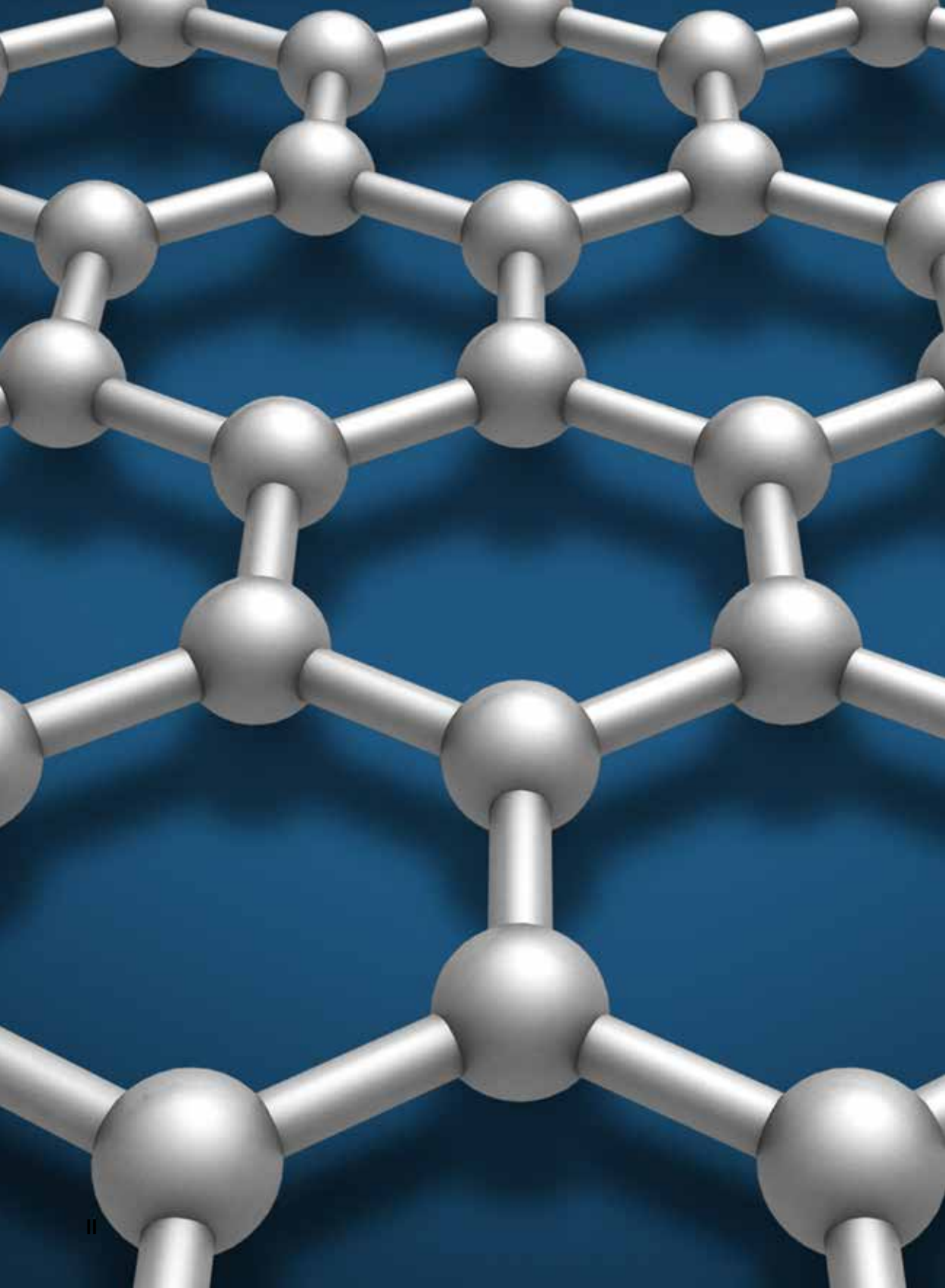
GENERAL PROGRAM

XXVII INTERNATIONAL MATERIALS RESEARCH CONGRESS (IMRC 2018)

August 19-24, 2018 • Cancún, México

Sociedad Mexicana de Materiales A.C.

MRS MATERIALS RESEARCH SOCIETY®
Advancing materials. Improving the quality of life.



DIRECTORY

GENERAL CHAIR OF THE CONGRESS AND PRESIDENT OF SMM

Claudia Gutiérrez Wing
Instituto Nacional de Investigaciones Nucleares

BOARD OF DIRECTORS

VICEPRESIDENT

Heberto Balmori Ramírez
Instituto Politécnico Nacional

TREASURER

Raúl Pérez Hernández
Instituto Nacional de Investigaciones Nucleares

BOARD OF GOVERNORS

Miguel José Yacamán
University Of Texas, San Antonio

David Ríos Jara
Instituto Potosino de Investigación Científica y Tecnológica AC

Lorenzo Martínez Gómez
Universidad Nacional Autónoma de México

Ramiro Pérez Campos
Universidad Nacional Autónoma de México

Egberto Bedolla Becerril
Universidad Michoacana de San Nicolás de Hidalgo

Leticia Torres Guerra
Universidad Autónoma de Nuevo León

Ventura Rodríguez Lugo
Universidad Autónoma del Estado de Hidalgo

Pedro Hugo Hernández Tejeda
Benemérita Universidad Autónoma de Puebla

Juan Méndez Nonell
Centro de Investigación en Materiales Avanzados

Luis Enrique Sansores Cuevas
Universidad Nacional Autónoma de México

Sergio Mejía Rosales
Universidad Autónoma de Nuevo León

Armando Salinas Rodríguez
Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional

José Gerardo Cabañas Moreno
Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional

SMM OFFICE

Alma Vallejo Morones
Fernanda Cruz Maldonado
Márgara Smith de la Fuente

PROGRAM MANAGEMENT & WEBMASTER

Ana Laura Espinoza Vizcarra
Vanessa Carreón Ortega

TECHNICAL SUPPORT

Edgar Coraza Palafox
Eduardo Hernández Ronquillo

CHAIRS COORDINATION

Sergio Mejia Rosales (UANL)

TUTORIAL COURSES COORDINATION

Jesús Arenas Alatorre (IF-UNAM)

UNIVERSITY STUDENT CHAPTERS COORDINATION

Milton Muñoz Navia (UASLP)
Laura Arellín Hernández

POSTERS AWARDS COORDINATION

Sandra Rodil Posada (IIM-UNAM)
Jose Luis Rodríguez López (IPICYT)

STUDENT MONITORS COORDINATION

Raúl Pérez Hernández (ININ)
Alvaro Angeles Pascual (Cinvestav-IPN)
Pavel López Carvajal (ININ)
Samuel Tehuacanero Cuapa (IF-UNAM)

GRADUATE PROGRAMS EXHIBITION

Raúl Esquivel Sirvent (IF-UNAM)

MATERIALS RESEARCH SOCIETY

Diane Rosenbaum

Graphic Design: Israel Hernández Cedeño

BOARD OF DIRECTORS

2018 MRS OFFICERS

PRESIDENT

Sean J. Hearne
Center for Integrated Nanotechnologies
Sandia National Laboratories

IMMEDIATE PAST PRESIDENT

Susan Trolier-McKinstry
The Pennsylvania State University

VICE PRESIDENT

Michael R. Fitzsimmons
Oak Ridge National Laboratory and University of Tennessee

SECRETARY

Eric A. Stach
University of Pennsylvania

TREASURER

David J. Parrillo
The Dow Chemical Company

EXECUTIVE DIRECTOR

Todd M. Osman
Materials Research Society

DIRECTORS

Griselda Bonilla
IBM T.J. Watson Research Center

Li-Chyong Chen
National Taiwan University

Matt Copel
IBM Research Division

Paul S. Drzaic
Apple, Inc.

Dawnielle Farrar-Gaines
Johns Hopkins University

Yury Gogotsi
Drexel University

Claudia Gutierrez-Wing
Instituto Nacional de Investigaciones Nucleares

Young-Chang Joo
Seoul National University

Lincoln J. Lauhon
Northwestern University

Paul C. McIntyre
Stanford University

Christopher Schuh
Massachusetts Institute of Technology

Rachel A. Segalman
University of California, Santa Barbara

Magaly Spector
University of Texas at Dallas

Molly M. Stevens
Imperial College London

Ehrenfried Zschech
Fraunhofer IKTS

INDEX

Welcome from the SMM President	VIII
Meeting Chairs	XIX
Rooms	XII
Exhibit Map	XIII
Schedule	XIV
Technical Sessions by Exhibiting Companies Schedule	XV
Special Events	XVI
General Information	XVIII
Sponsors	XIX
Exhibitors	XX
Graduate Programs Exhibition 2018	XXII
Technical Sessions By Exhibiting Companies	XXIII

PLENARY LECTURES

Plenary 1 Prof. Susan Trolier-Mckinstry	XXVI
Plenary 2 Prof. Yuichi Ikuhara	XXVIII
Plenary 3 Prof. Amanda S. Barnard	XXX
Plenary 4 Prof. Ben L. Feringa	XXXII
Plenary 5 Prof. Galo Soler Illia	XXXIV

SCIENCE, TECHNOLOGY AND SOCIETY LECTURE

Mtro. Leonardo Beltrán	XXXVI

TUTORIALS

1	Computational DFT Methods for Catalytic Materials and more!	XXXIX
2	Design of Advanced Steels and Advanced Coating for Steels	XXXIX
3	Electron Crystallography in TEM: Orientation Imaging to Strain and Metals to Archaeology at nm Scale	XXXIX
4	Hybrid Perovskite Solar Cells: Fundamentals to Cell Fabrication and Scale-Up	XXXIX
5	Mentoring Young Scientists: Developing Survival Skills	XXXIX
6	Probing Nanomaterials in Space or Time With High Spatial and Energy Resolution	XXXIX
7	Texture and Microstructure Analysis Using Electron Backscatter Diffraction (EBSD)	XXXIX

SYMPOSIA

A. Nanomaterials and 2D Materials

- A1 Nanostructured Carbon Materials and their Applications
- A2 Nano-alloys: Theory, Synthesis & Characterization
- A3 Emerging 2D Non-Graphene Materials: Synthesis, Heterogeneity, and Collective Phenomena
- A4 Silicon Based Nanoscale Optoelectronic Devices
- A5 Nano-engineered Coatings, Surfaces, and Interfaces
- A6 Nanostructured Materials and Nanotechnology: Synthesis, Processing and Theory

B. Hybrid Materials, Bioinspired Materials and Soft Matter

- B1 New Trends in Polymer Chemistry and Characterization
- B2 Micro and Nanoscale Biomaterials
- B3 Advanced Functional Materials for Tissue Engineering
- B4 Innovative Smart Materials for Flexible/Wearable and Large-Area Electronics
- B5 Functional Surfaces and their Interactions with Biological Systems
- B6 Materials for Medical Applications and Health

C. Materials for Energy Conversion, Storage and Harvesting

- C1 Electrochemical Energy Storage and Generation: Batteries, Supercapacitors and Fuel Cells
- C2 Challenges in Materials and Technologies for Energy Conversion, Saving and Storage (MATECSS)
- C3 Solar Hydrogen Production
- C4 Photovoltaics, Solar Energy Materials and Technologies
- C6 Heat Transfer at the Nanoscale
- C7 Metal-Organic Frameworks and their Applications

D. Development of New Characterization, Modeling, Data Analytics and Design Methods

- D1 Computational Discovery of Advanced Materials
- D2 Machine Learning and Data Science in Materials Synthesis, Characterization and Modeling
- D3 Texture and Microstructure
- D4 Probing Nanomaterials in Space or Time with High Spatial and Energy Resolution
- D5 In-situ and Operando Microscopy of Electronic and Energy Materials

D6 Characterization of Nanomaterials Using Diffraction and Combined Techniques
D7 Structural and Chemical Characterization of Metals and Alloys

E. Structural Materials and Metallurgy

E1 Structural Lightweight Metallic Alloys: Synergies Between Processing and Alloy Development
E2 Advanced Structural Materials: Mechanics, Properties and Applications
E3 Materials in Nuclear Science and Technology
E4 NACE: Corrosion and Metallurgy
E5 Steels

F. General

F1 New Advances in Superconductivity and Magnetism: 1D, 2D and 3D
F2 Advances in Functional Semiconducting Materials
F3 Catalysis by Materials: Nano and Bulk
F4 Boron Materials
F5 Materials and the Environment
F6 Strategies for Academy-Industry Relationship
F7 Preparing the Next Generation of Materials Scientists with New Approaches

WS. Workshop

WMC 4th NANOMXCN: Mexico-China Workshop on Nano Materials / Science / Technology: Renewable Energy and Environment Remediation
WS Advanced Defense Materials Workshop

Claudia Gutiérrez Wing
SMM President (2017-2018)

WELCOME from the SMM President XXVII IMRC General Chair

Dear Participants

As the current president of the Sociedad Mexicana de Materiales, it is my great pleasure to welcome you to the celebration of the XXVII edition of the international Materials Research Congress, which is organized jointly by the SMM and the Materials Research Society.

The fast-paced evolution of science and technology worldwide benefits from the interactions between professionals and scientists from academia, industry and the public sector, and especially students, who hold in their hands the future of scientific development in favor of our planet and its population.

The IMRC is aimed at providing forums where representatives of these sectors with a common interest in the materials world, can interact by presenting, discussing and learning from the latest advances and trends in the field of Materials Science and Engineering.

This year´s IMRC program holds more than 2500 oral and poster contributions by participants from 41 countries, to be presented in its 38 symposia, organized into six topical clusters. Five plenary lectures will be delivered by leading international scientists, including Prof. Ben L. Feringa, the 2016 Chemistry Nobel Laureate, Prof. Susan Trolier-McKinstry, Prof. Amanda Barnard, Prof. Yuichi Ikuhara and Prof. Galo Soler. Additionally, a lecture on the series of Science, Technology and Society by

Deputy Secretary for Planning and Energy Transition, Leonardo Beltrán. Seven tutorial courses and other special events have been scheduled, among them the presentation of the Materials Innovation Program by the Secretariat of Energy of México, and a Session on international Research Funding Opportunities.

A section on Complementary Essential tools in MSE will take place simultaneously with these activities, which comprises a scientific writing workshop, activities dedicated to sustainability and a presentation focused on Research, Technological and Talent Development for the Energy Sector in Mexico. In addition, a graduate student fair has been organized, where students will have the opportunity to learn about graduate study programs at participating universities. We will also have the participation of the 2018 MRS-Spring Meeting poster awardees. A great complement to this event is the commercial exhibition that will be distributed throughout the venue.

I am deeply grateful to the Chairs of the XXVII IMRC, Cecilia Noguez (Universidad Nacional Autónoma de México), Coray M. Colina (University of Florida), Hans M. Christen (Oak Ridge National Laboratory) and Ciro Falcony (Centro de Investigación y de Estudios Avanzados) for their intense work, their time and the invaluable contributions they made to the organization of the scientific content of this event.

I would like to express my gratitude to the Symposium Organizers for accepting their important role and for their leadership in the organization of the technical program of each symposium. I would also like to acknowledge the colleagues who participated in the local organizing committee, who have dedicated their time and effort to collaborate in the coordination of diverse activities within the IMRC 2018 program. Thanks also to the SMM staff for their great and intense work in the preparation of the event during several months that crystallizes today, and to the many volunteers who have supported our organizers.

Thanks to participating commercial organizations and to our national and international sponsors. Special thanks to CONACYT for their invaluable support to make possible the development of several initiatives in this edition of the IMRC, which have facilitated the participation of attendees and promoted the professional development of many students. Thanks also to the Secretariat of Energy of México and to the U. S. ARMY, U. S. NAVY and U. S. Air Force for their financial support.

I appreciate your attendance to the XXVII IMRC and your contribution to the development of this event. Thanks to all the participants that have chosen this congress as a suitable via to present and discuss the results of their research. I hope that you are able to stablish fruitful relationships and friends for your future work, enjoy your participation in the many activities that have been programed for you and, of course, the wonderful City of Cancún.

Claudia Gutierrez Wing
SMM President (2017-2018)

MEETING CHAIRS

Cecilia Noguez
Instituto de Física
Universidad Nacional
Autónoma de México

Hans M. Christen
Center for Nanophase
Materials Sciences, Oak Ridge
National Laboratory

Coray M. Colina
Department of Chemistry
University of Florida

Ciro Falcony
Departamento de Física
CINVESTAV

Welcome to the XXVII International Materials Research Congress

The conference chairs of the XXVII International Materials Research Congress are delighted to welcome you to a truly international event comprised of 38 symposia in 6 topical clusters, combining a total of ... 2538 scientific presentations and posters. With a focus on specific areas, the event will provide an opportunity to explore topics in depth, benefit from different perspectives on well-defined scientific challenges, and build international collaborations.

The topic areas have been chosen to emphasize scientifically and societally important fields of research and emphasize new directions. Researchers will have an opportunity to explore nanomaterials and 2D materials; hybrid materials, bioinspired materials, and soft matter; materials for energy conversion, storage, and harvesting; and structural materials and metallurgy. In addition, the cluster on new characterization, modeling, data analytics and design methods will discuss emerging tools and approaches that will lead to the next advances in materials research.

These areas are also reflected in the remarkable line-up of plenary speakers: Nobel Laureate Ben Feringa (Groningen); Professors Susan Trolier-McKinstry (Penn State), Amanda Barnard (SCIRO), Yuichi Ikuhara (Tokyo), Galo Soler Illia (San Martin); and Deputy Secretary for Planning and Energy Transition Leonardo Beltrán. Together with the numerous invited talks, contributed talks, and posters, we are looking forward to a fantastic and stimulating program.

There will be opportunities to network, socialize, and enjoy the conference venue. Finally, we would like to thank all of the symposia organizers, speakers, and participants for making this conference possible and for continuing the tradition of international cooperation and scientific excellence.

Looking forward to an exciting conference!

Hans M. Christen, Coray M. Colina,
Ciro Falcony, Cecilia Noguez
Congress Chairs

ROOMS

Room	Sunday 20	Monday 20	Tuesday 21	Wednesday 22	Thursday 23	Friday 24
Maya II		D4	D4	F4		
Maya I		D5	D5	C3		
Maya III	STUDENTS MONITORS / STUDENTS CHAPTERS					
Maya IV	REGISTRATION					
Maya V						
Maya VI		D2	D2	D2/B5		
Maya VII		A2	A2	A5	A5	
Acapulco		B1	B1	B1		
Mexico		B6	B6	WS		
Cozumel		B4	B4			
Vallarta		B2	B5	D6	D7	
Tulum A		E1	E2	E2		
Tulum B		A4	A6	A6	A6	
Tulum C		A1	A1	A3	A3	
Tulum D	Plenary 1	Plenary 2	Plenary 3	Plenary 4	Plenary 5	
Tulum E						
Tulum F		F3	F3	F3	WMC	WMC
Tulum G		B3	F5	F5	F5	
Tulum H		C4	C4	F2	F2	
Uxmal I		D3	D1	D1	D1	
Uxmal II		F1	C6	F6		
Chichen Itza I		C1	C2	C2	C2	
Chichen Itza II		E3	E5	E4	E4	
Terrace		Poster Session				
COBA		C6/C7	C7	F7	F7	
PALENQUE		TSEC	TSEC	TSEC		

EXHIBIT MAP

JW MARRIOTT RESORT & SPA

MARRIOTT CANCUN RESORT

Congress & Exhibit Map

XVIII INTERNATIONAL MATERIALS RESEARCH CONGRESS
Cancun, México, 2018

SCHEDULE

TIME	Sunday 19		Monday 20		Tuesday 21		Wednesday 22		Thursday 23	Friday 24
8:30-11:00	TUTORIALS	Registration	Oral Session	Registration	Oral Session	Registration	Oral Session	Registration	Oral Session	Oral Session
11:00-11:30	Coffee Break		Coffee Break		Coffee Break		Coffee Break		Poster Awards Ceremony & Coffee Break	Coffee Break
11:30-12:30	TUTORIALS		Plenary 2		Plenary 3		Plenary 4		Plenary 5	Oral Session
12:30-14:00			Oral Session		Oral Session		Oral Session		Oral Session	
14:00-16:00	Lunch									
16:00-18:30	Registration		Oral Session	Registration	Oral Session	Registration	Oral Session	Registration	Oral Session	Oral Session
18:00-19:00	Inaguration		17:30 hrs. Science, Technology and Society Lecture SENER							
19:00-20:00	Plenary 1		Poster Session & Coffee Break		Poster Session & Coffee Break		Poster Session & Coffee Break			
20:30	Toast						Dinner			

SPECIAL EVENTS SCHEDULE

	Time	Activity Name	Type	Room
Tuesday 21	07:00-09:00 / 14:00-16:00	"How to publish a scientific paper in the field of materials science and engineering"	Workshop	Tulum D
	17:00-18:00	"Sustainable Materials: A Thermodynamic Perspective"	Workshop	Tulum D
	18:00 - 19:00	"Research, Technological and Talent Development for the Energy Sector in Mexico" SENER	Workshop	Tulum D
	18:30 - 20:00	Special Poster Session MRS 2018	Special poster presentation	Terrace
Wednesday 22	19:00 - 20:00	Research Funding Opportunities U. S. Army, U. S. Navy, U. S. Airforce and NSF	Presentation	Mexico - Cozumel
Thursday 23	14:00-15:00	"Mission Innovation. Clean Energy Materials Innovation Challenge" Fondos sectoriales CONACYT-SENER	Presentation	Tulum D

TECHNICAL SESSIONS BY EXHIBITING COMPANIES SCHEDULE (TSEC)

	Time	Activite Name	Room
Sunday 19	10:30 - 12:15	WITec, GmbH "Correlative 3D Raman Imaging: The Complete Picture of Material Properties"	Palenque
Monday 20	9:00 - 10:45	Agilent Technologies de México, S de RL de CV "Vacuum Technology & Leak Detection"	Palenque
Tuesday 21	9:00 - 10:45	Nanociencias de Mexico, SA de CV "Review of Various Particle Size Techniques"	Palenque
	12:30 - 14:00	Park Systems Inc "Atomic Force Microscopy PinPoint Nanomechanical Mode"	Palenque
	14:00 - 16:00	Anton-Paar México, SA de CV "Nano Mechanical Characterization of Thin Hard Coating Using Indentation, Scratch and Tribological Studies"	Tulum E
	14:15-15:45	Thermo Fisher Scientific The Gandolfi Stage: A Novel Approach for the Analysis of Single Crystals and Small Volume Samples	Palenque
	16:00 - 17:45	Bruker Mexicana, SA de CV "Pushing the Limits in Analytical Instrumentation for Advancing Materials Research"	Palenque
Wednesday 22	12:30-14:00	INTERCOVAMEX, SA de CV AFM + Nanoscale Vis-IR Spectroscopy via Photo-induced Force Microscopy	Palenque
	14:00 - 15:45	International Centre For Diffraction Data "Materials Characterization Using XRD and the ICDD PDF-4+ Database"	Palenque
	14:00 - 15:45	Malvern Panalytical México "Nanomaterials – Relating materials properties to performance"	Tulum E

SPECIAL EVENTS

Presentation:

MISSION INNOVATION. CLEAN ENERGY MATERIALS INNOVATION CHALLENGE

Dr. Hermann Tribukait,
Enlace de los Fondos Sectoriales CONACYT – SENER para América del Norte.
Thursday August 23rd 14:00 a 15:00 hr. Room: Tulum B

COMPLEMENTARY ESSENTIAL TOOLS IN MATERIALS SCIENCE AND ENGINEERING

"HOW TO PUBLISH A SCIENTIFIC PAPER IN THE FIELD OF MATERIALS SCIENCE AND ENGINEERING"

Dr. Heberto Balmori Ramírez[a)]
Materials Science and Engineering-ESIQIE
Instituto Polítecnico Nacional

ABSTRACT:

Publishing a scientific paper marks the end of a specific scientific work. Publishing it in an appropriate journal is vital for dissemination of knowledge, as well as, to establish a researcher's reputation. However, writing the paper requires some skills that are not obvious for young researchers. The purpose of this workshop is to present the general characteristics and structure of scientific publications and to provide a few writing tips to young researchers in order to help them get their papers published. Additionally, the characteristics of scientific journals and of the importance of the peer review process will be address. Finally, the use of commercial tools that are helpful to complement the literature review, selecting the adequate journal for a paper and reducing the risk of plagiarism will be address.

SYLLABUS:

FIRST SESSION Tuesday August 21st 07:00-09:00 hrs. Room: TULUM D

1. Introduction
What is a scientific journal?
What is a scientific paper?
2. Why is it important to publish a scientific paper for young scientists?
The steps to publish a scientific paper.
The classification scheme of scientific journals
3. The ethical aspects of publishing a scientific paper.
Practical Tools to avoid plagiarism.

SECOND SESSION Tuesday August 21st 14:00-16:00 hrs. Room: TULUM D

4. The structure of scientific papers.
How to make an efficient literature review
Submitting a paper for publication and the reviewing process.
Finally! Your paper gets published

[a)]Vice President (2017-2018) of the Sociedad Mexicana de Materiales A.C.

SPECIAL EVENTS

SUSTAINABLE MATERIALS: A THERMODYNAMIC PERSPECTIVE

Dr. Antonio del Río Portilla
Institute of Renewable Energies, Universidad Nacional Autónoma de México
Tuesday August 23rd 17:00-18:00 Room: TULUM B

ABSTRACT:
Nowadays, as a society, we are facing a paradigm regarding the use of sustainable materials and technologies. This breakpoint has boosted the search of tailoring sustainable materials. Sustainability is not the return to some kind of idyllic landscape untouched by human hands. Especially since the nature laws bound us. More specifically, we need to take into account the laws of thermodynamics.

In this talk, a discussion about the physical meaning indicated by the sustainable material concept from the irreversible thermodynamics point of view is presented. We start with the discussion of Sustainable Development Goals and the entropy production for irreversible processes. Finally, we conclude that to obtain a sustainable material one need to look for maximum efficiency instead of maximum power.

Living sustainability today involves a process of "co-evolution". A bottom up approach where we, as a society, work together to build "Sustainable Communities". A brief general scope on this topic for an ongoing project in the framework of CONACyT´s network "Red de Energía Solar" is address.

RESEARCH, TECHNOLOGICAL AND TALENT DEVELOPMENT FOR THE ENERGY SECTOR IN MEXICO

Dr. Edgar Santoyo Castelazo,
Director General de Investigación, Desarrollo Tecnológico y Formación de Recursos Humanos de la SENER
Tuesday August 21st 18:00-19:00 Room: TULUM B

RESEARCH FUNDING OPPORTUNITIES

Wednesday August 22nd 19:00-20:00 Room: MEXICO-COZUMEL

Presenter #1: Jose-Miguel Larenas
U.S. Army's RDECOM
Description: Research funding opportunities with the U.S. Army Development and Engineering Command across Latin America

Presenter#2: Linda Sapochak
NSF Director of Materials Research (DMR)
Description: International programs and activities from NSF's Office of International Science & Engineering

Presenter #3: Geoff Andersen
U.S. Air Force's Southern Office of Aerospace Research and Development (SOARD)
Description: USAF basic science programs in Latin America

Presenter #4: Diogenes (Dio) Placencia
U.S. Naval Research Laboratory
Description: Research funding opportunities with the Office of Naval Research Global (ONRG) across Latin America

GENERAL INFORMATION

LANGUAGE

The official language of the congress is **English**

EXHIBIT:

An exhibit is scheduled during the congress with companies displaying instrumental products and services in the field of materials science and topics related to the nature of the technical symposia. The exhibit will be located in the meeting registration area and in the foyers of the Marriott Cancun Resort and JW Marriott hotels.

SCHEDULE:

For Booths 34 to 43 Exhibit days and hours are: Sunday 19, Monday 20 and Tuesday 21, 8:30 to 14:00 & 16:00 to 18:30. For Booths 1 to 33 and Tables 1 to 7 exhibit days and hours are: Monday 20, Tuesday 21 and Wednesday 22, 9:00 to 14:00 & 16:00 to 18:30

SOCIAL EVENTS

INAUGURATION
TULUM D & E,
Sunday 19th, August at 18:30 hrs.
WELCOME RECEPTION
Pool Garden Marriott Cancun Resort
Sunday 19th, August at 20:30 hrs.
GALA DINNER
TULUM D & E,
Wednesday 22nd, August at 21:00 hrs.

MRS POSTER AWARDEES AT IMRC 2018

*Special Poster Session There will be a special poster presentation on Tuesday 21, August with the winners of the best poster award of the MRS 2018 Spring Meeting.

Emily Moses
emose002@ucr.edu
University of California, Riverside, USA
"What Role Does Driving Force Play in CdSe Nanocrystals for Photon Up Conversion"

Marta San Juan Mucientes
m.sanjuanmucientes@lancaster.ac.uk
Lancaster University, United Kingdom
"Comparison of Local Dynamic Response of MEMS Nanostructures Using Ultrasonic Force Microscopy and Laser Doppler Vibrometry"

Jing Zhou
jzhou305@gatech.edu
Georgia Institute of Technology, USA
"Design of Hybrid Metamaterials with Large Modulation of Plasmonic Resonances and QD Photoluminescence"

GENERAL SPONSORS

CONACYT
Consejo Nacional de Ciencia y Tecnología

SENER
SECRETARÍA DE ENERGÍA

ESTADOS UNIDOS MEXICANOS

ININ

IPN

U.S. ARMY RDECOM
TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

Office of Naval Research GLOBAL Science & Technology

cimav

SYMPOSIA SPONSORS

Cinvestav

UNIVERSIDAD AUTÓNOMA DE NUEVO LEÓN

UNIVERSIDAD DE SONORA 1942

KMU

UNIVERSIDAD AUTÓNOMA DE CIUDAD JUÁREZ

IMP
INSTITUTO MEXICANO DEL PETRÓLEO

Le Mans Université

ICDD

JEOL

FAPESP
SÃO PAULO RESEARCH FOUNDATION

Ternium

CORROSIÓNYPROTECCIÓN

EXHIBITORS

1
TODO EN MICROESCALA, SA DE CV

2 & 28
JEOL MÉXICO, SA DE CV
www.jeol.com.mx

3 & 4
MICRA NANOTECNOLOGÍA, SA DE CV
www.micra.com.mx

5
SERVICIO INDUSTRIAL PRO ANÁLISIS, SA DE CV (SIPROA) www.siproa.com.mx

6
ALTA TECNOLOGÍA EN LABORATORIO, SA DE CV (ATL) www.atlsadecv.com

7
OXFORD INSTRUMENTS AMERICA, INC
www.oxford-instruments.com

8
GATAN, INC
www.gatan.com

9
NANOSCRIBE GmbH
www.nanoscribe.com

10
OCEANOPTICS, INC - TECNO LAB, SA DE CV www.tecno-labmex.com

11
NATIONAL SCIENCE FOUNDATION (NSF) – DIVISION OF MATERIALS RESEARCH
www.materials.northwestern.edu

12
PARK SYSTEMS, INC
www.parkafm.com

13
NANO CIENCIAS DE MÉXICO, SA DE CV
www.nanociencias.mx

14
RENISHAW MEXICO, S DE RL DE CV
www.renishaw.mx

15
PETROSERVICIOS INDUSTRIALES, SA DE CV
www.petroservicios.com.mx

16
WITec, GmbH
www.witec.de

17 & 18
INTERCOVAMEX, SA DE CV
www.intercovamex.com

19
BRUKER MEXICANA, SA DE CV
www.bruker.com

20
HITACHI - HLATAM
www.hitachi-hightech.com/ca/

21 & 22
INSTRUMENTOS Y EQUIPOS FALCON, SA DE CV www.falconmx.com

23
MARKTEK, SA DE CV
www.marktek.com.mx

24
THERMO FISHER SCIENTIFIC MEXICO
www.thermofisher.com

25
RUBIO CORPORATIVO, SA DE CV
www.rubiocorporativo.com

26
QUANTUM DESIGN, INC.
www.qdusa.com

27
ANTON-PAAR MÉXICO, SA DE CV
www.anton-paar.com

29
ICDD - INTERNATIONAL CENTRE FOR DIFFRACTION DATA www.icdd.com

30
NANOVEA, INC
www.nanovea.com

31 & 32
MALVERN PANALYTICAL
www.malvernpanalytical.com

33
MEISA
www.meisa.com

34
PERKIN ELMER
www.perkinelmer.com

35 ASPELAB (ASESORÍA Y PROVEEDORA DE EQUIPOS PARA LABORATORIO, SA DE CV)
www.aspelab.com

36
SciAps Inc - Symtek Inc
www.sciaps.com

37
HEIDELBERG INSTRUMENTS, INC
www.himt.de

38 THERMO FISHER SCIENTIFIC MEXICO - ELECTRÓNICA COM
www.thermofisher.com

39
IONAUTICS AB
www.ionautics.com

40 CANITEC - CORPORACIÓN ANALÍTICA INTEGRAL, SA de CV
www.canitec.com.mx

41
HIDEN ANALYTICAL LTD
www.hidenanalytical.com

42
AGILENT TECHNOLOGIES VPD
www.agilent.com

43 &44
CARL ZEISS DE MÉXICO, SA DE CV
www.zeiss.com.mx

45
NANOMETRIX, SA DE CV
www.nanometrix.com.mx

Ed
SPRINGER NATURE
www.springer.com

M1
MANTIS-SIGMA
www.mantis-sigma.com

M2
DELONG AMERICA INC
www.lv-em.com

M3
ANYOVER INSTRUMENTACION CIENTIFICA SA DE CV www.anyover.com.mx

M4
HORIBA - GBC SCIENTIFIC EQUIPMENT DE MEXICO, SA DE CV www.gbcsci.com.mx

M5
SERVICIOS ESP. PARA LAB. CLINICOS E INDUSTRIALES, SA DE CV (SELCI)
www.selci.mx

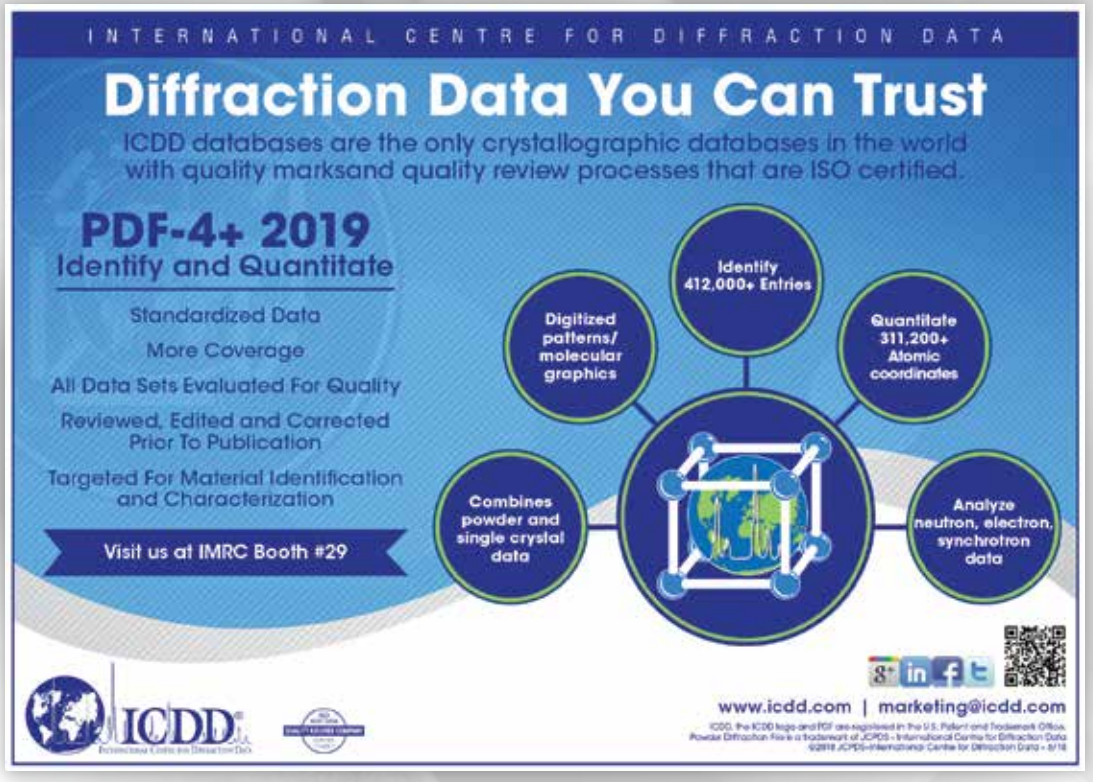
M6
SURFACE MEASUREMENTS SYSTEMS / JWK RESEARCH MEXICO
www.jwkresearch.com

M7
SISTEMAS AUTOMATIZADOS E INDUSTRIALES SA DE CV (SAIDE)
www.saidesa.com

M8
CONSULTORÍA INTEGRAL EN MICROSCOPÍA, SA DE CV
www.cimicroscopia.com

GRADUATE PROGRAMS EXHIBITION 2018

- Benemérita Universidad Autónoma de Puebla
- Centro de Enseñanza Técnica y Superior
- Centro de Investigación Científica de Yucatán AC
- Centro de Investigación y de Estudios Avanzados del IPN
- CINVESTAV Unidad Saltillo
- Corporación Mexicana de Investigación en Materiales S.A. de C.V.
- Escuela Superior de Física y Matemáticas-Instituto Politécnico Nacional
- Instituto Tecnológico de Cancún
- Tecnológico Nacional de México en Celaya
- Universidad Autónoma de Chihuahua
- Universidad Autónoma de Nuevo León
- Universidad Autónoma Metropolitana
- Universidad de Ciencias y Artes de Chiapas
- Universidad Iberoamericana
- Universidad Nacional Autónoma de México
- Universidad Popular Autónoma del Estado de Puebla, A.C.
- Universidad Autónoma de San Luis Potosí
- University Of Groningen, The Netherlands
- Fondos Sectoriales Conacyt ® SENER



TECHNICAL SESSIONS BY EXHIBITING COMPANIES (TSEC)

WITec, GmbH

Correlative 3D Raman Imaging: The Complete Picture of Material Properties

Dr. Stefan Gomes da Costa
WITec Applications Scientist
Dr. Fernando Vargas
WITec Latin American Business Manager
Room Palenque / Sunday, August 19th
10:30 - 12:15

Agilent Technologies de México, S de RL de CV

Vacuum Technology & Leak Detection

Bartly Carlson
Agilent Technologies Inc.
Room Palenque / Monday, August 20th
9:00 - 10:45

Nanociencias de Mexico, SA de CV

Review of Various Particle Size Techniques

Peter Bouza
Market Development Manager, Micrometrics
Room Palenque / Tuesday, August 21st
9:00 - 10:45

Park Systems Inc

Atomic Force Microscopy PinPoint Nanomechanical Mode

Dr. Gabriela Mendoza
Applications Scientists, Park Systems
Room Palenque / Tuesday, August 21st
12:30 - 14:00

Anton-Paar México, SA de CV

Nano Mechanical Characterization of Thin Hard Coating Using Indentation, Scratch and Tribological Studies

Gregory Favaro
Product Manager, Anton Paar GmbH, Scratch Tester and Calotest
Room Tulum E / Tuesday, August 21st
14:00 - 16:00

Thermo Fisher Scientific

The Gandolfi Stage: A Novel Approach for the Analysis of Single Crystals and Small Volume Samples.

Gregory Schmidt
Product Specialist in Bulk Elemental Analysis, Thermo Fisher Scientific.
Room Palenque / Tuesday, August 21st
14:15 - 15:45

Bruker Mexicana, SA De CV

Pushing the Limits in Analytical Instrumentation for Advancing Materials Research

Danilo Bittar
Bruker AXS LATAM Director
Michael Huber
Bruker OPTICS Regional Manager
Room Palenque
Tuesday, August 21st
16:00 - 17:45

International Centre For Diffraction Data

Materials Characterization Using XRD and the ICDD PDF-4+ Database

Thomas Blanton
ICDD
Miguel Delgado
Universidad de los Andes
Room Palenque
Wednesday, August 22nd
14:00 - 15:45

Malvern Panalytical México

Nanomaterials – Relating materials properties to performance

Ulf Nobbmann
Product Manager of Nanometrics, Malvern Panalytical
Room Tulum E
Wednesday, August 22nd
14:00 - 15:45

Intercovamex, SA de CV

AFM + Nanoscale Vis-IR Spectroscopy via Photo-induced Force Microscopy

Sung Park,
CEO of Molecular Vista
Room Palenque
Wednesday, August 22nd
12:00 - 14:00

Sociedad Mexicana de Materiales A.C.

MRS MATERIALS RESEARCH SOCIETY®
Advancing materials. Improving the quality of life.

The Sociedad Mexicana de Materiales (SMM-MEXICO)
The Materials Research Society (MRS)
ANNOUNCE

18-23 August 2019

Cancún, México

PLENARY LECTURES

Sunday, August 19th

Prof. Susan Trolier-Mckinstry

Professor of Ceramic Science and Engineering
Director of the Penn State Nanofabrication Facility
The Penssylvania State University, U.S.A.

Room: Tulum D & E
19:00 - 20:00 hrs

Biography

Susan Trolier-McKinstry is the Steward S. Flaschen Professor of Ceramic Science and Engineering, Professor of Electrical Engineering, and Director of the Nanofabrication facility at the Pennsylvania State University. Her main research interests include thin films for dielectric and piezoelectric applications. Her group studies the fundamental mechanisms that control the properties of ferroelectric films, the processing science associated with growing and patterning films, and piezoelectric microelectromechanical systems; they have published >400 papers in this field. She is a fellow of the American Ceramic Society, IEEE, and the Materials Research Society, and an academician of the World Academy of Ceramics. She currently serves as an associate editor for Applied Physics Letters. She is 2017 President of the Materials Research Society; previously she served as president of the IEEE Ultrasonics, Ferroelectrics and Frequency Control Society, as well as Keramos. She is the recipient of the IEEE Ferroelectrics Achievement Award, the Robert E. Newnham Award, the Jeppson, Fulrath, and Robert Coble Awards of the American Ceramic Society, the Wilson Outstanding Research Award, the Ceramics Education Council Outstanding Educator Award, the Wilson Award for Outstanding Teaching in the College of Earth and Mineral Sciences, the Materials Research Laboratory Outstanding Faculty Award, and a National Science Foundation Career grant. She was a Distinguished Lecturer for IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society. Twenty-one people that she has advised/co-advised have taken faculty positions around the world.

ABSTRACT

THIN FILM PIEZOELECTRICS AND THEIR APPLICATIONS

Piezoelectric materials couple electrical and mechanical energies, and as such, offer an interesting platform to study numerous functional properties. Piezoelectric thin films are ubiquitous in filters and duplexers for cell phones, and are of increasing interest in low voltage microelectromechanical systems (MEMS) for sensing, actuation, and energy harvesting. This talk will discuss how materials are optimized for these applications, as well as examples of the use of piezoelectric films over a wide range of length scales. The key figures of merit for resonators, actuators, and energy harvesting will be discussed, with emphasis on how to achieve these on practical substrates. Recent work on doped AlN for cell phone resonators will be reviewed. In addition, the roles of crystallographic orientation and domain state will be described for low voltage actuators and mechanical harvesters in thin films with the perovskite structure. Examples of integration into MEMS structures will also be discussed, including adaptive optics for X-ray telescopes, low frequency and non-resonant piezoelectric energy harvesting devices, inkjet printers, and ultrasound transducers for miniaturized medical diagnostics.

PLENARY LECTURES

Monday, August 20th

Prof. Yuichi Ikuhara

Institute of Engineering Innovation
The University of Tokyo, Japan

Room: Tulum D & E
11:30 - 12:30 hrs

Biography

Yuichi Ikuhara is Professor and Director of Nanotechnology Center, Institute of Engineering Innovation at University of Tokyo since 2003. He received Dr.Eng. from Department of Materials Sciences, Kyushu University in 1988. His current research interest is in interface and grain boundary and interface phenomena, advanced transmission electron microscopy and so on. Dr.Ikuhara is author and coauthor of about 720 scientific original papers in this field, and has more than 350 invited talks at international and domestic conferences. He received"Medal with Purple Ribbon"from the Emperor of Japan (2016), "Humboldt Research Award"from Alexander von Humboldt Foundation (2010) and so on. He is a fellow of the American Ceramics Society (2011), member of World Ceramic Academy (2014), and an associate member of the Science Council of Japan. He holds a group leader position at JFCC (Japan Fine Ceramics Center) and WPI (World Premier International Research Center Initiative) professor at Tohoku University concurrently.

ABSTRACT

GRAIN BOUNDARY AND SURFACE DYNAMICS IN CERAMICS

Many experimental investigations have been tried for understanding the dislocation-grain boundary interaction in materials, but these experiments were mostly carried out statically, and the dynamic behavior is still not well understood yet. It has been known that several oxide crystals can be plastically deformed even at R.T. by dislocation slip like metals. In this study, the in-situ nanoindentation experiments were conducted for SrTiO3 single crystal and its bicrystals inside TEM. For bicrystal experiments, various types of GBs including CSL (Coincidence Site Lattice) GBs and low angle tilt and twist GBs were prepared. Various interface phenomena such as dislocation pile-up at GBs, jog formation, jog-drag motion were dynamically observed. The dislocation-GB interaction and its dependence on the GB characters will be discussed in detail.

The properties of lithium ion battery (LIB) cathodes strongly depend on the diffusion of lithium ions during charge/discharge process. Then, direct visualization of lithium site is required to understand the mechanism of the diffusion of lithium ions. In this study, aberration corrected STEM were applied to directly observe the {010} surface, which coresponded to perpendular to the 1-D diffusion orientation, of the olivine LixFePO4. It was found that orientation of boundary layers at the FePO4/Li2/3FePO4 interface gradually changed from lower index planes to higher index planes. The mechanism of the lithiation/delithiation from and to the surface will be discussed based on the observation results.

PLENARY LECTURES

Tuesday, August 21st

Prof. Amanda S. Barnard

Office of the Chief Executive Science Leader
Data61
Commonwealth Scientific and Industrial Research Organisation, Australia

Room: Tulum D & E
11:30 - 12:30 hrs

Biography

Dr. Amanda Barnard is an Office of the Chief Executive Science Leader within Data61 at CSIRO. She received her Ph.D. (Physics) in from RMIT in 2003, followed by a Distinguished Postdoctoral Fellow in the Center for Nanoscale Materials at Argonne National Laboratory (USA), and the prestigious senior research position as Violette & Samuel Glasstone Fellow at the University of Oxford (UK) with an Extraordinary Research Fellowship at The Queen's College. She joined CSIRO as an Australian Research Council Queen Elizabeth II Fellow in 2009, and now as an OCE Science Leader she leads research developing structure/property relationships using computational physics and chemistry, machine learning, deep learning and AI. Dr Barnard is a member of the Nature Index Panel (Nature Publishing Group), and has previously served as an Associate Editor for Science Advances (AAAS). She is the Chair of the National Computational Merit Allocation Scheme for Australia (awarding $10 million in resources annually) and a Fellow of the Australian Institute of Physics. For her work she has won the 2009 Young Scientist Prize in Computational Physics from the International Union of Pure and Applied Physics, the 2009 Malcolm McIntosh Award from the Prime Minister of Australia for the Physical Scientist of the Year, the 2010 Frederick White Prize from the Australian Academy of Sciences, the 2014 ACS Nano Lectureship (Asia/Pacific) from the American Chemical Society, and the 2014 Feynman Prize in Nanotechnology (Theory) from the Foresight Institute, being the first woman to do so in the history of the award.

ABSTRACT

CAPTA-DRIVEN MATERIALS DESIGN

Even though it is always there, dealing with the complexity of nanomaterials, the diversity of individual samples, and the persistent imperfection of individual structures has been secondary to our search for novel properties and promising applications. However, for our science to translate into technology we will inevitably need to deal with the issue of polydispersivity and integrate this feature into the next generation of more realistic structure/property predictions. Our predictions need a fault tolerance, but uncovering the underlying connection between specific structures and properties is difficult to do experimentally, particularly when many (if not all) of the important design parameters are cross-correlated. Fortunately the strategic use of computational methods and high performance computing can provide these insights, and so much more. A range of reliable statistical and data-driven methods, such as machine learning and deep learning, have become widely available to help us to take greater advantage computational data, or "capta". Appropriate sampling of our enormous parameter spaces, judicious data cleaning and curation, and selection of the right learning models are essential elements of capta-driven materials design, and differ from approaches applied to experimental data. In this presentation we will explore the development of capta sets and the use of simple statistical and machine learning methods to predict properties and performance. We will also see how to predict structure/property relationships for entire samples of structures, and how we can investigate the impact of different manufacturing processes that restrict the polydispersivity in different ways.

PLENARY LECTURES

Wednesday, August 22nd

Prof. Ben L. Feringa

Jacobus van 't Hoff Distinguished Professor of Molecular Sciences
University of Groningen, Netherlands
Nobel Prize in Chemistry 2016

Room: Tulum D & E
11:30 - 12:30 hrs

Biography

Ben L. Feringa obtained his PhD degree at the University of Groningen in the Netherlands under the guidance of Professor Hans Wynberg. After working as a research scientist at Shell in the Netherlands and the UK, he was appointed lecturer and in 1988 full professor at the University of Groningen and named the Jacobus H. van 't Hoff Distinguished Professor of Molecular Sciences in 2004. He was elected Foreign Honorary member of the American Academy of Arts and Sciences. He is a member of the Royal Netherlands Academy of Sciences as well as a member of the Council of the Royal Society of Chemistry. In 2008 he was appointed Academy Professor and he was knighted by Her Majesty the Queen of the Netherlands. Feringa's research has been recognized with numerous awards including the Körber European Science Award (2003), the Spinoza Award (2004), the Prelog gold medal (2005), the Norrish Award of the ACS (2007), the Paracelsus medal (2008), the Chirality medal (2009), the RSC Organic Stereochemistry Award (2011), the Humboldt award (2012), the Nagoya gold medal (2013), the ACS Cope Scholar Award (2015), the Chemistry for the Future Solvay Prize (2015), the August-Wilhelm-von-Hoffman Medal (2016), The 2016 Nobel prize in Chemistry and the Tetrahedron Prize (2017).

Feringa's research interest includes stereochemistry, organic synthesis, asymmetric catalysis, molecular switches and motors, self-assembly, molecular nanosystems and photopharmacology.

ABSTRACT

MOLECULAR MACHINES

The fascinating molecular motors and machines that sustain life offer a great source of inspiration to the molecular explorer at the nanoscale. Among the major challenges ahead in the design of complex artificial molecular systems and smart materials is the control over dynamic functions and responsive far-from-equilibrium behaviour. Chemical systems ultimately require integration of structure, organization and function of multi-component dynamic molecular assemblies at different hierarchical levels. A major goal is to achieve and exploit translational and rotary motion.

In this presentation the focus is on the dynamics of functional molecular systems as well as triggering and assembly processes. We design switches and motors in which molecular motion is coupled to specific functions. Responsive behaviour will be illustrated in self-assembly, responsive materials and molecular machines. The design, synthesis and functioning of rotary molecular motors will also be presented with a prospect toward future dynamic molecular systems.

Information on http://www.benferinga.com
Molecular Machines: Nature, September 2015; Chem Eng. News dec. 2017
Molecular Switches: Chemistry World, June 2016

PLENARY LECTURES

Thursday, August 23rd

Prof. Galo Soler Illia

Instituto de Nanosistemas
Universidad Nacional de San Martín, Argentina

Room: Tulum D & E
11:30 - 12:30 hrs

Biography

Galo Soler-Illia performed his MSc and PhD in Chemistry at Buenos Aires University (1989-1998), followed bya postdoc in C. Sanchez group at University Pierre-et-Marie-Curie, Paris (1999-2003). He was the founder of Chemistry of Nanomaterials Group at CNEA, Argentina (2003-2014). At present, he is the Dean of Instituto de Nanosistemas at San Martín University, Buenos Aires, Principal Researcher of CONICET (Argentina), Associate Professor at the University of Buenos Aires, and Full Member of the National Academy of Exact and Natural Sciences of Argentina (Nanotechnology chair). He has been guest professor at Paris VI, University of Osaka Prefecture and the University of Melbourne. He received several national awards, in basic and applied sciences. He designs and produces new nanosystems with intelligent architectures and custom properties using chemical methods inspired by Nature. He has published more than 140 papers in reviewed journals, which received more than 10.000 citations (h=44), and filed four patents. In addition, he is an advisor for the Argentine Nanotechnology Foundation; he has published three science books about chemistry and nanotechnology, and disseminates science in open TV. He leads national and international projects with research groups and companies; he recently co-founded Hybridon, a start-up dedicated to mesoporous hybrid materials.

ABSTRACT

MESOPOROUS MATERIALS: A PLATFORM TOWARDS PROGRAMMABLE MATTER

The combination of nanomaterials synthesis with self-assembly processes led to a significant advance in the production of hybrid inorganic-organic materials with hierarchical structures and localized functions. Our ability to produce highly precise complex architectures with well-defined localized functions opens the path to create intelligent matter that can change their physical or chemical properties in response to the environment. Programmable nanosystems can be envisaged, in which confinement effects, responsivity, or collaborative functionality can be imparted into the structure through the control of positional chemistry of different chemical building blocks.

In this presentation, we will illustrate the richness of this emergent field by focusing in mesoporous materials (MM). Mesoporous architectures can be produced through the self-assembly of inorganic nanobuilding blocks in the presence of supramolecular templates. MM can then be decorated by small molecular species, biomolecules, polymers or nanospecies. An amazing variety of chemical behaviors can be programmed into these structures, from tunable catalysis to light guiding or responsiveness to external stimuli. In addition to synthetic and characterization tools, theoretical models and simulations are essential to understand the complexity of the synthesis paths and the final properties. This in-depth knowledge is key to evolve from materials synthesis to ultimate nanosystems design. We will present examples of tunable catalysts, enzyme cascade hosts, intelligent bioscaffolds, remotely activated nanoparticles, chemical-to-optical transducers or perm-selective membranes. A potentially infinite variety of nanosystems with externally controllable behavior is at our disposal, opening the path to design intelligent matter.

SCIENCE, TECHNOLOGY AND SOCIETY LECTURE

Monday, August 20th

Mtro. Leonardo Beltrán

Deputy Secretary for Planning and Energy Transition
Secretariat of Energy, México

Room: Tulum D & E
17:30 - 18:30 hrs

Biography

Leonardo Beltran Rodriguez, Deputy Secretary for Planning and Energy Transition, holds a Master's in Public Administration in International Development from Harvard Kennedy School.

He also holds a Bachelor of Science in Economics from the Instituto Tecnológico Autónomo de México (ITAM), and studied Law at the Faculty of Law at the Universidad Nacional Autónoma de México (UNAM).

From 2005 to 2012, he joined the Secretariat of Energy (SENER), as Director of International Negotiations and Director General of Information and Energy Studies.

He also worked as a consultant for the Inter-American Development Bank, the World Bank, the Organisation for Economic Co-operation and Development and the United Nations Industrial Development Organization.

Before his Presidential appointment as Deputy Secretary for Planning and Energy Transition in December of 2012, he collaborated in the International Affairs coordination division with the campaign and governmental transition team of President Enrique Peña Nieto.

ABSTRACT

MATERIALS FOR THE ENERGY SECTOR

The innovation process to develop new materials within the energy sector and bring these to market, can take at least 10 to 20 years and results very costly. Accelerating and improving this process through international collaboration in research and development (R&D) could result in major breakthroughs for the energy sector.

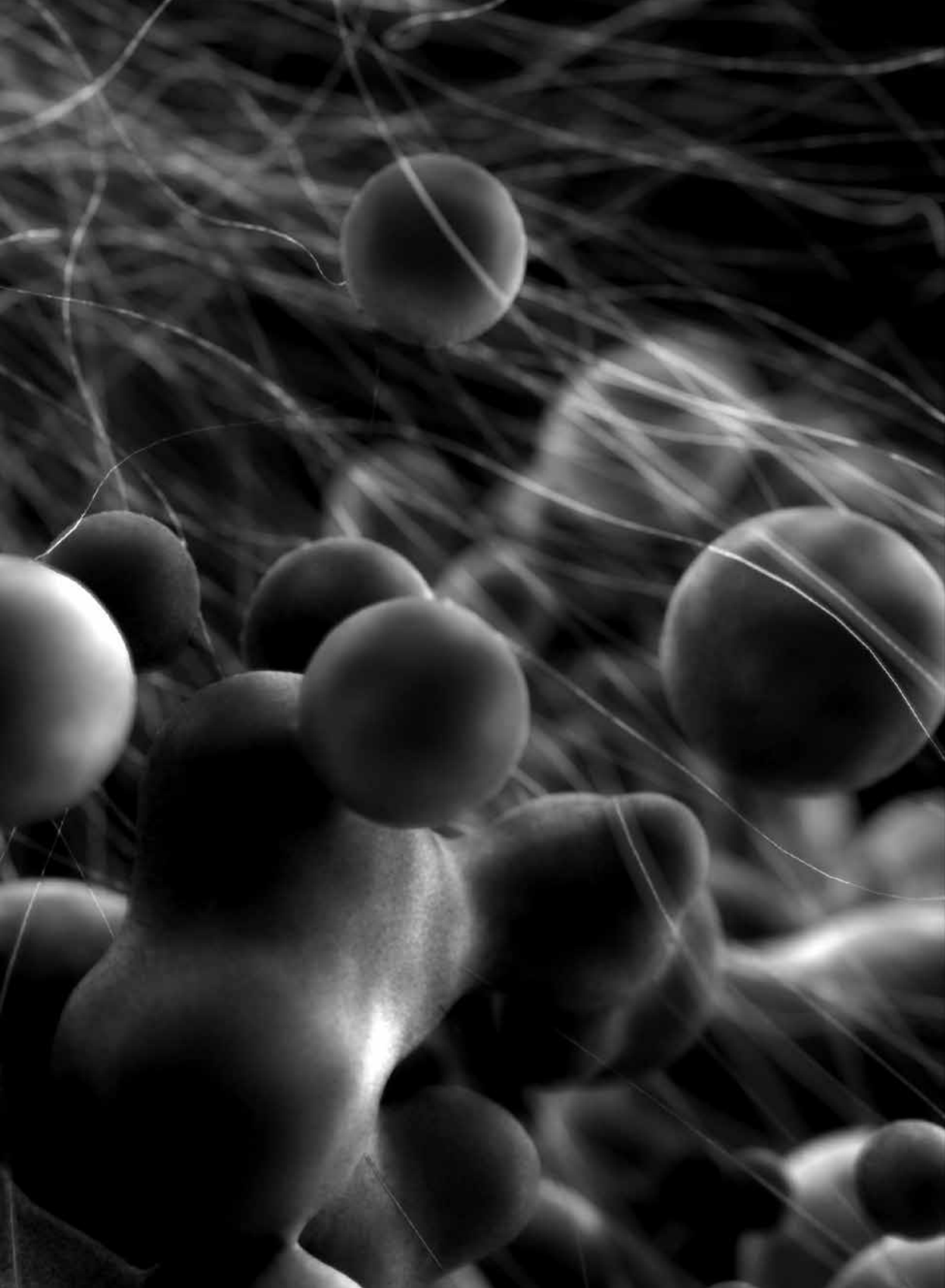
In this sense, Mexico is part of the international Mission Innovation initiative, which aims to "double between 2015 and 2020 public investment in research and technological development of clean energy and encourage the private sector."

As part of this initiative, we work on seven Innovation Challenges, where Mexico leads the "Advanced Discovery of Energy Materials"; which has as an objective to develop a Material Acceleration Platform that allows discovering new, high performance and low-cost materials.

This initiative seeks to significantly reduce the cost and improve the quality, generation, transmission, distribution and use of energy technologies.

The work done under this Challenge will be directed to the development of a fully integrated end-to-end Material Acceleration Platform that will accelerate the discovery of materials throughout the entire process, from low to high technology readiness levels. The focus will be on cutting-edge R&D technologies with a long-term vision towards 2030 and beyond that will lead to automated and autonomous MAPs.

This proposal will benefit all the stages of the innovation process of new clean energy materials and take advantage of the international advances of individual activities.



TUTORIALS

TUTORIAL 1

COMPUTATIONAL DFT METHODS FOR CATALYTIC MATERIALS AND MORE!

Sunday, August 19th / Duration: 6 Hrs

Room: Acapulco

Instructor: **Manuel Ramos**
Universidad Autónoma de Ciudad Juárez, México
E-mail: manuel.ramos@uacj.mx

TUTORIAL 2

DESIGN OF ADVANCED STEELS AND ADVANCED COATING FOR STEELS

Sunday, August 19th / Duration: 4 hours

Room: Vallarta

Instructor: **John Speers**
Colorado School of Mines, USA
E-mail: jspeer@mines.edu

Instructor: **Frank Goodwin**
International Zinc Association, USA
E-mail: fgoodwin@zinc.org

TUTORIAL 3

ELECTRON CRYSTALLOGRAPHY IN TEM: ORIENTATION IMAGING TO STRAIN AND METALS TO ARCHAEOLOGY AT NM SCALE

Sunday, August 19th / Duration: 4.30 hours

Room: México

Instructor: **Stavros Nicolopoulos**
NanoMEGAS SPRL, Belgium
E-mail: Info@nanomegas.com

Instructor: **Partha Pratim Das**
NanoMEGAS SPRL, Belgium
E-mail: partha@nanomegas.com

TUTORIAL 4

HYBRID PEROVSKITE SOLAR CELLS: FUNDAMENTALS TO CELL FABRICATION AND SCALE-UP

Sunday, August 19th / Duration: 5 hours

Room: Tulum H

Instructor: **Matthew Carnie**
College of Engineering, Swansea University, United Kingdom
E-mail: m.j.carnie@swansea.ac.uk

Instructor: **Youmna Mouhamad**
College of Engineering, Swansea University, United Kingdom
E-mail: y.mouhamad@swansea.ac.uk

TUTORIAL 5

MENTORING YOUNG SCIENTISTS: DEVELOPING SURVIVAL SKILLS

Sunday, August 19th / Duration: 6 hours

Room: Maya VI

Instructor: **Federico Rosei**
INRS, Canada
E-mail: rosei@emt.inrs.ca

Instructor: **Olivia Graeve**
UC San Diego, USA
E-mail: ograeve@ucsd.edu

TUTORIAL 6

PROBING NANOMATERIALS IN SPACE OR TIME WITH HIGH SPATIAL AND ENERGY RESOLUTION

Sunday, August 19th / Duration: 6 hours

Room: Maya VII

Instructor: **Christian Kisielowski**
Molecular Foundry, LBNL, USA
E-mail: CFKisielowski@lbnl.gov

Instructor: **Stig Helveg**
Haldor Topsoe A/S, Danemark
E-mail: STH@topsoe.com

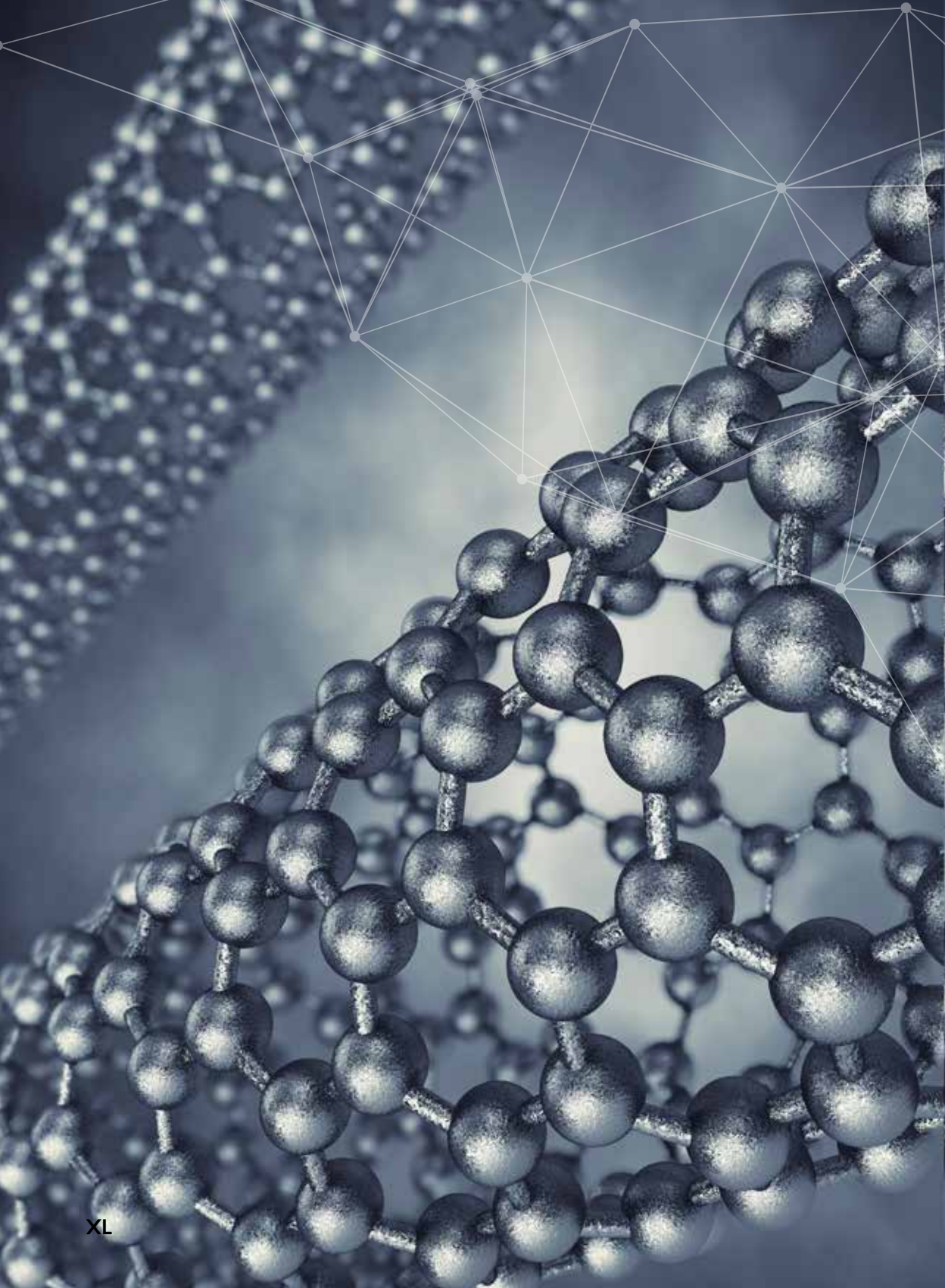
TUTORIAL 7

TEXTURE AND MICROSTRUCTURE ANALYSIS USING ELECTRON BACKSCATTER DIFFRACTION (EBSD)

Sunday, August 19th / Duration: 5.5 hours

Room: Cozumel

Instructor: **Stuart I. Wright**
EDAX, USA
E-mail: stuart.wright@ametek.com


XL

Symposium A1

NANOSTRUCTURED CARBON MATERIALS AND THEIR APPLICATIONS

François Béguin / Poznan University of Technology
Ana Karina Cuentas Gallegos / Universidad Nacional Autonoma de Mexico
Conchi Ania / Centre Nationnal de la Recherche Scientifique (CNRS)
Gleb Yushin / Georgia Institute of Technology

MONDAY, AUGUST 20
ROOM: TULUM C

- **08:30 - 09:00 SA1-O001 Invited talk GRAPHENE FROM COAL CHAR: SYNTHESIS AND APPLICATIONS**
  Gerardine Botte[1]
  [1]Ohio University, Department of Chemical and Biomolecular Engineering, United States.

- **09:00 - 09:15 SA1-O002 CHEMICAL FUNCTIONALIZATION OF GRAPHENE AND BLACK PHOSPHORUS**
  Andreas Hirsch[1]
  [1]Universität Erlangen-Nürnberg, Chemistry, Germany.

- **09:15 - 09:30 SA1-O003 ON THE MECHANISM OF HYDROPHILICITY OF GRAPHENE DOPED WITH NITROGEN**
  Francisco Javier Martinez Farias[1], Erick Ortiz Dimas[1], Luis Rodríguez Morales[1], Jesus Pelayo[1], Alejandro Morales Peñaloza[1], Pablo López Pérez[1], Luis Alberto Hernández Hernández[1], Arturo Hernández Hernández[1], Eduardo Rangel Cortes[2], Emmanuel Vallejo[1], Alfredo Pescador Rojas[1]
  [1]Universidad Autónoma del Estado de Hidalgo, Energetic Systems and Advanced Materials, Mexico. [2]Universidad Autónoma del Estado de México, Energetic Systems and Advanced Materials, Mexico.

- **09:30 - 09:45 SA1-O004 MICROPATTERNING OF NANOGRAPHENE SHEETS GROWN DIRECTLY ON DIELECTRIC SUBSTRATES**
  Jorge Luis Cholula Díaz[1], José Barzola Quiquia[2]
  [1]Tecnológico de Monterrey, School of Engineering and Science, Mexico. [2]University of Leipzig, Felix-Bloch-Institut für Festkörperphysik, Germany.

- **09:45 - 10:15 SA1-O005 Invited Talk THE GRAPHENE INDUSTRY: FROM THE LAB TO THE MARKET**
  Antonio Miramontes[1]
  [1]Graphenemex, CEO, Mexico.

- **10:15 - 10:30 SA1-O006 EXFOLIATION OF GRAPHENE FROM GRAPHITE WITH SUPERCRITICAL WATER, SUPERCRITICAL CO_2 AND SUPERCRITICAL ETHANOL.**
  Rodolfo Morales Ibarra[1], Motonobu Goto[2], Saida Mayela García Montes[1], Antonio Francisco García Loera[1]
  [1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico. [2]Nagoya University, Department of Chemical Engineering, Japan.

- **10:30 - 10:45 SA1-O007 FACILE ULTRASOUND AMINE-GRAPHENE OXIDE FUNCTIONALIZATION AND MATERIALS CAPACITIVE PERFORMANCE**

Salvador Fernández Tavizón[1], Uriel Alejandro Sierra Gomez[1], Edgar Cuara Diaz[1], Jesus Alfonso Mercado[1], Manuel Eduardo Martinez Cartagena[1]
[1]Centro de Investigación en Química Aplicada - CIQA , Laboratorio Nacional de Materiales Grafénicos, Mexico.

- **10:45 - 11:00 SA1-O008 FEW-LAYER GRAPHENE MODIFIED WITH SILICON GROWN ON COPPER FOR LITHIUM ION BATTERY**

Isaias Zeferino Gonzalez[1], Hsien-Chieh Chiu[2], Raynald Gauvin[2], George P. Demopoulos[2], Mario Miki Yoshida[3], Ana María Valenzuela Muñiz[4], Ysmael Verde Gomez[1]
[1]Instituto Tecnológico de Cancún, División de Estudios de Posgrado e Investigación, Mexico. [2]McGill University, Department of Mining and Materials Engineering, Canada. [3]Centro de Investigación en Materiales Avanzados, S.C., Materiales Nanoestructurados, Mexico. [4]Instituto Tecnológico de Cancún, CONACYT- TECNM / Instituto Tecnológico de Cancún, Mexico.

11:00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY II
PROF. YUICHI IKUHARA

- **12:30 - 12:45 SA1-O009 SELF-ASSEMBLED THREE-DIMENSIONAL STRUCTURES BASED ON GRAPHENE OXIDE OR REDUCED GRAPHENE OXIDE**

Alma Daniela Salazar Aguilar[1], Irma C. Galindo Vallarino[1], Gladis Judith Labrada Delgado[2], David Meneses Rodriguez[3,4], Ferdinando Tristán López[1], Sofia Magdalena Vega Diaz[1,5]
[1]Tecnológico Nacional de México/Instituto Tecnológico de Celaya, Departamento de Ingeniería Química, Mexico. [2]Instituto Potosino de Investigación Científica y Tecnológica A.C., División de Materiales Avanzados, Mexico. [3]Cátedras-CONACyT-CINVESTAV Mérida, Mexico. [4]CINVESTAV-Mérida, Departamento de Física Aplicada, Mexico. [5]Cátedras-CONACyT- Instituto Tecnológico de Celaya, Mexico.

- **12:45 - 13:00 SA1-O010 INTERACTION OF POTASSIUM NITRATE WITH GRAPHENE OXIDE: A FIRST PRINCIPLES CALCULATION**

Adrian Montero Rangel[1], Gabriel Ivan Canto Santana[1], Gustavo Dominguez Rodriguez[1], Jorge Alejandro Tapia Gonzalez[2]
[1]Universidad Autónoma de Campeche, CICORR, Mexico. [2]Universidad Autónoma de Yucatán, FIUADY, Mexico.

- **13:00 - 13:15 SA1-O011 NETWORK OF GRAPHENE AUGMENTED CERAMIC NANOFIBERS**

Irina Hussainova[1], Roman Ivanov[1]
[1]Tallinna Tehnikaülikool, Mechanical and Industrial Engineering, Estonia.

- **13:15 - 13:30 SA1-O012 ANTICORROSIVE POLYMER COATINGS BASED ON ACRYLIC/GRAPHENE NANOCOMPOSITES FOR PROTECTION OF STAINLESS STEEL IN MARINE ENVIRONMENTS.**

Jose Manuel Mata Padilla[1], Alma Patricia Ysiwata Rivera[2], Ernesto Hernández Hernández[3], Gregorio Cadenas[4], Carlos Alberto Avila Orta[2], Pablo Gonzalez Morones[2], Arturo Velásquez De Jesús[5], Maria Guadalupe Neira Velázquez[4]
[1]CONACYT-CIQA, Polymer processing, Mexico. [2]Centro de Investigación en Química Aplicada - CIQA, Advanced Materials, Mexico. [3]CONACYT-CIQA, Advanced Materials, Mexico. [4]Centro de Investigación en Química Aplicada - CIQA, Polymer Synthesis, Mexico. [5]Universidad Tecnológico de Coahuila, Nanotechnology, Mexico.

- **13:30 - 14:00 SA1-O013 Invited Talk POROUS CARBON MATERIALS FROM POLYMERIC RESINS USING GEL STABILIZATION METHODS**

Cesar Alfredo Barbero[1], Mariano M. Bruno[1], Diego F. Acevedo[1], Juan Balach[1]
[1]Instituto de Investigaciones en Tecnologias Energeticas y Materiales Avanzados (UNRC-CONICET), Chemistry, Argentina.

- **14:00 - 14:15 SA1-O014 DESIGN OF INTERCONNECTED POROUS CARBON NETWORKS WITH ENHANCED ELECTRICAL CONDUCTIVITY**

Ana Casanova[1], Alicia Gomis Berenguer[1], M Dolores Calzada[2], Conchi O. Ania[1]
[1]CNRS, CEMHTI-HT, France. [2]Universidad de Córdoba, Laboratorio de Innovación en Plasmas (LIPs), Spain.

14:00 – 16:00 Lunch time

- **16:00 - 16:15 SA1-O015 DEVELOPMENT OF MULTIFUNCTIONAL METAL-ION BATTERIES BASED ON 1D MATERIALS**

Kostiantyn Turcheniuk[1], Xiaolei Ren[1], Fujia Wang[1], Gleb Yushin[1]
[1]Georgia Institute of Technology, Materials Science and Engineering, United States.

- **16:15 - 16:30 SA1-O016 NANOPOROUS CARBONS ELECTRODES: PHOTOELECTROCHEMICAL RESPONSE**

Alicia Gomis Berenguer[1], Conchi O. Ania[1]
[1]CNRS, POR2E group, CEMHTI-HT, Orléans, France.

- **16:30 - 17:00 SA1-O017 Invited Talk ATOMISTIC SIMULATIONS OF ORDERED AND DISORDERED**

CARBONS: "MIMICKING", "TARGETING" AND "IMAGING"

Roland Pelleng[1,2]

[1]CNRS, MSE2 / CNRS-MIT-AMU, France. [2]Massachusetts Institute of Technology, MITEI / CEE, United States.

▸ **17:00 - 17:30 SA1-O018 Invited Talk ENGINEERED CARBON MATERIALS TO DIMINISH ENVIRONMENTAL PROBLEMS IN WATER**

Jose Rene Rangel Mendez[1]

[1]Instituto Potosino de Investigación Científica y Tecnológica A.C., Environmental Sciences, Mexico.

■ **17:30 - 17:45 SA1-O019 COMPARATIVE OF THE ADSORPTION CAPACITY OF GRAPHENE NANOSHEETS FOR TEXTILE DYES REMOVAL WITH DIFFERENT WAVELENGTH.**

Barbara Souza Damasceno[1], Marcos Gomes Ghislandi[1], Lilian Kássia de Assis[1], Nathália Nogueira[1]

[1]Universidade Federal Rural de Pernambuco, UACSA, Brazil.

■ **17:45 - 18:00 SA1-O020 NOVEL AND SIMPLE ONE-POT METHOD FOR THE SYNTHESIS OF TITANIUM MODIFIED-CMK-3 APPLIED IN OXIDATIVE DESULFURIZATION OF REFRACTORY ORGANOSULFUR COMPOUNDS**

Lorena Rivoira[1], Brenda Ledesma[1], Juliana Maria Juarez[1], Andrea Beltramone[1]

[1]Universidad Tecnológica Nacional, Argentina.

● **17:30 -18:30 Science, Technology and Society Lecture**

MONDAY, AUGUST 20
ROOM: TERRACE

18:30 -20:30 POSTER SESSION & COFFEE BREAK

■ **SA1-P001 CENTER NITROGEN-VACANCY IN DIAMOND AS A SOLID STATE QUBIT**

César Iván Huerta Pérez[1], Raúl Riera Aroche[1]

[1]Universidad de Sonora, Departamento de Investigación en Física, Mexico.

■ **SA1-P002 STUDY OF ADSORPTION OF CO_2 AND CO IN A SURFACE FORMED BY GRAPHENE LAYER AND HEXAGONAL SEMIFULLERENE THROUGH LITHIUM, PLATINUM AND TITANIUM.**

Nadxiieli Delgado Jimenez[1], Luis Fernando Magana[1], Monica Araceli Canales[1]

[1]Instituto de Física - Universidad Nacional Autónoma de México, Solid State, Mexico.

■ **SA1-P003 MOLECULAR DYNAMICS STUDY ON HYDROGEN DISSOCIATION IN Pd-Pt CORE SHELLS SUPPORTED ON NITROGEN DOPED GRAPHENE**

Emmanuel Vallejo[1], Eduardo Rangel Cortes[1], Francisco Martínez Farías[1], Pablo Antonio López Pérez[1], Arturo Hernández Hernández[1], Edgar Azael Martínez Domínguez[1], Martín Alberto Coca Ordoñez[1], David Jadiel Pérez Valentín[1], Ana Brenda Tapia Hernández[1]

[1]Universidad Autónoma del Estado de Hidalgo, Escuela Superior de Apan, Mexico.

■ **SA1-P004 CONTROLLING CARBON AEROGEL NANOSTRUCTURE FOR TAILORED PROPERTIES**

Maria Canal Rodríguez[1], Ana Arenillas[1], Miguel Montes Morán[1], J. Angel Menéndez[1]

[1]Consejo Superior de Investigaciones Científicas, MCAT, Spain.

■ **SA1-P005 HYDROGEN STORAGE ON LITHIUM DECORATED ZEOLITE TEMPLATED CARBON, DFT STUDY**

Frank Isidro Ortega[1], Juan Horacio Pacheco Sanchez[1]

[1]Instituto Tecnológico de Toluca, DEPI, Mexico.

■ **SA1-P006 ELECTRONIC PROPERTIES OF AN ENDOHEDRAL HYDROGEN IMPURITY AT EXTEME CONDITIONS**

Cesar Martinez Flores[1], Remigio Cabrera Trujillo[1]

[1]Instituto de Ciencias Físicas, UNAM, Fisica Atomica Molecular y Optica Experimentales, Mexico.

■ **SA1-P007 ON POROUS STRUCTURE OF REDUCED GRAPHENE OXIDE AEROGEL**

Yurii Volfkovich[1], Anatoliy Lobach[2], Nataliya Spitsyna[2], Sergey Baskakov[2], Vladimir Sosenkin[1], Alexey Rychagov[1], Evgeniy Kabachkov[2], Aleksandrs Sakars[3], Alexandre Michtchenko[4], Yury Shulga[5]

[1]A.N.Frumkin Institute of Physical Chemistry and Electrochemistry, Russian Academy of Sciences, Russia. [2]Institute of Problems of Chemical Physics, Russian Academy of Sciences, Russia. [3]MPM&P Researcn Inc, Canada. [4]Instituto Politecnico Nacional, IPN - SEPI-ESIME-Zacatenco, Mexico. [5]Institute of Problems of Chemical Physics, Russian Academy of Sciences. National University of Science and Technology MISIS. Russia, Russia.

■ **SA1-P008 SYNTHESIS AND CHARACTERIZATION OF GRAPHENE OXIDE FOR APPLICATIONS IN ORGANIC SOLAR CELLS**

Nestor Efren Mendez Lozano[1], Alejandro Manzano Ramirez[2], Scarlett Ayala Villalobos[3], Alonso Valdez[4], Carlos Gonzalez Gutierrez[1]

[1]Universidad del Valle de México A.C., Ingenieria, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, CINVESTAV Unidad Queretaro, Mexico. [3]Universidad del Valle de México A.C., Ingenieria Biomedica, Mexico. [4]Universidad del Valle de México A.C., QFBT, Mexico.

■ **SA1-P009 FIRST PRINCIPLES CALCULATIONS OF ADSORPTION OF CHLORINATED ORGANIC COMPOUNDS ON SINGLE CARBON NANOTUBES**

Dante Hernández Andrade[1], José de Jesús Pelayo Cárdenas[1], Ariadna Sanchez Castillo[1]

[1]Universidad Autónoma del Estado de Hidalgo, Escuela Superior de Apan, Mexico.

■ **SA1-P010 SOLVENT-FREE COVALENT FUNCTIONALIZATION OF GRAPHENE OXIDE PAPER WITH AMINES**

Diego Armando Acevedo Guzmán[1], Erika Natalia Alzate Carvajal[1], Víctor Alfonso García Ramírez[1], Elena V. Basiuk[1]

[1]Universidad Nacional Autónoma de México, Materials and Nanotechnology, Mexico.

■ **SA1-P011 SYNTHESIS AND CHARACTERIZATION OF ACTIVATED CARBON OBTAINED FROM THE EPICARP OF COFFEE BY THE PHYSICAL METHOD**

José Daniel Guzmán Ríos[1], Alfredo Silverio Ordeñana Martinez[2], Roger Castillo Palomera[1], Bianca Yadira Pérez Sariñana[1], Alfredo Olea Rogel[1]

[1]Universidad Politécnica de Chiapas, Maestria en Energias Renovables, Mexico. [2]Universidad Popular Autonóma del Estado de Puebla, Departamento de Ciencias Biológicas Facultad de Ingeniería Ambiental, Mexico.

■ **SA1-P012 GRAPHENE ENHANCED RAMAN SCATTERING EFFECT OF RHB ADSORBED ON PHOTO REDUCED GRAPHENE OXIDE THIN FILMS**

Francisco Berrellez Reyes[1], Monica Acosta Elias[2], Susana Alvarez Garcia[2]

[1]Universidad de Sonora, Programa de Doctorado en Ciencias (Física), Mexico. [2]Universidad de Sonora, Departamento de Investigacion en Fisica, Mexico.

■ **SA1-P013 SENSOR OF GRAPHENE BASED NANOINK TO BIOMECHANICS APPLICATIONS**

Geselle García Beltrán[1], Christopher René Torres San Miguel[1], Martín Daniel Trejo Valdéz[2]

[1]Instituto Politecnico Nacional, IPN - SEPI-ESIME-Zacatenco, Mecánica, Mexico. [2]Instituto Politécnico Nacional - IPN - ESIQIE, Materiales, Mexico.

■ **SA1-P014 ON THE FINAL STEP FOR LARGER ENDOHEDRAL METALLOFULLERENES: THEORETICAL CHARACTERIZATION OF M@C50 SPECIES**

Alan Joel Miralrio Pineda[1], Luis Enrique Sansores[2]

[1]Universidad Nacional Autónoma de México, Departamento de Física y Química Teórica, Facultad de Química, Mexico. [2]Universidad Nacional Autónoma de México, Departamento de Materiales de Baja Dimensionalidad, Instituto de Investigaciones en Materiales., Mexico.

■ **SA1-P015 GRAPHENE-SILVER NANOPARTICLES FUNCTIONALIZATION: GREEN SYNTHESIS WITH BURSERA MICROPHYLLA EXTRACT**

Gerardo Calderón Ayala[1,2]

[1]Universidad de Sonora, Investigación en Física, Mexico. [2]Universidad Estatal de Sonora, Mexico.

■ **SA1-P016 SELF-ASSEMBLED PARTICLES USED TO CONTROL GRAPHENE OXIDE AEROGEL STRUCTURES**

José Iván Rodríguez Rodríguez[1], Alma Daniela Salazar Aguilar[1], Gladis Judith Labrada Delgado[2], David Meneses Rodriguez[3,4], Ferdinando Tristán López[1], Sofia Magdalena Vega Diaz[1,5]

[1]Tecnológico Nacional de México/Instituto Tecnológico de Celaya, Departamento de Ingeniería Química, Mexico. [2]Instituto Potosino de Investigación Científica y Tecnológica A.C., División de Materiales Avanzados, Mexico. [3]Cátedras-CONACyT-CINVESTAV Mérida, Mexico. [4]CINVESTAV-Mérida, Departamento de Física Aplicada, Mexico. [5]Cátedras-CONACyT- Instituto Tecnológico de Celaya, Mexico.

■ **SA1-P017 DECORATING GRAPHENE OXIDE SURFACES WITH EUROPIUM, PLATINUM AND RUTHENYUM TO ENHANCE THEIR FOTOLUMINISCENT AND CATALYTIC PROPERTIES**

Verónica Janette Cedeño Garcidueñas[1], Ricardo Rangel Segura[1], Pascual Bartolo Pérez[2], Oscar Edel Contreras López[3], Rafael García Gutiérrez[4], Antonio Ramos Carrazco[4], Dainet Berman Mendoza[4], Jorge Arturo Montes Gutiérrez[4]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Posgrado de Ingeniería Química, Mexico. [2]CINVESTAV-Mérida, Física Aplicada, Mexico. [3]Centro de Nanociencias y Nanotecnología CNyN-UNAM,

Nanoestructuras, Mexico. [4]Universidad de Sonora, Investigación en Física, Mexico.

- **SA1-P018 ELECTRICAL TRANSPORT OF COMPOSITES FORMED BY ALIGNED MULTIPLE WALL CARBON NANOTUBES IMMERSED IN AN INSULATING POLYMER MATRIX**

Asuncion Zeferino Martínez Elena[1,2], Eloy Ramírez García[3], Gerardo Ortega Cervantez[4], Gabriela Rueda Morales[4], Jaime Ortiz López[4]

[1]Escuela Superior de Física y Matemáticas IPN, Física de los Materiales, Mexico. [2]Esime zacatenco, Comunicaciones y Electrónica, Mexico. [3]Esime zacatenco, Telecomunicaciones, Mexico. [4]Escuela Superior de Física y Matemáticas IPN, Física, Mexico.

- **SA1-P019 ADSORPTION OF CO_2 AND OCCO ON GRAPHENE SURFACE WITH DEFECTS**

Alipio Calles Martinez[1], Roxana Mitzayè del Castillo Vázquez[1], Raúl Arturo Espejel Morales[1], Héctor Hernández Coronado[1]

[1]Facultad de Ciencias, UNAM, Physics, Mexico

- **SA1-P020 REDUCED GRAPHENE OXIDE/TITANIUM DIOXIDE COMPOSITE AS ANODE FOR Li-ion BATTERIES**

Guillermo Santamaria Juarez[1], Estela Gomez Barojas[1], Enrique Quiroga González[2], Enrique Sánchez Mora[2], Mildred Quintana[3], Juana Deisy Santamaria Juarez[4]

[1]Benemerita Universidad Autonoma de Puebla, Centro en investigación en Dispositivos Semiconductores, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Institute of Physics, Mexico. [3]Universidad Autónoma de San Luis Potosí, Departamneto de Fisica, Mexico. [4]Benemerita Universidad Autonoma de Puebla, School of Chemical Engineering, Mexico.

- **SA1-P021 SYNTHESIS OF MESOPOROUS CARBON XEROGELS WITH CUSTOMIZED POROSITY FOR PROTEIN SEPARATION**

Luis Adrián Ramírez Montoya[1], Ana Arenillas[1], J. Ángel Menéndez[1], Miguel Montes Morán[1]

[1]Instituto Nacional del Carbón (INCAR-CSIC), Procesos químicos en energía y medio ambiente, Spain.

- **SA1-P022 ATMOSPHERE DEPENDENT PROPERTIES OF SU-8 PHOTORESIST PYROLYTIC CARBON**

Oscar Pilloni[1], Axel Ricardo Rodriguez Gomez[2], Sveidy Vaca[1], Laura Natalia Serkovic Loli[3], Laura Oropeza Ramos[4]

[1]Universidad Nacional Autónoma de México, Programa de Maestria y Doctorado en Ingenieria, Mexico. [2]Universidad Nacional Autónoma de México, Facultad de Ciencias, Mexico. [3]Universidad Nacional Autónoma de México, Instituto de Fisica, Mexico. [4]Universidad Nacional Autónoma de México, Facultad de Ingenieria, Mexico.

- **SA1-P023 AB-INITIO STUDY OF THE MAGNETIC AND ELECTRONIC PROPERTIES IN A GRAPHENE (5,5)+ SEMIFULLERENE SURFACE (C_{30}).**

Monica Canales Lizaola[1,2], Juan Manuel Ramirez de Arellano Nino Rincon[3], Juan Salvador Arellano[2], Luis Fernando Magana[1]

[1]Instituto de Física - Universidad Nacional Autónoma de México, Estado Sólido, Mexico. [2]Universidad Autónoma Metropolitana, Azcapotzalco, Ciencias Básicas, Mexico. [3]Instituto Tecnológico y de Estudios Superiores de Monterey, Escuela de Ingeniería y Ciencias, Mexico.

- **SA1-P024 GAP VARIATION FOR 2D GRAPHENE AND HEXAGONAL BORON NITRIDE HETEROSTRUCTURES**

Raúl Mauricio Torres Rojas[1], David Armando Contreras Solorio[1], Luis Hernández[2], Carlos Iván Cabrera Perdomo[1], Agustín Enciso[1]

[1]Universidad Autónoma de Zacatecas, Unidad Académica de Física, Mexico. [2]Universidad de La Habana, Facultad de Física, Cuba.

- **SA1-P025 CARBON STRUCTURES: AS GOOD ALTERNATIVES IN SURFACE-ENHANCED RAMAN SPECTROSCOPY**

Claudia Bautista Flores[1], Roberto Sato[1], Elsi Violeta Mejía Uriarte[1], Doroteo Mendoza[2], Stephen Muhl[3]

[1]Universidad Nacional Autónoma de México, ICAT, Mexico. [2]Instituto de Investigaciones en Materiales, Materia Condensada y Criogenia, Mexico. [3]Instituto de Investigaciones en Materiales, Materiales de baja dimensionalidad, Mexico.

- **SA1-P026 FABRICATION OF GRAPHENE ELECTRODES BASED ON CARBON-MEMS TECHNOLOGY**

Sveidy Vaca[1], Axel Ricardo Rodríguez Gomez[2], Oscar Pilloni[1], Laura Natalia Serkovic Loli[3], Laura Oropeza Ramos[4]

[1]Universidad Nacional Autónoma de México, Programa de Maestria y Doctorado en Ingenieria, Mexico. [2]Universidad Nacional Autónoma de México, Facultad de Ciencias, Mexico. [3]Universidad Nacional Autónoma de México, Instituto de Fisica, Mexico. [4]Universidad Nacional Autónoma de México, Facultad de Ingenieria, Mexico.

- **SA1-P027 MORPHOLOGY AND MICROSTRUCTURE EFFECTS ON THE MAGNETOTRANSPORT CHARACTERISTICS OF CARBON NANOWALLS**

OBTAINED IN DIFFERENT PARAMETERS OF SYNTHESIS BY PECVD

Mijaela Acosta Gentoiu[1], Marius Volmer[2], Sorin Vizireanu[3], Stefan Antohe[4], Gheorghe Dinescu[3], Rene Betancourt Riera[5], Raul Riera Aroche[1]

[1]Universidad de Sonora, Departamento de Investigación en Física, Mexico. [2]Transilvania University, Transilvania University, Rumania. [3]National Institute for Lasers, Plasma and Radiation Physics, National Institute for Lasers, Plasma and Radiation Physics, Rumania. [4]University of Bucharest, Faculty of Physics, Rumania. [5]Instituto Tecnológico de Sonora, Instituto Tecnológico de Hermosillo, Mexico.

- **SA1-P028 MOLECULAR MODELING TO SUPPORT PALLADIUM IN AN ALLOTROPIC CARBON SYSTEM ATTACKED BY OXYGEN**

Maria Esther Cedano Alvaro[1], Juan Horacio Pacheco Sánchez[1]

[1]Instituto Tecnológico de Toluca, División de estudios de investigación y posgrado, Mexico.

- **SA1-P029 OPTICAL PROPERTIES OF AMINE FUNCTIONALIZED GRAPHENE OXIDE AND NANODIAMONDS**

Janna Douda[1], Xochitl Andrea Hernandez Contreras[1], César Raymundo González Vargas[2], Jesus Fuentes Garcia[1]

[1]Instituto Politécnico Nacional - IPN, UPIITA, Mexico. [2]Universidad TecMilenio, Mexico.

- **SA1-P030 SYNTHESIS OF N-DOPED GRAPHENE QUANTUM DOTS BY PULSED LASER ABLATION IN LIQUID MEDIUM AND ITS APPLICATION AS FLUORESCENT SENSOR**

Daniel Hernández[1], Selene Sepulveda[1], Ilse Cristal Novoa de Leon[1]

[1]Universidad Autónoma de Nuevo León, FIME, Mexico.

- **SA1-P031 EFFICIENCY OF GRAPHENE OXIDE PHOTOREDUCTION USING VARIOUS LIGHT SOURCES**

Oscar Rafael Gomez Pacheco[1], Jaime Ortiz[2]

[1]Instituto Politécnico Nacional - IPN, ESFM-Physics Dept., Mexico. [2]Instituto Politécnico Nacional - IPN, ESFM- Physics Dept., Mexico.

- **SA1-P032 CHARACTERIZATION OF LASER SCRIBED GRAPHENE SENSORS AND ITS APPLICATION FOR ELECTROCHEMICAL DETECTION.**

Eider Aparicio Martinez[1], Rocío B Domínguez[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Ingenieria y química de materiales, Mexico.

- **SA1-P033 STUDY OF STORAGE OF HYDROGEN IN THE MATERIAL CARBON BCC-C6**

Cesar Cab[1], Raúl Arias[1], Alejandro Tapia[1]

[1]Universidad Autónoma de Yucatán, Ingeniería Física, Mexico.

- **SA1-P034 SYNTHESIS AND CHARACTERIZATION OF CARBON QUANTUM DOTS FROM REBAUDIANA-STEVIA**

José Antonio de Jesús Peña Leal[1], Juan Francisco Luna Martínez[1], Nasser Mohamed Noriega[1], Selene Sepulveda[1], Ilse Cristal Novoa de Leon[1], Rodolfo López González[2]

[1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico. [2]Universidad Politécnica de Apodaca, Ingeniería Aeronáutica, Mexico.

- **SA1-P035 COMPOSITE MATERIALS WITH GRAPHENIC MATERIALS BY EXTRUSION FOR 3D PRINTING**

Ana Lilia Martínez Borja[1], Leonardo Yudiel Hernandez Resandiz[1], José de Jesús Pérez Bueno[1], Maria Luisa Mendoza Lopez[2]

[1]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Direccion de Ciencia, Mexico. [2]Instituto Tecnológico de Querétaro, Metal Mecánica, Mexico.

- **SA1-P036 CHARACTERZATION AND PROPERTIES OF METAL MATRIX NANOCOMPOSITE Cu-RGO**

Sergio Enriquez[1], Juan Mendez[1], Victor Hugo Castrejon[1]

[1]Tecnológico de Estudios Superiores de Jocotitlán, Ingeniería en Materiales, Mexico.

- **SA1-P037 CHARACTERZATION AND PROPERTIES OF THIN FILMS RGO IN SILICON**

Alejandra Daniela Mercado[1], Juan Mendez[1], Victor Hugo Castrejón[1]

[1]Tecnológico de Estudios Superiores de Jocotitlán, Ingeniería en materiales, Mexico.

- **SA1-P038 MICROWAVE SYNTHESIS OF CARBON QUANTUM DOTS FOR METAL ION SENSORS**

Aruna Devi Rasu Chettiar[1], Latha Marasamy[1], Vivechana Agarwal[1]

[1]Universidad Autónoma del Estado de Morelos, CIICAp, Mexico.

- **SA1-P039 NITROGEN DOPED GRAPHENE NANOPARTICLES-POLYANILINE (NGNPs-PANI) COMPOSITES COATED OPTICAL FIBER FOR pH SENSING**

Latha Marasamy[1], Aruna Devi Rasu Chettiar[1], Jesus Castrellon Uribe[1], Vivechana Agarwal[1]

[1]Universidad Autónoma del Estado de Morelos, CIICAp, Mexico.

- **SA1-P040 OPTICAL PROPERTIES OF ZINC OXIDE NANOPARTICLES EMBEDDED IN GRAPHENE OXIDE GROWING BY HWWCVD METHOD.**

  Aaron Israel Diaz Cano[1], Yosemik Arjuna León Nataret[1], Edith Bravo González[1], Jesús Antonio Fuentes García[1]

  [1]Instituto Politécnico Nacional - IPN, SEPI UPIITA, Mexico.

- **SA1-P041 OPTIMIZATION AND CHARACTERIZATION OF REDUCED GRAPHENE OXIDE INK FOR THIN FILM MANUFACTURING.**

  Rocio Martinez[1], Geonel Rodríguez Gattorno[1], Miguel Ruiz Gómez[2], David Meneses Rodriguez[2]

  [1]CINVESTAV-Mérida, Física Aplicada, Mexico. [2]Cátedras-CONACyT-CINVESTAV Mérida, Física Aplicada, Mexico.

- **SA1-P042 NANO-STRUCTURES OF Pt-Ni SUPPORTED ON GRAPHENE AND THEIR PERFORMANCE ON THE OXYGEN REDUCTION REACTION**

  Esther Torres Santillan[1], Oscar Rojas Valencia[1], Selene Irais Capula Colindres[2], Gerardo Teran Mendez[3], Jesus Godinez Salcedo[4]

  [1]Instituto Politécnico Nacional - IPN, Basic Formation Department, Mexico. [2]Instituto Politécnico Nacional - IPN, Computation Investigation Center, Mexico. [3]Instituto Politécnico Nacional - IPN, Industrial Chemical Engineering, Mexico. [4]Instituto Politécnico Nacional - IPN, Metalurgical Engineering, Mexico.

- **SA1-P043 SILICONE RUBBER COMPOSITE WITH GRAPHENE**

  José Alfredo Soriano[1], Gabriela L. Rueda Morales[1], Hugo Martínez Gutiérrez[2], Gerardo Ortega Cervantez[1], Jaime Ortiz López[1]

  [1]Instituto Politécnico Nacional - IPN, Solid state, Mexico. [2]Instituto Politécnico Nacional - IPN, N.A., Mexico.

- **SA1-P044 GATE-TUNABLE PHOTODETECTOR AND AMBIPOLAR TRANSISTOR IN GRAPHENE/$MoSe_2$ BARRISTOR**

  Gwangtaek Oh[1], Ji Hoon Jeon[1], Seoyul Lim[1], Yeong Hwan Ahn[2], Bae Ho Park[1]

  [1]Konkuk University, physics, Korea. [2]Ajou University, physics, Korea.

- **SA1-P045 SYNTHESIS OF CARBON NANO ONIONS DOPED WITH Fe AND N FOR APPLICATIONS IN SUPER CAPACITORS**

  Eduardo Tovar Martínez[1], Jorge Valentin Cabrera Salazar[2], Roman Lopez Sandoval[2], Marisol Reyes Reyes[3]

  [1]Instituto Potosino de Investigación Científica y Tecnológica A.C., División de Materiales Avanzados, Mexico. [2]Instituto Potosino de Investigación Científica y Tecnológica, División de Materiales Avanzados, Mexico. [3]Universidad Autónoma de San Luis Potosí, IICO, Mexico.

- **SA1-P046 RAMAN SCATTERING AMPLIFICATION OF THE GRAPHENE/GOLD NANOPARTICLES SUBSTRATES**

  Maricela Santana Vázquez[1], Octavio Estevez[1], Laura Natalia Serkovic Loli[1], Cristina Zorrilla[1], Raúl Herrera[1]

  [1]Instituto de Física - Universidad Nacional Autónoma de México, Materia Condensada, Mexico.

- **SA1-P047 FÖRSTER RESONANCE ENERGY TRANSFER IN CARBON DOTS-DYES AND CARBON DOTS-NANOPARTICLES ASSEMBLIES**

  Roberto Daniel Sotolongo García[1], Manuel Alatorre Meda[1], Georgina Pina Luis[1]

  [1]Instituto Tecnológico de Tijuana, Centro de Graduados e Investigación en Química, Mexico.

- **SA1-P048 SYNTHESIS AND CHARACTERIZATION OF NANOCOMPOSITES OF Fe_3O_4-C**

  Jorge Valentín Cabrera Salazar[1], Eduardo Tovar Martínez[1], Román López Sandoval[1], Marisol Reyes Reyes[2]

  [1]Instituto Potosino de Investigación Científica y Tecnológica A.C., División de Materiales Avanzados, Mexico. [2]Universidad Autónoma de San Luis Potosí, Instituto de Investigacion en Comunicacion Optica, Mexico.

- **SA1-P049 Mo-Co NANOPARTICLES SUPPORTED IN GRAPHENE APPLIED TO THE VISCOSITY REDUCTION PROCESSES OF EXTRA HEAVY CRUDE OIL**

  Ezequiel Villagarcía Chávez[1], Emanuel Torres Labra[1], Esther Torres Santillan[1], Selene Irais Capula Colindres[2]

  [1]Instituto Politécnico Nacional - IPN, Basic Science Department, Mexico. [2]Instituto Politécnico Nacional - IPN, Computation Investigation Center, Mexico.

- **SA1-P050 GRAPHENE OXIDE SUPPORTED STAR-LIKE GOLD NANOPARTICLES AS SERS SUBSTRATE FOR LABEL-FREE THERAPEUTIC DRUG MONITORING OF PACLITAXEL AND CYCLOPHOSPHAMIDE IN BLOOD PLASMA**

  Sandeep Panikar[1,2], Elder de la Rosa Cruz[3], Tanya Amanda Camacho[1]

  [1]Cátedra CONACYT-CIATEJ, Biomedical and Pharmaceutics, Mexico. [2]Centro de Investigaciones en Optica, Nanophotonics and Advanced

Material Group, Mexico. [3]Centro de Investigaciones en Optica, Nanophotonics and Advanced Materials Group, Mexico.

■ **SA1-P051 COMPARATIVE STUDY OF FREESTANDING GRAPHENE OXIDE FILMS PREPARED BY DISPERSION CASTING AND VACUUM FILTRATION**

Estefania Rosario Silva Osuna[1], Roque Sánchez Salas[2], Andrés Castro Beltrán[1], Rodolfo Cruz Silva[3,4], Aaron Morelos Gomez[3], Mauricio Terrones[4,5], Morinobu Endo[3,4]

[1]Universidad Autónoma de Sinaloa, Facultad de Ingeniería, Mexico. [2]Instituto Potosino de Investigación Científica y Tecnológica, Dapartamento de materiales avanzados, Mexico. [3]Shinshu University, Global Aqua Innovation Center, Japan. [4]Shinshu University, Institute of Carbon Science and Technology, Japan. [5]Penn State University, Department of Physics, Chemistry, Materials Science and Engineering, Center for 2-Dimensional and Layered Materials and Center for Atomically Thin Multifunctional Materials (ATOMIC), United States.

■ **SA1-P052 STRUCTURAL AND PHOTOLUMINESCENT PROPERTIES OF CARBON DOTS OBTAINED BY HYDROTHERMAL METHOD**

Nikte Yolotzin Martinez Palma[1], Giovanni García Domínguez[2], Joan Reyes Miranda[3], Erasto Vergara Hernandez[4], Leticia Flores Alatorre Hernández[1], Ali Antonio García Barrera[1], Aristeo Garrido Hernandez[1]

[1]Universidad Tecnológica de Tecamac, Biotecnología, Mexico. [2]Centro de Investigación e Innovación Tecnológica, Posgrado, Mexico. [3]Universidad Autónoma Metropolitana, Metalurgia, Mexico. [4]Instituto Politécnico Nacional - IPN, Ingenieria, Mexico.

■ **SA1-P053 CARBONS OBTAINED FROM MEXICAN AGROINDUSTRIAL BIOMASS AS ELECTRODE MATERIALS FOR SUPERCAPACITOR CELLS**

Ana Karina Cuentas Gallegos[1], Diana Cristina Martínez Casillas[1], Diego Ramon Lobato Peralta[1], Ivonne Alonso Lemus[2], Víctor Hugo Ramos Sanchez[3], Heidi Villafán Vidales[1], Camilo Arancibia Bulnes[1], Alejandro Ayala Cortes[1]

[1]Universidad Nacional Autónoma de México, Instituto de Energías Renovables, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Mexico. [3]Universidad Autónoma de Chihuahua, Facultad de Ciencias Químicas, Mexico.

TUESDAY, AUGUST 21
ROOM: TULUM C

▸ **08:30 - 09:00 SA1-O021 Invited Talk ADVANCED MICROPORE ELECTRIC DOUBLE LAYER THEORY FOR PREDICTING SALT STORAGE AND ION SELECTIVITY IN CAPACITIVE DEIONIZATION**

Matthew Suss[1]

[1]Technion - Israel Institute of Technology, Mechanical Engineering, Israel.

■ **09:00 - 09:15 SA1-O022 ALL-CARBON SUPERCAPACITOR, FULLERENE-GRAFTED 3D GRAPHENE AS ELECTRICAL ENERGY STORAGE MATERIAL**

Maira R Ceron[1], Tuan A. Pham[1], Patrick Campbell[1], Vedasri Vedharathinam[1], Brandon Wood[1], Juergen Biener[1], Monika Biener[1]

[1]Lawrence Livrermore National Laboratory, Physical and Life Sciences, United States.

▸ **09:15 - 09:45 SA1-O023 Invited Talk REALISTIC MOLECULAR MODEL OF KEROGEN NANOSTRUCTURE IN GAS SHALES: HYDROCARBON ADSORPTION AND TRANSPORT**

Benoit Coasne[1]

[1]CNRS, Laboratoire Interdisciplinaire de Physique, France.

▸ **09:45 - 10:15 SA1-O024 Invited Talk TAILORING METALLOPORPHYRINS AND METALLOPHTHALOCYANINES REDOX POTENTIALS VIA AXIAL LIGATION TO CARBON NANOTUBES TO OPTIMIZE THEIR ELECTROCATALYTIC ACTIVITY FOR REACTIONS RELEVANT TO ENERGY CONVERSION**

Jose Zagal[1]

[1]Universidad de Santiago de Chile, Department of Chemistry of Materials, Chile.

■ **10:15 - 10:30 SA1-O025 SURFACE MODIFICATION OF CARBON FELTS AND ITS IMPACT ON PDNPS FOR ELECTROCHEMICAL HYDROGENATION OF BENZALDEHYDE**

Abhi Karkamkar[1]

[1]Pacific Northwest National Laboratory, Materials Science, United States.

■ **10:30 - 10:45 SA1-O026 CARBON NITRIDE AS NON-ENZYMATIC ELECTROCHEMICAL HYDROGEN PEROXIDE SENSOR TO DETECT GLUCOSE LEVELS**

Salvador Fernandez Tavizon[1], Edgar Cuara Diaz[1], Jesus Alfonso Mercado Silva[1], Manuel Eduardo Martinez Cartagena[1], Uriel Alejandro Sierra Gomez[1]

[1]Centro de Investigación en Química Aplicada - CIQA , Laboratorio Nacional de Materiales Grafénicos, Mexico.

■ **10:45 - 11:00 SA1-O027 THEORETICAL STUDY OF GRAPHYNE-Γ DOPED WITH N ATOMS: THE QUEST FOR NOVEL CATALYTIC MATERIALS**

Christian Alejandro Celaya Lopez[1], Jesus Muñiz[2,3], Luis Enrique Sansores Cuevas[1,4]

[1]Instituto de Investigaciones en Materiales, Materiales de baja dimensionalidad, Mexico. [2]Instituto de Energías Renovables Universidad Nacional Autónoma de México, Mexico. [3]Instituto de Energías Renovables Universidad Nacional Autónoma de México, nanomateriales y nanotecnología, Mexico. [4]Industria privada, Mexico.

11:00 -11:30 COFFEE BREAK

11:30 -12:30 PLENARY III
DR. AMANDA S. BARNARD

■ **12:30 - 12:45 SA1-O028 HEAVY METAL SENSING USING FLUORESCENT CARBON DOTS**

Farah Noun[1], Jun-Ray Macairan[1], Francisco Yarur[1], Rafik Naccache[1]

[1]Concordia University, Chemistry and Biochemistry/Centre for NanoScience Research, Canada.

▸ **12:45 - 13:15 SA1-O029 Invited Talk STRONGER, FASTER, AND MORE POWERFUL ARTIFICAL MUSCLE YARNS AND FIBERS**

Ray Baughman[1]

[1]University of Texas at Dallas, Alan G. MacDiarmid NanoTech Institute, United States.

■ **13:15 - 13:30 SA1-O030 MOLECULAR ENCAPSULATION IN VARIABLE DIAMETER CARBON NANOSCROLLS**

Izcoatl Saucedo Orozco[1], Mildred Quintana[1,2]

[1]Universidad Autónoma de San Luis Potosí, Materiales Nanoestructurados, Mexico. [2]Universidad Autónoma de San Luis Potosí, Centro de Investigación en Ciencias de la Salud y Biomedicina, Mexico.

■ **13:30 - 13:45 SA1-O031 DISPERSION CHARACTERISTICS OF PRISTINE AND FUNCTIONALIZED CARBON NANOTUBES IN WATER USING A NON-IONIC SURFACTANT**

Karen Paola Cacua Madero[1], Robison Buitrago Sierra[1], Diana López[2], Bernardo Herrera[1], Alexander Meza[1]

[1]Instituto Tecnológico Metropolitano, Antioquia, Colombia. [2]Universidad de Antioquía, Antioquia, Colombia.

■ **13:45 - 14:00 SA1-O032 LUMINESCENT CENTRES IN DIAMOND: GE & EU DEFECT-COMPLEXES**

Danny Vanpoucke[1], Shannon Nicley[1], Emilie Bourgeois[1], Milos Nesladek[1], Ken Haenen[1]

[1]Hasselt University, Institute for Materials Research (IMO), Belgium.

14:00 – 16:00 Lunch time

■ **16:00 - 16:15 SA1-O033 OPTICAL PROPERTIES OF THE MOLECULE S_8 PHYSISORBED ON A GRAPHENE LAYER OR BETWEEN GRAPHITIC LAYERS**

Juan Salvador Arellano[1], Osiris Salas Torres[2], Luis Fernando Magana[3]

[1]Universidad Autónoma Metropolitana, Ciencias Basicas, Mexico. [2]Esime zacatenco, Mexico. [3]Instituto de Física - Universidad Nacional Autónoma de México, Estado Sólido, Mexico.

■ **16:15 - 16:30 SA1-O034 VOID DETECTION IN ELECTRICALLY AND THERMALLY CONDUCTIVE CEMENT GROUT WITH CNT TYPE**

Heeyoung Lee[1,2], Wonseok Chung[1]

[1]Kyung Hee University, Civil engineering, South Korea. [2]University of Colorado Denver, Civil engineering, United States.

■ **16:30 - 16:45 SA1-O035 ROOM TEMPERATURE SUPERCONDUCTIVITY AT 2D GRAPHITE INTERFACES**

Pablo D. Esquinazi[1]

[1]University of Leipzig, Superconductivity and Magnetism, Germany.

■ **16:45 - 17:00 SA1-O036 SINGLE WALLED BII_3 AND GDI_3 NANOTUBES ENCAPSULATED WITHIN CNT**

Leonard Francis[1], Anumol Ashokkumar[1]

[1]International Iberian Nanotechnology Laboratory - INL, Department of Advanced Electron Microscopy, Imaging and Spectroscopy, Portugal.

■ **17:00 - 17:15 SA1-O037 MECHANICAL AND TRIBOLOGICAL PROPERTIES OF THE WC-W-a:C MULTILAYER AND COMPOSITE THIN FILM**

Cesar Rivera Tellao[1,2], Dulce Melo Máximo[1], Ramiro Meza Corona[3], Joaquin Oseguera[1], Lizbeth Melo Máximo[4]

[1]Trames S. A. de C. V., Mexico. [2]Universidad de Guadalajara, Mexico. [3]TERMOINNOVA, Tecnologia, Mexico. [4]Trames S. A. de C. V., Mecánica, Mexico.

■ **17:15 - 17:30 SA1-O038 SCIENCE AND TECHNOLOGY OF TAILORED HYDROPHILIC TO SUPER-HYDROPHOBIC/CORROSION-ABRASION RESISTANT/BIOCOMPATIBLE MICRON TO ULTRANANOCRYSTALLINE DIAMOND COATING SURFACES**

A. Gabriela Montaño[1,2], Jesus J. Alcantar Peña[2], Pablo Tirado[2,3], Alejandro Abraham[2], Elida de Obaldia[2,4], Orlando Hector Auciello[5]

[1]Universidad de Sonora, Departamento de Investigación en Polímeros y Materiales, Mexico. [2]University of Texas at Dallas, Materials Science and Engineering, United States. [3]Universidad de Sonora, Departamento de Investigación en Física, Mexico. [4]Universidad Tecnológica de Panamá, Facultad de Ciencia y Tecnología, Panama. [5]University of Texas at Dallas, Materials Science and Engineering and Bioegineering, United States.

■ **17:30 - 17:45 SA1-O039 HIGH PERFORMANCE ELECTRON EMISSION DEVICES FROM SELF-ORGANIZED MULTILAYER GRAPHENE-DIAMOND HYBRID NANOSPINES**

Sankaran Kamatchi Jothiramalingam[1,2], Mateusz Ficek[3], Chien-Jui Yeh[4], Robert Bogdanowicz[3], Key-Chyang Leou[4], I-Nan Lin[5], Ken Haenen[1,2]

[1]Hasselt University, Institute for Materials Research (IMO), Belgium. [2]IMEC vzw, IMOMEC, Belgium. [3]Gdansk University of Technology, Department of Metrology and Optoelectronics, Faculty of Electronics, Telecommunications and Informatics, Poland. [4]National Tsing Hua University, Department of Engineering and System Science, Taiwan. [5]Tamkang University, Department of Physics, Taiwan.

Symposium A2

NANO-ALLOYS: THEORY, SYNTHESIS & CHARACTERIZATION

Grégory Guisbiers / University of Arkansas at Little Rock
José Luis Rodríguez-López / Instituto Potosino de Investigación Científica y Tecnológica, A.C.
Lauro Oliver Paz-Borbon / Universidad Nacional Autonoma de Mexico
Konstantin Neyman / Universitat de Barcelona
Tunna Baruah / The University of Texas at El Paso

MONDAY, AUGUST 20
ROOM: MAYA VII

Session: Characterization of Nano-alloys

SESSION CHAIR: GREGORY GUISBIERS

09:00 - 09:30 SA2-O001 Invited Talk THE ROLE OF NON-EQUILIBRIUM GRAIN BOUNDARY STRUCTURE IN RADIATION TOLERANCE AND THERMAL STABILITY

Mitra L. Taheri[1], Pete Baldo[2], Christopher Barr[1], Jacob Gruber[1], Marquis Kirk[2], Garritt Tucker[1], Yong Q. Wang[3], Gregory Vetterick[1]

[1]Drexel University, Department of Materials Science & Engineering, United States. [2]Argonne National Laboratory, United States. [3]Los Alamos National Laboratory, Ion Beam Materials Laboratory, United States.

09:30 - 10:00 SA2-O002 Invited Talk ON THE INTERPRETATION OF NANOPARTICLES ELECTRON DIFFRACTION PATTERNS

Reyes-Gasga Jose[1]

[1]Instituto de Física - Universidad Nacional Autónoma de México, Departamento de Materia Condensada, Mexico.

10:00 - 10:15 SA2-O003 NANODIAMOND FABRICATION THROUGH PLASMA PROCESS AT 300K

Mario Alberto Garcia Ramirez[1], Jorge Campa Molina[1], Sandra Guadalupe Ulloa Godinez[1], Rosa Elvia Lopez Estopier[2], Sonia Valeria Perez Bracho[1], Miguel Angel Bello Jimenez[2], Aleksandr Alexandrovich Polokhin[3], Yurievich Alexander Gerasimenko[3]

[1]Universidad de Guadalajara, Electronics and Computer Science, Mexico. [2]Universidad Autónoma de San Luis Potosí, Instituto de Investigacion en Comunicacion Optica, Mexico. [3]National Research University of Electronic Technology - MIET, Department fo Biomedical Systems, Russia.

10:15 - 10:45 SA2-O004 Invited Talk GOOD THINGS COME IN SMALL PACKAGES: DESIGNING NANOALLOYS FOR BIOLOGICAL APPLICATONS

Thomas Webster[1]

[1]Northeastern University, Chemical Engineering, United States.

10:45 - 11:00 SA2-O005 STABILITY AND CHARGE DISTRIBUTION IN SILVER, GOLD AND BIMETALLIC CLUSTERS: THE $Ag_{44-x}Au_x(SR)_{30}^{4-}$ AND $Ag_{25-x}Au_x(SR)_{18}^{1-}$ CASES

Cercis Morera Boado[1], Francisco Hidalgo[2], Cecilia Noguez[1]

[1]Instituto de Física - Universidad Nacional Autónoma de México, Física Química, Mexico. [2]Universidad Autónoma Metropolitana, Ciencias Básicas, Mexico.

11:00 -11:30 COFFEE BREAK

11:30 -12:30 PLENARY II
PROF. YUICHI IKUHARA

Session: Synthesis of Nano-Alloys

SESSION CHAIR: JOSE-LUIS RODRIGUEZ

12:30 - 13:00 SA2-O006 Invited Talk BIMETALLIC NANOPARTICLES AND THIN FILMS BY PULSED LASER ABLATION IN LIQUID (PLAL)
Sadasivan Shaji[1], David Avellaneda[1], Selene Sepulveda[1], Bindu Krishnan[1], Jacob Johny[1], Joseph Alejandro Cruz Turcios[1], Sreed Sharma[1]
[1]Universidad Autónoma de Nuevo León, Facultad de Ingenieria Mecanica y Electrica, Mexico.

13:00 - 13:30 SA2-O007 Invited Talk TANDEM LASER ABLATION SYNTHESIS IN SOLUTION-GALVANIC REPLACEMENT REACTIONS (LASiS-GRR) ENABLES GREEN SYNTHEIS OF INTERMETALLIC NANOALLOYS AND NANOCOMPOSITES AS ORR ELECTROCATALYSTS
Dibyendu Mukherjee[1], Sheng Hu[2], Erick L. Ribeiro[2], Bamin Khomami[1]
[1]University of Tennessee, Department of Mechanical, Aerospace & Biomedical Engineering, United States. [2]University of Tennessee, Department of Chemical and Biomolecular Engineering, United States.

13:30 - 13:45 SA2-O008 SYNTHESIS OF SiGe ALLOYS BY THE SIMULTANEOUS LASER ABLATION OF Si AND Ge TARGETS
Angel Estrada López[1], Mariana Giselle Hernandez Jimenez[2], Laura Patricia Rivera Resendiz[3,4], Enrique Camps[3], M. A. Santana Aranda[5], A. Pérez Centeno[5], Gilberto Gomez Rosas[5], A. Chávez Chávez[5], Guadalupe Cárdenas[5], J. G. Quiñones Galván[5]
[1]Universidad de Guadalajara, Ingenieria de Proyectos, Mexico. [2]Universidad Juárez Autónoma de Tabasco, Ingenieria en Nanotecnologia, Mexico. [3]Instituto Nacional de Investigaciones Nucleares (ININ), Fisica, Mexico. [4]Universidad Nacional Autónoma de México, Instituto de Investigaciones en Materiales, Mexico. [5]Universidad de Guadalajara, Fisica, Mexico.

13:45 - 14:00 SA2-O009 METHANOL REACTIVITY OVER Cu-Pt NANOPARTICLES SUPPORTED ON NANOSTRUCTURED CERIA
Diego Daniel Gonzalez Araiza[1], Antonio Gomez[1], Gabriela Díaz[1]
[1]Instituto de Física - Universidad Nacional Autónoma de México, Física Química, Mexico.

14:00 – 16:00 Lunch time

Session: Theory

SESSION CHAIR: LAURO OLIVER PAZ-BORBON

16:00 - 16:30 SA2-O010 Invited Talk PHASE TRANSFORMATIONS IN NANOCRYSTALLINE Fe ALLOYS: THERMAL STABILITY VS INTERFACE GENERATION
Dor Amram[1], Christopher Schuh[1]
[1]Massachusetts Institute of Technology, Materials Science and Engineering, United States.

16:30 - 17:00 SA2-O011 Invited Talk COMPUTER INVESTIGATION OF SYNTHESIS, STRUCTURAL AND ELECTRONIC PROPERTIES OF BIMETALLIC NANOPARTICLES
Ilia Chepkasov[1], Zakhar Popov[2], Maxim Visotin[3]
[1]N. F. Katanov Khakas State University, Department of Physics, Russia. [2]National University of Science and Technology 'MISIS', Inorganic Nanomaterials, Russia. [3]Siberian Federal University, Department of Physics, Russia.

17:00 - 17:15 SA2-O012 STUDY OF COPPER-PALLADIUM NANOALLOYS SYNTHESIZED BY A MECHANOCHEMICAL APPROACH
Víctor Fabián Ruiz[1], David Díaz[1], Israel Betancourt[2]
[1]Universidad Nacional Autónoma de México, Departamento de Química Inorgánica y Nuclear, Facultad de Química, Mexico. [2]Universidad Nacional Autónoma de México, Departamento de Materiales Metálicos y Cerámicos, Instituto de Investigaciones en Materiales, Mexico.

17:15 - 17:30 SA2-O013 EFFECTS OF LIGAND EXCHANGE ON THE PHOTOLUMINESCENCE OF COLLOIDAL CDSE QUANTUM DOTS
Sandra Alvarenga[1], Carlos Rudamas[1]
[1]Universidad de El Salvador, Optical Spectroscopy Laboratory, Escuela de Física, Facultad de Ciencias Naturales y Matemática, El Salvador.

17:30 -18:30 Science, Technology and Society Lecture

MONDAY, AUGUST 20
ROOM: TERRACE

18:30 -20:30 POSTER SESSION & COFFEE BREAK

- **SA2-P001 SYNTHESIS AND OPTICAL PROPERTIES OF Au-Ag BIMETALLIC NANOSTRUCTURES**
  Ricardo Andres Britto Hurtado[1], Manuel Cortez Valadez[1], Mario Flores Acosta[1], Humberto Arizpe Chávez[1]
  [1]Universidad de Sonora, Departamento de Investigación en Física, Mexico.

- **SA2-P002 STUDY OF THE OPTICAL ABSORPTION FOR MONOMETALLIC NOBLE METAL CLUSTERS SUPPORTED ON MgO USING TD-DFT**
  Jonathan Casildo Luque Ceballos[1], Alessandro Fortunelli[2], Alvaro Posada Amarillas[1]
  [1]Universidad de Sonora, Departamento de Investigación en Física, Mexico. [2]CNR, CNR-ICCOM, Italy.

- **SA2-P003 MAGNETIC PROPERTIES OF Co-Ni-Fe ALLOYED NANOPARTICLES DOPED WITH Nd FOR CANCER TREATMENT BY HYPERTHERMIA**
  Oscar Eduardo Cigarroa Mayorga[1], Salvador Gallardo Hernandez[2], Patricia Talamás Rohana[3], Adolfo Tavira Fuentes[4]
  [1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Nanociencias y nanotecnología, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, LANE, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Infectómica y Patogénesis Molecular, Mexico. [4]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Ingenieria Electrica - SEES, Mexico.

- **SA2-P004 THIN FILMS OF BIMETALLIC NANOPARTICLES FROM THEIR LASER ABLATED NANOCOLLOIDS**
  Joseph Alejandro Cruz Turcios[1], Sadasivan Shaji[1], Jacob Johny[1], Sreed Sharma[1], Bindu Krishnan[1], David Avellaneda[1]
  [1]Universidad Autónoma de Nuevo León, Facultad de Ingenieria Mecanica y Electrica, Mexico.

- **SA2-P005 XRF SPECTROSCOPY ANALYSIS OF COLOMBIAN METAMORPHIC ROCKS. HIGH RUTHENIUM CONCENTRATION**
  Mikel Fernando Hurtado Morales[1,2], Omar Rodriguez Pinilla[1], Jorge Eliecer Lopez Cardona[1]
  [1]Universidad Central, Electronic Engineering, Colombia. [2]Universidad Minuto de Dios, Civil Engineering, Colombia.

- **SA2-P006 OPTICAL, STRUCTURAL AND PIEZOELECTRIC CHARACTERIZATION OF PVDF/ FERROELECTRIC COMPOSITES**
  Yessica Paola Reyes[1], Octavio Estevez[2], Pedro Perdigon Lagunes[2], Ulises Salazar Kuri[3], J. Juan Gervacio Arciniega[4], Raúl Herrera Becerra[2]
  [1]Universidad Nacional Autónoma de México, Facultad de Química, Mexico. [2]Instituto de Física - Universidad Nacional Autónoma de México, Departamento de Materia Condensada, Mexico. [3]Benemerita Universidad Autonoma de Puebla, Instituto de Física, Mexico. [4]Benemerita Universidad Autonoma de Puebla, FCFM, Mexico.

- **SA2-P007 Ag/Pt ALLOYS IN NANOPARTICLES FORMED BY MEANS OF ION IMPLANTATION**
  Juan Pablo Cordero Santiago[1], Alejandro Crespo Sosa[1]
  [1]Instituto de Física - Universidad Nacional Autónoma de México, Fisica Experimental, Mexico.

- **SA2-P008 BISMUTH TELLURIDE THIN FILMS VIA CROSSED BEAMS PLD**
  J. C. Romero[1], Dagoberto Cardona Ramírez[1], Ernesto David García Bustos[2], Ettore Vassallo[1], A Chavez Chavez[3], A Perez Centeno[3], Miguel Angel Santana Aranda[3], Gilberto Gomez Rosas[3], J. G. Quiñones Galván[3]
  [1]ITESO, Universidad Jesuita de Guadalajara, Departamento de matemáticas y física, Mexico. [2]Universidad de Guadalajara, Departamento de ingeniería de proyectos, Mexico. [3]Universidad de Guadalajara, Departamento de física, Mexico.

- **SA2-P009 MICROSTRUCTURAL AND MECHANICAL PROPERTIES OF Al_5Fe_2 INTERMETALLIC NANO-ALLOY**
  Sarina Alfa Galvez Breña[1], Carlos Vladimir Landauro Sáenz[1,2], Francisco Aurelio Rumiche Zapata[3], Justiniano Quispe Marcatoma[1,2]
  [1]Universidad Nacional Mayor de San Marcos, Facultad de Ciencias Físicas, Peru. [2]Centro de Investigaciones Tecnológicas, Biomédicas y Medioambientales, Peru. [3]Pontificia Universidad Católica del Perú, CITE Materiales, Peru.

- **SA2-P010 STUDY OF MECHANICAL BEHAVIOR OF NANOSTRUCTURED $Al_{64}Cu_{23}Fe_{13}$ QUASICRYSTALLINE ALLOY**
  José Alberto Castañeda Vía[1], Carlos Vladimir Landauro Sáenz[1,2], Francisco Aurelio Rumiche Zapata[3], Justiniano Quispe Marcatoma[1,2]

[1]Universidad Nacional Mayor de San Marcos, Facultad de Ciencias Físicas, Peru. [2]Centro de Investigaciones Tecnológicas, Biomédicas y Medioambientales, Peru. [3]Pontificia Universidad Católica del Perú, CITE Materiales, Peru.

- **SA2-P011 OPTICAL AND STRUCTURAL PROPERTIES OF $Al_xGa_{1-x}N$ NANO-POWDERS OBTAINED BY PYROLYSIS AND ANNEALED IN NH_3**

Godofredo García[1], Ana Maria Herrera[1], Rafael García Gutiérrez[2], Erick Gastellou[1], Fabiola Nieto[3], Gustavo Alonso Hirata[4], Tomás Díaz[1], Enrique Rosendo[1], Crisoforo Morales Ruiz[1], Roman Romano Trujillo[1], Antonio Coyopol Solis[1], Reina Galeazzi Isasmendi[1]

[1]Benemerita Universidad Autonoma de Puebla, CIDS-ICUAP, Mexico. [2]Universidad de Sonora, Departamento de Investigación en Física, Mexico. [3]Benemerita Universidad Autonoma de Puebla, FCQ, Mexico. [4]Universidad Nacional Autónoma de México, Centro de Nanociencias y Nanotecnologia, Mexico.

- **SA2-P012 SYNTHESIS AND CHARACTERIZATION ZnO ON SILICON SUBSTRATES WITH PIEZOELECTRIC EFFECT**

Darwin Francisco Suchiapa Olba[1], Giselle Hernández Brenes[1], Jorge Evaristo Conde Diaz[1], Heber Vilchis[1]

[1]Universidad de Ciencias y Artes de Chiapas, Instituto de Investigación e Innovación en Energías Renovables, Mexico.

- **SA2-P013 STRUCTURAL ELUCIDATION OF Pt-Co_n (n = 5-10) CLUSTER ADSORPTION IN A TiO_2 SURFACE USING DFT CALCULATIONS**

Filiberto Ortiz Chi[1], Gerardo Hernandez Juárez[2], Adib Abiu Silahua Pavon[3], Claudia Guadalupe Espinosa Gonzalez[1], Srinivas Godavarthi[1], Jose Luis Cabellos[4], Gabriel Merino[5], Jose Gilberto Torres Torres[3]

[1]Cátedras CONACyT-Universidad Juárez Autónoma de Tabasco, DACB, Mexico. [2]Instituto tecnologico de calkini en el estado de campeche, Ingenieria, Mexico. [3]Universidad Juárez Autónoma de Tabasco, DACB, Mexico. [4]Universidad de Sonora, DIPM, Mexico. [5]CINVESTAV-Mérida, Fisica Aplicada, Mexico.

- **SA2-P014 STRUCTURAL CHARACTERIZATION OF $Al_{1-x}Ga_xAs$ THIN FILMS GROWN ON SI (100) AND GLASS SUBSTRATES**

Juan David Losada Losada[1,2], Alvaro Pulzara Mora[2]

[1]Universidad de Manizales, Facultad de Ingeniería, Colombia. [2]Universidad Nacional de Colombia, Facultad de Ciencias Exactas y Naturales, Colombia.

- **SA2-P015 SYNTHESIS OF BIMETALLIC Al-BASED NANO-ALLOYS BY LASER ABLATION IN LIQUIDS**

Matthew Kusper[1], Gregory Guisbiers[1]

[1]University of Arkansas, Department of Physics and Astronomy, United States.

TUESDAY, AUGUST 21
ROOM: MAYA VII

Session: Applications of Nano-Alloys

SESSION CHAIR: JOSE-LUIS RODRIGUEZ

- **09:00 - 09:30 SA2-O014 Invited Talk UTILIZATION OF PHOTOLUMINESCENT DOWN-CONVERTING QUANTUM DOTS IN PHOTOVOLTAIC STRUCTURES AND CHARACTERIZATION OF THE ANOMALOUS RED-SHIFT EXHIBITED BY COLLOIDAL QUANTUM DOT SOLUTIONS**

Arturo A. Ayón[1], Gregory Guisbiers[2]

[1]University of Texas at San Antonio, Physics and Astronomy, United States. [2]University of Arkansas, Physics and Astronomy Department, United States.

- **09:30 - 10:00 SA2-O015 Invited Talk CATALYSIS AT THE METALOXIDE/METAL INTERFACE: DETAILED INVESTIGATIONS OF Pt_3Sn**

Matthias Vandichel[1], Henrik Grönbeck[1]

[1]Chalmers tekniska högskola, Department of Physics and Competence Centre For Catalysis, Sweden.

- **10:00 - 10:15 SA2-O016 GRAVITATIONAL INFLUENCE ON THE THIRD-ORDER NONLINEAR OPTICAL EFFECTS EXHIBITED BY CARBON/METAL NANOSTRUCTURES SUSPENDED IN ETHANOL**

Miguel Ángel Sánchez Salazar[1], Samuel Morales Bonilla[2], Cecilia Mercado Zúñiga[3], Claudia Lizbeth Martínez González[1], Carlos Torres Torres[1]

[1]Instituto Politécnico Nacional - IPN, Sección de Estudios de Posgrado e Investigación, ESIME Zacatenco, Mexico. [2]Universidad del Valle de México A.C., Division de Ingeniería en Mecatrónica, Mexico. [3]Tecnológico de Estudios Superiores de Coacalco, Depto. Ing. Materiales, Mexico.

- **10:15 - 10:45 SA2-O017 Invited Talk REALISTIC MODELLING OF ALLOY NANOCRYSTALLITES WITH HUNDREDS OF ATOMS**

Sergey Kozlov[1]

[1]King Abdullah University of Science and Technology, KAUST Catalysis Center, Saudi Arabia.

■ **10:45 - 11:00 SA2-O018 THERMODYNAMIC STABILITY STUDY OF THIOLATE-PROTECTED GOLD CLUSTERS**

Lauro Oliver Paz Borbon[1], A. Patricio García[1], J. Jesus Pelayo[2], Israel Valencia[3], Ignacio L. Garzón[1]

[1]Universidad Nacional Autónoma de México, Instituto de Física, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Escuela Superior de Apan, Mexico. [3]Universidad Nacional Autónoma de México, Facultad de Estudios Superiores Iztacala, Mexico.

11:00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY III
DR. AMANDA S. BARNARD

Session: Synthesis of Nano-alloys

SESSION CHAIR: LAURO OLIVER PAZ BORBON

▸ **12:30 - 13:00 SA2-O019 Invited Talk PULSED PHOTONIC FABRICATION OF NANOSTRUCTURED METAL OXIDE THIN FILMS**

Doug Chrisey[1]

[1]Tulane University, Physics, United States.

▸ **13:00 - 13:30 SA2-O020 Invited Talk SYNTHESIS OF MAGNETIC NANOALLOYS BY PULSED LASER ABLATION IN LIQUIDS**

Bilal Gökce[1], Stephan Barcikowski[1]

[1]Universität Duisburg-Essen, Chemistry, Germany.

■ **13:30 - 13:45 SA2-O021 ON THE STRUCTURE EVOLUTION AND CATALYTIC ACTIVITY OF DI-MOLYBDENUM CLUSTERS**

Calaminici Patrizia[1], Domingo Cruz Olvera[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Chemistry, Mexico.

■ **13:45 - 14:00 SA2-O022 STUDY OF ADSORPTION OF O_2 ON AU_MAG_N (M+N=4,5,6) CLUSTER SUPPORTED ON A F-CENTER MGO SURFACE (100)**

Fernando Buendia[1], Marcela Regina Beltran[1], Jorge Vargas[2]

[1]Universidad Nacional Autónoma de México, Instituto de Investigaciones en Materiales, Mexico. [2]Central Michigan University, Department of Physics, United States.

■ **14:00 - 14:15 SA2-O023 ATOMIC-SCALE UNDERSTANDING OF GOLD CLUSTER GROWTH ON DIFFERENT SUBSTRATES AND ADSORPTION-INDUCED STRUCTURAL CHANGE**

Leonard Francis[1], Junjie Li[1]

[1]International Iberian Nanotechnology Laboratory - INL, Department of Advanced Electron Microscopy, Imaging and Spectroscopy, Portugal.

14:00 – 16:00 Lunch time

Session: Theory

SESSION CHAIR: KONSTANTIN NEYNMAN

■ **16:00 - 16:15 SA2-O024 SIZE, SHAPE, AND COMPOSITIONAL EFFECTS ON THE ORDER-DISORDER PHASE TRANSITIONS IN Au-Cu AND Pt-M (M = Fe, Co, and Ni) NANOCLUSTER ALLOYS**

Forrest Kaatz[1], Adhemar Bultheel[2]

[1]Mesalands Community College, Institutional Research, United States. [2]Katholieke Universiteit Leuven, Computer Science, Belgium.

▸ **16:15 - 16:45 SA2-O025 Invited Talk REDUCED DIMENSIONALITY MODELLING OF NANOALLOYS PROPERTIES**

Kevin Rossi[1]

[1]Kings College London, Physics, United Kingdom, Channel Islands & Isle of Man.

▸ **16:45 - 17:15 SA2-O026 Invited Talk NANOPARTICLE BEAM DEPOSITION: A NEW ROUTE TO THE CREATION OF HETEROGENEOUS CATALYSTS**

Richard Palmer[1]

[1]Swansea University, College of Engineering, United Kingdom, Channel Islands & Isle of Man.

■ **17:15 - 17:30 SA2-O027 SYNTHESIS AND CHARACTERIZATION OF NANOCRYSTALLINE NiAlCu BY MECHANICAL ALLOYING.**

Manuel Eduardo Serrano Nava[1], Arturo Molina Ocampo[1], Rene Guardian[1]

[1]Universidad Autónoma del Estado de Morelos, Centro de Investigación en Ingeniería y Ciencias Aplicadas, Mexico.

Symposium A3

EMERGING 2D NON-GRAPHENE MATERIALS: SYNTHESIS, HETEROGENEITY, AND COLLECTIVE PHENOMENA

Kai Xiao / Oak Ridge National Laboratory
Deji Akinwande / The University of Texas at Austin
Talat Rahman / University of Central Florida
Gerardo Garcia Naumis / Universidad Nacional Autonoma de Mexico

WEDNESDAY, AUGUST 22
ROOM: TULUM C

Session: Novel materials and devices for electronics

SESSION CHAIR: BARRAZA-LOPEZ, SALVADORLOPEZ

▸ **08:45 - 09:15 SA3-O001 Invited Talk FUNDAMENTAL INSIGHTS AND PERSPECTIVES INTO NOVEL 2D ANISOTROPIC MATERIALS**
Sefaattin Tongay[1]
[1]Arizona State University, Materials Science and Engineering, United States.

■ **09:15 - 09:30 SA3-O002 TWO-DIMENSIONAL TANTALUM DISULFIDE: CONTROLLING STRUCTURE AND PROPERTIES VIA SYNTHESIS**
Rui Zhao[1], Benjamin Grisafe[2], Ram Krishna Ghosh[2], Suman Datta[2], Joshua Robinson[1]
[1]Penn State University, Materials Science and Engineering, United States. [2]University of Notre Dame, Department of Electrical Engineering, United States.

▸ **09:30 - 10:00 SA3-O003 Invited Talk CONFORMAL GROWTH OF TWO-DIMENSIONAL CRYSTALS ON PATTERNED SURFACES**
Kai Wang[1], Alex Puretzky[2], Kai Xiao[2], David Geohegan[2]
[1]Southwest Petroleum Univeristy, Institute of Photovoltaics, China. [2]Oak Ridge National Laboratory, Center for Nanophase Materials Sciences, United States.

■ **10:00 - 10:15 SA3-O004 STRONG ELECTRONIC MODULATION ASSISTED BY THE INTERLAYER ROTATION ANGLE IN GRAPHENE/WS_2**
Francisco Sanchez Ochoa[1], Cecilia Noguez[1], Francisco Hidalgo[1]
[1]Universidad Nacional Autónoma de México, Solid state department, Instituto de Fisica, Mexico.

▸ **10:15 - 10:45 SA3-O005 Invited Talk TUNING THE TRANSPORT PROPERTIES OF WSe_2 2d MATERIALS**
Philip Rack[1,2]
[1]Oak Ridge National Laboratory, Center for Nanophase Materials Science, United States. [2]The University of Tennessee, Materials Science and Engineering, United States.

11:00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY IV NOBEL PRIZE IN CHEMISTRY 2016
PROF. BEN L. FERINGA

Session: Heterogeneity in 2D materials

SESSION CHAIR: DAVID GEOGHEGAN

12:30 - 13:00 SA3-O006 Invited Talk THE UNIFORMITY OF CHEMICAL VAPOUR DEPOSITION GROWN 2D MOS2 AND WS2 MATERIALS AT THE ATOMIC SCALE
Jamie Warner[1]
[1]University of Oxford, Materials, United Kingdom, Channel Islands & Isle of Man.

13:00 - 13:15 SA3-O007 UNDERSTANDING THE OPTOELECTRONIC FUNCTIONALITY INDUCED BY THE HETEROGENEITY IN 2D MATERIALS: FROM LOCALIZED DEFECTS TO MACROSCOPIC HETEROSTRUCTURE
Kai Xiao[1], Xufan Li[1], Kai Wang[1], Mina Yoon[1], Xiahan Sang[1], Ray Unocic[1], Masoud Mahjouri Samani[1], Bernadeta Srijanto[1], Chris Rouleau[1], Alex Puretzky[1], Bobby Sumpter[1], Philip Rack[2], Feng Ding[3], David Geohegan[1]
[1]Oak Ridge National Laboratory, Center for Nanophase Materials Sciences, United States. [2]University of Tennessee. Oak Ridge National Laboratory., Center for Nanophase Materials Sciences, United States. [3]Institute for Basic Science, Center for Multidimensional Carbon Materials, South Korea.

13:15 - 13:45 SA3-O008 Invited Talk TWO-DIMENSIONAL STRUCTURAL PHASE TRANSITIONS ON 2D MATERIALS WITH STRUCTURAL DEGENERACIES
Salvadorlopez Barraza Lopez[1]
[1]University of Arkansas, Physics, United States.

13:45 - 14:00 SA3-O009 TUNING THE ADSORPTION ENERGY OF ORGANIC MOLECULES ON TWISTED-BILAYER GRAPHENE
Francisco Hidalgo[1], Alberto Rubio[1], Cecilia Noguez[2]
[1]Universidad Autónoma Metropolitana, Ciencias Básicas, Mexico. [2]Universidad Nacional Autónoma de México, Instituto de Física, Mexico.

14:00 – 16:00 Lunch time

Session: Predictive modeling and theoretical simulation

SESSION CHAIR: HUI ZHAO

16:00 - 16:30 SA3-O010 Invited Talk THE KINETICS OF TWO DIMENSIONAL MATERIALS' GROWTH
Feng Ding[1,2]
[1]Institute for Basic Science, Center for Multidimensional Carbon Materials, South Korea. [2]Ulsan National Institute of Science and Technology, School of Materials Science and Engineering, South Korea.

16:30 - 16:45 SA3-O011 ELECTRONIC AND MECHANICAL PROPERTIES OF THE TWO-DIMENSIONAL Zn-PORPHYRIN MONOLAYER: A FIRST-PRINCIPLES STUDY OF SIZE EFFECTS
Miguel Eduardo Cifuentes Quintal[1], Mariel Contreras Padilla[1], Romeo de Coss[1]
[1]CINVESTAV-Mérida, Física Aplicada, Mexico.

16:45 - 17:15 SA3-O012 Invited Talk AB INITIO STUDIES OF THE EXCITED STATES AND ULTRAFAST CHARGE DYNAMICS IN 2D TRANSITION METAL DICHALCOGENIDES
Volodymyr Turkowski[1], Talat Rahman[1]
[1]University of Central Florida, Physics, United States.

17:15 - 17:30 SA3-O013 STRONGLY-BOUND EXCITONS IN ORGANIC-INORGANIC 2D PEROVSKITES:A DFT + POST-DFT STUDY
Maurizia Palummo[1]
[1]Università degli Studi di Roma Tor Vergata, Physics Department and INFN, Italy.

17:30 - 18:00 SA3-O014 Invited Talk PREDICTIVE MODELING OF 2D MATERIALS, SYNTHESIS TO PROPERTIES
Boris Yakobson[1]
[1]Rice University, MSNE, United States.

18:00 - 18:15 SA3-O015 AB-INITIO STUDY OF THE INTERACTION OF A PT-DOPED MOS2-2D LAYER AND AN H2 MOLECULE
Guillermo Espartaco Orozco Ruiz[1], Luis Fernando Magana[2], Juan Manuel Eugenio Ramirez de Arellano Nino Rincon[3]

[1]Universidad Autónoma de la Ciudad de México, Posgrado en Dinámica no Lineal y Sistemas Complejos, Mexico. [2]Instituto de Física - Universidad Nacional Autónoma de México, Estado Sólido, Mexico. [3]Instituto Tecnológico y de Estudios Superiores de Monterey, Escuela de Ingenieria y Ciencias, Mexico.

WEDNESDAY, AUGUST 22
ROOM: TERRACE

18:30 -20:30 POSTER SESSION & COFFEE BREAK

- **SA3-P001 AB-INITIO STUDY OF THE ReCN IN THE BULK AND AS A NEW TWO DIMENSIONAL MATERIAL**

  Jonathan Guerrero Sanchez[1], Noboru Takeuchi[1], Armando Reyes Serrato[1]

  [1]Universidad Nacional Autónoma de México, Centro de Nanociencias y Nanotecnologia, Mexico.

- **SA3-P002 CHARGE TRANSPORT IN NOVEL Er-DOPED $TlInS_2$ CRYSTALS**

  Solmaz Mustafaeva[1], Salim Asadov[2]

  [1]Institute of Physics, Azerbaijan National Academy of Sciences, Baku, Azerbaijan. [2]Institute of Catalysis and Inorganic Chemistry, Azerbaijan National Academy of Sciences, Baku, Azerbaijan.

- **SA3-P003 ELECTRONIC PROPERTIES OF CARBON-DOPED BORON NITRIDE NANORIBBONS**

  Jose Luis Rivera Rojas[1], Francisco Villanueva Mejia[2], Pedro Navarro Santos[2]

  [1]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ingeniería Quimica, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigaciones Químico-Biológicas, Mexico.

- **SA3-P004 ANALYSIS OF ELECTRONIC WAVE FUNCTION IN QUASYPERIODIC SYSTEMS: THE FIBONACCI AND PENROSE LATTICES**

  Ernesto Huipe Domratcheva[1], Oracio Navarro[2]

  [1]Universidad Nacional Autónoma de México, Escuela Nacional de Estudios Superiores, Unidad Morelia, Mexico. [2]Universidad Nacional Autónoma de México, Unidad Morelia, Instituto de Investigación en Materiales, Mexico.

- **SA3-P005 DESING AND CHARACTERIZATION OF NOVEL LAYERED SOLIDS FROM THE INTERCALATION OF ORGANIC MOLECULES INTO TRANSITION METAL NITROPRUSSIDES.**

  Yosuan Avila García[1], Edilso Reguera[1], Marlene Gonzalez Montiel[1], Osiry Hernández Silva[2]

  [1]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Nanomateriales, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Quimica, Mexico.

- **SA3-P006 TUNING RYDBERG SERIES AND VAN-HOVE SINGULARITIES IN TWISTED-BILAYER GRAPHENE**

  Francisco Sanchez Ochoa[1], Cecilia Noguez[1]

  [1]Universidad Nacional Autónoma de México, Solid state department, Instituto de Fisica, Mexico.

- **SA3-P007 FABRICATION AND CHARACTERIZATION OF FIELD EFFECT TRANSISTOR BASED ON MoS_2 SEMICONDUCTOR**

  Barbara Alejandra Muñiz Martinez[1], Andres de Luna Bugallo[1]

  [1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Materiales, Mexico.

- **SA3-P008 MODELLING THE BUCKLING OF 2D NON-GRAPHENE HONEYCOMB NANOSHEETS: SILICENE AND STANENE**

  Jorge Ramón Soto Mercado[1], Bertha Molina Brito[1], Jorge Javier Castro Hernández[2]

  [1]Universidad Nacional Autónoma de México, Departamento de Física, Facultad de Ciencias, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Departamento de Física, Mexico.

- **SA3-P009 ELECTRONIC PROPERTIES AND ENHANCED REACTIVITY OF MoS_2 MONOLAYERS WITH SUBSTITUTIONAL GOLD ATOMS EMBEDDED INTO SULFUR VACANCIES.**

  Alan Miralrio[1], Eduardo Rangel Cortés[2], Miguel Castro[1]

  [1]Universidad Nacional Autónoma de México, Departamento de Física y Química Teórica, Facultad de Química, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Escuela Superior de Apan, Mexico.

- **SA3-P010 CHARACTERIZATION AND SYNTHESIS OF MoS_2 THIN-FILMS BY PULSED LASER DEPOSITION CONTROLLING THE MEAN KINETIC ENERGY OF THE PLASMA**

  Eduardo Israel Acosta Reynoso[1], Enrique Campos Gonzalez[2], Armando Perez Centeno[3], Miguel Angel Santana Aranda[3], Gilberto Gomez Rosas[3], Dagoberto Cardona[4], José Guadalupe Quñones Galván[3]

  [1]Instituto Tecnológico y de Estudios Superiores de Occidente A.C., Physics and Mathematics, Mexico. [2]Instituto Nacional de

Investigaciones Nucleares (ININ), Physics, Mexico. [3]Universidad de Guadalajara, Physics, Mexico. [4]Instituto Tecnológico y de Estudios Superiores de Occidente A.C., Mathematics and physics, Mexico.

- **SA3-P011 ON THE STABILITY OF HYDROGEN PASSIVATED DEFECTS IN THE AlGaN/GaN STRUCTURE**
  Jaime Mimila Arroyo[1], Alma Sofía Arreola Pina[1]
  [1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Electrical Engineering (SEES), Mexico.

- **SA3-P012 EVALUATION OF THE CHEMICAL INTERACTION OF hBN AND A MODIFIED POLYPROPYLENE**
  Eder I. Santos Alvarado[1], Selene Sepulveda Guzman[1], Nora Aleyda Garcia Gomez[2], Sadasivan Shaji[1], Sofia Vazquez Rodriguez[1]
  [1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Electrica, Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico.

- **SA3-P013 CALCULATION OF ELECTRONIC AND MECHANICAL PROPERTIES OF NEW GERMANIUM CARBIDE NANOSHEETS**
  Verónica Arroyo Sánchez[1], Alejandro Bautista Hernandez[2], Humberto Camacho Garcia[1]
  [1]Benemerita Universidad Autonoma de Puebla, Facultad de Ingenieria Quimica, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Facultad de Ingenieria, Mexico.

- **SA3-P014 ON THE POSIBILITY OF PROBING THE TEMPERATURE OF A TWO DIMENSIONAL ELECRON GAS**
  Jaime Mimila Arroyo[1]
  [1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Electrical Engineering (SEES), Mexico.

- **SA3-P015 DEVELOPMENT OF GRAPHENE FILMS WITH GOLD NANOPARTICLES FOR ITS APPLICATION IN FLEXIBLE ELECTRONICS**
  José Manuel Martínez[1], Idalia Gómez[1], Thelma Serrano[1]
  [1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico.

- **SA3-P016 TOWARDS THE OPTICAL PROPERTIES OF 2D MATERIAL: PHOSPHORENE AND GRAPHENE**
  Laura Alejandra Tepanecatl[1], Martha Palomino[1], Gregorio Hérnandez[2]
  [1]Benemerita Universidad Autonoma de Puebla, FCFM-BUAP, Mexico. [2]Benemerita Universidad Autonoma de Puebla, IFUAP-BUAP, Mexico.

THURSDAY, AUGUST 23
ROOM: TULUM C

Session: Controlled synthesis and in-situ characterization

SESSION CHAIR: TONGAY, SEFAATTIN

- **08:45 - 09:15 SA3-O016 Invited Talk IN SITU DIAGNOSTICS OF 2D MATERIALS SYNTHESIS AND HETEROGENEITY: CLOSING THE LOOP**
  David Geohegan[1], Alex Puretzky[2], Kai Wang[2], Yu-Chuan Lin[2], Chenze Liu[3], Yiyi Gu[2], Mina Yoon[2], Xiahan Sang[2], Ray Unocic[2], Masoud Mahjouri Samani[4], Xufan Li[5], Bernadeta Srijanto[2], Chris Rouleau[2], Mengkun Tian[6], Philip Rack[7], Kai Xiao[2]
  [1]Oak Ridge National Laboratory, Center for Nanophase Materials Sciences, United States. [2]Oak Ridge National Laboratory, CNMS, United States. [3]University of Tennessee. Oak Ridge National Laboratory., Dept. of Materials Science and Engineering, United States. [4]Auburn University, ECE Dept., United States. [5]Honda Research Institute, United States. [6]University of Tennessee. Oak Ridge National Laboratory., Materials Science and Engineering, United States. [7]University of Tennessee. Oak Ridge National Laboratory., Dept. of Mat. Sci. and Eng., United States.

- **09:15 - 09:30 SA3-O017 OPTOELECTRONIC, SURFACE AND STRUCTURAL ANALYSIS OF COINS NANOPARTICLES LIKE MOS_2 NANOSHEETS, 0D OR 2D MATERIAL?**
  Mikel Fernando Hurtado Morales[1,2], Carlos Aldana[1], Wilmer Feney Velandia[1], Jhon Eyber Pazos[3], Mario Alejandro Garcia Fox[3], Jose Augusto Galvis Echeverry[3]
  [1]Universidad Central, Electronic Engineering, Colombia. [2]Universidad Minuto de Dios, Civil Engineering, Colombia. [3]Universidad Central, Cluster NBIC, Colombia.

- **09:30 - 10:00 SA3-O018 Invited Talk CREATING AND EXPLORING ATOMICALLY-THIN MATERIALS AND HETEROSTRUCTURES**
  Joshua Robinson[1]
  [1]Penn State University, Materials Science, United States.

- **10:00 - 10:15 SA3-O019 ATOMIC SCALE EDGE ENGINEERING IN TWO-DIMENSIONAL TRANSITION METAL DICHALCOGENIDES**
  Xiahan Sang[1], Xufan Li[2], Wen Zhao[3], Jicheng Dong[3], Chris Rouleau[1], David Geohegan[1], Feng Ding[4], Kai Xiao[1], Raymond Unocic[1]

[1]Oak Ridge National Laboratory, Center for Nanophase Materials Sciences, United States. [2]Honda Research Institute, Materials Science, United States. [3]Institute for Basic Science, Center for Multidimensional Carbon Materials, Korea. [4]Ulsan National Institute of Science and Technology, Center for Multidimensional Carbon Materials, Korea.

11:00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY V
PROF. GALO SOLER ILLIA

Session: Advanced characterizations including spatially- and time-resolved spectroscopy and microscopy

SESSION CHAIR: KAI XIAO

12:30 - 13:00 SA3-O020 Invited Talk ULTRAFAST CHARGE AND ENERGY TRANSFER IN VAN DER WAALS HETEROSTRUCTURES
Hui Zhao[1]
[1]The University of Kansas, Physics and Astronomy, United States.

13:00 - 13:15 SA3-O021 ELECTRON MICROSCOPY OF 2D GALLIUM, INDIUM, GaN AND InN LAYERS SYNTHESIZED BY CONFINEMENT HETEROEPITAXY (CHet) TECHNIQUE
Hesham Elsherif[1], **Brian Bersch**[2], **Natalie Briggs**[2], **Joshua Robinson**[2], **Nabil Bassim**[1]
[1]McMaster University, Materials Science and Engineering, Canada. [2]Penn State University, Materials Science and Engineering, United States.

13:15 - 13:45 SA3-O022 Invited Talk STRUCTURAL STUDY OF 2D MATERIALS BY SPATIALLY AND TEMPORALLY RESOLVED X-RAY DIFFRACTION
Haidan Wen[1]
[1]Argonne National Laboratory, Advanced Photon Source, United States.

13:45 - 14:00 SA3-O023 CHARGE-DENSITY-WAVE TRANSFORMATION INDUCED BY ION DOPING INTO 1T-TAS_2
Rui Zhao[1], **Benjamin Grisafe**[2], **Ram Krishna Ghosh**[2], **Suman Datta**[2], **Joshua Robinson**[1]
[1]Penn State University, Materials Science and Engineering, United States. [2]University of Notre Dame, Department of Electrical Engineering, United States.

14:00 – 16:00 Lunch time

Symposium A4

SILICON BASED NANOSCALE OPTOELECTRONIC DEVICES

Karim Monfil Leyva / Benemérita Universidad Autónoma de Puebla
Mario Moreno Moreno / INAOE
Carlos Domínguez / Institute of Microelectronics of Barcelona
Maurizia Palummo / University of Rome "Tor Vergata"

MONDAY, AUGUST 20
ROOM: TULUM B

■ **09:30 - 09:45 SA4-O001 GOLD NANOPARTICLES AT SiO2 SPHERE CLOSE-PACKED ARRAYS AS SERS SUBSTRATES**

Arturo Santos Gómez[1], Miller Toledo[1], Enrique Sánchez Mora[1], Ana Lilia González Ronquillo[1]

[1]Benemerita Universidad Autonoma de Puebla, Instituto de Física, Mexico.

▸ **09:45 - 10:15 SA4-O002 Invited Talk OPTICAL, ELECTRICAL AND ELECTRO-OPTICAL PROPERTIES OF SILICON NANOPARTICLES IN SILICON RICH OXIDE FILMS**

Liliana Palacios[1], Mariano Aceves Mijares[1], Carlos Domínguez Horna[2], Mario Moreno[1], Alfredo Morales[3]

[1]Instituto Nacional de Astrofísica, Óptica y Electrónica, Electrónica, Mexico. [2]nstituto de Microelectrónica de Barcelona (IMB-CNM, CSIC), Grupo de Transductores Químicos, Spain. [3]Centro de Investigación en Materiales Avanzados, S.C., Unidad Monterrey, Mexico.

■ **10:15 - 10:30 SA4-O003 EVALUATION OF GRAPHENE THERMOELECTRIC PROPERTY**

Georgina Garcia Pacheco[1], Naria Adriana Flores Fuentes[1], Jhonathan Efraín Espinosa García[1], Mayahuel Ortega Avilés[2], Norberto Hernandez Como[2], Jaime Ortiz López[3]

[1]ESIME TICOMAN, SEPI, Mexico. [2]Centro de Nanociencias y micro y Nanotecnologías del IPN, SEPI, Mexico. [3]Escuela Superior de Física y Matemáticas IPN, Departamento de Física, Mexico.

▸ **10:30 - 11:00 SA4-O004 Invited Talk DROP-CASTED FILMS OF PLASMA TORCH SYNTHETIZED SI NANOSTRUCTURES WITH GIANT PHOTOLUMINESCENCE AMPLIFICATION YIELD**

Paola Castrucci[1]

[1]Università degli Studi di Roma Tor Vergata, Dipartimento di Fisica, Italy.

11:00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY II
PROF. YUICHI IKUHARA

Session:

SESSION CHAIR: MAURIZIA PALUMMO

▸ **12:30 - 13:00 SA4-O005 Invited Talk ENERGY HARVESTING: INTEGRATION OF MATERIALS AND POWER MANAGEMENT CIRCUITS**

Roberto AMBROSIO[1], Sergio Romero[2], Victor Gonzalez[2], Mario Moreno[3], Javier Flores[2], Fermi Guerrero[2], Israel Vivaldo[2]

[1]Benemerita Universidad Autonoma de Puebla, Electronic, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Electronics, Mexico. [3]Instituto Nacional de Astrofísica, Óptica y Electrónica, Electronics, Mexico.

■ **13:00 - 13:15 SA4-O006 SURFACE PASSIVATION EFFECTS ON THE OPTICAL, AND VIBRATIONAL PROPERTIES OF POROUS SILICON: A FIRST PRINCIPLES STUDY**

Israel González Cortés[1], Akari Narayama Sosa Camposeco[1], Alejandro Trejo Baños[1], Álvaro Miranda Durán[1], Miguel Cruz Irrison[1]

[1]Instituto Politécnico Nacional - IPN, ESIME Culhuacan, Mexico.

▸ **13:15 - 13:45 SA4-O007 Invited Talk CARRIER MULTIPLICATIONS IN SI-NCS: AB-INITIO RESULTS**

Ivan Marri[1]

[1]CNR, Institute of nanoscience CNR-NANO, Italy.

▸ **13:45 - 14:15 SA4-O008 Invited Talk IS HEXAGONAL Si THE NEXT BIG THING IN NANOWIRES?**

Riccardo Rurali[1]

[1]Institut de Ciència de Materials de Barcelona, Theory and Simulation of Materials, Spain.

☒ **14:00 – 16:00 Lunch time**

● **17:30 - 18:30 Science, Technology and Society Lecture**

MONDAY, AUGUST 20
ROOM: TERRACE

◾ **18:30 -20:30 POSTER SESSION & COFFEE BREAK**

■ **SA4-P001 EMISSION OF POROUS SILICON MONOLAYERS DECORATED WITH RARE EARTHS**

Luis Octavio Meza Espinoza[1], Zorayda Lazcano[1], Jesus Arriaga[1]

[1]Benemerita Universidad Autonoma de Puebla, Instituto de Física Ing. Luis Rivera Terrazas, Mexico.

■ **SA4-P002 POROUS SILICON BASED BIOSENSOR FOR DETECTION OF BIOGENIC AMINE (PUTRESCINE)**

Francisco Severiano Carrillo[1], Valentin López Gayou[1], Godofredo Garcia[2], Raul Delgado Macuil[1], Orlando Zaca Moran[1], José Antonio Contreras Rozo[1]

[1]Centro de investigación en biotecnología aplicada, Biotecnología Aplicada, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Dispositivos semiconductores, Mexico.

■ **SA4-P003 EFFECT OF DRY OXIDATION CONDITION OF POROUS SILICON ON ITS PHOTOLUMINESCENCE**

Estela Gomez Barojas[1], Guillermo Santamaria Juarez[1], Enrique Quiroga González[2], Enrique Sánchez Mora[2], Juana Deisy Santamaria Juarez[3]

[1]Benemerita Universidad Autonoma de Puebla, Centro de Investigacion en Dispositivos Semiconductores, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Institute of Physics, Mexico. [3]Benemerita Universidad Autonoma de Puebla, School of Chemical Engineering, Mexico.

■ **SA4-P004 CHARACTERIZATION AND ANALYSIS OF A MICROCAVITY MADE OF POROUS SILICON AND POROUS ANODIC ALUMINUM OXIDE**

Claudia Antonio Hernández[1], Edith Osorio de la Rosa[2], Mauricio Pacio Castillo[1], Roberto Koropecki[3], Raul Urteaga[3], Hector Juárez Santiesteban[1]

[1]Benemerita Universidad Autonoma de Puebla, Posgrado en Dispositivos Semiconductores, Mexico. [2]Universidad de Quintana Roo, División Ciencia e Ingeniería, Mexico. [3]Universidad Nacional del Litoral, Instituto de Física del Litoral, Argentina.

■ **SA4-P005 POLYMORPHOUS SILICON-GERMANIUM MICROBOLOMETERS FOR INFRARED APPLICATIONS: INFLUENCE OF PIXEL GEOMETRY**

Ricardo Jimenez[1], Mario Moreno[1], Alfonso Torres[1], Pedro Rosales[1], Javier de la Hidalga[1], Roberto Ambrosio[2], Adrian Itzmoyotl Toxqui[1], Oscar Aponte[1]

[1]Instituto Nacional de Astrofísica, Óptica y Electrónica, Electronics, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Electronics, Mexico.

■ **SA4-P006 DEPOSITION, CHARACTERIZATION AND OPTIMIZATION OF AMORPHOUS SILICON CARBIDE THIN FILMS FOR LIGHT EMISSION APPLICATIONS**

Maricela Meneses[1], Mario Moreno[1], Alfredo Morales[2], Alfonso Torres[1], Pedro Rosales[1], Israel Vivaldo[3]

[1]Instituto Nacional de Astrofísica, Óptica y Electrónica, Electronica, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., CIMAV-Unidad Monterrey, Mexico. [3]Benemerita Universidad Autonoma de Puebla, FCE BUAP, Mexico.

■ **SA4-P007 LUMINESCENT THIN FILMS BASED ON SILICON OXYCARBIDE OBTAINED WITH MONOMETHYL-SILANE BY HWCVD TECHNIQUE**

Juan Ramon Ramos Serrano[1], Yasuhiro Matsumot Kuwabara[1,2], Crisoforo Morales Ruiz[3]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Program of Nanoscience and Nanotechnology, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Sección de Electrónica del Estado Sólido, Mexico.

[3]Benemerita Universidad Autonoma de Puebla, Centro de Investigación en Dispositivos Semiconductores, Mexico.

- **SA4-P008 DEVELOPMENT OF A FABRICATION PROCESS OF C-SI/A-SI:H HETEROJUNCTION SOLAR CELLS (HIT)**

Oscar Javier Velandia Caballero[1], Mario Moreno[2], Pedro Rosales[2], Alfonso Torres[2], Jesús Martínez[2], Hiram Martínez[2], Javier de la Hidalga[2], Sandra Báez[2]

[1]Instituto Nacional de Astrofísica, Óptica y Electrónica, electronics, Mexico. [2]Instituto Nacional de Astrofísica, Óptica y Electrónica, Mexico.

- **SA4-P009 WHITE LUMINESCENCE ACTIVATED BY NITROGEN INCORPORATION IN SI/SIOX MULTILAYERS.**

Braulio Palacios Márquez[1], Karla Esther González Flores[1], Mario Moreno[2], Liliana Licea[1], Sergio Alfonso Pérez[1], Alfredo Morales[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Unidad Monterrey, Mexico. [2]Instituto Nacional de Astrofísica, Óptica y Electrónica, Electrónica, Mexico.

- **SA4-P010 MULTILEVEL BIPOLAR RESISTIVE SWITCHING IN SILICON-BASED MULTILAYER STRUCTURES.**

Karla Esther González Flores[1], Paul Horley[1], Jaime Alvarez[1], Mario Moreno[2], Sergio Alfonso Pérez[1], Liliana Licea[1], Alfredo Morales[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Unidad Monterrey, Mexico. [2]Instituto Nacional de Astrofísica, Óptica y Electrónica, Electrónica, Mexico.

- **SA4-P011 STUDY OF THE TOP-DOWN CONVERSION PRODUCED BY A SiO_x COATING ON SILICON SOLAR CELLS**

Esteban Ojeda Durán[1], Karim Monfil Leyva[1], Jesús Carrillo López[1], José Alberto Luna López[1], Ana Luz Muñoz Zurita[2], Mario Moreno Moreno[3], Roberto C. Ambrosio Lázaro[2]

[1]Benemerita Universidad Autonoma de Puebla, Science Institute, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Faculty of Electronics Sciences, Mexico. [3]Instituto Nacional de Astrofísica, Óptica y Electrónica, Electronics, Mexico.

- **SA4-P012 VISIBLE ELECTROLUMINESCENCE OBTAINED WITH SiO_x THIN FILMS DEPOSITED BY RF SPUTTERING**

Karim Monfil Leyva[1], Alma Sinia Lizet Salazar Valdez[1], Alfredo Morales Sánchez[2], Francisco Morales Morales[2], José Alberto Luna López[1], José Álvaro David Hernández de la Luz[3], Miguel Ángel Domínguez Jiménez[3], Ana Luz Muñoz Zurita[4], Javier Flores Méndez[4]

[1]Benemerita Universidad Autonoma de Puebla, Science Institute, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., Unidad Monterrey, Mexico. [3]Benemerita Universidad Autonoma de Puebla, Sciences Institute, Mexico. [4]Benemerita Universidad Autonoma de Puebla, Faculty of Electronics Sciences, Mexico.

- **SA4-P013 PHOTONIC CRYSTALS TUNED BY FERROELECTRIC NANOSTRUCTURED MATERIALS**

Ana Cecilia Flores[1], Ulises Salazar[1], Octavio Estevez[2], Nicolás Rutilo Silva González[1]

[1]Benemerita Universidad Autonoma de Puebla, Physics Institute, Mexico. [2]Universidad Nacional Autónoma de México, Physics Institute, Mexico.

- **SA4-P014 MODULATION OF PROPERTIES OF POROUS SILICON PRODUCED BY METAL ASSISTED CHEMICAL ETCHING WITH ILLUMINATION DURING THE OBTAINING PROCESS**

Miguel Angel Juárez Estrada[1], Enrique Quiroga González[2], Estela Gomez Barojas[1], Oscar Perez Diaz[2]

[1]Benemerita Universidad Autonoma de Puebla, Dispositivos Semiconductores, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Instituto de Fisica, Mexico.

- **SA4-P015 CONFORMAL DEPOSITION OF SILICON OXIDE ON Si PLATEAUS BY TEOS-LPCVD**

Maria de Los Angeles de la Cruz García[1], Enrique Quiroga González[2], Estela Gomez Barojas[1]

[1]Benemerita Universidad Autonoma de Puebla, Dispositivos semiconductores, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Instituto de Física, Mexico.

- **SA4-P016 STUDY OF PM-SI:H STRUCTURES ANNEALING BEHAVIOUR FOR STABLE SOLAR CELLS DEVELOPMENT**

Leon Hamui Balas[1]

[1]Universidad Anáhuac México Norte, Ingenieria, Mexico.

Symposium A5

NANO-ENGINEERED COATINGS, SURFACES, AND INTERFACES

Stephanos Konstantinidis / University of Mons
Fernando Alvarez / University of Campinas (UNICAMP)
Kostas Sarakinos / Linköping University
Bernardo Yáñez-Soto / Universidad Autónoma de San Luis Potosí

WEDNESDAY, AUGUST 22
ROOM: MAYA VII

Session:

SESSION CHAIR: KOSTAS SARAKINOS

08:15 - 08:45 SA5-O001 Invited Talk STRESS IN FILMS DEPOSITED BY PHYSICAL VAPOR DEPOSITION: TOWARD A PREDICTIVE MODEL

Eric Chason[1]
[1]Brown University, School of Engineering, United States.

08:45 - 09:00 SA5-O002 SURFACTANT-BASED STRATEGIES FOR MANIPULATING GROWTH OF THIN METAL FILMS ON WEAKLY-INTERACTING SUBSTRATES

Andreas Jamnig[1,2], Grégory Abadias[1], Kostas Sarakinos[2]
[1]CNRS, Institut Pprime, Département Physique et Mécanique des Matériaux, France. [2]Linkopings Universitet, Nanoscale Engineering Division, Sweden.

09:00 - 09:15 SA5-O003 AN XPS STUDY OF THE H_2 ATMOSPHERE AND THE SUBSTRATES ION BOMBARDMENT INFLUENCE IN THE TiN/Si INTERFACE LOCAL BOND

Vinicius Antunes[1], Silvia Cucatti[1], Carlos Alejandro Figueroa[2], Fernando Alvarez[1]
[1]Universidade Estadual de Campinas, Departamento de Física Aplicada, Brazil. [2]Universidade de Caxias do Sul, Programa de Pós-Graduação em Materiais, Brazil.

09:15 - 09:45 SA5-O004 Invited Talk RECENT ADVANCES IN THE CONTROL OF THE NANO-ARCHITECTURE OF ORGANIC-BASED THIN FILMS

Damien Thiry[1], Nathan Vinx[1], Pascal Damman[2], Pierre-Yves Tessier[3], Rony Snyders[1]
[1]Université de Mons, Chimie des Interactions Plasma Surface, Belgium. [2]Université de Mons, Laboratoire Interfaces et fluides complexes, Belgium. [3]Université de Nantes, Insitut des Matériaux Jean Rouxel, France.

09:45 - 10:00 SA5-O005 TAILORING THE MICROSTRUCTURE TOWARDS CONDUCTIVE NANOCRYSTALLINE DIAMOND FILMS FOR ENHANCED FIELD ELECTRON EMISSION CHARACTERISTICS

Sankaran Kamatchi Jothiramalingam[1,2], Chien-Jui Yeh[3], Ping-Yen Hsieh[4], Paulius Pobedinskas[1,2], Key-Chyang Leou[3], Marlies K. Van Bael[1,2], Nyan-Hwa Tai[4], I-Nan Lin[5], Ken Haenen[1,2]
[1]Hasselt University, Institute for Materials Research, Belgium. [2]IMEC vzw, IMOMEC, Belgium. [3]National Tsing Hua University, Department of Engineering and System Science, Taiwan. [4]National Tsing Hua University, Department of Materials Science and Engineering, Taiwan. [5]Tamkang University, Department of Physics, Taiwan.

10:00 - 10:15 SA5-O006 STUDY OF THE STRUCTURAL AND OPTICAL PROPERTIES OF

ZnS:Eu^{3+} THIN FILMS BY POLYOL AND DIP COATING TECHNIQUE

Joan Reyes Miranda[1], Dulce Yolotzin Medina Velazquez[1], Antonio Silvio de Ita de la Torre[1], Ángel de Jesús Morales Ramírez[2], Ulises Caldiño García[3], Mariana Molina Morales[4]

[1]Universidad Autónoma Metropolitana, Materiales, Mexico. [2]Instituto Politécnico Nacional - IPN - ESIQIE, Metalurgia Extractiva, Mexico. [3]Universidad Autónoma Metropolitana, Física, Mexico. [4]Instituto Politecnico Nacional, IPN - SEPI-ESIME-Zacatenco, Ciencias de la Ingeniería Mecánica, Mexico.

▸ **10:15 - 10:45 SA5-O007 Invited Talk PHYSICAL UNDERSTANDING OF NANOSCALE FRICTION IN A-C:H/D THIN FILMS**

Fernando Graniero Echeverrigaray[1], Saron Rosy Sales de Mello[1], Fernando Alvarez[2], Alexandre Fassini Michels[1], Carlos Alejandro Figueroa[3]

[1]Universidade de Caxias do Sul, PGMAT, Brazil. [2]Universidade Estadual de Campinas, DFA, Brazil. [3]Universidade de Caxias do Sul, PGGMAT, Brazil.

■ **10:45 - 11:00 SA5-O008 WEAR RESISTANCE OF CuxAly COATINGS DEPOSITED VIA FLAME THERMAL SPRAY**

Alfredo Morales[1], Juan Sebastian Castillo Figueroa[1], Oscar Piamba[1], Jhon Jairo Olaya Florez[1]

[1]Universidad Nacional de Colombia, Mecánica y Mecatrónica, Colombia.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY IV NOBEL PRIZE IN CHEMISTRY 2016 PROF. BEN L. FERINGA

Session:

SESSION CHAIR: STEPHANOS KONSTANTINIDIS

■ **12:30 - 12:45 SA5-O009 MECHANICAL NANO-CHARACTERIZATION OF AL AND AL-SI COATINGS DEPOSITED BY CVD-FBR ON AUSTENITIC STAINLESS STEEL AISI 316 AND STEAM OXIDATION**

Diego Pérez Muñoz[1], José Luddey Marulanda Arévalo[1], Jose Luis Tristancho Reyes[1], María Paulina Holguín Patiño[1], Diego Alejandro Ramírez Cardona[1]

[1]Universidad Tecnológica de Pereira, Mechanical Engineering Faculty, Colombia.

■ **12:45 - 13:00 SA5-O010 ENVIRONMENTAL BARRIER COATINGS OF YTTRIA-STABILIZED ZIRCONIA PRODUCED BY SOL-GEL / DIP-COATING FOR USE IN THE MOLTEN SALT REACTOR**

Francisco Javier Gomez Cano[1], Orlando Castilleja Hernandez[2], Eddie Lopez Honorato[1]

[1]CONACYT-CINVESTAV del IPN, Ingenieria Cerámica, Mexico. [2]CONACYT-CINVESTAV del IPN, sustentabilidad y medio ambiente, Mexico.

■ **13:00 - 13:15 SA5-O011 WEAR RESISTANCE OF STAINLESS STEEL COATINGS DEPOSITED VIA SPUTTERING**

Claudia Liliana España[1], Estrella Natali Borja Goyeneche[1], Abel Cándido Recco[2], Carlos Mario Garzón[3], Jhon Jairo Olaya Florez[1]

[1]Universidad Nacional de Colombia, Mecánica y Mecatrónica, Colombia. [2]Universidad do Estado de Santa Catarina, Centro de Ciencias Tecnologicas, Brazil. [3]Universidad Nacional de Colombia, Fisica, Colombia.

▸ **13:15 - 13:45 SA5-O012 Invited Talk MAGNETRON PLASMA TUNING FOR SELECTIVE GROWTH OF DESIRED MATERIAL**

Tiberiu Minea[1], Felipe Cemin[2], Martin Rudoph[2], Daniel Lundin[3], Grégory Abadias[4], Fernando Alvarez[5]

[1]Université Paris Sud - Paris 11, LPGP : CNRS - Université Paris-Sud - Unievrsité Paris-Saclay, France. [2]Université Paris Sud - Paris 11, LPGP : CNRS - Université Paris-Sud - Univesrité Paris-Saclay, France. [3]CNRS, LPGP : CNRS - Université Paris-Sud - Univesrité Paris-Saclay, France. [4]CNRS, Institut Pprime, Département Physique et Mécanique des Matériaux, France. [5]Universidade Estadual de Campinas, Instituto de Física Gleb Wataghin, Brazil.

14:00 – 16:00 Lunch time

WEDNESDAY, AUGUST 22
ROOM: TERRACE

18:30 -20:30 POSTER SESSION & COFFEE BREAK

■ **SA5-P001 NANOSTRUCTURING AND NANOCHARACTERIZATION OF NOVEL HYDROPHOBIC SILVER NANOWIRE COATINGS**

Busra Tugba Camic[1], Abdolali Khalili Sadaghiani[2], Ali Kosar[1], Meltem Sezen[1]

[1]Sabanci University, SUNUM, Turkey. [2]Sabanci University, FENS, Turkey.

■ **SA5-P002 CORROSION BEHAVIOR OF Ti-TiO_2 THIN FILMS DEPOSITED ON MG ALLOYS**

Benjamin Millan Ramos[1], Sandra Elizabeth Rodil[1]
[1]Instituto de Investigaciones en Materiales, Low-Dimensionality, Mexico.

- **SA5-P003 DESALINATION BY DRAGGING WATER USING A LOW-ENERGY NANO-MECHANICAL DEVICE OF POROUS GRAPHENE**

Jose Luis Rivera Rojas[1], Francisco Villanueva Mejia[2], Pedro Navarro Santos[2], Roberto Guerra Gonzalez[1]
[1]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ingeniería Quimica, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigaciones Químico-Biológicas, Mexico.

- **SA5-P004 SILICON NANOWIRES/COPPER NANOPARTICLES/SILVER HETEROJUNCTION FOR METHYL ORANGE DEGRADATION BY HETEROGENEOUS PHOTOCATALYSIS UNDER VISIBLE IRRADIATION**

María Reina García Robles[1], José de Jesús Pérez Bueno[1], Crista Selene Arteaga Syllas[1,2], Maria Luisa Mendoza López[3]
[1]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Dirección de Ciencia, Mexico. [2]Universidad Tecnológica de Tula-Tepeji, TSU en Química Área Industrial, Mexico. [3]Instituto Tecnológico de Querétaro, Metalmecánica, Mexico.

- **SA5-P005 CHARACTERIZATION OF THIN FILMS DOPED WITH GOLD NANOPARTICLES**

Orlando Ortiz Jimenez[1], Mónica Trejo Durán[1], Alejandro Vázquez Dimas[2], Wilma Betzabe Rojas Salinas[3], Jesús Eduardo Castellanos Águila[1]
[1]Universidad de Guanajuato, Departamento de Estudios Multidisciplinarios, Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico. [3]Universidad de Guanajuato, División de Ingenierías Campus Irapuato-Salamanca, Mexico.

- **SA5-P006 CHARACTERIZATION OF MO-OXIDE MICROWIRE ARRAY DECORATED WITH Au NANOPARTICLES SYNTHETIZED BY THERMAL OXIDATION**

Alan Rair López Rivera[1], Eric Fernando Vazquez Vazquez[1], Angel Guillen Cervantes[2], Miguel A. Avendaño Ibarra[3], Salvador Gallardo Hernandez[4], Oscar Eduardo Cigarroa Mayorga[1]
[1]Instituto Politécnico Nacional - IPN, Tecnologías Avanzadas, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Fisica, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Depto. Ingenierá Electronica, SEES, Mexico. [4]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, LANE, Mexico.

- **SA5-P007 FURTHER ADDITION OF ISOCYANATE AND AMINE GROUPS TO URETHANE BOND FOR THE SYNTHESIS OF HYDROPHOBIC FLUORINATED COATINGS ON CORNING® GLASS**

Alejandro Torres Castro[1], Pedro E. Martin Varguez[2], Juan Antonio Perez Patiño[3], Virgilio A. González González[1]
[1]Universidad Autónoma de Nuevo León, Posgrado en Nanotecnología, Mexico. [2]Universidad Autónoma de Nuevo León, Posgrado, Mexico. [3]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico.

- **SA5-P008 REGULAR SURFACE PATTERNS IN POLYCRYSTALLINE STEEL GENERATED BY LOW ENERGY ION BOMBARDMENT**

Roosevelt Droppa Jr[1], Silvia Cucatti[2], Monica Morales[2], Haroldo C Pinto[3], Vinicius Antunes[2], Fernando Alvarez[2]
[1]Universidade Federal do Abc, CCNH, Brazil. [2]Universidade Estadual de Campinas, IFGW - DFA, Brazil. [3]Universidade de São Paulo, EESC - SMM, Brazil.

- **SA5-P009 BEHAVIOR OF WEAR AND MICROSTRUCTURE OF TYPE CERMET COATINGS COMPOUNDS OF CoCr [Ni] WC OBTAINED BY THERMAL SPRAY**

Sandra Marcela Acuña Rodriguez[1], Erika Jazmith Espinosa Cardenal[1], Carlos Mauricio Moreno Telléz[1]
[1]Universidad Pedagógica y Tecnológica de Colombia, Boyacá, Colombia.

- **SA5-P010 PERFORMANCE OF SURFACE TREATMENT WITH SILICON-BASED NANOPARTICLES APPLIED IN AGED CONCRETE STRUCTURES.**

Laura Arcelia Vaca Arciga[1], Gerardo Fajardo San Miguel[1], Dulce María Anahí Cruz Moreno[1], Aldrhyn Miguel Esquivel Gómez[1], Ismael Flores Vivian[1]
[1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Civil, Mexico.

- **SA5-P011 WEAR RESISTANCE OF CuxAly COATINGS DEPOSITED VIA SPUTTERING**

Diana Maria Otalora Barreno[1], Estrella Natali Borja Goyeneche[1], Jose Alberto Duarte Moller[2], Jhon Jairo Olaya Florez[1]

[1]Universidad Nacional de Colombia, Mecánica y Mecatrónica, Colombia. [2]Centro de Investigación en Materiales Avanzados, S.C., Física de Materiales, Mexico.

- **SA5-P012 STUDY OF STRUCTURAL PROPERTIES OF NANOSTRUCTURE PbS THIN FILMS**

Francisco Jose Solis Pomar[1], Abel Fundora Cruz[2], Eduardo Gerardo Perez Tijerina[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Físico Matemáticas, Mexico. [2]Universidad de La Habana, Division laser, Cuba.

- **SA5-P013 SURFACES PROTECTION TROUGH CONTROLLED OXIDATION WITHIN NITRIDED BONDS FOR PVD COATINGS.**

Gilberto Enoc García Acosta[1]

[1]Tecnológico de Monterrey, Ingenieria, Mexico.

- **SA5-P014 OPTIMIZATION OF INKJET PRINTING PARAMETERS FOR SYNTHESIZING NICKEL OXIDE THIN FILMS**

Angel David Samos Puerto[1], Gerko Oskam[1], Geonel Rodríguez Gattorno[1], Miguel Ruiz Gómez[2]

[1]CINVESTAV-Mérida, Department of Applied Physics, Mexico. [2]Cátedras-CONACyT-CINVESTAV Mérida, Department of Applied Physics, Mexico.

- **SA5-P015 FERROELECTRIC PHASE STABILIZATION OF HfO_2 GROWN ON CUBIC InN**

Vicente Damian Compean Garcia[1], Enrique Prado Navarrete[2], Edgar López Luna[2], Miguel Angel Vidal[2]

[1]CONACyT-Coordinación para la Innovación y Aplicación de la Ciencia y la Tecnología, Mexico. [2]Universidad Autónoma de San Luis Potosí, CIACyT, Mexico.

- **SA5-P016 BILAYER COATINGS OF VN/TiN, PRODUCED BY D.C MAGNETRON SPUTTERING**

Maria Jose Rivera Chaverra[1], Daniel Escobar Rincón[2], Elisabeth Restrepo Parra[1]

[1]Universidad Nacional de Colombia, Fisica y Quimica, Colombia. [2]Universidad de Antioquía, Fisica y Quimica, Colombia.

- **SA5-P017 THE ADHERENCE OF CdS THIN FILMS CHEMICALLY DEPOSITED ON COMMON INORGANIC SUBSTRATES**

Jorge Alberto García Valenzuela[1,2], Dagoberto Cabrera German[1,3], Marcos Alan Cota Leal[1,3], Miguel Martinez Gil[1,3], Martha Raquel Baez Gaxiola[1], Merida Sotelo Lerma[3]

[1]SMARTER-Lab nucleus for research & divulgation, A.C., Mexico. [2]Universidad de Sonora, Departamento de Ingeniería Química y Metalurgia, Mexico. [3]Universidad de Sonora, Departamento de Investigación en Polímeros y Materiales, Mexico.

- **SA5-P018 EFFECT OF SUBSTRATE POLARIZATION ON REMOTE-PLASMA NITRIDATION OF TIN/HfO_2/Si STRUCTURES**

Marisol Mayorga Garay[1], Andres de Luna Bugallo[1], Alberto Herrera Gomez[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Materiales, Mexico.

- **SA5-P019 SILVER NANOPARTICLES ABLATED BY 5NS LASER: STANDARD OPTICAL CHARACTERIZATION TO SERS APPLICATIONS**

Jonathan Álvarez[1], Héctor Reynoso[1], Diana Paola Arenas Ramirez[1], Rigoberto Castro[1]

[1]Universidad de Guanajuato campus León, Física, Mexico.

- **SA5-P020 TRANSPARENT POLYMER FILMS WITH EXCELLENT PHOTOLUMINESCENT PROPERTIES BASED ON TiO_2: Sm^{3+} COMPLEX**

Gloria Lesly Jimenez Miranda[1], José Luis Reyes Rodríguez[2], Isela Padilla Rosales[1], Raúl Ivan Sánchez Alarcón[3], Miguel A. Aguilar Frutis[3], Gilberto Alarcón Flores[3], Ciro Falcony[4]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Nanoscience and Nanotechnology, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Química, Mexico. [3]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Películas Delgadas, Mexico. [4]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Física, Mexico.

- **SA5-P021 ON THE DISTINCTION OF COORDINATION MODES IN SURFACE METAL CARBOXYLATES BY MEANS OF XPS. STUDIES WITH MODEL COMPOUNDS**

Edgar Obed Perez Reyes[1], Oscar Fernando Odio Chacón[1], Luis Lartundo Rojas[2], Herlys Viltres Cobas[1], Paula Montserrat Crespo Barrera[1], Edilso Reguera[1]

[1]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Nanotecnología y Materiales Funcionales, Mexico. [2]Centro de Nanociencias y micro y Nanotecnologías del IPN, Espectroscopia de Fotoelectrónes Inducidos por Rayos X (XPS), Mexico.

- **SA5-P022 THEORETICAL-EXPERIMENTAL STUDY OF THE OPTICAL TRANSMITTANCE OF ALUMINUM-DOPED ZINC OXIDE THIN FILMS**

Benito Juarez[1], Juan Carlos Alonso Huitron[1]

[1]Instituto de Investigaciones en Materiales, Condensed matter and cryogenics, Mexico.

- **SA5-P023 THE APPLICATION OF MULTILAYERED Co/Ni PERPENDICULAR MAGNETIC ANISOTROPY (PMA) EFFECT CELL TRAPPING DEVICE**

Xu Li[2], Yu-Ching Hsiao[2], Dino Di Carlo[1], Chris Lynch[2], Reem Khojah[1], Auni Kundu[2]

[1]University of California, Los Angeles, Bioengineering, United States. [2]University of California, Los Angeles, Mechanical and Aerospace Engineering, United States.

- **SA5-P024 SUSTAINABLE ENERGY SOURCE BASED ON TRIBOELECTRIC NANOGENERATORS.**

Carlos Eduardo Osornio Martinez[1], Juan Roberto Moreno[1], Gabriel Gonzalez[1], Francisco Javier González[1]

[1]Universidad Autónoma de San Luis Potosí, Coordinación para la Innovación y Aplicación de la Ciencia y la Tecnología (CIACYT), Mexico.

- **SA5-P025 STRESS, HARDNESS AND ELASTIC MODULES OF BISMUTH TRIIODIDE (BiI3)**

Natalia Coutinho[1], Rafael Merlo[1], Silvia Cucatti[1], Fernando Alvarez[1], Francisco Marques[1]

[1]Universidade Estadual de Campinas, Physics Institute, Brazil.

- **SA5-P026 HYBRID LAYERED NANOPHOSPHOR COMPOSITES: ENHANCED LUMINESCENCE PROPERTIES**

Jesús Uriel Balderas[1], S. Carmona T.[2], Luis Mariscal Becerra[3], Ciro Falcony[3]

[1]Cinvestav Zacatenco, Nanociencias y Nanotecnología, Mexico. [2]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Tecnología avanzada, Mexico. [3]Cinvestav Zacatenco, Física, Mexico.

- **SA5-P027 CHARACTERIZATION OF SILICON OXIDE FILMS OBTAINED BY HFCVD TECHNIQUE USING TEOS AND SBA-15 AS SOURCE OF ATOMS**

Iván Enrique García Balderas[1], Crisoforo Morales Ruiz[1]

[1]Benemerita Universidad Autonoma de Puebla, CIDS-ICUAP, Mexico.

THURSDAY, AUGUST 23
ROOM: MAYA VII

Session:

SESSION CHAIR: BERNARDO YANEZ-SOTO

- **09:00 - 09:30 SA5-O013 Invited Talk IMMOBILIZATION EFFECTS ON THE PHOTOCATALYTIC ACTIVITY OF CdS QUANTUM DOTS-HORSERADISH PEROXIDASE HYBRID NANOMATERIALS**

Iker Iñarritu[1], Eduardo Torres[2], Antonio Topete[3], José Campos Terán[4]

[1]Universidad Autónoma Metropolitana, Posgrado en Ciencias Naturales e Ingeniería, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Centro de Química, Mexico. [3]Universidad de Guadalajara, Fisiología, Mexico. [4]Universidad Autónoma Metropolitana, Procesos y Tecnología, Mexico.

- **09:30 - 09:45 SA5-O014 MAGNETITE NANOPARTICLES DETECTION EMPLOYING HIGH-SENSITIVE HALL EFFECT SENSORS FOR BIOMEDICAL APPLICATIONS**

Jesus Molinar Diaz[1], Christian Chapa[1], Erika Fuentes[2], Manuel Quevedo[2], Perla Elvia Garcia Casillas[1]

[1]Universidad Autónoma de Ciudad Juárez, Materials, Mexico. [2]University of Texas at Dallas, Materials Science and Engineering, United States.

- **09:45 - 10:00 SA5-O015 ATOMIC LAYER DEPOSITION OF ULTRA-THIN TITANIA FILMS ON NANOSTRUCTURED SUBSTRATES**

Alejandra Romero[1], Joel Molina[1]

[1]Instituto Nacional de Astrofísica, Óptica y Electrónica, Electrónica, Mexico.

- **10:00 - 10:30 SA5-O016 Invited Talk LARGE SCALE, LOW TEMPERATURE SYNTHESIS OF SOFT, STRETCHABLE 2D ELECTRONICS**

Christopher Muratore[1], Nicholas Glavin[2]

[1]University of Dayton, Chemical and Materials Engineering, United States. [2]Air Force Research Laboratory, Materials and Manufacturing Directorate, United States.

- **10:30 - 10:45 SA5-O017 ELECTRICAL AND OPTICAL PROPERTIES IN ULTRATHIN CAPACITORS BASE ON Al_2O_3 – Y_2O_3 GROWTH VIA ATOMIC LAYER DEPOSITION**

Javier Alonso Lopez Medina[1], Eduardo Antonio Murillo Bracamontes[2], Nicola Nedev[3], Gerardo Soto Herrera[1], Mario Farias[1], Hugo Tiznado[1]

[1]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Fisicoquimica, Mexico. [2]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Nanoestructuras, Mexico. [3]Universidad Autónoma de Baja California, Instituto de Ingeniería, Mexico.

■ **10:45 - 11:00 SA5-O018 OPTIMIZATION OF MAGNETRON SPUTTERED TiN FILMS FOR PLASMONIC APPLICATION**

Jiri Bulir[1], Joris More Chevalier[1], Christelle Kadlec[2], Ladislav Fekete[1], Jarmila Remiasova[1], Martin Vondracek[1], Katerina Horakova[1], Morgane Poupon[3], Michal Novotny[1], Jan Lancok[1]

[1]Institute of Physics of the Czech Academy of Sciences, Department of Analysis of Functional Materials, Czech Republic. [2]Institute of Physics of the Czech Academy of Sciences, Department of Dielectrics, Czech Republic. [3]Institute of Physics of the Czech Academy of Sciences, Department of Structure Analysis, Czech Republic.

11: 00 - 11:30 POSTER AWARDS CEREMONY & COFFEE BREAK

11:30 - 12:30 PLENARY V
PROF. GALO SOLER ILLIA

Session:

SESSION CHAIR: FERNANDO ALVAREZ

■ **12:30 - 12:45 SA5-O019 SYNTHESIS AND CHARACTERIZATION OF GaN THIN FILMS BY PLASMA ENHANCED ATOMIC LAYER DEPOSITION TECHNIQUE**

Denisse Cortés Salinas[1], José Joaquín Alvarado Pulido[1], Blanca Susana Soto Cruz[1], Melissa Chávez Portillo[1], Salvador Gallardo Hernández[2]

[1]Benemerita Universidad Autonoma de Puebla, CIDS-ICUAP, Mexico. [2]Cinvestav Zacatenco, Laboratorio Avanzado de Nanoscopía Electrónica, Mexico.

■ **12:45 - 13:00 SA5-O020 ATOMIC VERSION OF A PINHOLE CAMERA USING HOLE-MASK COLLOIDAL LITHOGRAPHY**

Maria H. Salazar[1], Vladimir E. Bochenkov[2], Duncan S. Sutherland[1]

[1]Aarhus Universitet, Nanoscience, Denmark. [2]Moscow State University, Chemical Kinetics, Russia.

13:00 - 13:30 SA5-O021 Invited Talk HIGH PERFORMANCE NANOTSRUCTURED COATINGS AND THEIR APPLICATIONS

Kwang Leong Choy[1]

[1]University College London, UCL Institute for Materials Discovery, United Kingdom, Channel Islands & Isle of Man.

14:00 – 16:00 Lunch time

Symposium A6

NANOSTRUCTURED MATERIALS AND NANOTECHNOLOGY: SYNTHESIS, PROCESSING AND THEORY

Milton Muñoz Navia / UASLP
Alma Gabriela Palestino Escobedo / UASLP
Martin E. Garcia / Universität Kassel

MONDAY, AUGUST 20
ROOM: TERRACE

18:30 -20:30 POSTER SESSION & COFFEE BREAK

SA6-P001 SENNA OCCIDENTALIS AQUEOUS EXTRACT FOR THE SYNTHESIS OF NANOPARTICLES WITH CERIUM, LANTHANUM, COPPER, SILVER AND ZINC SALTS PRODUCES STABLE ANTIMICROBIAL AGENT

Leyanet Barbieria Roque[1], Olayide Obidi[2], Erasmo Gámez Espinosa[1], Marisa Viera[3,4], Natalia Bellotti[1,5]

[1]Centro de Investigación y Desarrollo en Tecnología de Pinturas (CIDEPINT), Pinturas Especiales, Argentina. [2]Lagos State University, Department of Microbiology, Nigeria. [3]Centro de Investigación y Desarrollo en Tecnología de Pinturas (CIDEPINT), ANELPIRE, Argentina. [4]Universidad Nacional de La Plata, Facultad de Ciencias Exactas, Argentina. [5]Universidad Nacional de La Plata, Facultad de Ciencias Naturales y Museo, Argentina.

SA6-P002 A THERMOMECHANICAL APPROACH FOR OBTAINING CELLULOSE NANOCRYSTALS

Hector Miranda Pacindo[1], Nelly Flores Ramirez[2], Salomon Ramiro Vasquez Garcia[3]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Department of Wood Engineering and Technology, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Wood Engineering and Technology, Mexico. [3]Universidad Michoacana de San Nicolás de Hidalgo, Department of Chemical Engineering, Mexico.

SA6-P003 DIELECTRIC NANOFLUIDS: WHAT IS KNOWN ABOUT ELECTRIC PRE-RUPTURE PHENOMENA?

Jose Luis Hernandez Avila[1], Fermin P Espino Cortes[2], Monica Corea[3], Carlos Gomez Yanez[4], Juan Carlos Olivarez Galván[1]

[1]Universidad Autónoma Metropolitana, CBI-Departamento de Energía, Mexico. [2]Instituto Politecnico Nacional, IPN - SEPI-ESIME-Zacatenco, SEPI ESIME Zacatenco, Mexico. [3]Instituto Politécnico Nacional - IPN - ESIQIE, SEPI ESIQIE, Mexico. [4]Instituto Politécnico Nacional - IPN - ESIQIE, Department of Materials Engineering, Mexico.

SA6-P004 FABRICATION OF A MIS STRUCTURE BASED ON TWO-DIMENSIONAL ZnO NANOSTRUCTURES GROWN BY CHEMICAL ROUTES: ELECTROCHEMISTRY AND HYDROTERMAL

José Alberto Luna López[1], Rubén Jonatan Aranda García[1]

[1]Benemerita Universidad Autonoma de Puebla, Centro de Investigaciones en Dispositivos Semiconductores, Mexico.

- **SA6-P005 POLYELECTROLYTES WITH PHOSPHONIC ACID GROUPS USEFUL IN THE SYNTHESIS AND STABILIZATION OF Au NANOPARTICLES**

  Mari Carmen Reyes[1]

  [1]Universidad Autónoma del Estado de Hidalgo, Laboratorio de Polímeros, Área Académica de Ciencias de la Tierra y Materiales, Mexico.

- **SA6-P006 YAG POWDERS DOPED WITH DIFFERENT RARE EARTH IONS (YAG:RE, RE= CE^{3+} , EU^{3+} , ND^{3+} AND PR^{3+}) VIA COMBUSTION SYNTHESIS**

  Angel Rafael Valenzuela León[1], Vivian Gudalupe Vargas Bazan[1], Ana Lucia Lopez Gastelum[1], Rafael Garcia Gutierrez[1]

  [1]Universidad de Sonora, Ingeniería Química y Metalurgia, Mexico.

- **SA6-P007 MECHANICAL PROPERTIES IN HOLLOW NANOPARTICLES**

  Felipe Valencia[1]

  [1]Universidad de Chile, Physics, Chile.

- **SA6-P008 THERMOLUMINESCENCE AND AFTERGLOW IN RED NANOPHOSPHOR $MgGa_2O_4:Cr^{3+}$ SYNTHESIZED BY COMBUSTION METHOD**

  Nancy Jovaana Zúñiga Rivera[1], Rodolfo Ruiz Torres[2], Marcelino Barboza Flores[3], Rafael Garcia Gutierrez[3]

  [1]Universidad de Sonora, Departamento de Física, Matemáticas e Ingeniería, Universidad de Sonora U.R.S., Mexico. [2]Universidad de Sonora, Departamento de Física, Posgrado en Nanotecnología., Mexico. [3]Universidad de Sonora, Departamento de Investigación en Física, Mexico.

- **SA6-P009 SYNTHESIS OF DENDRIMERS VIA SONOGASHIRA COUPLING REACTION**

  Luis Isaac Allende Alarcón[1], Marcos Martínez García[1]

  [1]Universidad Nacional Autónoma de México, Organic Chemistry, Mexico.

- **SA6-P010 QUANTITATIVE INVESTIGATION OF PYROELECTRIC LUMINESCENCE THROUGH POOLE-FRENKEL EFFECT**

  Mohamed Swaisi[1], Andreas Ruediger[1], Membarka Atantawi[1]

  [1]Université du Québec, Energy and Materials Sciences, Canada.

- **SA6-P011 DIELECTRIC FUNCTION AND EXCITON TRANSITIONS IN ALD GROWN WSe2 MONOLAYER**

  Won Chegal[1], Jun Oh Kim[2], Sang Jun Lee[2], Sang Woo Kang[1], Mangesh Diware[1]

  [1]Korean Research Institute of Standards and Science, Advanced Instrumentation Institute, South Korea. [2]Korean Research Institute of Standards and Science, Division of Industrial Metrology, South Korea.

- **SA6-P012 SYNTHESIS AND CHARACTERIZATION OF SILVER NANOCRYSTALS USING GARLIC (ALLIUM SATIVUM) AND ONION (ALLIUM CEPA)**

  Rubí Vazquez Mora[1], Yoxkin Estevez Martinez[2], Elizabeth Chavira[3], Adriana Tejeda[3], Karla Eriseth Morales Reyes[3], Omar Novelo[3], Josue Romero Ibarra[3]

  [1]Instituto Tecnológico Superior de Acatlán de Osorio, Ingenieria en Industrias Alimentarias, Mexico. [2]Instituto Tecnológico Superior de Acatlán de Osorio, Ingenieria Electronica, Mexico. [3]Universidad Nacional Autónoma de México, Instituto de Investigaciones en Materiales, Mexico.

- **SA6-P013 SYNTHESIS OF NEW HYDROXYL CONTAINING DIAZACROWN ETHER WITH AMIDE AND IRON NANOPARTICLES**

  Leyla Vezirova[1]

  [1]Research Institute Geotechnological Problems of Oil, Gas and Chemistry, Az1010 Baku, Azerbaijan.

- **SA6-P014 SYNTHESIS OF $(Bi_{1.7}Pb_{0.3})_2Sr_2Ca_2Cu_2O_{10}$ NANOMATERIAL SUPERCONDUCTOR.**

  Ricardo Ernesto Paniagua Martinez[1,2], Elizabeth Chavira[2], Jesús Angel Arenas Alatorre[3], Adriana Tejeda Cruz[4], Karla Eriseth Morales Reyes[5], Jorge Barreto[6], Omar Novelo[7], Rodolfo Ivan Cruz Hernandez[2,8], Josué Romero Ibarra[9]

  [1]Facultad de Química, UNAM, Inorganica, Mexico. [2]Instituto de Investigaciones en Materiales, Materiales de baja dimensionalidad, Mexico. [3]Instituto de Física - Universidad Nacional Autónoma de México, Propiedades magneticas, Mexico. [4]Instituto de Investigaciones en Materiales, Materiales metálicos y cerámicos, Mexico. [5]Instituto de Investigaciones en Materiales, Polimeros, Mexico. [6]Instituto de Física - Universidad Nacional Autónoma de México, Estado solido, Mexico. [7]Instituto de Investigaciones en Materiales, Biomateriales, Mexico. [8]Instituto Tecnologico Superior de Poza Rica, Nanotecnologia, Mexico. [9]Instituto de Investigaciones en Materiales, Fisica, Mexico.

- **SA6-P015 SUBSTRATES SERS STUDY OBTAINED BY TOLLENS AND ELECTROLESS TECHNIQUES. APPLICATION IN DETECTION OF ARSENIC OXIDES**

  Aransselly Jesus Quiroz Chang[1,2], Roberto Sato[2], Guadalupe Bañuelos[2], Esther Mata[2], Ruben Sanchez[1], Eduardo Massoni[3]

[1]Pontificia Universidad Católica del Perú, Departamento de Ciencias, Grupo de Óptica Aplicada, Peru. [2]Universidad Nacional Autónoma de México, Centro de Ciencias Aplicadas y Desarrollo Tecnológico, Mexico. [3]Pontificia Universidad Católica del Perú, Departamento de Ciencias, Peru.

- **SA6-P016 STUDY OF CDS:SB_2S_3 THIN-FILMS BY PULSED LASER DEPOSITION**

Michelle Judith Salgado[1], Dainet Berman Mendoza[2], Manuel A. Quevedo López[3], Bruce Gnade[3]

[1]Universidad de Sonora, Fisica, Mexico. [2]Universidad de Sonora, Investigación en Física, Mexico. [3]The University of Texas at Dallas, Department of Materials Science and Engineering, United States.

- **SA6-P017 OPTICAL CHARACTERIZATION OF TITANIUM OXIDE NANOCRYSTALS INSIDE A POROUS SILICON MATRIX OBTAINED BY ELECTROLYSIS.**

Fabiola Nieto[1], Godofredo Garcia[2], Tomás Díaz[2], Enrique Rosendo[2], Roman Romano Trujillo[2], Crisoforo Morales Ruiz[2], Antonio Coyopol Solis[2], Minerva Sanchez Padilla[1], Reina Galeazzi Isasmendi[2]

[1]Benemerita Universidad Autonoma de Puebla, FCQ, Mexico. [2]Benemerita Universidad Autonoma de Puebla, CIDS-ICUAP, Mexico

- **SA6-P018 OPTICAL, RAMAN AND MICROSCOPY CHARACTERIZATION OF EUROPIUM ION DOPED GLASSES OF SIO_2 PMMA**

Pablo Trejo[1], Raul Aceves Torres[2], Martin Rodolfo Palomino Merino[1], José Eduardo Espinosa[1], Eduardo Moreno Barbosa[1], Juan de la Cruz[1]

[1]Benemerita Universidad Autonoma de Puebla, Fisico-Matematicas, Mexico. [2]Universidad de Sonora, Departamento de investigación en Física, Mexico.

- **SA6-P019 SYNTHESIS OF THIN FILMS NANOSTRUCTURED OF HfO_2 DEPOSITED BY THE ULTRASONIC PYROLYTIC SPRAY TECHNIQUE A METAL-ORGANIC SOURCE.**

Roberto Vázquez Arreguín[1], Antonio Gustavo Juarez Gracia[2], Tatiana Mileydy Leal del Rio[2], Miguel García Rocha[3]

[1]Instituto Politécnico Nacional - IPN, ESCOM, Mexico. [2]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Instrumentación y Caracterización, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Física, Mexico.

- **SA6-P020 CAPILLARY SURFACE PRODUCED ON TITANIUM ALLOY BY FEMTOSECOND LASER**

Ranran Fang[1]

[1]Chongqing University of Posts and Telecommunications, School of Science, China.

- **SA6-P021 SYNTHESIS OF SILICON NANOPORES AND THEIR STRUCTURAL AND ELECTRONIC PROPERTIES USED IN ULTRA FAST DNA SENSING**

Itzel Santizo[1], Maximiliano S. Pérez[1], Ignacio L. Garzon[2], Carlos Lasorsa[1]

[1]Universidad Tecnológica Nacional, Ingeniería de Recubrimientos Especiales y Nanoestructuras, Argentina. [2]Instituto de Física - Universidad Nacional Autónoma de México, Sistemas Complejos, Mexico.

- **SA6-P022 STRUCTURAL EVOLUTION OF MECHANICALLY ALLOYED Ni-Cr-Al-Y POWDERS**

Jorge Morales[1], Oscar Velázquez de Jesús[2], Viviana Leyva Hernández[3]

[1]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Science, Mexico. [2]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Posgrade, Mexico. [3]Instituto Tecnológico Superior de Ébano, Academic development, Mexico.

- **SA6-P023 TiO_2 POROUS PELLETS SYNTHESIZED BY SOL-GEL AND RAPID LIQUID PHASE SINTERING**

Duilio Valdespino Padilla[1,2], Gabriel Rojas George[3], Ma. de la Paz Cruz Jáuregui[2]

[1]Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE), advanced materials, Mexico. [2]Centro de Nanociencias y Nanotecnología CNyN-UNAM, advanced materials, Mexico. [3]Centro de Investigación en Materiales Avanzados, S.C., Catedrático CONACyT, Mexico.

- **SA6-P024 CHEMICAL ROUTE FOR SYNTHESIS OF LOW RESISTIVE TRANSPARENT NANOCRYSTALLINE CADMIUM OXIDE**

Erick Velázquez Lozada.[1], Luis Castañeda[2], Gabriela Monserrat Camacho González[3]

[1]Instituto Politécnico Nacional - IPN, SEPI ESIME Zacatenco, Mexico. [2]Instituto Politécnico Nacional - IPN, Laboratorio de Modelado Molecular, Bioinformática y Diseño de Fármacos de la Escuela Superior de Medicina, Mexico. [3]Instituto Politécnico Nacional - IPN, ESIME Zacatenco, Mexico.

- **SA6-P025 LIGHT EMISSION AND STRUCTURE OF Nd-DOPED Si-RICH-HfO_2 FILMS PREPARED BY MAGNETRON SPUTTERING IN DIFFERENT ATMOSPHERES**

Erasto Vergara Hernández[1], Leonardo Gabriel Vega Macotela[2], Tetyana Torchynska[3], Larysa Khomenkova[4,5], C. Labbé[6], X. Portier[6], F. Gourbilleau[6]

[1]Instituto Politécnico Nacional - IPN, UPIIH, Mexico. [2]Instituto Politécnico Nacional - IPN, ESIME, Mexico. [3]Instituto Politécnico Nacional - IPN, ESFM, Mexico. [4]National University - Kyiv-Mohyla academy, Ukraine. [5]V.Lashkaryov Institute of Semiconductor Physics at the National Academy of Sciences of Ukriane, Ukraine. [6]CIMAP/CEA/CNRS/Ensicaen/UCBN, France.

- **SA6-P026 STUDY OF NANOGRASS GROWTH OVER A TiO_2 NANOTUBES MATRIX USING GRAPHITE AS CATHODE.**

Marcos Luna Cervantes[1], Luis Zamora Peredo[1], Julian Hernandez Torres[1], Adriana Báez Rodríguez[1]

[1]Universidad Veracruzana, Microna, Mexico.

- **SA6-P027 PREPARATION AND CHARACTERIZATION OF NANOCRYSTALLINE CELLULOSE BIREFRINGENT FILMS.**

Tania Tejeda[1], Arturo Mendoza Galván[1], Reina Araceli Mauricio[1], Amos Benjamín Domínguez Gómez[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Unidad Queretaro, Mexico.

- **SA6-P028 EFFECT OF DOPANT IN THE MORPHOLOGY, CRYSTAL SIZE AND PHASES IN $BaTiO_3$ NANOFIBERS**

Maria Cristina Maldonado Orozco[1], Raul Sandoval Jabalera[1], Perla Cordero[1], Raúl Acosta Chávez[1], Matha Ochoa Lara[2], Francisco Espinosa Magaña[2,3]

[1]Universidad Autónoma de Chihuahua, Facultad de Ingeniería, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., Física de Materiales, Mexico. [3]Centro de Investigación en Materiales Avanzados, S.C., Mexico.

- **SA6-P029 OPTICAL AND THERMAL PROPERTIES OF PVB ENCAPSULANT POLYMER FUNCTIONALIZED WITH LUMINESCENT ORGANIC DYES FOR PHOTOVOLTAIC APPLICATION**

Agroui Kamel[1], Arfi Walid[1]

[1]CRTSE, TESE, Algeria.

- **SA6-P030 STUDY OF PHOTOLUMINESCENCE OF GERMANIUM NANOSTRUCTURES**

Alejandra Lopez Suarez[1], Thania Andrea Briano Veloz[1]

[1]Universidad Nacional Autónoma de México, Instituto de Fisica, Mexico.

- **SA6-P031 LUMINESCENT PROPERTIES OF $YVO_4:Eu^{3+}$ NANOPARTICLES PREPARED AT ROOM TEMPERATURE**

Claudia Elena Rivera Enriquez[1,2], Ana Leticia Fernández Osorio[1,2]

[1]Facultad de Estudios Superiores Cuautitlán, UNAM., Física, Mexico. [2]Universidad Nacional Autónoma de México, Química, Mexico.

- **SA6-P032 $Pd(OH)_2$-$PdCO_3$ AMORPHOUS POWDER GROWN BY CHEMICAL BATH AND ITS TRANSFORMATION INTO PD NANOCRYSTALS AFTER THERMAL ANNEALING TREATMENT**

Marcial Zamora Tototzintle[1], Oscar Portillo Moreno[2], Vladimir Maldonado Guzman[3], Miguel Hernandez Hernandez[4], José Albino Moreno Rodríguez[5]

[1]Benemerita Universidad Autonoma de Puebla, Ciencias Químicas, laboratorio de química general, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Fisico Matematicas, laboratorio de ciencia de materiales, Mexico. [3]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniería Química, Mexico. [4]Benemerita Universidad Autonoma de Puebla, Físico Matemáticas, Mexico. [5]Benemerita Universidad Autonoma de Puebla, Ciencias Quimicas, Mexico.

- **SA6-P033 NANOSTRUCTURED KETOROLAC-TROMETHAMINE/MCF COMPOSITE. DRUG RELEASE SYSTEM.**

Jorgelina Cussa[1], Juliana M Juarez[1], Antonela M Prados[1], Marcos B. Gomez Costa[1], Oscar Anunziata[1]

[1]Universidad Tecnológica Nacional, FRC-Nanotec, Argentina.

- **SA6-P034 SURFACE MODIFICATION OF CERAMIC TiO_2@SiO_2 SOL-GEL NANOPARTICLES WITH 4-AMINOBENZOIC ACID (PABA)**

Maria Luz Carrera Jota[1], Margarita García Hernández[2], Ernesto Rivera Becerril[3], Jorge Humberto Luna Domínguez[4], José Aarón Melo Banda[2]

[1]Universidad Autónoma Metropolitana, Posgrado en Ciencias naturales e ingeniería, Mexico. [2]Tecnólogico Nacional de México/Instituto Tecnológico de Ciudad Madero, Centro de investigación en petroquímica, Mexico. [3]Universidad Autónoma Metropolitana, Ciencias Naturales e Ingeniería, Mexico. [4]Universidad Autónoma de Tamaulipas, Facultad de Odontología, Mexico.

- **SA6-P035 CELL VIABILITY OF A DRUG DELIVERY SYSTEM USING A POLYETHYLENE GLYCOL BIOPOLYMER AND RETINOL**

Juan Francisco Hernandez[2], Imelda Olivas Armendáriz[2], Claudia Alejandra Rodríguez González[2], Valeria Alejandra Irigoyen Pérez[1], Florinda Jimenez Vega[3], Mauricio Salcedo Vargas[4]

[1]Universidad Autónoma de Ciudad Juárez, Departamento de Electrica y Computacion, Mexico. [2]Universidad Autónoma de Ciudad Juárez, Departamento de Fisica y Matematicas, Mexico. [3]Universidad Autónoma de Ciudad Juárez, Departamento de ciencias biomédicas, Mexico. [4]Universidad Autónoma de Ciudad Juárez, Clínica siglo XXI, Mexico.

TUESDAY, AUGUST 21
ROOM: TULUM B

09:00 - 09:30 SA6-O001 Invited Talk LOW ENERGY ION IRRADIATION FOR DEVELOPING SPIN-FILTERS BETWEEN MAGNETIC-NON MAGNETIC NANOJUNCTIONS IN NON-MAGNETIC ZnO NANOSTRUCTURES

Pablo D. Esquinazi[1]

[1]University of Leipzig, Superconductivity and Magnetism, Germany.

09:30 - 09:45 SA6-O002 ELECTRONIC THEORY OF COHERENT MAGNETIZATION REVERSAL IN TRANSITION METAL CLUSTERS

Jes?s Dorantes D?vila[1], Zahra Sheikh Abbasi[2], David Gallina[2], Gustavo Miguel Pastor[2]

[1]Universidad Autónoma de San Luis Potosí, Instituto de Física, Mexico. [2]Universität Kassel, Theoretische Physik, Germany.

09:45 - 10:00 SA6-O003 LIGAND-CONTROLLED MAGNETISM OF MONOLAYER-PROTECTED GOLD NANOCLUSTERS

Mikhail Agrachev[1], Sabrina Antonello[1], Tiziano Dainese[1], Marco Ruzzi[1], Alfonso Venzo[2], Alfonso Zoleo[1], Flavio Maran[1]

[1]Università degli Studi di Padova, Chemistry Department, Italy. [2]CNR, Chemistry Department, Italy.

10:00 - 10:30 SA6-O004 Invited Talk EFFICIENT CHARGE-SPIN CONVERSION USING SURFACE STATE

Kouta Kondou[1], Yoshichika Otani[2]

[1]RIKEN, Center For Emergent Matter Science, Japan. [2]The University of Tokyo, Institute For Solid State Physics, Japan.

10:30 - 10:45 SA6-O005 STRUCTURAL AND MULTIFERROIC PROPERTIES OF BFO BASED SOLID SOLUTIONS.

Subhash Sharma[1]

[1]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Materiales Avanzados, Mexico.

10:45 - 11:00 SA6-O006 THE SYNTHESIS AND CHARACTERIZATION OF ZnO AND ZnO:Mn FILMS

Carolina Bohorquez Martinez[1,2], Manuel Herrera[2], Nicolás Rutilo Silva González[3]

[1]Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE), Nanoscience, Mexico. [2]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Physics, Mexico. [3]Benemerita Universidad Autonoma de Puebla, Physics institute, Mexico.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY III
DR. AMANDA S. BARNARD

12:30 - 13:00 SA6-O007 Invited Talk DYNAMICS OF 3D ISLAND GROWTH ON WEAKLY-INTERACTING SUBSTRATES

Victor Gervilla[1], Bo Lü[2], Joe Greene[1,3], Kostas Sarakinos[1]

[1]Linkopings Universitet, Department of Physics, Chemistry and Biology, Sweden. [2]Stockholms universitet, Department of Physics, Chemistry and Biology, Sweden. [3]University of Illinois at Urbana-Champaign, Materials Science and Physics Departments, United States.

13:00 - 13:15 SA6-O008 SYNTHESIS AND CHARACTERIZATION OF TiO_2 NANOPARTICLES IN ANATASE AND ANATASE-BROOKITE PHASE ON CARBON NANOTUBES

Gabriel Marcelo de Jesús Rosado[1], Ysmael Verde Gomez[1], Mario Miki Yoshida[2], Ana María Valenzuela Muñiz[1]

[1]Instituto Tecnológico de Cancún, Departamento de posgrado e investigación, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., Mexico.

13:15 - 13:30 SA6-O009 SYNTHESIS OF METALLIC NANOBOXES AND THEIR OPTICAL AND STRUCTURAL PROPERTIES

Jesus Valdez[1], Aycan Yurtsever[1]

[1]Institut National de la Recherche Scientifique, Université du Québec, EMT, Canada.

13:30 - 13:45 SA6-O010 OPTICAL STUDIES ON (Co, Cu)–DOPED ZnO NANOPARTICLES SYNTHESIZED BY SOL-GEL METHOD AT DIFFERENT CALCINATION TEMPERATURES

Manuel Fernando Acosta Humánez[1], Carlos Alberto Guerrero Fajardo[2], Ovidio Almanza Montero[1]

[1]Universidad Nacional de Colombia, Departamento de Física, Colombia. [2]Universidad Nacional de Colombia, Departamento de Química, Colombia.

- **14:00 - 14:15 SA6-O011 ROLE OF RADICALS AND IONS IN GAS MAGNETRON DISCHARGES FOR PREPARATION OF NANOSTRUCTURED THIN FILMS**
  Petr Pokorny[1], Michal Novotny[1], Premysl Fitl[1], Jindrich Musil[1], Jiri Bulir[1], Jan Lancok[1]
  [1]Institute of Physics of the Czech Academy of Sciences, Department of Analysis of Functional Materials, Czech Republic.

☒ **14:00 - 16:00 Lunch time**

- **16:00 - 16:30 SA6-O012 Invited Talk SYNTHESIS OF Pt HIERARCHICAL NANOSTRUCTURES BY ELECTRODEPOSITION AND CHEMICAL REDUCTION FROM BICONTINUOUS MICROEMULSIONS AND THEIR ELECTROCHEMICAL CHARACTERIZATION**
  Margarita Sanchez Dominguez[1], Elijah Temitope Adesuji[1], Marcelo Videa[2]
  [1]Centro de Investigación en Materiales Avanzados, S.C., Unidad Monterrey, Mexico. [2]Instituto Tecnológico y de Estudios Superiores de Monterrey, Departamento de Química y Escuela de Ingeniería y Ciencias, Mexico.

- **16:30 - 16:45 SA6-O013 OPTICALLY MONODISPERSE GOLD NANOROD COLLOIDS PRODUCED BY FEMTOSECOND LASER RESHAPING**
  Ovidio Y. Peña Rodríguez[1], Guillermo González Rubio[2,3], Pablo Díaz Núñez[1], Antonio Rivera[1], Alejandro Prada[1], Gloria Tardajos[3], Jesús González Izquierdo[4], Luis Bañares[3,4], Pablo Llombart[3], Luis González Macdowell[3], Mauricio Alcolea Palafox[3], Luis M. Liz Marzán[2,5], Andrés Guerrero Martínez[3]
  [1]Universidad Politécnica de Madrid, Instituto de Fusión Nuclear, Spain. [2]CIC BiomaGUNE, Bionanoplasmonics Laboratory, Spain. [3]Universidad Complutense de Madrid, Departamento de Química Física I, Spain. [4]Universidad Complutense de Madrid, Centro de Láseres Ultrarápidos, Spain. [5]Basque Foundation for Science, Ikerbasque, Spain.

- **16:45 - 17:00 SA6-O014 SYNTHESIS AND MORPHOLOGY, OPTICAL AND ELECTRICAL CHARACTERIZATION OF AMORPHOUS AND HIGHLY ORDERED TITANIUM DIOXIDE NANOTUBES**
  Alba Arenas Hernandez[1], Carlos Zúñiga Islas[1], Joel Molina Reyes[1], Netzahualcoyotl Carlos Ramírez[1]
  [1]Instituto Nacional de Astrofísica, Óptica y Electrónica, INAOE, Mexico.

- **17:00 - 17:15 SA6-O015 TWO-STEP METHODS FOR SYNTHESIS OF SILVER NANOCRYSTALS AND LOW COST.**
  Daphne Meixueiro[1], Elizabeth Chavira[1], Karla Eriseth Morales Reyes[2], Josué Romero Ibarra[3], Adriana Tejeda[4]
  [1]Instituto de Investigaciones en Materiales, Materiales de baja dimensionalidad, Mexico. [2]Instituto de Investigaciones en Materiales, Departamento de polímeros, Mexico. [3]Instituto de Investigaciones en Materiales, Departamento de física, Mexico. [4]Instituto de Investigaciones en Materiales, Materiales Metálicos y Cerámicos, Mexico.

- **17:15 - 17:30 SA6-O016 SYNTHESIS OF SiC NANOWIRES: STRUCTURAL CHARACTERIZATION AND REFLECTIVITY BEHAVIOR**
  Judith Celina Tanori Cordova[1]
  [1]Universidad de Sonora, DIPM, Mexico.

- **17:30 - 17:45 SA6-O017 GREEN SYNTHESIS OF SILVER-GOLD BIMETALLIC NANOPARTICLES USING THE HAMELIA PATENS LEAF EXTRACT**
  Karina del Carmen Chavez Gomez[1], Gerardo Antonio Rosas Trejo[1]
  [1]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de investigación en metalurgia y materiales, Mexico.

- **17:45 - 18:00 SA6-O018 THE HIGHLY REPRODUCIBLE AND ECO-FRIENDLY SYNTHESIS OF SILVER, GOLD AND SILVER/GOLD NANOCRYSTALS AND THEIR POTENTIAL ANTI-CANCER THERAPEUTIC PROPERTIES**
  Jorge Luis Cholula Diaz[1,2], Diana Lomelí Marroquín[3], Viridiana Leyva Aranda[3], Alfonso Nieto Argüello[3], Diana Ginette Zarate Triviï¿½o[4]
  [1]Tecnológico de Monterrey, Chemistry and Nanotechnology Chemistry and Nanotechnology, Mexico. [2]Tecnológico de Monterrey, School of Engineering and Science, Mexico. [3]Tecnológico de Monterrey, Chemistry and Nanotechnology, Mexico. [4]Universidad Autónoma de Nuevo León, Biological Sciences, Mexico.

- **18:00 - 18:15 SA6-O019 IMPROVEMENT OF PHYSICAL PROPERTIES OF BACTERIAL CELLULOSE USING A CHEAPER AND MORE ECOFRIENDLY CULTURE MEDIUM, BY A TWO-STAGE STRATEGY FERMENTATION**
  Carlos Andrés Molina Ramírez[1], Cristina Castro[2], Robin Zuluaga[3], Piedad Gañán[1]
  [1]Universidad Pontificia Bolivariana, Ingeniería Química, Colombia. [2]Universidad Pontificia Bolivariana, Ingeniería Textil, Colombia. [3]Universidad Pontificia Bolivariana, Ingeniería Agroindustrial, Colombia.

- **18:15 - 18:30 SA6-O020 INFLUENCE OF DIFFERENT SURFACTANTS ON ZETA POTENTIAL AND ISOELECTRIC POINT OF ALUMINA NANOFLUIDS**

Karen Paola Cacua Madero[1,2], Fredy Ordoñez Ramos[1,2], Robison Buitrago Sierra[1], Elizabeth Pabón Gelves[2], Bernardo Herrera[1]

[1]Instituto Tecnológico Metropolitano, Antioquia, Colombia. [2]Universidad Nacional de Colombia, Antioquia, Colombia.

TUESDAY, AUGUST 21
ROOM: TERRACE

- **18:30 -20:30 POSTER SESSION & COFFEE BREAK**

- **SA6-P036 MAGNETIC SPONGE OF MAGNETITE NANOPARTICLES EMBEDDED IN A POLYURETHANE MATRIX**

Miguel Angel Ortiz Ramos[1], Héctor Elizarraraz Mendiola[1], Nicolas Ortega Miranda[1], Ana María Herrera González[2], Azdrubal Lobo Guerrero Serrano[2], Javier Gustavo Cabal Velarde[1]

[1]Instituto Tecnológico Superior de Irapuato, Micro y Nanotecnologías, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Mexico.

- **SA6-P037 COMPOSITION AND DIAMETER MODULATION OF MAGNETIC NANOWIRE ARRAYS FABRICATED BY A NOVEL APPROACH**

Juan Escrig[1,2], Mohamed Shaker Salem[3], Felipe Tejo[2], Robert Zierold[4], Philip Sergelius[4], Josep M. Montero Moreno[4], Detlef Goerlitz[4], Kornelius Nielsch[4,5]

[1]Center for the Development of Nanoscience and Nanotechnology, Chile. [2]Universidad de Santiago de Chile, Departamento de Física, Chile. [3]Cairo University, Physics Department, Egypt. [4]UNIVERSITY OF HAMBURG, Institute of Nanostructure and Solid State Physics, Germany. [5]Leibniz-Institute for Solid State and Materials Research Dresden (IFW Dresden), Institute of Metallic Materials, Germany.

- **SA6-P038 DESIGN OF GALFENOL/PERMALLOY NANOLAMINATES FOR INCORPORATION INTO A STRAIN-MEDIATED NANOSCALE ANTENNA**

Kevin Fitzell[1], Colin Rementer[1], Michelle Jamer[2], Julie Borchers[2], Brian Kirby[2], Jane Chang[1]

[1]University of California, Los Angeles, Chemical Engineering, United States. [2]National Institute of Standards and Technology, NIST Center for Neutron Research, United States.

- **SA6-P039 STRUCTURAL AND HYSTERETIC PROPERTIES OF $La_{0.7}Ca_{0.3-x}Sr_xMnO_3$ MANGANITES USING THE HYDROTHERMAL ROUTE**

Laura Cristina Rave Osorio[1], Viviana Londoño Calderón[1], Johans Restrepo[2], Oscar Arnache[2], Elisabeth Restrepo Parra[1]

[1]Universidad Nacional de Colombia, Laboratorio de Física del Plasma, Colombia. [2]Universidad de Antioquía, Laboratorio de Magnetismo y Simulación, Colombia.

- **SA6-P040 SYNTHESIS AND CHARACTERIZATION OF COBALT AND MAGNESIUM FERRITES NANOPARTICLES BY THE CO-PRECIPITATION METHOD**

Liliana Trinidad Corona Ruiz[1], José Salvador Martínez Flores[1], Martha Isabel González Domínguez[1]

[1]Universidad de La Cienega del Estado de Michoacán de Ocampo, Ingeniería en nanotecnología, Mexico.

- **SA6-P041 SYNTHESIS, SPECTROSCOPIC, AND MAGNETIC CHARACTERIZATION OF $CoFe_2O_4$, $NiFe_2O_4$, AND $Co_{0.5}Ni_{0.5}Fe_2O_4$ NANOPARTICLES OBTAINED BY A SOLUTION COMBUSTION METHOD**

Jose Luis Ortiz Quiñonez[1], Umapada Pal[2], Martín Salazar Villanueva[1]

[1]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniería, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Instituto de Física, Mexico.

- **SA6-P042 STUDY OF ELECTRON TRANSFER IN COBALT HEXACYANOFERRATE NANOPARTICLES PROMOTED BY REVERSE MICROEMULSIONS PREPARED WITH CTAB**

Laura Guadalupe Vazquez Novoa[1]

[1]Universidad de Guadalajara, Ingenieria en Nanotecnologia, Mexico.

- **SA6-P043 MODELLING THE INFLUENCE OF THE INTERPHASE ON THE ELECTRIC PROPERTIES OF POLYMER-MATRIX COMPOSITE MATERIAL SYSTEMS**

Myriam Paredes Olguin[1], Miguel Angel Parra Mondragon[1], Carlos Gomez Yanez[2], Fermin Pascual Espino Cortés[3]

[1]Universidad Politécnica del Valle de México, Nanotechnology Engineering, Mexico. [2]Escuela Superior de Ingeniería Química e Industrias Extractivas, Department of Metallurgy and Materials, Mexico. [3]Esime zacatenco, Sección de Estudios de Posgrado e Investigación, Mexico.

- **SA6-P044 GA-DOPING IMPACT ON EMISSION, MORPHOLOGY AND STRUCTURE OF ZNO:GA NANOCRYSTALS**

Isis Chetzyl Ballardo Rodriguez[1], Brahim El Filali[2], Adriana Valdes Becerril[1], Tetyana Torchynska[3]

[1]Instituto Politécnico Nacional - IPN, SEPI UPIITA, Mexico. [2]Instituto Politécnico Nacional - IPN, Ingenieria, UPIITA, Mexico. [3]Instituto Politécnico Nacional - IPN, Materiales, ESFM, Mexico.

- **SA6-P045 POOLE-FRENKEL CONDUCTION MECHANISM ON SINGLE ZnO NANOBELTS.**

Karime Carrera[1], Eduardo Murillo[2], Ignacio Rivero[3], Manuel Herrera[1]

[1]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Física, Mexico. [2]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Nanoestructuras, Mexico. [3]Instituto Tecnológico de Tijuana, Centro de Graduados, Mexico.

- **SA6-P046 PHOTOCATALYTIC ACTIVITY IN ZnO NANOWIRES ARRAY OBTAINED BY THERMAL OXIDATION**

Oscar Eduardo Cigarroa Mayorga[1], Angel Guillen Cervantes[2], Miguel A. Avendaño Ibarra[3], Salvador Gallardo Hernandez[4]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Nanociencia y nanotecnología, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Fisica, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Ingeniería Electrónica, SEES, Mexico. [4]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, LANE, Mexico.

- **SA6-P047 INFLUENCE OF $ZnCl_2$ CONCENTRATION ON ZnO NANOSHEETS GROWN ON Si SUBSTRATE OBTAINED BY HYDROTHERMAL SYNTHESIS**

Amado Carlos Garcia Velasco[1], Adriana Baez Rodriguez[1], Julian Hernandez Torres[1], Teresa Hernandez Quiroz[1], Luis Zamora Peredo[1]

[1]Universidad Veracruzana, Centro de Investigacion en Micro y Nanotecnologia, Mexico.

- **SA6-P048 PHOTOLUMINESCENCE STUDY IN ZnO:IN NANOCRYSTAL**

Juan Antonio Jaramillo Gomez[1], Brahim El Filali[1], Tetyana Torchynska[2]

[1]Instituto Politécnico Nacional - IPN, UPIITA Depto. Ingeniería, Mexico. [2]Instituto Politécnico Nacional - IPN, ESFM, Mexico.

- **SA6-P049 SYNTHESIS AND CHARACTERIZATION OF ZNO MICRO-AND NANOSTRUCTURES FOR GAS SENSOR APPLICATION**

Jorge Rodrigo Mora Viquez[1]

[1]Benemerita Universidad Autonoma de Puebla, ICUAP, Mexico.

- **SA6-P050 EFFECT OF GROWTH TIME ON ZNO NANOCOLUMNS PREPARED BY CHEMICAL BATH DEPOSITION**

Maria Guadalupe Soriano Rosales[1], Adriana Báez Rodríguez[1], Luis Zamora Peredo[1], Julian Hernandez Torres[1], Leandro Garcia Gonzalez[1]

[1]Universidad Veracruzana, Centro de Investigación en Micro y Nanotecnología, Mexico.

- **SA6-P051 OPTICAL AND STRUCTURAL CHARACTERIZATION OF ZnO Er NANOCRYSTALS PREPARED BY SPRAY PYROLYSIS**

Tetyana Torchynska[1], Brahim El Filali[2], Jorge Ramírez García[2], Jose Luis Casas Espinola[1]

[1]Instituto Politécnico Nacional - IPN, fisica, Mexico. [2]Instituto Politécnico Nacional - IPN, UPIITA, Mexico.

- **SA6-P052 ELECTRIC FIELD EFFECTS ON THE SYNTHESIS OF ZnO NANOWIRES BY THERMAL EVAPORATION**

Maria Teresa Valenzuela Lopez[1], Manuel Herrera Zaldivar[1]

[1]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Physics, Mexico.

- **SA6-P053 LUMINESCENCE PROPERTIES OF YAlGaO:Ce^{3+} NANO-PHOSPHORS PREPARED BY A COMBUSTION METHOD**

Rafael Benjamín Casanova Sánchez[1], Ana Leticia Fernández Osorio[1], Julián Chávez Fernández[1]

[1]Universidad Nacional Autónoma de México, FES Cuautitlan, Mexico.

- **SA6-P054 SERS ACTIVITY OF HYBRID NANO/MICROSTRUCTURES Ag-Fe_3O_4 BASED ON Dimorphotheca ecklonis POLLEN GRAINS AS BIOTEMPLATE**

Rodolfo Daniel Ávila Avilés[1,2], Alfredo Rafael Vilchis Nestor[1], Nayely Torres Gómez[1], Marco Antonio Camacho López[3]

[1]Centro Conjunto de Investigación en Química Sustentable UAEM-UNAM (CCIQS), Laboratorio de Materiales, Mexico. [2]Universidad Autónoma del Estado de México, Facultad de Ciencias, Mexico. [3]Universidad Autónoma del Estado de México, Laboratorio de Investigación y Desarrollo de Materiales Avanzados, Sección de Espectroscopía Raman, Mexico.

- **SA6-P055 ELECTROCHEMICAL GROWTH OF POLYHEDRAL STRUCTURES OF Ag@Au ON ITO AND THEIR APPLICATIONS AS SERS SUBSTRATES**

Maria Edith Navarro Segura[1], Margarita Sánchez Domínguez[1], Israel López[2], Ana Arizmendi Morquecho[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Unidad Monterrey, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., Facultad de Ciencias Químicas, Mexico.

- **SA6-P056 FABRICATION OF NOBLE METAL-CHITOSAN SUBSTRATES FOR SURFACE-ENHANCED RAMAN SPECTROSCOPY (SERS)**

Carlos Eduardo Puente de León[1], Margarita Sánchez Domínguez[2], Israel López[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., Unidad Monterrey, Mexico.

- **SA6-P057 ENHANCED PHOTOLUMINESCENT PROPERTIES OF EUROPIUM DOPED SILICA NANOPOWDERS INCORPORATING SUNLIGHT-SYNTHESIZED SILVER NANOPARTICLES**

Francisco Felix[1], Roberto Carlos Carrillo Torres[1], Roberto Pedro Duarte Zamorano[1], Celso Velásquez[2], Raúl Sánchez Zeferino[1], Mario Enrique Alvarez Ramos[1]

[1]Universidad de Sonora, Departamento de Física, Mexico. [2]Universidad de Guadalajara, Centro de Investigación en Nanociencia y Nanotecnología, Mexico.

- **SA6-P058 GREEN SYNTHESIS AND CHARACTERIZATION OF BIMETALLIC Ag@Pd NANOPARTICLES USING AQUEOUS EXTRACTS OF SCHINUS MOLLE AND THEIR AND THEIR CATALYTIC ACTIVITY.**

Fabian Mares Briones[1], Gerardo Antonio Rosas Trejo[1], Rodrigo A. Esparza Muñoz[2]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Metalurgia Física, Mexico. [2]Universidad Autónoma de la Ciudad de México, Nanotecnología, Mexico

- **SA6-P059 OPTIMIZATION OF SILVER NANOPARTICLES SYNTHESIS METHOD AND EVALUATION OF ITS ANTIBACTERIAL ACTIVITY**

Catalina Quintero Quiroz[1], Jenniffer Zapata Giraldo[2], Luz Elena Botero Palacio[3], Julian Quintero[4], Diana Ginette Zarate Triviï¿½o[5], Vera Pérez[1]

[1]Universidad Pontificia Bolivariana, Centro de Bioingeniería, Colombia. [2]Universidad Pontificia Bolivariana, Facultad de Medicina, Colombia. [3]Universidad Pontificia Bolivariana, Faculta de Medicina, Colombia. [4]Universidad de Antioquía, Facultad de Ciencias Farmacéuticas y Alimentarias, Colombia. [5]Universidad Autónoma de Nuevo León, Facultad de Ciencias Biológicas, Mexico.

- **SA6-P060 DISPERSION OF CARBON NANOTUBES AS REINFORCEMENT MATERIAL IN A METAL MATRIX BY MECHANICAL MILLING**

Ismael Santos Ramos[1], Juan Zárate Medina[1], Gerardo Antonio Rosas Trejo[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigaciones en Metalurgia y Materiales, Mexico.

- **SA6-P061 GROWTH OF AN ALUMINUM NANOPARTICLES MONOLAYER OVER THE SURFACE OF FUSED SILICA SUBSTRATE FOR UV-PLASMONICS APPLICATIONS**

Arturo Rodríguez Gómez[1]

[1]Instituto de Física - Universidad Nacional Autónoma de México, Condensed Matter, Mexico.

- **SA6-P062 SYNTHESIS OF ZINC-ALUMINUM LAYERED DOUBLE HYDROXIDE ON ALUMINUM ALLOY GRID**

Maridely Oviedo[1], Gabriela Amor[1], Augusto Cardenas[1], Sergio Obregón[2], Alejandro Vazquez[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ciencias Físico Matemáticas, Mexico.

- **SA6-P063 FLUORESCENCE SENSING OF IRON (III) BY GRAPHITIC CARBON NITRIDE**

Augusto Cardenas[1], Sergio Obregón[2], Alejandro Vazquez[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Quimicas, Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ciencias Físico Matemáticas, Mexico.

- **SA6-P064 SYNTHESIS OF GRAPHITIC CARBON NITRIDE NANOSTRUCTURES USING CALCIUM CARBONATE AS A HARD TEMPLATE**

Sandra Herrera[1], Miguel Ruiz Gómez[2], Sergio Obregón[3], Alejandro Vazquez[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Quimicas, Mexico. [2]CINVESTAV-Mérida, Departamento de Física Aplicada, Mexico. [3]Universidad Autónoma de Nuevo León, Facultad de Ciencias Físico Matemáticas, Mexico.

- **SA6-P065 CO2 ADSORPTION BY MESOPOROUS MATERIAL MCM-41 SYNTHESIZED FROM WASTES**

Jesús Guillermo Mendoza Álvarez[1], Fabricio Espejel Ayala[1], Eduardo Coutino Gonzalez[1]

[1]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Biotecnología y electroquímica ambiental, Mexico.

- **SA6-P066 PREPARATION OF Co_3O_4-CARBON TUBULAR NANOCOMPOSITE FOR SUPERCAPACITOR APPLICATIONS**

  Alejandro Ivan Cuesta Balderas[1], Jorge Roberto Vargas Garcia[1]

  [1]Instituto Politécnico Nacional - IPN, ESIQIE-Departamento de Ingeniería en Metalurgia y Materiales, Mexico.

- **SA6-P067 ATTRIBUTES OF NANOPARTICLES OBTAINED BY GREEN SYNTHESIS FOR APPLICATION IN ANTIFUNGAL COATINGS**

  Erasmo Gámez Espinosa[1], Cecila Deyá[1,2], Natalia Bellotti[1,3]

  [1]Centro de Investigación y Desarrollo en Tecnología de Pinturas (CIDEPINT), Pinturas Especiales, Argentina. [2]Universidad Nacional de La Plata, Facultad de Ingeniería, Argentina. [3]Universidad Nacional de La Plata, Facultad de Ciencias Naturales y Museo, Argentina.

- **SA6-P068 CTT1 PEPTIDE-LOADED POLYETHYLENEIMINE AND CHITOSAN POLYMER-BASED MUCOADHESIVE LIQUID CRYSTALLINE SYSTEMS INTENDED FOR VAGINAL DRUG DELIVERY**

  Marlus Chorilli[1], Camila Fernanda Rodero[1], Giovana Maria Fioramonti Calixto[1]

  [1]Universidade Estadual Paulista, Drugs and Medicines, Brazil.

- **SA6-P069 EFFECT OF NITROGEN FLOW RATE ON MICROSTRUCTURE, HARDNESS AND TRIBOLOGICAL BEHAVIOR OF NANOSTRUCTURED MULTILAYER HF/HFN COATINGS DEPOSITED BY DC MAGNETRON SPUTTERING**

  Leandro Garcia Gonzalez[1], Carlos Eduardo García Tolentino[2], Daniel de Jesús Araujo Pérez[1], Luis Zamora Peredo[1], José de Jesús Pérez Bueno[3], Nelly Flores Ramirez[4], Salomon Ramiro Vasquez Garcia[5], Julian Hernandez Torres[6]

  [1]Universidad Veracruzana, Centro de Investigación en Micro y Nanotecnología, Mexico. [2]Universidad Veracruzana, Facultad de Ingeniería en Metalurgia y Ciencia de los Materiales, Mexico. [3]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Mexico. [4]Universidad Michoacana de San Nicolás de Hidalgo, Wood Engineering and Technology, Mexico. [5]Universidad Michoacana de San Nicolás de Hidalgo, Department of Chemical Engineering, Mexico. [6]Universidad Veracruzana, Research Center for Micro and Nanotechnology, Mexico.

- **SA6-P070 CONSTRUCTION OF A MESOSCOPIC SURFACE OF AMORPHOUS SILICA IN THE METASTABLE PHASE**

  Juan Martin Montejano Carrizales[1], Guadalupe-Lopez Laurrabaquio[2], Maria Eufemia Fernandez Garcia[3], David Arturo Morin Martinez[4], Cesar Díaz Torrejón[5]

  [1]Universidad Autónoma de San Luis Potosí, Instituto de Fisica, Mexico. [2]Instituto Nacional de Investigaciones Nucleares (ININ), Depto. de Física, Mexico. [3]Instituto Nacional de Investigaciones Nucleares (ININ), Depto. de Tecnología de Materiales, Mexico. [4]Instituto Potosino de Investigación Científica y Tecnológica A.C., Centro Nacional de Supercomputo, Mexico. [5]Benemerita Universidad Autonoma de Puebla, Laboratorio Nacional de Supercomputo del Sureste de México, Mexico.

- **SA6-P071 GOLD/SILICA/COPPER SULFIDE NANOCOMPOSITES AS NANOHEATERS WITH ABSORPTION BANDS IN THE FIRST AND SECOND BIOLOGICAL WINDOWS**

  Roberto Carlos Carrillo Torres[1], Mario Enrique Alvarez Ramos[1]

  [1]Universidad de Sonora, Departamento de Física, Mexico.

- **SA6-P072 RAMAN RESPONSE AMPLIFICATION VIA MULTILAYER DIELECTRIC-GRAPHENE SUBSTRATES**

  Paola Rosales Legaspi[1], Jaime Raúl Suárez López[1], José Samuel Pérez Huerta[2], Jesús Madrigal Melchor[1]

  [1]Universidad Autónoma de Zacatecas, Unidad Académica de Física, Mexico. [2]Universidad Autónoma de Zacatecas, Unidad Autónoma de Zacatecas, Mexico.

- **SA6-P073 BENDING ENERGY OF 2D MATERIALS: GRAPHENE, MOS_2 AND ALUMINOSILICATE NANOTUBES (IMOGOLITE)**

  Rafael Gonzalez Valdes[1,2], Francisco Munoz[1,3]

  [1]Center for the Development of Nanoscience and Nanotechnology, Chile. [2]Universidad Mayor, Centro de Nanotecnologia Aplicada, Facultad de Ciencias, Chile. [3]Universidad de Chile, Departamento de Fisica, Chile.

- **SA6-P074 SYNTHESIS OF NICKEL HYDROXIDE BY MICROWAVE-ASSISTED HYDROTHERMAL REACTION.**

  Angel David Samos Puerto[1], Geonel Rodríguez Gattorno[1], Miguel Ruiz Gómez[2]

  [1]CINVESTAV-Mérida, Department of Applied Physics, Mexico. [2]Cátedras-CONACyT-CINVESTAV Mérida, Department of Applied Physics, Mexico.

- **SA6-P075 THEORETICAL STUDY OF UV-VIS ABSORPTION SPECTRUM OF GOLD-CLUSTER COMPLEX Au_4-S-C_nH_{2n}-S'-Au_4' n=2-5**

Ulises Asael Vergara Beltran[1], Fray de Landa Castillo Alvarado[1], Jochen Autschbach[2], Juan I. Rodríguez[1]

[1]Escuela Superior de Física y Matemáticas IPN, Escuela Superioir de Física y Matemáticas, Mexico. [2]University at Buffalo: the State University of New York, Department of Chemistry, United States.

- **SA6-P076 SELECTIVE FUNCTIONALIZATION WITH A PRIMARY AMINE TOWARDS THE BASAL PLANE OF THE GRAPHENE OXIDE**

Alexis Piñeiro Garcia[1], Daniela Salazar Aguilar[1], Andres Fest[1], David Meneses Rodriguez[2], Juan Carlos Fierro González[1], Vincent Semetey[3], Ferdinando Tristán López[1], Sofia Magdalena Vega Diaz[1,4]

[1]Tecnológico Nacional de México/Instituto Tecnológico de Celaya, Ingeniería Química, Mexico. [2]CINVESTAV-Mérida, Física Aplicada, Mexico. [3]Chimie ParisTech, Organometallic Chemistry and Polymerization Catalysis, France. [4]Cátedras-CONACyT- Instituto Tecnológico de Celaya, Ingeniería Química, Mexico.

- **SA6-P077 SILVER SULFIDE QUANTUM DOTS STABILIZED WITH BOVINE SERUM ALBUMIN FOR FUTURE APPLICATION IN BIOSENSOR FOR BREAST CANCER**

Nataly Arrieta Sandoval[1], Imelda Olivas Armendáriz[1], Juan Francisco Hernandez[1], Florinda Jimenez Vega[2], Mauricio Salcedo Vargas[3], Cynthia Deisy Gomez Esparza[4], Claudia Alejandra Rodríguez González[1]

[1]Universidad Autónoma de Ciudad Juárez, Fisica y Matematicas, Mexico. [2]Universidad Autónoma de Ciudad Juárez, Departamento de Ciencias Basicas ICB, Mexico. [3]Mexican Institute for Social Security IMSS, Unidad de investigacion Oncologica, Mexico. [4]Centro de Investigación en Materiales Avanzados, S.C., Laboratorio Nacional de Nanotecnologia, Mexico.

- **SA6-P078 THEORETICAL AND EXPERIMENTAL STUDY OF Pt-Co CLUSTER SUPPORTED ON TiO_2 AS CATALYST FOR PRODUCE 2,5-DIMETHYLFURAN (DMF) FROM 5-HYROXYMETHYLFURFURAL (HMF)**

Claudia Guadalupe Espinosa Gonzalez[1], Adib A. Silahua Pabón[2], Filiberto Ortiz Chi[1], Srinivas Godavarthi[1], Gerardo Hernandez Juárez[3], José Gilberto Tores Torres[2]

[1]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Universidad Juárez Autónoma de Tabasco, Mexico. [2]Universidad Juárez Autónoma de Tabasco, Centro de Investigación en Ciencia y Tecnología Aplicada de Tabasco, Mexico. [3]Instituto tecnologico de calkini en el estado de campeche, Biotecnología, Mexico.

- **SA6-P079 FUNCTIONALIZATION OF PYROLYTIC COAL FROM AGROINDUSTRIAL WASTE BY CHEMICAL VAPOR DEPOSITION**

Jose Luis Toro Trochez[1], Eileen Susana Carillo Pedraza[1], Javier Rivera de la Rosa[1], Diana Bustos Martinez[1], Jacob Josafat Salazar Rábago[1]

[1]Universidad Autónoma de Nuevo León, Faculta de Ciencias Químicas, División Estudios de Posgrado, Mexico.

- **SA6-P080 PRODUCTION OF NANO-SCALE AMORPHOUS BORON POWDER VIA CHEMICAL VAPOUR DEPOSITION**

Meltem Bolluk[1], Cüneyt Arslan[1], Ismail Duman[1]

[1]Istanbul Teknik Üniversitesi, Department of Metallurgical and Material Engineering, Turkey.

- **SA6-P081 LINES MARKED ON A FERROUS METAL WITH AN INORGANIC MATERIAL, BY VITRIFICATION WITH A CO_2 LASER.**

Raul Zenteno[1], Alexandre Michtchenko[1], Javier Zenteno[2]

[1]Instituto Politécnico Nacional - IPN, SEPI ESIME Zacatenco, Mexico. [2]Universidad Nacional Autónoma de México, instituto de ingeniería, Mexico.

- **SA6-P082 ELECTROPHORETIC DEPOSITION OF NICKEL HYDROXIDE / NICKEL-ALUMINUM LAYERED DOUBLE HYDROXIDE COMPOSITES**

Abner Zarate[1], Edgar Alejandro Ferreira[1], Sergio Obregón[2], Alejandro Vazquez[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ciencias Fisico Matematicas, Mexico.

- **SA6-P083 SYNTHESIS OF POLYMERIC NANOCOMPOSITES BY INFILTRATION. APPLICATIONS IN 3D (FUSED FILAMENT MOLDING) PRINTING**

Kevin Riberi[1], Jesica Yanina Pereyra[1], Cesar Alfredo Barbero[1]

[1]Instituto de Investigaciones en Tecnologias Energeticas y Materiales Avanzados (UNRC-CONICET), Chemistry, Argentina.

- **SA6-P084 ADSORPTION OF ALKALI AND ALKALINE EARTH ATOMS ON SILIGENE**

Francisco de Santiago[1], José Antonio Santiago[1], Alejandro Trejo Baños[1], Alvaro Miranda[1], Luis Antonio Perez[2], Miguel Cruz Irrison[1]

[1]Instituto Politécnico Nacional - IPN, ESIME Culhuacan, Mexico. [2]Universidad Nacional Autónoma de México, Instituto de Física, Mexico.

- **SA6-P085 HYDROTHERMAL SYNTHESIS OF HIERARCHICAL CORAL-LIKE $Na_2Ti_3O_7$ STRUCTURES FOR HIGHLY METHYLENE BLUE ADSORPTION**

Joan Reyes Miranda[1], Antonieta García Murillo[2], Felipe de Jesús Carillo[2]

[1]Universidad Autónoma Metropolitana, Materiales, Mexico. [2]Centro de Investigación e Innovación Tecnológica, Posgrado, Mexico.

- **SA6-P086 THEORETICAL STUDY OF NANOSTRUCTURE MORPHOLOGY TRANSITIONS OF PS-PI- PMMA TRIBLOCK COPOLYMER VIA TEMPERATURE EFFECT**

Cesar Soto Figueroa[1], David Alfredo González Pizarro[1], Maria del Rosario Rodríguez Hidalgo[2], Luis Vicente[2]

[1]Universidad Autónoma de Chihuahua, Facultad de Ciencias Químicas, Mexico. [2]Universidad Nacional Autónoma de México, Facultad de Química, Mexico.

- **SA6-P087 CHARACTERIZATION AND GROWTH OF DOPED-PBS IN SITU WITH Bi^{3+}, Cd^{2+} AND Er^{3+} IONS BY CHEMICAL BATH**

Miguel Hernandez Hernandez[1], Oscar Portillo Moreno[2], Marcial Zamora Tototzintle[3], Vladimir Maldonado Guzman[4]

[1]Benemerita Universidad Autonoma de Puebla, Físico Matemáticas, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Físico Matemáticas, laboratorio de ciencia de materiales, Mexico. [3]Benemerita Universidad Autonoma de Puebla, Ciencias Quimicas, química general, Mexico. [4]Benemerita Universidad Autonoma de Puebla, Ingenieria Química, Mexico.

- **SA6-P088 ANILINE ADSORPTION AND POLYMERIZATION OVER GALLIUM MODIFIED MESOPOROUS MATERIAL**

M. Laura Martinez[1], Lorena Rivoira[1], Andrea Beltramone[1], Oscar Anunziata[1]

[1]Universidad Tecnológica Nacional, Argentina.

- **SA6-P089 STUDY ON SHORT WAVELENGTH INFRARED PHOTODETECTOR BASED ON InGaAs AND InGaAsSb**

Jun Oh Kim[1], Che Gal Won[2], Sang Jun Lee[2]

[1]Korea Research Institute of Standards and Science, Division of Industrial Metrology, Korea. [2]Korea Research Institute of Standards and Science, Advanced Instrumentation Institute, Korea.

- **SA6-P090 SYNTHESIS AND CHARACTERIZATION OF THE Z SHEME Bi2WO6/Ag/AgBr FOR THE PHOTOCATALYTICAL DEGRADATION OF PHARMACEUTICAL COMPOUNDS IN WATER**

Melissa Méndez Galván[1]

[1]Universidad Nacional Autónoma de México, Centro de Ciencias Aplicadas y Desarrollo Tecnológico, Mexico.

- **SA6-P091 PREPARATION AND CHARACTERIZATION OF NANOCRYSTALLINE CELLULOSE IRIDISCENT FILMS**

Olga Rubi Juárez Rivera[1], Reina Araceli Mauricio[1], Amos Benjamín Domínguez Gómez[1], Arturo Mendoza Galván[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Unidad Querétaro, Mexico.

- **SA6-P092 ASSOCIATION OF PROTEINS TO NANOPARTICLES OF CHITOSAN MODIFIED WITH MERCAPTOPROPIONIC ACID AND MERCAPTOUNDECANOIC ACID**

Julián Piri Santana[1], Luis Fernando López Soto[2], Jesús Adriana Soto Guzmán[2], Miguel Ángel Valdéz Covarrubias[1], Josúe Elías Juárez Onofre[1]

[1]Universidad de Sonora, Physics Department, Mexico. [2]Universidad de Sonora, Department of Medicine and Health Sciences, Mexico.

- **SA6-P093 EVALUATION OF THIOLATED CHITOSAN NANOPARTICLES LOADED WITH INSULIN, IN VIVO MODEL**

Andrea Roxana Nevárez López[1], Jesus Adriana Soto Guzman[2], Luis Fernando Lopez Soto[2], Miguel Angel Valdez Covarrubias[1], Josué Elías Juárez Onofre[1]

[1]Universidad de Sonora, Department of Physics, Mexico. [2]Universidad de Sonora, Department of Medicine and Health Sciences, Mexico.

- **SA6-P094 PURE AND Mn-DOPED $LiNbO_3$ NANOFIBERS**

Maria Cristina Maldonado Orozco[1], Claudia Georgina Nava Dino[1], Roberto Narro García[1], Juan Pablo Flores De Los Ríos[1], Raúl Sandoval Jabalera[1], Martha Ochoa Lara[2], Francisco Espinosa Magaña[2]

[1]Universidad Autónoma de Chihuahua, Facultad de Ingeniería, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., Física de Materiales, Mexico.

- **SA6-P095 SYNTHESIS OF TiO2 NANOPARTICLES IN RUTILE PHASE, THEIR SURFACE MODIFICATION AND USE IN COSMETIC FORMULATIONS**

Ruben Rodriguez[1], Facundo Ruiz[1], Guillermo Enrique Acosta[2], Omar Torres[2]

[1]Universidad Autónoma de San Luis Potosí, Facultad de Ciencias, Mexico. [2]Nanomateriales S.A. de C.V., I&D, Mexico.

- **SA6-P096 SYNTHESIS AND SUPRAMOLECULAR COMPLEXES OF CALIX[4](AZA)CROWNS**

Marcos Martínez García[1], Ana Cristina Vargas Medina[1], Luis-Daniel Pedro Hernández[1]

[1]Universidad Nacional Autónoma de México, Instituto de Química, Mexico.

- **SA6-P097 PDMS NANODOMAINS CONFINED TO AN EPOXY INCREASED TOUGHNESS AND INDUCE TWO-GLASS TRANSITION BEHAVIOR**

Adriana Reyes Mayer[1,2], Manuela Calixto Rodriguez[2], Estela Sarmiento Bustos[2], Karina Santiago Santiago[2], Angel Romo Uribe[3]

[1]Centro de Caracterización e Investigación en Materiales S.A. de C.V., CeCIM, Mexico. [2]Universidad Tecnológica Emiliano Zapata del Estado de Morelos, División Académica de Mecánica Industrial, Mexico. [3]Polymer Nanocomposites Lab, Mexico.

- **SA6-P098 DEWETTING OF NI THIN FILMS OBTAINED BY ATOMIC LAYER DEPOSITION DUE TO THE THERMAL REDUCTION PROCESS: VARIATION OF THE THICKNESS**

Daniela Alburquenque[1], Marcela del Canto[1,2], Claudia Arenas[1], Felipe Tejo[1], Alejandro Pereira[1,2], Juan Escrig[1,2]

[1]Universidad de Santiago de Chile, Física, Chile. [2]Center for the Development of Nanoscience and Nanotechnology, CEDENNA, Chile.

- **SA6-P099 PRODUCTION OF DIFFERENT ASPECT RATIO ZnO-Eu DOPED NANOSTRUCTURES THROUGH STATISTICAL DESIGN OF EXPERIMENTS**

José Luis Cervantes López[1], Ricardo Rangel Segura[1], Juan José Alvarado Gil[2], Patricia Quintana Owen[2]

[1]Universidad Michoacana de San Nicolás de Hidalgo, División de estudios de posgrado, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Departamento de Física Aplicada, Mexico.

- **SA6-P100 PREPARATION AND CHARACTERIZATION OF STARCH NANOPARTICLES A NON-CONVENTIONAL SOURCE**

Haydee Lopez[1], Francisco Hernandez Centeno[1], Maria Hernandez[1], Claudia Lopez Badillo[2], Norma Ventura Acosta[1]

[1]Universidad Autonoma Agraria Antonio Narro, Ciencia y Tecnología de Alimentos, Mexico. [2]Universidad Autónoma de Coahuila, Facultad de Ciencias Quimicas, Mexico.

- **SA6-P101 DEVELOPMENT OF ZEOLITE-BASED MATERIALS USING NON-CONVENTIONAL PRECURSORS FOR OPTOELECTRONIC APPLICATIONS**

Eduardo Coutino Gonzalez[1], Fabricio Espejel Ayala[1]

[1]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Biotechnology and environmental electrochemistry, Mexico.

- **SA6-P102 SYNTHESIS OF CARBON NANOSTRUCTURES FROM NATURAL RUBBER**

Jaime Abraham Guzmán Fuentes[1], José de Jesús Contreras Navarrete[1], Francisco Gabriel Granados Martínez[1], Jael Madaí Ambriz Torres[1], Carmen Judith Gutiérrez García[1], Diana Litzajaya Garcia Ruiz[1], Ezequiel Huipe Nava[2,3], Yesenia Arredondo León[4], Orlando Hernánez Cristobal[4], Lada Domratcheva Lvova[1,5]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Mechanical Engineering, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Electrical Engineering, Mexico. [3]Universidad Michoacana de San Nicolás de Hidalgo, Language deparment, Mexico. [4]Universidad Nacional Autónoma de México, ENES Unidad Morelia, Mexico. [5]Universidad Michoacana de San Nicolás de Hidalgo, Wood Technology Engineering, Mexico.

- **SA6-P103 SYNTHESIS AND CHARACTERIZATION OF LITHIATED NANOSTRUCTURES**

David Brusilovsky[1,2]

[1]Instituto de Materiales de Misiones - CONICET, Programa de Materiales Modelización y Metrología, Argentina. [2]Universidad Nacional de Misiones - CONICET, Quimica, Argentina.

- **SA6-P104 FORMATION OF V_{GA}-O_N COMPLEX IN O-DOPED GAN NANORODS AND MICROSTRUCTURES.**

Aaron Mendoza[1], Gabriela Guzmán[1], Manuel Herrera[1]

[1]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Physics, Mexico.

- **SA6-P105 SYNTHESIS AND CHARACTERIZATION OF TWO SILICON MATERIALS WITH YEAST CONFINED OBTAINED BY THE SOL-GEL AND THEIR EVALUATION EFFECT OF THE YEAST ENTRAPMENT**

Jose Quezada[1], Jose Antonio Gutierrez Ortega[1], Juan Carlos Meza Contreras[2], Ricardo Manríquez González[2]

[1]Universidad de Guadalajara, Departamento de Química, CUCEI, Mexico. [2]Universidad de Guadalajara, Departamento de Madera, Celulosa y Papel, CUCEI, Mexico.

■ **SA6-P106 SYNTHESIS AND CHARACTERIZATION OF NANOSTRUCTURES FOR TO ENCAPSULATE TRYPANOCIDAL DRUGS**

Jenny Geovanna Ordoñez Benavides[1], Gabriel Colmenares Roldan[2], Lina Marcela Hoyos Palacio[2], Luis Alberto Rios[3], Henry Andrade[1]

[1]Universidad Pontificia Bolivariana, Dinámica Cardiovascular, Colombia. [2]Universidad Pontificia Bolivariana, Biología de Sistemas, Colombia. [3]Universidad de Antioquía, Procesos Químicos Avanzados, Colombia.

■ **SA6-P107 SYNTHESIS OF NANOSTRUCTURED ZnO-GRAPHENE COMPOSITE**

Germán Pérez Zúñiga[1], Gabriel Herrera Pérez[2], Mario Miki Yoshida[3], Ysmael Verde Gomez[1], Ana María Valenzuela Muñiz[4]

[1]Instituto Tecnológico de Cancún, Doctorado en Ciencia en Materiales, Mexico. [2]Instituto Tecnológico Superior de Irapuato, Departamento de Ingeniería en Materiales, Mexico. [3]Centro de Investigación en Materiales Avanzados, S.C., Centro de Investigación en Materiales Avanzados (CIMAV), Mexico. [4]Instituto Tecnológico de Cancún, Catedrática CONACYT - Instituto Tecnológico de Cancún, Mexico.

■ **SA6-P108 INFLUENCE OF SINGLE WALLED CARBON NANOTUBES DEPOSITED ON ZnO NANOWIRES**

Concepcion Mejia Garcia[1], Gerardo Ortega Cervantez[1], Gabriela L. Rueda Morales[2], Elvia Diaz Valdes[1]

[1]Instituto Politécnico Nacional - IPN, ESFM, Mexico. [2]Instituto Politécnico Nacional - IPN, Mexico.

■ **SA6-P109 VISIBLE LUMINESCENCE FROM RARE EARTH (Tb/Sm) DOPED $SrSnO_3$ NANOPARTICLES SYNTHETIZED BY ULTRASONIC TECNIQUE.**

Carlos G. Perez Hernandez[1,2], Jesus Antonio Maldonado Arriola[1,2], Mario Enrique Alvarez Ramos[1], Roberto Carlos Carrillo Torres[1], Raúl Sánchez Zeferino[1]

[1]Universidad de Sonora, Departamento de Física, Mexico. [2]Universidad de Sonora, Posgrado en Nanotecnología, Mexico.

■ **SA6-P110 THE EFFECT OF NICKEL DOPING ON THE BAND GAP ENERGY OF TITANIUM DIOXIDE NANOPARTICLES**

Wafae Halim[1], Said Ouaskit[1], Abdel Hadi Kassiba[2]

[1]University Hassan II of Casablanca, Faculty of science Ben Msik, Physics Department, Laboratory of Condensed Matter Physics, Morocco. [2]Université du Maine, Faculty of Science and Technology , Institute of Molecules and Materials of Le Mans (I3M),UMR-CNRS 6283, France.

■ **SA6-P111 CELLULOSE NANOFIBERS TEMPO-OXIDIZED FILMS, INCORPORATED WITH CuS NP**

Luis Alejandro Macclesh del Pino[1], Ana Morales Cepeda[1]

[1]Instituto Tecnológico de Ciudad Madero, Departamento de Posgrado, Mexico.

■ **SA6-P112 OPTICAL CHARACTERIZATION OF VO_2 THIN FILMS BY UV-VIS-IR ELLIPSOMETRY**

Jorge Andres Ramirez Rincon[1], Cindy Lorena Gomez Heredia[1], Alan Corvisier[2], Thierry Girardeau[2], Jose Ordonez Miranda[2], Karl Joulain[2], Younes Ezzahri[2], Oscar Ares Muzio[1], Juan Jose Alvarado Gil[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Applied Physics, Mexico. [2]CNRS, Institut Pprime, Physics, France.

■ **SA6-P113 THERMODINAMIC STUDY ON Zn3MgO4. THEIR SYNTHESIS, AND STRUCTURAL CHARACTERIZATION.**

Daniel Ivan Guillen Carrillo[1], Elizabeth Chavira[1], Karla Eriseth Morales Reyes[2], Adriana Tejeda Cruz[3], Jesús Angel Arenas Alatorre[4], Jorge Barreto[4], Roberto Sato[5]

[1]Instituto de Investigaciones en Materiales, Materiales de baja dimensionalidad, Mexico. [2]Instituto de Investigaciones en Materiales, Departamento de polimeros, Mexico. [3]Instituto de Investigaciones en Materiales, Departamento de metálicos y cerámicos, Mexico. [4]Instituto de Física - Universidad Nacional Autónoma de México, Instituto de Física, Mexico. [5]Universidad Nacional Autónoma de México, Laboratorio LUCE, Mexico.

■ **SA6-P114 A NOVEL MICROWAVE METHOD TO OBTAIN A NANOPARTICULATED THIN–FILM CHLORIDE SALTS.**

Yara Segura De Jesus[1], Guillermo Carbajal Franco[1]

[1]Instituto Tecnológico de Toluca, Division of Graduate Studies and Reserch, Mexico.

■ **SA6-P115 CRYSTALLIZATION PATTERN OF ULTRA-THIN**

Argelia Perez[1], Rosa Maria Quispe[2], Michael Mcconney[3], Abigail Juhl[3], Nicholas Glavin[3], Jianjun Hu[3], John E Bultman[3], Christopher Muratore[4]

[1]Hospital General de Mexico, Unidad de Investigacion y Desarrollo Tecnológico, Mexico. [2]Hospital General de Mexico, Unidad de Invetigación y Desarrollo Tecnológico, Mexico. [3]Air Force Research Laboratory, Materials and Manufacturing Directorate, United States. [4]University of Dayton, Chemical and Materials Engineering, United States.

■ **SA6-P116 CONTROLLED SYNTHESIS OF TiO_2 NANOFIBERS USING DIFFERENT MOLECULAR PRECURSORS BY ELECTROSPINNING TECHNIQUE**

Oscar Secundino Sánchez[1], Joel Díaz Reyes[2], José Francisco Sánchez Ramírez[2], Noe Sánchez González[1], Angel Netzahual Lopantzi[1], Edgar Oliver Lopez Villegas[3]

[1]Instituto Politécnico Nacional - IPN, Unidad Profesional Interdisciplinaria en Ingeniería y Tecnologías Avanzadas, Mexico. [2]Instituto Politécnico Nacional - IPN, Centro de Investigación en Biotecnología Aplicada, Mexico. [3]Instituto Politécnico Nacional - IPN, ENCB, Mexico.

WEDNESDAY, AUGUST 22
ROOM: TULUM B

■ **08:00 - 08:15 SA6-O021 SiO_2, MnO_2, TiO_2 or ZrO_2- PROTECTED GOLD AND SILVERS NANOPARTICLES: SYNTHESIS AND APPLICATION AS NANORESONATORS FOR RAMAN ANALYSIS OF SURFACES**

Jan Krajczewski[1]

[1]University of Warsaw, Faculty of Chemistry, Poland.

▸ **08:15 - 08:45 SA6-O022 Invited Talk SIGNATURES OF MAJORANA ZERO MODES IN NANOSCALED (BixSb1-x)2Te3/Nb JOSEPHSON JUNCTIONS**

Detlev Gruetzmacher[1,2], Peter Schüffelgen[2], Daniel Rosenbach[2], Mussler Gregor[2], Thomas Schaepers[2], Brinkmann Alexander[3], Jonas Koelzer[2], Tobias Schmitt[2], Sarah Schmitt[2], Chuan Li[3]

[1]Forschungszentrum Juelich GmbH, JARA Institute for Green IT (PGI-10), Germany. [2]Forschungszentrum Juelich GmbH, Peter Grünberg Institute, Institute for Semiconductor Nanelectronics (PGI-9), Germany. [3]Universiteit Twente, MESA+ Institute for Nanotechnology, Netherlands.

■ **08:45 - 09:00 SA6-O023 ELECTROMAGNETICALLY INDUCED TRANSPARENCY IN HYPERBOLIC METAMATERIALS**

Anatoliy Pinchuk[1]

[1]University of Colorado at Colorado Springs, Physics, United States.

■ **09:00 - 09:15 SA6-O024 A CORE-SHELL NANOPARTICLE LIBRARY FOR PLASMON MEDIATED CATALYSIS**

Arturo Susarrey Arce[1], Krzysztof Czajkowski[2], Svetlana Alekseeva[1], David Albinsson[1], Irem Tanyeli[1], Iwan Darmadi[1], Sara Nilsson[1], Stephan Bartling[1], Tomasz Antosiewicz[2], Christoph Langhammer[1]

[1]Chalmers tekniska högskola, Department of Applied Physics, Sweden. [2]University of Warsaw, Centre of New Technologies, Poland.

■ **09:15 - 09:30 SA6-O025 ORTHOVANADATE AS A HOST FOR DOWN AND UPCONVERSION LUMINESCENCE**

Tamilmani Vairapperumal[1]

[1]Indian Institute of Technology Madras, chemistry, India.

■ **09:30 - 09:45 SA6-O026 ZnO NANOSTRUCTURED THIN FILMS GROWN AT DIFFERENT PLASMA ENERGIES BY THE LASER ABLATION OF METALLIC Zn IN OXYGEN WITH A 532 nm WAVELENGTH**

Jesús Alonso Guerrero de León[1], José Guadalupe Quiñones[2], Armando Perez Centeno[2], Gilberto Gomez Rosas[2], Enrique Camps[3], Miguel Angel Santana Aranda[2]

[1]Universidad de Guadalajara, Departamento de Ingeniería de Proyectos, Mexico. [2]Universidad de Guadalajara, Departamento de Física, Mexico. [3]Instituto Nacional de Investigaciones Nucleares (ININ), Departamento de Física, Mexico.

▸ **09:45 - 10:15 SA6-O027 Invited Talk ADVANCED METHODS FOR STRAIN MEASUREMENT IN CRYSTALLINE NANOMATERIALS: APPLICATION TO MULTILAYER INALGAP QUANTUM DOTS FORMED ON HIGH-INDEX (11L)GAAS SUBSTRATES**

Nikolay Cherkashin[1], Nikolay Ledentsov[2], Vitaly Shchukin[2]

[1]CNRS, CEMES, France. [2]VI Systems GmbH, VIS, Germany.

■ **10:15 - 10:30 SA6-O028 OPTICAL CHARACTERIZATION OF VO_2 THIN FILMS BY PHOTOTHERMAL RADIOMETRY**

Jorge Andres Ramirez Rincon[1], Cindy Lorena Gomez Heredia[1], Wu Yunhui[2], Jose Ordonez Miranda[2], Karl Joulain[2], Younes Ezzahri[2], Oscar Ares Muzio[3], Juan Jose Alvarado Gil[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Applied Physics, Mexico. [2]CNRS, Institut Pprime, Physics, France. [3]CNRS, Institut Pprime, Applied Physics, France.

■ **10:30 - 10:45 SA6-O029 ELECTRIC AND MAGNETIC-FIELD DEPENDENT CONDUCTIVITY OF GAAS/INSB CORE-SHELL and INSB SHELL NANOWIRES**

Nataliya Demarina[1], Mihail Lepsa[2], Detlev Grützmacher[2]

[1]Forschungszentrum Juelich GmbH, PGI 2, Germany. [2]Forschungszentrum Juelich GmbH, PGI 9, Germany.

■ **10:45 - 11:00 SA6-O030 EFFECT OF APPLIED ELECTRIC FIELD ON THE NONLINEAR OPTICAL PROPERTIES OF MODULATION-DOPED DOUBLE QUANTUM WELL**

Juan Carlos Martínez Orozco[1], Karla Arely Rodríguez Magdaleno[1], Alejandro Puga[1], F. Ungan[2]

[1]Universidad Autónoma de Zacatecas, Unidad Académica de Física, Mexico. [2]Cumhuriyet University, Faculty of Technology, Department of Optical Engineering, Turkey.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY IV NOBEL PRIZE IN CHEMISTRY 2016
PROF. BEN L. FERINGA

▸ **12:30 - 13:00 SA6-O031 Invited Talk NANOSCALE MASS TRANSPORT IN POLYMER FILMS INDUCED BY OPTICAL INTENSITY AND POLARISATION PATTERNS**

Joachim Jelken[1], Carsten Henkel[1], Burkhard Stiller[1], Svetlana Santer[1]

[1]University of Potsdam, Physics and Astronomy, Germany.

■ **13:00 - 13:15 SA6-O032 THERMAL HYSTERESIS MEASUREMENT OF THE VO_2 EMISSIVITY AND ITS APPLICATION IN THERMAL RECTIFICATION**

Cindy Lorena Gomez Heredia[1], Jorge Andres Ramirez Rincon[1], Jose Ordonez Miranda[2], Oscar Ares Muzio[1], Juan José Alvarado Gil[1], Corinne Champeaux[3], Frederic Dumas Bouchiat[3], Younes Ezzahri[4], Karl Joulain[4]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Física Aplicada, Mexico. [2]CNRS, Institut Pprime, Institut PPRIME, France. [3]CNRS, IRCER, France. [4]CNRS, Institut Pprime, Université de Poitiers, France.

■ **13:15 - 13:30 SA6-O033 CHARACTERIZATION OF THE ORGANIC COATING OF COLLOIDAL QUANTUM DOTS USING NMR SPECTROSCOPY**

Chengqi Zhang[1], Goutam Palui[1], Hedi Mattoussi[1]

[1]Florida State University, Department of Chemistry and Biochemistry, United States.

■ **13:30 - 13:45 SA6-O034 NANOSCALE INVESTIGATION OF ENHANCED FIELD ELECTRON EMISSION FOR GOLD-DIAMOND NANOHYBRIDS**

Sankaran Kamatchi Jothiramalingam[1,2], Kalpataru Panda[3], Balakrishnan Sundaravel[4], I-Nan Lin[5], Ken Haenen[1,2]

[1]Hasselt University, Institute for Materials Research, Belgium. [2]IMEC vzw, IMOMEC, Belgium. [3]KAIST, Center for Nanomaterials and Chemical Reactions, Korea. [4]Indira Gandhi Centre for Atomic Research, Materials Physics Division, India. [5]Tamkang University, Department of Physics, Taiwan.

■ **13:45 - 14:00 SA6-O035 HYBRID THIN FILMS BASED ON NANOSTRUCTURED POROUS SILICON AND GREEN SYNTHETIZED SILVER NANOPARTICLES AS EFFICIENT SUBSTRATES FOR BIOSENSING APPLICATIONS**

Gonzalo Recio[1], Jacobo Hernandez[2], Manuel Romero[3], Noelia Benito[4]

[1]Universidad Católica de Temuco, Ciencias Matemáticas y Físicas, Chile. [2]Universidad Católica de Temuco, Cienicas Matemáticas y Físicas, Chile. [3]Instituto Tecnológico Metropolitano, Grupo Calidad, Metrología y Produccion, Colombia. [4]Universidad de Concepción, Fisica, Chile.

■ **14:00 - 14:15 SA6-O036 USE OF NANOFLUIDS TO IMPROVE THE PERFORMANCE OF HEAT PIPES**

Bernardo Herrera[1,2], Farid Chejne[2], Marcia B. H. Mantelli[3], Karen Paola Cacua Madero[1,4]

[1]Instituto Tecnológico Metropolitano, Faculty of Engineering, Group of Advanced Materials and Energy, Colombia. [2]Universidad Nacional de Colombia, Faculty of Mines, Group of Applied Thermodynamic and Alternative Energies, Colombia. [3]Universidade Federal de Santa Catarina, Faculty of Mechanical Engineering, Laboratory of Heat Pipes - LABTUCAL, Brazil. [4]Universidad Nacional de Colombia, Faculty of Sciences, Group of Science of Advanced Materials, Colombia.

14:00 - 16:00 Lunch time

▸ **16:00 - 16:30 SA6-O037 Invited Talk GUIDED NANOWIRE OPTOELECTRONICS**

Eitan Oksenberg[1], Ella Sanders[1], Sara Martí Sánchez[2], Ronit Popovitz Biro[1], Lothar Houben[1], Jordi Arbiol[2], Ernesto Joselevich[1]

[1]Weizmann Institute of Science, Department of Materials and Interfaces and Chemical Research Support, Israel. [2]Institut Català de Nanociéncia i Nanotecnologia, Advanced Electron Nanoscopy Group, Spain.

▸ **16:30 - 17:00 SA6-O038 Invited Talk TRANSFORMATION OF BULK ALLOYS TO METAL-ORGANIC AND OXIDE NANOWIRES AND THEIR USE AS CERAMIC SEPARATORS**

Kostiantyn Turcheniuk[1], Fujia Wang[1], Baolin Wang[2], Danni Lei[1], Jim Benson[1], Alexandre Magasinski[1], Ting Zhu[2], Gleb Yushin[1]

[1]Georgia Institute of Technology, Materials Science and Engineering, United States. [2]Georgia Institute of Technology, Mechanical Engineering, United States.

- **17:00 - 17:15 SA6-O039 LUMINESCENT PROPERTIES OF POINT DEFECTS IN HYDROXYAPATITE NANOBELTS**

Veronica Jazmin Huerta Guerra[1,2], Manuel Herrera[2], Nicolás Rutilo Silva González[3], Virginia Gomez Vidales[4]

[1]Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE), Nanoscience, Mexico. [2]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Physics, Mexico. [3]Benemerita Universidad Autonoma de Puebla, Physics Institute, Mexico. [4]Universidad Nacional Autónoma de México, Chemistry Institute, Mexico.

- **17:15 - 17:30 SA6-O040 REDUCTION AND EXFOLIATION OF DRY GRAPHENE OXIDE VIA MICROWAVES IRRADIATION: DEGREE OF EXFOLIATION AND ELECTRICAL CONDUCTIVITY**

María Guadalupe Iniestra Galindo[1], José Pérez González[1], Benjamín Marcos Marín Santibáñez[2]

[1]Instituto Politécnico Nacional - IPN, Escuela Superior de Física y Matemáticas, Mexico. [2]Instituto Politécnico Nacional - IPN, Escuela Superior de Ingeniería Química e Industrias Extractivas, Mexico.

- **17:30 - 17:45 SA6-O041 EXPERIMENTAL STUDY OF VISCOSITY AND SURFACE TENSION OF Al_2O_3-DEIONIZED WATER NANOFLUIDS USING SDBS AS STABILIZING AGENT**

Anderson Gallego Montoya[1], Karen Paola Cacua Madero[1], Bernardo Herrera[1]

[1]Instituto Tecnológico Metropolitano, Antioquia, Colombia.

- **17:45 - 18:00 SA6-O042 GOLD NANOROD FUNCIONALIZATED WITH ELECTROACTIVE POLYMER AND THE BIONANOACTUATION IN LANGMUIR FILMS**

Bianca Sandrino[1], Michelle R. L. Zanetti[2], Karen Wohnrath[3], Ana Maria Percebom[4], Paulo Henrique de Sousa Picciani[2]

[1]Universidade de São Paulo, Phisycs Department, Brazil. [2]Universidade Federal do Rio de Janeiro, Eloisa Mano Macromolecules Institute, Brazil. [3]Universidade Estadual de Ponta Grossa, Chemistry Department, Brazil. [4]Pontifícia Universidade Católica do Rio de Janeiro, Chemistry Department, Brazil.

- **18:00 - 18:15 SA6-O043 FUNCTIONAL NANOSTRUCTURED POROUS SILICON CARRIERS FOR TYPE 2 DIABETES MELLITUS ORAL THERAPHY**

Gabriela Sarahi García Briones[1], Juan Jesus Barrios Capuchino[2], María del Carmen González Castillo[1], Raul Ocampo Perez[1], Alma Gabriela Palestino Escobedo[1]

[1]Universidad Autónoma de San Luis Potosí, Facultad de Ciencias Quimicas, Mexico. [2]Universidad Autónoma de San Luis Potosí, Facultad de Ciencias, Mexico.

- **18:15 - 18:30 SA6-O044 SYNTHESIS, CARACTERIZATION AND PROPERTIES EVALUACION OF HYBRID POLY(ACRYLIC ACID)-MICROALGAE HYDROGELS**

Miguel Olvera Sosa[1,2], Sergio Rosales Mendoza[2,3], Gabriela Palestino[1,2]

[1]Universidad Autónoma de San Luis Potosí, Laboratorio de Biopolímeros y Nanoestructuras, Facultad de Ciencias Químicas, Mexico. [2]Universidad Autónoma de San Luis Potosí, Sección de Biotecnología, Centro de Investigación en Ciencias de la Salud y Biomedicina, Mexico. [3]Universidad Autónoma de San Luis Potosí, Laboratorio de Biofarmacéuticos Recombinantes, Facultad de Ciencias Químicas, Mexico.

WEDNESDAY, AUGUST 22
ROOM: TERRACE

- **18:30 -20:30 POSTER SESSION & COFFEE BREAK**

- **SA6-P117 BIOCONJUGATES COMPOSED OF MAGNETIC NANOPARTICLES AND Ib-M6 ANTIMICROBIAL PEPTIDE ANDE THEIR THE ACTIVITY AGAINST Escherichia Coli O157:H7**

Jose Luis Ropero Vega[1], Sonia Carolina Saavedra Gúzman[1], Natalia Ardila Rosas[2], Herminsul de Jesús Cano Calle[2], Johanna Marcela Flórez[1]

[1]Universidad de Santander UDES, Santander, Colombia. [2]Universidad Industrial de Santander, Santander, Colombia.

- **SA6-P118 IMPROVEMENT OF THE HARD MAGNETIC PROPERTIES IN A POLY(VINYL ALCOHOL)-$SrFe_{12}O_{19}$ COMPOSITE**

Azdrubal Lobo Guerrero Serrano[1], Manuel Mirabal García[2], Javier Gustavo Cabal Velarde[3], Fabiola Jacqueline Santos López[1], Gerardo Gabriel López Rocha[2]

[1]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Mexico. [2]Universidad Autónoma

de San Luis Potosí, Instituto de Física, Mexico. [3]Instituto Tecnológico Superior de Irapuato, Micro y nanotecnologías, Mexico.

- **SA6-P119 CHARACTERIZATION OF Mn NANOPARTICLES DOPED WITH ND AND SYNTHETIZED BY SPRAY PYROLYSIS FOR CANCER TREATMENT BY HYPERTHERMIA**

Diana Sarai Hernandez Manzo[1], Alexa Gaona Esquivel[1], Miguel Melendez Lira[2], Oscar Eduardo Cigarroa Mayorga[1]

[1]Instituto Politécnico Nacional - IPN, UPIITA, Mexico. [2]Cinvestav Zacatenco, Física, Mexico.

- **SA6-P120 MAGNETIC HYPERTHERMIA OF MAGNETIC NANOPARTICLES DOPED WITH RARE EARTHS IN AQUEOUS MEDIUM**

Jose de Jesus Ibarra Sanchez[1], Tzarara Lopez Luke[1], Elder de la Rosa Cruz[1], Mario Eduardo Cano[2], José de Jesús Bernal[3], Octavio Jiménez González[3], Teodoro Cordova Fraga[3]

[1]Centro de Investigaciones en Optica, Dirección de Investigación, Mexico. [2]Universidad de Guadalajara, Centro Universitario de la Ciénega, Mexico. [3]Universidad de Guanajuato campus León, Departamento de Ingeniería Física, Mexico.

- **SA6-P121 SYNTHESIS OF MAGNETITE@SILICA/ZINC OXIDE CATALYTIC MICROMOTORS**

Gustavo Ochoa[1], Alejandro Vazquez[1]

[1]Universidad Autónoma de Nuevo León, Mexico.

- **SA6-P122 SYNTHESIS AND CHARACTERIZATION OF STRONTIUM HEXAFERRITE NANOPARTICLES USING THE PECHINI AND SOLID STATE METHODS.**

Maria de Los Angeles Urbano Peña[1], Salvador Palomares Sanchez[1], Facundo Ruiz[1], Teresita de Jesus Perez[2], Rigoberto López Juárez[2]

[1]Universidad Autónoma de San Luis Potosí, Facultad de Ciencias, Mexico. [2]Universidad Nacional Autónoma de México, Instituto de Materiales Avanzados, Mexico.

- **SA6-P123 EASY ROUTE FOR COATING OF MAGNETIC NANOPARTICLES WITH CHITOSAN**

Victor Hugo Romero Arellano[1], Diana Consuelo Nava Reyes[2], Tzarara Lopez Luke[3], Belkis Coromoto Sulbarán Rangel[4], Carlos Alberto Guzmán Gonzalez[5]

[1]Universidad de Guadalajara, Departamento de Agua y Energia, Mexico. [2]Universidad de Guadalajara, Ciencias Básicas Aplicadas e Ingenierías, Mexico. [3]Centro de Investigaciones en Optica, NAFOMA, Mexico. [4]Universidad de Guadalajara, Departamento de Estudios del Agua y la Energía, Mexico. [5]Universidad de Guadalajara, Ciencia Básica aplicada e Ingeniería, Mexico.

- **SA6-P124 RAMAN STUDY OF ZnO NANOCOLUMNS SYNTHESIZED BY CHEMICAL BATH TECHNIQUE**

Adriana Baez Rodriguez[1], Teresa Hernandez[1], Leandro Garcia Gonzalez[1], Julian Hernandez Torres[2], Manuel García Hipólito[1], Luis Zamora Peredo[1], José Guzmá Mendoza[3]

[1]Universidad Veracruzana, Microna, Mexico. [2]Asidetech Research, S.A. de C.V., microna, Mexico. [3]Instituto Politécnico Nacional - IPN, CICATA Legaria, Mexico.

- **SA6-P125 GREEN SYNTHESIS OF ZINC OXIDE NANOSTRUCTURES: TEMPERATURE AND REACTION TIME EFFECTS ON THE MORPHOLOGY**

Susana Borbon[1], Shadai Lugo Loredo[1], Israel López[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico.

- **SA6-P126 NANOSTRUCTURE STUDY OF PS-PB-PMMA TRIBLOCK COPOLYMER: MODIFICATION BY MEANS OF COMPOSITION**

Cesar Soto Figueroa[1], David Alfredo González Pizarro[1], Maria del Rosario Rodríguez Hidalgo[2], Luis Vicente[2]

[1]Universidad Autónoma de Chihuahua, Facultad de Ciencias Químicas, Mexico. [2]Universidad Nacional Autónoma de México, Facultad de Química, Mexico.

- **SA6-P127 PHOTOLUMINESCENCE, RAMAN SCATTERING AND STRUCTURE OF ZnO:Cu NANOCRYSTALS FILMS**

Brahim El Filali[1], Tetyana Torchynska[2], J. Manuel del Rio Villagran[3]

[1]Instituto Politécnico Nacional - IPN, Ingenieria, Mexico. [2]Instituto Politécnico Nacional - IPN, Materiales, Mexico. [3]Instituto Politécnico Nacional - IPN, SEPI UPIITA, Mexico.

- **SA6-P128 MICROWAVE-ASSISTED SYNTHESIS OF ZINC-ALUMINUM LAYERED DOUBLE HYDROXIDE**

Fernanda Garcia[1], Gustavo Ochoa[1], Sandra Herrera[1], Sergio Obregón[2], Alejandro Vazquez[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Quimicas, Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ciencias Fisico Matematicas, Mexico.

- **SA6-P129 MORPHOLOGICAL STUDY OF Ni, Fe AND Mo MICROEMULSIONS BY SMALL ANGLE X-RAY SCATTERING ANALYSIS**

Mayda Lam Maldonado[1], Jose Aarón Melo Banda[1], David Macias Ferrer[1], Benjamín Portales Martínez[2], Jose Manuel Mata Padilla[3], Jose

Manuel Dominguez[4], Gabriela del Pilar Gómez Mendoza[5]

[1]Instituto Tecnológico de Ciudad Madero, Nanomaterials, Mexico. [2]Instituto Mexicano del Petróleo, Miscoscopy, Mexico. [3]Centro de Investigación en Química Aplicada - CIQA , Chemistry, Mexico. [4]Instituto Mexicano del Petróleo, Heavy Oil, Mexico. [5]Instituto Tecnológico de Ciudad Madero, Science, Mexico.

- **SA6-P130 SYNTHESIS AND CHARACTERIZATION OF ZINC OXIDE NANOPARTICLES WITH DIFFERENT MORPHOLOGY FOR OBTAINING NANOFLUIDS**

Fredy Ordoñez Ramos[1], Elizabeth Pabón[1], Farid Chejne[1], Karen Paola Cacua Madero[2]

[1]Universidad Nacional de Colombia, Antioquia, Colombia. [2]Instituto Tecnológico Metropolitano, Antioquia, Colombia.

- **SA6-P131 ENHANCED LUMINESCENCE PROPERTIES OF $ZnGa_2O_4$:Cr_{3+} NANOPARTICLES**

Marcos Tapia Montalvo[1], Ana Leticia Fernández Osorio[2], Julian Chávez Fernández[2]

[1]Universidad Nacional Autónoma de México, Estudiante Maestria en Ciencias Quimicas, Mexico. [2]Universidad Nacional Autónoma de México, FES Cuautitlan Química, Mexico.

- **SA6-P132 AL-DOPING IMPACT ON EMISSION AND STRUCTURE OF ZnO NANOCRYSTAL FILMS**

Tetyana Torchynska[1], Jose Luis Casas Espinola[1], Georgiy Polupan[2], Brahim El Filali[3], Lyudmula Shcherbyna[4]

[1]Instituto Politécnico Nacional - IPN, Physics, Mexico. [2]Instituto Politécnico Nacional - IPN, LABINTAB, Mexico. [3]Instituto Politécnico Nacional - IPN, UPIITA, Mexico. [4]V.Lashkaryov Institute of Semiconductor Physics at the National Academy of Sciences of Ukriane, Photoelectronics, Ukraine.

- **SA6-P133 STRUCTURAL CHARACTERIZATION OF $LiM_{0.5}Mn_{1.5}O_{4\pm\delta}$ (M = Ni AND Co) NANOSTRUCTURES SYNTHESIZED BY THE THERMAL DECOMPOSITION OF NITRATES ULTRASOUND ASSISTED (DTN-UA) METHOD**

Daniela Alburquenque[1], Loreto Troncoso[2], Juan Escrig[1]

[1]Universidad de Santiago de Chile, Física, Chile. [2]Universidad Austral de Chile, Instituto de Materiales, Chile.

- **SA6-P134 STUDY ON THE VOLUME PLASMON BLUE-SHIFT OF METALLIC BISMUTH NANOPARTICLES SYNTHESIZED BY SOLVOTHERMAL REACTION**

Raul Borja Urby[1], Herlys Viltres Cobas[2], Silvia Patricia Paredes Carrera[3], Francisco Paraguay[4], Damasio Morales Cruz[5], Arturo García Bórquez[6], Luis Rendon Vazquez[7], Patricia Santiago Jacinto[8]

[1]Instituto Politécnico Nacional - IPN, Centro de Nanociencias y Micro y Nanotecnologías, Mexico. [2]Instituto Politécnico Nacional - IPN, Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Mexico. [3]Instituto Politécnico Nacional - IPN, Escuela Superior de Ingeniería Química e Industrias Extractivas, Mexico. [4]Centro de Investigación en Materiales Avanzados, S.C., Física de materiales, Mexico. [5]Instituto Politécnico Nacional - IPN, Escuela Superior de Ingeniería Mecánica y Eléctrica - Zacatenco, Mexico. [6]Instituto Politécnico Nacional - IPN, Escuela Superior de Física y Matemáticas, Mexico. [7]Universidad Nacional Autónoma de México, Instituto de Física - Materiales Nanoestructurados, Mexico. [8]Universidad Nacional Autónoma de México, Instituto de Física - Materia Condensada, Mexico.

- **SA6-P135 GROWTH OF SILVER DENDRITIC NANOSTRUCTURES DECORATED WITH GOLD NANOSPHERES AND THEIR APPLICATION AS SERS SUBSTRATE**

Manuel Ceballos[1], Ana Arizmendi Morquecho[1], Israel López[2], Margarita Sánchez Domínguez[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Unidad Monterrey, Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico.

- **SA6-P136 OBTAINING AN ACTIVE TWO-DIMENSIONAL SUBSTRATE FOR SERS BASED ON Au-Ag NANOSTRUCTURES IN A POLYMERIC MATRIX**

Eduardo Carlos Martinez Zuñiga[1], Alfredo Rafael Vilchis Néstor[1]

[1]Centro Conjunto de Investigación en Química Sustentable UAEM-UNAM (CCIQS), Materials Science, Mexico.

- **SA6-P137 SURFACE ENHANCED RAMAN SCATTERING DUE TO INTERSTITIAL GOLD NANOPARTICLES INTO SiO2 SPHERES ARRAY**

Miller Toledo Solano[1], Luis A. Romero Cruz[1], A. Santos Gómez[1], M. A. Palomino Ovando[1], E. Sanchéz Mora[2], A. L. González[2]

[1]Benemerita Universidad Autonoma de Puebla, Facultad de Ciencias Físico Matemáticas, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Instituto de Física BUAP, Mexico.

- **SA6-P138 SYNTHESIS OF BIMETALLIC NANOPARTICLES AND THEIR PHOTOLUMINESCENCE ENHANCEMENT EFFECT OF AN OLED COMPOUND**

Edgar Alejandro Ferreira[1], Mónica Trejo[2], Alejandro Vazquez[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico. [2]Universidad de Guanajuato, Departamento de Estudios Multidisciplinarios, Mexico.

- **SA6-P139 BIOSYNTHESIS OF SILVER NANOPARTICLES USING TAGETES LUCIDA CAV. FLOWERS EXTRACT. OPTIMIZATION BY TAGUCHI METHOD**

  José Salvador Martínez Flores[1], Liliana Trinidad Corona Ruiz[1], Martha Isabel González Domínguez[1]

  [1]Universidad de La Cienega del Estado de Michoacán de Ocampo, Ingeniería en Nanotecnología, Mexico.

- **SA6-P140 Al_2O_3-Y_2O_3 ULTRATHIN MULTILAYER STACKS GROWN BY ATOMIC LAYER DEPOSITION AS PERSPECTIVE FOR OPTICAL APPLICATIONS**

  Javier Alonso Lopez Medina[1], Eder German Lizarraga Medina[1], Nicola Nedev[2], Gerardo Soto[1], Hugo Tiznado[1], Mario Farias[1]

  [1]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Fisicoquimica, Mexico. [2]Universidad Autónoma de Baja California, Instituto de Ingeniería, Mexico.

- **SA6-P141 INTERBAND FORMATION FOR A δ-DOPED LIKE GaAs/$Al_xGa_{1-x}As$ QW SUPERLATTICES.**

  Antonio del Rio de Santiago[1], Karla Arely Rodríguez Magdaleno[2], Juan Carlos Martínez Orozco[2]

  [1]Universidad Autónoma de Zacatecas, Unidad Académica de Ingeniería, Mexico. [2]Universidad Autónoma de Zacatecas, Unidad Académica de Física, Mexico.

- **SA6-P142 EMISSION AND STRUCTURE VARYING AT ANNEALING MBE GaAs/AlGaAs HETEROSTRUCTURES WITH InAs QUANTUM DOTS AND STRAIN REDUCED AlGaInAs LAYER**

  Georgiy Polupan[1], Tetyana Torchynska[2], Ricardo Cesneros Tamayo[3], Leonardo G. Vega Macotela[3], Arturo Escobosa Echavarría[4]

  [1]Instituto Politécnico Nacional - IPN, LABINTAB ESIME, Mexico. [2]Instituto Politécnico Nacional - IPN, ESFM IPN, Mexico. [3]Instituto Politécnico Nacional - IPN, ESIME, Mexico. [4]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Solid state electronics, Mexico.

- **SA6-P143 SYNTHESIS AND CHARACTERIZATION OF A-ALUMINA BY INORGANIC SOL-GEL METHOD**

  Danila Ferreira Niero[1], Adriano Michael Bernardin[1]

  [1]Universidade do Extremo Sul Catarinense, Ceramic Materials Group, Brazil.

- **SA6-P144 SONOCHEMISTRY PROCESS FOR OBTAIN OF CARBON QUANTUM DOTS AND DOPAND CARBON QUANTUM DOTS**

  Raul Herrera Basurto[1], Flora Emperatriz Mercader Trejo[2], María de Jesús Hernández González[3], Obed Arnoldo Chimal Valencia[4], Aarón Rodríguez López[2]

  [1]Universidad Aeronáutica en Querétaro, Investigación y Posgrado, Mexico. [2]Universidad Politécnica de Santa Rosa Jáuregui, Mexico. [3]Universidad Tecnológica Fidel Velasquez, Nanotecnologia, Mexico. [4]Universidad Aeronáutica en Querétaro, Mexico.

- **SA6-P145 DESING AND CHARACTERIZATION OF A MICROWAVE CAVITY TO CONTROL IRRADIATION OF CARBON NANOTUBES**

  Topacio Llarena Bravo[1], Edgar Alvarez Zauco[1]

  [1]Universidad Nacional Autónoma de México, Facultad de Ciencias, Mexico.

- **SA6-P146 EFFECT OF TRANSITION METALS IN ONE-POT MULTI-WALLED CARBON NANOTUBES SYNTHESIS BY SPRAY PYROLYSIS**

  Samantha Suszek[1], Ignacio Alfredo Rivero Espejel[1]

  [1]Instituto Tecnológico de Tijuana, Centro de Graduados e Investigación en Química, Mexico.

- **SA6-P147 MODIFIED NANO-CLAYS WITH NATURAL PRODUCTS TO BE USED AS BIOACTIVE FILLER TO FUNCTIONALIZED COATINGS**

  Mariela Fernández[1,2], Roberto Romagnoli[3], Natalia Bellotti[3,4]

  [1]CETMIC- Centro de Tecnología de Recursos Minerales y Cerámica, Arcillas, Argentina. [2]Universidad Nacional de La Plata, Facultad de Ciencias Exactas, Argentina. [3]Centro de Investigación y Desarrollo en Tecnología de Pinturas (CIDEPINT), Pinturas Especiales, Argentina. [4]Universidad Nacional de La Plata, Facultad de Ciencias Naturales y Museo, Argentina.

- **SA6-P148 EVALUATION OF THE CURCUMIN-LOADED MUCOADHESIVE LIQUID CRYSTALLINE SYSTEM FOR THE TREATMENT OF VULVOVAGINAL CANDIDIASIS**

  Marlus Chorilli[1], Camila Fernanda Rodero[1], María Soledad Miró[2], Claudia Elena Sotomayor[2], Taís Maria Bauab[3]

  [1]Universidade Estadual Paulista, Drugs and Medicines, Brazil. [2]Universidad Nacional de Córdoba, Clinical Biochemistry, Argentina. [3]Universidade Estadual Paulista, Biological Scineces, Brazil.

- **SA6-P149 FE-DOPED TIO2 NANOTUBES SYNTHESIZED VIA A ONE-STEP ELECTROCHEMICAL ANODIZATION**

  Salomon Ramiro Vasquez Garcia[1], Ana Karen García Rueda[1], Leandro Garcia Gonzalez[2], Luis Zamora Peredo[2]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ingeniería Química, Mexico. [2]Universidad Veracruzana, Centro de Investigación en Micro y Nanotecnología, Mexico.

- **SA6-P150 AMORPHICITY AND STRUCTURAL CHANGES IN Au_xCu_y clusters, for x+y=38, AND 55.**

José Manuel Cabrera Trujillo[1], Juan Martin Montejano Carrizales[2], César G. Galván[1]

[1]Universidad Autónoma de San Luis Potosí, Facultad de Ciencias, Mexico. [2]Universidad Autónoma de San Luis Potosí, Instituto de Física, Mexico.

- **SA6-P151 DEVELOPMENT OF NANOSTRUCTURED AU-AG COMPOSITE BASED ON BOVINE BONE AS A CATALYST: SYNTHESIS, CHARACTERIZATION AND APPLICATION**

Jossue Jared Barrera Torres[1,2], Alfredo Rafael Vilchis Nestor[1], Nayely Torres Gómez[1], Gustavo López Téllez[3]

[1]Centro Conjunto de Investigación en Química Sustentable UAEM-UNAM (CCIQS), Laboratorio de Química de Materiales, Mexico. [2]Universidad Tecnológica de Zinacantepec, Mexico. [3]Centro Conjunto de Investigación en Química Sustentable UAEM-UNAM (CCIQS), Laboratorio de química ambiental 2, Mexico.

- **SA6-P152 GROWTH KINETICS AND THERMAL PROPERTIES OF GOLD NANOSHELL**

Angel Netazhual Lopantzi[1], Delfino Cornejo Monrroy[2], Noe Sánchez González[3], Jose Luis Jiménez Pérez[1], Oscar Secundino Sánchez[1], Jose Francisco Sánchez Ramírez[3]

[1]Instituto Politécnico Nacional - IPN, Unidad Profesional Interdisciplinaria en Ingeniería y Tecnologías Avanzadas, Mexico. [2]Universidad Autónoma de Ciudad Juárez, Instituto de Ingeniería y Tecnología, Mexico. [3]Instituto Politécnico Nacional - IPN, Centro de Investigación en Biotecnología Aplicada, Mexico.

- **SA6-P153 ANTIOXIDANT POTENTIAL EVALUATION OF TARAXACUM OFFICINALE FOR GOLD NANOPARTICLES SYNTHESIS**

Amalia Ines del Moral Gomez[1], Gerardo Antonio Rosas Trejo[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigaciones en Metalurgia y Materiales, Mexico.

- **SA6-P154 QUASI-PERIODIC MULTILAYER DIELECTRIC-GRAPHENE SUBSTRATES FOR RAMAN RESPONSE IMPROVEMENT**

Andrea Alejandra Rodríguez Miramontes[1], Jaime Raúl Suárez López[1], José Samuel Pérez Huerta[1], Jesús Madrigal Melchor[1]

[1]Universidad Autónoma de Zacatecas, Unidad Académica de Física, Mexico.

- **SA6-P155 SYNTHESIS OF NP AU USING MICROFLUIDICS FOR SENSOR APPLICATIONS**

Ulises Jesús Tamayo Pérez[1], Eduardo Hernández Wagner[1], Gabriel Alonso Nunez[2], Victor Ruiz Cortes[3], Guillermo Amaya Parra[4], Jorge Mata Ramirez[5], Jose Luis Gonzalez Sanchez[6], Marco Antonio Garcia Zarate[3], Julian Israel Aguilar Duque[6], Elizabeth Ramirez Mondragon[7]

[1]Universidad Autónoma de Baja California, Departamento de Nanotecnología FIAD, Mexico. [2]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Departamento de catálisis, Mexico. [3]Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE), Departamento de Óptica en la División de Física Aplicada, Mexico. [4]Universidad Autónoma de Baja California, Departamento de Propiedad Intelectual, Mexico. [5]Universidad Autónoma de Baja California, Departamento de Nanotecnologia, Mexico. [6]Universidad Autónoma de Baja California, Departamento de Ingeniería, Mexico. [7]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Departamento de nanoestructuras, Mexico.

- **SA6-P156 SYNTHESIS, CHARACTERIZATION AND ANTIMICROBIAL EFFICIENCY OF Diatom-NPs-Ag COMPOSITE**

Miguel Salvador Mendoza Gutierrez[1], Jorge Cisneros Preciado[1], Rodolfo Rodriguez Valladolid[1], Luis Alberto Bretado Aragon[1], Martha Isabel Gonzalez Domingez[1], Martha Salinas Sandoval[1]

[1]Universidad de La Cienega del Estado de Michoacán de Ocampo, Ingenieria en Nanotecnologia, Mexico.

- **SA6-P157 CITRATE-CONTROLLED SOLUTION DEPOSITION OF PbSe THIN FILMS**

Maayan Perez[1,2], Michael Shandalov[3], Eyal Yahel[4], Yuval Golan[2]

[1]Ben-Gurion University of the Negev, Ilse Katz Institute for Nanoscale Science and Technology, Israel. [2]Ben-Gurion University of the Negev, Materials Engineering, Israel. [3]NRCN, Materials Engineering, Israel. [4]NRCN, Physics, Israel.

- **SA6-P158 NANOENCAPSULATION (LIPOSOME) OF HIBISCUS SABDARIFFA L. (ROSELLE) EXTRACT: ANTIOXIDANT CAPACITY**

Jessica Batalla Mayoral[1], Andrea de la Luz Ramos[2], Miriam Vega Hernández[2], Salvador López González[1]

[1]Benemerita Universidad Autonoma de Puebla, Complejo Regional Mixteca. Campus Izúcar de Matamoros, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniería Química, Mexico.

■ **SA6-P159 UPCONVERSION AND DOWNSHIFTING LUMINESCENCE OF HAFNIUM SILICATE CO-DOPED WITH Tb^{3+}-Yb^{3+}.**

Vicente Vargas[1], Jesús Uriel Balderas[2], S. Carmona T.[3], Zacarias Rivera Alvarez[3], Ciro Falcony Guajardo[3]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Nanociencia y Nanotecnología, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Física, Mexico.

■ **SA6-P160 EMISSION AND STRUCTURE STUDY IN ALGAAS/GAAS QUANTUM WELLS WITH INAS QUANTUM DOTS AND ALGAINAS STRAIN REDUCING LAYER.**

Ricardo Cisneros Tamayo[1,2], Tetyana Torchynska[3], Leonardo Gabriel Vega Macotela[4], Georgiy Polupan[5]

[1]ESIME CULHUACAN, Posgrado, Mexico. [2]Universidad Politécnica del Valle de México, Nanotecnología, Mexico. [3]Escuela Superior de Física y Matemáticas IPN, Ciencia de los Materiales, Mexico. [4]Esime zacatenco, Control, Mexico. [5]Esime zacatenco, SEPI-POSGRADO, Mexico.

■ **SA6-P161 TUNING OPTICAL PROPIERTIES OF ITO THIN FILMS WITH TILTED NANOCULUMNAR STRUCTURES GROWN BY RF-SPUTTERING IN OBLIQUE ANGLE DEPOSITION**

Luis German Daza Casiano[1], Roman Castro Rodríguez[1], Augusto A. Iribarren Alfonso[2]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Department of Applied Physics, Mexico. [2]Universidad de La Habana, Instituto de Ciencia y Tecnología de Materiales, Cuba.

■ **SA6-P162 STUDY OF SELF-ASSEMBLY PROCESS OF IN-RICH NANOSTRUCTURES CONTROLLED BY HYDROGEN PLASMA**

Sarai Vazquez y Parraguirre[1], Ismael Cosme Bolaños[1,2], Svetlana Mansurova[1], Andrey Kosarev[3], Yuriy Kudriavtsev[4], Netzahualcoyotl Carlos Ramirez[3], Adrian Itzmoyotl Toxqui[3]

[1]Instituto Nacional de Astrofísica, Óptica y Electrónica, Optics, Mexico. [2]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Optics, Mexico. [3]Instituto Nacional de Astrofísica, Óptica y Electrónica, Electronics, Mexico. [4]Cinvestav Zacatenco, Solid-state electronics, Mexico.

■ **SA6-P163 COMPARATIVE STUDY OF MORPHOLOGY AND OPTICAL PROPERTIES OF ORGANIC NANOPARTICLES SYNTHESIZED BY LASER ABLATION AND REPRECIPITATION**

Héctor Mauricio Reynoso de la Cruz[1], Enrique Alba Rosales[1,2], Gabriel Ortiz[3], Gerardo Gutiérrez Juárez[4], Jayaramakrishnanb Velusami[3], Olivia Hernandez[3]

[1]Universidad de Guanajuato campus León, División de ciencias e ingenierías, Mexico. [2]Centro de Investigaciones en Optica, Óptica no lineal y fotofisica, Mexico. [3]Centro de Investigaciones en Optica, Optica no Lienal y fotofisica, Mexico. [4]Universidad de Guanajuato, División de ciencias e ingenierías, Mexico.

■ **SA6-P164 STRUCTURAL CHANGES IN ZnO(Co) NANOPARTICLES INDUCED BY DIFFERENT LASER POWER: PHONON PROPERTIES**

Maja Romcevic[1], Branka Hadzic[1], Witold Dobrowolski[2], Nebojsa Romcevic[1]

[1]Institute of Physics, University of Belgrade, Laboratory for electronic materials, Serbia. [2]Polish Academy of Sciences, Institute of Physics, Poland.

■ **SA6-P165 HIERARCHICAL ZEOLITES FROM SILICON NATURAL SOURCES: SYNTHESIS AND CHARACTERIZATION**

Tania Farías[1], Katia Borrego Morales[1], Rosa I. Meneau Hernández[1], María B. Liva Garrido[1], Julio Duque Rodríguez[1], Francisco Calderón Piñar[1], Yilian Fernández Afonso[2], Omitzu Picazo[1], Javier Ellena[3], Jean Claude M´peko[3], Rabdel Ruiz Salvador[4]

[1]Universidad de La Habana, Instituto de Ciencia y Tecnología de Materiales, Cuba. [2]Centro de Estudios Avanzados de Cuba (CEAC), Nanomateriales, Cuba. [3]Universidade Federal de São Paulo, Instituto de Física de Sao Carlos, Brazil. [4]Universidad Pablo de Olavide, Faculty of Experimental Sciences, Spain.

■ **SA6-P166 SYNTHESIS OF ZIRCONIUM DIBORIDE NANOBARS USING SOLAR FURNACE**

Laura Guadalupe Ceballos Mendivil[1], Jesús Adrián Baldenebro López[1], Judith Celina Tánori Córdova[2], Carlos Alberto Pérez Rábago[3], Claudio Alejandro Estrada Gasca[3]

[1]Universidad Autónoma de Sinaloa, Facultad de Ingeniería Mochis, Mexico. [2]Universidad de Sonora, Departamento de Investigación en Polímeros y Materiales, Mexico. [3]Universidad Nacional Autónoma de México, Instituto de Energías Renovables, Mexico.

THURSDAY, AUGUST 23
ROOM: TULUM B

- **09:00 - 09:15 SA6-O045 CHANGES ON THE DISSOCIATION BARRIER OF H_2 DUE TO BUCKLING INDUCED BY A CHEMISORBED HYDROGEN ON A DOPED GRAPHENE SURFACE**
  Arturo Hernández Hernández[1], Alejandro Morales Peñaloza[1], Francisco Javier Martínez Farías[1], Eduardo Rangel Cortes[1], Alberto Hernandez Hernandez[1], Lis Tamayo Rivera[1], Emmanuel Vallejo Castaneda[1], Jose Alfredo Pescador Rojas[1], Luis Omar Vera Olvera[1], Pablo Antonio López Pérez[1], Jesus Pelayo[1]
  [1]Universidad Autónoma del Estado de Hidalgo, Energetic Systems and Advanced Materials, Mexico.

- **09:15 - 09:30 SA6-O046 MOLECULAR MECHANICS SIMULATION OF ALUMINOSILICATE NANOTUBES (IMOGOLITE): MECHANICAL RESPONSE UNDER COMPRESSION AND PROPERTIES WHEN THE NANOTUBE IS IMMERSED IN WATER**
  Rafael Gonzalez Valdes[1,2]
  [1]Center for the Development of Nanoscience and Nanotechnology, Chile. [2]Universidad Mayor, Centro de Nanotecnologia Aplicada, Facultad de Ciencias, Chile.

- **09:30 - 09:45 SA6-O047 HIGH QUALITY DEEP ETCHING OF DIAMOND: PROCESS OPTIMISATION OF AN ITERATIVE AR/O_2 AND AR/CL_2 ICP REACTIVE ION ETCH FOR POWER DEVICE FABRICATION**
  Marie-Laure Hicks[1], Alexander Pakpour Tabrizi[1], Richard Jackman[1]
  [1]University College London, London Centre for Nanotechnology, United Kingdom, Channel Islands & Isle of Man.

- **09:45 - 10:00 SA6-O048 CARBON NANOCOMPOSITES FOR WIDE RANGE STRAIN SENSOR DEVELOPMENT**
  Li Sun[1], Min Lu[1]
  [1]University of Houston, Mechanical Engineering, United States.

- **10:00 - 10:15 SA6-O049 NANOPARTICLES GRAFTING WITH POLYMER FOR WASTEWATER APPLICATIONS**
  Ghada Nafie[1], Gerardo Vitale[1], Nashaat Nassar[1]
  [1]University of Calgary, Chemical and Petroleum Engineering, Canada.

- **10:15 - 10:30 SA6-O050 THERMAL ACTIVATION OF LAYERED AND FIBROUS CLAYS AND THEIR APLICATION IN THE REMOVAL OF CADMIUM (II) FROM AQUEOUS SOLUTION**
  Erika Padilla[1], Roberto Leyva Ramos[1], Raúl Ocampo Perez[1], Nahúm Medellin[1], Erick Oyarvide Carmona[1]
  [1]Universidad Autónoma de San Luis Potosí, Centro de Investigación y Estudios de Posgrado, Facultad de Ciencias Químicas, México.

11:00-11:30 POSTER AWARDS CEREMONY & COFFEE BREAK

11:30 - 12:30 PLENARY V
PROF. GALO SOLER ILLIA

Symposium B1

NEW TRENDS IN POLYMER CHEMISTRY AND CHARACTERIZATION

Ernesto Rivera Garcia / Universidad Nacional Autónoma de México
Mario Gauthier / University of Waterloo
Coleen Pugh / University of Akron
Francisco Javier Illescas Martínez / Instituto Tecnológico de Toluca

MONDAY, AUGUST 20
ROOM: ACAPULCO

Session: Conjugated and Photoactive polymers

SESSION CHAIR: COLEEN PUGH

- **09:00 - 09:30 SB1-O001 Invited Talk NOVEL, METAL-FREE, WELL-DEFINED, MULTIFUNCTIONAL AROMATIC POLYMERS**
  Mikhail Zolotukhin[1]
  [1]Instituto de Investigaciones en Materiales, Polymers, Mexico.
- **09:30 - 10:00 SB1-O002 Invited Talk MECHANISTIC ASPECTS OF SUPERACID MEDIATED POLYCONDENSATION OF POLYPHENOLS WITH KETONES. A THEORETICAL INSIGHT**
  Serguei Fomine[1]
  [1]Universidad Nacional Autónoma de México, Institute for materials researches, polymer department, Mexico.
- **10:00 - 10:30 SB1-O003 Invited Talk NAPHTYL- AND PYRENYL-FLAVYLIUM DYADS: SYNTHESIS, DFT AND OPTICAL PROPERTIES**
  Gerardo Zaragoza Galán[1]
  [1]Universidad Autónoma de Chihuahua, Chemistry, Mexico.
- **10:30 - 11:00 SB1-O004 Invited Talk SUPRAMOLECULAR COMPLEXES OF PORPHYRINS AND FULLERENES ORGANIZED BY POLYPEPTIDIC STRUCTURES: LIGHT HARVESTERS FOR THE ELABORATION OF ORGANIC SOLAR CELLS.**
  Nathalie Solladie[1]
  [1]CNRS-Laboratoire de Chimie de Coordination, Groupe de Synthèse de Systèmes Porphyriniques, France.

11:00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY II
PROF. YUICHI IKUHARA

Session: Conjugated and Photoactive Polymers / Functional Polymers

SESSION CHAIR: JAVIER ILLESCAS

- **12:30 - 13:00 SB1-O005 Invited Talk CONJUGATED POLYMERS WITH FUSED HYDROGEN BOND**
  Yu Zhu[1]
  [1]University of Akron, Department of Polymer Science, United States.
- **13:00 - 13:15 SB1-O006 SYNTHESIS, CHARACTERIZATION AND OPTICAL PROPERTIES OF**

NOVEL STAR AZO-OLIGOMERS CONTAINING WELL-DEFINED OLIGO(ETHYLENE GLYCOL) SEGMENTS

Roberto González Gómez[1], Jesús Ortíz Palacios[1], Ernesto Rivera García[1]

[1]Instituto de Investigaciones en Materiales, Rheology, Mexico.

- **13:15 - 13:30 SB1-O007 NOVEL DENDRITIC MOLECULES BEARING DONOR-ACCEPTOR GROUPS (PYRENE-BODIPY) AS POTENTIAL ENERGY TRANSFERT SYSTEMS**

Pasquale Porcu[1], Ernesto Rivera[1]

[1]Universidad Nacional Autónoma de México, Instituto de Investigaciones en Materiales, Mexico.

- **13:30 - 13:45 SB1-O008 DETERMINATION OF RADICAL REACTIVITY RATIOS OF FLUOROPHILIC MONOMERS AND N,N-DIMETHYLACRYLAMIDE IN RADICAL COPOLYMERIZATIONS BY IN-SITU QUANTITATIVE ^{1}H-NMR SPECTROSCOPY**

Coleen Pugh[1], Dibyendu Debnath[1], Jessi Baughman[2], Sujay Datta[3]

[1]University of Akron, Polymer Science, United States. [2]University of Akron, Chemistry, United States. [3]University of Akron, Statistics, United States.

- **13:45 - 14:00 SB1-O009 NEW SWELLING PROPERTIES OF CROSSLINKED POLY(N-ISOPROPYLACRYLAMIDE) GELS IN NONAQUEOUS SOLUTIONS.**

Maria Victoria Martinez[1], Maria Alejandra Molina[1], Cesar Alfredo Barbero[1]

[1]Instituto de Investigaciones en Tecnologias Energeticas y Materiales Avanzados (UNRC-CONICET), Chemistry, Argentina.

- **14:00 - 14:15 SB1-O010 PERFORMANCE STUDY OF NOVEL CATIONIC TERPOLYMERS SUBMITTED TO ELEVATED TEMPERATURES AND A HIGHLY CONCENTRATED BRINE.**

Natalya Victorovna Likhanova[1], Diego Guzmán Lucero[2], Felipe de Jesus Guevara Rodríguez[1], Jorge F. Palomeque Santiago[3], Javier Guzman Pantoja[4]

[1]Instituto Mexicano del Petróleo, Gerencia de Desarrollo de Materiales y Productos Químicos, Mexico. [2]Instituto Mexicano del Petróleo, Gerencia de Transformación de Biomasa, Mexico. [3]Instituto Mexicano del Petróleo, Gerencia de Productos Quimicos, Mexico. [4]Instituto Mexicano del Petróleo, Gerencia de Refinación de hidrocarburos, Mexico.

☒ **14:00 - 16:00 Lunch time**

Session: Functional Polymers

SESSION CHAIR: MARIO GAUTHIER

- **16:00 - 16:30 SB1-O011 Invited Talk STRUCTURAL ANALYSIS OF CHAIN-LEVEL STRUCTURE OF SEMICRYSTALLINE POLYMERS BY SOLID-STATE NMR**

Toshikazu Miyoshi[1]

[1]University of Akron, Polymer Science, United States.

- **16:30 - 17:00 SB1-O012 Invited Talk SYNTHESIS AND GAS TRANSPORT PROPERTIES OF CROSSLINKED POLYNORBORNENE DICARBOXIMIDES**

Joel Vargas[1], Ivette Aranda Suárez[1], Arlette A. Santiago[2], Mar López González[3]

[1]Universidad Nacional Autónoma de México, Instituto de Investigaciones en Materiales, Unidad Morelia, Mexico. [2]Universidad Nacional Autónoma de México, Escuela Nacional de Estudios Superiores, Unidad Morelia, Mexico. [3]Instituto de Ciencia y Tecnología de Polímeros, (ICTP-CSIC), Spain.

- **17:00 - 17:30 SB1-O013 Invited Talk DESIGN AND SYNTHESIS OF FUNCTIONAL POLYMERS INCLUDING ORGANOMETALLIC POCOP PINCER FRAGMENTS. POTENTIAL APPLICATIONS AS EFFICIENT AND RECOVERABLE CATALYSTS**

David Morales Morales[1], Hugo Valdes[2], Lorena Berenice Diaz Sanchez[2]

[1]Instituto de Química. Universidad Nacional Autónoma de México, Inorganic Chemistry, Mexico. [2]Instituto de Quimica UNAM, inorganic chemistry, Mexico.

- **17:30 - 18:00 SB1-O014 Invited Talk PROPERTY EFFECT OF FLUORINATED MONOMER INCORPORATION INTO BACKBONE MATRIX OF POLYIMIDE AEROGELS**

Stephanie Vivod[1], Maryann Meador[1], Coleen Pugh[2]

[1]National Aeronautics and Space Administration, Structures and Materials, United States. [2]University of Akron, Polymer Science, United States.

- **18:00 - 18:15 SB1-O015 THE INFLUENCE OF CURE AGENT, TREATMENT AND FIBERS CONTENT ON THE THERMAL BEHAVIOR OF A CURAUA/EPOXY PREPREG**

Vilson Dalla Libera Junior[1], Rosineide Miranda Leão[1,2], Sandra Maria Da Luz[1,3]
[1]Universidade de Brasília, Engineering Materials Integrity Program, Brazil. [2]Universidade Paulista, Institute of Exact Sciences and Technology, Brazil. [3]University of Alberta, Department of Chemical and Materials Engineering, Canada.

■ **18:15 - 18:30 SB1-O016 POLYMERIZATION REACTOR MONITORING BY IN-LINE RAMAN SPECTROMETRY**

José Ramiro Infante Martinez[1], Ricardo López González[1], Ramón Diaz León[1], Luis Villarreal Cárdenas[1]
[1]Centro de Investigación en Química Aplicada - CIQA , Procesos de polimerización, Mexico.

● **17:30 -18:30 Science, Technology and Society Lecture SENER**

TUESDAY, AUGUST 21
ROOM: ACAPULCO

Session: Functional Polymers

SESSION CHAIR: PASQUALE PORCU

▸ **09:00 - 09:30 SB1-O017 Invited Talk PHENYLENVINYLENE POLYMERS OF CONTROLLED ARCHITECTURE BY RING OPENING METATHESIS OF STRAINED 1,9-PARACYCLOPHANEDIENES: RINGS, TELECHELICS AND BLOCK COPOLYMERS.**

Michael Turner[1]
[1]The University of Manchester, Chemistry, United Kingdom, Channel Islands & Isle of Man.

▸ **09:30 - 10:00 SB1-O018 Invited Talk IN SILICO SYNTHESIS AND CHARATERIIZATION OF AMORPOHUS POLYMERIC MATERIALS**

Coray Colina[1]
[1]University of Florida, Department of Chemistry, United States.

▸ **10:00 - 10:30 SB1-O019 Invited Talk SURFACE-MODIFIED POLYIMIDE MEMBRANES FOR GAS SEPARATION APPLICATIONS**

Kazukiyo Nagai[1]
[1]Meiji University, Department of Applied Chemistry, Japan.

■ **10:30 - 10:45 SB1-O020 FOLDON SIZE IN POLY(L-GLUTAMIC ACID) ARBORESCENT POLYMERS DETERMINED BY PYRENE EXCIMER FLUORESCENCE**

Mario Gauthier[1], Timothy Hall[1], Greg Whitton[1], Remi Casier[1], Jean Duhamel[1]
[1]University of Waterloo, Chemistry, Canada.

▸ **10:45 - 11:15 SB1-O021 Invited Talk SYNTHESIS OF HYPERBRANCHED POLYACRYLATES USING SELF CONDENSING VINYL POLYMERIZATION BY ATRP BY DIVERSE INITIATION TECHNIQUES IN AQUEOUS DISPERSED SYSTEMS**

Guillermina Garcia[1,2], Coleen Pugh[3]
[1]Industry, Research And Development, United States. [2]University of Akron, Research and Development, United States. [3]University of Akron, Departament of Polymer Science, United States.

◾ **11: 00 - 11:30 COFFEE BREAK**

🕮 **11:30 - 12:30 PLENARY III**
DR. AMANDA S. BARNARD

Session: Dendrimers and Hyperbranched Polymers

SESSION CHAIR: ERNESTO RIVERA

▸ **12:30 - 13:00 SB1-O022 Invited Talk CYCLODEXTRIN-BASED SUPRAMOLECULAR STRCUTURES AS DRUG DELIVERY NANOSYSTMES**

Yareli Rojas Aguirre[1], Patricia Guadarrama[1], Manuel Alexis Torres Mena[1]
[1]Instituto de Investigaciones en Materiales, Polímeros, Mexico.

▸ **13:00 - 13:30 SB1-O023 Invited Talk GLYCODENDRIMERSOMES : NOVEL SELF-ASSEMBLING AMPHIPHILIC ARCHITECTURES**

Rene Roy[1]
[1]Université du Québec à Montréal, Chemistry, Canada.

▸ **13:30 - 14:00 SB1-O024 Invited Talk DENDRITIC B-CYCLODEXTRIN DERIVATIVES AS CONTAINERS OF HYDROPHOBIC GUESTS. STRUCTURAL ANALYSIS AND ITS IMPACT IN THE PHARMACEUTICAL DESIRABILITY**

Luis José López Méndez[1], Yareli Rojas Aguirre[1], Hugo Vázquez Lima[2], Patricia Guadarrama[1]
[1]Universidad Nacional Autónoma de México, Polymers, Mexico. [2]Universidad Autónoma Metropolitana, División de Ciencias Naturales e Ingeniería, Mexico.

☒ **14:00 - 16:00 Lunch time**

Session: Dendrimers and Hyperbranched Polymers / Biopolymers

SESSION CHAIR: NATHALIE SOLLADIÉ

- **16:00 - 16:30 SB1-O025 Invited Talk TELODENDRIMERS BASED NANOSTRUCTURES FOR DRUG DELIVERY: A HYBRID PLATFORM COMBINING ADVANTAGEOUS TRAITS OF LINEAR POLYMERS WITH DENDRIMERS**
  Ashok Kakkar[1]
  [1]McGill University, Chemistry, Canada.
- **16:30 - 17:00 SB1-O026 Invited Talk POLY(METHYL 6-ACRYLOYL-β-D-GLUCOSAMINOSIDE) AS A CATIONIC GLYCOMIMETIC OF CHITOSAN**
  Andrea M. Kasko[1]
  [1]University of California, Los Angeles, Bioengineering, United States.
- **17:00 - 17:30 SB1-O027 Invited Talk NANOCELLULOSES: 1D CRYSTALLINE BUILDING BLOCKS FOR MULTI-FUNCTIONAL MATERIALS**
  You-Lo Hsieh[1]
  [1]University of California, Davis, Fiber and Polymer Science, United States.
- **17:30 - 18:00 SB1-O028 Invited Talk POLYMER DESIGN APPROACHES IN URINARY TISSUE ENGINEERING**
  Anirudha Singh[1]
  [1]Johns Hopkins University, Urology, United States.
- **18:00 - 18:30 SB1-O029 Invited Talk AMPHIPHILIC POLYMERIC NANOCARRIERS TO OVERCOME BIOLOGICAL BARRIERS**
  Alejandro Sosnik[1]
  [1]Technion - Israel Institute of Technology, Materials Science and Engineering, Israel.

TUESDAY, AUGUST 21
ROOM: TERRACE

- **18:30 -20:30 POSTER SESSION & COFFEE BREAK**
- **SB1-P001 SYNTHESIS AND CHARACTERIZATION OF BIODEGRADABLE POLYURETHANES**
  Jose Manuel Burelo[1], Adileily Olivares Jiménez[2], Mikhail A. Tlenkopatchev[1], Selena Gutiérrez Flores[3,4]
  [1]Instituto de Investigaciones en Materiales, Polymers, Mexico. [2]Facultad de Química, UNAM, Chemical Engineering, Mexico. [3]Facultad de Química, UNAM, Mexico. [4]Facultad de Química, UNAM, Analytical Chemistry, Mexico.
- **SB1-P002 SYNTHESIS AND CHARACTERIZATION OF A NEW OLEIC ACID-DERIVED POLYAMIDE BEARING SULFONIC GROUPS**
  Carlos Corona García[1], Morelia H. Abrego[1], Arlette A. Santiago[2], Jorge A. Cruz Morales[3], Joel Vargas[1]
  [1]Universidad Nacional Autónoma de México, Instituto de Investigaciones en Materiales, Unidad Morelia, Mexico. [2]Universidad Nacional Autónoma de México, Escuela Nacional de Estudios Superiores, Unidad Morelia, Mexico. [3]Universidad Nacional Autónoma de México, Instituto de Investigaciones en Materiales, Mexico.
- **SB1-P003 ECOLOGICAL VARNISH OBTAINED BY FUNCTIONALISATION AND POST-SYNTHETIC MODIFICATION OF ABIETIC ACID**
  Nelly Flores Ramirez[1], Erandini Guzmán Mejía[1], Salomon Ramiro Vasquez Garcia[2], Leandro Garcia Gonzalez[3], Gerardo Gallegos Leon[1]
  [1]Universidad Michoacana de San Nicolás de Hidalgo, Department of Wood Engineering and Technology, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Department of Chemical Engineering, Mexico. [3]Universidad Veracruzana, Research Center for Micro and Nanotechnology, Mexico.
- **SB1-P004 MODIFICATION OF BEADS OF CHITOSAN AND POLY(VINYL ALCOHOL) BY MEANS OF LUMISCENT DISCHARGE PLASMA FOR THE ADSORPTION OF RED 2 DYE**
  Antonio Alvarado Bonifacio[1], Beatriz Garcia Gaitan[1], José Luis García Rivas[1], Rosa Elvira Zavala Arce[1], Celso Hernandez Tenorio[1], María de la Luz Jiménez Núñez[1], Teresa Soriano Aguilar[1]
  [1]Tecnologico Nacional de Mexico/Instituto Tecnologico de Toluca, División de Estudios de Posgrado e Investigación, Mexico.
- **SB1-P005 INFLUENCE OF CHEMICAL MODIFICATIONS ON AGAVE BAGASSE**
  Gema Susana Cano Díaz[1,2], Alberto Rosas Aburto[2], Leticia Flores Santos[3], Miguel Ángel Vega Hernández[2], Eduardo Vivaldo Lima[2], Ricardo Cosarrubias[2]
  [1]Universidad Nacional Autónoma de México, Mexico. [2]Universidad Nacional Autónoma de México, Chemical Engineering, Mexico. [3]Rheomod de México, Investigation, Mexico.

■ **SB1-P006 ENCAPSULATION OF ACTIVE FRACTIONS OF WHEY PROTEINS WITH ANTIOXIDANT POTENTIAL IN PECTIN-COLLAGEN AND PECTIN-GELATIN MICROPARTICLES**

Jazmin Castillo Sanabria[1], Claudia Rosario Muro[1], Rosa Elena Ortega Aguilar[1], Javier Illescas[1], Maria del Carmen Diaz Nava[1]

[1]Instituto Tecnológico de Toluca, División de Estudios de Postgrado e Investigación, Mexico.

■ **SB1-P007 AFM OBSERVATION OF SELF–ORDERED CELLULOSE NANOCRYSTALS**

Carlos Fernando Castro Guerrero[1], Valdemar Tejeda Hernandez[2], Filemon Delgado Arroyo[3], Ana Morales Cepeda[4], Mario Diaz Guillen[3], Jeannete Ramirez Aparicio[1]

[1]Consejo Nacional de Ciencia y Tecnologia - CONACYT, INEEL, Mexico. [2]Instituto Nacional De Electricidad y Energías Limpias, Posgrado, Mexico. [3]Instituto Nacional De Electricidad y Energías Limpias, Departamento de Sistemas Mecanicos, Mexico. [4]Instituto Tecnológico de Ciudad Madero, Division de Estudios de Posgrado e Investigacion, Mexico.

■ **SB1-P008 ELABORATION AND CHARACTERIZATION OF HYDROLYZED MAIZE STARCH FILMS ADDED WITH MICROENCAPSULATED POLYPHENOLS WITH BIOCIDE PROPERTIES**

Maximiliano Díaz Molina[1], Fernando Martínez Bustos[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Unidad Querétaro, Mexico.

■ **SB1-P009 PATTERN RECOGNITION OF CRYSTALLINITY ON ^{13}C CPMAS SPECTRA OF CHITOSANS BY SINGULAR VALUE DECOMPOSITION METHOD**

William Facchinatto[1], Rubens Bernardes Filho[2], Anderson Fiamingo[3], Sergio Paulo Campana Filho[1], Luiz Alberto Colnago[2]

[1]Universidade de São Paulo, Sao Carlos Institute of Chemistry, Brazil. [2]Embrapa, Embrapa Instrumentation, Brazil. [3]Universidade de São Paulo, Sao Carlos Institute of Physics, Brazil.

■ **SB1-P010 PREPARATION AND CHARACTERIZATION OF Poly(Vinyl Acetate),PVAc COMPOSITES WITH NANOCELLULOSE OBTAINED FROM DIFFERENT NATURAL RENEWABLE SOURCES**

Rosa Maria Jimenez[1], Emma Rebeca Macías Balleza[1], Thais Helena Sydenstsahagun[2], Salvador García Enriquez[3], Harrison Corrêa[2], Talita Sylapak Franco[4,5], Jaqueline Mara Silva[6], Aline Caldonazo[6], Maite Renteria Urquiza[4]

[1]Universidad de Guadalajara, Chemical Engineering Department, Mexico. [2]Universidade Federal do Paraná, Mechanics Department, Brazil. [3]Universidad de Guadalajara, Wood, Cellulosic and Paper Department, Mexico. [4]Universidad de Guadalajara, Chemical Department, Mexico. [5]Universidade Federal do Paraná, Laboratório LCNANO - SISNANO, Brazil. [6]Universidade Federal do Paraná, Programa de Mestrado em Engenharia e Ciência dos Materiais, Brazil.

■ **SB1-P011 SYNTHESIS AND CHARACTERIZATION OF NEW CHITOSAN-GLUTARALDEHYDE SCAFFOLDS FOR TISSUE ENGINEERING USING SCHIFF BASES**

Gabriela Martínez Mejía[1], Rogelio Jiménez Juárez[1], Mónica de la Luz Corea Téllez[2]

[1]Instituto Politécnico Nacional - IPN, Organic Chemistry, Mexico. [2]Instituto Politécnico Nacional - IPN - ESIQIE, Polymers, Mexico.

■ **SB1-P012 STUDY OF THE THERMAL PROPERTIES OF BANANA STARCH (Musa X paradisiaca) MODIFIED WITH MAGNESIUM AND POTASIUM IONS**

Nathalia Mutis Gonzalez[1], Posidia Pineda Gómez[1,2], Mario Enrique Rodriguez Garcia[3]

[1]Universidad Nacional de Colombia, Fisica y Quimica, Colombia. [2]Universidad de Caldas, Fisica y Quimica, Colombia. [3]Universidad Nacional Autónoma de México, Nanotegnologia, Mexico.

■ **SB1-P013 STUDY OF THE PARAMETERS INVOLVED IN THE BIOPROCESS OF XANTHAN GUM PRODUCTION**

Hugo Oñate Robledo[1], Jorge Adrían Botello Rueda[1], Jorge Alfonso Tavares Negrete[1], Argelia Rosillo de la Torre[1], Irais Amaranta Quintero Ortega[1]

[1]Universidad de Guanajuato campus León, Chemical Electronic Biomedical Engineering, Mexico., Mexico.

■ **SB1-P014 EVALUATION OF A MIXED SYSTEM OF ALGINATE AND INULIN IN THE ENCAPSULATION OF STEVIA REBAUDIANA BERTONI AQUEOUS EXTRACT.**

Juan Pablo Quintal Martínez[1], Maira Rubí Segura Campos[1], Jorge Carlos Ruiz Ruiz[2]

[1]Universidad Autónoma de Yucatán, Facultad de Ingeniería Química, Mexico. [2]Universidad Anáhuac México Norte, Facultad de Nutrición, Mexico.

■ **SB1-P015 THE INTERPRETATION OF WIDE-ANGLE X-RAY SCATTERING CURVES IN ISOLATED STARCHES. THE IDENTIFICATION OF LAMELLAR STRUCTURE**

Mario Rodriguez Garcia[1], Sandra Milena Londoño Restrepo[2], Cristian Felipe Ramirez Gutierrez[2], Batriz Marcela Millán Malo[1], Eric Mauricio Rivera Muñoz[1]

[1]Universidad Nacional Autónoma de México, Departamento de Nanotecnología, Centro de Física Aplicada y Tecnología Avanzada, Mexico. [2]Universidad Nacional Autónoma de México, Posgrado en Ciencia e Ingeniería de Materiales, Mexico.

- **SB1-P016 CHITOSAN MODIFIED BY MECHANOSYNTHESIS, COMPUTATIONAL SIMULATION, SYNTHESIS AND CHEMICAL CHARACTERIZATION.**

Abner Hesli Rojas Calva[1], Eduardo Cerecedo Saenz[1], Rosa Angeles Vazquez[1], Josè Angel Cobos Murcia[1], Demetrio Mendoza Anaya[2], Ventura Rodriguez Lugo[1]

[1]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Instituto de Ciencias Básicas e Ingeniería, Mexico. [2]Instituto Nacional de Investigaciones Nucleares (ININ), Instituto Nacional de Investigaciones Nucleares, Mexico.

- **SB1-P017 SYNTHESIS AND CHARACTERIZATION OF SUPERABSORBENTS OF SODIUM ACRYLATE** / XANTHAN USING DIFFERENT INITIATORS (KPS AND V-50)

Juan Carlos Sanchez Diaz[1], Emilio Cruz Barba[1], Agustin Martínez Ruvalcaba[1], Laura Castellanos Arteaga[2]

[1]Universidad de Guadalajara, Ingenieria Química, Mexico. [2]Universidad de Guadalajara, Química, Mexico.

- **SB1-P018 SYNTHESIS AND INVESTIGATION PROPERTIES OF CITOSAN-REDUCE GRAPHENE OXIDE NANOCOMPOSITES.**

Diego Abraham Sanchez Pardo[1], Yevgen Prokhorov[1], Gabriel Luna Barcenas[2], Reina Araceli Mauricio[1], Javier Villarreal Castellon[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Materials, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Mexico.

- **SB1-P019 BINARY GRAFTING OF INTELLIGENT MONOMERS N-VINILCAPROLACTAMA / AC. ACRYLIC IN CHITOSANE FOR THE RETENTION AND RELEASE OF DRUGS BY IONIZING RADIATION**

Abigail Sanchez[1,2]

[1]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Mexico. [2]Instituto de Ciencias Nucleares UNAM, macromolecules, Mexico.

- **SB1-P020 OPTICAL PROPERTIES OF CHITOSAN/ CARBOXYMETHYL CELLULOSE POLYELECTROLYTES FILMS LOADED WITH FLAVYLIUM SALTS**

Marysol Sauzameda[1,2]

[1]Centro de Investigación en Materiales Avanzados, S.C., Laboratorio de Análisis Térmico, Mexico. [2]Universidad Autónoma de Chihuahua, Facultad de Ciencias Químicas, Mexico.

- **SB1-P021 SYNTHESIS AND CHARACTERIZATION OF POLYELECTROLYTES AS FLUORESCENT pH SENSORS.**

Estefania Terrazas Caro[1,2]

[1]Centro de Investigación en Materiales Avanzados, S.C., Laboratorio de Análisis Térmico, Mexico. [2]Universidad Autónoma de Chihuahua, Facultad de Ciencias Químicas, Mexico.

- **SB1-P022 BIOFILMS BASED ON STARCH OF AVOCADO SEEDS WITH A NATURAL CROSS-LINKER**

Perla Guadalupe Castro García[1], Paloma Topacio Escobedo Leon[1], Ana Victoria López Hernández[1], Salomon Ramiro Vasquez Garcia[2], Nelly Flores Ramirez[3], Juan Alonso Villalón Cueto[2]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Chemical Engineering, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Department of Chemical Engineering, Mexico. [3]Universidad Michoacana de San Nicolás de Hidalgo, Department of Wood Engineering and Technology, Mexico.

- **SB1-P023 STUDY OF THE ASSOCIATION OF THE CHITOSAN TO MEMBRANES OF NANOTUBES OF TiO_2**

Salomon Ramiro Vasquez Garcia[1], Bernardo Núñez Mendoza[1], Nelly Flores Ramirez[2]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Department of Chemical Engineering, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Department of Wood Engineering and Technology, Mexico.

- **SB1-P024 DEVELOPMENT OF AGAVE FIBER-g-ACRYLIC ACID COPOLYMERS BY RAFT POLYMERIZATION**

Miguel Ángel Vega Hernández[1], Patricia Perez Salinas[2], Gema Susana Cano Díaz[1], Ricardo Casarrubias[1], Humberto Vázquez Torres[3], Alberto Rosas Aburto[1], Eduardo Vivaldo Lima[1]

[1]Universidad Nacional Autónoma de México, Facultad de Química, Mexico. [2]Universidad Nacional Autónoma de México, Instituto de Investigaciones en Materiales, Mexico. [3]Universidad Autónoma Metropolitana, FÍSICA, UAM IZTAPALAPA, Mexico.

- **SB1-P025 MOLECULAR DYNAMICS ANALYSIS OF CHITOSAN-GRAPHENE OXIDE NANOCOMPOSITE**

Javier Villarreal[1], Yevgen Prokhorov[2], Reina Araceli Mauricio[3], Gabriel Luna Barcenas[3], Diego Abraham Sanchez Pardo[3]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Propiedades eléctricas y biopolímeros, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Propiedades electricas, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Biopolimeros, Mexico.

- **SB1-P026 HYBRIDS OF LIPOSOMES FOR DRUG CO-ENCAPSULATION**

Janna Douda[1], Isaac Izcoatl Mota Dïaz[2]

[1]Instituto Politécnico Nacional - IPN, UPIITA, Posgrado, Mexico. [2]Instituto Politécnico Nacional - IPN, UPIITA, Mexico.

- **SB1-P027 SYNTHESIS OF NOVEL SUPRAMOLECULAR DENDRITIC SYSTEM FOR CONTROLLED DRUG DELIVERY**

Israel Gonzalez Mendez[1], José Solano Becerra[2], Ernesto Rivera[1]

[1]Instituto de Investigaciones en Materiales, Reología, Mexico. [2]Facultad de Química, UNAM, Biology, Mexico.

- **SB1-P028 DIFFERENTIATION IN GEOMETRICAL PROPERTIES OF BIOPHYSICAL MODELS OF PERICELLULAR BRUSHES FOUND ON THE SURFACE OF CANCEROUS AND NORMAL CERVICAL EPITHELIAL CELLS**

Juan de Dios Hernández Velázquez[1]

[1]Universidad Autónoma de Nuevo León, Centro de Investigación en Ciencia Físico-Matemáticas, Mexico.

- **SB1-P029 SYNTHESIS, OPTICAL AND PHOTOPHYSICAL PROPERTIES OF NOVEL PYRENE-METALLOPORPHYRIN DENDRITIC SYSTEMS**

Sandra Marcela Rojas Montoya[1]

[1]Universidad Nacional Autónoma de México, instituto de investigaciones en materiales, Mexico.

- **SB1-P030 SYNTHESIS OF L-LYSINE DENDRIMERS USING "CLICK CHEMISTRY" FOR APPLICATIONS IN NANOMEDICINE**

Kendra Sorroza Martínez[1], Israel González Mendez[1], Ernesto Rivera[1]

[1]Instituto de Investigaciones en Materiales, Reología, Mexico.

- **SB1-P031 HYDROGELS AS POLYMER ELECTROLYTE FOR USE IN FLEXIBLE BATTERIES**

Carlos Hipólito Antonio Hernández[1,1], Alberto Rosas Aburto[1,1], Eduardo Vivaldo Lima[1], Mylai Renata Balderas Arteaga[1]

[1]Universidad Nacional Autónoma de México, Chemical Engineering, Mexico.

- **SB1-P032 ELECTROCHEMICAL DETECTION OF ARSENITE EMPLOYING AND HYDROGEL SOFT MATRIX**

Maria Victoria Martinez[1], Rusbel Coneo Rodriguez[1], Mariano M. Bruno[1], Diego F. Acevedo[1], Cesar Alfredo Barbero[1]

[1]Instituto de Investigaciones en Tecnologias Energeticas y Materiales Avanzados (UNRC-CONICET), Chemistry, Argentina.

- **SB1-P033 DEVELOPMENT OF ASSOCIATIVE POLYMERS WITH POTENTIAL USE AS HYDROGELS.**

Liliana Guadalupe López Mendoza[1], Jorge Herrera Ordoñez[1], Miriam Rocío Estévez González[1], Juan Francisco Perez Robles[2]

[1]Instituto de Investigaciones en Materiales, Centro de Fisica Aplicada y Tecnologia Avanzada, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Unidad Querétaro, Mexico.

- **SB1-P034 SYNTHESIS AND CHARACTERIZATION OF HYDROGEL WITH AG NANOPARTICLES FOR 3D PRINTING PROSTHESIS**

Kari Guadalupe Hortensia Martinez Reyna[1], Guadalupe Valdivieso[1], Hugo R Navarro Contreras[1]

[1]Universidad Autónoma de San Luis Potosí, Coordinación para la Innovación y Aplicación de la Ciencia y la Tecnología (CIACYT), Mexico.

- **SB1-P035 NON-EQUILIBRIUM KINETICS OF THE TRANSFORMATION OF LIQUIDS INTO PHYSICAL GELS**

Jose Manuel Olais Govea[1,2], Leticia López Flores[2], Martín Chávez Páez[2], Magdaleno Medina Noyola[2]

[1]Instituto Tecnológico y de Estudios Superiores de Monterey, Escuela de Ingeniería y Ciencias, Mexico. [2]Universidad Autónoma de San Luis Potosí, Instituto de Física Manuel Sandoval Vallarta, Mexico.

- **SB1-P036 ALGINATE-FERRIC ZEOLITE BEADS BIOCOMPOSITE FOR REMOVAL OF AZO DYE FROM WATER MEDIUM**

Samantha Ortega Aguirre[1], Maria del Carmen Diaz Nava[1], Marcos José Solache Ríos[2], Javier Illescas[1]

[1]Instituto Tecnológico de Toluca, División de Estudios de Posgrado e Investigación, Mexico. [2]Instituto Nacional de Investigaciones Nucleares (ININ), Departamento de Química, Mexico.

■ **SB1-P037 POLYMER NETWORKS CONTAINING POLY(IONIC LIQUIDS)**

Alberto Rosas Aburto[1], Eduardo Vivaldo Lima[1], Liliana Vértiz Vázquez[1], Carlos Hipólito Antonio Hernández[1], Mylai Renata Balderas Arteaga[1], Pedro Roquero Tejeda[1], Camiel Hernan Cornelis Janssen[1], Ismael Arroyo Díaz[2]

[1]Facultad de Química, UNAM, Ingeniería Química, Mexico. [2]Instituto de Investigaciones en Materiales, Posgrado, Mexico.

■ **SB1-P038 BATCH POLYMERIZATION PROCESS TO OBTAIN ENCAPSULATED FRAGRANCES IN POLYMER HYDROGELS**

Alberto Rosas Aburto[1], Eduardo Vivaldo Lima[1], Patricia Perez Salinas[2], Humberto Vázquez Torres[3], Ana Bárbara Carrillo Pérez[1], Blanca Araceli Bello Salgado[1]

[1]Facultad de Química, UNAM, Ingeniería Química, Mexico. [2]Facultad de Química, UNAM, Departamento de Ingeniería, Mexico. [3]Universidad Autónoma Metropolitana, Física, Mexico.

■ **SB1-P039 EVALUATION OF THE HOMOGENEITY OF POLYMER HYDROGELS**

Alberto Rosas Aburto[1], Eduardo Vivaldo Lima[1], Sahad Janyla Rosales Ortega[1], Patricia Perez Salinas[1], Humberto Vázquez Torres[2], Liliana Vértiz Vázquez[1], Ismael Arroyo Díaz[3]

[1]Facultad de Química, UNAM, Ingeniería Química, Mexico. [2]Facultad de Química, UNAM, Física, Mexico. [3]Instituto de Investigaciones en Materiales, Posgrado, Mexico.

■ **SB1-P040 PHYSICAL AND CHEMICAL EVALUATION OF BIOMEMBRANES BASED ON HYDROGELS AND nHA-NTC OBTAINED BY ELECTROSPINNING**

Areli Marlen Salgado Delgado[1], Melinda Juarez Duje[1], Alfredo Olarte Paredes[2], René Salgado Delgado[3]

[1]Instituto Tecnológico de Zacatepec, Ing. Química y Bioquímica, Mexico. [2]Instituto Tecnológico de Zacatepec, Metal-Macánica, Mexico. [3]Instituto Tecnológico de Zacatepec, Ing. Química y Bioquímica/División de Estudios de Posgrado e Investigación, Mexico.

■ **SB1-P041 ORGANOGELS FROM MONOAMIDE LOW MOLECULAR WEIGHT ORGANOGELATORS: PHASE DIAGRAMS CONSTRUCTION AND HYDROGEN-BONDING ELUCIDATION THROUGH VT-FTIR SPECTROSCOPY**

Samuel Zapién Castillo[1], Nancy Díaz[1], Philippe Mésini[2], Jose Luis Rivera Armenta[1], Jose Aarón Melo Banda[1]

[1]Instituto Tecnológico de Ciudad Madero, División de Estudios de Posgrado e Investigación, Mexico. [2]Université de Strasbourg, Institut Charles Sadron, France.

■ **SB1-P042 ANALYSIS OF CURING CYCLES IN THERMOSTABLE POLYMERS BY THERMAL AND MECHANICAL ANALYSIS**

Guillermo Israel Meza Mendoza[1,2], Dalia Holanda Chavez Garcia[1]

[1]CETYS Universidad, Ingeniería, Mexico. [2]Honeywell Aerspace, Materials, Mexico.

■ **SB1-P043 PREPARATION AND CHARACTERIZATION OF EPOXY VITRIMERS WITH METAL CATALYSTS**

Rodrigo Cunha[1], Marcio Nele[2], Marcos Lopes Dias[1]

[1]Universidade Federal do Rio de Janeiro, Institute of Macromolecules Professor Eloisa Mano, Brazil. [2]Universidade Federal do Rio de Janeiro, Chemical Engineering Program at COPPE, Brazil.

■ **SB1-P044 COMPARISON OF POLYMER NETWORKS AT DIFFERENT PRESSURES SYNTHESIZED BY FRP AND RAFT COPOLYMERIZATION PROCESSES IN SUPERCRITICAL CARBON DIOXIDE**

Patricia Perez Salinas[1], Eduardo Vivaldo Lima[1], Humberto Vázquez Torres[2], Alberto Rosas Aburto[1], Francisco López Serrano Ramos[1]

[1]Universidad Nacional Autónoma de México, Ingeniería Química, Mexico. [2]Universidad Autónoma Metropolitana, Departamento de Física, Mexico.

■ **SB1-P045 COMB-TYPE SYSTEM (NET-AAC)-G-4VP GRAFTED ONTO PP FILMS ITS COMPLEXES WITH COPPER (II) IONS IN ACIDIC AQUEOUS MEDIUM**

Luz Maria Lazo Jimenez[1], Guillermina Burillo Amezcua[2], Alejandro Solano Peralta[3], Fernando Ureña Nuñez[4], Rafael Basurto Sanchez[5]

[1]Instituto de Ciencias Físicas, UNAM, Química de Radiaciones y Radioquímica, Mexico. [2]Instituto de Ciencias Nucleares UNAM, Química de Radiaciones y Radioquímica, Mexico. [3]Facultad de Química, UNAM, Unidad de Servicios de Apoyo a la Investigación, USAI., Mexico. [4]Instituto Nacional de Investigaciones Nucleares (ININ), Depto. de Fisica, Mexico. [5]Instituto Nacional de Investigaciones Nucleares (ININ), Departamento de Química, Mexico.

■ **SB1-P046 PREPARATION AND CHARACTERIZATION BY SEM OF A POLYMERIC MEMBRANE USED IN PRECIOUS METALS SEPARATION**

María Elena Núñez Gaytán[1], Ana María Núñez Gaytán[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ingeniería Química, Mexico.

- **SB1-P047 SYNTHESIS AND CHARACTERIZATION OF NEW SULFONATED POLYNORBORNENE DICARBOXIMIDES FOR ION EXCHANGE MEMBRANES**

Isabel Ruiz[1], Karen Alicia Peñaloza[1], Alejandro Onchi[2], Arlette Arizbe Santiago[2], Mohamed Abatal[3], Joel Vargas[1]

[1]Universidad Nacional Autónoma de México, Instituto de Investigaciones en Materiales, Unidad Morelia, Mexico. [2]Universidad Nacional Autónoma de México, Escuela Nacional de Estudios Superiores, Unidad Morelia, Mexico. [3]Universidad Autónoma del Carmen, Facultad de Ingeniería, Mexico.

- **SB1-P048 MODIFICATION AND CHARACTERIZATION OF POLYSULFONE FILMS BY IONIZING RADIATION (GAMMA-RAYS) WITH ENHANCED HIDROPHILICITY**

Israel Fredy Sanchez Salinas[1], Javier Illescas[1], Claudia Rosario Muro Urista[1], Guillermina Burillo[2], Maria del Carmen Diaz Nava[1]

[1]Instituto Tecnológico de Toluca, Division de estudios de posgrado e investigacion, Mexico. [2]Instituto de Ciencias Nucleares UNAM, Química de Radiaciones y Radioquímica, Mexico.

- **SB1-P049 CHARACTERIZATION OF NOVEL POLYARAMIDES WITH CO_2 PLASTICIZATION RESISTANCE**

Rita del Rosario Sulub Sulub[1], Manuel Aguilar[1], María Ortencia González Díaz[2]

[1]Centro de Investigación Científica de Yucatán, Unidad de Materiales, Mexico. [2]CONACyT, Centro de Investigación Científica de Yucatán (CICY), Unidad de Materiales, Mexico.

- **SB1-P050 SYNTHESIS AND CHARACTERIZATION OF HIGHLY PERMEABLE POLYIMIDE MEMBRANES CONTAINING TERT-BUTYL GROUPS**

Rita del Rosario Sulub Sulub[1], María Isabel Loría Bastarrachea[1], Humberto Vázquez Torres[2], José Luis Santiago García[1], Manuel Aguilar[1]

[1]Centro de Investigación Científica de Yucatán, Unidad de Materiales, Mexico. [2]Universidad Autónoma Metropolitana, Departamento de Física, Mexico.

- **SB1-P051 ALTERNATIVE REMOVING OF THE PSP MARINE TOXIN BY THE ISO-X COPOLYMER MEMBRANES**

Wadi Sosa[1,2], Carlos Poot[3], David López[4], José Bustillos[4], Ramón Pali[5], José Zavala[5], Marcial Yam[5], Manuel Aguilar[6]

[1]Instituto Tecnológico Superior de Champotón, Campeche, Mexico. [2]Instituto Tecnológico Superior de Champotón, Campeche, Ingeniería Electromecánica, Mexico. [3]Instituto Tecnológico Superior de Champotón, Ingeniería Electromecánica, Mexico. [4]Centro de Investigaciones Biológicas del Noreste A.C. (CIBNOR), Investigaciones Biológicas, Mexico. [5]Universidad Internacional Iberoamericana, Posgrado, Mexico. [6]Centro de Investigación Científica de Yucatán, Materiales, Mexico.

- **SB1-P052 TRIBOLOGICAL AND MECHANICAL CHARACTERIZATION OF PMMA/HAp BULK NANOCOMPOSITE OBTAINED BY FREE-RADICAL POLYMERIZATION**

Virginia Campos Sanabria[1], María Teresa Hernández[1], Micael Gerardo Bravo Sánchez[2], J. Santos García[3], Luis Daniel Aguilera[3], Karla Judith Moreno Bello[3]

[1]Instituto Tecnológico de Celaya, Doctorado en Ciencias de la Ingenieria, Mexico. [2]Instituto Tecnológico de Celaya, Ingeniería Bioquímica, Mexico. [3]Instituto Tecnológico de Celaya, Ingeniería Mecánica, Mexico.

- **SB1-P053 IMPROVEMENT IN THE HEAT DISSIPATION OF SILICONE-BASED COMPOSITES FOR HIGH POWER APPLICATIONS**

Carlos Gomez Yanez[1], Fermin Pascual Espino Cortés[2], Teresa Retana Fernandez[1], Alexandre Michtchenko[3], Ernesto Marin Moares[4]

[1]Instituto Politécnico Nacional - IPN, Metallurgical and Materials Engineering, Mexico. [2]Instituto Politécnico Nacional - IPN, Electrical Engineering ESIME, Mexico. [3]Instituto Politécnico Nacional - IPN, Electrical Engineering, Mexico. [4]Instituto Politécnico Nacional - IPN, CICATA Legaria, Mexico.

- **SB1-P054 TRIBO-MECHANICAL BEHAVIOR OF HDPE/NATURAL FIBERS FILLER COMPOSITE MATERIALS**

José Francisco Louvier Hernández[1], Ernesto David García Bustos[2], Gabriela Mendoza Leal[1,3], Carolina Hernández Navarro[4], Jaime Navarrete Damián[5], Luis Alejandro Alcaraz Caracheo[6], Francisco Javier García Rodríguez[7]

[1]Instituto Tecnológico de Celaya, Departamento de Ingeniería Química, Mexico. [2]Universidad de Guadalajara, Centro Universitario de Ciencias Exactas e Ingenierías, Mexico. [3]Instituto Tecnológico de Celaya, Mexico. [4]Instituto Tecnológico de Celaya, Departamento de Ingeniería Mecánica, Mexico. [5]Centro Regional de Optimización y Desarrollo (CRODE) de Celaya, Área de Diseño y de Investigación, Mexico. [6]Instituto Tecnológico de Celaya, Departamento de Ingeniería Mecatrónica, Mexico. [7]Instituto Tecnológico de Celaya, Departamento de Ingeniería Industrial, Mexico.

- **SB1-P055 ON THE CHARACTERIZATION AND TRIBOLOGICAL BEHAVIOR OF PMMA COMPOSITE**

COATINGS WITH BCP NANOPARTICLES ON AISI 316L STAINLESS STEEL

María Teresa Hernández Sierra[1], Virginia Campos Sanabria[1], Carolina Hernández Navarro[1], Luis Daniel Aguilera[1], J. Santos García[1], Karla Judith Moreno Bello[1]

[1]Tecnológico Nacional de México/Instituto Tecnológico de Celaya, Departamento de Ingeniería Mecánica, Mexico.

- **SB1-P056 CHARACTERIZATION OF THERMAL PROPERTIES OF PVDF NANOFIBERS INCORPORATED WITH SILVER NANOPARTICLES BY PHOTOTHERMAL METHODS.**

Wilson Melgares Camacho[1], Eduardo San Martín Martinez[1], Alfredo Cruz Orea[2]

[1]Instituto Politécnico Nacional - IPN, CICATA Legaria, Mexico. [2]Cinvestav Zacatenco, Física, Mexico.

- **SB1-P057 DEVELOPMENT OF A NANOCOMPOSITE BASED ON EPOXY RESIN AND GRAPHENE OXIDE AND ITS APPLICATIONS AS A PROTECTIVE COATING**

Brenda Irais Orea Calderón[1,2], Jenaro Leocadio Varela Caselis[1], Juana Deysi Santamaría Juárez[2], Efraín Rubio Rosas[3]

[1]Benemerita Universidad Autonoma de Puebla, Centro Universitario de Vinculación y Transferencia de Tecnología, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniería Química, Mexico. [3]Benemerita Universidad Autonoma de Puebla, Centro de Vinculación y Transferencia de Tecnología, Mexico.

- **SB1-P058 PARTIAL DISCHARGE STUDY OF CROSS-LINKED POLYETHYLENE NANOCOMPOSITES - NEED OF FOLLOWING IEC 60270 STANDARD**

Ashish Paramane[1], Kannaiah Sathish Kumar[2], Haripada Bhunia[3], Prasenjit Basak[1]

[1]Thapar University, Electrical and Instrumentation Engineering Department, India. [2]Vellore Institute of Technology, Vellore, School of Electrical Engineering, India. [3]Thapar University, Chemical Engineering Department, India.

- **SB1-P059 REMOVAL OF BROMOPHENOL BLUE DYE FROM AQUEOUS SOLUTIONS THROUGH THE SYNTHESIS AND CHARACTERIZATION OF A POLYMER-CLAY COMPOSITE**

Gabriela Diana Remigio Reyes[1], Javier Illescas[1], Maria del Carmen Diaz Nava[1]

[1]Instituto Tecnológico de Toluca, Division de estudios de posgrado e investigacion, Mexico.

- **SB1-P060 OBTAINING AND CHARACTERIZATION OF AEROGELS BASED ON SILICA BY SOL-GEL PROCESS USING NTC/CB/PPy**

René Salgado Delgado[1], Alfredo Olarte Paredes[2], Areli Marlen Salgado Delgado[3], Juan Carlos Ochoa Jaimes[4], Zully Vargas Galarza[1], Edgar García Hernández[1]

[1]Instituto Tecnológico de Zacatepec, Ing. Química y Bioquímica/ División de Estudios de Posgrado e Investigación, Mexico. [2]Instituto Tecnológico de Zacatepec, Departamento de metal-mecanica/div. De estudios de posgrado e inv., Mexico. [3]Instituto Tecnológico de Zacatepec, ING. QUIMICA Y BIOQUÍMICA, Mexico. [4]Instituto Tecnológico de Zacatepec, Div. de estudios de posgrado e invesyt-igación, Mexico.

- **SB1-P061 EFFECT OF THE APPLICATION OF A FILM OF 3-GLYCIDOXYPROPYL TRIMETHOXYSILANE IN A NANOCOMPOSITE COATING**

Jenaro Leocadio Varela Caselis[1], Juana Deisy Santamaría Juárez[2], José Alberto Galicia Aguilar[2], Efraín Rubio Rosas[1,3]

[1]Benemerita Universidad Autonoma de Puebla, Centro Universitario de Vinculación y Transferencia de Tecnología, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniería Química, Mexico. [3]Benemerita Universidad Autonoma de Puebla, Mexico.

- **SB1-P062 LANGMUIR-BLODGETT FILMS OF AN ORGANIC CONDUCTIVE MOIETY OF INDACENE DERIVATIVE**

Violeta Alvarez Venicio[1], Jose Alfonso Hernández Rojas[1], Rafael Antonio Medina Flores[1], Rafael Arcos Ramos[1], Jaime Octavio Guerra Pulido[2], Víctor Velázquez[3], Margarita Rivera[4], María del Pilar Carreón Castro[5]

[1]Universidad Nacional Autónoma de México, Química de Radiaciones y Radioquímica, Instituto de Ciencias Nucleares, Mexico. [2]Universidad Nacional Autónoma de México, Departamento de Ingeniería Electrónica, División de Ingeniería Eléctrica, Facultad de Ingeniería, Mexico. [3]Universidad Nacional Autónoma de México, Departamento de Física, Facultad de Ciencias, Mexico. [4]Universidad Nacional Autónoma de México, Fisica, Mexico. [5]Universidad Nacional Autónoma de México, Departamento de Química de Radiaciones y Radioquímica, Instituto de Ciencias Nucleares, Mexico.

- **SB1-P063 DEVELOPMENT OF DUMBBELL-LIKE BTD-BASED DERIVATIVES AS BUILDING BLOCKS TO ENGINEER ORGANIC SEMICONDUCTING MATERIALS**

Rafael Arcos Ramos[1], Rosalba Montserrat Miranda Olvera[1], Violeta Alvarez Venicio[1], Luz

María Janine Flores Romero[1], María del Pilar Carreón Castro[1], Víctor Velázquez[2]
[1]Instituto de Ciencias Nucleares UNAM, Química de Radiaciones y Radioquímica, Mexico. [2]Facultad de Ciencias, UNAM, Física, Mexico.

- **SB1-P064 PYRENE-LABELED DENDRIMERS FUNCTIONALIZED WITH FULLERENE C_{60} OR PORPHYRIN CORE AS LIGHT HARVESTING ANTENNAS.**

Yoliztli Bañales[1], Mireille Vonlanthen[1], Ernesto Rivera García[1]
[1]Instituto de Investigaciones en Materiales, Rheology and mechanics of materials, Mexico.

- **SB1-P065 A SOLUBLE AND CONCDUCTIVE POLYANILINE COPOLYMER HAVING SYNERGISTIC NIR LIGHT ABSORPTION AND LOWER CRITICAL TEMPERATURE (LCST)**

Silvestre Bongiovanni Abel[1], Maria Alejandra Molina[1], Claudia R. Rivarola[1], Cesar Alfredo Barbero[1]
[1]Instituto de Investigaciones en Tecnologias Energeticas y Materiales Avanzados (UNRC-CONICET), Chemistry, Argentina.

- **SB1-P066 EXPERIMENTAL AND COMPUTATIONAL STUDY OF CONDUCTIVITY OF MULTILAYER GRAPHENE IN POLYPROPYLENE NANOCOMPOSITES**

Roxana Mitzayé del Castillo Vázquez[1], Luis Felipe del Castillo[2], Alipio Calles Martinez[1], Vicente Compañ[3]
[1]Facultad de Ciencias, UNAM, Departamento de Física, Mexico. [2]Instituto de Investigaciones en Materiales, Polímeros, Mexico. [3]Universidad Politécnica de Valencia, Departamento de Termodinámica Aplicada. Escuela Técnica Superior de Ingenieros Industriales (ETSII), Spain.

- **SB1-P067 SYNTHESIS AND SEMICONDUCTOR BEHAVIOR OF N,2,5-TRISUBSTITUTED PYRROLES**

Lioudmila Fomina[1], Olivia Monroy[1], María Elena Sánchez Vergara[2], Ruben Gaviño[3], Alonso Acosta[1], Roberto Salcedo[1]
[1]Universidad Nacional Autónoma de México, Polímeros, Mexico. [2]Universidad Anáhuac México Norte, Centro de Alta Dirección en Ingeniería y Tecnología, Mexico. [3]Universidad Nacional Autónoma de México, Laboratorio 1 de RMN, Mexico.

- **SB1-P068 DONOR-ACCEPTOR COPOLYMERS BASED IN DIKETOPYRROLOPYRROLE AND FLUORENE BY DIRECT ARYLATION POLYMERIZATION FOR ORGANIC PHOTOVOLTAICS**

Patricia García Ramírez[1], Marisol Güizado Rodríguez[1], Victor Barba[2], Jose-Luis Maldonado[3]
[1]Universidad Autónoma del Estado de Morelos, Centro de Investigación en Ingeniería y Ciencias Aplicadas, Mexico. [2]Universidad Autónoma del Estado de Morelos, Centro de Investigaciones Químicas, Mexico. [3]Centro de Investigaciones en Optica, Grupo de Propiedades Ópticas de la Materia, Mexico.

- **SB1-P069 SYNTHESIS OF DONOR-ACCEPTOR COPOLYMERS DERIVED OF DIHEXYLTHIOPHENE AND DIKETOPYRROLOPYRROLE BY ARYLATION DIRECT FOR ORGANIC SOLAR CELLS**

José Elías Guzmán López[1], Patricia García Ramírez[1], Marisol Güizado Rodríguez[1], Victor Barba[2], Jose-Luis Maldonado[3]
[1]Universidad Autónoma del Estado de Morelos, Centro de Investigación en Ingeniería y Ciencias Aplicadas, Mexico. [2]Universidad Autónoma del Estado de Morelos, Centro de Investigaciones Químicas, Mexico. [3]Centro de Investigaciones en Optica, Grupo de Propiedades Ópticas de la Materia, Mexico.

- **SB1-P070 EFFECTS PRODUCED BY SDS SURFACTANT ON A POLYPYRROLE FILM SYNTHESIZED ELECTROCHEMICALLY AND DOPED WITH GLOW DISCHARGE PLASMA**

Teresa Hernández de la Cruz[1], Celso Hernandez Tenorio[1], Miguel Villanueva Castañeda[1], Hilda Moreno Saavedra[1], Juan Horacio Pacheco Sánchez[1]
[1]Instituto Tecnológico de Toluca, División de estudios de posgrado e investigación, Mexico.

- **SB1-P071 ELECTROCHEMICAL SYNTHESIS OF POLYPYRROLE FILMS DOPED WITH IODINE BY LUMINESCENT DISCHARGE PLASMA**

Celso Hernandez Tenorio[1], Miguel Villanueva Castañeda[1], Juan Nabor Balderas Gutiérrez[1], Hilda Moreno Saavedra[1], Juan Horacio Pacheco Sánchez[1]
[1]Instituto Tecnológico de Toluca, División de estudios de posgrado e Investigación, Mexico.

- **SB1-P072 CHLOROPHYLL-SENSITIZED PHENOLIC RESINS FOR PHOTOCATALYTIC DECOLORIZATION OF METHYLENE BLUE UNDER VISIBLE LED IRRADIATION: SYNTHESIS, CHARACTERIZATION AND MECHANISMS**

Daniel Simon Olivo Alanis[1], Elva Melisa Castellanos Escamilla[1], Refugio Bernardo Garcia Reyes[1], Alcione Garcia Gonzalez[1], Felipe de Jesús Cerino Córdova[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico.

- **SB1-P073 ELECTROCHEMICAL CHARACTERIZATION OF POLYPIRROLE-GRAPHENE OXIDE HYBRID MATERIAL AND IT´S POTENTIAL APPLICATION AS NO-ENZYMATIC ELECTROCHEMICAL DETECTOR.**

Abdon Ortiz Flores[1], Selene Sepulveda[1], Luis Ernesto Jasso Ramos[1], Juan Manriquez[2]

[1]Universidad Autónoma de Nuevo León, Materiales, Mexico. [2]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Materiales, Mexico.

- **SB1-P074 A NOVEL METHOD FOR SYNTHESIS OF POLYPYRROLE/ALGINATE/CARBON NANOTUBE COMPOSITES USING GREEN CHEMISTRY**

Reina Vianey Quevedo Robles[1], Teresa del Castillo Castro[1]

[1]Universidad de Sonora, Departamento de investigación en polímeros y materiales, Mexico.

- **SB1-P075 ENHANCEMENT OF ELECTRICAL CONDUCTIVITY AND MICROSTRUCTURAL ANALYSIS OF HYBRID POLYMER NANOCOMPOSITES BASED ON POLYPROPYLENE, CARBON NANOTUBES AND CARBON NANOFIBERS**

Claudia Angélica Ramírez Herrera[1], José Pérez González[2], Omar Solorza Feria[3], Hugo Martínez Gutiérrez[4], Abelardo Flores[5], Jose Gerardo Cabañas Moreno[1]

[1]Cinvestav Zacatenco, Nanociencias y Nanotecnología, Mexico. [2]Escuela Superior de Física y Matemáticas IPN, Física, Mexico. [3]Cinvestav Zacatenco, Química, Mexico. [4]Centro de Nanociencias y micro y Nanotecnologías del IPN, HR-SEM, Mexico. [5]Instituto Politécnico Nacional - IPN, Centro Mexicano para la Producción más Limpia, Mexico.

- **SB1-P076 BIS-PORPHYRINIC TWEEZERS FOR THE MOLECULAR RECOGNITION OF BIDENTATE BASES OF VARIOUS SIZES: TOWARDS THE PURIFICATION OF POLLUTED EFFLUENTS.**

Regis Rein[1], Nathalie Solladie[1]

[1]CNRS-Laboratoire de Chimie de Coordination, Groupe de Synthèse de Systèmes Porphyriniques, France.

- **SB1-P077 SYNTHESIS CHEMICAL AND OPTICAL CHARACTERIZATION OF A FLUOROPHORE DERIVATIVE OF 8-HIDROXIVINILQUINOLINA**

Alma Victoria Sanchez Mendoza[1], Rosa Angeles Vazquez Garcia[1], Karina Aleman Ayala[2], Ivana Moggio[3], Eduardo Arias Marín[3], Huberto Valenzuela Soto[4]

[1]Universidad Autónoma del Estado de Hidalgo, Ciencias de la Tierra y Materiales, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Computacion y Electronica, Mexico. [3]Centro de Investigación en Química Aplicada - CIQA , Materiales Avanzados, Mexico. [4]Centro de Investigación en Química Aplicada - CIQA , Plasticos en la Agricultura, Mexico.

- **SB1-P078 EVALUATION PARAMETERS IN ARTIFICIAL MUSCLES,FOR MICROROBOTICS APPLICATIONS**

Laura Luz Valero[1,2], Toribio Fernández Otero[2], Javier Salas García[3], Lerma Chan Chan[4]

[1]Universidad Autónoma del Estado de México, Electrónica, Mexico. [2]Universidad Politécnica de cartagena, Centro de Electroquímica y Materiales Inteligentes, Spain. [3]Universidad Autónoma del Estado de México, Facultad de Ingeniería Departamento de Investigación, Mexico. [4]Universidad de Sonora, Departamento de Física, Mexico.

- **SB1-P079 EATON'S REAGENT IN POLYBENZIMIDAZOLE SYNTHESIS: THE INFLUENCE OF TEMPERATURE & MICROWAVE IRRADIATION**

Larissa Alexandrova[1], Jessica Olvera Mancilla[2], Joaquín Palacios Alquisira[1]

[1]Universidad Nacional Autónoma de México, Instituto de Investigaciones en Materiales, Mexico. [2]Universidad Nacional Autónoma de México, aLaboratorio de Fisicoquímica Macromolecular, Mexico.

- **SB1-P080 SYNTHESIS AND CHARACTERIZATION OF NEW POLY(OXINDOLARYLENE)S**

Enoc Cetina Mancilla[1], María Ortencia González Díaz[2], Mikhail Zolotukhin[1]

[1]Universidad Nacional Autónoma de México, Instituto de Investigaciones en Materiales, Mexico. [2]Centro de Investigación Científica de Yucatán, Materiales Avanzados, Mexico.

- **SB1-P081 POLYGLYCEROL MODIFIED WITH GLYCINE FOR THE SYNTHESIS OF CATIONIC POLYMERS**

Luis Carlos Fonseca Herreño[1,2], Juan David Monroy Avila[1,2], Viatcheslav Kafarov[1], Andrea Juliana Garzón Sanabria[1], Gustavo Emilio Ramírez Caballero[2]

[1]Universidad Industrial de Santander, Centro de Investigación para el Desarrollo Sostenible en Industria y Energía (CIDES), Colombia. [2]Universidad Industrial de Santander, Grupo de Investigación en Polímeros, Colombia.

- **SB1-P082 SYNTHESIS AND CHARACTERIZATION OF POLYMER POLOXAMER F-407 FUNCTIONALIZED**

WITH TRIPROPYL AND TRIHEPTYL CITRATES THROUGH WILLIAMSON ETHER SYNTHESIS

Jose Eduardo Hernandez Torres[1], Ernesto Rivera Becerril[2], Gerardo Perez Hernandez[2]

[1]Universidad Autónoma Metropolitana, Posgrado en Ciencias Naturales e Ingenieria, Mexico. [2]Universidad Autónoma Metropolitana, Ciencias Naturales e Ingenieria, Mexico.

- **SB1-P083 EFFECT OF THE CHEMICAL STRUCTURE ON THE THERMAL PROPERTIES OF AROMATIC POLYIMIDES AND POLYESTERIMIDES**

Rosa Estela Lazo Jimenez[1], Larissa Alexandrova[2], Dimitry Likhatchev[2], José Chávez[3], Valentin Islas[4], Luz María Lazo[3], Carlos Flores[3], Marc J. Abadie[5]

[1]Instituto de Ciencias Nucleares UNAM, Química de Radiaciones, Mexico. [2]Instituto de Investigaciones en Materiales, Polímeros, Mexico. [3]Instituto de Investigaciones en Materiales, Materiales, Mexico. [4]Universidad Nacional Autónoma de México, FES-Zaragoza, Mexico. [5]Université Montpellier 2, Science-Tecnology, France.

- **SB1-P084 CATIONIC POLYGLYCEROL ASSISTED BY MICROWAVE IRRADIATION**

Juan David Monroy Avila[1,2], Luis Carlos Fonseca Herreño[1,2], Viatcheslav Kafarov[1], Andrea Juliana Garzón Sanabria[1], Gustavo Emilio Ramírez Caballero[2]

[1]Universidad Industrial de Santander, Centro de Investigación para el Desarrollo Sostenible en Industria y Energía (CIDES), Colombia. [2]Universidad Industrial de Santander, Grupo de Investigación en Polímeros, Colombia.

- **SB1-P085 POLYMERS CONTAINING PHENOLIC GROUPS IN THE MAIN CHAIN FROM SUPERACID-CATALIZED STEP-GROWTH POLYMERIZATION OF KETONES WITH BIPHENOLS**

Lilian Irais Olvera Garza[1], Mikhail Zolotukhin[2]

[1]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Procesos industriales y Recubrimientos, Mexico. [2]Instituto de Investigaciones en Materiales, Polímeros, Mexico.

- **SB1-P086 POLYBENZIMIDAZOLES SYNTHESIS IN EATON REAGENT UNDER DIFFERENT TEMPERATURES AND MICROWAVE IRRADIATION**

Jessica Olvera Mancilla[1], Joaquín Palacios Alquisira[1], Larissa Alexandrova[2]

[1]Facultad de Química, UNAM, Fisicoquímica, Mexico. [2]Instituto de Investigaciones en Materiales, Polímeros, Mexico.

- **SB1-P087 SYNTHESIS AND CHARACTERIZATION OF NEW POLYNORBORNENE DICARBOXIMIDES BEARING AROMATIC PENDANT GROUPS**

Karen Alicia Peñaloza[1], Isabel Ruiz[1], Arlette Arizbe Santiago[2], Carlos Alonso Rangel[3], Joel Vargas[1], Mercedes Gabriela Téllez Arias[3]

[1]Universidad Nacional Autónoma de México, Instituto de Investigaciones en Materiales, Unidad Morelia, Mexico. [2]Universidad Nacional Autónoma de México, Escuela Nacional de Estudios Superiores, Unidad Morelia, Mexico. [3]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ingeniería Química, Mexico.

- **SB1-P088 SYNTHESIS OF POLY(AMINO ACIDS) BASED ON L-CYSTEINE BY CARBODIIMIDE BIOCONJUGATIO**

Han Noé Umaña Kossio[1], María del Carmen Ley Flores[1], Marco Vizcarra[2], Armando Lucero Acuña[1,2], Paul Zavala Rivera[1,2]

[1]Universidad de Sonora, Chemical and Metallurgical Engineering Department, Mexico. [2]Universidad de Sonora, Posgrado en Nanotecnología, Mexico.

- **SB1-P089 SYNTHESIS AND CHARACTERIZATION OF POLY (STYRENE-CO-ACRYLONITRILE) NANOFIBERS FOR POTENTIAL DEVELOPMENT OF ARTIFICIAL MUSCLES**

Rubén Caro Briones[1], Monica Corea[1], Hugo Martinez Gutiérrez[2]

[1]Instituto Politécnico Nacional - IPN - ESIQIE, Polímeros, Mexico. [2]Centro de Nanociencias y micro y Nanotecnologías del IPN, Centro de Nanociencias y Micro y Nanotecnologías, Mexico.

- **SB1-P090 CONTINUOUS POLYMERIZATION PROCESS AT LABORATORY SCALE. PLANT LAYOUT AND REACTION KINETICS MONITORING BY RAMAN SPECTROMETRY**

Jose Ramiro Infante Martinez[1], Enrique Saldívar Guerra[1], Ricardo López González[1], Ramón Diaz León[1], Luis Rodríguez Guadarrama[2]

[1]Centro de Investigación en Química Aplicada - CIQA , Procesos de polimerización, Mexico. [2]REPSOL, Desarrollo de Procesos, Spain.

- **SB1-P091 EMULSION POLYMERIZATION EMPLOYING EUTECTIC LIQUIDS**

Itzel Alejandra Quintanar Arellano[1], Jorge Herrera Ordóñez[1], Josue David Mota Morales[1], Juan Francisco Pérez Robles[2]

[1]Universidad Nacional Autónoma de México, Centro de Fisica Aplicada y Tecnologia Avanzada, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Unidad Querétaro, Mexico.

- **SB1-P092 EFFECT OF THE CONCENTRATION OF 2-ETHYL HEXYL METHACRYLATE ON THE**

COPOLYMERIZATION WITH STYRENE BY THE FREE RADICAL EMULSION POLYMERIZATION PROCESS

Mariana Guadalupe Cacho Aldaco[1], María de Jesús Palacios[1], Rosaura Hernández[2], Lourdes Adriana Pérez Carrillo[3], Martín Rabelero[3], Abraham Gabriel Alvarado Mendoza[4]

[1]Universidad de Guadalajara, Química, Mexico. [2]Universidad de Guadalajara, Electrónica, Mexico. [3]Universidad de Guadalajara, Ingeniería Química, Mexico. [4]Universidad de Guadalajara, Ingeniería Mecánica Eléctrica, Mexico.

- **SB1-P093 CORE/SHELL POLYMERS OF POLY (BUTYL ACRYLATE)/POLYSTYRENE OBTAINED BY NANOEMULSION POLYMERIZATION**

Daniel Puentes Camacho[1], Rosaura Hernández[2], Abraham Gabriel Alvarado Mendoza[3], Lourdes Adriana Pérez Carrillo[1], Norma Ramírez Hernández[2], Juan Humberto Pérez López[1], Martín Rabelero[1]

[1]Universidad de Guadalajara, Ingeniería Química, Mexico. [2]Universidad de Guadalajara, Electrónica, Mexico. [3]Universidad de Guadalajara, Ingeniería Mecánica Eléctrica, Mexico.

- **SB1-P094 ACCELERATED DEGRADATION OF POLYPROPYLENE ON ELECTRODEPOSITION TREATMENTS**

Eugenia Josefina Aldeco Perez[1], Lilian Olvera Garza[2], Liliana España Sanchez[1], Jose Antonio Avila Nino[1]

[1]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Subdirección de Procesos Industriales y Recubrimientos, Mexico. [2]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Subdirección Procesos Industriales y Recubrimientos, Mexico.

- **SB1-P095 FORMATION OF PHYSICAL GELS BY ARRESTED SPINODAL DECOMPOSITION IN CHARGED COLLOIDS**

Alonso Gomez Canales[1], Jose Manuel Olais Govea[1], Magdaleno Medina Noyola[2]

[1]Instituto Tecnológico y de Estudios Superiores de Monterey, Escuela de Ingenieria y Ciencias, Mexico. [2]Universidad Autónoma de San Luis Potosí, Departamento de Física, Mexico.

- **SB1-P096 SOLUTION RHEOLOGY OF A TRIBLOCK AMPHIPHILIC COPOLYMER**

Ervin Daniel Ordaz Rodriguez[1], Valeria Jordana Gonzalez Coronel[1], Nancy Tepale[1], Frida Karem Rivas Moreno[1], Jesus Guillermo Soriano Moro[2]

[1]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniería Química, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Instituto de Ciencias, Mexico.

- **SB1-P097 EFFECTS AND APPLICATIONS OF ULTRASONIC STRESS ON POLYSTYRENE WASTE**

Arturo López Pérez[1,2], Gerardo Cedillo Valverde[1], Salvador López Morales[1], Miguel Ángel Canseco[1], Manuel García Hipólito[3], Hermilo Zarco Garcia[4]

[1]Instituto de Investigaciones en Materiales, Polímeros, Mexico. [2]Universidad Nacional Autónoma de México, Facultad De Estudios Superiores Cuautitlán, Mexico. [3]Instituto de Investigaciones en Materiales, Materiales Metálicos Y Cerámicos, Mexico. [4]Instituto de Investigaciones en Materiales, Materia Condensada Y Criogenia, Mexico.

- **SB1-P098 LINEAR VISCOELASTICITY ON ATTRACTIVE SYSTEMS: ARRESTED SPINODAL DECOMPOSITION.**

Leticia Lopez Flores[1], José Manuel Olais Govea[1,2], Martín Chavéz Páez[1], Magdaleno Medina Noyola[1]

[1]Universidad Autónoma de San Luis Potosí, Instituto de Fisica, Mexico. [2]Tecnológico de Monterrey, Escuela de Ingeniería y Ciencias, Mexico.

- **SB1-P099 FOLLOWING THE BEHAVIOR OF THE LINEAR VISCOELASTICITY ON ARRESTED SPINODAL DECOMPOSITION**

Leticia Lopez Flores[1], José Manuel Olais Govea[1,2], Martín Chavéz Páez[1], Magdaleno Medina Noyola[1]

[1]Universidad Autónoma de San Luis Potosí, Instituto de Fisica, Mexico. [2]Tecnológico de Monterrey, Escuela de Ingeniería y Ciencias, Mexico.

- **SB1-P100 MOLECULAR DYNAMICS SIMULATIONS OF THE PHASE COEXISTENCE IN CONFINED BINARY MIXTURES OF POLYMERS AND COLLOIDS.**

Héctor Pérez[1], Susana Figueroa Gerstenmaier[2], Gerardo Odriozola[1]

[1]Universidad Autónoma Metropolitana, Área de Física de Procesos Irreversibles, División de Ciencias Básicas e Ingeniería, Mexico. [2]Universidad de Guanajuato, Departamento de Ingenierías Química, Electrónica y Biomédica, División de Ciencias e Ingenierías, Mexico.

- **SB1-P101 THERMODYNAMIC STUDY OF THE INFLUENCE OF CARBOXILIC AND AMINO GROUP IN HIGHLY FUNCTIONALIZED POLYMERS**

Lazaro Ruiz Virgen[1], Jose Manuel del Rio García[1], Monica Corea[2], Ruber Caro Briones[1]

[1]Instituto Politécnico Nacional - IPN - ESIQIE, ESIQIE, Mexico. [2]Instituto Politecnico Nacional, IPN - SEPI-ESIME-Zacatenco, ESIQIE, Mexico.

- **SB1-P102 CTAB AS COMPATIBILIZER IN COMPOSITES SILICONE RUBBER- $BaTiO_3$ FOR OUTDORR HIGH-VOLTAGE APPLICATIONS**

Brenda Edith García Caudillo[1]
[1]Instituto Politécnico Nacional - IPN - ESIQIE, Mexico.

WEDNESDAY, AUGUST 22
ROOM: ACAPULCO

▸ **09:45 - 10:15 SB1-O030 Invited Talk TERNARY POLYMER COMPOSITES EXHIBITING BULK AND SURFACE QUADRUPLE SHAPE MEMORY BEHAVIOR**
Patrick Mather[1], Shelby Buffington[2]
[1]Bucknell University, Chemical Engineering, United States. [2]Syracuse University, Biomedical and Chemical Engineering, United States.

■ **10:15 - 10:30 SB1-O031 MWCNTs-POLYMER COMPOSITES CHARACTERIZATION THROUGH SPECTROSCOPIES: FTIR AND RAMAN**
Francisco Gabriel Granados Martínez[1], José de Jesús Contreras Navarrete[1], Jael Madaí Ambriz Torres[1], Carmen Judith Gutiérrez García[1], Diana Litzajaya Garcia Ruiz[1], Jaime Abraham Guzmán Fuentes[1], María Remedios Cisneros Magaña[2], Leandro García González[3], Luis Zamora Peredo[3], Lada Domratcheva Lvova[1,4]
[1]Universidad Michoacana de San Nicolás de Hidalgo, Mechanical Engineering, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Materials and Metallurgy Investigation Institute, Mexico. [3]Universidad Veracruzana, Centro de Investigación en Micro y Nanotecnología, Mexico. [4]Universidad Michoacana de San Nicolás de Hidalgo, Wood Technology Engineering, Mexico.

■ **10:30 - 10:45 SB1-O032 SYNTHESIS AND CHARACTERIZATION OF CLAY-POLYMER COMPOSITES AND THEIR APPLICATION FOR THE REMOVAL OF ORGANIC COMPOUNDS FROM AQUEOUS SOLUTIONS**
Javier Illescas[1], Maria del Carmen Diaz Nava[1], Claudia Rosario Muro[1], Rosa Elena Ortega Aguilar[1]
[1]Instituto Tecnológico de Toluca, División de Estudios de Posgrado e Investigación, Mexico.

■ **10:45 - 11:00 SB1-O033 THERMALLY-TRIGGERED ACTUATORS BASED ON OLIGO(ω-PENTADECALACTONE) HYBRID NANOCOMPOSITES**
Muhammad Yasar Razzaq[1], Marc Behl[2], Andreas Lendlein[3,4]
[1]Helmholtz Zentrum Geesthacht, Institute of Biomaterial Science, Department of Active Polymers, Germany. [2]Helmholtz Zentrum Geesthacht, Institute of Biomaterial Science, Department of Active Poylmers, Germany. [3]Helmholtz Zentrum Geesthacht, Institute of Biomaterial Science, Germany. [4]University of Potsdam, Institute of Chemistry, Germany.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY IV NOBEL PRIZE IN CHEMISTRY 2016
PROF. BEN L. FERINGA

Session: Shape Memory Polymers

SESSION CHAIR: DAVID MORALES-MORALES

▸ **12:30 - 13:00 SB1-O034 Invited Talk RE-PROGRAMMABLE SHAPE-MEMORY POLYMER ACTUATORS**
Andreas Lendlein[1,2]
[1]Helmholtz Zentrum Geesthacht, Institute of Biomaterial Science and Berlin-Brandenburg Centre for Regenerative Therapies, Germany. [2]University of Potsdam, Institute of Chemistry, Germany.

■ **13:00 - 13:15 SB1-O035 IMPLEMENTING AND QUANTIFYING THE SHAPE-MEMORY EFFECT OF SINGLE POLYMERIC MICRO/NANOWIRES WITH AN ATOMIC FORCE MICROSCOPE**
Oliver Gould[1], Liudmila Lysyakova[1], Karl Kratz[1], Andreas Lendlein[1,2]
[1]Helmholtz Zentrum Geesthacht, Institute for Biomaterials Science, Germany. [2]University of Potsdam, Institute of Chemistry, Germany.

■ **13:15 - 13:30 SB1-O036 MULTILEVEL TOPOGRAPHICAL CHANGES OF POLYMERIC SURFACES CONTROL THEIR AEROPHOBIC BEHAVIOR**
Yi Jiang[1], Mansfeld Ulrich[1], Karl Kratz[1], Andreas Lendlein[1]
[1]Helmholtz Zentrum Geesthacht, Institute of Biomaterial Science, Germany.

■ **13:30 - 13:45 SB1-O037 NONCONTINUOUSLY RESPONDING POLYMERIC ACTUATORS**
Muhammad Farhan[1,2], Tobias Rudolph[1], Ulrich Nöchel[1], Wan Yan[1,2], Karl Kratz[1], Andreas Lendlein[1,2]
[1]Institute of Biomaterial Science, Germany. [2]University of Potsdam, Institute of Chemistry, Germany.

14:00 – 16:00 Lunch time

Symposium B2

MICRO AND NANOSCALE BIOMATERIALS

Ming Su / Northeastern University
Mildred Quintana / Universidad Autónoma de San Luis Potosí
Jingjiao Guan / Florida State University
Xiaogang Liu / National University of Singapore

MONDAY, AUGUST 20
ROOM: VALLARTA

Session: B2

SESSION CHAIR: MING SU

■ **08:00 - 08:15 SB2-O001 OPTIMIZATION OF NANOFILTRATION USING ARTIFICIAL NEURAL NETWORKS**

Belkis Sulbaran[1], Kelly Joel Gurubel Tun[2], Abigail Eloisa Madrigal Olvera[2], Virgilio Zuñiga Grajeda[3]

[1]Universidad de Guadalajara, Departamento de Estudios de Agua y Energía, Mexico. [2]Universidad de Guadalajara, Departamento de Estudios del Agua y la Energía, Mexico. [3]Universidad de Guadalajara, Departamento de Ciencias de la Información y Desarrollos Tecnológicos, Mexico.

■ **08:15 - 08:30 SB2-O002 NANOPARTICLES FOR BIOMEDICAL APPLICATIONS**

Dalia Holanda Chavez Garcia[1,2], Karla Oyuky Juarez Moreno[3], Gustavo Alonso Hirata[2]

[1]CETYS Universidad, Engineering, Mexico. [2]Universidad Nacional Autónoma de México, Fisico-quimica de materiales, Mexico. [3]Universidad Nacional Autónoma de México, Bionanotecnologia, Mexico.

■ **08:30 - 08:45 SB2-O003 MULTINEEDLE ELECTROSSPINNIG OF PCL-BIOGLASS** / CHITOSAN ZnO TO BIOMEDICAL PURPOUSES.

Gethzemani Estrada[1], Ana Arizmendi[2]

[1]Centro de Investigación en Química Aplicada - CIQA , Materiales Avanzados, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., Nanotecnología, Mexico.

■ **08:45 - 09:00 SB2-O004 HIGHLY-STABLE SOFTENING SPINAL CORD STIMULATION ARRAY**

Adriana Carolina Duran Martinez[1], Alexandra Joshi Imre[2], Aldo Garcia Sandoval[3], Stuart Cogan[3], Walter Voit[4]

[1]University of Texas at Dallas, Bioengineering, United States. [2]University of Texas at Dallas, Engineering Innovation, United States. [3]The University of Texas at Dallas, Bioengineering, United States. [4]The University of Texas at Dallas, Materials Science and Engineering, United States.

▸ **09:00 - 09:30 SB2-O005 Invited Talk TWO DECADES OF COMMERCIALIZING NANOMEDICINE TO HELP HUMAN HEALTH, THE FUTURE IS NOW**

Thomas Webster[1]

[1]Northeastern University, Chemical Engineering, United States.

■ **09:30 - 09:45 SB2-O006 MICROSTRUCTURAL CHARACTERIZATION OF HYDROXYAPATITE NANOFIBERS BY HIGH RESOLUTION TRANSMISSION ELECTRON MICROSCOPY**

Nestor Efren Mendez Lozano[1], Rodrigo Velazquez Castillo[2], Miguel Apatiga Castro[3], Eric Rivera Muñoz[3], Beatriz Millan Malo[3]

[1]Universidad del Valle de México A.C., Ingenieria, Mexico. [2]Universidad Autónoma de Querétaro, Facultad de Ingeniería,

Mexico. [3]Universidad Nacional Autónoma de México, Centro de Fisica Aplicada y Tecnologia Avanzada, Mexico.

- **09:45 - 10:00 SB2-O007 EFFECT OF POLYSACCHARIDE CHARGE ON FORMATION AND PROPERTIES OF NANOPARTICLES PREPARED BY ELECTROSTATIC INTERACTION BETWEEN CHITOSAN-POLYANIONS OF PECTIN AND HYALURONIC ACID**

  Paula A. Mendez[1], Betty L. López[2]

  [1]Universidad Nacional Abierta y a Distancia (UNAD), Escuela de Ciencias Básicas Tecnología e Ingeniería, Colombia. [2]Universidad de Antioquía, Instituto de Química, Facultad de Ciencias Exactas y Naturales, Colombia.

- **10:00 - 10:15 SB2-O008 EFFECT OF PH-SENSITIVE POLYMERS ON THE LCST OF SR-g-NVCL SYNTHESIZED BY GRAFTING-RADIATION METHOD**

  Victor Hugo Pino Ramos[1], Gerardo Cedillo[2], Emilio Bucio[3]

  [1]Instituto de Ciencias Nucleares UNAM, Polymers, Mexico. [2]Instituto de Ciencias Nucleares UNAM, Chemistry, Mexico. [3]Instituto de Ciencias Nucleares UNAM, Chemistry radiation, Mexico.

- **10:15 - 10:30 SB2-O009 A CHEMICAL ANALYSIS OF CHITOSAN NANOPARTICLES PREPARED BY TWO DIFFERENT METHODS AND THEIR BEHAVIOR DURING THEIR ENZYMATIC DEGRADATION**

  Paula A. Mendez[1], Carlos A. López[1], Betty L. López[1], Yuliana Monsalve[1]

  [1]Universidad de Antioquía, Facultad de Ciencias Exactas y Naturales, Colombia.

- **10:30 - 10:45 SB2-O010 RECREATION OF THE WATER ADSORPTION PROCESS IN SEEDS OF SOLUANUM LYCOPERSICUM L. (TOMATO) BY MONTE CARLO SIMULATION**

  Iván-David Buitrago Torres[1], Javier Torres Osorio[2], Elisabeth Restrepo Parra[1]

  [1]Universidad Nacional de Colombia, Departamento de Física y Química, Colombia. [2]Universidad de Caldas, Departamento de Física, Colombia.

- **10:45 - 11:00 SB2-O011 EFFECT OF THE CRYSTAL SIZE ON THE X-RAY DIFFRACTION OF BIO-HYDROXYAPATITE**

  Mario Enrique Rodríguez García[1], Rodrigo Jeronimo Cruz[2], Batriz Marcela Millán Malo[1], Eric M. Rivera Muñoz[1], Sandra Milena Londoño Restrepo[1]

  [1]Universidad Nacional Autónoma de México, Nanotecnología, Mexico. [2]Universidad Nacional Autónoma de México, Licenciatura en Tecnología, Mexico.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY II
PROF. YUICHI IKUHARA

Session: B2

SESSION CHAIR: MILDRED QUINTANA

- **12:30 - 12:45 SB2-O012 X-RAY POWDER DIFFRACTION AND RAMAN SPECTROSCOPY STUDY IN COMPOSITES KDP/ AROMATIC MOLECULES**

  Maritza Iveth Perez Valverde[1], María Eugenia Mendoza[1]

  [1]Benemerita Universidad Autonoma de Puebla, Insituto de Fisica LRT, Mexico.

- **12:45 - 13:00 SB2-O013 SYNTHESIS OF NYLON 6 BY ELECTROSPINNING AND COMPARISON WITH NONWOVEN BLUE SMS FOR APPLICATION AS HOSPITAL COVER**

  Mónica Liliana Mejía Suaza[1], Beatriz Janeth Galeano Upegui[1], Nelson Javier Escobar Mora[1], Lina Marcela Hoyos Palacio[1], Jenniffer Zapata Giraldo[1], Diana Paola Cuesta Castro[2], Luz Elena Botero Palacio[2], Isabel Cristina Ortiz Trujillo[2], Maria Isabel Gallego Gaona[1], Maria Nela Galeano[1]

  [1]Universidad Pontificia Bolivariana, Engineering, Colombia. [2]Universidad Pontificia Bolivariana, Medicine, Colombia.

- **13:00 - 13:30 SB2-O014 Invited Talk BIO-INSPIRED STRUCTURES AND APPROACHES TO ELUCIDATE CELL-SURFACE INTERACTIONS**

  Fabio Variola[1]

  [1]University of Ottawa, Department of Mechanical Engineering, Canada.

- **13:30 - 13:45 SB2-O015 EVALUATION OF CONTAC ANGLE IN BIOPOLYMER PARTICLES WITH SURFACE ACTIVITY**

  Martín R. Porras Godínez[1], Guadalupe Franco Rodríguez[2], Juan José Sánchez Romero[2], Mónica R. Jaime Fonseca[3]

  [1]Universidad Nacional Autónoma de México, Fisico-Química, Mexico. [2]Universidad Nacional Autónoma de México, Fisicoquimica, Mexico. [3]Instituto Politécnico Nacional - IPN, Tencnología Avanzada, Mexico.

■ **13:45 - 14:00 SB2-O016 SYNTHESIS AND CHARACTERIZATION OF HYDROXYAPATITE/NPs Ag/ GRAPHENE OXIDE COMPOSITE**

Edith Bravo González[1], Yosemik Arjuna León Nataret[1], Aaron Israel Diaz Cano[1], Efraín Rubio[2]

[1]Instituto Politécnico Nacional - IPN, UPIITA, Mexico. [2]Benemerita Universidad Autonoma de Puebla, CUVYTT, Mexico.

☒ **14:00 - 16:00 Lunch time**

Session: B2

SESSION CHAIR: MILDRED QUINTANA

▸ **16:00 - 16:30 SB2-O017 Invited Talk PHASE CHANGE NANOPARTICLES FOR BIOMARKER DETECTION AND BIOIMAGING**

Ming Su[1]

[1]Northeastern University, Chemical Engineering, United States.

■ **16:30 - 16:45 SB2-O018 HIGH THROUGHPUT TOXICITY ASSAY ON COORDINATELY ORDERED SINGLE CELLS WITH INDIVIDUAL IDENTITY**

Qingxuan Li[1], Junfei Xia[1], Ming Su[1]

[1]Northeastern University, Chemical Engineering, United States.

■ **16:45 - 17:00 SB2-O019 DEVELOPMENT OF FORCESPUN FIBER-ALIGNED SCAFFOLDS GELATIN-ZEIN COMPOSITES FOR POTENTIAL USE IN TISSUE ENGINEERING AND DRUG RELEASE**

Narsimha Mamidi[1]

[1]Tecnológico de Monterrey, School of Engineering and Science, Mexico.

■ **17:00 - 17:15 SB2-O020 STRUCTURAL-BASED STRATEGIES TO ENGINEER ANTIMICROBIAL SURFACES**

Arturo Susarrey Arce[1]

[1]Universiteit Twente, Mesoscale Chemical Systems, Netherlands.

■ **17:15 - 17:30 SB2-O021 2D POWERLESS CAPILLARY MICROCHANNEL DEVICE FOR EFFICIENT CAPTURE OF CIRCULATING TUMOR CELLS**

Angela Su[1,2], Junfei Xia[1]

[1]Northeastern University, Department of Chemical Engineering, United States. [2]The Winsor School, United States.

■ **17:30 - 17:45 SB2-O022 ANTIMICROBIAL WOUND DRESSINGS BASED ON SILVER NANOPARTICLES AND FISH SCALES**

Gerardo Villa Sánchez[1,2], Claudia Gutiérrez Wing[1], Daniel Luna Zaragoza[3], Demetrio Mendoza Anaya[1]

[1]Instituto Nacional de Investigaciones Nucleares (ININ), Tecnología de Materiales, Mexico. [2]Tecnológico de Estudios Superiores de Jocotitlán, División de Ingeniería Industrial, Mexico. [3]Instituto Nacional de Investigaciones Nucleares (ININ), Banco de Tejidos Radioesterilizados, Mexico.

■ **17:45 - 18:00 SB2-O023 CORE-SHELL AND HOLLOW-SPHERE PARTICLES FROM EUMELANIN VIA ENZYMATIC IN SITU COATING**

Oliver Strube[1]

[1]Universität Paderborn, Biobased & Bioinspired Materials, Germany.

■ **18:00 - 18:15 SB2-O024 FIBROUS MATS BASED ON BIOPOLYESTERS AND HYDROXYAPATITE MANUFACTURED BY CENTRIFUGAL SPINNING (FORCESPINNING®) WITH POTENTIAL USE AS BONE SCAFFOLDS**

Victoria Maria Padilla Gainza[1], Heriberto Rodríguez Tobías[1], Graciela Morales[1], Karen Lozano[2], Vanessa Montaño Machado[3], Diego Mantovani[3]

[1]Centro de Investigación en Química Aplicada - CIQA , Síntesis, Mexico. [2]University of Texas Rio Grande Valley, Mecanica, United States. [3]Université Laval, Min-Met-Materials Eng. & CHU, Canada.

■ **18:15 - 18:30 SB2-O025 SYNTHESIS OF NANOCRYSTALLINE CALCIUM PHOSPHATE FOR IMMOBILIZATION OF CELLULASES**

Manuel Alejandro Valdes[1], Dulce María Guzmán[2], Cristian Salas Torres[2], Sofía Nava Coronel[2], Guillermo Capistrano Zuñiga Neria[1], Juan Javier Guillen[1], Israel Pala Rosas[3]

[1]Instituto Tecnológico Superior de Ciudad Hidalgo, Departamento de nanotecnología y mecatrónica, Mexico. [2]Instituto Tecnológico Superior de Ciudad Hidalgo, Departamento de nanotecnología, Mexico. [3]Instituto Politécnico Nacional - IPN - ESIQIE, Secretaría de Estudios de Posgrado e Investigación, Mexico.

● **17:30 -18:30 Science, Technology and Society Lecture SENER**

MONDAY, AUGUST 20
ROOM: TERRACE

◪ **18:30 -20:30 POSTER SESSION & COFFEE BREAK**

- **SB2-P001 DESIGN OF A BIOMATERIAL BASED ON DNA IMMOBILIZATION BY THE SOL-GEL METHOD**
  Elani Cabrera Vega[1], Marcela Hurtado y de la Peña[1], Georgina Alarcón Ángeles[1], Martín Gómez Hernández[1]
  [1]Universidad Autónoma Metropolitana, Departamento de Sistemas biológicos, Mexico.

- **SB2-P002 PHOTO CONTROLLED DYNAMIC MICROPATTERNING OF 3D MICROTISSUES FOR RADIATION ASSESSMENT**
  Yuting Qiu[1]
  [1]Northeastern University, Chemical Engineering, United States.

- **SB2-P003 SYNTHESIS AND CHARACTERIZATION OF ZEOLITE ZSM-5 MODIFIED WITH Ag BY THE SOL-GEL METHOD ASSISTED BY MICROWAVES FOR FUTURE APPLICATION IN TISSUE ENGINEERING**
  Mayra Alejandra Hernandez Granados[1], Jose M. Gutierrez Viezcas[2], Maria de la Luz Mota[3,4], Priscy Alfredo Luque[2], Amanda Carrillo Castillo[1]
  [1]Universidad Autónoma de Ciudad Juárez, Departamento de Ingeniería Eléctrica y Computación, Instituto de Ingeniería y Tecnología, Mexico. [2]Universidad Autónoma de Baja California, Facultad de Ingeniería, Arquitectura y Diseño, Mexico. [3]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Departamento de Ingeniería Eléctrica y Computación, Instituto de Ingeniería y Tecnología, Mexico. [4]Universidad Autónoma de Ciudad Juárez, Instituto de Ingeniería y Tecnología, Departamento de Ingeniería Eléctrica y Computación, Mexico.

- **SB2-P004 SURFACE CHARGE CONTROLLED NUCLEOLI SELECTIVE STAINING WITH NANOSCALE CARBON DOTS**
  Qingxuan Li[1], Zhijun Zhu[1], Ming Su[1]
  [1]Northeastern University, Chemical Engineering, United States.

- **SB2-P005 EFFECT OF MODIFICATION OF THE SURFACE OF MESOPOROUS SILICA IN THE ADSORTION-DESORTION OF GRISEOFULVINE**
  Arlet Ariadne Rodriguez Castañeda[1], Ma. del Carmen Salazar Hernández[1,2], Mercedes Salazar Hernández[3], Raul Miranda Avilés[3], Agustín Hilario Rocha Ramírez[4]
  [1]Instituto Politécnico Nacional - IPN, Materiales y Termofluidos, Mexico. [2]Universidad de Guanajuato, Minas, metalúrgica y geología, Mexico. [3]Universidad de Guanajuato, Minas, Metalurgia y Geologia, Mexico. [4]Instituto Politécnico Nacional - IPN, Biología, Mexico.

- **SB2-P006 MOLECULAR BLENDING OF WEBS OF BIODEGRADABLE POLYMERS**
  Karina Santiago Santiago[1], Adriana Reyes Mayer[1,2], Angel Romo Uribe[3], Rene Guardia Tapia[4]
  [1]Universidad Tecnológica Emiliano Zapata del Estado de Morelos, División Académica de Mecánica Industrial, Mexico. [2]Centro de Caracterización e Investigación en Materiales S.A. de C.V., CeCIM, Mexico. [3]Polymer Nanocomposites Lab, Mexico. [4]Universidad Autónoma del Estado de Morelos, CIICAp, Mexico.

- **SB2-P007 TEOS-PVA/AGNPS HYDROGEL BY SOL-GEL METHOD AS AN ALTERNATIVE FOR THE CONSTRUCTION OF BIOSENSORS AND OTHER BIOMEDICAL APPLICATIONS**
  Guadalupe Rafaela Cazares[1], Edgar Zavala[1], Amanda Carrillo Castillo[1], Priscy A. Luque[2], María de la Luz Mota González[3,4]
  [1]Universidad Autónoma de Ciudad Juárez, Instituto de Ingeniería y Tecnología, Mexico. [2]Universidad Autónoma de Baja California, Facultad de Ingeniería, Arquitectura y Diseño, Mexico. [3]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Eléctrica y Computación, Mexico. [4]Universidad Autónoma de Ciudad Juárez, Eléctrica y Computación, Mexico.

- **SB2-P008 LIGHTWEIGHT AND MECHANICALLY ROBUST SUSTINABLE BIO-COMPOSITES DERIVED FROM FRACTIONATED WOODY BIOMASS**
  Venkatesh Balan[1], Megan Robertson[2]
  [1]University of Houston, Department of Engineering Technology, United States. [2]University of Houston, Chemical and Biomolecular Engineering, United States.

- **SB2-P009 NANOCELLULOSE TEMPLATED GROWTH OF ULTRA-SMALL BISMUTH NANOPARTICLES FOR ENHANCED RADIATION THERAPY**
  Qingxuan Li[1], Li Jiao[1], Ming Su[1]
  [1]Northeastern University, Chemical Engineering, United States.

- **SB2-P010 ENHANCED BIOLOGICAL COOLING WITH ENCAPSULATED PHASE CHANGE NANOPARTICLES**
  Weike Hu[1]
  [1]Northeastern University, Chemical Engineering, United States.

- **SB2-P011 VERTICAL NANOWIRES ENHANCED X-RAY RADIATION DAMAGE OF CELLS**
  Qingxuan Li[1], Liyuan Zheng[1], Ming Su[1]
  [1]Northeastern University, Chemical Engineering, United States.

- **SB2-P012 MULTI-MODALITY CANCER TREATMENT WITH MULTI-FUNCTIONAL NANOPARTICLES**
  Yacong Wu[1], Zhijun Zhu[2], Ming Su[1]
  [1]Northeastern University, Chemical engineering, United States. [2]Northwestern University, Chemical engineering, United States.

- **SB2-P013 MAGNETO-LUMINESCENT GAG:CE NANOPARTICLES FUNCTIONALIZED WITH FOLIC ACID FOR BIOIMAGING OF BREAST CANCER CELLS**

Carlos Muñoz Bustos[1], Akhil Jain[2], Gustavo Alonso Hirata Flores[2], Karla Oyuky Juárez Moreno[3,4]

[1]Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE), Physical chemistry, Mexico. [2]Centro de Nanociencias y Nanotecnología CNyN-UNAM, physical chemistry, Mexico. [3]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Nanobiotechnology, Mexico. [4]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Nanobiotechnology, Mexico.

- **SB2-P014 DESIGN OF A NANOSCINTILLATOR COUPLED WITH PROTOPORPHYRIN IX FOR ITS POTENTIAL APPLICATION IN PHOTODYNAMIC THERAPY**

Karelid Garcia Tapia[1], Prakhar Sengar[2], Kanchan Chauhan[3], Akhil Jain[2], Karla Oyuky Juarez Moreno[3], Hugo Alejandro Borbón Nuñez[2], Gustavo Alonso Hirata[2]

[1]Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE), Fisicoquímica de nanomateriales, Mexico. [2]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Fisicoquímica de nanomateriales, Mexico. [3]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Bionanotecnología, Mexico.

- **SB2-P015 INNOXIOUS COVERT BARCODING USING LITHOGRAPHICALLY-DEFINED MICRO-THERMAL DOTS**

Miao Wang[1,1], Ming Su[1,1]

[1]Northeastern University, Chemical Engineering, United States.

- **SB2-P016 BIOCOMPATIBILITY STUDY WITH PLA-PVA-HAp MEMBRANES OBTAINED BY ELECTROSPINNING IN-VITRO MODEL.**

Brenda Lizbeth Arroyo Reyes[1], Carolina Morán Raya[1], Marco Antonio Morales Sánchez[2]

[1]Benemerita Universidad Autonoma de Puebla, Instituto de Ciencias, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniería Química, Mexico.

- **SB2-P017 UNILATERAL ARTHRITIS MODEL IN VIVO FOR THE EVALUATION OF A FUSION ANTIBODY**

Elvia Zárate[1,2]

[1]Unidad Académica Multidisciplinaria Reynosa-Aztlán, Pharmacology, Mexico. [2]Universidad Autónoma de San Luis Potosí, Pharmacology, Mexico.

- **SB2-P018 TOXICOLOGICAL EVALUATION OF SPIONS ON BRAIN MICROVASCULAR ENDOTHELIAL CELLS**

Lorena Garate Velez[1], Claudia Escudero Lourdes[2], José Luis Rodríguez López[1]

[1]Instituto Potosino de Investigación Científica y Tecnológica A.C., Materiales Avanzados, Mexico. [2]Universidad Autónoma de San Luis Potosí, Ciencias Químicas, Mexico.

- **SB2-P019 THERMO AND -pH SENSITIVE POLYURETHANE CATHETERS OF N-VINYLIMIDAZOLE AND N-ISOPROPYLACRYLAMIDE SYNTHETIZED BY RADIATION-GRAFTING.**

Jessica Cecilia Audifred Aguilar[1], Victor Hugo Pino Ramos[1], Emilio Bucio[1]

[1]Instituto de Ciencias Nucleares UNAM, Macromolecules Radiation Chemistry, Mexico.

- **SB2-P020 PHYSICOCHEMICAL CHARACTERIZATION AND COMPARISON OF THE BIOLOGICAL ACTIVITY, IN A MODEL OF ARTHRITIS, OF THREE ANTIBODIES ANTI TNF-α**

Elvia Zárate[1,2]

[1]Dixpertia Investigación Biofarmacéutica y Farmacológica S.C, Laboratorio de biotecnología, Mexico. [2]Universidad Autónoma de San Luis Potosí, Pharmacology, Mexico.

- **SB2-P021 SURFACE ENHANCED RAMAN SCATTERING BIOSENSORS DESIGNED AND FABRICATED VIA FOCUSED ION BEAM LITHOGRAPHY**

Rodrigo Cabrera Alonso[1], Javier Mendez Lozoya[1], Francisco Javier González[1]

[1]Universidad Autónoma de San Luis Potosí, Laboratorio Nacional de Ciencia y Tecnología de Terahertz (LANCyTT), Mexico.

- **SB2-P022 THE INFLUENCE OF MEMBRANE MODEL AT PRION AGGREGATION, A LANGMUIR ESSAYS AND INFRARED CHARACTERIZATION**

Bianca Sandrino[1], Karen Jochelavicius[1], Diogo Volpati[2], Simone Barbosa[1], Tathyane M. Nobre[1], Osvaldo Novais de Oliveira Jr.[1]

[1]Universidade de São Paulo, São Carlos Institute of Physics, Brazil. [2]Mid Sweden University, Department of Natural Sciences, Sweden.

- **SB2-P023 SYNTHESIS OF HOLLOW NANO-STRUCTURED HYDROXYAPATITE-Au MICROSPHERES AND THEIR APPLICATION LIKE DRUG DELIVERY SYSTEM**

Gabriela Amor[1], Ma. Fabiola León Galván[2], Mónica Trejo[3], Alejandro Vazquez[1], Boris Kharisov[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico. [2]Universidad de Guanajuato, Departamento de

Alimentos, División de Ciencias de la Vida, Mexico. [3]Universidad de Guanajuato, Departamento de Estudios Multidisciplinarios, Mexico.

- **SB2-P024 MODELLING OF THERMODYNAMIC PROPERTIES IN CHITOSAN AND CHITIN POLYMERS: EFFECT OF MOLECULAR WEIGHT**

Gloria Arévalo Sánchez[1], Roberto López Rendón[1], Inocencio Higuera Ciapra[2], Javier Hernández Martínez[3], Evelin Martínez Benavides[2]

[1]Universidad Autónoma del Estado de México, Física, Mexico. [2]Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco, Polímeros, Mexico. [3]Universidad Veracruzana, Química, Mexico.

- **SB2-P025 SYNTHESIS OF ALBUMIN NANOPARTICLES MODIFIED WITH LACTOSE SPECIFICALLY RECOGNIZED BY LIVER CELLS**

Amed Gallegos[1], Maria Anguiano Lizarraga[2], Andrei Sarabia Sainz[1], Martín Pedroza Montero[1]

[1]Universidad de Sonora, Departamento de Investigación en Física, Mexico. [2]CIAD, Ciencias, Mexico.

- **SB2-P026 MOLECULAR SIMULATION OF THE IONIC EFFECT OF CHITOSAN POLYMERS**

Nanei Mazatl Maldonado Fiesco[1], Javier Hernández Martínez[2], Inocencio Higuera Ciapra[3], Evelin Martínez Benavides[3], Roberto López Rendón[4]

[1]Universidad Autónoma del Estado de México, Física, Mexico. [2]Universidad Veracruzana, Química, Mexico. [3]Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco, Polímeros, Mexico. [4]Universidad Autónoma del Estado de Hidalgo, Física, Mexico.

- **SB2-P027 SYNTHESIS, CHARACTERIZATION AND IN VITRO CYTOTOXICITY EVALUATION OF SILICA NANOPARTICLES AND ITS ASSESSMENT AS AN ANTICONVULSANT DRUG DELIVERY SYSTEM**

Francisco Javier Romero Argote[1], Irais Amaranta Quintero Ortega[1], José Jorge Delgado García[1], Laura Edith Castellano Torres[1], Ricardo Navarro Mendoza[2], Paulina Lozano Sotomayor[2], Argelia Rosillo de la Torre[1]

[1]Universidad de Guanajuato campus León, Departamento de Ingenierías Química, Electrónica y Biomédica, División de Ciencias e Ingenierías, Mexico. [2]Universidad de Guanajuato, Departamento de Química, División de Ciencias Naturales y Exactas, Mexico.

- **SB2-P028 SOL-GEL SYNTHESIS OF MAGNETIC MATERIALS AND THEIR POTENTIAL IN BIOMEDICINE**

Nancy Nelly Zurita Méndez[1], Marco Antonio Espinosa Medina[1], Maria de Lourdes Ballesteros Almanza[2], Miriam Estévez[3], Georgina Carbajal de la Torre[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Mechanical Engineering, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Biology, Mexico. [3]Universidad Nacional Autónoma de México, Centro de Física Aplicada y Tecnología Avanzada, Mexico.

- **SB2-P029 STRUCTURAL AND PHOTOLUMINESCENT STUDY OF EUROPIUM DOPED HYDROXYAPATITE SINTERED BY SPS TECHNIQUE**

Giovanni García Domínguez[1], Aristeo Garrido Hernandez[2], Sebastian Diaz de la Torre[1], Lorena Chavez Güitron[2]

[1]Centro de Investigación e Innovación Tecnológica, Posgrado, Mexico. [2]Universidad Tecnológica de Tecamac, Biotecnología, Mexico.

- **SB2-P030 MICROWAVE ASSISTED SOL-GEL SYNTHESIS OF BIOGLASS/AgNPs COMPOSITE FOR BIOMEDICAL APPLICATIONS**

Amanda Carrillo[1], Perla Lucero Gonzalez Fernandez[1], Maria de la Luz Mota González[1], Ana J Verdugo Ontiveros[1], Priscy A Luque Morales[2], Francisco Servando Aguirre Tostado[3]

[1]Universidad Autónoma de Ciudad Juárez, Departamento de Ingeniería Eléctrica y Computación, Instituto de Ingeniería y Tecnología, Mexico. [2]Universidad Autónoma de Baja California, Facultad de Ingeniería, Arquitectura y Diseño, Mexico. [3]Centro de Investigación en Materiales Avanzados, S.C., CIMAV Unidad Monterrey, Mexico.

- **SB2-P031 DESIGN AND MICROSTRUCTURAL CHARACTERIZATION OF A SPIRULINA NUTRACEUTIC**

Alberto Martínez Mena[1], Gabriela Mendoza[1], Israel Arzate Vázquez[2], Lorena Armenta Villegas[3], Ollín Celeste Martínez Ramírez[1]

[1]Universidad Autónoma del Estado de Morelos, Facultad de Nutrición, Mexico. [2]Centro de Nanociencias y micro y Nanotecnologías del IPN, Unidad Adolfo López Mateos, Mexico. [3]Universidad de Sonora, Departamento de Ciencias Químico Biológicas, Mexico.

- **SB2-P032 CRYSTALLIZATION AND GLASS FORMATION INDUCED BY GRAVITY IN A MAGNETIC GRANULAR SYSTEM UNDER AN UNSTEADY MAGNETIC FIELD**

Manuel de Jesus Sanchez Miranda[1], José Luis Carrillo Estrada[1], Fernando Donado Perez[2]

[1]Benemerita Universidad Autonoma de Puebla, Instituto de Física, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Fisica y Matematicas, Mexico.

- **SB2-P033 EVALUACIÓN IN VITRO DE LA BIOCOMPATIBILIDAD DE NANOCAPSULAS PLGA EN CULTIVOS CELULARES**

  Maria Isabel Gallego Gaona[1], Lina Marcela Hoyos Palacio[1], Henry Andrade Caicedo[1], Catalina Quintero Quiroz[1], Isabel Ortiz Trujillo[1]

  [1]Universidad Pontificia Bolivariana, Antioquia, Colombia.

- **SB2-P034 DISPERSION OF GRAPHENE OXIDE ON MEDICAL-GRADE POLYURETHANE FOR POTENTIAL USE IN BIOSENSORS**

  Joemi Conchita Durazo Alarcón[1], José de Jesús Ku Herrera[2], Lerma Hanaiy Chan Chan[3]

  [1]Universidad de Sonora, Ingeniería Química y Metalurgia, Mexico. [2]CONACyT-Centro de Investigación en Química Aplicada, Polymer sinthesis, Mexico. [3]CONACyT- Universidad de Sonora, Departamento de Física, Mexico.

- **SB2-P035 STRUCTURAL ANALYSIS IN POLYMERS OF CHITOSAN THROUGH MOLECULAR DYNAMICS**

  Martin Giovanny Gutierrez Gonzalez[1], Evelin Martínez Benavides[2], Inocencio Higuera Ciapra[2], Javier Hernández Martínez[3], Roberto López Rendón[1]

  [1]Universidad Autónoma del Estado de México, Física, Mexico. [2]Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco, Particulas, Mexico. [3]Universidad Veracruzana, Química, Mexico.

- **SB2-P036 ISOLATION AND CHARACTERIZATION OF CELLULOSE NANOFIBERS FROM BANANA RACHIS**

  Grecia Lizbeth Escobar Calderón[1], Sheila Ariany Uribe Lopez[2], Yaquelín Gómez Alcudia[2], Dora María Frías Márquez[2], Mayra Angelica Alvarez Lemus[2], Melina del Carmen Uribe Lopez[2], Rosendo López González[2]

  [1]Universidad Juárez Autónoma de Tabasco, División Académica Multidisciplinaria de Jalpa de Méndez, Mexico. [2]Universidad Juárez Autónoma de Tabasco, Division Academica de Ingenieria y Arquitectura, Mexico.

- **SB2-P037 LOCTITE 3525 AS A LOW-COST, BIOCOMPATIBLE PHOTOPATTERNABLE CONSTRUCTION MATERIAL FOR BIOLOGICAL CELLULAR SCAFFOLD**

  Cindy Viridiana Peto Gutierrez[1]

  [1]Universidad Nacional Autónoma de México, Facultad de Ciencias, Mexico.

- **SB2-P038 SURFACE CHARACTERIZATION OF FIQUE FIBERS (FURCRAEA GIGANTEA) BY ATOMIC FORCE MICROSCOPY**

  Martin Eduardo Espitia Nery[1], Nelson Rodríguez Ramírez[1], Jeimy Calderón Bustos[1]

  [1]Corporación Universitaria Minuto de Dios, Colombia.

- **SB2-P039 PRODUCTION OF GOLD NANOPARTICLES BY YEASTS AND THEIR ANTIBACTERIAL ACTIVITY**

  Jesús Daniel Guerra[1], Miguel Avalos Borja[2,3], Georgina Sandoval[1]

  [1]CIATEJ, Industrial Biotechnology, Mexico. [2]Instituto Potosino de Investigación Científica y Tecnológica, LINAN, Mexico. [3]Universidad Nacional Autónoma de México, CNYN, Mexico.

- **SB2-P040 ANALYSIS AND FRACTAL DETERMINATION OF CHLOROPHYTIC MICROALGAE FOR CONSTRUCTION APPLICATIONS**

  Adan Ramirez Sanchez[1], Juan Carlos Arteaga Arcos[2], Miguel Mayorga Rojas[1]

  [1]Universidad Autónoma del Estado de México, Laboratory of Rheology, Nanofluids and Microfluidity, of School of Sciences, Mexico. [2]Universidad Autónoma del Estado de México, Micromechanics laboratory of School of Sciences, Mexico.

- **SB2-P041 ANALYSIS OF THE ANTIOXIDANT ACTIVITY OF EU DOPED DOPED CERIUM DIOXIDE SYNTHESIZED BY SOL-GEL METHOD BY ABTS ASSAYS**

  Yarazett Hernández Castillo[1], Margarita García Hernández[2], Arturo López Marure[1], Maria Luz Carrera Jota[3], Perla Yolanda López Camacho[4], Jorge Humberto Luna Domínguez[5], Ángel de Jesús Morales Ramírez[6]

  [1]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Unidad Altamira, IPN, Posgrado en Tecnología Avanzada, Mexico. [2]Tecnólogico Nacional de México/Instituto Tecnológico de Ciudad Madero, Centro de investigación en petroquímica, Mexico. [3]Universidad Autónoma Metropolitana, Posgrado en Ciencias Naturales e Ingeniería, Mexico. [4]Universidad Autónoma Metropolitana, Ciencias Naturales e Ingeniería, Mexico. [5]Universidad Autónoma de Tamaulipas, Facultad de Odontología, Mexico. [6]Instituto Politécnico Nacional - IPN - ESIQIE, Ingeniería en metalurgia y materiales, Mexico.

- **SB2-P042 SYNTHESIS AND PROPERTIES OF FUNCTIONALLY SUBSTITUTED DIAZACROWN ETHERS AND SUPRAMOLECULAR COMPOUNDS CONTAINING IRON NANOPARTICLES**

  Leyla Vezirova[1]

[1]Research Institute Geotechnological Problems of Oil, Gas and Chemistry, Baku, Azerbaijan.

■ **SB2-P043 CHEMICAL MODIFICATION OF NANOCELLULOSE WITH TEMPO OXIDATION**

Belkis Sulbaran[1], Abigail Eloisa Madrigal Olvera[2], Carlos Alberto Guzman Gonzales[2], Victor Hugo Romero Arellano[3]

[1]Universidad de Guadalajara, Departamento de Estudios de Agua y Energía, Mexico. [2]Universidad de Guadalajara, Departamento de Estudios del Agua y la Energía, Mexico. [3]Universidad de Guadalajara, Departamento de Agua y Energia, Mexico.

■ **SB2-P044 BIOMIMETIC PVA NANOPARTICLES FOR A NOVEL APLICATION IN FRUIT CULTURE**

Constanza Sabando[1], Walther Ide[1], Richard Bastía[2], Miguel Valenzuela[2], Saddys Maria Rodriguez Llamazares[1]

[1]Centro de Investigación de Polímeros Avanzados, CIPA, Investigacion, Chile. [2]Universidad de Concepción, Facultad de Agronomía, Chile.

■ **SB2-P045 EFFECT OF ZINC OXIDE NANOPARTICLES IN A NATURAL OINTMENT**

Esteban Alberto González García[1], Zayra Melissa San Juan Refugio[2], Olda Alexia Cardenas Cortez[3], Dinorah Diaz del Angel[2], Hada Aurora Hernandez Valdez[2], Iris Sabday Papayanopulos Ruiz[2], Luis Medina Torres[4]

[1]Instituto Tecnologico Superior de Poza Rica, Ingeniería en Gestión Empresarial, Mexico. [2]Instituto Tecnologico Superior de Poza Rica, Ingeniería en Nanotecnología, Mexico. [3]Instituto Tecnologico Superior de Poza Rica, Ingeniería en Nanotecnogía, Mexico. [4]Universidad Nacional Autónoma de México, Farmacia, Mexico.

■ **SB2-P046 STUDY OF THE HYDROXYAPATITE PARTICLE MORPHOLOGY FROM THE SOL-GEL TECHNIQUE, VARYING ITS SYNTHESIS CONDITIONS**

Tannia Rosa Yolanda Sandoval Arriaga[1], Isaac Muñoz Juárez[2], María Cristina Piña Barba[3], Juan Manuel Perez Osorio[3]

[1]Instituto de Investigaciones en Materiales, Metálicos y Cerámicos, Mexico. [2]Centro de Investigación e Innovación Tecnológica, Posgrado, Mexico. [3]Universidad Nacional Autónoma de México, Metálicos y cerámicos, Mexico.

■ **SB2-P047 SPARK PLASMA EXTRUSION OF BINDER FREE ALUMINA-HYDROXYAPATITE AND ZIRCONIA-HYDROXYAPATITE POWDERS**

Isaac Muñoz Juárez[1], Sebastián Díaz de la Torre[1]

[1]Centro de Investigación e Innovación Tecnológica, Departamento de Posgrado, Mexico.

■ **SB2-P048 EFFECT OF KCl AND $MgCl_2$ ON THE RHEOLOGICAL PROPERTIES OF AQUEOS SOLUTIONS OF CHAN SEED MUCILAGE**

Yokiushirdhilgilmara Estrada Girón[1], Emma Rebeca Macías Balleza[1], José de Jesús Sánchez Delgadillo[1], Victor Vladimir Amilcar Fernáncez Escamilla[2]

[1]Universidad de Guadalajara, Departamento de Ingeniería Química, Mexico. [2]Universidad de Guadalajara, Departamento de Ciencias Tecnológicas, Mexico.

■ **SB2-P049 RHEOLOGICAL EFFECT OF THE CONCENTRATION OF NANOPARTICLES IN STARCH MANIOC**

Cesar de Jesús Alarcón Hernández[1], Esteban Alberto González García[1,2], Luis Medina Torres[3], Patricio Morales Pacheco[1]

[1]Instituto Tecnologico Superior de Poza Rica, Ingeniería en Nanotecnología, Mexico. [2]Instituto Tecnologico Superior de Poza Rica, Ingeniería en Gestión empresarial, Mexico. [3]Universidad Nacional Autónoma de México, departamento de Farmacia, Mexico.

■ **SB2-P050 CHARACTERIZATION OF BREAST TISSUE BY OPTICAL PROPERTIES THROUGH RAMAN SPECTROSCOPY**

Carolina Valencia Muñoz[1], Carlos Vargas Hernández[1]

[1]Universidad Nacional de Colombia, Colombia.

■ **SB2-P051 DEVELOPMENT OF CELL CULTURE SCAFFOLDS BY LASER ABLATION**

Lucero Mescli Hernandez Cedillo[1], Jorge Luis Domínguez Juárez[1], Francisco Gabriel Vazquéz Cuevas[2], Jorge Alfredo Ferrer Peréz[3]

[1]Universidad Nacional Autónoma de México, Centro de Física Aplicada y Tecnología Avanzada, Mexico. [2]Universidad Nacional Autónoma de México, Instituto de Neurobiología, Mexico. [3]Universidad Nacional Autónoma de México, Unidad de Alta Tecnología, FI, Mexico.

■ **SB2-P052 POLYMER-NANOSTRUCTURED CARBON CAPSULES EFFECTS IN MDA-MB-231 CANCER CELLS**

Santos Adriana Martel Estrada[1], Claudia-Lucía Vargas Requena[2], Elí Santos Rodríguez[3], Dulce Azucena Salazar Vázquez[4], Karen Andrea Legarreta Arias[4], José Emmanuel Sánchez Serrano[4], Carlos Alberto Martínez Pérez[5], Laura Valencia Gómez[5], Lorena Rivera Rios[5]

[1]Universidad Autónoma de Ciudad Juárez, Diseño, Mexico. [2]Universidad Autónoma de Ciudad Juárez, Ciencia Básicas, Mexico.

[3]Universidad Autónoma de Chiapas, Centro Mesoamericano de Física Teórica, Mexico. [4]Universidad Autónoma de Ciudad Juárez, Ciencias Básicas, Mexico. [5]Universidad Autónoma de Ciudad Juárez, Física y Matemáticas, Mexico.

- **SB2-P053 THE EFFECTS OF RADIATION ON THE BIODEGRADATION AND THERMAL PROPERTIES OF CHITOSAN BASED FILMS**

Santos Adriana Martel Estrada[1], Elí Santos Rodríguez[2], Patricia Urquizo Monrreal[1], Laura Susana Acosta Torres[3]

[1]Universidad Autónoma de Ciudad Juárez, Diseño, Mexico. [2]Universidad Autónoma de Chiapas, Centro Mesoamericano de Física Teórica, Mexico. [3]Escuela Nacional de Estudios Superiores de la UNAM unidad León, ENES, Mexico.

- **SB2-P054 OPTICAL PROPERTIES MODIFICATION IN QUANTUM DOTS AT LIPOSOMAL ENCAPSULATION**

Rebeca Jimenez[1], Janna Douda[1], Tetyana Kryshtab[2]

[1]Instituto Politécnico Nacional - IPN, UPIITA, Mexico. [2]Instituto Politécnico Nacional - IPN, ESFM, Mexico.

Symposium B3

ADVANCED FUNCTIONAL MATERIALS FOR TISSUE ENGINEERING

Anderson de Oliveira Lobo / Universidade Brasil
Roberto Parra Saldivar / Tecnologico de Monterrey
Loreto M. Valenzuela / Pontificia Universidad Católica de Chile
Guillermo U. Ruiz-Esparza / Harvard-MIT Division of Health Sciences and Technology and Brigham and Womens Hospital

MONDAY, AUGUST 20
ROOM: TULUM G

Session 1

SESSION CHAIR: ROSTRO MAGDALENA

08:00 - 08:30 SB3-O001 Invited Talk POROSITY AND THERMAL STABILITY OF MOLECULARLY IMPRINTED GELATIN-BASED COMPOSITE HYDROGEL FOR TISSUE ENGINEERING APPLICATIONS.

Rogelio Rodríguez Rodríguez[1], Hugo Espinosa Andrews[2], Cristina Velasquillo Martínez[3], Yaaziel Melgarejo Ramírez[3], Jorge Armando Jiménez Avalos[1], Inés Jiménez Palomar[4], Zaira Yunuen Garcia Carvajal[1]

[1]Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco, Medical and Pharmaceutical Biotechnology, Mexico. [2]Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco, Food Technology, Mexico. [3]Instituto Nacional de Rehabilitacion, Tissue Engineering, Cell Therapy and Regenerative Medicine, Mexico. [4]Additive Manufacturing Laboratory, Mexico.

08:30 - 09:00 SB3-O002 Invited Talk MORE DEATHS INFECTIONS THAN ALL CANCER COMBINED BY 2050? TISSUE ENGINEERING SOLUTIONS

Thomas Webster[1]

[1]Northeastern University, Chemical Engineering, United States.

09:00 - 09:30 SB3-O003 Invited Talk NANODIAMONDS AS A PLATFORM FOR NEURAL CELL ATTACHMENT AND GROWTH INTO FUNCTIONAL NETWORKS

Richard Jackman[1]

[1]University College London, London Centre for Nanotechnology, United Kingdom, Channel Islands & Isle of Man.

09:30 - 10:00 SB3-O004 Invited Talk DEVELOPMENT OF A NOVEL TiNbTa ALLOY AS POTENTIAL BIOMATERIAL FOR BONE TISSUE ENGINEERING

Ernesto Chicardi[1], Cristina García Garrido[2], María Jesús Sayagués[2], Carlos F. Gutiérrez González[3]

[1]Universidad de Sevilla, Ingeniería y Ciencia de los Materiales y del Transporte, Spain. [2]Instituto de Ciencia de Materiales de Sevilla, Mecanoquímica y Reactividad de Materiales, Spain. [3]Centro de Investigación en Nanomateriales y Nanotecnología, Nanomateriales Multifuncionales y Nanocomposites, Spain.

10:00 - 10:30 SB3-O005 Invited Talk DEVELOPMENT OF HYDROGELS REINFORCED WITH NANOHYDROXYAPATITE WITH INTEGRATION OF MAGNESIUM AGAINST OSTEOPOROSIS

Gerardo Presbitero[1], Laura Peña Parás[2], Cristina Piña Barba[3], Edgar Rodríguez[2], Katya Villarreal[2]

[1]Universidad Nacional Autónoma de México, Facultad de Ingeniería, Mexico. [2]Universidad de Monterrey, Departamento de Ingeniería, Mexico. [3]Universidad Nacional Autónoma de México, Instituto de Investigaciones en Materiales, Mexico.

10:30 - 11:00 SB3-O006 Invited Talk EVALUATION OF A SEMI-INTERPENETRATED POLYMER NETWORK AS A CONTROLLED DRUG DELIVERY SYSTEM FOR ITS APPLICATION IN SKIN CANCER

Angélica Jiménez Rosales[1]

[1]Universidad Autónoma del Estado de México, Centro de Investigación en Ciencias Médicas, Mexico.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY II
PROF. YUICHI IKUHARA

Session 2

SESSION CHAIR: ROSTRO MAGDALENA

12:30 - 13:00 SB3-O007 Invited Talk ALGINATE / GELLAN GUM DOUBLE NETWORK HYDROGELS FOR TISSUE ENGINEERING

Maria Fernanda Araiza Verduzco[1], Eustolia Rodriguez Velazquez[2], Georgina Pina Luis[1], Manuel Alatorre Meda[1]

[1]Instituto Tecnológico de Tijuana, Centro de Graduados e Investigacion en Quimica, Mexico. [2]Universidad Autónoma de Baja California, Facultad de Odontologia-Tijuana, Mexico.

13:00 - 13:15 SB3-O008 IMPACT OF THE HYDRATION STATES OF POLYMERS ON THEIR BIOCOMPATIBILITY

Loreto Valenzuela[1,2], Min Bag[1]

[1]Pontificia Universidad Catolica de Chile, Chemical and Bioprocessing Engineering, Chile. [2]Pontificia Universidad Catolica de Chile, Institute for Biological and Medical Engineering, Chile.

13:15 - 13:30 SB3-O009 SCAFFOLD FOR TISSUE ENGINEERING FROM EXTRACELLULAR MATRIX OF MYOCARDIUM

Abraham Israel Muñoz Ruiz[1], Hector Flores[1], Amaury Pozos Guillen[1], Diana M. Escobar García[1]

[1]Universidad Autónoma de San Luis Potosí, Laboratorio De Ciencias Básicas, Mexico.

13:30 - 13:45 SB3-O010 EFFECT OF BIOGLASS 45S5 AS A CERAMIC REINFORCEMENT IN POROUS SCAFFOLDS OF POLYLACTIC ACID MANUFACTURED BY SEPARATION OF PHASES

Joaquin Villalba Guevara[1], Ena Athenea Aguilar Reyes[1], Carlos Alberto Leon Patïï¿½o[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de investigación en Metalurgia y Materiales, Mexico.

13:45 - 14:00 SB3-O011 ELECTRIC STIMULATION INDUCES IN VIVO-LIKE FEATURES OF TERMINAL DIFFERENTIATION IN MUSCLE PROGENITORS IN VITRO

Manuel Ramírez[1], Natalia González[1], Valentina Irribarren[1], Loreto Valenzuela[2,3], Hugo Olguin[1]

[1]Pontificia Universidad Catolica de Chile, Cellular and Molecular Biology Department, Chile. [2]Pontificia Universidad Catolica de Chile, Chemical and Bioprocessing Engineering, Chile. [3]Pontificia Universidad Catolica de Chile, Institute for Biological and Medical Engineering, Chile.

14:00 - 16:00 Lunch time

Session 3

SESSION CHAIR: ROSTRO MAGDALENA

16:00 - 16:30 SB3-O012 Invited Talk PUTTING 3D BIOPRINTING TO THE USE OF TISSUE FABRICATION

Y. Shrike Zhang[1]

[1]Harvard University, Medicine, United States.

17:30 -18:30 Science, Technology and Society Lecture SENER

ROOM: TERRACE
MONDAY, AUGUST 20

18:30 -20:30 POSTER SESSION & COFFEE BREAK

SB3-P001 INFLUENCE OF THE ADDITION OF A PHOTO-CATALYTIC SEMICONDUCTOR (TiO2) IN A CEMENTITIOUS MATERIAL BASED ON WHITE CEMENT

Omar Rodriguez Villarreal[1]

[1]Universidad Autónoma de Nuevo León, Facultad de ingeniera civil, Mexico.

SB3-P002 ANALYSIS AND TRANSFORMATION OF GUADUA: WASTE TO INDUSTRIAL PRODUCTS

Carlos Andres Herrera[1], Vivian Liceth Suárez Moreno[1]
[1]Instituto Tecnológico Metropolitano, antioquia, Colombia.

- **SB3-P003 DOUBLE-NETWORK CHITOSAN HYDROGELS FOR TISSUE REPAIR**

Yasmany Garcia Rodriguez[1], Eustolia Rodriguez Velazquez[2], Georgina Pina Luis[1], Manuel Alatorre Meda[1]
[1]Instituto Tecnológico de Tijuana, Centro de Graduados e Investigación en Química, Mexico. [2]Universidad Autónoma de Baja California, Facultad de Odontologia-Tijuana, Mexico.

- **SB3-P004 A COMPARISON BETWEEN ELECTRO AND ROTARY-JET SPINNING TO PRODUCE POLYMERIC FIBERS WITH INCORPORATED NANOHYDROXYAPATITE AND CARBON NANOTUBES: REDUCED BACTERICIDAL ACTIVITY.**

Mirian Michelle Machado de Paula[1,2], Fernanda Roberta Marciano[3], Marcus Alexandre Finzi Corat[2], Thomas Webster[1], Conceicao de Maria Vaz Elias[4], Anderson Lobo[3,5]
[1]Northeastern University, Department of Chemical Engineering, United States. [2]Universidade Estadual de Campinas, Multidisciplinary Center for Biological Research, Brazil. [3]Universidade Brasil, Department of Biomedical Engineering, Brazil. [4]Universidade Brasil, Institute of Science and Technology, Brazil. [5]Universidade Federal do Piauí, Materials Science Graduation Program, Brazil.

- **SB3-P005 BIODEVICE REDUCES INFLAMMATION IN THE HIPPOCAMPUS OF A MOUSE MODEL OF ALZHEIMER'S DISEASE**

Geisa Salles[1,2], Michele Calió[2], Cristina Pacheco Soares[3], Marimelia Porcionatto[2], Christian Holscher[4], Conceicao de Maria Vaz Elias[5], Anderson Lobo[3,6]
[1]Uniiversidade do Vale do Paraiba, Institute of Research and Development, Brazil. [2]Universidade Federal de São Paulo, Laboratório de Neurobiologia, Brazil. [3]Universidade do Vale do Paraiba, Institute of Research and Development, Brazil. [4]Lancaster University, Division of Biomedical and Life Sciences, United Kingdom, Channel Islands & Isle of Man. [5]Universidade Brasil, Instituto Ciência e Tecnologia, Brazil. [6]Massachusetts Institute of Technology, Department of Chemistry, United States.

- **SB3-P006 BIOMIMETIC ARTERIAL-TUNICA MEDIA CONSTRUCT**

Rodrigo Ontiveros Tlachi[1], Nadia Vázquez[1], Casandra Paulina Chaires Rosas[1], Katia Jarquín[1], Beatriz Hernández Téllez[1], Gabriela Piñón Zárate[1], Miguel Ángel Herrera Enríquez[1], Alfredo Maciel Cerda[2], Ricardo Vera Graziano[2], Andrés Eliú Castell Rodríguez[1]
[1]Universidad Nacional Autónoma de México, Laboratorio de Inmunoterapia Experimental e Ingeniería de Tejidos, Biología Celular y Tisular, Mexico. [2]Universidad Nacional Autónoma de México, Nanofibras para Ingeniería de Tejidos, Polímeros, Mexico.

- **SB3-P007 2D AND 3D NATURAL-BASED BIOMATERIALS FOR TISSUE ENGINEERING**

Eustolia Rodriguez Velazquez[1], Remedios Sanchez Diaz[2], Ana Gabriela Carrillo Varguez[1], Miguel Angel Cadena Alcantar[1], Manuel Alatorre Meda[3]
[1]Universidad Autónoma de Baja California, Facultad de Odontologia-Tijuana, Mexico. [2]Universidad Autónoma de Baja California, ECISALUD, Mexico. [3]Instituto Tecnológico de Tijuana, Centro de Graduados e Investigacion en Quimica, Mexico.

- **SB3-P008 DEVELOPMENT A FUNCTIONAL MULTI-FILAMENT SUTURE USING COMMERCIAL 3D PEN AND GELMA**

Josy Anteveli Osajima Furtini[1], Francisca Pereira de Araujo[1], Conceição de Maria Vaz Elias[2], Lavinia Ribeiro[3], Edson Cavalcanti Da Silva Filho[1,4], Anderson de Oliveira Lobo[2,4], Michele de Paula Madeira[4]
[1]Universidade Federal do Piauí, Brazil. [2]Universidade Brasil, Department of Biomedical Engineering, Brazil. [3]Universidade Federal do Piauí, Department of Physics, Brazil. [4]Universidade Federal do Piauí, Materials Engineering, Brazil.

- **SB3-P009 SUPERHYDROPHOBIC SURFACES: A BIOMIMETIC TOOL FOR THE SYNTHESIS OF BIOMATERIALS**

Manuel Alatorre Meda[1], Eustolia Rodriguez Velazquez[2]
[1]Instituto Tecnológico de Tijuana, Centro de Graduados e Investigacion en Quimica, Mexico. [2]Universidad Autónoma de Baja California, Facultad de Odontologia-Tijuana, Mexico.

- **SB3-P010 POLY-(BUTYLENE ADIPATE-CO-TEREPHTHALATE) / POLYPYRROLE/NANO-HYDROXYAPATITE SCAFFOLDS FOR BONE TISSUE REGENERATION**

Conceicao de Maria Vaz Elias[1], Antonio Luiz Martins Maia Filho[2], Laryssa Roque Da Silva[2], Danniel Cabral Leão Ferreira[2], Fernanda Roberta Marciano[1], Anderson Oliveira Lobo[1]
[1]Universidade Brasil, Department of Biomedical Engineering, Brazil. [2]Universidade Estadual do Piauí, Department of Mutagenesis, Brazil.

Symposium B4

INNOVATIVE SMART MATERIALS FOR FLEXIBLE/WEARABLE AND LARGE-AREA ELECTRONICS

Amanda Carrillo Castillo / Universidad Autónoma de Ciudad Juárez
Mijung Lee / Kookmin University
Roberto Carlos Ambrosio Lázaro / Benemérita Universidad Autónoma de Puebla
Santos Jesus Castillo / Universidad de Sonora

MONDAY, AUGUST 20
ROOM: COZUMEL

- **08:00 - 08:30 SB4-0001 Invited Talk HYBRID PEROVSKITES FOR RADIATION DETECTION**
  Manuel Quevedo[1]
  [1]The University of Texas at Dallas, MSE, United States.

- **08:30 - 08:45 SB4-0002 SILICON QUANTUM DOTS EMBEDDED INTO ZNO MATRIX BY SOL-GEL METHOD AS COATING FOR EFFICIENCY IMPROVEMENT FOR SOLAR CELLS**
  Hiram Jesús Higuera Valenzuela[1], **Frank Romo Garcia**[1], **Dagoberto Cabrera Germán**[2], **Antonio Ramos Carrazco**[3], **Rodrigo Arturo Rosas Burgos**[1], **Rafael Garcia Gutierrez**[3], **Oscar Edel Contreras**[4], **Dainet Berman Mendoza**[3]
  [1]Universidad de Sonora, Departamento de Física, Mexico. [2]Universidad de Sonora, Departamento de Investigación en Polímeros y Materiales, Mexico. [3]Universidad de Sonora, Departamento de Investigación en Física, Mexico. [4]Universidad Nacional Autónoma de México, Centro de Nanociencias y Nanotecnologia, Mexico.

- **08:45 - 09:15 SB4-0003 Invited Talk THIN FILM HYBRID PHOTOVOLTAIC STRUCTURES**
  Arturo A. Ayón[1]
  [1]University of Texas at San Antonio, Physics and Astronomy, United States.

- **09:15 - 09:30 SB4-0004 TEXTILE POLYMER SOLAR CELLS ENHANCED BY PLASMONIC NANOSTRUCTURES FOR WEARABLE ENERGY PLATFORMS**
  Sung-Min Lee[1], **Seok Ho Cho**[2], **Kyung Cheol Choi**[3]
  [1]Kookmin University, School of Materials Science and Engineering, South Korea. [2]Chonnam National University, Department of Clothing & Textiles, South Korea. [3]KAIST, Department of Electrical Engineering, South Korea.

- **09:30 - 09:45 SB4-0005 CDS THIN FILMS/CDS NPS BY SOFT CHEMISTRY METHODS FOR TFTS APPLICATIONS**
  Laura Aislínn Carrasco Chávez[1], **Raúl Agustín Velarde Delgado**[1], **María de la Luz Mota González**[1,2], **Francisco Servando Aguirre Tostado**[3], **Manuel A. Quevedo López**[4], **Amanda Carrillo Castillo**[1]
  [1]Universidad Autónoma de Ciudad Juárez, Instituto de Ingeniería y Tecnología, Departamento de Ingeniería Eléctrica y Computación, Mexico. [2]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Instituto de Ingeniería y Tecnología, Departamento de Ingeniería Eléctrica y Computación, Mexico. [3]Centro de Investigación en Materiales Avanzados, S.C., Unidad Monterrey, Mexico. [4]The University of Texas at Dallas, Departament of Electrical and Computer Engineering, United States.

- **09:45 - 10:00 SB4-0006 EFFECTIVE PARAMETERS FOR 1D PHOTONIC CRYSTALS WITH ISOTROPIC**

AND ANISOTROPIC MAGNETIC INCLUSIONS: COHERENT WAVE-HOMOGENIZATION THEORY

Javier Flores Méndez[1,2], A. C. Piñón Reyes[3], René Pérez Pérez[2]

[1]Benemerita Universidad Autonoma de Puebla, Ingeniería en Sistemas Automotrices, Mexico. [2]Instituto Tecnológico de Puebla, Metal-Mecánica, Mexico. [3]Benemerita Universidad Autonoma de Puebla, Instituto de ciencias, Mexico.

- **10:00 - 10:30 SB4-O007 Invited Talk DEPOSITION OF CuSbS2 BY SOLUTION METHODS FOR LARGE AREA SOLAR CELLS APPLICATIONS**

Obed Yamín Ramírez Esquivel[1], Dalia Mazón Montijo[1], Zeuz Montiel González[1], Francisco Servando Aguirre Tostado[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Unidad Monterrey, Mexico.

- **10:30 - 11:00 SB4-O008 Invited Talk NEW DESIGN RULES FOR LOW-LOSS ORGANIC SOLAR CELLS**

Artem Bakulin[1]

[1]Imperial College London, Department of Chemistry, United Kingdom, Channel Islands & Isle of Man.

- **11: 00 - 11:30 COFFEE BREAK**
- **11:30 - 12:30 PLENARY II**
  PROF. YUICHI IKUHARA

- **12:30 - 12:45 SB4-O009 GREEN-PHOSPHORESCENCE PVA/OLIGOMER MEMBRANES AS ALTERNATIVE FOR FLEXIBLE OPTOELECTRONIC DEVICES**

Jennifer Alejandra Muñoz Valdez[1], Gerardo Gutierrez Heredia[2], Guadalupe Rafaela Cázares Loya[3], Mi Jung Lee[4], Amanda Carrillo Castillo[3], Maria de la Luz Mota Gonzalez[5,6]

[1]Universidad Autónoma de Ciudad Juárez, Instituto de Ingeniería y Tecnología, Departamento de Eléctrica y Computación, Mexico. [2]Centro de Investigaciones en Optica, Centro de Investigaciones en Óptica, Mexico. [3]Universidad Autónoma de Ciudad Juárez, Departamento de Eléctrica y Computación, Mexico. [4]Kookmin University, School of Advanced Materials Engineering, Korea. [5]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Instituto de Ingenieria y Tecnologia, Mexico. [6]Universidad Autónoma de Ciudad Juárez, Instituto de Ingenieria y Tecnologia, Mexico.

- **12:45 - 13:15 SB4-O010 Invited Talk POLYSULFIDE THERMOSETS FOR USE FLEXIBLE AND STRETCHABLE ELECTRONICS**

David Arreaga Salas[1]

[1]Ares Materials Inc, R&D, United States.

- **13:15 - 13:45 SB4-O011 Invited Talk REVERSIBLE TUNING OF VO_2 THIN FILMS AND NANOPARTICLES FOR FLEXIBLE THERMOCHROMIC SMART WINDOWS**

Junwoo Son[1]

[1]Pohang University of Science and Technology, Department of Materials Science and Engineering, South Korea.

- **13:45 - 14:15 SB4-O012 Invited Talk FLEXIBLE ELECTRONIC CIRCUITS ON SOFTENING POLYMER FOR BIOMEDICAL IMPLANTS**

Gerardo Gutierrez Heredia[1,2], Ovidio Rodriguez Lopez[2], Walter Voit[2]

[1]Centro de Investigaciones en Optica, Fotonica, Mexico. [2]The University of Texas at Dallas, Department of Material Science Engineering, United States.

- **14:00 - 16:00 Lunch time**

- **16:00 - 16:30 SB4-O013 Invited Talk DEVELOPMENT OF A METAL/CARBON HYBRID ELECTROMAGNETIC SHIELDING FABRIC FOR SMART FASHION APPLICATIONS**

Jungjoon Kim[1], Hyunjoo Choi[1]

[1]Kookmin University, School of Materials Science and Engineering, Korea.

- **16:30 - 16:45 SB4-O014 TRANSFER PRINTING OF INTEGRATED ELECTRONICS ONTO CROSSLINKED COLLAGEN**

Salvador Moreno[1], Manuel Quevedo[2], Majid Minary[3]

[1]The University of Texas at Dallas, Mechanical Engineering, United States. [2]The University of Texas at Dallas, Materials Science, United States. [3]University of Texas at Dallas, Mechanical Engineering, United States.

- **17:30 -18:30 Science, Technology and Society Lecture SENER**

MONDAY, AUGUST 20
ROOM: TERRACE

- **18:30 -20:30 POSTER SESSION & COFFEE BREAK**
- **SB4-P001 STUDY OF CuS THIN FILMS PREPARED BY CBD DOPED WITH NiS/ CuS NANOPARTICLES FOR SEMICONDUCTOR DEVICES APPLICATIONS**

Adriana Garcia Gallardo[1], Maria de la Luz Mota Gonzalez[2,3], Marcela Mireles Ramirez[4], Angel Sauceda Carvajal[1], Amanda Carrillo Castillo[1]

[1]Universidad Autónoma de Ciudad Juárez, Instituto de Ingeniería y Tecnología, Departamento de Ingeniería Eléctrica y Computación, Mexico. [2]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Instituto de Ingeniería y Tecnología. Departamento de Ingeniería Eléctrica y Computación, Mexico. [3]Universidad Autónoma de Ciudad Juárez, Mexico. [4]Rochester Institute of Technology, United States.

- **SB4-P002 SYNTHESIS AND CHARACTERIZATION OF COBALT SULFIDE AND CHROMIUM SULFIDE NANOPARTICLES**

Roberto Leyva Ontiveros[1], Amanda Carrillo Castillo[2], Maria de la Luz Mota Gonzalez[2], Horacio Antolin Pineda Leon[3], Santos Jesus Castillo[1], Rafael Ramirez Bon[4]

[1]Universidad de Sonora, DIFUS, Mexico. [2]Universidad Autónoma de Ciudad Juárez, Instituto de Ingenieria y Tecnologia, Mexico. [3]Universidad Autónoma de Ciudad Juárez, IIT, Mexico. [4]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Querétaro, IPN, Postgrado en Materiales, Mexico.

- **SB4-P003 MORPHOLOGICAL EFFECTS OF ALUMINUM DOPING ON ZINC SULFIDE THIN FILMS SUPPORTED ON SILICON DIOXIDE**

Osvaldo Nava[1], Carlos Alberto Soto Robles[1], Maria Cosio[1], Ruben Villarreal[1], Claudia Gomez[2], Amanda Carrillo Castillo[3], Amelia Olivas[4], Priscy Alfredo Luque[1]

[1]Universidad Autónoma de Baja California, Bioingeniería, Mexico. [2]Universidad Autónoma de Baja California, Kilometro 104 Tijuana Ensenada, Mexico. [3]Universidad Autónoma de Ciudad Juárez, IIE, Mexico. [4]Universidad Nacional Autónoma de México, CNyN, Mexico.

- **SB4-P004 CADMIUM OXIDE THIN FILMS FOR APPLICATIONS AS A WINDOW LAYER SYNTHESIZED BY A THERMAL TREATMENT ON CADMIUM CARBONATE PRECURSOR THIN FILMS**

Kassim Jose Mendoza Peña[1], José Antonio Heredia Cancino[2], Ramón Ochoa Landín[1], Santos Jesús Castillo[2], Mario Enrique Alvarez Ramos[1]

[1]Universidad de Sonora, Departamento de Física, Mexico. [2]Universidad de Sonora, Departamento de Investigación en Física, Mexico.

- **SB4-P005 FUNCTIONAL TRANSPARENT SUBSTRATES FOR FLEXIBLE ELECTRONICS APPLICATIONS**

Maria de la Luz Mota[1,2], Amanda Carrillo Castillo[2]

[1]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Departamento de Electrica y Computacion, Mexico. [2]Universidad Autónoma de Ciudad Juárez, Departamento de Electrica y Computacion, Mexico.

- **SB4-P006 A HYBRID/ORGANIC PENTACENE P-N JUNCTION FOR ORGANIC ELECTRONICS APPLICATIONS**

Maria de la Luz Mota[1,2], Amanda Carrillo Castillo[2], Gerardo Gutierrez Heredia[3], Marcela Mireles Ramirez[4], Manuel Angel Quebedo Lopez[5]

[1]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Departamento de Electrica y Computacion, Mexico. [2]Universidad Autónoma de Ciudad Juárez, Departamento de Electrica y Computacion, Mexico. [3]Centro de Investigaciones en Optica, Centro de Investigaciones en Optica, Mexico. [4]Rochester Institute of Technology, Technology, United States. [5]Universidad de Sonora, Mexico.

- **SB4-P007 SYNTHESIS OF PENTACENE/PANI/AGNPS DISTRIBUTED IN A PVA MATRIX MEMBRANE BY SOL-GEL METHOD**

Maria de la Luz Mota[1,2], Amanda Carrillo Castillo[3]

[1]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Departamento de Electrica y Computacion, Mexico. [2]Universidad Tecnologica de Ciudad Juárez, Instituto de Ingenieria y Tecnologia, Mexico. [3]Universidad Autónoma de Ciudad Juárez, Departamento de Electrica y Computacion, Mexico.

- **SB4-P008 THIN FILMS BASED ON TERPHENYLS MOLECULES BY SPIN COATING-SPRAY PYROLISIS: EFFECT OF NUMBER OF LAYER AND DEPOSITION TECHNIQUE**

Jazmyr Alejandro León Coronado[1], Moises Alberto Valdes Pech[2], Amanda Carrillo[1], Roberto AMBROSIO[3], Marcela Mireles Ramirez[4], Mi Jung Lee[5], María de L. Mota González[6]

[1]Universidad Autónoma de Ciudad Juárez, Instituto de Ingeniería y Tecnología, Universidad Autónoma de Ciudad Juárez, Mexico. [2]Centro de Investigación en Química Aplicada - CIQA , CIQA, Mexico. [3]Benemerita Universidad Autonoma de Puebla, Benemérita Universidad Autónoma de Puebla, Mexico. [4]Rochester Institute of Technology, Rochester Institute of Technology, United States. [5]Kookmin University, School of Advanced Materials Engineering, Korea. [6]Consejo Nacional de Ciencia y Tecnologia - CONACYT, CONACYT- Universidad Autónoma de Ciudad Juárez, Mexico.

- **SB4-P009 OPTOELECTRONIC PROPERTIES OF OLIGO(PHENYLENE VINYLENE)QUINOLINES**

Miguel Angel Amado Briseño[1], Josué Ruben Velázquez Hernández[1], Ventura Rodríguez Lugo[1], Karina Alemán Ayala[2], Oscar Coreño Alonso[3], Beatriz Romero Herrero[4], Gonzalo del Pozo Melero[4], Rosa Angeles Vázquez García[1]

[1]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Área Académica de Electrónica y Telecomunicaciones, Mexico. [3]Universidad Autónoma del Estado de Hidalgo, Depto. Ing. Civil, Mexico. [4]URJC, Depto. Matemática Aplicada, Ciencia e Ingeniería de los Materiales y Tecnología Electrónica, Mexico.

- **SB4-P010 SYNTHESIS OF CARBON DOTS FROM ORGANIC PRECURSORS**

Itzel Arizbe Olivares Torres[1], Santos Jesús Castillo[2], Josefina Alvarado Rivera[1]

[1]Universidad de Sonora, Physics, Mexico. [2]Universidad de Sonora, Department of Research in Physics, Mexico.

- **SB4-P011 ENHANCEMENT OF PHOTOLUMINESCENCE PROPERTIES IN a-Si1-xCx: H INDUCED BY RAPID THERMAL ANNEALING**

Israel Vivaldo[1], Roberto Ambrosio[1], Mario Moreno[2], Javier Flores[1]

[1]Benemerita Universidad Autonoma de Puebla, Facultad de Ciencias de la Electrónica, Mexico. [2]Instituto Nacional de Astrofísica, Óptica y Electrónica, Microelectrónica, Mexico.

- **SB4-P012 STUDY OF THE THERMOELECTRIC PROPERTIES OF G/PLA (GRAPHENE WITH POLY-LACTIC ACID) OBTAINED BY THE ELECTRO-SPINNING PROCESS**

Mercy Tatiana Villate Fonseca[1,2], Nestor Alonso Sierra Cárdenas[1], Efrén de Jesús Muñoz[3]

[1]Universidad Antonio Nariño, Facultad de Ingeniería Mecánica, Electrónica y Biomédica, Colombia. [2]Universidad Pedagógica y Tecnológica de Colombia, Maestría en Metalurgia y Ciencia de los Materiales, Colombia. [3]Universidad Pedagógica y Tecnológica de Colombia, Facultad de Química, Colombia.

- **SB4-P013 BENDING CYCLES STUDY OF HAFNIUM OXIDE CAPACITORS ON DEFORMABLE SOFTENING POLYMER SUBSTRATE**

Ovidio Rodriguez Lopez[1,2], Gerardo Gutierrez Heredia[3,4], Alexander J. Polednik[4], Edgar Guerrero[4], Aldo Garcia Sandoval[1], Walter Voit[1,4]

[1]The University of Texas at Dallas, Department of Biomedical Engineering, United States. [2]The University of Texas at Dallas, Department of Electrical and Computer Engineering, United States. [3]Centro de Investigaciones en Optica, Fotonica, Mexico. [4]The University of Texas at Dallas, Department of Material Science and Engineering, United States.

- **SB4-P014 STUDY OF PL FOR THIN FILMS BASED ON ZnO/Si FOR POTENTIAL APPLICATIONS IN LARGE AREA OPTOELECTRONICS**

Francisco Javier Galindo Sarmiento[1], Francisco Morales Morales[2], Alfredo Morales[2], Roberto Ambrosio[1]

[1]Benemerita Universidad Autonoma de Puebla, Electronica, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., Nanotecnologia, Mexico.

- **SB4-P015 SYNTHESIS OF GALLIUM NITRIDE BY MOCVD FOR DEVELOPMENT OF THIN FILM TRANSISTORS**

Dainet Berman Mendoza[1], Omar Emmanuel Paredes Gallardo[1], Antonio Ramos Carrazco[1], Rafael Garcia Gutierrez[1], Oscar Edel Contreras Lòpez[2], Gustavo Alonso Hirata[3]

[1]Universidad de Sonora, Investigación en Física, Mexico. [2]Universidad de Sonora, Nanoestructuras, Mexico. [3]Universidad de Sonora, Fisicoquimica de nanomateriales, Mexico.

- **SB4-P016 TRANSPARENT HEATER BASED ON SOLUTION-PROCESS OF INDIUM TIN OXIDE NANOPARTICLE INK OPTIMIZED WITH OXYGEN VACANCY CONTROL**

Chaewon Kim[1], Sung-Jei Hong[2], Mi Jung Lee[1]

[1]Kookmin University, Advanced Materials Engineering, Korea. [2]KETI, Display Materials and Components Research Center, Korea.

- **SB4-P017 SYNTHESIS AND CHARACTERIZATION OF SnO_2/TiO_2 THIN FILMS BY SOL-GEL PROCESS FOR OPTOELECTRONIC APPLICATIONS**

Hernan Hernandez Carrillo[1], Maria de la Luz Mota González[1], Angel Sauceda Carvajal[1], Gerardo Gutierrez Heredía[2], Laura A Carrasco Chavez[1], Amanda Carrillo Castillo[1]

[1]Universidad Autónoma de Ciudad Juárez, Departamento de Ingeniería Eléctrica y Computación, Instituto de Ingeniería y Tecnología, Mexico. [2]Centro de Investigaciones en Optica, Mexico.

- **SB4-P018 NiS NANOPARTICLES BY SOFT CHEMISTRY AS SEMICONDUCTOR IN ELECTRONIC DEVICES**

Ruben Guzman Saucedo[1], Maria de la Luz Mota Gonzalez[2], Amanda Carrillo Castillo[1]

[1]Universidad Autónoma de Ciudad Juárez, Departamento de Ingeniería Eléctrica y Computación, Instituto de Ingeniería y Tecnología, Mexico. [2]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Departamento de Ingeniería Eléctrica y Computación, Instituto de Ingeniería y Tecnología, Mexico.

- **SB4-P019 SYNTHESIS OF ZrO_2-PS HYBRID FILMS FOR LARGE AREA APPLICATIONS**

Libia Judith Verastica Ward[1], Diana Sánchez Ahumada[1], Andrés Castro Beltrán[1], Rafael

Ramirez Bon[2], Clemente Guadalupe Alvarado Beltrán[1]

[1]Universidad Autónoma de Sinaloa, Facultad de ingeniería Mochis, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Unidad Querétaro, Mexico.

- **SB4-P020 GROWTH AND REACTION MECHANISM OF ALUMINIUM DOPED ZINC OXIDE NANOSHEETS ON ALN SEED LAYER FOR FLEXIBLE AND WAFER SUBSTRATES.**

Edgardo Uriel León Salguero[1], Josefina Alvarado Rivera[1], Frank Güell[3], Gonzalo Murillo[2]

[1]Universidad de Sonora, Posgrado en Nanotecnologia, Mexico. [2]nstituto de Microelectrónica de Barcelona (IMB-CNM, CSIC), Department of Nano and Microsystems, Spain. [3]Universitat de Barcelona, Departament de electronica, Spain.

- **SB4-P021 CuO THIN FILMS BY THE SOL-GEL METHOD FOR ITS APPLICATION AS A NON-ENZYMATIC GLUCOSE BIOSENSOR**

Jessica Judith Lillo Ramiro[1], Jorge Manuel Guerrero[2], Maria de la Luz Mota[3], Francisco Servando Aguirre Tostado[4], Amanda Carrillo Castillo[5]

[1]Universidad Autónoma de Ciudad Juárez, Departamento de Electrica y Computacion, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., Material Science, Mexico. [3]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Instituto de Ingeniería y Tecnología, Departamento de eléctrica y computación, Mexico. [4]Centro de Investigación en Materiales Avanzados, S.C., Ciencia de Materiales, Mexico. [5]Universidad Autónoma de Ciudad Juárez, Instituto de Ingeniería y Tecnología, Departamento de eléctrica y computación, Mexico.

- **SB4-P022 SYNTHESIS OF TiO_2-PS HYBRID FILMS FOR DIELECTRIC APLICATIONS**

Diana Sánchez Ahumada[1], Libia Judith Verastica Ward[1], Andrés Castro Beltrán[1], Rafael Ramirez Bon[2], Clemente Guadalupe Alvarado Beltrán[1]

[1]Universidad Autónoma de Sinaloa, Facultad de ingeniería Mochis, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Unidad Querétaro, Mexico.

- **SB4-P023 SYNTHESIS AND CHARACTERIZATION OF ZnO THIN FILMS BY CVD TECHNIQUE FOR THE DEVELOPMENT OF FET TRANSISTORS**

Antonio Gallardo[1], Alicia Vera Marquina[1], Dainet Berman Mendoza[1], Jose R Noriega[1], Rafael Garcia Gutierrez[1], Ricardo Rangel[2], Antonio Ramos Carrazco[1]

[1]Universidad de Sonora, Departamento de Investigación en Fisica, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de ingenieria quimica, Mexico.

- **SB4-P024 STUDY OF NANOPARTICLES CdTe BY AQUEOUS CHEMICAL SOLUTION AT DIFFERENT CONCENTRATION.**

Carlos Olvera Felix[1], Ramon Ochoa Landin[1], Santos Jesús Castillo[1], Rafael Ramirez Bon[2], Horacio Antolin Pineda Leon[1], Roberto Leyva Ontiveros[1]

[1]Universidad de Sonora, DIFUS, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, CINVESTAV, Mexico.

- **SB4-P025 STUDY OF PbS THIN FILMS DOPED WITH MoS2 NANOPARTICLES FOR APPLICATIONS IN TFTs AND FLEXIBLE SOLAR CELLS**

Horacio Antolin Pineda Leon[1], Amanda Carrillo Castillo[1], Roberto Leyva Ontiveros[2], Gerardo Gutierrez Heredia[3], Carlos Olvera Felix[2], Anderson Klay Romero Jaime[2,4], Santos Jesús Castillo[2]

[1]Universidad Autónoma de Ciudad Juárez, IIT, Mexico. [2]Universidad de Sonora, DIFUS, Mexico. [3]Centro de Investigaciones en Optica, FLEXIBLES, Mexico. [4]Universidad de Sonora, Maestria en Electronica, Mexico.

- **SB4-P026 EFFECT OF DEPOSITION RATE ON THE PROPERTIES OF ZnS:Cu FILMS DEPOSITED IN AN AMMONIA FREE SOLUTION**

Luis Carlos Santana Medina[1], María de la Luz Mota González[2,3], Adriana Garcia Gallardo[1], Francisco Servando Aguirre Tostado[4], Marcela Mireles Ramírez[5], Priscy Alfredo Luque Morales[6], Amanda Carrillo Castillo[1]

[1]Universidad Autónoma de Ciudad Juárez, Instituto de Ingeniería y Tecnología, Departamento de Ingeniería Eléctrica y Computación, Mexico. [2]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Instituto de Ingeniería y Tecnología, Departamento de Ingeniería Eléctrica y Computación, Mexico. [3]Universidad Autónoma de Ciudad Juárez, Instituto de Ingeniería y Tecnología. Departamento de Ingeniería Eléctrica y Computación, Mexico. [4]Centro de Investigación en Materiales Avanzados, S.C., Unidad Monterrey, Mexico. [5]Rochester Institute of Technology, United States. [6]Universidad Autónoma de Baja California, Facultad de Ingeniería, Arquitectura y Diseño, Mexico.

- **SB4-P027 STUDY OF OPTICAL, MICROSTRUCTURAL AND ELECTRICAL PROPERTIES FOR MULTIPLE DIP DEPOSITION OF ZnS:Cu FILMS PREPARED BY CHEMICAL BATH DEPOSITION**

Luis Carlos Santana Medina[1], María de la Luz Mota González[2,3], Francisco Servando Aguirre

Tostado[4], Marcela Mireles Ramírez[5], Priscy Alfredo Luque Morales[6], Amanda Carrillo Castillo[1]

[1]Universidad Autónoma de Ciudad Juárez, Instituto de Ingeniería y Tecnología, Departamento de Ingeniería Eléctrica y Computación, Mexico. [2]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Instituto de Ingeniería y Tecnología, Departamento de Ingeniería Eléctrica y Computación, Mexico. [3]Universidad Autónoma de Ciudad Juárez, Instituto de Ingeniería y Tecnología. Departamento de Ingeniería Eléctrica y Computación, Mexico. [4]Centro de Investigación en Materiales Avanzados, S.C., Unidad Monterrey, Mexico. [5]Rochester Institute of Technology, United States. [6]Universidad Autónoma de Baja California, Facultad de Ingeniería, Arquitectura y Diseño, Mexico.

- **SB4-P028 SYNTHESIS AND CHARACTERIZATION OF PBS/SIO_2 CORE-SHELL NANOSPHERES FOR APPLICATIONS IN OPTOELECTRONIC DEVICES**

Anderson Klay Romero Jaime[1], Milka del Carmen Acosta Enríquez[1], Horacio Antolin Pineda Leon[1], Judith Celina Tanori Cordova[2], Santos Jesús Castillo[1]

[1]Universidad de Sonora, Investigación en Física, Mexico. [2]Universidad de Sonora, Investigación en Materiales, Mexico.

- **SB4-P029 SYNTHESIS AND CHARACTERIZATION OF PbS NANOPARTICLES BY CHEMICAL BATH.**

Beatriz Guadalupe Zaragoza Palacios[1], Roberto Pedro Duarte Zamorano[1], Mario Enrique Alvarez Ramos[1], Santos Jesús Castillo[2]

[1]Universidad de Sonora, Fisica, Mexico. [2]Universidad de Sonora, Departamento de Investigación en Física, Mexico.

TUESDAY, AUGUST 21
ROOM: COZUMEL

- **08:00 - 08:30 SB4-O015 Invited Talk DEVELOPMENT OF SOLUTION-PROCESSED, LOW-TEMPERATURE HYBRID FILMS FOR DIELECTRIC GATE APPLICATIONS**

Rafael Ramirez Bon[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Unidad Querétaro, Mexico.

- **08:30 - 08:45 SB4-O016 MULTILAYER STUDY ON PURIFIED POLYANILINE-POLYVINYL ALCOHOL (PANI-PVA) MEMBRANES OBTAINED BY SPIN COATING DEPOSITION AND ITS RESPONSE TO GLUTARALDEHYDE**

Jorge Manuel Guerrero Villalba[1], Amanda Carrillo Castillo[2], María de Luz Mota González[2,3], Roberto Carlos Ambrosio Lázaro[4], Francisco Servando Aguirre Tostado[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Electrónica Flexible y Energías Alternas, Mexico. [2]Universidad Autónoma de Ciudad Juárez, Ingeniería Eléctrica y Computación, Mexico. [3]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Dirección Adjunta al Desarrollo Científico, Dirección de Cátedras, Mexico. [4]Benemerita Universidad Autonoma de Puebla, Facultad de Ciencias de la Electrónica, Mexico.

- **08:45 - 09:00 SB4-O017 STUDY OF THE PHYSICAL PROPERTIES OF BI_2S_3 /PANI THIN FILMS OBTAINED BY SOLUTION PROCESS FOR ELECTRONIC DEVICES APPLICATIONS**

Brayan German Rivas Valles[1], Maria de la Luz Mota[2,3], Francisco Servando Aguirre Tostado[4], Roberto C. Ambrosio Lázaro[5], Mijung Lee[6], Amanda Carrillo Castillo[1]

[1]Universidad Autónoma de Ciudad Juárez, Departamento de Ingeniería Eléctrica y Computación, Instituto de Ingeniería y Tecnología, Mexico. [2]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Departamento de Ingeniería Eléctrica y Computación, Instituto de Ingeniería y Tecnología, Mexico. [3]Universidad Autónoma de Ciudad Juárez, Departamento de Ingeniería Eléctrica y Computación, Mexico. [4]Centro de Investigación en Materiales Avanzados, S.C., Unidad Monterrey, Mexico. [5]Benemerita Universidad Autonoma de Puebla, Mexico. [6]Kookmin University, School of Advanced Materials Engineering, Korea.

- **09:00 - 09:15 SB4-O018 STUDY OF THE ELECTRIC PROPERTIES OF G/PLA (GRAPHENE WITH POLY-LACTIC ACID) OBTAINED BY THE ELECTRO-SPINNING PROCESS**

Nestor Alonso Sierra Cardenas[1], Mercy Tatiana Villate Fonseca[1], Omar Franklin Rojas Moreno[1]

[1]Universidad Antonio Nariño, Facultad de Ingeniería Mecánica, Electrónica y Biomédica, Colombia.

- **09:15 - 09:30 SB4-O019 ULTRASOUND ASSISTED SYNTHESIS OF AgNPs USING PVA AND PEG AS STABILIZING AGENT AT ROOM TEMPERATURE**

Ana Janeth Verdugo Ontiveros[1], Amelia Olivas Sarabia[2], María de la Luz Mota González[3], Priscy Alfredo Luque Morales[4], Brayan Germán Rivas Valles[1], Amanda Carrillo Castillo[5]

[1]Universidad Autónoma de Ciudad Juárez, Instituto de Ingeniería y Tecnología, Departamento de Ingeniería Eléctrica y Computación, Mexico. [2]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Departamento de Nanocatálisis, Mexico. [3]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Instituto de Ingeniería y Tecnología, Departamento de Ingeniería Eléctrica y Computación, Mexico. [4]Universidad Autónoma de Baja California, Facultad de Ingeniería,

Arquitectura y Diseño, Mexico. [5]Universidad Autónoma de Ciudad Juárez, Departamento de Ingeniería Eléctrica y Computación, Instituto de Ingeniería y Tecnología, Mexico.

▸ **09:30 - 10:00 SB4-O020 Invited Talk ENGINEERING GRAPHENE AND TRANSITION METAL DISULFIDES FOR NANOELECTRONIC DEVICE APPLICATIONS**

Moon-Ho Ham[1]

[1]Gwangju Institute of Science and Technology (GIST), Materials Science and Engineering, Korea.

▸ **10:00 - 10:30 SB4-O021 Invited Talk DEVELOPMENT OF NANO AND MICROCRYSTALLINE SEMICONDUCTORS DEPOSITED AT LOW TEMPERATURES FOR FLEXIBLE ELECTRONIC DEVICES APPLICATIONS**

Mario Moreno[1], Arturo Torres[1], Pedro Rosales[1], Miguel Domínguez[2], Alfonso Torres[1], Roberto Ambrosio[3], Alfredo Morales[4]

[1]Instituto Nacional de Astrofísica, Óptica y Electrónica, Electronics, Mexico. [2]Benemerita Universidad Autonoma de Puebla, CIDS, Mexico. [3]Benemerita Universidad Autonoma de Puebla, FCE BUAP, Mexico. [4]Centro de Investigación en Materiales Avanzados, S.C., Unidad Monterrey, Mexico.

■ **10:30 - 10:45 SB4-O022 PIEZORESISTIVE AND THERMORESISTIVE CHARACTERIZATION OF CARBON HYBRID NANOCOMPOSITES**

Raúl Armando Pech Pisté[1,2], Fidel Fernando Gamboa Perera[3], Alejandro May Pat[1], Marco Antonio Cen Puc[1], Abraham Isaías Balam Mena[1], Francis Avilés Cetina[1]

[1]Centro de Investigación Científica de Yucatán, Materials, Mexico. [2]Universidad Autónoma de Yucatán, Physics Engineering, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Applied Physics, Mexico.

■ **10:45 - 11:00 SB4-O023 STUDY OF THE THERMOELECTRIC PROPERTIES OF G/PLA (GRAPHENE WITH POLY-LACTIC ACID) OBTAINED BY THE ELECTRO-SPINNING**

Mercy Tatiana Villate Fonseca[1,2]

[1]Universidad Antonio Nariño, Boyacá, Colombia. [2]Universidad Pedagógica y Tecnológica de Colombia, Colombia.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY III
DR. AMANDA S. BARNARD

■ **12:30 - 12:45 SB4-O024 PHENYLBORONIC ACIDS/ PVA COMPLEX THIN FILMS IN BIOLOGICAL RECOGNITION**

Ricardo Lozano Bravo[1], Amanda Carrillo[1], Mario Moreno[2], Mijung Lee[3], María de la Luz Mota González[1,4], José Guadalupe Télles[5]

[1]Universidad Autónoma de Ciudad Juárez, Ingeniería Eléctrica y Computación, Mexico. [2]Instituto Nacional de Astrofísica, Óptica y Electrónica, Electrónica, Mexico. [3]Kookmin University, School of Advanced Materials Engineering, Korea. [4]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Ingeniería Eléctrica y Computación, Mexico. [5]Centro de Investigación en Química Aplicada - CIQA , CIQA, Mexico.

▸ **12:45 - 13:15 SB4-O025 Invited Talk CONSIDERATIONS TO IMPLEMENT IN-PIXEL THIN FILM ELECTRONICS FOR LARGE AREA SENSOR ARRAYS**

Israel Mejia[1], Carlos Avila[2], Rodolfo Zola Garcia Lozano[3], Sergiy Rozhdestvenskyy[2], Christopher Pham[2], Bhabendra Pradhan[4], Manuel A. Quevedo López[2], Bruce Gnade[5]

[1]The University of Texas at Dallas, Materials Science and Engineering, United States. [2]University of Texas at Dallas, Materials Science and Engineering, United States. [3]Universidad Autónoma del Estado de México, Computacion, Mexico. [4]Nanoholdings LLC, CTO, United States. [5]Southern Methodist University, Lyle School of Engineering, United States.

14:00 – 16:00 Lunch time time

Symposium B5

FUNCTIONAL SURFACES AND THEIR INTERACTIONS WITH BIOLOGICAL SYSTEMS

Halima Alem / Lorraine University
Philippe Lavalle / National Institute of Health and Medical Research
Julia Kzhyshkowska / Heidelberg University
Karine Glinel / Université catholique de Louvain

TUESDAY, AUGUST 21
ROOM: VALLARTA

- **08:00 - 08:30 SB5-O001 Invited Talk**
  NANOFIBRILLAR PATCHES OF COMMENSAL SKIN BACTERIA
  Jonas Alain[1]
  [1]Université Catholique de Louvain, Institute of Condensed Matter and Nanosciences, Belgium.

- **08:30 - 08:45 SB5-O002 ANTIMICROBIAL COATINGS BASED ON BIOPOLYMERS FOR MEDICAL DEVICES**
  Philippe Lavalle[1], Angela Mutschler[1], Lorène Tallet[1], Cynthia Caligaro[1], Nihal Engin Vrana[2], Pierre Schaaf[1]
  [1]INSERM, Biomaterials and Bioengineering, France. [2]Protip Medical, Biomedical, France.

- **08:45 - 09:00 SB5-O003 LAYER-BY-LAYER ENCAPSULATION OF A COMMENSAL SKIN BACTERIA TO CONTROL ITS GROWTH**
  Glinel Karine[1]
  [1]Université Catholique de Louvain, Institute of Condensed Matter and Nanosciences (Bio and Soft Matter), Belgium.

- **09:00 - 09:15 SB5-O004 SUPERPARAMAGNETIC IRON OXIDE NANOPARTICLES COVERED WITH METHYLENE BLUE FOR ANTIMICROBIAL PHOTODYNAMIC THERAPY**
  Paula Haddad[1], Victor Toledo Saulo[1], Martha S. Ribeiro[2], Saulo T. Pereira[2], Tania M. Yoshimura[2]
  [1]Universidade Federal de São Paulo, Departamento de Química, Brazil. [2]Universidade de São Paulo, Centro de Lasers e Aplicações, IPEN-CNEN/SP, Brazil.

- **09:15 - 09:30 SB5-O005 NANOMATERIAL-BASED FORMULATIONS TO CONTROL MICROBIAL COLONIZATION OF STONE: TESTING, EFFECTIVENESS AND ENVIRONMENTAL IMPLICATIONS**
  Benjamín Otto Ortega Morales[1], Juan Carlos Camacho Chab[1], María Manuela Reyes Estebanez[1], Manuel Jesús Chan Bacab[1]
  [1]Universidad Autónoma de Campeche, Microbiología Ambiental y Biotecnología, Mexico.

- **09:45 - 10:15 SB5-O006 Invited Talk**
  MOLECULARLY IMPRINTED POLYMER MODIFIED CdTeS/ZnS QDs FOR THE RECOGNITION OF DOPAMINE
  Raphael Schneider[1]
  [1]Université de Lorraine, LRGP, France.

- **10:15 - 10:30 SB5-O007 COMPARISON OF SELF-ASSEMBLY MONOLAYERS BETWEEN SILICON AND**

HYDROGENATED AMORPHOUS SILICON CARBIDE SUBSTRATES FOR BIOLOGICAL BIOSENSORS

Francisco Javier Gómez Montaño[1], Orlando Zaca Moran[2], María del Carmen Guadalupe Avelino Flores[3], Fabiola Avelino Flores[4], Claudia Reyes Betanzo[5], Janet Morales Chávez[1], Abdú Orduña Díaz[2]

[1]Centro de investigación en biotecnología aplicada, Mexico. [2]Centro de investigación en biotecnología aplicada, Instrumentación, Mexico. [3]Benemerita Universidad Autonoma de Puebla, Alimentos, Mexico. [4]Benemerita Universidad Autonoma de Puebla, MIcrobiología, Mexico. [5]Instituto Nacional de Astrofísica, Óptica y Electrónica, Instrumentación, Mexico.

■ **10:30 - 10:45 SB5-O008 PMMA-BASED MICROFLUIDIC SYSTEM FOR POINT-OF-CARE APPLICATIONS**

José Herrera Celis[1,2], Euth Ortiz Ortega[1], Luis Gerardo Arriaga[1], Beatriz Liliana España Sánchez[3]

[1]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Generación de Energía por Vía Electroquímica, Mexico. [2]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Cátedras CONACYT, Mexico. [3]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Procesos Industriales y Recubrimientos, Mexico.

■ **10:45 - 11:00 SB5-O009 NOVEL HYBRID-SEMICONDUCTOR STRUCTURE FEATURING A SET OF FUNCTIONALISED DOUBLE-CLAMPED BEAMS FOR BIO APPLICATIONS**

Cesar Adrian Hernandez Lopez[1], Mario Alberto Garcia Ramirez[1], Nancy Elizabeth Franco Rodriguez[2], Jose Trinidad Guillen Bonilla[1], Miguel Angel Bello Jimenez[3], Cesar Millan Castillo[1], Rosa Elvia Lopez Estopier[3], Maria Esther Macias Rodriguez[2]

[1]Universidad de Guadalajara, Electronics and Computer Science, Mexico. [2]Universidad de Guadalajara, Pharmacobiology, Mexico. [3]Universidad Autónoma de San Luis Potosí, Instituto de Investigacion en Comunicacion Optica, Mexico.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY III
DR. AMANDA S. BARNARD

▸ **12:30 - 13:00 SB5-O010 Invited Talk RING-OPENING POLYMERIZATION OF EUTECTIC MIXTURES IN GEL EMULSIONS: TOWARDS BIODEGRADABLE HIERARCHICAL NANOCOMPOSITES FOR TISSUE ENGINEERING**

Josue David Mota Morales[1], María Guadalupe Pérez García[2], Cristina Velasquillo Martínez[3], Joseline Janai Hidalgo Moyle[1,3], Jose Manuel Cervantes Díaz[2]

[1]Universidad Nacional Autónoma de México, Centro de Física Aplicada y Tecnología Avanzada, Mexico. [2]Universidad de Guadalajara, Centro Universitario de Tonalá, Mexico. [3]Instituto Nacional de Rehabilitacion, Biotecnología, Mexico.

▸ **13:00 - 13:30 SB5-O011 Invited Talk MICROENGINEERED IMMUNOMODULATORY HYDROGELS FOR CONTROLLING IMPLANT MICROENVIRONMENT**

Nihal Engin Vrana[1,2]

[1]INSERM, UMR 1121, France. [2]Protip Medical, France.

■ **13:30 - 13:45 SB5-O012 IMMUNOMODULATION ON THE IMPLANT-TISSUE INTERFACE USING SELF-STANDING RELEASE SYSTEM WITH MACROPHAGE PHENOTYPE-FIXING CYTOKINE FORMULATION**

Julia Kzhyshkowska[1], V Riabov[2], F Salazar[3], Ss Htwe[3], A Gudima[2], J Barthes[4], H Knopf Marques[5], H Klüter[2,6], Am Ghaemmaghami[3], Ne Vrana[4]

[1]Baden-Württemberg-Hessen, Institute for Transfusion Medicine and Immunology, Germany. [2]University of Heidelberg, Institute for Transfusion Medicine and Immunology, Germany. [3]The University of Nottingham, Division of Immunology, United Kingdom, Channel Islands & Isle of Man. [4]Protip Medical, Protip Medical, France. [5]Université de Strasbourg, Faculté de Chirurgie Dentaire, France. [6]Red Cross Blood Service Baden-Württemberg-Hessen, Red Cross Blood Service, Germany.

■ **13:45 - 14:00 SB5-O013 LIPOAMINO ACID: TWO-STEP SYNTHESIS OF THIOL-FUNCTIONALIZED OLEIC ACID**

María del Carmen Ley Flores[1], Han Noé Umaña Kossio[1], Marco Vizcarra[2], Armando Lucero Acuña[1,2], Paul Zavala Rivera[1,2], Anya Argüelles[2]

[1]Universidad de Sonora, Departamento de Ingeniería Química y Metalurgia, Mexico. [2]Universidad de Sonora, Posgrado en Nanotecnología, Mexico.

■ **14:00 - 14:15 SB5-O014 EFFECT OF BOTH YSZ CONTENT OF AN HA PLASMA SPRAY BIO-COATING**

Victor Orozco[1], Roberto Gómez Batres[2], Irene Leal Solís[3], Hugo Estupiñan[4]

[1]Centro de Investigación en Materiales Avanzados, S.C., MIE, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., MEI, Mexico. [3]Universidad Autónoma de Chihuahua, Facultad de Medicina, Mexico. [4]Universidad Nacional de Colombia, Sede Medellin, Facultad de MInas, Colombia.

14:00 - 16:00 Lunch time

16:00 - 16:30 SB5-O015 Invited Talk PROTEIN ADSORPTION AND CELLULAR RESPONSE TO BIOCOMPATIBLE METAL OXIDE COATINGS

Phaedra Suriel Silva Bermudez[1], Argelia Almaguer Flores[2], Victor Irahuen García Pérez[2], Rene Olivares Navarrete[3], Sandra Elizabeth Rodil[4]

[1]Instituto Nacional de Rehabilitacion, Unidad de Ingenieria de Tejidos, Terapia Celular y Medicina Regenerativa, Mexico. [2]Universidad Nacional Autónoma de México, Division de Investigación y Estudios de Posgrado, Facultad de Odontología, Mexico. [3]Virginia Commonwealth University, Department of Biomedical Engineering, United States. [4]Universidad Nacional Autónoma de México, Instituto de investigaciones en Materiales, Mexico.

16:30 - 16:45 SB5-O016 FOCUSED ELECTRON AND ION BEAM (FEB-FIB) MODIFICATION OF BIOCERAMIC SURFACES FOR OSTEOBLAST CELLS ADHESION OPTIMIZATION

Feray Bakan[1], Melike Çokol Çakmak[2], Meltem Sezen[1], Elif Celik[2], Zaeema Khan[2], Tolga Sutlu[1]

[1]Sabanci University, SUNUM, Turkey. [2]Sabanci University, FENS, Turkey.

16:45 - 17:00 SB5-O017 PATTERNED BORON-DOPED DIAMOND COATED CNTS FOR APPLICATIONS IN NEURONAL INTRA–CELLULAR RECORDING

Sungmyung Kang[1], Alice Taylor[1], Richard Jackman[1]

[1]University College London, London Centre for Nanotechnology, United Kingdom, Channel Islands & Isle of Man.

17:00 - 17:15 SB5-O018 IN-VITRO BIOCOMPATIBILITY TESTING OF THE NANOSTRUCTURES FORMED BY ANODIZING IN A SUPERELASTIC Ti-BASE ALLOY

Frank Eduardo Meléndez Anzures[1], Luis Alberto López Pavón[1], Iván Eleazar Moreno Cortez[1], Diana Ginette Zárate Triviño[2], Enrique Manuel López Cuellar[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ciencias Biológicas, Mexico.

17:15 - 17:30 SB5-O019 SUFACE BIOFUNCTIONALIZATION OF POLYCAPROLACTONE AND CHITOSAN COATINGS VIA DIRECT ION BEAM PROCESSING

Meltem Sezen[1], Özlem Karahan[1], Melike Çokol Çakmak[2], Feray Bakan[1]

[1]Sabanci University, SUNUM, Turkey. [2]Sabanci University, FENS, Turkey.

TUESDAY, AUGUST 21
ROOM: TERRACE

18:30 -20:30 POSTER SESSION & COFFEE BREAK

SB5-P001 DEVELOPMENT OF OPTIMIZED PLASMONIC SUBSTRATES FOR THE DETECTION OF GLYPHOSATE IN CORN BY SERS

Karen Alejandra López Castaños[1], Enrique Quiroga González[2], Alia Méndez Albores[1]

[1]Benemerita Universidad Autonoma de Puebla, Institute of sciences, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Institute Physics, Mexico.

SB5-P002 MODEL OF CELL MEMBRANES AND PROTEIN DYNAMICS

Rosario Esperanza Moctezuma Martiñón[1], Isis Sarahí Lázaro Covarrubias[2], José Luis Arauz Lara[1]

[1]Universidad Autónoma de San Luis Potosí, Instituto de Física, Mexico. [2]Universidad Autónoma de San Luis Potosí, Facultad de Ciencias, Mexico.

SB5-P003 CALCIUM-INDUCED TUBULIN RING FORMATION OBSERVED BY HS-AFM

David Alejandro Garcia Ortiz[1], Noriyuki Kodera[2], Jorge Luis Menchaca Arredondo[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Fisico Matematicas, Mexico. [2]Kanazawa University, Department of Physics, Japan.

SB5-P004 BACTERICIDAL BEHAVIOR HYDROTALCITE/COTTON COMPOSITES WITH HIGH ACTIVITY AGAINST CORYNEBACTERIUM AMMONIAGENES BACTERIUM

Ana María León Vallejo[1], Geolar Fetter[1], Alvaro Sampieri[2], Gerardo Landeta Cortés[3]

[1]Benemerita Universidad Autonoma de Puebla, Facultad de Ciencias Químicas, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniería Química, Mexico. [3]Benemerita Universidad Autonoma de Puebla, Centro Universitario de Vinculación y Transferencia de Tecnología, Mexico.

SB5-P005 A SENSITIVE NON-ENZYMATIC ELECTROCHEMICAL GLUCOSE SENSOR BASED ON HYBRID MATERIAL OF GRAPHENE NANO SHEETS/ TIO2 NANOPARTICLES

Salvador Fernandez Tavizon[1], Edgar Cuara Diaz[1], Jesus Alfonso Mercado Silva[1], Manuel Eduardo Martinez Cartagena[1], Uriel Alejandro Sierra Gomez[1]

[1]Centro de Investigación en Química Aplicada - CIQA , Laboratorio Nacional de Materiales Grafénicos, Mexico.

- **SB5-P006 ANTIFOULING PHOTO-BACTERICIDAL COMBINED EFFECT OF A AG@NANOMOF**

Ana Arenas Vivo[1], Gerogiana Amariei[2], Sonia Aguado[3], Roberto Rosal[3], Patricia Horcajada[1]

[1]IMDEA Energy, Advanced Porous Materials Unit, Spain. [2]Universidad de Alcalá de Henares, Chemical Engineering, Spain. [3]Universidad de Alcalá, Chemical Engineering, Spain.

- **SB5-P007 SYNTHESIS AND CHARACTERIZATION OF FUNCTIONALIZED LUMINESCENT NANOPARTICLES AS BIOLABELS OF CANCER CELLS**

Rodrigo Osorio Arciniega[1,2], Pierrick Fournier[1], Bonifacio Alejandro Can Uc[3], Akhil Jain[3], Gustavo Alonso Hirata[3], Patricia Juárez[1]

[1]Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE), Biomedics (Cancer and Bone Research), Mexico. [2]Centro de Nanociencias y Nanotecnología CNyN-UNAM, BioNanosciences, Mexico. [3]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Physical Chemistry of Materials, Mexico.

- **SB5-P008 FUNCTIONALIZATION OF ZnO NANOWIRES ARRAY FOR ATTACHMENT OF FUCOSILATED PROTEINS EPITHELIAL OVARIAN CANCER**

Oscar Eduardo Cigarroa Mayorga[1], Patricia Talamás Rohana[2], Salvador Gallardo Hernandez[3]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Nanociencias y Nanotecnología, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Infectómica y Patogénesis Molecular, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, LANE, Mexico.

- **SB5-P009 PHYSICAL CHEMICAL STUDY OF SEEDS BELONGING TO THE PASSIFLORACEAE FAMILY**

Laura María Echeverry Cardona[1], Javier Torres Osorio[2], Elisabeth Restrepo Parra[1], Diana Carolina Galvez Coy[3]

[1]Universidad Nacional de Colombia, Laboratorio de Física del Plasma, Colombia. [2]Universidad de Caldas, Grupo de Investigacion en Campo Electromagneticos, Medio Ambiente y Salud Publico, Colombia. [3]SENA, Tecnoacademia, Colombia.

- **SB5-P010 EFFECT OF CHITOSAN-COATED GOLD NANOPARTICLES (AUNPS) ON DENDRITIC CELLS (DC)**

Margarita Hernández[1], Diana Ginette Zarate Triviï¿½o[1], Moisés Franco Molina[1], Cristina Rodríguez Padilla[1], Diana Caballero Hernández[1]

[1]Universidad Autónoma de Nuevo León, Laboratorio de Inmunología y Virología, Mexico.

- **SB5-P011 EFFECT OF THE INCORPORATION OF NANOPARTICLES OF CALCIUM CARBONATE IN THERMODYNAMIC PROPERTIES IN A LIQUID-AIR INTERFACE**

Jair Rafael Carrillo Avila[1], Carlos Rodriguez[2], Jaime Ruiz García[2], Patricia Quintana Owen[3], Refugio Bernardo Garcia Reyes[1], Alcione Garcia Gonzalez[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Quimicas, Mexico. [2]Universidad Autónoma de San Luis Potosí, Instituto de Física, Mexico. [3]CINVESTAV-Mérida, Laboratorio nacional de nano y biomateriales, Mexico.

- **SB5-P012 DEVELOPMENT OF 3D PRINTED EDIBLE CARRIERS TO IMPROVE INTESTINAL HEALTH**

Silvestre de Jesus Chavez Bautista[1], Marisela González Avila[1], Zaira Yunuen Garcia Carvajal[1]

[1]Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco, Medical Pharmaceutical Biotechnology, Mexico.

- **SB5-P013 SYNTHESIS OF ORGANIC LIGNIN/ COPPER NANOCOMPOSITES WITH COMBINED ANTIBACTERIAL/ANTICORROSION CHARACTERISTICS**

Erika Valeria Cortez Cruz[1], Yunnuen Zepeda Cortez[1], Leonardo Mondragón Núñez[1], Gabriel Luna Bárcenas[2], Beatriz Liliana España Sánchez[1]

[1]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Procesos industriales y Recubrimientos, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Polímeros y Biopolímeros, Mexico.

- **SB5-P014 DEVELOPMENT OF ANTIFOULING COATINGS BASED ON HYBRID POLYMER/METAL NANOCOMPOSITES**

Cristian Isael Galindo Velazquez[1,2], José Mojica Gómez[3], José Manuel Mata Padilla[1], Beatriz Liliana España Sánchez[2]

[1]Centro de Investigación en Química Aplicada - CIQA , Materiales Avanzados, Mexico. [2]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Procesos Industriales y Recubrimientos, Mexico. [3]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Subdirección de Tecnología, Mexico.

■ **SB5-P015 EVALUATION OF DIFFERENT METHODS TO SYNTHESIZE OF IRON OXIDE NANOPARTICLES TO POSSIBLE APPLICATIONS IN MAGNETIC HYPERTHERMIA**

David Ravelo[1], Jaime Santoyo[2], Hernani Yee Madeira[1]

[1]Instituto Politécnico Nacional - IPN, Física, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Física, Mexico.

WEDNESDAY, AUGUST 22
ROOM: MAYA VI

▸ **16:00 - 16:30 SB5-O020 Invited Talk PEPTIDE-MEDIATED CYTOSOLIC DELIVERY OF QUANTUM DOTS AND GOLD NANOMATERIALS**

Hedi Mattoussi[1]

[1]Florida State University, Department of Chemistry and Biochemistry, United States.

■ **16:30 - 16:45 SB5-O021 N-(AMINOALKYL)-BIOTINAMIDES ASSEMBLED ON GOLD NANOPARTICLES PROBES FOR RECOGNITION OF AVIDIN**

Samantha Suszek[1], Ignacio Alfredo Rivero Espejel[1]

[1]Instituto Tecnológico de Tijuana, Centro de Graduados e Investigación en Química, Mexico.

■ **16:45 - 17:00 SB5-O022 SYNTHESIS, CHARACTERIZATION AND EVALUATION OF GOLD-CHITOSAN-VINCRISTINE SULFATE (CVcAu-QTS) NANOCOMPLEXES AS A DRUG RELEASE SYSTEM FOR CANCER CELLS**

Diana Ginette Zarate Triviño[1], Edelin Posada Briseño[1], Moisés Franco Molina[1], Sergio Galindo Rodríguez[2], Cristina Rodríguez Padilla[1]

[1]Universidad Autónoma de Nuevo León, Immunology, Mexico. [2]Universidad Autónoma de Nuevo León, Analytic chemistry, Mexico.

■ **17:00 - 17:15 SB5-O023 THERMO-RESPONSIVE CORE/SHELL SPIONs AND THEIR FURTHER INTERACTION WITH CANCER CELLS**

Alem Halima[1]

[1]CNRS-Universite de Lorraine, Institut Jean Lamour, France.

■ **17:15 - 17:30 SB5-O024 INFLUENCE OF THE SURFACE CHARGE ON THE BROWNIAN MOTION AND THE INTERACTION OF COLLOIDAL PARTICLES NEAR BIOMIMETIC SURFACES**

Juan Manuel Hernandez Meza[1], Maria de Los Angeles Ramirez Saito[1], Juan Rodrigo Velez Cordero[2], Said Eduardo Aranda Espinoza[1], Bernardo José Luis Arauz Lara[1], Bernardo Yañez Soto[2]

[1]Universidad Autónoma de San Luis Potosí, Instituto de Fisica, Mexico. [2]Conacyt - Universidad Autonoma de San Luis Potosi, Instituto de Fisica, Mexico.

Symposium B6

MATERIALS FOR MEDICAL APPLICATIONS AND HEALTH

Phaedra Silva-Bermudez / Instituto Nacional Rehabilitación
Sandra E. Rodil / Universidad Nacional Autónoma de México
Diego Mantovani / Laval University
Fabio Variola / University of Ottawa

MONDAY, AUGUST 20
ROOM: MEXICO

- **09:15 - 09:45 SB6-O001 Invited Talk SYNTHETIC SMALL CALIBER VASCULAR GRAFTS: CHEMISTRY, MECHANICS AND BIOCOMPATIBILITY**

  Juan Valerio Cauich Rodriguez[1]

  [1]Centro de Investigación Científica de Yucatán, Unidad de Materiales, Mexico.

- **09:45 - 10:00 SB6-O002 SOFTENING SPINAL CORD STIMULATION ARRAYS FOR CHRONIC TREATMENTS**

  Aldo Garcia Sandoval[1], Ajay Pal[2], Sydney Sherman[1], Adriana Carolina Duran Martinez[1], Alexandra Joshi Imre[3], Jason Carmel[2], Walter Voit[4]

  [1]University of Texas at Dallas, Bioengineering, United States. [2]Cornell University, Burke Medical Research Institute, United States. [3]University of Texas at Dallas, Center of engineering innovation, United States. [4]University of Texas at Dallas, Materials Science and Engineering, United States.

- **10:00 - 10:15 SB6-O003 A NOVEL CONDUCTIVE AND FLEXIBLE FILM FOR NEURO-REGENERATION**

  Keila Neri Alvarado Estrada[1,2], Eyleen Goh[3], Olindi Wijesekera[1], Eunice Chin[3], Kaisorn Chaichana[1], Alfredo Quinones Hinojosa[1], Manuel Monleon Pradas[4]

  [1]Mayo Clinic, Neurosurgery, United States. [2]Universidad Politécnica de Valencia, Center for Biomaterials and Tissue Engineering, Spain. [3]DUKE-NUS, Neuroscience Academic Clinical Programme, DUKE-NUS Medical School, Singapore. [4]Universidad Politécnica de Madrid, Center for Biomaterials and Tissue Engineering, Spain.

- **10:15 - 10:30 SB6-O004 DESORPTION STUDY OF IMMUNOSUPPRESSIVE, ANTICOAGULANT AND ANTITHROMBOTIC DRUGS IN POLY (L-LACTIC-CO-GLYCOLIC ACID) AND POLY (DL-LACTIC-CO-GLYCOLIC ACID), FOR USE IN DRUG-ELUTING STENTS**

  María José Valarezo[1], Lazaro Ruiz Virgen[1], Rubén Caro Briones[1], Francisco Rivera[1]

  [1]Instituto Politécnico Nacional - IPN, ESIQIE, Mexico.

- **10:30 - 10:45 SB6-O005 DEVELOPMENT AND CHARACTERIZATION OF AN EFFICIENT NANOVECTOR FOR ANTIOXIDANT DELIVERY IN CARDIAC NANOMEDICINE APPLICATIONS**

  Omar Lozano[1,2], Anay Fernanda Lázaro Alfaro[1], Alejandro Torres Quintanilla[1], Judith Bernal Ramírez[1], Yuriana Oropeza Almazán[1,2], Gerardo de Jesús García Rivas[1,2]

  [1]Instituto Tecnológico y de Estudios Superiores de Monterey, Cátedra de Cardiología y Medicina Vascular, Escuela de Medicina y Ciencias de la Salud, Mexico. [2]Instituto Tecnológico y de Estudios Superiores de Monterey, Centro de Investigación Biomédica, Hospital Zambrano-Hellion, Mexico.

- **10:45 - 11:00 SB6-O006 DEVELOPMENT AND IN VITRO EVALUATION OF POLYCAPROLACTONE-GELATIN ELECTROSPUN MATRICES AS POTENTIAL SCAFFOLDS FOR WOUND TREATMENT**

Gina Prado Prone[1,2], Maasoomeh Bazzar[3], Phaedra Suriel Silva Bermudez[2], Maria Letizia Focarete[3], Jorge A. García Macedo[4], Adriana Hernandez Rangel[2,5], Angelica Fernandez Puron[2,6], Sandra Elizabeth Rodil[7], Cristina Velasquillo[8]

[1]Instituto de Investigaciones en Materiales, Posgrado en Ciencia e Ingeniera de Materiales, Mexico. [2]Instituto Nacional de Rehabilitacion, Unidad de Ingeniería de Tejidos, Terapia Celular y Medicina Regenerativa, Mexico. [3]Alma Mater Studiorum - Università di Bologna, Dipartimento di Chimica Giacomo Ciamician, Italy. [4]Instituto de Física - Universidad Nacional Autónoma de México, Departamento de Estado Solido, Mexico. [5]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, CINVESTAV-Queretaro, Mexico. [6]Facultad de Química, UNAM, Facultad de Química, Mexico. [7]Instituto de Investigaciones en Materiales, Departamento de Baja Dimensionalidad, Mexico. [8]Instituto Nacional de Rehabilitacion, Subdirección de Investigación Tecnológica, Mexico.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY II
PROF. YUICHI IKUHARA

Session: ANTIBACTERIAL MATERIALS

SESSION CHAIR: PHAEDRA SILVA-BERMUDEZ

12:30 - 13:00 SB6-O007 Invited Talk SALIVARY PROTEINS AND THEIR POTENTIAL TO REDUCE BACTERIAL COLONIZATION ON IMPLANT SURFACES

Miryam Martínez Hernández[1], Victor I. García Pérez[1], René Olivares Navarrete[2], Argelia Almaguer Flores[1]

[1]Universidad Nacional Autónoma de México, Facultad de Odontología, DEPeI, Mexico. [2]Virginia Commonwealth University, Biomedical Engineering, School of Engineering., United States.

13:15 - 13:30 SB6-O008 SYNTHESIS AND CHARACTERIZATION OF MOFs SUPPORTED ON COTTON FABRICS WITH ANTIBACTERIAL POTENTIAL APPLICATIONS

Cristian Andres Cano Benitez[1], Cesar Augusto Sierra Avila[1]

[1]Universidad Nacional de Colombia, Departamento de Química, Colombia.

13:30 - 13:45 SB6-O009 PHOTOACTIVE NANOMATERIALS FOR ANTIBACTERIAL APPLICATIONS

Petr Henke[1], Jirí Mosinger[1,2]

[1]Charles University, Faculty of Science, Department of Inorganic Chemistry, Czech Republic. [2]Institute of Inorganic Chemistry of the Czech Academy of Sciences, Department of Materials Chemistry, Czech Republic.

14:00 - 16:00 Lunch time

Session: CERAMIC BIOMATERIALS

SESSION CHAIR: FABIO VARIOLA

16:00 - 16:30 SB6-O010 Invited Talk TOWARDS DUCTILE BIO-CERAMICS: ZIRCONIA-BASED COMPOSITES WITH TRANSFORMATION-INDUCED PLASTICITY

Chevalier Jerome[1], Reveron Helen[1], Nicolas Courtois[2], Tobias Fuederer[3]

[1]MATEIS - INSA Lyon, UMR CNRS 5510, University of Lyon, France. [2]Anthogyr, Anthogyr SAS, France. [3]Doceram, Doceram medical, Germany.

16:30 - 16:45 SB6-O011 TECHNOLOGICAL DEVELOPMENT FOR COMMERCIALIZATION OF TRANSFORMATIONAL NEW GENERATION OF DENTAL IMPLANTS COATED WITH BIOCOMPATIBLE/CORROSION RESISTANT ULTRANANOCRYSTALLINE DIAMOND (UNCD) COATING

Orlando Hector Auciello[1,2], Karam Kang[3], Jesus J. Alcantar Peña[4], Daniel G. Olmedo[5], Sandra I. Renou[5], Debora R. Tasat[5]

[1]Original Biomedical Implants-México, Medical Devices, Mexico. [2]University of Texas at Dallas, Materials Science and Engineering and Bioegineering, United States. [3]University of Texas at Dallas, Materials Science and Engineering, United States. [4]University of Texas at Dallas, Materials Science and Engneering, United States. [5]Universidad de Buenos Aires, Department of Oral Pathology, Argentina.

16:45 - 17:00 SB6-O012 EVALUATION OF THE BIOCOMPATIBILITY OF SINTERED MATERIALS OF NATURAL WOLLASTONITE AND COMPOSITE OF HIDROXIAPATITE/WOLLASTONITE, PREPARED BY THE SOL-GEL TECHNIQUE

Luis Alberto Nuñez Rodriguez[1], Martín Antonio Encinas Romero[2]

[1]Universidad de Sonora, Posgrado en Ciencias de la Ingeniería: IQ, Mexico. [2]Universidad de Sonora, Ingeniería Química y Metalurgia, Mexico.

- **17:00 - 17:30 SB6-O013 Invited Talk NEW PERSPECTIVES IN PATHOLOGICAL BIOMINERALIZATION ENABLED BY LIQUID CELL ELECTRON MICROSCOPY**
  Tolou Shokuhfar[1]
  [1]University of Illinois at Chicago, PhD.Department of Bioengineerin, United States.

- **17:30 - 17:45 SB6-O014 CHARACTERIZATION AND EVALUATION OF COMPOSITE MATERIAL BIOGLASS - POLYLACTIC (BG-PLA) FOR BONE TISSUE ENGINEERING APPLICATIONS**
  Hugo I. Medina Vargas[1], **Nancy Nelly Zurita Méndez**[2], **Marco Antonio Espinosa Medina**[2], **Maria de Lourdes Ballesteros Almanza**[3], **Ana Beatriz Martinez Valencia**[2], **Georgina Carbajal de la Torre**[2]
  [1]Instituto Tecnológico de Morelia, Biochemistry, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Mechanical Engineering, Mexico. [3]Universidad Michoacana de San Nicolás de Hidalgo, Faculty of Biology, Mexico.

- **17:45 - 18:00 SB6-O015 INFLUENCE OF THE PROJECTION PARAMETERS ON MECHANICAL PROPERTIES OF BIOACTIVE GLASS COATING OBTAINED BY ATMOSPHERIC PLASMA SPRAYING (APS)**
  Alexander Barrios Barrios[1], **Renaldo Corro Guerrero**[1], **Monica Johanna Monsalve Arias**[2], **Yelsin Enrique Mendez Camacho**[3], **Isabel Cristina Niño Camacho**[3], **Héléne Ageorges**[4]
  [1]Universidad del Atlantico, Atlantico, Colombia. [2]Universidad Nacional de Colombia, Cundinamarca, Colombia. [3]SENA, Atlantico, Colombia. [4]University of Limoges, Science des Procédés Céramiques et de Traitements de Surface (SPCTS), Limoges, France.

- **18:00 - 18:15 SB6-O016 SYNTHESIS, STUDY AND CHARACTERIZATION OF HYDROXYAPATITE FOR BONE GROWTH ACCELERATION UNDER ELECTRIC FIELDS**
  Ricardo Perez Solis[1], **María Eugenia Mendoza**[1], **Abel Moreno Carcamo**[2]
  [1]Benemerita Universidad Autonoma de Puebla, Physics Institute, Mexico. [2]Instituto de Quimica UNAM, Departamento Química de Biomacromoléculas, Mexico.

- **17:30-18:30 Science, Technology and Society Lecture SENER**

MONDAY, AUGUST 20
ROOM: TERRACE

- **18:30 -20:30 POSTER SESSION & COFFEE BREAK**

- **SB6-P001 TiO_2, Al_2O_3, AND ZnO AS BIOMATERIALS FOR ANTIBACTERIAL APPLICATIONS IN DENTISTRY**
  Beatriz Adriana Andrade Espinoza[1], **Alejandro Perez Larios**[1]
  [1]University of Guadalajara, Ingenierias, Mexico.

- **SB6-P002 DEVELOPMENT AND CHARACTERIZATION OF POLYMER FILMS FOR THEIR APPLICATION IN REGENERATION OF EPITHELIAL TISSUE**
  Laura Elizabeth Valencia Gómez[1], **Santos Adriana Martel Estrada**[2], **Claudia Alejandra Rodríguez González**[1], **Claudia Lucia Vargas Requena**[3], **Juan Jose Acevedo Fernández**[4], **Juan Francisco Hernandez**[1], **Imelda Armendáriz**[1]
  [1]Universidad Autónoma de Ciudad Juárez, Física-matemáticas, Mexico. [2]Universidad Autónoma de Ciudad Juárez, Diseño industrial, Mexico. [3]Universidad Autónoma de Ciudad Juárez, Química, Mexico. [4]Universidad Autónoma del Estado de Morelos, Electrofisiología y Bioevaluación Farmacológica, Mexico.

- **SB6-P003 SYNTHESIS OF ANTIMICROBIAL ADDITIVES TO CONTROL FUNGAL GROWTH IN WATERBORNE COATINGS**
  Romina Arreche[1], **Katerine Igal**[1], **Natalia Bellotti**[2], **Patricia Vázquez**[1]
  [1]CINDECA, Chemistry, Argentina. [2]Centro de Investigación y Desarrollo en Tecnología de Pinturas (CIDEPINT), Chemistry, Argentina.

- **SB6-P004 MULTFUNCTIONAL NANOPLATAFORM COMPOSED OF SUPERPARAMAGNETIC MANGANESE IRON OXIDE CORE AND A MESOPOROUS SILICA SHELL FOR SIMULTANEUS DRUG DELIVERY AND FLUORESCENCE IMAGING**
  Susel del Sol Fernandez[1], **Yosuan Avila García**[1], **Herlys Viltres Cobas**[1], **Ricardo García Salcedo**[2], **Oscar Fernando Odio Chacón**[1], **Eva Ramón Gallegos**[3], **Edilso Reguera Ruiz**[1]
  [1]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, LNCAE, Mexico. [2]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Física Educativa, Mexico. [3]Escuela Nacional de Ciencias Biológicas, Morfología, Mexico.

- **SB6-P005 BACTERIAL INACTIVATION BY THE EFFECT OF NANOCOMPOSITE BASED ON ZINC OXIDE NANOPARTICLES**

  Jesica Yanina Pereyra[1], Diego F. Acevedo[1], Edith Ines Yslas[1], Cesar Alfredo Barbero[1]

  [1]Instituto de Investigaciones en Tecnologias Energeticas y Materiales Avanzados (UNRC-CONICET), Chemistry, Argentina.

- **SB6-P006 CONTROLLED BACTERICIDE EFFECT OF NANOCOMPOSITE BASED ON HYDROGEL AND SILVER NANOPARTICULES. HIGHLY EFFECTIVE AGAINST AGAINSTPATHOGENIC BACTERIA**

  Melisa Monerris[1], Martin Broglia[1], Cesar Alfredo Barbero[1], Claudia R. Rivarola[1], Edith Ines Yslas[2]

  [1]Instituto de Investigaciones en Tecnologias Energeticas y Materiales Avanzados (UNRC-CONICET), Chemistry, Argentina. [2]Instituto de Investigaciones en Tecnologias Energeticas y Materiales Avanzados (UNRC-CONICET), Molecular Biology, Argentina.

- **SB6-P007 PROLIFERATION AND COLLAGEN PRODUCTION OF BOVINE FETAL FIBROBLASTS INSIDE 3D SCAFFOLD BASED ON MACROPOROUS Poly(N-ISOPROPYLACRYLAMIDE) HYDROGEL**

  Rebeca Rivero[1], Virginia Capella[2], A. Cecilia Liaudat[3], Pablo Bosch[3], Nancy Rodriguez[3], Cesar Alfredo Barbero[1], Claudia R. Rivarola[1]

  [1]Instituto de Investigaciones en Tecnologias Energeticas y Materiales Avanzados (UNRC-CONICET), Chemistry, Argentina. [2]Instituto de Investigaciones en Tecnologias Energeticas y Materiales Avanzados (UNRC-CONICET), Molecular Biology, Argentina. [3]Universidad Nacional de Rio Cuarto, Molecular biology, Argentina.

- **SB6-P008 FRACTURE STRENGTH OF PORCELAIN VENEERS ON CoCr COPPINGS MANUFACTURED BY CASTING, CAD-CASTING AND CAD-CAM**

  Denisse Contreras[1], Sergio Belmares[2], Adrian Contreras[1], Geo Rolando Contreras Hernandez[1], Yaneth Bedolla Gil[1]

  [1]GEODENT, R&D, Mexico. [2]Universidad Autónoma de Nuevo León, FCFM, Mexico.

- **SB6-P009 ANTI-BIOFILM ACTIVITY OF A CHITOSAN HYDROGEL WITH GOLD NANORODS FOR PHOTOTHERMAL THERAPY AND THEIR CYTOTOXIC EFFECT ON HUMAN FIBROBLASTS**

  Carlos Omar Bermudez[1], Gabriel Alejandro Martinez[1], Nereyda Niño[2], Fidel Martinez[3], Nuria Patiño[1], Facundo Ruiz[2]

  [1]Universidad Autónoma de San Luis Potosí, Facultad de Estomatología, Mexico. [2]Universidad Autónoma de San Luis Potosí, Facultad de Ciencias, Mexico. [3]Universidad Autónoma de San Luis Potosí, Facultad de Ciencias Quimicas, Mexico.

- **SB6-P010 EFFECT OF THE BIOABSORBILITY OF BIOFILM MICROBIAL BUCCAL AND BACTERIA OF Escherichia coli. IN SCAFFOLDS OF POLYLACTIC ACID-POLYCAPROLACTONE-HYDROXYPATITE (PLA-PCL-HA)**

  Miguel T. Candelario Domínguez[1], Maria de Lourdes Ballesteros Almanza[1], Marco Antonio Espinosa Medina[2], Miguel Villagomez Galindo[2], Ana Beatriz Martinez Valencia[2], Georgina Carbajal de la Torre[2]

  [1]Universidad Michoacana de San Nicolás de Hidalgo, Faculty of Biology, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Mechanical Engineering, Mexico.

- **SB6-P011 METFORMINE AS POTENTIAL COCRYSTALLIZER IN THE SOLID STATE**

  Efrén Venancio García Báez[1], Sayuri Chong[3], Itzia I. Padilla Martínez[2], Marcos Morales Santana[2]

  [1]Instituto Politécnico Nacional - IPN, Laboratorio de Investigación en Polímeros y Nanomateriales, Mexico. [2]Instituto Politécnico Nacional - IPN, Laboratorio de Química Supramolecular y Nanociencias UPIBI-Instituto Politécnico Nacional., Mexico. [3]Instituto Politécnico Nacional - IPN, Laboratorio de Química Supramolecular y Nanociencias UPIBI, Mexico.

- **SB6-P012 MANUFACTURING AND MECHANICAL AND ELECTROCHEMICAL CHARACTERIZATION OF Zr-BASED AMORPHOUS RIBBONS**

  Aish Valdemar Escamilla Flores[1], Jorge Alejandro Verduzco Martinez[1]

  [1]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigación en Metalurgia y Materiales, Mexico.

- **SB6-P013 GREEN SYNTHESIS OF SILVER NANOPARTICLES MEDIATED BY BIOLOGICAL EXTRACTS FOR ANTIBACTERIAL COATINGS**

  Beatriz Liliana España Sánchez[1,2], Miriam Esteves[1], Gabriel Luna Bárcenas[3], Felipe Padilla Vaca[4]

  [1]Centro de Física Aplicada y Tecnología Avanzada UNAM, Campus Juriquilla, Mexico. [2]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Procesos Industriales y Recubrimientos, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Polímeros y Biopolímeros, Mexico. [4]Universidad de Guanajuato, Biología, Mexico.

- **SB6-P014 PLASMA OXIDATION OF A SILVER DOPED DIAMOND-LIKE CARBON COATING FOR ANTIBACTERIAL APPLICATIONS**

Linda Bonilla[1], Stephane Turgeon[1], Pascale Chevallier[1], Diego Mantovani[1]
[1]Université Laval, Lab Biomaterials & Bioengineering (CRC-1), Dept-Min-Met-Materials Eng. & CHU de Quebec Research Center, Canada.

- **SB6-P015 DEVELOPMENT OF MULTIFUNCTIONAL DENTAL IMPLANTS WITH SUPERIOR ANTIBACTERIAL PERFORMANCES**

Vanessa Montaño Machado[1], Graciela Morales[2], Diego Mantovani[1]
[1]Université Laval, Dept. of Min-Met-Materials Eng, Canada. [2]Centro de Investigación en Química Aplicada - CIQA , Síntesis de Polímeros, Mexico.

- **SB6-P016 HYDROTALCITES AS EFFECTIVE BIOCIDAL MATERIALS AGAINST ASPERGILLUS NIGER FUNGUS**

Franchescoli Didier Velázquez Herrera[1], Geolar Fetter[1], Vilma Rosato[2], Andrea M. Pereyra[3], Elena I. Basaldella[3]
[1]Benemerita Universidad Autonoma de Puebla, Facultad de Ciencias Quimicas, Mexico. [2]Universidad Tecnológica Nacional, Facultad Regional La Plata, Argentina. [3]CINDECA, CCT- La Plata-CONICET, Argentina.

- **SB6-P017 SYNTHESIS OF 3D CYLINDERS OF PLA-G-(N-VCL/GLyMA) BY GAMMA-RAYS AND COVALENT IMMOBILIZATION OF LYSOZYME TO OBTAIN ANTIMICROBIAL ACTIVITY**

G. G. Flores Rojas[1], F. Lopez Saucedo[1], V. H. Pino Ramos[1], N. Dionisio Chávez[1], C. Alvarez Lorenzo[2], A. Concheiro[2], E. Bucio[1]
[1]Instituto de Ciencias Nucleares UNAM, Quimica de radiaciones en macromoleculas, Mexico. [2]Universidad de Santiago de Compostela, Departamento de Farmacología, Farmacia y Tecnología Farmacéutica, Spain.

- **SB6-P018 WEAR EFFECT ON THE REALESE OF ANTIBIOTIC IN PMMA CEMENT**

Rocio Guadalupe Hernandez Garcia[1]
[1]Universidad Autónoma de Nuevo León, Facultad de Ingenieria Mecanica y Electrica, Mexico.

- **SB6-P019 EVALUATION OF THE ANTIMICROBIAL EFFECT OF THE SILVER NANOPARTICLES IN BACTERIAL PLAQUE**

Carolina Holguin[1], León Francisco Espinosa Cristóbal[1], Simón Yobanny Reyes López[2], Alejandro Donohue[1], Juan Carlos Cuevas[1], Karla Tovar[1], Armando Zaragoza[3]
[1]Universidad Autónoma de Ciudad Juárez, Dentistry, Mexico. [2]Universidad Autónoma de Ciudad Juárez, Biologyc chemistry sciences, Mexico. [3]Centro de Investigación en Materiales Avanzados, S.C., Engineering and Materiales Chemistry, Mexico.

- **SB6-P020 INHIBITION OF THE ADHERENCE OF THE STREPTOCOCCUS MUTANS WITH NPS ON DENTAL SURFACES OF PATIENT WITH ORTHODONTICS**

Carolina Holguin[1], León Francisco Espinosa Cristóbal[1], Simón Yobanny Reyes López[2], Karla Tovar[3], Juan Cuevas[1], Armando Zaragoza[4], Alejandro Donohue[1], Denisse Cabada[1], Natalie Lopez[1]
[1]Universidad Autónoma de Ciudad Juárez, Dentistry, Mexico. [2]Universidad Autónoma de Ciudad Juárez, Biologyc chemistry sciences, Mexico. [3]Universidad Autónoma de la Ciudad de México, Dentistry, Mexico. [4]Centro de Investigación en Materiales Avanzados, S.C., Engineering and Materiales Chemistry, Mexico.

- **SB6-P021 ANTIMICROBIAL PROPERTY OF SILVER NANOPARTICLES AGAINST DENTAL PLAQUE PATIENTS WITH ACTIVE CARIES**

Alondra Jiménez[1], León Francisco Espinosa Cristóbal[2], Simón Yobanny Reyes López[1], Armando Zaragoza Contreras[3], Alejandro Donohué Cornejo[2], Karla Tovar Carrillo[2], Juan Cuevas[2]
[1]Universidad Autónoma de Ciudad Juárez, Biological-Chemistry Sciences, Mexico. [2]Universidad Autónoma de Ciudad Juárez, Dentistry, Mexico. [3]Centro de Investigación en Materiales Avanzados, S.C., Engineering and Materials Chemistry, Mexico.

- **SB6-P022 EVALUATION OF ANTIBACTERIAL AND BIODEGRADATION PROPERTIES OF STARCH/ MIMOSA TENUIFLORA/ZINC OXIDE FILMS FOR TISSUE ENGINEERING**

Edgar Eduardo Mendoza Zubia[1], Amanda Carrillo Castillo[1], Claudia Lucía Vargas Requena[2], Claudia Alejandra Rodríguez González[3], Christian Chapa[1], Imelda Olivas Armendáriz[3], Elí Santos Rodríguez[4], Santos Adriana Martel Estrada[5]
[1]Universidad Autónoma de Ciudad Juárez, Ingeniería Eléctrica y Computación, Mexico. [2]Universidad Autónoma de Ciudad Juárez, Ciencias Básicas, Mexico. [3]Universidad Autónoma de Ciudad Juárez, Física y Matemáticas, Mexico. [4]Universidad Autónoma de Chiapas, MCTP, Mexico. [5]Universidad Autónoma de Ciudad Juárez, Diseño, Mexico.

- **SB6-P023 INFILTRATION OF MAGNESIUM IN STRUCTURES NUKBONE POROUS BY THE CAIS TECHNIQUE**

José de Jesús Martínez González[1], Sebastián Díaz de la Torre[1], María Cristina Piña Barba[2], Isaac Muñoz Juarez[1]

[1]Centro de Investigación e Innovación Tecnológica, Advanced Materials, Mexico. [2]Universidad Nacional Autónoma de México, Biomaterials, Mexico.

- **SB6-P024 PREVALENCE OF SILVER RESISTANCE GENES (SILCBA) IN BACTERIA OF TEETH WITH SECONDARY ENDODONTIC INFECTION AND DEVELOPMENT OF RESISTANCE TO SILVER NANOPARTICLES (AGNPS) BY ENDODONTIC BACTERIA**

Marco Felipe Salas Orozco[1], Nereyda Niño Martínez[2], Gabriel Martínez[1], Facundo Ruiz[2], Fernando Torres[1]

[1]Universidad Autónoma de San Luis Potosí, Facultad de estomatologia, Mexico. [2]Universidad Autónoma de San Luis Potosí, Facultad de Ciencias, Mexico.

- **SB6-P025 STUDY OF BIOACTIVITY AND ANTIBACTERIAL PROPERTIES OF SILVER-DOPED HYDROXYAPATITE.**

Jhan Danilo Salazar Martínez[1], Pedro Jose Arango Arango[1], Belarmino Segura Giraldo[1], Elisabeth Restrepo Parra[1]

[1]Universidad Nacional de Colombia, Ciencias Exactas y Naturales, Colombia.

- **SB6-P026 HYDROTALCITES INTERCALATED WITH CITRATE TO BE USED AS BIOCIDAL MATERIALS**

Alvaro Sampieri[1], Geolar Fetter[2], Franchescoli Didier Velázquez Herrera[2], Marta Lobo Sánchez[2]

[1]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniería Química, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Facultad de Ciencias Químicas, Mexico.

- **SB6-P027 SILVER NANOWIRE MODIFIED FABRICS FOR ANTIMICROBIAL APPLICATIONS**

Doga Doganay[1], Akin Kanicioglu[2], Sahin Coskun[1], Gulcin Akca[2], Husnu Unalan[1]

[1]Orta Dogu Teknik Üniversitesi, Metallurgical and Materials Engineering, Turkey. [2]Gazi University, Department of Medical Microbiology, Turkey.

- **SB6-P028 STRUCTURE-STABILITY RELATIONSHIP IN THE FORMATION OF COORDINATION COMPOUNDS OF Cu(II) AND Fe(III) FROM CYCLOPHANES AND ITS POTENTIAL USE AS BIOMIMETIC AGENTS OF SOD AND POX**

Melissa Beltran Torres[1], Hisila del Carmen Santacruz Ortega[1], Rocío Sugich Miranda[2]

[1]Universidad de Sonora, Departamento de Polimeros y Materiales, Mexico. [2]Universidad de Sonora, Departamento de Ciencias Químico Biológicas, Mexico.

- **SB6-P029 AN ECONOMIC 3D DIGITIZER FOR THE DIAGNOSTICS AND TREATMENT OF FLAT FEET**

Felix Diaz Santos[1], Rajesh Roshan Biswal[2], Eddy Sanchez de la Cruz[3], Gregorio Fernández Lambert[1]

[1]Instituto Tecnologico Superior de Misantla, Ingenieria Industrial, Mexico. [2]Instituto Tecnologico Superior de Misantla, Ingenieria de Sistemas Computacionales, Mexico. [3]Instituto Tecnologico Superior de Misantla, Mexico.

- **SB6-P030 DEVELOPMENT OF A BIOSENSOR BASED ON CARBON NANOTUBES AND POLYPYRROLE FOR DETECTION OF ALBUMIN**

Hugo Armando Estupiñan Duran[1], Dario Yesid Pena Ballesteros[2], Aida Ximena Velasco[1], James Rosero[1], Jose Luis Endrino[3]

[1]Universidad Nacional de Colombia, Materiales y Minerales, Colombia. [2]Universidad Industrial de Santander, Escuela de Ingeniería Metalúrgica, Colombia. [3]Cranfield University, Institute of SEPI, United Kingdom, Channel Islands & Isle of Man.

- **SB6-P031 EFFECT OF GOLD NANOPARTICLES FUNCTIONALIZED WITH CALRETICULIN ON THE EXPRESSION OF GROWTH FACTOR**

Sara Paola Hernández[1], Diana Ginette Zarate Triviï¿½o[1], Moisés Franco Molina[1], Juan José Bollain y Goytia de la Rosa[2], Cristina Rodríguez Padilla[1]

[1]Universidad Autónoma de Nuevo León, Immunology, Mexico. [2]Universidad Autónoma de Zacatecas, Immunology, Mexico.

- **SB6-P032 CYTOTOXICITY ASSAYS ON HELA CELLS WITH GOLD AND SILVER NANOPARTICLES SYNTHESIZED WITH VITEX MOLLIS FRUIT HYDROETHANOLIC EXTRACT**

Abraham Grijalva Arizmendi[1], Aaron Alberto Martinez Higuera[1], Juan Manuel Martínez Soto[2], Cesar Rodríguez Beas[1], Kareen Krizzan Encinas Soto[3], Ericka Rodríguez Leon[1], Ramón Alfonso Iñiguez Palomares[1]

[1]Universidad de Sonora, Departamento de Física, Mexico. [2]Universidad de Sonora, Departamento de Medicina y Ciencias de la Salud, Mexico. [3]Universidad de Sonora, Departamento de Ingeniería Química y Metalurgia, Mexico.

- **SB6-P033 AMORPHOUS SiNPs INDUCE THE MEGAKARYOCYTE DIFFERENTIATION: POTENTIAL IMPLICATIONS FOR HEMATOLOGICAL HOMEOSTASIS**

Xiaoting Jin[1], Qunfang Zhou[1], Guibin Jiang[1]
[1]Chinese Academy of Sciences, Research Center for Eco-Environmental Sciences, China.

- **SB6-P034 APPLICATION OF THERMOSETTING ELASTOMERS IN THE DESIGN OF HAND PROSTHESES**

Christian Diaz León[1], Guillermo Urriolagoitia Sosa[1], Mildred Egure[1], Daniel Maya Anaya[1], Jacobo Martinez Reyes[1]
[1]Instituto Politécnico Nacional - IPN, Sección de Estudios de Posgrado e Investigación, Mexico.

- **SB6-P035 FUNCTIONALIZATION OF OPTICAL FIBER REDUCED BY CHEMICAL ETCHING**

Juan Sarid Domínguez[1], Abdú Orduña[1], Plácido Zaca[2], Rafael Antonio Salinas Domínguez[1], Juan Pablo Padilla[2], Valentín Lopéz[1]
[1]Centro de investigación en biotecnología aplicada, Instrumentación Analítica y Biosensores, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Instituto de Ciencias, Mexico.

- **SB6-P036 UPSIDE-DOWN JELLYFISH CASSIOPEA XAMACHANA (CNIDARIA; SCYPHOZOA) AS CUTANEOUS MEMBRANE SCAFFOLDS FOR SKIN TISSUE ENGENEERING**

Irving Fernandez Cervantes[1], L. V. León Deniz[2], M. Cervantes Uc[1], T. Hernández Sotomayor[3], N. Rodríguez Fuentes[1]
[1]Centro de Investigación Científica de Yucatán, Materiales Poliméricos, Laboratorio de Biomateriales, Mexico. [2]Universidad Autónoma de Yucatán, Biología Marina, Mexico. [3]Centro de Investigación Científica de Yucatán, Unidad de Bioquímica y biología molecular de plantas, Mexico.

- **SB6-P037 RADIATION-GRAFTING OF POLYPROPYLENE FILMS WITH METHYL METHACRYLATE AND N-VINYLIMIDAZOLE: A VANCOMYCIN PH-DEPENDENT RELEASE SYSTEM**

F. López Saucedo[1], G. G. Flores Rojas[1], S. Gómez Dorantes[1], E. Bucio[1]
[1]Instituto de Ciencias Nucleares UNAM, Quimica de Radiaciones y Macromoleculas, Mexico.

- **SB6-P038 In vitro BIOCOMPATIBILITY OF GELATIN-BASED HYDROGEL FILMS IN MUCUS PRODUCING HUMAN COLONIC CELLS**

Jorge Armando Jiménez Avalos[1], Rogelio Rodríguez Rodríguez[1], Marisela González Avila[1], Hugo Espinosa Andrews[2], Zaira Y. García Carvajal[1]
[1]Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco, Medical and Pharmaceutical Biotechnology Unit, Mexico. [2]Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco, Food Technology Unit, Mexico.

- **SB6-P039 SURFACE MODIFICATION WITH RGD AND IN VITRO EVALUATION OF PLA/ HYDROXYAPATITE SCAFFOLDS OBTAINED BY ELECTROSPINNING FOR BONE REGENERATION**

Mariana Gutiérrez Sánchez[1], Vladimir Alonso Escobar Barrios[1], Amaury Pozos Guillen[2], Diana M. Escobar García[2]
[1]Instituto Potosino de Investigación Científica y Tecnológica A.C., Division of advanced materials, Mexico. [2]Universidad Autónoma de San Luis Potosí, Faculty of Dentistry, Mexico.

- **SB6-P040 ELECTROSPINNING TECHNIQUE USED FOR THE FABRICATION OF FIBROUS TUBES MADE OF PLA-GELATIN WITH POSSIBLE APPLICATION IN BLOOD VESSEL TISSUE ENGINEERING**

Abraham Alejandro Leyva Verduzco[1], María Mónica Castillo Ortega[1]
[1]Universidad de Sonora, Departamento de Investigación en Polimeros y Materiales, Mexico.

- **SB6-P041 AMORPHOUS SILICA NANOPARTICLES FOR CRTC3 siRNA DELIVERY: EFFECTS AND TOXICITY in vitro.**

America Susana Mares Garcia[1], Amaury Pozos Guillen[2], Antonio Augusto Gordillo Moscoso[1], María Guadalupe Cárdenas Galindo[3], Ilse Nayeli Avila Hernández[3]
[1]Universidad Autónoma de San Luis Potosí, Laboratorio de Investigación Traslacional en Farmacología, Mexico. [2]Universidad Autónoma de San Luis Potosí, Laboratorio de Ciencias Básicas, Mexico. [3]Universidad Autónoma de San Luis Potosí, Laboratorio de catálisis, Mexico.

- **SB6-P042 SYNTHESIS AND CHARACTERIZATION OF POLYMERIC BIODEGRADABLE FILM FOR TREATMENT OF OPEN WOUND**

Beatriz Martinez Perez[1,2], Juan Pablo Gutierrez López[2], Jorge Eduardo Munguía Huerta[2], Alitzel Belem García Hernández[2], Abraham Orozco Bladorni[2], Guadalupe Ugalde Guerrero[2]
[1]Facultad de Estudios Superiores Cuautitlán, UNAM., Laboratorio de Sistemas Farmacéuticos de Liberación Modificada, Mexico. [2]Universidad Politécnica del Valle de México, División de Ingeniería en Nanotecnología, Mexico.

- **SB6-P043 FABRICATION OF A PVA-BASED HYDROGEL USING A PETRI DISH 3D TECHNOLOGY FOR BIOMEDICAL APPLICATIONS**

  Maira Moreno Valtierra[1], Luis Alberto Castillo Díaz[1], Rodolfo Hernández Gutiérrez[1], Rogelio Rodriguez[1], Jorge Armando Jiménez Avalos[1], Iliana Iséhy Sànchez Muñoz[1], Zaira Yunuen Garcia Carvajal[1]

  [1]Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco, Medical and Pharmaceutical Biotechnology, Mexico.

- **SB6-P044 SYNTHESIS OF LAYERED DOUBLE HYDROXIDE-CARBON DOT COMPOSITE FOR IMAGING AND TARGETED CANCER THERAPY**

  Karina Nava Andrade[1], Gregorio Guadalupe Carbajal Arizaga[1]

  [1]Universidad de Guadalajara, Química, Mexico.

- **SB6-P045 COMPARISON OF TWO METHODS TO OBTAIN SILK FIBROIN POROUS BIOMATERIALS**

  Heidy Catalina Navia[1], Diego Combita Merchan[1], Robison Buitrago Sierra[2], Juan Felipe Santa Marin[2], Enrique Aguilar Fernandez[1], Juan Carlos Sepúlveda Arias[1]

  [1]Universidad Tecnológica de Pereira, Grupo Infección e Inmunidad. Facultad de Ciencias de la Salud, Colombia. [2]Instituto Tecnológico Metropolitano, Grupo de Investigación Materiales Avanzados y Energía - MATyER, Colombia.

- **SB6-P046 PRINTABLE HYDROGELS FOR PERIODONTAL REGENERATION SYSTEM GELATIN-PVA REINFORCED WITH BIOCERAMICS**

  Wendy de Lourdes Ortega Lara[1]

  [1]Tecnológico de Monterrey, Escuela de Ingenieria y Ciencias, Mexico.

- **SB6-P047 MANUFACTURING AND CHARACTERIZATION OF PLA EYE IMPLANTS AS AN ALTERNATIVE FILLING OF THE OCULAR CAVITY OBTAINED BY 3D PRINTING.**

  Juan Manuel Perez Osorio[1], Cristina Piña Barba[1], Marco Antonio Alvarez Perez[2], José Ocotlán Flores Flores[3]

  [1]Instituto de Investigaciones en Materiales, Metallic and ceramic, Mexico. [2]Universidad Nacional Autónoma de México, Laboratorio de bioingeniería de tejidos, Facultad de odontología, Mexico. [3]Universidad Nacional Autónoma de México, Centro de Ciencias Aplicadas y Desarrollo Tecnológico, Mexico.

- **SB6-P048 CHARACTERIZATION OF A POLYMERIC MATERIAL BLENDED TO BONE FORMING ELEMENTS AND REINFORCED WITH SILVER PARTICLES**

  Esther Perez Torrero[1], Leticia Esmeralda Luna Rodriguez[1], Gerardo Antonio Fonseca Hernandez[2]

  [1]Universidad Autónoma de Querétaro, Facultad de Ingeniería, Mexico. [2]Universidad Nacional Autónoma de México, Laboratorio de Pruebas Mecanicas, Mexico.

- **SB6-P049 SYNTHESIS OF CARBOXYMETHYL CHITOSAN FILMS AND ALLIUM CEPA EXTRACT FOR SKIN REGENERATIONS**

  Hortensia Reyes Blas[1], Laura Elizabeth Valencia Gómez[1], Faviola Silvia Miranda Cabrera[1], Juan Francisco Hernandez Paz[1], Claudia Alejandra Rodríguez González[1], Imelda Olivas Armendáriz[1]

  [1]Universidad Autónoma de Ciudad Juárez, Fisica y Matemáticas, Mexico.

- **SB6-P050 DEVELOPMENT AND DETERMINATION OF MECHANICAL PROPIERTIES OF BIODEGRADABLE STENTS OF PLGA**

  Francisco Antonio Rivera Rojas[1], Isaac Chairez Oria[2], Mónica de la Luz Corea Téllez[1]

  [1]Instituto Politécnico Nacional - IPN, ESIQIE, Mexico. [2]Instituto Politécnico Nacional - IPN, UPIBI, Mexico.

- **SB6-P051 MATHEMATICAL MODELING OF DISTRIBUTION OF MAGNETIC NANOPARTICLES IMMERSED IN POLYMERS FOR POSSIBLE TREATMENT OF HEPATIC TUMORS.**

  Tatiana Ivanova Román Valenzuela[1], Ángel Luis Rodríguez Morales[1], Miriam Rocío Estévez González[1], Ángel Ramón Hernández Martínez[1]

  [1]Universidad Nacional Autónoma de México, Centro de Física Aplicada y Tecnología Avanzada, Mexico.

- **SB6-P052 CHARACTERIZATION AND EVALUATION OF THE CYTOTOXIC ACTIVITY OF POLYMERS OBTAINED FROM CHITOSAN AND EGGSHELL.**

  Yeidy Viviana Arias Andrade[1], Angela Patricia Castro Ramírez[2], Juan Carlos Sepúlveda Arias[1], luz Angela Veloza[2]

  [1]Universidad Tecnológica de Pereira, Grupo Infección e Inmunidad, Facultad de Ciencias de la Salud, Colombia. [2]Universidad Tecnológica de Pereira, Grupo Polifenoles, Facultad de Tecnologías, Colombia.

- **SB6-P053 DESIGN AND IN VITRO EVALUATION OF A BIOINSPIRED TRI-BIOPOLYMER HYDROGEL**

Jorge Alfonso Tavares Negrete[1], Diana Karime Navarro Arias[1], Hugo Oñate Robledo[1], Argelia Rosillo de la Torre[1], Jorge Delgado Garcia[1], Laura Edith Castellano Torres[1], Irais Amaranta Quintero Ortega[1]

[1]Universidad de Guanajuato campus León, Chemical Electronic Biomedical Engineering, Mexico.

- **SB6-P054 PLLGA COPOLYMERS: A DEGRADATION, DRUG DESORPTION AND CYTOTOXICITY STUDY**

María José Valarezo[1,2], Lazaro Ruiz Virgen[3], Rubén Caro Briones[3], Francisco Rivera Rojas[3]

[1]Instituto Politécnico Nacional - IPN, Escuela Superior de Ingeniería Química e Industrias Extractivas, Mexico. [2]Instituto Politécnico Nacional - IPN, ESIQIE-POLÍMEROS, Mexico. [3]Instituto Politécnico Nacional - IPN, ESIQIE, Mexico.

- **SB6-P055 HYDROGEL FILMS WITH CNT IN A MICROFLUIDIC CHIP FOR BIOSENSING APPLICATIONS**

Paloma Alejandra Vilchis[1], Rodolfo Fabian Estrada[1], Jose Jorge Chanona[2], Felipe Cervantes Sodi[1]

[1]Universidad Iberoamericana, Physics and Mathematics, Mexico. [2]Escuela Nacional de Ciencias Biológicas, Departamento de Ingeniería Bioquímica, Mexico.

- **SB6-P056 TAPIOCA STARCH-GALACTOMANNAN SYSTEMS: COMPARATIVE STUDIES OF RHEOLOGICAL AND TEXTURAL PROPERTIES**

Erich Von Borries Medrano[1], Monica Rosalía Jaime Fonseca[1], Miguel Angel Aguilar Méndez[1]

[1]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Biomateriales, Mexico.

- **SB6-P057 PREPARATION AND CHARACTERIZATION OF AMPHIPHILIC COPOLYMERS BLENDED POLY (LACTIC ACID) MEMBRANES FOR DIALYSIS AND PROTEIN ADSORPTION**

Cynthia Xix[1], Arelly Varguez[1], Manuel Aguilar[1], María González[2]

[1]Centro de Investigación Científica de Yucatán, Unidad de Materiales, Mexico. [2]CONACyT, Centro de Investigación Científica de Yucatán (CICY), Unidad de Materiales, Mexico.

- **SB6-P058 FORMATION AND EVALUATION OF SILK FIBROIN HYDROGELS FOR HYALINE CARTILAGE REGENERATION.**

Augusto Zuluaga Velez[1], Carlos Andres Toro Acevedo[1], Jhon Jairo Melchor Moncada[1], Jenny Marcela Vélez Gómez[2], Luz Angela Veloza[2], Enrique Aguilar Fernandez[1], Juan Carlos Sepúlveda Arias[1]

[1]Universidad Tecnológica de Pereira, Grupo Infección e Inmunidad. Facultad de Ciencias de la Salud, Colombia. [2]Universidad Tecnológica de Pereira, Grupo Polifenoles, Facultad de Tecnologías, Colombia.

- **SB6-P059 ADDITION OF GALACTOMANNANS AND CITRIC ACID IN CORN STARCH PROCESSED BY EXTRUSION: RETROGRADATION AND RESISTANT STARCH STUDIES**

Erich Von Borries Medrano[1], Monica Rosalía Jaime Fonseca[1], Miguel Angel Aguilar Méndez[1], Héctor Iván García Cruz[1]

[1]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Laboratorio de Biomateriales, Mexico.

- **SB6-P060 FUNCTIONAL AND PHYSICOCHEMICAL PROPERTIES OF NIXTAMALIZED BLUE AND RED CORN FLOURS OBTAINED BY EXTRUSION COOKING**

Erich Von Borries Medrano[1], Monica Rosalía Jaime Fonseca[1], Miguel Angel Aguilar Méndez[1], Cinthya Nathaly Quiroz Reyes[1], Héctor Iván García Cruz[1]

[1]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Laboratorio de Biomateriales, Mexico.

- **SB6-P061 FORMATION OF DIAZACROWN ETHER, CONTAINING IRON NANOPARTICLES AND INVESTIGATION OF THEIR ANTIMICROBIAL ACTIVITY**

Leyla Vezirova[1]

[1]Research Institute Geotechnological Problems of Oil, Gas and Chemistry, Baku, Azerbaijan.

- **SB6-P062 SYNTESIS AND CHARACTERIZATION OF HYBRID LIPOSOMES ELABORATED BY PHOSPHOLIPID AND (TRI-)BLOCK COPOLYMERS**

Citlali Uitz T.[1], Juan Ramón Avendaño Gómez[1], Obed Andres Solís[1], María Fernanda Bautista Pérez[2]

[1]Instituto Politécnico Nacional - IPN - ESIQIE, Depto. Ingenieria quimica SEPI-ESIQIE, Mexico. [2]Instituto Politécnico Nacional - IPN - ESIQIE, Depto. Ingenieria quimica, Mexico.

TUESDAY, AUGUST 21
ROOM: MEXICO

Session: NANO-BIO MATERIALS

SESSION CHAIR: SANDRA E. RODIL

09:00 - 09:30 SB6-O017 Invited Talk HIGH PERFORMANCE POLYMERIC AND METALLIC IMPLANT MATERIALS

Laszlo Sajti[1], Jelena Horky[1], Maciej Krystian[1], Bernhard Mingler[1], Manfred Bammer[1]
[1]AIT Austrian Institute of Technology, Biomedical Systems, Austria.

09:30 - 09:45 SB6-O018 SILICA-BASED DELIVERY SYSTEMS FOR ORAL DELIVERY OF DRUGS, ENZYMES AND PROBIOTICS

Maxime Girardon[1], Andreea Pasc[1]
[1]Université de Lorraine, Laboratoire Lorrain de Chimie Moléculaire, France.

09:45 - 10:00 SB6-O019 IRON OXIDE NANOPARTICLES: POTENTIAL VEHICLES FOR DRUG DELIVERY

Paula Haddad[1], Tatiane Nassar Britos[1], Fabio Furlan Ferreira[2], Auro del Gilgio[3], Giuliana Petri[4], Fernando Luiz Affonso Fonseca[3], Bruno Machado Bertassoli[4]
[1]Universidade Federal de São Paulo, Departamento de Química, Brazil. [2]Universidade Federal do Abc, Centro de Ciências Naturais e Humanas, Brazil. [3]Faculdade de Medicina do ABC, Departamento de Oncologia/Hematologia, Brazil. [4]Faculdade de Medicina do ABC, Departamento de Morfologia, Brazil.

10:00 - 10:15 SB6-O020 NANOTHERMOMETRY BASED ON NANODIAMONDS IN COLLOIDAL SOLUTION

Karla Santacruz Gomez[1], Juan Ramirez[2], Monica Acosta Elias[2], Marcelino Barboza Flores[2], Rodrigo Melendrez Amavizca[2], José García Solé[3], Martin Pedroza Montero[2], Eduardo Montes Ramirez[3]
[1]Universidad de Sonora, Physics Department, Mexico. [2]Universidad de Sonora, Department of Physics Research, Mexico. [3]Universidad Autónoma de Madrid, Material Physics Department, Spain.

10:15 - 10:30 SB6-O021 GOLD FLUORESCENT NANO-CONJUGATES FOR THERANOSTICS APPLICATIONS

Anatoliy Pinchuk[1]
[1]University of Colorado at Colorado Springs, Physics, United States.

10:30 - 10:45 SB6-O022 SYNTHESIS AND FUNCTIONALIZATION OF SILICA NANOPARTICLES WITH EXTRACT OF KALANCHOE DAIGREMONTIANA, AND ITS ANTI-PROLIFERATIVE EFFECT IN COLON CANCER CELLS.

Luis Oscar Granados Segura[1], Miriam Rocío Estévez González[1], Héctor Paul Reyes Pool[1], Haydé Azeneth Vergara Castañeda[2], Ángel Ramon Hernández Martínez[1]
[1]Universidad Nacional Autónoma de México, Centro de Fisica Aplicada y Tecnologia Avanzada, Mexico. [2]Universidad Autónoma de Querétaro, Facultad de Medicina, Mexico.

10:45 - 11:00 SB6-O023 NANOBIOTECHNOLOGY STRATEGIES IN THE DESIGN OF INTELLIGENT ANTIMICROBIAL THERAPEUTICS

Jose Ruben Morones Ramírez[1,2], Javier Alberto Garza Cervantes[2], Albert Isaac Lerma Escalera[2], Francisco de Jesus Balderas Cisneros[2]
[1]Research Center in Biotechnology and Nanotechnology, Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY III
DR. AMANDA S. BARNARD

Session: POLYMERS AND SURFACE MODIFICATIONS

SESSION CHAIR: PHAEDRA SILVA-BERMUDEZ

12:30 - 13:00 SB6-O024 Invited Talk POLYMER BIOMATERIAL SURFACE MODIFICATION: THE KEY TO INTEGRATION

Marta Cerruti[1]
[1]McGill University, Materials Engineering, Canada.

13:00 - 13:15 SB6-O025 NOVEL POLYMERIC MATERIALS FOR SOLID- PHASE EXTRACTION OF SARCOSINE

Soane Fernández Puig[1], Miguel Alberto López Sánchez[1], Jheny Adriana Rodríguez Mendez[2], Arístides Camilo Valdés González[3], Abraham Ulises Chávez Ramírez[1]
[1]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Electrochemistry, Mexico. [2]Universidad Autónoma de Querétaro, Faculty of Medicine, Mexico. [3]Universidad de La Habana, LUCES, Cuba.

■ **13:15 - 13:30 SB6-O026 LINKING ARM EFFECT ON THE BIOLOGICAL PERFORMANCE OF A CD31 PEPTIDE DIRECTLY GRAFTED ON L605 CoCr ALLOY BY A PLASMA BASED MULTI-STEP STRATEGY**

Sergio Diaz Rodriguez[1], Pascale Chevallier[1], Caroline Loy[1], Diego Mantovani[1]

[1]Université Laval, Laboratoire de Biomatériaux et de Bioingénierie, Canada.

■ **13:30 - 13:45 SB6-O027 BIOCOMPOSITES FUNCTIONALIZED WITH EXTRAPALLIAL FLUID PROTEIN FOR BONE TISSUE ENGINEERING**

Miguel Angel Rojas Yañez[1], Claudia Lucia Vargas Requena[2], Claudia Alejandra Rodríguez González[1], Florinda Jimenez Vega[2], Laura Elizabeth Valencia Gómez[1], Imelda Armendáriz[1]

[1]Universidad Autónoma de Ciudad Juárez, Física y Matemáticas, Mexico. [2]Universidad Autónoma de Ciudad Juárez, Instituto de Ciencias Biomédicas, Mexico.

■ **13:45 - 14:00 SB6-O028 LIGHT SHEET MICROSCOPY FOR LUMINESCENT NANOPARTICLES IN CANCER CELL TAGGING**

Bonifacio Alejandro Can Uc[1], Juana Berenice Montes Frausto[1], Karla Oyuky Juarez Moreno[1], Israel Rocha Mendoza[2], Gustavo Alonso Hirata[1]

[1]Centro de Nanociencias y Nanotecnología CNyN-UNAM, CNYN, Mexico. [2]Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE), Optica, Mexico.

☒ **14:00 - 16:00 Lunch time**

Session: HYDROGELS

SESSION CHAIR: FABIO VARIOLA

▸ **16:00 - 16:30 SB6-O029 Invited Talk MUSSEL-INSPIRED ADHESION FROM SYNTHESIS TO APPLICATIONS**

Malcolm Xing[1]

[1]University of Manitoba, Mechanical Engineering, Canada.

■ **16:30 - 16:45 SB6-O030 LANGMUIR MONOLAYERS AS TOOLS TO STUDY MOLECULAR DEGRADATION OF ALIPHATIC POLYESTERS**

Rainhard Machatschek[1], Burkhard Schulz[1,2], Andreas Lendlein[1,2]

[1]Helmholtz Zentrum Geesthacht, Institute of Biomaterial Research and Berlin-Brandenburg Center for Regenerative Therapies, Germany. [2]University of Potsdam, Institute of Chemistry, Germany.

■ **16:45 - 17:00 SB6-O031 POLYMER DECORATED PLASMONIC COPPER NANOPARTICLES AS NANOARMADAS: A COMBINATORIAL CANCER THERAPEUTIC APPROACH**

Goldie Oza[1], Almendra Reyes[2], Karen Analy Chavez Bracamont[2], Mauricio Alberto Medina Pérez[3], Ashutosh Sharma[2], Walter Noe Velazquez Arjona[1], Luis Gerardo Arriaga Hurtado[1], Jose Tapia Ramirez[4]

[1]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Laboratorio Nacional de Micro y Nanofluidics, Mexico. [2]Tecnológico de Monterrey, Departamento de Bioingenieria, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Nanoscience and Nanotechnology, Mexico. [4]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Genetica y Biologia Molecular, Mexico.

▸ **17:00 - 17:30 SB6-O032 Invited Talk DYNAMIC PHOTOPOLYMERIZATION BY PHOTOLITHOGRAPHY YIELDS COMPLEX MICROSTRUCTURES ON HYDROGELS FOR A 3D INTESTINAL TISSUE MODEL IN A SIMPLE FABRICATION PROCESS**

Elena Martinez[1]

[1]Institute for Bioengineering of Catalonia (IBEC), Biomimetic systems for cell engineering, Spain.

■ **17:30 - 17:45 SB6-O033 PREPARATION AND CHARACTERIZATION OF CONTROLLED DRUG DELIVERY SYSTEM OF POLYMERIC NANOPARTICLES [poly(D,L-lactide-co-glycolide)/poly(L-γ-glutamic acid)], CONJUGATED TO FOLIC ACID FOR TARGETED DELIVERY OF DOXORUBICIN**

Laura Jaimes Aguirre[1], Enrique Morales Avila[1], Blanca E. Ocampo García[2], Luis A. Medina[3]

[1]Universidad Autónoma del Estado de México, Pharmacy, Mexico. [2]Instituto Nacional de Investigaciones Nucleares (ININ), Radiactive Materials, Mexico. [3]Universidad Nacional Autónoma de México, Instituto de Física, Mexico.

■ **17:45 - 18:00 SB6-O034 NANOCAVITATED TITANIUM SURFACES INFLUENCE OSTEOGENIC CELL BEHAVIOR**

Dainelys Guadarrama Bello[1], Aurelien Fouillen[1,2], Antonella Badia[3], Antonio Nanci[1,2]

[1]Université de Montréal, Department of Stomatology, Canada. [2]Université de Montréal, Department of Biochemistry and Molecular Medicine, Canada. [3]Université de Montréal, Department of Chemistry, Canada.

■ **18:00 - 18:15 SB6-O035 PREPARATION AND IN VITRO EVALUATION OF A SMART DRUG DELIVERY**

SYSTEM: (^{177}Lu-DOTA-HA-PLGA(MTX), AS A NEW POTENTIAL NANORADIOPHARMACEUTICAL FOR COMBINED THERAPY IN ARTHRITIS

Rosa Maydelid Trujillo Nolasco[1], Enrique Morales Avila[1], Blanca Eli Ocampo García[2]

[1]Universidad Autónoma del Estado de México, Farmacia, Mexico. [2]Instituto Nacional de Investigaciones Nucleares (ININ), Gerencia de aplicaciones nucleares a la salud, Mexico.

TUESDAY, AUGUST 21
ROOM: TERRACE

18:30 -20:30 POSTER SESSION & COFFEE BREAK

- **SB6-P063 GEMINI SURFACTANTS FOR GENE THERAPY: THE INFLUENCE OF THE SPACER ON THEIR SELF-ASSEMBLY AND CYTOCOMPATIBILITY**

Delvis R. Acosta Martinez[1,2], Eustolia Rodriguez Velazquez[3], Georgina Pina Luis[1], Pablo Taboada[2], Manuel Alatorre Meda[1]

[1]Instituto Tecnológico de Tijuana, Centro de Graduados e Investigacion en Quimica, Mexico. [2]Universidad de Santiago de Compostela, Fisica de Particulas, Spain. [3]Universidad Autónoma de Baja California, Facultad de Odontologia-Tijuana, Mexico.

- **SB6-P064 SYNTHESIS OF Ti-Ta BASED ALLOYS FOAMS WITH HIGH YIELD STRENGTH AND LOW ELASTIC MODULUS**

Claudio Aguilar[1], Carolina Gonzalez[1], Mamie Sancy[2], Luis Bejar[3], Ariosto Medina[4]

[1]Universidad Técnica Federico Santa María, Departamento de Ingeniería Metalúrgica y Materiales, Chile. [2]Pontificia Universidad Catolica de Chile, Escuela de Construcción Civil, Chile. [3]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ingenieria Mecánica, Mexico. [4]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigaciones Metalurgica y Materiales, Mexico.

- **SB6-P065 QUANTUM CHEMICAL CALCULATIONS OF THE PLATINUM(II) BIOACTIVE COMPLEXES**

Dilgam Tagiyev[1], Asmet Azizova[1], Mirsalim Asadov[1]

[1]Institute of Catalysis and Inorganic Chemistry, Azerbaijan National Academy of Sciences, Baku, Azerbaijan.

- **SB6-P066 LIPOSOMAL FORMULATION OF TAXOL: PHYSICAL AND FUNCTIONAL STABILITY**

Jessica Batalla Mayoral[1], Rocío Guadalupe Casañas Pimentel[2], Eduardo San Martín Martínez[2]

[1]Benemerita Universidad Autonoma de Puebla, Complejo Regional Mixteca. Campus Izúcar de Matamoros, Mexico. [2]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Laboratorio de Biomateriales, Mexico.

- **SB6-P067 STUDY OF NIOSOMAS THERMAL STABILITY**

María Fernanda Bautista Pérez[1], Juan Ramón Avendaño Gómez[1], Obed Andres Solis Gonzalez[1], Citlali Uitz T.[1]

[1]Instituto Politécnico Nacional - IPN - ESIQIE, Ingeniería Química, Mexico.

- **SB6-P068 ALGINATE MICROBEADS ENCAPSULATING HUMAN OSTEOBLASTS FOR 3D CULTURE**

Noé Martín Carreón Aguiñaga[1], Hector Flores[1], Diana M. Escobar García[1], Amaury Pozos Guillen[1]

[1]Universidad Autónoma de San Luis Potosí, Laboratorio de Ciencias Básicas, Mexico.

- **SB6-P069 SYNTHESIS AND CHARACTERIZATION OF POLYMERIC NANOPOROUS MICROPARTICLES AS POTENCIAL DRUG CARRIERS**

Sayuri Chong[1], Itzia I. Padilla Martínez[1], Monica Corea[2]

[1]Instituto Politécnico Nacional - IPN, Laboratorio de Química Supramolecular y Nanociencias UPIBI, Mexico. [2]Instituto Politécnico Nacional - IPN - ESIQIE, Laboratorio de Investigación en Polímeros y Nanomateriales, Mexico.

- **SB6-P070 IN VITRO BIOACTIVITY AND BIODEGRADABILITY OF THE AS CAST Mg-1.5Ga ALLOY AND Mg**

Scarlet Sofia Esquivel Flores[1], José Concepción Escobedo Bocardo[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV Unidad Saltillo, Metalurgia, Mexico.

- **SB6-P071 IN VITRO BIOACTIVITY AND BIODEGRADABILITY ASSESSMENT OF AS CAST Mg-1.125Ga-4.5Zn AND Mg-0.75Ga ALLOYS.**

Ana Patricia García Favela[1], José Concepción Escobedo Bocardo[2]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV Unidad Saltillo, Metalurgia, Mexico. [2]Cinvestav-Unidad Saltillo, Metalurgia, Mexico.

- **SB6-P072 SONIC GUIDE FOR BLIND PEOPLE**

Samuel Castro Ruiz[1], Susana Chávez Cruz[1], Adán Gabriel García Hernández[1], Ashley Saraí García Chacón[1], Ana Guadalupe Chávez Cruz[2], Martín Alberto Martínez Ruíz[1]

[1]Universidad Mundo Maya, Tecnología y computación, Mexico. [2]Universidad Autónoma de Guadalajara (UAG), Medicina, Mexico.

- **SB6-P073 PREPARATION AND IN VITRO EVALUATION OF A RADIOLABELLED NANOCARRIER AS AN APPROACH FOR COMBINED THERAPY ON TRIPLE NEGATIVE BREAST CANCER CELLS**

Brenda Gibbens Bandala[1,2], Blanca Eli Ocampo García[1], Enrique Morales Avila[2]

[1]Instituto Nacional de Investigaciones Nucleares (ININ), Materiales Radiactivos, Mexico. [2]Universidad Autónoma del Estado de México, Facultad de Quimica, Mexico.

- **SB6-P074 BIOMEDICAL Ti-25Ta ALLOY PRODUCED BY MECHANICAL ALLOYING AND SINTERING**

Karla Nayeli Arreola García[1], Alecia Torres García[1], Claudia Alejandra Rodríguez González[2], Jose Alberto Duarte Moller[3], Cynthia Deisy Gomez Esparza[3]

[1]Universidad Tecnologica de Ciudad Juárez, Ingeniería en Nanotecnología, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., Instituto de Ingeniería y Tecnología, Mexico. [3]Centro de Investigación en Materiales Avanzados, S.C., Física de Materiales, Mexico.

- **SB6-P075 PEG-SH–FOLIC ACID–B-CYCLODEXTRIN-AUNS COMPLEXES AS DRUG DELIVERY SYSTEMS AND THERAPUTIC AGENTS FOR PHOTO-THERMAL ABLATION**

Armando Gonzalez Sanchez[1], José Luis Rodríguez López[1], Claudia Escudero Lourdes[2]

[1]Instituto Potosino de Investigación Científica y Tecnológica A.C., Advanced Materials, Mexico. [2]Universidad Autónoma de San Luis Potosí, Chemist Sciences Faculty, Mexico.

- **SB6-P076 BASIC SURFACE MODIFICATION IR NATURAL FIBER AS REINFORCED IN POLYMERIC COMPOSITES WITH MEDICAL APPLICATIONS**

Victoria González[1], Vladimir Alonso Escobar Barrios[1]

[1]Instituto Potosino de Investigación Científica y Tecnológica A.C., Advanced materials, Mexico.

- **SB6-P077 STUDY OF THE APPLICATION OF RAMAN SPECTROSCOPY FOR EARLY DETECTION OF CERVICAL CANCER**

Alondra Hernández Cedillo[1], Aida Catalina Hernandez Arteaga[1], Hugo R Navarro Contreras[1], Hiram Joazet Ojeda Galvan[1]

[1]Universidad Autónoma de San Luis Potosí, Coordinación para la Innovación y Aplicación de la Ciencia y la Tecnología (CIACYT), Mexico.

- **SB6-P078 SYNTHESIS OF $Mn_{0.5}Zn_{0.5}Fe_{1.9}TR_{0.1}O_4$ BY THE SOLUTION COMBUSTION METHOD USING UREA AS A FUEL**

Dalmy Lucia Ochoa Gamboa[1], Israel Alejandro Flores Urquizo[1], Jesús Antonio Salas Gonzalez[1], Tomás Constantino Hernández García[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico.

- **SB6-P079 ASSEMBLY AND PHYSICOCHEMICAL CHARACTERIZATION OF LIPOSOMES WITH A BIOACTIVE CONJUGATED LINOLEIC ACID MIXTURE AS A VEHICLE OF ANTITUMORAL DRUGS**

Norma Estela Hernandez Loredo[1], Said Aranda Espinoza[2], Carmen Gonzalez[1,3], Gabriela Navarro Tovar[1,3]

[1]Universidad Autónoma de San Luis Potosí, Laboratorio de fisiologia Celular, Mexico. [2]Universidad Autónoma de San Luis Potosí, Instituto de Fisica, Mexico. [3]Universidad Autónoma de San Luis Potosí, Centro de Investigación en Ciencias de la Salud y Biomedicina, Mexico.

- **SB6-P080 SYNTHESIS OF OLIGOMER D-A-D BASED ON DPP WITH POTENTIAL BIOMEDICAL APPLICATION**

Oscar Javier Hernández Ortiz[1], María Isabel Reyes Valderrama[1], Rosa Angeles Vazquez[1], Mario Alejandro Rodríguez Rivera[2]

[1]Universidad Autónoma del Estado de Hidalgo, Área Acádemica de Ciencias de la Tierra y Materiales, Mexico. [2]Centro de Investigaciones en Optica, Grupo de Propiedades Ópticas de la Materia, Mexico.

- **SB6-P081 A FULL-RANGE WIRELESS CAPACITIVE PRESSURE SYSTEM DESIGNED FOR MEASURING VENTRICULAR PRESSURE**

Natiely Hernández Sebastián[1], Wilfrido Calleja Arriaga[1], Francisco Javier Renero Carrillo[2], Daniela Díaz Alonso[3]

[1]Instituto Nacional de Astrofísica, Óptica y Electrónica, Electrónica, Mexico. [2]Instituto Nacional de Astrofísica, Óptica y Electrónica, óptica, Mexico. [3]Centro de Ingeniería y Desarrollo Industrial, Dirección de MEMS, Mexico.

- **SB6-P082 FORMATION AND CHARACTERIZATION OF ETHOSOMES AND CYTOTOXICITY EVALUATION**

Jesus Alejandro Campa Rivera[1], Cesar Rodríguez Beas[1], Jesús Adriana Soto Guzmán[2], Eduardo Larios[3], Aaron Alberto Martinez Higuera[1], Ramon Alfonso Iniguez Palomares[1], Ericka Rodríguez Leon[4]

[1]Universidad de Sonora, Departamento de Física, Mexico. [2]Universidad de Sonora, Departamento de Medicina y Ciencias de la Salud, Mexico. [3]Universidad de Sonora, Departamento de Ingeniería Química y Metalurgia, Mexico. [4]Universidad de Sonora, Departamento de Física, Mexico.

- **SB6-P083 STUDY OF TiO_2 AND SiO_2 EMBEDDED IN REDUCED GRAFENE OXIDE**

Luz del Carmen Legorreta Colindres[1], Juan Mendez Ramirez[1], Victor Hugo Castrejón Sánchez[1]

[1]Tecnológico de Estudios Superiores de Jocotitlán, Materiales, Mexico.

- **SB6-P084 SYNTHESIS AND CHARACTERIZATION OF TI-ZR ALLOYS WITH ADDITIONS OF TA OR B FOR BONE IMPLANTS**

Azalea Maldonado Pérez[1], Ismailia Leilani Escalante Garcia[1], Francisco Alvarado Hernández[2]

[1]Universidad Autónoma de Zacatecas, Unidad Academica de Ciencias Quimicas, Mexico. [2]Universidad Autónoma de Zacatecas, Unidad Académica de Ingenieria I, Mexico.

- **SB6-P085 SYNTHESIS OF NANOMEDICINE BASED ON OLSALAZINE DENDRIMERS**

Giancarlo Marino Tinajero[1], Sandra Cortez Maya[1], Elena Klimova[2], Marcos Martínez García[1]

[1]Universidad Nacional Autónoma de México, Instituto de Química, Mexico. [2]Universidad Nacional Autónoma de México, Instituto de Fisiología Celular, Mexico.

- **SB6-P086 PREPARATION AND MICROBIOLOGICAL EVALUATION OF TRICLOSAN LIPOSOMES TO ACNE TREATMENT**

Wan Yin Chávez Yuen[1], Ana Daniela Olivano Esquivel[1], Beatriz Martinez Perez[2,3], Ariadna López González[1], Mario Alberto Godoy Zaragoza[1], Daniela Pérez Flores[1], Alma Leticia Torres Solís[1]

[1]Universidad Politécnica del Valle de México, División de Ingeniería en Nanotecnología, Mexico. [2]Facultad de Estudios Superiores Cuautitlán, UNAM., Laboratorio de Sistemas Farmacéuticos de Liberación Modificada, Mexico. [3]Universidad Politécnica del Valle de México, Dirección de ingeniería en Nanotecnología, Mexico.

- **SB6-P087 DOUBLE NETWORK CHITOSAN-ALGINATE NANOPARTICLES FOR DRUG DELIVERY: A DYNAMIC LIGHT SCATTERING STUDY**

Egna Yaroslavh Rios Campos[1], Eustolia Rodriguez Velazquez[2], Manuel Alatorre Meda[1]

[1]Instituto Tecnológico de Tijuana, Centro de Graduados e Investigacion en Quimica, Mexico. [2]Universidad Autónoma de Baja California, Facultad de Odontologia-Tijuana, Mexico.

- **SB6-P088 MICELLAR PHASE BEHAVIOR OF STIMULI-RESPONSIVE POLYMERIC MICELLES: EFFECT OF pH, IONIC STRENGTH AND TEMPERATURE.**

María del Rosario Rodríguez Hidalgo[1], César Soto Figueroa[2], Luís Vicente[3]

[1]Facultad de Estudios Superiores Cuautitlán, UNAM., Ciencias Químicas, Mexico. [2]Universidad Autónoma de Chihuahua, Ciencias Químicas, Mexico. [3]Facultad de Química, UNAM, Física y Química Teórica, Mexico.

- **SB6-P089 ORGANIC ELECTROCHEMICAL TRANSISTORS AS A PLATFORM FOR PERSONALIZED WELLNESS SOLUTIONS**

Jonathan Sayago[1], María Olga Concha Guzmán[2], José Ramón Herrera Garza[2]

[1]Instituto de Energías Renovables Universidad Nacional Autónoma de México, Termociencias, Mexico. [2]Instituto de Energías Renovables Universidad Nacional Autónoma de México, Materiales Solares, Mexico.

- **SB6-P090 AMOXICILLIN CONTROLLED-RELEASE FROM POLYMERICS HYDROGELS**

Ana Valeria Torres Figueroa[1], Cinthia Jhovanna Pérez Martínez[1], Teresa del Castillo Castro[2], Enrique Bolado Martínez[1], María Alba Guadalupe Corella Madueño[1]

[1]Universidad de Sonora, Departamento de Ciencias Químico Biológicas, Mexico. [2]Universidad de Sonora, Departamento de Investigación en Polímeros y Materiales, Mexico.

- **SB6-P091 THERMAL ABLATION OF TUMORS BY ANISOTROPIC AUNPS FUNCTIONALIZED WITH BSA**

Clara de la Luz Carreón Álvarez[1], José Luis Rodríguez López[2], Rubén López Revilla[1]

[1]Instituto Potosino de Investigación Científica y Tecnológica A.C., Molecular Biology, Mexico. [2]Instituto Potosino de Investigación Científica y Tecnológica A.C., Advanced Materials, Mexico.

- **SB6-P092 SERS EFFECT IN POROUS ALUMINA FILM DECORATED WITH GOLD NANOPARTICLES FOR CANCER BIOMARKERS DETECTION IN RAMAN SPECTROSCOPY**

Oscar Eduardo Cigarroa Mayorga[1], Angel Guillen Cervantes[2], Miguel A. Avendaño Ibarra[3], Patricia Talamás Rohana[4], Salvador Gallardo Hernandez[5]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Nanociencias y nanotecnología, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Fisica, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Ingeniería Electronica, SEES, Mexico. [4]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV,

Infectómica y Patogénesis Molecular, Mexico. [5]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, LANE, Mexico.

- **SB6-P093 MAGNETIC NANOPARTICLES WITH PH-RESPONSIVE POLYMERIC COATING FOR THE GUIDED DOSAGE OF DRUGS**

  Fernando Espinola[1], Gonzalo Ramirez[2], Silvia Gutierrez[1]

  [1]Universidad de Guanajuato, Ciencias Naturales y Exactas, Mexico. [2]Centro de Investigaciones en Optica, Guanajuato, Mexico.

- **SB6-P094 MAGNETIC PROPERTIES IN AUTO COMBUSTION OBTAINED $La_{0.7}Sr_{0.3-X}Ca_XMnO_3$ COATED BY AMINO SILANE FOR BIOMEDICAL PROPOSES**

  Israel Alejandro Flores Urquizo[1], Flavio Tais Montes de Oca Ayala[2], Hamid Sánchez Correa[2], Jesús Antonio Salas Gonzalez[1], Dalmy Lucia Ochoa Gamboa[1], Joaquín Chávez Arellano[2], Marco Antonio Garza Navarro[3], Tomás Constantino Hernández[1]

  [1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico. [2]Instituto Tecnológico Superior de Ciudad Hidalgo, Mexico. [3]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico.

- **SB6-P095 MICROWAVE-ASSISTED SYNTHESIS OF AMINOBORONIC-FUNCTIONALIZED CARBON DOTS AND ITS APPLICATION AS A GLUCOSE ON-OFF SENSOR**

  Hector Daniel Ibarra Prieto[1], Ignacio Alfredo Rivero Espejel[1]

  [1]Instituto Tecnológico de Tijuana, Centro de Graduados e Investigación en Química, Mexico.

- **SB6-P096 GOLD AND AU@AG NANOPARTICLES SYNTHESIZED WITH RUMEX HYMENOSEPALUS EXTRACT: A CYTOTOXIC STUDY IN HELA CELLS**

  Mauro Villalobos Noriega[1], Aaron Alberto Martinez Higuera[1], Juan Manuel Martínez Soto[2], Ericka Rodríguez Leon[1], Ruben Mendoza Cruz[3], Yedith Soberanes[4], Roberto Carlos Carrillo Torres[1], José Manuel Galvan Moroyoqui[2], Ramon Iñiguez Palomares[1]

  [1]Universidad de Sonora, Departamento de Física, Mexico. [2]Universidad de Sonora, Departamento de Medicina y Ciencias de la Salud, Mexico. [3]The University of Texas at San Antonio, Department of Physics and Astronomy, United States. [4]Universidad de Sonora, Departamento de Polímeros y Materiales, Mexico.

- **SB6-P097 SYNTHESIS AND CHARACTERIZATION OF Fe, Cu AND Fe/Cu BIMETALLIC NANOPARTICLES USING FRUIT EXTRACTS FROM VITEX MOLLIS**

  Aaron Alberto Martinez Higuera[1], Juan Manuel Martínez Soto[2], Ruben Mendoza Cruz[3], Eduardo Larios[4], Blanca Esthela Rodríguez Vázquez[5], Roberto Mora Monroy[6], Ericka Rodríguez Leon[1], Heriberto Acuña Campa[1], Ramon Alfonso Iniguez Palomares[7]

  [1]Universidad de Sonora, Departamento de Física, Mexico. [2]Universidad de Sonora, Departamento de Medicina y Ciencias de la Salud, Mexico. [3]University of Texas at San Antonio, Department of Physics and Astronomy, United States. [4]Universidad de Sonora, Departamento de Ingeniería Química y Metalurgia, Mexico. [5]Universidad de Sonora, Departamento de Polímeros y Materiales, Mexico. [6]Universidad de Sonora, Departamento de Investigación en Física, Mexico. [7]Universidad de Sonora, Departamento de Física, Mexico.

- **SB6-P098 STUDY OF THE ELECTROCHEMICAL PROPERTIES OF THE LIGANDS L24, PC, PO AND THEIR CORRESPONDING COPPER COMPLEXES WITH POTENTIAL BIOMIMETIC ACTIVITY OF ANTIOXIDANT ENZYMES BY CYCLIC VOLTAMMETRY.**

  Elio Alberto Molina Martinez[1], Rocío Sugich Miranda[2], Felipe Medrano Valenzuela[2], Hisila Santacruz Ortega[1], Alex J. Salazar Medina[1]

  [1]Universidad de Sonora, Departamento de Investigación en Polímeros y Materiales, Mexico. [2]Universidad de Sonora, Departamento de Ciencias Químico Biológicas, Mexico.

- **SB6-P099 SONOCHEMICAL SYNTHESIS AT ROOM TEMPERATURE OF HYDROXYAPATITE NANOSTRUCTURES DOPED WITH LANTHANIDES .**

  Pedro Perdigon Lagunes[1], Maricela Santana Vázquez[1], Octavio Estevez[1], Cristina Zorrilla Cangas[1], Raúl Herrera Becerra[1]

  [1]Universidad Nacional Autónoma de México, Condensed Matter, Mexico.

- **SB6-P100 UP-CONVERSION NANOMATERIALS AS ENERGY TRANSDUCERS FOR THERANOSTIC APPLICATIONS: LUMINESCENCE IMAGING, PHOTODYNAMIC THERAPY, PHOTOTHERMAL THERAPY AND DRUG DELIVERY**

  Gonzalo Ramírez García[1], Tzarara Lopez Luke[1], Elder de la Rosa[1]

  [1]Centro de Investigaciones en Optica, Nanophotonics and Advanced Materials Group, Mexico.

■ **SB6-P101 NANOCOMPOSITE OF GRAPHENE OXIDE COULPED WITH HOLLOW GOLD NANOSHELLS FOR ENHANCENMENT OF PHOTOTHERMAL APPLICATIONS**

Sayma Adriana Rodriguez Montelongo[1], Facundo Ruiz[1], Omar González[2], Sonia Silva Ramirez[2], Samuel Kolosovas[3]

[1]Universidad Autónoma de San Luis Potosí, Facultad de Ciencias, Mexico. [2]Universidad Autónoma de San Luis Potosí, Facultad de Ciencias Quimicas, Mexico. [3]Universidad Autónoma de San Luis Potosí, Ciacyt, Mexico.

■ **SB6-P102 COENCAPSULATION OF FE3O4 NANOPARTICLES AND ANTITUMORAL PEPTIDES ON PLGA NANOCAPSULES**

Yuniel Gerardo Rodríguez Rivero[1], Hernani T Yee[2]

[1]Escuela Superior de Física y Matemáticas IPN, Laboratorio de Espectroscopia Mossbauer y Técnicas complementarias, Mexico. [2]Escuela Superior de Física y Matemáticas IPN, Laboratorio de Espectroscopia Mosbauer y Técnicas complementarias, Mexico.

■ **SB6-P103 GOLD NANOSTARS FOR TENTATIVE THERANOSTIC APPLICATIONS**

Leyanis Rodriguez Rodriguez[1], Eustolia Rodriguez Velazquez[2], Georgina Pina Luis[1], Manuel Alatorre Meda[1]

[1]Instituto Tecnológico de Tijuana, Centro de Graduados e Investigacion en Quimica, Mexico. [2]Universidad Autónoma de Baja California, Facultad de Odontologia-Tijuana, Mexico.

■ **SB6-P104 ADSORPTION AND SELF-ASSEMBLY OF ANTICANCER ANTIBIOTIC DOXORUBICIN ON SINGLE-WALLED CARBON NANOTUBES**

Andres Rodriguez[1]

[1]Instituto de Ciencias Nucleares UNAM, quimica, Mexico.

■ **SB6-P105 PREPARATION OF SUB-50 NM STRUCTURES OF METHACRYLIC COPOLYMER/ ASPIRIN BY MEANS OF SEMICONTINUOUS HETEROPHASE POLYMERIZATION WITH A HIGH DRUG CONTENT**

Francisco Javier Enriquez[1], Jose Roberto López[1], Graciela Morales[1], Raul Guillermo López[2], Hened Saade Caballero[2]

[1]Centro de Investigación en Química Aplicada - CIQA , Síntesis de Polímeros, Mexico. [2]Centro de Investigación en Química Aplicada - CIQA , Procesos de Polimerizacion, Mexico.

■ **SB6-P106 COMPARATIVE EFFECTS ON RAT PRIMARY ASTROCYTES AND C6 RAT GLIOMA CELLS CULTURES AFTER 24 HOURS EXPOSURE TO SILVER NANOPARTICLES (AgNPs)**

Samuel Salazar[1]

[1]Universidad Autónoma de San Luis Potosí, Ciencias Químicas, Mexico.

■ **SB6-P107 FABRICATION AND STUDY OF CURCUMIN LOADED NANOPARTICLES BASED ON PCL FOR SCA7 TREATMENT**

María Luisa Del Prado Audelo[1,2], María Cristina Piña Barba[3], Jonathan Javier Magaña Aguirre[4], Gerardo Leyva Gómez[5], David Quintanar Gerrero[1]

[1]Facultad de Estudios Superiores Cuautitlán, UNAM., Ingeniería y Tecnología, Mexico. [2]Facultad de Química, UNAM, Pharmacy, Mexico. [3]Instituto de Investigaciones en Materiales, Metálicos y Cerámicos, Mexico. [4]Instituto Nacional de Rehabilitacion, Genética y genómica, Mexico. [5]Facultad de Química, UNAM, Farmacia, Mexico.

Symposium C1

ELECTROCHEMICAL ENERGY STORAGE AND GENERATION: BATTERIES, SUPERCAPACITORS AND FUEL CELLS

Francisco Javier Rodríguez-Varela / Instituto Politécnico Nacional, Unidad Saltillo
Sundeep Mukherjee / University of North Texas
Ivonne Liliana Alonso-Lemus / Cátedra Conacyt
Ana Lilia Ocampo-Flores / Universidad Nacional Autonoma de Mexico

MONDAY, AUGUST 20
ROOM: CHICHEN ITZA I

Session: Session 1

SESSION CHAIR: F.J. RODRIGUEZ-VARELA AND I.L. ALONSO-LEMUS

▸ **08:00 - 08:30 SC1-O001 Invited Talk MATERIALS AND SURFACE/INTERFACE DESIGNS FOR ALL-SOLID-STATE LITHIUM ION RECHARGEABLE BATTERIES ~ FLUX CRYSTAL GROWTH APPROACHES FOR CATHODES AND SOLID ELECTROLYTES ~**
Katsuya Teshima[1], Tetsuya Yamada[1], Nobuyuki Zettsu[1]
[1]Shinshu University, Center for Energy and Environmental Science, Japan.

■ **08:30 - 08:45 SC1-O002 CHARACTERIZATION OF THE MECHANISMS OF IONIC CONDUCTIVITY IN LITHIUM AND SODIUM HYDROXYL (Oxy) HALIDES SOLID ELECTROLYTES**
Kostiantyn Turcheniuk[1], Ah-Young Song[1], Yiran Xiao[1], Marco Olguin[2], Lamartine Meda[3], Oleg Borodin[2], Gleb Yushin[1]
[1]Georgia Institute of Technology, Materials Science and Engineering, United States. [2]Army Research Lab, Electrochemistry Branch, United States. [3]Xavier University, Department of Chemistry, United States.

■ **08:45 - 09:00 SC1-O003 CHEMICAL PROCESSING AND MICROSTRUCTURE OF CATHODIC THIN FILMS FOR ALL-SOLID-STATE-LITHIUM BATTERIES**
Yumi Ikuhara[1], Shunsuke Kobayashi[1], Craig Fisher[1], Akihide Kuwabara[1], Hiroki Moriwake[1], Yuichi Ikuhara[1,2]
[1]Japan Fine Ceramics Center, Nanostructures Research Laboratory, Japan. [2]The University of Tokyo, Institute of Engineering Innovation, Japan.

▸ **09:00 - 09:30 SC1-O004 Invited Talk INSTANTANEOUS HYDROGEN GENERATION FOR POWER ON DEMAND**
Anit Giri[1], B. Hornbuckle[1], A. Roberts[1], J. Marsico[1], S. Grendahl[1], Kris Darling[1]
[1]US Army Research Laboratory, WMRD, United States.

■ **09:30 - 09:45 SC1-O005 NOVEL AMORPHOUS METAL ELECTRO-CATALYSTS FOR PEM FUEL CELLS**
Sundeep Mukherjee[1]
[1]University of North Texas, Materials Science and Engineering, United States.

- **09:45 - 10:00 SC1-O006 APPLICATION OF AN HEURISTIC METHOD FOR THE OPTIMIZATION OF PEM FUEL CELLS**
  Edumis Viera Martin[1]
  [1]Universidad Autónoma del Estado de Morelos, CIICAP, Mexico.
- **10:00 - 10:15 SC1-O007 APPLICATION OF NEW METHODOLOGY FOR MANUFACTURE OF POROUS SCAFFOLD USED ON SOLID OXIDE FUEL CELL ELECTRODES**
  Bruna Machado[1], Rodrigo Munoz[1], Paola Cajas[1]
  [1]Universidade de Brasília, FGA, Brazil.
- **10:15 - 10:30 SC1-O008 THERMODYNAMICS OF INTERCALATION AND CONVERSION REACTIONS IN BATTERY ELECTRODES**
  Sai Gautam Gopalakrishnan[1,2], Daniel C. Hannah[3], Pieremanuele Canepa[3], Gerbrand Ceder[3,4]
  [1]Massachusetts Institute of Technology, Materials Science and Engineering, United States. [2]Princeton University, Mechanical and Aerospace Engineering, United States. [3]Lawrence Berkeley National Laboratory, Materials Sciences Division, United States. [4]University of California, Berkeley, Materials Science and Engineering, United States.
- **10:30 - 10:45 SC1-O009 GREEN FABRICATION OF PLATINUM NANOPARTICLES DECORATED TiO_2 NANORODS AS EFFICIENT AND STABLE ELECTROCATALYST FOR OXYGEN REDUCTION REACTION**
  Paskalis Sahaya Murphin Kumar[1], Gopalakrishnan Kumar[2], Siva Kumar Krishnan[3]
  [1]Anna University Chennai, Department of Applied Science and Technology, India. [2]Daegu University, Department of Environmental Engineering, South Korea. [3]Benemerita Universidad Autonoma de Puebla, CONACYT- Instituto de Física, Mexico.
- **10:45 - 11:00 SC1-O010 PtPd/C BIMETALLIC NANOPARTICLES FROM ORGANOMETALLIC PRECURSORS TOWARD METHANOL OXIDATION REACTION**
  Esther Ramirez Meneses[1], Jesús Soto Hernández[2], Lena Priscila Alejandra Guerrero Ortega[2], Arturo Manzo Robledo[2], Luis Marcos Palacios Romero[1], Karine Philippot[3]
  [1]Universidad Iberoamericana, Departamento de Ingeniería Química, Industrial y de Alimentos, Mexico. [2]Escuela Superior de Ingeniería Química e Industrias Extractivas, Laboratorio de Electroquímica y Corrosión, Mexico. [3]CNRS-Laboratoire de Chimie de Coordination, Ingénierie des Nanoparticules Métalliques, France.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY II
PROF. YUICHI IKUHARA

Session: Session 2

SESSION CHAIR: S. MUKHERJEE

- **12:30 - 13:00 SC1-O011 Invited Talk SYNTHESIS AND ELECTRICAL PROPERTIES OF CO-DOPED ZrO_2 SOLID ELECTROLYTES FOR THEIR USE IN SOFC**
  José Alonso Díaz Guillén[1], Carlos Andrés Durón Sifuentes[1], Madelyne Salazar Zertuche[1], Oswaldo Burciaga Díaz[1], Sagrario Martínez Montemayor[2], David Rentería[1], Antonio F. Fuentes[3]
  [1]Instituto Tecnológico de Saltillo, División de Estudios de Posgrado e Investigación, Mexico. [2]Centro de Investigación en Química Aplicada - CIQA , Departamento de Materiales Avanzados, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV Unidad Saltillo, Ingeniería Cerámica, Mexico.
- **13:00 - 13:15 SC1-O012 SYNTHESIS AND CHARACTERIZATION POLYETHERSULFONE (PES) COPOLYMER MEMBRANES MODIFIED WITH OF TANTALUM PENTOXIDE.**
  Karina Marcela Ballesteros Arrieta[1], Alvaro Realpe Jimenez[1], Maria Teresa Acevedo Morantes[1]
  [1]Universidad de Cartagena, Chemical Engineering, Colombia.
- **13:15 - 13:30 SC1-O013 DEVELOPMENT OF A PROTON EXCHANGE COMPOSITE MEMBRANE BASED ON SULFONATED POLYSULFONE/GRAPHENE OXIDE**
  Mauricio Sánchez Luna[1], Vladimir Alonso Escobar Barrios[2]
  [1]Instituto Potosino de Investigación Científica y Tecnológica A.C., Advaced Materials, Mexico. [2]Instituto Potosino de Investigación Científica y Tecnológica A.C., Advanced Materials, Mexico.
- **13:30 - 13:45 SC1-O014 BIMETALLIC CoMoS COMPOSITE ANCHORED TO BIO-CARBON FIBERS AS A HIGH-CAPACITY ANODE FOR Li-ION BATTERIES**
  Noemi Dominguez[1]
  [1]University of Texas at El Paso, Metallurgical, Materials and Biomedical Engineering Department, United States.
- **13:45 - 14:00 SC1-O015 FACILE PREPARATION OF Sn-BASED NANOCOMPOSITE AS NEGATIVE ELECTRODES FOR Na-ION BATTERIES AND ELUCIDATING THE ASSOCIATED REACTION**

MECHANISM USING X-RAY ABSORPTION SPECTROSCOPY

Ghulam Ali[1]

[1]KIST, Center for Energy Convergence Research, Korea.

■ **14:00 - 14:15 SC1-O016 M-DOPED TiO_2 (M= Sn, Ta) AS ENHANCED Pt ELECTROCATALYST SUPPORT FOR DIRECT METHANOL FUEL CELL**

Ana Lilia Ocampo[1], Isaac Juárez[2], Edgar Valenzuela[3], Lázaro Huerta[4], Josefina de Gyves[1]

[1]Universidad Nacional Autónoma de México, Facultad de Química, Mexico. [2]Universidad Politécnica del Estado de Guerrero, Energía, Mexico. [3]Universidad Autónoma de Baja California, Facultad de Ingeniería, Mexico. [4]Universidad Nacional Autónoma de México, Instituto de Investigaciones en Materiales, Mexico.

☒ **14:00 - 16:00 Lunch time**

Session: Session 3

SESSION CHAIR: A.L. OCAMPO-FLORES

■ **16:00 - 16:15 SC1-O017 EFFECT OF THE OAM/OAC RATIO IN THE SYNTHESIS, CHARACTERIZATION, AND PERFORMANCE OF Ni-Pt NANOPARTICLES EMPLOYED AS CATALYSTS FOR THE OXYGEN REDUCTION REACTION IN PEM FUEL CELLS.**

Jose Luis Reyes Rodriguez[1], Omar Solorza[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Quimica, Mexico.

■ **16:15 - 16:30 SC1-O018 NEW 2D MATERIALS DESIGN STRATEGIES TO IMPROVE THE SAFETY OF LITHIUM BATTERIES**

Reza Shahbazian Yassar[1]

[1]University of Illinois at Chicago, Mechanical Engineering, United States.

■ **16:30 - 16:45 SC1-O019 STUDY OF THE FORMATION OF Cu@Pd CORE-SHELL NANOPARTICLES USED FOR THE ELECTROOXIDATION OF ALCOHOLS.**

Jose Maya Cornejo[1], Miriam Rocío Estévez González[2], Josue David Mota Morales[1], Rodrigo Alonso Esparza Muñoz[1], Ramiro Perez Campos[1]

[1]Centro de Física Aplicada y Tecnología Avanzada UNAM, Nanotecnología, Mexico. [2]Centro de Física Aplicada y Tecnología Avanzada UNAM, Ingeniería Molecular de Materiales, Mexico.

■ **16:45 - 17:00 SC1-O020 NANOCATALYST OF CuNiPt ALLOY, SUPPORTED ON REDUCED GRAPHENE OXIDE**

Miguel Adrian Padilla Islas[1], Miriam Marisol Tellez Cruz[1], Maria Guadalupe Salinas Juarez[1], Hilda Margarita Alfaro Lopez[1], Omar Solorza Feria[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Quimica, Mexico.

● **17:30-18:30 Science, Technology and Society Lecture SENER**

MONDAY, AUGUST 20
ROOM: TERRACE

◘ **18:30 -20:30 POSTER SESSION & COFFEE BREAK**

■ **SC1-P001 SUPERCAPACITIVE BEHAVIOR OF MULTIWALLED C/NiO NANOTUBES SYNTHETIZED BY LIQUID PHASE DEPOSITION METHOD**

Jorge Vazquez Lujano[1], Jorge Roberto Vargas Garcia[2]

[1]Instituto Politécnico Nacional - IPN, ESIQIE-Departamento de Ingeniería en Metalurgia y Materiales, Mexico. [2]Instituto Politécnico Nacional - IPN, Centro de Nanociencias y Micro y Nanotecnologías, Mexico.

■ **SC1-P002 MANUFACTURE OF ELECTRODES WITH ZE/MWCNT/MOS_2 APPLIED TO SUPERCAPACITORS**

Allan Abdías García Silva[1], Jeannete Ramírez Aparicio[1,2], J. Enrique Samaniego Benitez[3,4], Daniel Fernández Rodríguez[1], Victor Manuel Salinas Bravo[1]

[1]Instituto Nacional De Electricidad y Energías Limpias, Sistemas mecánicos, Mexico. [2]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Catedras, Mexico. [3]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Posgrado de Tecnología Avanzada, Mexico. [4]Instituto Politécnico Nacional - IPN, Mexico.

■ **SC1-P003 DEVELOPMENT OF HIGH SURFACE AREA AND MICROSTRUCTURE IN BIOCHARS FOR APPLICATION IN INTERMEDIATE TEMPERATURE DIRECT CARBON-SOFC.**

Jair Gabriel Triana Pequeño[1], Jorge Ibarra[1], Eduardo Martínez[2], Felipe de Jesús Cerino Córdova[3], Juan Jacobo Ruiz Valdés[1], Juan Manuel Hernández López[1], Anabel Álvarez Méndez[1], Astrid Iriana Sánchez Vázquez[1]

[1]Universidad Autónoma de Nuevo León, Laboratorio de Materiales III, FCQ, Mexico. [2]Centro de Investigación en Materiales Avanzados,

S.C., CIMAV-Monterrey, Mexico. [3]Universidad Autónoma de Nuevo León, Laboratorio de Ingeniería Química I, FCQ, Mexico.

- **SC1-P004 DEVELOPMENT OF SODIUM SUPERIONIC CONDUCTOR BY GLASS-CERAMIC ROUTE**

Jairo Felipe Ortiz Mosquera[1], Adriana Marcela Nieto Munoz[1], Ana Candida Martins Rodrigues[2]

[1]Universidade Federal de São Carlos, Dema-LaMaV, Brazil. [2]Universidade Federal de São Carlos, Dema, Brazil.

- **SC1-P005 STRUCTURAL AND ELECTRICAL BEHAVIOR OF Na^+-SUPER IONIC CONDUCTOR GLASS-CERAMICS**

Adriana Marcela Nieto Munoz[1], Ana Candida Martins Rodrigues[2]

[1]Universidade Federal de São Carlos, PPG-CEM, Brazil. [2]Universidade Federal de São Carlos, Department of Materials Engineering, Brazil.

- **SC1-P006 PRE-CONDITIONING OF SILICON ANODES BY SODIATION FOR LITHIUM-ION BATTERIES**

Erick Leonel Espinosa Villatoro[1], Enrique Quiroga González[1]

[1]Benemerita Universidad Autonoma de Puebla, Instituto de Física Ing. Luis Rivera Terrazas, Mexico.

- **SC1-P007 COMPOSITE OF SULFUR AND CARBON OBTAINED FROM CORNCOBS AT A HIGH TEMPERATURE, AS CATHODE OF Li-S BATTERIES**

Juan David Garay Marín[1], Enrique Quiroga González[1]

[1]Benemerita Universidad Autonoma de Puebla, Institute of Physics, Mexico.

- **SC1-P008 3D PRINTED ASYMMETRIC MICRO-SUPERCAPACITORS BASED ON NANOSTRUCTURED MANGANESE PHOSPHATE AND VANADIUM PHOSPHATE**

Raúl Lucio Porto[1], Jorge Zuñiga Martínez[1], César Iván García Guajardo[1], Iván Eleazar Moreno Cortez[1], Luis Alberto López Pavón[1]

[1]Universidad Autónoma de Nuevo León, Centro de Innovación, Investigación y Desarrollo en Ingeniería y Tecnología, Mexico.

- **SC1-P009 CHICKEN MANURE-DERIVED BIOCARBON AS METAL-FREE ELECTROCATALYSTS: EVALUATION FOR THE OXYGEN REDUCTION REACTION IN ALKALINE FUEL CELLS**

Maricruz Salazar Oropeza[1], Beatriz Escobar[2], Edilso Reguera[3], Javier Rodriguez Varela[1], José Escorcia[4], Ivonne Alonso Lemus[5]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Unidad Saltillo, Mexico. [2]CONACyT, Centro de Investigación Científica de Yucatán (CICY), Unidad de Energía Renovable, Mexico. [3]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Unidad Legaria, Mexico. [4]CONACYT-CINVESTAV del IPN, Unidad Saltillo, Mexico. [5]CONACYT, Cinvestav Unidad Saltillo., Sustentabilidad de los Recursos Naturales y Energía, Mexico.

- **SC1-P010 SYNTHESIS OF Sn@Pt/C CORE-SHELL NANOCATALYSTS BY THE BAE AND POLYOL METHODS FOR THE ETHYLENE GLYCOL ELECTRO-OXIDATION REACTION**

Gerardo Hernández Vázquez[1], Samuel Dessources[2], Ivonne Alonso Lemus[3], Beatriz Escobar[4], Edilso Reguera[5], Javier Rodriguez Varela[2,6]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Unidad Saltillo, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Programa de Nanociencias y Nanotecnología, Mexico. [3]CONACYT, Cinvestav Unidad Saltillo, Sustentabilidad de los Recursos Naturales y Energia, Mexico. [4]CONACyT, Centro de Investigación Científica de Yucatán (CICY), Unidad de Energía Renovable, Mexico. [5]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Unidad Legaría, Mexico. [6]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Programa de Sustentabilidad de los Recursos Naturales y Energía, Mexico.

- **SC1-P011 STUDY OF THE PEROVSKITE $LaFe_{0,2}Co_{0,8-x}Cr_xO_3$ (x = 0.0, 0.2, 0.4, 0.6, 0.8) AS ANODE IN SOLID OXIDE FUEL CELLS**

Wilson Rativa Parada[1], Jairo Gomez Cuaspud[2], Enrique Vera Lopez[1], Yaneth Pineda Triana[1], Juan Carda[3]

[1]Universidad Pedagógica y Tecnológica de Colombia, Metallurgical Engineering, Colombia. [2]Universidad Pedagógica y Tecnológica de Colombia, Chemistry, Colombia. [3]Universitat Jaume I, Chemistry, Spain.

- **SC1-P012 EVALUATION OF ONION WASTE-DERIVED CARBON CATALYSTS FUNCTIONALIZED BY MICROWAVE HEATING FOR ANODE APPLICATIONS IN MICROBIAL FUEL CELLS**

Omar Jose Duarte Urbina[1], Fabián Fernández Luqueño[1], Gregorio Vargas Gutiérrez[1], M. E. Sánchez Castro[1], L. de la Torre Sáenz[2], Beatriz Escobar[3], Ivonne Alonso Lemus[4], Javier Rodriguez Varela[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Unidad Saltillo, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., Mexico. [3]CONACyT, Centro de

Investigación Científica de Yucatán (CICY), Unidad de Energía Renovable, Mexico. [4]CONACYT-CINVESTAV del IPN, Unidad Saltillo, Mexico.

- **SC1-P013 USE OF BIOCARBONS-BASED CATALYST TO ENHANCE THE ELECTROCHEMICAL PERFORMANCE OF ANODES FOR MICROBIAL FUEL CELLS**

Carlos Antonio Cobos Reyes[1], Ivonne Alonso Lemus[2], Fabián Fernández Luqueño[1], Beatriz Escobar[3], Edilso Reguera[4], Javier Rodriguez Varela[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Unidad Saltillo, Mexico. [2]CONACYT-CINVESTAV del IPN, Unidad Saltillo, Mexico. [3]CONACyT, Centro de Investigación Científica de Yucatán (CICY), Unidad de Energía Renovable, Mexico. [4]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Laboratorio de Nanotecnología, Mexico.

- **SC1-P014 OCTYLAMINE STABILIZED PtPdNi TRIMETALLIC NANOALLOYS FROM AN ORGANOMETALLIC APPROACH AND THEIR PERFORMANCE DURING UOR**

Miguel Angel Pérez Sosa[1], Lena Priscila Alejandra Guerrero Ortega[2], Esther Ramirez Meneses[1], Arturo Manzo Robledo[2], Carlos Juárez Balderas[3], Vicente Garibay Febles[4]

[1]Universidad Iberoamericana, Departamento de Ingeniería Química, Industrial y de Alimentos, Mexico. [2]Escuela Superior de Ingeniería Química e Industrias Extractivas, Laboratorio de Electroquímica y Corrosión, Mexico. [3]Universidad Iberoamericana, Departamento de Estudios en Ingeniería para la Innovación, Mexico. [4]Instituto Mexicano del Petróleo, Laboratorio de Microscopia Electrónica de Ultra Alta Resolución, Mexico.

- **SC1-P015 BIOELECTRICITY GENERATION FROM SUGAR INDUSTRY EFFLUENT IN MICROBIAL FUEL CELL BY BACILLUS SP. EXOELECTROGEN**

Yolanda Córdova Bautista[1], Marcia Eugenia Ojeda Morales[1], Bertha Pérez Hernández[2], Gabriel Martínez Pereyra[1], Juan Gabriel Álvarez Ramírez[1], Alida Elizabeth Cruz Pérez[1]

[1]Universidad Juárez Autónoma de Tabasco, Universidad Juarez Autónoma de Tabasco, Mexico. [2]Instituto de Ecología A. C., Laboratorio de pre-secuenciación, Mexico.

- **SC1-P016 SYNTHESIS OF Mn DOPED $Na_2Ti_3O_7$ AND ITS ELECTROCHEMICAL PERFORMANCE AS ANODE IN SODIUM ION BATTERIES**

Patricio Iván Cortez Pérez[1], Luis Carlos Torres González[1], Eduardo Maximiano Sanchez Cervantes[1], Enrique Quiroga González[2], Lorena Leticia Garza Tovar[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Instituto de Física, Mexico.

- **SC1-P017 SYNTHESIS OF SULFONATED LATEX MEMBRANES AND MODIFIED WITH V_2O_5 FOR APPLICATION IN FUEL CELLS**

Alvaro Realpe Jimenez[1], María Teresa Acevedo Morantes[1], Yina Pino[1]

[1]Universidad de Cartagena, Chemical Engineering, Colombia.

- **SC1-P018 SYNTHESIS, STRUCTURAL, MORPHOLOGICAL AND TRANSPORT PROPERTIES OF $Ce_{1-x}Sm_xO_{2-\delta}$ (SDC) AND $La_{0.6}Sr_{0.4}Co_{0.2}Fe_{0.8}O_{3-\delta}$ (LSCF) THIN FILMS OBTAINED BY ULTRASONIC SPRAY PYROLYSIS**

Ruben Martinez Bautista[1], José Alvaro Chávez Carvayar[1]

[1]Instituto de Investigaciones en Materiales, Universidad Nacional Autónoma de México, Mexico.

- **SC1-P019 PREPARATION OF SnO_2-Ag NANOSTRUCTURES AND ITS ELECTROCHEMICAL PERFORMANCE AS ANODE IN LITHIUM-ION BATTERY**

Carlos Eduardo Puente de León[1], Israel López[1], Margarita Sánchez Domínguez[2], Lorena Leticia Garza Tovar[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., Unidad Monterrey, Mexico.

- **SC1-P020 SYNTHESIS OF ELECTROCERAMICS FOR USE IN SOFC FUEL CELLS AT LOW TEMPERATURES**

Mario González Alatriste[1], Georgina García Pacheco[2], Elsa Miriam Arce Estrada[1]

[1]Escuela Superior de Ingeniería Química e Industrias Extractivas, Metalurgia y materiales, Mexico. [2]ESIME TICOMAN, Materiales, Mexico.

- **SC1-P021 USE OF NIPT NANOCATALYST FOR pH-INDEPENDENT OXYGEN EVOLUTION REACTION**

Adrián Velázquez Osorio[1,2], José Luis Reyes Rodríguez[3], Omar Solorza Feria[3]

[1]Instituto Politécnico Nacional - IPN, ESFM, Mexico. [2]Universidad Nacional Autónoma de México, FCPYS-SUAED, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Chemistry, Mexico.

- **SC1-P022 HYDROGEN PRODUCTION WITH A MONOPOLAR ELECTROLIZER USING A DIFERENT DIAPHRAGM**
  Luis Enrique Martinez Toledo[1], Jose Yovany Galindo Diaz[1], Yanhsy Hernández Portillo[1], Juan Andrés Reyes Nava[1], Joel Moreira Acosta[1]
  [1]Universidad de Ciencias y Artes de Chiapas, Instituto de investigación e innovación en Energías Renovables, Mexico.

- **SC1-P023 DEVELOPMENT OF CONJUGATED POLYMERS FOR APPLICATIONS IN ION-LITHIUM RECHARGEABLE BATTERIES**
  Rodrio Iván Galván Baena[1]
  [1]Centro de Investigación en Química Aplicada - CIQA , Synthesis of Polymers, Mexico.

- **SC1-P024 SYNTHESIS OF ACTIVATED CARBON FROM COFFEE ENDOCARP FOR ELECTROCHEMICAL SUPERCAPACITORS**
  Harvey de Jesus Orantes Flores[1], Roger Castillo Palomera[2], Ebelia Del Ángel Meraz[3], Edith Ponce[2], Minerva Gamboa Sanchez[2]
  [1]Universidad Politécnica de Chiapas, Maestría en Energías Renovables, Mexico. [2]Universidad Politécnica de Chiapas, Centro de Investigación y Desarrollo Tecnológico en Energías Renovables CIDTER, Mexico. [3]Universidad Juárez Autónoma de Tabasco, División Académica de Ingeniería y Arquitectura, Mexico.

- **SC1-P025 OXIGEN-INCORPORATED MoS_2 AS ANODE MATERIAL FOR LITHIUM-ION BATTERIES**
  Ricardo Briones[1], Salomé Maribel de la Parra Arciniega[1], Lorena Leticia Garza Tovar[1], Eduardo Maximiano Sanchez Cervantes[1]
  [1]Universidad Autónoma de Nuevo León, Laboratorio de Materiales para el Almacenamiento y Conversión de Energía, Mexico.

- **SC1-P026 CHARACTERIZATION OF NiO-GDC10/ GDC10/LSCF-GDC10 MANUFATURED BY TAPE CASTING AND REACTIVE MAGNETRON SPUTTERING PROCESSES OF SOLID OXIDE FUEL CELLS**
  Carlos Ignacio Hernandez Londoño[1]
  [1]Université de Technologie de Belfort-Montbeliard, Besanson, France.

- **SC1-P027 STUDY OF THE SYNTHESIS, CHARACTERIZATION, AND PERFORMANCE OF POLYHEDRAL Ni-Pt NANOCATALYSTS AND THEIR APPLICATION AS CATHODES IN PEM FUEL CELLS.**
  Jose Luis Reyes Rodriguez[1], Omar Solorza Feria[1]
  [1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Quimica, Mexico.

- **SC1-P028 ELECTROCHEMICAL CHARACTERIZATION OF GREEN SYNTHESIS OF NiO NPs USING MANIHOT ESCULENTA CRANTZ FOR ALKALINE FUEL CELL**
  Jorge Armando Avila Guzmán[1], Mónica Arely Lucio Garcia[1], Beatriz Escobar Morales[2], Durcy V. Ruiz Ciau[1], Jesús Alfredo Araujo León[1]
  [1]Universidad Autónoma de Yucatán, Facultad de química, Mexico. [2]Centro de Investigación Científica de Yucatán, Energías renovables, Mexico.

- **SC1-P029 Pt_3Fe/C BIMETALLIC ALLOY NANOPARTICLES AS ELECTROCATALYSTS WITH IMPROVED ACTIVITY FOR THE OXYGEN REDUCTION REACTION**
  Miriam Marisol Tellez Cruz[1], Miguel Adrian Padilla Islas[1], Heriberto Cruz Martínez[2], Hilda Margarita Alfaro López[1], María Guadalupe Salinas Juárez[1], Omar Solorza Feria[1]
  [1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Química, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Doctorado en Nanociencias y Nanotecnología, Mexico.

Symposium C2

CHALLENGES IN MATERIALS AND TECHNOLOGIES FOR ENERGY CONVERSION, SAVING AND STORAGE (MATECSS)

Federico Rosei / Université du Québec
Carlos Gomez Yanez / Instituto Politécnico Nacional
Olivia Graeve / University of California, San Diego
Riad Nechache / École de technologie supérieure
Clara Santato / Polytechnique Montréal

TUESDAY, AUGUST 21
ROOM: CHICHEN ITZA I

Session: Processing I

SESSION CHAIR:

- **08:30 - 09:00 SC2-0001 Invited Talk MULTIFUNCTIONAL MATERIALS FOR STRUCTURAL, ENERGY AND WATER RELATED APPLICATIONS**
  David Kisailus[1]
  [1]University of California, Riverside, Chemical and Environmental Engineering and Materials Science and Engineering, United States.
- **09:00 - 09:30 SC2-0002 Invited Talk SYNTHESIS OF NANOSTRUCTURED MATERIALS WITH UNIQUE PROPERTIES IN CATALYSIS AND BATTERIES**
  Ryan Richards[1,2]
  [1]Colorado School of Mines, Chemistry, United States. [2]National Renewable Energy Laboratory, Nexus, United States.
- **09:30 - 10:00 SC2-0003 Invited talk ADVANCES IN SUB-WAVELENGTH CHARACTERIZATION OF METAMATERIALS WITH FAR-FIELD SPECTROSCOPIC ELLIPSOMETRY**
  Juan Antonio Zapien[1,2], Foo Yishu[1,2]
  [1]City University of Hong Kong, Center of Super Diamond and Advanced Thin Films (COSDAF), Hong Kong. [2]City University of Hong Kong, Materials Science and Engineering, Hong Kong.
- **10:00 - 10:30 SC2-0004 Invited Talk CARBON DOTS: SYNTHESIS AND OPTICAL PROPERTIES**
  John Manioudakis[1], Jun-Ray Macairan[1], Rafik Naccache[1]
  [1]Concordia University, Chemistry and Biochemistry/Centre for NanoScience Research, Canada.
- **10:30 - 11:00 SC2-0005 Invited Talk PEROVSKITE OXIDE NANOPARTICLES FOR THE OXYGEN EVOLUTION AND REDUCTION REACTIONS**
  Francesca Deganello[1], Jose Guadalupe Rivera Ordoñez[2], Jesus Valdez[3], Maria Luisa Testa[1], Valeria la Parola[1], Maria Laura Tummino[1], Aycan Yurtsever[3], German Orozco[2], Ana C. Tavares[3]
  [1]CNR, Istituto per lo Studio dei Materiali Nanostrutturati, Italy. [2]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Mexico. [3]Institut National de la Recherche Scientifique, Université du Québec, Centre Énergie, Matériaux et Télécommunications, Canada.
- **11: 00 - 11:30 COFFEE BREAK**

11:30 - 12:30 PLENARY III
DR. AMANDA S. BARNARD

Session: Processing II

SESSION CHAIR:

12:30 - 13:00 SC2-O006 Invited Talk DEVELOPMENT OF CIS PHOTOVOLTAIC CELLS BY ELECTRODEPOSITION
Denis Gilbert Francis David[1], Marcus Vinicius Santos Da Silva[1], Yuri Hamayano Lopes Ribeiro[2]
[1]Universidade Federal da Bahia, Instituto de Física, Brazil. [2]Instituto Federal de Educação, Ciência e Tecnologia da Bahia, Área de Ciencias Exatas, Brazil.

13:00 - 13:30 SC2-O007 Invited Talk UPCONVERTING LANTHANIDE-DOPED NANOPARTICLES
Fiorenzo Vetrone[1]
[1]Institut National de la Recherche Scientifique, Université du Québec, Centre Énergie, Matériaux et Télécommunications, Canada.

13:30 - 14:00 SC2-O008 Invited Talk TUNING METAL-SEMICONDUCTOR INTERFACES TO IMPROVE RATE ENHANCEMENT IN HOT ELECTRON-MEDIATED PHOTOCATALYTIC REACTIONS.
Laura Fabris[1], Supriya Atta[2], Ashley Pennington[3], Fuat Celik[3]
[1]Rutgers, The State University of New Jersey, Materials Science and Engineering, United States. [2]Rutgers, The State University of New Jersey, Chemistry and Chemical Biology, United States. [3]Rutgers, The State University of New Jersey, Chemical and Biochemical Engineering, United States.

14:00 - 16:00 Lunch time

Session: Processing III

SESSION CHAIR:

16:00 - 16:30 SC2-O009 Invited Talk CHARGE STORAGE IN DISORDERED NANOSHEET ELECTRODES: DEFECTS AND ELECTROCHEMICAL RESPONSES
Scott Misture[1]
[1]Alfred University, Materials Science, United States.

16:30 - 17:00 SC2-O010 Invited Talk PULSED LASER DEPOSITION OF METAL-INSULATOR TRANSITION MATERIALS
Mohamed Chaker[1]
[1]Institut National de la Recherche Scientifique, Université du Québec, Energy Materials Telecommunications, Canada.

17:00 - 17:30 SC2-O011 Invited Talk GRAPHENE COMPOSITES FOR ENERGY: THE IMPORTANCE OF SURFACES
Marta Cerruti[1]
[1]McGill University, Materials Engineering, Canada.

17:30 - 18:00 SC2-O012 Invited Talk LOW-COST PRINTABLE HYBRID HETEROSTRUCTURES FOR ENERGY HARVESTING AND ENERGY-EFFICIENT LIGHTING
Charles Trudeau[1], Ivy M. Asuo[2], Jaime Benavides[1], Debika Banerjee[1], Xiaohang Guo[1], Ibrahima Ka[1], Dawit Gedamu[1], Riad Nechache[1], Sylvain G. Cloutier[1]
[1]École de technologie supérieure (ETS), Electrical Engineering, Canada. [2]Institut National de la Recherche Scientifique, Université du Québec, Centre Énergie, Matériaux et Télécommunications, Canada.

18:00 - 18:15 SC2-O013 HYDRODEOXYGENATION OF GUAYACOL OVER PLATINUM MODIFIED MESOPOROUS CATALYSTS
Lorena Rivoira[1], M. Laura Martinez[1], Andrea Beltramone[1]
[1]Universidad Tecnológica Nacional, Argentina.

18:15 - 18:30 SC2-O014 ROAD PAVEMENT ENERGY HARVESTING DEVICE TO CONVERT VEHICLES KINETIC ENERGY INTO ELECTRICAL ENERGY
Adelino Ferreira[1,2], Francisco Duarte[2]
[1]Universidade de Coimbra, Portugal. [2]Universidade de Coimbra, CITTA, Department of Civil Engineering, Portugal.

TUESDAY, AUGUST 21
ROOM: TERRACE

18:30 -20:30 POSTER SESSION & COFFEE BREAK

SC2-P001 STUDY OF THE PROPERTIES OF ABSORPTION OF HYDROGEN IN THE ALLOYS TiCr1.1-x V0.9-x (X = 0, 0.2, 0.3) SYNTHESIZED BY MECHANICAL MILLING

Dario Yesid Peña Ballesteros[1], Hugo Armando Estupiñan Duran[2], Alejandro David Martinez[3]
[1]Universidad Industrial de Santander, Santander, Colombia. [2]Universidad Nacional de Colombia, Antioquia, Colombia. [3]UDES, Santander, Colombia.

- **SC2-P002 HYDROXYLATION OF LITHIUM CUPRATE (Li_2CuO_2) FOR HYDROGEN PRODUCTION BY WATER GAS SHIFT REACTION**

Omar Hernandez Rivas[1,2], Arturo Mendoza Nieto[1], Heriberto Pfeiffer Perea[1]
[1]Instituto de Investigaciones en Materiales, Metallic and Ceramic Materials, Mexico. [2]Universidad Nacional Autónoma de México, Posgrado en Ciencias Químicas, Mexico.

- **SC2-P003 Y-DOPED CERIA AND Y-DOPED ZIRCONIA DENSE DUAL-PHASE MEMBRANES FOR HIGH-TEMPERATURE CO_2 SEPARATION**

Daniela Gonzalez Varela[1], Heriberto Pfeiffer Perea[2]
[1]Instituto de Investigaciones en Materiales, Materiales ceramicos y metalicos, Mexico. [2]Instituto de Investigaciones en Materiales, Materiales metalicos y ceramicos, Mexico.

- **SC2-P004 IRREVERSIBILITY ANALYSIS OF MHD FREE CONVECTIVE COUETTE FLOW OF A NANOFLUID IN A VERTICAL MICROCHANNEL WITH A POROUS MEDIUM, CONVECTIVE HEATING AND THERMAL RADIATION**

Guillermo Ibáñez[1], Aracely López[1], Joel Pantoja Enríquez[1], Joel Moreira Acosta[1], Orlando Lastres[1]
[1]Universidad de Ciencias y Artes de Chiapas, Instituto de Investigación e Innovación en Energías Renovables, Mexico.

- **SC2-P005 EVALUATION OF A HELICOIDAL SAVONIUS WIND TURBINE IN A REAL OPERATING ENVIRONMENT**

Eduardo Albert Huerta Argaez[1], Rubén Domínguez Maldonado[2]
[1]Augusto Leon Castillo Servicio y Mantenimiento SA de CV, Departamento de diseño, Mexico. [2]Universidad del Mayab S.C., Facultad de Ingeniería, Mexico.

- **SC2-P006 NANOCLUSTERS OF VANADIUM OXIDE INCLUDED IN HYBRID NANOSTRUCTURED MATERIALS USE AS HYDROGEN STORAGE MATERIAL**

Juliana Maria Juarez[1], Marcos B. Gómez Costa[1], M. Laura Martinez[1], Oscar Anunziata[1]
[1]Universidad Tecnológica Nacional, Nanotec, Argentina.

- **SC2-P007 USE OF A GEOPOLYMER FOR THERMAL ENERGY SAVING**

Salvador Eduardo Martínez Galván[1], José Ramón Gasca Tirado[2], Alejandro Manzano Ramírez[3], Ramon Zarraga Nuñez[4], Blanca Gómez Luna[2]
[1]Universidad de Guanajuato, División de ciencias de la salud e ingenierías, Mexico. [2]Universidad de Guanajuato, Departamento de ingenierías, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Unidad Querétaro, Mexico. [4]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, División de ingenierías, Mexico.

- **SC2-P008 ELECTROCHEMICAL SYNTHESIS OF AMMONIA FROM WATER AND NITROGEN WITH HIGH FARADAIC EFFICIENCY USING LITHIUM-ION CONDUCTING CERAMIC**

Hyung Chul Yoon[1], Choong-Yul Yoo[1], Sun Hyung Kim[1], Eun Young Jeong[1], Chan Hee Jung[1], Jong Nam Kim[1]
[1]Korea Institute of Energy Research, Clean Fuel Laboratory, South Korea.

- **SC2-P009 ADSORPTION OF H_2 MOLECULES ON $CaCO_3$ (1 1 0) SURFACE**

Teresa Ramírez Rodríguez[2], Fray de Landa Castillo Alvarado[1], Williams Ramirez Carbellido[1]
[1]Instituto Politécnico Nacional - IPN, Escuela Superior de Física y Matemáticas, Mexico. [2]Instituto Politécnico Nacional - IPN, Escuela Superior de Ingeniería Textil, Mexico.

- **SC2-P010 OPTOELECTRONIC PROPERTIES OF CESIUM BASED PEROVSKITE MATERIAL BY COMPUTER SIMULATIONS**

Jeevan Torres[1], Jesus Sanchez Diaz[1], Ana Dibert[1], Ariana Garcia[1], J. M. Rivas[1], Diego Esparza[1]
[1]Universidad Autónoma de Zacatecas, Unidad Académica de Ingeniería Eléctrica, Mexico.

- **SC2-P011 DYNAMIC HEAT TRANSFER ANALYSIS OF PARABOLIC TROUGH SOLAR COLLECTOR RECEIVER.**

Alejandro de la Cruz Rogel Ramirez[1], Martha Ortiz Rojas[2], Jose Antonio Zamora Plata[2], Hector Hugo Martinez y Rojas[2]
[1]Universidad Nacional Autónoma de México, Chemical Engineering Department, Mexico. [2]Universidad Nacional Autónoma de México, Chemical Engineering, Mexico.

- **SC2-P012 HIGH PERFORMANCE BCTZ-BASED CERAMIC AS AN OPTIMUM ENERGY HARVESTING ALTERNATIVE**

Armando Reyes Montero[1], Rigoberto López Juárez[2], Brenda Carreño Jiménez[1], María Elena Villafuerte Castrejón[1]

[1]Instituto de Investigaciones en Materiales, Materiales Cerámicos y Metálicos, Mexico. [2]Instituto de Investigaciones en Materiales (Unidad Morelia), Materiales Cerámicos y Metálicos, Mexico.

- **SC2-P013 ELECTRODEPOSITION OF A COBALT-PHOSPHATE COMPLEX CATALYST (CoPi) IN PRESENCE OF AN ORGANIC COMPLEXING AGENT**

Xochitl Andrea Hernandez Contreras[1], Jose Luis Casas Espinola[2], Inti Zumeta Dubé[1], Edilso Reguera[3], Selene Haydee Martinez Salas[4]

[1]Instituto Politécnico Nacional - IPN, UPIITA, Mexico. [2]Instituto Politécnico Nacional - IPN, ESFM, Mexico. [3]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, SEPI, Mexico. [4]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Mexico.

- **SC2-P014 PHOTOELECTRODEPOSITION OF Co_3O_4 QDs ON TiO_2 ELECTRODES FOR PHOTOCATALYTIC WATER OXIDATION**

Selene Haydee Martinez Salas[1], Inti Zumeta Dubé[2], Edilso Reguera[1], Xochitl Andrea Hernandez Contreras[2]

[1]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Posgrado en Tecnología Avanzada, Mexico. [2]Instituto Politécnico Nacional - IPN, UPIITA, Mexico.

- **SC2-P015 OBTAINING ELECTRICITY DIFFERENT TYPES OF WATER USING ELECTROLYTIC CELLS**

José Luis Jerónimo Pérez[1], Marcelino Rodríguez Cruz[1], Rudy Solis Silvan[1], Israel Ávila Lázaro[2], Elucinque Rodríguez Vargas[1], Eddy Priego Alvarez[1], María Estela Izquierdo Hernández[1], Carlos Fabian Perez de la Cruz[1], Jose Angel Reyes Bautista[1]

[1]Instituto Tecnologico Nacional De Mexico/Instituto Tecnológico Superior de Comalcalco, Enviromental, Mexico. [2]Universidad Juárez Autónoma de Tabasco, Ingeniería Ambiental, Mexico.

- **SC2-P016 DEVELOPMENT OF NANOMETRIC AND MICROMETRIC METALLIC OXIDES COATINGS FOR PROTECTION OF SURFACES IN SOLAR CONCENTRATION**

Juan Carlos Erreguin Mejia[1], José de Jesús Pérez Bueno[1], Yunny Meas Vong[1], Maria Luisa Mendoza Lopez[2]

[1]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Direccion de Ciencia, Mexico. [2]Instituto Tecnológico de Querétaro, Metal Mecánica, Mexico.

- **SC2-P017 EFFECT OF THE Sb^{5+}CATION ON THE STRUCTURAL, MICROSTRUCTURAL AND ELECTRICAL PROPERTIES OF THE SOLID SOLUTION $0.98(K_{0.48}Na_{0.52})_{0.95}Li_{0.05}Nb_{(1-x)}Sb_xO_3$-$0.02Ba_{0.5}(Bi_{0.5}Na_{0.5})_{0.5}ZrO_3$**

Brenda Carreño Jiménez[1], Armando Reyes Montero[1], María Elena Villafuerte Castrejón[1], Rigoberto López Juárez[2]

[1]Instituto de Investigaciones en Materiales, Metálicos y cerámicos, Mexico. [2]Instituto de Investigaciones en Materiales (Unidad Morelia), Mexico.

- **SC2-P018 APPROXIMATIONS TO DEFECT CHEMISTRY IN $Bi_4Ti_3O_{12}$**

Carlos Gomez Yanez[1], María del Carmen Martínez Morales[2], José Ortiz Landeros[2]

[1]Instituto Politécnico Nacional - IPN, Metallurgical and Materials Engineering, Mexico. [2]Instituto Politécnico Nacional - IPN - ESIQIE, Metallurgical and Materials Engineering, Mexico.

- **SC2-P019 DEVELOPMENT OF SAMARIUM-DOPED BOROSILICATE GLASSES OBTAINED BY THE SOL-GEL METHOD**

Eli Emmanuel Campos Zuñiga[1], José Luis Rodríguez Galicia[1], Ivonne Alonso Lemus[2], José Escorcia García[3]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV Unidad Saltillo, Ingeniería Cerámica, Mexico. [2]CONACYT, Cinvestav Unidad Saltillo., Sustentabilidad de los Recursos Naturales y Energía, Mexico. [3]CONACYT, Cinvestav Unidad Saltillo, Ingeniería Cerámica, Mexico.

- **SC2-P020 SYNTHESIS AND CHARACTERIZATION OF EUROPIUM DOPED HYBRID SILICA: L-ARGININE GLASSES**

Ana Lucia Lopez Gastelum[1], Elda Iveth Torres Flores[2], Santos Jesús Castillo[3], Hilda Esperanza Esparza Ponce[4], Javier Hernández Paredes[2]

[1]Universidad de Sonora, Departamento de Ingeniería Química y Metalurgia, Mexico. [2]Universidad de Sonora, Departamento de Física, Mexico. [3]Universidad de Sonora, Departamento de Investigación en Física, Mexico. [4]Centro de Investigación en Materiales Avanzados, S.C., Centro de Investigación en Materiales Avanzados (CIMAV), Mexico.

- **SC2-P021 DEVELOPMENT OF A HEAT GENERATING SYSTEM, USING BIOGAS AS FUEL**

Yanhsy Hernández Portillo[1], Joel Moreira Acosta[1], José Yovany Galindo Díaz[1], Neín Farrera Vázquez[1], Marco Antonio Palafox Matus[1], Uriel Eduardo López Hernández[1], Fidel Eurípides Antúnez Collins[1], Joseph Sebastian Pathiyamattom[2]

[1]Universidad de Ciencias y Artes de Chiapas, Instituto de Investigación e Innovación en Energías Renovables, Mexico.

[2]Instituto de Energías Renovables Universidad Nacional Autónoma de México, Instituto de Energías Renovables, Mexico.

- **SC2-P022 EVALUATION OF TEMPERATURE AND RESIDENCE TIME IN TORREFACTION PROCESS ON THERMAL PROPERTIES ON COLOMBIAN BIOMASS**
  Fredy Jaramillo[1], Pedro N. Alvarado[1]
  [1]Instituto Tecnológico Metropolitano, Antioquia, Colombia.
- **SC2-P023 ENTROPY GENERATION IN FLOW DUE TO ROTATING DISK IN POROUS MEDIUM**
  Imer Lopez[1], Guillermo Ibañez[2], Aracely Lopez[2]
  [1]Universidad de Ciencias y Artes de Chiapas, Energy, Mexico. [2]Universidad de Ciencias y Artes de Chiapas, Mexico.
- **SC2-P024 DEVELOPMENT OF A BAR FOR THE MANUFACTURE OF ELECTRIC LOAD BREAKERS**
  Bárbara G. Rolón[1]
  [1]Universidad de Guanajuato, ingeniería Mecánica, Mexico.
- **SC2-P025 THERMAL PROPERTIES OF $Co_7Sb_2O_{12}$ SPINEL LIKE SOLID SOLUTION CERAMIC VARISTOR USING THE FRONT-FACE FLASH METHOD**
  Carolina Tabasco Novelo[1], Nelson Wilbur Pech May[1], Alejandro Vega Flick[1], Juan José Alvarado Gil[1], Geonel Rodríguez Gattorno[1], Patricia Quintana Owen[1]
  [1]CINVESTAV-Mérida, Applied Physics, Mexico.

WEDNESDAY, AUGUST 22
ROOM: CHICHEN ITZA I

Session: Theory and Modeling I

SESSION CHAIR:

- **08:30 - 09:00 SC2-O015 Invited Talk PHASE STABILITY ANALYSIS OF MIXED-CATION METAL HEXABORIDES: INSIGHTS FROM DFT CALCULATIONS AND EXPERIMENTAL CHARACTERIZATION**
  Kevin Schmidt[1], Olivia Graeve[2], Scott Misture[3], Victor R Vasquez[1]
  [1]University of Nevada, Reno, Chemical and Materials Engineering, United States. [2]University of California, San Diego, Mechanical and Aerospace Engineering, United States. [3]Alfred University, Materials Science and Engineering, United States.
- **09:00 - 09:30 SC2-O016 Invited Talk MICROSTRUCTURALLY-INDUCED PROPERTIES AND DEGRADATION IN LITHIUM-ION BATTERIES**
  Edwin Garcia[1]
  [1]Purdue University, Materials Engineering, United States.
- **09:30 - 10:00 SC2-O017 Invited Talk ARTIFICIAL PHOTOSYNTHESIS: CHALLENGES AND OPPORTUNITIES**
  Claverie Jerome[1]
  [1]Université de Sherbrooke, Chemistry, Canada.
- **10:00 - 10:30 SC2-O018 Invited Talk HOT ELECTRON GENERATION IN SOLAR ENERGY CONVERSION. PHENOMENOLOGICAL THEORETICAL FRAMEWORK AND PRACTICAL DESIGN INSIGHTS.**
  Lucas Vazquez Besteiro[1,2], Xiang-Tian Kong[2,3], Zhiming Wang[2], Alexander Govorov[3]
  [1]Institut National de la Recherche Scientifique, Université du Québec, Énergie, Matériaux et Télécommunications, Canada. [2]University of Electronic Science and Technology of China, Institute for Fundamental and Frontier Sciences, China. [3]Ohio University, Department of Physics and Astronomy, United States.
- **10:30 - 11:00 SC2-O019 Invited Talk MATERIALS AND SYSTEMS FOR HIGH POWER ENERGY STORAGE**
  Victor Castano[1]
  [1]Universidad Nacional Autónoma de México, CFATA, Mexico.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY IV NOBEL PRIZE IN CHEMISTRY 2016
PROF. BEN L. FERINGA

Session: Theory and Modeling II

SESSION CHAIR:

- **12:30 - 13:00 SC2-O020 Invited Talk MACHINE LEARNING AND HIGH-THROUGHPUT EXPERIMENTAL TOOLS FOR NEXT-GENERATION ELECTROLYTES**
  Ruiyun Huang[1], Timothy Davenport[1], Erin Antono[2], Gregory Mulholland[2], Bryce Meredig[2], Sossina Haile[1]
  [1]Northwestern University, Materials Science and Engineering, United States. [2]Citrine Informatics, R&D, United States.

- **13:00 - 13:30 SC2-O021 Invited Talk COMPUTATIONAL DESIGN OF NANOSTRUCTURES FOR ENERGY MATERIALS: A PATHWAY TOWARDS CARBON-NEUTRAL CYCLE**
  Caetano Rodrigues Miranda[1]
  [1]Universidade de São Paulo, IFUSP, Brazil.
- **13:30 - 14:00 SC2-O022 Invited Talk UTILIZING THE POTENTIALS OF HETEROSTRUCTURES FOR EFFICIENT SOLAR ENERGY CONVERSION**
  Oomman Varghese[1], Ram Neupane[1], Maggie Paulose[1]
  [1]University of Houston, Department of Physics, United States.

☒ **14:00 - 16:00 Lunch time**

Session: Processing IV

SESSION CHAIR:

- **16:00 - 16:15 SC2-O023 EFFICIENT ELECTRICITY GENERATION THE ELECTROCHEMICAL DECOMPOSITION OF H_2O_2 IN AN MEMBRANELESS ELECTROCHEMICAL CELL CONTAINING A PRUSSIAN BLUE-MODIFIED GLASSY CARBON ANODE AND A GOLD OXIDES-BASED CATHODE**
  Juan Manriquez[1], David Ortega[1], Selene Sepulveda[2], Erika Bustos[1], German Orozco[1]
  [1]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Department of Science, Mexico. [2]Universidad Autónoma de Nuevo León, CIIDIT, Mexico.
- **16:15 - 16:30 SC2-O024 DEVELOPMENT OF PHASE CHANGE MATERIALS FOR IMPREGNATION IN COARSE AGGREGATES**
  Daniel Jimenez[1], Lilia Narvaez[2], Juana María Miranda[2]
  [1]Universidad Autónoma de San Luis Potosí, DICIM, Mexico. [2]Universidad Autónoma de San Luis Potosí, Facultad del Habitat, Mexico.
- **16:30 - 16:45 SC2-O025 SUITABILITY OF ALUMINIUM-COPPER-SILICON AS METALLIC PHASE CHANGE MATERIAL FOR VEHICLE APPLICATION**
  Veronika Jilg[1], Mirko Klein Altstedde[1], Tina Gläsel[2]
  [1]German Aerospace Center (DLR), Institute of Vehicle Concepts, Germany. [2]German Aerospace Center (DLR), Institute of Materials Physics in Space, Germany.
- **16:45 - 17:00 SC2-O026 COMPOSITE MATERIALS FOR ELECTRIC STRESS GRADING ON HIGH VOLTAGE EQUIPMENT FED BY PWM VOLTAGES**
  Fermin P Espino Cortes[1], Carlos Gomez Yanez[2], Myriam Paredes Olguin[3]
  [1]Instituto Politecnico Nacional, IPN - SEPI-ESIME-Zacatenco, Electrical Engineering Department, Mexico. [2]Instituto Politécnico Nacional - IPN - ESIQIE, Departamento de Metalurgia y Materiales, Mexico. [3]Universidad Politécnica del Valle de México, División de Ingeniería en Nanotecnología, Mexico.
- **17:00 - 17:15 SC2-O027 $Co_7Sb_2O_{12}$ SPINEL LIKE SOLID SOLUTIONS AS NEW VARISTOR MATERIAL**
  Carolina Tabasco Novelo[1], Isidro Gonzalez Panzo[2], Fidel Fernando Gamboa Perera[1], Ulises Salazar Kuri[3], Geonel Rodríguez Gattorno[1], Patricia Quintana Owen[1]
  [1]CINVESTAV-Mérida, Applied Physics, Mexico. [2]Benemerita Universidad Autonoma de Puebla, CIDS-ICUAP, Mexico. [3]Benemerita Universidad Autonoma de Puebla, Physics Institute, Mexico.
- **17:15 - 17:30 SC2-O028 FLAT MIRRORS WITH MULTI-LAYERED COATING FOR OUTSIDE WEATHERING IN SOLAR CONCENTRATION APPLICATIONS**
  Héctor Mote Medécigo[1], José de Jesús Pérez Bueno[1], Yunny Meas Vong[1]
  [1]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Dirección de Ciencia, Mexico.
- **17:30 - 17:45 SC2-O029 MULTIFUCTIONAL IMPROVED WOOD-BIOGAS STOVE**
  Fidel Euripides Antunez Collins[1], Joel Moreira Acosta[1], Neín Farrera Vázquez[1], Yanhsy Hernández Portillo[2], Joseph Sebastian Pathiyamattom[3]
  [1]Universidad de Ciencias y Artes de Chiapas, Instituto de Investigación e Innovación en Energías Renovables, Mexico. [2]Universidad de Ciencias y Artes de Chiapas, instituto de Investigación e Innovación en Energías Renovables, Mexico. [3]Instituto de Energías Renovables Universidad Nacional Autónoma de México, Celdas de Combustible, Mexico.
- **17:45 - 18:00 SC2-O030 ANANAS COMOSUS CULTIVATION IN ORDER TO OBTAIN BIOELECTRICITY.**
  Rudy Solís Silvan[1], Eddy Priego Alvarez[2], Jose Angel Reyes Bautista[2], Carlos Fabian Perez de la Cruz[2], Isidro Jimenez Leon[3], Marcelino Rodriguez Cruz[1], Jose Luis Geronimo Perez[1]

[1]Instituto Tecnologico Nacional De Mexico/Instituto Tecnológico Superior de Comalcalco, environmental, Mexico. [2]Instituto Tecnologico Nacional De Mexico/Instituto Tecnológico Superior de Comalcalco, mechatronic, Mexico. [3]Instituto Tecnologico Nacional De Mexico/Instituto Tecnológico Superior de Comalcalco, Academic direction, Mexico.

- **18:00 - 18:15 SC2-O031 STUDY OF THE TRANSITION SEMICONDUCTOR TO DIELECTRIC OF THE NANOPARTICLES OF COBALT SPINEL**
  Ernesto Andrade Sánchez[1], Georgina Garcia Pacheco[2], Maria de Los Angeles Hernandez Perez[1], Mayahuel Ortega Avíles[3]
  [1]Instituto Politécnico Nacional - IPN, SEPI ESIQIE, Mexico. [2]ESIME TICOMAN, SEPI, Mexico. [3]Centro de Nanociencias y micro y Nanotecnologías del IPN, MEB Especialist, Mexico.
- **18:15 - 18:30 SC2-O032 EMPLASTE DE YESO DIATERMICO**
  Wilfredo Soto Gomez[1]
  [1]Instituto Tecnológico de Tijuana, Ciencia de la tierra, Mexico.

THURSDAY, AUGUST 23
ROOM:CHICHEN ITZA I

Session: Characterization I

SESSION CHAIR:

- **08:30 - 09:00 SC2-O033 Invited Talk METAL OXYNITRIDES FOR PHOTOCATALYSIS**
  Sara Skrabalak[1]
  [1]Indiana University Bloomington, Chemistry, United States.
- **09:00 - 09:30 SC2-O034 Invited Talk ENERGY EFFICIENT WATER NANOFILTRATION SOLUTIONS FROM 2D MATERIALS**
  Giovanni Fanchini[1]
  [1]The University of Western Ontario, Physics and Astronomy, Canada.
- **09:30 - 10:00 SC2-O035 Invited Talk STEADY-STATE AND TIME-RESOLVED FLUORESCENCE SPECTROSCOPY APPLIED TO THE CHARCTERIZATION OF CHARGE TRANSFE PROCESSES IN THIN FILMS OF ORGANIC MATERIALS.**
  Tatiana MARTINS[1], Geovany Souza[1]
  [1]Universidade Federal de Goiás, Chemistry Institute, Brazil.
- **10:00 - 10:30 SC2-O036 Invited Talk IMPACT OF THE NATURE AND PREPARATION OF POLYMER NANOCOMPOSITES FOR ELECTRICITY TRANSPORT NETWORK**
  Claudiane Ouellet Plamondon[1]
  [1]École de technologie supérieure (ETS), Construction, Canada.
- **10:30 - 10:45 SC2-O037 CUBO DE LA VIDA**
  Wilfredo Soto Gomez[1]
  [1]Instituto Tecnológico de Tijuana, Ciencia de la tierra, Mexico.
- **10:45 - 11:00 SC2-O038 EMPLASTE DIATERMICO**
  Wilfredo Soto Gomez[1]
  [1]Instituto Tecnológico de Tijuana, Ciencia de la tierra, Mexico.

11:00-11:30 POSTER AWARDS CEREMONY & COFFEE BREAK

Symposium C3

SOLAR HYDROGEN PRODUCTION

Isabell Thomann /
Alejandro Pérez Larios / Universidad de Guadalajara
Samuel Mao / The Institute Of New Energy, Shenzhen, China
Oomman Varghese / University of Houston
Lionel Vayssieres / Xian Jiaotong University

WEDNESDAY, AUGUST 22
ROOM: MAYA I

Session 1

SESSION CHAIR: OOMMAN VARGHESE AND ALEJANDRO PEREZ LARIOS

- **08:00 - 08:30 SC3-O001 Invited Talk MATERIALS DESIGN OF VISIBLE-LIGHT-DRIVEN PHOTOCATALYSTS FOR WATER SPLITTING ~ FLUX CRYSTAL GROWTH INNOVATION ~**
  Katsuya Teshima[1], Sayaka Suzuki[2], Nobuyuki Zettsu[1]
  [1]Shinshu University, Center for Energy and Environmental Science, Japan. [2]Shinshu University, Department of Materials Chemistry, Japan.
- **08:30 - 09:00 SC3-O002 Invited Talk PULSE LASER ACTIVE TiO_2-$CoTiO_3$ CATALYSTS FOR ENERGY APPLICATIONS**
  Francisco Robles Hernandez[1], Mudit Singh[1], Olga Idalú Pérez Ordóñez[2], Fan Qin[3], Jiming Bao[3], Viktor G. Hadjiev[4], Daniel Gostovic[5]
  [1]University of Houston, Department of Mechanical Engineering Technology, United States. [2]Centro de Investigación en Materiales Avanzados, S.C., Materiales Avanzados, Mexico. [3]University of Houston, Department of Electrical and Computer Engineering, United States. [4]University of Houston, Texas Center for Superconductivity, United States. [5]Thermo Fisher Scientific, Materials & Structural Analysis, United States.
- **09:00 - 09:30 SC3-O003 Invited Talk MULTIFUNCTIONAL MATERIALS FOR SOLAR HYDROGEN PRODUCTION**
  Federico Rosei[1]
  [1]Institut National de la Recherche Scientifique, Université du Québec, Energy, Materials and Telecommunications, Canada.
- **09:30 - 10:00 SC3-O004 Invited Talk COST-INFORMED DEVELOPMENT OF MATERIALS AND SYSTEMS FOR SOLAR HYDROGEN PRODUCTION**
  Joun Lee[1], Wei Cheng[2], Jonathan Koonce[2], Syed Mubeen[2], Tim Young[1]
  [1]HyperSolar, Inc., United States. [2]University of Iowa, Chemical and Biochemical Engineering, United States.
- **10:00 - 10:15 SC3-O005 EXPERIMENTAL AND THEORETICAL ANALYSIS OF WATER OXIDATION CATALYSIS ON METAL-OXIDE PHOTOANODES**
  Camilo A. Mesa Zamora[1], Laia Francàs[1], Ke Yang[2], Pablo Garrido[2,3], Ernest Pastor[1], Yimeng Ma[1], Andreas Kafizas[1], Timothy E. Rosser[4], Matthew T. Mayer[5], Erwin Reisner[4], Michael Grätzel[5], Victor S. Batista[2], James Durrant[1]
  [1]Imperial College London, Chemistry, United Kingdom, Channel Islands & Isle of Man. [2]Yale University, Chemistry and Energy Sciences Institute, United States. [3]ICIQ, Institute of Chemical Research of Catalonia (ICIQ), Spain. [4]University of Cambridge, Chemistry, United Kingdom, Channel Islands & Isle of Man. [5]EPFL, Institut des Sciences et Ingénierie Chimiques, Swaziland.
- **10:15 - 10:45 SC3-O006 Invited Talk SCULPTING PHOTOCATALYSTS ON THE NANO SCALE**

Lilac Amirav[1]
[1]Technion - Israel Institute of Technology, Schulich Faculty of Chemistry, Israel.

■ **10:45 - 11:00 SC3-O007 SYNTHESIS OF Fe-TiO_2 NANOPARTICLES FOR PHOTOELECTROCHEMICAL GENERATION OF HYDROGEN**
Alvaro Realpe Jimenez[1], **María Teresa Acevedo Morantes**[2], **Diana Nuñez**[1]
[1]Universidad de Cartagena, Chemical Engineering, Colombia. [2]Universidad de Cartagena, Chemical Engineering, Research Group of Modeling of Particles and Processes, Colombia.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY IV NOBEL PRIZE IN CHEMISTRY 2016
PROF. BEN L. FERINGA

Session 2

SESSION CHAIR: SAMUEL MAO

12:30 - 13:00 SC3-O008 Invited Talk SEMICONDUCTOR DEVICE MODELING OF ARTIFICIAL PHOTOSYNTHESIS
Kirk Bevan[1]
[1]McGill University, Materials Engineering, Canada.

13:00 - 13:30 SC3-O009 Invited Talk ADDRESSING FUNDAMENTAL MATERIALS CHALLENGES IN DIRECT SOLAR WATER SPLITTING TECHNOLOGIES FOR SUSTAINABLE HYDROGEN PRODUCTION
Eric Miller[1], **Katie Randolph**[1], **David Peterson**[1], **James Vickers**[2], **Neha Rustagi**[1], **Maxim Lyubovsky**[3], **Kim Cierpik Gold**[4], **Stephanie Byham**[5]
[1]U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Fuel Cell Technologies Office, United States. [2]American Association for the Advancement of Science, Fuel Cell Technologies Office, United States. [3]Oak Ridge Associated Universities, Fuel Cell Technologies Office, United States. [4]Allegheny Science and Technology, Fuel Cell Technologies Office, United States. [5]The Building People, Fuel Cell Technologies Office, United States.

13:30 - 14:00 SC3-O010 Invited Talk RENWABLE HYDROGEN PRODUCTION AT GIGAWATT SCALE: AN INDUSTRIAL VIEW
Joost Smits[1]
[1]Shell Technology Centre Amsyterdam, Long Range Research, Netherlands.

14:00 – 16:00 Lunch time

WEDNESDAY, AUGUST 22
ROOM: TERRACE

18:30 -20:30 POSTER SESSION & COFFEE BREAK

■ **SC3-P001 DYNAMIC MODEL FOR THE LARGE-SCALE MIXOTROPHIC CULTURE OF MICROALGAE AND BACTERIA IN A THIN-LAYER PHOTO-BIOREACTOR**
Alina Juantorena Ugas[1], **Orlando Ginés Alfaro Vives**[2], **Roger Ammer Proenza Yero**[2], **Carolin Ivette Rocabruno Valdés**[3], **Emilio Arenas Guerrero**[4], **Carlos Alberto Rodríguez Proenza**[5]
[1]Universidad Autónoma del Estado de Morelos, Facultad de Ciencias Agropecuarias/ETL, Mexico. [2]Centro de Investigaciones de Energía Solar, Biotecnología Solar, Cuba. [3]Universidad Autónoma del Estado de Morelos, Centro de Investigación en Ingeniería y Ciencias Aplicadas., Mexico. [4]Universidad Nacional Autónoma de México, Instituto de Investigaciones en Ecosistemas y Sustentabilidad, Mexico. [5]Universidad Nacional Autónoma de México, Centro de Fisica Aplicada y Tecnologia Avanzada, Mexico.

■ **SC3-P002 SYNTHESIS AND CHARACTERIZATION OF Mn-Ce MIXED OXIDE FOR HYDROGEN PRODUCTION BY A SOLAR ASSISTED THERMOCHEMICAL CYCLE**
Kenya Mora[1], **Manuel Román Aguirre**[2], **David Chavez Flores**[1], **Víctor Hugo Ramos Sanchez**[1]
[1]Universidad Autónoma de Chihuahua, Facultad de Ciencias Químicas, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., Departamento de Ingeniería y Química de Materiales, Mexico.

■ **SC3-P003 SOLAR WATER SPLITTING USING NANOSCALE TUNGSTEN OXIDE**
Keea Healey[1], **Dillon Kopecky**[2], **Ram Neupane**[1], **Maggie Paulose**[1], **Oomman Varghese**[1]
[1]University of Houston, Physics, United States. [2]University of Houston, Chemistry, United States.

■ **SC3-P004 IMPROVED TiO_2-FE_2O_3 AS MIXED OXIDE FOR H_2 PRODUCTION BY WATER SPLITTING METHOD**
Victor Ruiz Santoyo[1], **Alejandro Pérez Larios**[1]
[1]Universidad de Guadalajara, Engineering Department, Mexico.

■ **SC3-P005 KINETIC CONSTANTS ASSOCIATED WITH THE TRANSFER AND RECOMBINATION OF CHARGE**

CARRIERS AT WO_3/$BiVO_4$ MULTILAYER AND $CuBi_2O_4$ PHOTOELECTRODES FOR SOLAR WATER SPLITING

Alberto Gabriel Vega Poot[1], Ingrid Guadalupe Rodríguez Gutiérrez[1,2], Jinzhan Su[2], Lionel Vayssieres[2], Rodrigo García Rodríguez[1], Geonel Rodríguez Gattorno[1], Gerko Oskam[1]

[1]CINVESTAV-Mérida, Física Aplicada, Mexico. [2]Xi'an Jiaotong University, International Research Centre for Renewable Energy, China.

- **SC3-P006 TERNARY N-TYPE CuIn3Se5 PHOTOANODE ELETRODES FOR PHOTOINDUCED HYGROGEN GENERATION**

Joo Sung Kim[1], Young Been Kim[1], Hyungkoun Cho[1]

[1]Sungkyunkwan University, School of Advanced Materials Science & Engineering, Korea.

- **SC3-P007 EVALUATION OF NICKEL ELECTRODEPOSITION VARIABLES ON STAINLESS STEEL MESHES USED AS CATHODE IN HYDROGEN ELECTROLYTE PRODUCTION**

María Inés Jaramillo Gutiérrez[1], Julio Andres Pedraza Avella Julio Andres Pedraza Avella[1], Julio Elias Pedraza Rosas[2], Sonia Sierra González[1], Carlos Andrés Ramírez González[1]

[1]Universidad Industrial de Santander, Escuela de Ingeniería Quimica, Colombia. [2]Universidad Industrial de Santander, Escuela de Ingeniería Metalurgia, Colombia.

- **SC3-P008 COMBINATORIAL SEARCH FOR NEW MATERIALS FOR SOLAR WATER SPLITTING**

Patrick Van Vliet[1,2], Alberto Gabriel Vega Poot[1], Miguel Angel Ruiz Gómez[1,3], Geonel Rodríguez Gattorno[1], Gerko Oskam[1]

[1]CINVESTAV-Mérida, Applied Physics, Mexico. [2]Utrecht University, Chemistry, Netherlands. [3]Cátedras-CONACyT-CINVESTAV Mérida, Applied Physics, Mexico.

- **SC3-P009 NICKEL-COBALT MIXED OXIDES AS POTENTIAL MATERIALS FOR HYDROGEN PRODUCTION**

Reyna Dianela Bacelis Martinez[1], Geonel Rodríguez Gattorno[1], Miguel Ruiz Gómez[2]

[1]CINVESTAV-Mérida, Física aplicada, Mexico. [2]Cátedras-CONACyT-CINVESTAV Mérida, Física Aplicada, Mexico.

- **SC3-P010 COBALT-PHOSPHATE COMPLEX (CoPi) CATALYST FOR WATER OXIDATION**

Jose Luis Casas Espinola[1], Xochitl Andrea Hernandez Contreras[2], Inti Zumeta Dubé[2]

[1]Instituto Politécnico Nacional - IPN, Departamento de Física, Mexico. [2]Instituto Politécnico Nacional - IPN, SEPI UPIITA, Mexico.

THURSDAY, AUGUST 23
ROOM: MAYA I

Session 3

SESSION CHAIR: ISABELL THOMANN

- **08:00 - 08:30 SC3-O011 Invited Talk AMORPHOUS MATERIALS FOR PHOTOCATALYTIC HYDROGEN GENERATION**

Harun Tueysuez[1]

[1]Max-Planck-Institute for Coal Research, Heterogeneous Catalysis and Sustainable Energy, Germany.

- **08:30 - 09:00 SC3-O012 Invited Talk PHOTOELECTROCHEMICAL CHARACTERIZATION OF METAL OXIDE MATERIALS FOR SOLAR WATER SPLITTING**

Gerko Oskam[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Department of Applied Physics, Mexico.

- **09:00 - 09:15 SC3-O013 SYNTHESIS OF N-FE-TIO2 NANOPARTICLES FOR PHOTOELECTROCHEMICAL GENERATION OF HYDROGEN**

Karina Marcela Ballesteros Arrieta[1], Alvaro Realpe Jimenez[1], Diana Núñez de la Osa[1], Maria Teresa Acevedo Morantes[1]

[1]Universidad de Cartagena, Chemical Engineering, Colombia.

- **09:15 - 09:30 SC3-O014 PHOTOCATALYTIC HYDROGEN PRODUCTION IN WATER/EDTA OVER $Sr_{0.97}Eu_{0.02}Zr_{0.1}Ti_{0.9}O_3$ IMPREGNATED WITH NICKEL**

Pilar Delgado Niño[1], Johan Rincón[1], Andres Lopez[1]

[1]Universidad Libre, Colombia.

- **09:30 - 10:00 SC3-O015 Invited Talk UNDERSTANDING COLUMNAR MORPHOLOGY OF METAL OXIDE AND ITS SURFACE ACTIVATION FOR SOLAR WATER OXIDATION**

Flavio Leandro de Souza[1,2]

[1]Universidade Federal do Abc, Centro de Ciencia Naturais e Humanas, Brazil. [2]University of California, Davis, Materials Science and Engineering, United States.

- **10:00 - 10:30 SC3-O016 Invited Talk CARBON DOTS: STRUCTURE DESIGH, PROPERTIES AND CATALYTIC APPLICATIONS**

Zhenhui Kang[1]
[1]Soochow University, Institute of Functional Nano & Soft Materials, China.

- **10:30 - 11:00 SC3-O017 Invited Talk JET FUEL FROM H_2O, CO_2, AND SOLAR ENERGY**

Aldo Steinfeld[1]
[1]Eidgenössische Technische Hochschule Zürich, Mechanical and Process Engineering, Switzerland.

11:00-11:30 POSTER AWARDS CEREMONY & COFFEE BREAK

11:30 - 12:30 PLENARY V
PROF. GALO SOLER ILLIA

Session 4

SESSION CHAIR: LIONEL VAYSSIERES

- **12:30 - 13:00 SC3-O018 Invited Talk CATALYTIC PROPERTIES OF COBALT AND MODIFIED COBALT (OXY)HYDROXIDES FOR THE OXYGEN EVOLUTION REACTION: EFFECTS OF COMPOSITION, LOCAL STRUCTURE AND IN-SITU STRUCTURAL EVOLUTION**

Bruce Koel[1]
[1]Princeton University, Chemical and Biological Engineering, United States.

- **13:00 - 13:30 SC3-O019 Invited Talk CONTSTRUCTIONS OF PHOTOCATALYTIC AND PHOTOELECTROCHEMICAL WATER SPLITTING SYSTEMS UNDER VISIBLE LIGHT**

Katayama Masao[1]
[1]The University of Tokyo, Department of Chemical System Engineering, Japan.

- **13:30 - 14:00 SC3-O020 Invited Talk NANO-ARRAY INTEGRATED MONOLITHIC DEVICES FOR ENERGY AND THE ENVIRONMENTAL APPLICATIONS**

Pu-Xian Gao[1]
[1]University of Connecticut, Department of Materials Science and Engineering & Institute of Materials Science, United States.

Symposium C4

PHOTOVOLTAICS, SOLAR ENERGY MATERIALS AND TECHNOLOGIES

Xavier Mathew / Universidad Nacional Autónoma de Mexico
Gerko Oskam / Instituto Politécnico Nacional
Manuel Quevedo-Lopez / University of Texas at Dallas
Gerardo S. Contreras Puente / Instituto Politécnico Nacional

MONDAY, AUGUST 20
ROOM: TULUM H

Session: Organic & Perovskite 1

SESSION CHAIR: MANUEL QUEVEDO-LOPEZ

08:30 - 09:00 SC4-O001 Invited Talk SOLUTION SYNTHESIZED P-TYPE DELAFOSSITE NANOPARTICLES FOR HOLE TRANSPORT LAYERS IN ORGANIC AND PEROVSKITE SOLAR CELLS

Julia Hsu[1]

[1]The University of Texas at Dallas, Materials Science and Engineering, United States.

09:00 - 09:30 SC4-O002 Invited Talk NOVEL ORGANIC DYES AND MESOPOROUS METAL OXIDE NANOSTRUCTURES FOR HIGH-EFFICIENCY DYE SOLAR CELLS AND SEMI-TRANSPARENT SOLAR MODULES

Cyril Aumaitre[1], Damien Joly[1], Maxime Godfroy[1], Yann Kervella[1], Frédéric Oswald[2], Emilio Palomares[3], Renaud Demadrille[1]

[1]CEA, INAC, France. [2]SME, Solaronix, Switzerland. [3]ICIQ, ICIQ, Spain.

09:30 - 09:45 SC4-O003 SYNTHESIS OF REGIOREGULAR POLY(3-HEXYLTHIOPHENES) BY DIRECT ARYLATION POLYMERIZATION AND THEIR APPLICATION IN BHJ ORGANIC SOLAR CELLS

Miriam Rangel Ayala[1], Marisol Güizado Rodríguez[1], Victor Barba[2], Jose-Luis Maldonado[3]

[1]Universidad Autónoma del Estado de Morelos, Centro de Investigación en Ingeniería y Ciencias Aplicadas, Mexico. [2]Universidad Autónoma del Estado de Morelos, Centro de Investigaciones Químicas, Mexico. [3]Centro de Investigaciones en Optica, Grupo de Propiedades Ópticas de la Materia, Mexico.

09:45 - 10:00 SC4-O004 A HIGH OPEN CIRCUIT VOLTAGE DYE-SENSITIZED SOLAR CELL BASED ON TiO_2 IN THE BROOKITE PHASE

Dena Pourjafari[1], David Reyes Coronado[2], Alberto Gabriel Vega Poot[1], Renan Andres Escalante Quijano[1], Gerko Oskam[1]

[1]CINVESTAV-Mérida, Física Aplicada, Mexico. [2]Universidad de Quintana Roo, Unidad Académica Playa del Carmen, Mexico.

10:00 - 10:15 SC4-O005 SCRIBING METHOD OPTIMISATION FOR FULLY PRINTABLE PEROVSKITE SOLAR MODULES

Simone Meroni[1], Katherine Hooper[1], Francesca de Rossi[1], Jennifer Baker[1], Trystan Watson[1]

[1]Swansea University, SPECIFIC, College of Engineering, United Kingdom, Channel Islands & Isle of Man.

10:15 - 10:30 SC4-O006 PREPARATION OF HALIDE PEROVSKITE PHOTONIC CRYSTALS

Harun Tueysuez[1]

[1]Max-Planck-Institute for Coal Research, Heterogeneous Catalysis and Sustainable Energy, Germany.

■ **10:30 - 10:45 SC4-O007 EFFECT OF RAPID THERMAL PROCESSING ON CDS/$CH_3NH_3PBI_3$ SOLAR CELLS**

Daniel Arturo Acuna Leal[1], Bindu Krishnan[1], Sadasivan Shaji[1], David Avellaneda[1], Josue A. Aguilar Martinez[2]

[1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico. [2]Universidad Autónoma de Nuevo León, Centro de Investigación e Innovación en Ingeniería Aeronáutica, Mexico.

■ **10:45 - 11:00 SC4-O008 INFLUENCE OF ANNEALING TEMPERATURE ON NICKEL OXIDE THIN FILMS DEPOSITED BY CHEMICAL BATH DEPOSITION**

Miguel Martinez Gil[1,2], Maria Isabel Pintor Monroy[3], Dagoberto Cabrera Germán[1,2], Marcos Alan Cota Leal[1,2], Angelica Garzon[4], Jorge Alberto Garcia Valenzuela[1,5], Manuel A. Quevedo López[2,3], Merida Sotelo Lerma[2]

[1]SMARTER-Lab nucleus for research & divulgation, A.C., Mexico. [2]Universidad de Sonora, Departamento de Investigación en Polímeros y Materiales, Mexico. [3]The University of Texas at Dallas, Department of Materials Science and Engineering, United States. [4]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Mexico. [5]Universidad de Sonora, Departamento de Ingenieria Quimica y Metalurgia, Mexico.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY II
PROF. YUICHI IKUHARA

Session: Perovskite 2

SESSION CHAIR: GERKO OSKAM

12:30 - 13:00 SC4-O009 Invited Talk THE FAST AND THE SLOW: PROCESSING, IONIC MOTION, HYSTERESIS, AND INTERFACIAL RECOMBINATION IN PEROVSKITE SOLAR CELLS

Matt Carnie[1]

[1]Swansea University, SPECIFIC-IKC & Materials Research Centre, United Kingdom, Channel Islands & Isle of Man.

■ **13:00 - 13:15 SC4-O010 FIRST PRINCIPLES STUDY OF IMPURITIES IN LEAD-BASED HYBRID PEROVSKITES**

Arun Mannodi Kanakkithodi[1], Ji-Sang Park[2], Duyen Cao[3], Nari Jeon[3], Alex Martinson[3], Maria Chan[1]

[1]Argonne National Laboratory, Center for Nanoscale Materials, United States. [2]Imperial College London, Department of Materials, United Kingdom, Channel Islands & Isle of Man. [3]Argonne National Laboratory, Materials Science Division, United States.

■ **13:15 - 13:30 SC4-O011 EFFECT OF THE ELECTRON SELECTIVE CONTACTS ON CARRIER TRANSPORT AND RECOMBINATION IN PEROVSKITE SOLAR CELLS**

Karen L. Valadez Villalobos[1], Jesús Idígoras[2], Lilian Pérez[1], Juan Antonio Anta[2], Gerko Oskam[1]

[1]CINVESTAV-Mérida, Department of Applied Physics, Mexico. [2]Universidad Pablo de Olavide, Department of Physical, Chemical and Natural Systems, Spain.

■ **13:30 - 13:45 SC4-O012 THE IMPORTANCE OF INSERTING AN ANATASE MESOPOROUS LAYER ON A LOW TEMPERATURE TIO_2 BASED PSC FOR IMPROVING ITS STABILITY.**

Alejandra Maria Castro Chong[1], Tom Aernouts[2], Weiming Qiu[2], Joao Bastos[2], Gerko Oskam[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Applied Physics, Mexico. [2]IMEC vzw, Photovoltaics, Belgium.

■ **13:45 - 14:00 SC4-O013 A COMPUTATIONAL SCREENING OF ALKALI METAL-HALIDE, INORGANIC PEROVSKITES FOR SOLAR ENERGY APPLICATIONS**

Miguel Eduardo Cifuentes Quintal[1], Carlos Manuel Ramos Castillo[1,2], Geonel Rodríguez Gattorno[1], Gerko Oskam[1], Romeo de Coss[1]

[1]CINVESTAV-Mérida, Física Aplicada, Mexico. [2]Universidad Autónoma de Campeche, Centro de Investigaciones en Corrosión, Mexico.

14:00 – 16:00 Lunch time

● **17:30-18:30 Science, Technology and Society Lecture SENER**

MONDAY, AUGUST 20
ROOM: TERRACE

18:30 -20:30 POSTER SESSION & COFFEE BREAK

■ **SC4-P001 SYNTHESIS AND CHARACTERIZATION OF KESTERITE'S POWDERS BY BALL-MILLING PROCESS FOR SOLAR CELLS APPLICATION**

Miriam Marmara Nicolás Marin[1], Fabian Andres Pulgarin Agudelo[2], Osvaldo Vigil Galán[1], Victor Izquierdo Roca [3]

[1]Instituto Politécnico Nacional - IPN, Escuela Superior de Física y Matemáticas, Mexico. [2]Instituto Politécnico Nacional - IPN, Catedras CONACYT-Escuela Superior de Física y Matemáticas, Mexico. [3]Catalonian Institute for Energy Research (IREC), Energy Research, Spain.

- **SC4-P002 SYNTHESIS AND CHARACTERIZATION OF THIN FILMS OF CADMIUM SULFIDE BY SHALLOW CHEMICAL BATH DEPOSITION TECHNIQUE**

Sergio Ramírez Velasco[1], Osvaldo Vigil Galán[1]

[1]Instituto Politécnico Nacional - IPN, Physics, Mexico.

- **SC4-P003 DIPPING AS ALTERNATIVE TECHNIQUE TO CREATE REGION p+ on CdTe FILMS**

Antonio Arce Plaza[1], Itzel Gomez Salazar[1], Jorge Roque de la Puente[2], Fernando Sanchez Rodriguez[3], Mauricio Ortega López[4], Osvaldo Vigil Galán[5]

[1]Instituto Politécnico Nacional - IPN, Escuela Superior de Ingeniería y Arquitectura Unidad Zacatenco, Mexico. [2]Cinvestav Zacatenco, LANE Laboratory, Mexico. [3]Universidad Autónoma de Sinaloa, Facultadad de Ciencias Físico Matemático, Mexico. [4]Cinvestav Zacatenco, Seccion de Electronica de Estado Sólido, Mexico. [5]Instituto Politécnico Nacional - IPN, Escuela Superior de Física y Matematicas, Mexico.

- **SC4-P004 TUNING THE BAND GAP OF $Cu(In,Ga)Se_2$ SEMICONDUCTOR THIN FILMS BY ELECTRODEPOSITION FOR SOLAR CELLS APLICATIONS**

Miguel Angel Contreras Ruiz[1], María Estela Calixto Rodríguez[1], Antonio Mendez Blas[1]

[1]Benemerita Universidad Autonoma de Puebla, Instituto de Física Ing. Luis Rivera Terrazas, Mexico.

- **SC4-P005 NOVEL METHOD TO DETERMINE THE DYNAMIC PARAMETERS OF SOLAR CELLS USING LED LIGHT**

Perla Yazmìn Sevilla Camacho[1], Abner David Sánchez Jímenez[2], Luis Felipe Arcos Estrada[2], Marco Antonio Zuñiga Reyes[3], Jose Billerman Robles Ocampo[1]

[1]Universidad Politécnica de Chiapas, Posgrado en energías renovables, Mexico. [2]Universidad Politécnica de Chiapas, Ingeniería Mecatrónica, Mexico. [3]Universidad de Ciencias y Artes de Chiapas, Maestrìa en materiales y sistemas energéticos renovables, Mexico.

- **SC4-P006 FABRICATION OF A HYBRID MATERIAL USING PbS NANOPARTICLES AND RGO FOR SOLAR CELL APPLICATIONS**

Alan Ricardo Lara Canche[1,2], Domingo Ixcoatl Garcia Gutierrez[1,2], Diana Fabiola García Gutiérrez[1,2], Selene Sepulveda[1,2]

[1]Universidad Autónoma de Nuevo León, Centro de Innovacion, Investigacion y Desarrollo en Ingenieria y Tecnologia CIIDIT, Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ingenieria Mecanica y Electrica, Mexico.

- **SC4-P007 SYNTHESIS OF ZnO THIN FILMS BY CHEMICAL BATH DEPOSITION**

Irving Josué González Chan[1], Pablo Ernesto Moguel Dominguez[1], Andres Ivan Oliva Arias[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Applied Physics, Mexico.

- **SC4-P008 DEVELOPMENT OF TWO DONOR-ACCEPTOR COPOLYMERS FOR EVALUATION IN BULK HETERO-JUNCTION POLYMER SOLAR CELLS**

Jonatan Rodriguez Rea[1], Marisol Güizado Rodríguez[1], Victor Barba[2], Jose-Luis Maldonado[3]

[1]Universidad Autónoma del Estado de Morelos, Centro de Investigación en Ingeniería y Ciencias Aplicadas, Mexico. [2]Universidad Autónoma del Estado de Morelos, Centro de Investigaciones Químicas, Mexico. [3]Centro de Investigaciones en Optica, Grupo de Propiedades Ópticas de la Materia, Mexico.

- **SC4-P009 STUDIES ON PHOTOVOLTAIC CELLS BASED ON NANO-STRUCTURED DIAMONDS FILMS**

Rafael Garcia Gutierrez[1], Orlando Hector Auciello[2], Pablo Tirado[1], Jorge Monte Gutierrez[3], Carlos Perez Rabago[4]

[1]Universidad de Sonora, Research in Physics, Mexico. [2]University of Texas at Dallas, Bioengineering, United States. [3]Universidad de Sonora, Physics, Mexico. [4]Universidad Nacional Autónoma de México, Instituo de Energias Renovables, Mexico.

- **SC4-P010 FABRICATION OF PHASE PURE 1D NANOSTRUCTURES OF $CU_2ZNGESE_4$ NANOSTRUCTURES THROUGH SOLVOTHERMAL PROCESS**

Francisco Enrique Cancino Gordillo[1], Mou Pal[1], Umapada Pal[1]

[1]Benemerita Universidad Autonoma de Puebla, Instituto de Física, Mexico.

- **SC4-P011 MOLYBDENUM SULFIDE NANOSTRUCTURES SYNTHESIZED BY**

HYDROTHERMAL METHOD FOR HYBRID SOLAR CELLS APPLICATION

Claudia Martinez Alonso[1], Arizbeth Vianey Andrade Lobatón[1], Gildardo Casarrubias Segura[2], Ma. Concepción Arenas[1]

[1]Escuela Nacional de Estudios Superiores de la UNAM unidad León, Laboratorio de Investigación Interdisciplinaria, Mexico. [2]Instituto de Energías Renovables Universidad Nacional Autónoma de México, NA, Mexico.

- **SC4-P012 SOL–GEL SYNTHESIS OF ZnO THIN FILMS AND ITS EFFECT OF DOPING WITH CU ON THE STRUCTURAL AND OPTICAL PROPERTIES**

Patricia de la Cruz May[1], Fabiola del Carmen Gómez Torres[1], Laura Lorena Díaz Flores[1], Germán Pérez Hernández[1], Angélica Silvestre López Rodríguez[1], Roger Castillo Palomera[2], Edith Ponce Recinos[2]

[1]Universidad Juárez Autónoma de Tabasco, DAIA, Mexico. [2]Universidad Politécnica de Chiapas, Maestría en Energías Renovables, Mexico.

- **SC4-P013 COMPARATIVE STUDY OF OPTICAL AND MICROSTRUCTURAL PROPERTIES OF THIN FILMS OF NIALOX-ALXOY OBTAINED BY AACVD, WITH APPLICATION IN SOLAR HEATERS**

Carlos Alberto Hurtado Arambula[1], Rubén Dorantes Rodríguez[1], Roberto Tito Hernández López[1], Beatríz Cruz Muñoz[2], Humberto González Bravo[1], Mario Miki Yoshida[3], Patricia Amézaga Madrid[3], Pedro Pizá Ruiz[3], Mauro Santelis Carbajal[1]

[1]Universidad Autónoma Metropolitana, Ciencias Básicas e Ingeniería, Mexico. [2]Universidad Tecnológica de Pereira, Departamento de Física, Colombia. [3]Centro de Investigación en Materiales Avanzados, S.C., Física de Materiales, Mexico.

- **SC4-P014 DYE SENSITIZED SOLAR CELLS (DSSC) BASED IN TITANIUM DIOXIDE DOPPED WITH COPPER AND A CHANGE IN PHOTOELECTRODE POROSITY**

Jonathan Joaquin Parra Santiago[1], Carlos Alberto Guerrero Fajardo[1]

[1]Universidad Nacional de Colombia, Chemistry, Colombia.

- **SC4-P015 β-$CuGaO_2$ AS A STRONG CANDIDATE MATERIAL FOR EFFICIENT FERROELECTRIC PHOTOVOLTAICS**

Seungwoo Song[1], Donghun Kim[2]

[1]Korean Research Institute of Standards and Science, Center for Materials and Energy Measurement, South Korea. [2]Korea Institute of Science and Technology, Computational Science Research Center, South Korea.

- **SC4-P016 MULTILAYER DEVICE FROM VERTICAL GRAPHENE/H-BN HETEROSTRUCTURES**

Carlos Iván Cabrera[1], David Armando Contreras Solorio[1], Luis Hernández[2], Agustín Enciso[1], Carlos Rodríguez[2]

[1]Universidad Autónoma de Zacatecas, Academic Unit of Physics, Mexico. [2]Universidad de La Habana, Faculty of Physics, Cuba.

- **SC4-P017 A FLUORENE-DIKETOPYRROLOPYRROLE POLYMER PREPARED BY DIRECT ARYLATION POLYMERIZATION FOR ORGANIC SOLAR CELLS**

Alejandra Montoya del Angel[1], Patricia García Ramírez[1], Jonatan Rodriguez Rea[1], Marisol Güizado Rodríguez[1], Victor Barba[2], Jose-Luis Maldonado[3]

[1]Universidad Autónoma del Estado de Morelos, Centro de Investigación en Ingeniería y Ciencias Aplicadas, Mexico. [2]Universidad Autónoma del Estado de Morelos, Centro de Investigaciones Químicas, Mexico. [3]Centro de Investigaciones en Optica, Grupo de Propiedades Ópticas de la Materia, Mexico.

- **SC4-P018 DEVELOPMENT OF A HYBRID SYSTEM IN THE ACTIVE LAYER: POLY(3-HEXYLTHIOPHENE)-PEROVSKITE FOR SOLAR CELLS**

Ricardo Elihu Ocampo Macedo[1], Edgar Gonzalez Juárez[1], Marisol Güizado Rodríguez[1], Victor Barba[2], Mario Rodríguez[3], José Luis Maldonado[3], J. Oracio Barbosa García[3]

[1]Universidad Autónoma del Estado de Morelos, Centro de Investigación en Ingeniería y Ciencias Aplicadas, Mexico. [2]Universidad Autónoma del Estado de Morelos, Centro de Investigaciones Químicas, Mexico. [3]Centro de Investigaciones en Optica, Grupo de Propiedades Ópticas de la Materia, Mexico.

- **SC4-P019 PREPARATION AND CHARACTERIZATION OF IMIDAZOLIUM-PBI_2 BASED HYBRID ORGANIC-INORGANIC COMPOUNDS.**

Eduardo Maximiano Sanchez Cervantes[1], Edgar González[1], Diego González Quijano[1], Diana Fabiola García Gutiérrez[1], Domingo Ixcoatl Garcia Gutierrez[2]

[1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico.

- **SC4-P020 UP-CONVERSION PHOTOLUMINESCENCE OF $NaYF_4$:Yb-Er THIN FILMS BY ELECTRODEPOSITION**

Jacob Barranco Cisneros[1], Alexandra Bustamante[1], Ma. Estela Calixto[1], Antonio Mendez Blas[1]
[1]Benemerita Universidad Autonoma de Puebla, Instituto de Física, Mexico.

- **SC4-P021 COPPER (CUS) AND SILVER (AG_2S) SULFIDE THIN FILMS DEVELOPED BY A SIMPLE AND LOW COST PROCESS TO BE APPLIED IN SMART WINDOWS**

Patricia Urquizo Monrreal[1], Claudia Alejandra Rodríguez González[2], Imelda Olivas Armendáriz[2], Juan Francisco Hernández Paz[2], Claudia Almaraz Córdova[1], Santos Adriana Martel Estrada[1]
[1]Universidad Autónoma de Ciudad Juárez, Diseño, Mexico. [2]Universidad Autónoma de Ciudad Juárez, Física y Matemáticas, Mexico.

- **SC4-P022 EVALUATION OF THE EFFECT OF THE CONCENTRATION OF CsI ON THE PHYSICAL PROPERTIES OF PEROVSKITES BICATIÓN CsX(MA1-X)PbI3 SYNTHESIZED FOR USE AS AN ACTIVE LAYER IN PHOTOVOLTAIC SOLAR CELLS**

Jenny Buitrago[1], César Quiñones[1], Gerardo Gordillo[2]
[1]Fundación Universidad de América, Colombia. [2]Universidad Nacional de Colombia, Colombia.

- **SC4-P023 STUDY OF ORGANIC DYES ANCHORED TO ZnO FOR APPLICATIONS IN SENSITIZED SOLAR CELLS (DSSC)**

María Fernanda García Mendoza[1], Rafael Torres Ricárdez[2], Erik Ramirez Morales[1], Lizeth Rojas Blanco[1], Laura Lorena Díaz Flores[1], Juan Gabriel Álvarez Ramírez[1], Manuel Gonzalez Solano[1], Germán Pérez Hernández[1]
[1]Universidad Juárez Autónoma de Tabasco, División Académica de Ingeniería y Arquitectura, Mexico. [2]Universidad Juárez Autónoma de Tabasco, Mexico.

- **SC4-P024 CdS THIN FILMS DEPOSITION USING CBD AND SILAR**

Ariana Garcia[1], Ernesto Valadez[1], Diego Esparza[1], J. M. Rivas[1]
[1]Universidad Autónoma de Zacatecas, Unidad Academica de Ingenieria Electrica, Mexico.

- **SC4-P025 EFFECT OF METAL IONS ON THE EFFICIENCY OF DYE-SENSITIZED SOLAR CELLS (DSSCS) FABRICATED FROM SCHIFF BASE TRANSITION METAL COMPLEXES**

Mayra Margarita Luna Martinez[1], Jazmín Montoya Pacheco[1], Belen Betsabe Anaya Monroy[1], Jayanthi Narayanan[1], Carlos Alberto Huerta Aguilar[1]
[1]Universidad Politécnica del Valle de México, Ingeniería de Nannotecnología, Mexico.

- **SC4-P026 In_2S_3 AS WINDOW AND BUFFER LAYER ON CADMIUM REDUCED CdTe SOLAR CELLS**

Uziel Galarza Gutiérrez[1], Maria de Lourdes Albor Aguilera[1], Miguel Angel González Trujillo[2], Jose-Manuel Flores Marquez[3], Hernani Tiago Yee[1], Cesar Hernandez Vasquez[1]
[1]Instituto Politécnico Nacional - IPN, ESFM, Depto. de Física, Mexico. [2]Instituto Politécnico Nacional - IPN, ESCOM, Depto. de Ciencias Básicas, Mexico. [3]Instituto Politécnico Nacional - IPN, ESIQIE-Departamento de Ingeniería en Metalurgia y Materiales, Mexico.

- **SC4-P027 EFFECT OF THERMAL TREATMENT OF POLYSULFONE SULFONATED ON ITS ELECTRICAL PROPERTIES**

Aracely Sarai Cruz Zavala[1], Vladimir A. Escobar Barrios[1]
[1]Instituto Potosino de Investigación Científica y Tecnológica A.C., División de Materiales, Laboratorio de Polímeros, Mexico.

- **SC4-P028 DESIGN, CONSTRUCTION AND EVALUATION OF A STOVE THERMAL-PHOTOVOLTAIC**

Luis Alberto Hernández Domínguez[1], Roilan Iglesias[1], Alix Geronimo Ventura[1], Pablo Rodrigo Nazario Pérez[1], Madai de Jesús Gómez Aguilar[1]
[1]Universidad de Ciencias y Artes de Chiapas, Fotovoltaica y Materiales, Mexico.

- **SC4-P029 ANALYSIS OF TCT PV ARRAYS BY MEANS OF CIRCUITAL SIMPLIFICATION USING THE SINGLE DIODE MODEL**

Luz Adriana Trejos[1]
[1]Universidad Nacional de Colombia, Facultad de Minas, Colombia.

- **SC4-P030 FIRST-PRINCIPLES STUDY OF VIBRATIONAL AND ELECTRONIC PROPERTIES OF LEAD-FREE HYBRID HALIDE PEROVSKITE $CH_3NH_3CaBr_3$**

Horacio Espinosa[1], Ivan de Jesús Ornelas Cruz[1], Alejandro Trejo Baños[1], Eliel Carvajal Quiroz[1], Miguel Cruz Irrison[1]
[1]Instituto Politécnico Nacional - IPN, ESIME Culhuacan, Mexico.

- **SC4-P031 GROWTH OF CdS THIN FILMS BY CHEMICAL BATH DEPOSITION REDUCING THE AMOUNT OF CHEMICAL WASTE PRODUCED**

Roberto Carlos Ruiz Ortega[1], Maria de Lourdes Albor Aguilera[1], Miguel Angel González Trujillo[2], Karla Gutierrez Zayas Bazán[1]

[1]Instituto Politécnico Nacional - IPN, Departamento de Fisica, Mexico. [2]Instituto Politécnico Nacional - IPN, Departamento de Formación Básica, Mexico.

- **SC4-P032 CONSTRUCTION OF A SOLAR TEST BENCH FOR THE CHARACTERIZATION OF COMMERCIAL PHOTOVOLTAIC MODULES MEASURING PARAMETERS IN REAL TIME.**

Jimmy Rodrigo Perez Soto[1], Roger Castillo Palomera[2], Minerva Gamboa Sanchez[3], Alfredo Olea Rogel[2], Jose Campos Alvarez[4]

[1]Universidad Politécnica de Chiapas, Maestria en Energias Renovables, Mexico. [2]Universidad Politécnica de Chiapas, energías renovables y sustentabilidad, Mexico. [3]Universidad Politécnica de Chiapas, Tecnología ambiental, Mexico. [4]Instituto de Energías Renovables Universidad Nacional Autónoma de México, energías renovables y sustentabilidad, Mexico.

- **SC4-P033 SOLAR CELL EFFICIENCY IMPROVEMENT EMPLOYING PHOTOLUMINESCENT SI AND ZNO QD MULTILAYERED FILMS**

Alejandra Cordova Rubio[1], Rosendo Lopez Delgado[2], Aldo Zazueta Raynaud[1], Arturo Ayon[2], Mario Enrique Alvarez Ramos[1]

[1]Universidad de Sonora, Departamento de fisica, Mexico. [2]The University of Texas at San Antonio, Department of Physics and Astronomy, United States.

- **SC4-P034 EVALUATION OF HIGHLY EFFICIENT TRIPLE JUNCTION, MICRO AND NANODIAMOND-BASED PHOTOTHERMIONIC SOLAR CELLS**

Doria Alejandra Ochoa Romero[1], Rafael Garcia Gutierrez[2], Carlos Perez Rabago[3]

[1]Universidad de Sonora, Posgrado en Nanotecnología, Mexico. [2]Universidad de Sonora, Departamento de Investigación en Física, Mexico. [3]Instituto de Energías Renovables Universidad Nacional Autónoma de México, Departamento de Sistemas Energéticos, Mexico.

- **SC4-P035 HYBRID PEROVSKITES FOR SOLAR CELLS APPLICATIONS**

Christian Selene Coria Monroy[1], Mauricio Solis de la Fuente[2]

[1]Lawrence Berkeley National Laboratory, Inorganic Nanostructures Facility, United States. [2]Lawrence Berkeley National Laboratory, Energy Technologies, United States.

- **SC4-P036 EFFECT OF AMMONIUM HYDROXIDE CONCENTRATION AND THE DRIP TIME OF THIOUREA ON THE PROPERTIES OF CdS THIN FILMS DEPOSITED BY CBD**

Valeria Detzani Moreno Regino[1], Fátima Montserrat Castañeda de la Hoya[1], Carlos Gerardo Torres Castanedo[2], Joaquín Márquez Marín[1], Rebeca Castanedo Pérez[1], Gerardo Torres Delgado[1], Orlando Zelaya Ángel[3]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Unidad Querétaro, Mexico. [2]King Abdullah University of Science and Technology, Advanced Semiconductor Laboratory, Saudi Arabia. [3]Cinvestav Zacatenco, Física, Mexico.

- **SC4-P037 ELECTRODEPOSITION OF SELECTIVE COATINGS BASED ON COBALT-MANGANESE OXIDES FOR THERMOSOLAR APPLICATIONS**

Marco de Jesús Cetina Dorantes[1], Francisco Iván Lizama Tzec[1], Dallely Melissa Herrera Zamora[1], Gerko Oskam[1]

[1]CINVESTAV-Mérida, Física Aplicada, Mexico.

- **SC4-P038 ENHANCED PHOTORESPONSE OF METAL-OXIDE-SEMICONDUCTOR PHOTODETECTOR BY GERMANIUM NANOCRYSTALS EMBEDDED IN THE SILICON OXIDE LAYER**

Jesus Alberto Maldonado Espinosa[1], Nancy Lizbeth Rodriguez Morales[1], Juan Carlos Ortiz Sanchez[1], Arturo Hernández Hernández[2], Luis Alberto Hernández Hernández[2], Eduardo Rangel Cortes[2], Emmanuel Vallejo[2], Francisco Javier Martinez Farias[2], Pablo A. López Pérez[2], Miguel Melendez Lira[3]

[1]Universidad Autónoma del Estado de Hidalgo, Ingeniería en Nanotecnología, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Energetic Systems and Advanced Materials, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Departamento de Física, Mexico.

- **SC4-P039 FABRICATION OF Sb_2S_3-SENSITIZED SOLAR CELLS BY CHEMICAL BATH DEPOSITION USING TARTARIC ACID AS COMPLEXING AGENT**

José Escorcia Garcia[1], Araceli Hernández Granados[2], Maraolina Domínguez Díaz[3], Horacio Martinez[3], David Becerra García[4]

[1]CONACYT, Cinvestav Unidad Saltillo, Ingeniería Cerámica, Mexico. [2]Centro de Investigación en Ingenieria y Ciencias Aplicadas, Tecnología de Materiales, Mexico. [3]Instituto de Ciencias Físicas, UNAM, Física Atómica y Molecular, Mexico. [4]Universidad Politécnica del Estado de Guerrero, Energía, Mexico.

- **SC4-P040 BLACK SILICON FABRICATED BY DIRECT FEMTOSECOND LASER NANO/MICROSTRUCTURING**

Anatoliy Vorobyev[1]
[1]Chongqing University of Posts and Telecommunications, School of Science, China.

- **SC4-P041 DESIGN AND DEVELOPMENT OF $Sb_2S_xSe_{3-x}$ THIN FILM SOLAR CELLS: AN ENVIRONMENTAL APPROACH**

Alexis Gustavo Alatorre Alba[1], Sarah Ruth Messina Fernández[1]
[1]Universidad Autónoma de Nayarit, Unidad Académica de Ciencias Básicas e Ingenierías, Mexico.

- **SC4-P042 SEMITRANSPARENT THIN FILMS OF SrCuSeF WITH POTENTIAL APPLICATION AS BACK CONTACTS OF SOLAR CELLS IN THE SUPERSTRATE CONFIGURATION.**

Karla Gutierrez Zayas Bazán[1], Patricia Gutierrez Zayas Bazán[1], Francisco de Moure Flores[2], Ana María Salomón Preciado[1], Jorge Ricardo Aguilar Hernández[1], Concepción Mejía García[1], Gerardo Contreras Puente[1]
[1]Escuela Superior de Física y Matemáticas IPN, Departamento de Física Avanzada, Mexico. [2]Universidad Autónoma de Querétaro, Facultad de Química-Materiales, Mexico.

- **SC4-P043 STUDY OF TRIPHENYLAMINE DERIVED SENSITIZERS WITH AZOMETHINE IN THE PI BRIDGE FOR BE USED IN DSSC**

Rody Abraham Soto Rojo[1], Tomás de Jesús Delgado Montiel[1], Jorge Luis Reyes Corrales[1], Daniel Glossman Mitnik[2,3], Jesús Adrián Baldenebro López[1]
[1]Universidad Autónoma de Sinaloa, Facultad de Ingeniería Mochis, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., Laboratorio Virtual NANOCOSMOS, Mexico. [3]Universitat Illes Balears, Departamento de Química, Spain.

- **SC4-P044 CLEANING AND COOLING SYSTEM OF PHOTOVOLTAIC MODULES**

Luis Alberto Hernández Domínguez[1], Gerardo López Mancilla[1], Erik Armando Marina Lara[1], Luis Javier Hernández Koller[1], Monserrat Zebadua Avendaño[1], Paola Carolina Luis López[1]
[1]Universidad de Ciencias y Artes de Chiapas, Fotovoltaica y Materiales, Mexico.

- **SC4-P045 GROWTH AND CHARACTERIZATIÓN OF II-VI SEMICONDUCTORS BY PLD**

David Omar Flores Tavira[1], Jorge Ricardo Aguilar Hernández[1], Luis Arturo Martinez Ara[1], Maria de Los Angeles Hernandez Perez[2], Patricia Maldonado Altamirano[1], Rogelio Mendoza Pérez[3], Fray de Landa Castillo Alvarado[1], Jorge Sastré Hernández[4]
[1]Escuela Superior de Física y Matemáticas IPN, Departamento de Física, Mexico. [2]Escuela Superior de Ingeniería Química e Industrias Extractivas, Departamento de Ingeniería en Metalurgia y Materiales, Mexico. [3]Universidad Autónoma de la Ciudad de México, Departamento de Física, Mexico. [4]Tecnológico de Monterrey, Escuela de Ingeniería y Ciencias, Mexico.

- **SC4-P046 OPTIMIZATION OF NiO THIN FILMS WITH APPLICATION IN PEROVSKITE SOLAR CELLS**

Jesus Sanchez Diaz[1], Jeevan Torres[1], Ana Dibert[1], Ariana Garcia[1], J. M. Rivas[1], Diego Esparza[1]
[1]Universidad Autónoma de Zacatecas, Unidad Academica de Ingenieria Electrica, Mexico.

- **SC4-P047 ENHANCED LIGHT HARVESTING OF DYE-SENSITIZED SOLAR CELLS EMPLOYING TUNABLE SIZED SELF-ASSEMBLED TiO2 MICROSPHERES.**

David Antonio Morales Barrera[1], Rodrigo García Rodríguez[2], Dena Pourjafari[1], Miguel Ruiz Gómez[1], Osvaldo Carvente Muñoz[3], Gerko Oskam[1], Geonel Rodríguez Gattorno[1]
[1]CINVESTAV-Mérida, Applied Physics Department, Mexico. [2]University of Bath, Department of Chemistry, United Kingdom, Channel Islands & Isle of Man. [3]Universidad Autónoma de Yucatán, Facultad de Ingeniería, Mexico.

- **SC4-P048 LUMINISCENCE AND CONDUCTIVITY ON Ag-DOPED ZnO FILMS**

Juan Araiza[1], Manuel Herrera[2]
[1]Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE), Nanociencias, Mexico. [2]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Física, Mexico.

- **SC4-P049 STABLE CUBIC TIN SULFIDE THIN FILMS OBTAINED BY CHEMICAL SOLUTION DEPOSITION**

Juniet Rebeca Gaitan Arevalo[1], Luis GONZALEZ[1], Jose Escorcia Garcia[2]
[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV Unidad Saltillo, Ingeniería Cerámica, Mexico. [2]CONACYT, Cinvestav Unidad Saltillo., Ingeniería Cerámica, Mexico.

- **SC4-P050 PHOTOVOLTAIC STUDY OF ENHANCED EFFICIENCY ON SENSITIZED QUANTUM DOTS SOLAR CELLS BASED ON TIO2 BY INTRODUCTION OF ZNO:AL^{3+}NANOPARTICLES WITH DIFFERENT MORPHOLOGIES**

Humberto Emmanuel Sanchez Godoy[1], Ruben Rodriguez[1], Jesus Castañeda[1], Virginia Marañon[2], Tzarara Lopez Luke[3], Elder de la Rosa Cruz[3], Isaac Zarazua[4]

[1]University of Guadalajara, Departamento de Ciencias Exactas y Tecnología, Mexico. [2]University of Guadalajara, Departamento de Ciencias de la Tierra y de la Vida, Mexico. [3]Centro de Investigaciones en Optica, Fotonica, Mexico. [4]Universidad de Guadalajara, Departamento de Ciencias Exactas y Tecnología, Mexico.

- **SC4-P051 FORMATION OF $CuSb(S,Se)_2$ BY THE SELENIZATION OF ELECTRODEPOSITED Sb_2S_3/Cu STACK**

Edgar Alexander Rueda Perez[1], Rocio Guadalupe Avilez Garcia[2], Tenoch Gonzalez Sanchez[1], Mou Pal[3], Nini Rose Mathews[1]

[1]Instituto de Energías Renovables Universidad Nacional Autónoma de México, Materiales Solares, Mexico. [2]Centro de Investigación en Dispositivos Semiconductores, Centro de Investigación en Dispositivos Semiconductores, Mexico. [3]Instituto de Física BUAP, Instituto de Física BUAP, Mexico.

- **SC4-P052 INFLUENCE OF MESOPOROUS LAYER ON SCALE UP OF THIRD GENERATION SOLAR CELLS**

Alessary Saadi Monroy[1], Manuel Alejandro Estrella Gutierrez[1], Renan Andres Escalante Quijano[2], Dena Pourjafari[2], Gerko Oskam[2]

[1]Universidad Autónoma de Yucatán, Facultad de Ingeniería Química, Mexico. [2]CINVESTAV-Mérida, Física Aplicada, Mexico.

- **SC4-P053 DEVELOPMENT AND STUDY OF THE OPTICAL PROPERTIES OF NEW PEROVSKITE BASED MATERIALS FOR INCORPORATION OF HYBRID SOLAR CELLS**

Pablo Marin Rosas[1], Manuel Alejandro Estrella Gutierrez[1], Karen Valadez Villalobos[2], Gerko Oskam[2]

[1]Universidad Autónoma de Yucatán, Facultad de Ingeniería Química, Mexico. [2]CINVESTAV-Mérida, Departamento de Física Aplicada, Mexico.

- **SC4-P054 EFFECT OF GE IN KESTERITE: AN INVESTIGATION ON FILM RECRYSTALLIZATION, AND OPTO-ELECTRONIC PROPERTIES OF CdS/CZTGS SOLAR CELL**

Tenoch Gonzalez Sanchez[1], Xavier Mathew[1], Edgardo Saucedo[2], Yudenia Sánchez[2], Eulises Regalado Perez[1], Nini Rose Mathews[1], Mónica Fabiola Sánchez Ruiz[1]

[1]Instituto de Energías Renovables Universidad Nacional Autónoma de México, Mexico. [2]Catalonian Institute for Energy Research (IREC), Spain.

- **SC4-P055 INCREASE IN THE EFFICIENCY OF A LUMINESCENT SOLAR CONCENTRATOR, BY PLASMONIC EFFECT PRODUCED BY GOLD NANOPARTICLES.**

Victor Hugo Romero Arellano[1], Jose Miguel Blancas Flores[1], Tzarara Lopez Luke[2], Belkis Coromoto Sulbarán Rangel[1], Carlos Alberto Guzman[1]

[1]Universidad de Guadalajara, Ingenierías e Innovación Tecnológica, Mexico. [2]Centro de Investigaciones en Optica, NAFOMA, Mexico.

- **SC4-P056 CHARACTERIZATION OF N-TYPE CuO OBTAINED BY THERMAL OXIDATION OF COPPER FOILS**

Laura Marcela Hill Pastor[1], Tomás Díaz[1], Roman Romano Trujillo[1], Miguel Galvan[2], Ramón Peña Sierra[2]

[1]Benemerita Universidad Autonoma de Puebla, Mexico. [2]Cinvestav Zacatenco, Mexico.

- **SC4-P057 STUDY OF AQUEOUS-PROCESSABLE FULL-ORGANIC AND HYBRID ORGANIC/INORGANIC NANOPARTICLE-BASED FILMS FOR SUSTAINABLE PHOTOVOLTAIC APPLICATIONS**

Silvia Destri[1], Stefania Zappia[1], Guido Scavia[1], Anna Maria Ferretti[2], Marina Alloisio[3], Massimo Ottonelli[3], Davide Comoretto[3], Ivana Moggio[4], Eduardo Manuel Arias Marín[4]

[1]CNR, Istituto per lo Studio delle Macromolecole (ISMAC), Italy. [2]CNR, Istituto per lo Studio dei Materiali Nanostrutturati (ISTM), Italy. [3]Università degli Studi di Genova, Dipartimento di Chimica e Chimica Industriale (DCCI), Italy. [4]Centro de Investigación en Química Aplicada - CIQA, Mexico.

- **SC4-P058 FERROELECTRICITY AND PHONON BEHAVIORS IN ECO-FRIENDLY ADVANCE MULTIFUNCTIONAL [KNbO3]1-x[(BaNi1/2Nb1/2O3-δ)]x COMPOUND**

Blanca Yamile Rosas[1], Karuna Mishra[1], Alvaro Instan Ballesteros[1], Ram Katiyar[1]

[1]Universidad de Puerto Rico, Physics, Puerto Rico.

- **SC4-P059 NANOSTRUCTURED ZnO-BASED DYE-SENSITIZED SOLAR CELLS USING NOVEL ORGANIC DYES**

Carlos Antonio Gonzalez Flores[1], Alberto Gabriel Vega Poot[1], Dena Pourjafari[1], Beatriz Eugenia Heredia Cervera[1], Jesús Idígoras[2], Juan Antonio Anta[2], Gerko Oskam[1]

[1]CINVESTAV-Mérida, Física Aplicada, Mexico. [2]Universidad Pablo de Olavide, Sistemas Físicos, Químicos y Naturales, Spain.

■ **SC4-P060 THE PURSUIT OF HIGH STABILITY AND PERFORMANCE CARBON-BASED PSC**

Renan Andres Escalante Quijano[1,2], Dena Pourjafari[1], Simone Meroni[2], Trystan Watson[2], Gerko Oskam[3]

[1]CINVESTAV-Mérida, Applied physics, Mexico. [2]Swansea University, United Kingdom, Channel Islands & Isle of Man. [3]CINVESTAV-Mérida, Mexico.

■ **SC4-P061 STUDY OF Zn /Si-p HETEROSTRUCTURES BY MODIFYING THE PROPERTIES OF ZnO FILMS AND THE RESISTIVITY OF SILICON SUBSTRATES FOR OBTAINING PHOTOVOLTAIC DEVICES**

Carlos Bueno[1], Edith Osorio[2], René Pérez[1], Alberto Alvarado[3], Mauricio Pacio[4], J. Alejandro García[1], Hector Juárez Santiesteban[4]

[1]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniería, Mexico. [2]Universidad de Quintana Roo, Catedra, Mexico. [3]University of Washington, Department of Materials Science and Engineering, United States. [4]Benemerita Universidad Autonoma de Puebla, Centro de Investigación en Dispositivos Semiconductores, Mexico.

■ **SC4-P062 MAGNETRON-SPUTTERED SELECTIVE SOLAR COATINGS BASED ON MO AND Al_2O_3 THIN FILMS**

Juan Jose Becerril Gonzalez Montecinos[1], Gerko Oskam[1], Oscar Eduardo Ares Muzio[1]

[1]CINVESTAV-Mérida, Applied Physics, Mexico.

■ **SC4-P063 SUPPRESSED HYSTERESIS AND ENHANCED CARRIER LIFETIMES BY PHASE STABILIZATION YIELD HIGH VOLTAGES AND EFFICIENCY IN PLANAR PEROVSKITE SOLAR CELLS**

Silver Hamill Turrén Cruz[1,2], Michael Saliba[2], Matthew T. Mayer[2], Hector Juárez Santiesteban[3], Xavier Mathew[4], Lea Lea Nienhaus[5], Wolfgang Wolfgang Tress[2], Moungi G. Bawendi[5], Michael Grätzel[2], Antonio Abate[6], Anders Hagfeldt[2], Juan-Pablo Correa Baena[5]

[1]Benemerita Universidad Autonoma de Puebla, Instituto de ciencias, Mexico. [2]École Polytechnique Fédérale de Lausanne, Switzerland. [3]Benemerita Universidad Autonoma de Puebla, Mexico. [4]Instituto de Energías Renovables Universidad Nacional Autónoma de México, Mexico. [5]Massachusetts Institute of Technology, United States. [6]Helmholtz-Zentrum Berlin für Materialien und Energie GmbH, Young Investigator Group Active Materials and interfaces for stable perovskite solar cells, Germany.

■ **SC4-P064 EFFECTS OF SECONDARY PHASES ON THE ELECTRO-OPTICAL PROPERTIES OF THE Cu_2SnS_3 THIN FILMS DEPOSITED BY ULTRASONIC SPRAY PYROLYSIS**

Ignacio Estevez Espinoza[1], Mauricio Ortega López[2], Yasuhiro Matsumoto[2], Octavio Estevez[3]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Program of Nanoscience and Nanotechnology, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Program of Nanoscience and Nanotechnology. Department of Electrical Engineering (SEES), Mexico. [3]Universidad Nacional Autónoma de México, Instituto de Física, Mexico.

■ **SC4-P065 INSTRUMENTATION AND CONTROL SYSTEM FOR THE CHARACTERISTIC ACCORDING TO THE THERMAL AND LIGHT RADIATIONS IN THE SOLAR CELL MANUFACTURING PROCESS CdS / CdTe**

Laura Luz Valero[1], Juan Luis Peña Chapa[2], Javier Salas Garcia[3], Silvia Edith Albarrán Trujillo[4], Ivan Rimmaudo[5]

[1]Universidad Autónoma del Estado de México, Research Electronic Engeener School, Mexico. [2]CINVESTAV-Mérida, Física Aplicada, Mexico. [3]Universidad Autónoma del Estado de México, Investigacion Ingeniería en electrónica, Mexico. [4]Universidad Autónoma del Estado de México, Investigación electrónica y Sistemas, Mexico. [5]Università degli Studi di Verona, Administration office (Computer Science), Italy.

■ **SC4-P066 RE-DESIGN, CONSTRUCTION AND STARTING OF SOLAR TRACKER**

Luis Carlos Muñoz Rivera[1], Carlos Ramón Batista Rodríguez[2], Mercy Tatiana Villate Fonseca[2]

[1]Universidad Antonio Nariño, Ingeniería Mecánica, Colombia. [2]Universidad Antonio Nariño, Facultad de Ingeniería Mecánica, Electrónica y Biomédica, Colombia.

■ **SC4-P067 BEHAVIOR OF TiO_2 MESOPOROS / TiO2 NANOTUBES HYBRID MATERIAL LIKE ETL IN PEROVSKITE-HYBRID SOLAR CELLS.**

David Meneses Rodriguez[1], Daniel Chan Morales[2], Karen L. Valadez[3], Andres Fest[4], Alma Daniela Salazar Aguilar[4,5], Sofia Magdalena Vega Diaz[4], Gerko Oskam[6]

[1]Cátedras-CONACyT-CINVESTAV Mérida, Departamento de Física Aplicada, Mexico. [2]Universidad Autónoma de Yucatán, Facultad de Ingeniería, Mexico. [3]CINVESTAV-Mérida, Física Aplicada, Mexico. [4]Instituto Tecnológico de Celaya, Departamento de Ingeniería Química, Mexico. [5]Instituto Tecnológico de Celaya, Mexico. [6]CINVESTAV-Mérida, Departamento de Física Aplicada, Mexico.

■ **SC4-P068 ELECTRICAL CHARACTERIZATION OF CDS/ CDTE MODULES SERIALLY INTERCONNECTED BY LASER SCRIBING**

Daniel Jimenez Olarte[1], Lucero Alejandra Esquivel Mendez[2], Cesar Hernandez Vasquez[2], Maria de Lourdes Albor Aguilera[2], Osvaldo Vigil Galán[2], Gerardo Contreras Puente[2]

[1]Instituto Politecnico Nacional, IPN - SEPI-ESIME-Zacatenco, SEPI, Mexico. [2]Escuela Superior de Física y Matemáticas IPN, Física, Mexico.

- **SC4-P069 DESIGN, CONSTRUCTION AND TESTING OF THE PROTOTYPE OF A HIGH TEMPERATURE SOLAR THERMAL CONCENTRATOR TYPE PDR.**

Duban Roa Gacha[1], Carlos Ramón Batista Rodríguez[2], Mercy Tatiana Villate Fonseca[2]

[1]Universidad Antonio Nariño, Ingeniería Mecánica, Colombia. [2]Universidad Antonio Nariño, Facultad de Ingeniería Mecánica, Electrónica y Biomédica, Colombia.

- **SC4-P070 STUDY ON THE ACTIVATION OF CdTe/CdS JUNCTION WITH $MgCl_2$**

Clara Luz Mendoza González[1], Martin Gregorio Reyes Banda[2], Eulises Regalado Perez[2], José Juan Jerónimo Rendon[1], Hector Juárez Santiesteban[1], Xavier Mathew[2]

[1]Benemerita Universidad Autonoma de Puebla, Semiconductor Devices, Mexico. [2]Instituto de Energías Renovables Universidad Nacional Autónoma de México, Solar Cells, Mexico.

TUESDAY, AUGUST 21
ROOM: TULUM H

Session: Inorganic materials 1

SESSION CHAIR: CLEMENS HESKE

- **08:30 - 09:00 SC4-O014 Invited Talk CIGS THIN FILM SOLAR CELLS: ADVANCEMENTS AND OPPORTUNITIES FOR FLEXIBLE AND TANDEM DEVICES WITH PEROVSKITE**

Ayodhya N. Tiwari[1], Stefano Pisoni[1], Fan Fu[1], Thomas Feurer[1], Enrico Avancini[1], Johannes Loeckinger[1], Shiro Nishiwaki[1], Thomas Weiss[1], Romain Carron[1], Stephan Buecheler[1]

[1]Empa-Swiss Federal Laboratories for Materials Science and Technology, Laboratory for Thin Films and Photovoltaics, Switzerland.

- **09:00 - 09:30 SC4-O015 Invited Talk ELECTRODE MICRO PATTERNING FOR ENHANCED CHARGE EXTRACTION SOLAR CELLS**

Youmna Mouhamad[1], Anthony Lewis[2], Ahmed Ismail[3], Jian Yao[3], John Stark[3], Justin Searle[2], Eifion Jewell[2], Trystan Watson[2]

[1]Swansea University, College of Engineerng, United Kingdom, Channel Islands & Isle of Man. [2]Swansea University, College of Engineering, United Kingdom, Channel Islands & Isle of Man. [3]Queen Mary, University of London, School of Engineering, United Kingdom, Channel Islands & Isle of Man.

- **09:30 - 10:00 SC4-O016 Invited Talk GaAs PHOTOVOLTAICS ON FLEXIBLE, INEXPENSIVE METAL SUBSTRATES**

Venkat Selvamanickam[1,2]

[1]University of Houston, Advanced Manufacturing Institute, Texas Center for Superconductivity, United States. [2]University of Houston, Mechanical Engineering, United States.

- **10:00 - 10:15 SC4-O017 AG INCORPORATION IN CZTS KESTERITE THIN FILMS FOR PHOTOVOLTAIC APPLICATIONS**

Raquel Garza Hernandez[1], James T. Gibbon[2], Vinod R. Dhanak[2], Francisco Servando Aguirre Tostado[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Laboratorio de Energías Alternas y Electronica Flexible, Mexico. [2]Stephenson Institute for Renewable Energy, University of Liverpool, Department of Physics, United Kingdom, Channel Islands & Isle of Man.

- **10:15 - 10:30 SC4-O018 NANOWIRE DEVICE DESIGNS FOR ENHANCEED OPEN-CIRCUIT VOLTAGE IN CDTE BASED SOLAR CELLS**

Matthew Dye[1], Riasad Badhan[1], Deepak Kumar[1], Sai Guduru[1], Vijay Singh[1]

[1]University of Kentucky, Electrical and Computer Engineering, United States.

- **10:30 - 10:45 SC4-O019 PHOTOVOLTAIC STRUCTURES USING $Cu_xSn_yS_z$ AS AN ABSORBER MATERIAL.**

David Avellaneda[1], Sadasivan Shaji[2], Bindu Krishnan[2], Laura Patricia Rivera Rosas[2]

[1]Universidad Autónoma de Nuevo León, FIME-CIDET, Mexico. [2]Universidad Autónoma de Nuevo León, FIME, Mexico.

- **10:45 - 11:00 SC4-O020 SILICON SOLAR CELL WITH DOWN-CONVERSION PROPERTIES USING EUROPIUM COMPLEX EMBEDDED IN COPOLYMER**

Yasuhiro Matsumoto[1], Gloria Lesly Jimenez Miranda[2], Ciro Falcony Guajardo[3], Rogelio Mendoza Pérez[4], Agustin Cortes[1], V. M. Sánchez R.[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Electrical Engineering, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Doctoral Program in Nanoscience and Nanotechnology, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Department of Physic, Mexico. [4]Universidad Autónoma de la Ciudad de México, Colegio de Ciencia y Tecnología, Mexico.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY III
DR. AMANDA S. BARNARD

Session: Inorganic materials 2

SESSION CHAIR: GERARDO CONTRERAS PUENTE

12:30 - 13:00 SC4-O021 Invited Talk ELECTRONIC AND CHEMICAL STRUCTURE OF ALTERNATIVE BUFFERS AND THEIR INTERFACES IN THIN-FILM SOLAR CELLS
Clemens Heske[1,2]
[1]Karlsruher Institut für Technologie, Institute for Photon Science and Synchrotron Radiation, Germany. [2]University of Nevada, Las Vegas, Chemistry & Biochemistry, United States.

13:00 - 13:15 SC4-O022 PROCESSING AND CHARACTERIZATION OF SB_2TE_3 BY DC- SPUTTERING DEPOSITION FOR SOLAR CELLS APLICATION
Rogelio Mendoza Pérez[1], Jose Alfredo del Oso Acevedo[1], Jorge Sastré Hernández[2], José Joaquín Lizardi del Ángel[1], Guillermo Santana[3], Gerardo Contreras Puente[2]
[1]Universidad Autónoma de la Ciudad de México, Colegio de Ciencia y Tecnología, Mexico. [2]Escuela Superior de Física y Matemáticas IPN, Física, Mexico. [3]Instituto de Investigaciones en Materiales, Instituto de Investigaciones en Materiales, Mexico.

13:15 - 13:30 SC4-O023 STABILITY IMPROVEMENT ON POLYMORPHOUS SILICON THIN FILMS SOLAR CELLS
Leon Hamui Balas[1]
[1]Universidad Anáhuac México Norte, Ingenieria, Mexico.

13:30 - 13:45 SC4-O024 BLACK NICKEL ELECTRODEPOSITION ON COPPER STRIPS FOR FLAT PLATE SOLAR COLLECTOR APPLICATIONS
Francisco Ivan Lizama Tzec[1], Alberto Gabriel Vega Poot[1], Dallely Melissa Herrera Zamora[1], Marco de Jesus Cetina Dorantes[1], Oscar Ares Muzio[1], Víctor Hugo Gómez Espinoza[2], Iris Santos González[3], Octavio García Valladares[2], Gerko Oskam[1]
[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Department of Applied Physics, Mexico. [2]Instituto de Energías Renovables Universidad Nacional Autónoma de México, Mexico. [3]Modulo Solar S.A. de C.V., Mexico.

13:45 - 14:00 SC4-O025 EFFECTS OF Cd- AND AG-DOPING IN Cu_2ZnSnS_4 SOLAR CELLS
Sai Gautam Gopalakrishnan[1], Thomas P. Senftle[1], Emily A. Carter[2]
[1]Princeton University, Mechanical and Aerospace Engineering, United States. [2]Princeton University, School of Engineering and Applied Science, United States.

TUESDAY, AUGUST 21
ROOM: TERRACE

18:30 -20:30 POSTER SESSION & COFFEE BREAK

SC4-P071 SYNTHESIS AND CHARACTERIZATION OF CdS / ZnS HYBRID WINDOW LAYERS FOR PHOTOVOLTAIC TECHNOLOGY APPLICATIONS
Guadalupe Viviana Hernández Calderón[1], Osvaldo Vigil Galán[1], Fabian Andres Pulgarin Agudelo[1,2]
[1]Instituto Politécnico Nacional - IPN, Physics, Mexico. [2]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Physics, Mexico.

SC4-P072 TOWARD AQUEOUS BASED DYE-SENSITIZED SOLAR CELLS
Alfredo Romero Contreras[1], Julio Villanueva[1]
[1]Benemerita Universidad Autonoma de Puebla, Instituto de Física, Mexico.

SC4-P073 BLUE CDTE SURFACE OBTAINED BY $CDCL_2$ THERMAL TREATMENT AND THEIR PERFORMANCE ON CDTE SOLAR CELL
Cesar Hernandez Vasquez[1], María de Lourdes Albor Aguilera[1], Miguel Angel González Trujillo[2], Jose Manuel Flores Marquez[3], Salvador Gallardo Hernandez[4]
[1]Instituto Politécnico Nacional - IPN, Física, Mexico. [2]Instituto Politécnico Nacional - IPN, Formación básica, Mexico. [3]Instituto Politécnico Nacional - IPN, Ing. en Metalurgia y Materiales, Mexico. [4]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Física, Mexico.

SC4-P074 INVESTIGATION ON THE Se ALLOYING WITH CdTe AND THE EFFECT ON THE OPTO-ELECTRONIC PROPERTIES OF CdTe/CdS SOLAR CELL

Martin Gregorio Reyes Banda[1,2], Maria Isabel Pintor Monroy[2], Eulises Regalado Perez[1], Manuel Quevedo[2], Xavier Mathew[1]

[1]Instituto de Energías Renovables Universidad Nacional Autónoma de México, Materiales Solares, Mexico. [2]The University of Texas at Dallas, MSE, United States.

- **SC4-P075 DISCUSSION OF THIN FILMS OF TIN SULFIDE DOPED WITH COPPER BY ULTRASONIC SPRAY PYROLYSIS TECHNIQUE TO APPLICATIONS IN PHOTOVOLTAIC DEVICES.**

Sergio Rodriguez Castro[1], Jorge Sergio Narro Rios[2], German Escalante Notario[3], Guillermo Santana[4], Aaron Sanchez Juarez[2], Carlos Alvarez Macias[1,3]

[1]Instituto Tecnologico de la Laguna, Posgrade, Mexico. [2]Instituto de Energías Renovables Universidad Nacional Autónoma de México, Posgrade, Mexico. [3]Unidad Especializada en Energias Renovables, Posgrade, Mexico. [4]Instituto de Investigaciones en Materiales, Posgrade, Mexico.

- **SC4-P076 STUDY OF THE DRY KINETICS OF Moringa oleifera IN A SOLAR HYBRID DRYER SOLAR - WIND, WITH ACCUMULATION SYSTEMS OF HEAT AND ELECTRIC ENERGY**

Roilan Iglesias[1,2], María Teresa de Jesús Pérez Figueroa[3], Luis Alberto Hernandez Dominguez[1]

[1]Universidad de Ciencias y Artes de Chiapas, Instituto de Investigación e Innovación en Energías Renovables, Mexico. [2]Universidad de Ciencias y Artes de Chiapas, Postgrado - Maestría en Materiales Y sistemas Energéticos Renovables, Mexico. [3]Universidad de Ciencias y Artes de Chiapas, Posgrado en Materiales y Sistemas Energéticos Renovables, Mexico.

- **SC4-P077 ZnS DEPOSITION BY THE CHEMICAL BATH TECHNIQUE WITHOUT COMPLEXING AGENTS**

Irving Josué González Chan[1], Aaron Ayrton Pat Herrera[1], Andres Ivan Oliva Arias[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Applied Physics, Mexico.

- **SC4-P078 EFFECT OF THE SOLUTION pH ON THE PROPERTIES OF ZnS THIN FILMS SYNTHESIZED BY A NON-TOXIC CHEMICAL BATH DEPOSIT**

Carlos Rodríguez[1], Claudia Carrasco[2], Marcos Flores[3]

[1]Universidad de La Serena, Multidisciplinary Research Institute for Science and Technology, Chile. [2]Universidad de Concepción, Departamento de Ingeniería de Materiales, Chile. [3]Universidad de Chile, Departamento de Física, Chile.

- **SC4-P079 PHOTOVOLTAIC DEVICES OF MOLYBDENUM SULFIDE SYNTHESIZED BY MICROWAVE ASSISTED HEATING**

Gildardo Casarrubias Segura[1], Claudia Martínez Alonso[2], Hailin Zhao Hu[1]

[1]Instituto de Energías Renovables Universidad Nacional Autónoma de México, NA, Mexico. [2]Escuela Nacional de Estudios Superiores de la UNAM unidad León, NA, Mexico.

- **SC4-P080 OPTICAL CHARACTERIZATION OF AMMONIA-FREE CdS:Ag THIN FILMS USING FLEXIBLE SUBSTRATE BY CHEMICAL BATH DEPOSITION**

Rosa Ahimé Corral Guerrero[1], Ramón Ochoa Landín[2], Alejandro Apolinar Iribe[2], Santos Jesús Castillo[1]

[1]Universidad de Sonora, Departamento de Investigación en Física, Mexico. [2]Universidad de Sonora, Departamento de física, Mexico.

- **SC4-P081 ELECTRONIC STRUCTURE AND OXIDATION STATES ANALYSIS OF $CU_2ZNSN(S,SE)_4$ KESTERITE THIN FILMS OBTAINED BY SPRAY PYROLYSIS FOR PHOTOVOLTAIC APPLICATIONS**

Raquel Garza Hernandez[1], Holly J. Edwards[2], James T Gibbon[2], Vinod R. Dhanak[2], Francisco Servando Aguirre Tostado[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Laboratorio de Energías Alternas y Electronica Flexible, Mexico. [2]Stephenson Institute for Renewable Energy, University of Liverpool, Department of Physics, United Kingdom, Channel Islands & Isle of Man.

- **SC4-P082 STUDY OF THE SPECIFIC HEAT OF SOLAR SALTS WITH THE PRESENCE OF SILICA NANOPARTICLES**

Erika Muñoz Gracia[1], Jenaro L. Varela Caselis[2], Efraín Rubio Rosas[2]

[1]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniería Química, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Centro Universitario de Vinculación y Transferencia de Tecnología, Mexico.

- **SC4-P083 CADMIUM TELLURIDE THIN FILMS AS GROWN ON MOLYBDENUM FLEXIBLE SUBSTRATES BY CLOSE SPACE VAPOR TRANSPORT TECHNIQUE (CSVT)**

Ana María Salomón Preciado[1], Karla Gutierrez Zayas Bazán[1], Patricia Gutierrez Zayas Bazán[1], Osvaldo Vigil Galán[1], Maria de Lourdes Albor Aguilera[1], Francisco de MouFlores[2], Jorge Ricardo Aguilar Hernández[1], Jorge Sastré Hernández[3],

Miguel Tufiño Velázquez[1], Norberto Hernandez Como[4], Gerardo Contreras Puente[5]

[1]Escuela Superior de Física y Matemáticas IPN, Física Avanzada, Mexico. [2]Universidad Autónoma de Querétaro, Facultad de Química, Mexico. [3]Instituto Tecnológico y de Estudios Superiores de Monterey, Escuela de Ingeniería y Ciencias, Mexico. [4]Centro de Nanociencias y micro y Nanotecnologías del IPN, Nanociencias, Mexico. [5]Escuela Superior de Física y Matemáticas IPN, Mexico.

- **SC4-P084 ELECTRICAL CHARACTERIZATION WITH IMPEDANCE SPECTROSCOPY STUDY OF TiO_2 NANOPARTICLES PREPARED BY GREEN CHEMICAL MECHANISM**

Alvaro Realpe Jimenez[1], María Teresa Acevedo Morantes[1], Diana Nuñez[1]

[1]Universidad de Cartagena, Chemical Engineering, Colombia.

- **SC4-P085 GROWTH OF CZTS THIN FILMS FOR DESIGN OF SOLAR CELLS**

Gustavo Alvarez Suarez[1], Jairo Gomez Cuaspud[2], Enrique Vera Lopez[3], Yaneth Pineda Triana[3], Ivan Calvet[4], Juan Carda[4]

[1]Universidad Pedagógica y Tecnológica de Colombia, Electromechanical engineering, Colombia. [2]Universidad Pedagógica y Tecnológica de Colombia, Chemistry, Colombia. [3]Universidad Pedagógica y Tecnológica de Colombia, Metallurgical Engineering, Colombia. [4]Universitat Jaume I, Chemistry, Spain.

- **SC4-P086 CHEMICAL DEPOSITION OF Co^{+2} DOPED FeS_2 THIN FILMS WITH FERROMAGNETIC PROPERTIES FOR PHOTOVOLTAIC SYSTEMS.**

Eder Cedeño[1], Yolanda Peña[1], Idalia Gómez[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico.

- **SC4-P087 ALUMINUM, ALUMINA AND NANOSTRUCTURE VANADIUM PENTOXIDE FILM TANDEM AS SOLAR SELECTIVE ABSORBER FOR CONCENTRATING SOLAR POWER TECNOLOGY**

Juan Eduardo Lopez Martínez[1], Arturo Martínez[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Energia, Mexico.

- **SC4-P088 THEORETICAL AND EXPERIMENTAL STUDY OF THE OPTICAL AND ELECTRONIC PROPERTIES OF $BiFeO_3$ AND $(Bi_{0.9}La_{0.1})FeO_3$ FOR PHOTOVOLTAIC APPLICATIONS**

Espiridión Martínez[1,2], H´ Linh H´ Mok[1,2], María Guadalupe Moreno Armenta[3], Jesús María Siqueiros Beltrones[2]

[1]Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE), Posgrado en Física de Materiales, Mexico. [2]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Departamento de Materiales Avanzados, Mexico. [3]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Departamento de Nanoestructuras, Mexico.

- **SC4-P089 MYF_4 (M=Li, Na, K) & MYF_4:Eu^{3+} THIN FILMS BY ELECTROCHEMICAL PROCESSES FOR OPTOELECTRONIC APPLICATIONS**

Alexandra Bustamante[1], Jacob Barranco Cisneros[1], Ma. Estela Calixto[1], Antonio Mendez Blas[1]

[1]Benemerita Universidad Autonoma de Puebla, Instituto de Física, Mexico.

- **SC4-P090 STUDY OF PROPERTIES OF THIN FILMS OF THE COMPOUND $FA_XMA_{(1-X)}PBI_3$ DEVELOPED WITH PEROVSKITE STRUCTURE FOR SOLAR CELLS**

Ophyr Virgüez Amaya[1]

[1]Universidad de América, Colombia.

- **SC4-P091 EVALUATION OF THE EFFECT OF THE CsI'S CONCENTRATION IN THE THIN FILMS OF THE COMPOUND $Cs_{(X)}$ $FA_{(1-X)}$ PbI_3 WITH PEROVSKITE STRUCTURE FOR USE AS AN ACTIVE LAYER ON SOLAR CELLS**

Leidy Julieth Herrera Torres[1]

[1]Universidad de América, Colombia.

- **SC4-P092 COMPUTATIONAL STUDY OF OLIGOMERS WITH STRUCTURE D-A-D BASED ON THE DPP AND BT AS A ACCEPTOR SEGMENTS**

Amós Benjamín Enríquez[1], Rosa Angeles Vazquez[1], Mario Alejandro Rodríguez Rivera[2], Oscar Javier Hernández Ortiz[1], Arian Espinosa Roa[3]

[1]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Mexico. [2]Centro de Investigaciones en Optica, Grupo de Propiedades Ópticas de la Materia, Mexico. [3]Centro de Investigación en Química Aplicada - CIQA , Materiales Avanzados, Mexico.

- **SC4-P093 BANDGAP CONTROL IN TITANIUM OXIDE PARTICLES USING REDUCED GRAPHENE OXIDE**

Daniela Olmos[1], Andres Fest[1], Alexis Piñeiro Garcia[1], Sofia Magdalena Vega Diaz[1,2], Ferdinando Tristán López[1]

[1]Instituto Tecnológico de Celaya, Departamento de Ingeniería Química, Mexico. [2]Instituto Tecnológico de Celaya, Cátedras CONACYT-Instituto Tecnológico de Celaya, Mexico.

- **SC4-P094 THEORETICAL STUDY OF SEMICONDUCTOR Π-CONJUGATE POLYMERS USED IN ORGANIC SOLAR CELLS**
  Daniel E. Trujillo González[1], Fray de Landa Castillo Alvarado[1], Andreas W. Goetz[2], Juan I. Rodríguez[1]
  [1]Escuela Superior de Física y Matemáticas IPN, Escuela Superior de Física y Matemáticas, Mexico. [2]University of California, San Diego, San Diego Supercomputer Center, United States.

- **SC4-P095 SYNTHESIS AND CHARACTERIZATION OF HYBRID SOLAR CELLS BASED ON PEROVSKITE BY THE SPIN COATING METHOD**
  Alejandra Jiménez[1], Rafael Garcia Gutierrez[2]
  [1]Universidad de Sonora, Posgrado de Nanotecnologia, Mexico. [2]Universidad de Sonora, Departamento de Investigación en Física, Mexico.

- **SC4-P096 LEAD-FREE INORGANIC Cs-Sn BASED HALIDE PEROVSKITE THIN FILMS BY SPRAY DEPOSITION**
  Franco Josue Amaya Suazo[1], Bindu Krishnan[1], Sadasivan Shaji[1], David Avellaneda[1]
  [1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico.

- **SC4-P097 OPTICAL AND MORPHOLOGICAL STUDY OF CDS NANOWIRES FOR USE AS A WINDOW MATERIAL IN CdS/CdTe SOLAR CELLS**
  Patricia Gutierrez Zayas Bazán[1], Karla Gutierrez Zayas Bazán[1], Osvaldo de Melo Pereira[2], Jorge Ricardo Aguilar Hernández[1], Francisco de Moure Flores[3], Miguel Tufiño Velázquez[1], Gerardo S. Contreras Puente[1]
  [1]Escuela Superior de Física y Matemáticas IPN, Física Avanzada, Mexico. [2]Universidad de La Habana, Facultad de Física, Cuba. [3]Universidad Autónoma de Querétaro, Facultad de Química, Mexico.

- **SC4-P098 STUDY OF THE OPTOELECTRONIC PROPERTIES IN CDS/CDTE SAMPLES INFLUENCED BY ALTERNATIVE THERMAL TREATMENTS**
  Miguel Macias[1], Maria de Lourdes Albor Aguilera[2], Cesar Hernandez Vasquez[2], Aduljay Remolina Millán[2], Salvador Gallardo Hernandez[3]
  [1]Instituto Politécnico Nacional - IPN, Ingeniería, Mexico. [2]Instituto Politécnico Nacional - IPN, Física, Mexico. [3]Cinvestav Zacatenco, S.E.E.S, Mexico.

- **SC4-P099 ELABORATION AND CHARACTERIZATION OF SEMICONDUCTOR MATERIALS USING THE MANUAL AND AUTOMATED DEPOSIT TECHNIQUE FOR CHEMICAL BATH**
  Bruno Balbino Castillejos Cruz[1], Alfredo Olea Rogel[1], Roger Castillo Palomera[1], Raul Moreno Rincon[2], Minerva Gamboa Sanchez[3], Jose Campos Alvarez[4]
  [1]Universidad Politécnica de Chiapas, Maestría en Energías Renovables, Mexico. [2]Instituto Tecnológico Nacional de Méxio / Instituto Tecnológico de Tuxtla Gutierrez, Eléctrica y Electrónica, Mexico. [3]Universidad Politécnica de Chiapas, Ambiental, Mexico. [4]Instituto de Energías Renovables Universidad Nacional Autónoma de México, IER, Mexico.

- **SC4-P100 DEVELOPMENT OF ULTRA-THIN SOLAR CELLS OF CdS/CdTe PROCESSED BY THE MAGNETO-PLANAR-SPUTTERING (MPS) TECHNIQUE**
  Karla Gutierrez Zayas Bazán[1], Patricia Gutierrez Zayas Bazán[1], Francisco de Moure Flores[2], Daniel Jimenez Olarte[1], Jorge Sastré Hernández[1], Jorge Ricardo Aguilar Hernández[1], Concepción Mejía García[1], Gerardo Contreras Puente[1]
  [1]Escuela Superior de Física y Matemáticas IPN, Departamento de Física Avanzada, Mexico. [2]Universidad Autónoma de Querétaro, Facultad de Química-Materiales, Mexico.

- **SC4-P101 THERMAL TREATMENTS INFLUENCE ON CdTe THIN FILMS GROWN BY CSS IN LARGE AREAS**
  Lucero Alejandra Esquivel Mendez[1], Maria de Lourdes Albor Aguilera[1], Miguel Angel González Trujillo[2], Hernani Yee Madeira[1], Yasuhiro Matsumoto[3]
  [1]Instituto Politécnico Nacional - IPN, Fisica, Mexico. [2]Instituto Politécnico Nacional - IPN, De Formación Básica, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, SEES, Mexico.

- **SC4-P102 STUDY OF MORPHOLOGICAL PROPERTIES OF ZnS THIN FILMS INFLUENCED BY USING DIFFERENT THERMAL TREATMENTS**
  Juana Angelica Ortega Cardenas[1], Maria de Lourdes Albor Aguilera[1], Hernani Yee Madeira[1], Miguel Angel González Trujillo[2]
  [1]Instituto Politécnico Nacional - IPN, E.S.F.M Física, Mexico. [2]Instituto Politécnico Nacional - IPN, E.S.C.O.M Formación Básica, Mexico.

- **SC4-P103 ARTIFICIAL INTELLIGENCE BASED MODEL FOR PV ARRAY RECONFIGURATION TO MAXIMIZE POWER WITH HOMOGENOUS IRRANDIANCE**

Horacio Irán Solís Cisneros[1], Perla Yazmín Sevilla Camacho[2], José Billerman Robles Ocampo[3], Marco Antonio Zuñiga Reyes[4]

[1]Universidad Politécnica de Chiapas, Master in Renewable Energy, Mexico. [2]Universidad Politécnica de Chiapas, Mechatronics, Mexico. [3]Universidad Politécnica de Chiapas, Energy, Mexico. [4]Instituto Tecnológico Nacional de Méxio / Instituto Tecnológico de Tuxtla Gutierrez, Electrical engineering, Mexico.

- **SC4-P104 SYNTHESIS OF MOLYBDENUM OXIDE THIN FILMS BY LASER ABLATION AT DIFFERENT OXYGEN PRESSURES**

Ivette Alejandra Ramos Díaz[1], Gilberto Gomez Rosas[2], Dagoberto Cardona Ramírez[1], Enrique Camps[3], Enrique Campos Gonzalez[3], Miguel Angel Santana Aranda[2], Jose Guadalupe Quiñones[2]

[1]Instituto Tecnológico y de Estudios Superiores de Occidente A.C., Departamento de Fisica y Matematicas, Mexico. [2]Universidad de Guadalajara, Departamento de Fisica, Mexico. [3]Instituto Nacional de Investigaciones Nucleares (ININ), Departamento de Fisica, Mexico.

- **SC4-P105 STUDY AND CHARACTERIZATION OF SELECTIVE COBALT BLACK COATINGS ELECTRODEPOSITED ON STAINLESS STEEL SUBSTRATES (AISI 304) AND INCONEL 600 FOR THE CONVERSION OF SOLAR TO THERMAL ENERGY**

Dallely Melissa Herrera Zamora[1], Francisco Iván Lizama Tzec[1], Oscar Ares Muzio[1], Gerko Oskam[1]

[1]CINVESTAV-Mérida, Department of Applied Physics, Mexico.

- **SC4-P106 A NOVEL THREE-STEP CHEMICAL DEPOSITION AND VAPOR REACTION METHOD FOR SYNTHESIS OF PEROVSKITE $CH_3NH_3PbI_{3-x}Cl_x$**

Marcos Alan Cota Leal[1,2], Miguel Martinez Gil[1,2], Dagoberto Cabrera Germán[1,2], Jorge Alberto García Valenzuela[1,3], Merida Sotelo Lerma[2]

[1]SMARTER-Lab Nucleus for Research & Divulgation, A.C, Mexico. [2]Universidad de Sonora, Departamento de Investigación en polímeros y materiales, Mexico. [3]Universidad de Sonora, Departamento de ingeniería química y metalurgia, Mexico.

- **SC4-P107 STUDY OF OPTICAL, STRUCTURAL, AND MORPHOLOGICAL PROPERTIES OF ZINC OXIDE NANORODS AND ITS APPLICATION IN SOLAR CELLS**

Jesus Antonio Maldonado Arriola[1], Mario Enrique Alvarez Ramos[1], Gerardo Saavedra Rodríguez[1], Roberto Carlos Carrillo Torres[1], Raúl Sánchez Zeferino[1]

[1]Universidad de Sonora, Departamento de Física, Mexico.

- **SC4-P108 CINNAMIC ESTER DERIVATIVES FOR OLED APPLICATION**

Miguel Ángel Aztatzi Mendoza[1], Eugenio Hernández Fernández[1], Luis Abraham Lozano Hernández[2], Jose-Luis Maldonado[2], Israel López[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico. [2]Centro de Investigaciones en Optica, Grupo de Propiedades Ópticas de los Materiales, Mexico.

- **SC4-P109 CDTE PHOTO-LUMINESCENT QUANTUM DOTS AND THEIR INFLUENCE IN COMMERCIAL SOLAR CELLS EFFICIENCY.**

Aldo Zazueta Raynaud[1,2], J Elias Pelayo Ceja[3], Rosendo Lopez Delgado[1,2], Alvaro Flores[2], Mario Enrique Alvarez Ramos[2], Arturo Ayon[1]

[1]The University of Texas at San Antonio, Physics and Astronomy, United States. [2]Universidad de Sonora, Fisica, Mexico. [3]Universidad de Guadalajara, Centro de Ciencias Exactas e Ingenierias, Mexico.

- **SC4-P110 SIMULATION OF REAL c-GaN p-i-n HETEROSTRUCTURES FOR SOLAR CELLS APPLICATIONS**

Alison Ruiz[1], Jose Joaquin Alvarado Pulido[2], Heber Vilchis[1], Salvador Gallardo Hernandez[3], Jorge Evaristo Conde Diaz[4]

[1]Universidad de Ciencias y Artes de Chiapas, Instituto de Investigación e Innovación en Energías Renovables, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Centro de Investigación en Dispositivos Semiconductores, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Departamento de física, Mexico. [4]Universidad de Ciencias y Artes de Chiapas, Catedras CONACYT-Instituto de investigación e innovación en energías renovables, Mexico.

- **SC4-P111 THEORETICAL-EXPERIMENTAL ANALYSIS OF THE INFLUENCE OF FUNCTIONAL ORGANIC GROUPS PRESENT IN DYE OF THE FRUIT OF GARAMBULLO ON THIN FILMS OF TITANIUM DIOXIDE (TIO_2)**

Porfirio Esaã° Martínez Muñoz[1], Minerva Robles Agudo[2], Patricia Durán Arenas[1], Ruben Velazquez Hernandez[1], Ivo Neftali Ayala Garcia[3], Ignacio Rojas Rodriguez[1]

[1]Universidad Tecnológica de Querétaro, Industrial-Nanotecnología, Mexico. [2]Cátedra CONACYT-Universidad Tecnológica de Querétaro, Industrial-Nanotecnología, Mexico. [3]Universidad Tecnológica de Querétaro, Mecatrónica, Mexico.

- **SC4-P112 INVERTED STRUCTURE OF PEROVSKITE SOLAR CELL FABRICATED UNDER AMBIENT CONDITIONS**

Marco Polo[1], Siraj Sidhik[2], Andrea Cerdan Pasaran[2], Diego Esparza[1], Tzarara Lopez Luke[2], J. M. Rivas[1], Elder de la Rosa Cruz[2]

[1]Universidad Autónoma de Zacatecas, Unidad Académica de Ingeniería Eléctrica, Mexico. [2]Centro de Investigaciones en Optica, Fotonica, Mexico.

- **SC4-P113 SYNTHESIS AND CHARACTERIZATION OF CH 3 NH 3 PbX 3 PEROVSKITES QUANTUM DOTS**

Ana Dibert[1], Ariana Garcia[1], Jeevan Torres[1], Jesus Sanchez Diaz[1], J.m. Rivas[1], Diego Esparza[1]

[1]Universidad Autónoma de Zacatecas, Unidad Academica de Ingieneria Electrica, Mexico.

- **SC4-P114 EFFECT OF THE NUMBER OF LAYERS ON THE CONDUCTIVITY OF SEMICONDUCTOR FILMS OF ZINC OXIDE BY THE LANGMUIR-BLODGETT SYNTHESIS METHOD FOR APPLICATION IN SOLAR CELLS**

Jonathan Jetzrahel de la Peña Reyes[1], Alcione Garcia Gonzalez[1], Refugio Bernardo Garcia Reyes[1], Daniel Simon Olivo Alanis[1], Gerko Oskam[2], Dena Pourjafari[2]

[1]Universidad Autónoma de Nuevo León, Facultad de ciencias químicas, Mexico. [2]CINVESTAV-Mérida, Física aplicada, Mexico.

- **SC4-P115 SIMULATION AND MODELLING OF FUNCTIONAL MATERIALS FOR ENVIROMENTAL APLICATIONS**

Radamés Ricardo Reynoso Manríquez[1], Martin Romero[2], Raúl Gomez[2], Ana Córdova[2]

[1]Facultad de Ciencias, UNAM, Departament of physics, Mexico. [2]Facultad de Ciencias, UNAM, Department of Physics, Mexico.

- **SC4-P116 ELECTRO-OPTICAL CHARACTERIZATION AND MODELING OF NANOWIRE CdS-CdTe SOLAR CELLS**

Riasad Badhan[1], Hongmei Dang[1], Rasika Ganvir[1], Deepak Kumar[1], Matthew Dye[1], Vijay Singh[1]

[1]University of Kentucky, Electrical and Computer Engineering, United States.

- **SC4-P117 DEPOSITION, CHARACTERIZATION AND OPTIMIZATION OF MICROCRYSTALLINE SILICON-GERMANIUM THIN FILMS**

Arturo Torres[1], Mario Moreno[1], Pedro Rosales[1], Miguel Angel Dominguez[2], Alfonso Torres[1], Adrian Itzmoyotl[1]

[1]Instituto Nacional de Astrofísica, Óptica y Electrónica, Electronica, Mexico. [2]Benemerita Universidad Autonoma de Puebla, semiconductores, Mexico.

- **SC4-P118 SYNTHESIS AND CHARACTERIZATION OF A HYBRID COMPOUND FROM BISMUTH TRIIODIDE AND TETRA-N-OCTYLPHOSPHONIUM WITH STRUCTURE PEROVSKITE TYPE WITH POTENTIAL USE IN PHOTOVOLTAIC CELLS**

Itzel Amairani Abarca Villarreal[1], Eduardo Maximiano Sanchez Cervantes[1], Diana Fabiola García Gutiérrez[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico.

- **SC4-P119 TRANSITION METAL COMPLEXED METHYL ORANGE FOR EFFECTIVE DYE-SENSITIZED SOLAR CELLS (DSSCS): EFFICIENCY COMPARISON**

Sharon Jeannette Sandoval Ferman[1], Samantha Cedillo Escalona[1], Jayanthi Narayanan X[1]

[1]Universidad Politécnica del Valle de México, Ingenieria en Nanotecnologia, Mexico.

- **SC4-P120 DEVELOPMENT OF THIN FILMS OF Cu_2ZnSnS_4 BY THERMAL CO-EVAPORATION FOR APPLICATION AS AN ABSORBENT LAYER IN SOLAR CELLS**

Noé de la Cruz Santiago.[1], Sergio Antonio López de Dios[2], Cristino Ricardez Jimenez[1], Omar Sarracino Martinez[3]

[1]Universidad Juárez Autónoma de Tabasco, División Académica de Ciencias Básicas, Mexico. [2]Universidad Popular de la Chontalpa, Mexico. [3]Universidad Juárez Autónoma de Tabasco, Mexico.

- **SC4-P121 OPTIMIZATION OF CDS QUANTUM DOT SENSITIZED SOLAR CELL BY SOLVENT MODIFIED SILAR APPROACH**

Christopher Rosiles[1], Siraj Sidhik[1], Tzarara Lopez Luke[1], Elder de la Rosa Cruz[1]

[1]Centro de Investigaciones en Optica, Mexico.

- **SC4-P122 SYNTHESIS AND CHARACTERIZATION OF PEROVSKITE-BASED MATERIALS WITH DIFFERENT HALIDES ONTO TiO_2 AND MOFs SUBSTRATES**

Luis Felipe Ullate Ritchie[1], Manuel Alejandro Estrella Gutierrez[1], Karen Valadez Villalobos[2], Gerko Oskam[3]

[1]Universidad Autónoma de Yucatán, Facultad de Ingeniería Química, Mexico. [2]CINVESTAV-Mérida, Física Aplicada, Mexico. [3]CINVESTAV-Mérida, Departamento de Física Aplicada, Mexico.

- **SC4-P123 GROWTH AND DISORDER CHARACTERIZATION OF NON-STOICHIOMETRIC Cu2ZnSnS4 THIN FILMS PREPARED USING A TWO-STEP SULFURIZATION PROCESS**

Roberto Colina Ruiz[1], Juan Hoy Benitez[1], José Mustre de León[1], Felipe Caballero Briones[2], Francisco Espinosa Faller[3]

[1]CINVESTAV-Mérida, Física Aplicada, Mexico. [2]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Unidad Altamira, IPN, Laboratorio de Materiales Fotovoltaicos, Mexico. [3]Universidad Marista de Mérida, Laboratorio de nuevos materiales para el aprovechamiento de la energía, Mexico.

- **SC4-P124 DETECTION OF ELECTROLUMINESCENCE IN SOLAR CELLS USING ORDINARY DIGITAL CAMERA AND EULERIAN VIDEO MAGNIFICATION**

Eduardo Pérez Dawn[1], Caridad Vales Pinzón[1], José Ángel Méndez Gamboa[1], Ruben Arturo Medina Esquivel[1]

[1]Universidad Autónoma de Yucatán, Physics Engineering, Mexico.

- **SC4-P125 FABRICATION PROCESS OF NANOCRYSTALS BY SURFACE EFFECT. THEORETICAL-EXPERIMENTAL APPROACH**

Nancy Lizbeth Rodriguez Morales[1], Jesus Alberto Maldonado Espinosa[1], Juan Carlos Ortiz Sanchez[1], Arturo Hernandez Hernandez[2], Luis Alberto Hernández Hernández[2], Pablo A. López Pérez[2], Francisco Martínez Farías[2], Eduardo Rangel Cortes[2], Emmanuel Vallejo[2], Miguel Melendez Lira[3]

[1]Universidad Autónoma del Estado de Hidalgo, Ingenieria en Nanotecnologia, Escuela Superior de Apan, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Energetic Systems and Advanced Materials, Escuela Superior de Apan, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Departamento de Fisica, Mexico.

- **SC4-P126 PIPERIDINE-SUBSTITUTED PERYLENE-MONOANHYDRIDE DERIVATIVES AS MOLECULAR ABSORBERS IN ZnO-BASED DYE-SENSITIZED SOLAR CELLS**

Esdras Josue Canto Aguilar[1], David Gutiérrez Moreno[2], Angela Sastre[2], Fernando Fernández Lázaro[2], Shogo Mori[3], Gerko Oskam[1]

[1]CINVESTAV-Mérida, Department of Applied Physics, Mexico. [2]Universidad Miguel Hernández de Elche, Área de Química Orgánica, Spain. [3]Shinshu University, Division of Chemistry and Materials, Japan.

- **SC4-P127 COMPARISON OF SOLAR RADIATION PREDICTIVE MODELS BASED ON TEMPERATURES AND PRECIPITATION CHARACTERISTICS IN THE STATE OF CHIAPAS, MÉXICO.**

Manuel de Jesus Palacios Gallegos[1], Jesús A. Utrilla Yang[2], Victor Ramos Fon Bon[3], Cristina Blanco González[1], Aremy Virrueta Gordillo[3]

[1]Universidad Politécnica de Chiapas, Unidad de posgrado en Energías Renovables, Mexico. [2]Universidad Politécnica de Chiapas, Posgrado, Mexico. [3]Universidad Politécnica de Chiapas, Ingeniería en Desarrollo de Software, Mexico.

Symposium C6

HEAT TRANSFER AT THE NANOSCALE

Raul Esquivel Sirvent / Universidad Nacional Autonoma de Mexico
Philippe Ben-Abdallah / Laboratoire Charles Fabry
Achim Kittel / Carl-von-Ossieetsky University Oldenburg

MONDAY, AUGUST 20
ROOM: COBA

14:00 - 16:00 Lunch time

Session: Near Field Heat Transfer

SESSION CHAIR: GIUSEPPE PIRRUCCIO

- **16:00 - 16:30 SC6-O001 ON THE SEEMING DEPENDENCE OF NEAR FIELD HEAT TRANSFER ON THE APPARENT BARRIER HEIGHT OF A TUNNEL JUNCTION**
  Achim Kittel[1], Till Ziehm[1], Philipp Thurau[1]
  [1]University of Oldenburg, Institute of Physics, Germany.
- **16:30 - 17:00 SC6-O002 Invited Talk ENGINEERING ELECTRON AND PHONON ENERGY FLUXES IN ELECTRONIC JUNCTION REFRIGERATORS**
  Mika Prunnila[1]
  [1]VTT Technical Research Centre of Finland, Espoo, Finland.
- **17:00 - 17:15 SC6-O003 MEASUREMENT AND MODELING OF THE THERMAL CONDUCTIVITY ENHANCEMENT OF SiO2 THIN FILMS DUE TO THE PROPAGATION OF SURFACE ELECTROMAGNETIC WAVES**
  Jose Ordonez[1]
  [1]CNRS, Institut Pprime, Physics, France.
- **17:15 - 17:45 SC6-O004 Invited Talk THERMODYNAMICS OF THE GAS OF PHOTONS IN THE NEAR-FIELD**
  Miguel Rubi[1], Agustin Pérez Madrid[1], Luciano C. Lapas[2]
  [1]Universitat de Barcelona, Condensed Matter Physics, Spain. [2]UNILA, Interdisciplinary Center for Natural Sciences, UNILA, Brazil.
- **17:45 - 18:15 SC6-O005 Invited Talk OPENING AND CONTROL OF THERMAL BAND-GAPS IN NEAR FIELD HEAT TRANSFER.**
  Giuseppe pirruccio[1], Jaime Perez[1], Raul Esquivel[1]
  [1]Universidad Nacional Autónoma de México, IFUNAM, Mexico.
- **17:30-18:30 Science, Technology and Society Lecture SENER**

TUESDAY, AUGUST 21
ROOM: UXMAL II

- **08:30 - 08:45 SC6-O006 NEAR-FIELD RADIATIVE HEAT TRANSFER IN AL NANOPARTICLES. EFFECTS OF OXIDES**
  Raul Esquivel Sirvent[1], Jaime E. Pérez Rodríguez[2], Giuseppe Pirruccio[1]
  [1]Instituto de Física - Universidad Nacional Autónoma de México, Fisico-Química, Mexico. [2]Instituto de Física - Universidad Nacional Autónoma de México, Fisica-Química, Mexico.
- **08:45 - 09:15 SC6-O007 Invited Talk ENERGY TRANSFER IN NANOSCALE GA**

Pramod Reddy[1]
[1]University of Michigan, College of Engineering, United States.

▸ **09:15 - 09:45 SC6-O008 Invited Talk ADDRESSING THERMAL ANOMALIES WITH NON-EQUILIBRIUM FLUCTUATION ELECTRODYNAMICS**

Carsten Henkel[1]
[1]University of Potsdam, Physics and Astronomy, Germany.

■ **09:45 - 10:00 SC6-O009 THERMAL PROPERTIES OF COMPOSITE MATERIALS WITH A COMPLEX FRACTAL STRUCTURE: INCLUSION DISPERSITY AND THERMAL CONTRAST EFFECTS**

Manuel de Jesús Sánchez Miranda[1], Victor Dossetti[2], José Luis Carrillo Estrada[1], Candido Omar Cerezo Ponce[3]
[1]Benemerita Universidad Autonoma de Puebla, Instituto de Física, Mexico. [2]Benemerita Universidad Autonoma de Puebla, CIDS-ICUAP, Mexico. [3]Benemerita Universidad Autonoma de Puebla, Facultad de Ciencias de la Electrónica, Mexico.

▸ **10:00 - 10:30 SC6-O010 Invited Talk TOPOLOGICAL PHASE TRANSITIONS AND NON-LOCALITY IN CASIMIR EFFECT AND HEAT TRANSFER IN THE GRAPHENE FAMILY**

Pablo Rodriguez Lopez[1], Wilton Kort Kamp[2,3], Diego Dalvit[3], Lilia Woods[4]
[1]Consejo Superior de Investigaciones Científicas, Theory of Quantum Materials and Solid State Quantum Technologies, Spain. [2]Los Alamos National Laboratory, Center for Nonlinear Studies, United States. [3]Los Alamos National Laboratory, Theoretical Division, United States. [4]University of South Florida, Physics, United States.

▸ **10:30 - 11:00 SC6-O011 Invited Talk MAGNETO-OPTICAL CONTROL OF THERMAL RADIATION AT THE NANOSCALE**

Svend-Age Biehs[1], Annika Ott[1], Philippe Ben Abdallah[2]
[1]University of Oldenburg, Institut of Physics, Germany. [2]CNRS - Laboratoire Charles Fabry, Institut dOptique, France.

11:00-11:30 COFFEE BREAK

11:30 - 12:30 PLENARY III
DR. AMANDA S. BARNARD

■ **12:45 - 13:00 SC6-O012 TOWARDS AN ALL-ELECTRIC CONTROL OF THE HEAT FLUX BASED ON ELECTROPHONONIC EFFECTS**

Juan Antonio Seijas Bellido[1], Hugo Aramberri[1], Jorge Íñiguez[2], Riccardo Rurali[1]
[1]Institut de Ciència de Materials de Barcelona, Theory and Simulation of Materials, Spain. [2]Luxembourg Institute of Science and Technology, Materials Research and Technology Department, Luxembourg.

▸ **13:00 - 13:30 SC6-O013 Invited Talk THERMAL TRANSPORT AND ENERGY DISSIPATION IN NANOSCALE CONDUCTORS**

Fabian Menges[1], Fabian Koenemann[2], Nico Mosso[2], Tino Wagner[3], Andreas Stemmer[3], Johannes Gooth[4], Bernd Gotsmann[2]
[1]University of Colorado at Boulder, Physics, United States. [2]IBM Research Zurich, Switzerland. [3]Eidgenössische Technische Hochschule Zürich, Switzerland. [4]Max Planck Institute for Chemical Physics of Solids, Germany.

▸ **13:30 - 14:00 SC6-O014 Invited Talk THERMAL RADIATION AT THE WAVELENGTH SCALE AND THERMOPHOTOVOLTAICS**

Pierre-Olivier Chapuis[1], Etienne Blandre[2], Khac Long Nguyen[2], Yoichiro Tsurimaki[3,4], Christophe Lucchesi[5], Makoto Shimizu[4], Olivier Merchiers[2], Rodolphe Vaillon[6,7]
[1]CNRS, CETHIL (Centre for Energy and Thermal Sciences), France. [2]CETHIL - INSA Lyon, CETHIL, France. [3]CETHIL - INSA Lyon, France. [4]Tohoku University, Department of Mechanical Engineering, Japan. [5]CETHIL - CNRS, CETHIL, France. [6]CNRS, CETHIL, France. [7]IES Madrid, IES, Spain.

☒ **14:00 - 16:00 Lunch time**

▸ **16:00 - 16:30 SC6-O015 Invited Talk SURFACE-MODE-ASSISTED AMPLIFICATION OF RADIATIVE HEAT TRANSFER BETWEEN NANOPARTICLES**

Riccardo Messina[1]
[1]CNRS, Laboratoire Charles Fabry, CNRS and IOGS, France.

■ **16:30 - 16:45 SC6-O016 DEPENDENCE OF RADIATIVE HEAT TRANSFER BETWEEN NANOPARTICLES ON COUPLED SURFACE MODES**

David Becerril Rodriguez[1], Cecilia Noguez[1]
[1]Universidad Nacional Autónoma de México, Physics, Mexico.

▸ **16:45 - 17:15 SC6-O017 Invited Talk FREQUENCY-SELECTIVE NEAR-FIELD RADIATIVE HEAT TRANSFER ENHANCEMENT VIA INVERSE DESIGN**

Alejandro Rodriguez[1], Weiliang Jin[1], Sean Molesky[1], Zin Lin[2]
[1]Princeton University, Electrical Engineering, United States. [2]Harvard University, SEAS, United States.

- **17:00 - 17:15 SC6-O018 THERMAL RECTIFICATION IN TELESCOPIC NANOWIRES**
  Milo Y. Swinkels[1], Alessio Campo[1], Lorenzo Di Mario[2], Faustino Martelli[2], Riccardo Rurali[3], Ilaria Zardo[1]
  [1]University of Basel, Department Physik, Switzerland. [2]CNR, Istituto per la microelettronica e microsistemi (IMM), Italy. [3]Institut de Ciència de Materials de Barcelona, Theory and Simulation of Materials, Spain.

- **17:15 - 17:45 SC6-O019 Invited Talk THERMAL AND ACOUSTIC PROPERTIES OF NANOSTRUCTURES**
  Emigdio Chavez Angel[1], Bart Graczikoski[1], Marianna Sledzinska[1], Francesc Alzina[1], Clivia Sotomayor Torres[1]
  [1]Institut Català de Nanociéncia i Nanotecnologia, Phononic and Photonic Nanostructure Group, Spain.

TUESDAY, AUGUST 21
ROOM: TERRACE

- **18:30 -20:30 POSTER SESSION & COFFEE BREAK**

- **SC6-P001 THERMAL CARACTERIZATION OF N-TYPE POROUS SILICON AS A FUNCTION OF ETCHING TIME**
  Alejandro Rojas[1], Uriel Nogal[2], Joel Hernandez[2], Jose Bruno Rojas Trigos[1], Ernesto Marin Moares[1], José Antonio Calderón Arenas[1]
  [1]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Instrumentación y caracterización, Mexico. [2]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Instituto Politécnico Nacional, Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Unidad Legaria., Mexico.

- **SC6-P002 FREQUENCY DOMAIN PHOTOACOUSTIC TECHNIQUE AND THE TWO LAYERS MODEL: THERMAL CONDUCTIVITY AND THERMAL DIFUSIVITY DETERMINATION OF P-TYPE POROUS SILICON**
  Lizbeth Luviano[1], Uriel Nogal[2], Joel Hernandez[3], Jose Bruno Rojas Trigos[1], Ernesto Marin Moares[1], José Antonio Calderón Arenas[1], Ivan Gabriel Férnandez Peña[1]
  [1]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Instrumentación y caracterización, Mexico. [2]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Instituto Politécnico Nacional, Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Unidad Legaria, Mexico. [3]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Instituto Politécnico Nacional, Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Unidad Legaria., Mexico.

- **SC6-P003 NEAR FIELD RADIATIVE HEAT TRANSFER BETWEEN SYSTEMS OF NANOPARTICLES: DEPENDENCE ON COUPLED MODES**
  David Becerril Rodriguez[1], Cecilia Noguez[1]
  [1]Universidad Nacional Autónoma de México, Physics, Mexico.

- **SC6-P004 EFFECTIVE MEDIUM THEORY FOR CALCULATE THERMAL CONDUCTIVITY IN SYSTEMS WITH ELLIPSOIDAL INCLUSIONS**
  Angela Camacho de la Rosa[1], Raul Esquivel Sirvent[1]
  [1]Instituto de Física - Universidad Nacional Autónoma de México, Chemical Physics, Mexico.

- **SC6-P005 HEAT TRANSPORT THROUGH ATOMIC AND MOLECULAR JUNCTIONS**
  Kloeckner Jan[1,2]
  [1]Okinawa Institute of Science and Technology Graduate University, Japan. [2]Universität Konstanz, Department of Physics, Germany.

- **SC6-P006 INFLUENCE OF THE CONTROL TEMPERATURE DURING THE GRAPHENE OXIDE SYNTHESIS.**
  Yosemik Arjuna León Nataret[1], Aarón Isarel Díaz Cano[1], Efraín Rubio Rosas[2], Edith Bravo González[1]
  [1]Instituto Politécnico Nacional - IPN, SEPI UPIITA IPN, Mexico. [2]Instituto Politécnico Nacional - IPN, BUAP, Mexico.

- **SC6-P007 THERMAL CHARACTERIZATION OF NANOCRYSTALLINE VO_2 POWDERS**
  Cindy Lorena Gomez Heredia[1], Jorge Andres Ramirez Rincon[1], Ivan Yecid Forero Sandoval[1], Juan Daniel Macias[1], Jose Ordonez Miranda[2], Younes Ezzahri[2], Karl Joulain[2], Oscar Ares Muzio[1], Juan José Alvarado Gil[1]
  [1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Física Aplicada, Mexico. [2]CNRS, Institut Pprime, Institut PPRIME, France.

Symposium C7

METAL-ORGANIC FRAMEWORKS AND THEIR APPLICATIONS

Heriberto Díaz Velázquez / Instituto Mexicano del Petróleo
Matthias Vandichel / Chalmers University of Technology
Francis Verpoort / Wuhan University of Technology-Ghent University
Sandra Loera Serna / Universida Autónoma Metropolitana

MONDAY, AUGUST 20
ROOM: COBA

Session 1

SESSION CHAIR: MATTHIAS VANDICHEL

08:00 - 08:30 SC7-O001 Invited Talk OVERSOLUBILITY EFFECTS IN NANOCONFINED SOLVENTS
Linh Ngoc Ho[1], David Farrusseng[1], Benoit Coasne[2]
[1]CNRS, IRCELYON, France. [2]CNRS, Laboratoire Interdisciplinaire de Physique, France.

08:30 - 09:00 SC7-O002 Invited Talk THE ORIGIN OF FLEXIBILITY OF METAL-ORGANIC FRAMEWORK DUT-8(Ni)
Thomas Heine[1]
[1]University of Leipzig, Wilhelm-Ostwald-Institut, Germany.

09:00 - 09:15 SC7-O003 FACILE ZIF-67@meso-Al_2O_3 COMPOSITE MATERIAL AND THEIR APPLICATION FOR CATALYST
Somboon Chaemchuen[1,2], Francis Verpoort[2]
[1]National Research Tomsk Polytechnic University, , Russia. [2]Wuhan University of Technology, State Key Laboratory of Advanced Technology for Materials Synthesis and Processing, China.

09:15 - 09:45 SC7-O004 Invited Talk METAL ORGANIC FRAMEWORKS AS PRECURSORS FOR THE MANUFACTURE OF ADVANCED CATALYTIC MATERIALS
Jorge Gascon[1]
[1]King Abdullah University of Science and Technology, PSE, Saudi Arabia.

09:45 - 10:00 SC7-O005 HYBRIDIZATION OF Ti-MOF AND INORGANIC NANOSHEETS FOR EFFICIENT HYDROGEN PRODUCTION BY PHOTOCATALYTIC WATER SPLITTING
Hyunuk Kim[1], Tae Woo Kim[1]
[1]Korea Institute of Energy Research, Energy Materials Laboratory, South Korea.

10:00 - 10:30 SC7-O006 Invited Talk CATALYSTS BASED ON CERIUM MOFs
Enrique V. Ramos Fernandez[1]
[1]Universidad de Alicante, Instituto Universitario de Materiales de Alicante, Spain.

10:30 - 10:45 SC7-O007 ACTIVE SITE ENGINEERING IN THE Zr-MOF UiO-66
Matthias Vandichel[1]
[1]Chalmers tekniska högskola, Department of Physics and Competence Centre For Catalysis, Sweden.

10:45 - 11:15 SC7-O008 Invited Talk ADDING SOLIDS AND MOLECULES: METAL-ORGANIC FRAMEWORKS AS HYBRID MATERIALS
Danny Vanpoucke[1]
[1]Hasselt University, Institute for Materials Research (IMO), Belgium.

11:00-11:30 COFFEE BREAK

11:30 - 12:30 PLENARY II
PROF. YUICHI IKUHARA

■ **12:45 - 13:00 SC7-O009 STRUCTURE OF A NEW COPPER COPOLYMER PREPARED FROM METAL VINYL BENZOIC MONOMER AND EGMA**
Egla Yareth Bivián Castro[1], Brenda Mata Ortega[1]
[1]Universidad de Guadalajara, Centro Universitario de los Lagos, Mexico.

▸ **13:00 - 13:30 SC7-O010 Invited Talk METAL-ORGANIC FRAMEWORK ZIF-8: A NANOPOROUS PIEZOELECTRIC**
Monique A. Van Der Veen[1]
[1]Technische Universiteit Delft, Chemical Engineering, Netherlands.

▸ **13:30 - 14:00 SC7-O011 Invited Talk SYNTHESIS AND CHARACTERIZATION OF A BIO-MOF BASED ON MIXED ADENINATE/TRICARBOXYLATE LIGANDS AND ZINC IONS**
Victor Varela[1,2]
[1]Universidad Autónoma del Estado de México, Centro Conjunto de Investigación en Quimica Sustentable UAEM-UNAM, Mexico. [2]Universidad Autónoma del Estado de México, Chemical Engineering, Mexico.

■ **14:00 - 14:15 SC7-O012 NOVEL Zn/Co ZEOLITIC IMIDAZOLATE FRAMEWORK (ZIF); PROPERTIES AND APPLICATIONS**
Francis Verpoort[1,2], Somboon Chaemchuen[1,2]
[1]National Research Tomsk Polytechnic University, Research School of Chemistry & Applied Biomedical Sciences, Russia. [2]Wuhan University of Technology, State Key Laboratory of Advanced Technology for Materials Synthesis and Processing, China.

14:00-16:00 Lunch

● **17:30-18:30 Science, Technology and Society Lecture SENER**

TUESDAY, AUGUST 21
ROOM: COBA

Session 2

SESSION CHAIR: FRANCIS VERPOORT

▸ **08:00 - 08:30 SC7-O013 Invited Talk METAL ORGANIC FRAMEWORKS AND POROUS MOLECULAR CRYSTALS BASED ON NOVEL AROMATICS**
Ognjen Miljanic[1]
[1]University of Houston, Department of Chemistry, United States.

▸ **08:30 - 09:00 SC7-O014 Invited Talk METAL-ORGANIC FRAMEWORKS TOWARD HYDROGEN ISOTOPE SEPARATION**
Hoi Ri Moon[1]
[1]Ulsan National Institute of Science and Technology, Department of Chemistry, South Korea.

■ **09:00 - 09:15 SC7-O015 METAL-ORGANIC FRAMEWORK-BASED MATERIALS FOR ADSORPTIVE HYDROGEN STORAGE**
Henrietta Langmi[1], Sonwabo Bambalaza[1,2], Nicholas Musyoka[1], Jianwei Ren[1], Mkhulu Mathe[1], Lindiwe Khotseng[2]
[1]Council for Scientific and Industrial Research, HySA Infrastructure, South Africa. [2]University of the Western Cape, Faculty of Natural Science, South Africa.

▸ **09:15 - 09:45 SC7-O016 Invited Talk HIGH EFFICIENCY MOLECULAR SEPARATIONS VIA THE USE OF METAL-ORGANIC FRAMEWORK MEMBRANE AND ADSORBENT DEVICES**
Ryan Lively[1]
[1]Georgia Institute of Technology, Chemical and Biomolecular Engineering, United States.

■ **09:45 - 10:00 SC7-O017 MOF@GO COMPOSITES FOR ADSORPTION OF H_2 CO_2 AND CH_4**
Jonathan Cortes Suarez[1], Sandra Loera Serna[1]
[1]Universidad Autónoma Metropolitana, Ciencias Basicas, Mexico.

▸ **10:00 - 10:30 SC7-O018 Invited Talk PROTON MOTION AND MOVEMENT IN CONFINED SPACE**
Minyoung Yoon[1]
[1]Gachon University, Department of Nanochemistry, South Korea.

▸ **10:30 - 11:00 SC7-O019 Invited Talk DRUG VECTORIZATION USING ENGINEERED-SURFACE METAL-ORGANIC FRAMEWORKS**
Patricia Horcajada[1]
[1]IMDEA Energy, Advanced Porous Materials Unit, Spain.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY III
DR. AMANDA S. BARNARD

Session 3

SESSION CHAIR: HERIBERTO DÍAZ VELÁZQUEZ

- **12:30 - 12:45 SC7-O020 THE FUNGICIDE EFFECT OF HKUST-1 TO ASPERGILLUS NIGER, FUSARIUM SOLANI AND PENICILLIUM CHRYSOGENUM**

  Vanessa Celis Arias[1], Sandra Loera Serna[1], Hiram Isaac Beltran Conde[2], J. Carlos Álvarez Zeferino[3], Efraín Garrido[4], Rubén Ruiz Ramos[5]

  [1]Universidad Autónoma Metropolitana, Ciencias Básicas, Mexico. [2]Universidad Autónoma Metropolitana, Departamento de Ciencias Naturales, Mexico. [3]Universidad Autónoma de Baja California, Instituto de Ingeniería, Mexico. [4]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Génetica y Biología Molecular, Mexico. [5]Universidad Veracruzana, Instituto de Medicina Forense, Mexico.

- **12:45 - 13:15 SC7-O021 Invited Talk MOF-BASED MAGNETIC CATALYSTS FOR HYDROGEN SPIN CONVERSION**

  Yong Nam Choi[1], Heeju Lee[2]

  [1]Korea Atomic Energy Research Institute, Neutron Science Center, Korea. [2]MetaVista Inc., HEXAR, Korea.

- **13:15 - 13:30 SC7-O022 MICROWAVE ASSISTED SYNTHESIS OF METAL-ORGANIC FRAMEWORKS WITH LUMINESCENT PROPERTIES**

  Anaid Carro Gastelum[1], Sandra Loera[2], Gilberto Alarcon Flores[3], S. Carmona T.[1], Miguel A. Aguilar Frutis[1]

  [1]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Tecnología Avanzada, Mexico. [2]Universidad Autónoma Metropolitana, Ciencia de Materiales, Mexico. [3]Centro de investigación en biotecnología aplicada, Tecnologia Avanzada, Mexico.

14:00-16:00 Lunch

TUESDAY, AUGUST 21
ROOM: TERRACE

- **18:30 -20:30 POSTER SESSION & COFFEE BREAK**

- **SC7-P001 EFFICIENT ADSORPTIVE REMOVAL OF NAPROXEN AND DICLOFENAC WATER USING A HYBRID METAL-ORGANIC FRAMEWORK Fe@CuBTC**

  Aldo Castañeda[1]

  [1]Universidad Autónoma Metropolitana, Ciencias Básicas e Ingeniería, Mexico.

- **SC7-P002 SYNTHESIS AND CHARACTERIZATION OF NEW METAL-ORGANIC FRAMEWORKS USING RARE EARTHS**

  Gelen Gomez Jaimes[1], Hiram Isaac Beltran Conde[1]

  [1]Universidad Autónoma Metropolitana, Ciencias Naturales e Ingeniería, Mexico.

- **SC7-P003 EFFECT OF THE SYNTHESIS CONDITIONS ON THE ADOSPRTION OF NITROGEN CONTAINING COMPUNDS ON MIL-101, A CASE STUDY OF MEXICAN FUEL OILS**

  Heriberto Diaz Velazquez[1]

  [1]Instituto Mexicano del Petróleo, Department of hydrocarbon refining, Mexico.

- **SC7-P004 OBTAINING A COMPOSITE MATERIAL (MOFs / CARBON STRUCTURE) FOR GAS STORAGE**

  Jade Galicia Apolinar[1]

  [1]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Laboratorio Nacional de Conversión y Almacenamiento de Energía, Mexico.

- **SC7-P005 ULTRASONIC SPRAY DEPOSITION AS A NEW ROUTE TO LUMINESCENT MOF SYNTHESIS**

  Jesús Uriel Balderas[1], S. Carmona T.[2], Vicente Vargas[1], Ciro Falcony[3]

  [1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Nanociencias y Nanotecnología, Mexico. [2]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Posgrado en Tecnología Avanzada, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Física, Mexico.

- **SC7-P006 NANOMETRIC MIL-125-NH2 METAL-ORGANIC FRAMEWORK AS NERVE AGENT ANTIDOTE CARRIER**

  Sérgio M.f. Vilela[1], Pablo Salcedo Abraira[1], Isabelle Colinet[2], Fabrice Salles[3], Martijn C. de Koning[4], Marloes J.a. Joosen[5], Christian Serre[2,6], Patricia Horcajada[1]

  [1]IMDEA Energy, Advanced Porous Materials Unit, Spain. [2]CNRS, Institut Lavoisier de Versailles, France. [3]CNRS, Institut Charles Gerhardt Montpellier, France. [4]TNO, TNO, Netherlands. [5]TNO, , Netherlands. [6]CNRS, Institut des Matériaux Poreux de Paris, France.

- **SC7-P007 MECHANICAL SYNTHESIS AND EVALUATION OF A MODIFIED ELECTRODE WITH MOF-RPR**

  Ingrid Guadalupe Meza Pardo[1], María Aurora Veloz Rodríguez[1], Victor Esteban Reyes Cruz[1], Gustavo Urbano Reyes[1], María Isabel Reyes[1],

José María Rivera Villanueva[2], Josè Angel Cobos Murcia[1,3]

[1]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Mexico. [2]Universidad Veracruzana, Facultad de Ciencias Químicas, Mexico. [3]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Depto. de Cátedras, Mexico.

- **SC7-P008 POROUS CARBON DERIVED NH_2-MIL-125(Ti) MEMBRANES: ADVANCED SUPPORTS FOR ENRICHMENT OF BPA AND 4-t-BP WELL WATER SAMPLES**

Jorge Luis Guzman Mar[1], Laura Hinojosa Reyes[1], Araceli Hernández Ramírez[1], Carlos Palomino Cabello[2], Gemma Turnes Palomino[2], Víctor Cerdá[2]

[1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico. [2]Universitat Illes Balears, Department of Chemistry, Spain.

- **SC7-P009 STUDY OF SILVER IONS RELEASED METAL ORGANIC FRAMEWORKS**

Vanessa Celis Arias[1], Sandra Loera[1], Hiram Isaac Beltran Conde[1]

[1]Universidad Autónoma Metropolitana, Ciencias Básicas, Mexico.

- **SC7-P010 ONE-POT SYNTHESIS OF MOF-5 AND MOF-199 EMBEDDED ON Fe_3O_4 MAGNETIC NANOPARTICLES FOR ANTHRACENE REMOVAL**

Graciela Galván González[1], Lemuel Roberto Olán Vargas[1], Antonio Tirado Guízar[1], William Santiago González Gómez[2], Geonel Rodríguez Gattorno[2], Francisco Paraguay[3], Gerko Oskam[2], Georgina Pina Luis[1]

[1]Instituto Tecnológico de Tijuana, Centro de Graduados e Investigación en Química, Mexico. [2]CINVESTAV-Mérida, Física Aplicada, Mexico. [3]Centro de Investigación en Materiales Avanzados, S.C., Física de materiales, Mexico.

- **SC7-P011 TUNING THE ADSORPTION POTENTIAL. SEPARATION OF AROMATIC HYDROCARBONS BY COBALT AND ZINC ZEOLITIC IMIDAZOLATE FRAMEWORKS**

Rene Salvador Lopez Cabrera[1]

[1]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, XRD & Crystallography, Mexico.

- **SC7-P012 INCORPORATION OF METALLIC NANOPARTICLES ONTO METAL ORGANIC FRAMEWORKS FOR DRUG DELIVERY APPLICATIONS**

Julian Pastor Novelo Uc[1], Manuel Alejandro Estrella Gutierrez[1], Geonel Rodriguez Gattorno[2], Gerko Oskam[2]

[1]Universidad Autónoma de Yucatán, Facultad de Ingeniería Química, Mexico. [2]CINVESTAV-Mérida, Física Aplicada, Mexico.

- **SC7-P013 EVALUATION OF METAL ORGANIC FRAMEWORK AS PHOTOELECTRODES FOR PHOTOELECTROCHEMICAL WATER SPLITTING**

Vanessa Sanchez Vazquez[1], Manuel Alejandro Estrella Gutierrez[1], Geonel Rodríguez Gattorno[2], Gerko Oskam[2]

[1]Universidad Autónoma de Yucatán, Facultad de Ingeniería Química, Mexico. [2]CINVESTAV-Mérida, Departamento de Física Aplicada, Mexico.

- **SC7-P014 APPLICATION OF METAL ORGANIC FRAMEWORKS IN SEPARATION PROCESSES**

Vanire Mena Burgos[1], Manuel Alejandro Estrella Gutierrez[1], Geonel Rodríguez Gattorno[2], Gerko Oskam[2]

[1]Universidad Autónoma de Yucatán, Facultad de Ingeniería Química, Mexico. [2]CINVESTAV-Mérida, Departamento de Física Aplicada, Mexico.

- **SC7-P015 HYDROGEN ISOTOPE SEPARATION IN METAL ORGANIC FRAMEWORKS**

Carlos Rodríguez Castellanos[1,2], Javier Toledo Marín[3], Alejandro Valderrama[4], Yamil Divó Matos[5]

[1]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Laboratorio Nacional de Conversión y Almacenamiento de Energía, Mexico. [2]Universidad de La Habana, Faculty of Physics, Cuba. [3]Instituto de Física - Universidad Nacional Autónoma de México, Materia Condensada, Mexico. [4]Facultad de Ciencias, UNAM, Física de Materiales, Mexico. [5]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, , Mexico.

- **SC7-P016 H2 AND H ADSORPTION OVER METAL ORGANIC FRAMEWORK MATERIAL Ni3(HITP)2**

Cesar Cab[1], José Pérez Alcocer[1], Alejandro Tapia[1]

[1]Universidad Autónoma de Yucatán, Ingeniería Física, Mexico.

- **SC7-P017 SEPARATION OF H_2–CO_2 AND CH_4–CO_2 BINARY MIXTURES BY ZEOLITE-LIKE IMIDAZOLATE FRAMEWORKS**

Rene Salvador Lopez Cabrera[1]

[1]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, XRD & Crystallography, Mexico.

- **SC7-P018 HIERARCHICAL POROUS CARBON SPONGES VIA MOF-NANOPARTICLE HYBRIDS**

FOR FAST PHTHALATES REMOVAL IN MEMBRANE FORMAT

Jorge Luis Guzman Mar[1], Daniel Salazar Beltrán[1], Laura Hinojosa Reyes[1], Carlos Palomino Cabello[2], Gemma Turnes Palomino[2], Fernando Maya[2]

[1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico. [2]Universitat Illes Balears, Department of Chemistry, Spain.

Symposium D1

COMPUTATIONAL DISCOVERY OF ADVANCED MATERIALS

Jorge Martín del Campo Ramírez / Universidad Nacional Autonoma de Mexico
Noa Marom / Carnegie Mellon University
Samuel B. Trickey / University of Florida
Alberto Vela / CINVESTAV

TUESDAY, AUGUST 21
ROOM: UXMAL I

Session 1

SESSION CHAIR: MARTIN DEL CAMPO

08:30 - 09:00 SD1-O001 Invited Talk MODELING MIXED METAL OXIDES FOR SELECTIVE OXIDATION CATALYSIS
Notker Roesch[1,2]
[1]Institute of High Performance Computing, , Singapore. [2]Technische Universität München, Catalysis Research Center, Germany.

09:00 - 09:15 SD1-O002 DISCUSSION ON THEORETICAL TOOLS FOR CHARACTERIZING CHEMICAL REACTIVITY AND REACTION MECHANISMS. APPLICATION TO CATALYTIC MATERIALS AND REACTIONS.
Alejandro Toro Labbe[1], Soledad Gutiérrez Oliva[1]
[1]Pontificia Universidad Catolica de Chile, Departamento de Química Física, Chile.

09:15 - 09:30 SD1-O003 OVERCOMING SITE HETEROGENEITY IN SEARCH OF METAL NANOCATALYSTS FOR OXYGEN REDUCTION
Hongliang Xin[1]
[1]Virginia Polytechnic Institute and State University, Chemical Engineering, United States.

09:30 - 10:00 SD1-O004 Invited Talk RATIONAL DESIGN PRINCIPLES FOR SINGLE-BAND SEMICONDUCTORS BASED ON HETERO-TRIANGULENE TWO-DIMENSIONAL POLYMERS
Thomas Heine[1]
[1]Technische Universität Dresden, Department of Chemistry, Germany.

10:00 - 10:30 SD1-O005 Invited Talk VAN-DER-WAALS-INCLUSIVE TIGHT-BINDING METHODS FOR STRUCTURE AND STABILITY PREDICTION OF HYBRID ORGANIC-INORGANIC MATERIALS
Reinhard Maurer[1]
[1]University of Warwick, Department of Chemistry, United Kingdom, Channel Islands & Isle of Man.

10:30 - 11:00 SD1-O006 Invited Talk A CHEMICAL THEORY OF TOPOLOGICAL INSULATORS
Francisco Munoz[1], Fernanda Pinilla[1]
[1]Universidad de Chile, Physics, Chile.

11: 00 - 11:30 COFFEE BREAK
11:30 - 12:30 PLENARY III
DR. AMANDA S. BARNARD

Session:

SESSION CHAIR: CHELIKOWSKY

■ **12:30 - 12:45 SD1-O007 EXPLORING LITHIUM ION SOLID STATE ELECROLYTES BY ATOMISTIC BASED COMPUTERS SIMULATIONS**

Jincheng Du[1]
[1]University of North Texas, Materials Science and Engineering, United States.

▸ **12:45 - 13:15 SD1-O008 Invited Talk MANY BODY TECHNIQUES FOR SURFACE ENERGIES, INTERLAYER BINDING ENERGIES AND STRUCTURAL PHASE TRANSITIONS**

Adrienn Ruzsinszky[1]
[1]Temple University, Department of Physics, United States.

■ **13:15 - 13:30 SD1-O009 SPATIALLY RESOLVED MULTIPHYSICAL MODELING AND SIMULATION OF LITHIUM DENDRITE GROWTH**

Aniruddha Jana[1], Edwin Garcia[1]
[1]Purdue University, Materials Engineering, United States.

▸ **13:30 - 14:00 SD1-O010 Invited Talk ADVANCES IN CORRELATED MATERIALS SIMULATION USING QUANTUM MONTE CARLO**

Paul Kent[1]
[1]Oak Ridge National Laboratory, Center for Nanophase Materials Sciences, United States.

☒ **14:00 - 16:00 Lunch time**

Session 2

SESSION CHAIR: STAROVEROV

▸ **16:00 - 16:30 SD1-O011 Invited Talk INCREASING THE ACCURACY OF GGA EXCHANGE ENERGY FUNCTIONALS THROUGH CONSTRAINT SATISFACTION**

Jose Gazquez[1], Javier Carmona Espindola[1], Alberto Vela[2], Samuel B. Trickey[3]
[1]Universidad Autónoma Metropolitana, Chemistry, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Chemistry, Mexico. [3]University of Florida, Physics, United States.

▸ **16:30 - 17:00 SD1-O012 Invited Talk THE SCAN DENSITY FUNCTIONAL: PREDICTIVE POWER OF 17 EXACT CONSTRAINTS**

John P. Perdew[1]
[1]Temple University, Physics, United States.

■ **17:00 - 17:15 SD1-O013 SIMPLIFICATION OF META-GGA EXCHANGE-CORRELATION FUNCTIONALS**

Samuel B. Trickey[1], Daniel Mejia Rodriguez[2], Angel Albavera Mata[3]
[1]University of Florida, Physics, United States. [2]University of Florida, Dept. of Physics, United States. [3]Cinvestav Zacatenco, Quimica, Mexico.

TUESDAY, AUGUST 21
ROOM: TERRACE

◾ **18:30 -20:30 POSTER SESSION & COFFEE BREAK**

■ **SD1-P001 Ab INITIO CALCULATIONS OF VIBRATIONAL PROPERTIES AND BAND STRUCTURE OF YB_6 COMPOUND UNDER PRESSURE**

Martin Romero[1], Raúl Escamilla[2], Raúl Gomez[1], Maria Luisa Marquina[1], Roberto Hinojosa[1], Jose Luis Rosas[2]
[1]Facultad de Ciencias, UNAM, Departamento de fisica, Mexico. [2]Instituto de Investigaciones en Materiales, Materia condensada, Mexico.

■ **SD1-P002 ON THE QUANTUM CHEMISTRY OF THE BENEŠOV METEOR: A DFT STUDY OF $(CaO)_n$ NANOCLUSTERS**

Jonathan Rene Santos Castillo[1], Francisco Javier Meléndez Bustamante[2], Maria de Lourdes Sandoval[3], Alejandro Palma[1]
[1]Benemerita Universidad Autonoma de Puebla, Instituto de Física Ing. Luis Rivera Terrazas, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Facultad de Ciencias Químicas, Mexico. [3]Benemerita Universidad Autonoma de Puebla, Facultad de Cienciad de la Computación, Mexico.

■ **SD1-P003 INFLUENCE OF MOLECULE SIZE ON SURFACE POLYMORPH FORMATION**

Andreas Jeindl[1], Michael Scherbela[1], Lukas Hörmann[1], Alexander Egger[1], Oliver Hofmann[1]
[1]Graz University of Technology, Institute of Solid State Physics, Austria.

■ **SD1-P004 STRUCTURAL, ELECTRONIC AND OPTICAL PROPERTIES OF Eu^{2+} AND Eu^{3+} DOPED CaF_2: A FIRST PRINCIPLES STUDY**

Hoat Do Minh[1], Rivas Silva Juan Francisco[1], Méndez Blas Antonio[1]

[1]Benemerita Universidad Autonoma de Puebla, Instituto de Física Ing. Luis Rivera Terrazas, Mexico.

- **SD1-P005 THEORETICAL STUDY OF STRUCTURAL AND ELECTRONIC PROPERTIES OF ZINC OXIDE DOPED BY RARE-EARTH ELEMENTS**

Gabriela Stephania Anaya González[1], Tania Gabriela Dìaz Rodriguez[1], Mauricio Pacio[1], Avelino Cortès Santiago[1]

[1]Benemerita Universidad Autonoma de Puebla, Semiconductores, Mexico.

- **SD1-P006 MECHANICAL AND ELECTRONIC PROPERTIES OF MECHANICALLY-BENT MONOLAYER TRANSITION METAL DICHALCOGENIDES IN THE GROUND STATE USING SCAN.**

Niraj K. Nepal[1], Liping Yu[1], Qimin Yan[1], Adrienn Ruzsinszky[1]

[1]Temple University, Department of Physics, United States.

- **SD1-P007 FIRST PRINCIPLES PREDICTION OF FERROMAGNETIC/FERROMAGNETIC COUPLING IN $BiFeO_3/La_{0.67}Sr_{0.33}MnO_3$ HETEROSTRUCTURES**

H Linh H Mok[1,2], Espiridión Martínez[1,3], Joel Antúnez García[4], Jordi Ribas Ariño[5], Lourdes Mestres Vila[6], Jesús María Siqueiros Beltrones[2], Oscar Raymond Herrera[2]

[1]Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE), Posgrado en Física de Materiales, Mexico. [2]Universidad Nacional Autónoma de México, Centro de Nanociencias y Nanotecnología CNyN-UNAM, Departamento de Materiales Avanzados, Mexico. [3]Universidad Nacional Autónoma de México, Centro de Nanociencias y Nanotecnología, Mexico. [4]Universidad Nacional Autónoma de México, Centro de Nanociencias y Nanotecnología, Departamento de Física de Superficies, Mexico. [5]Universitat de Barcelona, Departament de Ciencia de Materials i Química Física, Spain. [6]Universitat de Barcelona, Departament de Química Inorgànica, Spain.

- **SD1-P008 INCREASE OF THE RESOLUTION THROUGH THE REGULARIZATION OF THE RELAXATION SPECTRUM IN CDTE IN A THEORETICAL WAY USING MATLAB.**

Francisco Javier Arizaga Ayala[1], Armando Gregorio Rojas Hernandez[1], Julio Valenzuela Badilla[1]

[1]Universidad de Sonora, Department of Research in Physics, Mexico.

- **SD1-P009 INTERPLAY OF VAN DER WAALS AND HYDROGEN BONDS IN MATERIALS**

Bimal Neupane[1], Santosh Adhikari[1], Niraj Nepal[1], Adrienn Ruzsinszky[1]

[1]Temple University, Department of Physics, United States.

- **SD1-P010 IMPROVED ATOMIZATION ENERGIES AND BARRIER HEIGHTS WITH FLOSIC**

Kamal Wagle[1], Chandra Shahi[1], Puskar Bhattarai[1], John P. Perdew[1]

[1]Temple University, Physics, United States.

- **SD1-P011 OBTAINING LOAD-STRAIN DIAGRAMS OF NANOGRAPHENE STRUCTURES: A STUDY BY MOLECULAR MECHANICS**

Heber Henández Flores[1]

[1]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniería Química, Mexico.

- **SD1-P012 HYSTERESIS BEHAVIOR OF A MIXED SPIN -5/2 AND SPIN -3/2 IN CORE/SHELL NANOWIRE**

Maria Camila Barrero Moreno[1], Elisabeth Restrepo Parra[1]

[1]Universidad Nacional de Colombia, Departamento de Fisica y Quimica, Colombia.

- **SD1-P013 EXPLOITING THE SIMILARITY OF THE Al_{13} CLUSTER WITH At FOR CANCER TREATMENT: A DFT AND QTAIM STUDY**

Bertha Molina Brito[1], Jorge Ramón Soto Mercado[1], Jorge Javier Castro Hernández[2]

[1]Universidad Nacional Autónoma de México, Departamento de Física, Facultad de Ciencias, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Departamento de Física, Mexico.

- **SD1-P014 THEORETICAL STUDY OF THE INTERACTION BETWEEN MONOMERS OF D-GLUCOSAMINE AND N-ACETYL-D-GLUCOSAMINE WITH CAPSAICIN**

Rodolfo Daniel Ávila Avilés[1], Roberto López Rendón[1], Inocencio Higuera Ciapara[2], Javier Hernández Martínez[3]

[1]Universidad Autónoma del Estado de México, Facultad de Ciencias, Mexico. [2]Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco, , Mexico. [3]Universidad Veracruzana, SARA-Laboratorio de Química Productos Naturales, Mexico.

- **SD1-P015 TUNNELING I-V CHARACTERISTICS FOR A SUPERCONDUCTOR-INSULATOR-HALF-METAL JUNCTION**

Alfredo Mamian Mamian[1], Jesus Heiras[2], Gilberto Bolaños[1]

[1]Universidad del Cauca, Laboratorio de Fisica de Bajas Temperaturas, Departamento de Ingenieria Fisica, Colombia. [2]Universidad Nacional Autónoma de México, Centro de Nanociencias y Nanotecnologia, Mexico.

- **SD1-P016 SIMULATION OF ACOUSTIC WAVE ENERGY CONCENTRATION**
  Rafael Zaca Moran[1], Juan Castillo Mixcoatl[1], Juan Pablo Padilla[2], Plácido Zaca[2], Julio Cesar Ramirez San Juan[3], Ruben Ramos Garcia[3]
  [1]Benemerita Universidad Autonoma de Puebla, FCFM, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Instituto de Ciencias, Mexico. [3]Instituto Nacional de Astrofísica, Óptica y Electrónica, Departamento de óptica, Mexico.
- **SD1-P017 EFFECT OF INCREASING THE CATIONS CHAIN LENGTH ON THERMODYNAMIC AND TRANSPORT PROPERTIES OF IONIC LIQUIDS USING MOLECULAR DYNAMICS**
  Edgar Guadalupe Blanco Díaz[1], Edgar Omar Castrejón González[2]
  [1]Universidad de Guanajuato, Civil Engineering, Mexico. [2]Instituto Tecnológico de Celaya, Chemical Engineering, Mexico.
- **SD1-P018 A COMPARATIVE STUDY OF DIFFERENT DRAG MODELS OF CFD MODELING IN THREE-PHASE FLUIDIZED BED SYSTEM**
  Liliana Patricia Olivo Arias[1]
  [1]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Intrumentación y Caracterización, Mexico.
- **SD1-P019 HEXATIC AND TETRATIC PHASES IN TWO-DIMENSIONAL SQUARE-WELL PLUS SQUARE-SHOULDER FLUIDS**
  Luis Adrian Padilla Salas[1], Ana Laura Benavides Obregon[1], Julio Cesar Armas Perez[1]
  [1]Universidad de Guanajuato, Physical Engineering, Mexico.
- **SD1-P020 IMPROVED UNDERSTANDING OF THE ADSORPTION OF AROMATIC MOLECULES FROM RECENT meta-GGAs**
  Santosh Adhikari[1], Bimal Neupane[1], Adrienn Ruzsinszky[1]
  [1]Temple University, Department of Physics, United States.

WEDNESDAY, AUGUST 22
ROOM: UXMAL I

Session 3

SESSION CHAIR: TRICKEY

- **08:30 - 09:00 SD1-O014 Invited Talk A QUANTUM CHEMICAL LAYER FOR DEEP LEARNING OF ELECTRONIC PROPERTIES**
  David J Yaron[1], Haichen Li[1], Christopher R Collins[1]
  [1]Carnegie Mellon University, Department of Chemistry, United States.
- **09:00 - 09:30 SD1-O015 Invited Talk MOLECULAR DESIGN OF DYE-SENSITIZED SOLAR CELLS COMPONENTS WITH DATA-DRIVEN APPROACHES**
  Alvaro Vazquez Mayagoitia[1], Jacqueline Cole[2,3], Ganesh Sivaraman[2]
  [1]Argonne National Laboratory, Computational Sciences Division, United States. [2]Argonne National Laboratory, Leadership Computing Facility, United States. [3]University of Cambridge, Cavendish Laboratory, Department of Physics, United Kingdom, Channel Islands & Isle of Man.
- **09:30 - 09:45 SD1-O016 A GENETIC ALGORITHM METHOD FOR GLOBAL MINIMUM SEARCHES: AN APPLICATION TO GOLD CLUSTERS**
  Marcela Regina Beltran[1,2]
  [1]Central Michigan University, Physics, United States. [2]Universidad Nacional Autónoma de México, Condensed Matter, Mexico.
- **09:45 - 10:15 SD1-O017 Invited Talk MATERIALS INFORMATICS FOR THE DISCOVERY OF 2D MATERIALS FOR SPINTRONICS**
  Richard Hennig[1]
  [1]University of Florida, Materials Science and Engineering, United States.
- **10:15 - 10:45 SD1-O018 Invited Talk HOW DOES MOLECULAR STRUCTURE INFLUENCE CHARGE MOBILITY? MINING A DATABASE OF ORGANIC SEMICONDUCTORS.**
  Harald Oberhofer[1]
  [1]Technische Universität München, Theoretical Chemistry, Germany.
- **10:45 - 11:00 SD1-O019 CONFIGURATIONAL ENERGY LANDSCAPE OF ALLOYS**
  Juan Miguel Sanchez[1]
  [1]University of Texas at Austin, Institute for Computationa Science and Engineering, United States.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY IV NOBEL PRIZE IN CHEMISTRY 2016
PROF. BEN L. FERINGA

Session 4

SESSION CHAIR: GÁZQUEZ

- **12:30 - 13:00 SD1-O020 Invited Talk DATA-DRIVEN MOLECULAR ENGINEERING OF SOLAR-POWERED WINDOWS**
  Jacqueline Cole[1,2]
  [1]ISIS Facility, STFC Rutherford Appleton Laboratory, United Kingdom, Channel Islands & Isle of Man. [2]University of Cambridge, Physics, United Kingdom, Channel Islands & Isle of Man.
- **13:00 - 13:30 SD1-O021 Invited Talk RELIABLE AND PRACTICAL COMPUTATIONAL PREDICTION OF MOLECULAR CRYSTAL POLYMORPHS**
  Johannes Hoja[1], Hsin-Yu Ko[2], Marcus A. Neumann[3], Roberto Car[2], Robert A. Distasio Jr.[4], Alexandre Tkatchenko[1]
  [1]University of Luxembourg, Physics and Materials Science Research Unit, Luxembourg. [2]Princeton University, Department of Chemistry, United States. [3]Avant-garde Materials Simulation, , Germany. [4]Cornell University, Department of Chemistry and Chemical Biology, United States.
- **13:30 - 14:00 SD1-O022 Invited Talk THROUGH POLYMORPH AND CHEMICAL SPACE: DETERMINING AND OPTIMIZING SURFACE-INDUCED PHASES VIA MACHINE LEARNING**
  Lukas Hörmann[1], Alexander Egger[1], Andreas Jeindl[1], Oliver Hofmann[1]
  [1]Graz University of Technology, Institute of Solid State Physics, Austria.

14:00 - 16:00 Lunch time

Session 5

SESSION CHAIR: HEINE

- **16:00 - 16:30 SD1-O023 Invited Talk ANALYTIC SECOND DERIVATIVES FROM AUXILIARY DENSITY PERTURBATION THEORY**
  Andreas Koster[1], Rogelio Delgado Venegas[1], Calaminici Patrizia[1]
  [1]Cinvestav Zacatenco, Quimica, Mexico.
- **16:30 - 16:45 SD1-O024 HOW TO CHOOSE THE DFT FUNCTIONAL TO OPTIMALLY DESCRIBE CHARGE TRANSFER ACROSS INORGANIC/ORGANIC INTERFACES**
  Elisabeth Wruss[1], Egbert Zojer[1], Oliver Hofmann[1]
  [1]Graz University of Technology, Institute of Solid State Physics, Austria.
- **16:45 - 17:00 SD1-O025 GLOBAL OPTIMIZATION OF BIMETALLIC PtCu CLUSTERS SUPPORTED ON CeO_2(111)**
  Lauro Oliver Paz Borbón[1], Ignacio L. Garzón[2], Alvaro Posada Amarillas[3]
  [1]Instituto de Física - Universidad Nacional Autónoma de México, Chemical Physics, Mexico. [2]Instituto de Física - Universidad Nacional Autónoma de México, Complex Systems, Mexico. [3]Universidad de Sonora, DIFUS, Mexico.
- **17:15 - 17:30 SD1-O026 AMORPHOUS ZnO: STRUCTURE, ELECTRONIC PROPERTIES AND CHARGE TRAPPING**
  David Mora Fonz[1], Alexander L. Shluger[1]
  [1]University College London, Department of Physics and Astronomy, United Kingdom, Channel Islands & Isle of Man.
- **17:30 - 18:00 SD1-O027 Invited Talk RELIABLE DFT RESULTS FOR SPIN GAPS OF TRANSITION METAL COMPLEXES**
  Eunji Sim[1]
  [1]Yonsei University, Chemistry, South Korea.
- **18:00 - 18:30 SD1-O028 Invited Talk DISCOVERING A NOVEL NANOMETRIC CUBIC PHASE IN MONOCHALCOGENIDE SEMICONDUCTORS – THEORY MEETS EXPERIMENT**
  Guy Makov[1]
  [1]Ben-Gurion University of the Negev, Ilse Katz Institue for nanoscale Science & Technology, Israel.

THURSDAY, AUGUST 23
ROOM: UXMAL I

Session 6

SESSION CHAIR: VELA

- **08:30 - 09:00 SD1-O029 Invited Talk MAGNETISM AND SUPERCONDUCTIVITY IN DISORDERED CARBON**
  James Chelikowsky[1], Yuki Sakai[1]
  [1]University of Texas at Austin, Institute for Computational Engineering and Sciences, United States.
- **09:00 - 09:15 SD1-O030 MAGNETIC BEHAVIOR OF MIXED SPIN PRUSSIAN BLUE ANALOG CYLINDRICAL NANOWIRE**

Iván-David Buitrago Torres[1], Juan-David Alzate Cardona[1], Elisabeth Restrepo Parra[1]
[1]Universidad Nacional de Colombia, Departamento de Física y Química, Colombia.

■ **09:15 - 09:30 SD1-O031 FIRST-PRINCIPLES CALCULATIONS OF THE MAGNETIC PROPERTIES FOR VANADIUM IMPURITIES IN GRAPHENE**

Juan Hernandez Tecorralco[1], Miguel Eduardo Cifuentes Quintal[2], Lilia Meza Montes[1], Romeo de Coss[2]
[1]Benemerita Universidad Autonoma de Puebla, Instituto de Física, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Departamento de Física Aplicada, Mexico.

■ **09:30 - 09:45 SD1-O032 LATTICE DYNAMICS AND ELECTRON-PHONON COUPLING ON $M_{N1-x}Fe_xSi$: EVOLUTION OF MAGNETISM**

Omar de la Pena Seaman[1], Paola González Castelazo[1], Rolf Heid[2]
[1]Benemerita Universidad Autonoma de Puebla, Physics institute, Mexico. [2]Karlsruher Institut für Technologie, Institute for Solid State Physics (IFP), Germany.

■ **09:45 - 10:00 SD1-O033 FERROMAGNETISM VS ANTIFERROMAGNETISM IN $BIFEO_3$ BY FIRST PRINCIPLES CALCULATION**

H´ Linh H´ Mok[1], Espiridión Martínez Aguilar[1], Joel Antúnez García[2], Jordi Ribas Ariño[3], Lourdes Mestres Vila[4], Pere Alemany[5], Donald H. Galvan[2], Jesús María Siqueiros Beltrones[6], Oscar Raymond Herrera[6]
[1]Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE), Posgrado en Fisica de Materiales, Mexico. [2]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Departamento de Física de Superficies, Mexico. [3]Universitat de Barcelona, Departament de Ciencia de Materials i Química Física, Spain. [4]Universitat de Barcelona, Departament de Química Inorgànica, Spain. [5]Universitat de Barcelona, Departament de Química Física, Spain. [6]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Departamento de Materiales Avanzados, Mexico.

▸ **10:00 - 10:30 SD1-O034 Invited Talk CLATHRATE SEMICONDUCTORS: NOVEL, OPEN FRAMEWORK, CRYSTALLINE SOLIDS BASED ON SILICON, GERMANUIM, AND TIN**

Charles W. Myles[1], Dong Xue[1]
[1]Texas Tech University, Physics, United States.

▸ **10:30 - 11:00 SD1-O035 Invited Talk POLYMORPHIC TRANSFORMATIONS OF DIBORANE UNDER EXTREME PRESSURES: RECONCILING THEORY AND EXPERIMENT**

Viktor N. Staroverov[1], Yang Song[1], Amin Torabi[1], Angela M. Murcia Rios[1], Darya N. Komsa[1]
[1]The University of Western Ontario, Department of Chemistry, Canada.

11:00-11:30 POSTER AWARDS CEREMONY & COFFEE BREAK

11:30 - 12:30 PLENARY V
PROF. GALO SOLER ILLIA

Session 7

SESSION CHAIR: ROESCH

▸ **12:30 - 13:00 SD1-O036 Invited Talk CHEMICAL REACTIVITY OF SULFIDE MINERALS - CONNECTION TO ACID ROCK DRAINAGE**

Helio Anderson Duarte[1]
[1]Universidade Federal de Minas Gerais, Department of Chemistry, Brazil.

▸ **13:00 - 13:30 SD1-O037 Invited Talk OPTOELECTRONIC PROPERTIES OF HALIDE PEROVSKITES WITH AB INITIO MANY-BODY PERTURBATION THEORY**

Linn Leppert[1]
[1]Universität Bayreuth, Department of Physics, Germany.

■ **13:30 - 13:45 SD1-O038 THEORETICAL STUDY OF THE ELECTRONIC STRUCTURE AND STABILITY OF TITANIUM DIOXIDE CLUSTERS $(TiO_2)N$ WITH N=18, 28, AND 38**

Tania Gabriela Díaz Rodríguez[1], Mauricio Pacio[1], Jesus Muñiz[2]
[1]Benemerita Universidad Autonoma de Puebla, CIDS, Mexico. [2]Instituto de Energías Renovables Universidad Nacional Autónoma de México, Posgrado, Mexico.

■ **13:45 - 14:00 SD1-O039 UNDERSTANDING MECHANOCHEMISTRY IN A TWO-DIMENSIONAL PICTURE: WHICH FORCE BREAKS A BOND?**

Michael Walter[1]
[1]Universität Freiburg, Center for Interactive Materials and Bioinspired Technologies, Germany.

Session 8

SESSION CHAIR: KÖSTER

- **16:00 - 16:30 SD1-O040 Invited Talk COMPUTATIONAL STUDIES OF INCOMMENSURABLE VAN DER WAALS HETEROSTRUCTURES**
  Jeil Jung[1]
  [1]University of Seoul, Department of Physics, South Korea.

- **16:30 - 16:45 SD1-O041 FIRST-PRINCIPLES INVESTIGATION OF METALLIC FERROELECTRICS IN LAYERED PEROVSKITES HETEROSTRUCTURE OF $Ca_2Nb_2O_7$-RELATED PHASES**
  Javier Alanis[1], Jorge Íñiguez[2], Hong-Jian Zhao[2], María Eugenia Mendoza[1]
  [1]Benemerita Universidad Autonoma de Puebla, Instituto de Física, LRT, Mexico. [2]Luxembourg Institute of Science and Technology, Materials Research and Technology, Luxembourg.

- **16:45 - 17:15 SD1-O042 Invited Talk ELECTRONIC STOPPING IN CONDENSED MATTERS: UNDERSTANDING ELECTRONIC EXCITATION DYNAMICS UNDER ION IRRADIATION**
  Yosuke Kanai[1]
  [1]University of North Carolina at Chapel Hill, Department of Chemistry, United States.

- **17:15 - 17:30 SD1-O043 ACCELERATED DISCOVERY OF LEAD-FREE ORGANIC-INORGANIC HALIDE DOUBLE PEROVSKITES FOR OPTOELECTRONICS**
  Kesong Yang[1], Yuheng Li[1]
  [1]University of California, San Diego, NanoEngineering, United States.

- **17:30 - 17:45 SD1-O044 INTERACTIONS BETWEEN ALANINE, GLYCINE AND PROLINE WHEN ADSORBED ON A GRAPHENE SURFACE**
  Ali Fransuani Jiménez González[1], Luis Fernando Magaña[1]
  [1]Instituto de Física - Universidad Nacional Autónoma de México, Solid State, Mexico.

- **18:15 - 18:45 SD1-O045 Invited Talk MODELING METAL ORGANIC FRAMEWORKS FOR NOVEL APPLICATIONS**
  Timo Thonhauser[1]
  [1]Wake Forest University, Physics, United States.

- **18:45 - 19:00 SD1-O046 ON THE POSSIBILITY OF SINGLET FISSION IN CRYSTALLINE QUATERRYLENE**
  Xiaopeng Wang[1], Xingyu Liu[1], Cameron Cook[2], Bohdan Schatschneider[2], Noa Marom[1]
  [1]Carnegie Mellon University, Materials Science and Engineering, United States. [2]Cal Poly Pomona, Chemistry and Biochemistry, United States.

Symposium D2

MACHINE LEARNING AND DATA SCIENCE IN MATERIALS SYNTHESIS, CHARACTERIZATION AND MODELING

Subramanian Sankaranarayanan / University of Chicago
Fernando Cortés-Guzmán / Universidad Nacional Autonoma de Mexico
Juan Pablo Hernandez-Ortiz / Universidad Nacional de Colombia
Mathew Cherukara / Argonne National Laboratory
Edward M Kober / Los Alamos National Lab

MONDAY, AUGUST 20
ROOM: MAYA VI

Session 1

SESSION CHAIR: SUBRAMANIAN SANKARANARAYANAN

- **08:45 - 09:00 SD2-O001 BRIDGING THE ELECTRONIC, ATOMISTIC AND MESOSCOPIC SCALES USING MACHINE LEARNED MODELS**
  Subramanian Sankaranarayanan[1]
  [1]Argonne National Laboratory, Center for Nanoscale Materials, United States.
- **09:00 - 09:30 SD2-O002 Invited Talk SCALABLE MACHINE LEARNED INTERATOMIC POTENTIALS WITH SNAP**
  Mitchell Wood[1], Aidan Thompson[1]
  [1]Sandia National Laboratories, Center for Computing Research, United States.
- **09:30 - 10:00 SD2-O003 Invited Talk MASSIVE AND MULTISCALE MODELLING WITH DEEP LEARNING**
  Isaac Tamblyn[1]
  [1]National Research Council Canada, Physics, Canada.
- **10:00 - 10:30 SD2-O004 Invited Talk PREDICTIVE MATERIALS MODELING TO DESIGN REACTIVE INTERFACES FOR ENERGY APPLICATIONS**
  Badri Narayanan[1], Mathew Cherukara[2], Henry Chan[3], Maria Chan[3], Stephen Gray[3], Subramanian Sankaranarayanan[3]
  [1]Argonne National Laboratory, Materials Science Division, United States. [2]Argonne National Laboratory, X-ray Science Division, United States. [3]Argonne National Laboratory, Center for Nanoscale Materials, United States.
- **10:30 - 10:45 SD2-O005 MODELING THE GROWTH OF TRANSITION METAL DICHALCOGENIDE**
  Henry Chan[1], Mathew Cherukara[2], Badri Narayanan[3], Subramanian Sankaranarayanan[1,4]
  [1]Argonne National Laboratory, Center for Nanoscale Materials, United States. [2]Argonne National Laboratory, X-ray Science Division, United States. [3]Argonne National Laboratory, Materials Science Division, United States. [4]University of Chicago, Computation Institute, United States.
- **10:45 - 11:00 SD2-O006 FILLING THE GAPS IN A BENCHMARK OF WEAKLY INTERACTING CALIXARENE-GUESTS COMPLEXES THROUGH MACHINE LEARNING PREDICTION METHODS.**

Joaquin Barroso Flores[1,2]
[1]Universidad Nacional Autónoma de México, Centro Conjunto de Investigación en Química Sustentable, Mexico. [2]Universidad Nacional Autónoma de México, Instituto de Química, Mexico.

■ **11:00-11:30 Coffe Break**

🕮 **11:30 - 12:30 PLENARY II**
PROF. YUICHI IKUHARA

■ **12:45 - 13:00 SD2-O007 DEEP CONVOLUTIONAL NEURAL NETWORKS FOR AUTOMATED CLASSIFICATION AND FEATURE EXTRACTION COHERENT X-RAY DIFFRACTION IMAGING DATA**
Mathew Cherukara[1], Youssef Nashed[2], Ross Harder[1]
[1]Argonne National Laboratory, Advanced Photon Source, United States. [2]Argonne National Laboratory, Math and Computer Science, United States.

▸ **13:00 - 13:30 SD2-O008 Invited Talk INTEGRATED DESIGN OF FUNCTIONAL MATERIALS**
Bobby Sumpter[1]
[1]Oak Ridge National Laboratory, Center for Nanophase Materials Sciences, United States.

■ **13:30 - 13:45 SD2-O009 COMPRESSIVE HYPERSPECTRAL MICROSCOPY OF NANOMATERIALS**
Kevin Kelly[1]
[1]Rice University, Electrical Engineering, United States.

■ **13:45 - 14:00 SD2-O010 DEEP LEARNING FOR SEGMENTATION OF 3D CONCRETE MICROSTRUCTURE CHARACTERIZATION**
Aidan Ross[1], Christopher Anand[2], Nabil Bassim[3]
[1]McMaster University, Computational Science and Engineering, Canada. [2]McMaster University, Computing and Software, Canada. [3]McMaster University, Materials Science and Engineering, Canada.

■ **14:00 - 14:15 SD2-O011 HIGH-THROUGHPUT GENERATION OF NONPOLAR STOICHIOMETRIC SLAB-AND-VACUUM MODELS**
Yoyo Hinuma[1,2]
[1]Chiba University, Center for Frontier Science, Japan. [2]National Institute for Materials Science, Division of Materials Data and Integrated System, Japan.

☒ **14:00 - 16:00 Lunch time**

Session 2

SESSION CHAIR: MATHEW J. CHERUKARA, SUBRAMANIAN SANKARANARAYANAN

▸ **16:00 - 16:30 SD2-O012 Invited Talk LEARNING PTYCHOGRAPHIC RECONSTRUCTION WITH BACKPROPAGATION**
Youssef Nashed[1]
[1]Argonne National Laboratory, Mathematics and Computer Science, United States.

▸ **16:30 - 17:00 SD2-O013 Invited Talk MATERIALS INFORMATICS AND BIG DATA: REALIZATION OF 4TH PARADIGM OF SCIENCE IN MATERIALS SCIENCE**
Ankit Agrawal[1], Alok Choudhary[1]
[1]Northwestern University, EECS, United States.

■ **17:00 - 17:15 SD2-O014 ACCELERATION OF INTERFACE STRUCTURE SEARCH VIA BAYESIAN OPTIMIZATION AND TRANSFER LEARNING**
Shin Kiyohara[1], Teruyasu Mizoguchi[1]
[1]The University of Tokyo, Institute of Industrial Science, Japan.

● **17:30-18:30 Science, Technology and Society Lecture SENER**

TUESDAY, AUGUST 21
ROOM: MAYA VI

Session 3

SESSION CHAIR: EDWARD KOBER

■ **08:45 - 09:00 SD2-O015 CHARACTERIZING ATOMISTIC GEOMETRIES AND POTENTIAL FUNCTIONS USING STRAIN FUNCTIONALS**
Edward Kober[1], Nithin Mathew[1]
[1]Los Alamos National Laboratory, Theoretical Division, United States.

▸ **09:00 - 09:30 SD2-O016 Invited Talk POLYMER GENOME: AN INFORMATICS PLATFORM FOR RATIONAL POLYMER DIELECTRICS DESIGN AND BEYOND**
Rampi Ramprasad[1]
[1]Georgia Institute of Technology, Materials Science & Engineering, United States.

09:30 - 10:00 SD2-O017 Invited Talk MACHINE (&HUMAN!) LEARNING IN CATALYST DISCOVERY

Hongliang Xin[1]

[1]Virginia Polytechnic Institute and State University, Chemical Engineering, United States.

10:00 - 10:30 SD2-O018 Invited Talk LIQUID CRYSTAL FREE ENERGY RELAXATION BY A THEORETICALLY INFORMED MONTE CARLO METHOD USING A FINITE ELEMENT.

Julio Cesar Armas Perez[1], **Juan Pablo Hernandez Ortiz**[2,3], **Juan Jose de Pablo**[3,4]

[1]Universidad de Guanajuato, Departamento de Ingenierías Química, Electrónica y Biomédica, División de Ciencias e Ingenierías, Mexico. [2]Universidad Nacional de Colombia, Departamento Materiales y Minerales, Colombia. [3]University of Chicago, Institute for Molecular Engineering, United States. [4]Argonne National Laboratory, , United States.

10:30 - 11:00 SD2-O019 Invited Talk CREATIVEAI FOR MATERIAL DISCOVERY

Payel Das[1]

[1]IBM Research Watson, IBM Research AI, United States.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY III
DR. AMANDA S. BARNARD

Session 4

SESSION CHAIR: EDWARD KOBER, JUAN PABLO HERNANDEZ-ORTIZ

12:30 - 13:00 SD2-O020 Invited Talk MACHINE LEARNING COLLECTIVE VARIABLE DISCOVERY FOR MATERIALS DESIGN AND ENGINEERING

Andrew Ferguson[1]

[1]University of Chicago, Institute for Molecular Engineering, United States.

13:00 - 13:30 SD2-O021 Invited Talk DATA SCIENCE METHODS AND INFRASTRUCTURE FOR PREDICTIVE MATERIALS MODELING

Alejandro Strachan[1]

[1]Purdue University, School of Materials Engineering, United States.

13:30 - 14:00 SD2-O022 Invited Talk HOLISTIC SCREENING OF MORE THAN 12,000 CANDIDATES FOR SOLID LITHIUM-ION CONDUCTORS WITH STATISTICAL LEARNING APPROACHES

Evan Reed[1]

[1]Stanford University, Material Science and Engineering, United States.

14:00 - 14:15 SD2-O023 META-STABLE PHASE DIAGRAM PREDICTION USING MACHINE GUIDED FREE ENERGY OPTIMIZATION.

Troy Loeffler[1], **Srilok Srinivasan**[1], **Subramanian Sankaranarayanan**[1]

[1]Argonne National Laboratory, Center for Nanoscale Materials, United States.

14:00 - 16:00 Lunch time

Session 5

SESSION CHAIR: JUAN PABLO HERNANDEZ-ORTIZ

16:00 - 16:30 SD2-O024 Invited Talk GUIDING MATERIALS DISCOVERY AND DESIGN WITH DATA

Turab Lookman[1]

[1]Los Alamos National Laboratory, Theoretical Division, United States.

16:30 - 17:00 SD2-O025 Invited Talk MACHINE LEARNING MODELS TO BRIDGE LENGTH SCALES

Olle Heinonen[1], **Sandeep Madireddy**[2], **Troy Loeffler**[3], **Ding-Wen Chung**[4], **Mathew Cherukara**[3], **Badri Narayanan**[5], **Tao Sun**[6], **David Seidman**[7], **Subramanian Sankaranarayanan**[3]

[1]Argonne National Laboratory, Materials Science Department, United States. [2]Argonne National Laboratory, Division of Mathematics and Computer Sciences, United States. [3]Argonne National Laboratory, Division of Nanoscience and Technology, United States. [4]Northwestern University, Materials Science and Engineering, United States. [5]Argonne National Laboratory, Materials Science Division, United States. [6]Argonne National Laboratory, X-ray Science Division, United States. [7]Northwestern University, Department of Materials Science and Engineering, United States.

17:00 - 17:15 SD2-O026 SIMILARITY OF ELECTRONIC PROPERTIES OF MATERIALS MINED FROM AN OPEN ACCESS DATABASE

Guillermo Carbajal Franco[1], **Eréndira Rendón Lara**[1], **Abigail Vásquez Aguilar**[1], **Itzel Abundez Barrera**[1]

[1]Instituto Tecnológico de Toluca, Division of Graduate Studies and Research, Mexico.

WEDNESDAY, AUGUST 22
ROOM: MAYA VI

Session 6

SESSION CHAIR: FERNANDO CORTÉS-GUZMÁN, JUAN PABLO HERNANDEZ-ORTIZ

■ **08:45 - 09:00 SD2-O027 GENETIC ALGORITHM FOR IDENTIFYING PHASE BOUNDARIES AND METASTABLE PHASES OF Al-Cu SYSTEMS**

Srilok Srinivasan[1], Troy Loeffler[1], Subramaniyan Sankaranarayanan[1]

[1]Argonne National Laboratory, Center for Nanoscale Materials, United States.

▸ **09:00 - 09:30 SD2-O028 Invited Talk DATA SCIENCE FOR HIDDEN DATA IN MATERIALS IMAGING AND MODELING**

Krishna Rajan[1]

[1]University at Buffalo; the State University of New York, Materials Design and Innovation, United States.

▸ **09:30 - 10:00 SD2-O029 Invited Talk THE EFFECTIVE USE OF DATA IN MATERIALS RESEARCH**

Tim Mueller[1]

[1]Johns Hopkins University, Materials Science and Engineering, United States.

▸ **10:00 - 10:30 SD2-O030 Invited Talk DESIGN OF PATTERNS ON SUBSTRATES TO DIRECT THE SELF-ASSEMBLY OF BLUE-PHASE LIQUID CRYSTALS**

Jose Adrian Martinez Gonzalez[1,2], Juan Pablo Hernandez Ortiz[3], Xiao Li[2], Ye Zhou[2], Monirosadat Sadati[2], Paul Nealey[2], Juan Jose de Pablo[2]

[1]Universidad Autónoma de San Luis Potosí, Facultad de Ciencias, Mexico. [2]University of Chicago, Institute for Molecular Engineering, United States. [3]Universidad Nacional de Colombia, Facultad de Minas, Colombia.

▸ **10:30 - 11:00 SD2-O031 Invited Talk MACHINE-LEARNING OF CRYSTAL STRUCTURE ENERGY LANDSCAPES**

Richard Hennig[1]

[1]University of Florida, Materials Science and Engineering, United States.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY IV NOBEL PRIZE IN CHEMISTRY 2016
PROF. BEN L. FERINGA

Session 7

SESSION CHAIR: FERNANDO CORTÉS-GUZMÁN

▸ **12:30 - 13:00 SD2-O032 Invited Talk LEVERAGING MACHINE LEARNING AND FIRST PRINCIPLES MODELING TO ACCELERATE MATERIALS CHARACTERIZATION AND DESIGN**

Maria Chan[1], Arun Mannodi Kanakkithodi[1], Spencer Hills[1], Eric Schwenker[1,2], Fatih Sen[1], Liang Li[1], Kendra Letchworth Weaver[1]

[1]Argonne National Laboratory, Center for Nanoscale Materials, United States. [2]Northwestern University, , United States.

■ **13:00 - 13:15 SD2-O033 MACHINE LEARNING-AIDED INTERPRETATION AND PREDICTION OF CORE-LOSS SPECTRUM**

Shin Kiyohara[1], Tomohiro Miyata[1], Teruyasu Mizoguchi[1]

[1]The University of Tokyo, Institute of Industrial Science, Japan.

■ **13:15 - 13:30 SD2-O034 OPTICAL MODELS OF OXIDE/METAL/OXIDE THIN FILMS BY SPECTROSCOPIC ELLIPSOMETRY**

Laura Hrostea[1,2], Mihaela Girtan[3], Liviu Leontie[4], Beatrice Negulescu[5]

[1]Alexandru Ioan Cuza University of Iasi, Department of Physics, Rumania. [2]Université d'Angers, , France. [3]Université d'Angers, Photonics, France. [4]Alexandru Ioan Cuza University of Iasi, Physics, Rumania. [5]Université François Rabelais, Physics, France.

■ **13:30 - 13:45 SD2-O035 INTEGRATING MACHINE LEARNING, MOLECULAR SIMULATION AND HIGH-RESOLUTION MICROSCOPY FOR PROBING DEFECT DYNAMICS AND ONSET OF PHASE TRANSFORMATION IN 2D MATERIALS**

Badri Narayanan[1], Tarak Patra[2], Fu Zhang[3], Daniel Schulman[3], Henry Chan[2], Mathew Cherukara[4], Mauricio Terrones[3,5], Saptarshi Das[3], Subramanian Sankaranarayanan[2,6]

[1]Argonne National Laboratory, Materials Science Division, United States. [2]Argonne National Laboratory, Center for Nanoscale Materials, United States. [3]Penn State University, Materials Science and Engineering, United States. [4]Argonne National Laboratory, X-Ray Science Division, United States. [5]Penn State University, Department of Physics, United States. [6]University of Chicago, Computational Institute, United States.

■ **13:45 - 14:00 SD2-O036 MACHINE LEARNING APPROACH TO ESTIMATE TRANSIENT HEAT TRANSFER COEFFICIENTS**

Imre Felde[1], Martha Patricia Guerrero Mata[2], Rafael Colás[2], Sándor Szénási[1], Zoltán Fried[1]
[1]Óbudai Egyetem, John von Neumann Faculty of Informatics, Hungary. [2]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico.

- **14:00 - 14:15 SD2-O037 PREDICTING THE DISSOLUTION KINETICS OF SILICATE GLASSES USING MACHINE LEARNING**
N. M. Anoop Krishnan[1], Mathieu Bauchy[2]
[1]Indian Institute of Technology Delhi, Department of Civil Engineering, India. [2]University of California, Los Angeles, Physics of AmoRphous and Inorganic Laboratory, United States.

14:00-16:00 Lunch Time

WEDNESDAY, AUGUST 22
ROOM: TERRACE

18:30 -20:30 POSTER SESSION & COFFEE BREAK

- **SD2-P001 PHYSICAL ASPECTS AND MODELING OF THE FRACTURE IN ROCKS AND CEMENTITIOUS MATERIALS**
Omar Rodriguez Villarreal[1,2]
[1]Universidad Autónoma de Nuevo León, Facultad de Ingeniera Civil, Mexico. [2]Universite de pau et des pays de ladour, Institut Supérieur Aquitain du Bâtiment et des Travaux Publics, France.

- **SD2-P002 SURFACE PLASMONS IN MODIFIED ATR KRETSCHMANN GEOMETRIES**
Jesus Manuel Gutierrez Villarreal[1], Jorge Alberto Gaspar Armenta[1]
[1]Universidad de Sonora, DIFUS-USON, Mexico.

- **SD2-P003 SELF-ASSEMBLY OF BLUE PHASE LIQUID CRYSTALS GUIDED BY PATTERNED SURFACES**
Armando Gutierrez[1], Juan Jose de Pablo[2], Jose Adrian Martinez Gonzalez[1]
[1]Universidad Autónoma de San Luis Potosí, Facultad de Ciencias, Mexico. [2]University of Chicago, IME, United States.

- **SD2-P004 USE OF ARTIFICIAL NEURAL NETWORKS IN THE STUDY OF PITTING FAILURE IN A SURGICAL STAINLESS STEEL IMPLANT**
Alfonso Monzamodeth Roman Sedano[1,2], Osvaldo Flores Cedillo[2], Arturo Molina Ocampo[3], Bernardo Campillo Illanes[2,4], Horacio Martínez Valencia[2], Itzel Reyes Chaparro[4]
[1]Centro de Investigación en Ingenieria y Ciencias Aplicadas, CIICAP, Mexico. [2]Instituto de Ciencias Físicas, UNAM, Física atómica, molecular y óptica experimentales, Mexico. [3]Centro de Investigación en Ingenieria y Ciencias Aplicadas, Materiales, Mexico. [4]Facultad de Química, UNAM, Ingeniería química metalúrgica, Mexico.

- **SD2-P005 3D MODELLING OF THE TRANSIENT THERMAL RESPONSE IN SOLIDS FOR APPLICATION TO INFRARED PHOTOTHERMAL RADIOMETRY TECHNIQUE: NUMERICAL AND THEORETICAL SIMULATIONS**
Victor Manuel Suarez Quezada[1], Jenniffer Katherine Olarte Villamizar[1], Joel Hernandez Wong[1]
[1]Instituto Politécnico Nacional - IPN, Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Mexico.

- **SD2-P006 CLASSIFICATION OF IMAGES OF ZnO THIN FILMS USING DEEP LEARNING APPROACH**
Karim Gonzalez[1], Rajesh Roshan Biswal[1], Eddy Sanchez de la Cruz[1]
[1]Instituto Technologico Superior de Misantla, Ingenieria de Sistemas Computacionales, Mexico.

- **SD2-P007 MODELLING OF PHASE BEHAVIOR FOR TWO DIMENSIONAL MIES POTENTIAL USING GPU.**
Patricia del Carmen Tavares Ramirez[1], Luis Adrian Padilla Salas[1], Ana Laura Benavides Obregon[1], Julio Cesar Armas Perez[1]
[1]Universidad de Guanajuato campus León, Division de Ciencias e Ingenierias, Mexico.

- **SD2-P008 STUDY OF THE REACTIVITY IN Al_n CLUSTERS USING ATOMIC DESCRIPTORS AND MACHINE LEARNING METHODS**
Lillian Gisela Ramirez Palma[1], David Ignacio Ramirez Palma[1], Cesar Garcia Jacas[1], Fernando Cortes Guzman[1,2]
[1]Instituto de Quimica UNAM, Physical Chemistry, Mexico. [2]Centro Conjunto de Investigación en Química Sustentable UAEM-UNAM (CCIQS), Physical Chemistry, Mexico.

- **SD2-P009 THEORETICAL STUDY OF THE ORGANIC MOLECULE 2,4-DISTYRYLPYRIDINE AND COMPARATIVE ANALYSIS WITH THE EXPERIMENTAL OPTICAL PROPERTIES FOR SIO2 DOPED WITH 2,4 DSTP**
Verónica Domínguez Benítez[1], Martin Rodolfo Palomino Merino[1], José Eduardo Espinosa[1], Raul Aceves Torres[2], Marco Pablo Trejo Garcia[1], Eduardo Moreno Barbosa[1], Judith Percino[3]

[1]Benemerita Universidad Autonoma de Puebla, Fisico-Matematicas, Mexico. [2]Universidad de Sonora, Departamento de Investigacion en Fisica, Mexico. [3]Benemerita Universidad Autonoma de Puebla, Laboratorio de Polimeros, Mexico.

■ **SD2-P010 DEVELOPMENT OF A MONITORING SYSTEM FOR CLEAN COOKSTOVES EVALUATION**

Ruben Martinez Heredia[1], Neín Farrera[2,3], Pascual Lopez[2], James Jetter[4], Joel Moreira Acosta[2,3], Weimar Alberto Grajales Morales[5], Nestor Antonio Gómez de la Rosa[6]

[1]Universidad de Ciencias y Artes de Chiapas, Instituto de Investigacion de Innovacion en Energias Renovables, Mexico. [2]Universidad de Ciencias y Artes de Chiapas, Instituto de Investigación e Innovación en Energías Renovables, Mexico. [3]Universidad del Valle de México A.C., , Mexico. [4]U. S. Environmental Protection Agency, Cookstove Laboratory Research, United States. [5]Universidad de Ciencias y Artes de Chiapas, Insituto de Investigación e Innovación en Energías Renovables, Mexico. [6]Universidad del Valle de México A.C., Mecatronica, Mexico.

■ **SD2-P011 COMPARISON OF THE EFFICIENCY OF ULTRASONIC AND INFRARED SENSORS IN THE DETECTION OF OBSTACLES OF DIFFERENT MATERIALS**

Juan Antonio Jaramillo Gomez[1], Brahim El Filali[1], Mirna Salmerón Guzmán[1]

[1]Instituto Politécnico Nacional - IPN, Ingeniería, Mexico.

■ **SD2-P012 CFD SIMULATION OF A HFCVD REACTOR FOR THE DEPOSIT OF SiO_x FILMS**

Xochitl Aleyda Moran Martinez[1], Norma Yadira Mendoza Gonzalez[2], José Alberto Luna López[3]

[1]Benemerita Universidad Autonoma de Puebla, ICUAP, Mexico. [2]McGill University, Plasma Processig Laboratory (PPL), Chemical Engenieering Deparment, Canada. [3]Benemerita Universidad Autonoma de Puebla, Centro de investigación en Dispositivos Semiconductores, Mexico.

■ **SD2-P013 EFFECTS OF FINITE SIZE IN THE MICHAELIS-MENTEN MODEL OF CATALYSIS MODELED BY HOPFIELD NEURAL NETWORKS**

Miguel Castellanos[1], Arnulfo Castellanos[1]

[1]Universidad de Sonora, Department of Physics, Mexico.

Symposium D3

TEXTURE AND MICROSTRUCTURE

Francisco Cruz Gandarilla / Instituto Politécnico Nacional
Raúl Bolmaro / Instituto de Física Rosario
Claude Esling / Laboratoire d'Etude des Microstructures et de Mécanique des Matériaux
Stuart Wright / EDAX, Materials Analysis Division of Ametek

MONDAY, AUGUST 20
ROOM: UXMAL I

Session: Technique development, data processing.

SESSION CHAIR: DR. RAFAEL COLÁS, DR. IRENE BEYERLEIN

08:00 - 08:30 SD3-O001 Invited Talk RESOLVING THE VARIANT PROBLEM IN TERMS OF A HIDDEN REGRESSION MODEL FOR CRYSTALLOGRAPHIC ORIENTATIONS

Richard Arnold[1], Florian Bachmann[2], Peter E. Jupp[3], Helmut Schaeben[4]

[1]Victoria University of Wellington, School of Mathematics and Statistics, New Zealand. [2]Xnovo Technology ApS, , Denmark. [3]University of St Andrews, School of Mathematics and Statistics, United Kingdom, Channel Islands & Isle of Man. [4]Technische Universität Bergakademie Freiberg, Geophysics and Geoinformatics, Germany.

08:30 - 08:45 SD3-O002 ANISOTROPIC DEFECT ACCUMMULATION IN ROLLED ALUMINUM BY EBSD AND XRD

Emanuel Benatti[1,2], Natalia de Vincentis[1,2], Martina Cecilia Avalos[1,2], Francisco Cruz Gandarilla[3], Heinz-Günter Brokmeier[4], Raul Eduardo Bolmaro[1,2]

[1]Instituto de Fisica Rosario, Materials Science Laboratory, Argentina. [2]Universidad Nacional de Rosario, , Argentina. [3]Instituto Politécnico Nacional - IPN, Escuela Superior de Física y Matemáticas., Mexico. [4]Helmholtz Zentrum Geesthacht, Institut für Werkstoffkunde und Werkstofftechnik, Germany.

08:45 - 09:15 SD3-O003 A COMPARISON OF ELECTRON BACKSCATTER DIFFRACTIONS PATTERN INDEXING VIA CONVENTIONAL AND DICTIONARY METHODS

Stuart Wright[1,2]

[1]Carnegie Mellon University, Materials Science and Engineering, United States. [2]EDAX, TSL, United States.

09:15 - 09:30 SD3-O004 A NEW, NON-DESTRUCTIVE POLE FIGURE MEASUREMENT METHOD FOR CENTRELESS X-RAY DIFFRACTOMETERS

Mate Sepsi[1], Valeria Mertinger[1], Marton Benke[1]

[1]University of Miskolc, Institute of Physical Metallurgy, Metalforming and Nanotechnology, Hungary.

09:30 - 10:00 SD3-O005 Invited Talk STATISTICAL APPROACH OF MEASURED CRYSTALLOGRAPHIC TEXTURE COMPARISON

Dmitry Nikolayev[1], Tatiana Lychagina[1]

[1]Joint Institute for Nuclear Research, Frank Laboratory of Neutron Physics, Russia.

10:00 - 10:15 SD3-O006 APPLICATION OF EBSD MISORIENTATION FUNCTIONS TO STUDY THE RECRYSTALLIZATION IN STEELS

Francisco Cruz Gandarilla[1], Raúl Eduardo Bolmaro[2], Miguel Gesiquio Garduño[3], Hector Mendoza Leon[4], Ana María Salcedo Garrido[3]

[1]Instituto Politécnico Nacional - IPN, Physics, Mexico. [2]Instituto de Fisica Rosario, , Argentina. [3]Instituto Politécnico Nacional - IPN, Escuela Superior de Ingeniería Química e Industrias Extractivas, Mexico. [4]Instituto Politécnico Nacional - IPN, Centro de Nanociencias y Micro y Nanotecnologías, Mexico.

- **10:15 - 10:30 SD3-O007 CONTROLLING THE MORPHOLOGY AND FRACTALITY OF TWO-DIMENSIONAL PARTICLE AGGREGATES GENERATED BY FUNDAMENTAL STOCHASTIC GROWTH MODELS**

José Luis Carrillo Estrada[1], Victor Dossetti[2], José Roberto Nicolás Carlock[1]

[1]Benemerita Universidad Autonoma de Puebla, Instituto de Física, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Centro de Investigación en Dispositivos Semiconductores, Mexico.

- **10:30 - 10:45 SD3-O008 A CLOSER LOOK AT THE HUMAN TOOTH: COMBINED FIB AND TEM NANOANALYSIS**

Meltem Sezen[1], Cleva Ow Yang[2], Burak Kitiki[3]

[1]Sabanci University, Sabanci University Nanotechnology Research and Application Center (SUNUM), Turkey. [2]Sabanci University, Faculty of Engineering and Natural Sciences, Turkey. [3]Beykoz Dental Health Hospital, Pediatric Dentistry, Turkey.

- **10:45 - 11:00 SD3-O009 COMPARATIVE TRANS-SPECIFIC STUDIES OF CALCITIC BIO-MINERALIZATION PROCESSES.**

Raúl Eduardo Bolmaro[1,2], Martina Cecilia Avalos[1,2], Vanina Tartalini[1], Pablo Risso[1], Analía López[3], María Carla de Aranzamendi[4], Sandra Gordillo[5]

[1]Instituto de Fisica Rosario, Materials Science Laboratory, Argentina. [2]Universidad Nacional de Rosario, , Argentina. [3]Universidad de Buenos Aires, Departamento de Ecología, Genética y Evolución, Facultad de Ciencias Exactas y Naturales, Argentina. [4]Universidad Nacional de Córdoba, Instituto de Diversidad y Ecología Animal, IDEA-Facultad de Ciencias Exactas, Físicas y Naturales., Argentina. [5]Universidad Nacional de Córdoba, Centro de Investigaciones en Ciencias de la Tierra (CICTERRA), Argentina.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY II
PROF. YUICHI IKUHARA

Session: Nobel production techniques: SPD, 3D AM,

SESSION CHAIR: DR. HELMUT SCHAEBEN, DR. STUART WRIGHT

- **12:30 - 13:00 SD3-O010 Invited Talk TEXTURE EVOLUTION IN ROLLED BIPHASE LAMINATES**

Irene Beyerlein[1]

[1]University of California, Santa Barbara, Mechanical Engineering, Materials, United States.

- **13:00 - 13:15 SD3-O011 CRYSTALLOGRAPHIC TEXTURE OF AN ADDITIVELY MANUFACTURED COLD-WORK TOOL STEEL**

Jun-Yun Kang[1], Byunghwan Kim[1], Jaecheol Yun[2], Jungho Choe[2], Sangsun Yang[2], Ji-Hun Yu[2], Yong-Jin Kim[2]

[1]Korea Institute of Materials Science, Steel Department, Korea. [2]Korea Institute of Materials Science, Powder Technology Department, Korea.

- **13:15 - 13:30 SD3-O012 MICROSTRUCTURAL CHARACTERIZATION OF ALTERNATIVE MANUFACTURING TECHNIQUES OF U6Nb: ADDITIVE MANUFACTURED, CAST AND WROUGHT**

Eloisa Zepeda Alarcon[1], Donald Brown[1], Bjorn Clausen[1], Sven Vogel[1], Amanda Wu[2]

[1]Los Alamos National Laboratory, MST8, United States. [2]Los Alamos National Laboratory, Materials Engineering Division, United States.

- **13:30 - 13:45 SD3-O013 MICROSTRUCTURAL EVOLUTION IN SEVERELY DRAWN HIGH CARBON CONTENT WIRES**

Martina Cecilia Avalos[1], Elena Brandaleze[2], Mykhaylo Romanyuk[3], Raul Eduardo Bolmaro[4]

[1]Instituto de Fisica Rosario, Electron Microscopy Lab, Argentina. [2]Universidad Tecnológica Nacional- Facultad Regional San Nicolás, Departamento Metalurgia- Centro DEYTEMA, Argentina. [3]Universidad Tecnológica Nacional, Departamento Metalurgia-Centro DEYTEMA, Argentina. [4]Instituto de Fisica Rosario, Micromecanica de Materiales Heterogéneos, Argentina.

- **13:45 - 14:00 SD3-O014 EFFECT OF THE BORIDING AND THE SHOT-PEENING IN THE RESISTENCE TO THE FATIGUE OF THE STEEL AISI 8620**

Alonso Salazar Garibay[1], Araceli Vázquez Rodríguez[2], Luis Gabriel Bermudez Rodriguez[3], Alfredo Márquez Herrera[2]

[1]Instituto Politécnico Nacional - IPN, UPIIG, Mexico. [2]Universidad de Guanajuato, División de Ciencias de la Vida, Mexico. [3]Universidad de la Salle, Universidad de la Salle Bajío, Mexico.

- **14:00 - 14:15 SD3-O015 PINPOINT NANOMECHANICAL MODE USING PROBES WITH DIFFERENT STIFFNESS**

Keibock Lee[1], Wenqing Shi[1], Gerald Pascual[1], Byong Kim[1]
[1]Park Systems, Inc., Technical Marketing, United States.

14:00 - 16:00 Lunch time

Session: Plastic deformation, industrial processing.

SESSION CHAIR: DR. DMITRY NICOLAYEV, DR. RAÚL BOLMARO

16:00 - 16:30 SD3-O016 Invited Talk EBSD ANALYSES OF INDUSTRIAL ALLOYS
Javier Humberto Ramirez Ramirez[1], Francisco Aurelio Perez Gonzalez[1], Nelson Federico Garza Montes De Oca[1], Rafael Colás[1]
[1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico.

16:30 - 16:45 SD3-O017 MICROSTRUCTURAL BEHAVIOUR OF TI6AL4V DURING ROOM TEMPERATURE DEFORMATION
Gajanan Kulkarni[1]
[1]Bharat Forge ltd, Research & Development, India.

16:45 - 17:00 SD3-O018 EVOLUTION OF ROLLING AND RECRYSTALLIZATION TEXTURES IN Ti-35Nb-7Zr-5Ta ALLOY AND ITS EFFECTS ON THE GROWTH OF TiO_2 NANOTUBES
Leonardo Fanton[1], Alberto Fatichi[1], Márcia de Oliveira Taipina[1], Mariana Gerardi de Mello[1], Rubens Caram[1]
[1]Universidade Estadual de Campinas, School of Mechanical Engineering, Brazil.

17:00 - 17:15 SD3-O019 QUANTITATIVE DETERMINATION OF THE RETAINED AUSTENITE IN STEEL USING NEUTRON DIFFRACTION
Dmitry Nikolayev[1], Tatiana Lychagina[1], Alexander Zisman[2], Ekaterina Yashina[2]
[1]Joint Institute for Nuclear Research, Frank Laboratory of Neutron Physics, Russia. [2]Central Research Institute of Structural Materials - Prometey, , Russia.

17:15 - 17:30 SD3-O020 STUDY OF IMIDAZOLIUM-BASED CATIONS AS STRUCTURE DIRECTING AGENTS IN THE SYNTHESIS OF ZEOLITES
Gabrielli Almeida[1], Alex Rojas[1], José Manuel Rivas Mercury[1], Yuri M. Variani[2]
[1]Instituto Federal do Maranhao, PPGEM, Brazil. [2]Universidade Federal do Rio Grande do Sul, PGCiMat, Brazil.

17:30 - 18:00 SD3-O021 Invited Talk LAYER STABILITY IN TI/AL COMPOSITES PRODUCED BY ACCUMULATIVE ROLL BONDING (ARB) CONSIDERING THE DEVELOPMENT OF LOCAL AND BULK TEXTURE
Oertel Carl Georg[1], Scharnweber Juliane[1], Romberg Jan[2], Freudenberger Jens[2], Skrotzki Werner[1]
[1]Technische Universität Dresden, Institut für Festkörper- und Materialphysik, Germany. [2]Leibniz-Institute for Solid State and Materials Research Dresden (IFW Dresden), Institute for Metallic Materials, Germany.

17:30-18:30 Science, Technology and Society Lecture SENER

MONDAY, AUGUST 20
ROOM: TERRACE

18:30 -20:30 POSTER SESSION & COFFEE BREAK

SD3-P001 CHARACTERIZATION OF THE DENDRITES ORIENTATION RATIO OF A BRASS AS CAST WITH INDUCED CRACKING USING THE EBSD.
Itzel Reyes[1], Osvaldo Flores Cedillo[2], Alfonso Monzamodeth Roman Sedano[2], Ivan Puente[3], Sergio García[1], Bernardo Campillo[1,2]
[1]Universidad Nacional Autónoma de México, Facultad de Química , DIM, Mexico. [2]Universidad Autónoma del Estado de Morelos, Instituto de Ciencias Físicas, Laboratorio de Espectroscopia, Mexico. [3]Universidad Nacional Autónoma de México, Facltad de Química, USAII, Mexico.

SD3-P002 EFFECT OF INITIAL TEXTURES ON THE ANNEALING TEXTURES OF A BCC METAL
Jun-Yun Kang[1], Seong-Jun Park[1], Jun Young Park[1], Seongwon Park[1], Yi-Hwa Song[2], Sung-Taek Park[2], Gwang-Lyeon Kim[2]
[1]Korea Institute of Materials Science, Steel Department, Korea. [2]Poongsan, R&D Institute, South Korea.

SD3-P003 EXPERIMENTAL ANALYSIS OF THE DEFORMATION TEXTURE IN METAL SAMPLES BY ELECTRON BACKSCATTER DIFRACTION
Oliver Contreras Muro[1], Adair Jimenez Nieto[1], Jose Antonio Tiburcio Moreno[2], Joel Moreno

Palmerin[3], Jose Manuel Juarez Garcia[4], Jose Martin Yañez Limon[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Materiales, Mexico. [2]Universidad Nacional Jorge Basadre Grohmann - Tacna, Fisica, Peru. [3]Universidad de Guanajuato, Minas, Metalurgia y Geologia, Mexico. [4]Centro Nacional de Metrologia, Microscopia, Mexico.

- **SD3-P004 EFFECT OF TEXTURE ON GRAIN GROWTH IN NB-CONTAINING FERRITIC STAINLESS STEEL**

Kye-Man Lee[1]

[1]POSCO, Stainless Steel Research Group, South Korea.

- **SD3-P005 MICROSTRUCTURE OF ZnO:NiO BY HFCVD**

Delfino Román Gutiérrez Olvera[1], Tomás Díaz[1], Godofredo Garcia[1], Fabiola Nieto[2], Enrique Rosendo[1], Antonio Coyopol[1], Roman Romano Trujillo[1], Crisoforo Morales Ruiz[1], Reina Galeazzi Isasmendi[1]

[1]Benemerita Universidad Autonoma de Puebla, CIDS-ICUAP, Mexico. [2]Benemerita Universidad Autonoma de Puebla, FCQ, Mexico.

Symposium D4

PROBING NANOMATERIALS IN SPACE OR TIME WITH HIGH SPATIAL AND ENERGY RESOLUTION

Hector A. Calderon / Instituto Politécnico Nacional
Christian Kisielowski / Lawrence Berkeley National Laboratory
Stig Helveg / Haldor Topsøe A/S
Quentin Ramasse / SuperSTEM

MONDAY, AUGUST 20
ROOM: MAYA II

Session: Probing in Space or Time with High Energy Resolution I.

SESSION CHAIR: HECTOR A. CALDERON

08:30 - 09:00 SD4-O001 Invited Talk NOVEL SOLUTIONS ON ELECTRON MICROSCOPY FOR NANO-MATERIALS CHARACTERIZATION
Rafael Villaurrutia[1]
[1]ThermoFisher Scientific, Electron Microscopy, Mexico.

09:00 - 09:30 SD4-O002 Invited Talk PERSPECTIVES FOR THE OBSERVATION OF ATOM DYNAMICS AT ATOMIC RESOLUTION
Christian Kisielowski[1]
[1]Lawrence Berkeley National Laboratory, The Molecular Foundry, United States.

09:30 - 10:00 SD4-O003 Invited Talk ELECTRON MICROSCOPY OF EARTH-ABUNDANT NANOPLASMONICS
Emilie Ringe[1]
[1]Rice University, MSNE, United States.

10:00 - 10:30 SD4-O004 Invited Talk LOCAL PLAMON RESPONSE ENGINEERING IN B- AND N-DOPED GRAPHENE PROVED WITH MONOCHROMATED STEM-EELS
Quentin Ramasse[1], Fredrik Hage[1], Demie Kepaptsoglou[1], Trevor Hardcastle[1], Morten Gjerding[2], Kirsten Winther[2], Kristian Thygesen[2]
[1]SuperSTEM Laboratory, SuperSTEM Laboratory, United Kingdom, Channel Islands & Isle of Man. [2]Danmarks Tekniske Universitet, CAMD, Denmark.

10:30 - 11:00 SD4-O005 Invited Talk STRUCTURE VARIATIONS AND DEFECT IDENTIFICATION IN GaN-BASED HETEROSTRUCTURES
Petra Specht[1]
[1]University of California, Berkeley, MSE, United States.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY II
PROF. YUICHI IKUHARA

Session: Probing in Space or Time with High Energy Resolution II

SESSION CHAIR: CHRISTIAN KISIELOWSKI

▸ **12:30 - 13:00 SD4-O006 Invited Talk OBSERVING CATALYST STRUCTURES AND DYNAMICS AT ATOMIC-RESOLUTION**

Stig Helveg[1]
[1]Haldor topsoe A/S, R&D, Denmark.

▸ **13:00 - 13:30 SD4-O007 Invited Talk IN-SITU MATERIALS CHARACTERIZATION OF 2-D MATERIALS AT HIGH ENERGY AND SPATIAL RESOLUTION**

Robert Klie[1]
[1]University of Illinois at Chicago, Department of Physics, United States.

■ **13:30 - 13:45 SD4-O008 DIRECT ATOMIC-SCALE OBSERVATION OF DROPLETS COALESCENCE DRIVEN NUCLEATION AND GROWTH OF SUPPORTED BISMUTH NANOCRYSTAL IN THE TEM**

Leonard Francis[1], Junjie Li[1]
[1]International Iberian Nanotechnology Laboratory - INL, Department of Advanced Electron Microscopy, Imaging and Spectroscopy, Portugal.

■ **13:45 - 14:00 SD4-O009 ELECTRON MICROSCOPY OF HALIDE PEROVSKITE MATERIALS EDGES: EDS AND TEM.**

Hector Alfredo Calderon Benavides[1], Francisco Robles Hernandez[2], Jiming Bao[3], Viktor Hadiev[4]
[1]Instituto Politécnico Nacional - IPN, Departamento de Física, Mexico. [2]University of Houston, Mechanical Engineering Technology, United States. [3]University of Houston, Materials Science & Engineering, United States. [4]University of Houston, Department of Mechanical Engineering, United States.

☒ **14:00-16:00 Lunch Time**

▸ **16:30 - 17:00 SD4-O010 Invited Talk PROBING SOFT MATTER STRUCTURE AND ASSEMBLY WITH CRYOGENIC AND LIQUID PHASE ELECTRON MICROSCOPY**

Joe Patterson[1]
[1]Technische Universiteit Eindhoven, Chemical Engineering and Chemistry, Netherlands.

■ **17:00 - 17:15 SD4-O011 SIMULATION OF CUBE OCTAHEDRAL NiO-Pt NANOPARTICLES AND COMPARISON TO TEM IMAGES**

Fernando Alvarez Ramirez[1]
[1]Instituto Mexicano del Petróleo, IMP, Mexico.

■ **17:15 - 17:30 SD4-O012 CARBON BASED NANOHYBRID MATERIALS (sp2-sp3) FOR ENERGY APPLICATIONS**

Mildred Quintana[1]
[1]Universidad Autónoma de San Luis Potosí, Instituto de Física, Mexico.

● **17:30-18:30 Science, Technology and Society Lecture SENER**

MONDAY, AUGUST 20
ROOM: TERRACE

◾ **18:30 -20:30 POSTER SESSION & COFFEE BREAK**

■ **SD4-P001 STRUCTURAL TEM CHARACTERIZATION OF AU/TiO_2 NANOSTRUCTURES SYNTHESIZED BY ELECTRODEPOSITION IN A NANOPOROUS ANODIC ALUMINA TEMPLATE.**

Juan Ernesto Neri Cruz[1,2], Hector Alfredo Calderon Benavides[1]
[1]Escuela Superior de Física y Matemáticas IPN, Departamento de Física, Mexico. [2]Instituto Politécnico Nacional - IPN, Escuela Nacional de Ciencias Biológicas, Mexico.

■ **SD4-P002 DOPED TiO_2 MOSOPOROUS ARRAYS AS PHOTO-TRANSFORMERS**

David Levi Quiroz Aguilera[1], Hector Alfredo Calderon Benavides[2], Luz A. García Serrano[3], Jessica Molina Maturano[3], Martha Garcia Estrada[4]
[1]Instituto Politécnico Nacional - IPN, ENCB -DNMN, Mexico. [2]Instituto Politécnico Nacional - IPN, ESFM, Mexico. [3]Instituto Politécnico Nacional - IPN, CIIEMAD, Mexico. [4]Instituto Politécnico Nacional - IPN, , Mexico.

■ **SD4-P003 MICROSTRUCTURAL AND NANOSTRUCTURAL CHARACTERIZATION OF RAW MEAT IN DIFFERENT STAGES OF REFRIGERATION**

Josué David Hernández Varela[1], Luis Eduardo Suárez Najera[1], José Jorge Chanona Pérez[1], Juan Vicente Méndez Méndez[2], Juan Ernesto Neri Cruz[3], Alejandra Valdivia Flores[4]
[1]Instituto Politécnico Nacional - IPN, Departamento de Ingenieria bioquimica, Mexico. [2]Centro de Nanociencias y micro y Nanotecnologías del IPN, Laboratorio de Microscopia de Fuerza Atómica y nanoindentación, Mexico. [3]Instituto Politécnico Nacional - IPN, Departamento de Física, Mexico. [4]Instituto Politécnico Nacional - IPN, Secretaria de Investigacion y Posgrado, Mexico.

■ **SD4-P004 FIRE RETARDANT FIBERS**

Luz A. García Serrano[1], Hector Alfredo Calderon Benavides[2], Mayela Garcia de Alva[1], David Levi Quiroz Aguilera[3], J. Antonio Carmona García[4]

[1]Instituto Politécnico Nacional - IPN, CIIEMAD, Mexico. [2]Instituto Politécnico Nacional - IPN, ESFM, Mexico. [3]Instituto Politécnico Nacional - IPN, ENCB -DNMN, Mexico. [4]Moscow State University, , Russia.

■ **SD4-P005 SPINODAL TRANSFORMATION IN NANOSTRUCTURED CERAMIC OXIDES PRODUCED BY MECHANICAL MILLING**

Araceli Huerta[1]

[1]Escuela Superior de Física y Matemáticas IPN, Departamento de Física, Mexico.

■ **SD4-P006 CHARACTERIZATION OF NOPAL NANOPARTICLES BY MEANS OF SPECTROSCOPY AND ELECTRON MICROSCOPY TECHNIQUES**

Jocelyn Madrigal Acevedo[1], Jose Jorge Chanona Pérez[1], Leticia Manuel Apolinar[2], Juan Ernesto Neri Cruz[3], Martha Quetzalli Marín Bustamante[1], Elier Ekberg Neri Torres[4]

[1]Escuela Nacional de Ciencias Biológicas, Biochemical Engineering, Mexico. [2]IMSS, Medical Research Unit in Endocrine Diseases, Mexico. [3]Escuela Superior de Física y Matemáticas IPN, physics, Mexico. [4]Universidad Iberoamericana, Chemical, Industrial and Food Engineering, Mexico.

TUESDAY, AUGUST 21
ROOM: MAYA II

Session: Probing in Space or Time with High Energy Resolution IV

SESSION CHAIR: STIG HELVEG

▸ **08:30 - 09:00 SD4-O013 Invited Talk MONOCHROMATED AND ABERRATION-CORRECTED ANALYTICAL ELECTRON MICROSCOPE**

Masaki Mukai[1], Eiji Okunishi[1], Yoshihiro Ohkura[1]

[1]JEOL Ltd., EM business unit, Japan.

▸ **09:00 - 09:30 SD4-O014 Invited Talk UNDERSTANDING NOVEL DOMAIN SCIENCE IN MULTIFERROIC MATERIALS BY ULTRAHIGH RESOLUTION ELECTRON MICROSCOPY AND SPECTROSCOPY**

Xiaoqing Pan[1,2]

[1]University of California, Irvine, Department of Chemical Engineering and Materials Science, United States. [2]University of California, Irvine, Department of Physics and Astronomy, United States.

▸ **09:30 - 10:00 SD4-O015 Invited Talk UNDERSTANDING AMORPHOUS MESOPOROUS SILICA SUPERSTRUCTURES BY ABERRATION-CORRECTED STEM**

Sebastian Calderon[1], Tânia Ribeiro[2], José Paulo Farinha[2], Carlos Baleizão[2], Paulo Ferreira[1,3]

[1]International Iberian Nanotechnology Laboratory - INL, Advanced Electron Microscopy, Imaging and Spectroscopy, Portugal. [2]IST, University of Lisbon, Centro de Química-Física Molecular and Institute of Nanosciences and Nanotechnology, Portugal. [3]University of Texas at Austin, Materials Science and Engineering, United States.

▸ **10:00 - 10:30 SD4-O016 Invited Talk NANOSTRUCTURES PROBED WITH HIGH ENERGY AND SPATIAL RESOLUTION USING SCANNING/ TRANSMISSION ELECTRON MICROSCOPY**

Nasim Alem[1]

[1]The Pennsylvania State University, Materials Science and Engineering, United States.

▸ **10:30 - 11:00 SD4-O017 Invited Talk GRAPHENE SHEETS DEFORMABILITY AND PLASTICITY**

Mildred Quintana[1,2]

[1]Universidad Autónoma de San Luis Potosí, Instituto de Física, Mexico. [2]Universidad Autónoma de San Luis Potosí, Microscopia de Alta Resolución, Centro de Investigación en Ciencias de la Salud y Biomedicina, Mexico.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY III
DR. AMANDA S. BARNARD

Session: Probing in Space or Time with High Energy Resolution V

SESSION CHAIR: HECTOR A. CALDERON

▸ **12:30 - 13:00 SD4-O018 Invited Talk NEW AND NOVEL DETECTION SYSTEMS IN THE TRANSMISSION ELECTRON MICROSCOPE.**

Jan Ringnalda[1]

[1]FEI, Materials Science, United States.

■ **13:00 - 13:15 SD4-O019 TELLURENE**

Moon Kim[1], Robert Klie[2], Maria Chan[3], Wenzhou Wu[4]

[1]University of Texas at Dallas, Materials Science and Engineering, United States. [2]University of Illinois at Chicago, Physics, United States. [3]Argonne National Laboratory, Nanoscale Materials, United States. [4]Purdue University, Industrial Engineering, United States.

■ **13:15 - 13:30 SD4-O020 NOVEL AUTOMATION SCRIPTING FOR SEM & DUALBEAM**

Rafael Villaurrutia[1], Daniel Phifer[2]

[1]ThermoFisher Scientific, Electron Microscopy, Mexico. [2]Thermo Fisher Scientific, Electron Microscopy, Netherlands.

■ **13:30 - 13:45 SD4-O021 FERROELECTRIC MODULATED ELECTRON RECONSTRUCTION AT $RAlO_3/SrTiO_3$ INTERFACES PROBED BY ELECTRON MICROSCOPY AND SPECTROSCOPY**

Di Wu[1]

[1]Nanjing University, Nantional Lab. of Solid State Microstructures and Department of Materials Science and Engineering, China.

☒ **14:00-16:00 Lunch**

▸ **17:00 - 17:30 SD4-O022 Invited Talk EFFECTIVE REINFORCEMENT OF CARBON-CARBON COMPOSITES USING MORPED GRAPHENE**

Francisco Robles Hernandez[1], Hector Alfredo Calderon Benavides[2], Fernando Alvarez Ramirez[3], Raymundo Ordonez[4], Viktor G. Hadjiev[5]

[1]University of Houston, Mechanical Engineering Technology, United States. [2]Instituto Politécnico Nacional - IPN, Escuela Superior de Fisica y Matematicas, Mexico. [3]Instituto Mexicano del Petróleo, Catalysis, Mexico. [4]University of Pittsburgh, Mechanical and Materials Science and Engineering Department, United States. [5]University of Houston, Texas Center for Superconductivity, United States.

▸ **17:30 - 18:00 SD4-O023 Invited Talk ADVANCES IN 3-D CHARACTERIZATION OF NANOMATERIALS USING ELECTRON TOMOGRAPHY**

Ilke Arslan[1]

[1]Argonne National Laboratory, Center for Nanoscale Materials, United States.

■ **18:00 - 18:15 SD4-O024 USE OF HIGH RESOLUTION TRANSMISSION AND SCANNING ELECTRON MICROSCOPIES IN CHARACTERIZING NANOSTRUCTURED ENERGY MATERIALS**

Oomman Varghese[1]

[1]University of Houston, Department of Physics, United States.

Symposium D5

IN-SITU AND OPERANDO MICROSCOPY OF ELECTRONIC AND ENERGY MATERIALS

Haimei Zheng / Lawrence Berkeley National Laboratory
Teruyasu Mizoguchi / University of Tokyo
Mario Miki Yoshida / Centro de Investigación en Materiales Avanzados S.C.
Xiaoqing Pan / University of California

MONDAY, AUGUST 20
ROOM: MAYA I

▸ **08:45 - 09:15 SD5-O001 Invited Talk ATOMIC RESOLUTION IN-SITU IMAGING OF 2D MATERIALS AT ELEVATED TEMPERATURES AND UNDER ELECTRICAL BIASING**

Jamie Warner[1]

[1]University of Oxford, Materials, United Kingdom, Channel Islands & Isle of Man.

▸ **09:15 - 09:45 SD5-O002 Invited Talk ATOMIC INSIGHT INTO FRANK-VAN DE MERWE GROWTH MECHANISM IN 2D MXENES**

Xiahan Sang[1], Yu Xie[2], Dundar Yilmaz[3], Roghayyeh Lotfi[3], Mohamed Alhabeb[4], Alireza Ostadhossein[3], Babak Anasori[4], Weiwei Sun[5], Xufan Li[6], Kai Xiao[1], Paul Kent[1], Adri Van Duin[3], Yury Gogotsi[7], Raymond Unocic[1]

[1]Oak Ridge National Laboratory, Center for Nanophase Materials Sciences, United States. [2]Rice University, Department of Materials Science, United States. [3]Penn State University, Mechanical Engineering, United States. [4]Drexel University, Materials Science and Engineering, United States. [5]Northwestern University, Center for Nanophase Materials Sciences, United States. [6]Honda Research Institute, NA, United States. [7]Drexel University, Materials Science, United States.

■ **09:45 - 10:00 SD5-O003 IN-SITU ATOMIC-SCALE OBSERVATION OF INTERMEDIATE PATHWAYS OF MELTING AND CRYSTALLIZATION OF SUPPORTED BI-NANOPARTICLES IN THE TEM**

Leonard Francis[1], Junjie Li[1]

[1]International Iberian Nanotechnology Laboratory - INL, Department of Advanced Electron Microscopy, Imaging and Spectroscopy, Portugal.

■ **10:00 - 10:15 SD5-O004 IN-SITU STUDY OF THE DEWETTING BEHAVIOR OF Au/Ni BILAYER FILMS**

Klaus Van Benthem[1]

[1]University of California, Davis, Materials Science and Engineering, United States.

▸ **10:30 - 11:00 SD5-O005 Invited Talk IN-SITU MICROSCOPY FOR SUB-10nm MATERIALS**

Litao Sun[1]

[1]Southeast University, School of Electronic Science and Engineering, China.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY II
PROF. YUICHI IKUHARA

▸ **12:30 - 13:00 SD5-O006 Invited Talk IN SITU STUDIES OF THE INTERCALATION OF GRAPHITE**

B. C. Regan[1,2]

[1]University of California, Los Angeles, California NanoSystems Institute, United States. [2]University of California, Los Angeles, Department of Physics and Astronomy, United States.

■ **13:00 - 13:15 SD5-O007 REPLICATING REAL-WORLD ELECTROCHEMISTRY IN MULTIMODAL LIQUID CELL MICROSCOPY**

Daan Hein Alsem[1], Tyler Mefford[2], Khim Karki[1], Norman Salmon[1], William Chueh[2]

[1]Hummingbird Scientific, R&D, United States. [2]Stanford University, Materials Science and Engineering, United States.

■ **13:15 - 13:30 SD5-O008 DIRECT OBSERVATION OF THREE-DIMENSIONAL DISTRIBUTION AND DYNAMICS OF SINGLE IONS IN AN IONIC LIQUID**

Yuki Sugimori[1], Tomohiro Miyata[1], Teruyasu Mizoguchi[1]

[1]The University of Tokyo, Institute of Industrial Science, Japan.

▸ **13:30 - 14:00 SD5-O009 Invited Talk IN SITU ELECTRON MICROSCOPY OF BATTERY MATERIALS**

Reza Shahbazian Yassar[1]

[1]University of Illinois at Chicago, Mechanical Engineering, United States.

☒ **14:00 - 16:00 Lunch time**

▸ **16:00 - 16:30 SD5-O010 Invited Talk ON THE DEGRADATION OF PtNi NANOCATALYSTS FOR PEM FUEL CELLS: AN IDENTICAL LOCATION ABERRATION-CORRECTED TEM STUDY**

Somaye Rasouli[1], Naotoshi Nakashima[2], Paulo Ferreira[1,3]

[1]The University of Texas at Austin, Materials Science and Engineering, United States. [2]Kyushu University, Applied Chemistry, Japan. [3]International Iberian Nanotechnology Laboratory - INL, Advanced Electron Microscopy, Imaging and Spectroscopy, Portugal.

■ **16:30 - 16:45 SD5-O011 INVESTIGATION OF LIQUID AND GAS USING ATOMIC RESOLUTION STEM-EELS**

Teruyasu Mizoguchi[1], Tomohiro Miyata[1], Yuki Sugimori[1]

[1]The University of Tokyo, Institute of Industrial Science, Japan.

■ **16:45 - 17:00 SD5-O012 DYNAMIC SURFACE PROCESSES OF THE INITIAL STAGES OF Cu OXIDATION**

Judith Yang[1]

[1]University of Pittsburgh, Chemical and Petroleum Engineering, United States.

● **17:30-18:30 Science, Technology and Society Lecture SENER**

MONDAY, AUGUST 20
ROOM: TERRACE

◪ **18:30 -20:30 POSTER SESSION & COFFEE BREAK**

■ **SD5-P001 ELECTRON HOLOGRAPHY OF POROUS SPHERICAL MAGNETITE NANOSTRUCTURES**

Diana Aracely Vazquez Vargas[1], Arturo Ponce Pedraza[2], Blanca Monárrez Cordero[1], Patricia Amézaga Madrid[1], Mario Miki Yoshida[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Physics of materials, Mexico. [2]University of Texas at San Antonio, Physics and Astronomy, United States.

■ **SD5-P002 MICROSTRUCTURAL EVOLUTION OF CU-FE-TI BASED OXIDES COATINGS STUDIED BY IN-SITU ELECTRON MICROSCOPY HEAT TREATMENT**

Pedro Pizá Ruiz[1,2], Angélica Sáenz Trevizo[3], Patricia Amézaga Madrid[3], Carlos Elias Ornelas[1], Oscar Omar Solís Canto[1], Ysmael Verde Gomez[2], Mario Miki Yoshida[3]

[1]Centro de Investigación en Materiales Avanzados, S.C., Nanotech, Mexico. [2]Instituto Tecnológico de Cancún, Div. de Estudios de Posgrado, Mexico. [3]Centro de Investigación en Materiales Avanzados, S.C., Fisica, Mexico.

■ **SD5-P003 HEXAGONAL ZNO NANOCRYSTALS OBTAINED BY VARIOUS CHEMICAL ROUTES**

Danelia del Carmen Sanchez Pedrero[1], Osiris Escamilla Luna[1], Fabiola del Carmen Gomez Torres[1], Saul García López[1], Ma Guadalupe Garnica Romo[2], Laura Lorena Díaz Flores[1]

[1]Universidad Juárez Autónoma de Tabasco, División Académica de Ingeniería y Arquitectura, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ingeniería Civil, Mexico.

■ **SD5-P004 EFFECT OF IN-SITU HEAT TREATMENT IN THE MICROSTRUCTURE OF AL-CU-FE BASED OXIDES COATINGS**

Oswaldo Esquivel Pereyra[1], Diana Vasquez Vargas[1], Pedro Pizá Ruiz[1], Patricia Amézaga Madrid[1], Carlos Elias Ornelas[1], Oscar Omar Solís Canto[1], Mario Miki Yoshida[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Fisica de materiales, Mexico.

TUESDAY, AUGUST 21
ROOM: MAYA I

▸ **09:00 - 09:30 SD5-O013 Invited Talk NEW DESIGN STRATEGIES FOR THE FORMATION OF POROUS MATERIALS DERIVED FROM THE IMAGING OF DYNAMIC PROCESSES**

Joe Patterson[1]

[1]Technische Universiteit Eindhoven, Chemical Engineering and Chemistry, Netherlands.

▸ **09:30 - 10:00 SD5-O014 Invited Talk DEEP LEARNING BASED IMAGE RESTORATION AND ATOM SEGMENTATION FOR CONTINUOUS DATA STREAMS**

Mengshu Ge[1], Shize Yang[1], Huolin Xin[2]

[1]Brookhaven National Laboratory, CFN, United States. [2]Brookhaven National Laboratory, Center for Functional Nanomaterials, United States.

■ **10:00 - 10:15 SD5-O015 CHARGED GRAIN BOUNDARIES IN IONIC CERAMICS FOR ENERGY APPLICATIONS**

Vikrant Karra[1], Edwin Garcia[1]

[1]Purdue University, Materials Engineering, United States.

▸ **10:15 - 10:45 SD5-O016 Invited Talk QUANTITATIVE IN SITU CHARACTERIZATION OF MAGNETIC SPIN TEXTURES IN THE TRANSMISSION ELECTRON MICROSCOPE**

Rafal Dunin Borkowski[1], Andras Kovacs[1]

[1]Forschungszentrum Juelich GmbH, Ernst Ruska-Centre for Microscopy and Spectroscopy with Electrons, Germany.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY III
DR. AMANDA S. BARNARD

▸ **12:30 - 13:00 SD5-O017 Invited Talk DESIGN OF NEW MATERIALS IN SOLUTION: INSIGHTS FROM IN-SITU ELECTRON MICROSCOPY**

Eli Sutter[1]

[1]University of Nebraska-Lincoln, Mechanical and Materials Engineering, United States.

■ **13:00 - 13:15 SD5-O018 REAL TIME IMAGING OF IRON OXIDE GROWTH WITH LIQUID CELL ELECTRON MICROSCOPY**

Matthew Hauwiller[1], Wenjing Zheng[2], Haimei Zheng[1,3]

[1]Lawrence Berkeley National Laboratory, Materials Sciences Division, United States. [2]Tianjin University, Materials Science and Engineering, China. [3]University of California, Berkeley, Department of Materials Science and Engineering, United States.

▸ **13:15 - 13:45 SD5-O019 Invited Talk NANOPARTICLE SELF-ASSEMBLY BY SOLVENT EVAPORATION, VAN DER WAALS INTERACTION, AND STERIC HINDRANCE**

Jaewon Lee[1], Elias Nakouzi[1], Jaehun Chun[1], Dongsheng Li[1]

[1]Pacific Northwest National Laboratory, Physical and Computational Sciences Directorate, United States.

▸ **13:45 - 14:15 SD5-O020 Invited Talk LONG-RANGE INTERACTIONS BETWEEN NANOPARTICLES OBSERVED BY LIQUID-PHASE STEM**

Elisa Iseth Cepeda Pérez[1], Niels de Jonge[1,2]

[1]INM - Leibniz-Institute for New Materials, Innovative Electron Microscopy, Germany. [2]Saarland University, Department of Physics, Germany.

14:00 - 16:00 Lunch time

▸ **16:00 - 16:30 SD5-O021 Invited Talk IN SITU TEM STUDY OF 2D MATERIALS FORMATION PROCESS**

Hong-Gang Liao[1]

[1]Xiamen University, Chemistry and Chemical engineering Department, China.

■ **16:30 - 16:45 SD5-O022 REVERSIBLE TRANSFORMATIONS OF LEAD NANOPARTICLES**

Wenjing Zheng[1,2], Kaiyang Niu[1], Jun Kang[1], Lin-Wang Wang[1], Haimei Zheng[1]

[1]Lawrence Berkeley National Laboratory, Materials Sciences Division, United States. [2]Tianjin University, Materials Science and Engineering, China.

■ **16:45 - 17:00 SD5-O023 A NEW FRAMEWORK FOR INTERPRETING CHEMICAL KINETICS OF NANOCRYSTAL FORMATION BASED ON KINETIC DATA DERIVED FROM LIQUID CELL ELECTRON MICROSCOPY**

Taylor Woehl[1]

[1]University of Maryland, Chemical and Biomolecular Engineering, United States.

Symposium D6

CHARACTERIZATION OF NANOMATERIALS USING DIFFRACTION AND COMBINED TECHNIQUES

Lauro Bucio Galindo / Universidad Nacional Autonoma de Mexico
Thomas N. Blanton / International Centre for Diffraction Data 12 Campus
José Miguel Delgado / Universidad de Los Andes

WEDNESDAY, AUGUST 22
ROOM: VALLARTA

Session: Characterization of Nanomaterials Using Diffraction and Combined Techniques

SESSION CHAIR: THOMA BLANTON

08:00 - 08:30 SD6-O001 Invited Talk 100 YEARS OF SCHERRER EQUATION: NO ALTERNATIVES YET?
Matteo Leoni[1]
[1]Università degli Studi di Trento, DICAM, Italy.

08:30 - 09:00 SD6-O002 Invited Talk CERAMIC DIELECTRICS AND PIEZOELECTRICS: LOCAL STRUCTURES AND THEIR CHANGE TO TEMPERATURE AND FIELD
Jacob Jones[1]
[1]North Carolina State University, Materials Science and Engineering, United States.

09:00 - 09:30 SD6-O003 Invited Talk USE OF XRD AND PDF ANALYSIS TO DEFINE NANOSCALE DISORDER IN NANOSHEET ELECTRODES
Scott Misture[1]
[1]Alfred University, Materials Science, United States.

09:30 - 09:45 SD6-O004 4D ULTRA-FAST X-RAY IMAGING OF LATTICE DYNAMICS AT THE NANOSCALE
Mathew Cherukara[1], Kiran Sasikumar[2], Subramanian Sankaranarayanan[2], Ross Harder[1]
[1]Argonne National Laboratory, Advanced Photon Source, United States. [2]Argonne National Laboratory, Center for Nanoscale Materials, United States.

09:45 - 10:00 SD6-O005 PROBING NANOSCALE STRUCTURE OF DISORDERED MATERIALS USING 4-DIMENSIONAL SCANNING TRANSMISSION ELECTRON MICROSCOPY
Menglin Zhu[1], Soohyun Im[1], Michelle Paquette[2], Nathan Oyler[3], Paul Rulis[2], Ridwan Sakidja[4], Jinwoo Hwang[1]
[1]The Ohio State University, Materials Science and Engineering, United States. [2]University of Missouri, Department of Physics and Astronomy, United States. [3]University of Missouri, Department of Chemistry, United States. [4]Missouri State University, Physics, Astronomy, and Materials Science, United States.

10:00 - 10:30 SD6-O006 Invited Talk MICROSTRUCTURAL CHARACTERIZATION OF ZnO

NANOSTRUCTURES THROUGH X-RAY DIFFRACTION AND ELECTRON MICROSCOPY

Eric M. Rivera Muñoz[1], Batriz Marcela Millán Malo[1], Alejandro Manzano Ramirez[2], Héctor Guzmán Carrillo[2]

[1]Universidad Nacional Autónoma de México, Centro de Física Aplicada y Tecnología Avanzada, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, , Mexico.

▸ **10:30 - 11:00 SD6-O007 Invited Talk CEMENT HYDRATION PRODUCTS CHARACTERIZED BY COMBINED PDF AND RIETVELD ANALYSES**

Miguel A. G. Aranda[1], Ana Cuesta[2], Angeles G. de la Torre[3], Isabel Santacruz[3], Monica Dapiaggi[4]

[1]ALBA synchrotron, Experiments Division, Spain. [2]Universidad de Málaga, Qumica Inorganica, Spain. [3]Universidad de Málaga, Departamento de Quimica Inorganica, Spain. [4]University of Milan, Department of Earth Sciences Ardito Desio, Italy.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY IV NOBEL PRIZE IN CHEMISTRY 2016
PROF. BEN L. FERINGA

Session: Characterization of Nanomaterials Using Diffraction and Combined Techniques

SESSION CHAIR: JOSE MIGUEL DELGADO

▸ **12:30 - 13:00 SD6-O008 Invited Talk CHARACTERIZATION BY TEM ORIENTATION IMAGING (EBSD-TEM) IN COMBINATION WITH STRAIN ANALYSIS , 3D DIFFRACTION TOMOGRAPHY AND E-PDF AT NANOMETER SCALE**

Stavros Nicolopoulos[1], Partha Pratim Das[1]

[1]NanoMEGAS SPRL, Research and Development, Belgium.

■ **13:00 - 13:15 SD6-O009 TREATMENT OF BACKGROUND IN POORLY CRYSTALLIZED MATERIALS BY XRD WITH BRAGG-BRENTANO GEOMETRY**

Lauro Bucio[1]

[1]Instituto de Física - Universidad Nacional Autónoma de México, Laboratorio de Cristalofísica y Materiales Naturales, Mexico.

■ **13:15 - 13:30 SD6-O010 CHARACTERIZATION AND PHASE IDENTIFICATION OF MATERIALS USING THE POWDER DIFFRACTION FILE™**

Tom Blanton[1], Justin Blanton[1]

[1]International Centre for Diffraction Data, ICDD, United States.

■ **13:30 - 13:45 SD6-O011 STRUCTURAL CHARACTERIZATION OF NANOMATERIALS USING SOME OF THE FACILITIES OF THE PDF-4+ DATABASE**

José Miguel Delgado[1]

[1]Universidad de los Andes, Facultad de Ciencias, Departamento de Química, Laboratorio de Cristalografía-LNDRX, Venezuela.

▸ **13:45 - 14:15 SD6-O012 Invited Talk SIZE EFFECTS IN DIFFRACTION ANALYSIS OF NANOCRYSTALLINE POWDER SAMPLES**

Ismail Noyan[1]

[1]Columbia University in the City of New York, Dept. of Appl. Phys. & Appl. Math., United States.

14:00 - 16:00 Lunch time

Session: Characterization of Nanomaterials Using Diffraction and Combined Techniques

SESSION CHAIR: LAURO BUCIO

▸ **16:00 - 16:30 SD6-O013 Invited Talk COMBINING XRPD, PDF AND TEM TO CHARACTERIZE SPIONs**

Fabio Furlan Ferreira[1], Beatriz de Lourdes Henrique[1], Daniele Ribeiro Araujo[1], Tatiane Nassar Britos[2], Paula Haddad[2]

[1]Universidade Federal do Abc, Center for Natural and Human Sciences (CCNH), Brazil. [2]Universidade Federal de São Paulo, Chemistry Department, Brazil.

▸ **16:30 - 17:00 SD6-O014 Invited Talk X-RAY DIFFRACTION CHARACTERIZATION OF Au NANOPARTICLES SUPPORTED ON HIERARCHICAL MESOPOROUS SILICA DECORATED WITH Fe_2O_3**

Batriz Marcela Millán Malo[1], Carmen Peza Ledesma[1], Eric M. Rivera Muñoz[1]

[1]Universidad Nacional Autónoma de México, Centro de Física Aplicada y Tecnología Avanzada, Mexico.

■ **17:00 - 17:15 SD6-O015 OPTIMIZING THE METASTABILITY OF HIGH-STRENGTH ULTRAFINE GRAINED MICROSTRUCTURE LARGE STRAIN MACHINING**

Sepideh Abolghasem[1], Luis Felipe Hernandez Rivera[2], Niyireth Alicia Porras Holguin[2], Fabio Arturo Rojas Mora[2]
[1]Universidad de los Andes, Industrial Engineering, Colombia. [2]Universidad de los Andes, Mechanical Engineering, Colombia.

- **17:15 - 17:30 SD6-0016 HOMOGENEITY OF CO-MILLED POWDERS OF A356 ALUMINUM ALLOY AND Si_3N_4.**
Heydi Milagros Fernández Echevarría[1,2], Matteo Leoni[2], Stella Ordoñez[1]
[1]Universidad de Santiago de Chile, Department of Metallurgical Engineering, Chile. [2]Università degli Studi di Trento, DICAM, Italy.

WEDNESDAY, AUGUST 22
ROOM: TERRACE

- **18:30 -20:30 POSTER SESSION & COFFEE BREAK**

- **SD6-P001 HPLC CHARACTERIZATION AND CUANTIFICATION OF ALKALOIDS AND TOCOPHEROLS USING AN ISOCRATIC METHOD**
Miguel Gonzalo Arenas Quevedo[1]
[1]Instituto Politécnico Nacional - IPN, Sección de Estudios de Posgrado e Investigación, Mexico.

- **SD6-P002 MICROPOLARIMETRY WITH UNCONVENTIONAL POLARIZED LIGHT FOR THE DETERMINATION OF OPTICAL PROPERTIES OF MATERIALS**
Rafael Espinosa Luna[1], Guadalupe Lopez Morales[1], Jacqueline Isamar Muro Ríos[1]
[1]Centro de Investigaciones en Optica, Dept. Photonics, Mexico.

- **SD6-P003 TEXTURE INFLUENCE ON THE ELECTRONIC STRUCTURE IN LEAD-FREE PEROSVKITE ELECTRO-CERAMICS BASED ON $Ba_{1-x}Ca_xTi_{0.9}Zr_{0.1}O_3$ BY HR-XRD AND MICRO-XANES**
Guillermo M Herrera[1], Jesus Canche[2], Maria Elena Montero Cabrera[2], Jasper Plaisier[3], Diane Eichert[3], Luis E. Fuentes Cobas[4]
[1]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Física de Materiales, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., Medio Ambiente, Mexico. [3]Elettra-Sincrotrone Trieste, Physics, Italy. [4]Centro de Investigación en Materiales Avanzados, S.C., Física de Materiales, Mexico.

- **SD6-P004 STUDYING THE STRUCTURE OF SELF-ASSEMBLED GOLD NANOWIRES USING THE PAIR DISTRIBUTION FUNCTION**
Jorge Vargas[1], Valeri Petkov[1], Guillaume Viau[2], Romuald Poteau[2]
[1]Central Michigan University, Department of Physics, United States. [2]Université de Toulouse, LPCNO, INSA, France.

- **SD6-P005 RADIAL DISTRIBUTION FUNCTION IN POROUS COORDINATION POLYMERS CHARACTERIZATION. Fe BTC & Cu BTC, CASE STUDY**
Frank Echevarría Castillo[1]
[1]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Laboratorio Nacional de Conversión y Almacenamiento de Energía, Mexico.

- **SD6-P006 STRUCTURAL XRD and SEM CHARACTERIZACION OF THE SOLID SOLUTION $SrTi_{1-x}Zr_xO_3$ with Pr^{3+}**
Germán López Pacheco[1], María Elena Villafuerte Castrejón[1], Federico González García[2]
[1]Instituto de Investigaciones en Materiales, Materiales cerámicos, Mexico. [2]Universidad Autónoma Metropolitana, Ingeniería de Procesos e Hidráulica, Mexico.

- **SD6-P007 CHARACTERIZATION OF MWCNT@$Sn_xTi_{1-x}O_2$ COMPOSITES FOR LITHIUM-ION BATTERIES**
Patricia Altuzar Coello[1], Mirna Ramírez Vargas[1], Oscar Jaramillo Quintero[2], Marina Rincón González[1]
[1]Universidad Nacional Autónoma de México, Instituto de Energías Renovables, Mexico. [2]Universidad Nacional Autónoma de México, CONACYT-Instituto de Energías Renovables, Mexico.

- **SD6-P008 THERMODYNAMICS OF THE SILICA NANOPARTICLE SYNTHESIS FOR IMPROVING EFFICIENCY IN REACTION MEDIA.**
Carlos Alfonso Luna Mayo[1], Jose Miguel Reyes Zarate[1], Andrea Acevedo[2], Cecilia Salinas[1], Erick Flores Romero[1,3], Juan Carlos Cheang Wong[1]
[1]Instituto de Física - Universidad Nacional Autónoma de México, Fisica Experimental, Mexico. [2]Instituto de Ciencias Físicas, UNAM, Fisica Experimental, Mexico. [3]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Catedras CONACyT, Mexico.

- **SD6-P009 STRUCTURAL AND OPTICAL PROPERTIES OF SILICA MATRIX WITH EMBEDDED CAROTENES**
Diana Leticia Espericueta González[1,2], Gerardo Ortega Zarzosa[3], Azdrubal Lobo Guerrero Serrano[4], Dora Erika Espericueta González[2], José

Refugio Martínez Mendoza[5], Francisco Raúl Barrientos Hernández[4]

[1]Instituto Tecnológico Superior de San Luis Potosí, Capital, , Mexico. [2]Universidad Autónoma de San Luis Potosí, Facultad de Ingeniería, Mexico. [3]Universidad Autónoma de San Luis Potosí, Facultad de Ciencias, Mexico. [4]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Mexico. [5]Universidad Autónoma de San Luis Potosí, Departamento de Físico-Matemáticas, Mexico.

- **SD6-P010 ELECTROCHEMICAL SMALL-ANGLE SCATTERING AND REFLECTIVITY PROBES FOR THE STUDY OF COMPLEX FLUID-SOLID INTERFACES**

Jose Banuelos[1]

[1]University of Texas at El Paso, Physics, United States.

- **SD6-P011 STRUCTURAL EVOLUTION OF GOLD CLUSTERS: FROM MOLECULES TO BULK**

Forrest Kaatz[1], Adhemar Bultheel[2]

[1]Mesalands Community College, Institutional Research, United States. [2]Katholieke Universiteit Leuven, Computer Science, Belgium.

- **SD6-P012 CALCIUM SILICATE HYDRATES AND THE HYDRATION OF TRICALCIUM SILICATE**

America Yazmin Torres[1], Lauro Bucio[2], Nora Ariadna Pérez Castellanos[2], Perla Yolanda López Camacho[1]

[1]Universidad Autónoma Metropolitana, CNI-CBS, Mexico. [2]Universidad Nacional Autónoma de México, IFUNAM, Mexico.

- **SD6-P013 CHARACTERIZATION OF ARuO3 PEROVSKITES AND ARuO3@GRAPHENE COMPOSITE (A=Ca,Sr) FOR ELECTROCATALYTIC ACTIVITY**

Patricia Altuzar Coello[1], Elizabeth Chavira[2], Diego Ramón Lobato Peralta[1], Ana Karina Cuentas Gallegos[1], Beatriz Millán Malo[3], Eric Rivera Muñóz[3]

[1]Universidad Nacional Autónoma de México, Instituto de Energías Renovables, Mexico. [2]Universidad Nacional Autónoma de México, Instituto de Investigación en Materiales, Mexico. [3]Universidad Nacional Autónoma de México, Centro de Física Aplicada y Tecnología Avanzada, Mexico.

- **SD6-P014 SURFACE CRYSTALLOGRAPHY: IMPACT ON CONVERSION AND ENERGY STORAGE**

Lucero Torres Lopez[1], Manuel Avila Santos[1], Rene Salvador Lopez Cabrera[1]

[1]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Nanotecnologia y Materiales Funcionales, Mexico.

- **SD6-P015 EVOLUTION OF MORPHOLOGY IN ZnO+xMWCNTs NANOSYSTEM.**

Manuel Eduardo Serrano Nava[1], Mykola Kakazey[1], Marina Vlasova[1]

[1]Universidad Autónoma del Estado de Morelos, Centro de Investigación en Ingeniería y Ciencias Aplicadas, CIICAp, UAEM, Mexico.

- **SD6-P016 ANALYSIS OF THE MOLARITY OF A LIQUID SUBSTANCE BY INTERFEROMETRY**

Yadira Fabiola López Alvarez[1], Francisco Gerardo Peña Lecona[2], Francisco Javier Casillas Rodriguez[2], Jesus Muñoz Maciel[2], Victor Manuel Duran Ramírez[2]

[1]University of Guadalajara, Departamento de Ciencias Exactas y Tecnología, Mexico. [2]Universidad de Guadalajara, Departamento de Ciencias Exactas y Tecnología, Mexico.

- **SD6-P017 CHARACTERIZATION OF THE Ti13Ta3Sn POWDER ALLOY BY MECHANICAL ALLOYING USING X-RAY DIFFRACTION**

Edgar Pio[1], Claudio Aguilar[1], Pablo Martin[1], Luis Bejar[2], Ariosto Medina[3], Mangalaraja Ramalinga Viswanathan[4]

[1]Universidad Técnica Federico Santa María, Departamento de Ingeniería Metalúrgica y Materiales, Chile. [2]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ingeniería Mecánica, Mexico. [3]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigaciones en Metalurgia y Materiales, Mexico. [4]Universidad de Concepción, Laboratorio de Cerámicos Avanzados y Nanotecnología, Departamento de Ingeniería de Materiales, Chile.

- **SD6-P018 MAGNETIC STUDY ON A NANO-METRIC SCALE K-Sr-Cr-O SYSTEM.**

Gustavo Antonio Jimenez Garcia[1], Elizabeth Chavira[1], Jesús Angel Arenas Alatorre[2], Adriana Tejeda Cruz[1], Karla Eriseth Morales Reyes[1], Omar Novelo[1], Jorge Barreto[2]

[1]Instituto de Investigaciones en Materiales, , Mexico. [2]Instituto de Física - Universidad Nacional Autónoma de México, , Mexico.

- **SD6-P019 SYNTHESIS AND CHARACTERIZATION OF Ta_2O_5/GRAPHENE COMPOSITES**

Jorge Rafael Puga Lechuga[1], Gustavo Tavizón Alvarado[1]

[1]Universidad Nacional Autónoma de México, Física y Química Teórica, Mexico.

Symposium D7

STRUCTURAL AND CHEMICAL CHARACTERIZATION OF METALS AND ALLOYS

Ramiro Perez Campos / Universidad Nacional Autónoma de México
Jesús Angel Arenas Alatorre / Universidad Nacional Autónoma de México
Carlos Alberto León Patiño / Universidad Michoacana de San Nicolás de Hidalgo

WEDNESDAY, AUGUST 22
ROOM: TERRACE

18:30 -20:30 POSTER SESSION & COFFEE BREAK

- **SD7-P001 MECHANICAL BEHAVIOR AT HIGH TEMPERATURE OF A CAST Al-5Cu-0.36Mn ALLOY WITH ADDITION OF V, Ti AND Zr**

  Sergio Haro[1], Ramón Lamas[2], Rafael Colás[2], Dheerendra K. Dwivedi[3], Josep Picas[4]

  [1]Universidad Autónoma de Zacatecas, Unidad Académica de Ingeniería, Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico. [3]Indian Institute of Technology Roorkee, Department of Mechanical & Industrial Eng., India. [4]Universitat Politècnica de Catalunya, Centre de Disseny d Aliatges Lleugers i Tractaments de Superfície, Spain.

- **SD7-P002 SYNTESIS OF THE $(Sr_{1-x}, Y_x)_2FeNbO_6$ DOUBLE PEROVSKITE AND CHARACTERIZATION BY MOSSBAUER SPECTROSCOPY.**

  Martin Romero[1], Raul Gomez[1], Raúl Escamilla[2], Maria Luisa Marquina[1], Jose Luis Perez[1], Roberto Hinojosa[1], Jose Luis Rosas[2]

  [1]Facultad de Ciencias, UNAM, Departamento de Fisica, Mexico. [2]Instituto de Investigaciones en Materiales, Materia condensada, Mexico.

- **SD7-P003 ANALYSIS OF 3D PLANAR LAMINATION IN A WELDED SECTION OF API 5L X52 APPLLYING THE FINITE ELEMENT METHOD**

  Gerardo Teran Mendez[1], Selene Capula Colindres[1], Martin Fernández Cueto[2], Daniel Angeles Herrera[3], Julio C. Velázquez Altamirano[1]

  [1]Instituto Politécnico Nacional - IPN, Departamento de Ingeniería Química Industrial, Mexico. [2]Instituto Tecnológico de Tuxtepec, Departamento de Metalmecánica, Mexico. [3]Industria privada, Instituto Tecnológico Superior de Tantoyuca (ITSTA), Subdirección de Posgrado e Investigación, Mexico.

- **SD7-P004 NEW LANTHANIDE LUMINESCENT MATERIALS BASED ON SCHIFF BASE COMPLEXES**

  Karla Estefanía Cureño Hernández[1], Silvia Elena Castillo Blum[1]

  [1]Universidad Nacional Autónoma de México, Departamento de Química Inorgánica y Nuclear, Facultad de Química, Mexico.

- **SD7-P005 MICROSTRUCTURAL CHARACTERIZATION OF PIGMENTS BELONGING TO THE EXCONVENT OF SAN NICOLAS OF TOLENTINO ACTOPAN IN STATE OF HIDALGO**

  Jesús Benjamín Ortega Lazcano[1], María Isabel Reyes Valderrama[2], Juan Hernández Avila[2], Eleazar Salinas Rodriguez[2], Demetrio Mendoza Anaya[3], Ventura Rodriguez Lugo[2]

  [1]Universidad Autónoma del Estado de Hidalgo, Instituto de Ciencias e Ingeniería, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Instituto de Ciencias Básicas e Ingeniería, Mexico.

[3]Universidad Autónoma del Estado de Hidalgo, Instituto Nacional de Investigaciones Nucleares, Mexico.

- **SD7-P006 BIOSYNTHESIS OF IRON OXIDE NANOPARTICLES OBTAINED BY THEOBROMA CACAO L**

Eduardo Aguirre Muñoz[1], Jesús Ángel Arenas Alatorre[2], Rosa Ángeles Vázquez Garcìa[1], Eleazar Salinas Rodriguez[1], Eduardo Cerecedo Saenz[1], Ventura Rodriguez Lugo[1]

[1]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Instituto de Ciencias Básicas e Ingeniería, Mexico. [2]Universidad Nacional Autónoma de México, Instituto de Física, Universidad Nacional Autónoma de México, Mexico.

- **SD7-P007 EFFECT OF WC ON MECHANICAL AND STRUCTURAL PROPERTIES OF Ti-Zr ALLOY**

Umanel Azazael Hernández González[1], Héctor Abraham Jaramillo Castro[2], Francisco Alvarado Hernández[2], Omar Jiménez Alemán[3], Victor Hugo Baltazar Hernández[2]

[1]Instituto Politécnico Nacional - UPIIZ, Ingeniería, Mexico. [2]Universidad Autónoma de Zacatecas, Unidad Académica de Ingeniería I, Mexico. [3]Universidad de Guadalajara, Centro Universitario de Ciencias Exactas e Ingenierías, Mexico.

- **SD7-P008 FIRST PRINCIPLES STUDIES OF IRON AND SAMARIO DOPED HYDROXYAPATITE.**

Sandra Esteban Gomez[1], Ariadna Sanchez Castillo[2], Eleazar Salinas Rodríguez[1], Maria Isabel Reyes Valderrama[1], Ventura Rodriguez Lugo[1]

[1]Universidad Autónoma del Estado de Hidalgo, Instituto de Ciencias Básicas e Ingeniería, Área Académica de Ciencias de la Tierra y Materiales, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Escuela Superior de Apan, Mexico.

- **SD7-P009 SYNTHESIS AND CHARACTERIZATION OF AuPt BIMETALLIC NANOPARTICLES FOR METHANOL OXIDATION REACTION**

America Libertad Higareda Alvear[1], Gerardo Antonio Rosas Trejo[2], Ramiro Perez Campos[1], Rodrigo Alonso Esparza Muñoz[1]

[1]Universidad Nacional Autónoma de México, Centro de Física Aplicada y Tecnología Avanzada, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigación en Metalurgia y Materiales, Mexico.

- **SD7-P010 INFLUENCE OF MG ADDITIONS, HOT-EXTRUSION AND COLD-ROLLING IN AGED 2024 ALLOY**

Lilia Jasiel García Hernández[1], Carlos Gamaliel Garay Reyes[1], Aisse Hernández Arrollo[2], Ivanovich Estrada[1], Hansel Manuel Medrano Prieto[1], Maria Cristina Maldonado Orozco[2], Roberto Martinez Sanchez[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Metalurgia e Integridad Estructural, Mexico. [2]Universidad Autónoma de Chihuahua, Facultad de Ingeniería, Mexico.

- **SD7-P011 EFFECT OF CHROMIUM AS GRAIN GROWTH INHIBITOR IN WC-10CO ALLOYS**

Carlos Gamaliel Garay Reyes[1], Marco Antonio Ruiz Esparza Rodriguez[1], Ivanovich Estrada[1], Sergio Eliseo Hernández Martínez[2], Jose Luis Hernandez Rivera[2], Jose de Jesus Cruz Rivera[2], Javier Servando Castro[3], Roberto Martinez Sanchez[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Metalurgia e Integridad Estructural, Mexico. [2]Universidad Autónoma de San Luis Potosí, Instituto de Metalurgia, Mexico. [3]Universidad Autónoma de Ciudad Juárez, Facultad de Ingenieria, Mexico.

- **SD7-P012 MICROSTRUCTURAL CHARACTERIZATION OF AL-CU-MG ALLOY REINFORCED WITH WC PARTICLES SYNTHETIZED BY MECHANICAL ALLOYING**

Gustavo Rodríguez Cabriales[1], Adam Mauricio Lometo Sánchez[2], Ivanovich Estrada Guel[1], Carlos Gamaliel Garay Reyes[1], Maria Cristina Maldonado Orozco[2], Roberto Martínez Sánchez[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Metalurgia e Integridad Estructural, Mexico. [2]Universidad Autónoma de Chihuahua, Facultad de Ingeniería, Mexico.

- **SD7-P013 CRYSTAL STRUCTURE STUDY OF THE $Mo_{1-x}Fe_xB_3$ COMPOUND**

Jesus Alberto Leon Flores[1], Jose Luis Rosas Huerta[1], Lázaro Huerta[1], Martin Romero[2], José Luis Pérez Mazariego[2], Jesús Angel Arenas Alatorre[3], Raul Escamilla[1]

[1]Instituto de Investigaciones en Materiales, Materia Condensada y Criogénia, Mexico. [2]Facultad de Ciencias, UNAM, Física Atómica y Molecular, Mexico. [3]Instituto de Física - Universidad Nacional Autónoma de México, Materia Condensada, Mexico.

- **SD7-P014 SYNTHESIS AND CHARACTERIZATION OF REDUCED GRAPHENE OXIDE**

Flor Cecilia Sánchez Vargas[1], Daniel Sánchez Campos[2], María Isabel Reyes Valderrama[2], Mónica Araceli Camacho González[1], Venkata Krishna Karthik Tangirala[3], Demetrio Mendoza Anaya[4], Ventura Rodriguez Lugo[2]

[1]Universidad Tecnológica de Tecamac, Área Académica de nanomateriales, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Instituto de Ciencias Básicas e Ingeniería, Mexico. [3]Universidad Autónoma del Estado de Hidalgo, Escuela Superior de Tepeji del Rio, Universidad Autónoma del Estado de Hidalgo, Mexico. [4]Instituto Nacional de Investigaciones Nucleares (ININ), Instituto Nacional de Investigaciones Nucleares, Mexico.

- **SD7-P015 INFLUENCE OF AlN PHASE ON THE MECHANICAL AND TRIBOLOGICAL PROPERTIES OF TiAlN COATINGS FOR WEAR RESISTANT APPLICATIONS**

Hernán Darío Mejía[1], Aida Milena Echavarría[1], Gilberto Bejarano Gaitan[1]

[1]Universidad de Antioquía, Ingeniería de Materiales, Colombia.

- **SD7-P016 DETERMINATION OF THE CONTROL AGENT IN THE NANOCRYSTALLINE MULTICOMPONENT SYSTEM (ALCOCRFEMNNI).**

Marco Antonio Ruiz Esparza Rodriguez[1], Carlos Gamaliel Garay Reyes[1], Jose Manuel Mendoza Duarte[1], Ivanovich Estrada[1], Roberto Martinez Sanchez[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Metalurgia e Integridad Estructural, Mexico.

- **SD7-P017 ANALYSIS OF THE STRUCTURE, MICROSTRUCTURE AND MECHANICAL PROPERTIES OF A MULTICOMPONENT SYSTEM ALCOCRFEMNNI SINTERED CONVENTIONALLY AND BY ELECTROMAGNETIC INDUCTION.**

Marco Antonio Ruiz Esparza Rodriguez[1], Carlos Gamaliel Garay Reyes[1], Jose Manuel Mendoza Duarte[1], Ivanovich Estrada[1], Roberto Martinez Sanchez[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Metalurgia e Integridad Estructural, Mexico.

- **SD7-P018 GRAIN REFINEMENT OF Al-5Cu AND Al-7Si ALLOYS**

Jhony Salvatore Hernandez Bermudez[1], Sergio Haro Rodriguez[1], Ramon Lamas Martinez[2], Omero Alonso Gonzalez[1], Enric Martin Fuentes[3]

[1]Universidad Autónoma de Zacatecas, Maestría en Ciencia e Ingeniería de los Materiales, Unidad Académica de Ingeniería, Mexico. [2]Universidad Autónoma de Nuevo León, Doctorado en Ingeniería de Materiales, Facultad de Ingeniería Mecánica y Eléctrica, Mexico. [3]Universitat Politècnica de Catalunya, Centre de Disseny d Aliatges Lleugers i Tractaments de Superfície, Spain.

- **SD7-P019 EFFECT OF Ni ADDITIONS AND AGING HEAT TREATMENT ON THE PRECIPITATION SEQUENCE OF THETA Al_2Cu PHASE IN Al-Si-Cu AGED ALLOYS.**

Hansel Manuel Medrano Prieto[1], Carlos Gamaliel Garay Reyes[1], Ivanovich Estrada Guel[1], Marco Antonio Ruíz Esparza Rodríguez[1], María Cristina Maldonado Orozco[2], Roberto Martínez Sánchez[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Metalurgia e Integridad Estructural, Mexico. [2]Universidad Autónoma de Chihuahua, Facultad de Ingeniería, Mexico.

- **SD7-P020 EFFECT OF Cu ON THE β'(NiAl) PRECIPITATES IN A COMPOSITIONAL GRADIENT OF FERRITIC Fe-Ni-Al ALLOYS**

Cynthia Dayana Hernandez Jimenez[1], Carlos Ferreira Palma[1], Víctor Manuel López Hirata[1], Nicolás Cayetano Castro[2], Hugo Martínez Gutiérrez[2], Jorge Luis González Velázquez[1], Héctor Javier Dorantes Rosales[1]

[1]Instituto Politécnico Nacional - IPN, ESIQIE-Departamento de Ingeniería en Metalurgia y Materiales, Mexico. [2]Instituto Politécnico Nacional - IPN, CNMN, Mexico.

- **SD7-P021 SYNTHESIS AND CHARACTERIZATION OF Fe-Cu MULTILAYER THIN FILMS SYNTHETIZED BY SPUTTERING METHOD**

Jes?s Angel Arenas Alatorre[1], Víctor Manuel Mendoza Pérez[2], Héctor Cruz Manjarrez[1]

[1]Universidad Nacional Autónoma de México, Instituto de Física, Mexico. [2]Universidad Politécnica del Valle de México, Naotecnología, Mexico.

- **SD7-P022 CHARACTERISATION OF ALUMINIUM HYDROXIDES GENERATED IN ELECTROCOAGULATION REACTOR**

Juan Carlos Ortiz Cuellar[1], Jesus Fernando Martinez Villafañe[1], Carlos Rodrigo Muñiz Valdez[1], Jesus Salvador Luna Alvarez[1], Ruben Villa[1], Gregorio Gonzalez[2], Victor Vazquez[3]

[1]Universidad Autónoma de Coahuila, Facultad de Ingenieria, Mexico. [2]Instituto Tecnológico Superior de Monclova, Ingenieria, Mexico. [3]Universidad de Sonora, Ingeniería Química y Metalurgia, Mexico.

- **SD7-P023 HIGH TEMPERATURE BEHAVIOR OF NiAl COATINGS ON HAYNES® 282 ALLOY PRODUCED BY THERMOCHEMICAL DIFFUSION.**

Mario Aldebaran Mejia Martinez[1], Nelson Federico Garza Montes De Oca[1], Rafael Colás[2], Francisco Aurelio Perez Gonzalez[1], Javier

Humberto Ramirez Ramirez[1], Juan Antonio Perez Patiño[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ingenieria Mecanica y Electrica, Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ingenieria Mecania y Electrica, Mexico.

- **SD7-P024 STRUCTURAL STUDY OF HYDROXIAPATITE SYNTHETIZED BY THE HYDROTHERMAL METHOD ASSISTED BY MICROWAVE**

Denisse Martínez[1], Lesly Sabina Villaseñor Cerón[2], Juan Hernández Avila[2], Efraín Rubio Rosas[3], Demetrio Mendoza Anaya[4], Mónica Araceli Camacho González[1], Ventura Rodriguez Lugo[2]

[1]Universidad Tecnológica de Tecamac, NAnotecnologìa, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Instituto de Ciencias Básicas e Ingeniería, Mexico. [3]Benemerita Universidad Autonoma de Puebla, Centro Universitario de Vinculación y Transferencia de Tecnología, Mexico. [4]Instituto Nacional de Investigaciones Nucleares (ININ), Instituto Nacional de Investigaciones Nucleares, Mexico.

- **SD7-P025 RECOVERY OF PRECIOUS METALS WITH ALTERNATIVE METHODS IN EXHALATIVE SEDIMENTARY PLACES IN THE STATE OF HIDALGO**

Edmundo Roldan[1], Juan Hernández Avila[1], Ventura Rodriguez Lugo[1], Francisco Raúl Barrientos[1], Eduardo Cerecedo Saenz[1], María Isabel Reyes[1], Eleazar Salinas Rodríguez[1]

[1]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Mexico.

- **SD7-P026 FATIGUE STUDY AND EFFECTS OF HEAT INPUT ON THE MICROSTRUCTURES AND MECHANICAL PROPERTIES OF TIG-WELDED 6061-T6 ALLOY JOINTS.**

Hugo Rojas[1], Arturo Molina Ocampo[1], Socorro Valdez[2], Bernardo Campillo[2], Sergio Serna[1]

[1]Centro de Investigación en Ingenieria y Ciencias Aplicadas, Tecnología de Materiales, Mexico. [2]Instituto de Ciencias Físicas, UNAM, Ciencia de Materiales, Mexico.

- **SD7-P027 EFFECTS OF GRAPHITE IN THE STRUCTURAL AND MECHANICAL PROPERTIES OF TiZr ALLOYS**

Héctor Abraham Jaramillo Castro[1], Umanel Azazael Hernández González[2], Francisco Alvarado Hernández[3], Omar Jimenez Aleman[4], Victor Hugo Baltazar Hernandez[3]

[1]Universidad Politecnica de Zacatecas, Ingeniería Industrial, Mexico. [2]Instituto Politécnico Nacional - UPIIZ, Ingeniería, Mexico. [3]Universidad Autónoma de Zacatecas, Unidad Académica de Ingeniería I, Mexico. [4]Universidad de Guadalajara, Centro Universitario de Ciencias Exactas e Ingenierías, Mexico.

- **SD7-P028 PROPERTIES OF INTERMEDIATE PHASES IN FeS–PbS–Ga(In)$_2$S$_3$**

Mirsalim Asadov[1], Solmaz Mustafaeva[2], Ulviya Hasanova[1], Kazimir Yanushkevic[3], Sergey Nikitov[4]

[1]Institute of Catalysis and Inorganic Chemistry, Azerbaijan National Academy of Sciences, Baku, Azerbaijan. [2]Institute of Physics, Azerbaijan National Academy of Sciences, Baku, Azerbaijan. [3]Scientific-Practical Material Research Centre of the National Academy of Sciences, Minsk, Belarus. [4]Kotelnikov Institute of Radio Engineering and Electronics (IRE), RAS, Moscow, Russia.

- **SD7-P029 DEVELOPMENT OF A PROTOTYPE FOR CHARACTERIZATION OF NANOSTRUCTURED MATERIALS USING INFRARED PHOTOTHERMAL RADIOMETRY (PTR)**

Veronica Ofelia Torres Guerrero[1], Ruben Velazquez Hernandez[1], Minerva Robles Agudo[1], Jose de Santiago Luna[1], Ivo Neftali Ayala Garcia[2], Ignacio Rojas Rodriguez[1]

[1]Universidad Tecnológica de Querétaro, Nanotechnology, Mexico. [2]Universidad Tecnológica de Querétaro, Mechatronics, Mexico.

- **SD7-P030 MICROSTRUCTURAL ANALYSIS OF ALUMINUM-GRAPHITE COMPOSITE PREPARED BY MECHANICAL MILLING AND SINTERED USING AN ALTERNATIVE ROUTE**

José Mendoza[1], Francisco Robles[2], Carlos Gamaliel Garay Reyes[1], Ivanovich Estrada[1], Roberto Martinez Sanchez[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Metalurgia e integridad estructural, Mexico. [2]University of Houston, Mechanical Engineering Technology, United States.

- **SD7-P031 CHARACTERIZATION OF A LEAD CONCENTRATE FOR THE STUDY OF SILVER RECOVERY.**

Edgar Martinez Rojo[1], Aislin Michelle Teja Ruiz[1], Martin Perez Reyes[1], Miguel Perez Labra[1], Mizraim Uriel Flores Guerrero[2], Julio Cesar Juarez Tapia[1]

[1]Universidad Autónoma del Estado de Hidalgo, Area Academica de Ciencias de la Tierra y Materiales, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Área de Electromecánica Industrial, Mexico.

- **SD7-P032 CHARACTERIZATION OF THE POTASSIUM JAROSITE SYNTHESIZED WITH AN IMPROVED METHOD. EFFECT OF TIME AND TEMPERATURE**

Elias Hermández Lazcano[1], Juan Hernández Avila[1], María Isabel Reyes Valderrama[1], Eduardo

Cerecedo Saenz[1], Ventura Rodriguez Lugo[1], Eleazar Salinas Rodríguez[1]
[1]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Instituto de Ciencias Básicas e Ingeniería, Mexico.

- **SD7-P033 SYNTHESIS, STRUCTURE AND MAGNETIC PROPERTIES OF NOVEL COPPER(II) CLUSTERS BRIDGED BY SCHIFF BASE AND AZIDE.**
Cándida Pastor[1]
[1]Benemerita Universidad Autonoma de Puebla, Instituto de Química, Mexico.

- **SD7-P034 INFLUENCE OF THE COOLING RATE ON MICROSTRUCTURE AND MECHANICAL PROPERTIES OF A HOT ROLLED STEEL PLATE**
Sergio Haro[1], Juan José Ramirez[2], Arheli Rodriguez[3], Rafael Colás[2]
[1]Universidad Autónoma de Zacatecas, Unidad Académica de Ingeniería, Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Electrica, Mexico. [3]SISAMEX, Sistemas Automotrices de México, Mexico.

- **SD7-P035 DISPERSION OF CARBON NANOTUBES FOR EVALUATION OF OZONE GAS SENSITIVITY**
Selene Irais Capula Colindres[1], Gerardo Teran Mendez[2], Esther Torres[3]
[1]Instituto Politécnico Nacional - IPN, metallurgy, Mexico. [2]Instituto Politécnico Nacional - IPN, metalurgia, Mexico. [3]Instituto Politécnico Nacional - IPN - ESIQIE, Química, Mexico.

- **SD7-P036 MICROSTRUCTURAL EVALUATION OF A Zn-Al-Ag ALLOY**
Janet Beltrán González[1], Georgina Carbajal de la Torre[1], Marco Antonio Espinosa Medina[1]
[1]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ingeniería Mecánica, Mexico.

- **SD7-P037 SYNTHESIS AND CHARACTERIZATION OF AL MG NANOWIRES BY SPONTANEOUS GROWTH IN WATER VAPOR ATMOSPHERE**
Jesus Israel Barrera Delgado[1], José Oswald Téllez[1], Minerva Robles Agudo[2], Saúl López Herrera[1], Ignacio Rojas Rodriguez[1]
[1]Universidad Tecnológica de Querétaro, Industrial, Mexico. [2]Cátedra CONACYT-Universidad Tecnológica de Querétaro, Industrial, Mexico.

- **SD7-P038 PRELIMINARY PROOFS OF CATIONIC INTERCHANGE OF A DIATOMITE**
Edgar O. Serrano Mejía[1], Ma. I. Reyes Valderrama[1], Eduardo Cerecedo Sáenz[1], Alma D. Román Gutierrez[2], Ventura Rodríguez Lugo[1], Eleazar Salinas[1], Juan Hernández Ávila[1]
[1]Universidad Autónoma del Estado de Hidalgo, Academic Area of Earth Sciences and Materials, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Academic Area of Chemistry of Foods, Mexico.

- **SD7-P039 CHARACTERIZATION OF SODIUM JAROSITE NANOPARTICLES WHITE SILVER**
Gladys L. López Garnica[1], Magda G. Sánchez Trujillo[2], Ventura Rodríguez Lugo[1], Eduardo Cerecedo Sáenz[1], Demetrio Mendoza Anaya[3], Juan Hernández Ávila[1], Ma. I. Reyes Valderrama[1], Eleazar Salinas[1]
[1]Universidad Autónoma del Estado de Hidalgo, Academic Area of Earth Sciences and Materials, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Superior School of Tepeji del Río, Mexico. [3]Instituto Nacional de Investigaciones Nucleares (ININ), Advanced Materials, Mexico.

- **SD7-P040 CHARACTERIZATION OF GOLD RECOVERED FROM E-WASTE BY OXIDATIVE LEACHING USING OZONE**
Y. Z. Hernández Vega[1], Magda G. Sánchez Trujillo[2], Ventura Rodríguez Lugo[1], Eduardo Cerecedo Sáenz[1], Juan Hernández Ávila[1], Ma. I. Reyes Valderrama[1], Eleazar Salinas[1]
[1]Universidad Autónoma del Estado de Hidalgo, Academic Area of Earth Sciences and Materials, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Superior School of Tepeji del Río, Mexico.

- **SD7-P041 COLLOIDAL SOLOUTION OF Au-NPs BY GREEN CHEMISTRY METTHOD**
Karla Jenny Lozano Rojas[1], Arturo García Bórquez[2], Jesus Israel Guzman Castañeda[3], Jesus Roman Lopez[4]
[1]Instituto Politécnico Nacional - IPN, materials science, Mexico. [2]Instituto Politécnico Nacional - IPN, Ciencia de Materiales, Mexico. [3]Instituto Politécnico Nacional - IPN - ESIQIE, Formacion Basica, Mexico. [4]Universidad Nacional Autónoma de México, ICN, Mexico.

- **SD7-P042 INFLUENCE OF CARBURIZING PROCESS ON RESIDUAL STRESSES AND DISTORTION IN TRANSMISSION SHAFTS FOR HEAVY TRUCK**
Sergio Haro[1], Marco Antonio Delgado López[2], René de Jesús Cerda Rojas[2], Arheli Zaid Rodríguez Diaz[3], Rafael Colás[4]
[1]Universidad Autónoma de Zacatecas, Unidad Académica de Ingeniería, Mexico. [2]SISAMEX, Centro de Desarrollo Tecnológico y Humano CDTH, SISAMEX, Mexico. [3]SISAMEX, Centro de Desarrollo Tecnológico y Humano CDTH, SISAMEX, Mexico. [4]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico.

■ **SD7-P043 ROLE OF Li^+ ION IN IMPROVED CRYSTALLIZATION AND THE LUMINESCENCE ENHANCEMENT OF UPCONVERSION IN YTTRIUM PHOSPHORS**

Evelyn Fernanda Huerta Cuevas[1], Alma Ramos[2], José Gerardo Cabañas Moreno[3], Ciro Falcony Guajardo[4]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Nanociencias y Nanoptecnología, Mexico. [2]Institut National de la Recherche Scientifique, Université du Québec, , Canada. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Nanociencias y Nanoecnología, Mexico. [4]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Física, Mexico.

■ **SD7-P044 MICROHARDNESS AND MICROSTRUCTURAL BEHAVIOR IN 35Cr-45Ni CAST HEAT-RESISTING ALLOY AS A FUNCTION OF AGING TIME**

Sergio Haro[1], Ireri Aydée Sustaita Torres[1], Rosa Dolores Ortega Reyes[2], Rafael Colás[2]

[1]Universidad Autónoma de Zacatecas, Unidad Académica de Ingeniería, Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico.

■ **SD7-P045 EFFECTS OF SI ON CRYSTALLIZATION AND PHASE FORMATION IN A CU-HF-SI GLASSY ALLOYS**

Ricardo Luis Romales Magaña[1], Octavio Lozada[1], Carlos Flores Morales[1], Ignacio Alejandro Figueroa Vargas[1]

[1]Instituto de Investigaciones en Materiales, Materiales Metálicos y Cerámicos, Mexico.

■ **SD7-P046 CHARACTERIZATION OF BENTONITE AFTER CATIONIC INTERCHANGE TO RECOVER RARE EARTHS FROM A SEDIMENTARY LEACHED MINERAL**

Claudia A. Amador Ortega[1], Magda G. Sánchez Trujillo[2], Ventura Rodríguez Lugo[1], Eduardo Cerecedo Sáenz[1], Demetrio Mendoza Anaya[3], Juan Hernández Ávila[1], Ma. I. Reyes Valderrama[1], Eleazar Salinas[1]

[1]Universidad Autónoma del Estado de Hidalgo, Academic Area of Earth Sciences and Materials, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Superior School of Tepeji del Río, Mexico. [3]Instituto Nacional de Investigaciones Nucleares (ININ), Advanced Materials, Mexico.

■ **SD7-P047 CALCULATION OF GIBBS FREE ENERGY AND THE OCCUPATION OF MOLYBDENUM IN CuMo ALLOYS SYNTHESIZED BY MECHANICAL ALLOY**

Oscar Jose Hernandez[1], Claudio Aguilar[2], Luis Bejar[3], Ariosto Medina[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Insituto de Investigación en Metalurgia y Materiales, Mexico. [2]Universidad Técnica Federico Santa María, Departamento de Ingeniería Metalúrgica y Materiales, Chile. [3]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ingeniería Mecánica, Mexico.

■ **SD7-P048 GREEN CHEMISTRY IN THE SYNTHESIS OF Ag NANOPARTICLES**

Jesus Israel Guzman Castañeda[1], Karla Jenny Lozano Rojas[2], Roman Cabrera Sierra[3], Ivonne Berenice Lozano Rojas[4]

[1]Instituto Politécnico Nacional - IPN - ESIQIE, Formacion Basica, Mexico. [2]Instituto Politécnico Nacional - IPN, materials science, Mexico. [3]Instituto Politécnico Nacional - IPN - ESIQIE, IQI, Mexico. [4]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, SIP, Mexico.

■ **SD7-P049 PHOTOLUMINISCENT PROPERTIES EFFECTS OF ERBIUM-DOPED GLASSES FROM TERNARY SYSTEM $CdO-V2O_5-P_2O_5$**

Universidad de Puebla[1], Rosendo Leovigildo Lozada Morales[2], Ulises Caldiño[3], Abraham N. Meza Rocha[2]

[1]Benemerita Universidad Autonoma de Puebla, FCFM BUAP, Mexico. [2]Benemerita Universidad Autonoma de Puebla, FCFM, Mexico. [3]Universidad Autónoma Metropolitana, , Mexico.

■ **SD7-P050 STRUCTURAL AND ELECTROCHEMICAL CHARACTERIZATION OF AuPt AND AuPd BIMETALLIC NANOPARTICLES**

Rodrigo Alonso Esparza Muñoz[1], America Libertad Higareda Alvear[1], Alejandro Alan Santoveña Uribe[1], Jose Maya Cornejo[1], Daniel Bahena Uribe[2], Carlos Alberto Rodriguez Proenza[1], Gerardo Antonio Rosas Trejo[3], Ramiro Perez Campos[1]

[1]Universidad Nacional Autónoma de México, CFATA, Mexico. [2]Cinvestav Zacatenco, Laboratorio Avanzado de Nanoscopía Electrónica, Mexico. [3]Universidad Michoacana de San Nicolás de Hidalgo, IIM, Mexico.

■ **SD7-P051 SINTESYS AND CHARACTERIZATION OF BIMETALLIC AgPd NANOPARTICLES AS ELECTROCATALYSTS FOR ENHANCED METHANOL OXIDATION**

Alejandro Alan Santoveña Uribe[1], Jose Maya Cornejo[1], Kaleb Jair González Arredondo[2], Daniel

Bahena Uribe[3], Ramiro Perez Campos[1], Rodrigo Esparza[1], José Luis López Miranda[4]

[1]Centro de Física Aplicada y Tecnología Avanzada UNAM, Metallic Materials, Mexico. [2]Universidad Tecnológica de Querétaro, División Industrial, Mexico. [3]Cinvestav Zacatenco, Laboratorio Avanzado de Nanoscopía Electrónica, Mexico. [4]Centro de Física Aplicada y Tecnología Avanzada UNAM, Nanotechnology, Mexico.

■ **SD7-P052 CHARACTERIZATION BY MEB OF CARBON NANOTUBES OBTAINED BY THE CHEMICAL VAPOR DEPOSITION METHOD**

Luis Bejar[1], Carolina Parra[2], Claudio Aguilar[3], Abraham Mejia[1], Ariosto Medina[4], Griselda Sesento[5], Engelbert Huape Padilla[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ingeniería Mecánica, Mexico. [2]Universidad Técnica Federico Santa María, Departamento de fisica, Chile. [3]Universidad Técnica Federico Santa María, Departamento de Metalúrgica y Materiales, Chile. [4]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigación de Metalurgia y Materiales, Mexico. [5]Universidad Michoacana de San Nicolás de Hidalgo, Coordinación de la Investigación Científica, Mexico.

■ **SD7-P053 MANUFACTURING AND CHARACTERIZATION OF METALLIC FOAMS 75% Ti-13% Ta-12% Sn**

Luis Bejar[1], Claudio Aguilar[2], Abraham Mejia[3], Carolina Parra[4], Ariosto Medina[5], Oracio Garcia[3], Hector Carreón[5]

[1]Universidad Michoacana de San Nicolás de Hidalgo, , Mexico. [2]Universidad Técnica Federico Santa María, Departamento de Metalúrgica y Materiales, Chile. [3]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ingeniería Mecánica, Mexico. [4]Universidad Técnica Federico Santa María, Departamento de Fisica, Chile. [5]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigación de Metalurgia y Materiales, Mexico.

■ **SD7-P054 STRUCTURAL CHARACTERIZATION OF BIMETALLIC NANOPARTICLES OF Au-Pt TO FABRICATION OF ELECTROCATALYSTS**

Amado Francisco García Ruiz[1], America Libertad Higareda Alvear[2], Miguel Angel Ramírez Arias[2], Rodrigo Esparza[2], Ramiro Pérez Campos[2]

[1]Instituto Politécnico Nacional - IPN, Academias de Física. UPIICSA, Mexico. [2]Universidad Nacional Autónoma de México, CFATA, Mexico.

■ **SD7-P055 THE EFFECT OF Cu ON THE MICROSTRUCTURE OF Al-Cu-Si-Mg ALLOY**

Bertha Yunuén Casas Herrera[1], Ismeli Alfonso[1], Luis Bejar[2]

[1]Universidad Nacional Autónoma de México, Materiales, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Mecanica, Mexico.

■ **SD7-P056 NON-DESTRUCTIVE SPATIALLY RESOLVED QUALITATIVE ASSESSMENT OF TEXTURE TO CHARACTERIZE A CULTURAL HERITAGE OBJECT**

Valeria Mertinger[1], Mate Sepsi[2], Benke Marton[2]

[1]University of Miskolc, Institute of Physical Metallurgy, Metalforming and Nanotechnology, Hungary. [2]University of Miskolc, Institute of Physical Metallurgy Metalforming and Nanotechnology, Hungary.

■ **SD7-P057 CORRELATION OF MICROSTRUCTURE WITH HARD MAGNETIC PROPERTIES OF GLASS-COATED MnBi MICROWIRES**

Jonathan Zamora Mendieta[1,2], Alejandro Jiménez[3], Israel Betancourt[2], Rafael Pérez del Real[3], Manuel Vázquez[3]

[1]Instituto de Ciencias de Materiales de Madrid, CSIC, Procesos de Imanación, Spain. [2]Instituto de Investigaciones en Materiales, Materiales Metálicos y Cerámicos, Mexico. [3]ICMM-CSIC, Procesos de Imanación, Spain.

■ **SD7-P058 MINERALOGICAL AND GEOCHEMICAL ANALYSES OF ZAPOTITLAN SALINAS, PUEBLA, MEXICO: A STUDY WITH LABORATOTY X RAY TECHNIQUES**

Primavera Lopez Salazar[1], Javier Martínez Juárez[1], Gabriel Juarez Diaz[2], Erika Serrano Silva[3]

[1]Benemerita Universidad Autonoma de Puebla, Centro de Investigacion en Dispositivos Semiconductores, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Facultad de Ciencias de la Computación, Mexico. [3]Benemerita Universidad Autonoma de Puebla, Facultad de Ingenieria, Mexico.

■ **SD7-P059 PHYSICAL PROPERTIES OF CuO AND Cu2O NANOLAYERS GROWN ON SILICON SUBSTRATES OBTAINED BY THERMAL COPPER OXIDATION**

Jose Eladio Flores Mena[1], Joel Diaz Reyes[2], Miguel Galvan Arellano[3]

[1]Benemerita Universidad Autonoma de Puebla, Facultad de Ciencias de la Electronica, Mexico. [2]Instituto Politécnico Nacional - IPN, Centro de Investigaciones en Biotecnologia Aplicada, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Departamento de Ingenieria Electrica, Mexico.

■ **SD7-P060 SYNTHESIS OF NOVEL NANOCRYSTALLINE fcc Ti-Ta-BASED ALLOY BY MECHANICAL ALLOYING**

Claudio Aguilar[1], Edgar Pio[1], Ariosto Medina[2], Ismeli Alfonso[3], Luis Bejar[4]

[1]Universidad Técnica Federico Santa María, Departamento de Ingeniería Metalúrgica y Materiales, Chile. [2]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigaciones Metalurgica y Materiales, Mexico. [3]Universidad Nacional Autónoma de México, Instituto de Investigaciones en Materiales, Mexico. [4]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ingeniería Mecánica, Mexico.

- **SD7-P061 X-RAY RECIPROCAL SPACE MAPPING STUDY ON DOUBLE HETEROEPITAXIAL AlGaSb STRUCTURE**

  Gabriel Juarez Diaz[1], Primavera López Salazar[2], Javier Martínez Juárez[2], Alvaro David Hernandez De la Luz[2], Angel Rodriguez Victoria[2]

  [1]Benemerita Universidad Autonoma de Puebla, Facultad de Ciencias de la Computación, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Centro de Investigación en Dispositivos Semiconductores, Mexico.

- **SD7-P062 FABRICATION OF CERAMIC TILES USING CLAY BODIES MODIFIED WITH COFFEE BAGASSE CHARACTERIZED BY ASTM STANDARDS**

  Dulce Jeanette Garcia Garcia[1], Alejandro Escobedo Morales[1], Heriberto Hernández Cocoletzi[1]

  [1]Benemerita Universidad Autonoma de Puebla, Facultad de ingeniería química, Mexico.

- **SD7-P063 SYNTHESIS AND CHARACTERIZATION OF MODIFIED TiO2-GO COMPOSITES**

  Daniela Kristell Calvo Ramos[1], Sandra Andrea Mayén Hernández[1], M. Vega González[2], Rodrigo Alonso Esparza Muñoz[3], José Santos Cruz[1]

  [1]Universidad Autónoma de Querétaro, Facultad de Química, Mexico. [2]Universidad Nacional Autónoma de México, Centro de Geociencias, Mexico. [3]Universidad Nacional Autónoma de México, Centro de Física Aplicada y Tecnología Avanzada, Mexico.

- **SD7-P064 SYNTHESIS AND CHARACTERIZATION OF COMPOSITE BIOMATERIAL (POLYURETHANE-NANOPARTICLE); WITH POTENTIAL APPLICATION FOR USE IN BIOPSY MARKER**

  Martín Castillo Santillan[1], Ángel Ramon Hernández Martínez[1], Miriam Rocío Estévez González[1]

  [1]Universidad Nacional Autónoma de México, Centro de Física Aplicada y Tecnología Avanzada, Mexico.

- **SD7-P065 CELLULOSE NANOCRYSTALS FROM DIFFERENT SOURCES OBTAINED BY DES PROCESSING FUNCTIONING AS STABILIZERS FOR NONAQUEOUS HIGH INTERNAL PHASE EMULSIONS**

  Ana Laura Ruiz Deance[1,2], Josue David Mota Morales[2]

  [1]Escuela Nacional de Estudios Superiores - Juriquilla, Licenciatura en Tecnología, Mexico. [2]Universidad Nacional Autónoma de México, Centro de Física Aplicada y Tecnología Avanzada, Mexico.

- **SD7-P066 EFFECT OF MILLING TIME ON CHANGE OF POLIMORFOS TiO2.**

  Elizabeth Castillo Torres[1], Miguel Montoya Davila[1], Victor Hugo Baltazar Hernadez[1], Francisco Alvardo Hernandez[1]

  [1]Universidad Autónoma de Zacatecas, Mestría en Ciencia e Ingenieria de los Matreiales, Mexico.

THURSDAY, AUGUST 23
ROOM: VALLARTA

Session 1

SESSION CHAIR: JESÚS ARENAS A.

- **08:30 - 09:00 SD7-O001 Invited Talk ELECTRON MICROSCOPY CHARACTERIZATION OF SUPERDUPLEX STAINLESS STEEL 2507 WITH FRAGILIZATION THERMAL TREATMENT**

  Alberto Ruiz[1], Victor Sayil López Álvarez[1], Gildardo Gutiérrez Vargas[1], Reyes-Gasga Jose[2]

  [1]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigación en Metalurgia y Materiales, Mexico. [2]Universidad Nacional Autónoma de México, Instituto de Física, Mexico.

- **09:00 - 09:15 SD7-O002 ANALYSIS OF THE INFLUENCE OF THE AUSTEMPERING HEAT TRATMENT OVER THE BEHAVIOR IN THERMAL FATIGUE OF GRAY IRON AND COMPACTED GRAPHITE IRON**

  Luis Angel Aguirre Hernández[1], María de Jesús Pérez[2], Efraín Almanza[3], Nelly Rodríguez[3]

  [1]Instituto Tecnológico de Saltillo, División de Estudios de Posgrado, Mexico. [2]Instituto Tecnológico de Saltillo, Metal-Mecáncia, Mexico. [3]Instituto Tecnológico de Saltillo, Metal-Mecánica, Mexico.

- **09:15 - 09:30 SD7-O003 INFLUENCE OF THE PRECIPITATION HEAT TREATMENT TEMPERATURE ON THE METALLURGICAL, MICROSTRUCTURE, THERMAL, PROPERTIES, AND MICROHARDNESS OF AN ALPHA BRASS**

  Ignacio Rojas Rodriguez[1], Alberto Lara Guevara[2], Mario Enrique Rodríguez García[3], Julio Cesar

Mosquera Mosquera[4], Porfirio Esau Martínez Muñoz[1], Minerva Robles Agudo[1]

[1]Universidad Tecnológica de Querétaro, Div. Industrial (Materiales), Mexico. [2]Universidad Autónoma de Querétaro, División de Posgrado, Facultad de Informática, Mexico. [3]Universidad Nacional Autónoma de México, CFATA, Mexico. [4]Universidad del Quindío, Instituto Interdisciplinario de las Ciencias, Colombia.

■ **09:30 - 09:45 SD7-O004 RELATIONSHIP BETWEEN HEAT INPUT AND CRACKING IN WELDS OF AUTOMOTIVE COMPONENTS.**

Luis Miguel Pérez[1], Rafael Colás[1], Sergio Haro[2], Arheli Rodriguez[3], Héctor Torres[1,3]

[1]Universidad Autónoma de Nuevo León, PhD in materials engineering, Mexico. [2]Universidad Autónoma de Zacatecas, Master of Science and Materials Engineering, Mexico. [3]SISAMEX, CDTH, Sistemas Automotrices de México, Mexico.

■ **09:45 - 10:00 SD7-O005 MECHANICAL CHARACTERIZATION OF Mg MATRIX COMPOSITES REINFORCED WITH AlN AND SiC FABRICATED BY STIR CASTING ROUTE**

Carlos Arreola Fernández[1], William Argenis Carrillo Falcón[1], José Egberto Bedolla Becerril[1], José Lemus Ruiz[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigación en Metalurgia y Materiales, Mexico.

■ **10:00 - 10:15 SD7-O006 TRANSFORMATION OF NBC TO NB_3NI_2SI DURING AGING OF A CAST 34CR-47NI-0.5C HEAT RESISTANT ALLOY**

Rosa Dolores Ortega Reyes[1], Rafael Colás[1], Sergio Haro[2], Ireri Aydée Sustaita Torres[2], Francisco Aurelio Perez Gonzalez[1], Nelson Federico Garza Montes De Oca[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ingenieria Mecanica y Electrica, Mexico. [2]Universidad Autónoma de Zacatecas, Unidad Academica de Zacatecas, Mexico.

■ **10:15 - 10:30 SD7-O007 PASSIVITY MECHANISM OF Ti6Al4V ALLOY IN A PHYSIOLOGICAL HANKS SOLUTION**

Mercedes Paulina Chávez Díaz[1], Rosa María Luna Sánchez[2], Jorge Gabriel Vazquez Arenas[3], José Manuel Hallen López[1], Roman Cabrera Sierra[4]

[1]Instituto Politécnico Nacional - IPN, Metalurgia y Materiales, Mexico. [2]Universidad Autónoma Metropolitana, Energía, Mexico. [3]Instituto Politécnico Nacional - IPN, Química, Mexico. [4]Instituto Politécnico Nacional - IPN, Ingeniería Química Industrial, Mexico.

▸ **10:30 - 11:00 SD7-O008 Invited Talk CRACK GROW RATE IN STRESS CORROSION CRACKING OF LOW CARBON PIPELINE STEELS**

Antonio Contreras Cuevas[1], Veronica Monserrat Camarena[2], Ricardo Galván Martínez[3], Luis Ricardo Jacobo Cisneros[4]

[1]Instituto Mexicano del Petróleo, Pipeline and Materials, Mexico. [2]Instituto Mexicano del Petróleo, Posgrado, Mexico. [3]Universidad Veracruzana, Unidad Anticorrosión, Instituto de Ingeniería, Mexico. [4]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigación en Metalurgia y Materiales, Mexico.

11:00-11:30 POSTER AWARDS CEREMONY & COFFEE BREAK

11:30 - 12:30 PLENARY V
PROF. GALO SOLER ILLIA

Session 2

SESSION CHAIR: RAMIRO PÉREZ CAMPOS

▸ **12:30 - 13:00 SD7-O009 Invited Talk PHYSICAL PROPERTIES DETERMINATION OF METALLIC FILMS AT NANOMETRIC-SCALE: AN OPEN FIELD IN NANOMATERIALS**

Andres Ivan Oliva Arias[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Applied Physics, Mexico.

■ **13:00 - 13:15 SD7-O010 EFFECT OF MAGNESIUM ON MICROSTRUCTURE AND MECHANICAL BEHAVIOR AT HIGH TEMPERATURE OF Al-5Cu-0.15Zr-0.20V-0.22Ti ALLOY**

Ramón Lamas[1], Sergio Haro[2], María Teresa Baile[3], Dheerendra K. Dwivedi[4], Rafael Colás[1]

[1]Universidad Autónoma de Nuevo León, Doctorado en Ingeniería de Materiales, Facultad de Ingeniería Mecánica y Eléctrica, Mexico. [2]Universidad Autónoma de Zacatecas, Maestría en Ciencia e Ingeniería de los Materiales, Unidad Académica de Ingeniería, Mexico. [3]Universitat Politècnica de Catalunya, Centre de Disseny d Aliatges Lleugers i Tractaments de Superfície, Spain. [4]Indian Institute of Technology Roorkee, Centre de Disseny d Aliatges Lleugers i Tractaments de Superfície, India.

■ **13:15 - 13:30 SD7-O011 EFFECT OF PRECIPITATES ON MECHANICAL PROPERTIES OF TI–6AL–4V ALLOY**

Martín Ricardo Barajas Alvarez[1], Alberto Ruiz[1], Victor Hugo López Morelos[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigación en Metalurgia y Materiales, Mexico.

- **13:30 - 13:45 SD7-O012 SYNTHESIS, CHARACTERIZATION AND THERMAL STABILITY OF SiO_2/TiO_2/CR-Ag MULTILAYERED PARTICLES**
  Gabriela Diaz[1]
  [1]University of Arizona, Chemical Engineering, United States.

- **13:45 - 14:00 SD7-O013 SYNTHESIS AND PROPERTIES OF PULSED ELECTRIC CURRENT SINTERED AlN/Cu COMPOSITES**
  Carlos Alberto Leon Patiño[1], Deisy Ramírez Vinasco[1], Ena Athenea Aguilar Reyes[1], Makoto Nanko[2]
  [1]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigación en Metalurgia y Materiales, Mexico. [2]Nagaoka University of Technology, Mechanical Engineering, Japan.

☒ **14:00 - 16:00 Lunch time**

Session 3

SESSION CHAIR: CARLOS A. LEÓN P.

- **16:00 - 16:15 SD7-O014 EFFECT OF LITHIUM-MAGNESIUM IN THE A380 AND A390 ALUMINUM ALLOYS ON ITS CAPACITY OF BEING WELDED WITH FSW**
  Adan Carrillo[1], Simitrio Maldonado[2], Pilar Orozco González[1], Sergio Haro[1], Enrique Alejandro Lopez[1]
  [1]Universidad Autónoma de Zacatecas, Maestría en ciencia e ingeniera de los materiales, Mexico. [2]Universidad Autónoma de Zacatecas, Maestría en ciencia e ingeniería de los materiales, Mexico.

- **16:15 - 16:30 SD7-O015 ALUMINUM ALLOY 7075-T6 BEHAVIOR UNDER ULTRASONIC FATIGUE TESTS WITH PRE-CORRODED AND NON PRE-CORRODED SPECIMENS**
  Ishvari Fernanda Zuniga[1], Gonzalo M. Dominguez Almaraz[1], Julio Adrian Ruiz Vilchez[1], Manuel Guzmán Tapia[1]
  [1]Universidad Michoacana de San Nicolás de Hidalgo, Posgrado de Ingeniería Mecánica, Mexico.

- **16:30 - 16:45 SD7-O016 STUDY OF THE EFFECT OF SIO_2 NANOPARTICLES IN A POLYMER MATRIX OF POLYMETHYL METHALRYLATE**
  Erick Javier Villalobos[1], Jose Maya Cornejo[2], Rodrigo Alonso Esparza Muñoz[2], Miriam Rocío Estévez González[2], Ramiro Perez Campos[2]
  [1]Universidad Nacional Autónoma de México, Nonotecnologia, Mexico. [2]Universidad Nacional Autónoma de México, Nanotecnologia, Mexico.

- **16:45 - 17:00 SD7-O017 CHARACTERIZATION OF NANOSCALE STRUCTURAL HETEROGENEITY IN METALLIC GLASSES USING 4-D SCANNING TRANSMISSION ELECTRON MICROSCOPY**
  Soohyun Im[1], Pengyang Zhao[1], Geun Hee Yoo[2], Eun Soo Park[2], Yunzhi Wang[1], Jinwoo Hwang[1]
  [1]The Ohio State University, Materials Science and Engineering, United States. [2]Seoul National University, Materials Science and Engineering, Korea.

- **17:00 - 17:15 SD7-O018 MORPHOLOGICAL CHARACTERIZATION OF METALLIC NANOPARTICLES BY HRTEM IMAGE ANALYSIS**
  Carlos Angeles Chavez[1], Maria Antonia Cortes Jacome[1], Jose Antonio Toledo Antonio[1]
  [1]Instituto Mexicano del Petróleo, Gerencia de Desarrollo de Materiales y Productos Químicos, Mexico.

- **17:15 - 17:30 SD7-O019 FABRICATION AND CHARACTERIZATION OF Al-Zn/Al_2O_3 COMPOSITES BY IN SITU REACTION**
  G. Rodríguez Ortiz[1], J. Rodríguez García[1], J. M. Martínez Vázquez[1]
  [1]Universidad Politécnica de Juventino Rosas, Ingeniería en Metalúrgica, Mexico.

- **17:30 - 17:45 SD7-O020 SYNTHESIS, CHARACTERIZATION AND STUDY OF CYTOTOXICITY OF Fe_3O_4 NANOPARTICLES DECORATED WITH Au, Pt AND Pd FOR MEDICAL APPLICATIONS**
  Alvaro Angeles[1], Rodrigo Esparza[2], Ramiro Pérez[2]
  [1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Laboratorio Avanzado de Nanoscopía Electrónica, Mexico. [2]Centro de Física Aplicada y Tecnología Avanzada UNAM, Departamento de Nanotecnología, Mexico.

- **17:45 - 18:00 SD7-O021 EXPLORING THE HYPERFINE STRUCTURE OF ^{133}Cs USING HIGH RESOLUTION SPECTROSCOPIES IN THE OPTICAL AND MICROWAVE REGION**
  Carlos Andrés Ortiz Cardona[1,2], Eduardo de Carlos López[2], J. Mauricio López Romero[1], Sergio Joaquín Jiménez Sandoval[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Unidad Querétaro, Mexico. [2]Centro Nacional de Metrologia, Dirección de Tiempo y Frecuencia, Mexico.

- **18:00 - 18:15 SD7-O022 CONTROLLED EVOLUTION OF THE REDUCTION PROCESS IN GRAPHENE OXIDE**

Daniel Sánchez Campos[1], María Isabel Reyes Valderrama[1], Demetrio Mendoza Anaya[2], Luis Escobar Alarcon[2], Eleazar Salinas Rodriguez[1], Venkata Krishna Karthik Tangirala[1], Ventura Rodriguez Lugo[1]

[1]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Instituto de Ciencias Básicas e Ingeniería, Mexico. [2]Instituto Nacional de Investigaciones Nucleares (ININ), Instituto Nacional de Investigaciones Nucleares, Mexico.

- **18:15 - 18:30 SD7-O023 CHARACTERIZATION OF ZINC OXIDE NANOPARTICLES GROWN BY GREEN CHEMISTRY AND ITS POTENTIAL ANTIBACTERIAL USE**

Rafael Álvarez Chimal[1,2], Victor Irahuen García Pérez[2], Jesús Angel Arenas Alatorre[1]

[1]Instituto de Física - Universidad Nacional Autónoma de México, Instituto de Física, Mexico. [2]Universidad Nacional Autónoma de México, División de Estudios de Posgrado e Investigación. Facultad de Odontología, Mexico.

Symposium E1

STRUCTURAL LIGHTWEIGHT METALLIC ALLOYS: SYNERGIES BETWEEN PROCESSING AND ALLOY DEVELOPMENT

Dietmar Letzig / Helmoltz Zentrum Geesthacht (HZG)
David Hernández Silva / Instituto Politécnico Nacional, ESIQIE
Talal Al-Samman / RWTH Aachen University
Bong Sun You / Korea Institute of Materials Science

MONDAY, AUGUST 20
ROOM: TULUM A

Session: Morning Session

SESSION CHAIR: BONG SUN YOU

- **08:00 - 08:15 SE1-O001 DENDRITIC AND NON-DENDRITIC Al-Si ALLOYS SOLIDIFIED BY DIE-CASTING AND SIMPLIFIED RHEOCASTING**

  José Federico Chávez Alcalá[1], Alfredo Hernandez Herrera[1,2]

  [1]Instituto Politécnico Nacional - IPN - ESIQIE, Department of Engineering in Metallurgy and Materials, Mexico. [2]Tecnológico de Estudios Superiores de Coacalco, Ingeniería de Materiales, Mexico.

- **08:15 - 08:30 SE1-O002 EXPLOITATION OF MATERIALS SOFTENING IN PULSATION-IMPOSED HOT SHEET METAL FORMING IN COMBINATION WITH RAPID COOLING TO IMPROVE THE FORMABILITY**

  Peter Birnbaum[1], Verena Kraeusel[1], Dirk Landgrebe[1]

  [1]Technische Universität Chemnitz, Professorship for Forming and Joining, Germany.

- **08:30 - 08:45 SE1-O003 EVOLUTION OF MICROSTRUCTURE AND MECHANICAL BEHAVIOR IN A CP-ALUMINUM PROCESSED BY A NEW SPD METHOD**

  Jose Maria Cabrera[1], Sandra Luz Rodriguez Reyna[1,2], Jessica Calvo[1], Alexander P. Zhilyaev[3,4]

  [1]Universitat Politècnica de Catalunya, Departamento de Ciencia de los Materiales e Ingeniería Metalúrgica, Spain. [2]Universidad Autónoma de San Luis Potosí, Mecánica y Eléctrica, Mexico. [3]Institute for Metals Superplasticity Problems, , Russia. [4]Nosov Magnitogorsk State Technical University, Laboratory of Mechanics of Gradient Nanomaterials, Russia.

- **08:45 - 09:00 SE1-O004 EFFECT OF CHEMICAL MODIFICATION OF AN AA3003 ALLOY ON THE MICROSTRUCTURE AND STAMPING QUALITY**

  José González Herrera[1], A. Alberto Torres Castillo[1], Emmanuel José Gutierrez Castañeda[1], Enrique Galarza[2]

  [1]Universidad Autónoma de San Luis Potosí, Instituto de Metalurgia, Mexico. [2]Valeo Engine Cooling, Quality Laboratory, Mexico.

- **09:00 - 09:15 SE1-O005 USE OF ALUMINUM ALLOY SERIES 4XXX, TO RETARD THE CORROSION SPEED IN HEAT EXCHANGERS FOR THE AUTOMOTIVE INDUSTRY**

Luis Santiago Ortiz Monroy[1], A. Alberto Torres Castillo[2], Enrique Galarza[1], Edgar Vega[1]
[1]Valeo Engine Cooling, Quality Laboratory, Mexico. [2]Universidad Autónoma de San Luis Potosí, Instituto de Metalurgia, Mexico.

- **09:15 - 09:45 SE1-O006 Invited Talk HIGH-STRENGTH LIGHT ALLOYS THROUGH PRECIPITATION HARDENING VIA MICROALLOYING AND PROCESS CONTROL: CONSIDERATIONS FOR ALLOY DESIGN**
Chamini Mendis[1]
[1]Brunel University, BCAST (Brunel Centre for Advanced Solidification Technology), United Kingdom, Channel Islands & Isle of Man.

- **09:45 - 10:15 SE1-O007 Invited Talk ENHANCED MECHANICAL AND FORMING BEHAVIOR OF TWIN ROLL CAST ZEW200 Mg ALLOY SHEETS VIA CRYSTALLOGRAPHIC TEXTURE MANIPULATION**
José Victoria Hernández[1], Sangbong Yi[1], Gerrit Kurz[1], Dietmar Letzig[1]
[1]Helmholtz Zentrum Geesthacht, Wrought Magnesium Alloys, Germany.

- **10:15 - 10:30 SE1-O008 EFFECT OF GADOLINIUM ADDITION ON THE DEFORMATION AND RECRYSTALLIZATION BEHAVIOR OF Mg SINGLE CRYSTALS**
Talal Al Samman[1], Konstantin Molodov[1], Molodov Dmitri[1]
[1]RWTH Aachen University, Institute of Physical Metallurgy and Metall Physics, Germany.

- **10:30 - 11:00 SE1-O009 Invited Talk MICROSTRUCTURE AND MECHANICAL PROPERTIES OF Ca CONTAINING AZXW3100 ALLOY SHEETS**
Sangbong Yi[1], José Victoria Hernández[1], Young Min Kim[2], Bong Sun You[3], Dietmar Letzig[1]
[1]Helmholtz Zentrum Geesthacht, Magnesium Innovation Centre, Germany. [2]Korea Institute of Materials Science, Implementation research division, Korea. [3]Korea Intitute of Materials Science, Implementation research division, Korea.

11:00-11:30 COFFE BREAK

11:30 - 12:30 PLENARY II
PROF. YUICHI IKUHARA

Session: Noon session

SESSION CHAIR: DIETMAR LETZIG

- **12:30 - 13:00 SE1-O010 Invited Talk UNDERSTANDING PRECIPITATION-HARDENING AND MECHANICAL PROPERTIES IN Mg ALLOYS BY SLIP TRACE ANALYSIS AND TEM CHARACTERIZATION**
Carmen Cepeda Jimenez[1], Maria Teresa Perez Prado[1]
[1]IMDEA Materials Institute, Physical Metallurgy, Spain.

- **13:00 - 13:30 SE1-O011 Invited Talk THE MICROSTRUCTURAL EVOLUTION AND MECHANICAL BEHAVIOR Fe AND Cr MODIFIED Ti-13Cr(wt.%)**
Carl Boehlert[1], Joann Ballor[1], Vahid Khademi[1]
[1]Michigan State University, chemical engineering and materials science, United States.

- **13:30 - 14:00 SE1-O012 Invited Talk PLASTIC DEFORMATION AND ANISOTROPY OF LONG-PERIOD-STACKING-ORDERED STRUCTURES IN MG-ZN-Y ALLOYS**
Stefanie Sandlöbes[1]
[1]RWTH Aachen University, Institut für Metallkunde und Metallphysik, Germany.

- **14:00 - 14:15 SE1-O013 INTEGRATED COMPUTATIONAL MATERIALS ENGINEERING (ICME) FOR VEHICLE LIGHTWEIGHTING**
Kaan Inal[1]
[1]University of Waterloo, Mechanical and Mechatronics Engineering, Canada.

14:00 - 16:00 Lunch time

Session: Afternoon Session

SESSION CHAIR: TALAL AL-SAMMAN

- **16:00 - 16:30 SE1-O014 Invited Talk THE EFFECT OF Sn AND Ca ADDITION ON MECHANICAL PROPERTIES AND IGNITION BEHAVIOUR OF MAGNESIUM ALLOYS SUBJECTED TO DIRECT EXTRUSION PROCESS**
Young Min Kim[1,2], Yohan Go[3], Jong Sik Suh[2], Jun Ho Bae[2], Byeong-Chan Suh[2], Bong Sun You[2]
[1]Korea Institute of Geoscience and Mineral Resources, , South Korea. [2]Korea Institute of Materials Science, Magnesium Department, South Korea. [3]Korea University of Science and Technology, Advanced Materials Engineering, South Korea.

- **16:30 - 16:45 SE1-O015 ATHERMAL INFLUENCE OF PULSED ELECTRIC CURRENT ON THE TWINNING**

BEHAVIOR AND ROLLABILITY OF Mg-3Al-1Zn ALLOY

Jie Kuang[1,2], Guoyi Tang[1], Alan Luo[3], Kai Wu[2], Jinyu Zhang[2], Gang Liu[2], Jun Sun[2]

[1]Tsinghua University, School of Materials Science and Engineering, China. [2]Xi'an Jiaotong University, State key laboratory for mechanical behavior of Materials, China. [3]The Ohio State University, Department of Materials Science and Engineering, United States.

- **16:45 - 17:00 SE1-O016 CORROSION BEHAVIOR OF NEW MAGNESIUM ALLOY**

Bong Sun You[1], Young Min Kim[2]

[1]Korea Intitute of Materials Science, Dept. Metals Research, Korea. [2]Korea Institute of Materials Science, Dept. Metals Research, Korea.

- **17:00 - 17:15 SE1-O017 Fe EFFECT ON CONTINUOUS COOLING TRANSFORMATION BEHAVIOR OF Ti-Al-Fe ALLOY**

Yong-Taek Hyun[1], Jong-Woo Won[1]

[1]Korea Institute of Materials Science, Titanium, Korea.

- **17:15 - 17:30 SE1-O018 MECHANICAL BEHAVIOR AND FRACTURE ANALYSIS IN ALUMINUM ALLOY 6061 T6 AND T4 WELDED BY GMAW, PULSED METAL TRANSFER.**

Isidro Guzman[1]

[1]Universidad Autónoma de Coahuila, Facultad de Sistemas, Mexico.

- **17:30 - 17:45 SE1-O019 REPETITIVE CORRUGATION AND STRAIGHTENING ON A 6061 ALUMINUM ALLOY. EFFECT OF HEAT TREATMENT**

S. Elizalde[1], J M. Cabrera[2], J A. Picas[2], M. Ezequiel[1], G. Gonzalez[1]

[1]Instituto de Investigaciones en Materiales, Materiales Metalicos y Cerámicos, Mexico. [2]Universitat Politècnica de Catalunya, Departamento de Ciencia de los Materiales e Ingeniería Metalúrgica, Spain.

- **17:45 - 18:00 SE1-O020 DERIVATION OF THE FORMING LIMIT DIAGRAM ON THE AL-5754 PROCESSED BY REPETITIVE CORRUGATION AND STRAIGHTENING**

Marco Alejandro Ezequiel Alvarado[1], Sergio Alberto Elizalde Huitron[1], María Teresa Baile[2], Jose Maria Cabrera[3], Ignacio Alejandro Figueroa Vargas[1], Gonzalo Gonzalez[1]

[1]Instituto de Investigaciones en Materiales, Materiales metálicos y cerámicos, Mexico. [2]Universitat Politècnica de Catalunya, Ciencia de los Materiales e Ingeniería Metalúrgica-ETSPVG, Spain. [3]Universitat Politècnica de Catalunya, Ciencia de los Materiales e Ingeniería Metalúrgica-EEBE, Spain.

- **17:30-18:30 Science, Technology and Society Lecture SENER**

MONDAY, AUGUST 20
ROOM: TERRACE

- **18:30 -20:30 POSTER SESSION & COFFEE BREAK**

- **SE1-P001 IMPLEMENTATION OF A PROCESS AT PILOT PLANT LEVEL TO OBTAIN 6063 ALUMINUM ALLOY SLABS OBTAINED FROM RECYCLABLE MATERIAL.**

José Ivan Valencia de Lima[1], Armando Salinas Rodríguez[1], Alfredo Flores Valdés[1], José de Jesús Velásquez Rodríguez[2], Marco Antonio Morales Sánchez[3]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Metalúrgia, Mexico. [2]Industria privada, Metalmecanica, Mexico. [3]Benemerita Universidad Autonoma de Puebla, Facultad de ingeniería Quimica, Mexico.

- **SE1-P002 THE EFFECT OF HOT-EXTRUSION, COLD-ROLLING AND ARTIFICIAL AGING ON MICROSTRUCTURE AND HARDNESS OF 2024 ALLOY**

Lilia Jasiel García Hernández[1], Carlos Gamaliel Garay Reyes[1], Juan Carlos Aranda Casas[2], Ivanovich Estrada[1], Hansel Manuel Medrano Prieto[1], Maria Cristina Maldonado Orozco[2], Roberto Martinez Sanchez[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Metalurgia e integridad estructural, Mexico. [2]Universidad Autónoma de Chihuahua, Facultad de Ingeniería, Mexico.

- **SE1-P003 CONSOLIDATION AND SINTERING PROCESSES IN Al-Cu-Mg-Wc COMPOSITES**

Gustavo Rodríguez Cabriales[1], Adam Mauricio Lometo Sánchez[2], Ivanovich Estrada Guel[1], Carlos Gamaliel Garay Reyes[1], Maria Cristina Maldonado Orozco[2], Roberto Martínez Sánchez[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Metalurgia e Integridad Estructural, Mexico. [2]Universidad Autónoma de Chihuahua, Facultad de Ingeniería, Mexico.

- **SE1-P004 EVALUATION OF THE MECHANICAL PROPERTIES OF THE Zn-22 Al-2Ag ALLOY WHEN BEING WELDED BY FSW.**

Jonathan Humberto Reveles[1], Francisco Alvarado Hernández[1], Simitrio Maldonado[1], Victor Hugo

Baltazar Hernadez[1], Miguel Montoya[1], Miguel Fernando Delgado Pamanes[2]

[1]Universidad Autónoma de Zacatecas, Unidad Académica de Ingeniería I, Mexico. [2]Instituto Politécnico Nacional - IPN, IPN, Mexico.

- **SE1-P005 STUDY OF THE PROCESS PARAMETERS IN THE HIGH PRESSURE DIE CASTING (HPDC) ON MICROSTRUCTURE OF ALUMINIUM ALLOYS**

Erika Tatiana Badillo Campos[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ingeniera Mecánica y eléctrica, Mexico.

- **SE1-P006 HOT PRESSING AND PRESSURELESS SINTERING COMPARISON AND MODELING OF SUPER SATURATED SOLID SOLUTIONS OF Si, Mg AND Ni IN Al OBTAINED VIA MECHANICAL ALLOYING**

Alejandro Sedano Aguilar[1], Arturo Molina Ocampo[1], Sergio Rubén Gonzaga Segura[2], Roberto Ademar Rodriguez Diaz[3], Heriberto Villanueva Pliego[1]

[1]Centro de Investigación en Ingenieria y Ciencias Aplicadas, Powder Metallurgy, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., Powder Metallurgy, Mexico. [3]Tecnológico de Estudios Superiores de Coacalco, Metallurgy, Mexico.

- **SE1-P007 SYNTHESIS OF MAGNESIUM MATRIX COMPOSITE MATERIALS REINFORCED WITH CALCIUM AND ZINC PARTICLES VIA MECHANICAL ALLOYING (AM)**

Sergio Rubén Gonzaga Segura[1], Arturo Molina Ocampo[1], Alejandro Sedano Aguilar[1], Heriberto Villanueva Pliego[1], René Guardián Tapia[1], Adalberto Castro Hernández[1]

[1]Centro de Investigación en Ingenieria y Ciencias Aplicadas, Materiales, Mexico.

- **SE1-P008 EFFECT OF RE ON MICROSTRUCTURE AND TEXTURE DEVELOPMENT OF MG ALLOYS DURING RECRYSTALLIZATION ANNEALING**

Xun Zeng[1], Sangbong Yi[1], Dietmar Letzig[1], Karl Kainer[1]

[1]Helmholtz Zentrum Geesthacht, Magnesium Innovation Centre, Germany.

- **SE1-P009 INFLUENCE OF THE ADDITION OF Nd AND Ca ON DEFORMATION MECHANISMS IN Mg-Zn ALLOYS**

Changwan Ha[1], Sangbong Yi[1], Jan Bohlen[1], Xiaohua Zhou[2], Heinz-Günter Brokmeier[2], Norbert Schell[3], Dietmar Letzig[1], Karl Kainer[1]

[1]Helmholtz Zentrum Geesthacht, Magnesium Innovation Centre, Germany. [2]Technische Universität Clausthal, Institute of Materials Science and Engineering, Germany. [3]Helmholtz Zentrum Geesthacht, HZG Outstation at DESY, Germany.

- **SE1-P010 TEXTURE DEVELOPMENT DURING ISOCHRONAL RECRYSTALLIZATION ANNEALING OF Mg-Zn-RE ALLOYS EXTRUDED AT LOW SPEED.**

Guadalupe Cano Castillo[1], Jan Bohlen[1], José Victoria Hernández[1], Dietmar Letzig[1], Karl Kainer[1]

[1]Helmholtz Zentrum Geesthacht, Magnesium Innovation Centre-MagIC, Germany.

- **SE1-P011 APPLICATION OF STRUCTURAL ALUMINUM IN THE MANUFACTURE OF A TOOL FOR THE REMOVAL OF BEARINGS FROM THE TURBOFAN JT8D ENGINE AVAILABLE IN THE ESIME UPT IPN**

Victor Manuel Sauce[1], Marco A. García[1], Antonio Mosqueda[1]

[1]ESIME TICOMAN, Ing. Aeronáutica, Mexico.

- **SE1-P012 EFFECT OF Ce AND Y ON MICROSTRUCTURE DEVELOPMENT, CRYSTALLOGRAPHIC TEXTURE AND MECHANICAL PROPERTIES IN MAGNESIUM ALLOYS AZ80 AND ZK60**

César Palacios Trujillo[1], David Hernandez Silva[2], José Victoria Hernández[3], Dietmar Letzig[3]

[1]Instituto Politécnico Nacional - IPN, , Mexico. [2]Instituto Politécnico Nacional - IPN, Departamento de Ingeniería en Metalurgia y Materiales, Mexico. [3]Helmholtz Zentrum Geesthacht, , Germany.

- **SE1-P013 CREVICE CORROSION ON HEAT EXCHANGERS FOR AUTOMOTIVE INDUSTRY**

Enrique Galarza[1], A. Alberto Torres Castillo[2]

[1]Valeo Engine Cooling, Quality Laboratory, Mexico. [2]Universidad Autónoma de San Luis Potosí, Instituto de Metalurgia, Mexico.

- **SE1-P014 DETERMINATION OF THE FLUX CONTENT IN ALUMINUM BRAZED HEAT EXCHANGERS FOR THE AUTOMOTIVE INDUSTRY**

Edgar Vega[1], Norma Elisa Orta Gascón[2], Enrique Galarza[1], Luis Santiago Ortiz Monroy[1]

[1]Valeo Engine Cooling, Quality Laboratory, Mexico. [2]Universidad Autónoma de San Luis Potosí, Facultad de Ciencias Químicas, Mexico.

Symposium E2

ADVANCED STRUCTURAL MATERIALS: MECHANICS, PROPERTIES AND APPLICATIONS

Francisco C. Robles-Hernandez / University of Houston
Jorge López-Cuevas / CINVESTAV-IPN Unidad Saltillo
J. Martin Herrera-Ramírez / CIMAV
José María Cabrera Marrero / Universitat Politècnica de Catalunya
Yadienka Martinez Rubi / National Research Council

TUESDAY, AUGUST 21
ROOM: TULUM A

Session: Metallic-based Materials 1

SESSION CHAIR: DR. JORGE LOPEZ CUEVAS

- **08:00 - 08:15 SE2-O001 NUMERICAL STUDY OF FRICTION WELDING ON ADVANCED MATERIALS**
  Jesus Gustavo Villarreal Contreras[1,2], Luis Arturo Reyes Osorio[1,2], Flor Araceli García Castillo[1,2], Patricia del Carmen Zambrano Robledo[1,2]
  [1]National Laboratory for Additive and Digital Manufacturing, , Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ingenieria Mecanica y Electrica, Centro de Investigación e Innovación en Ingeniería Aeronáutica, Mexico.

- **08:15 - 08:30 SE2-O002 FINITE ELEMENT SIMULATION OF A DETACHABLE WING BOX IN COMPOSITE MATERIALS FOR SMALL AIRCRAFT**
  Isaias Chamorro Cruz[1], Hilario Hernandez Moreno[1], Victor Manuel Delgado Romero[2]
  [1]ESIME TICOMAN, Sección de Estudios de Posgrado e Investigación, Mexico. [2]Universidad Politécnica Metropolitana de Hidalgo, Maestría en Ingeniería Aeroespacial, Mexico.

- **08:30 - 08:45 SE2-O003 STRUCTURAL CHARACTERIZATION OF UNMANNED AIRCRAFT MADE OF COMPOSITE MATERIALS USING SOFTWARE**
  Arturo Paz[1], Fabiola Lom[1], Manuel Alejandro Lira[1], Salvador Noriega[1], Delfino Cornejo Monrroy[2]
  [1]Universidad Autónoma de Ciudad Juárez, Department of Industrial Engineering and Manufacturing, Mexico. [2]Universidad Autónoma de Ciudad Juárez, Instituto de Ingeniería y Tecnología, Mexico.

- **08:45 - 09:00 SE2-O004 ANALYTICAL, COMPUTATIONAL AND EXPERIMENTAL STUDIES OF THE MECHANICAL PROPERTIES OF ADDITIVELY MANUFACTURED (FDM) LATTICE MATERIALS**
  Enrique Cuan Urquizo[1,2], Atul Bhaskar[2]
  [1]Tecnológico de Monterrey, Escuela de Ingeniería y Ciencias, Mexico. [2]University of Southampton, Faculty of Engineering and the Environment, United Kingdom, Channel Islands & Isle of Man.

▸ **09:00 - 09:30 SE2-O005 Invited Talk SIMULATION OF COMPLEX THERMAL CYCLES USING QUENCHING DILATOMETRY: A TOOL FOR PRODUCT DEVELOPMENT FOR CONTINUOUS PROCESSING OF AHSS-DP STEELS**

Armando Salinas Rodriguez[1], Gerardo Altamirano Guerrero[2], Patricia Sheilla Costa[1], Frank E Goodwin[3]

[1]Cinvestav-Unidad Saltillo, Metallurgy, Mexico. [2]Instituto Tecnológico de Saltillo, , Mexico. [3]International Lead Zinc Research Org., Inc., , United States.

■ **09:30 - 09:45 SE2-O006 NUMERICAL ANALYSIS OF A MECHANISM FOR THE MORPHOLOGY OF AN AIRFOIL**

Erik Raudel Jimenez Barron[1], Martín Castillo Morales[1], Diego Ledezma Ramirez[1]

[1]Universidad Autónoma de Nuevo León, Aeronautica, Mexico.

■ **09:45 - 10:00 SE2-O007 THERMAL AND MECHANICAL NUMERICAL ANALYSIS OF THE PRIMARY COMPOSITE STRUCTURE OF A CUBESAT**

Mauricio Torres[1], Saul Piedra[1], Saul Ledesma[1], Aaron Burgos[1], Miguel Vergara[1]

[1]Centro de Investigación y Desarrollo Industrial (CIDESI), CENTA, Mexico.

■ **10:00 - 10:15 SE2-O008 NON-LINEAR DEFORMATION IN PLATES WITH PROBABILLTY OF FAILURE**

Ernesto Pineda[1], Dante Tolentino Lopez[1], Janis Zapata Lopez[2]

[1]Instituto Politécnico Nacional - IPN, Structures, Mexico. [2]Instituto Politécnico Nacional - IPN, Research Department, Mexico.

■ **10:15 - 10:30 SE2-O009 STRUCTURAL PHASE TRANSFORMATIONS AND STACKING CHARACTERIZATION OF MARTENSITE IN COPPER BASED SHAPE MEMORY ALLOYS**

Osman Adiguzel[1]

[1]Firat Üniversitesi, Physics, Turkey.

■ **10:30 - 10:45 SE2-O010 STRUCTURAL AND MECHANICAL CHARACTERIZATION OF HEAT-TREATED TiB2/Al-Cu COMPOSITES BY THE SMALL PUNCH TECHNIQUE**

Abel Luis Manzano Rodríguez[1], Carlos Alberto León Patiño[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigación en Metalurgia y Materiales, Mexico.

■ **10:45 - 11:00 SE2-O011 EFFECT OF BORON ON THE SURFACE OF SURGICAL GRADE COCRMO ALLOY**

Carlos Cuao[1], Marco Hernández[1]

[1]Universidad Autónoma de Nuevo León, CIDET (FIME), Mexico.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY III
DR. AMANDA S. BARNARD

Session: Metallic-based Materials 2

SESSION CHAIR: DR. FRANCISCO ROBLES HERNANDEZ

■ **12:30 - 12:45 SE2-O012 EFFECT OF THE FRACTALITY ON PACKING FOR THE SPACE HOLDER PARTICLES USED IN METALLIC FOAMS MANUFACTURING**

Ismeli Alfonso[1], Luis Enrique Carranza[1], Rosalva Mendoza[1], Juan Carlos Carranza Garcia[1], Luis Bejar[2], Luis Pérez[3], Ignacio Alejandro Figueroa Vargas[4]

[1]Universidad Nacional Autónoma de México, Instituto de Investigaciones en Materiales. Unidad Morelia, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ingeniería Mecánica, Mexico. [3]Universidad Técnica Federico Santa María, Department of Mechanical Engineering, Advanced Center for Electrical and Electronic Engineering, Chile. [4]Universidad Nacional Autónoma de México, Instituto de Investigaciones en Materiales, Mexico.

▸ **12:45 - 13:15 SE2-O013 Invited Talk EFFECT OF PRECIPITATION HARDENING ON THE PROPERTIES OF 17-4PH STAINLESS STEEL FOAMS**

Maxime Gauthier[1], Aurélien Katz[2], Cristian Victor Cojocaru[1], Fabrice Bernier[1], Antoine Maison[2]

[1]National Research Council Canada, Automotive and Surface Transportation Research Centre, Canada. [2]ESIREM (École Supérieure d?Ingénieurs en Matériaux), Département Matériaux, Développement Durable, France.

■ **13:15 - 13:30 SE2-O014 BORONIZED LAYERS ON THE HAYNES 282 AND INCONEL 718 SUPERALLOYS**

Rosa Lara[1], Javier Humberto Ramirez Ramirez[1], Francisco Aurelio Perez Gonzalez[1], Rafael Colás[1], Nelson Federico Garza Montes De Oca[1]

[1]Universidad Autónoma de Nuevo León, Corrosion And Metallurgy, Mexico.

■ **13:30 - 13:45 SE2-O015 INFLUENCE OF RELATIVE MOUVEMENT OF PIECES WHILE BUILDING COMPOSITE COATINGS**

Ricardo Cuenca Alvarez[1], Erika Grisel Rodríguez Santos[1], Luis Edgar Alanis Carranza[1], Paola Perez Hernandez[1], Fernando Juarez Lopez[1], Ángel de Jesús Morales Ramírez[1]
[1]Instituto Politécnico Nacional - IPN, Graduate department, Mexico.

- **13:45 - 14:00 SE2-O016 TRIBOLOGICAL PERFORMANCE OF TERNARY TIMN FILMS (M=Al, B and Cr) DEPOSITED BY CATHODIC ARC ON M2 STEEL**

Gabriela Mendoza Leal[1], Carolina Hernandez Navarro[2], Ernesto David García Bustos[3], Johan Restrepo[4], Martin Flores Martinez[5], Eduardo Rodríguez[5]
[1]Tecnológico Nacional de México/Instituto Tecnológico de Celaya, Departamento de Ingeniería Química, Mexico. [2]Tecnológico Nacional de México/Instituto Tecnológico de Celaya, Departamento de Ingeniería Mecánica, Mexico. [3]Universidad de Guadalajara, Cátedras CONACYT-Departamento de Ingeniería de Proyectos, Mexico. [4]SADOSA, Recubrimientos, Mexico. [5]Universidad de Guadalajara, Departamento de Ingeniería de Proyectos, Mexico.

- **14:00 - 14:15 SE2-O017 WEAR BEHAVIOUR OF HIGH TEMPERATURE ALLOYS FOR AUTOMOTIVE AND AERONAUTICS PURPOSES**

Javier Humberto Ramirez Ramirez[1], Francisco Aurelio Perez Gonzalez[1], Juan Manuel Alvarado Orozco[2], Rafael Colás[1], Nelson Federico Garza Montes De Oca[1]
[1]Universidad Autónoma de Nuevo León, FIME, Mexico. [2]Centro de Investigación y Desarrollo Industrial (CIDESI), Surface Engineering, Mexico.

☒ **14:00 - 16:00 Lunch time**

Session: Cementitious Materials

SESSION CHAIR: DR. MARTIN HERRERA-RAMIREZ

- **16:00 - 16:15 SE2-O018 INTERNAL CURING IN HIHG PERFORMANCE CONCRETE WITH FLY ASH EMPLOYING PUMICE AND SUPERABSORBENT POLYMERS**

Greisy Guadalupe Barrera Alvarez[1]
[1]Universidad Autónoma de Coahuila, Postgrado Facultad Ingeniería Civil, Mexico.

- **16:15 - 16:30 SE2-O019 MICROSTRUCTURAL EVOLUTION OF BLAST FURNACE SLAG CEMENTS ACTIVATED WITH BINARY ALKALINE SOLUTIONS**

Irma Elizabeth Betancourt Castillo[1], Oswaldo Burciaga Díaz[1], José Alonso Díaz Guillén[1]
[1]Instituto Tecnológico de Saltillo, División de Estudios de Posgrado e Investigación, Mexico.

- **16:30 - 16:45 SE2-O020 STUDY OF THE BEHAVIOR OF THE NORMAL RESISTANCE CONCRETE WITH THE INCORPORATION OF ALKALINE ACTIVATED STEEL SLIDES AND POLYPROPYLENE FIBERS EXPOSED TO HIGH TEMPERATURES**

Martin Eduardo Espitia Nery[1], Dery Esmeralda Corredor[1], Edisson Cordoba[1]
[1]Corporación Universitaria Minuto de Dios, , Colombia.

- **16:45 - 17:00 SE2-O021 IMPROVING STRENGTH AND DURABILITY IN CALCAREOUS CEMENTS MIXTURES ADDING POWDERED NOPAL (OPUNTIA FICUS INDICA)**

Carlos Gabriel Hernández Carrillo[1], Jairo Alberto Gómez Cuaspud[2], Carlos Eduardo Martínez Suárez[1]
[1]Universidad Pedagógica y Tecnológica de Colombia, Faculty of Engineering, Colombia. [2]Universidad Pedagógica y Tecnológica de Colombia, Science Faculty, Colombia.

- **17:00 - 17:15 SE2-O022 IMPROVEMENT IN THE MECHANICAL RESISTANCE TO COMPRESSION AND BENDING IN MIXTURES OF CEMENTS, THROUGH THE NATURAL FIBER CHEMICALLY TREATED AND IMPREGNATED WITH INORGANIC COMPOUNDS**

Carlos Gabriel Hernández Carrillo[1], Carlos Eduardo Martínez Suárez[1], Yusely Johana Sánchez Hernández[1]
[1]Universidad Pedagógica y Tecnológica de Colombia, Faculty of Engineering, Colombia.

- **17:15 - 17:30 SE2-O023 STRESS-STRAIN AND FAILURE MODES OF ASPHALT CONCRETE DUE TO GEOMETRICAL CHANGES**

Lee Leon[1], Derek Gay[1], Nicola Simpson[1], Shian Edwin[1]
[1]The University of the West Indies, St. Augustine, Civil & Environmental Engineering, Trinidad and Tobago.

- **17:30 - 17:45 SE2-O024 LABORATORY INVESTIGATION ON THE EFFECTS OF COARSE AGGREGATE ANGULARITY ON PERMANENT DEFORMATION**

Lee Leon[1], Derek Gay[1]
[1]The University of the West Indies, St. Augustine, Civil and Environmental Engineering Dept., Trinidad and Tobago.

■ **17:45 - 18:00 SE2-O025 MULTI SPECKLE DWS ANALYSIS: APPLICATION TO PORTLAND CEMENT SUSPENSIONS**

O. Ojeda Farías[1], P. Hebráud[2], J. M. Mendoza Rangel[1], D. Lootens[3], M. Liard[3]

[1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Civil, Mexico. [2]Université de Strasbourg, IPCMS/CNRS, France. [3]Sika Technology AG, Central Research, Switzerland.

■ **18:00 - 18:15 SE2-O026 IMPROVEMENT IN THE MECHANICAL RESISTANCE TO COMPRESSION, BENDING AND TENACITY IN CONCRETE, THROUGH HEMP FIBERS (CANNABIS SATIVA L) TREATED CHEMICALLY AND IMPREGNATED WITH INORGANIC COMPOUNDS.**

Yusely Sanchez[1], Carlos Gabriel Hernández Carrillo[1], Oscar Javer Gutierrez Junco[1]

[1]Universidad Pedagógica y Tecnológica de Colombia, Faculty of Engineering, Colombia.

■ **18:15 - 18:30 SE2-O027 PARAMETERS OF DURABILITY IN LOCAL AND COMERCIAL MORTAR USED FOR THE REPAIR OF REINFORCED CONCRETE STRUCTURAL ELEMENTS**

Rebeca Visairo Méndez[1], Andres Antonio Torres Acosta[2,3], Roberto Alvarado Cárdenas[1]

[1]Universidad Autónoma de Querétaro, Facultad de Ingeniería, Mexico. [2]Instituto Mexicano del Transporte, Materiales, Mexico. [3]Universidad Marista de Queretaro, Investigación, Mexico.

WEDNESDAY, AUGUST 22
ROOM: TULUM A

Session: Ceramic-based Materials

SESSION CHAIR: DR. JOSE MARIA CABRERA MARRERO

■ **08:00 - 08:15 SE2-O028 THE COMPLICATE STRUCTURE OF LASER-REMELTED LAYER ON THE SURFACE OF COMPOSITIONAL CERAMICS ON BASE OF Al_2O_3.**

Adalberto Castro Hernández[1], Marina Vlasova[1], Mykola Kakazey[1], Pedro Antonio Márquez Aguilar[1], René Guardián Tapia[1]

[1]Universidad Autónoma del Estado de Morelos, Centro de Investigación en Ingeniería y Ciencias Aplicadas, Mexico.

■ **08:15 - 08:30 SE2-O029 ROTARY-HYDROTHERMAL METHOD TO PRODUCE $BaCuSi_2O_6$ POWDERS: EFFECT OF THE COOPER PRECURSOR**

Diego Antonio Corona Martínez[1], Juan Carlos Rendón Angeles[1], Jorge López Cuevas[1], Kazumichi Yanagisawa[2]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV Unidad Saltillo, Ceramic engineering department, Mexico. [2]Kochi University, Research Laboratory of Hydrothermal Chemistry, Faculty of Science, Japan.

■ **08:30 - 08:45 SE2-O030 THERMAL AND TRIBOLOGICAL PROPERTIES OF ZIRCONIA-ALUMINA COATINGS OBTAINED FOR THERMAL FLAME SPRAYING**

Martha Yasmid Ferrer Pacheco[1], Carlos Mauricio Moreno Tellez[2], Fabio Vargas Galvis[3]

[1]Universidad Francisco de Paula Santander, Norte de Santander, Colombia. [2]Universidad Pedagógica y Tecnológica de Colombia, Boyacá, Colombia. [3]Universidad de Antioquía, Antioquia, Colombia.

■ **08:45 - 09:00 SE2-O031 RESISTANCE TO WEAR AT HIGH TEMPERATURES OF ZIRCONIA-ALUMINA-CERIA COATINGS ACHIEVED BY THERMAL FLAME SPRAYING**

Luis Francisco Rodriguez Wilches[1,2], Martha Yasmid Ferrer Pacheco[2], Fabio Vargas Galvis[3]

[1]Colegio Santo Angel de la Guarda, Cucuta, Colombia. [2]Universidad Francisco de Paula Santander, Norte de Santander, Colombia. [3]Universidad de Antioquía, Antioquia, Colombia.

▸ **09:00 - 09:30 SE2-O032 Invited Talk DESIGNING THE STRUCTURE AND PROPERTIES OF ULTRA-HIGH TEMPERATURE CERAMICS WITH SOLID SOLUTION CHEMISTRY: THE EXAMPLE OF TANTALUM CARBIDE**

Olivia Graeve[1,2], James Kelly[1,2], Ekaterina Novitskaya[2]

[1]Alfred University, Kazuo Inamori School of Engineering, United States. [2]University of California, San Diego, Mechanical and Aerospace Engineering, United States.

■ **09:30 - 09:45 SE2-O033 SYNTHESIS OF A DIOPSIDE-TRICALCIUM PHOSPHATE BIOCERAMIC BY THE PETRURGIC METHOD, AND EVALUATION OF ITS IN VITRO BIOACTIVITY**

Jorge López Cuevas[1], Claudia Magdalena López Badillo[2], Juan Méndez Nonell[3], José Luis Rodríguez Galicia[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Ceramics Engineering, Mexico. [2]Universidad Autónoma

de Coahuila, Facultad de Ciencias Químicas, Mexico. [3]Centro de Investigación en Materiales Avanzados, S.C., , Mexico.

- **09:45 - 10:00 SE2-O034 IN VITRO BIOACTIVITY OF A DIOPSIDE-TRICALCIUM PHOSPHATE BIOCERAMIC SYNTHESIZED BY THE GLASS-CERAMIC METHOD**
  Jorge López Cuevas[1], Claudia López Badillo[2], Juan Méndez Nonell[3], Carlos Alberto Gutiérrez Chavarría[1]
  [1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Ceramics Engineering, Mexico. [2]Universidad Autónoma de Coahuila, Facultad de Ciencias Químicas, Mexico. [3]Centro de Investigación en Materiales Avanzados, S.C., , Mexico.

- **10:00 - 10:15 SE2-O035 WEAR AND CORROSION PROPERTIES OF TIB2-NI3B NANOCOMPOSITE COATINGS DEPOSITED BY DC SPUTTERING**
  Jorge Morales[1], José Manuel Juárez[2], Héctor Herrera[3], Viviana Leyva[4]
  [1]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Industrial Process and Coatings, Mexico. [2]Centro Nacional de Metrologia, Metalic materials, Mexico. [3]Universidad Autónoma del Estado de México, Electrochemic and Corrosion, Mexico. [4]Instituto Tecnológico Superior de Ébano, Jefatura de Desarrollo Académico, Mexico.

- **10:15 - 10:30 SE2-O036 HILLOCK FORMATION ON NANOCRYSTALLINE DIAMOND**
  Felipe Valencia[1]
  [1]Universidad de Chile, Physics, Chile.

- **10:30 - 10:45 SE2-O037 GENERATION IN-SITU OF POLYURETHANE INTO CEMENT MATRIX DURING THE SETTING PROCESS**
  Eric Enrique Sanchez Diaz[1], Maria Mercedes Zavala Arriaga[2], Vladimir Alonso Escobar Barrios[1]
  [1]Instituto Potosino de Investigación Científica y Tecnológica A.C., Laboratorio de Polímeros, Mexico. [2]Instituto Potosino de Investigación Científica y Tecnológica A.C., Geologia Aplicada, Mexico.

- **10:45 - 11:00 SE2-O038 MICROSTRUCTURE AND PROPERTIES OF LASER CLADDING OF WC-Co-Cr ALLOYS SYNTHESIZED BY MECHANICAL MILLING**
  Rosa Adriana Garcia Hernandez[1], Victor Hugo Baltazar Hernández[1], Juan Manuel Alvarado Orozco[2], Juan Muñoz Saldaña[3], Haideé Ruiz Luna[4]
  [1]Universidad Autónoma de Zacatecas, Maestría en Ciencia e Ingeniería de Materiales, Mexico. [2]Centro de Investigación y Desarrollo Industrial (CIDESI), Investigacion, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Investigador, Mexico. [4]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Catedras-CONACYT, Mexico.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY V
PROF. GALO SOLER ILLIA

Session: Metallic-based Materials 3

SESSION CHAIR: DR. FRANCISCO ROBLES HERNANDEZ

- **12:30 - 12:45 SE2-O039 MICROSTRUCTURAL EVOLUTION OF ADIABATIC SHEAR BANDS DURING IMPACT**
  Nabil Bassim[1]
  [1]University of Manitoba, Mechanical Engineering, Canada.

- **12:45 - 13:15 SE2-O040 Invited Talk LASER CLADDING OF AISI 420 MARTENSITIC STAINLESS STEEL**
  Afsaneh Edrisy[1], Mohammad K. Alam[1], Ruth Jill Urbanic[1]
  [1]University of Windsor, Engineering Materials Program, Mechanical, Automotive, and Materials Engineering Department, Canada.

- **13:15 - 13:30 SE2-O041 INTERFACIAL ANALYSIS IN METAL MATRIX COMPOSITES REINFORCED WITH CARBON NANOTUBES BY THE SANDWICH TECHNIQUE**
  Cesar Isaza[1], Miguel José Yacamán[2], Jose Martin Herrera Ramirez[3], Juan Meza Meza[4], Juan Sebastian Rudas[1]
  [1]Institución Universitaria Pascual Bravo, Antioquia, Colombia. [2]University of Texas at San Antonio, San Antonio, United States. [3]Centro de Investigación en Materiales Avanzados, S.C., , Mexico. [4]Universidad Nacional de Colombia, Antioquia, Colombia.

- **13:30 - 13:45 SE2-O042 STUDY AND CHARACTERIZATION OF ZnNi ALLOYS SYNTHESIZED WITH MICRO-METALLIC AND NANO-METALLIC PARTICLES BY SOLID-STATE REACTION**
  Jose Guadalupe Miranda Hernandez[1], Hector Herrera Hernandez[1], Carlos O. Gonzalez Moran[1], Jesus Vargas Hernandez[1], Ricardo Miranda[2]
  [1]Universidad Autónoma del Estado de México, Industrial Engineering, Mexico. [2]Gettysburg College, Physics, United States.

- **13:45 - 14:00 SE2-O043 A NOVEL EXPERIMENTAL TECHNIQUE TO OBTAIN MIXING TIME IN GAS-STIRRED LADLES**

Marco Aureio Ramírez Argáez[1], Luis Enrique Jardón Pérez[1]
[1]Universidad Nacional Autónoma de México, Facultad de Química, Mexico.

- **14:00 - 14:15 SE2-O044 INDUCING POROSITY ON HOLLOW NANOPARTICLES BY HYPERVELOCITY IMPACTS**
Felipe Valencia[1]
[1]Universidad de Chile, Physics, Chile.

☒ **14:00 - 16:00 Lunch time**

Session: Polymeric-based Materials

SESSION CHAIR: DR. YADIENKA MARTINEZ RUBI

- **16:00 - 16:15 SE2-O045 ELECTRICAL AND MECHANICAL PROPERTIES ENHANCING OF PMMA AND PA6 BY FUNCTIONALIZED MWCNTs ADITION**
José de Jesús Contreras Navarrete[1], Jael Madaí Ambriz Torres[2], Carmen Judith Gutiérrez García[2], Francisco Gabriel Granados Martínez[2], Diana Litzajaya Garcia Ruiz[2], Jaime Abraham Guzmán Fuentes[2], Pedro Garnica González[3], María de Lourdes Mondragón[3], Ezequiel Huipe Nava[4,5], Omar Aguilar García[6], Lada Domratcheva Lvova[2,7]
[1]Universidad Michoacana de San Nicolás de Hidalgo, Mechanical Engineer, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Mechanical Engineering, Mexico. [3]Instituto Tecnológico de Morelia, Materials Engineering, Mexico. [4]Universidad Michoacana de San Nicolás de Hidalgo, Electrical Engineering, Mexico. [5]Universidad Michoacana de San Nicolás de Hidalgo, Language Deparment, Mexico. [6]Instituto Tecnológico de Morelia, Industrial Engineering, Mexico. [7]Universidad Michoacana de San Nicolás de Hidalgo, Wood Technology Engineering, Mexico.

- **16:15 - 16:30 SE2-O046 DESIGN FOR THE MANUFACTURING OF A TUBULAR SENSOR IN COMPOSITE MATERIALS FOR DETECTION OF EVENTS IN PIPELINES.**
Rebeca López Santiago[1], Hilario Hernández Moreno[2], Cristina Verde Rodarte[3], Flor Lizeth Torres Ortíz[3]
[1]Instituto Politécnico Nacional - IPN, SEPI ESIME Azcapotzalco MIM, Mexico. [2]ESIME TICOMAN, Programas de ingeniería Aeronáutica, Mexico. [3]Instituto de Ingeniería (Universidad Nacional Autónoma de México), Eléctrica y computación, Mexico.

- **16:30 - 17:00 SE2-O047 Invited Talk MAGNETORHEOLOGICAL CNT NANOCOMPOSITES AND THEIR VISCOELASTIC RESPONSES**
Lizhi Sun[1], Rui Li[2]
[1]University of California, Irvine, CEE MSE, United States. [2]University of California, Irvine, CEE, United States.

- **17:00 - 17:15 SE2-O048 INFLUENCE OF CARBON NANOTUBE LENGTH ON THE ELECTRICAL RESPONSE OF POLYMER NANOCOMPOSITES UNDER VISCOELASTIC RELAXATION**
Gonzalo Antonio Madera Puigcerver[1], Andres Ivan Oliva Arias[1], Andrés Iván Oliva Avilés[2], Francis Avilés Cetina[3]
[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Applied Physics, Mexico. [2]Universidad del Mayab S.C., División de Ingeniería y Ciencias Exactas, Mexico. [3]Centro de Investigación Científica de Yucatán, Unidad de Materiales, Mexico.

- **17:15 - 17:30 SE2-O049 SCALABLE FABRICATION OF VERSATILE POLYURETHANE/NANOTUBE COMPOSITES AND STUDY OF STRUCTURE-PROPERTIES RELATIONSHIP**
Yadienka Martinez Rubi[1], Behnam Ashrafi[2], Michael Jakubinek[1], Shan Zou[3], Michael Barnes[1], Keun Su Kim[1], Daesun Park[2], Benoit Simard[1]
[1]National Research Council Canada, Security and Disruptive Technologies, Canada. [2]National Research Council Canada, Aerospace, Canada. [3]National Research Council Canada, Measurement Science and Standards, Canada.

- **17:30 - 17:45 SE2-O050 MECHANICAL PROPERTIES OF GLARE (GLASS RENFORCED LAMINATE) USING AN EPOXY RESIN REINFORCED WITH GRAPHITE OXIDE**
Salvador Robertson[1], José Ignacio Steinmeyer[2], Gonzalo Pacheco[3], Palza Humbert[4], Alberto Monsalve[5]
[1]Academia Politécnica Aeronáutica, , Chile. [2]Universidad de Santiago de Chile, Ingeniería Metalúrgica, Chile. [3]Academia Politécnica Aeronáutica, CIDCA, Chile. [4]Universidad de Chile, Ingeniería Química, Chile. [5]Universidad de Santiago de Chile, Depto. ingeniería Metalúrgica, Chile.

- **17:45 - 18:00 SE2-O051 SYNERGISTIC REINFORCEMENT FROM CARBON NANOTUBES AND CARBON NANOFIBERS IN POLYPROPYLENE COMPOSITES AND THE POSITIVE EFFECT OF A REPROCESSING STAGE ON THEIR MECHANICAL STRENGTH**

Claudia Angélica Ramírez Herrera[1], José Pérez González[2], Omar Solorza Feria[3], Hugo Martínez Gutiérrez[4], Abelardo Flores[5], Jose Gerardo Cabañas Moreno[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Nanociencias y Nanotecnología, Mexico. [2]Escuela Superior de Física y Matemáticas IPN, Física, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Química, Mexico. [4]Centro de Nanociencias y micro y Nanotecnologías del IPN, SEM, Mexico. [5]Instituto Politécnico Nacional - IPN, CMPL, Mexico.

- **18:00 - 18:15 SE2-O052 MANUFACTURING AND MECHANICAL CHARACTERIZATION OF COMPOSITE PANELS FOR CUBESAT STRUCTURES.**

Mauricio Torres[1], Saul Ledesma[1], Víctor Gómez[1], Rubén Pérez[1], Miguel Vergara[1], Aaron Burgos[1]

[1]Centro de Investigación y Desarrollo Industrial (CIDESI), CENTA, Mexico.

- **18:15 - 18:30 SE2-O053 INFLUENCE OF ELECTRODE CONFIGURATION ON DAMAGE EVALUATION OF MULTISCALE COMPOSITE MATERIALS**

Gabriela Carolina Uribe Riestra[1,2], Jorge Andrés Ocampo Bello[1,3], Fidel Fernando Gamboa Perera[4], Fernando Mendoza Santoyo[5], Javier Iván Cauich Cupul[1], Brian Kostadinov Shalon Isaac Medina[1], Alejandro May Pat[1], Francis Avilés Cetina[1]

[1]Centro de Investigación Científica de Yucatán, Materials Department, Mexico. [2]Universidad Autónoma de Yucatán, Physics Engineering Department, Mexico. [3]Universidad Autónoma de Yucatán, Mechatronical Engineering Department, Mexico. [4]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Applied Physics Department, Mexico. [5]Centro de Investigaciones en Optica, Optical Metrology Department, Mexico.

WEDNESDAY, AUGUST 22
ROOM: TERRACE

- **18:30 -20:30 POSTER SESSION & COFFEE BREAK**

- **SE2-P001 INFLUENCE OF SUBSTRATE ROUGHNESS ON THE ADHESION AND TRIBOLOGICAL PERFORMANCE OF TITANIUM NITRIDE COATING ON AISI H13 STEEL**

Ricardo Ortega[1], María Teresa Hernández[1], Benjamín Arroyo[1], Luis Daniel Aguilera[1], J. Santos García[1], Karla Judith Moreno Bello[1]

[1]Instituto Tecnológico de Celaya, Departamento de Ingeniería Mecánica, Mexico.

- **SE2-P002 FRACTURE FAILURE ASSESSMENT IN API 5L X70 PIPELINE STEELS**

Jhonny Ortiz[1]

[1]Universidad Nacional de Trujillo, Mechanical engineering, Peru.

- **SE2-P003 DEVELOPMENT, CHARACTERIZATION AND APPLICATION OF A SPECIAL BRASS ALLOY LEAD FREE**

Araceli Salazar Peralta[1], J. Alfredo Pichardo Salazar[2], Ulises Pichardo Salazar[3], Rosa Hilda Chavez[4]

[1]Centro de Estudios Superiores de Jocotitlán, Ingeniería en Materiales, Mexico. [2]Centro de Bachillerato Tecnológico Industrial y de Servicios No. 161, Bachillerato, Mexico. [3]Planet English, Docencia, Mexico. [4]Instituto Nacional de Investigaciones Nucleares (ININ), Ciencias Ambientales, Mexico.

- **SE2-P004 EFFECT OF EDGE DISLOCATIONS IN ATOMIC DIFFUSION IN THERMAL BARRIER COATING SUPERALLOY**

Bárbara G. Rolón[1], Sandra Eloísa Chávez[1]

[1]Universidad de Guanajuato, Departamento de ingeniería mecánica, Mexico.

- **SE2-P005 NUMERICAL ANALYSIS OF AN IMPLANT TO MITIGATE MEDIAL KNEE OSTEOARTHRITIS**

José María Aburto Barrera[1], Beatriz Romero Ángeles[1], Julio Cesar Avalos Flores[1], Aldo Hernández Ramírez[1], Guillermo Urriolagoitia Calderón[1]

[1]Esime zacatenco, Sección de Estudios de Posgrado e Investigación, Mexico.

- **SE2-P006 DIGITAL SIGNAL ANALYSIS OF ELECTROCHEMICAL SIGNALS OF GRAPHENE OXIDES FOR DISPLAY DEVICES**

Claudia Georgina Nava Dino[1], Roberto Narro García[1], Juan Pablo Flores de Los Ríos[1], Maria Cristina Maldonado Orozco[1], Raul Sandoval Jabalera[1], Raul German Bautista Margulis[2]

[1]Universidad Autónoma de Chihuahua, Facultad de Ingenieria, Mexico. [2]Universidad Juárez Autónoma de Tabasco, División Académica Ciencias Biológicas, Mexico.

- **SE2-P007 PHOTODEGRADATION OF PYRROMETHENE IMBEDDED IN A POLYMERIC MATRIX. COMPARISON BETWEEN FILMS AND OPTICAL FIBER GEOMETRIES**

Roberto Narro García[1], Liliana Jaramillo Ochoa[2], Miguel Angel Ocampo Mortera[2], Rafael Quintero Torres[2]

[1]Universidad Autónoma de Chihuahua, Facultad de Ingeniería, Mexico. [2]Universidad Nacional Autónoma de México, Centro de Física Aplicada y Tecnología Avanzada, Mexico.

- **SE2-P008 STUDY OF THE HYDRATION OF SULFOALUMINATE BELITIC CEMENTS IN PARTIALLY BLENDED WITH BLAST FURNACE SLAG, FLY ASH AND LIMESTONE**

Amy Farías Sanabria[1], Lauren Yolanda Gomez Zamorano[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico.

- **SE2-P009 EFFECT OF CARBON NANOTUBE CONCENTRATION AND LENGTH ON THE PIEZORESISTIVE RESPONSE OF MWCNT/PMMA COMPOSITES UNDER AXIAL TENSION**

Jesus Ramon Cob Cantu[1], Andrés Iván Oliva Avilés[2], Andres Ivan Oliva Arias[1], Francis Avilés Cetina[3]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Applied Physics, Mexico. [2]Universidad del Mayab S.C., División de Ingeniería y Ciencias Exactas, Mexico. [3]Centro de Investigación Científica de Yucatán, Unidad de Materiales, Mexico.

- **SE2-P010 EFFECT OF TIO_2 ON THE THERMAL AND OPTICAL PROPERTIES OF RE^{3+} DOPED TELLURITE GLASSES**

Jesus Javier Leal[1], Eugenio Rodriguez[1], Roberto Narro Garcia[2], Maria Cristina Maldonado Orozco[3], Claudia Georgina Nava Dino[2], Raúl Sandoval Jabalera[2]

[1]Instituto Politécnico Nacional - IPN, Center for Research in Applied Science and Advanced Technology Altamira Unit, Mexico. [2]Universidad Autónoma de Chihuahua, Faculty of Engineering, Mexico. [3]Universidad Autónoma de Coahuila, Faculty of Engineering, Mexico.

- **SE2-P011 NANOINDENTATION STUDY OF INTERFACIAL MECHANICAL PROPERTIES IN Al/ Ni3Al COMPOSITE PRODUCED DURING SPARK PLASMA SINTERING TECHNIQUE**

Norma Vanessa de León Murguía[1,2], Hector Javier Dorantes Rosales[2], Felipe Hernandez Santiago[3], Carlos Ferreira Palma[2]

[1]Instituto Politécnico Nacional - IPN, ESCUELA SUPERIOR DE INGENIERIA MECANICA Y ELECTRICA UNIDAD AZCAPOZALCO, Mexico. [2]Instituto Politécnico Nacional - IPN, Escuela Superior de Ingeniería Química e Industrias Extractivas, Mexico. [3]Instituto Politécnico Nacional - IPN, cuela Superior de Ingeniería Mecánica y Eléctrica - Azcapozalco, Mexico.

- **SE2-P012 EFFECT OF CARBON NANOFIBERS ON TOUGHNESS AND SLIDING WEAR BEHAVIOR OF HVOF-WC-12%CO SPRAYED COATINGS**

Luis Alberto López Tejeda[1], Marco Aurelio González[1,2], Eduardo Rodríguez[1], Omar Jiménez Alemán[1], Héctor Guillén Bonilla[1], Jose de Jesus Ibarra[3]

1Universidad de Guadalajara, Projects Engineering Department / CUCEI, Mexico. [2]Consejo Nacional de Ciencia y Tecnologia - CONACYT, , Mexico. [3]Instituto Tecnologico Superior de Zapopan, , Mexico.

- **SE2-P013 SiO_2 AND Al_2O_3 NANOPARTICLES EFFECT ON THE MICROSTRUCTURE AND MECHANICAL PROPERTIES OF THE WELD BEAD JOINING AISI 1025 STEEL PLATES**

Abel Jiménez Jiménez[1], Ana María Paniagua Mercado[2], Arturo García Bórquez[2], Víctor Manuel López Hirata[3], Antonio de Ita[4], Everardo Miguel Díaz[5], Maribel L. Saucedo Muñoz[3]

[1]Instituto Politécnico Nacional - IPN, Sección de Estudios de Posgrado e Investigación, Mexico. [2]Instituto Politécnico Nacional - IPN, Depto. Ciencia de los Materiales, Mexico. [3]Instituto Politécnico Nacional - IPN - ESIQIE, Depto. Ingeniería en Metalurgía y Materiales, Mexico. [4]Universidad Autónoma Metropolitana, Depto. Materiales, Mexico. [5]Instituto Tecnológico Superior de la Sierra Norte de Puebla, Div. Ingeniería Industrial y Forestal, Mexico.

- **SE2-P014 STRUCTURE AND THERMO-MECHANICAL PROPERTIES CORRELATION IN EXTRUDED FILMS OF HIGH PERFORMANCE COPOLYESTER**

Adriana Reyes Mayer[1,2], Rosario Benavente Castro[3], Manuela Calixto Rodriguez[2], Manuel Aguilar Franco[4], Angel Romo Uribe[5], Karina Santiago Santiago[2]

[1]Centro de Caracterización e Investigación en Materiales S.A. de C.V., CeCIM, Mexico. [2]Universidad Tecnológica Emiliano Zapata del Estado de Morelos, División Académica de Mecánica Industrial, Mexico. [3]Instituto de Ciencia y Tecnología de Polímeros, Departamento de Polímeros, Spain. [4]Universidad Nacional Autónoma de México, Laboratorio Central de Microscopía IFUNAM, Mexico. [5]Polymer Nanocomposites Lab, Nanopolímeros, Mexico.

- **SE2-P015 FABRICATION AND CHARACTERIZATION OF OXIDE DISPERSION STREGNTHENED ALLOYS USING 3D PRE-FORMING PROCESS FOR THE ADDITIVE MANUFACTURING**

Sanghoon Noh[1], Suk Hoon Kang[1]

[1]Korea Atomic Energy Research Institute, Nuclear Materials Division, Korea.

- **SE2-P016 EFFECT OF COBALT ADDITIONS ON MICROSTRUCTURES AND MECHNICAL PROPERTIES OF ODS STEELS FOR HIGH TEMPERATURE SERVICE APPLICATIONS**

  Sanghoon Noh[1], Suk Hoon Kang[1]
  [1]Korea Atomic Energy Research Institute, Nuclear Materials Division, Korea.

- **SE2-P017 ON THE WAY FOR A SEMIAUTOMATIC DEPOSITION OF COMPOSITE PARTICLES**

  Ricardo Cuenca Alvarez[1], Luis Edgar Alanis Carranza[1], Paola Perez Hernandez[1], Moisés Vicente Márquez Olivera[1], Viridiana Gudelia Hernández Herrera[1]
  [1]Instituto Politécnico Nacional - IPN, Graduate department, Mexico.

- **SE2-P018 VALIDATION OF A COMPUTATIONAL MODEL BASED ON A HYBRID APPROACH BETWEEN THE ASYMPTOTIC HOMOGENIZATION AND FINITE ELEMENT METHODS FOR MAGNETO-ELECTRO-ELASTIC MICROMECHANICAL CHARACTERIZATION**

  Yoanh Espinosa Almeyda[1], Hector Camacho Montes[1], Lorenzo Efraín Barraza de León[1], José Antonio Otero Hernández[2], Claudia Alejandra Rodríguez González[1], Imelda Armendáriz[1]
  [1]Universidad Autónoma de Ciudad Juárez, Instituto de Ingeniería y Tecnología, Mexico. [2]Instituto Tecnológico y de Estudios Superiores de Monterey, Física y Matemáticas, Mexico.

- **SE2-P019 A COMPARISON OF CRYSTALLIZATION ACTIVATION ENERGY DETERMINATION BETWEEN DIFFERENTIAL THERMAL ANALYSIS AND HOT STAGE MICROSCOPY FOR LEAD-ZINC-BOROSILICATE GLASS CERAMICS DURING SINTERING.**

  Omar Cedillos Barraza[1], Perla Elvia Garcia Casillas[2], Claudia Alejandra Rodríguez González[2], Imelda Armendáriz[2], Carlos Alberto Martinez Perez[2], Armando García Reyes[3], Héctor Camacho Montes[2]
  [1]University of Texas at El Paso, Mechanical Engineering Department, United States. [2]Universidad Autónoma de Ciudad Juárez, Física-matemáticas, Mexico. [3]Interceramic Technological Center, Centro técnico, Mexico.

- **SE2-P020 UNUSUAL ELASTIC DEFORMATION AND THERMAL BEHAVIOR IN EPOXY-RUBBER COMPOSITES**

  Adriana Reyes Mayer[1,2], Manuela Calixto Rodriguez[2], Karina Santiago Santiago[2], Estela Sarmiento Bustos[2], Angel Romo Uribe[3]
  [1]Centro de Caracterización e Investigación en Materiales S.A. de C.V., División Académica de Mecánica Industrial, Mexico. [2]Universidad Tecnológica Emiliano Zapata del Estado de Morelos, División Académica de Mecánica Industrial, Mexico. [3]Polymer Nanocomposites Lab, , Mexico.

- **SE2-P021 EFFECT OF DEFORMATION ON AGING BEHAVIOR OF AL 7075-T6 ALLOY DURING WARM FORMING AND POST-TREATMENT**

  Seon-Ho Jung[1,2], Jiyoung Park[2,3], Yeon-Taek Choi[2,3], Yong-Bae Kim[2], Junghan Song[2], Jongsup Lee[2]
  [1]Inha University, Mechanical Engineering, South Korea. [2]Korea Institute of Industrial Technology, Metal Forming Technology R&D Group, South Korea. [3]Hanyang University, Mechanical Design Engineering, South Korea.

- **SE2-P022 THERMOQUIMIC TREATMENT IN A STEEL AISI 1018 THROUGH CHARCOAL AND GRAY IRON SHAVINGS.**

  Luis Eduardo Tovar Gallegos[1], Jesús Salvador Luna[1], Carlos Rodrigo Muñiz Valdez[1], Marisol Gallardo Heredia[1], Juan Carlos Ortiz Cuellar[1], Jesus Fernando Martinez Villafañe[1]
  [1]Universidad Autónoma de Coahuila, Química, Mexico.

- **SE2-P023 HYDROPHILIC PROPERTIES OF Mo-OXIDE MICROSTRUCTURES ARRAY SYNTHETIZED BY THERMAL OXIDATION**

  Eric Fernando Vazquez Vazquez[1], Alan Rair López Rivera[1], Angel Guillen Cervantes[2], Miguel A. Avendaño Ibarra[3], Salvador Gallardo Hernandez[4], Oscar Eduardo Cigarroa Mayorga[1]
  [1]Instituto Politécnico Nacional - IPN, Tecnologias Avanzadas, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Fisica, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Depto. Ingenieria Electronica, SEES, Mexico. [4]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, LANE, Mexico.

- **SE2-P024 SYNTHESIS AND CHARACTERIZATION OF A Ni_3Al INTERMETALLIC MODIFIED WITH COPPER ATOMS VIA POWDER METALLURGY**

  Heriberto Villanueva Pliego[1], Bernardo Campillo[2], Arturo Molina Ocampo[1], Rene Guardia Tapia[1], Alejandro Sedano Aguilar[1], Oscar Hernández Guerrero[1], Sergio Serna[1]
  [1]Universidad Autónoma del Estado de Morelos, CIICAp, Mexico. [2]Universidad Nacional Autónoma de México, ICF, Mexico.

- **SE2-P025 PREPARATION AND CHARACTERIZATION OF THE SUPPORT FOR COMBUSTION CATALYST OF THE FCC PLANT REGENERATOR**

Arturo Pallares García[1], José Luis Contreras[1], Beatriz Zeifert[2], Tamara Vázquez[1], Griselda Bermudez[1]

[1]Universidad Autónoma Metropolitana, CBI-Departamento de energía, Mexico. [2]Instituto Politécnico Nacional - IPN - ESIQIE, UPALM, Mexico.

- **SE2-P026 STUDY OF THE THERMAL STABILITY OF LITHIUM ZIRCONATE BY THE COMBUSTION METHOD**

Melisa Morales Pérez[1], Rubén Jonatan Aranda García[1], Daniel Cruz Gonzalez[2]

[1]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniería Química, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Facultad de ingeniería Química, Mexico.

- **SE2-P027 STUDY OF CORROSION RESISTANCE IN MULLITE-BASE CERMETS COMPOSITES REINFORCED WITH NANOSILVER**

Mercedes Gabriela Téllez Arias[1,2], J. G. Miranda Hernández[1], E. Terrés[3], M. A. Espinoza Medina[4]

[1]Universidad Autónoma del Estado de México, CU-UAEM-VM, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ingeniería Química, Mexico. [3]Instituto Mexicano del Petróleo, Laboratorio de Microscopia Electrónica de Ultra Alta Resolución, Mexico. [4]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ingeniería Mecánica, Mexico.

- **SE2-P028 SIMULTANEOUS IMPROVEMENT OF CORROSION RESISTANCE AND STRENGTH OF Al-Mg-Si ALLOY BY STEAM PROCESS**

Ai Serizawa[1], Kotaro Mori[1], Yuta Shimada[1], Takahiro Ishizaki[1]

[1]Shibaura Institute of Technology, Materials Science and Engineering, Japan.

- **SE2-P029 SELF-NORMALIZED PHOTOACOUSTIC TECHNIQUE FOR THERMAL DIFFUSIVITY MEASUREMENTS OF MATERIALS CONSISTING ON THIN LAYERS**

José Abraham Balderas López[1], Yolanda de Las Mercedes Gómez y Gómez[2], María Esther Bautista Ramírez[2]

[1]Instituto Politécnico Nacional - IPN, Ciencias Básicas, Mexico. [2]Instituto Politécnico Nacional - IPN, Bioprocesos, Mexico.

- **SE2-P030 INTERNAL CURING IN HIHG PERFORMANCE CONCRETE WITH FLY ASH EMPLOYING PUMICE AND SUPERABSORBENT POLYMERS**

Greisy Guadalupe Barrera Alvarez[1], E. U. de Los Santos[1], G. Santiago Hurtado[1], V. M. Moreno Landeros[1], L. M. Reynosa Morales[1]

[1]Universidad Autónoma de Coahuila, Facultad Ingeniería Civil Unidad Torreon, Mexico.

- **SE2-P031 HYDROGEN PERMEABILITY PARAMETERS OVER A MICROALLOYED STEEL SUBJECTED TO DIFFERENT THERMAL CYCLES AND COOLING RATES**

Julio César Villalobos[1], Octavio Vázquez[1], Héctor Vergara[1], Adrian Del Pozo[2], Bernardo Campillo[3], Sergio Serna[2]

[1]Instituto Tecnológico de Morelia, Posgrado en Ciencias en Metalurgia, Mexico. [2]Universidad Autónoma del Estado de Morelos, CIICAP, Mexico. [3]Universidad Nacional Autónoma de México, Facultad de Química, Mexico.

- **SE2-P032 REINFORCEMENT OF ALUMINUM ALLOY 7075 WITH SYNTHESIZED REDUCED GRAPHENE OXIDE BY AN ENVIRONMENT-FRIENDLY METHOD**

Eduardo Cuadros[1], Daniel Lardizabal[2], Jose Martin Herrera Ramirez[1], Caleb Carreño[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Metalurgia e integridad estructural, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., Analisis Termicos, Mexico.

- **SE2-P033 STUDY OF THE MECHANISMS OF FRACTURE AND DELAMINATION OF Cu-Nb MATERIALS**

Francisco Alfredo García Pastor[1], Cesar Mariscal Hernandez[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV Unidad Saltillo, Metallurgy, Mexico.

- **SE2-P034 SYNTHESIS, MICROSTRUCTURE, AND PHASE STABILITY OF NEW CERAMIC MATERIALS $In_{1+x}(Ti_{1/2}Zn_{1/2})_{1-x}O_3(ZnO)_m$ (m = 2, 4, and 6; x = 0.5) AND THEIR DIELECTRIC PROPERTIES**

Fructuoso Hernandez Orozco[1], Victor Alvarez Montaño[1], Francisco Brown[2]

[1]Universidad de Sonora, Departamento de Ingenieria Quimica y Metalurgia, Mexico. [2]Universidad de Sonora, Departamento de Investigación en Polímeros y Materiales, Mexico.

- **SE2-P035 ASPHALT PAVEMENT WITH RECOVERING CAPABILITIES DUE TO ITS HYDROPHILIC PROPERTIES**

Israel A. Briseño Carmona[1], Edgar Ulises De Los Santos[1], Griselda Santiago Hurtado[1], Victor Manuel Moreno Landeros[1]

[1]Universidad Autónoma de Coahuila, Facultad de Ingeniería Civil Unidad Torreón, Mexico.

- **SE2-P036 UNIVERSAL REPRESENTATION OF THE ARC COLUMN AND ARC-WELD POOL INTERACTIONS FOR TUNGSTEN INERT GAS WELDING**

Marco Aureio Ramírez Argáez[1], José Alfredo Delgado Alvarez[2], Patricio Mendez[3]

[1]Universidad Nacional Autónoma de México, Facultad de Química, Mexico. [2]Universidad Nacional Autónoma de México, Facultad de Química, Mexico. [3]University of Alberta, Chemical and Materials Engineering, Canada.

- **SE2-P037 DESIGN, SIMULATION AND CONSTRUCTION OF A METALLIC ELASTIC METAMATERIAL**

J Andres Matutes Aquino[1], Cesar Alejandro Torres Torres[1], Carlos Roberto Santillán Rodríguez[1], Renee Joselin Saenz Hernandez[1], María Eugenia Botello Zubiate[1], María Cristina Grijalva Castillo[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Física de Materiales, Mexico.

- **SE2-P038 SYNTHESIS AND CHARACTERIZATION OF METAL MATRIX COMPOSITES TI-TIB2 FOR BIOCOMPATIBLE IMPLANTS**

Andrés Meiners[1], Omar Jiménez Alemán[2], Ivan Gerardo Farias Velazquez[2]

[1]Instituto Tecnológico y de Estudios Superiores de Occidente A.C., Matematicas y Fisica, Mexico. [2]Universidad de Guadalajara, CUCEI, Mexico.

- **SE2-P039 MECHANICAL ACTIVATION OF THE MIXTURE PRECURSOR $CaCO_3$-Al_2O_3-SiO_2 FOR THE SYNTHESIS OF ANORTHITE**

Pablo Eusebio Hernández Mendoza[1], Brenda Rogelina Cruz Ortiz[1], Adali Oliva Castañeda Facio[2], Jorge López Cuevas[3], Oswaldo Burciaga Díaz[3], Claudia Magdalena López Badillo[1]

[1]Universidad Autónoma de Coahuila, Ceramic department, Mexico. [2]Universidad Autónoma de Coahuila, polymer department, Mexico. [3]Instituto Tecnológico de Saltillo, Ceramic department, Mexico.

- **SE2-P040 DEVELOPMENT OF POLYMERIC STRAIN GAUGE FOR AERONAUTICAL STRUCTURAL MONITORING**

Jesus Obregon Garcia[1,2], Jacobo Esteban Munguia Cervantes[1], Georgina Garcia Pacheco[2]

[1]Centro de Nanociencias y micro y Nanotecnologías del IPN, Micro y nanotecnologías, Mexico. [2]ESIME TICOMAN, Posgrado, Mexico.

- **SE2-P041 ANALYSIS OF THE PROGRESSIVE ROUGHNESS IN A NiCoCrAlYTa BOND COAT FOR THERMAL BARRIER COATING APPLICATIONS**

Aureliano Martinez[1], José Ernesto Ledezma Sillas[1], Caleb Carreño[1], Barbara Bermudez Reyes[2], Yoshikazu Todaka[3], Jose Martin Herrera Ramirez[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Metalurgia e integridad estructural, Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico. [3]Toyohashi University of Technology, Mechanical Engineering, Japan.

- **SE2-P042 BISMUTH-STABILIZED YTTRIUM DENSE SOLID ELECTROLYTE PREPARED BY SPARK PLASMA SINTERING**

Paola Cardenas Terrazas[1], Margarita Talavera Leyva[2], Caleb Carreño Gallardo[1], Ernesto Ledezma Sillas[1], Maria Teresa Ayala Ayala[3], Juan Muñoz Saldaña[3], Jose Martin Herrera Ramirez[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Metalurgia e integridad estructural, Mexico. [2]Universidad Autónoma de Chihuahua, Facultad de ingenieria, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Ceramicos multifuncionales, Mexico.

- **SE2-P043 COMPARISON OF THE MECHANICAL PROPERTIES OF PURE Ti AND THE Ti-6Al-4V TITANIUM ALLOY EXPOSED TO BORIDING**

Alexis Chino Ulloa[1], Enrique Hernández Sánchez[1], Itzel Pamela Torres Avila[1], Carlos Orozco Álvarez[2], Pamela González García[1], José Antonio García Macedo[3]

[1]Instituto Politécnico Nacional - IPN, Laboratorio de caracterización física y mecánica de biomateriales, Mexico. [2]Instituto Politécnico Nacional - IPN, Bioingeniería, Mexico. [3]Tecnológico de Monterrey, Laboratorio de materiales, Mexico.

- **SE2-P044 EFFECT OF THE OPERATION VARIABLES IN TITANIUM SCAFFOLD**

Israel García Pérez[1], Nathyely Marisol Leon Lugo[1], Juan Jose Cortes Molina[2]

[1]Instituto Politécnico Nacional - IPN, ESIME Zacatenco, ICA, Mexico. [2]Instituto Politécnico Nacional - IPN, CECyT No. 1 GW, Mexico.

- **SE2-P045 METAL OXIDES ADDITION EFFECT (ZRO_2 AND CUO_2) ON THE ELECTRICAL AND MECHANICAL PROPERTIES OF ALUMINUM MATRIX**

Reyna Anahí Falcón Castrejón[1], Isaí Rosales Cadena[1]

[1]Universidad Autónoma del Estado de Morelos, Centro de Investigación en Ingeniería y Ciencias Aplicadas, Mexico.

■ **SE2-P046 SYNTHESIS AND THERMOLUMINESCENCE PROPERTIES OF BETA PARTICLE IRRADIATED Li_2SO_4:Eu PHOSPHORS**

Iván Castro[1], Catalina Cruz Vázquez[1], Rodolfo Bernal Hernández[2], Alma Ruth García Haro[3]

[1]Universidad de Sonora, Departamento de Investigación en Polímeros y Materiales, Mexico. [2]Universidad de Sonora, Departamento de Investigación en Física, Mexico. [3]Universidad de Sonora, Departamento de Ciencias Químico Biológicas, Mexico.

■ **SE2-P047 EFFECT OF ALKALINE ACTIVATOR TYPE ON CEMENTS BASE WASTE GLASS-LIMESTONE**

Andrea Estefanía Córdova Sánchez[1], Ulises Avila López[1], J Iván Escalante Garcia[2], Marisol Gallardo Heredia[1]

[1]Universidad Autónoma de Coahuila, Facultad de Ingeniería, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV Unidad Saltillo, Cerámicos, Mexico.

■ **SE2-P048 MANUFACTURING OF NiCoCrAlYTa COATINGS BY FLAME SPRAY**

Christian de Jesus Morado[1], Melquisedec Vicente[1], Ricardo Cuenca[1], Fernando Juarez[1]

[1]Centro de Investigación e Innovación Tecnológica, Rociado termico y preparacion de superficies, Mexico.

■ **SE2-P049 DESIGN AND CONSTRUCTION OF A SPECIMEN HEATING DEVICE**

Manuel Guzmán Tapia[1], Gonzalo M. Dominguez Almaraz[2], Alberto Gutiérrez Martínez[3], Julio Velázquez Araiza[3], Ishvari Fernanda Zuniga[1], Javier Gutíerrez Martinez[1], Julio Adrian Ruiz Vilchez[2]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Doctorado en Ciencias en Ingeniería Mecánica, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Posgrado en Ciencias en Ingeniería Mecánica, Mexico. [3]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de ingeniería Eléctrica, Mexico.

■ **SE2-P050 DURABILITY EVALUATION OF CONCRETE MADE WITH MARBLE POWDER AS A PARTIAL SUBSTITUTE FOR CEMENT**

Diego Andres Zuñiga Martinez[1], Griselda Santiago Hurtado[1], Edgar Ulises De Los Santos[1], Victor Manuel Moreno Landeros[1], Francisco Javier Olguin Coca[2], Luis Daimir López León[3]

[1]Universidad Autónoma de Coahuila, Facultad de Ingeniería Civil, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Instituto de Cencias Básicas e Ingeniería, Mexico. [3]Universidad Autónoma del Estado de Hidalgo, Instituto de Ciencias Básicas e Ingeniería, Mexico.

■ **SE2-P051 ELECTROCHEMICAL EVALUATION OF REINFORCED CONCRETE WITH PARTIAL SUSBTITUTION OF CEMENT BY LIMESTONE POWDER**

Claudia Estefania Olivares Gonzalez[1], Griselda Santiago Hurtado[2], Victor Manuel Moreno Landeros[2], Edgar Ulises De Los Santos[2], Luis Manuel Reynosa Morales[3], Miguel Angel Baltazar Zamora[4]

[1]Universidad Autónoma de Coahuila, Facultad de Ingenierá Civil, Mexico. [2]Universidad Autónoma de Coahuila, Facultad de Ingeniería Civil, Mexico. [3]Universidad Autónoma de Coahuila, Facultad de Ingeniería, Mexico. [4]Universidad Veracruzana, Facultad de Ingeniería Civil, Mexico.

■ **SE2-P052 ORGANIC ADDITIVE FLUIDIFIER AND DENSIFIER OF CEMENTING MATRIX IN MASONRY MORTARS**

Luis Alberto Gonzalez Luna[1], Victor Manuel Baez Angel[1], Wilfrido Martinez Molina[1], Hugo Luis Chávez García[1], Elia Mercedes Alonso Guzman[1], Cindy Lara Gomez[1], Sandra del Carmen Arguello Hernandez[1], Rosalia Ruiz Ruiz[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Civil Engineering Faculty, Mexico.

■ **SE2-P053 COMPARISON OF NUMERICAL AND EXPERIMENTAL DEFORMATION VALUES IN BEAMS USING DIFFERENT CONCRETE ADDITIVES**

Jose Alberto Guzman Torres[1], Jose Gerardo Tinoco Ruiz[2], Wilfrido Martinez Molina[3], Franciso Javier Dominguez Mota[2], Hugo Luis Chávez García[3], Elia Mercedes Alonso Guzman[3], Cindy Lara Gomez[3], Arturo Zalapa Damian[4], Marco Antonio Navarrete Seras[1], Elizabeth Contreras Marin[5]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ciencias Físico Matemáticas y Facultad de Ingeniería Civil, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ciencias Físico Matemáticas, Mexico. [3]Universidad Michoacana de San Nicolás de Hidalgo, Civil Engineering Faculty, Mexico. [4]Universidad Michoacana de San Nicolás de Hidalgo, Chemical and Civil Engineering Faculties, Mexico. [5]Universidad de Sevilla, Escuela Tecnica Superior de Arquitectura, Spain.

■ **SE2-P054 CEMENT MORTARS OF CEMENT WITH PARTIAL SUBSTITUTIONS OF STARCH AND NOPAL FIBER FOR ITS PERFORMANCE TO RESIST CHLORIDE PERMEABILITY**

Marcos Ariel Villanueva Guzman[1], Wilfrido Martinez Molina[2], Hugo Luis Chávez García[2], Elia Mercedes Alonso Guzman[2], Cindy Lara Gomez[2],

Noel Diaz Gonzalez[2], Felipe de Jesus Jeronimo Rodriguez[2], Fidel Bautista Leon[2]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Maestria en Infraestructura del Transporte en la Rama de las Vias Terrestres, F.I.C., Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Civil Engineering Faculty, Mexico.

- **SE2-P055 ORGANIC ADDITIONS IN MORTARS FOR SEMI-RIGID PAVING: EVALUATION OF RUPTURE MODULUS**

Luis Colin Velazquez[1], Wilfrido Martinez Molina[1], Hugo Luis Chávez García[1], Elia Mercedes Alonso Guzman[1], Cindy Lara Gomez[1], Sandra del Carmen Arguello Hernandez[1], Marco Antonio Mondragon Ornelas[1], Emmanuel Gonzalez Castro[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Civil Engineering Faculty, Mexico.

- **SE2-P056 EVALUATION OF GOVERNMENTAL ACTIONS IN THE EUROPEAN UNION: THE RCD´S CASE STUDY IN BUILDING**

Elizabeth Contreras Marin[1], Antonio Jaramillo Morilla[1], Wilfrido Martinez Molina[2], Hugo Luis Chávez García[2], Elia Mercedes Alonso Guzman[2], Cindy Lara Gomez[2], Arturo Zalapa Damian[2], Maybelin Carolina Garcia Chiquito[2]

[1]Universidad de Sevilla, Escuela Superior Tecnica de Arquitectura, Spain. [2]Universidad Michoacana de San Nicolás de Hidalgo, Civil Engineering Faculty, Mexico.

- **SE2-P057 PARTIAL SUBSTITUTION OF SUGARCANE BAGASSE ASH IN HYDRAULIC CONCRETE: EVALUATION OF RESISTANCE TO ABRASION AS A PARAMETER OF ITS DURABILITY**

Emmanuel Gonzalez Castro[1], Wilfrido Martinez Molina[1], Hugo Luis Chávez García[1], Elia Mercedes Alonso Guzman[1], Cindy Lara Gomez[1], Sandra del Carmen Arguello Hernandez[1], Cipriano Bernabe Reyes[1], Luis Colin Velazquez[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Civil Engineering Faculty, Mexico.

- **SE2-P058 ANALYSIS OF COMPACTNESS IN MORTAR BASE CEMENT, MUCILAGE OF NOPAL AS SUBSTITUTE OF FLUID MIXING**

Fidel Bautista Leon[1], Wilfrido Martinez Molina[1], Hugo Luis Chávez García[1], Elia Mercedes Alonso Guzman[1], Cindy Lara Gomez[1], Marco Antonio Mondragon Ornelas[1], Noel Diaz Gonzalez[1], Marcos Ariel Villanueva Guzman[2]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Civil Engineering Faculty, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Maestria en Infraestructura del Transporte en la Rama de las Vias Terrestres, F.I.C., Mexico.

- **SE2-P059 POZZOLANIC ACTIVITY OF CANE BAGASSE´S ASHES OF MICHOACÁN, use in substitution and addition for mortars.**

Isaias Trujillo Calderon[1], Wilfrido Martinez Molina[1], Hugo Luis Chávez García[1], Elia Mercedes Alonso Guzman[1], Cindy Lara Gomez[1], Noel Diaz Gonzalez[1], Felipe de Jesus Jeronimo Rodriguez[1], Ramiro Silva Orozco[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Civil Engineering Faculty, Mexico.

- **SE2-P060 EVALUATION OF THE BEHAVIOR AT 28 DAYS AGE OF CEMENT MORTAR WITH PARTIAL SUBSTITUTION OF BRICK HAND MAKING ASH**

Job Daniel Alvarez Pita[1], Wilfrido Martinez Molina[1], Hugo Luis Chávez García[1], Elia Mercedes Alonso Guzman[1], Cindy Lara Gomez[1], Mauricio Arreola Sanchez[1], Sandra del Carmen Arguello Hernandez[1], Cipriano Bernabe Reyes[1], Carlos Uriel Espino Gonzalez[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Civil Engineering Faculty, Mexico.

- **SE2-P061 GEOTHERMAL WASTE THAT IMPROVE THE MECHANICAL PROPERTIES OF THE PORTLAND CEMENT MORTARS**

Victor Manuel Baez Angel[1], Wilfrido Martinez Molina[1], Hugo Luis Chávez García[1], Elia Mercedes Alonso Guzman[1], Cindy Lara Gomez[1], Luis Alberto Gonzalez Luna[1], Sandra del Carmen Arguello Hernandez[1], Cipriano Bernabe Reyes[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Civil Engineering Faculty, Mexico.

- **SE2-P062 PROPERTIES MATHEMATICAL CORRELATION OF CONCRETE PERFORMED WITH EMPIRICAL DESIGN AND EVALUATED WITH NON-DESTRUCTIVE TESTS AT LATE AGES**

Jose Wilbert Viveros Ramos[1], Wilfrido Martinez Molina[1], Hugo Luis Chávez García[1], Elia Mercedes Alonso Guzman[1], Cindy Lara Gomez[1], Noel Diaz Gonzalez[1], Marco Antonio Mondragon Ornelas[1], Victor Hugo Blancas Herrera[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Civil Engineering Faculty, Mexico.

■ **SE2-P063 MECHANICAL CHARACTERIZATION OF TITANIUM MATRIX COMPOSITES WITH DIFFERENT TiC ADDITIONS VIA SPARK PLASMA SINTERING**

Ivan Gerardo Farias Velazquez[1], Luis Rafael Olmos Navarrete[2], Omar Jiménez Alemán[1]

[1]Universidad de Guadalajara, Departamento de Ingeniería de Proyectos, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigaciones en Ciencias de la Tierra, Mexico.

■ **SE2-P064 TENSILE STRENGTH OF NOTCHED POLYMER MATRIX COMPOSITES REINFORCED WITH JUTE AND STEEL MESH**

Antonio Mosqueda Sanchez[1], Victor Sauce Rangel[1], Hilario Hernandez Moreno[1]

[1]Instituto Politécnico Nacional - IPN, Laboratorio de Ingenieria de Materiales, Mexico.

■ **SE2-P065 BENDING BEHAVIOR OF AN HYBRID LAMINATED COMPOSITE REINFORCED WITH NATURAL FIBERS (JUTE) AND STEEL MESH**

Antonio Mosqueda Sanchez[1], Victor Sauce Rangel[1], Alfonso Espinosa Picazo[2]

[1]Instituto Politécnico Nacional - IPN, Laboratorio de Ingenieria de Materiales, Mexico. [2]Instituto Politécnico Nacional - IPN, Laboratorio de Ensaye de Materiales, Mexico.

■ **SE2-P066 STRUCTURAL AND OPTICAL STUDY OF ZnTe THIN FILMS GROWN BY LASER ABLATION**

Maria Alicia Ramirez[1], Fray de Landa Castillo Alvarado[1,2], Concepción Mejía García[1,2], Jorge Aguilar Hernández[1,2], David Omar Flores Tavira[1,2], Luis Arturo Martinez Ara,[1,2], Miguel Angel Ibarra[1,3], Miguel Angel Serviles[1,4], Adolfo Tavira Fuentes[1,3]

[1]Escuela Superior de Física y Matemáticas IPN, Materiales, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, SEE, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Sección de Electrónica del Estado Sólido, Mexico. [4]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Fisica, Mexico.

■ **SE2-P067 TRIAXIAL TESTS IN STABILIZED SOILS PERFORMED AS INDICATED IN ASTM 6276**

Omar Salvador Miranda Leal[1], Wilfrido Martinez Molina[1], Israel Bocanegra Torres[1], Pablo Garcia Diaz[1], Ernesto Alberto Nuñez Guzman[1], Felipe de Jesus Jeronimo Rodriguez[1], Fernando Nuñez Guzman[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Civil Engineering Faculty, Mexico.

■ **SE2-P068 BIOACTIVE COATING ON AN ASTM F75 ALLOY TREATED WITH HYDROXYAPATITE BY Nd:YAG PROCESS**

Juan Carlos Ortiz Cuellar[1], Carlos Rodrigo Muñiz Valdez[1], Anay Garcia Garcia[2], Jesus Salvador Luna Alvarez[1], Jesus Fernando Martinez Villafañe[1], Nelly Rodriguez Rosales[3]

[1]Universidad Autónoma de Coahuila, Facultad de Ingenieria, Mexico. [2]Universidad Autónoma de Coahuila, FACULTA DE INGENIERIA, Mexico. [3]Instituto Tecnológico de Saltillo, Metal-Mecánica, Mexico.

■ **SE2-P069 INFLUENCE OF DIFFERENT CONTENTS OF SILICA IN AN EPOXY-POLYANILINE-SILICA BASED COATING FOR CORROSION PROTECTION**

Camila Caldas[1,2], Bluma Soares[2]

[1]Centro Universitário Estadual da Zona Oeste, Polímeros, Brazil. [2]Universidade Federal do Rio de Janeiro, Instituto de macromoléculas professora Eloisa Mano, Brazil.

■ **SE2-P070 EFFECT OF CITRIC ACID AND GELATIN BINDERS ON THE MECHANICAL STRENGTH OF HYDROXYAPATITE-BASED BIOCEMENTS**

Jorge López Cuevas[1], Gregorio Vargas Gutiérrez[1], José Luis Rodríguez Galicia[1], Juan Carlos Rendón Angeles[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Ceramics Engineering, Mexico.

Symposium E3

MATERIALS IN NUCLEAR SCIENCE AND TECHNOLOGY

Demetrio Mendoza Anaya / Instituto Nacional de Investigaciones Nucleares
Angeles del C. Díaz Sánchez / Instituto Nacional de Investigaciones Nucleares
Jose A. Rodríguez-Rivera / University of Maryland

MONDAY, AUGUST 20
ROOM: CHICHEN ITZA II

Session: Materials for nuclear applications and radiation effects

SESSION CHAIR: EPIFANIO CRUZ ZARAGOZA

- **09:00 - 09:15 SE3-O001 FRACTURE BEHAVIOR AND MECHANICAL PROPERTIES OF LDX 2101 WELDED JOINTS WITH FATIGUE DAMAGE**
  Kevin Jesús Fuentes Corona[1], Alberto Ruiz[1], Victor Hugo López Morelos[1]
  [1]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigación en Metalurgia y Materiales, Mexico.
- **09:15 - 09:30 SE3-O002 OXIDATION OF PYROLYTIC CARBON COATINGS AND NUCLEAR GRADE GRAPHITE AT TEMPERATURES BETWEEN 700 AND 1000 °C**
  David Jacob Navarro Solis[1], Eddie Lopez Honorato[1]
  [1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV Unidad Saltillo, Céramica, Mexico.
- **09:30 - 09:45 SE3-O003 ANALYSIS AND COMPARISON OF THE RESPONSE OF TWO DIFFERENT TYPES OF SOLID SCINTILLATORS EXPOSED TO GAMMA RADIATION**
  Edmundo Márquez Quintos[1], Marco Pablo Trejo García[1], Eduardo Moreno Barbosa[2], Martín Rodolfo Palomino Merino[1]
  [1]Benemerita Universidad Autonoma de Puebla, FCFM-BUAP, Mexico. [2]Benemerita Universidad Autonoma de Puebla, FCFM, Mexico.
- **09:45 - 10:00 SE3-O004 INFLUENCE OF THE ENTHALPY LANDSCAPE ON THE IRRADIATION-INDUCED DISORDERING OF MINERALS**
  N. M. Anoop Krishnan[1], Mathieu Bauchy[2]
  [1]Indian Institute of Technology Delhi, Department of Civil Engineering, India. [2]University of California, Los Angeles, Physics of AmoRphous and Inorganic Laboratory, United States.
- **10:00 - 10:30 SE3-O005 Invited Talk DEVELOPMENT OF YSZ ENVIRONMENTAL BARRIER COATINGS BY sol-gel/dip COATING AND CVD FOR THE MOLTEN SALT FAST REACTOR**
  Francisco Javier Gómez Cano[1], Lester Javier Espinoza Perez[1], Eddie Lopez Honorato[1]
  [1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV Unidad Saltillo, Ingeniería Cerámica, Mexico.
- **10:30 - 10:45 SE3-O006 MeV PROTON IRRADIATION DAMAGE ON TUNGSTEN: BLISTER FORMATION**
  Guy Makov[1]
  [1]Ben-Gurion University of the Negev, Materials Engineering, Israel.

■ **10:45 - 11:00 SE3-O007 THE DAMAGE PROCESS OF PYROCHLORE OXIDES TO LOW ENERGY IRRADIATION**

Yue Xia[1,2]

[1]Lanzhou University, Nuclear Sciences and Technology, China. [2]Stanford University, Geological Sciences, United States.

■ **11:00-11:30 Coffe Break**

🕮 **11:30 - 12:30 PLENARY II**
PROF. YUICHI IKUHARA

Session: Nuclear materials characterization and modeling

SESSION CHAIR: EDDIE LÓPEZ HONORATO

■ **12:30 - 12:45 SE3-O008 DOSIMETRIC CHARACTERIZATION OF CALCIUM DIALUMINATE**

Pablo Victor Ceron[1], Miguel Ángel Vallejo Hernández[1], Eduardo Montes Ramirez[2], Christian Gomez[1], José Antonio Irán Díaz Góngora[3], Luis Armando Diaz Torres[2], Ricardo Navarro[4], Modesto Sosa[1]

[1]Universidad de Guanajuato, Ingeniería Física, Mexico. [2]Centro de Investigaciones en Optica, Investigación, Mexico. [3]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Investigación, Mexico. [4]Universidad de Guanajuato, Química, Mexico.

■ **12:45 - 13:00 SE3-O009 HYDROGEN ADSORPTION STUDIES ON ZIRCONIUM SURFACE**

Katerina Horakova[1], Stanislav Cichon[1], Jan Lancok[1], Irena Kratochvilova[1], Vladimir Chab[1], Petr Sajdl[2], Luca Floreano[3], Alberto Verdini[3], Marcos Dominguez Rivera[3]

[1]Institute of Physics of the Czech Academy of Sciences, Department of Analysis of Functional Materials, Czech Republic. [2]University of Chemistry and Technology Prague, Department of Power Engineering, Czech Republic. [3]CNR-IOM Laboratorio Nazionale TASC, , Italy.

▸ **13:00 - 13:30 SE3-O010 Invited Talk SPIN-ORBIT INTERACTION AND STRONG CORRELATION EFFECTS ON SUPERCONDUCTING ACTINIDES**

Omar de la Pena Seaman[1], Rolf Heid[2]

[1]Benemerita Universidad Autonoma de Puebla, Physics institute, Mexico. [2]Karlsruher Institut für Technologie, Institute for Solid State Physics (IFP), Germany.

■ **13:30 - 13:45 SE3-O011 THERMAL EXPANSION AND SHRINKAGE OF A BENTONITE CLAY MEASURED BY DILATOMETRY UNDER DIFFERENT HUMID CONDITIONS**

Ekkehard Post[1]

[1]NETZSCH Geraetebau GmbH, Applications Lab, Germany.

■ **13:45 - 14:00 SE3-O012 GLOVE-BOX VERSION OF A NEW DILATOMETER WITH A NEW OPTICAL-ELECTRONIC DISPLACEMENT SYSTEM**

Ekkehard Post[1]

[1]NETZSCH Geraetebau GmbH, Applications Lab, Germany.

☒ **14:00 - 16:00 Lunch time**

Session: Dosimetry - Thermoluminescence

SESSION CHAIR: OMAR DE LA PEÑA SEAMAN

■ **16:00 - 16:15 SE3-O013 NANO-HAP: SYNTHESIS, CHARACTERIZATION AND THERMOLUMINESCENT STUDIES**

Susana López Ortiz[1], Demetrio Mendoza Anaya[2], Eleazar Salinas Rodríguez[1], María Eufemia Fernandez García[2], Juan Hernandez Avila[1], Venkata Krisgna Karthik Venkata Krisgna Karthik[3], Ventura Rodriguez Lugo[1]

[1]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Instituto de Ciencias Básicas e Ingeniería, Mexico. [2]Instituto Nacional de Investigaciones Nucleares (ININ), Instituto Nacional de Investigaciones Nucleares, Mexico. [3]Universidad Autónoma del Estado de Hidalgo, Escuela Superior de Tepeji del Rio, Universidad Autónoma del Estado de Hidalgo, Mexico.

■ **16:15 - 16:30 SE3-O014 Ag NANOPARTICLES EFFECTS ON THE MORPHOLOGY AND THE THERMOLUMINECENT BEHAVIUR OF HYDROXYAPATITE**

Lesly Sabina Villaseñor Cerón[1], Demetrio Mendoza Anaya[2], Jesús Angel Arenas Alatorre[3], Efraín Rubio[4], Juan Hernández Avila[1], Ventura Rodriguez Lugo[1]

[1]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Instituto de Ciencias Básicas e Ingeniería, Mexico. [2]Instituto Nacional de Investigaciones Nucleares (ININ), Instituto Nacional de Investigaciones Nucleares, Mexico. [3]Instituto de Física - Universidad Nacional Autónoma de México, Instituto de Física, Mexico. [4]Benemerita Universidad Autonoma

de Puebla, Centro Universitario de Vinculación y Transferencia de Tecnología, Mexico.

- **16:30 - 17:00 SE3-O015 Invited Talk THERMALLY STIMULATED LUMINESCENCE CHARACTERIZATION OF $LiF_{(1-x)}NaF_{(x)}$ ALKALI FLUORIDE FOR RADIATION DOSIMETRY**

  Epifanio Cruz Zaragoza[1], Erika Gómez Chayres[2], Julian Marcazzó[3]

  [1]Instituto de Ciencias Nucleares UNAM, Radiation Chemistry Department, Mexico. [2]Facultad de Química, UNAM, Programa de Maestría y Doctorado en Ciencias Químicas, Mexico. [3]CONICET / University of Buenos Aires, Instituto de Física, Argentina.

- **17:00 - 17:15 SE3-O016 SYNTHESIS AND EVALUATION OF THE THERMOLUMINESCENCE RESPONSE OF $SrTiO_3$ FOR THE DEVELOPMENT OF HIGH DOSE RADIATION DOSIMETERS**

  Guadalupe Aide Bustamante Lopez[1], Catalina Cruz Vázquez[1], Rodolfo Bernal Hernández[2]

  [1]Universidad de Sonora, Departamento de Investigación en Polímeros y Materiales, Mexico. [2]Universidad de Sonora, Departamento de Investigación en Física, Mexico.

- **17:15 - 17:30 SE3-O017 LOWER DETECTABLE DOSE DETERMINATION IN AFTERGLOW DOSIMETRY**

  Tomasa Hernandez[1], Rodolfo Bernal Hernández[2], Catalina Cruz Vázquez[1], Francisco Brown[1]

  [1]Universidad de Sonora, Departamento de Investigación en Polímeros y Materiales, Mexico. [2]Universidad de Sonora, Departamento de Investigación en Física, Mexico.

- **17:30-18:30 Science, Technology and Society Lecture SENER**

MONDAY, AUGUST 20
ROOM: TERRACE

- **18:30 -20:30 POSTER SESSION & COFFEE BREAK**

- **SE3-P001 STUDY OF LITHIUM BORATE GLASSES DOPED WITH Dy^{3+} AND Yb^{3+} AND CONTAINING SILVER NANOPARTICLES AS POSSIBLE DOSIMETRIC USE**

  Janet Alejandra Elías[1], Miguel Ángel Vallejo Hernández[1]

  [1]Universidad de Guanajuato campus León, Departamento de Ingenieria Fisica, Mexico.

- **SE3-P002 STUDY OF THE THERMAL STABILITY OF LITHIUM ALUMINATE WITH POTENTIAL APPLICATION FOR THE GENERATION OF TRITIUM**

  Gladiola Santiago de Jesús[1], Daniel Cruz Gonzalez[1], Rubén Jonatán Aranda García[1]

  [1]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniería Química, Mexico.

- **SE3-P003 INCORPORATION OF QUANTUM DOTS IN BORATE GLASSES FOR ITS APPLICATION IN DOSIMETRY**

  Miguel Ángel Vallejo Hernández[1], Pablo Victor Ceron[1], Christian Gomez[1], Ricardo Navarro[2], Modesto Sosa[1]

  [1]Universidad de Guanajuato campus León, División de Ciencias e Ingenierías, Mexico. [2]Universidad de Guanajuato, División de Ciencias Naturales y Exactas, Mexico.

- **SE3-P004 THERMALLY STIMULATED LUMINESCENCE OF NOVEL La_2O_3 PHOSPHORS OBTAINED BY UREA-BASED SOLUTION COMBUSTION SYNTHESIS**

  Adriana Guadalupe Lara González[1], Victor Ramón Orante Barrón[1], Catalina Cruz Vázquez[1], Rodolfo Bernal Hernández[2]

  [1]Universidad de Sonora, Departamento de Investigación en Polímeros y Materiales, Mexico. [2]Universidad de Sonora, Departamento de Investigación en Física, Mexico.

- **SE3-P005 HYDROQUINONE EFFECT ON THE MORPHOLOGY OF THE HYDROXYAPATITE: CHARACTERIZATION Y APPLICATION**

  Uriel Aldair Alarcon Carrillo[1], Susana Lopez Ortiz[2], Mónica Arceli Camacho Gonzalez[1], Demetrio Mendoza Anaya[3], María Isabel Reyes Valderrama[4], Venkata Krishna Karthik Tangirala[5], Ventura Rodriguez Lugo[2]

  [1]Universidad Tecnológica de Tecamac, Universidad Tecnológica de Tecámac, Mexico. [2]Universidad Tecnológica de Tecamac, Área Académica de Ciencias de la Tierra y Materiales, Instituto de Ciencias Básicas e Ingeniería, Mexico. [3]Instituto Nacional de Investigaciones Nucleares (ININ), Instituto Nacional de Investigaciones Nucleares, Mexico. [4]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Instituto de Ciencias Básicas e Ingeniería, Mexico. [5]Universidad Autónoma del Estado de Hidalgo, Escuela Superior de Tepeji del Rio, Universidad Autónoma del Estado de Hidalgo, Mexico.

- **SE3-P006 THERMOLUMINESCENCE OF CARBON QUANTUM DOTS DOPED ALUMINIUM OXIDE EXPOSED TO X RAY AND UV RADIATION**

Laura Elena Puentes Prado[1], Christian Gómez Solís[2], Pablo Victor Ceron Ramírez[2], Miguel Ángel Vallejo Hernández[3], José de Jesús Bernal Alvarado[2], Modesto Sosa[2], Ricardo Navarro Mendoza

[1]Universidad de Guanajuato, departamento de Quimica, Mexico. [2]Universidad de Guanajuato campus León, Departamento de Física Médica, Mexico. [3]Universidad de Guanajuato campus León, Departamento de Ingeniería Física, Mexico. [4]Universidad de Guanajuato, Departamento de Química Analítica, Mexico.

- **SE3-P007 THERMOLUMINESCENCE PROPERTIES OF MGO: EU, LI, OBTAINED BY GLYCINE-BASED SOLUTION COMBUSTION SYNTHESIS**

Maria Alicia Gortárez Jiménez[1], Victor R. Orante Barrón[1], Catalina Cruz Vázquez[1], Rodolfo Bernal Hernández[2]

[1]Universidad de Sonora, Departamento de Investigación en Polímeros y Materiales, Mexico. [2]Universidad de Sonora, Departamento de Investigación en Física, Mexico.

- **SE3-P008 THERMOLUMINESCENCE PROPERTIES OF MAGNESIUM OXIDE DOPED WITH DYSPROSIUM AND LITHIUM OBTAINED BY SOLUTION COMBUSTION SYNTHESIS**

Gustavo Eduardo Sanchez Ortega[1], Victor Ramón Orante Barrón[1], Catalina Cruz Vázquez[1], Rodolfo Bernal Hernández[2]

[1]Universidad de Sonora, Departamento de Investigación en Polímeros y Materiales, Mexico. [2]Universidad de Sonora, Departamento de Investigación en Física, Mexico.

- **SE3-P009 SYNTHESIS OF TiO_2:Eu PHOSPHORS FOR HIGH DOSAGE THERMOLUMINESCENCE DOSIMETERS**

Guadalupe Aide Bustamante Lopez[1], Catalina Cruz Vázquez[1], Rodolfo Bernal Hernández[2], Victor M. Castaño[3]

[1]Universidad de Sonora, Departamento de Investigación en Polímeros y Materiales, Mexico. [2]Universidad de Sonora, Departamento de Investigación en Física, Mexico. [3]Universidad Nacional Autónoma de México, Departmento de Ingenieria Molecular de Materiales, Mexico.

- **SE3-P010 EFFECT OF DEPOSITION TEMPERATURE ON THE MICROSTRUCTURE AND CHEMICAL COMPOSITION OF ZIRCONIA COATINGS PRODUCED BY PECVD AS ENVIRONMENTAL BARRIER COATINGS FOR THE MOLTEN SALT FAST REACTOR**

Lester Javier Espinoza Perez[1], Eddie Lopez Honorato[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Ingenieria Metalurgica y Ceramica, Mexico.

- **SE3-P011 SYNTHESIS, CHARACTERIZATION AND THERMOLUMINESCENCE RESPONSE OF QUANTUM DOTS OF GRAPHITIC CARBON NITRIDE (g C3N4)**

Mario Cesar Pérez Chávez[1], Miguel Ángel Vallejo Hernández[1], Christian Gómez Solís[1], Pablo Victor Ceron[1], Modesto Sosa[1]

[1]Universidad de Guanajuato campus León, Física Médica, Mexico.

- **SE3-P012 DETERMINATION OF KINETIC PARAMETERS OF THERMOLUMINESCENCE GLOW CURVE OF $MgO\text{-}CeO_2$ AND $MgO\text{-}La(OH)_3$ SYSTEMS**

Flor María Escobar Ochoa[1], Victor Ramón Orante Barrón[2], Gustavo Eduardo Sanchez Ortega[2], Catalina Cruz Vázquez[2], Rodolfo Bernal Hernández[3]

[1]Universidad de Sonora, Departamento de Polimeros y Materiales, Mexico. [2]Universidad de Sonora, Departamento de Investigacion en Polimeros y Materiales, Mexico. [3]Universidad de Sonora, Departamento de Investigacion en Fisica, Mexico.

- **SE3-P013 THERMOLUMINESCENCE OF $SRZRO_3$ OBTAINED BY SOLID STATE SYNTHESIS**

Cayetano Cortez Galaz[1], Rodolfo Bernal Hernández[2], Catalina Cruz Vázquez[3]

[1]Universidad de Sonora, Departamento de Investigación en Polímeros y Materiales, Mexico. [2]Universidad de Sonora, Departamento de Investigación en Física, Mexico. [3]Universidad de Sonora, Departmento de Ingenieria Molecular de Materiales, Mexico.

- **SE3-P014 THERMOLUMINESCENT PROPERTIES OF SRB_4O_7 OBTAINED BY REACTION IN SOLID STATE**

Cayetano Cortez Galaz[1], Rodolfo Bernal Hernández[2], Catalina Cruz Vázquez[1]

[1]Universidad de Sonora, Departamento de Investigación en Polímeros y Materiales, Mexico. [2]Universidad de Sonora, Departamento de Investigación en Física, Mexico.

- **SE3-P015 EFFECT OF Dy DOPING ON THE THERMOLUMINESCENCE PROPERTIES OF ZnO PHOSPHORS**

Raul Aviles Monreal[1], Catalina Cruz Vázquez[2], Rodolfo Bernal Hernández[1]

[1]Universidad de Sonora, Departamento de Investigación en Física, Mexico. [2]Universidad de Sonora, Departamento de Investigación en Polímeros y Materiales, Mexico.

■ **SE3-P016 THERMOLUMINESCENCE RESPONSE OF STROMTIUM ALUMINATE DOPED WITH Ce+2 (Sr4Al14O25: Ce+2) TO X-RAY IRRADIATION**

Manuel León Madrid[1], Pablo Victor Ceron[1], Miguel Ángel Vallejo Hernández[1], Modesto Sosa[1]

[1]Universidad de Guanajuato, Physical Engineering, Mexico.

■ **SE3-P017 YALO3:CARBON DOTS SYNTHESIS, STRUCTURAL CHARACTERIZATION, PHOTOLUMINESCENCE AND DOSIMETRIC STUDIES**

Christian Gómez Solís[1], Pablo Victor Ceron Ramírez[2], José de Jesús Bernal Alvarado[2], Modesto Sosa[3], Miguel Ángel Vallejo Hernández[4], Ricardo Navarro Mendoza[5]

[1]Universidad de Guanajuato campus León, departamento de Ingeniería, Mexico. [2]Universidad de Guanajuato campus León, Departamento de Física Medíca, Mexico. [3]Universidad de Guanajuato campus León, Departamento de Ingeniería Física, Mexico. [4]Universidad de Guanajuato campus León, , Mexico. [5]Universidad de Guanajuato campus León, Química Analítica Ambiental y de Procesos Industriales, Mexico.

■ **SE3-P018 THERMOLUMINESCENCE RESPONSE OF LiF:Dy OBTAINED BY COPRECIPITATION CHEMISTRY METHOD**

Alma Ruth García Haro[1,2], Catalina Cruz Vázquez[3], Rodolfo Bernal Hernandez[4], Oralia Orduño Fragoza[2], Víctor Manuel Castaño Meneses[5], Daniel Raymundo Córdova Acosta[2]

[1]Universidad de Sonora, , Mexico. [2]Universidad de Sonora, Ciencias Químico Biológicas, Mexico. [3]Universidad de Sonora, Polímeros y Materiales, Mexico. [4]Universidad de Sonora, Centro de Investigación en Física, Mexico. [5]Centro de Física Aplicada y Tecnología Avanzada UNAM, Dpto de Física Aplicada y Tecnología Avanzada, Mexico.

■ **SE3-P019 IMPACT OF AGING DEGRADATION MECHANISMS ON NUCLEAR POWER PLANT MAIN TURBINE-GENERATOR TURBINE BLADE FAILURE PROBABILITIES**

David Alejandro Quintanar Gago[1], Pamela F. Nelson[1], Angeles del C Díaz Sánchez[2]

[1]Universidad Nacional Autónoma de México, Facultad de Ingeniería, Mexico. [2]Instituto Nacional de Investigaciones Nucleares (ININ), Ciencia y Tecnología de Materiales, Mexico.

Symposium E4

NACE: CORROSION AND METALLURGY

José Guadalupe Chacón Nava / CIMAV
Jorge Cantó / NACE International

WEDNESDAY, AUGUST 22
ROOM: CHICHEN ITZA II

- **08:00 - 08:15 SE4-O001 CARRAGEENAN FROM RED ALGAE CHONDRACANTHUS CHAMISSOI AS AN ECOLOGICAL INHIBITOR FOR THE ASTM A335 STEEL GRADE P11 IN HCl**

  Luis Manuel Angelats Silva[1,2], Nilthon Zavaleta Gutierrez[3], Raúl Siche[4], Gustavo Duffó[5,6]

  [1]Universidad Nacional de Trujillo, Departamento Académico de Física, Peru. [2]Universidad Privada Antenor Orrego, Laboratorio de Investigación Multidisciplinaria, Peru. [3]Universidad Nacional de Trujillo, Departamento de Minas y Metalutgia, Peru. [4]Universidad Nacional de Trujillo, Facultad de Ciencias Agropecuarias, Peru. [5]Centro Atómico Constituyentes - CNEA, Gerencia de Materiales, Argentina. [6]Universidad Nacional de General San Martín, Departamento de Química, Argentina.

- **08:15 - 08:30 SE4-O002 EFFECT OF NICKEL TO COPPER RATIO ON OXIDE SCALE FORMATION AT HIGH TEMPERATURE**

  Shrikant Jadhav[1]

  [1]Bharat Forge ltd, Research and development, India.

- **08:30 - 08:45 SE4-O003 EFFECT OF HEAT TREATMENT ON CORROSION BEHAVIOR OF AZ91E/AlN COMPOSITES IN NaCl SOLUTION**

  Raul Alejandro Pulido Aguilar[1], Jorge Antonio Gonzalez Sanchez[2], José Egberto Bedolla Becerril[3], Ena Athenea Aguilar Reyes[3]

  [1]Instituto de Investigaciones en Materiales, Materiales compuestos, Mexico. [2]Universidad Autónoma de Campeche, CICORR, Mexico. [3]Universidad Michoacana de San Nicolás de Hidalgo, Materiales compuestos, Mexico.

- **08:45 - 09:00 SE4-O004 PERFORMANCE OF GALVANIC ANODOS SENTINEL**

  Miguel Martínez Madrid[1], Mariela Rendón Belmonte[1], José Trinidad Peréz Quiroz[1]

  [1]Instituto Mexicano del Transporte, Materiales, Mexico.

- **09:00 - 09:15 SE4-O005 MAIN FACTORS AFFECTING MAGNESIA REFRACTORY WEAR LINES COAL SLAG STEEL LADLES FOR COLOMBIAN SIDERURGICA**

  Jose Humberto Farigua Perez[1], Alfonso López[1], Miguel Burbano[1]

  [1]Universidad Pedagógica y Tecnológica de Colombia, Boyaca, Colombia.

- **09:15 - 09:30 SE4-O006 ELECTROCHEMICAL EVALUATION OF CARBON AND STAINLESS STEEL AS STRUCTURAL MATERIALS FOR THERMAL ENERGY STORAGE**

  Fabiola Pineda[1,2], Magdalena Walczak[1], Melissa Farias[1]

  [1]Pontificia Universidad Catolica de Chile, Departamento de Ingenieria Mecanica y Metalurgica, Chile. [2]Pontificia Universidad Catolica de Chile, Escuela de Construccion Civil, Chile.

- **09:30 - 09:45 SE4-O007 EFFECT OF A NON-CONVENTIONAL QUENCHING HEAT TREATMENT ON THE HYDROGEN ABSORPTION OF ON STEEL API 5L X60**

Manuel Alberto Tun Serrano[1], Jorge Antonio González Sánchez[1], José Damián Calan Canche[2], Orest Bilyy[1]

[1]Universidad Autónoma de Campeche, Centro de Investigación en Corrosión, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigación en Metalurgia y Materiales, Mexico.

- **09:45 - 10:00 SE4-O008 ELECTROCHEMICAL STUDY OF THE EFFECT OF THE ADDITION OF MOLYBDENUM (3% AND 5% WEIGHT) TO A POWDER-METALLURGICAL STEEL AISI 316 COMPARED TO A CONVENTIONAL STEEL**

Luz Adriana Cañas Mendoza[1,2], Yaneth Pineda Triana[1], Enrique Vera Lopez[1]

[1]Universidad Pedagógica y Tecnológica de Colombia, Facultad de Ingeniería, Colombia. [2]Universidad Tecnológica de Pereira, Facultad de Tecnología, Colombia.

- **10:00 - 10:15 SE4-O009 EFFECT OF VC POWDERS ON THE MECHANICAL PROPERTIES OF THERMAL SPRAY COATINGS APPLIED BY HVOF**

José Ángel Cabral Miramontes[1], Julio César Valladares Hernández[1], Pedro Samaniego Gamez[1], Citlalli Gaona[1], Patricia del Carmen Zambrano Robledo[1], Carlos Agustin Poblano Salas[2], Facundo Almeraya[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico. [2]CIATEQ, Materiales Avanzados, Mexico.

- **10:15 - 10:30 SE4-O010 NONLINEAR DYNAMIC STUDY OF THE FORMATION OF A PROTECTIVE LAYER OF 2,6-BIS [((2-PYRIDYLMETHYL) OXY) METHYL])] PYRIDINE AS AN INHIBITOR**

Esteban Garcia Ochoa[1], Pandiyan Thangarasu[2], Pablo Maldonado[1]

[1]Universidad Autónoma de Campeche, CICORR, Mexico. [2]Universidad Nacional Autónoma de México, Facultad Química, Mexico.

- **10:30 - 10:45 SE4-O011 EVALUATION OF THE CORROSION RESISTANCE OF AN AISI 1020 STEEL WITH A THERMALLY TREATED CoCr [Ni] WC COATING**

Carlos Mauricio Moreno Tellez[1], Sandra Marcela Acuña Rodriguez[1], Erika Jazmith Espinosa Cardenal[1]

[1]Universidad Pedagógica y Tecnológica de Colombia, Boyacá, Colombia.

- **10:45 - 11:00 SE4-O012 LOW POWER - HI PROPAGATION SYSTEM TO MONITOR CRITICAL PARAMETERS FOR PIPELINES**

Jorge Canto Ibañez[1]

[1]Corrosión y Protección Ingeniería, Engineering, Mexico.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY IV NOBEL PRIZE IN CHEMISTRY 2016
PROF. BEN L. FERINGA

- **12:30 - 12:45 SE4-O013 HIGH TEMPERATURE OXIDATION OF STAINLESS STEEL PROCESSED BY TRADITIONAL ROUTES AND ADDITIVE MANUFACTURING UNDER ISOTHERMAL CONDITIONS.**

Francisco Aurelio Perez Gonzalez[1], Nestor Ivan Martinez[2], Javier Humberto Ramirez Ramirez[1], Nelson Federico Garza Montes De Oca[1], Rafael Colás[1]

[1]Universidad Autónoma de Nuevo León, materials, Mexico. [2]Universidad Autónoma de Nuevo León, materiales, Mexico.

- **12:45 - 13:00 SE4-O014 EVALUATION OF CORROSION BEHAVIOR IN FUNCTION OF PROCESS PARAMETERS IN FRICTION-STIR WELDED JOINTS OF ALUMINUM ALLOY AA5052-H32**

Jimy Unfried[1], Roosvel Soto[2], Ramiro Chamorro[3], Maria Mercedes Cely[2], Anderson Sandoval[4]

[1]Universidad de Córdoba, Mechanical Engineering Department, Colombia. [2]Universidad Autónoma del Caribe, Mechanical engineering, Colombia. [3]Universidade Estadual de Campinas, Departamento de eletronica, Brazil. [4]Universidad Industrial de Santander, Grupo de Investigaciones en Corrosión, Colombia.

- **13:00 - 13:15 SE4-O015 DETERMINATION OF MECHANICAL PROPERTIES IN STEELS FOR API 5L PIPE WITH HYDROGEN INFILTRATION**

Angel David Casarrubias Alvarez[1], Jorge Luis Gonzalez[1], Diego Israel Rivas[1], Manuel Alejandro Beltran Zuñiga[1], Juan José Trujillo Tadeo[1], Erick Giovanni Sandoval Garcia[1]

[1]Instituto Politécnico Nacional - IPN - ESIQIE, DIMM, Mexico.

- **13:15 - 13:30 SE4-O016 ISOTHERMAL AND CYCLIC OXIDATION BEHAVIOUR OF 425 TITANIUM ALLOY AT HIGH TEMPERATURE**

Omar Alejandro Valdes Saucedo[1], Juan Antonio Perez Patiño[1], Nora Aleyda Garcia Gomez[2], Javier Humberto Ramirez Ramirez[1], Francisco Aurelio

Perez Gonzalez[1], Rafael Colás[1], Nelson Federico Garza Montes De Oca[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico.

- **13:30 - 13:45 SE4-O017 STUDY OF CORROSION OF REINFORCING STEEL CONCRETE EMBEDDED IN MIXTURES WITH ACTIVATED FLY ASH**

Rosa Veronica Martínez Peréz[1], Mariela Rendón Belmonte[2], Miguel Martinez Madrid[2], José Trinidad Peréz Quiroz[2]

[1]Instituto Tecnológico de Querétaro, Ingeniería en Materiales, Mexico. [2]Instituto Mexicano del Transporte, Materiales, Mexico.

- **13:45 - 14:00 SE4-O018 EFFECT OF pH AND SOIL RESISTIVITY ON CORROSION RATE OF A SAE-1018 STEEL**

Roman Olalde[1], Francisco Javier Rodriguez Gomez[1]

[1]Universidad Nacional Autónoma de México, Metallurgic Engineering Department. School of Chemistry, Mexico.

- **14:00 - 14:15 SE4-O019 HIGH TEMPERATURE OXIDATION COMPARISON BETWEEN THE CAST AND FORGED AND ADDITIVE MANUFACTURED INCONEL 718. IS ADDITIVE MANUFACTURING A REAL SOLUTION FOR TURBINE BLADE FABRICATION OR REPARATION?**

Bruno Doria Delgado[1], Mauro Javier Gaona Martínez[1], Juan Antonio Pérez Patiño[1], Javier Humberto Ramirez Ramirez[1], Francisco Aurelio Pérez González[1], Juan Manuel Alvarado Orozco[2,3], Rafael Colás[1], Nelson Federico Garza Montes De Oca[1]

[1]Universidad Autónoma de Nuevo León, FIME, Mexico. [2]Centro de Ingeniería y Desarrollo Industrial, , Mexico. [3]Centro de Ingeniería y Desarrollo Industrial, Ingeniería de Superficie, Mexico.

☒ **14:00 - 16:00 Lunch time**

- **16:00 - 16:15 SE4-O020 HIGH TEMPERATURE OXIDATION OF AN INCOLOY 909 ALLOY IN DRY AIR AN WATER VAPOUR MIXTURES**

Mauro Javier Gaona Martinez[1], Nelson Federico Garza Montes De Oca[1], Juan Antonio Perez Patiño[1], Juan Manuel Alvarado Orozco[2], Javier Humberto Ramirez Ramirez[1], Francisco Aurelio Perez Gonzalez[1], Rafael Colás[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico. [2]Centro de Ingeniería y Desarrollo Industrial, Ingeniería de superficies, Mexico.

- **16:15 - 16:30 SE4-O021 COMPARATIVE STUDY OF THE EFFECT OF THE ADDITION OF 0,4% AND 1% OF TITANIUM TO A POWDER-METALLURGICAL STEEL AISI 316, COMPARED TO A CONVENTIONAL STEEL**

Luz Adriana Cañas Mendoza[1,2], Yaneth Pineda Triana[1], Enrique Vera Lopez[1]

[1]Universidad Pedagógica y Tecnológica de Colombia, Facultad de Ingeniería, Colombia. [2]Universidad Tecnológica de Pereira, Facultad de Tecnología, Colombia.

- **16:30 - 16:45 SE4-O022 ELECTROCHEMICAL CHARACTERIZATION AND SUSCEPTIBILITY TO HYDROGEN ABSORPTION IN API 5L X60 STEEL WITH AND WITHOUT UNCONVENTIONAL HEAT TREATMENT**

José Damián Calan Canche[1], Rafael García Hernández[1], Jorge Antonio Gonzalez Sanchez[2], Luis Román Dzib Pérez[2], Manuel Alberto Tun Serrano[2], Orest Bilyy[2]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigación en Metalurgia y Materiales, Mexico. [2]Universidad Autónoma de Campeche, Centro de Investigación en Corrosión, Mexico.

- **16:45 - 17:00 SE4-O023 STUDY OF THE EFFECT OF RESISTIVITY IN THE CORROSION PROCESS OF REINFORCING STEEL EMBEDDED IN MORTAR AND CONCRETE**

Jesús David Sáenz López[1], Tezozomoc Pérez López[1], Víctor Manuel Moo Yam[1]

[1]Universidad Autónoma de Campeche, Centro de Investigación en Corrosión, Mexico.

WEDNESDAY, AUGUST 22
ROOM: TERRACE

- **18:30 -20:30 POSTER SESSION & COFFEE BREAK**

- **SE4-P001 CORROSION BEHAVIOR OF X70 NITRIDED PIPELINE STEEL IN NS-4 SOLUTION**

Alvaro Torres Islas[1], Horacio Martinez[2], Mario Acosta Flores[1]

[1]Universidad Autónoma del Estado de Morelos, Facultad de Ciencias Químicas e Ingeniería, Mexico. [2]Universidad Nacional Autónoma de México, Instituto de Fisica, Mexico.

■ **SE4-P002 STUDY OF CORROSION BEHAVIOR OF MULTILAYER PVD COATINGS BY THE CYCLIC POTENTIODYNAMIC POLARIZATION CURVES AND ELECTROCHEMICAL IMPEDANCE SPECTROSCOPY**

Marvin Montoya Rangel[1], Citlalli Gaona[1], Nelson Federico Garza Montes de Oca[1], Jose Luis Tristancho Reyes[2], Patricia del Carmen Zambrano Robledo[1], Facundo Almeraya[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico. [2]Universidad Tecnológica de Pereira, Facultad de Mecánica, Colombia.

■ **SE4-P003 PREPARATION AND CHARACTERIZATION OF EPOXY RESIN/ZEOLITE/CNT COATINGS ON CARBON STEEL**

Jeannete Ramírez Aparicio[1,2], Victor Manuel Salinas Bravo[2], Allan Abdías García Silva[2], José Enrique Samaniego Benítez[3], Carlos Fernando Castro Guerrero[1,2]

[1]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Cátedras, Mexico. [2]Instituto Nacional De Electricidad y Energías Limpias, Sistemas mecánicos, Mexico. [3]Instituto Politécnico Nacional - IPN, CICATA Legaria, Mexico.

■ **SE4-P004 Ti ELECTROCHEMICAL CORROSION IN PRESENCE OF NACE TM 0177 SOLUTION**

Josephine Inés Quirino Gutiérrez[1], María Aurora Veloz Rodríguez[1], Jorge Uruchurtu Chavarín[2], Victor Esteban Reyes Cruz[1], Juan Hernández Avila[1], Ventura Rodriguez Lugo[1]

[1]Universidad Autónoma del Estado de Hidalgo, Instituto de Ciencias Básicas e Ingeniería, Área Académica de Ciencias de la Tierra y Materiales, Mexico. [2]Universidad Autónoma del Estado de Morelos, Centro de Investigación en Ingeniería y Ciencias Aplicadas, CIICAp, UAEM, Mexico.

■ **SE4-P005 EFFECT OF ASPHALTENES ELECTROSTATIC CHARGE IN THE CORROSION INHIBITION OF HEAVY CRUDE OIL-SEAWATER**

Manuel de Jesus Macias Hernandez[1], Erick Marín Quiroz[1]

[1]Instituto Politécnico Nacional - IPN - ESIQIE, Engineering of metallurgycal and materials, Mexico.

■ **SE4-P006 FAILURE ANALYSIS OF THE ACCESS CHAINS TO FLOODGATES OF A RESERVOIR**

Alfonso López Díaz[1], Guillermo Vargas[1], Yaneth Pineda Triana[1], Enrique Vera Lopez[1]

[1]Universidad Pedagógica y Tecnológica de Colombia, INCITEMA, Colombia.

■ **SE4-P007 CORROSION RESISTANT PERFORMANCE OF HYDROXIDE COMPOSITE FILMS PREPARED ON Mg ALLOYS BY STEAM COATING**

Takahiro Ishizaki[1,2], Yuta Shimada[3], Tomohiro Miyashita[3], Taejun Kim[3], Ai Serizawa[1]

[1]Shibaura Institute of Technology, Department of Materials Science and Engineering, Faculty of Engineering, Japan. [2]Shibaura Institute of Technology, SIT Research Laboratories, Japan. [3]Shibaura Institute of Technology, Graduate School of Materials Science and Engineering, Japan.

■ **SE4-P008 COATING OF NATURAL CORROSION INHIBITORS BY AUTOCLAVE METHOD**

Daniel Alejandro Pineda Hernandez[1], Pedro Jose Arango Arango[2], Belarmino Segura Giraldo[2]

[1]Universidad Nacional de Colombia, Laboratiorio de Fisica de Plasma, Colombia. [2]Universidad Nacional de Colombia, Laboratorio de Fisica del Plasma, Colombia.

■ **SE4-P009 USE OF CUMARINES, AS AN ALTERNATIVE, TO ELIMINATE CALCIO CARBONATE SCALES**

Katherine Andrea Blanco Buitrago[1], Wilson Elias Rozo Nuñez[1,2], Enrique Vera Lopez[1], Yaneth Pineda Triana[1]

[1]Universidad Pedagógica y Tecnológica de Colombia, Boyaca, Colombia. [2]Universidade Federal da Bahia, , Brazil.

■ **SE4-P010 HIGH TEMPERATURE OXIDATION IN STEAM OF THE INCONEL 718 ALLOY MANUFACTURED BY DMLS.**

Jennifer Treviño López[1], Nelson Federico Garza Montes De Oca[1], Francisco Aurelio Perez Gonzalez[1], Javier Humberto Ramirez Ramirez[1], Rafael Colás[1], Juan Manuel Alvarado Orozco[2]

[1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico. [2]Centro de Investigación y Desarrollo Industrial (CIDESI), Departamento de Ingeniería de Superficies, Mexico.

■ **SE4-P011 CORROSION BEHAVIOR AND MECHANICAL PROPERTIES OF X-70 EXPERIMENTAL NI-MICROALLOYED PIPELINE STEEL IN ETHANOLIC MEDIA**

Adrian del Pozo Mares[1], Julio César Villalobos[2], Bernardo Campillo[3,4], Alvaro Torres Islas[5], Sergio Serna[1]

[1]Universidad Autónoma del Estado de Morelos, CIICAp, Mexico. [2]Instituto Tecnológico de Morelia, ITM, Mexico. [3]Universidad Nacional Autónoma de México, FQ, Mexico. [4]Universidad Nacional

Autónoma de México, ICF, Mexico. [5]Universidad Autónoma del Estado de Morelos, FCQeI, Mexico.

- **SE4-P012 ELECTROCHEMICAL DEPOSIT OF IRON OXALATE USING A REACTOR FM01**

Miguel Ángel Castillo Rojas[1], María Aurora Veloz Rodríguez[2], Victor Esteban Reyes Cruz[2], Josè Angel Cobos Murcia[2,3]

[1]Universidad Tecnológica de Tulancingo, Ingeniería en Energías Renovables, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Mexico. [3]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Depto. de Cátedras, Mexico.

- **SE4-P013 ELECTROCHEMICAL RESPONSE OF ALUMINUM 6061 SURFACE MODIFIED WITH DIAMOND-LIKE CARBON (DLC)**

María Cristina Juárez Vertiz[1], Arturo Molina Ocampo[1], Jesus Porcayo Calderon[2], Alejandro Sedano Aguilar[1], Magda Elisa Arias Aguilar[1], Jan Mayen Chaires[3]

[1]Universidad Autónoma del Estado de Morelos, Centro de Investigación en Ingenieria y Ciencias Aplicadas, Mexico. [2]Universidad Nacional Autónoma de México, Instituto de Ciencias Físicas, Mexico. [3]CIATEQ, CIATEQ, Mexico.

- **SE4-P014 ANALYSIS OF THE SUPERFICIAL EVOLUTION AND SUB-SURFACE ABSORPTION OF HYDROGEN ON STEEL API 5L X65**

José Damián Calan Canche[1], Rafael García Hernández[1], Jorge Antonio Gonzalez Sanchez[2], Luis Román Dzib Pérez[2], Orest Bilyy[2], Manuel Alberto Tun Serrano[3]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigación en Metalurgia y Materiales, Mexico. [2]Universidad Autónoma de Campeche, Centro de Investigación en Corrosión, Mexico. [3]Universidad Autónoma de Campeche, , Mexico.

- **SE4-P015 PERFORMANCE OF THREE PROTECTION METHODS AGAINST CHLORIDE-INDUCED CORROSION OF REINFORCEMENT STEEL EMBEDDED IN CONCRETE**

Adán Medina[1], Gerardo Fajardo San Miguel[2], Alejandro Durán Herrera[2], Surendra K Manjreka[3]

[1]Universidad Autónoma de Nuevo León, Posgrado, Mexico. [2]Universidad Autónoma de Nuevo León, FIC-UANL, Mexico. [3]Sunanda Speciality Coatings Pvt. Ltd, N/F, India.

- **SE4-P016 STUDY OF EFFECT AUSTEMPERING TREATMENT ON DUCTILE IRON AND THEIR CORROSION PERFORMANCE**

Seydy Lizbeth Olvera Vazquez[1], Victor Hugo Gutiérrez Pérez[1], Alejandro Cruz Ramírez[2], Perla Maria Arellano Sosa[1], Elsa Miriam Arce Estrada[2]

[1]Instituto Politécnico Nacional - UPIIZ, Departamento de Formación Profesional Específica, Mexico. [2]Instituto Politécnico Nacional - IPN - ESIQIE, Departamento de Ingeniería Metalúrgica, Mexico.

- **SE4-P017 GENERATION OF PITTING CORROSION ON 304 STAINLESS STEEL USING Pt/Hg AMALGAMED ELECTRODE**

Luis Roman Dzib Perez[1], Isabel Guadalupe Ake Turriza[2], Matilde Leon Solorio[2], Carlos A. Perez Pool[2], Jorge Antonio González Sánchez[1], Orest Bilyy[1], José Damián Calan Canche[1]

[1]Universidad Autónoma de Campeche, Centro de Investigacion en Corrosion, Mexico. [2]Universidad Autónoma de Campeche, Facultad de Ciencias Quimico Biologicas, Mexico.

- **SE4-P018 USE OF BRICK-MAKING ASH AS CEMENTITIOUS ADDITION IN PORTLAND CEMENT MORTARS: ELECTROCHEMICAL EVALUATION**

Cipriano Bernabe Reyes[1], Wilfrido Martinez Molina[2], Hugo Luis Chávez García[2], Elia Mercedes Alonso Guzman[2], Cindy Lara Gomez[2], Marco Antonio Navarrete Seras[3], Isaias Trujillo Calderon[2], Mauricio Arreola Sanchez[1], Jose Maria Ponce Ortega[4]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Chemical and Civil Engineering Faculties, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Civil Engineering Faculty, Mexico. [3]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ciencias Físico Matemáricas y Facultad de Ingeniería Civil, Mexico. [4]Universidad Michoacana de San Nicolás de Hidalgo, Chemical Engineering Faculty, Mexico.

- **SE4-P019 ELECTROCHEMICAL EVALUATION OF CONCRETE MADE WITH PORTLAND CEMENT AND BLAST FURNACE SLAG**

Demetrio Nieves Mendoza[1], Olaf Hernandez[1], Erick Maldonado Bandala[1], Jose Ivan Escalante Garcia[2]

[1]Universidad Veracruzana, Facultad de Ingenieria Civil, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV Unidad Saltillo, Ceramics Engineering. Sustainability of Natural Resources and Energy, Mexico.

- **SE4-P020 ELECTROCHEMICAL TECHNIQUES COMPARISON TO ASSESS A COATING MADE WITH SCRAP MATERIAL, APPLIED ON STEEL RODS EMBEDDED IN CONCRETE.**

Tezozomoc Pérez López[1], Kareli Guadalupe Cambranis Acosta[1], Emilio Chavez Ulloa[2], Miguel Ramon Sosa Baz[1], Víctor Manuel Moo Yam[1]

[1]Universidad Autónoma de Campeche, Centro de Investigación en Corrosión, Mexico. [2]Secretaría de la Defensa Nacional, Dir .Gral. Ings., U.D.E.F.A., E.M. I., Mexico.

- **SE4-P021 EVALUATION OF PREUSOMERIN AS AN ECO-FRIENDLY CORROSION INHIBITOR OF API 5L X70 STEEL IN 3% NACL**

Araceli Espinoza Vazquez[1], Luis Antonio Lopez Resendiz[2], Francisco Javier Rodriguez Gomez[1], A. Bautista Lopez[3], Mario Alberto Figueroa Saldivar[3]

[1]Universidad Nacional Autónoma de México, Metallurgic Engineering Department. School of Chemistry, Mexico. [2]Universidad Nacional Autónoma de México, Metallurgical Engineering, Chemistry School, Mexico. [3]Universidad Nacional Autónoma de México, Pharmacy Department, Chemistry School, Mexico.

- **SE4-P022 PERFORMANCE OF SPRAY COATINGS IN ADHESIVE WEAR TESTS**

Ângela Beatriz Coelho Arnt[1], Marcio Roberto Da Rocha[2], Ronaldo Veronês Do Nascimento[3], Guilherme Ferrari Marangoni[1]

[1]Universidade do Extremo Sul Catarinense, Engenharia de Materiais, Brazil. [2]Universidade Federal de Santa Catarina, Engenharia de Materiais, Brazil. [3]Universidade do Extremo Sul Catarinense, Engenharia Mecânica, Brazil.

- **SE4-P023 EVALUATION OF THE CORROSION POTENTIAL IN ARMED CONCRETE STRUCTURES AFTER ONE YEAR OF BEING SUBJECTED TO ELECTROCHEMICAL REALCALINIZATION**

Miguel Ramón Sosa Baz[1], José Elías Canché Dzib[1], Tezozomoc Pérez López[1], Josefa de Los Angeles Paat Estrella[1], Brenda Eloísa Farfán Collí[1]

[1]Universidad Autónoma de Campeche, Centro de Investigación en Corrosión de la Universidad Autónoma de Campeche, Mexico.

- **SE4-P024 HIERARCHICAL TaN / Ta MULTILAYER AS A COATING ON BIOMEDICAL ALLOYS AND ITS RESPONSE TO TRIBOCORROSION**

Jessica Estefania Gonzalez Sevilla[1], Martín Flores[1], Ernesto David García Bustos[2]

[1]Universidad de Guadalajara, Departamento de Ingeniería de Proyectos, Mexico. [2]Universidad de Guadalajara, Cátedras CONACyT. Departamento de Ingeniería de Proyectos, Mexico.

- **SE4-P025 CHARACTERIZATION OF THE REINFORCING STEEL EXTRACTED FROM BEAMS SUBJECTED TO AN ACCELERATED CORROSION PROCESS WITH 3% NaCl**

Maybelin Carolina Garcia Chiquito[1], Wilfrido Martinez Molina[1], Hugo Luis Chávez García[1], Elia Mercedes Alonso Guzman[1], Cindy Lara Gomez[1], Andres Antonio Torres Acosta[2], Arturo Zalapa Damian[3], Ramiro Silva Orozco[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Civil Engineering Faculty, Mexico. [2]Universidad Marista de Queretaro, Civil Engineering School, Mexico. [3]Universidad Michoacana de San Nicolás de Hidalgo, Chemical and Civil Engineering Faculties, Mexico.

- **SE4-P026 MODELING OF CRACK LENGTHS IN PRESTRESSED CONCRETE BEAMS DAMAGED BY CORROSION**

Arturo Zalapa Damian[1], Wilfrido Martinez Molina[2], Andres Antonio Torres Acosta[3], Hugo Luis Chávez García[2], Elia Mercedes Alonso Guzman[2], Cindy Lara Gomez[2], Jose Alberto Guzman Torres[4], Maybelin Carolina Garcia Chiquito[2], Ramon Antonio Figueroa Carranza[1], Jose Maria Ponce Ortega[5]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Chemical and Civil Engineering Faculties, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Civil Engineering Faculty, Mexico. [3]Universidad Marista de Queretaro, Civil Engineering School, Mexico. [4]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ciencias Físico Matemáticas y Facultad de Ingeniería Civil, Mexico. [5]Universidad Michoacana de San Nicolás de Hidalgo, Chemical Engineering Faculty, Mexico.

- **SE4-P027 CORROSION BEHAVIOR OF Ti6Al4V ALLOY TREATED BY LASER SHOCK PROCESSING**

Roman Angel Rosas Meza[1], Gilberto Gómez Rosas[2], Martín Flores Matínez[1], José Luis Ocaña[3]

[1]Universidad de Guadalajara, Departamento de Ingeniería de Proyectos, Mexico. [2]Universidad de Guadalajara, Departamento de Física, Mexico. [3]Universidad Politécnica de Madrid, Física Aplicada e Ingeniería de Materiales, Spain.

- **SE4-P028 INFLUENCE OF RARE EARTH ADDITIONS AND HEAT TREATMENTS ON THE MICROSTRUCTURE OF THE INCONEL 718 ALLOY**

Luis Enrique González Abarca[1], Arnoldo Bedolla Jacuinde[1], Alberto Ruiz[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Metalurgia y Materiales, Mexico.

- **SE4-P029 EVALUACIÓN ELECTROQUÍMICA DE ALEACIONES BASE Ni-Zr EN UNA SOLUCIÓN DE 3%NaCl**

Dario Yesid Pena Ballesteros[1], Hugo Estupiñán[2], Elvia Gomez[3], Luis Zambrano[3], Anderson Sandoval[4]

[1]Universidad Industrial de Santander, Metallurgical Engineering, Colombia. [2]Universidad Nacional de Colombia, Material Science, Colombia. [3]Universidad Industrial de Santander, Metalurgia, Colombia. [4]University, Unidades Tecnológicas de Santander, Colombia.

- **SE4-P030 ANALYSIS OF POTENTIODYNAMIC CURVES FOR 4 STAINLESS STEELS EXPOSED TO NATURAL MARINE SEAWATER.**

Daniel Martín Delgado Salas[1], Tezozomoc Pérez López[2], Homero Castaneda[3], Víctor Manuel Moo Yam[2]

[1]Universidad Autónoma de Campeche, Facultad de Ciencias Químico Biológicas, Mexico. [2]Universidad Autónoma de Campeche, Centro de Investigación en Corrosión, Mexico. [3]Texas A&M University, Materials Science and Engineering, United States.

- **SE4-P031 THERMAL FATIGUE EFFECT ON THE CORROSION RESISTANCE OF THE MARTENSITIC STAINLESS STEEL HARDFACING**

Luis Bejar[1], Engelbert Huape Padilla[1], Ariosto Medina[2], Hector Carreón[2], Jose G. Chacon Nava[3], Manuel Alejandro Paniagua[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ingeniería Mecánica, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigación en Metalurgia y Materiales, Mexico. [3]Centro de Investigación en Materiales Avanzados, S.C., Laboratorio de Deterioro de Materiales y Recubrimientos, Mexico.

- **SE4-P032 ASSESSMENT OF THE EMPLOYMENT OF RECURSIVE PLOTS IN THE STUDY OF CORROSION PROCESS OF REINFORCED STEEL EMBEDDED IN CONCRETE.**

Emilio Joaquin Sordo Cruz[1], René Efraín Canché Solís[1], Rafael de Jesús Camacho Chab[1], Tezozomoc Pérez López[2]

[1]Instituto Tecnológico de Campeche, Departamento de Ingeniería Química y Ambiental, Mexico. [2]Universidad Autónoma de Campeche, Centro de Investigaciones en Corrosión, Mexico.

- **SE4-P033 EFFICIENCY OF THE N-PHENYL-C-FURIL-NITRONE CORROSION INHIBITOR, IN AUTOCLAVE CONDITIONS.**

Oscar Javier Gomez Puentes[1], Enrique Vera Lopez[1], Yaneth Pineda Triana[1]

[1]Universidad Pedagógica y Tecnológica de Colombia, INCITEMA, Colombia.

- **SE4-P034 PARTITION ANALYSIS OF A COMERCIAL INHIBITOR IN KEROSENE - WATER PHASES BY UV - VIS TECHNIQUE**

Kenia Amairany Hernández Zárate[1], Jesus Israel Guzman Castañeda[2], Beatriz Adriana Espinosa Aguilar[3], José Cosme de la Cruz Morales[3], Roman Cabrera Sierra[3]

[1]Escuela Superior de Ingeniería Química e Industrias Extractivas, Departamento de Ingeniería en Metalurgia y Materiales, Mexico. [2]Escuela Superior de Ingeniería Química e Industrias Extractivas, Academia de Fisica, Mexico. [3]Escuela Superior de Ingeniería Química e Industrias Extractivas, LCDMYM, CIDIM IPN, Mexico.

- **SE4-P035 ANALYSIS OF THE FRICTION COEFFICIENT OF AN AISI 4140 STEEL THROUGH TRIBOLIC TESTS**

Manuel Alejandro Paniagua[1], Luis Bejar[1], Ariosto Medina[2], Engelbert Huape Padilla[1], Andrés López[3]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ingeniería Mecánica, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigación en Metalurgia y Materiales, Mexico. [3]Universidad Veracruzana, Facultad de Ingeniería Mecánica Eléctrica, Mexico.

- **SE4-P036 FAILURE ANALYSIS AND DETERMINATION OF THE CORROSION TIME IN THE MECHANICAL COMPONENTS OF THE TRANSMISSION OF THE HELICOPTER BELL 206 MATRICULA XA-TVA.**

Victor Manuel Sauce[1], Hilario Hernández[1], Antonio Mosqueda[1]

[1]ESIME TICOMAN, Ing. Aeronáutica, Mexico.

- **SE4-P037 EFFECT OF BORON, ZIRCONIUM AND RUTHENIUM ADDITIONS ON THE MICROSTRUCTURE AND MECHANICAL PROPERTIES AN INCONEL 625**

Luis Alberto Hernandez Ramon[1], Arnoldo Bedolla Jacuinde[1], Ignacio Mejía[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigación en Metalurgia y Materiales, Mexico.

- **SE4-P038 EVALUATION OF PRESTRESSED CONCRETE BEAMS ATTACKED BY ACCELERATED CORROSION**

Ramon Antonio Figueroa Carranza[1], Wilfrido Martinez Molina[2], Hugo Luis Chávez García[2], Elia Mercedes Alonso Guzman[2], Cindy Lara Gomez[2], Andres Antonio Torres Acosta[3], Maybelin Carolina Garcia Chiquito[2], Arturo Zalapa Damian[1], Isaias Trujillo Calderon[2], Elizabeth Contreras Marin[4]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Chemical and Civil Engineering Faculties, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Civil Engineering Faculty, Mexico.

[3]Universidad Marista de Queretaro, Civil Engineering School, Mexico. [4]Universidad de Sevilla, Escuela Tecnica Superior de Arquitectura, Spain.

- **SE4-P039 EXPERIMENTAL AND DFT STUDIES OF CORROSION INHIBITION OF CARBON STEEL BY AMMONIUM-BASED INHIBITORS**

  Paulina Arellanes Lozada[1], Octavio Olivares Xometl[1], Heriberto Hernández Cocoletzi[1], Natalya Victorovna Likhanova[2], Irina Lijanova[3]

  [1]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniería Química, Mexico. [2]Instituto Mexicano del Petróleo, Gerencia de Ingeniería de Recuperación Adicional, Mexico. [3]Instituto Politécnico Nacional - IPN, CIITEC, Mexico.

- **SE4-P040 ELECTROCHEMICAL PERFORMANCE OF STEEL EMBEDDED IN MORTARS WITH STEEL FIBERS AND FLY ASH**

  Edgar Ulises De Los Santos[1], José Manuel Mendoza Rangel[2], Victor Manuel Moreno Landeros[1], Luis Manuel Reynosa Morales[3], Israel Antonio[1]

  [1]Universidad Autónoma de Coahuila, Facultad de Ingeniería Civil Unidad Torreón, Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Civil, Mexico. [3]Universidad Autónoma de Coahuila, Facultad de Ingeniería Civil, Mexico.

- **SE4-P041 SEM IN THE STUDY OF FRACTOGRAPHY. CAMSHAFT FAILURE**

  Guillermina Gonzalez[1], Diego Enrique Gonzalez[1]

  [1]Facultad de Química, UNAM, Ingeniería Metalúrgica, Mexico.

- **SE4-P042 EFFECT OF INHIBITOR OF CORROSION ON ARMED CONCRETE STRUCTURES EXPOSED IN CONDITION OF INDOOR LABORATORY**

  Miguel Ramon Sosa Baz[1], José Elías Canché Dzib[1], Tezozomoc Pérez López[1], Suriel Ezequiel Chin Acevedo[1], Aracelli Jara Medina[1]

  [1]Universidad Autónoma de Campeche, Centro de Investigación en Corrosión de la Universidad Autónoma de Campeche, Mexico.

- **SE4-P043 EVALUATION OF A CATHODIC PROTECTION SYSTEM USING MG AND ALLOYS MG-CR AND MG-NB AS SACRIFICE ANODES IN THE PROTECTION OF ACTS API X52 AND API X-65 IN SEA WATER.**

  Tezozomoc Pérez López[1], Antonio Contreras Cuevas[2], Judith Sanmiguel[1], Erick Adrian Juarez Arellano[3], Miguel Ramon Sosa Baz[1]

  [1]Universidad Autónoma de Campeche, Centro de Investigación en Corrosión, Mexico. [2]Instituto Mexicano del Petróleo, Exploración, Mexico. [3]Universidad del Papaloapan, Instituto de Química, Mexico.

THURSDAY, AUGUST 23
ROOM: CHICHEN ITZA II

- **08:00 - 08:15 SE4-O024 HOT CORROSION OF 7YSZ COATINGS PRODUCED BY FLAME SPRAY**

  Melquisedec Vicente Mendoza[1], Erika Grisel Rodríguez Santos[1], Christian Morado Rueda[1], Ricardo Cuenca Álvarez[1], Fernando Juárez López[1]

  [1]Centro de Investigación e Innovación Tecnológica, Rociado Térmico t Tratamiento de Superficies, Mexico.

- **08:15 - 08:30 SE4-O025 CORROSION MEASUREMENT ON REINFORCED STEEL CONCRETE AFTER EXPOSURE TO MARINE ENVIRONMENT BY ELECTROCHEMICAL NOISE TECHNIQUE WITH ARTIFICIAL INTELIGENCE**

  Guillermo Sosa Von Putlitz[1,2], Ricardo Orozco Cruz[2], Ricardo Galvan Martinez[2], Hector Herrera Hernandez[1], Heriberto Casarruvias Vargas[1]

  [1]Universidad Autónoma del Estado de México, Ing. Industrial, Mexico. [2]Universidad Veracruzana, Instituto de Ingeniería, Mexico.

- **08:30 - 08:45 SE4-O026 MICROSTRUCTURAL EVOLUTION DURING SEVERAL HEAT TREATMENTS OF A NICKEL-BASED SUPERALLOY**

  Eduardo Cortes Carrillo[1], Arnoldo Bedolla Jacuinde[1], Ignacio Mejía Granados[1], Jorge Zuno Silva[2]

  [1]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigaciones en Metalurgia y Materiales, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Materiales, Mexico.

- **08:45 - 09:00 SE4-O027 FABRICATION AND MICROSTRUCTURAL CHARACTERIZATION OF Ti-6% Al-1.5% V-1.0Mo-0.5% Zr-0.1%C ALLOY AND ITS BEHAVIOR TO WEAR AND CORROSION WITH ADDITION OF Ru AND VARIATIONS OF PERCENTAGES OF V AND Mo**

  Bayron Santoveña Chavez[1], Arnoldo Bedolla Jacuinde[1]

  [1]Universidad Michoacana de San Nicolás de Hidalgo, instituto de investigación en metalurgia y materiales, Mexico.

- **09:00 - 09:15 SE4-O028 HIGH TEMPERATURE OXIDATION IN STEAM OF THE INCONEL 718 ALLOY MANUFACTURED BY DMLS.**

  Jennifer Treviño López[1], Nelson Federico Garza Montes De Oca[1], Francisco Aurelio Perez Gonzalez[1], Javier Humberto Ramirez Ramirez[1], Rafael Colás[1], Juan Manuel Alvarado Orozco[2]

[1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico. [2]Centro de Investigación y Desarrollo Industrial (CIDESI), Departamento de Ingeniería de Superficies, Mexico.

- **09:15 - 09:30 SE4-O029 ELECTROCHEMICAL EVALUATION IN THE DISSIMILAR WELD OF AUSTENIC STAINLESS STEEL AND CARBON STEEL EXPOSED IN A TIDAL ZONE FOR STRUCTURAL APPLICATIONS**

Juan Carlos Isidro Ramírez Soto[1], Tezozomoc Pérez López[1], José Trinidad Pérez Quiroz[2], Miguel Martinez Madrid[2], Ruth Lopez Alcantara[1]

[1]Universidad Autónoma de Campeche, CICORR, Mexico. [2]Instituto Mexicano del Transporte, CIVIE, Mexico.

- **09:30 - 09:45 SE4-O030 LOAD CAPACITY DEGRADATION OF CORRODED PRESTRESSED CONCRETE ELEMENTS**

Arturo Zalapa[1], Ramon A. Figueroa Carranza[1], Andres Antonio Torres Acosta[2], Wilfrido Martinez Molina[3], Elia Mercedes Alonso Guzman[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Materials Laboratory, Mexico. [2]Instituto Mexicano del Transporte, CIVIE, Mexico. [3]Universidad Michoacana de San Nicolás de Hidalgo, , Mexico.

- **09:45 - 10:00 SE4-O031 ELECTROCHEMICAL NOISE AND ARTIFICIAL INTELIGENCE TO PREDICT CORROSION DAMAGE ON INDUSTRIAL STEELS**

Héctor Herrera[1], Ramiro Espinosa Vega[1], Guillermo Sosa Von Putlizt[1], José Guadalupe Miranda Hernández[1], Jesus Vargas Hernandez[1]

[1]Universidad Autónoma del Estado de México, Ing. Industrial, Mexico.

- **10:00 - 10:15 SE4-O032 EVALUATION OF STRICTOSAMIDE AS NATURAL CORROSION INHIBITOR IN C844 BRONZE USING 3% NACL**

Araceli Espinoza Vazquez[1], Francisco Javier Rodriguez Gomez[1]

[1]Universidad Nacional Autónoma de México, Metallurgic Engineering Department. School of Chemistry, Mexico.

- **10:15 - 10:30 SE4-O033 STRENGTH AND CORROSION RESISTANCE OF HIGH PRESSURE COLD SPRAY COATINGS**

Christian Widener[1,2], Morotolaoluwa Alabi[3], Bharat Jasthi[3]

[1]South Dakota School of Mines and Technology, AMP Laboratory, United States. [2]VRC Metal Systems, , United States. [3]South Dakota School of Mines and Technology, Metallurgical & Materials Department, United States.

- **10:30 - 10:45 SE4-O034 NATURAL CORROSION INHIBITOR: LIQUID-EXTRACT OF ALOE-VERA LEAVES AS GREEN TECHNOLOGY PROTECTION OF STEELS**

Hector Herrera Hernandez[1], José Guadalupe Miranda Hernández[1], Carlos Omar Gonzalez Moran[1]

[1]Universidad Autónoma del Estado de México, Ing. Industrial, Mexico.

- **10:45 - 11:00 SE4-O035 EFFECT OF CORROSION INFLUENCED MICROBIOLOGICALLY ON A STEEL WITH API 5L SPECIFICATION**

Juan José Trujillo Tadeo[1], Jorge Luis González Velázquez[1], Diego Israel Rivas[1], Manuel Alejandro Beltran Zuñiga[1], Erick Giovanni Sandoval Garcia[1], Angel David Casarrubias Alvarez[1]

[1]Instituto Politécnico Nacional - IPN - ESIQIE, DIMM, Mexico.

11:00-11:30 POSTER AWARDS CEREMONY & COFFEE BREAK

11:30 - 12:30 PLENARY V
PROF. GALO SOLER ILLIA

Symposium E5

STEELS

Martha Patricia Guerrero Mata / UNIVERSIDAD AUTONOMA DE NUEVO LEON
Omar García Rincón / TERNIUM Mexico SA de CV
Jessica Calvo Muñoz / Universitat Politècnica de Catalunya
Armando Salinas Rodriguez / IPN Unidad Saltillo

TUESDAY, AUGUST 21
ROOM: CHICHEN ITZA II

Session: E5 Steels I

SESSION CHAIR: OMAR GARCIA RINCON

08:30 - 08:45 SE5-O001 Invited Talk THERMOMECHANICAL CHARACTERIZATION OF NEWLY DEVELOPED PRESS HARDENING STEELS

Enrique Meza García[1], Verena Kräusel[1], Dirk Landgrebe[1]
[1]Technische Universität Chemnitz, Professorship for Forming and Joining, Germany.

08:45 - 09:00 SE5-O002 GRAIN REFINEMENT OF A DDQ STEEL BY A REPETITIVE CORRUGATED AND STRAIGHTENING PROCESS

Ana Isabel Macías García[1], Jose Maria Cabrera[1], Jessica Calvo[1], Omar García[2], Juan Pedraza[2]
[1]Universitat Politècnica de Catalunya, Materials Science and Metallurgical Engineering, Spain. [2]Company, Ternium México, S.A. de C.V., Mexico.

09:00 - 09:15 SE5-O003 EFFECT OF COLD ROLLING AND ANNEALING TEMPERATURE ON THE MICROSTRUCTURE AND TEXTURE EVOLUTION OF DP-590 STEEL GRADE SHEETS FOR AUTOMOTIVE APPLICATIONS

Gabriela Martinez Granados[1], Armando Salinas Rodriguez[1], Omar García Rincon[2]
[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV Unidad Saltillo, Ingeniería Metalúrgica, Mexico. [2]Ternium SA de CV, , Mexico.

09:15 - 09:30 SE5-O004 HOT FORMING BEHAVIOUR AND PHASE TRANSFORMATIONS IN 1800PHS AND 2000PHS PRESS HARDENING GRADES

Jessica Calvo[1], Katerina Opatova[2], Ahmed Boulajaaj[3], Jose Maria Cabrera[1], Daniel Casellas[4]
[1]Universitat Politècnica de Catalunya, Ciencia de los Materiales e Ingeniería Metalúrgica, Spain. [2]University of West Bohemia, Regional technological institute, Czech Republic. [3]Fundació CTM Centre Tecnològic, Materiales, Spain. [4]Fundació CTM Centre Tecnològic, Materials, Spain.

09:30 - 09:45 SE5-O005 EFFECT OF INTERRUPTED COOLING ON TRANSFORMATION OF INTER-CRITICAL AUSTENITE IN AHSS-DP COLD ROLLED STEEL STRIPS

Martin Fibela Esparza[1], Armando Salinas Rodriguez[1], Frank E Goodwin[2]
[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV Unidad Saltillo, Metalurgia, Mexico. [2]International Zinc Association, Tecnología y desarrollo del mercado, United States.

09:45 - 10:00 SE5-O006 EXPERIMENTAL INVESTIGATION ON THE TRANSFORMATION OF INTERCRITICAL AUSTENITE DURING CONTINUOUS COOLING OF COLD ROLLED AHSS-DP STEELS

Patricia Sheilla Costa[1], Armando Salinas Rodriguez[1], Gerardo Altamirano Guerrero[2], Frank E Goodwin[3]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV Unidad Saltillo, Metallurgy, Mexico. [2]Instituto Tecnológico de Saltillo, Division of postgraduate studies, Mexico. [3]International Zinc Association, International Lead Zinc Research Org, United States.

■ **10:00 - 10:15 SE5-O007 MICROSTRUCTURAL EVOLUTION AND MODELING OF FERRITE DURING HOT DEFORMATION IN THE INTERCRITIC ZONE**

Gustavo Pérez[1], Juan Cancio Jiménez[1], José Federico Chávez Alcalá[1], Jose Maria Cabrera[2]

[1]Instituto Politécnico Nacional - IPN - ESIQIE, Department of Metallurgy and Materials Engineering, Mexico. [2]Universitat Politècnica de Catalunya, Departamento de Ciencia de Materiales e Ingeniería Metalúrgica, Spain.

■ **10:15 - 10:30 SE5-O008 TRENDS IN STEEL USAGE AND THE AUTOMOTIVE INDUSTRY IN NORTHEAST OF MEXICO IN R&D**

Tania Paloma Berber Solano[1], Jaime Arturo Castillo Elizondo[1], Adriana Salas Zamarripa[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico.

▸ **10:30 - 11:00 SE5-O009 Invited Talk TECHNOLOGICAL ADVANCES IN TRANSPORTATION SYSTEMS: IMPACT ON STEEL DEVELOPMENTS**

David Matlock[1], John Speer[1]

[1]Colorado School of Mines, The George S. Ansell Department of Metallurgical and Materials Engineering, United States.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY III
DR. AMANDA S. BARNARD

Session: E5 Steels II

SESSION CHAIR: ARMANDO SALINAS RODRIGUEZ

■ **12:30 - 12:45 SE5-O010 THERMAL STABILITY AND MECHANICAL BEHAVIOR OF A HIGH CR MARTENSITIC STEEL (FV535)**

Lizangela Guerra[1], M. A. L. Hernandez Rodriguez[1], Armando Salinas Rodriguez[2], R. Deaquino Lara[2], Edgar Omar Garcia Sanchez[1]

[1]Universidad Autónoma de Nuevo León, Posgrado en Ingeniería de Materiales, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV Unidad Saltillo, Metallurgy, Mexico.

■ **12:45 - 13:00 SE5-O011 THERMAL TREATMENTS IN STEELS USING SOLAR ENERGY THROUGH FRESNEL LENSES**

Maria Luisa Mendoza Lopez[1], José de Jesús Pérez Bueno[2], Maria Guadalupe Vázquez Orduña[1], Brenda Gabriela Floran Mendoza[1], Ernesto Sanjuanero Campos[1], Joaquín Pérez Meneses[1], Martha Elva Pérez Ramos[1]

[1]Instituto Tecnológico de Querétaro, Metal Mecánica, Mexico. [2]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Dirección de Ciencia, Mexico.

■ **13:00 - 13:15 SE5-O012 PHASE TRANSFORMATIONS IN STEELS WITH Al AND WITHOUT Cr ANALYZED BY MOSSBAUER METHOD**

Jorge Ramos[1], Jeferson F. Piamba[2], Hector Sánchez[2], Germán A. Pérez[2]

[1]Universidad Autónoma de Occidente, Valle, Colombia. [2]Universidad del Valle, Valle, Colombia.

■ **13:15 - 13:30 SE5-O013 HIGH TEMPERATURE OXIDATION KINETICS AND INFLUENCE OF SURFACE TREATMENT ON SCALES FORMED IN CASTED MICRO-ALLOYED STEEL**

Rosa Maria Pineda Huitron[1]

[1]Luleå tekniska Universitet, Materials Science and Mathematics, Sweden.

▸ **13:30 - 14:00 SE5-O014 Invited Talk THE ROLE OF HOT ROLLING SIMULATIONS ON HIGH STRENGTH STEELS PRODUCTION**

Fulvio Siciliano[1], Samuel F. Rodrigues[2], Brian Allen[1]

[1]Dynamic Systems Inc., , United States. [2]McGill University, Meterials Engineering, Canada.

14:00 - 16:00 Lunch time

Session: E5 Steels III

SESSION CHAIR: MARTHA P. GUERRERO-MATA

▸ **16:00 - 16:30 SE5-O015 Invited Talk EFFECT OF ULTRAFAST HEATING ON PROPERTIES OF A LOW CARBON STEEL ON MACRO- AND MICRO-SCALES**

Miguel A. Valdes Tabernero[1], Florian Vercruysse[2], Roumen Petrov[2], Jon Molina Aldareguia[3], Miguel Monclus[3], Ilchat Sabirov[1]

[1]IMDEA Materials Institute, Physical Simulation, Spain. [2]Universiteit Gent, Department of Electrical Energy, Metals, Mechanical

constructions & Systems, Belgium. [3]IMDEA Materials Institute, Nanomechanics, Spain.

- **16:30 - 16:45 SE5-O016 RELATIONSHIP BETWEEN THE HEAT TRANSFER COEFFICIENT AND THE AGITATION SPEED OF THE FLUID IN QUENCHOTEST**
  Jose Antonio Guzman Santana[1]
  [1]Universidad Autónoma de Nuevo León, FIME, Mexico.

- **16:45 - 17:00 SE5-O017 MICROSTRUCTURAL AND MECHANICAL CHARACTERIZATION OF AUTOGENOUS GTAW WELD IN HIGH-Mn AUSTENITIC Ti-CONTAINING TWIP STEEL WITH THERMAL ANALYSIS**
  Víctor García García[1], Ignacio Mejía[1], Francisco Reyes Calderón[2]
  [1]Universidad Michoacana de San Nicolás de Hidalgo, Departamento de Metalurgia Mecánica-IIMM, Mexico. [2]Instituto Tecnológico de Morelia, Departamento de Metalmecánica, Mexico.

- **17:00 - 17:15 SE5-O018 EVALUATION OF TWO DIFFERENT JOINT DESIGNS IN THE THERMAL AFFECTION OF 2507 SUPERDUPLEX STAINLESS STEEL WELDED WITH THE GMAW PROCESS.**
  Ricardo Arreola Rangel[1]
  [1]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigación en Metalurgia y Materiales, Mexico.

- **17:15 - 17:30 SE5-O019 JOINING OF COLD FORMED STEEL FOR LIGHT-WEIGHT STRUCTURAL APPLICATIONS: PROCESSING, MICROSTRUCTURE, MECHANICAL AND CORROSION BEHAVIOR**
  Sundeep Mukherjee[1], Anthony Wang[1], Spencer Taylor[1], Ravindra Mehta[1], Sameehan Joshi[1], Narendra Dahotre[1]
  [1]University of North Texas, Materials Science and Engineering, United States.

- **17:30 - 17:45 SE5-O020 MICROSTRUCTURE AND MECHANICAL PROPERTIES OF LASER WELDED HSLA STEEL FOR WIND ENERGY APPLICATIONS**
  Osvaldo Tijerina García[1], Martha Patricia Guerrero Mata[1], José Luis Cavazos García[1], Maria de Jesus Nañez[1]
  [1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico.

- **17:45 - 18:00 SE5-O021 RELATIONSHIP OF MECHANICAL AND MICROSTRUCTURAL PROPERTIES THROUGH THE APPLICATION OF A RELATIVE MEASUREMENT COEFFICIENT**
  Erick Giovanni Sandoval Garcia[1], Jorge Luis Gonzalez[2], Diego Israel Rivas[1], Manuel Alejandro Beltran Zuñiga[1], Juan José Trujillo Tadeo[1], Angel David Casarrubias Alvarez[1]
  [1]Instituto Politécnico Nacional - IPN - ESIQIE, DIMM, Mexico. [2]Instituto Politécnico Nacional - IPN - ESIQIE, , Mexico.

- **18:00 - 18:15 SE5-O022 THEORETICAL AND PRACTICAL DETERMINATION OF A BINARY MIXTURE OF METALLIC POWDERS OF 316 STAINLESS STEEL WITH TWO SIZES OF PARTICLE, FOR POWDER METALLURGY PROCESS**
  Luz Adriana Cañas Mendoza[1,2], Yaneth Pineda Triana[1], Jose G. Chacon Nava[3]
  [1]Universidad Pedagógica y Tecnológica de Colombia, Facultad de Ingeniería, Colombia. [2]Universidad Tecnológica de Pereira, Facultad de Tecnología, Colombia. [3]Centro de Investigación en Materiales Avanzados, S.C., Departamento de Metalurgia e Integridad Estructural, Mexico.

- **18:15 - 18:30 SE5-O023 INFLUENCE OF THE PHASES γ'-Fe_4N and ε-$Fe_{2-3}N$ ON THE CHEMICAL, MECHANICAL AND TRIBOLOGICAL PROPERTIES OF TOOL GRADE STEEL AISI M2: THEORETICAL-EXPERIMENTAL STUDY**
  Víctor Manuel Hurtado Pájaro[1,2], Juan Emiliano Galván Chaire[1], Alma Martínez Hernández[1], Juan Manuel Alvarado Orozco[1]
  [1]Centro de Ingeniería y Desarrollo Industrial, Surface Engineering, Mexico. [2]Universidad Tecnológica de Querétaro, Nanotechnology Engineering, Mexico.

TUESDAY, AUGUST 21
ROOM: TERRACE

- **18:30 -20:30 POSTER SESSION & COFFEE BREAK**

- **SE5-P001 METALLOGRAPHIC, STRUCTURAL AND MECHANICAL CHARACTERIZATION OF A LOW DENSITY Fe-Mn-Al-C STEEL MICROALLOYED WITH Ti/B IN AS-CAST AND -HOMOGENIZED CONDITIONS**
  Omar Enrique Villanueva Pérez[1], Ignacio Mejía[1], Víctor García García[1], Arnoldo Bedolla Jacuinde[2]
  [1]Universidad Michoacana de San Nicolás de Hidalgo, Departamento de Metalurgia Mecánica-IIMM, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Departamento de Fundición-IIMM, Mexico.

■ **SE5-P002 STRUCTURAL INTEGRITY OF WELDED JOINTS USING WAVE PROPAGATION APPROACH**

Tania Paloma Berber Solano[1], Ana Karen Vega Rivera[1], Diego Francisco Ledezma Ramírez[1], Adriana Salas Zamarripa[1], Martín Castillo Morales[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico.

■ **SE5-P003 HEAT INPUT EFFECT ON THE MICROSTRUCTURE OF TWINNING-INDUCED PLASTICITY (TWIP) STEEL WELDED JOINTS THROUGH THE GTAW PROCESS**

Humberto Hernández Belmontes[1], Ignacio Mejía[1], Víctor García García[1], Cuauhtémoc Maldonado[2]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Departamento de Metalurgia Mecánica-IIMM, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Departamento de Soldadura-IIMM, Mexico.

■ **SE5-P004 MICROSTRUCTURAL CHARACTERIZATION OF A DP STEEL BY LASER VIBROMETRY.**

Adriana Salas Zamarripa[1], Bertha Inés González Chávez[1], Tania Paloma Berber Solano[1], Diego Francisco Ledezma Ramirez[1], Omar García Rincón[2]

[1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico. [2]Ternium SA de CV, High End, Mexico.

■ **SE5-P005 METALLOGRAPHIC, STRUCTURAL AND MECHANICAL CHARACTERIZATION OF REM-CONTAINING Fe-Mn-Al-C LOW DENSITY STEEL IN AS-CAST CONDITION**

Gladys Yvette Díaz Martínez[1], Ignacio Mejía[1], Víctor García García[1], Arnoldo Bedolla Jacuinde[2]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Departamento de Metalurgia Mecánica-IIMM, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Departamento de Fundición-IIMM, Mexico.

■ **SE5-P006 SIMULATION OF DISTORTION PHENOMENA OCURRING DURING INMERSION QUENCHING OF HEAVY TRUCK COMPONENTS**

Sergio Haro[1], Marco Antonio Delgado López[2], René de Jesús Cerda Rojas[2], Arheli Zaid Rodriguez Diaz[3], Imre Felde[4], Rafael Colás[5]

[1]Universidad Autónoma de Zacatecas, Unidad Académica de Ingeniería, Mexico. [2]SISAMEX, Centro de Desarrollo Tecnológico y Humano CDTH, SISAMEX, Mexico. [3]SISAMEX, Centro de Desarrollo Tecnológico y Humano CDTH, SISAMEX, Mexico. [4]Óbuda University, John von Neumann Faculty of Informatics, Hungary. [5]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecáinca y Eléctrica, Mexico.

■ **SE5-P007 SIMULATION ON MOLDS FOR INJECTION PROCESSES WITH H13 HOT WORKING STEEL CHARACTERISTICS**

Victor Hugo Mercado Lemus[1,2], Hugo Arcos Gutiérrez[1], Jan Mayén Chaires[1], Maricruz Hernández Hernández[3], Raúl Pérez Bustamante[3], Adriana del Carmen Gallegos Melgar[3], Luis Alberto Cáseres Díaz[1], John Edison García Herrera[1], Noé Villa Villaseñor[1], Isaías Emmanuel Garduño Olvera[1], Mayra del Angel Monroy[4]

[1]Consejo Nacional de Ciencia y Tecnologia - CONACYT, CIATEQ, Mexico. [2]Corporación Mexicana de Investigación en Materiales S.A, COMIMSA, Mexico. [3]Consejo Nacional de Ciencia y Tecnologia - CONACYT, COMIMSA, Mexico. [4]CIATEQ, Plásticos y Materiales Avanzados, Mexico.

■ **SE5-P008 SEGREGATION AND MICROSTRUCTURAL DEVELOPMENT BY THERMO-MECHANICAL TREATMENT OF Fe-Mn-(Al, Si) TRIP/TWIP STEELS**

Leobardo Portuguez Pardo[1], Gerardo Peralta Perez[1], Josè Luis Jasso Morales[1]

[1]Escuela Superior de Ingeniería Química e Industrias Extractivas, Department of Metallurgy and Materials Engineering, Mexico.

■ **SE5-P009 EFFECT OF THE ANNEALING TEMPERATURE AND COOLING TYPE ON MICROSTRUCTURE AND HARDNESS OF AN AUTOMOTIVE STEEL**

Efraín Lizárraga Álvarez[1], Sergio Haro Rodríguez[1], Victor Hugo Baltazar Hernández[1], Simitrio Maldonado Ruiz[1], Omar García Rincón[2]

[1]Universidad Autónoma de Zacatecas, Maestria en Ciencia e Ingenieria de los Materiales, Mexico. [2]Ternium SA de CV, , Mexico.

■ **SE5-P010 QUANTIFICATION OF RETAINED AUSTENITE OF A TRIP STEEL DURING COLD ROLLING**

José Sergio Pacheco[1], Jorge Antonio Navarro[2], José Jaime López[3], José de Jesus Cruz[4], Pedro Garnica[2]

[1]Universidad Autónoma de San Luis Potosí, DICIM, Mexico. [2]Instituto Tecnológico de Morelia, División de Estudios de Posgrado e Investigación, Mexico. [3]Instituto Tecnológico de Morelia, Ingeniería en Materiales, Mexico. [4]Universidad Autónoma de San Luis Potosí, Facultad de Ingeniería-Instituto de Metalurgia UASLP, Mexico.

- **SE5-P011 CORROSION OF STEEL TENDONS COATED WITH FLEXIBLE FILLERS SUBJECTED TO DIFFERENT ENVIRONMENTAL CONDITIONS.**

  Ingrid Santillan[1], Francisco Presuel Moreno[1], Laura Arcelia Vaca Arciga[2]

  [1]FLORIDA ATLANTIC UNIVERSITY, Ocean Engineering, United States. [2]Universidad Autónoma de Nuevo León, ingeniera civil, Mexico.

- **SE5-P012 ANALYSIS OF A NEW INDUSTRIAL PRACTICE OF DESOXIDATION AND DESULFURATION OF STEEL DURING THE TRANSFER OF BOF TO LADLE FURNACE.**

  Sonia Azeneth Rivera Torres[1], Jesus Emilio Camporredondo Saucedo[1], Jose Jorge Ruiz Mondragon[2], Fabian Equihua[1], Adrian Moises Garcia Lara[1], Laura Castruita[1]

  [1]Universidad Autónoma de Coahuila, FIME-UN, Universidad Autónoma de Coahuila, Monclova, México, Mexico. [2]Corporación Mexicana de Investigación en Materiales S.A, COMIMSA, Mexico.

- **SE5-P013 STUDY OF THE PERFORMANCE OF MATERIAL AGGLOMERANT OF FERROUS MIXTURE FOR SINTERIZATION PROCESS**

  Jesus Emilio Camporredondo Saucedo[1], Manuel David Rodriguez Barrera[1], Adrian Moises Garcia Lara[1], Laura G. Castruita Avila[1], Abraham Alejandro Valdez Martínez[1], Fabian Equihua[1], Ernesto Hinojos de Hoyos[1]

  [1]Universidad Autónoma de Coahuila, FIME-Monclova, Mexico.

- **SE5-P014 DESIGN, MACHINING AND TESTING OF STEEL ALLOYS 4140T AND 1045 UNDER ULTRASONIC FATIGUE LOAD**

  Julio Adrian Ruiz Vilchez[1], Gonzalo M. Dominguez Almaraz[1], Ishvari Fernanda Zuniga[1], Manuel Guzmán Tapia[1]

  [1]Universidad Michoacana de San Nicolás de Hidalgo, Posgrado de Ingenieria Mecanica, Mexico.

- **SE5-P015 ELECTRON BEAM SURFACE HARDENING OF AISI H13 TOOL STEEL**

  Sandeep Thakare[1]

  [1]Bharat Forge ltd, Research & Development, India.

- **SE5-P016 MICROSTRUCTURE AND HARDNESS OF A FeCrNiMnTi HIGH ENTROPY ALLOY IN COMPARISON TO AN AISI 321 STAINLESS STEEL**

  Zaira Vianney Hernández Castro[1], Alecia Torres García[1], Roberto Martinez Sanchez[2], Jose Alberto Duarte Moller[3], Cynthia Deisy Gomez Esparza[3]

  [1]Universidad Tecnologica de Ciudad Juárez, Ingeniería en Nanotecnología, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., Metalurgía e Integridad Estructural, Mexico. [3]Centro de Investigación en Materiales Avanzados, S.C., Física de Materiales, Mexico.

- **SE5-P017 INVESTIGATION OF THERMO-PHYSICAL PROPERTIES DIRECTIONAL VARIATION FOR AM DEPOSITED TOOL STEEL**

  Libor Kraus[1], Jan Dzugan[2], Kristyna Halmesova[3], Jiri Savka[4]

  [1]COMTES FHT Inc., Management of Research, Czech Republic. [2]COMTES FHT Inc., Director for Research, Czech Republic. [3]COMTES FHT Inc., Mechanical testing, Czech Republic. [4]Technická Univerzita v Liberci, Department of Manufacturing Systems and Automation, Czech Republic.

- **SE5-P018 DESIGN OF AN ANNULAR CONICAL CALIBER FOR THE DEFECTION OF CONICAL SURFACES OF PINIONS IN GEAR BOXES**

  Noelia Barrueta Gomez[1]

  [1]Instituto Superior de Diseño, Mechanical engineering, Cuba.

Symposium F1

NEW ADVANCES IN SUPERCONDUCTIVITY AND MAGNETISM: 1D, 2D AND 3D

E. Dan Dahlberg / University of Minnesota
Roberto Escudero / Universidad Nacional Autonoma de Mexico
I. K. Schuller / U. California

MONDAY, AUGUST 20
ROOM: UXMAL II

- **08:00 - 08:30 SF1-O001 Invited Talk COMPARATIVE THEORETICAL STUDIES OF MAGNETIC STRUCTURE OF NEW IRON-BASED SUPERCONDUCTORS WITH d-ELECTRON DOPANTS**
  Ilya Kaplan[1]
  [1]Universidad Nacional Autónoma de México, Instituto de Investigaciones en Materiales, Mexico.
- **08:30 - 09:00 SF1-O002 Invited Talk COPPER BY MOLIBDENIUM AND IRON SUBSTITUTIONS IN YBCO REVISITED**
  Miguel Angel Alario Franco[1], Sara López Paz[1], Xabier Martínez de Irujo[1], Irene Herrero Ansorregui[1], Emilio Morán[1], Susana Garcia Martín[1]
  [1]Universidad Complutense de Madrid, Química Inorgánica-I, Spain.
- **09:00 - 09:15 SF1-O003 THE ROLE OF DOUBLE TiO_2 LAYERS AT THE INTERFACE OF FeSe/$SrTiO_3$ SUPERCONDUCTORS**
  Ke Zou[1]
  [1]University of British Columbia, Department of Physics and Astronomy, Canada.
- **09:15 - 09:45 SF1-O004 Invited Talk THE MARRIAGE OF FERROMAGNETISM AND SUPERCONDUCTIVITY: A NEW TWIST**
  Samuel Bader[1]
  [1]Argonne National Laboratory, Materials Science Division and Center for Nanoscale Materials, United States.
- **09:45 - 10:15 SF1-O005 Invited Talk SIZE-INDUCED MULTIFERROICITY IN OXIDE NANOPARTICLES**
  Juan Gabriel Ramirez Rojas[1], Jackeline Narvaez Morales[1], Diego Carranza[1], Alexander Cardona[1], Oscar Moscoso[2], Diego Muraca[2], Andreas Reiber[3], Marcelo Knobel[2]
  [1]Universidad de los Andes, Department of Physics, Colombia. [2]Universidade Estadual de Campinas, Instituto de Física Gleb Wataghin, Brazil. [3]Universidad de los Andes, Department of Chemistry, Colombia.
- **10:15 - 10:45 SF1-O006 Invited Talk ALL-IN-ONE SPINTRONICS: MANIPULATING ELECTRONIC PHASE SEPARATION IN COMPLEX OXIDES**
  Jian Shen[1]
  [1]Fudan University, Department of Physics, China.
- **10:45 - 11:00 SF1-O007 THE COULOMB BASED MAGNETO-ELECTRIC COUPLING IN MULTIFERROIC TUNNEL JUNCTIONS AND GRANULAR MULTIFERROICS**
  Oleg Udalov[1], Igor Beloborodov[1]
  [1]California State University, Northridge, Physics and Astronomy, United States.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY II
PROF. YUICHI IKUHARA

12:30 - 13:00 SF1-O008 Invited Talk ROLE OF DIPOLAR INTERACTIONS IN SPIN TRANSFER TORQUE NANO-OSCILLATORS
Dora Altbir[1,2], Daniela Mancilla Almonacid[1,2], Rodrigo E. Arias[1,3], Simon Oyarzun[1,2], Roberto Escobar[1], Sebastian Allende[2,4]
[1]Center for the Development of Nanoscience and Nanotechnology, Magnetic nanostructure, Chile. [2]Universidad de Santiago de Chile, Physics, Chile. [3]Universidad de Chile, Physics, Chile. [4]Center for the Development of Nanoscience and Nanotechnology, , Chile.

13:00 - 13:15 SF1-O009 HYSTERESIS FREE SWITCHING BETWEEN COLLINEAR AND VORTEX STATES IN CLOSELY PACKED Fe-Pd NANOCAP ARRAYS
Anantharaman Malie Madom Ramaswamy Iyer[1], Aravind Puthirath Balan[1], Michael Heigl[2], Mario Fix[2], Senoy Thomas[1], Manfred Albrecht[2]
[1]Cochin University of Science and Technology, Cochin, Kerala, Physics, India. [2]Universität Augsburg, Experimentalphysik IV Institut für Physik, Germany.

13:15 - 13:30 SF1-O010 SIMULATION AND MODELLING OF GRAIN BOUNDARY ANISOTROPY IN NANO-POLYCRYSTALLINE MAGNETIC THIN FILMS
Jose Dario Agudelo Giraldo[1,2], Elisabeth Restrepo Parra[2]
[1]Universidad Autónoma de Manizales, Caldas, Colombia. [2]Universidad Nacional de Colombia, , Colombia.

13:30 - 14:00 SF1-O011 Invited Talk MAGNETIC BEHAVIOR OF 1D-FE CHAINS IN METALLO-ORGANIC THIN FILMS AND SUPERLATTICES
Carlos Monton[1], Nicolas Vargas[2], Alexander Baker[3], Trevor Willey[3], Arturo Ponce[1], Ivan Schuller[4]
[1]The University of Texas at San Antonio, Physics and Astronomy, United States. [2]University of California, Santa Barbara, Physics and Astronomy, United States. [3]Lawrence Livrermore National Laboratory, Actinide and Lanthanide Science Group, United States. [4]University of California, San Diego, Physics and Astronomy, United States.

14:00 - 14:15 SF1-O012 PHOTOELECTROCHEMISTRY CHARACTERIZATION OF SEMICONDUCTING POLYMER BASED ON[4,7-DI-(THIOPHEN-2-YL)-BENZO-[C]-1,2,5-THIADIAZOLE (DTBT)
Luz Maria Lazo Jimenez[1], Bernardo Frontana Uribe[2]
[1]Instituto de Ciencias Nucleares UNAM, Química de Radiaciones y Radioquimica, Mexico. [2]Centro Conjunto de Investigación en Química Sustentable UAEM-UNAM (CCIQS), Departamento de Química, Mexico.

14:00 - 16:00 Lunch time

16:00 - 16:15 SF1-O013 RARE-EARTH-FREE PERMANENT MAGNETS FROM NANOSTRUCTURED COMPOSITE OXIDES BY ANISOTROPIC EXCHANGE COUPLING
Raul Valenzuela[1], Gabriela Vazquez Victorio[1], Nancy Flores Martinez[2], Giulia Franceschin[2], Thomas Gaudisson[2], Sophie Nowak[2], Souad Ammar[2]
[1]Instituto de Investigaciones en Materiales, Metallic and Ceramic Materials, Mexico. [2]Université Paris Diderot - Paris 7, ITODYS, France.

16:15 - 16:30 SF1-O014 SHEAR WAVE DRIVEN MAGNETOELASTIC ANTENNAS
Jin-Zhao Hu[1], Elmer Wu[1], Zhi Yao Yao[2], Joseph Schneider[1], Qianchang Wang[1], Cai Chen[1], Sidhant Tiwari[2], Greg Carman[1], Abdon Sepulveda[1]
[1]University of California, Los Angeles, Mechanical and Aerospace Engineering, United States. [2]University of California, Los Angeles, Electrical and Computer Engineering, United States.

16:30 - 16:45 SF1-O015 SYNTHESIS, STRUCTURAL AND MORPHOLOG CHARACTERIZATION ON BaO-MgO-V_2O_5 AND SnO_2-MgO-Sb_2O_3 SYSTEMS.
Jose Hurtado[1,2], Elizabeth Chavira[1], Adriana Tejeda Cruz[3], Karla Eriseth Morales Reyes[4], Omar Novelo[5], Josué Romero Ibarra[5], Jesús Angel Arenas Alatorre[6], Jorge Barreto[6]
[1]Instituto de Investigaciones en Materiales, Departamento de baja dimensionalidad, Mexico. [2]Universidad Nacional Autónoma de México, Posgrado en Ciencias Químicas, Mexico. [3]Instituto de Investigaciones en Materiales, Difracción de rayos x, Mexico. [4]Instituto de Investigaciones en Materiales, Análisis térmico, Mexico. [5]Instituto de Investigaciones en Materiales, Microscopía electrónica, Mexico. [6]Instituto de Física - Universidad Nacional Autónoma de México, Microscopía, Mexico.

16:45 - 17:00 SF1-O016 NEUTRON STUDIES ON HIGH PRESSURE A-SITE MANGANITES
Angel M. Arevalo Lopez[1], Elena Solana Madruga[2], Graham Mcnally[2], Antonio Juan Dos Santos Garcia[3], Regino Saez Puche[4], J Paul Attfield[2]

[1]CNRS-Universite de Lille, Chemistry, France. [2]University of Edinburgh, Chemistry, United Kingdom, Channel Islands & Isle of Man. [3]Universidad Politécnica de Madrid, Chemistry, Spain. [4]Universidad Complutense de Madrid, Chemistry, Spain.

- **17:00 - 17:15 SF1-O017 HYBRID HETEROSTRUCTURES**

Ivan Schuller[1], Ali Basaran[2], Juan Gabriel Ramirez[3], Javier del Valle Granda[2]

[1]University of California, San Diego, Physics Department, United States. [2]University of California, San Diego, Physics, United States. [3]University, Physics, Colombia.

- **17:15 - 17:30 SF1-O018 EXPLORATION OF NOISE IN MESOSCALE MAGNETIC DOTS**

Dan Dahlberg[1]

[1]University of Minnesota, Physics, United States.

- **17:30 - 18:30 Science, Technology and Society Lecture**

MONDAY, AUGUST 20
ROOM: TERRACE

- **18:30 -20:30 POSTER SESSION & COFFEE BREAK**

- **SF1-P001 ANALYTICAL AND NUMERICAL KU-B PHASE DIAGRAMS FOR COBALT NANOSTRUCTURES: STABILITY REGION FOR A BLOCH SKYRMION**

Juan Escrig[1,2], Alejandro Riveros[2], Nicolás Vidal Silva[2], Felipe Tejo[2]

[1]Center for the Development of Nanoscience and Nanotechnology, , Chile. [2]Universidad de Santiago de Chile, Departamento de Física, Chile.

- **SF1-P002 THERMODYNAMICS AND PHYSICAL PROPERTIES OF MAGNETIC COMPOUNDS MGa_2S_4 AND $M_2Ga_2S_5$ (M – Fe, Pb, Ni)**

Mirsalim Asadov[1], Solmaz Mustafaeva[2], Kazimir Yanushkevich[3], Sergey Nikitov[4]

[1]Institute of Catalysis and Inorganic Chemistry, Azerbaijan National Academy of Sciences, Baku, Azerbaijan. [2]Institute of Physics, Azerbaijan National Academy of Sciences, Baku, Azerbaijan. [3]Scientific-Practical Material Research Centre of the National Academy of Sciences, Minsk, Belarus. [4]Kotelnikov Institute of Radio Engineering and Electronics (IRE), RAS, Moscow, Russia.

- **SF1-P003 MAGNETIC MEASUREMENTS AND LOW TEMPERATURE SPECIFIC HEAT OF INTERMETALLIC HoCuBi**

Cintli Aguilar[1], Roberto Escudero[1]

[1]Instituto de Investigaciones en Materiales, Materia Condensada y Criogenia, Mexico.

- **SF1-P004 SYNTHESIS AND CHARACTERIZATION OF Fe_3O_4 NANOPARTICLES FUNCTIONALIZED FOR THE ADSORPTION OF HYDROCARBONS.**

Victor Alejandro Sosa Carrasco[1,2], Hernani Yee Madeira[1]

[1]Escuela Superior de Física y Matemáticas IPN, mossbauer spectroscopy laboratory and complementary techniques, Mexico. [2]Instituto Mexicano del Petróleo, environmental Protection, Mexico.

- **SF1-P005 STUDY OF PHYSICAL PROPERTIES OF $La_{0.67}Ca_{0.33-x}Sr_xMnO_3$ COMPOUND (x=0 to 0.04)**

Verónica E. Salazar Muñoz[1], S. A. Palomares Sánchez[1], Azdrubal Lobo Guerrero Serrano[2], Jose T. Elizalde Galindo[3], Rigoberto López Juárez[4], Vicente Damián Compeán García[5]

[1]Universidad Autónoma de San Luis Potosí, Facultad de Ciencias, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Mexico. [3]Universidad Autónoma de Ciudad Juárez, Departamento de Ciencias Básicas-Instituto de Ingeniería y Tecnología, Mexico. [4]Universidad Autónoma de la Ciudad de México, Unidad Morelia, Instituto de Investigación en Materiales, Mexico. [5]Conacyt - Universidad Autonoma de San Luis Potosi, Coordinación para la Innovación y Aplicación de la Ciencia y la Tecnología (CIACYT), Mexico.

- **SF1-P006 ORDER OF THE FERROMAGNETIC-PARAMAGNETIC TRANSITION OF THE MAGNETOCALORIC EFFECT OF $La_{0.67}Ca_{0.33-x}Sr_xMnO_3$ (x=0 to 0.04) COMPOUND**

Veronica E. Salazar M.[1], S. A. Palomares Sánchez[1], Azdrubal Lobo Guerrero Serrano[2], Jose T. Elizalde Galindo[3], T. J. Pérez Juache[4]

[1]Universidad Autónoma de San Luis Potosí, Facultad de Ciencias, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Mexico. [3]Universidad Autónoma de Ciudad Juárez, Departamento de Ciencias Básicas-Instituto de Ingeniería y Tecnología, Mexico. [4]Universidad Autónoma Metropolitana, Departamento de Ingeniería de Procesos e Hidráulica, Mexico.

- **SF1-P007 PRODUCTION OF THE SUPERCONDUCTOR SYSTEM $TR_3Ba_5Cu_8O_{18}$ (TR = La) THE COMBUSTION METHOD**

Ubeimar Fuentes Guerrero[1], Jairo Gomez Cuaspud[1], Carlos Arturo Parra Vargas[1]

[1]Universidad Pedagógica y Tecnológica de Colombia, Boyaca, Colombia.

- **SF1-P008 REENTRANT SUPERCONDUCTIVITY IN A COMPOSITE FORMED BY $YBa_2Cu_3O_{7-\delta}$ AND AMMONIUM TERBIUM OXALATE.**

Rodolfo Ezequiel Lopez Romero[1,2], Roberto Escudero Derat[3], Ana Karla Bobadilla Valencia[3]

[1]Universidad Autónoma Metropolitana, Ciencias Básicas e Ingeniería, Mexico. [2]Universidad Nacional Autónoma de México, Materia condensada y criogenia, Mexico. [3]Instituto de Investigaciones en Materiales, Materia condensada y criogenia, Mexico.

- **SF1-P009 MAGNETIC AND RAMAN STUDY OF NiO NANOPARTICLES**

Francisco Ascencio[1], Roberto Escudero[1]

[1]Instituto de Investigaciones en Materiales, Materia Condensada y Criogenia, Mexico.

- **SF1-P010 MECHANOCHEMICAL SYNTHESIS OF FLEXIBLE FERRITE $Mn_xZn_{1-x}Fe_2O_4$ ($0.1 < x < 1.0$)**

Margarita Chavez Martinez[1], María Cecilia Salcedo Luna[2], Hernández Martínez[1], Hermilo Goñi Cedeño[1], María de la Luz Soto Téllez[1], Luis Edgar López García[2]

[1]Universidad Autónoma Metropolitana, Ciencias Básicas, Química, Mexico. [2]Universidad Nacional Autónoma de México, Facultad de Química, Mexico.

- **SF1-P011 OPTIMAL DOPING FOR D-WAVE SUPERCONDUCTING GROUND STATES WITHIN THE GENERALIZED HUBBARD MODEL**

Benjamin Millan Ramos[1], Jose Samuel Millan Malo[2], Luis Antonio Perez López[3]

[1]Instituto de Investigaciones en Materiales, Low-Dimensionality, Mexico. [2]Universidad Autónoma del Carmen, Facultad de Ingenieria, Mexico. [3]Instituto de Física - Universidad Nacional Autónoma de México, Departamento de Química, Mexico.

- **SF1-P012 STRUCTURAL AND PHYSICAL PROPERTIES OF TERNARY TRANSITION METAL ANTIMONIDE Bi-Sb-Fe**

Miguel Angel Juarez Rosete[1], Roberto Escudero Derat[1]

[1]Instituto de Investigaciones en Materiales, Materia Condensada y Criogenia, Mexico.

- **SF1-P013 STRUCTURAL, MAGNETIC, AND THERMAL CHARACTERIZATION OF POLYCRYSTALLINE $Fe_{1-x}Al_x$ ALLOYS WITH x = 30, 50, and 60 (at. %) PREPARED BY MEANS OF A MAGNETIC MILL**

Diego Molano Ruales[1], Jessica López Tabares[1], Andrés Rosales Rivera[1]

[1]Universidad Nacional de Colombia, , Colombia.

- **SF1-P014 EXPERIMENTAL STUDY OF THE VOLUME and NEAR-SURFACE MAGNETIZATION OF FeCo-based METALLIC GLASSES**

Andrés Rosales Rivera[1], Ivan Gerardo Cely[1], Nicolás Antonio Salazar Henao[1], Abilo Andrés Velásquez Salazar[1], Jessica López Tabares[1], Alvaro Pulzara Mora[1]

[1]Universidad Nacional de Colombia, , Colombia.

Symposium F2

ADVANCES IN FUNCTIONAL SEMICONDUCTING MATERIALS

Abdel Hadi Kassiba / Le Mans University
Subramaniam Velumani / Centro de Investigación y de Estudios Avanzados del IPN (CINVESTAV)
Vijay Singh / University of Kentucky
Maria de Luz Olvera / Centro de Investigación y de Estudios Avanzados del IPN (CINVESTAV)

WEDNESDAY, AUGUST 22
ROOM: TULUM H

Session: Functional materials

SESSION CHAIR: A.KASSIBA, S.VELUMANI

09:00 - 09:30 SF2-O001 Invited Talk CRYSTAL GROWTH PHENOMENA OF CHALCOGENIDE MULTILAYERS WITH ATOMIC-SCALE RESOLUTION VIA MOLECULAR DYNAMICS

David Zubia[1], Rodolfo Aguirre[1], Jose Juan Chavez[2], Sharmin Abdullah[3], Xiaowang Zhou[2]

[1]The University of Texas at El Paso, Electrical and Computer Engineering, United States. [2]Sandia National Laboratories, Mechanics of Materials Department, United States. [3]The University of Texas at El Paso, Computational Science Department, United States.

09:30 - 09:45 SF2-O002 MONOMER DERIVED POLY(FURFURYL)/BaTiO3 0–3 NANOCOMPOSITE CAPACITORS: MAXIMIZATION OF THE EFFECTIVE PERMITTIVITY THROUGH CONTROL AT THE INTERFACE

Frederick Pearsall[1,2], Julien Lombardi[1], Stephen Obrien[1,2]

[1]City College of New York, Chemistry, United States. [2]The Graduate Center of the City University of New York, Chemistry, United States.

09:45 - 10:00 SF2-O003 STRAIN-INDUCED ELECTRICAL BEHAVIOR IN MANGANESE OXIDE THIN-FILMS SYNTHESIZED BY THERMAL OXIDATION

Karen Ailed Neri Espinoza[1], José Alberto Andraca Adame[2], Roberto Baca Arroyo[3], Ramón Peña Sierra[4]

[1]Instituto Politécnico Nacional - IPN, Programa de Doctorado en Nanociencias y Micro-Nanotecnlogías, Escuela Nacional de Ciencias Biológicas (ENCB), Mexico. [2]Instituto Politécnico Nacional - IPN, Unidad Profesional Interdisciplinaria de Ingeniería Campus Hidalgo (UPIIH), Mexico. [3]Instituto Politécnico Nacional - IPN, Departamento de Electrónica, Escuela Superior de Ingeniería Mecánica y Eléctrica (ESIME), Mexico. [4]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Sección de Electrónica del Estado Sólido, Departamento de Ingeniería Eléctrica, Mexico.

10:00 - 10:15 SF2-O004 EFFECT OF HEAT TREATMENT ON GALVANOSTATICALLY ELECTRODEPOSITED Cu_2ZnSnS_4 THIN FILMS

Rafael Torres Ricárdez[1], María Fernanda García Mendoza[1], Erik Ramirez Morales[1], Lizeth Rojas Blanco[1], Juan Gabriel Álvarez Ramírez[1], Manuel Gonzalez Solano[1], Francisco Iván Lizama Tzec[2], Germán Pérez Hernández[1]

[1]Universidad Juárez Autónoma de Tabasco, División Académica de Ingeniería y Arquitectura, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Departamento de Física Aplicada, Mexico.

■ **10:15 - 10:30 SF2-O005 DEPOSITION OF TiO_2 FILMS BY INKJET PRINTING**

W. Y. Padron Hernández[1], M. C. Ceballos Chuc[1], D. Pourjafari[1], G. Oskam[1], J. C. Tinoco Magaña[2], A. G. Martinez López[2], G. Rodríguez Gattorno[1]

[1]CINVESTAV-Mérida, Fisica aplicada, Mexico. [2]Universidad Veracruzana, Microna, Mexico.

▸ **10:30 - 11:00 SF2-O006 Invited Talk ATOMISTIC-SCALE MECHANISM OF ELECTRICAL DIPOLE SWITCHING IN FUNCTIONALIZED GLASSES**

Xiao Shen[1]

[1]University of Memphis, Physics and Materials Science, United States.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY IV NOBEL PRIZE IN CHEMISTRY 2016
PROF. BEN L. FERINGA

Session: ZnO-Based materials

SESSION CHAIR: V.SINGH, D.ZUBIA

■ **12:30 - 12:45 SF2-O007 A SIMPLE METHOD TO OBTAIN A HETEROJUCTION OF ZINC OXIDE NANOCRYSTALS AND GRAPHENE OXIDE**

Miguel Angel Gomez Alvarez[1], Aarón Isarel Díaz Cano[1], Luis Martín Reséndiz Mendoza[1], Yosemik Arjuna León Nataret[1], Víctor Cabrera Arenas[1]

[1]Instituto Politécnico Nacional - IPN, SEPI UPIITA, Mexico.

■ **12:45 - 13:00 SF2-O008 DYE SENSITIZED SOLAR CELLS BASED ON ZnO WITH DIFFERENT NANOPARTICLE SIZE**

Karla Moreno Laguna[1], Alberto Gabriel Vega Poot[2], Erik Ramirez Morales[1], Lizeth Rojas Blanco[1], Juan Gabriel Álvarez Ramírez[1], Germán Pérez Hernández[1]

[1]Universidad Juárez Autónoma de Tabasco, Posgrado en Ciencias en Ingeniería, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Física Aplicada, Mexico.

■ **13:00 - 13:15 SF2-O009 ZnO/PEDOT:PSS SCHOTTKY BARRIER DIODES FABRICATED ON POLYIMIDE SUBSTRATES**

Norberto Hernandez Como[1], Miguel Angel Lopez Castillo[2], Francisco Javier Hernandez Cuevas[1], Miguel Angel Aleman[1]

[1]Instituto Politécnico Nacional - IPN, Centro de Nanociencias y Micro y Nanotecnologías, Mexico. [2]Instituto Politécnico Nacional - IPN, Escuela Superior de Ingeniería Química e Industrias Extractivas, Mexico.

■ **13:15 - 13:30 SF2-O010 SCHOTTKY BARRIER DIODES FABRICATED WITH IGZO/AGO METAL OXIDES.**

Aaron Díaz Cano[2], Luis Alonso Santana Dorantes[2], F. J. Hernandez Cuevas[1], Luis M. Resendiz[2], Miguel Angel Aleman[1], N. Hernandez Como[1], I. Mejia[3]

[1]Centro de Nanociencias y micro y Nanotecnologías del IPN, CNMN, Mexico. [2]Instituto Politécnico Nacional - IPN, SEPI UPIITA, Mexico. [3]University of Texas at Dallas, Materials Science and Engineering, United States.

■ **13:30 - 13:45 SF2-O011 ELECTRICAL, MORPHOLOGICAL AND OPTICAL PROPERTIES OF OPTIMIZED RADIO-FREQUENCY SPUTTERED ALUMINUM DOPED ZINC OXIDE THIN FILMS FOR SOLAR CELL APPLICATIONS**

Onyekachi Nwakanma[1], Jorge Narro Rios[1], Velumani Subramaniam[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Departamento de Ingeniería Eléctrica, Mexico.

■ **13:45 - 14:00 SF2-O012 GO/TiO_2 NANOCOMPOSITES FOR ESCHERICHIA COLI PHOTOCATALYTIC INACTIVATION: THE ROLE OF REACTIVE OXYGEN SPECIES**

Christeena Theresa Thomas[1], Myriam Solís López[2], Roberto Hernandez[2], Martha Barajas Aceves[3], Jose Tapia Ramirez[4], José Alvaro Chávez Carvayar[5], Antonieta García Murillo[6], Felipe de Jesús Carillo[6], Eleicer Ching[7], Velumani Subramaniam[2]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Programa en Nanociencias y Nanotecnología, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Departamento de Ingeniería Eléctrica, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Departamento de Biotecnología, Mexico. [4]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Genética y Biología Molecular, Mexico. [5]Universidad Nacional Autónoma de México, Instituto de Investigaciones en Materiales, Mexico. [6]Escuela Superior de Ingeniería Química e Industrias Extractivas, Ingeniero Quimico Industrial, Mexico. [7]Universidad Tecnológica de Panamá, Departamento de Ciencias Naturales, Panama.

14:00 - 16:00 Lunch time

Session: Sensors

SESSION CHAIR: S.AMMAR, M.DE LUZ

- **16:00 - 16:15 SF2-O013 ALL OXIDE NiO-Ga_2O_3 PN JUNCTION: Ga_2O_3 LAYER THICKNESS EFFECT AND APPLICATION AS TEMPERATURE SENSOR AND UV DETECTOR.**

  Maria Isabel Pintor Monroy[1], Bayron Lennin Murillo Borjas[1], Julia Hsu[1], Husam Alshareef[2], Manuel A. Quevedo López[1]

  [1]The University of Texas at Dallas, Materials Science and Engineering, United States. [2]King Abdullah University of Science and Technology, Materials Science and Engineering, Saudi Arabia.

- **16:15 - 16:30 SF2-O014 PHASE SENSITIVE PREASURE SENSOR BY EMPLOYING AN INDIUM DOPED CdS THIN FILM CAPACITOR**

  José Antonio Dávila[1], Yolanda-Elinor Bravo Garcia[1], Edmundo Reynoso Lara[1]

  [1]Benemerita Universidad Autonoma de Puebla, Facultad de Ciencias de la Electrónica, Mexico.

- **16:30 - 16:45 SF2-O015 STUDY OF BENZENE DEGRADATION IN A PHOTOCATALYTIC REACTOR FOR ITS IMPLEMENTATION IN OCCUPATIONAL ENVIRONMENTS**

  Fátima Montserrat Castañeda de la Hoya[1], Gerardo Torres Delgado[1], Joaquín Márquez Marín[1], Rebeca Castanedo Pérez[1], Miguel Ángel Badillo Ávila[1], Cyntia I. Zúñiga Romero[1], Orlando Zelaya Ángel[2]

  [1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Unidad Querétaro, Mexico. [2]Cinvestav Zacatenco, Unidad Zacatenco, Mexico.

- **16:45 - 17:00 SF2-O016 NEW APPROACHES TO MAKE DIAMOND DIODES AND FIELD EFFECT TRANSISTORS BASED ON DIAMOND NANOSTRUCTURES**

  Alexander Pakpour Tabrizi[1], Richard Jackman[1]

  [1]University College London, London Centre for Nanotechnology, United Kingdom, Channel Islands & Isle of Man.

WEDNESDAY, AUGUST 22
ROOM: TERRACE

- **18:30 -20:30 POSTER SESSION & COFFEE BREAK**

- **SF2-P001 EFFECT OF MICROSTRUCTURE ON TRANSPORT AND OPTICAL PROPERTIES OF NB-DOPED ANATASE TIO2 FILMS: A TRANSMISSION ELECTRON MICROSCOPY STUDY**

  Daisuke Ogawa[1], Shoichiro Nakao[2], Kazuo Morikawa[1], Mizue Ebisawa[3], Yasushi Hirose[2], Tetsuya Hasegawa[2]

  [1]Tokyo Metropolitan Industrial Technology Research Institute, Advanced Materials Development Sector, Technological Development Support Division, Commercialization Support Department, Japan. [2]The University of Tokyo, Department of Chemistry, Graduate School of Science, Japan. [3]Tokyo Metropolitan Industrial Technology Research Institute, Electrical and Electronic Technology Group, Division I, Research and Development Department, Japan.

- **SF2-P002 ANALYSIS OF THE DIFFRACTION PATTERNS OF CU^{+2}/FE^{+3} MIXED OXIDES AND ITS THERMAL PROGRESSION TO DELAFOSSITE TYPE OXIDES**

  Sorelis Nieto Zambrano[1], Eshela Ramos Ramirez[1], Francisco Javier Tzompantzi[2]

  [1]Universidad de Guanajuato, chemistry, Mexico. [2]Universidad Autónoma Metropolitana, Chemistry, Mexico.

- **SF2-P003 HOPPING CONDUCTIVITY IN $(TlGaSe_2)_{1-x}$ $(TlInS_2)_x$ Solid Solutions**

  Salim Asadov[1], Solmaz Mustafaeva[2]

  [1]Institute of Catalysis and Inorganic Chemistry, Azerbaijan National Academy of Sciences, Baku, Azerbaijan. [2]Institute of Physics, Azerbaijan National Academy of Sciences, Baku, Azerbaijan.

- **SF2-P004 LUMINISCENCE VARIATION IN AGING ZnO:Ag NANOCRYSTALS OBTAINED BY ULTRASONIC SPRAY PYROLYSIS**

  Erick Velázquez Lozada.[1], Tetyana Torchynska[2], Gabriela Monserrat Camacho González[3]

  [1]Instituto Politécnico Nacional - IPN, SEPI ESIME Zacatenco, Mexico. [2]Instituto Politécnico Nacional - IPN, ESFM, Mexico. [3]Instituto Politécnico Nacional - IPN, ESIME Zacatenco, Mexico.

- **SF2-P005 FORMATION OF TIN DIOXIDE THIN FILMS USING CHEMICAL SPRAY TECHNIQUES**

  Erick Velázquez Lozada.[1], Luis Castañeda[2], Gabriela Monserrat Camacho González[3]

  [1]Instituto Politécnico Nacional - IPN, SEPI ESIME Zacatenco, Mexico. [2]Instituto Politécnico Nacional - IPN, Laboratorio de Modelado Molecular, Bioinformática y Diseño de Fármacos de la Escuela Superior de Medicina, Mexico. [3]Instituto Politécnico Nacional - IPN, ESIME Zacatenco, Mexico.

■ **SF2-P006 FREQUENCY – ELECTRICAL IMPEDANCE DEPENDENCIES OF NEUTRON-IRRADIATED NANOCRYSTALLINE SILICON CARBIDE (3C-SiC)**

Elchin Huseynov[1]

[1]Institute of Radiation Problems of Azerbaijan National Academy of Sciences, AZ1143, Azerbaijan.

■ **SF2-P007 FABRICATION OF THIN FILM TRANSISTORS BASED ON ZNO AT LOW TEMPERATURES**

Miguel Angel Lopez Castillo[1], Jose Alberto Andraca Adame[2], Francisco Javier Hernandez Cuevas[3], Miguel Angel Aleman[3], Norberto Hernandez Como[3]

[1]Instituto Politécnico Nacional - IPN, Escuela Superior de Ingeniería Química e Industrias Extractivas, Mexico. [2]Instituto Politécnico Nacional - IPN, Unidad Profesional Interdisciplinaria de Ingeniería Campus Hidalgo (UPIIH), Mexico. [3]Instituto Politécnico Nacional - IPN, Centro de Nanociencias y Micro y Nanotecnologías, Mexico.

■ **SF2-P008 DEVELOPMENT OF CO_2 SENSORS BASED ON ZnO NANOSTRUCTURES.**

Marco Polo Munguia Martín[1], Venkata Krishna Karthik Tangirala[2], María Isabel Reyes Valderrama[1], Juan Hernández Avila[1], Demetrio Mendoza Anaya[3], Ventura Rodriguez Lugo[1]

[1]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Instituto de Ciencias Básicas e Ingeniería, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Escuela Superior de Tepeji del Rio, Universidad Autónoma del Estado de Hidalgo, Mexico. [3]Instituto Nacional de Investigaciones Nucleares (ININ), Instituto Nacional de Investigaciones Nucleares, Mexico.

■ **SF2-P009 EFFECT OF POLYELECTROLYTE-CTAB SYSTEM ON THE PROPERTIES OF ZnO NANOPARTICLES SYNTHESIZED BY SOLVOTHERMAL METHOD**

Armando Flores Moreno[1], Ana María Herrera González[1], Jesús García Serrano[1]

[1]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Mexico.

■ **SF2-P010 SYNTHESIS AND CHARACTERIZATION OF SECOND GENERATION CONJUGATED DENDRIMERS WITH RESORCINARENE CORE**

Damaris Castro Monter[1], Rosa Angeles Vazquez[1], Marcos Martínez García[2], María Isabel Reyes Valderrama[1], Karina Aleman Ayala[1], Eleazar Salinas Rodriguez[1], Ventura Rodriguez Lugo[1]

[1]Universidad Autónoma del Estado de Hidalgo, Instituto de Ciencias Básicas e Ingeniería, Área Académica de Ciencias de la Tierra y Materiales, Mexico. [2]Universidad Nacional Autónoma de México, Facultad de Química, Mexico.

■ **SF2-P011 A METHOD TO CONFIGURE A STANDARD MARKING LASER AS A LOW-COST PATTERN GENERATOR TO OBTAIN PHOTOMASKS FOR FABRICATION OF ELECTRONIC DEVICES**

Norberto Hernandez Como[1], Miguel Angel Lopez Castillo[2], Francisco Javier Hernandez Cuevas[1], Hector Baez Medina[3], Marco Ramirez Salinas[3], Miguel Angel Aleman[1]

[1]Instituto Politécnico Nacional - IPN, Centro de Nanociencias y Micro y Nanotecnologías, Mexico. [2]Instituto Politécnico Nacional - IPN, Escuela Superior de Ingeniería Química e Industrias Extractivas, Mexico. [3]Instituto Politécnico Nacional - IPN, Centro de Investigación en Computación, Mexico.

■ **SF2-P012 EFFECT OF THE REACTANT GAS IN GaAs FILMS GROWN BY CLOSE-SPACED VAPOR TRANSPORT TECHNIQUE**

Jose de Jesus Cruz Bueno[1], Godofredo Garcia[1], Tomás Díaz[1], Fabiola Nieto[1], Antonio Coyopol[1], Roman Romano Trujillo[1], Enrique Rosendo[1], Crisoforo Morales[1], Reina Galeazzi[1]

[1]Benemerita Universidad Autonoma de Puebla, CIDS-ICUAP, Mexico.

■ **SF2-P013 STRUCTURAL AND MAGNETIC CHARACTERIZATION OF $Na_{0.75}Co_{1-x}Mn_xO_2$ (x=0, 0.035, 0.04, 0.045, 0.05, 0.06) SYSTEM**

Yury Esperanza Parada Cano[1], Carlos Arturo Parra Vargas[1], Iván Supelano García[1], César Armando Ortiz Otálora[1]

[1]Universidad Pedagógica y Tecnológica de Colombia, Boyacá, Colombia.

■ **SF2-P014 CHEMICAL-RESISTIVE BEHAVIOR EVALUATION AND STRUCTURAL CHARACTERIZATION OF NIO THIN FILM FOR CO DETECTION INSIDE OF COMMERCIAL AIRCRAFT**

Ivan Alvarez Samario[1], Mayahuel Ortega Avíles[2], Georgina Garcia Pacheco[1], Norberto Hernandez Como[2], Gerardo Francisco Pérez Sánchez.[3]

[1]ESIME TICOMAN, Seccion de posgrado, ESIME Ticomán, Mexico. [2]Centro de Nanociencias y micro y Nanotecnologías del IPN, Nanociencias, Mexico. [3]Benemerita Universidad Autonoma de Puebla, Ecocampus Valsequillo, Mexico.

■ **SF2-P015 WHITE LIGHT EMITTING PHOSPHORS BASED ON ZnO-MgO-TiO_2 COMPOSITES**

Lyudmyla Borkovska[1], Iryna Markevich[1], Tetyana Stara[1], Olexandr Gudymenko[1], Andriy Kryvko[2], Tetyana Kryshtab[3]

[1]V.Lashkaryov Institute of Semiconductor Physics at the National Academy of Sciences of Ukriane, Department of Semiconductor Heterostructures, Ukraine. [2]Instituto Politecnico Nacional, IPN - SEPI-ESIME-Zacatenco, Department of Systems, Mexico. [3]Instituto Politécnico Nacional - IPN, ESFM, Department of Physics, Mexico.

- **SF2-P016 NANOSTRUCTURES OF TIN, ZINC, AND NICKEL PRODUCED FROM WASTEWATER IN ELECTROCOAGULATION PROCESS**

Miguel Ángel Cerón[1], Rodolfo Salas[2], Maricruz Rocha[3], Francisco Paraguay[4], Victor Nolasco[5]

[1]Universidad Tecnológica de Tula-Tepeji, Programa Educativo de Química, Mexico. [2]Universidad Tecnologica de Ciudad Juárez, Programa Educativo de Mantenimiento Industrial, Mexico. [3]Universidad Tecnologica de Ciudad Juárez, Programa Educativo de Nanotecnología, Mexico. [4]Centro de Investigación en Materiales Avanzados, S.C., Física de materiales, Mexico. [5]Universidad Tecnológica de Tula-Tepeji, Programa Educativo de Nanotecnología, Mexico.

- **SF2-P017 COMPARATIVE STUDY OF THE PHOTOCATALYTIC RESPONSE OF METHYLENE BLUE BY DIFFERENT SEMICONDUCTOR OXIDES**

A. C. Gómez Monsiváis[1], M. de la L. Olvera[1], A. Maldonado[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Electric Engineering, Mexico.

- **SF2-P018 EFFECT OF TIME AND BALL-MILLING SPEED ON THE STRUCTURE AND ELECTRICAL PROPERTIES OF (CO, DY, TA)-DOPED SNO_2 VARISTORS**

Martin Itzcoatl Miranda Lopez[1], Marla B. Hernandez[1], Patricia Zambrano Robledo[1], Laura García Ortiz[1], Cristian Gómez Rodríguez[1], Sergio Garcia Villarreal[2], Josue A. Aguilar Martinez[1]

[1]Universidad Autónoma de Nuevo León, Centro de Investigación e Innovación en Ingeniería Aeronáutica, Mexico. [2]Universidad Autónoma de Coahuila, Facultad de Metalurgia, Mexico.

- **SF2-P019 STUDY OF THE PHOTOLUMINESCENCE MECHANISMS IN ZINC SULPHIDE (ZnS) DOPED WITH EUROPIUM 2+ (Eu^{2+}) AND WITH EXCESS OF ZINC (Zn).**

Victor Hugo Lopez Lugo[1], Juan Carlos Alonso Huitron[1], Martha Judith Rivera Medina[1]

[1]Instituto de Investigaciones en Materiales, Condesed matter and cryogenics, Mexico.

- **SF2-P020 TEORETICAL STUDY OF BARRIER SOLAR CELLS EFFICIENCY**

Julio Valenzuela Badilla[1], Armando G rojas hernandez[1], Francisco Javier Arizaga Ayala[1], Santos Jesús Castillo[1]

[1]Universidad de Sonora, Physics Investigation, Mexico.

- **SF2-P021 STUDY OF THE PROPERTIES OF MIXED METHYLAMMONIUM LEAD IODIDE AND CHLORIDE PEROVSKITE THIN FILMS OBTAINED BY A SINGLE STEP SOLUTION METHOD**

Isaac Montes Valenzuela[1], Arturo Morales Acevedo[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Electrical engineering, Mexico.

- **SF2-P022 EFFECT OF COMPLEXING AGENTS ON OPTIMIZED DEPOSITION OF CDS BUFFER LAYER FOR HIGH-EFFICIENT CIGSE SOLAR CELLS**

Onyekachi Nwakanma[1], Jorge Narro Rios[1], Velumani Subramaniam[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Departamento de Ingeniería Eléctrica, Mexico.

- **SF2-P023 ELECTRICAL, OPTICAL, AND STRUCTURAL PROPERTIES OF SOLUTION - PROCESSED FORMAMIDINIUM LEAD IODIDE (FAPbI3) PEROVSKITES**

Karthick Sekar[1], Jorge Sergio Narro Rios[2], Srikanth Chakaravarthy[1], Luisa Fernanda Salazar Rivera[2], Velumani Subramaniam[2]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Nanoscience and Nanotechnology, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Electrical Engineering (SEES), Mexico.

- **SF2-P024 STUDY OF THE SYNTHESIS AND THE STRUCTURAL AND OPTICAL PROPERTIES OF BASE InP QUANTUM DOTS AND PASSIVATED WITH ZnS**

Daladier Alonso Granada Ramirez[1], Jose Saul Arias Cerón[2], María Lucero Gómez Herrera[3], Juan Pedro Luna Arias[4], Patricia Rodriguez Fragoso[5], Julio Gregorio Mendoza Alvarez[5]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Nanoscience and Nanotechnology, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, SEES, Electrical Engineering, Mexico. [3]Universidad Autónoma de Querétaro, Physical Engineering, Mexico. [4]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Cell Biology, Mexico. [5]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Physics, Mexico.

■ **SF2-P025 SYNTHESIS AND CHARACTERIZATIONS OF CdS THIN FILM AS A BUFFER LAYER FOR CIGSe BASED SOLAR CELL**

G. Regmi[1], J. S. Narro Rios[1], Ashok Adhikari[1], Francisco Alvarado Cesar[1], Velumani S.[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Ingenieria Eléctrica, Mexico.

■ **SF2-P026 CHEMICAL SYNTHESIS AND SHEAR EXFOLIATION IN SOLUTION OF MoS_2 NANOPARTICLES**

Araceli Flores Conde[1], Esteban Díaz Torres[2], Alvaro Guzmán Campuzano[3], Mauricio Ortega López[3]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, PPrograma de Doctorado en Nanociencias y Nanotecnología, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Programa de Doctorado en Nanociencias y Nanotecnología, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Ingeniería Eléctrica, Mexico.

■ **SF2-P027 CARRIER RELAXATION PROCESSES IN DENDRONIZED $CaSiO_3$-SiO_2-Si NANOHETEROSTRUCTURES**

Tetyana Kryshtab[1], Rada Savkina[2], Aleksey Smirnov[3], Volodymyr Odarych[4], Volodymyr Shmid[4], Oleg Korotchenkov[4]

[1]Instituto Politécnico Nacional - IPN, ESFM, Department of Physics, Mexico. [2]V.Lashkaryov Institute of Semiconductor Physics at the National Academy of Sciences of Ukriane, Laboratory of infrared semiconductor photoelectronics, Ukraine. [3]V.Lashkaryov Institute of Semiconductor Physics at the National Academy of Sciences of Ukriane, Department of physics and technology of low-dimensional systems, Ukraine. [4]Taras Shevchenko National University of Kyiv, Faculty of Physics, Ukraine.

■ **SF2-P028 CR REMOVAL FROM DRINKING WATER BY THE USE OF NON-CONVENTIONAL ADSORBENTS MATERIALS**

Roberto Hernandez[1], Paulina Burgos[1], Mercyrani Babudurai[2], Myriam Solís López[2], Velumani Subramaniam[1,2]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Ingenieria Electrica, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Programa en Nanociencias y Nanotecnología, Mexico.

■ **SF2-P029 POROUS SILICON AS ANTI-REFLECTION COATING (ARC) IN SOLAR CELLS**

Gabriel Romero Paredes Rubio[1], Alejandro Ávila García[1], Ramón Peña Sierra[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Electrical Engineering, Mexico.

■ **SF2-P030 SYNTHESIS AND CHARACTERIZATION OF $BiVO_4$/TiO_2 THIN FILMS**

Drisya Karathuparathottathil Damodharan[1], Myriam Solís López[2], Roberto Hernandez[1], Velumani Subramaniam[1], Jorge Sergio Narro Rios[3], Francisco Alvarado Cesar[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Ingenieria Electrica, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Programa en Nanociencias y Nanotecnología, Mexico. [3]Cinvestav Zacatenco, Ingenieria Electrica, Mexico.

■ **SF2-P031 SYNTHESIS AND CHARACTERIZATION OF Co-DOPED CdS NANOFILMS DEPOSITED BY CHEMICAL-BATH DEPOSITION**

Joel Díaz Reyes[1], Jorge Indalecio Contreras Rascon[2], Miguel Galvan Arellano[3], Jose Saul Arias Ceron[3], Roberto Saul Castillo[4]

[1]Instituto Politécnico Nacional - IPN, Centro de Investigación en Biotecnologia Aplicada, Mexico. [2]Universidad del Valle de Puebla, División de Ingenierías, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Depto. de Ingenieria Electrica, SEES, Mexico. [4]Universidad Politécnica de Pachuca, , Mexico.

■ **SF2-P032 INFLUENCE OF MEAN KINETIC ENERGY OF THE PLASMA ON THE PROPERTIES OF SI AND GE THIN FILMS GROWN BY PULSED LASER DEPOSITION**

Angel Estrada López[1], Gilberto Gomez Rosas[2], Milton Oswaldo Vazquez Lepe[1], Miguel Angel Santana Aranda[2], Enrique Camps[3], Laura Guadalupe Vazquez Novoa[4], Mariana Giselle Hernández Jiménez[5], J. G. Quiñones Galván[2]

[1]Universidad de Guadalajara, Ingeniería de proyectos, Mexico. [2]Universidad de Guadalajara, Física, Mexico. [3]Instituto Nacional de Investigaciones Nucleares (ININ), Física, Mexico. [4]Universidad de Guadalajara, Ingeniería en nanotecnología, Mexico. [5]Universidad Juárez Autónoma de Tabasco, Nanotecnología, Mexico.

■ **SF2-P033 EFFECT OF THE TEMPERATURE ON THE OPTICAL AND STRUCTURAL PROPERTIES OF ZnO:Fe SOLID FILMS PREPARED BY SOL-GEL TECHNIQUE**

María Lizbeth Barrios Reyna[1], Conrado Rosales Torres[1], Francisco Severiano Carrillo[2], Enrique Sánchez Mora[3]

[1]Instituto Tecnológico y de Estudios Superiores de Monterrey, Mecatronica, Escuela de Ingeniería y Ciencias, Mexico. [2]Centro de investigación en biotecnología aplicada, Biología Aplicada, Mexico.

[3]Benemerita Universidad Autonoma de Puebla, Instituto de Física Ing. Luis Rivera Terrazas, Mexico.

■ **SF2-P034 EFFECT OF ANNEALING TEMPERATURE ON STRUCTURAL AND OPTICAL PROPERTIES OF TIO_2 NANOFIBERS**

Oscar Secundino Sánchez[1], Joel Díaz Reyes[2], Noe Sánchez González[1], José Francisco Sánchez Ramírez[2], Angel Netzahual Lopantzi[1], Orlando Zaca Moran[1], Edgar Oliver Lopez Villegas[3]

[1]Instituto Politécnico Nacional - IPN, Unidad Profesional Interdisciplinaria en Ingeniería y Tecnologías Avanzadas, Mexico. [2]Instituto Politécnico Nacional - IPN, Centro de Investigación en Biotecnología Aplicada, Mexico. [3]Escuela Nacional de Ciencias Biológicas, IPN, Mexico.

■ **SF2-P035 STUDY OF THE EFFECT OF THE SYNTHESIS TEMPERATURE ON THE PHOTOLUMINESCENT PROPERTIES OF InP@ZnS NANOCRYSTALS**

Froylan Angel Huerta[1], Joel Díaz Reyes[2], Martha Patricia Gonzalez Araos[3], Jose Saul Arias Ceron[4], José Francisco Sánchez Ramírez[2], Jose Luis Herrera Perez[1], Julio G Mendoza Alvarez[5]

[1]Instituto Politécnico Nacional - IPN, Unidad Profesional Interdisciplinaria en Ingeniería y Tecnologías Avanzadas, Mexico. [2]Instituto Politécnico Nacional - IPN, Centro de Investigación en Biotecnología Aplicada, Mexico. [3]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniería, Mexico. [4]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Departamento de Ingeniería Eléctrica-SEES, Mexico. [5]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Departamento de Física, Mexico.

■ **SF2-P036 CRISTAL STRUCTURE AND ELECTRONIC PROPERTIES OF THE DOUBLE PEROVSKITES Sr_2FeMO_6 (M = Mo, Nb and W), SYNTHESIZED BY THE MOLTEN SALT METHOD, AND THE FIRST PRINCIPLES CALCULATIONS RELATED.**

José Luis Rosas Huerta[1], Jesús Alberto León Flores[1], Raúl Escamilla Guerrero[1], Martin Romero Martínez[2], Lázaro Huerta Arcos[3], Jesús Angel Arenas Alatorre[4], Eliel Carvajal Quiroz[5]

[1]Instituto de Investigaciones en Materiales, Materia Condensada y Criogenia, Mexico. [2]Facultad de Ciencias, UNAM, Laboratorio de Física atómica y Molecular, Mexico. [3]Instituto de Investigaciones en Materiales, Laboratorio de XPS, Mexico. [4]Instituto de Física - Universidad Nacional Autónoma de México, Departamento de Materia Condensada, Mexico. [5]Instituto de Investigaciones en Materiales, grupo de Investigaciones en Nanociencias, Mexico.

■ **SF2-P037 SPIN-FILTERING EFFECT IN GaAsN: ELECTRON-NUCLEAR SPIN DYNAMICS OF Ga^{2+} and Ga^{3+} CENTERS**

Víctor Ibarra Sierra[1], Juan Carlos Sandoval Santana[1], Sawsen Azaizia[2], Helene Carrère[2], Leonid Bakaleinikov[3], Vladimir Kalevich[3], Eugeneous Ivchenko[3], Xavier Marie[2], Thierry Amand[2], Andrea Balocchi[2], Alejandro Kunold[4]

[1]Universidad Autónoma Metropolitana, Departamento de Física, Mexico. [2]Universitè de Toulouse, INSA-CNRS-UPS, LPCNO, Quantum Optoelectronics, France. [3]Ioffe Physical-Technical Institute, Laboratory of Optics of Semiconductors, Russia. [4]Universidad Autónoma Metropolitana, Departamento de Ciencias Básicas, Mexico.

■ **SF2-P038 FIRST PRINCIPLES STUDY OF THE ANISOTROPY EFFECTS ON THE ELECTRONIC AND OPTICAL PROPERTIES OF InAs NANOWIRES**

Eladio Lopez Lopez[1], Alejandro Trejo Baños[1], Marbella Calvino Gallardo[1], Isabel Iturrios Santos[2], Margarita Crisóstomo[2], Miguel Cruz Irrison[1]

[1]Instituto Politécnico Nacional - IPN, ESIME Culhuacan, Mexico. [2]Instituto Politécnico Nacional - IPN, CECYT 8 Narciso Bassols, Mexico.

■ **SF2-P039 NANOWIRE/NANOLAYER HETEROSTRUCTURES: ELECTRONIC AND MAGNETIC PROPERTIES**

Jose Miguel Cervantes Cervantes[1], Dora Patricia Fernández Jiménez[1], Raúl Oviedo Roa[2], Eliel Carvajal Quiroz[1], Miguel Cruz Irrison[1]

[1]Instituto Politécnico Nacional - IPN, ESIME Culhuacan, Mexico. [2]Instituto Mexicano del Petróleo, Programa en Investigación en Ingeniería Molecular, Mexico.

■ **SF2-P040 XPS STUDY OF ELECTROCHROMIC WO_3 THIN FILMS DEPOSITED BY DC MAGNETRON SPUTTERING**

Pedro Emmanuel Garcia Tinoco[1], Horacio Crotte Ledesma[1], Mario Pérez González[1], Martín Ponce Mosso[1], Michael Morales Luna[2], Sergio Armando Tomás Velázquez[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Departamento de Física, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Facultad de Quimica, Materiales, Mexico.

■ **SF2-P041 ELECTROCHROMISM OF TiO_2-ZnO THIN FILMS DEPOSITED BY DC REACTIVE MAGNETRON SPUTTERING**

Horacio Crotte Ledesma[1], Pedro Emmanuel Garcia Tinoco[1], Mario Pérez González[1], Martin Ponce Mosso[1], Sergio Armando Tomás Velázquez[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Fisica, Mexico.

- **SF2-P042 INFLUENCE OF BORE DOPING ON THE STRUCTURAL AND OPTICAL PROPERTIES OF INDIUM SULFIDE THIN FILMS PREPARED BY CHEMICAL BATH DEPOSITION**

Paola Elideth Rodríguez Hernández[1], José Santos Cruz[1], Enrique Campos Gonzalez[1], J. G. Quiñones Galván[2], Rodrigo Velázquez Castillo[3], Francisco de MouFlores[1]

[1]Universidad Autónoma de Querétaro, Química, Mexico. [2]Universidad de Guadalajara, Física, Mexico. [3]Universidad Autónoma de Querétaro, Ingenieria, Mexico.

- **SF2-P043 ELECTRON-NUCLEAR SPIN DYNAMICS OF GA CENTERS IN GAASN DILUTE NITRIDE SEMICONDUCTORS PROBED BY PUMP-PROBE SPECTROSCOPY**

Juan Carlos Sandoval Santana[1], Víctor Ibarra Sierra[1], Sawsen Azaizia[2], Helene Carrère[2], Leonid Bakaleinikov[3], Vladimir Kalevich[3], Eugeneous Ivchenko[3], Xavier Marie[2], Thierry Amand[2], Andrea Balocchi[2], Alejandro Kunold[4]

[1]Universidad Autónoma Metropolitana, Departamento de Física, Mexico. [2]Universitè de Toulouse, INSA-CNRS-UPS, LPCNO, Quantum Optoelectronics, France. [3]Ioffe Physical-Technical Institute, Laboratory of Optics of Semiconductors, Russia. [4]Universidad Autónoma Metropolitana, Área de Física Teórica y Materia Condensada, Mexico.

- **SF2-P044 EFFECT OF EUROPIUM ON MICROSTRUCTURAL AND OPTICAL BEHAVIORS OF HYSYCVD-TiO_2 SEMICONDUCTORS**

Jose Rafael Espinoza Salomon[1], Ana Lilia Leal Cruz[1], Alicia Vera Marquina[1], Rodrigo Melendrez Amavizca[1], Alondra Lizbeth Pineda Ojeda[1], Jesús Alán Pérez Aguirre[1], Josue A. Aguilar Martinez[2], Carlos Zuñiga Islas[3], Alejandro García Juárez[1]

[1]Universidad de Sonora, Departamento de Investigación en Física, Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico. [3]Instituto Nacional de Astrofísica, Óptica y Electrónica, Electronica, Mexico.

- **SF2-P045 EFFECT OF INDIUM CONCENTRATION ON $IN_XGA_{1-X}N$ SEMICONDUCTOR ALLOY THIN FILMS GROWN ON SI (111) BY MOCVD AS A FUNCTION OF SOME THERMODYNAMIC PARAMETERS.**

C. A. Marín García[1], D. M. Hurtado Casteñeda[1], J. S. Arias Cerón[2], V. M. Sánchez R.[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Electrical Engineering, Solid State Electronics Section, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, CONACyT, Electrical Engineering, Solid State Electronics Section, Mexico.

- **SF2-P046 SYNTHESIS AND OPTICAL CHARACTERIZATION OF TiO_2:Dy OBTAINED BY HYSYCVD METHOD**

Alondra Lizbeth Pineda Ojeda[1], Ana Lilia Leal Cruz[1], Alicia Vera Marquina[1], Rodrigo Melendrez Amavizca[1], Jose Rafael Espinoza Salomon[1], Jesús Alán Pérez Aguirre[1], Josue A. Aguilar Martinez[2], Carlos Zuñiga Islas[3], Alejandro García Juárez[1]

[1]Universidad de Sonora, Departamento de Investigación en Física, Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico. [3]Instituto Nacional de Astrofísica, Óptica y Electrónica, Electronica, Mexico.

- **SF2-P047 SYNTHESIS OF SILVER NANOPARTICLES CONTAINED IN A PHOTOCURABLE RESIN: KINETICS, MORPHOLOGY AND PHOTOTHERMAL PROPERTIES**

José Luis Jiménez Pérez[1], José Luis Luna Sánchez[1], Issis Claudette Romero Ibarra[1], Zormy Nacary Correa Pacheco[2]

[1]Instituto Politécnico Nacional - IPN, Unidad Profesional Interdisciplinaria en Ingeniería y Tecnologías Avanzadas, Mexico. [2]Consejo Nacional de Ciencia y Tecnologia - CONACYT, CEPROBI, Mexico.

- **SF2-P048 CO DETECTION DEVICE BASED ON PELLETS OF $NiSb_2O_6$ NANOPARTICLES**

Jorge Alberto Ramírez Ortega[1], José Trinidad Guillén Bonilla[2], Alex Guillén Bonilla[3], Mario Alberto García[2], Héctor Guillén Bonilla[1], Verónica María Rodríguez Betancourtt[4], Nancy Elizabeth Franco Rodríguez[5], María de la Luz Olvera Amador[6]

[1]Universidad de Guadalajara, Ingenieria de Proyectos, Mexico. [2]Universidad de Guadalajara, Electronica, Mexico. [3]Universidad de Guadalajara, Ciencias Computacionales e Ingenierias, Mexico. [4]Universidad de Guadalajara, Departamento de Quimica, Mexico. [5]Universidad de Guadalajara, Departamento Ciencias Computacionales, Mexico. [6]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Departamento de Ingeniería Eléctrica-SEES, Mexico.

- **SF2-P049 INFLUENCE OF GRAPHENE OXIDE CONCENTRATION ON THE PROPERTIES OF FTO/ TiO_2/PTB7:$PC_{70}BM$:Ag/MoO_3 DEVICE**

Guillermo Iván García Alvarado[1], Ramiro Perez Campos[1], Batriz Marcela Millán Malo[1], Tatiana Ivanova Román Valenzuela[1], Sandra Andrea Mayén Hernández[2], Francisco de MouFlores[2], Claudia Gutierrez Antonio[2], Jorge Cruz G[2], José Santos Cruz[2], Rodrigo Alonso Esparza Muñoz[1]

[1]Universidad Nacional Autónoma de México, CFATA, Mexico. [2]Universidad Autónoma de Querétaro, Facultad de Química, Mexico.

- **SF2-P050 GAS SENSING PROPERTIES OF $MnSb_2O_6$ NANOPARTICLES IN CARBON MONOXIDE AND PROPANE ATMOSPHERES**

Jorge Alberto Ramírez Ortega[1], Juan Reyes Gómez[2], Héctor Guillén Bonilla[1], Lorenzo Gildo Ortiz[1], Verónica María Rodríguez Betancourtt[3], José Trinidad Guillén Bonilla[4], María de la Luz Olvera Amador[5], Oscar Blanco Alonso[6], Alex Guillén Bonilla[7]

[1]Universidad de Guadalajara, Ingenieria de Proyectos, Mexico. [2]Universidad de Colima, Facultad de Ciencias, Mexico. [3]Universidad de Guadalajara, Departamento de Química, Mexico. [4]Universidad de Guadalajara, Electronica, Mexico. [5]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Departamento de Ingeniería Eléctrica-SEES, Mexico. [6]Universidad de Guadalajara, Departamento de Física, Mexico. [7]Universidad de Guadalajara, Ciencias Computacionales e Ingenierías, Mexico.

- **SF2-P051 OPTO-ELECTRONICS PROPERTIES OF NANOSTRUCTURED AZO THIN FILMS BY ULTRASONIC SPRAY PYROLYSIS**

Rajesh Roshan Biswal[1], Jaime Vega Pérez[2], Arturo Maldonado Alvarez[3], Maria de la Luz Olvera Amador[3], Antonio Esteban Jimenez Gonzalez[4], Eddy Sanchez de la Cruz[5]

[1]Instituto Tecnologico Superior de Misantla, Ingenieria de Sistemas Computacionales, Mexico. [2]ESIME TICOMAN, fisica, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Ingenieria Electrica, Mexico. [4]Instituto de Energías Renovables Universidad Nacional Autónoma de México, Laboratorio de Superficie y Vacio, Mexico. [5]Instituto Technologico Superior de Misantla, Ingenieria de sistemas Computacionales, Mexico.

- **SF2-P052 RANDOM TELEGRAPH NOISE IN SUBMICRON MOS TRANSISTORS UNDER THE INFLUENCE OF MAGNETIC FIELDS**

Oscar Vicente Huerta Gonzalez[1], Adrian Isrrael Tec Chim[1], Edmundo A. Gutierrez D.[1]

[1]Instituto Nacional de Astrofísica, Óptica y Electrónica, Electronica, Mexico.

- **SF2-P053 ELECTROCHEMICAL, MICROSTRUCTURAL, COMPOSITIONAL AND MAGNETIC PROPERTIES OF CONI THIN FILMS**

Sethuramachandran Thanikaikarasan[1], Thaiyan Mahalingam[2], Subramaniam Velumani[3]

[1]Saveetha School of Engineering, Saveetha Institute of Medical and Technical Sciences, Department of Physics, India. [2]Alagappa University, School of Physics, India. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Department of Electrical Engineering, Mexico.

- **SF2-P054 PALLADIUM ASSISTED HOMOEPITAXIAL GROWTH OF INAS NANOWIRE BY MOLECULAR BEAM EPITAXY**

Rajagembu Perumal[1], Sethuramachandran Thanikaikarasan[1], Thaiyan Mahalingam[2], Subramaniam Velumani[3]

[1]Saveetha School of Engineering, Saveetha Institute of Medical and Technical Sciences, Department of Physics, India. [2]Alagappa University, School of Physics, India. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Department of Electrical Engineering, Mexico.

- **SF2-P055 SURFACE PASSIVATION OF β-SILICON CARBIDE NANOWIRES BY HALOGENS: FIRST PRINCIPLES CALCULATIONS**

Francisco de Santiago[1], Lucía Guadalupe Arellano[1], Margarita Clarisaila Crisostomo Reyez[2], Alvaro Miranda[1], Luis Antonio Perez[3], Miguel Cruz Irrison[1]

[1]Instituto Politécnico Nacional - IPN, ESIME Culhuacan, Mexico. [2]Instituto Politécnico Nacional - IPN, CECYT 8, Mexico. [3]Universidad Nacional Autónoma de México, Instituto de Física, Mexico.

- **SF2-P056 AlGaN-BASED METAL-SEMICONDUCTOR ROUND CONTACTS. EFFECT OF SERIES ELECTRICAL RESISTANCE (R_S) ON THE ADMITTANCE MEASUREMENTS AT OPERATION HIGH-FREQUENCY**

Heberto Gómez[1], Maria de la Luz Olvera Amador[2], Venkata Krishna Karthik Tangirala[3]

[1]Universidad Autónoma del Estado de Hidalgo, Área Academica de Computacion y Electronica, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, SEES, Mexico. [3]Universidad Autónoma del Estado de Hidalgo, Nanotecnologia, Mexico.

- **SF2-P057 BI_2TE_3 TOPOLOGICAL INSULATOR: PHYSICAL VAPOR TRANSPORT VS MOLECULAR BEAM EPITAXY**

Omar Concepción[1], Arturo Escobosa[2], Osvaldo de Melo[3]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Programa de Doctorado en Nanociencias y Nanotecnología, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, SEES, Mexico. [3]Universidad de La Habana, Physics Faculty, Cuba.

- **SF2-P058 BI-TE BASED TOPOLOGICAL INSULATORS COMPOUNDS BY PHYSICAL VAPOR TRANSPORT**

Omar Concepción[1], Osvaldo de Melo[2], Arturo Escobosa[3]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Programa de Doctorado en Nanociencias y Nanotecnología, Mexico. [2]Universidad de La Habana, Physics Faculty, Cuba. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, SEES, Mexico.

- **SF2-P059 MANUFACTURE OF SEMICONDUCTOR NANOCERAMIC FOR THE DETECTION OF GASES**

Margarita Chávez Martínez[1], María Cecilia Salcedo Luna[2], Leonardo Hernández[1], Miguel Ávila Jiménez[1], María de la Luz Soto Téllez[1], Hermilo Goñi Cedeño[1]

[1]Universidad Autónoma Metropolitana, Ciencias Básicas, Química, Mexico. [2]Universidad Nacional Autónoma de México, Facultad de Química, Mexico.

- **SF2-P060 STRUCTURAL TRNASFORMATIONS IN UNDOPED AND Tb^{3+} DOPED ZnO FILMS GROWN BY RF MAGNETRON SPUTTERING ON Si SUBSTRATES**

Tetyana Kryshtab[1], Lyudmyla Borkovska[2], Oleksandr Kolomys[3], Victor Strelchuk[3], Roberto Benjamín Cortés Herrera[5], X. Portier[4]

[1]Instituto Politécnico Nacional - IPN, Department of Physics, Mexico. [2]V.Lashkaryov Institute of Semiconductor Physics at the National Academy of Sciences of Ukriane, Laboratory of photoelectric phenomena in semiconductors, Ukraine. [3]V.Lashkaryov Institute of Semiconductor Physics at the National Academy of Sciences of Ukriane, Laboratory of Optical Submicron Spectroscopy, Ukraine. [4]CIMAP/CEA/CNRS/Ensicaen/UCBN, UNICAEN, France. [5]Instituto Politécnico Nacional - IPN, ENCB, Mexico.

- **SF2-P061 DENSITY FUNCTIONAL STUDY OF [111]-Si NANOWIRES WITH INTERSTITIAL Li AND Na ATOMS AS POTENTIAL ANODIC MATERIALS**

Alvaro Miranda[1], Fernando Salazar[1], Alejandro Trejo[1], Eliel Carvajal Quiroz[1], L. A. Pérez[2], Miguel Cruz Irrison[1]

[1]Instituto Politécnico Nacional - IPN, ESIME Culhuacan, Mexico. [2]Instituto de Física - Universidad Nacional Autónoma de México, , Mexico.

- **SF2-P062 WO_3 NANOSTRUCTURES FOR H_2 GAS SENSOR**

Miriam Sarai Cruz Leal[1], Oscar Goiz[2], Carlos Felipe[2,3], Gerardo Francisco Pérez Sánchez[4], F. Chávez[4]

[1]Instituto Politécnico Nacional - IPN, UPIBI, Mexico. [2]Instituto Politécnico Nacional - IPN, CIIEMAD, Mexico. [3]Instituto Politécnico Nacional - IPN, , Mexico. [4]Benemerita Universidad Autonoma de Puebla, Centro de Investigación en fisicoquímica de materiales del instituto de ciencias, Mexico.

- **SF2-P063 SYNTHESIS AND CHARACTERIZATION OF CuS/ZnO AND CuS/TiO2 OBTAINED BY THE SOL-GEL METHOD FOR APPLICATIONS IN SOLAR CELLS**

Erik Ramirez Morales[1], Aldo Kevin Lopez Matus[1], Lizeth Rojas Blanco[1], Germán Pérez Hernández[1], Cristino Ricárdez[2], Roger Castillo Palomera[3], Edith Ponce[3]

[1]Universidad Juárez Autónoma de Tabasco, Division Academica de Ingenieria y Arquitectura, Mexico. [2]Universidad Juárez Autónoma de Tabasco, División Académica de Ciencias Básicas, Mexico. [3]Universidad Politécnica de Chiapas, Ingenieria en Energia, Mexico.

- **SF2-P064 ELECTRONIC AND OPTICAL PROPERTIES OF THE NEW β-$CdCr_2O_4$ PHASE**

Roberto Nunez Gonzalez[1], Joel Antúnez García[2], Alejandro Duran[2], Donald H. Galvan[2], Alvaro Posada Amarillas[3]

[1]Universidad de Sonora, Departamento de Matematicas, Mexico. [2]Universidad Nacional Autónoma de México, Centro de Nanociencias y Nanotecnologia, Mexico. [3]Universidad de Sonora, Departamento de Investigacion en Fisica, Mexico.

- **SF2-P065 SURFACE MORPHOLOGIES OF ZINC OXIDE THIN FILMS FROM DIFFERENT INDIUM PRECURSORS**

Rajesh Roshan Biswal[1], Arturo Maldonado Alvarez[2], Maria de la Luz Olvera Amador[2]

[1]Instituto Tecnologico Superior de Misantla, , Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Ingenieria electrica, Mexico.

- **SF2-P066 EFFECT OF THE WATER CONTENT IN THE STARTING SOLUTION, ON THE PHYSICAL PROPERTIES OF UNDOPED ZnO THIN FILMS DEPOSITED BY ULTRASONIC SPRAY TECHNIQUE**

Rajesh Roshan Biswal[1], Arturo Maldonado Alvarez[2], Maria de la Luz Olvera Amador[3], Eddy Sanchez de la Cruz[1]

[1]Instituto Tecnologico Superior de Misantla, Ingenieria de Sistemas Computacionales, Mexico. [2]Centro de Investigación y

de Estudios Avanzados del IPN - CINVESTAV, Ingenieria electrica, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, , Mexico.

- **SF2-P067 NUMERICAL MODELLING FOR METAL OXIDE SEMICONDUCTOR CAPACITOR INCLUDING QUANTUM MECHANICAL EFFECTS WITH MAGNETIC FIELD AND INTERFACE TRAP DENSITIES**

  Adrian Israel Tec Chim[1], Oscar Huerta[1], Hector Manuel Uribe Vargas[1], Edmundo Gutierrez[1]

  [1]Instituto Nacional de Astrofísica, Óptica y Electrónica, Electronics, Mexico.

- **SF2-P068 PREPARATION, CHARACTERIZATION AND PHOTOCATALYTIC ACTIVITY OF ZnO PELLETS**

  Mar?a del Rosario Herrera Rivera[1], Jacob Morales Bautista[1], Maria de la Luz Olvera Amador[1,2], Arturo Maldonado Alvarez[1,2]

  [1]CINVESTAV-IPN, Programa de Doctorado en Nanociencias y Nanotecnología, Mexico. [2]CINVESTAV-IPN, Departamento de Ingeniería Eléctrica-Sección de Electrónica del Estado Sólido, Mexico.

- **SF2-P069 INFLUENCE OF Cu DOPING ON ZnO NANOPARTICLES FROM AND THEIR GAS SENSING PROPERTIES**

  Mar?a del Rosario Herrera Rivera[1], Jacob Morales Bautista[2], Maria de la Luz Olvera Amador[2,3], Arturo Maldonado Alvarez[2,3]

  [1]Universidad Nacional Autónoma de México, Facultad de Estudios Superiores Acatlán, Mexico. [2]CINVESTAV-IPN, Programa de Doctorado en Nanociencias y Nanotecnología, Mexico. [3]CINVESTAV-IPN, Departamento de Ingeniería Eléctrica-Sección de Electrónica del Estado Sólido, Mexico.

- **SF2-P070 PHYSICAL PROPERTIES OF CHEMICALLY SPRAYED FLUORINE-DOPED ZNO THIN FILMS**

  Maria de la Luz Olvera Amador[1], Arturo Maldonado Alvarez[1]

  [1]CINVESTAV-IPN, Departamento de Ingeniería Eléctrica-Sección de Electrónica del Estado Sólido, Mexico.

- **SF2-P071 COMPARATIVE ANALYSIS OF THE OPTICAL, STRUCTURAL AND ELECTRICAL PROPERTIES OF CdS THIN FILMS DEPOSITED BY CHEMICAL BATH AND SPUTTERING. PERFORMANCE IN A HETEROSTRUCTURE CDS/CDTE FOR SOLAR CELLS APPLICATION**

  David Santos Cruz[1], Francisco de MouFlores[2], Maria de la Luz Olvera Amador[1], José Santos Cruz[2]

  [1]CINVESTAV-IPN, Departamento de Ingeniería Eléctrica-Sección de Electrónica del Estado Sólido, Mexico. [2]Universidad Autónoma de Querétaro, Facultad de Química, Materiales-Energía, Mexico.

- **SF2-P072 SYNTHESIS, CHARACTERIZATION AND PHOTOCATALYTIC ACTIVITY OF TIO_2 NANOPARTICLES**

  Jacob Morales Bautista[1], Maria de la Luz Olvera Amador[1,2], Arturo Maldonado Alvarez[1,2]

  [1]CINVESTAV-IPN, Programa de Doctorado en Nanociencias y Nanotecnología, Mexico. [2]CINVESTAV-IPN, Departamento de Ingeniería Eléctrica-Sección de Electrónica del Estado Sólido, Mexico.

- **SF2-P073 SENSORS BASED ON SEMICONDUCTOR OXIDE HETEROJUNCTIONS FOR THE DETECTION OF SYNGAS**

  Luis David Gordillo Guill?n[1], Edna Iris Rios Valdovinos[1], Francisco Pola[1]

  [1]Universidad de Ciencias y Artes de Chiapas, Instituto de Investigación e Innovación en Energías Renovables, Mexico.

- **SF2-P074 COMPARISON OF THE PHYSICAL CHARACTERISTICS OF ZnO THIN FILMS FABRICATED USING SOL-GEL, DIP COATING, AND SPUTTERING**

  Maria de la Luz Olvera Amador[1], Vinoth Kumar Jayaraman[2], María del Rosario Herrera Rivera[1], Arturo Maldonado Alvarez[1]

  [1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Departamento de Ingeniería Eléctrica-SEES, Mexico. [2]Universidad Nacional Autónoma de México, Instituto Investigaciones en Materiales, Mexico.

THURSDAY, AUGUST 23
ROOM: TULUM H

Session: Solar cells

SESSION CHAIR: V.SINGH, R.JACKMAN

- **09:00 - 09:30 SF2-O017 Invited Talk OPTIMIZING TWO AND FOUR TERMINALS $CuGaSe_2$/$CuInGaSe_2$ TANDEM SOLAR CELLS FOR ACHIEVING HIGH EFFICIENCIES**

  Santiago Torres Jaramillo[1], Arturo Morales Acevedo[2], Roberto Bernal Correa[1], Alvaro Pulzara Mora[1]

  [1]Universidad Nacional de Colombia, Physics, Colombia. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Electrical Engineering, Mexico.

- **09:30 - 09:45 SF2-O018 FABRICATION AND CHARACTERIZATIONS OF A $CuInSe_2$ THIN FILM BY A THREE-STAGE HYBRID METHOD**
  Ashok Adhikari[1], Jorge Sergio Narro Rios[1], Ganesh Regmi[1], Velumani Subramaniam[1]
  [1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Sección de Electrónica del Estado Sólido (SEES), Mexico.
- **09:45 - 10:00 SF2-O019 SELENIZATIONOF CIGSe STACKED METALLIC LAYER DEPOSITED BY CO-EVAPORATION TECHNIQUE**
  G. Regmi[1], J. S. Narro Rios[1], Velumani S.[1]
  [1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Departamento de Ingeniería Eléctrica (SEES), Mexico.
- **10:00 - 10:15 SF2-O020 STRUCTURAL, ELECTRONIC, AND OPTICAL PROPERTIES OF FORMAMIDINIUM LEAD IODIDE ($FAPbI_3$) PEROVSKITES DETERMINED BY FIRST-PRINCIPLES CALCULATIONS WITH VAN DER WAALS INTERACTIONS**
  Karthick Sekar[1], jose Jorge Rios Ramirez[2], Srikanth Chakaravarthy[1], Abdel Hadi Kassiba[3], Velumani Subramaniam[2]
  [1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Nanoscience and Nanotechnology, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Electrical Engineering (SEES), Mexico. [3]Université du Maine, , France.
- **10:15 - 10:30 SF2-O021 SPRAY PYROLYSIS SYSTEM CONTROLLED BY LabVIEW FOR OBTAINING SEMICONDUCTOR MATERIALS**
  Juan Felipe Pinto Gómez[1], Cesar Augusto Quiñones[2]
  [1]FUndacion Universidad America, Cundinamarca, Colombia. [2]Fundacion Universdiad de America, Cundinamarca, Colombia.
- **10:30 - 10:45 SF2-O022 GENERATIVE ADVERSARIAL NETWORKS FOR SIMULATION OF SEM IMAGES OF ZnO**
  Karim Gonzalez[1], Rajesh Roshan Biswal[1], Eddy Sanchez de la Cruz[1]
  [1]Instituto Tecnologico Superior de Misantla, Ingenieria en sistemas computacionales, Mexico.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY V
PROF. GALO SOLER ILLIA

Session: Photoactive semiconductors

SESSION CHAIR: M.DE LUZ , X.SHEN

- **12:30 - 13:00 SF2-O023 Invited Talk CARBON DOT, A NEW GENERATION OF METAL FREE SEMICONDUCTING NANOPARTICLES. APPLICATION TO ANODE SENSITIZATION IN WATER SPLITTING**
  Souad Ammar[1], Antonino Madonia[1], Larissa Chaperman[1], Fabrizio Messina[2], Delphine Schaming[1], Fayna Mammeri[1]
  [1]Université de Paris-Diderot, ITODYS Lab., France. [2]Università degli Studi di Palermo, Department of Physics, Italy.
- **13:00 - 13:15 SF2-O024 TiO_2 MATRIX CHARACTERIZATION AND ITS POTENTIAL APPLICATION FOR THE RELEASE OF DOPAMINE IN RATS WITH INDUCED HEMIPARKINSONISM**
  Laura Cristina Ibarra Montenegro[1], Emily Andrea Rodríguez Pérez[1], Patricia Vergara Aragon[1], Guadalupe Valverde Aguilar[2], Ana Laura Camacho Alvarez[1], Luis Rendon[3], Mario García[1], Patricia Jacinto[3], Gadi Reynoso Galvez[1]
  [1]Universidad Nacional Autónoma de México, Departamento de fisiologia, Mexico. [2]Instituto Politécnico Nacional - IPN, CICATA Legaria, Mexico. [3]Instituto de Física - Universidad Nacional Autónoma de México, Departamento de Estado Solido, Mexico.
- **13:15 - 13:30 SF2-O025 PHOTOCATALYTIC OXIDATION OF ARSENIC (III) IN WATER USING THE SOL- GEL SYNTHESIZED $BiVO_4/TiO_2$ NANOCOMPOSITE**
  Drisya Karathuparathottathil Damodharan[1], Myriam Solís López[2], Roberto Hernandez[1], Goldie Oza[1], Yasuhiro Matsumoto[1], Arturo Maldonado Alvarez[1], Maria de la Luz Olvera Amador[1], Mauricio Ortega López[1], Refugio Rodríguez Vázquez[3], Juan Carlos Durán Álvarez[4], Abdel Hadi Kassiba[5], Velumani Subramaniam[1]
  [1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Ingenieria Electrica, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Programa en Nanociencias y Nanotecnología, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Departamento de Biotecnología, Mexico. [4]Universidad Nacional Autónoma de México, Ciencias Aplicadas y Desarrollo Tecnológico, Mexico. [5]Université du Maine, IMMM-CNRS, France.

■ **13:30 - 13:45 SF2-O026 ARSENIC (V) REMOVAL USING NANO FUNCIONALIZED Fe_3O_4/TiO_2 ADSORBENTS OF LOW-COST**

Myriam Solís López[1], Drisya Karathuparathottathil Damodharan[2], Roberto Hernandez[2], Velumani Subramaniam[2]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Programa en Nanociencias y Nanotecnología, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Departamento de Ingeniería Eléctrica, Mexico.

■ **13:45 - 14:00 SF2-O027 CADMIUM REMOVAL IN AQUEOUS PHASE USING RED MUD FUNCTIONALIZED WITH TiO_2 AND Fe_3O_4 NANOPARTICLES**

Mercyrani Babudurai[1], Roberto Hernandez[2], Myriam Solís López[3], Paulina Burgos[2], Velumani Subramaniam[2]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Nanoscience and Nanotechnology, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Electrical engineering, Mexico. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, , Mexico.

☒ **14:00 - 16:00 Lunch time**

Session: Photocatalysis

SESSION CHAIR: S.VELUMANI, A.KASSIBA

▸ **16:00 - 16:30 SF2-O028 Invited Talk FUTURE DIAMOND MOSFETS FOR POWER ELECTRONICS**

Richard Jackman[1], Alexander Pakpour Tabrizi[1]

[1]University College London, London Centre for Nanotechnology, United Kingdom, Channel Islands & Isle of Man.

■ **16:30 - 16:45 SF2-O029 SYNTHESIS AND PHOTOCATALYTIC EVALUATION OF Co-RE-$BiFeO_3$ (RE=Dy, Gd, La) FOR DEGRADATION OF ORGANIC DYES UNDER VISIBLE LIGHT IRRADIATION**

Carlos Ostos[1], Giovanny Esteban Gonzalez Urrego[1], Sara Isabel Carmona[1], Daniela Velez[1], Jose Daniel Velez Ruiz[1], Lina Marcela Castro[1], Ricardo Palma[2]

[1]Universidad de Antioquía, ANT, Colombia. [2]Instituto Politécnico Nacional - IPN, , Mexico.

▸ **16:45 - 17:15 SF2-O030 Invited Talk STRUCTURAL ENGINEERING AND BAND GAP TUNABLE PHOTOCATALYTIC PROPERTIES OF COLLOIDAL TiO_2 NANOPARTICLES**

Jyoti Bansal[1,2], Ak Hafiz[3], Shailesh Sharma[1]

[1]CSIR-National Physical Laboratory, Advanced Materials and Devices, India. [2]Jamia Millia Islamia, Centre for Nanoscience and Nanotechnology, India. [3]Jamia Millia Islamia, Centre for Nanoscience and Nanotechnology, India.

Symposium F3

CATALYSIS BY MATERIALS: NANO AND BULK

Manuel Ramos / Universidad Autónoma de Ciudad Juárez
José Manuel Dominguez Esquivel / Instituto Mexicano del Petróleo
Xiaodong Wen / Institute of Coal and Chemistry
Rodolfo Zanella / Universidad Nacional Autónoma de México

MONDAY, AUGUST 20
ROOM: TULUM F

- **08:30 - 09:00 SF3-O001 Invited Talk ANALYSIS OF THE NANOPARTICLE MORPHOLOGY ON THE HYDROGENATION AND HYDRODESULFURIZATION REACTIONS FOR SULFIDED NIMOS CATALYSTS SUPPORTED ON AL2O3 AND SIO2/AL2O3**

  Jorge Ramirez[1]
  [1]Universidad Nacional Autónoma de México, Ingeniería Química, Mexico.

- **09:00 - 09:15 SF3-O002 CHARACTERIZATION AND EVALUATION OF MESOPOROUS MoO_3/SBA-15 CATALYSTS FOR OXIDATIVE DESULFURIZATION**

  Julio González García[1,2], Jin An Wang[1], Lifang Chen[1], Natali de la Fuente Maldonado[1], Maria Elena Manriquez[1]
  [1]Instituto Politécnico Nacional - IPN - ESIQIE, SEPI, Mexico. [2]Tecnológico de Estudios Superiores de Coacalco, Ingeniería Química, Mexico.

- **09:15 - 09:30 SF3-O003 TRIMETALLIC NIMOW SULFIDE CATALYSTS SUPPORTED ON Al-HMS FOR THE HYDRODESULFURIZATION OF DIBENZOTHIOPHENE**

  Rafael Huirache[1], Pedro Vazquez[1], Rafael Maya[1], Gabriel Alonso Nunez[2], Eric Rivera[3], Barbara Pawelec[4]
  [1]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ingeniería Química, Mexico. [2]Universidad Nacional Autónoma de México, Centro de Nanociencias y Nanotecnología, Mexico. [3]Universidad Nacional Autónoma de México, Centro de Física Aplicada y Tecnología Avanzada, Mexico. [4]Instituto de Catálisis y Petroleoquímica, CSIC, Spain.

- **09:30 - 09:45 SF3-O004 INFLUENCE OF THE PREPARATION METHOD ON THE HYDROGENATION ACTIVITY IN PRESENCE OF THIOPHENE OF Ni/HMOR CATALYST**

  José Gabriel Téllez[1], Rogelio Cuvas[2], Jorge Ramírez[2], Iván Puente[3], Cecilia Salcedo[3], Paulina Sarabia[4], Víctor Alfredo Nolasco[5], Sonia Hernández[6], Sandra López[6]
  [1]Universidad Tecnológica de Tula-Tepeji, Química, Mexico. [2]Universidad Nacional Autónoma de México, UNICAT, Mexico. [3]Universidad Nacional Autónoma de México, USAI, Mexico. [4]Universidad Nacional Autónoma de México, Ambiental, Mexico. [5]Universidad Tecnológica de Tula-Tepeji, Nanotecnología, Mexico. [6]Universidad Tecnológica de Tula-Tepeji, Ambiental, Mexico.

- **09:45 - 10:00 SF3-O005 SULFATED ZIRCONIA SUPPORTED WITH PALLADIUM AS A BIFUNCTIONAL CATALYST FOR TRANSESTERIFICATION AND BRANCHING OF CARBON CHAINS FROM PALM OLEIN OIL**

  Marggie Lisbeth Tovar Torres[1], Carlos Alberto Guerrero Fajardo[1]
  [1]Universidad Nacional de Colombia, , Colombia.

10:00 - 10:30 SF3-O006 Invited Talk THE PROMOTION OF MoS_2 WITH Co AND Ni SOLVED

Russell R. Chianelli[1]

[1]University of Texas at El Paso, MRTI-Chemistry, United States.

10:30 - 10:45 SF3-O007 NICKEL- IRON NANOPARTICLES FOR HYDROCRACKING REACTION OF A HEAVY OIL

Oscar Morelos[1], J. Jesus Velazquez Salazar[2], Ruben Mendoza[3], Benjamín Portales Martínez[4], Jose Aarón Melo Banda[1], Persi Schacht[5], Jose Manuel Dominguez[6], Miguel José Yacamán[3], Adriana Isabel Reyes de la Torre[1]

[1]Instituto Tecnológico de Ciudad Madero, Centro de Investigación en Petroquímica Secundaria, Mexico. [2]The University of Texas at San Antonio, Department of Physics and Astronomy, United States. [3]University of Texas at San Antonio, Department of Physics and Astronomy, United States. [4]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Dirección de Investigación en Exploración y Producción, Mexico. [5]Instituto Mexicano del Petróleo, Dirección de Transformación en Hidrocarburos, Mexico. [6]Instituto Mexicano del Petróleo, Dirección de Investigación en Exploración y Producción, Mexico.

10:45 - 11:00 SF3-O008 STUDY OF THE EFFECT OF THE QUANTITY OF Ni ABOUT THE ACTIVITY IN HYDRODESULFURIZATION IN CATALYSTS Ni-Mo SUPPORTED IN MIXED OXIDES OF $MgO\text{-}TiO_2$

Carlos López Lozano[1], Acela López Benítez[1], Alfredo Guevara Lara[1]

[1]Universidad Autónoma del Estado de Hidalgo, Chemistry Department, Mexico.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY II

PROF. YUICHI IKUHARA

12:30 - 12:45 SF3-O009 SOLVENT EFFECT OVER WASHED SPENT CATALYST NiMoP/Al2O3 FOR HYDRODESULFURIZATION OF DIBENZOTHIOPHENE

Carlos Eduardo Santolalla Vargas[1], Victor Santes[1], Janeth Vera Flores[1], Ines Castillo Delgadillo[1], Felipe Sanchez[2], Issis Claudette Romero Ibarra[3], Leonardo Diaz[4], Rosario Luna Ramírez[4], Omar U. Valdés[5], Jose Antonio de Los Reyes[5]

[1]Instituto Politécnico Nacional - IPN, Departamento de Biociencias e Ingeniería del Centro Interdisciplinario de Investigaciones y Estudios sobre Medio Ambiente y Desarrollo (CIIEMAD), Mexico. [2]Instituto Politécnico Nacional - IPN, Departamento de Ingeniería Química Petrolera (ESIQIE), Mexico. [3]Instituto Politécnico Nacional - IPN, Unidad Profesional Interdisciplinaria en Ingeniería y Tecnologías Avanzadas, Mexico. [4]Instituto Mexicano del Petróleo, Instituto Mexicano del Petróleo, Mexico. [5]Universidad Autónoma Metropolitana, Área de Ingeniería Química, Mexico.

12:45 - 13:00 SF3-O010 SYNTHESIS AND CHARACTERIZATION OF CATALYTIC FORMULATIONS CoMoW / Al2O3-MgO-Li2O

Javier Blancas Blancas[1], Dora Alicia Solis Casados[1], Luis Escobar[2], Fernando Gonzalez Zavala[2], Jose Escobar Aguilar[3]

[1]Universidad Autónoma del Estado de México, Ciencia de Materiales, Mexico. [2]Instituto Nacional de Investigaciones Nucleares (ININ), Departamento de Física, Mexico. [3]Instituto Mexicano del Petróleo, IMP, Mexico.

13:00 - 13:30 SF3-O011 Invited Talk HEAVY OILS FIELD UPGRADING: CATALYTIC SOLUTIONS

Pedro Pereira Almao[1]

[1]University of Calgary, Department of Chemical and Petroleum Engineering, Canada.

13:30 - 13:45 SF3-O012 HYDROGEN PRODUCTION FROM NON EDIBLE BIOMASS GASIFICATION

Felipe de Jesus Ortega Garcia[1]

[1]Instituto Mexicano del Petróleo, Refining processes, Mexico.

13:45 - 14:15 SF3-O013 Invited Talk KINETIC AND SPECTROSCOPIC STUDIES OF CATALYTIC MECHANISMS: HYDRODEOXYGENATION OF BIOMASS FEEDSTOCKS ON TRANSITION METAL PHOSPHIDES

Ted Oyama[1,2]

[1]The University of Tokyo, Chemical Systems Engineering, Japan. [2]Virginia Polytechnic Institute and State University, Chemical Engineering, United States.

14:00 - 16:00 Lunch time

16:00 - 16:30 SF3-O014 Invited Talk HDT OF THE MODEL DIESEL FEED OVER Ir-MODIFIED Ce-SBA-15, Zr-SBA-15 AND CE-ZR-SBA-15 CATALYSTS

Veronica Valles[1], Maria Laura Martinez[1], Yanika Sa Ngasaeng[2], Siriporn Jongpatiwut[2], Andrea Raquel Beltramone[1]

[1]Universidad Tecnológica Nacional, Nanotec, Facultad Cordoba, Argentina. [2]Chulalongkorn University, The Petroleum and Petrochemical College, Thailand.

16:30 - 16:45 SF3-O015 INFLUENCE OF STRUCTURING AGENT IN PHYSICAL AND CHEMICAL PROPERTIES OF MO/SIO_2 CATALYSTS FOR THE SELECTIVE HYDROCARBONS OXIDATION

Alexander Baena Novoa[1], William Giovanni Cortes Ortiz[2,3], Carlos Alberto Guerrero Fajardo[1]
[1]Universidad Nacional de Colombia, Aprovechamiento energético de recursos naturales; Facultad de Ciencias, Colombia. [2]Universidad el Bosque, Ad-honorem professor, Facultad de Ciencias, Colombia. [3]Universidad Politécnica de Valencia, Instituto de Tecnología Química, Spain.

▸ **16:45 - 17:15 SF3-O016 Invited Talk CATALYTIC THERMODYNAMICS OF NANOCLUSTER ADSORBATES FROM INFORMATIONAL STATISTICAL MECHANICS**

Forrest Kaatz[1], Adhemar Bultheel[2]
[1]Mesalands Community College, Institutional Research, United States. [2]Katholieke Universiteit Leuven, Computer Science, Belgium.

■ **17:15 - 17:30 SF3-O017 GREEN DIESEL SYNTHESIS BY CATALYTIC HYDROCONVERSION OF VEGETABLE OIL USING NIPW/TIO_2-AL_2O_3 CATALYSTS**

Ricardo Rivera Guasco[1], Acela López Benítez[1], José Antonio Rodríguez Ávila[1], Alfredo Guevara Lara[1], Berhault Gilles[2]
[1]Universidad Autónoma del Estado de Hidalgo, Centro de Investigaciones Químicas, Mexico. [2]Université Claude Bernard Lyon I, Institut de Recherches sur la Catalyse et l´Environnement de Lyon, France.

■ **17:30 - 17:45 SF3-O018 ACTIVITY AND SELECTIVITY OF NICKEL CATALYSTS SUPPORTED ON SBA-15 AND Al-SBA15 IN THE HYDROGENATION OF NAPHTHALENE**

Haydee Vargas Villagran[1], Diego Ramirez Suarez[1], Gerardo Ramirez Muñoz[1], Jose Escobar Aguilar[2], Tatiana Klimova[1]
[1]Universidad Nacional Autónoma de México, Facultad de Quimica, Mexico. [2]Instituto Mexicano del Petróleo, , Mexico.

■ **17:45 - 18:00 SF3-O019 Ab INITIO STUDY OF CO_2 HYDROGENATION MECHANISMS ON INVERSE ZnO/Cu CATALYSTS**

Michael Walter[1]
[1]Universität Freiburg, FIT Freiburg Centre for Interactive Materials and Bioinspired Technologies, Germany.

▸ **18:00 - 18:15 SF3-O020 Invited Talk MOLYBDENUM Di-SULFIDE CATALYTIC MATERIAL: WHAT HAVE WE LEARNED?**

Manuel Antonio Ramos[1], Jose Manuel Dominguez[2], Carlos Elias Ornelas[3], Félix Galindo Hernández[2]
[1]Universidad Autónoma de Ciudad Juárez, Physics and mathematics, Mexico. [2]Instituto Mexicano del Petróleo, Hidrocarburos, Mexico. [3]Centro de Investigación en Materiales Avanzados, S.C., Microscopia, Mexico.

■ **18:15 - 18:30 SF3-O021 SYNTHESIS OF NiMo CATALYSTS SUPPORTED IN Al_2O_3-MnO TO OBTAIN BIOFUELS FROM THE CATALYTIC HYDROCONVERSION OF WASTE SOYBEAN OIL**

Isaí Vázquez Garrido[1], Alfredo Guevara Lara[1], Gilles Berhault[2], José Antonio Rodríguez Ávila[1], Antonio Rafael Tapia Benavides[1]
[1]Universidad Autónoma del Estado de Hidalgo, Área Académica de Química, Mexico. [2]Université Claude Bernard Lyon I, Institut de Recherches sur la Catalyse et l´Environnement de Lyon, France.

● **17:30 - 18:30 Science, Technology and Society Lecture**

MONDAY, AUGUST 20
ROOM: TERRACE

◪ **18:30 -20:30 POSTER SESSION & COFFEE BREAK**

■ **SF3-P001 UPGRADING OF HEAVY CRUDE OIL UNDER SUPERCRITICAL WATER CONDITIONS**

Ernesto Alonso Pina[1,2], José M. Domínguez Esquivel[3,4], Ignacio E. Grossmann E.[5], Isaías Hernández Pérez[4]
[1]Carnegie Mellon University, , United States. [2]Universidad Autónoma Metropolitana, , Mexico. [3]Instituto Mexicano del Petróleo, Research, Mexico. [4]Universidad Autónoma Metropolitana, Departamento de Ciencias Básicas e Ingeniería, Mexico. [5]Carnegie Mellon University, Chemical Engineer, United States.

■ **SF3-P002 DESIGN AND EVALUATION OF A NOVEL CATALYTIC REACTOR PROTOTYPE BASED ON Pt/Al_2O_3 NANOLITHS ACTIVE FOR VOC´s OXIDATION**

Daniela Arango Vasquez[1], Carlos Ostos[1], Adriana Echavarria[1]
[1]Universidad de Antioquía, Medellin, Colombia.

■ **SF3-P003 PHOTODEGRADATION OF 2,4 D WITH TiO_2 PREPARED BY THE SOL-GEL METHOD AND IMPREGNATED WITH Pt, Rh, Ru AND Au**

Juan Carlos Arevalo Perez[1], Adrián Cervantes Uribe[2], Maria Antonia Lunagòmez Rocha[2], Israel Rangel Vázquez[3], Jose Gilberto Torres Torres[4], Gloria Alicia del Angel Montes[3], Adrián Cordero García[2], Adib Abiu Silahua Pavon[4]

[1]Universidad Juárez Autónoma de Tabasco, Ciencias Básicas, Centro de Investigacion de Ciencia y Tecnologia Aplicada de Tabasco, Mexico. [2]Universidad Juárez Autónoma de Tabasco, DACB-CICTAT, Mexico. [3]Universidad Autónoma Metropolitana, Quimica, Mexico. [4]Universidad Juárez Autónoma de Tabasco, DACB CICTAT, Mexico.

- **SF3-P004 CORRELATION OF RH PARTICLE SIZE WITH CO CHEMISORPTION: EFFECT ON CATALYTIC OXIDATION OF MTBE**

Adrián Cervantes Uribe[1], Gloria Alicia del Angel Montes[2], Gilberto Torres Torres[1], Armando Vázquez Zavala[3], Federico González[4], Adrián Cordero García[1], Reyna Ojeda López[5]

[1]Universidad Juárez Autónoma de Tabasco, Catalisis, Mexico. [2]Universidad Autónoma Metropolitana, Catalisis, Mexico. [3]Universidad Autónoma Metropolitana, Física, Mexico. [4]Universidad Autónoma Metropolitana, Ingeniera e Hidráulica, Mexico. [5]Universidad Autónoma Metropolitana, Superficies, Mexico.

- **SF3-P005 CATALYSTS DEVELOPMENT FOR GREEN DIESEL PRODUCTION FROM VEGETABLE OIL**

Hervey Gamaliel Chavarria Escamilla[1], Luis Cedeño Caero[2], Gustavo Marroquín[1], Maria Antonia Cortes Jácome[3], Jose Antonio Toledo[1]

[1]Instituto Mexicano del Petróleo, Transformación industrial de hidrocarburos, Mexico. [2]Universidad Nacional Autónoma de México, Departamento de Ingeniería Química, Mexico. [3]Instituto Mexicano del Petróleo, Desarrollo de Talento-Posgrado, Mexico.

- **SF3-P006 Ag NANOPARTICLES SUPPORTED ON CeO_2 FOR DIESEL-BIODIESEL PARTICULATE MATTER OXIDATION.**

Grisel Corro[1], Francisco Manuel Pacheco Aguirre[2], Juan Angel Flores Márquez[1], Alfred Zehe[3], Araceli Ramírez[3], Georgina Sandoval[4]

[1]Benemerita Universidad Autonoma de Puebla, Instituto de Ciencias, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniería Química, Mexico. [3]Benemerita Universidad Autonoma de Puebla, Facultad de Electrónica, Mexico. [4]Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco, Biodiesel Avanzado, Mexico.

- **SF3-P007 INFLUENCE OF PREPARATION METHOD OVER CATALYTIC ACTIVITY OF SULPHUR DOPED TiO_2**

Luis Enrique Cortés de Jesús[1], Roberto Portillo y Reyes[1], Miguel Angel Hernandez[2], Enrique Sánchez Mora[3]

[1]Benemerita Universidad Autonoma de Puebla, Faculty of Chemical Science, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Research in Zeolites, Mexico. [3]Benemerita Universidad Autonoma de Puebla, Physics Institute, Mexico.

- **SF3-P008 AN IMPROVED ADSORPTION AND PHOTOCATALYTIC REMOVAL OF METHYLENE BLUE BY MoO_3: ROLE OF SPUTTERING POWER, FILM THICKNESS, AND SPUTTERING WORKING PRESSURE**

Mario Pérez González[1], Michael Morales Luna[1,2], Jaime Santoyo[1], Horacio Crotte Ledesma[1], Pedro Emmanuel Garcia Tinoco[1], Sergio Armando Tomás Velázquez[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Fisica, Mexico. [2]Universidad Autónoma de Querétaro, Facultad de Quimica, Mexico.

- **SF3-P009 SYNTHESIS AND CHARACTERIZATION OF HYDROTREATING CATALYSTS WITH MANGANESE**

Magally Cruz[1], Jose Antonio Toledo[2], Gustavo Marroquín[2]

[1]Instituto Mexicano del Petróleo, Posgrado, Mexico. [2]Instituto Mexicano del Petróleo, Transformacion de Hidrocarburos, Mexico.

- **SF3-P010 KINETIC STUDY OF DEGRADATION ACETAMINOFÉN ASSISTED WITH SOLAR RADIATION AND DOPED Bi_2O_3**

Fidelio Sánchez López[1], Durvel de la Cruz Romero[1], Virginia Collins Martínez[2], José Gilberto Tores Torres[1], Alejandra E. Espinosa de Los Monteros[1]

[1]Universidad Juárez Autónoma de Tabasco, Academic Division of Basic Sciences, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., Department of Materials Engineering and Chemistry, Mexico.

- **SF3-P011 KINETIC MODELING IN THE DEGRADATION OF ESTRADIOL ASSISTED WITH SOLAR RADIATION AND Gd:TiO_2**

Héctor Martínez García[1], Durvel de la Cruz Romero[1], Jorge Luis Domínguez Arvizu[2], Nayi Cristel Castillo Gallegos[1], José Colina Márquez[3], Miguel Ángel Mueses[3]

[1]Universidad Juárez Autónoma de Tabasco, Academic Division of Basic Sciences, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., Departamento de Ingeniería y Química de Materiales, Mexico. [3]Universidad de Cartagena, Facultad de Ingeniería Química Campus Piedra de Bolívar, Colombia.

- **SF3-P012 THE THERMAL STABILITY AND ACIDITY OF HETEROPOLYACIDS ON SBA-15**

Natali de la Fuente Maldonado[1], Jin An Wang[1], Lifang Chen[2]

[1]Escuela Superior de Ingeniería Química e Industrias Extractivas, Laboratorio de Catálisis y Materiales, Mexico. [2]Escuela Superior

de Ingeniería Química e Industrias Extractivas, Departamento de Ingeniería Química Petrolera, Mexico.

- **SF3-P013 SYNTHESIS AND CHARACTERIZATION OF MESOPOROUS Co/SBA-15 CATALYSTS FOR FISCHER-TROPSCH REACTION**

  Berenice del Rio Carranza[1], Andres Arturo Fragoso Montes de Oca[1], Patricia Rayo[1]

  [1]Instituto Mexicano del Petróleo, Transformación de Hidrocarburos, Mexico.

- **SF3-P014 SYNTHESIS AND CHARACTERIZATION OF MESOPOROUS Fe/SBA-15 CATALYSTS**

  Berenice del Rio Carranza[1], Andres Arturo Fragoso Montes de Oca[1], Pablo Torres Mancera[1], Patricia Rayo[1]

  [1]Instituto Mexicano del Petróleo, Transformación de Hidrocarburos, Mexico.

- **SF3-P015 NAPHTHALENE HIDROGENATION ON Pt NANOPARTICLES/TiO_2 NANOTUBES CATALYST PREPARED BY VAPOR-PHASE IMPREGNATION METHOD**

  Cecilia Encarnación Gómez[1], Jorge Roberto Vargas García[2], Jose Antonio Toledo Antonio[3], Carlos Angeles Chavez[3], Maria Antonia Cortes Jacome[3]

  [1]Universidad Juárez Autónoma de Tabasco, División Académica Multidisciplinaria de Jalpa de Méndez, Mexico. [2]Instituto Politécnico Nacional - IPN - ESIQIE, Ingeniería Metalurgica y Materiales, Mexico. [3]Instituto Mexicano del Petróleo, Ingenieria Molecular, Mexico.

- **SF3-P016 ACIDIC HOMOGENEOUS AND HETEROGENEOUS CATALYSIS FOR THE SYNTHESIS OF NONYLPHENOL FORMALDEHYDE RESINS (NPFR)**

  Maria Ines Flores Conde[1], Adriana del Carmen Galván Cabrera[1], Miguel Ángel Vázquez Guevara[1], Merced Martínez Rosales[1], Jose Manuel Dominguez[2], Alma Delia Miranda Olvera[2]

  [1]Universidad de Guanajuato, Departamento de Química, División de Ciencias Naturales y Exactas, Mexico. [2]Instituto Mexicano del Petróleo, , Mexico.

- **SF3-P017 SYNTHESIS AND CHARACTERIZATION OF MIXED COPPER/ZINC/ALUMINUM OXIDES FROM HYDROTALCITE-LIKE COMPOUNDS**

  Andres Arturo Fragoso Montes de Oca[1], Jose Antonio Toledo Antonio[1], Carlos Ángeles Chávez[1], Jaime Sanchez Valente[1]

  [1]Instituto Mexicano del Petróleo, Transformacion de Hidrocarburos, Mexico.

- **SF3-P018 SYNTHESIS AND CHARACTERIZATION OF H-ZSM5 / SBA-15 MODIFIED WITH EXPANDING MOLECULES**

  Andres Arturo Fragoso Montes de Oca[1], Sergio Odin Flores Valle[2], Salvador Alfaro Hernandez[2], Berenice del Rio Carranza[1], Israel Pala Rosas[2], Hervey Gamaliel Chavarria Escamilla[1]

  [1]Instituto Mexicano del Petróleo, Transformacion de hidrocarburos, Mexico. [2]Instituto Politécnico Nacional - IPN, SEPI, Mexico.

- **SF3-P019 $H_3PW_{12}O_{40}$ HETEPOLYACID IMMOBILIZED OVER SBA-15 AND MCF MESOPOROUS ORDERED MATERIALS IN THE ORGANIC SYNTHESIS AS A CATALYST IN AN ACID/OXIDATION SEQUENCE**

  Adriana del Carmen Galvan Cabrera[1], Merced Martínez Rosales[1], Miguel Ángel Vázquez Guevara[1], José Manuel Domínguez Esquivel[2], Alma Delia Miranda Olvera[2]

  [1]Universidad de Guanajuato, Departmento de Química, División de Ciencias Naturales y Exactas, Mexico. [2]Instituto Mexicano del Petróleo, , Mexico.

- **SF3-P020 SYNTHESIS OF TiO_2/CuO_x THIN FILM COMPOSITES BY THE SIMULTANEOUS ABLATION OF Ti AND Cu METALLIC TARGETS**

  A. Valeria Garcia Caraveo[1], Dagoberto Cardona[1], J. G. Quiñones Galván[2]

  [1]Instituto Tecnológico y de Estudios Superiores de Occidente A.C., Department of Mathematics and Physics, Mexico. [2]Universidad de Guadalajara, Department of Physics, Mexico.

- **SF3-P021 EFFECT OF Zr ON THE PHYSICOCHEMICAL PROPERTIES OF SBA-15**

  Diego Alejandro Garcia Ramos[1], Rebeca Silva Rodrigo[1], Alfredo Guevara Lara[2], Juan Navarrete Bolaños[3], Jose Aarón Melo Banda[1], Armando Balboa Palomino[1], Lucero Imelda Ledesma Fosados[1]

  [1]Instituto Tecnológico de Ciudad Madero, Centro de Investigación en Petroquímica, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Área Académica de Química, Mexico. [3]Instituto Mexicano del Petróleo, , Mexico.

- **SF3-P022 SYNTHESIS AND CHARACTERIZATION OF SOLIDS WITH STRONG ACID / BASE PROPERTIES APPLIED AS A CATALYST IN THE SYNTHESIS OF IONONES**

  Rodrigo Rodolfo Gonzalez Jimenez[1], Roberto Portillo Reyes[1]

  [1]Benemerita Universidad Autonoma de Puebla, Chemical sciences, Mexico.

■ **SF3-P023 NAPHTALENE HYDROGENATION WITH CATALYSTS OF Rh AND Rh-Sn SUPPORTED IN γ-Al_2O_3 AND γ-Al_2O_3-Ce**

María Zarrazaga[1], Adriana Guadalupe Jimínez Vázquez[1], Ignacio Cuauhtémoc[1], Hermicenda Perez Vidal[1], Miroslava Barrera[2], José Guadalupe Pacheco[1], Jose Gilberto Torres Torres[1], Durvel de la Cruz Romero[1]

[1]Universidad Juárez Autónoma de Tabasco, División Académica de Ciencias Básicas, Mexico. [2]Universidad Politécnica de Golfo de México, Departamento de Ingeniería, Mexico.

■ **SF3-P024 DEVELOPMENT OF HIGHLY-ACTIVE SUPPORTED NiW CATALYSTS FOR DEEP HYDRODESULFURIZATION**

Tatiana Klimova[1], Rodrigo Arturo Ortega Domínguez[1], Carlos Gustavo Gutiérrez Juárez[1], Xim Bokhimi[2]

[1]Universidad Nacional Autónoma de México, Facultad de Química, Mexico. [2]Universidad Nacional Autónoma de México, Instituto de Física, Mexico.

■ **SF3-P025 ZnBiAl LAYERED DOUBLE HYDROXIDES FOR THE PHOTODEGRADATION OF PHENOL**

Pastora Salinas Hernández[1], Fernando Morales Anzures[1], Clara Tzompantzi Flores[2], Raúl Pérez Hernández[3], Sergio Antonio Chiñas Figueroa[1], Francisco Tzompantzi Morales[2]

[1]Universidad del Istmo, Instituto de Estudios de la Energía, Mexico. [2]Universidad Autónoma Metropolitana, Química, Mexico. [3]Instituto Nacional de Investigaciones Nucleares (ININ), Laboratorio de Nanocatalisis y Nanociencias, Mexico.

■ **SF3-P026 VARIATION OF NIFE NANOPARTICLES DENSITY IN REVERSE MICROEMULSION SYSTEMS**

Mayda Lam Maldonado[1], Jose Aarón Melo Banda[1], David Macias Ferrer[1]

[1]Instituto Tecnológico de Ciudad Madero, Posgrado, Mexico.

■ **SF3-P027 CONVERSION OF OXIMES TO THEIR CORRESPONDING CARBONYL COMPOUNDS WITH A NANOSTRUCTURED SUPPORT LIKE AS CATALYST.**

Anahi Lezama Baldenebro[1], Ignacio Alfredo Rivero Espejel[1], Karla Alejandra Espinoza Dueñas[1], Samantha Suszek[1]

[1]Instituto Tecnológico de Tijuana, Centro de Graduados E Investigación en Química, Mexico.

■ **SF3-P028 CATALYTIC PERFORMANCE OF Co-Mo-W-S CATALYSTS SUPPORTED ON HIERARCHICALLY STRUCTURED POROUS SILICAS FOR HDS REACTIONS**

Mario Alberto López[1], Eric M. Rivera Muñoz[1], Batriz Marcela Millán Malo[1], Carmen Leticia Peza Ledesma[2], Rufino Nava Mendoza[3], Rafael Huirache[4]

[1]Universidad Nacional Autónoma de México, Dept. of Nanotechnology - CFATA, Mexico. [2]Universidad Nacional Autónoma de México, Centro de Física Aplicada y Tecnología Avanzada, Mexico. [3]Universidad Autónoma de Querétaro, Facultad de Ingeniería, Mexico. [4]Universidad Michoacana de San Nicolás de Hidalgo, Departamento de Ingeniería Química, Mexico.

■ **SF3-P029 Ni/Al_2O_3-ZrO_2 CATALYSTS FOR THE PRODUCTION OF H_2 FROM THE DRY REFORMING OF CH_4**

Fernando Morales Anzures[1,2], Jesus Elias Mendoza Carballo[2], Pastora Salinas Hernández[1,2]

[1]Instituto Nacional de Investigaciones Nucleares (ININ), Laboratorio de Nanocatalisis y Nanociencia, Mexico. [2]Universidad del Istmo, Instituto de estudios de la Energia, Mexico.

■ **SF3-P030 ADSORPTION AND DISSOCIATION OF CARBON MONOXIDE ON IRON AND IRON-CARBON CLUSTERS: Fe_n + 2CO AND Fe_nC + 2CO, n= 4 AND 7. A THEORETICAL STUDY**

Alan Joel Miralrio Pineda[1], Patricio Limon[1], Miguel Castro[1]

[1]Universidad Nacional Autónoma de México, Departamento de Física y Química Teórica, Facultad de Química, Mexico.

■ **SF3-P031 TRANSITIONS STATES USING COMPUTER ASSISTED SIMULATIONS: A SEARCH FOR H2 PRODUCTION IN CeO2 SYSTEMS**

Jorge Reyna Alvarado[1], Raul Perez Hernandez[2], Manuel Antonio Ramos[1]

[1]Universidad Autónoma de Ciudad Juárez, Departamento de Fisica y Matematicas, Mexico. [2]Instituto Nacional de Investigaciones Nucleares (ININ), Tecnology of Materials, Mexico.

■ **SF3-P032 SELECTIVE STYRENE OXIDATION OVER TERNARY FeCoCu CATALYSTS: REACTION CONDITION EFFECTS**

Ana Paula Saraiva Oliveira[1], Alcineia Oliveira[2], Francisco Ferreira de Sousa[3], Adriana F Campos[4]

[1]Universidade Federal do Ceará, DAQFQ, Brazil. [2]Universidade Federal do Ceará, DQAFQ, Brazil. [3]Universidade federal do Para, DF,Belem,Para, Brazil. [4]Centro de Tecnologias Estratégicas do Nordeste-CETENE, Lad de Nanotecnologia, Recife,Pernambuco, Brazil.

■ **SF3-P033 CARBON FORMATION OVER MESOPOROUS SILICA SUPPORTED CATALYSTS VIA DRY REFORMING OF METHANE.**

Didier Santiago Salazar[1], Francisco Pola[1], Josef Galthier Roblero Lucchetti[1]
[1]Universidad de Ciencias y Artes de Chiapas, Instituto de Investigación e Innovación en Energías Renovables, Mexico.

- **SF3-P034 Ni-MoS_2 NANOPARTICLES GROWN ON REDUCED GRAPHENE OXIDE: AN ADVANCED CATALYST FOR THE HYDROGEN PRODUCTION**

Luz Hypatia Verastegui[1], Dora Irma Martinez[2], Rosa Maria Estrada[1], Rodrigo Arriaga[1], Jose Luis Gomez[1], Nora Elizondo Villarreal[1]
[1]Universidad Autónoma de Nuevo León, Centro de Investigación de Ciencias Fisico-Matematicas (CICFIM), Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ingeniera Mecanica y Electrica, Coordinación Ing. En Materiales, Mexico.

- **SF3-P035 STUDY OF THE EFFECT OF MgO AND THE QUANTITY OF Ni IN Ni-W CATALYSTS SUPPORTED IN MgO - Al_2O_3 APPLIED IN DIBENZOTHIOPHENE HYDRODESULFURIZATION**

Liliana Salinas Palafox[1], Acela López Benítez[1], Alfredo Guevara Lara[1], Gilles Berhault[2]
[1]Universidad Autónoma del Estado de Hidalgo, Área Académica de Química, Mexico. [2]Université Claude Bernard Lyon I, Institut de Recherches sur la Catalyse et l´Environnement de Lyon, France.

- **SF3-P036 EVALUATION OF THE CATALYTIC ACTIVITY OF PT/CO-MN MIXED OXIDES FOR TOLUENE OXIDATION VIA NAP-XPS UNDER IN OPERANDO CONDITIONS**

Luis Carlos Ojeda Perez[1], Carlos Ostos[1], Adriana Echavarria[1]
[1]Universidad de Antioquía, Grupo Catalizadores y Adsorbentes, Instituto de Química, Colombia.

- **SF3-P037 SYNTHESIS AND CHARACTERIZATION OF SOLID STATE ION EXCHANGED CU, FE AND CU-FE/MORDENITE FOR DIRECT CONVERSION OF METHANE TO METHANOL AT LOW TEMPERATURES.**

Marlene Gonzalez Montiel[1,2], Hebert Rodrigo Mojica Molina[1,3], Juvencio Vazquez[1], Edilso Reguera[1,4]
[1]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Tecnología Avanzada, Mexico. [2]Conversion and Storage Energy National Laboratory, Magnetic Properties, Mexico. [3]Conversion and Storage Energy National Laboratory, Surfaces Analysis, Mexico. [4]Conversion and Storage Energy National Laboratory, , Mexico.

- **SF3-P038 HYDROTHERMAL SYNTHESIS OF COPPER SELENIDE AND ITS PHOTOCATALYTIC PROPERTIES.**

Ricardo Serrato[1,2], Willars Rodriguez F J[1], J. E. Samaniego- Benitez[1,3], Rafael Ramirez Bon[1]
[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Materials, Mexico. [2]Universidad Tecnológica de Querétaro, Nanotechnology, Mexico. [3]Instituto Politécnico Nacional - IPN, CICATA Unidad Legaria, Mexico.

- **SF3-P039 EFFECTS OF FAU-TYPE ZEOLITE SYNTHESIS PARAMETERS ON CATALYTIC CONVERSION OF 5-HYDROXYMETHYLFURFURAL (5-HMF)**

Nathalia Ramirez Bocanegra[1], David Alejandro de Haro del Río[1], Javier Rivera de la Rosa[1], Carlos Javier Lucio Ortiz[1], Pablo Cubillas Gonzalez[2]
[1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, División de estudios de posgrado, Mexico. [2]Durham University, Department of earth science, United Kingdom, Channel Islands & Isle of Man.

- **SF3-P040 ENHANCED PHOTOCATALYTIC PERFORMANCE OF 1-D VAPOR-SOLID-LIQUID GROWN In_2O_3 NANOSTRUCTURES THROUGH DEFECT STRUCTURE MODIFICATION**

Jesus Alberto Ramos Ramon[1], David Maestre[2], Ana Cremades[2], Nicolás Rutilo Silva González[1], Umapada Pal[1]
[1]Benemerita Universidad Autonoma de Puebla, Instituto de Física, Mexico. [2]Universidad Complutense de Madrid, Departamento de Ciencias Físicas, Spain.

- **SF3-P041 CATALYTIC PROPERTIES OF MPA HETEROPOLYACID DISPERSED ON ALUMINOSILICATE NANOTUBES IN THE ACETYLATION OF GLYCEROL**

Antonio de Brito Santiago Neto[1], Alcineia Oliveira[1], Enrique Rodriguez Castellon[2], Rossano Lang[3]
[1]Universidade Federal do Ceará, DQAFQ, Brazil. [2]Universidad de Málaga, Departamento de Química Inorgánica, Facultad de Ciencias, Spain. [3]Federal University of São Paulo - UNIFESP, Institute of Science and Technology ICT, Brazil.

- **SF3-P042 SELECTIVE CATALYIC REDUCTION (SCR) OF NO_x IN THE PRESENCE OF H_2O/SO_x/ CO OVER POROUS ALUMINA-BASED OXIDE**

Jesuina Cassia S de Araújo[1], Alcineia Oliveira[2], Antônio de Brito S. Neto[3], Rinaldo S. Araujo[4], Monique Silva Souza[5]
[1]Universidade Federal do Espirito Santo - Centro Universitário Norte do Espírito Santo, Centro Universitário Norte do Espírito Santo, São Mateus, Espirito Santo, Brazil. [2]Universidade Federal do Ceará, DQAFQ, Brazil. [3]Universidade Federal do Ceará, DAFQ,

Brazil. [4]Instituto Federal de Educação -IFCE, Campus de Fortaleza, Benfica, Fortaleza, Ceará, Brazil. [5]Instituto Federal de Educação -IFCE, Campus de Fortaleza,Fortaleza, Ceará, Brazil.

- **SF3-P043 STUDY OF THE PHOTOCATALYTIC ACTIVITY OF THE Fe_3O_4 NANOPARTICLES OCLUDED IN THE INTERSTITIAL SITES OF SiO_2 OPALS**

  Enrique Sánchez Mora[1], Abraham Carmona Carmona[2], Miller Toledo Solano[2], Estela Gomez Barojas[3], César Márquez Beltrán[4]

  [1]Benemerita Universidad Autonoma de Puebla, Instituto de Física, Eco-Campus Valsequillo, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Facultad de Ciencias Físico Matemáticas, Mexico. [3]Benemerita Universidad Autonoma de Puebla, CIDS, Mexico. [4]Benemerita Universidad Autonoma de Puebla, Instituto de Física, Mexico.

- **SF3-P044 ELECTROCHEMICAL PERFORMANCE OF PtCo/rGO as ANODIC ELECTROCATALYSTS FOR METHANOL ELECTRO-OXIDATION IN ACID MEDIUM**

  David Macias Ferrer[1], Jose Aarón Melo Banda[2], Rebeca Silva Rodrigo[1], Ysmael Verde Gomez[3], Mayda Lam Maldonado[2], Paz del Angel[4], Ulises Páramo García[2]

  [1]Instituto Tecnológico de Ciudad Madero, Nanomaterials, Mexico. [2]Instituto Tecnológico de Ciudad Madero, Posgrado, Mexico. [3]Instituto Tecnológico de Cancún, Posgrado, Mexico. [4]Instituto Mexicano del Petróleo, MIcroscopía, Mexico.

- **SF3-P045 SELECTIVE SYNTHESIS OF HYDROGEN RICH FUEL COMPOSITIONS ON LOW PERCENTAGE CATALYSTS**

  Svetlana Tungatarova[1,2], Tolkyn Baizhumanova[2], Zauresh Zheksenbaeva[1,2], Manapkhan Zhumabek[2], Gulnar Kaumenova[1,2]

  [1]Al-Farabi Kazakh National University, Chemistry and Chemical Technology faculty, Kazakhstan. [2]D.V. Sokolsky Institute of Fuel, Catalysis and Electrochemistry, Laboratory of Organic Catalysis, Kazakhstan.

- **SF3-P046 SYNTHESIS AND CHARACTERIZATION OF Ni/C AND Mo/C NANOPARTICLES**

  Erika Maricela Tapia Rodriguez[1], José Arón Melo Banda[1]

  [1]Instituto Tecnológico de Ciudad Madero, Centro de Investigación en Petroquímica, Mexico.

TUESDAY, AUGUST 21
ROOM: TULUM F

- **08:30 - 09:00 SF3-O022 Invited Talk EFFECT OF CERIA MORPHOLOGY ON THE REACTIVITY OF METHANOL OVER Cu-M/CeO_2 CATALYSTS**

  Gabriela D?az[1], Diego Daniel Gonzalez Araiza[1], Juan Espino[1], Antonio Gomez[1]

  [1]Universidad Nacional Autónoma de México, Instituto de Física, Mexico.

- **09:00 - 09:15 SF3-O023 EFFECT OF Fe CONTENT ON THE PHOTOCATALYTIC ACTIVITY OF FERROELECTRIC $Fe^{3+}Cr^{3+}$ CO-DOPED $BaTiO_3$ NANOPARTICLES**

  Ifeanyichukwu Amaechi[1], Shuhui Sun[1], Andreas Ruediger[1]

  [1]Institut National de la Recherche Scientifique, Université du Québec, EMT, Canada.

- **09:15 - 09:30 SF3-O024 SOLAR-IRRADIATION DRIVEN PHENOL OXIDATION USING Cr/SiO_2, EXPLOTING INTERACTIONS BETWEEN Cr^{6+} AND Cr^{3+} MOIETIES**

  Grisel Corro[1], Karla del Razo[1], Fortino Bañuelos Bañuelos[1], Esmeralda Vidal Robles[2], Emmanuel Guilleminot[3]

  [1]Benemerita Universidad Autonoma de Puebla, Instituto de Ciencias, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniería Química, Mexico. [3]Universidad de las Américas Puebla, Facultad de Física, Mexico.

- **09:30 - 09:45 SF3-O025 DOPED TiO_2 AS PHOTOCATALYST IN REDUCTION OF BENZOPHENONE UNDER VISIBLE LIGHT IRRADIATING**

  Luis Enrique Cortés de Jesús[1], Roberto Portillo y Reyes[1], Miguel Angel Hernandez[2], Enrique Sánchez Mora[3]

  [1]Benemerita Universidad Autonoma de Puebla, Faculty of Chemical Science, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Research in Zeolites, Mexico. [3]Benemerita Universidad Autonoma de Puebla, Physics Institute, Mexico.

- **09:45 - 10:00 SF3-O026 PHOTOCATALYTICAL DEGRADATION OF AMOXYCILLINE USING ZINC OXIDE NANOPARTICLES OBTAINED FROM WASTE ALKALINE BATTERY ANODES**

  M.e. Hernández González[1], Carlos Lopez Diaz de Leon[1], Imelda Olivas Armendáriz[1], Juan Francisco Hernandez[1], Natividad Nieto Saldaña[1], Claudia Alejandra Rodríguez González[1]

[1]Universidad Autónoma de Ciudad Juárez, Instituto de Ingeniería y Tecnología, Mexico.

■ **10:00 - 10:15 SF3-O027 OPTIMIZATION OF THE CATALYTIC PHOTODEGRADATION PROCESS OF PHENOL WITH CeO-ZnO CATALYSTS**

Claudia Martínez Gomez[1], Ramon Zarraga Nuñez[1], Araceli Jacobo Azuara[1], Emmanuel Castillo Toxqui[2]

[1]Universidad de Guanajuato, Departamento de Química, División de Ciencias Naturales y Exactas, Mexico. [2]CIMAT, Centro de investigación en Matemáticas CIMAT, Unidad Aguascalientes, Mexico.

■ **10:15 - 10:30 SF3-O028 PHOTO-DEGRADATION OF AZO DYE REACTIVE BLACK 5 IN THE PRESENCE OF MICROPOROUS MATERIALS LIKE NATURAL ZEOLITES**

Jose Manuel Sanchez[1], Estela Márquez Ramírez[2], Gregorio Zacahua Tlacuatl[3], Fernando Chavez Rivas[1], Vitalii Petranovskii[4]

[1]Escuela Superior de Física y Matemáticas IPN, Fisica, Mexico. [2]Instituto Politecnico Nacional, IPN - SEPI-ESIME-Zacatenco, Mecanica, Mexico. [3]Instituto Politécnico Nacional - IPN - ESIQIE, Ingenieria Quimica, Mexico. [4]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Nanocatálisis, Mexico.

▸ **10:30 - 11:00 SF3-O029 Invited Talk MECHANISTIC ANALYSES AND CATALYTIC REQUIREMENTS FOR HYDRODEOXYGENATION OF PHENOLIC COMPOUNDS ON TRANSITION METAL CLUSTERS**

Ya-Huei (cathy) Chin[1], Junnan Shangguan[1]

[1]University of Toronto, Department of Chemical Engineering and Applied Chemistry, Canada.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY III
DR. AMANDA S. BARNARD

■ **12:30 - 12:45 SF3-O030 CATALYTIC OXIDATION OF TOLUENE OVER CO-MN MIXED OXIDES SYNTHESIZED BY AUTO-COMBUSTION METHOD AND CE IMPREGNATED.**

Luis Carlos Ojeda Perez[1], Carlos Ostos[1], Adriana Echavarria[1]

[1]Universidad de Antioquía, Grupo Catalizadores y Adsorbentes, Instituto de Química, Colombia.

■ **12:45 - 13:00 SF3-O031 INFLUENCE OF pH IN THE SYNTHESIS AND PHYSICOCHEMICAL PROPERTIES OF Al_2O_3-TiO_2-W CATALYSTS**

Gerardo Enrique Córdova[1], Jose Gilberto Torres Torres[1], Claudia Guadalupe Espinosa Gonzalez[2], Srinivas Godavarthi[2], Filiberto Ortiz Chi[2], Adib Abiu Silahua Pavon[1]

[1]Universidad Juárez Autónoma de Tabasco, Centro de Investigación de Ciencia y Tecnología Aplicada (CICTAT), DACB, Laboratorio de Nanomateriales Catalíticos Aplicados al Desarrollo de Fuentes de Energía y Remediación Ambiental, Mexico. [2]Cátedras CONACyT-Universidad Juárez Autónoma de Tabasco, Centro de Investigación de Ciencia y Tecnología Aplicada (CICTAT), DACB, Laboratorio de Nanomateriales Catalíticos Aplicados al Desarrollo de Fuentes de Energía y Remediación Ambiental, Mexico.

■ **13:00 - 13:15 SF3-O032 SYNTHESIS AND CHARACTERIZATION OF BI_2O_3:Gd FOR HYDROGEN PRODUCTION UNDER VISIBLE LIGHT**

David Salazar Marín[1], Durvel de la Cruz Romero[1], Ana Marlen Marín Xicotencatl[1], Hermicenda Perez Vidal[1], J. Guadalupe Pacheco Sosa[1]

[1]Universidad Juárez Autónoma de Tabasco, Academic Division of Basic Sciences, Mexico.

■ **13:15 - 13:30 SF3-O033 IRON-DOPED GRAPHITIC CARBON NITRIDE CATALYZED BIOMIMETIC PANI SYNTHESIS**

Manuel Eduardo Martinez Cartagena[1], Salvador Fernandez Tavizon[2], Uriel Alejandro Sierra Gomez[2], Edgar Cuara Diaz[2], Jesus Alfonso Mercado[2], Jose Roman Torres Lubian[3]

[1]Centro de Investigación en Química Aplicada - CIQA , Laboratorio Nacional de Materiales Grafénicos, Mexico. [2]Centro de Investigación en Química Aplicada - CIQA , LNMG, Mexico. [3]Centro de Investigación en Química Aplicada - CIQA , Sintesis de Polimeros, Mexico.

▸ **13:30 - 14:00 SF3-O034 Invited Talk FROM NOBLE METAL CATALYSTS TO NON-NOBLE BIMETALLIC CATALYSTS FOR SELECTIVE HYDROGENATION OF UNSATURATED IMPURITIES IN ALKENE CUTS**

Catherine Louis[1]

[1]CNRS-Sorbonne Université, Laboratoire de Réactivité de Surface, France.

14:00 - 16:00 Lunch time

■ **16:00 - 16:15 SF3-O035 TEMPLATE-FREE SELF-ASSEMBLED PLATINUM NANOPARTICLES FOR THE REDUCTION OF ORGANIC POLLUTANTS**

Naveen Kumar Reddy Bogireddy[1], Agarwal Vivechana[1], Mohan Kumar Kesarla[2], Lorenzo Martinez Gomez[2], Jose Manuel Domínguez Esquivel[3]

[1]Universidad Autónoma del Estado de Morelos, CIICAp - Material science and engineering, Mexico. [2]Universidad Nacional Autónoma de México, Material Science, Mexico. [3]Instituto Mexicano del Petróleo, Material science, Mexico.

- **16:15 - 16:30 SF3-O036 PLATINUM SUPPORTED NANOPARTICLES; CORRELATION BETWEEN ELECTRONIC STATES AND ACTIVITY IN METHANE OXIDATION**

  Grisel Corro[1], Rosalia Torralba Sanchez[1], Fortino Bañuelos[1], Umapada Pal[2], Ricardo Peña[1], Vladimir Serkin[1]

  [1]Benemerita Universidad Autonoma de Puebla, Instituto de Ciencias, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Instituto de Física, Mexico.

- **16:30 - 16:45 SF3-O037 DFT STUDY OF THE INTERACTION BETWEEN ZNO(103) SURFACE AND CO FOR CATALYTIC PURPOSE**

  Oscar Alberto Lopez Galan[1], Guillermo Carbajal Franco[1]

  [1]Instituto Tecnológico de Toluca, Division of Graduate Studies and Research, Mexico.

- **16:45 - 17:00 SF3-O038 DRY REFORMING OF METHANE OVER BIMETALLIC CERIA SUPPORTED Ni-Pt CATALYSTS**

  Antonio Gomez[1], Diego Daniel Gonzalez Araiza[1], Gabriela Díaz[1], Diana Griselda Arcos Alvaro[1]

  [1]Universidad Nacional Autónoma de México, Instituto de Física, Mexico.

- **17:00 - 17:15 SF3-O039 SYNTHESIS OF Ni@ GRAPHITIC-C_3N_4 AND ITS APPLICATION IN REDUCTION OF 4-NITROPHENOL TO 4-AMINOPHENOL**

  K. Mohan Kumar[1], F. Ortiz Chi[2], C. Espinosa Gonzalez[2], G. Torres Torres[3], L. Martinez Gomez[4], S. Godavarthi[2]

  [1]Madanapalle Institute of Technology & Science, Department of Chemistry, India. [2]Cátedras CONACyT-Universidad Juárez Autónoma de Tabasco, Centro de Investigación de Ciencia y Tecnología Aplicada de Tabasco (CICTAT), DACB, Mexico. [3]Universidad Juárez Autónoma de Tabasco, Centro de Investigación de Ciencia y Tecnología Aplicada de Tabasco (CICTAT), DACB, Mexico. [4]Universidad Nacional Autónoma de México, Instituto de Ciencias Fisicas, Mexico.

- **17:15 - 17:30 SF3-O040 BIMETALLIC COPPER-BASED ON CERIA CATALYSTS FOR HYDROGEN PRODUCTION FROM METHANOL**

  Diego Daniel Gonzalez Araiza[1], Antonio Gomez[1], Gabriela Díaz[1]

  [1]Instituto de Física - Universidad Nacional Autónoma de México, Física Química, Mexico.

- **17:30 - 17:45 SF3-O041 SYNTHESIS AND CHARACTERIZATION OF TiO_2-ZrO_2W CATALYSTS IN ACID AND BASIC MEDIUM**

  Ruben Daniel Moreno Lopez[1], Jose Gilberto Torres Torres[1], Adib Abiu Silahua Pavon[1], Srinivas Godavarthi[2], Claudia Guadalupe Espinosa Gonzalez[2], Filiberto Ortiz Chi[2]

  [1]Universidad Juárez Autónoma de Tabasco, Centro de Investigación de Ciencia y Tecnología Aplicada (CICTAT), DACB, Laboratorio de Nanomateriales Catalíticos Aplicados al Desarrollo de Fuentes de Energía y Remediación Ambiental, Mexico. [2]Cátedras CONACyT-Universidad Juárez Autónoma de Tabasco, Centro de Investigación de Ciencia y Tecnología Aplicada (CICTAT), DACB, Laboratorio de Nanomateriales Catalíticos Aplicados al Desarrollo de Fuentes de Energía y Remediación Ambiental, Mexico.

- **17:45 - 18:00 SF3-O042 GOLD SELECTIVE DEPOSIT ON Ir PARTICLES SUPPORTED ON Al_2O_3-CeO_2 FOR THE CWAO OF MTBE**

  Nayi Cristel Castillo Gallegos[1], Jose Gilberto Torres Torres[1], Zenaida Guerra Que[1], Adib Abiu Silahua Pavon[1], Adrian Cervantes Uribe[1], Juan Carlos Arevalo Perez[1]

  [1]Universidad Juárez Autónoma de Tabasco, Centro de Investigación de Ciencia y Tecnología Aplicada (CICTAT), DACB, Laboratorio de Nanomateriales Catalíticos Aplicados al Desarrollo de Fuentes de Energía y Remediación Ambiental, Mexico.

- **18:00 - 18:30 SF3-O043 Invited Talk STRUCTURAL AND FRACTAL ASPECTS OF MOS2 AND MoS2/Co TYPE CATALYSTS FOR UPGRADING HEAVY OILS**

  Jose Manuel Dominguez[1], Félix Galindo Hernández[1], Ilke Arslan[2], Manuel Antonio Ramos[3], Toby Sanders[2]

  [1]Instituto Mexicano del Petróleo, , Mexico. [2]Pacific Northwest National Laboratory, Institute for Integrated Catalysis and Environmental Molecular Science Laboratory, United States. [3]Universidad Autónoma de Ciudad Juárez, Instituto de Ingeniería y Tecnología, Mexico.

TUESDAY, AUGUST 21
ROOM: TERRACE

- **18:30 -20:30 POSTER SESSION & COFFEE BREAK**

■ **SF3-P047 ESTERIFICATIONOF GLYCEROL OVER ALUMINA-BASED OXIDES WITH A DEFINED PORE HIERARCHY**

José Vitor Costa Do Carmo[1], Alcineia Oliveira[1], Jesuina Cassia Santiago de Araújo[2], Adriana F Campos[3], Gian Carlos Silva Duarte[4]

[1]Universidade Federal do Ceará, DQAFQ, Brazil. [2]Universidade Federal do Espírito Santo, Centro Universitário Norte do Espírito Santo, São Mateus, Espirito Santo, Brazil. [3]Centro de Tecnologias Estratégicas do Nordeste-CETENE, Lab. de Nanotecnologia, Recife, Pernambuco, Brazil. [4]Centro de Tecnologias Estratégicas do Nordeste-CETENE, Lad de Nanotecnologia, Recife,Pernambuco, Brazil.

■ **SF3-P048 SYNTHESIS AND CHARACTERIZATION OF SBA-15 AT DIFFERENT CONCENTRATIONS OF HYDROCHLORIC ACID**

David Macias Ferrer[1], Jose Aarón Melo Banda[1], Rebeca Silva Rodrigo[1], Mayda Lam Maldonado[1], Paz del Ángel Vicente[2]

[1]Instituto Tecnológico de Ciudad Madero, Posgrado, Mexico. [2]Instituto Mexicano del Petróleo, Microscopía, Mexico.

■ **SF3-P049 SYNTHESIS AND CHARACTERIZATION OF CoMoS CATALYSTS SUPPORTED ON KIT-6 MODIFIED WITH CARBON NANOTUBES FOR HYDRODESULFURIZATION PROCESSES**

Agustín Torres Núñez[1], Anabel de la Cruz Delgado[2], Manuel Román Aguirre[2], Alfredo Aguilar Elguezabal[2], Lorena Alvarez Contreras[2]

[1]Universidad de La Cienega del Estado de Michoacán de Ocampo, Ingeniería en Nanotecnología, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., Ingeniería y Química de Materiales, Mexico.

■ **SF3-P050 NANOPARTICLES OF IRON OXIDE SUPPORTED IN A COMMERCIALLY ACTIVATED BENTONITE AND ITS CATALYTIC EVALUATION IN THE OXIDATION OF 4-METHOXYBENZYL ALCOHOL**

Gabriela Tapia Morales[1], José Luis Arias Téllez[1], Antonio Gómez Córtes[2], Yolanda Marina Vargas Rodríguez[1], José Alvaro Chávez Carvayar[3]

[1]Facultad de Estudios Superiores Cuautitlán, UNAM., Ciencias Químicas, Mexico. [2]Instituto de Física - Universidad Nacional Autónoma de México, Física-Química, Mexico. [3]Instituto de Investigaciones en Materiales, Materiales metálicos y cerámicos., Mexico.

■ **SF3-P051 Al_2O_3-TiO_2-ZrO_2 MIXED OXIDES: EFFECT OF THE TEMPERATURE TREATMENTS IN PHYSICOCHEMICAL PROPERTIES**

Jorge Cortez Elizalde[1], Jose Gilberto Torres Torres[1], Adib Abiu Silahua Pavon[1], Pedro Cadenas Lopez[2], Ignacio Cuauhtémoc[1], José Guadalupe Pacheco[1]

[1]Universidad Juárez Autónoma de Tabasco, Centro de Investigación de Ciencia y Tecnología Aplicada (CICTAT), DACB, Laboratorio de Nanomateriales Catalíticos Aplicados al Desarrollo de Fuentes de Energía y Remediación Ambiental, Mexico. [2]Universidad Juárez Autónoma de Tabasco, División Académica de Ingeniería y Arquitectura, Mexico.

■ **SF3-P052 SYNTHESIS AND CHARACTERIZATION OF LOW ACIDIC CATALYSTS FOR DIRECT DESULFURIZATION**

Dora Alicia Solis Casados[1], Claudia Estefany Rodríguez Nava[1], Tatiana Klimova[2], Luis Escobar[3]

[1]Universidad Autónoma del Estado de México, Centro Conjunto de Investigación en Química Sustentable UAEM-UNAM. Facultad de Química, Mexico. [2]Universidad Nacional Autónoma de México, Facultad de Química, Mexico. [3]Instituto Nacional de Investigaciones Nucleares (ININ), Departamento de Física, Mexico.

■ **SF3-P053 ONE-STEP SYNTHESIS AND PHOTOCATALYTIC BEHAVIOR FOR H_2 PRODUCTION FROM WATER OF HYBRID ZNS/MOO_3**

J. Enrique Samaniego[1], Angeles Mantilla[1], Luis Lartundo Rojas[2]

[1]Instituto Politécnico Nacional - IPN, Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Mexico. [2]Instituto Politécnico Nacional - IPN, Centro de Nanociencias y Micro y Nanotecnologías, Mexico.

■ **SF3-P054 NICKEL NANOPARTICLES CATALYSTS FOR HYDROCRACKING OF HEAVY OIL: KINETIC MODEL**

Oscar Morelos[1], Benjamín Portales Martínez[2], Persi Schacht[3], Jose Aarón Melo Banda[1], Jose Manuel Dominguez[4], Miguel José Yacamán[5], Adriana Isabel Reyes de la Torre[1]

[1]Instituto Tecnológico de Ciudad Madero, Centro de Investigación en Petroquímica Secundaria, Mexico. [2]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Dirección de Investigación en Exploración y Producción, Mexico. [3]Instituto Mexicano del Petróleo, Dirección de Transformación en Hidrocarburos, Mexico. [4]Instituto Mexicano del Petróleo, Dirección de Investigación en Exploración y Producción, Mexico. [5]The University of Texas at San Antonio, Department of Physics and Astronomy, United States.

■ **SF3-P055 Fe/SBA-15 FOR CATALYTIC WET AIR OXIDATION OF PHENOL**

Hermicenda Perez Vidal[1], Ma. Antonia Lunagómez Rocha[1], Dulce Yazmín López Chico[1], J. Gilberto Torres Torres[1], Ignacio Cuauhtémoc

López[1], Durvel de la Cruz Romero[1], J. Guadalupe Pacheco Sosa[1]
[1]Universidad Juárez Autónoma de Tabasco, Ciencias Básicas, Mexico.

- **SF3-P056 HYDROGEN PRODUCTION BY CELLULOSE GASIFICATION USING MOLYBDENUM CARBIDE CATALYSTS NICKEL-DOPED AND SUPPORTED ON HYDROXYAPATITE**

Jonathan Jesús Malpica Maldonado[1], Jose Aarón Melo Banda[1], Ana Lidia Martínez Salazar[1], Nancy Díaz[1], Daniel Rangel Martínez[2], Margarita García Hernández[1], Jose Manuel Dominguez[3], David Macias Ferrer[1]
[1]Instituto Tecnológico de Ciudad Madero, Centro de Investigación en Petroquímica, Mexico. [2]Durham University, Engineering Department, United Kingdom, Channel Islands & Isle of Man. [3]Instituto Mexicano del Petróleo, Ingeniería Molecular, Mexico.

- **SF3-P057 EFFECT OF SOLVENT ON THE DISPERSION OF Rh CATALYTIC WET AIR OXIDATION OF MTBE**

Ma Antonia Lunagomez[1], Blanca E. Pérez Rodriguez[1], Adrián Cervantes Uribe[1], José S. Arellano Cortaza[1], Hermicenda Perez Vidal[1], Gilberto Torres Torres[1]
[1]Universidad Juárez Autónoma de Tabasco, División Academica de Ciencias Básicas, Mexico.

- **SF3-P058 PRODUCTION AND IMMOBILIZATION OF LIPASES AS CATALYSTS FOR BIODIESEL SYNTHESIS**

Leticia Casas Godoy[1], Xochitl Niehus[2], Georgina Sandoval[2]
[1]Cátedra CONACYT-CIATEJ, Industrial Biotechnology, Mexico. [2]CIATEJ, Industrial Biotechnology, Mexico.

- **SF3-P059 INFLUENCE OF THE OXYGEN VACANCIES OVER NiO-ZRO$_2$ SYSTEM FOR HYDRODEOXYGENATION (HDO) OF PHENOL**

David Alberto Prado Chay[1], Jose Antonio Toledo[2], Maria Antonia Cortes[2], Jose Antonio de Los Reyes[3], Carlos Ángeles Chávez[2], José Ascención Montoya[2]
[1]Instituto Mexicano del Petróleo, Síntesis de nanomateriales y escalamiento de catalizadores, Mexico. [2]Instituto Mexicano del Petróleo, Transformación de hidrocarburos, Mexico. [3]Universidad Autónoma Metropolitana, Ciencias Básicas e Ingeniería, Mexico.

- **SF3-P060 DEVELOPMENT OF TRIMETALLIC CATALYSTS SUPPORTED IN P-MODIFIED HIERARCHICAL POROUS SILICA FOR HYDROTREATMENT OF HYDROCARBON BY HDS PROCESSES.**

Carmen Leticia Peza Ledesma[1], Rufino Nava Mendoza[2], Rafael Huirache[3], Mario Alberto López[1], Batriz Marcela Millán Malo[1], Veronica Hernandez Morales[1], Eric M. Rivera Muñoz[1]
[1]Universidad Nacional Autónoma de México, Centro de Física Aplicada y Tecnología Avanzada, Mexico. [2]Universidad Autónoma de Querétaro, Facultad de Ingeniería, Mexico. [3]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ingeniería Química, Mexico.

- **SF3-P061 Ni CATALYSTS SUPPORTED ON SBA-15 FOR THE OLEFINS HYDROGENATION TO PRODUCE SUSTAINABLE AVIATION FUEL THROUGH ALCOHOL TO JET PATHWAY**

Julio César Morales Ortuño[1], Juan Carlos Chavarría Hernández[1], Luis Carlos Ordoñez López[1]
[1]Centro de Investigación Científica de Yucatán, Unidad de Energía Renovable, Mexico.

- **SF3-P062 pH INFLUENCE IN ZrO$_2$-DOPED TITANIUM OXIDE NANOCOMPOSITES AS PHOTOCATALYST FOR THE ORGANIC POLLUTANTS DEGRADATION**

Victor Ruiz Santoyo[1], Rafael Romero Toledo[2], Alejandro Pérez Larios[1]
[1]Universidad de Guadalajara, Department of Engineering, Mexico. [2]Universidad de Guanajuato, Chemical Engineering department, Mexico.

- **SF3-P063 CARBON DIOXIDE METHANATION OVER Ni CATALYSTS SUPPORTED ON TiO2 NANOTUBES**

Oscar Carrera Nuñez[1], Miriam Vega Hernandez[1], Jose Carlos Mendoza Hernandez[1], Jessica Batalla Mayoral[2], Albina Gutierrez Martinez[3], Claudia Gutierrez Wing[3], Raul Perez Hernandez[3]
[1]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniería Química, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Complejo Regional Mixteca. Campus Izucar de Matamoros, Mexico. [3]Instituto Nacional de Investigaciones Nucleares (ININ), Tecnologia de Materiales, Mexico.

- **SF3-P064 EFFECT OF THE Si/Al RATIO OF HY ZEOLITES IN THE GAS-PHASE CATALYTIC DEHYDRATION OF GLYCEROL TO ACROLEIN**

Israel Pala Rosas[1], José Luis Contreras[2], Jose Salmones[1], Sofía Hernández Ramírez[2], Ricardo López Medina[2], Beatriz Zeifert[3], Andres Arturo Fragoso Montes de Oca[4], Jennipher Pérez Cabrera[2]

[1]Instituto Politécnico Nacional - IPN - ESIQIE, Secretaría de Estudios de Posgrado e Investigación, Mexico. [2]Universidad Autónoma Metropolitana, Departamento de energía-CBI, Mexico. [3]Instituto Politécnico Nacional - IPN - ESIQIE, Departamento de ingeniería en metalurgia y materiales, Mexico. [4]Instituto Mexicano del Petróleo, Laboratorio de síntesis de nanomateriales, Mexico.

- **SF3-P065 SYNTHESIS OF Pt-K-Ce / Al2O3-SiO2 CATALYSTS FOR THE COMBUSTION OF COAL OR COKE BOILER COMBUSTION GASES.**

  Jennipher Pérez Cabrera[1], José Antonio Aguilar[1], José Luis Contreras[2], Beatriz Zeifert[3], Tamara Vázquez[1]

  [1]Universidad Autónoma Metropolitana, Departamento de energía, Mexico. [2]Universidad Autónoma Metropolitana, Departamento de energía, Mexico. [3]Instituto Politécnico Nacional - IPN - ESIQIE, Departamento de energía, Mexico.

- **SF3-P066 HY ZEOLITES AS CATALYSTS IN THE LIQUID-PHASE DEHYDRATION OF GLYCEROL TO ACROLEIN**

  Israel Pala Rosas[1], José Luis Contreras[2], Jose Salmones[1], Ricardo López Medina[2], Manuel Alejandro Valdes[3], Jennipher Pérez Cabrera[2]

  [1]Instituto Politécnico Nacional - IPN - ESIQIE, Secretaría de Estudios de Posgrado e Investigación, Mexico. [2]Universidad Autónoma Metropolitana, Departamento de energía-CBI, Mexico. [3]Instituto Tecnológico Superior de Ciudad Hidalgo, Departamento de nanotecnología, Mexico.

- **SF3-P067 SYNTHESIS AND CHARACTERIZATION OF MOLYBDENUM CARBIDE NANOPARTICLES DOPED WITH NICKEL SUPPORTED IN CARBON NANOTUBES**

  Rubén Javier García Pérez[1], Jonathan Jesús Malpica Maldonado[1], Jose Aarón Melo Banda[1], David Macias Ferrer[1], Jose Manuel Dominguez[2]

  [1]Instituto Tecnológico de Ciudad Madero, Centro de Investigación en Petroquímica, Mexico. [2]Instituto Mexicano del Petróleo, ingeniería Molecular, Mexico.

- **SF3-P068 NANOSTRUCTURED ZnO/SBA-15 CATALYSTS FOR PHOTOCATALYTIC DEGRADATION OF METHYLENE BLUE**

  Tatiana Klimova[1], Lina Angélica Calzada[1], Luis Ángel García[1]

  [1]Universidad Nacional Autónoma de México, Facultad de Quimica, Mexico.

- **SF3-P069 EFFECT OF OXIPHILICITY ON THE CONVERSION OF GLYCEROL OVER SUPPORTED METAL CATALYSTS**

  Marco A. Sánchez Castillo[1,2], Claudia Elizabeth Ruiz Dávila[2], Brenda Jeanneth Acosta Ruelas[1], Clauida del Rocío Arellano del Río[1], Sergio Antonio Gómez Torres[3]

  [1]Universidad Autónoma de San Luis Potosí, Coordinación para la Innovación y Aplicación de la Ciencia y la Tecnología (CIACYT), Mexico. [2]Universidad Autónoma de San Luis Potosí, Facultad de Ciencias Químicas, Mexico. [3]Universidad Autónoma Metropolitana, Departamento de Ingeneria de Procesos e Hidraúlica, Mexico.

ROOM: TULUM F
WEDNESDAY, AUGUST 22

- **08:30 - 09:00 SF3-O044 Invited Talk SYNTHESIS OF TS-1 ZEOLITE MESOCRYSTALS WITH CONTROLLABLE MESOPOROSITY AND SIZE**

  Yichuan Li[1], Yaxian Li[1], Qing Fan[1], Yongming Chai[1], Chenguang Liu[1]

  [1]China University of Petroleum, State Key Laboratory of Heavy Oil Processing, China.

- **09:00 - 09:15 SF3-O045 USE OF METALLIC CARBIDES SUPPORTED ON A NOVEL SILICA, SBA-15 AND ZnO FOR THE DRY REFORMING OF METHANE**

  Josef Galthier Roblero Lucchetti[1], Francisco Pola[1], Miguel Ángel Valenzuela[2], Elizabeth Rojas García[2]

  [1]Universidad de Ciencias y Artes de Chiapas, Institute for Research and Innovation in Renewable Energies, Mexico. [2]Instituto Politécnico Nacional - IPN, ESIQIE, Mexico.

- **09:15 - 09:30 SF3-O046 TREATMENT OF PHENOL BY CATALYTIC WET AIR OXIDATION: A COMPARATIVE STUDY OF CATALYSTS BASED IN COPPER AND NYCKEL SUPPORTED ON Al_2O_3, CeO_2 and Al_2O_3-CeO_2**

  Zenaida Guerra Que[1], Jose Gilberto Torres Torres[1], Hermicenda Perez Vidal[1], Nayi Cristel Castillo Gallegos[1], Anabel Gonzalez Diaz[2], Adib Abiu Silahua Pavon[1], Susana Silva Martínez[3]

  [1]Universidad Juárez Autónoma de Tabasco, Centro de Investigación de Ciencia y Tecnología Aplicada (CICTAT), DACB, Laboratorio de Nanomateriales Catalíticos Aplicados al Desarrollo de Fuentes de Energía y Remediación Ambiental, Mexico. [2]Universidad Juárez Autónoma de Tabasco, División Académica de Ingeniería y Arquitectura, Mexico. [3]Centro de Investigación en Ingenieria y Ciencias Aplicadas, Universidad Autónoma del Estado de Morelos, Mexico.

- **09:30 - 09:45 SF3-O047 ON THE MECHANISM RESPONSIBLE FOR THE CATALYTIC ACTIVITY**

OF PLATINUM FOR OXYGEN REDUCTION AND HYDROGEN EVOLUTION REACTIONS

Mahmoud Reda[1]
[1]Canadelectrochim, R&D, Canada.

■ **09:45 - 10:00 SF3-O048 CERIUM AND ZIRCONIUM OXIDES AS ACTIVE CATALYSTS FOR THE SYNTHESIS OF KETONES FROM ALDEHYDES: HYDROGEN PRODUCTION AND MECHANISTICAL INSIGHTS**

Lina M. Orozco[1,2], Michael Renz[1], Avelino Corma[1]
[1]Universidad Politécnica de Valencia, Instituto de Tecnología Química, Spain. [2]Universidad Tecnológica de Pereira, Grupo Polifenoles, Facultad de Tecnologías. Grupo Infección e Inmunidad, Facultad de Ciencias de la Salud, Colombia.

▸ **10:00 - 10:30 SF3-O049 Invited Talk EFFECT OF SPACE VELOCITY ON METHANE AROMATIZATION OVER Mo SUPPORTED ON SULFATED ZIRCONIA CATALYSTS**

Swarom Ravindra Kanitkar[1], Ashraf Abedin[1], Srikar Bhattar[1], Spivey James J.[1]
[1]Louisiana State University, Chemical Engineering, United States.

■ **10:30 - 10:45 SF3-O050 THEORETICAL STUDY ON THE FLOW ASSURANCE OF HEAVY CRUDE OILS BY INTERACTION WITH IONIC LIQUIDS (ILs)**

Raiza Hernandez[1], Alma Delia Miranda Olvera[1], Jose Manuel Dominguez[1]
[1]Instituto Mexicano del Petróleo, Gerencia de Ingeniería de Recuperación Adicional, Mexico.

■ **10:45 - 11:00 SF3-O051 MESOSTRUCTURED SILICA-CARBON COMPOSITES SYNTHESIZED FROM SURFACTANT**

Nataliya Gerasymenko[1], Roberto Portillo y Reyes[1], Enrique Sánchez Mora[2]
[1]Benemerita Universidad Autonoma de Puebla, Faculty of Chemical Sciences, Catalysis Laboratory, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Physics Institute, Mexico.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY IV NOBEL PRIZE IN CHEMISTRY 2016
PROF. BEN L. FERINGA

■ **12:30 - 12:45 SF3-O052 METALLOCYCLIC COPPER(II) COMPLEX BEARING AN AMINO ACID DERIVED SCHIFF BASE LIGAND: STRUCTURE, CATALYTIC AND ANTIOXIDANT ACTIVITIES**

Karla Alejandra Lopez Gastelum[1], Fernando Rocha Alonzo[2], Enrique F. Velázquez Contreras[2], Yedith Soberanes[1], Alex J. Salazar Medina[1]
[1]Universidad de Sonora, Departamento de Investigación en Polímeros y Materiales, Mexico. [2]Universidad de Sonora, Departamento de Ciencias Químico Biológicas, Mexico.

■ **12:45 - 13:00 SF3-O053 PHENOL HYDROGENATION USING MAGNETIC PARTICLES Rh/Fe_2O_3-TiO_2**

Ignacio Cuauhtémoc López[1], Adriana Guadalupe Jiménez Vázquez[1], Gilberto Torres Torres[1], Adib Abiu Silahua Pavon[1], Adrian Cervantes Uribe[1]
[1]Universidad Juárez Autónoma de Tabasco, División Académica de Ciencias Básicas, Mexico.

■ **13:00 - 13:15 SF3-O054 BIODIESEL PRODUCTION FROM WASTE FRYING OIL USING MAGNETIC NICKEL AS ESTERIFICATION CATALYST**

Grisel Corro[1], Victor Manuel Romero Lara[1], Fortino Bañuelos Bañuelos[1], Georgina Sandoval[2]
[1]Benemerita Universidad Autonoma de Puebla, Instituto de Ciencias, Mexico. [2]Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco, Biodiesel, Mexico.

▸ **13:15 - 13:45 SF3-O055 Invited Talk AROMATIZATION OF ALIPHATIC ALDEHYDES ON SOLID BRØNSTED ACID CATALYSTS**

Ya-Huei (cathy) Chin[1], Fan Lin[1], Junyan Zhang[2], Dongxia Liu[2]
[1]University of Toronto, Department of Chemical Engineering and Applied Chemistry, Canada. [2]University of Maryland, Department of Chemical and Biomolecular Engineering, United States.

■ **13:45 - 14:00 SF3-O056 MAGNETIC HALLOYSITE NANOTUBES WITH INCREASED SURFACE AREA FOR THE OXIDATION OF BENZYLIC ALCOHOLS IN AQUEOUS MEDIUM**

Maria Elena Gutierrez Perez[1], Julio César Morales Mejía[2], Guadalupe Iveth Vargas Rodríguez[1], José Alvaro Chávez Carvayar[3], Antonio Gomez[4], Graciela Delgadillo[1], Yolanda Marina Vargas Rodríguez[1]
[1]Facultad de Estudios Superiores Cuautitlán, UNAM., Ciencias químicas, Mexico. [2]Facultad de Estudios Superiores Cuautitlán, UNAM., Ingeniería y Tecnología, Mexico. [3]Instituto de Investigaciones en Materiales, materiales metálicos y cerámicos, Mexico. [4]Instituto de Física - Universidad Nacional Autónoma de México, Física Química, Mexico.

■ **14:00 - 14:15 SF3-O057 FLUORINATED LAYERED DOUBLE HYDROXIDES ENHANCE CATALYSIS OF CYANOETHYLATION OF ALCOHOLS**

Mariana Lizeth Diaz Ramirez[1], Enrique Jaime Lima Muñoz[1]
[1]Universidad Nacional Autónoma de México, Instituto de Investigaciones en Materiales, Mexico.

14:00 - 16:00 Lunch time

16:00 - 16:15 SF3-O058 PRODUCTION OF HYDROGEN BY ETHANOL STEAM REFORMING USING Ni-Co-HYDROTALCITE CATALYSTS STABILIZED WITH TUNGSTEN

José Luis Contreras[1], Anabel Figueroa[2]
[1]Universidad Autónoma Metropolitana, Energy, Mexico. [2]Universidad Autónoma Metropolitana, , Mexico.

16:15 - 16:45 SF3-O059 Invited Talk EX-SITU AND IN-SITU LIQUID IMAGING OF ZEOLITES

Ilke Arslan[1]
[1]Argonne National Laboratory, Center for Nanoscale Materials, United States.

16:45 - 17:00 SF3-O060 CHARGE TRANSFER AND HYDROGEN ADSORPTION IN PALLADIUM BASED BIMETALLIC NANO SYSTEMS: AN EXPERIMENTAL AND THEORETICAL DFT STUDY

Carlos Quintanar[1], Reyna Caballero[1], Maira Ramos[1], Elizabeth Chavira[2], Magali Ugalde Alcantara[2], Hector Cruz Manjarres[3], Francisco Espinosa Magaña[4]
[1]Universidad Nacional Autónoma de México, Física, F. Ciencias, Mexico. [2]Universidad Nacional Autónoma de México, Instituto de Investigacion de Materiales, Mexico. [3]Universidad Nacional Autónoma de México, Instituto de Fisica, Mexico. [4]Centro de Investigación en Materiales Avanzados, S.C., Fisica de Materiales, Mexico.

17:00 - 17:30 SF3-O061 Invited Talk CATALYTIC PROCESSING OF LIGHT ALKANES INTO OLEFINS

Svetlana Tungatarova[1,2], Tolkyn Baizhumanova[2], Zauresh Zheksenbaeva[1,2], Kaysar Kassymkan[2], Rabiga Sarsenova[2], Gulnar Kaumenova[1,2]
[1]Al-Farabi Kazakh National University, Chemistry and Chemical Technology faculty, Kazakhstan. [2]D.V. Sokolsky Institute of Fuel, Catalysis and Electrochemistry, Laboratory of Organic Catalysis, Kazakhstan.

17:30 - 17:45 SF3-O062 EFFECT OF THE STRUCTURE, COMPOSITION AND ACID-BASE PROPERTIES OF TiO_2-ZrO_2 SYNTHESIZED BY SOL-GEL USING DIFFERENTS ADDITIVES FOR 5-HMF PRODUCTION FROM GLUCOSE

Adib Abiu Silahua Pavon[1], Jose Gilberto Torres Torres[1], Juan Carlos Arevalo Perez[1], Adrian Cervantes Uribe[1], Adrián Cordero García[1], Claudia Guadalupe Espinosa Gonzalez[2], Srinivas Godavarthi[2], Filiberto Ortiz Chi[2]
[1]Universidad Juárez Autónoma de Tabasco, Centro de Investigación de Ciencia y Tecnología Aplicada (CICTAT), DACB, Laboratorio de Nanomateriales Catalíticos Aplicados al Desarrollo de Fuentes de Energía y Remediación Ambiental, Mexico. [2]Cátedras CONACyT-Universidad Juárez Autónoma de Tabasco, Centro de Investigación de Ciencia y Tecnología Aplicada (CICTAT), DACB, Laboratorio de Nanomateriales Catalíticos Aplicados al Desarrollo de Fuentes de Energía y Remediación Ambiental, Mexico.

17:45 - 18:15 SF3-O063 Invited Talk NOVEL CATALYTIC MATERIALS FOR C1 CHEMISTRY

Jose Rodriguez[1]
[1]Brookhaven National Laboratory, Chemistry Department, United States.

18:30 – 20:00 POSTER SESSION AND COFFEE BREAK

Symposium F4

BORON MATERIALS

Gabriel Merino / Centro de Investigación y de Estudios Avanzados del IPN (CINVESTAV)
Thomas Heine / Leipzig University
William Tiznado / Universidad Andres Bello

WEDNESDAY, AUGUST 22
ROOM: MAYA II

Session 1

SESSION CHAIR: THOMAS HEINE

- **09:00 - 09:15 SF4-O001 Invited Talk CLOSO-BORATE CHEMISTRY IN THE GAS PHASE: FROM CURIOSITIES OBSERVED IN MASS SPECTRA TO NOVEL SELF-ORGANIZING MATERIALS**
  Jonas Warneke[1,2]
  [1]Pacific Northwest National Laboratory, Physical Sciences Division, United States. [2]Purdue University, Department of Chemistry, United States.
- **09:15 - 09:30 SF4-O002 FROM ELECTRONIC STABILITY RECORDS TO ARGON-BINDING ANIONS: CYANIDED CLOSO-DODECABORATES**
  Martin Mayer[1], Knut Asmis[1]
  [1]University of Leipzig, Wilhelm-Ostwald-Institut, Germany.
- **09:30 - 09:45 SF4-O003 Invited Talk DO ALL-BORON FULLERENE EXIST?**
  Kevin Wöhner[1], Nina Vankova[1], Thomas Heine[1]
  [1]University of Leipzig, Wilhelm-Ostwald-Institute for Physical and Theoretical Chemistry, Germany.
- **09:45 - 10:00 SF4-O004 Invited Talk PROBING THE STRUCTURES OF GAS-PHASE BORON CLUSTERS USING SIZE SELECTIVE IR SPECTROSCOPY**
  Andre Fielicke[1]
  [1]Fritz Haber Institute of the Max Planck Society, Molecular Physics, Germany.
- **10:00 - 10:15 SF4-O005 SHINING LIGHT ON BORON-BASED SUPRAMOLECULAR MATERIALS: A STRATEGY FOR THE SYNTHESIS OF ORGANIC BUILDING BLOCKS**
  Gonzalo Campillo Alvarado[1], Kyle Dmello[1], Alexis D. Brannan[1], Zhitting Feng[1], Dale C. Swenson[1], S. V. Santhana Mariappan[1], Hugo Morales Rojas[2], Herbert Höpfl[2], Leonard R. Macgillivray[1]
  [1]University of Iowa, Department of Chemistry, United States. [2]Universidad Autónoma del Estado de Morelos, Centro de Investigaciones Químicas, Mexico.
- **10:15 - 10:30 SF4-O006 Invited Talk A JOURNEY TO THE SYNTHESIS OF FRUSTRATED LEWIS PAIRS WITH GROUP 13 COMPOUNDS**
  Oracio Serrano[1]
  [1]Universidad de Guanajuato, Química, Mexico.
- **10:30 - 10:45 SF4-O007 Invited Talk Au/H: THERE ARE ANALOGY BETWEEN BnHn+2 and BnAun+2 (n = 2-5) SERIES?**
  Edison Osorio[1], Franklin Ferraro[1]
  [1]Universidad Católica Luis Amigó, Ciencias Básicas, Colombia.
- **10:45 - 11:00 SF4-O008 Invited Talk BORON IN TWO DIMENSIONS – BOROPHENE PREDICTIONS, SYNTHESIS, PROPERTIES**
  Boris Yakobson[1]
  [1]Rice University, MSNE, United States.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY IV NOBEL PRIZE IN CHEMISTRY 2016
PROF. BEN L. FERINGA

Session 2

SESSION CHAIR: KNUT ASMIS

- **12:30 - 12:45 SF4-O009 EFFECT OF CARBON REPLACEMENT BY B^- IN MONOCYCLIC AND POLYCYCLIC AROMATIC HYDROCARBONS**
  William Tiznado[1]
  [1]Universidad Andrés Bello, Chemistry, Chile.

- **12:45 - 13:00 SF4-O010 DEVELOPMENT OF ANTICORROSIVE POLYMER COATINGS BASED ON ACRYLIC/h-BORON NITRIDE NANOCOMPOSITES FOR PROTECTION OF STAINLESS STEEL**
  Alma Patricia Ysiwata Rivera[1], Jose Manuel Mata Padilla[2], Ernesto Hernández Hernández[3], Gregorio Cadenas[4], Carlos Alberto Avila Orta[1], Arturo Velásquez De Jesús[5], Pablo Gonzalez Morones[1], Gustavo Soria[6]
  [1]Centro de Investigación en Química Aplicada - CIQA , Advanced Materials, Mexico. [2]CONACYT-CIQA, Polymer Processing, Mexico. [3]CONACYT-CIQA, Advanced Materials, Mexico. [4]Centro de Investigación en Química Aplicada - CIQA , Polymer Synthesis, Mexico. [5]Universidad Tecnológico de Coahuila, Nanotechnology, Mexico. [6]CONACYT-CIQA, Polymer Synthesis, Mexico.

14:00 - 16:00 Lunch time

- **16:00 - 16:15 SF4-O011 INTERFACIAL PROPERTIES OF THE IONIC LIQUID [BMIM][BF_4] OVER A WIDE RANGE OF TEMPERATURES**
  Jose Luis Rivera Rojas[1], Luis Molina Rodriguez[1], José Luis Tapia Huerta[1]
  [1]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ingeniería Quimica, Mexico.

- **16:15 - 16:30 SF4-O012 IMPROVEMENT IN WEAR RESISTANCE OF AISI H13 STEEL BY PACK-BORONIZING METHOD**
  Niketan Manthani[1]
  [1]Bharat Forge, R&D Center, India.

- **16:30 - 16:45 SF4-O013 Invited Talk C-H AND C-C BOND ACTIVATIONS IN BORYLENE CHEMISTRY**
  Jose Oscar Carlos Jimenez Halla[1], Rian D. Dewhurst[2], Krzysztof Radacki[2], Holger Braunschweig[2]
  [1]Universidad de Guanajuato, Department of Chemistry (DNES), Mexico. [2]Universität Würzburg, Department for Inorganic Chemistry, Germany.

- **16:45 - 17:00 SF4-O014 Invited Talk UNUSUAL PROPERTIES OF BORON-CONTAINING CLUSTERS PROBED BY CRYOGENIC ION TRAP VIBRATIONAL SPECTROSCOPY**
  Knut Asmis[1]
  [1]University of Leipzig, Wilhelm-Ostwald-Institut, Germany.

- **17:00 - 17:15 SF4-O015 COAXIAL TRIPLE-LAYERED VERSUS HELICAL $Be_6B_{11}^-$ CLUSTERS: DUAL STRUCTURAL FLUXIONALITY AND MULTIFOLD AROMATICITY**
  Alejandro Vasquez Espinal[1], Said Jalife[1], Jose Luis Cabellos Quiroz[1], Sudip Pan[1], Hua-Jin Zhai[2], Gabriel Merino[1]
  [1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Applied Physics, Mexico. [2]Shanxi University, Nanocluster Laboratory, Institute of Molecular Science, China.

- **17:15 - 17:30 SF4-O016 INSIGHTS ON THE PHASE DIAGRAM OF TWO-DIMENSIONAL BORON OXIDE AND THE PROPERTIES OF ALPHA-TETRAGONAL BORON**
  Jens Kunstmann[1]
  [1]Technische Universität Dresden, Faculty of Chemistry and Food Chemistry, Germany.

- **17:30 - 17:45 SF4-O017 THE STRUCTURAL AND ELECTRONIC EFFECT OF Li ATOMS IN BORON CLUSTERS: TOWARDS THE DESIGN OF TUBULAR BORON STRUCTURES**
  Said Jalife Jacobo[1], Estefanía Ravell[1], Alejandro Vasquez Espinal[1], José-Luis Cabellos[2], Gabriel Merino[1]
  [1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Applied Physics, Mexico. [2]Universidad de Sonora, Departamento de Investigación en Polímeros y Materiales, Mexico.

WEDNESDAY, AUGUST 22
ROOM: TERRACE

18:30 -20:30 POSTER SESSION & COFFEE BREAK

- **SF4-P001 INDUCED MAGNETIC FIELD IN BORON CLUSTERS WITH FORMULA $B_n^{+/0/-}$ (n =**

10 - 21): EVIDENCES OF 4n AND 4n+2 RULES FOR AROMATICITY AND ANTIAROMATICITY

Mesias Orozco Ic[1], Said Jalife[1], Gabriel Merino[1]
[1]CINVESTAV-Mérida, Applied Physics, Mexico.

■ **SF4-P002 Li_2B_{12} AND Li_3B_{12}: PREDICTION OF THE SMALLEST TUBULAR AND CAGE-LIKE BORON STRUCTURES**

Estefanía Ravell[1], Said Jalife[1], Alejandro Vasquez Espinal[1], Sudip Pan[1], José Luis Cabellos[1], Zhong-Hua Cui[2], Gabriel Merino[1]
[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Física Aplicada, Mexico. [2]Jilin University, Institute of Atomic and Molecular Physics, Jilin Provincial Key Laboratory of Applied Atomic and Molecular Spectroscopy, Jilin University, China.

■ **SF4-P003 INFLUENCE OF THE INCUBATION TIME ON THE KINETIC OF GROWTH IRON BORIDE LAYER AS A FUNCTION OF THE SAMPLES SIZE**

Enrique Hernández Sánchez[1], Carlos Orozco Álvarez[1], Pablo Alfredo Ruiz Trabolsi[1], Alexis Chino[1], Itzel Pamela Torres Avila[1], José Antonio García Macedo[2]
[1]Instituto Politécnico Nacional - IPN, BIOINGENIERIA, Mexico. [2]Instituto Tecnológico y de Estudios Superiores de Monterey, Laboratorio de materiales, Mexico.

Symposium F5

MATERIALS AND THE ENVIRONMENT

Rosendo López González / Universidad Juárez Autónoma de Tabasco
Eddie López-Honorato / Centro de Investigación y de Estudios Avanzados del IPN (CINVESTAV)
Javier Vela / Iowa State University
Maria Bohorquez / Drake University

TUESDAY, AUGUST 21
ROOM: TULUM G

Session 1

SESSION CHAIR: EDDIE LÓPEZ HONORATO

- **09:00 - 09:30 SF5-O001 Invited Talk Invited talk AMORPHOUS CARBONS AS ADDITIVES TO SEMICONDUCTORS FOR ENHANCED SOLAR PHOTOCATALYSIS**
  Conchi O. Ania[1], Alicia Gomis Berenguer[2]
  [1]CNRS, CEMHTI, CEMHTI, France. [2]CNRS, CEMHTI, CEMTHI, France.

- **09:30 - 09:45 SF5-O002 SYNTHESIS AND EVALUATION IN THE CO_2 CAPTURE PROCESS OF MODIFIED LITHIUM SILICATES PRODUCED FROM STEEL METALLURGICAL SLAGS**
  Walther Dario Bejarano Peña[1], Brenda Alcántar Vázquez[1], Rosa María Ramírez Zamora[1]
  [1]Instituto de Ingeniería (Universidad Nacional Autónoma de México), Ingeniería Ambiental, Mexico.

- **09:45 - 10:00 SF5-O003 ENHANCED PHOTOCATALYTIC ACTIVITY OF ZrO_2 UNDER SIMULATED SOLAR RADIATION IN ZrO_2- TiO_2 COUPLED NANOMATERIALS**
  Mayra Angelica Alvarez Lemus[1], Brenda Bolaina[1], Rosendo López González[1], Dora María Frías Márquez[1], Melina del Carmen Uribe Lopez[1], Verónica de la Luz Tlapaya[2]
  [1]Universidad Juárez Autónoma de Tabasco, Academic Division of Engineering and Architecture, Mexico. [2]Universidad Autónoma Metropolitana, Chemistry, Mexico.

- **10:00 - 10:15 SF5-O004 APPLICATION OF LAYERED DOUBLE HYDROXIDES Mg/Fe IN THE REMOVAL OF ARSENIC PRESENT IN WATER FOR HUMAN CONSUMPTION**
  José Ignacio Ceseña Quiñonez[1], Norma Leticia Gutiérrez Ortega[2], Eshela Ramos Ramirez[3], Alma Hortensia Serafín Muñoz[2], Berenice Noriega Luna[2], Elizabeth Pabón Gelves[4]
  [1]Universidad de Guanajuato, Doctorado en Ciencia y Tecnología del Agua, División de Ingenierías, Mexico. [2]Universidad de Guanajuato, Departamento de Ingeniería Civil, División de Ingenierías, Mexico. [3]Universidad de Guanajuato, Departamento de Química, División de Ciencias Naturales y Exactas, Mexico. [4]Universidad Nacional de Colombia, Grupo Ciencia de Materiales Avanzados. Facultad de Ciencias, Colombia.

- **10:15 - 10:30 SF5-O005 SYNTHESIS AND SOLAR-LIGHT PHOTOCATALYTIC EVALUATION OF Bi 1-x Gd x FeO 3 ($0 \leq x \leq 0.15$) NANOSTRUCTURED SEMICONDUCTORS (0D AND 1D SYSTEMS) FOR THE DEGRADATION OF ORGANIC DYE IN DILUTED AQUEOUS MEDIA.**
  Daniela Arango Vasquez[1], Carlos Ostos[1], Lina Marcela Castro[2]

[1]Universidad de Antioquía, Medellin Colombia, Colombia. [2]Universidad de Antioquía, Medellin, Colombia.

■ **10:30 - 10:45 SF5-O006 STUDY AND DEVELOPMENT OF MESOPOROUS MATERIALS BIOMASS DERIVED ASHES FOR IRON ADSORPTION IN SOLUTION**

Mauricio Manuel Gómez Barrena[1], Alessio Ghisolfi[2], María de Lourdes Chávez García[3], Diego Cazorla Amorós[2], Jaime Pizarro Konczak[4]

[1]Universidad de Santiago de Chile, Departamento de ingeniería metalúrgica, Chile. [2]Universidad de Alicante, Departamento de Química Inorgánica e Instituto Universitario de Materiales, Spain. [3]Facultad de Ciencias, UNAM, Departamento de Químicas Inorgánica y Nuclear, Mexico. [4]Universidad de Santiago de Chile, Departamento de ingeniería geográfica, Chile.

■ **10:45 - 11:00 SF5-O007 ENHANCED PHOTOCATALYTIC ACTIVITY OF TiO_2/ZnO SUBMICROSCOPIC COMPOSITE**

Víctor Hugo Castrejón Sánchez[1], Ángeles Enríquez Pérez[1], Juan M. Ramírez[1], Gerardo Villa Sánchez[2], Marco Antonio Camacho López[3], Karen Rivas González[1], Enrique Camps[4], Yuritzin Yañez Maldonado[1]

[1]Tecnológico de Estudios Superiores de Jocotitlán, Materials Engineering, Mexico. [2]Tecnológico de Estudios Superiores de Jocotitlán, Industrial Engineering, Mexico. [3]Universidad Autónoma del Estado de México, Facultad de Química, Mexico. [4]Instituto Nacional de Investigaciones Nucleares (ININ), Física, Mexico.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY III
DR. AMANDA S. BARNARD

Session 2

SESSION CHAIR: ROSENDO LÓPEZ GONZÁLEZ

▸ **12:30 - 13:00 SF5-O008 Invited Talk THE USE OF SURFACTANT SYSTEMS FOR ENVIRONMENTAL APPLICATIONS**

Margarita Sanchez Dominguez[1,2], Javier Ivan Garza Arevalo[2], Federico Rossi[3], Ricardo Gomez[4]

[1]Centro de Investigación en Materiales Avanzados, S.C., , Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., Unidad Monterrey, Mexico. [3]Università degli Study di Salerno, Dipartimento di Chimica e Biologia Adolfo Zambelli/DCB, Italy. [4]Universidad Autónoma Metropolitana, Unidad Iztapalapa, Mexico.

■ **13:00 - 13:15 SF5-O009 AN EARLY DIAGNOSTIC METHOD FOR FORECASTING OF CHEMICAL OXYGEN DEMAND FRACTIONS IN AGRO-INDUSTRY EFFLUENTS OF NEJAYOTE**

Julio Edgar Peralta Rodríguez[1], Gregorio Fernández Lambert[2], Rajesh Roshan Biswal[3], Gustavo Martinez Castellanos[1], Eduardo Fernandez Echeverria[4]

[1]Instituto Tecnologico Superior de Misantla, Ingenieria Industrial, Mexico. [2]Instituto Tecnologico Superior de Misantla, , Mexico. [3]Instituto Tecnologico Superior de Misantla, Ingenieria de Sistemas Computacionales, Mexico. [4]Instituto Tecnologico Superior de Zacapoaxtla, Ingenieria Industrial, Mexico.

■ **13:15 - 13:30 SF5-O010 STIMULATION BY ELECTRIC FIELDS OF THE GERMINATION AND GROWTH OF MAIZE USING RuO_2-Ta_2O_5 | Ti AND IrO_2-Ta_2O_5 | Ti ELECTRODES**

Erika Bustos[1], Jazmin Acuña[1], Moisés Simón[1], Gustavo Acosta Santoyo[1]

[1]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Science, Mexico.

■ **13:30 - 13:45 SF5-O011 TRIBOLOGICAL STUDY OF GREASES FOR CIRCUIT BREAKERS**

Brenda Castanos[1], Cecilia Fernandez[1], Laura Peña Parás[1], Demófilo Maldonado Cortés[1], Juan José Rodríguez[2]

[1]Universidad de Monterrey, Engineering and Technology, Mexico. [2]Instituto Tecnológico y de Estudios Superiores de Monterey, Engineering and Technology, Mexico.

■ **13:45 - 14:00 SF5-O012 NATURAL CORROSION INHIBITOR: LIQUID-EXTRACT OF ALOE-VERA LEAVES AS GREEN TECHNOLOGY PROTECTION OF STEELS**

Hector Herrera Hernandez[1], Erick Monroy Barreto[1], J. Guadalupe Miranda Hernandez[1], Carlos Omar Gonzalez Moran[1]

[1]Universidad Autónoma del Estado de México, Ing. Industrial, Mexico.

14:00 - 16:00 Lunch time

Session 3

SESSION CHAIR: MAYRA A. ALVAREZ LEMUS

▸ **16:00 - 16:30 SF5-O013 Invited Talk KINETIC STUDIES OF THE PHOTOCATALYTIC DEGRADATION OF DICLOFENAC**

Edgar Moctezuma[1], Elisa Leyva[1], Carmen Lara Pérez[1], Saúl Noriega[1]

[1]Universidad Autónoma de San Luis Potosí, Facultad de Ciencias Químicas, Mexico.

- **16:30 - 16:45 SF5-O014 SUNLIGHT PHOTOACTIVITY OF TITANIA/BIOGENIC SILICA CATALYSTS FOR WATER TREATMENT**

  María C. Fernández de Córdoba[1,2], Juan Matos[3], Conchi O. Ania[4]

  [1]CNRS, CEMHTI, POR2E Group, Nanoporous Materials for Energy and Environment, France. [2]Universidad de Oviedo, Química Física y Analítica, Spain. [3]Universidad de Concepción, Hybrid and Carbon Materials Group, Bioenergy Department, UDT, Chile. [4]CNRS, CEMHTI, POR2E Group, Nanoporous Materials for Energy and Environment, Univ. Orléans, France.

- **16:45 - 17:00 SF5-O015 COMPARATIVE STUDY OF REAL-TIME OPTIMIZERS FOR THE ADJUSTMENT OF A VIBRATING SAMPLE MAGNETOMETER**

  Javier Torres Osorio[1], Victor Jaramillo[2,3], Abilo Velasquez[3], Elisabeth Restrepo Parra[3], Jorge Jaramillo[1]

  [1]Universidad de Caldas, , Colombia. [2]Universidad de Caldas, Caldas, Colombia. [3]Universidad Nacional de Colombia, , Colombia.

- **17:00 - 17:15 SF5-O016 NITRIFICATION IN A MEMBRANE BIOLOGICAL REACTOR IN PRESENCE OF PHENOLIC COMPOUNDS**

  Paulina Sarabia[1], Alfonso Durán[2]

  [1]Universidad Nacional Autónoma de México, Instituto de Química, Mexico. [2]Universidad Nacional Autónoma de México, Facultad de Química, Mexico.

- **17:15 - 17:30 SF5-O017 SUSTAINABLE BIO-BASED POLYMERS LIGNIN DERIVED PRECURSORS**

  Colleen Scott[1], Guery Saenz[1], Eric Munyaneza[1]

  [1]Mississippi State University, Chemistry, United States.

- **17:30 - 17:45 SF5-O018 MATERIAL SELECTION TO IMPROVE THE THERMAL EFFICIENCY OF A CLEAN BIOMASS COOKSTOVE.**

  Jose Nunez Gonzalez[1], Alberto Beltran Morales[2]

  [1]Escuela Nacional de Estudios Superiores, Unidad Morelia, UNAM, Ciencia de Materiales Sustentables, Mexico. [2]Instituto de Investigaciones en Materiales, Unidad Morelia, Mexico.

TUESDAY, AUGUST 21
ROOM: TERRACE

- **18:30 -20:30 POSTER SESSION & COFFEE BREAK**

- **SF5-P001 ENHANCE OF BIOGAS PRODUCTION ANAEROBIC CODIGESTION OF PIG MANURE AND CRUDE GLYCEROL**

  Fidel Alejandro Aguilar Aguilar[1], Alina Juantorena Ugas[1], Alexandre Soares[2], Joseph Sebastian Pathiyamattom[1]

  [1]Instituto de Energías Renovables Universidad Nacional Autónoma de México, Bioenergía, Mexico. [2]Universidad Federal dos Vales do Jequitinhonha e Mucuri, Biocombustibles, Brazil.

- **SF5-P002 SUPPLEMENTATION OF A FERMENTATION PROCESS WITH LEACHATES OF LOMBRICOMPOSTA FOR THE OBTAINING OF BIOETHANOL FROM PULP MANGO ATAULFO (MANGIFERA INDICA L.)**

  José Luis Alemán Ramirez[1], Bianca Yadira Pérez Sariñana[1], Sergio Saldaña Trinidad[1]

  [1]Universidad Politécnica de Chiapas, Centro de Investigación y Desarrollo Tecnológico en Energías Renovables de la Universidad Politécnica de Chiapas, Mexico.

- **SF5-P003 SYNTHESIS AND CHARACTERIZATION OF GEOPOLYMERS RICE HUSK ASH AND ALUMINUM ANODIZING SLUDGE**

  Natassia Bratti Da Silva Nuernberg[1], Adriano Michael Bernardin[1]

  [1]Universidade do Extremo Sul Catarinense, Ceramic Materials Group, Brazil.

- **SF5-P004 LIFE CYCLE OF CARDBOARD PROCESSED WITH WHEAT-STRAW AND RECYCLED PAPER**

  Julio Edgar Peralta Rodríguez[1], Rajesh Roshan Biswal[2], Gregorio Fernández Lambert[1]

  [1]Instituto Tecnologico Superior de Misantla, Ingenieria Industrial, Mexico. [2]Instituto Tecnologico Superior de Misantla, Ingenieria de Sistemas Computacionales, Mexico.

- **SF5-P005 IMITATION PANEL QUARRY ELABORATED WITH VALORIZABLE WASTE REINFORCED WITH EXTRACT OF OPUNTIA BIGELOVII (CHOLLA)**

  Luciano Armando Cervantes García[1], Catalina Guadalupe Morales Agundez[1], Oscar López Chávez[1]

  [1]Instituto Tecnológico de Sonora, Civil Engineering, Mexico.

- **SF5-P006 OBTENTION OF BIOETHANOL FROM THE BIOMASS OF THE BANANA INDUSTRY (VARIETY MUSA CAVENDISH**

  Carla de la Cerna Hernandez[1], Eric Reyes Cervantes[1], Julisa Martínez Miguel[2]

[1]Benemerita Universidad Autonoma de Puebla, Centro Universitario de Vinculación y Transferencia de Tecnología, Mexico. [2]Universidad Politécnica de Puebla, Ingeniería en Biotecnología, Mexico.

- **SF5-P007 PRODUCTION OF N-ACETYL-GLUCOSAMINE ALPHA-CHITIN USING A CHITINASE COCKTAIL**

Flavio Augusto Cardozo[1], William Facchinatto[2], Sergio Paulo Campana Filho[2], Luiz Alberto Colnago[3], Adalberto Junior[4]

[1]Universidade de São Paulo, Biomedical Sciences Institute, Brazil. [2]Universidade de São Paulo, Sao Carlos Institute of Chemistry, Brazil. [3]Embrapa, Embrapa Instrumentation, Brazil. [4]Universidade de São Paulo, Faculty of Pharmaceutical Sciences, Brazil.

- **SF5-P008 DEVELOPMENT AND CHARACTERIZATION OF A BIODEGRADABLE THERMOPLASTIC POLYMER BASED ON CORN STARCH AND POLYLACTIC ACID (PLA) OBTAINED BY EXTRUSION**

Héctor Iván García Cruz[1], Mónica Rosalía Jaime Fonseca[1], Horacio Vieyra Ruiz[2], Erich Von Borries Medrano[1]

[1]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Biomateriales, Mexico. [2]Tecnológico de Monterrey, Materiales, Mexico.

- **SF5-P009 EXTRACTION OF ARTICHOKE METABOLITES**

Naella Sandivel Valencia Pèrez[1], Jorge Yàñez Fernandez[1], Diana Ramìrez Guerra[2], Maribel Quezada Cruz[3], Porfirio Raùl Galicia Garcia[3], Giovanni García Domínguez[4], Genaro Ivan Ceròn Montes[3]

[1]Instituto Politécnico Nacional - IPN, Bioprocesos, Mexico. [2]Universidad Autónoma de Chapingo, Preparación Agricola, Mexico. [3]Universidad Tecnológica de Tecamac, Biotecnologia, Mexico. [4]Centro de Investigación e Innovación Tecnológica, Posgrado, Mexico.

- **SF5-P010 BIODEGRADABILITY STUDY OF A BIOBASED COMPOSITE MATERIAL FOR ACTIVE FOOD PACKING**

Maria Hernandez[1], Haydee Lopez[1], Francisco Hernandez Centeno[1], Ruben Ricardo Ruiz Ramirez[1]

[1]Universidad Autonoma Agraria Antonio Narro, Ciencia y Tecnología de Alimentos, Mexico.

- **SF5-P011 USE OF BIODEGRADABLE HYDROGELS OF CONTROLLED RELEASE OF VEGETABLE DEFENSE INDUCERS BASED ON CHITOSAN**

Julio César López Velázquez[1], Zaira Yunuen García Carvajal[2], Joaquín Alejandro Qui Zapata[1], Rogelio Rodríguez Rodríguez[2], Hugo Espinosa Andrews[3]

[1]Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco, Biotecnología Vegetal, Mexico. [2]Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco, Biotecnología Médica y Farmacéutica, Mexico. [3]Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco, Tecnología Alimentaria, Mexico.

- **SF5-P012 DEHYDROGENATION OF SURFACE-OXIDIZED MIXTURES OF $2LIBH_4$ + AL/ADDITIVES (TIF_3 OR CEO_2)**

Juan Luis Carrillo Bucio[1], Juan Rogelio Tena García[1], Karina Suárez Alcántara[1]

[1]Universidad Nacional Autónoma de México, Materials Research Institute - Morelia Unit, Mexico.

- **SF5-P013 PHOTOCATALYTIC ACTIVITY OF Fe_3O_4@ Gd- $BiFeO_3$ CORE-SHELL NANOSTRUCTURES FOR MB DYE DEGRADATION UNDER VISIBLE-LIGHT IRRADIATION**

Carlos Ostos[1], Giovanny Esteban Gonzalez Urrego[1], Sara Isabel Carmona[1], Jose Daniel Velez Ruiz[1], Lina Marcela Castro[1]

[1]Universidad de Antioquía, ANT, Colombia.

- **SF5-P014 STUDY OF THE KINETIC CONDITIONS FOR THE GENERATION OF OXIDIZING SPECIES IN A BDD / TiO2 SYSTEM.**

Martin Oscar Armando Pacheco Alvarez[1], Juan Manuel Peralta Hernández[1]

[1]Universidad de Guanajuato, División de Ciencias Naturales y Exactas, Mexico.

- **SF5-P015 EVALUATION OF TITANIUM DIOXIDE/ ACTIVATED CARBON COMPOSITE PHOTOCATALYST FOR THE DEGRADATION OF METHYLENE BLUE**

Karen Daniela Perdomo Rojas[1,2], David Alejandro Díaz Mieles[1,2], César Augusto Quiñones Segura[1,2]

[1]FUndacion Universidad America, Chemical Engineering, Colombia. [2]Universidad de América, , Colombia.

- **SF5-P016 EVALUATION OF TiO2 FILMS MODIFIED WITH CuO FOR THE INACTIVATION OF THE E.COLI BACTERIA IN THE PRESENCE OF VISIBLE LIGHT.**

Paola Giselle Poveda Vargas[1], Adriana Ines Paez Morales[1], Cesar Augusto Quiñones Segura[1]

[1]FUndacion Universidad America, , Colombia.

- **SF5-P017 PHOTOCATALYTIC ACTIVITY OF SnO_2 and SnO_2 / Ag_3PO_4 UNDER IRRADIATION OF LED LIGHT FOR THE DEGRADATION OF METHYLENE BLUE.**

  Yerania Sarahi Rodriguez Ramirez[1], Ma. Elvira Zarazúa Morín[1], Víctor Jesús Gallegos Sánchez[2], Leticia Myriam Torres Guerra[1]

  [1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Civil, Departamento de Ecomateriales y Energía, Mexico. [2]Educativa, nanotecnologia, Mexico.

- **SF5-P018 SYNTHESIS OF ZNAL HYDROTALCITES AND ITS PHOTOCATALYTIC PROPERTIES FOR PHENOL DEGRADATION**

  Guadalupe Romero Ortiz[1], Luis Lartundo Rojas[2], Angeles Mantilla[1], Victor Manuel Suarez Quezada[1]

  [1]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, posgrado y Tecnologla Avanzada, Mexico. [2]Centro de Nanociencias y micro y Nanotecnologías del IPN, Área de Nanociencias, Mexico.

- **SF5-P019 HYDROTHERMAL SYNTHESIS OF A TWO-DIMENSIONAL COMPOSITE G-C3N4/MOS2/ MNO2 AND ITS POTENTIAL APPLICATION IN PHOTOCATALYSIS.**

  J. Enrique Samaniego[1], Kristel Yurien Jiménez Rangel[1], Angeles Mantilla[1]

  [1]Instituto Politécnico Nacional - IPN, Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Mexico.

- **SF5-P020 PREPARATION OF BISMUTH-BASED THIN FILMS FOR PHOTOCATALYTIC APPLICATIONS.**

  Ericka Sanchez Angeles[1], Saul Romero Hernandez[2], Victor Hugo Castrejon Sanchez[1], Luis Escobar Alarcon[2]

  [1]Tecnológico de Estudios Superiores de Jocotitlán, Ingenieria en Materiales, Mexico. [2]Instituto Nacional de Investigaciones Nucleares (ININ), Departamento de Física, Mexico.

- **SF5-P021 SYNTHESIS OF $LaFeO_3$ VIA CO-PRECIPITACIÓN FOR ITS PHOTOCATALYTIC EVALUATION IN THE DEGRADATION OF EMERGING CONTAMINANTS**

  Daniel Sánchez Martínez[1], Rodrigo Vázquez Velázquez[1], Diana Berenice Hernandez Uresti[2], Alexis Ruiz Garcia[1]

  [1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Civil, Departamento de Ecomateriales y Energía, Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ciencias Fisico Matematicas, Mexico.

- **SF5-P022 SYNTHESIS OF MONOLITHS OF SILICON DIOXIDE AS SUPPORT OF A SEMICONDUCTOR OXIDE OF TRANSITION METAL (TiO2-Cu) FOR THE PRODUCTION OF HYDROGEN THROUGH PHOTODESCOMPOSITION OF WATER.**

  Arnold Santiago Segovia Dominguez[1], Rosendo López González[1], Mayra Angelica Alvarez Lemus[2], Karina del Carmen Jimenez Cordova[1], Daniela Jazmin Hernandez Castillo[1]

  [1]Universidad Juárez Autónoma de Tabasco, Division Academica de Ingenieria y Arquitectura, Mexico. [2]Universidad Internacional Iberoamericana, Division Academica de Ingenieria y Arquitectura, Mexico.

- **SF5-P023 TB-SUBSTITUTED HYDROXYAPATITE POWDERS FOR 2,4-DICHLOROPHENOXYACETIC ACID PHOTODEGRADATION APPLICATIONS**

  Victor Manuel Suarez Quezada[1], Jenniffer Katherine Olarte Villamizar[1]

  [1]Instituto Politécnico Nacional - IPN, Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Mexico.

- **SF5-P024 CRYSTALLINE STRUCTURE, SURFACE CHEMISTRY AND CATALYTIC PROPERTIES OF Fe3+ DOPED TiO2 SOL–GEL CATALYSTS FOR PHOTOOXIDATION OF 2,4–DICHLOROPHENOXYACETIC ACID**

  Ulises Arellano Sánchez[1,2], Jin An Wang[1], Maximiliano Asomoza[3], Silvia Solis[4], Victor Hugo Lara[4], Li Fang Chen[1]

  [1]Instituto Politécnico Nacional - IPN, ESIQIE, Mexico. [2]Universidad Autónoma Metropolitana, Departamento de Química, Mexico. [3]Universidad Autónoma del Estado de Morelos, Química, Mexico. [4]Universidad Autónoma Metropolitana, química, Mexico.

- **SF5-P025 PREPARATION AND CHARACTERIZATION OF Zn-DOPED TiO_2 THIN FILMS FOR PHOTOCATALYTIC APPLICATIONS**

  Laura Jazmín Velazquez Yedra[1,2], Saúl Romero Hernandez[1], Victor Hugo Castrejon Sanchez[2], Luis Escobar Alarcon[1]

  [1]Instituto Nacional de Investigaciones Nucleares (ININ), Ciencias Basicas, Mexico. [2]Tecnológico de Estudios Superiores de Jocotitlán, Ingenieria en materiales, Mexico.

- **SF5-P026 DETERMINATION OF THE TiO_2(B) PHASE IN Ce/TiO_2, La/TiO_2 AND Fe/TiO_2 NANOPOWDERS AND THEIR EFFECT IN PHOTOCATALYTIC PERFORMANCE ON THE DEGRADATION OF 4-CP AND P-CRESOL**

Amauri Alberto Rincon Lopez[1], Mariana Giselle Hernandez Jimenez[1], David Salvador Garcia Zaleta[1], Jorge Galaviz Pérez[1], Rosa del Rosario Collado Torres[1], Silvia Beatriz Brachetti Sibaja[2], Aide Torres[3], Miguel Antonio Domínguez Crespo[3]
[1]Universidad Juárez Autónoma de Tabasco, División Académica Multidisciplinaria de Jalpa de Méndez, Mexico. [2]Instituto Tecnológico de Ciudad Madero, Depto. de Ing. Química y Bioquímica, Mexico. [3]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Unidad Altamira, IPN, CICATA-IPN, Mexico.

- **SF5-P027 SYNTHESIS BY SOL–GEL OF GA_2O_3/ TIO_2 SEMICONDUCTORS FOR PHOTOCATALYTIC GENERATION OF HYDROGEN**

Michelle Navarrete[1], Sandra Cipagauta[1], Ricardo Gómez[1]
[1]Universidad Autónoma Metropolitana, Departamento de Química, Mexico.

- **SF5-P028 APPLICATION OF ZEOLITES FOR THE ADSORPTION OF EMERGING CONTAMINANTS IN WATER TREATMENT TECHNOLOGIES**

Aldo Arteaga Morales[1], Vitalii Petranovskii[1]
[1]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Nanocatalysis, Mexico.

- **SF5-P029 CADMIUM REMOVAL FROM AQUEOUS SOLUTION USING THE ACID MODIFIED ASPARAGUS WASTE: BIOSORPTION AND KINETICS STUDIES**

Brenda Celaya García[1], Guillermo Andrade Espinosa[1], José Diego Bárcenas Torres[1], Omar Augusto Sánchez Ortiz[1], José Juan Alvarado Flores[1], Carmen Cecilia García Castillo[1]
[1]Instituto Tecnológico del Valle de Morelia, Ciencias Ambientales, Mexico.

- **SF5-P030 SYNTHESIS AND CHARACTERIZATION OF FUNCTIONALIZED MESOPOROUS MATERIALS FOR ADSORPTION OF METALS IN AQUEOUS MEDIUM**

Andrea Victoria Dueñas Jaco[1], José Benito Pelayo Vázquez[1], María Guadalupe Pérez García[1], Irán Fernando Hernández Ahuactzi[1], Sara Cortés[2]
[1]Universidad de Guadalajara, Ciencias Básicas, Aplicadas e Ingenierías, Mexico. [2]Universidad de Guadalajara, Química, Mexico.

- **SF5-P031 MONOLITHS SiO_2 WITH HIERARCHICAL POROSITY FUNCTIONALIZED WITH –SH GROUPS FOR ADSORPTION OF HG (II)**

Veronica Hernandez Morales[1], Eric M. Rivera Muñoz[1], Rufino Nava Mendoza[2], Carmen Peza Ledesma[1], Mario Alberto López Mendoza[3]
[1]Universidad Nacional Autónoma de México, CFATA-UNAM, Mexico. [2]Universidad Autónoma de Querétaro, nanotecnologia, Mexico. [3]Centro de Física Aplicada y Tecnología Avanzada UNAM, Posgrado, Mexico.

- **SF5-P032 MODELING OF ACTIVATED CARBON DESORPTION ISOTHERMS**

Ricardo Aragon Martinez[1], Laura Victoria Aquino González[1], Alejandra Rojas Olivos[1], Emilio Hernandez Bautista[1], Susana Edith Hernández Arrazola[1]
[1]Universidad de la Salle, Ingeniería ambiental, Mexico.

- **SF5-P033 STUDY ON COMPRESSION MOLDING OF Ti_6Al_4V FIBER FOR PRODUCTION OF POROUS IMPLANT WITH CONTROLLED-RELEASE CAPACITY**

Seongsik Lim[1], Hyunjong Kim[2], Kiho Jung[1], Youngchul Shin[1], Hojoon Choi[1], Seongjoo Lim[1]
[1]Korea Institute of Industrial Technology, Metal Forming R&D group, South Korea. [2]Korea Institute of Industrial Technology, Surface treatment R&D group, South Korea.

- **SF5-P034 ADSORPTION OF TEXTILE DYES USING AN ACTIVATED CARBON AND CROSSLINKED POLYVINYL PHOSPHONIC ACID COMPOSITE**

Alejandra Alicia Pelaez Cid[1], Martín Caldera Villalobos[2], Ana María Herrera González[2]
[1]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniería, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Instituto de Ciencias Básicas e Ingeniería, Mexico.

- **SF5-P035 MODIFIED POLYURETHANE FOAM (PU) COMPOUNDS STUDY FOR WASTEWATER BIOFILTRATION**

Alejandra Ramirez Gonzalez[1], Vladimir Alonso Escobar Barrios[1]
[1]Instituto Potosino de Investigación Científica y Tecnológica A.C., Materiales Avanzados, Mexico.

- **SF5-P036 MAGNETIC BIODEGRADABLE MACROPOROUS POLYLACTIDE / POLYCAPROLACTONE BLEND SHYNTHESIZED FROM EUTECTIC MIXTURE BASED HIGH INTERNAL PHASE EMULSIONS AND ITS APPLICATION AS DYE ADSORBENTS**

Carolina Livier Recio Colmenares[1]
[1]Universidad de Guadalajara, Agua y energía, Mexico.

- **SF5-P037 MAGNETIC BIOCOMPOSITE ADSORBENT: SYNTHESIS, CHARACTERIZATION AND APPLICATION IN THE REMOVAL OF PESTICIDES**

Helen Paola Toledo Jaldin[1], Alien Blanco Flores[2], Gustavo López Téllez[3], Víctor Sánchez Mendieta[3], Alfredo R. Vilchis Nestor[3]

[1]Universidad Autónoma del Estado de México, Química, Mexico. [2]Tecnológico de Estudios Superiores de Tianguistenco, Mecánica, Mexico. [3]Centro Conjunto de Investigación en Química Sustentable UAEM-UNAM (CCIQS), Materiales, Mexico.

- **SF5-P038 POLYELECTROLYTES CONTAINING TETRAZOLE PENDANT GROUPS USEFUL FOR TEXTILE DYE REMOVAL**

Martín Caldera Villalobos[1], Alejandra Alicia Peláez Cid[2], Miriam Amelia Martins Alho[3], Ana María Herrera González[1]

[1]Universidad Autónoma del Estado de Hidalgo, Instituto de Ciencias Básicas e Ingeniería, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniería, Mexico. [3]Universidad de Buenos Aires, Facultad de Ingeniería, Argentina.

- **SF5-P039 A REVIEW FOR ABSORPTION OF NITRIC OXIDE IN AN AQUEOUS SOLUTIION OF FERROUS CHELATES**

Sun Hyung Kim[1], Hyeongjeong Cho[1], Hyung Chul Yoon[1]

[1]Korea Institute of Energy Research, Clean Fuel Laboratory, South Korea.

- **SF5-P040 COLORIMETRIC DETECTION OF METALS IN WATER BY BIODEGRADABLE SENSORY POLYMERS**

Astrid Hernandez[1], Hisila Santacruz Ortega[1], Agustín Gómez Álvarez[2], Rosa Elena Navarro Gautrín[1]

[1]Universidad de Sonora, Departamento de Investigación en Polímeros y Materiales, Mexico. [2]Universidad de Sonora, Departamento de Ingeniería Química y Metalurgia, Mexico.

- **SF5-P041 IRON NITROPRUSSIDE FOR ARSENIC REMOVAL FROM AQUEOUS MEDIUM**

Paula Montserrat Crespo Barrera[1], Oscar Fernando Odio Chacón[2], Herlys Viltres Cobas[1], Edgar Obed Pérez Reyes[1], Edilso Reguera Ruiz[1]

[1]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Nanomateriales, Mexico. [2]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, , Mexico.

- **SF5-P042 SYNTHESIS AND CHARACTERIZATION OF Fe_3O_4@α-FeOOH FOR ARSENIC SPECIES REMOVAL IN AQUEOUS MEDIUM**

Herlys Viltres Cobas[1], Oscar Fernando Odio Chacón[1], Gala Montiel Rubies[2], Paula Montserrat Crespo Barrera[1], Susel del Sol Fernandez[1], Edgar Obed Pérez Reyes[1], Raul Borja Urby[3], Cruz Paredes Sánchez[4], Edilso Reguera Ruiz[1]

[1]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Nanomateriales, Mexico. [2]Universidad de la Salle, Medio Ambiente, Mexico. [3]Centro de Nanociencias y micro y Nanotecnologías del IPN, Microscopía, Mexico. [4]Escuela Superior de Ingeniería Química e Industrias Extractivas, Ingenieria Química, Mexico.

- **SF5-P043 FLOTATION OF A COMPLEX SULFIDE ORE WITHOUT CYANIDE AS PYRITE DEPRESSANT**

Laura Angeles[1], Martín Reyes Pérez[1], Miguel Perez Labra[1], Elia Palacios[2], Francisco Patiño[3], Julio Cesar Juarez Tapia[1]

[1]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Mexico. [2]Instituto Politécnico Nacional - IPN, ESIQUIE, Mexico. [3]Universidad Politécnica Metropolitana de Hidalgo, Ingeniería en Energía, Mexico.

- **SF5-P044 MULTIFACTORIAL ANALYSIS OF THE FILTRATION OF MOLTEN SULFUR IN THE PRESENCE OF AUXILIARY SUBSTANCE**

Mirsalim Asadov[1], Tamella Kurbanzadeh[1]

[1]Institute of Catalysis and Inorganic Chemistry, Azerbaijan National Academy of Sciences, Baku, Azerbaijan.

- **SF5-P045 MEASUREMENTS OF THE THERMAL TRANSPORT PROPERTIES OF HEPTANE-ISOOCTANE MIXTURES**

Adrian Felipe Bedoya Perez[1], Salvador Alvarado[1], Ernesto Marin Moares[1]

[1]Instituto Politécnico Nacional - IPN, Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Mexico.

- **SF5-P046 EFFECTS OF CLIMATIC CONDITIONS ON PERFORMANCE OF MULTICRYSTALLINE SILICON SOLAR PHOTOVOLTAIC MODULES IN PUEBLA, MÉXICO**

Samuel de la Luz Merino[1], José Martín Ochoa Cáceres[2]

[1]Universidad Tecnológica de Puebla, Procesos industriales, Mexico. [2]Universidad Tecnológica de Puebla, Energías Renovables, Mexico.

- **SF5-P047 MECHANICAL AND THERMAL PROPERTIES OF CHITOSAN- STARCH REINFORCED**

WITH CHICKEN KERATIN MATERIALS PRODUCED BY EXTRUSION PROCESS

Cynthia Graciela Flores Hernandez[1], Ana Laura Martinez Hernandez[1], Carlos Velasco Santos[1]

[1]Instituto Tecnológico de Querétaro, Departamento de Posgrado e Investigacion, Mexico.

- **SF5-P048 COMPARATIVE STUDY OF SYNTHESIS AND CHARACTERIZATION OF THE Bi$_{1-x}$(Y$_{1-y}$Ba$_{y}$)$_x$FeO$_3$ with x = 0.07; y = 0, 0.5), USING MILL SCALE IRON WASTE.**

Yasmin Alejandra Garcia Tuta[1,2], Julieth Alexandra Mejia Gomez[3], Carlos Arturo Parra Vargas[2]

[1]Universidad Antonio Nariño, , Colombia. [2]Universidad Pedagógica y Tecnológica de Colombia, Boyacà, Colombia. [3]Universidad Antonio Nariño, Boyacà, Colombia.

- **SF5-P049 TERA HERTZ EMISSION SIMULATION FOR FOOD QUALITY CONTROL IN-SITU APPLICATION ON SOLAR DRYER**

Erick H. Domínguez[1], Jorge Evaristo Conde Diaz[2], Edgar Briones[3], Ja Reyes Nava[1], Heber Vilchis[1]

[1]Universidad de Ciencias y Artes de Chiapas, Instituto de Investigación e Innovación en Energías Renovables, Mexico. [2]Universidad de Ciencias y Artes de Chiapas, CONACYT-Instituto de Investigación e innovación en energías renovables, Mexico. [3]ITESO, Universidad Jesuita de Guadalajara, Matematicas y Fisica, Mexico.

- **SF5-P050 CARACTERIZACIÓN Y EVALUACIÓN DEL CACAO COB HUSK (Theobroma cacao l) PARA OBTENER AZÚCARES FERMENTABLES PARA LA PRODUCCIÓN DE BIOETANOL**

Alonso Guadalupe Hernández Mendoza[1], Sergio Saldaña Trinidad[2], Bianca Yadira Perez Sariñana[3]

[1]Universidad Politécnica de Chiapas, Maestría en Energía Renovables, Mexico. [2]Universidad Politécnica de Chiapas, Director de ingeniería Agroindustrial, Mexico. [3]Universidad Politécnica de Chiapas, Investigacion, Mexico.

- **SF5-P051 SENSORY POLYMER WITH A THIOUREA SUBUNIT FOR ANION DETECTION IN WATER**

Bruno Zavala Contreras[1], Hisila del Carmen Santacruz Ortega[1]

[1]Universidad de Sonora, Departamento de Investigación en Polímeros y Materiales, Mexico.

- **SF5-P052 POLIMERYC OPTIC FIBER PHOTOANODES USING TiO_2 MAGNELI PHASE AS A CATALYST**

Victor Manuel Becerril Estrada[1], Irma Robles[1], Luis A. Godínez[1]

[1]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Electrochemistry, Mexico.

- **SF5-P053 EFFECT OF THE FORMULATION OF CATALYSTS PREPARED BY A HETEROPOLYACID ($H_3PMo_{12}O_{40}$) ON THERMAL AND CATALYTIC HYDROTREATING OF FAME**

Ricardo Emmanuel Peralta Robledo[1], Felipe Sanchez[2], Sergio Odin Flores Valle[3], Daniel Martin Márquez López[1]

[1]Instituto Politécnico Nacional - IPN - ESIQIE, SEPI ESIQIE, Mexico. [2]Instituto Politécnico Nacional - IPN - ESIQIE, Ingeniería Química Petrolera-UCyEH, Mexico. [3]Instituto Politécnico Nacional - IPN - ESIQIE, Laboratorio de Química Verde, Mexico.

- **SF5-P054 USE OF MODIFIED ELECTRODES FOR THE PROCESS OF ELECTROCHEMICAL LEACHING OF METALS FROM E-WASTE**

Jaret del Carmen Ramírez Castellanos[1], María Aurora Veloz Rodríguez[1], Victor Esteban Reyes Cruz[1], Mayra Luna Trujillo[2], Arturo Manzo Robledo[2], Josè Angel Cobos Murcia[1,3]

[1]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Mexico. [2]Instituto Politécnico Nacional - IPN - ESIQIE, Escuela Superior de Ingeniería Química e Industrias Extractivas, Mexico. [3]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Consejo Nacional de Ciencia y Tecnología, Mexico.

- **SF5-P055 COMPLEMENTARY EXPERIMENTAL-SIMULATIONAL STUDY OF A NO IONIC SURFACTANT TO THE EXTRACTION PROCESS OF METALLIC IONS.**

María del Rosario Rodríguez Hidalgo[1], César Soto Figueroa[2], Luis Vicente[3]

[1]Facultad de Estudios Superiores Cuautitlán, UNAM., Ciencias Químicas, Mexico. [2]Universidad Autónoma de Chihuahua, Ciencias Químicas, Mexico. [3]Facultad de Química, UNAM, Fisica y Química Teórica, Mexico.

- **SF5-P056 SYNTHESIS OF MESOPOROUS SILICA FUNCTIONALIZED AND ITS PHYSICAL AND CHEMICAL CHARACTERIZATION TO ELIMINATE HEAVY METALS IONS**

Itzayana Lorely Cruz Pastrana[1], Areli Marlen Salgado Delgado[1], Jenaro Leocadio Varela Caselis[2], René Salgado Delgado[3], Alfredo Olarte Paredes[4]

[1]Instituto Tecnológico de Zacatepec, Ing. Química y Bioquímica, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Centro Universitario de Vinculación y Transferencia de Tecnología, Mexico.

[3]Instituto Tecnológico de Zacatepec, Ing. Química y Bioquímica/ División de Estudios de Posgrado e Investigación, Mexico. [4]Instituto Tecnológico de Zacatepec, Metal-Mecánica, Mexico.

- **SF5-P057 INFLUENCE OF TITANIUM SURFACE TREATMENT ON THE PROPERTIES OF Ti/SnO_2-Sb ELECTRODES**

  Jazmín Andrade[1], Teresa Zayas[2], Leonardo Salgado[3]

  [1]Benemerita Universidad Autonoma de Puebla, Posgrado en Ciencias Ambientales, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Centro de Química, Mexico. [3]Universidad Autónoma Metropolitana, Chemistry, Mexico.

- **SF5-P058 DEVELOPMENT OF MIXED OXIDES BASED ON CeO_2 AND THEIR EVALUATION AS CATALYSTS IN THE OXIDATION REACTION OF CARBONACEOUS PARTICULATE MATERIAL FROM EMISSIONS OF DIESEL ENGINES**

  Wendy Noemi Téllez Salazar[1], José Ortiz Landeros[1]

  [1]Instituto Politécnico Nacional - IPN, CEPROMIM, Mexico.

WEDNESDAY, AUGUST 22
ROOM: TULUM G

Session 4

SESSION CHAIR: CONCHI O. ANIA

- **09:00 - 09:30 SF5-O019 Invited Talk SYNTHESIS OF NANOCATALYSTS WITH INTERMETALLIC CORES AND RANDOM ALLOY SHELLS**

  Sara Skrabalak[1]

  [1]Indiana University Bloomington, Chemistry, United States.

- **09:30 - 09:45 SF5-O020 SYNTHESIS OF COBALT AT NANO-SCALE WITH LUCERNE (MEDICAGO STIVA) AND PEA (PISUM SATIVUM)**

  Adriana Nereida Avendaño Gavira[1], Elizabeth Chavira[1], Guadalupe Trinidad Zavala Padilla[2], Adriana Tejeda Cruz[3]

  [1]Instituto de Investigaciones en Materiales, Dep. Baja dimensionalidad, Mexico. [2]NA, Unidad de microscopía electrónica, Mexico. [3]Instituto de Investigaciones en Materiales, Laboratorio de difracción de rayos X, Mexico.

- **09:45 - 10:00 SF5-O021 PREPARATION OF CERAMIC MEMBRANES OF NANOFILTRATION BY NANO-DEPOSITION TO BE USED IN THE PURIFICATION OF IMPACTED EFFLUENTS WITH DIFERENT CONTAMINANTS**

  Irlanda Cruz Reyes[1], Angel de Jesus Morales Ramírez[2]

  [1]Instituto Politécnico Nacional - IPN, Química, Mexico. [2]Instituto Politécnico Nacional - IPN, Materiales, Mexico.

- **10:00 - 10:15 SF5-O022 TRACE LEVEL PESTICIDE DETECTION UTILIZING GOLD NANOPARTICLES AND SURFACE ENHANCED RAMAN SPECTROSCOPY**

  Anne-Marie Dowgiallo[1]

  [1]Ocean Optics, Inc, Sensors, United States.

- **10:15 - 10:30 SF5-O023 SIMULTANEOUS DESORPTION/BIODEGRADATION OF BASIC FUCHSIN BY FUNGI AND RECOVERY OF TiO_2 NANOTUBES**

  Claudia Martinez R.[1], Mariana Hinojosa[2], Idania de Alba[1], Ismael Acosta[2], Facundo Ruiz[1]

  [1]Universidad Autónoma de San Luis Potosí, Facultad de Ciencias, Mexico. [2]Universidad Autónoma de San Luis Potosí, Facultad de Ciencias Químicas, Mexico.

- **10:30 - 10:45 SF5-O024 DEGRADATION OF ORGANOPHOSPHORUS COMPOUNDS WITH METALLIC NANOPARTICLES**

  Juan Rizo Estrada[1,2], David Diaz[1], Benito Reyes Trejo[3]

  [1]Facultad de Química, UNAM, Departamento de Inorgánica, Mexico. [2]Instituto Tecnológico y de Estudios Superiores de Monterrey, Escuela de Ingeniería y Ciencias, CCM, Mexico. [3]Universidad Autónoma de Chapingo, Laboratorio de Productos Naturales, Área de Química, Mexico.

- **10:45 - 11:00 SF5-O025 CHARACTERIZATION AND GENERATION OF POLYMERIC MEMBRANES BASED ON THERMOPLASTIC POLYURETHANES (TPU) FOR DIRECT CONTACT MEMBRANE DISTILLATION (DCMD)**

  Yareni Aguilar Costumbre[1], Juliette Alexandra Lambert[2], Vladimir Alonso Escobar Barrios[1]

  [1]Instituto Potosino de Investigación Científica y Tecnológica A.C., División de Materiales Avanzados, Polímeros, Mexico. [2]Centro de Innovación Aplicada en Tecnologías Competitivas (CIATEC), Estudio de procesos de Membranas, Mexico.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY IV NOBEL PRIZE IN CHEMISTRY 2016
PROF. BEN L. FERINGA

12:30 - 13:00 SF5-O026 Invited Talk ON THE ROLE OF SACRIFICIAL AGENT METHANOL AND SULFITE IONS DURING THE 2-NITROPHENOL TO 2-AMINOPHENOL PHOTOCATALYTIC REDUCTION
Ricardo Gómez[1], Diana Guerrero[1], Próspero Acevedo Peña[2], David Ramírez Ortega[1]
[1]Universidad Autónoma Metropolitana, Química, Mexico. [2]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Materiales, Mexico.

13:00 - 13:15 SF5-O027 PHOTOCATALYTIC DEGRADATION OF CYANIDE COMPLEXES USING TIO2/RGO HYBRIDS.
Jesus Arturo Mata Marquez[1], Miguel Angel Valenzuela Zapata[1], Jose Manuel Barrera Andrade[1], Elim Albiter Escobar[1]
[1]Escuela Superior de Ingeniería Química e Industrias Extractivas, Departamento de catálisis y materiales, Mexico.

13:15 - 13:30 SF5-O028 POLYMERIC PHOTOSENSITIZATION OF CORE/SHELL SiO_2-TiO_2 MATERIALS AND ITS PHOTOCATALYTIC PROPERTIES
Rosendo López González[1], Jorge Alberto Acosta Alejandro[1], Mayra Angelica Alvarez Lemus[1], Dora María Frías Márquez[1], Ricardo Gomez[2]
[1]Universidad Juárez Autónoma de Tabasco, División Académica de Ingeniería y Arquitectura, Mexico. [2]Universidad Autónoma Metropolitana, Departamento de Química, Mexico.

13:30 - 13:45 SF5-O029 ACTIVATED CARBON FROM AVOCADO PEEL FOR ADSORPTION OF TEXTILE DYES
Ana Gabriela Rodriguez Calderon[1], Mara Elena Mendoza Roman[2], Rafael Huirache Acuña[2], Raúl Cortés Martínez[3]
[1]Universidad Michoacana de San Nicolás de Hidalgo, Programa de Maestria en Ingeniería Ambiental, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ingeniería Química, Mexico. [3]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Químico Farmacobiología, Mexico.

13:45 - 14:00 SF5-O030 ZIRCONIUM ORGANOPHOSPHONATE NANOMATERIALS, FROM ADSORPION TO ULTIMATE DISPOSAL
Jessica Veliscek Carolan[1], Vittorio Luca[2], Aditya Rawal[3], Thorogood Gordon[1], Tracey Hanley[4]
[1]Australian Nuclear Science and Technology Organisation, Nuclear Fuel Cycle Research, Australia. [2]Centro Atómico Constituyentes - CNEA, Centro Atomico Constituyentes, Argentina. [3]The University of New South Wales, Mark Wainwright Analytical Centre, Australia. [4]Australian Nuclear Science and Technology Organisation, Nuclear Materials Development and Characterisation, Australia.

14:00 - 16:00 Lunch time

Session 5

SESSION CHAIR: ROSENDO LÓPEZ GONZÁLEZ

16:00 - 16:30 SF5-O031 Invited Talk IMPROVEMENT OF REACTIVITY OF DICALCIUM PHOSPHATE DIHYDRATE (DCPD) FOR REMOVAL FLUORIDE ION IN THE WATER ENVIRONMENTS (INVIED)
Masamoto Tafu[1], Saori Takamatsu[1], Takeshi Toshima[2]
[1]National Institute of Technology, Toyama College, Department of Applied Chemistry and Chemical Engineering, Japan. [2]National Institute of Technology, Toyama College, Department of Mechanical Engineering, Japan.

16:30 - 16:45 SF5-O032 EFFECT OF UV RADIATION ON THE STRUCTURE OF GRAPHENE OXIDE AND ITS IMPACT ON ITS ADSORPTION CAPACITY OF AS (III) IN SOLUTION
Waldo Roberto Gallegos Perez[1], Claudia Alejandra Soto Ortiz[1], Ana Cecilia Reynosa Martinez[1], Ana Gabriela Navarro Tovar[1], Eddie Lopez Honorato[1]
[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV Unidad Saltillo, Ingenieria Ceramica, Mexico.

16:45 - 17:00 SF5-O033 A METHOD TO REDUCE WASTE OF CEMENTITIOUS MATERIALS
Erica Mejía Restrepo[1], Ximena Gaviria Gómez[2], Catalina Arroyave[2], Dallany Urrego[3,4]
[1]Universidad de San Buenaventura seccional Medellín, Facultad de Artes Integradas, Colombia. [2]Universidad de Medellín, Facultad de Ingenierías, Colombia. [3]SENA, Tecnoacademia, Colombia. [4]Universidad Nacional de Colombia, Facultad de Ciencias, Colombia.

17:00 - 17:15 SF5-O034 SUSTAINABLE CONSTRUCTION MATERIALS: RENEWABLE SYNTHESIS OF GLASS AND GLASS-CERAMICS USING SUGARCANE BAGASSE ASH (SCBA) AS MAIN RAW MATERIAL.
Jesus Abraham Perez Casas[1], Cristina Siligardi[2], Consuelo Mugoni[2], Juan Jacobo Ruiz Valdés[1], Antonio Alberto Zaldivar Cadena[3], Erika Iveth Cedillo González[1], Astrid Iriana Sánchez Vázquez[1]

[1]Universidad Autónoma de Nuevo León, Posgrado en Procesos Sustentables, Mexico. [2]Università degli Studi di Modena e Reggio Emilia, Department of Engineering Enzo Ferrari, Italy. [3]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Civil, Mexico.

- **17:15 - 17:30 SF5-O035 THE FATIGUE RESISTANCE OF RAP IN ASPHALT CONCRETE MIXES USING TWO DIFFERENT BINDERS**

Dale Diaz[1], Trevor Townsend[1], Lee Leon[1]

[1]The University of the West Indies, St. Augustine, Civil & Environmental Engineering, Trinidad and Tobago.

- **17:30 - 17:45 SF5-O036 SPATIAL DISTRIBUTION AND MOBILITY OF TOTAL ARSENIC AND LEAD IN URBAN SURFICIAL SOIL IN THE CITY OF DURANGO, MEXICO: THE GIS AND MINERAL IDENTIFICATION APPROACHES**

René Homero Lara Castro[1], Miguel Angel Escobedo Bretado[1], Fabiola Sagrario Sosa Rodríguez[2], Jorge Vázquez Arenas[3], Patricia Ponce Peña[1], Juan Manuel Hernández[1]

[1]Universidad Juárez del Estado de Durango, Facultad de Ciencias Químicas, Mexico. [2]Universidad Autónoma Metropolitana, Economía y Medio Ambiente, Mexico. [3]Instituto Politécnico Nacional - IPN, CMPL, Mexico.

WEDNESDAY, AUGUST 22
ROOM: TERRACE

- **18:30 -20:30 POSTER SESSION & COFFEE BREAK**

- **SF5-P059 MECHANICAL PROPERTIES IN CEMENT MATRIX WHIT MICRO-ENCAPSULATED PHASE CHANGE MATERIALS.**

Gildardo Javier Ziga[1]

[1]Universidad Autónoma de Nuevo León, FIME, Mexico.

- **SF5-P060 EVALUATION OF THE POZZOLANIC EFFECT OF THE MILLED BOROSILICATE CULLET AS PARTIAL REPLACEMENT IN CEMENT MORTARS**

Antonio Alberto Zaldivar Cadena[1], José Mauro Villarreal Ortega[1], Francisco Vázquez Acosta[1], Javier Rodrigo González López[1], Mayra Zyzlila Figueroa Torres[1], Miguel Angel Aguilar González[2], Nora Elizondo Villarreal[3], Astrid Iriana Sánchez Vázquez[4]

[1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Civil, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV Unidad Saltillo, Laboratorio de Microscopia, Mexico. [3]Universidad Autónoma de Nuevo León, Facultad de Ciencias Físico Matemáticas, Mexico. [4]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico.

- **SF5-P061 POLYURETHANE FOAM-PHENOLIC FOAM, A COMPARATIVE LIFE CYCLE ASSESSMENT**

Silvia Paola Venegas Segura[1], Israel Herrera Orozco[2], Martha Lilia Dominguez Patiño[1]

[1]Universidad Autónoma del Estado de Morelos, Facultad de Ciencias Químicas e Ingeniería, Mexico. [2]Centro de Investigaciones Energéticas, Medio Ambientales y Tecnológicas, Unidad de Análisis de Sistemas Energéticos, Spain.

- **SF5-P062 WATER AND CHLORIDE PERMEABILITY OF DEHYDRATED CACTI ADDITIONS TO INCREASE THE DURABILITY OF CEMENT-BASED MORTARS**

Andres Antonio Torres Acosta[1,2], Lilia Alejandra Díaz Cruz[3]

[1]Instituto Mexicano del Transporte, CIVIE, Mexico. [2]Universidad Marista de Queretaro, Construction Materials Laboratory, Mexico. [3]Element 5, CITEC Laboratory, Mexico.

- **SF5-P063 PRODUCTION OF CONSTRUCTION MATERIALS WITH RECYCLED WASTE**

Juan Ruben Serralde Lealba[1], Juan Hernández Avila[1], Eduardo Cerecedo Saenz[1], Ventura Rodriguez Lugo[1], Eleazar Salinas Rodríguez[1], María Isabel Reyes Valderrama[1]

[1]Universidad Autónoma del Estado de Hidalgo, Ciencias de la Tierra y Materiales, Mexico.

- **SF5-P064 ELABORATION OF BRICKS FROM REUSED POLYETHYLENE TEREPHTHALATE (PET)**

Roman Oscar Rosas Carpinteyro[1], Rubén Jonatan Aranda García[1], Daniel Cruz Gonzalez[1]

[1]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniería Química, Mexico.

- **SF5-P065 SYNTHESIS AND CHARACTERIZATION OF SELF-REPAIRING CONCRETE FOR CRACK HEALING BASED ON BACTERIA AND THEIR APPLICATION IN STRUCTURES**

Jhon Alexander Peñafiel Castro[1], Martin Eduardo Espitia Nery[1], Dery Esmeralda Corredor[1]

[1]Corporación Universitaria Minuto de Dios, Engineering Faculty, Colombia.

- **SF5-P066 DESIGN OF ASPHALT MIXTURES WITH 20% OF RECYCLED CONCRETE AGGREGATES IN SUBSTITUTION OF THE NATURAL PETROUS AGGREGATE**

Carlos Uriel Espino Gonzalez[1], Wilfrido Martinez Molina[1], Hugo Luis Chávez García[1], Elia Mercedes Alonso Guzman[1], Cindy Lara Gomez[1], Job Daniel Alvarez Pita[1], Noel Diaz Gonzalez[1], Marco Antonio Mondragon Ornelas[1], Judith Alejandra Velazquez Perez[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Civil Engineering Faculty, Mexico.

- **SF5-P067 MECHANICAL PROPERTIES OF LIGHTWEIGHT HYDRAULIC CONCRETES FROM METALLURGICAL SLAGS AND ALUMINUM RESIDUES**

Ricardo Xicotencatl Magallanes Rivera[1], Eduardo Cabello Ovalle[1], Juan Carlos Ortiz Cuellar[1], Marisol Gallardo Heredia[1], Ulises Avila López[1]

[1]Universidad Autónoma de Coahuila, Facultad de Ingeniería, Mexico.

- **SF5-P068 EFFECT OF THE ADDITION OF ZEOLITE IN THE PHYSICAL MECHANICAL PROPERTIES OF A MONTMORILLONITIC CLAY OF SAN LUIS POTOSÍ**

Angelica Lara[1], Juana María Miranda[2], Lilia Narvaez[2], Carmen Ojeda[3]

[1]Universidad Autónoma de San Luis Potosí, Doctorado Institucional en Ciencia e Ingeniería de Materiales, Mexico. [2]Universidad Autónoma de San Luis Potosí, Facultad del Hábitat, Mexico. [3]Universidad Autónoma de San Luis Potosí, Instituto de Metalurgia, Mexico.

- **SF5-P069 EQUIPMENT FOR THERMAL CONDUCTIVITY MEASUREMENT APPLIED TO NEW BUILDING MATERIALS**

Omar Christian Benitez[1], Octavio Cázarez Candia[2], Minerva Vargas Vega[1], Jose Campos Alvarez[3], José Efraín Ruiz Ramírez[1], Jorgelí Riquelme Arizmendi[1]

[1]Instituto Tecnológico de Zacatepec, Metalmecánica, Mexico. [2]Instituto Mexicano del Petróleo, Yacimientos Fracturados, Mexico. [3]Instituto de Energías Renovables Universidad Nacional Autónoma de México, Energía, Mexico.

- **SF5-P070 HYBRID CEMENTS BASED ON FLY ASH, METAKAOLIN AND CLINKER**

Adriagni Barboza[1], Lauren Gomez[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico.

- **SF5-P071 EFFECT OF THE METAKAOLIN AND WASTE GLASS ON COMPRESSIVE STRENGTH IN PASTES HYBRID ALKALINE CEMENT**

Magnolia Soto Felix[1], Jesús Adrián Baldenebro López[1], Francisco Baldenebro Lopez[1]

[1]Universidad Autónoma de Sinaloa, Facultad de Ingeniería Mochis - Posgrado en Ciencias de la Ingeniería, Mexico.

- **SF5-P072 TRACE LEVEL PESTICIDE DETECTION UTILIZING GOLD NANOPARTICLES AND SURFACE ENHANCED RAMAN SPECTROSCOPY**

Anne-Marie Dowgiallo[1]

[1]Ocean Optics, Inc, Sensors, United States.

- **SF5-P073 OBTAINING PH-SENSITIVE HYBRID SILICA-CHITOSAN NANOPARTICLES FOR BIOSENSORS**

Daniela Jazmín Hernández Castillo[1], Mayra Angelica Alvarez Lemus[1], Erick Natividad de la Cruz Hernández[2], Patricia Quintana Owen[3]

[1]Universidad Juárez Autónoma de Tabasco, División Académica de Ingeniería y Arquitectura, Mexico. [2]Universidad Juárez Autónoma de Tabasco, División Académica Multidisciplinaria de Comalcalco, Mexico. [3]CINVESTAV-Mérida, Departamento de Física Aplicada, Mexico.

- **SF5-P074 SYNTHESIS AND CHARACTERIZATION OF NANOSTRUCTURED NiO FILMS FOR CATALYTIC ACTIVITIES OF NAPROXEN AND NAPHTHALENE**

Lizbeth Herrera Colin[1], Martín Fernando Sosa Rojas[1], José Alberto Andraca Adame[1], Francisco Javier Hernandez Cuevas[2], Hugo Martínez Gutiérrez[2], Julia Liliana Rodríguez Santillán[3], Karen Ailed Neri Espinoza[4]

[1]Instituto Politécnico Nacional - IPN, UPIIH, Mexico. [2]Instituto Politécnico Nacional - IPN, CNMN, Mexico. [3]Instituto Politécnico Nacional - IPN, ESIQIE, Mexico. [4]Instituto Politécnico Nacional - IPN, ENCB, Mexico.

- **SF5-P075 EFFECT OF DOUBLE-LAYER STRUCTURE ON THE MULTI-STEP ELECTRON-TRANSFER KINETICS OF CO_2 ELECTROCHEMICAL REDUCTION AT SEMICONDUCTOR CATHODES BEARING Ag, Cu, AND BIMETALLIC Ag/Cu NANOPARTICULATE ARRAYS ELECTRODEPOSITED BY POTENTIOSTATIC DOUBLE-PULSE TECHNIQUE.**

Juan Manriquez[1], Jorge Alberto Banda Alemán[1], German Orozco[1], Erika Bustos[1], Selene Sepulveda[2]

[1]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Department of Science, Mexico. [2]Universidad Autónoma de Nuevo León, Centro de Innovación, Investigación y Desarrollo en Ingeniería y Tecnología, Mexico.

- **SF5-P076 SYNTHESIS AND SIMULATION OF TiO_2 NANOPARTICLES DOPED WITH MANGANESE**

Juan Manuel Vargas Angeles[1], Nahavi Eduardo Meneses Roldán[1], Ariadna Sanchez Castillo[1], María del Pilar Gutiérrez Amador[1]

[1]Universidad Autónoma del Estado de Hidalgo, Escuela Superior de Apan, Mexico.

- **SF5-P077 EFFECT OF THE pH ON PROPERTIES OF SOL-GEL ZnO-ZrO_2 NANOPARTICLES**

Melina del Carmen Uribe Lopez[1], Mayra Angelica Alvarez Lemus[1], Maria Carmen Hidalgo Lopez[2], Patricia Quintana Owen[3], Daniel Hector Aguilar Treviño[3], Rosendo López González[1], Sheila Ariany Uribe Lopez[1], Jorge Alberto Acosta Alejandro[1]

[1]Universidad Juárez Autónoma de Tabasco, Division academica de ingenieria y arquitectura, Mexico. [2]Instituto de Ciencia de Materiales de Sevilla, Materiales, Spain. [3]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Unidad Merida, Mexico.

- **SF5-P078 SYNTHESIS OF IRON NANOPARTICLES ONTO MICROFIBRILLATED CELLULOSE SUPPORTS FOR ADSORPTION OF FLUORIDE FROM AQUEOUS SOLUTIONS**

Adriana Vazquez Guerrero[1], Rafael Huirache Acuña[2], Raúl Cortés Martínez[3], Ruth Alfaro Cuevas Villanueva[4]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Posgrado Ingenieria Quimica, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Ingenieria Quimica, Mexico. [3]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Químico Farmacobiología, Mexico. [4]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigaciones en Ciencias de la Tierra, Mexico.

- **SF5-P079 ADSORPTION OF AQUEOUS Cd^{2+} AND Cu^{2+} IONS USING NANOPARTICLES OF CACO3 OBTAINED BY WASTED OYSTER SHELLS**

Shanty Teofani de la Cruz[1], Ariana del Carmen Luna de la Cruz[1], Angélica Silvestre López Rodríguez[1], Laura Lorena Díaz Flores[1], Candelario Ramón de Los Santos[1]

[1]Universidad Juárez Autónoma de Tabasco, Division Academica de Ingenieria y Arquitectura, Mexico.

- **SF5-P080 EFFECTS OF RELATIVE HUMIDITY AND TEMPERATURE ON ALKOXYSILANE-BASED NANOMATERIALS FOR STONE CONSERVATION**

Juan Illescas[1], Daniel Melendez[2], Diego Valadez[3], Julia Aguilar[2]

[1]Universidad Autónoma de Campeche, Centro de Investigacion en Corrosion, Mexico. [2]Universidad Autónoma Metropolitana, Ciencias Básicas, Mexico. [3]Company, Lasca Estudio, Mexico.

- **SF5-P081 METHYLENE BLUE DEGRADATION BY FENTON PROCESS USING DIFFERENT NANOSTRUCTURED CATALYSTS**

María del C. Cotto Maldonado[1], Francisco Marquez[1], Carmen Morant[2]

[1]Universidad del Turabo, Department of Chemistry and Physics, Puerto Rico. [2]Universidad Autónoma de Madrid, Departamento de Fisica Aplicada, Spain.

- **SF5-P082 INFLUENCE OF DUTY CYCLE ON THE CHEMICAL, MORPHOLOGICAL AND STRUCTURAL PROPERTIES OF PHOSPHATE IN TiO_2 COATINGS OBTAINED BY PLASMA ELECTROLYTIC OXIDATION**

Darwin Augusto Torres Ceron[1], Elisabeth Restrepo Parra[1], Daniel Escobar Rincón[2], Carlos Acosta Medina[1]

[1]Universidad Nacional de Colombia, Manizales, Colombia. [2]Universidad de Antioquía, Medellín, Colombia.

- **SF5-P083 POZZOLANIC ACTIVITY OF CANE BAGASSE ASH GENERATED IN THE SUGAR MILLS OF THE STATE OF MICHOACÁN**

Victor Hugo Blancas Herrera[1], Wilfrido Martinez Molina[1], Hugo Luis Chávez García[1], Elia Mercedes Alonso Guzman[1], Cindy Lara Gomez[1], Noel Diaz Gonzalez[1], Isaias Trujillo Calderon[1], Jose Wilbert Viveros Ramos[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Civil Engineering Faculty, Mexico.

- **SF5-P084 BIODIESEL PRODUCTION OF JATROPHA OIL USING CaO SUPPORTED ON SBA-15**

Ana Rebeca Martinez Martinez[1], Jin An Wang[1], Roberto Limas Ballesteros[1]

[1]Escuela Superior de Ingeniería Química e Industrias Extractivas, Sección de Estudios de Posgrados e Investigación, Mexico.

- **SF5-P085 POROSITY DEVELOPMENT OF ACTIVATED CARBON WITH H_3PO_4 FROM AGAVE ANGUSTIFOLIA HAW. BAGASSE**

Pablo Michel Pérez Macedo[1], Alejandra Rojas Olivos[1], Emilio Hernández Bautista[1], Laura Victoria Aquino González[1], Susana Edith Hernández Arrazola[1], Frank Manuel León Martínez[2], Felipe de Jesús Cano Barrita[2]

[1]Universidad de la Salle, Escuela de Ingenierías y Arquitectura, Mexico. [2]Instituto Politécnico Nacional - IPN, Laboratorio de Materiales, Mexico.

- **SF5-P086 SUGARCANE AGROINDUSTRIAL WASTE AS A PRECURSOR TO OBTAIN AN ACTIVATED CARBON/**

HEMATITE COMPOSITE FOR ENVIRONMENTAL APPLICATIONS

José Alfonso Rodríguez Nañez[1], Jorge Carlos Ríos Hurtado[1], Aglae Dávalos Sánchez[1], Evelyn Rodríguez Reyna[1], Juanita Yazmin Guevara Chavez[1]

[1]Universidad Autónoma de Coahuila, Facultad de Metalurgia, Mexico.

- **SF5-P087 CHARACTERIZATION OF SOLID WASTE FROM THE BASIC LEACHING OF ELECTRONIC SCRAP IN TIOSEMICARBAZIDE MEDIUM.**

Abner Hesli Rojas Calva[1], María Isabel Reyes Valderrama[1], Ventura Rodriguez Lugo[1], Juan Hernández Avila[1], Eduardo Cerecedo Saenz[1], Eleazar Salinas Rodriguez[1]

[1]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Instituto de Ciencias Básicas e Ingeniería, Mexico.

- **SF5-P088 BIOETHANOL PRODUCTION FROM LIGNOCELLULOSIC BIOMASS OF BANANA INDUSTRY (Musa Cavendish)**

Frinne Yomeli Cruz Pastrana[1], Areli Marlen Salgado Delgado[1], Eric Reyes[2], Carla de la Cerna Hernandez[2]

[1]Instituto Tecnológico de Zacatepec, Ing. Química y Bioquímica, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Centro Universitario de Vinculación y Transferencia de Tecnología, Mexico.

- **SF5-P089 CHARACTERIZATION OF BIOGAS FROM WASTE OF PINEAPPLE (Ananas comosus L. Merril)**

Esteban Estrada Govea[1], José Antonio Azamar Barrios[2], José Ramón Laines Canepa[3], Gloria Ivette Bolio López[1], Israel Ávila Lázaro[3], Rudy Solís Silvan[4], Jose Aurelio Sosa Olivier[3]

[1]Universidad Popular de la Chontalpa, Química Verde y Desarrollo Sustentable, Mexico. [2]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, , Mexico. [3]Universidad Juárez Autónoma de Tabasco, Ingeniería Ambiental, Mexico. [4]Instituto Tecnologico Nacional De Mexico/Instituto Tecnológico Superior de Comalcalco, Enviromental, Mexico.

- **SF5-P090 INTEGRATION OF A PILOT PLANT FOR THE PRODUCTION OF BIODIESEL FROM MICROALGAE BY HETEROGENEOUS CATALYSIS WITH CAO-SBA-15**

Erick Medardo Tejada[1,2]

[1]Instituto Politécnico Nacional - IPN - ESIQIE, ESIQIE, Mexico. [2]Instituto Politécnico Nacional - IPN - ESIQIE, Green Chemistry, Mexico.

- **SF5-P091 PHYSICS PROPERTIES OF MUCILAGE OF O. FICUS INDICA AND O. SPINULIFERA**

Lorena Vargas Rodriguez[1], Manuel Luna Ramírez[1], Brandon Iván León Bata[2], Carlos Hernán Herrera Méndez[1], Ricardo Navarro Mendoza[3]

[1]Universidad de Guanajuato, Departamento de Ing. Agroindustrial. División de C. de la S. e Ingenierías. Campus Celaya-Salvatierra. Universidad de Guanajuato, Mexico. [2]Universidad de Guanajuato, Lic. en Ing. Agroindustrial. División de C. de la Salud e Ingenierías. Campus Celaya-Salvatierra. Universidad de Guanajuato, Mexico. [3]Universidad de Guanajuato, Departamento de Química. División de Ciencias Naturales y Exactas, Mexico.

- **SF5-P092 DEVELOPMENT OF AN INDUSTRIAL WASTEWATER FILTER BASED IN BIOMASSES ORANGE PEELS AND WALNUT SHELLS FOR THE ABSORPTION OF HEAVY METALS.**

Ramses Adrian Valdez Morales[1], Carlos Fernando Córdova Juárez[1], Francisco Javier Almendariz Tapia[1], Guillermo del Carmen Tiburcio Munive[1], Paul Zavala Rivera[1]

[1]Universidad de Sonora, Departamento de Ingeniería Química y Metalurgia., Mexico.

- **SF5-P093 EVALUATION OF THE BIOCHEMICAL METHANE POTENTIAL (BMP) OF AGRO-INDUSTRIAL WASTES THROUGH ANAEROBIC CO-DIGESTION**

Soleyda Torres Arellano[1], Bianca Perez[1], Sergio Saldaña[2], Pathiyamattom Sebastian[3]

[1]Universidad Politécnica de Chiapas, Energia, Mexico. [2]Universidad Politécnica de Chiapas, Agroindusria, Mexico. [3]Instituto de Energías Renovables Universidad Nacional Autónoma de México, Bioenergia, Mexico.

- **SF5-P094 ALCOHOLIC FERMENTATION OF PENTOSES AND HEXOSES THROUGH AUTOCHTHONOUS YEASTS FROM THE STATE OF CHIAPAS ISOLATED FROM ORGANIC COFFEE CHERRIES (COFFEA ARABICA L.)**

Cleyfi Villanet Toalá Hernández[1], Sergio Saldaña Trinidad[2], Bianca Yadira Pérez Sariñana[3], Ricardo Musule Lagunes[4]

[1]Universidad Politécnica de Chiapas, Maestria en Energias Renovables, Mexico. [2]Universidad Politécnica de Chiapas, Director de Ingeniería Agroindustrial, Mexico. [3]Universidad Politécnica de Chiapas, Área de Investigación, Mexico. [4]Universidad Michoacana de San Nicolás de Hidalgo, Área de posdoctorado, Mexico.

- **SF5-P095 TCE SOLUBILIZATION USING A SERIES OF COMMERCIAL BIODEGRADABLE ETHOXYLATED FATTY ALCOHOL SURFACTANTS**

  Javier Ivan Garza Arévalo[1], Federico Rossi[2], Margarita Sánchez[1]

  [1]Centro de Investigación en Materiales Avanzados, S.C., Unidad Monterrey, Mexico. [2]università degli studi salerno, Chemistry and Biology, Italy.

- **SF5-P096 PHOTOSENSITIZING EVALUATION OF THE NANOSTRUCTURED SEMICONDUCTOR TiO_2**

  Lizeth Martínez Cruz[1], Susana Nohemi Ventura Romero[2], Victor Hugo Castrejon Sanchez[1], Ma. Angeles Enríquez Pérez[1]

  [1]Tecnológico de Estudios Superiores de Jocotitlán, Materials engineering, Mexico. [2]Tecnológico de Estudios Superiores de Jocotitlán, Meterials Engineering, Mexico.

- **SF5-P097 VISIBLE LIGHT PHOTODEGRADATION OF 2-4 DICHLOROPHENOXYACETIC ACID IN AQUEOUS MEDIUM USING AG-NP HYBRID MATERIALS AS PHOTOCATALYSTS**

  Monserrat Suarez Quezada[1], Victor Manuel Suarez Quezada[1,2], Angeles Mantilla[1]

  [1]Instituto Politécnico Nacional - IPN, CICATA Legaria, Mexico. [2]Universidad Autónoma Metropolitana, Catedra CONACyT. Departamento de Química Grupo ECOCATAL, Mexico.

- **SF5-P098 SYNTHESIS AND CHARACTERIZATION OF TUNGSTEN TRIOXIDE MATERIALS FOR THE EVALUATION IN THE HETEROGENEOUS PHOTODEGRADATION OF 2, 4-DICHLOROPHENOXYACETIC ACID**

  Karina del Carmen Jimenez Cordova[1], Rosendo López González[1], Dora María Frías Márquez[1], Mayra Angelica Alvarez Lemus[1], Luis Alberto Feria Miranda[1]

  [1]Universidad Juárez Autónoma de Tabasco, Division Academica de Ingenieria y Arquitectura, Mexico.

- **SF5-P099 FABRICATION OF ZnO AT DIFFERENT CONCENTRATIONS OF PH THROUGH MICROWAVE-ASSISTED SYNTHESIS AND ITS PERFORMANCE IN PHOTODEGRADATION OF MB.**

  Fátima Zareth Izquierdo de la Cruz[1], Erik Ramirez Morales[1], Germán Pérez Hernández[1], Maria de Lourdes Ruiz Peralta[2], Edith Ponce[3], Roger Castillo Palomera[3], Lizeth Rojas Blanco[1]

  [1]Universidad Juárez Autónoma de Tabasco, , Mexico. [2]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniera Química, Mexico. [3]Universidad Politécnica de Chiapas, , Mexico.

- **SF5-P100 CIPROFLOXACIN TREATMENT BY $PbMoO_4$ PHOTOCATALYSTS SUPPORTED BY PHOTO-FENTON OXIDATION**

  Citlalli Alanis Moreno[1], Diana Berenice Hernandez Uresti[2], Daniel Sanchez Martinez[3]

  [1]Instituto Tecnológico Superior de Ciudad Hidalgo, , Mexico. [2]Universidad Autónoma de Nuevo León, CICFIM-Facultad de Ciencias Físico Matemáticas, Mexico. [3]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Civil, Departamento de Ecomateriales y Energía, Mexico.

- **SF5-P101 OBTAINING HYDROXYHYDROQUINONE BY PHOTOCATALYSIS OF 4-CHLORO-2-NITROPHENOL WITH SnS2/TiO2 COMPOSITE FILMS UNDER VISIBLE LIGHT**

  María Elena Hernández Torres[1], Mariela Hernández Jiménez[1], Justo Miguel Gracia Jiménez[2], Nicolás Rutilo Silva González[2]

  [1]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniería Química, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Instituto de Física, Mexico.

- **SF5-P102 SYNTHESIS AND CHARACTERIZATION OF Cu-TiO_2 COMPOSITES FILMS FOR THE PHOTODECOMPOSITION OF 4-CHLORO-2 NITROPHENOL WITH VISIBLE LIGHT**

  Doris Giovanna Mitre Martínez[1], María Elena Hernández Torres[1], Justo Miguel Gracia y Jiménez[2], Nicolás Rutilo Silva González[2]

  [1]Benemerita Universidad Autonoma de Puebla, Facultad de Ingeniería Química, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Instituto de Física, Mexico.

- **SF5-P103 STRUCTURAL CHARACTERIZATION OF $Bi_{1-x}Ba_xFeO_3$ (x=0.05-0.15) NANOPOWDERS AND THEIR PHOTOCATALYTIC PERFORMANCE IN THE DEGRADATION OF P-CRESOL**

  Mariana Giselle Hernandez Jimenez[1], David Salvador Garcia Zaleta[1], Rosa del Rosario Collado Torres[1], José Castro Baeza[1], Aide Torres[2], Miguel Antonio Domínguez Crespo[2]

  [1]Universidad Juárez Autónoma de Tabasco, División Académica Multidisciplinaria de Jalpa de Méndez, Mexico. [2]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Unidad Altamira, IPN, Unidad Altamira, Mexico.

- **SF5-P104 EFFECT OF pH AND SACRIFICIAL AGENTS IN THE PHOTOREDUCTION OF Cr^{6+} USING VISIBLE LIGHT AND CdS**

Luz Amparo Hernández Carabalí[1], Luis Lartundo Rojas[2], María de Los Ángeles Mantilla Ramírez[1], Jose Escobar Aguilar[3]

[1]Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Legaría, IPN, Posgrado en Tecnología Avanzada- Fotocatálisis, Mexico. [2]Centro de Nanociencias y micro y Nanotecnologías del IPN, Laboratorio de espectroscopia de fotoelectrones emitidos por rayos X, Mexico. [3]Instituto Mexicano del Petróleo, Instituto Mexicano del Petróleo, Mexico.

- **SF5-P105 SYNTHESIS OF NANOCOMPOSITES BASED ON GRAPHENE-TIN OXIDE AND ITS APPLICATION IN PHOTOCATALYSIS**

Horacio Edgardo Garrafa Gálvez[1], Clemente Guadalupe Alvarado Beltrán[1], Victor Manuel Orozco Carmona[2], Angelica Garzón Fontecha[3], Priscy Alfredo Luque Morales[4], Andrés Castro Beltrán[5]

[1]Universidad Autónoma de Sinaloa, Posgrado en Ciencias de la Ingenieria, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., Integridad y Diseño de Materiales Compuestos, Mexico. [3]Universidad Nacional Autónoma de México, Centro de Nanociencias y Nanotecnología, Mexico. [4]Universidad Autónoma de Baja California, Facultad de Ingeniería Arquitectura y Diseño, Mexico. [5]Universidad Autónoma de Sinaloa, Posgrado en Ciencias de la Ingeniería, Mexico.

- **SF5-P106 EFFICIENT DEGRADATION OF RHODAMINE B DYE BY PHOTOCATALYSIS AND SONOPHOTOCATALYSIS IN THE PRESENCE OF NiTiO3/ZnO**

Arturo Sebastian Galindo Luna[1], Ma. Elvira Zarazúa Morín[1], Ana Lucia Ontiveros Rivas[1], Víctor Jesús Gallegos Sánchez[2], Leticia Myriam Torres Guerra[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Civil, Departamento de Ecomateriales y Energía, Mexico. [2]Educativa, Nanotecnología, Mexico.

- **SF5-P107 CO_2 PHOTOREDUCTION WITH H_2O OVER Cr_2O_3 CATALYSTS USING SOLAR RADIATION AS ENERGY SOURCE**

Grisel Corro[1], Surinam Cebada Castillo[1], Fortino Bañuelos Bañuelos[1], Alfred Zehe[2], Araceli Ramírez[2], Emmanuel Guilleminot[3]

[1]Benemerita Universidad Autonoma de Puebla, Instituto de Ciencias, Mexico. [2]Benemerita Universidad Autonoma de Puebla, Facultad Ciencias Electrónica, Mexico. [3]Universidad de las Américas Puebla, Facultad de Física, Mexico.

- **SF5-P108 MICROWAVE-ASSISTED HYDROTHERMAL SYNTHESIS OF BiFeO3 POWDERS FOR POTENTIAL APPLICATION IN PHOTOCATALYSIS**

Lizbeth Camacho Escobar[1], Beatriz Zeifert[1], José Ortiz Landeros[1], Issis Claudette Romero Ibarra[2]

[1]Escuela Superior de Ingeniería Química e Industrias Extractivas, Metallurgy and Materials Department, Mexico. [2]Instituto Politécnico Nacional - IPN, Postgraduate, Mexico.

- **SF5-P109 DETERMINATION OF THE LIFE CYCLE OF THE MOVIES GIVES TiO2/CuO/Ag AND HIS ANTIMICROBIAL EFFECT ON E.coli IN VISIBLE LIGHT.**

Emily Dayana Bohorquez Bonilla[1], Andres Leon[1], César Quiñones[1], Adriana Ines Paez Morales[1]

[1]Fundacion Universdiad de America, Cundinamarca, Colombia.

- **SF5-P110 ELABORATION AND CHARACTERIZATION OF A FOAM FOR USE AS HYDROPONIC SUBSTRATE**

Silvia Paola Venegas Segura[1], Martha Lilia Dominguez Patiño[1], Israel Herrera Orozco[2], Joel Vargas[3], Mario Alfonso Murillo Tovar[4], Alvaro Torres Islas[5]

[1]Universidad Autónoma del Estado de Morelos, Facultad de Ciencias Químicas e Ingeniería, Mexico. [2]Centro de Investigaciones Energéticas, Medio Ambientales y Tecnológicas, Unidad de Análisis de Sistemas Energéticos, Spain. [3]Instituto de Investigaciones en Materiales (Unidad Morelia), Materiales, Mexico. [4]Centro de Investigaciones Químicas, Química Analítica, Mexico. [5]Centro de Investigación en Ingenieria y Ciencias Aplicadas, Ingeniería Aplicada, Mexico.

THURSDAY, AUGUST 23
ROOM: TULUM G

Session 6

SESSION CHAIR: SARA SKRABALAK

- **09:00 - 09:30 SF5-O037 Invited Talk MESOPOROUS MATERIALS FOR ENVIRONMENTAL APPLICATIONS**

Galo Soler Illia[1]

[1]Universidad Nacional de General San Martín, Instituto de Nanosistemas, Argentina.

- **09:30 - 09:45 SF5-O038 CHALLENGES ON THE USE OF GRAPHENE OXIDE AS ARSENIC ADSORBENT MATERIAL**

Ana Cecilia Reynosa Martinez[1], Ana Gabriela Navarro Tovar[1], Waldo Roberto Gallegos Perez[1],

Claudia Alejandra Soto Ortiz[1], Eddie Lopez Honorato[1]
[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV Unidad Saltillo, Unidad Saltillo, Mexico.

- **09:45 - 10:00 SF5-O039 DEVELOPMENT OF A NON-ISOCYANATE POLYURETHANE FOAM/SiO_2 NPS WITH CO_2 INCORPORATION AND ITS PROCESS TECHNOLOGY FOR THERMAL INSULATION**

Natalia Elisa Noriega Ramirez[1], Amanda Carrillo Castillo[2], Santos Jesus Castillo[3], Maria de la Luz Mota Gonzalez[4,5]
[1]Universidad Autónoma de Ciudad Juárez, Departamento de Ingeniería Industrial y Manufactura, Mexico. [2]Universidad Autónoma de Ciudad Juárez, Departamento de Ingeniería Eléctrica y Computación, Instituto de Ingeniería y Tecnología, Mexico. [3]Universidad de Sonora, Departamento de Investigación en Física, Mexico. [4]Consejo Nacional de Ciencia y Tecnologia - CONACYT, Departamento de Ingeniería Eléctrica y Computación, Instituto de Ingeniería y Tecnología, Mexico. [5]Universidad Autónoma de Ciudad Juárez, Departamento de Ingeniería Eléctrica y Computación, Mexico.

- **10:00 - 10:15 SF5-O040 KINETIC STUDY FROM OXIDATION PRODUCTS OF RuO_2-Ta_2O_5|Ti AND IrO_2-Ta_2O_5 | Ti ANODES USING ELECTROCHEMICAL IMPEDANCE SPECTROSCOPY**

Erika Bustos[1], Itzel León[1], Rosa Herrada[1], Juan Manríquez[1]
[1]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Science, Mexico.

- **10:15 - 10:30 SF5-O041 Mg/Al LAYERED DOUBLE HYDROXIDES (HDL) FOR BRINES TREATMENT**

Marena Molano Mendoza[1], Dayana Donneys Victoria[1], Miguel Angel Mueses[2], Gianluca Li Puma[3], Fiderman Machuca Martinez[1], Nilson Marriaga Cabrales[1]
[1]Universidad del Valle, Valle del Cauca, Colombia. [2]Universidad de Cartagena, Bolívar, Colombia. [3]Loughborough University, Loughborough, United Kingdom, Channel Islands & Isle of Man.

- **10:30 - 10:45 SF5-O042 GRAPHENE OXIDE FUNCTIONALIZED WITH CALIXARENES FOR THE ADSORPTION OF ARSENIC IN WATER**

Ana Gabriela Navarro Tovar[1], Ana Cecilia Reynosa Martinez[1], Eddie Lopez Honorato[1]
[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV Unidad Saltillo, Ingenieria Ceramica, Mexico.

- **10:45 - 11:00 SF5-O043 EVALUATION AND CHARACTERIZATION OF ACTIVATED CARBONS OBTAINED FROM AGROINDUSTRIAL WASTE**

Irma Robles[1], Luis A. Godínez[1]
[1]Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Electrochemistry, Mexico.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY V
PROF. GALO SOLER ILLIA

Session 7

SESSION CHAIR: MASAMOTO TAFU

- **12:30 - 13:00 SF5-O044 Invited Talk VISIBLE LIGHT ACTIVE PHOTOCATALYTIC MATERIALS: FROM LABORATORY TO PRACTICAL APPLICATIONS**

Iliana Ernestina Medina Ramírez[1]
[1]Universidad Autónoma de Aguascalientes, Chemistry, Mexico.

- **13:00 - 13:15 SF5-O045 STUDY OF TITANIA NANOPARTICLES BASED FILMS AS PHOTOACTIVE ELEMENTS FOR WATER DECONTAMINATION**

Alejandra Romero[1], José Luis Sánchez Salas[2], Joel Molina[1]
[1]Instituto Nacional de Astrofísica, Óptica y Electrónica, Electrónica, Mexico. [2]Universidad de las Américas Puebla, Ciencias Químico Biológicas, Mexico.

- **13:15 - 13:30 SF5-O046 STRUCTURAL CHARACTERIZATION OF $BiFeO_3$, $Bi_{1-x}Ba_xFeO_3$ and TiO_2/$BiFeO_3$ COMPOUNDS AND THEIR PHOTOCATALYTIC EVALUATION IN THE DEGRADATION OF 4-CHLOROPHENOL UNDER VISIBLE LIGHT**

Evaristo Salaya Geronimo[1], Angel Madrigal Magaña[2], David Salvador Garcia Zaleta[3], Jose Manuel Vazquez Rodriguez[3], Maria Guadalupe Hernandez Cruz[3], Gabriela Jácome Acatitla[3], Rosendo López González[4]
[1]Universidad Juárez Autónoma de Tabasco, Posgrado de Ciencias en Química Aplicada, Mexico. [2]Universidad Juárez Autónoma de Tabasco, Posgrado de Ciencias en Ingeniería, Mexico. [3]Universidad Juárez Autónoma de Tabasco, División Académica Multidisciplinaria de Jalpa de Méndez, Mexico. [4]Universidad Juárez Autónoma de Tabasco, DIvisión Academica de Ingenieria y Arquitectura, Mexico.

- **13:30 - 13:45 SF5-O047 ADDITIONS OF TiO_2 NANOPARTICLES IN ALKALI ACTIVATED CEMENTS**

Erika Agustina Llano Guerrero[1], Lauren Yolanda Gomez Zamorano[1]
[1]Universidad Autónoma de Nuevo León, Programa Doctoral en Ingeniería de Materiales, Facultad de ingeniería mecánica y eléctrica, Mexico.

■ **13:45 - 14:00 SF5-O048 CARBON EMISSIONS AND BUILDING DESIGN**
Donna Kacmar[1]
[1]University of Houston, Architecture, United States.

☒ **14:00 - 16:00 Lunch time**

Session 8

SESSION CHAIR: EDDIE LÓPEZ HONORATO

▸ **16:00 - 16:30 SF5-O049 Invited Talk ZEOLITIZATION OF INDUSTRIAL BYPRODUCTS AND USE OF THE RESULTING MATERIALS TO REMOVE METALS DISSOLVED IN WATER**
Prócoro Gamero Melo[1]
[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Sustentabilidad de los Recursos Naturales y Energía, Mexico.

■ **16:30 - 16:45 SF5-O050 SYNTHESIS OF BELITE CEMENTS AT LOW TEMPERATURE FROM SILICA FUME AND NATURAL COMMERCIAL ZEOLITE**
Tatiana Lilia Avalos Rendon[1], Miguel Angel Jaimes Téllez[1], Carlos J. Mendoza Escobedo[1], Elías A. Pastén Chelala[1], Ignacio Alejandro Figueroa Vargas[2], Víctor H. Lara[3], Luis M. Palacios Romero[4]
[1]Instituto de Ingeniería (Universidad Nacional Autónoma de México), Ingeniería Estructural, Mexico. [2]Instituto de Ingeniería (Universidad Nacional Autónoma de México), Cerámicos y Metálicos, Mexico. [3]Instituto de Ingeniería (Universidad Nacional Autónoma de México), Química, Mexico. [4]Universidad Iberoamericana, Ingeniería y Ciencias Químicas, Mexico.

■ **16:45 - 17:00 SF5-O051 EQUIPMENT FOR THERMAL CONDUCTIVITY MEASUREMENT APPLIED TO NEW BUILDING MATERIALS**
Omar Christian Benitez[1], Octavio Cázarez Candia[2], Minerva Vargas Vega[1], José Campos Álvarez[3], José Efraín Ruiz Ramírez[1], Jorgelí Riquelme Arizmendi[1]
[1]Instituto Tecnológico de Zacatepec, Metalmecánica, Mexico. [2]Instituto Mexicano del Petróleo, Yacimientos Fracturados, Mexico. [3]Instituto de Energías Renovables Universidad Nacional Autónoma de México, energía, Mexico.

■ **17:00 - 17:15 SF5-O052 INERTIZATION OF PYRITIC MINE TAILINGS BY ENCAPSULATION IN GLASS-CERAMICS WITH THE ADDITION OF BRAZIL NUT SHELL ASHES**
Edwin Escalera Mejia[1], Rosse Mary Teran Pacheco[1], Javier Lovera[1]
[1]Universidad Mayor de San Simon, Cochabamba, Bolivia.

■ **17:15 - 17:30 SF5-O053 CHARACTERIZATION OF BUILDING MATERIALS IN DEMOLITIONS THROUGH XRD AND SEM**
Martin Eduardo Espitia Nery[1]
[1]Universidad Católica de Colombia, , Colombia.

■ **17:30 - 17:45 SF5-O054 STUDY OF GETTING PAPER OF PLATAIN CROP PSEUDOSTEM´S ORGANIC WASTE**
Carolina Valencia Muñoz[1], Diana Carolina Galvez Coy[1], Sandra Milena Loaiza García[1], Ximena Sepulveda Garcia[1], Luis Alejandro Trejos Ruiz[1]
[1]SENA, , Colombia.

Symposium F6

STRATEGIES FOR ACADEMY-INDUSTRY RELATIONSHIP

David Ríos / Instituto Potosino de Investigación Científica y Tecnológica.
Ernesto E. Marinero / Purdue University
Juan Méndez Nonell / Centro de Investigación en Materiales Avanzados
Ismeli Alfonso / Universidad Nacional Autónoma de México

WEDNESDAY, AUGUST 22
ROOM: UXMAL II

- **08:00 - 08:30 SF6-O001 Invited Talk ESTRATEGIA PARA EL DESARROLLO DE VINCULACION ACADEMIA-INDUSTRIA EN LAS AREAS DE MATERIALES, AMBIENTAL Y SOLDADURA EN LA UNIVERSIDAD AUTONOMA DE COAHUILA (UADEC).**
  Ruben Torres[1], Ulises Rentería[1], César Alejandro Torres[1]
  [1]Universidad Autónoma de Coahuila, Facultad de Ingeniería Mecánica y Eléctrica, Unidad Torreón, Mexico.

- **08:30 - 08:45 SF6-O002 TRAINING OF LEADERS INGENIERILES FOR THE PRIVATE SECTOR IN INSTITUTIONS OF PUBLIC EDUCATION**
  Edgar Israel Díaz León[1], Christian Diaz León[1], Guillermo Urriolagoitia Sosa[1], Julián Patiño Ortiz[1], Guillermo Manuel Urriolagoitia Calderón[1]
  [1]Instituto Politécnico Nacional - IPN, Sección de Estudios de Posgrado e Investigación, Mexico.

- **08:45 - 09:00 SF6-O003 VISUAL ANALYSIS OF CERAMIC COMBINATIONS WITH EDUCATIONAL PURPOSES FOR THE DEVELOPMENT OF ARTISAN PRODUCTS**
  Hernan Dario Castaño Castrillon[1], Vivian Liceth Suárez Moreno[1]
  [1]Instituto Tecnológico Metropolitano, Design, Colombia.

- **09:00 - 09:15 SF6-O004 CREATION OF AN INNOVATION CENTER FOR CIUDAD JUÁREZ BASED ON AN INDUSTRIAL ACADEMIC LINK STRATEGY**
  Ramon Mario Lopez Avila[1]
  [1]Universidad Autónoma de Ciudad Juárez, Administration, Mexico.

- **09:15 - 09:30 SF6-O005 VINCULACIÓN AGRICULTURA-INDUSTRIA ENTRE EL SECTOR RURAL Y AGROEMPRESARIAL: UN ESTUDIO DE CASO EN EL SURESTE DE MÉXICO**
  Aurelio Pedroza Sandoval[1], Diana América Reyna Izaguirre[2], Sergio Roberto Márquez Berber[3]
  [1]Universidad Autónoma de Chapingo, Unidad Regional Universitaria de Zonas Áridas, Mexico. [2]Universidad Autónoma de Chapingo, Ingeniería Agroindustrial, Mexico. [3]Universidad Autónoma de Chapingo, Fitotecnia, Mexico.

- **09:30 - 09:45 SF6-O006 PROYECTOS DE VINCULACIÓN EXITOSA EN CONJUNTO: ESIME UA – EMPRESA AEROESPACIAL**
  Bernardino Benito Salmeron Quiroz[1], Luis Olmos[2], Gerardo Villegas Medina[1], Salvador Antonio Rodriguez Paredes[1], Nohemí Perez Valdivia[3]
  [1]Instituto Politécnico Nacional - IPN, SEPI, Mexico. [2]Universidad Michoacana de San Nicolás de Hidalgo, Geociencias y Planificación del Territorio, Mexico. [3]Instituto Politécnico Nacional - IPN, SEPI-EIM, Mexico.

- **09:45 - 10:00 SF6-O007 PROPUESTA DE INDICADORES DE VINCULACIÓN PARA LA**

UNIVERSIDAD AUTÓNOMA DEL ESTADO DE MORELOS

Maria del Carmen Torres Salazar[1], Norma Alicia García Domínguez[1], Jesús del Carmen Peralta Abarca[1], Jesús Mario Colín de la Cruz[1]

[1]Universidad Autónoma del Estado de Morelos, Facultad de Ciencias Químicas e Ingeniería, Mexico.

▸ **10:00 - 10:30 SF6-O008 Invited Talk INTEGRACIÓN EXITOSA DE DESARROLLOS EN EMPRESAS DE BASE TECNOLÓGICA CON ENTIDADES ACADÉMICAS Y DE INVESTIGACIÓN**

Joaquin Oseguera[1]

[1]TRAMES SA de CV, Desarrollo Tecnologico, Mexico.

▸ **10:30 - 11:00 SF6-O009 Invited Talk EFICIENCIA TÉCNICA EN INSTITUCIONES DE EDUCACIÓN SUPERIOR EN MÉXICO Y SU IMPACTO EN LA INNOVACIÓN**

Magda Gabriela Sánchez[1], María Paola Barcenas Lopez[2], Ventura Rodriguez Lugo[3]

[1]Universidad Autónoma del Estado de Hidalgo, Área de Administración, Instituto de Ciencias Económico-administrativas, Mexico. [2]Universidad Tecnológica de Tecamac, Universidad Tecnológica de Tecámac, Mexico. [3]Universidad Autónoma del Estado de Hidalgo, Área Académica de Ciencias de la Tierra y Materiales, Instituto de Ciencias Básicas e Ingeniería, Mexico.

☕ **11: 00 - 11:30 COFFEE BREAK**

🕮 **11:30 - 12:30 PLENARY IV NOBEL PRIZE IN CHEMISTRY 2016**
PROF. BEN L. FERINGA

■ **12:30 - 12:45 SF6-O010 THE IDEAL ACADEMIC ENVIRONMENT FOR THE INCREASE OF TRIPLE HELIX MODEL EFFICIENT PROJECTS**

Mildred Egure Hidalgo[1], Aldo Hernández Ramirez[1], Mariana Molina Morales[2], Beatriz Romero Angeles[1], Guillermo Urriolagoitia Sosa[1]

[1]Esime zacatenco, Biomecánica, Mexico. [2]Esime zacatenco, ISISA, Mexico.

■ **12:45 - 13:00 SF6-O011 POSGRADOS PROFESIONALIZANTES ¿UNA SOLUCIÓN PARA LA INDUSTRIA O UN NEGOCIO?**

Gerardo Barrera Cardiel[1]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Instituto de Investigación en Metalurgia y Materiales, Mexico.

■ **13:00 - 13:15 SF6-O012 APLICACIONES TECNOLOGICAS EN EL TRATAMIENTO DE MATERIALES METALICOS POR LA TECNICA DE IMPACTOS LASER (LASER SHOCK PROCESSING, LSP) EN 3D**

Gilberto Gomez Rosas[1], Carlos Rubio Gonzalez[2], Miguel Angel Santana Aranda[1], Jose Guadalupe Quiñones[1], Armando Perez Centeno[1], Roman Angel Rosas Meza[3]

[1]Universidad de Guadalajara, Departamento de Fisica, Mexico. [2]Centro de Ingeniería y Desarrollo Industrial, investigacion, Mexico. [3]Universidad de Guadalajara, Posgrado en Ciencias de Materiales, Mexico.

■ **13:15 - 13:30 SF6-O013 LA MEDICIÓN DE LA EFICIENCIA EN LA VINCULACIÓN UNIVERSITARIA: UNA APLICACIÓN DEL ANÁLISIS ENVOLVENTE DE DATOS PARA LA UMSNH**

Moisés Salvador Becerra Medina[1], Rosalia Lopez Paniagua[2]

[1]Universidad Michoacana de San Nicolás de Hidalgo, Facultad de Economía, Mexico. [2]Universidad Nacional Autónoma de México, Centro de Investigaciones Interdisciplinarias en Ciencias y Humanidades, Mexico.

■ **13:30 - 13:45 SF6-O014 CENTURY 21TH UNIVERSITIES AS BACKBONE OF KNOWLEDGE AND REGIONAL DEVELOPMENT**

Maria Gabriela Martin Peon[1], Narciso Acuña González[1]

[1]Universidad del Mayab S.C., Vicerrectoría Académica, Mexico.

■ **13:45 - 14:00 SF6-O015 CHARACTERIZATION OF GOLD ALLUVIAL DEPOSITS USING INDUCED POTENTIAL, ELECTRICA TOMOGRAPHY AND GROUND PENETRATING RADAR (GPR) GEOPHYSICAL METHODS . OPEN-PIT MINING RESPONSIBLE FOR THE ENVIRONMENT**

Andrés Muñoz García[1], Diego Alberto Gutierrez Isaza[2], Moises Oswaldo Bustamante Rua[1]

[1]Universidad Nacional de Colombia, Instituto de Minerales CIMEX, Colombia. [2]Instituto Tecnológico Metropolitano, Facultad de Ciencias, Colombia.

■ **14:00 - 14:15 SF6-O016 TRANSLATIONAL RESEARCH AS A STRATEGY FOR TECHNOLOGY TRANSFER IN MEXICO**

Nelly Medina[1], Rebeca de Gortari[2]

[1]Facultad de Ingeniería, UNAM, DIMEI, Mexico. [2]Instituto de Investigaciones Sociales, UNAM, Educación y Ciencia, Mexico.

☒ **14:00 - 16:00 Lunch time**

- **16:00 - 16:30 SF6-O017 Invited Talk LA DIGITALIZACIÓN EN LA INDUSTRIA: HACIA UNA GOBERNANZA COLABORATIVA**
  Monica Casalet[1]
  [1]Facultad Latinoamericana de Ciencias Sociales, Ciencias Sociales, Mexico.
- **16:30 - 17:00 SF6-O018 Invited Talk MODIFICACION DE PLASTICOS CON CROMOFOROS FOTOACTIVOS: LA IMPORTANCIA DE LOS POLIMEROS COMODITIES EN LA GENERACION DE PATENTES**
  Ernesto Rivera García[1]
  [1]Instituto de Investigaciones en Materiales, Rheology, Mexico.
- **17:00 - 17:15 SF6-O019 PLASMA STIRLING CRYOGENIC REFRIGERATOR**
  Yuri Martinez Samaguey[1], Artur Aramyan[2], Vladimir Zuev[3], Ramiro Santos Mayorga[4]
  [1]National Research Nuclear University (Moscow Engineering Physics Institute), Plasmas Physics Department 21, Russia. [2]State Engineering University of Armenia, Plasmas Physics, Armenia. [3]Technological University MIREA, Mechanics, Russia. [4]Universidad Politecnica de Zacatecas, Math and Physics, Mexico.
- **17:15 - 17:45 SF6-O020 Invited Talk STRATEGIES FOR RESEARCH GROUPS TO MAINTAIN A BALANCE BETWEEN BASIC SCIENCE AND APPLIED SCIENCE FOR THE BENEFIT OF THE SOCIETY**
  Israel Mejia[1], Jesus Alcantar[1], Diego Barrera[1], Jesus Avila[1]
  [1]University of Texas at Dallas, Material Science and Engineering, United States.
- **17:45 - 18:15 SF6-O021 Invited Talk EL CENTRO NACIONAL DE SUPERCÓMPUTO DEL IPICYT Y SU VINCULACIÓN CON LOS SECTORES ACADÉMICO, EMPRESARIAL Y GUBERNAMENTAL.**
  David Ríos Jara[1]
  [1]Instituto Potosino de Investigación Científica y Tecnológica, , Mexico.

WEDNESDAY, AUGUST 22
ROOM: TERRACE

- **18:30 -20:30 POSTER SESSION & COFFEE BREAK**
- **SF6-P001 BENEFICIOS DE LA CIENCIA DE LA COMPUTACION PARA LA INVESTIGACION EN CIENCIA DE MATERIALES Y SU IMPORTANCIA EN LA INDUSTRIA**
  Claudia Georgina Nava Dino[1], Leticia Mendez[1], Roberto Narro García[1], Perla Cordero[1], Adán Borunda[2]
  [1]Universidad Autónoma de Chihuahua, Facultad de Ingenieria, Mexico. [2]Centro de Investigación en Materiales Avanzados, S.C., Metalurgia e Integridad Estructural, Mexico.
- **SF6-P002 STRATEGIES TO PROMOTE COLLECTIVE KNOWLEDGE IN SCIENCE STUDENTS**
  Ivan Gonzalez Uribe[1], Liliana Gutierrez Lonche[1], Martha Eugenia Espinosa Hernandez[1], Beatriz Romero Angeles[1], Guillermo Urriolagoitia Sosa[1]
  [1]Instituto Politécnico Nacional - IPN, Biomecanica, Mexico.
- **SF6-P003 PROYECTOS DE VINCULACIÓN EXITOSA : ESIME UA – EMPRESA AEROESPACIAL**
  Bernardino Benito Salmeron Quiroz[1], Jose Fermi Guerrero Castellanos[2], Luis Olmos[3], Gerardo Villegas Medina[1], Nohemí Perez Valdivia[4]
  [1]Instituto Politécnico Nacional - IPN, SEPI, Mexico. [2]Benemerita Universidad Autonoma de Puebla, FCE BUAP, Mexico. [3]Universidad Michoacana de San Nicolás de Hidalgo, Geociencias y Planificación del Territorio, Mexico. [4]Instituto Politécnico Nacional - IPN, SEPI-EIM, Mexico.
- **SF6-P004 ESTABLISHMENT OF THE SOCIO EMOTIONAL SKILLS, A NEW WINDOW TO THE ACADEMIC IMPROVEMENT OF THE STUDENTS**
  Martha Eugenia Espinosa Hernandez[1], Mildred Egure Hidalgo[1], Mariana Molina Morales[2], Beatriz Romero Angeles[1], Guillermo Urriolagoitia Sosa[1]
  [1]Esime zacatenco, Biomecanica, Mexico. [2]Esime zacatenco, ISISA, Mexico.
- **SF6-P005 El PAPEL DE LOS INDICADORES DE PRODUCTIVIDAD EN CENTROS DE INVESTIGACIÓN**
  Brenda Yesamin Moran López[1], Magda Gabriela Sánchez[2], Eleazar Salinas Rodríguez[3], Ventura Rodriguez Lugo[3]
  [1]Universidad Tecnológica de Tecamac, Universidad Tecnologíca de Tecamac, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Escuela Superior de Tepeji del Rio, Universidad Autónoma del Estado de Hidalgo, Mexico. [3]Universidad Autónoma del Estado de Hidalgo, Instituto de Ciencias Básicas e Ingeniería, Área Académica de Ciencias de la Tierra y Materiales, Mexico.
- **SF6-P006 LA GESTIÓN DEL CONOCIMIENTO Y SU CONTRIBUCIÓN EN LA INNOVACIÓN Y FORTALECIMIENTO DE LAS EMPRESAS**

Mara Elva Barrera Alvarez[1], Magda Gabriela Sánchez[2], Eduardo Cerecedo Saenz[3], Ventura Rodriguez Lugo[3]

[1]Universidad Tecnológica de Tecamac, Universidad Tecnológica de Tecamac, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Escuela Superior de Tepeji del Rio, Universidad Autónoma del Estado de Hidalgo, Mexico. [3]Universidad Autónoma del Estado de Hidalgo, Instituto de Ciencias Básicas e Ingeniería, Área Académica de Ciencias de la Tierra y Materiales, Mexico.

- **SF6-P007 EFECTO DE LA PRODUCTIVIDAD MARGINAL EN LA INNOVACIÓN**

Franco Olivares Sandra Ivonne[1], Magda Gabriela Sánchez[2], Rosa Angeles Vazquez[3], Ventura Rodriguez Lugo[3]

[1]Universidad Tecnológica de Tecamac, Universidad Tecnológica de Tecámac, Mexico. [2]Universidad Autónoma del Estado de Hidalgo, Escuela Superior de Tepeji del Rio, Universidad Autónoma del Estado de Hidalgo, Mexico. [3]Universidad Autónoma del Estado de Hidalgo, Instituto de Ciencias Básicas e Ingeniería, Área Académica de Ciencias de la Tierra y Materiales, Mexico.

- **SF6-P008 ESTUDIOS INTEGRALES DE RECURSOS HÍDRICOS EN MÉXICO: EMPRESAS VINCULADAS CON EL SECTOR PÚBLICO**

Laura Lorena Díaz Flores[1], Fabian Rivera Trejo[1], Carlos A. Rosas Figueroa[2]

[1]Universidad Juárez Autónoma de Tabasco, División Académica de Ingeniería y Arquitectura, Mexico. [2]ROSDI SA de CV, , Mexico.

- **SF6-P009 FABRICACIÓN DE UN DISPOSITIVO PARA LA ASISTENCIA EN EL TRASVASE Y COLADO DE PINTURAS BASE ACEITE**

Candelario Ramírez Martínez[1], Laura Lorena Díaz Flores[1]

[1]Universidad Juárez Autónoma de Tabasco, División Académica de Ingeniería y Arquitectura, Mexico.

- **SF6-P010 KUMAMOTO UNIVERSITY-COMPANY COOPERATION: EXTRACTION OF OLIGOMERS FROM LOW DENSITY POLYETHYLENE PELLETS USING SUPERCRITICAL CO_2**

Cinthya Soreli Castro Issasi[1], Armando T. Quitain[2], Tetsuya Kida[2], Mitsuru Sasaki[2,3], Noriyuki Taniyama[4]

[1]Kumamoto University, Graduate School of Science and Technology, Japan. [2]Kumamoto University, Faculty of Advance Science and Technology, Japan. [3]Kumamoto University, Institute of Pulsed Power Science, Japan. [4]AICELLO Corporation, Technology Development, Japan.

- **SF6-P011 STUDY OF THE STABILITY OF A FALLING LIQUID FILM WITH CONCURRENT GASES INSIDE A CIRCULAR DUCT**

Luis Borraz[1], Edgar Larrainzar[2], Florencio Sánchez Silva[2], Andres Reyes[1]

[1]Universidad de Ciencias y Artes de Chiapas, IER-Materiales y Sistemas Energéticos Renovables, Mexico. [2]Instituto Politecnico Nacional, IPN - SEPI-ESIME-Zacatenco, Laboratorio de Ingeniería Térmica e Hidráulica Aplicada -LABINTHAP, Mexico.

- **SF6-P012 DEVELOPMENT OF SOLAR CONICAL COLLECTOR PROTOTYPE FOR WATER HEATER.**

Oscar Ceh Soberanis[1,2], Jorge Chi[3], Bielka Manzanilla[1], Claudia Rossana Villanueva Rosado[4], Lucy Flores[5], Luis Flores[1], Alejandro Chí[6], Alfredo Díaz[1], Luisa Gisell Pat Reyes[1]

[1]Instituto Tecnológico de Mérida, Ingeniería Industrial, Mexico. [2]Motus Energy, , Mexico. [3]Instituto Tecnológico de Mérida, Ingeniería Mecánica, Mexico. [4]Instituto Tecnológico de Mérida, Ingeniería Química, Mexico. [5]Instituto Tecnológico de Mérida, Ingeniería Electrónica, Mexico. [6]Newark Element 14, , Mexico.

- **SF6-P013 POLYSTYRENE FOAM RECYCLING FOR INDUSTRIAL APPLICATIONS**

Bárbara G. Rolón[1], José Antonio González[1]

[1]Universidad de Guanajuato, Ingeniería Mecánica, Mexico.

- **SF6-P014 DESARROLLO DE UNA PLANTA PILOTO PARA EL COPROCESAMIENTO DE RESIDUOS DE MANEJO ESPECIAL**

Ruben Dominguez Maldonado[1], Eduardo Albert Huerta Argaez[2], Manuel Jesus Contreras Alcala[3]

[1]Universidad del Mayab S.C., Ingeniería, Mexico. [2]Augusto Leon Castillo Servicio y Mantenimiento SA de CV, Innovación, Mexico. [3]Ocean Green Progreso SA de CV, Dirección General, Mexico.

- **SF6-P015 NANO PARTICULAS DE PLATA APLICADAS COMO DESINFECTANTE EN AGROINDUSTRIA Y CONSERVACION DE PRODUCTOS PERECEDEROS**

Yuri Martinez Samaguey[1], Vladimir Zuev[2], Ramiro Santos Mayorga[3], Deni Azucena Morales Martinez[4]

[1]National Research Nuclear University (Moscow Engineering Physics Institute), Plasmas Physics Department 21, Russia. [2]Technological University MIREA, Materials Research, Russia. [3]Universidad Politecnica de Zacatecas, Math and Physics, Mexico. [4]Tecnologico de La Piedad Michoacán, Bioquimica, Mexico.

- **SF6-P016 ELECTROSPARK COATING APLICATION FOR STAMPING PRODUCTION TOOLS HARDENING**

Yuri Martinez Samaguey[1], Igor Ivanov Valerievich[2], Vladimir Zuev[3], Ramiro Santos Mayorga[4]

[1]National Research Nuclear University (Moscow Engineering Physics Institute), Plasmas Physics Department 21, Russia. [2]GOSNITI State, ElectroSpark, Russia. [3]Technological University MIREA, Mechanics, Russia. [4]Universidad Politecnica de Zacatecas, Math and Physics, Mexico.

- **SF6-P017 OZONIZATION OF EMU OIL FOR THERAPEUTIC PURPOSES AND ITS IN VIVO ANTI-INFLAMMATORY EVALUATION AND AS A SUPPLEMENT FOR THE TREATMENT OF ALZHEIMERS DISEASE SYMPTOMS**

Daniel Martin Márquez López[1], Sergio Odin Flores Valle[2], Jorge Alberto Mendoza Pérez[3], Ricardo Emmanuel Peralta Robledo[1], Erick Medardo Tejada Carbajal[4]

[1]Escuela Superior de Ingeniería Química e Industrias Extractivas, Green chemistry, Mexico. [2]Escuela Superior de Ingeniería Química e Industrias Extractivas, Organic chemistry and polymers, Mexico. [3]Escuela Nacional de Ciencias Biológicas, Department of Systems Engineering environmental, Mexico. [4]Escuela Superior de Ingeniería Química e Industrias Extractivas, Environmental engineering, Mexico.

Symposium F7

PREPARING THE NEXT GENERATION OF MATERIALS SCIENTISTS WITH NEW APPROACHES

M. W. Cole / Central New Mexico Community College
Lynnette D. Madsen / National Science Foundation
Eric Brewe / Drexel University
Rafael Ramirez Bon / CINVESTAV

WEDNESDAY, AUGUST 22
ROOM: COBA

- **08:00 - 08:30 SF7-0001 Invited Talk PERSPECTIVES ON THE GRAND CHALLENGES FOR ENGINEERING - IMPLICATIONS FOR PREPARING MATERIALS SCIENTISTS AND ENGINEERS FOR THE 21ST CENTURY**
  Rama Ramakrishna[1]
  [1]National Academy of Engineering, NAE Programs, United States.
- **08:30 - 09:00 SF7-0002 Invited Talk PREPARING PHD STUDENTS TO TACKLE GRAND CHALLENGES**
  Angus Kingon[1]
  [1]Brown University, School of Engineering, United States.
- **09:00 - 09:30 SF7-0003 Invited Talk SCIENCE OUTREACH TO SOCIETY: WHY DO IT AND ONE ATTEMPT**
  Dan Dahlberg[1]
  [1]University of Minnesota, Physics, United States.
- **09:30 - 10:00 SF7-0004 Invited Talk Pitt-NOCMAT: ENGAGING STUDENTS IN HUMANITARIAN ENGINEERING THROUGH LOCALLY SOURCED, SUSTAINABLE MATERIALS**
  Ian Nettleship[1]
  [1]University of Pittsburgh, Mechanical Engineering and Materials Science, United States.
- **10:00 - 10:30 SF7-0005 Invited Talk THE SYNERGISTIC RESEARCH & EDUCATION PROGRAM OF THE CENTER FOR TRANSLATIONAL APPLICATIONS OF MULTIFERROIC NANOSCALE SYSTEMS RESEARCH**
  Greg Carman[1]
  [1]University of California, Los Angeles, Mechanical and Aerospace Engineering, United States.
- **10:30 - 10:45 SF7-0006 ONGOING TRANSFORMATION IN TECHNOLOGY EDUCATION: ATTRACTING THE NEXT GENERATION OF GRADUATE STUDENTS**
  George Zouridakis[1], Francisco Robles[1], Anthony Ambler[1]
  [1]University of Houston, Engineering Technology, United States.
- **10:45 - 11:00 SF7-0007 INTRODUCING MAGNETOELECTRIC MULTIFERROIC COUPLING TO THE NEXT GENERATION OF SCIENTISTS AND ENGINEERS THROUGH THE TANMS EDUCATIONAL MODULES**

Kevin Fitzell[1], Zhuyun Xiao[2], Maria del Pilar Ocadiz Ocadiz[3], Jane Chang[1]
[1]University of California, Los Angeles, Chemical Engineering, United States. [2]University of California, Los Angeles, Electrical Engineering, United States. [3]University of California, Los Angeles, TANMS, United States.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY IV NOBEL PRIZE IN CHEMISTRY 2016
PROF. BEN L. FERINGA

12:30 - 12:45 SF7-O008 IMPORTANT PHILOSOPHICAL QUESTIONS FOR MATERIALS SCIENCE AND ENGINEERING`S STUDENTS
Ana Elisa Martinez del Rio[1], Luis José Yudico Anaya[1], Luis Alberto Bretado Aragon[1], Ana Lilian Rodriguez Villafuerte[2]
[1]Universidad de La Cienega del Estado de Michoacán de Ocampo, Nanotechnology, Mexico. [2]Instituto de Educación Media Superior del Distrito Federal, Plantel Gustavo A. Madero 2 - Salvador Allende, Mexico.

12:45 - 13:00 SF7-O009 IMPORTANCE OF METACOGNITIVE PROCESSES IN THE DEVELOPMENT OF MATHEMATICAL THINKING
Luis José Yudico Anaya[1], Ana Elisa Martinez del Rio[1]
[1]Universidad de La Cienega del Estado de Michoacán de Ocampo, Nanotechnology, Mexico.

13:00 - 13:30 SF7-O010 Invited Talk HEROIC PHYSICS: LESSONS OF LEARNING AND DISCOVERY TO BE INCORPORATED IN THE PHYSICS AND MATH CURRICULA
Arturo A. Ayon[1]
[1]University of Texas at San Antonio, Physics and Astronomy, United States.

13:30 - 14:00 SF7-O011 Invited Talk SCIENTIST BY DESIGN: AN ENABLING PEDAGOGY TO FOSTER CRITICAL THINKING AND COLLABORATIVE LEARNING
M. W. Cole[1]
[1]Central New Mecico College, MSE, United States.

14:00 - 14:15 SF7-O012 CREATING ACCESSIBLE SCIENCE RESEARCH PROJECTS FOR HIGH SCHOOL AND UNDERGRADUATE STUDENTS
Auni Kundu[1], Andres Chavez[1], Greg Carman[1], Chris Lynch[1]
[1]University of California, Los Angeles, Mechanical and Aerospace Engineering, United States.

14:00 - 16:00 Lunch time

16:00 - 16:30 SF7-O013 Invited Talk CASE STUDY: THE INFLUENCE OF PROJECT-BASED LEARNING ON STUDENT ENGAGEMENT AND ACADEMIC PERFORMANCE
Andrew Bennett Jackson[1,2], Tenell Rhodes[1], Sarah Robbins[3], Youngmoo Kim[1]
[1]Drexel University, Expressive and Creative Interaction Technologies Center, United States. [2]Drexel University, Materials Science and Engineering, United States. [3]21199C Training & Upgrading Fund, , United States.

16:30 - 17:00 SF7-O014 Invited Talk TRANSFERABILITY OF ACTIVE LEARNING TECHNIQUES TO UNDERREPRESENTED MINORITY (URM) STUDENTS: A BRIEF REVIEW
Alexandria Will Cole[1]
[1]Drexel University, Materials Science and Engineering, United States.

17:00 - 17:30 SF7-O015 Invited Talk STRATEGIES TO PROMOTE MATERIALS SCIENCE AND ENGINEERING FOR GRADUATE, UNDERGRADUATE AND K12 STUDENTS
Augustina Reyes[1], Jaime Ortiz[2], Francisco Robles Hernandez[3]
[1]University of Houston, Department of Educational Leadership and Policy Studies, United States. [2]University of Houston, Vice Provost for Global Strategies and Studies, United States. [3]University of Houston, Mechanical Engineering Technology, United States.

17:30 - 18:00 SF7-O016 Invited Talk NEXT GENERATION ENGINEERS: INCREASING UNDERREPRESENTED ENGINEERING STUDENTS' PERSISTENCE TO DEGREE COMPLETION
Enrique Ainsworth[1]
[1]University of California, Los Angeles, Henry Samueli School of Engineering and Applied Science, United States.

WEDNESDAY, AUGUST 22
ROOM: TERRACE

18:30 -20:30 POSTER SESSION & COFFEE BREAK

- **SF7-P001 HIGH SCHOOL STUDENTS CHARACTERIZING OXIDE THIN FILMS**
  Rachel Steinhardt[1]
  [1]Cornell University, Material Science and Engineering, United States.

- **SF7-P002 ARTIFICIAL INTELLIGENCE TECHNIQUES FOR CREATING ADAPTIVE LEARNING STYLES FOR ONLINE EDUCATION**
  Angel G. May[1], Alejandro del Rey Torres Rodriguez[1], Rajesh Roshan Biswal[1]
  [1]Instituto Tecnologico Superior de Misantla, Ingenieria de Sistemas Computacionales, Mexico.

- **SF7-P003 SYNTHESIS OF RADIOABSORBING CERAMICS BASED ON SILICON CARBIDE AND TUSINE**
  Irina Nikolaenko[1], Cvetlana Antipina[2], Efraín Rubio Rosas[3]
  [1]Institute of Solid State Chemistry, the Ural Branch of the Russian Academy of Sciences, Russia. [2]Yeltsin Ural Federal University, , Russia. [3]Benemerita Universidad Autonoma de Puebla, Centro Universitario de Vinculación y Transferencia de Tecnología, Mexico.

- **SF7-P004 STUDY ON THE EFFECT PRODUCED BY A TIO_2DA IMPLANT ON THE MOTOR BEHAVIOR IN A RAT HEMIPARKINSONISM MODEL.**
  Luis Gerardo Luna León[1], Patricia Vergara Aragón[1], Guadalupe Valverde Aguilar[2], Mario Vázquez García[1], Beatriz Hernández Téllez[3], Aurora Sánchez García[4]
  [1]Universidad Nacional Autónoma de México, Fisiología, Mexico. [2]Instituto Politécnico Nacional - IPN, CICATA Legaría, Mexico. [3]Universidad Nacional Autónoma de México, Biología celular y tisular, Mexico. [4]Universidad Nacional Autónoma de México, Patología, Mexico.

- **SF7-P005 COMMENTING SOME EXPERIENCES RELATED WITH THE FORMATION OF THE NEXT GENERATIONS OF MATERIALS SCIENTISTS, FROM PRESENTING THE MATERIALS: PLUMBONACRITE FILMS, AND ALSO FILMS OF SILVER QUANTUM DOTS COATED WITH SILVER CLATHRATE**
  Santos Jesús Castillo[1,2]
  [1]Universidad de Sonora, Physics Research, Mexico. [2]Universidad de Sonora, Physics, Mexico.

- **SF7-P006 SiO_2/DA MATERIAL FOR DRUG DELIVERY IN INDUCED HEMIPARKINSONISM. PART I BIOCOMPATIBILITY- EVALUATION**
  Sheila Miroslava Castillo Alejo[1], Patricia Vergara Aragón[1], Guadalupe Valverde Aguilar[2], Veronica Maqueda González[2], Mario Vázquez García[1], Laura Cristina Ibarra Montenegro[1], Emily Andrea Rodríguez Pérez[1]
  [1]Universidad Nacional Autónoma de México, Fisiología, Mexico. [2]Instituto Politécnico Nacional - IPN, CICATA Legaria, Mexico.

- **SF7-P007 CARBURIZING, A NON-EQUILIBRIUM THERMODYNAMICS MODEL**
  Roberto Tito Hernández López[1], Jaime Granados Samaniego[1], Alicia Cid Reborido[1], Juan Manuel Arcos Velázquez[1], Fernando Tavera Romero[1]
  [1]Universidad Autónoma Metropolitana, Departamento de Ciencias Básicas, Mexico.

- **SF7-P008 MECHANICAL CHARACTERIZATION OF COTTON YARNS**
  Jessica Batalla Mayoral[1], Arturo F. Méndez Sánchez[2], Edith Cortez Martínez[3]
  [1]Benemerita Universidad Autonoma de Puebla, Complejo Regional Mixteca. Campus Izúcar de Matamoros, Mexico. [2]Instituto Politécnico Nacional - IPN, Departamento de Física- ESFM-Escuela Superior de física y matemáticas, Mexico. [3]Instituto Politécnico Nacional - IPN, Departamento de Tejidos-ESIT-Escuela Superior de Ingeniería Textil, Mexico.

- **SF7-P009 CHARACTERIZATION OF THE AIR PERMEABILITY IN TEXTILE BARRIERS VELOCITY PROFILES OBTAINED BY HOT WIRE ANEMOMETRY**
  Jessica Batalla Mayoral[1], Isaac Soltero Ochoa[2], Arturo F. Méndez Sánchez[3], Edith Cortez Martínez[4]
  [1]Benemerita Universidad Autonoma de Puebla, Complejo Regional Mixteca. Campus Izúcar de Matamoros, Mexico. [2]Instituto Politécnico Nacional - IPN, Departamento de Física, ESFM-Instituto Politécnico Nacional-Instituto Politécnico Nacional, Mexico. [3]Instituto Politécnico Nacional - IPN, Departamento de Física, ESFM-Escuela Superior de física y matemáticas, Mexico. [4]Instituto Politécnico Nacional - IPN, Departamento de Ciencias Básicas-ESIT-Escuela Superior de Ingeniería Textil, Mexico.

- **SF7-P010 FABRICATION OF IRON OXIDE NANOFIBERS VIA FORCESPINNING**
  Salomon Luna[1]
  [1]University of Texas Rio Grande Valley, Mechanical Engineering, United States.

- **SF7-P011 EVALUATION OF THE SHAPE MEMORY EFFECT IN A COMPOSITE MATERIAL FROM PMMA AND METAL 0D NANOPARTICLES OF Ag.**
  Benjamin Portillo Rodriguez[1,2]

[1]Centro Conjunto de Investigación en Química Sustentable UAEM-UNAM (CCIQS), Material Chemistry, Mexico. [2]Universidad Autónoma del Estado de Morelos, Chemistry, Mexico.

- **SF7-P012 DESIGN AND SIMULATIONS OF A HYDRAULIC TEST BENCH FOR THE RENEWABLE ENERGIES APPROACH**

Carlos Artemio Macias Rodas[1], Pascual Lopez de Paz[1], Joel Moreira Acosta[1], Nein Farrera Vazquez[1], Orlando Lastres Danguillecurt[1]

[1]Universidad de Ciencias y Artes de Chiapas, Energía, Mexico.

THURSDAY, AUGUST 23
ROOM: COBA

- **08:00 - 08:30 SF7-O017 Invited Talk DATA-ENABLED DISCOVERY AND DESIGN OF ENERGY MATERIALS (D3EM): STRUCTURE OF AN INTERDISCIPLINARY MATERIALS DESIGN GRADUATE PROGRAM**

Raymundo Arroyave[1], Chi-Ning Chang[2], Brandie Semma[3], Marta Lynn Pardo[3], Patrick Shamberger[1], Debra Fowler[3]

[1]Texas A&M University, Materials Science and Engineering, United States. [2]Texas A&M University, Department of Educational Psychology, United States. [3]Texas A&M University, Center for Teach Excellence, United States.

- **08:30 - 09:00 SF7-O018 Invited Talk ROLE OF INDUSTRY SPONSORED SENIOR DESIGN PROJECTS ON THE EDUCATION OF NEXT GENERATION OF MATERIALS ENGINEERS**

Pamir Alpay[1], Rainer Hebert[1], Adam Wentworth[1], Harold Brody[1]

[1]University of Connecticut, Materials Science and Engineering, United States.

- **09:00 - 09:30 SF7-O019 Invited Talk SEVENTEEN YEARS PREPARING MATERIALS SCIENTISTS AT THE INSTITUTE OF MATERIALS SCIENCE AND TECHNOLOGY OF THE UNIVERSITY OF HAVANA**

Olimpia L. Arias de Fuentes[1], Yodalgis Mosqueda Laffita[1]

[1]Universidad de La Habana, Instituto de Ciencia y Tecnología de Materiales, Cuba.

- **09:30 - 10:00 SF7-O020 Invited Talk ENGINEERING EFFECTIVE ASSESSMENTS OF STUDENT LEARNING: HOW PSYCHOMETRICS IMPROVE MEASUREMENT CAPACITY**

Toni Sondergeld[1]

[1]Drexel University, School of Education, United States.

- **10:00 - 10:15 SF7-O021 THE BEAUTY OF SCIENCE DISCOVERY AND CONCEPT UNDERSTANDING THROUGH PHYSICS-BASED ENGINEERED LABORATORY SIMULATIONS**

M. W. Cole[1]

[1]Central New Mecico College, MSE, United States.

- **10:15 - 10:45 SF7-O022 Invited Talk USING RESEARCH-BASED PEDAGOGY WITH ADVANCED STUDENTS**

Ramon Lopez[1]

[1]University of Texas at Arlington, Physics, United States.

- **10:45 - 11:00 SF7-O023 STUDENT LEADERSHIP AS AN AUGMENTATION OF TRADITIONAL SCIENTIFIC EDUCATION FOR THE CENTER FOR TRANSLATIONIAL APPLICATIONS OF MULTIFERROIC NANOSCALE SYSTEMS**

Jeffrey Kurish[1]

[1]University of California, Los Angeles, Chemistry and Biochemistry, United States.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY V
PROF. GALO SOLER ILLIA

- **12:30 - 13:00 SF7-O024 Invited Talk MATERIALS SCIENCE IN HIGH DIMENSIONS: THINKING AND REASONING IN COMPLEX INFORMATION SPACE**

Krishna Rajan[1]

[1]University at Buffalo: the State University of New York, Dept. of Materials Design and Innovation, United States.

- **13:00 - 13:30 SF7-O025 Invited Talk EFFECTIVE MENTORING PRACTICES WORKING WITH DIVERSE UNDERGRADUATE STUDENTS**

Abdon Sepulveda[1]

[1]University of California, Los Angeles, Mechanical and Aerospace Engineering, United States.

- **13:30 - 14:00 SF7-O026 Invited Talk FOSTERING ENGINEERING IDENTITY AND PERSISTENCE: THE EDUCATIONAL PROGRAM PRACTICES OF THE TANMS ENGINEERING RESEARCH CENTER**

Maria del Pilar Ocadiz[1]

[1]University of California, Los Angeles, TANMS Engineering Research Center, United States.

■ **14:00 - 14:15 SF7-O027 THE SCIENTIFIC METHOD RULES: AN EFFICACIOUS APPROACH TO SCIENCE INSTRUCTION**

M. W. Cole[1]
[1]Central New Mecico College, MSE, United States.

☒ **14:00 – 16:00 Lunch time**

Symposium WMC

4TH NANOMXCN: MEXICO-CHINA WORKSHOP ON NANO MATERIALS / SCIENCE / TECHNOLOGY: RENEWABLE ENERGY AND ENVIRONMENT REMEDIATION

Juan Antonio Zapien / City University of Hong Kong
Guibin Jiang / Chinese Academy of Sciences
Iliana Medina Ramírez / Universidad Autónoma de Aguascalientes
Sandra Rodil / Universidad Nacional Autónoma de México

WEDNESDAY, AUGUST 22
ROOM: TERRACE

18:30 -20:30 POSTER SESSION & COFFEE BREAK

- **SWMC-P001 ADHESION MEASUREMENTS UNDER DIFFERENT HUMIDITY CONDITIONS**
  Celia Luz Rojo Blanco[1], Stephen Muhl[1]
  [1]Instituto de Investigaciones en Materiales, Departamento de Materiales de Baja Dimensionalidad, Instituto de Investigaciones en Materiales., Mexico.
- **SWMC-P002 ANALYSIS OF TCT PV ARRAYS BY MEANS OF CIRCUITAL SIMPLIFICATION USING THE SINGLE DIODE MODEL**
  Luz Adriana Trejos[1]
  [1]Universidad Nacional de Colombia, Facultad de Minas, Colombia.
- **SWMC-P003 STUDY OF THE INFLUENCE OF COBALT SPINEL Co_3O_4 ON SELECTIVE COATINGS OF BLACK COBALT FOR THE CONVERSION OF SOLAR ENERGY TO THERMAL ENERGY**
  Dallely Melissa Herrera Zamora[1], Francisco Iván Lizama Tzec[1], Leny Pinzon[1], Karen L. Valadez[1], Alberto Gabriel Vega Poot[1], Oscar Ares Muzio[1], Gerko Oskam[1]
  [1]CINVESTAV-Mérida, Department of Applied Physics, Mexico.
- **SWMC-P004 OPTICAL AND STRUCTURAL PROPIERTIES INFLUENCED BY THE PRESENCE OF NANOCRYSTALS EMBEDDED IN AN AMORPHOUS STRUCTURE**
  Javitt Linares[1]
  [1]Universidad Nacional Autónoma de México, Instituto de Investigación en Materiales, Mexico.
- **SWMC-P005 THE INFLUENCE OF MESOPOROUS BROOKITE ON THE PERFORMANCE OF CARBON-BASED PEROVSKITE SOLAR CELLS**
  Renan Andres Escalante Quijano[1,2], Dena Pourjafari[3], Simone Meroni[2], Trystan Watson[2], Gerko Oskam[3]
  [1]CINVESTAV-Mérida, Applied physics, Mexico. [2]Swansea University, , United Kingdom, Channel Islands & Isle of Man. [3]CINVESTAV-Mérida, , Mexico.

■ **SWMC-P006 ON THE IMPROVEMENT OF ZnO-BASED, ORGANIC-DYE SENSITIZED SOLAR CELLS**

Esdras Josue Canto Aguilar[1], Manuel Jesús Rodríguez Perez[2], David Gutiérrez Moreno[3], Angela Sastre[3], Fernando Fernández Lázaro[3], Alexandra T. de Denko[4], Frank E. Osterloh[4], Gerko Oskam[1]

[1]CINVESTAV-Mérida, Department of Applied Physics, Mexico. [2]Universidad Autónoma de Campeche, Facultad de Ingeniería, Mexico. [3]Universidad Miguel Hernández de Elche, Área de Química Orgánica, Spain. [4]University of California, Davis, Department of Chemistry, United States.

■ **SWMC-P007 ANALYSIS OF DRIED SOLAR OF THE BANANA (MUSA PARADISIACA L.) AS TREATMENT PRIOR TO THE ALCOHOLIC FERMENTATION IN THE PROCESS OF BIOETHANOL PRODUCTION**

L. Fernando Santis Espinosa[1,2], Youshiky J. R. Cortez[2], C. Abigail Illescas Sarricolea[2], Fernanda M. Chulines Montejo[2]

[1]Mesoamerican Centre for Theoretical Physics, Energía, Mexico. [2]Universidad Autónoma del Carmen, Ingeniería y Tecnología, Mexico.

■ **SWMC-P008 UNDERSTANDING THE ROLE OF AN ANATASE MESOPOROUS LAYER IN TiO_2-BASED PSCS**

Alejandra Maria Castro Chong[1], Tom Aernouts[2], Weiming Qiu[2], Joao Bastos[2], Gerko Oskam[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Applied Physics, Mexico. [2]IMEC vzw, Photovoltaics, Belgium.

■ **SWMC-P009 STUDY OF DIFFERENT MESOPOROUS LAYERS AS ELECTRON SELECTIVE CONTACTS AND THEIR EFFECT ON THE PERFORMANCE OF PEROVSKITE SOLAR CELLS**

Karen L. Valadez Villalobos[1], Jesús Idígoras[2], Lilian Pérez[1], Juan Antonio Anta[2], Gerko Oskam[1]

[1]CINVESTAV-Mérida, Department of Applied Physics, Mexico. [2]Universidad Pablo de Olavide, Department of Physical, Chemical and Natural Systems, Spain.

■ **SWMC-P010 THERMAL STABILITY OF BLACK NICKEL SELECTIVE COATINGS: EFFECT OF A SPUTTER-DEPOSITED PROTECTIVE ALUMINA FILM**

Francisco Ivan Lizama Tzec[1], Juan Jose Becerril Gonzalez Montecinos[1], Dallely Melissa Herrera Zamora[1], Juan Daniel Macias[1], Marco de Jesus Cetina Dorantes[1], Alberto Gabriel Vega Poot[1], Oscar Ares Muzio[1], Juan José Alvarado Gil[1], Gerko Oskam[1]

[1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Department of Applied Physics, Mexico.

■ **SWMC-P011 MECHANISMS OF CHARGE TRANSFER AND RECOMBINATION IN WO_3/$BiVO_4$ MULTILAYER HETEROJUNCTIONS AND $CuBi_2O_4$ ELECTRODES FOR PHOTOELECTROCHEMICAL WATER SPLITTING**

Alberto Gabriel Vega Poot[1], Ingrid Guadalupe Rodríguez Gutiérrez[1,2], Jinzhan Su[2], Lionel Vayssieres[2], Geonel Rodríguez Gattorno[1], Gerko Oskam[1]

[1]CINVESTAV-Mérida, Física Aplicada, Mexico. [2]Xi'an Jiaotong University, International Research Centre for Renewable Energy, China.

■ **SWMC-P012 DEVELOPMENT OF COUNTER ELECTRODES USING ADVANCED CARBONACEOUS MATERIALS AND SILVER SULFIDE NANOSTRUCTURES FOR THEIR APPLICATION ON DYE SENSITIZED SOLAR CELLS (DSSCs)**

Mario Rodriguez Parra[1], Carlos Alberto Martinez Perez[1], Claudia Alejandra Rodríguez González[1]

[1]Universidad Autónoma de Ciudad Juárez, Instituto de Ingeniería y Tecnología, Mexico.

■ **SWMC-P013 SYNTHESIS BY SOL-GEL OF TiO_2 MODIFIED WITH NITROGEN AND ITS PHOTOCATALYTIC ACTIVITY ON P-CRESOL DEGRADATION IN AQUEOUS MEDIA**

Héctor H. Vigil Castillo[1], Aracely Hernández Ramírez[1], Norma A. Ramos Delgado[2], Jorge Luis Guzman Mar[1], Minerva Villanueva Rodríguez[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico. [2]Instituto Tecnológico de Nuevo León, Centro de Investigación e Innovación Tecnológica-ITNL, Mexico.

■ **SWMC-P014 PHOTOCATALYTIC ACTIVITY OF STABILIZED β-Bi_2O_3 OBTAINED FROM $(BiO)_4CO_3(OH)_2$ PRECURSOR**

Karen Valencia Garcia[1], Agileo Hernández Gordillo[1], Sandra Elizabeth Rodil[1], Alejandro López Guadarrama[1]

[1]Universidad Nacional Autónoma de México, Instituto de Investigaciones en Materiales, Mexico.

■ **SWMC-P015 INVESTIGATIONS ON THE BIOLOGICAL EFFECT OF UPCONVERTING NANOPARTICLES**

Guangbo Qu[1]

[1]Research Center for Eco-Environmental Sciences of CAS, State Key Laboratory of Environment Chemistry and Ecotoxicology, China.

■ **SWMC-P016 TiO2, Al2O3 , ZrO2 AND ZnO AS BIOMATERIALS FOR ANTIBACTERIAL APPLICATIONS IN DENTISTRY**
Beatriz Adriana Andrade Espinoza[1], Alejandro Perez Larios[1]
[1]University of Guadalajara, Ingenierias, Mexico.

THURSDAY, AUGUST 23
ROOM: TULUM F

Session 1

SESSION CHAIR: ANTONIO ZAPIEN

■ **08:15 - 08:30 SWMC-O001 PROGRESSES AND OPPORTUNITIES OF SCIENCE AND TECHNOLOGY INNOVATION COOPERATION BETWEEN CHINA AND MEXICO**
Hao Zhu[1]
[1]Chinese Embassy in Mexico, Science and Technology, China.

▸ **08:30 - 09:00 SWMC-O002 Invited Talk IMPROVED BIOCOMPATIBILITY OF 2D NANOMATERIALS BY SURFACE MODIFICATION**
Guibin Jiang[1]
[1]Research Center for Eco-Environmental Sciences of CAS, , China.

▸ **09:00 - 09:30 SWMC-O003 Invited Talk MULTIFUNCTIONALIZED BIOCATALYTIC P22 NANOREACTOR FOR COMBINATORY TREATMENT OF ER+ BREAST CANCER**
Rafael Vazquez Duhalt[1], Kanchan Chauhan[1]
[1]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Bionanotecnología, Mexico.

▸ **09:30 - 10:00 SWMC-O004 Invited Talk THE UNESCO CHAIR IN MATERIALS AND TECHNOLOGIES FOR ENERGY CONVERSION, SAVING AND STORAGE**
Federico Rosei[1]
[1]Institut National de la Recherche Scientifique, Université du Québec, Energy, Materials and Telecommunications, Canada.

▸ **10:00 - 10:30 SWMC-O005 Invited Talk CHIRAL BILAYER GRAPHENE AND ITS POTENTIAL APPLICATIONS**
Cecilia Noguez[1]
[1]Universidad Nacional Autónoma de México, Instituto de Fisica, Mexico.

▸ **10:30 - 11:00 SWMC-O006 Invited Talk EFFICIENT REMOVAL OF RADIONUCLIDES FROM AQUEOUS SOLUTIONS USING CARBON NANOMATERIALS**
Xiangke Wang[1]
[1]North China Electric Power University, College of Environmental Science and Engineering, China.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY V
PROF. GALO SOLER ILLIA

Session 2

SESSION CHAIR: GERKO OSKAM

■ **12:30 - 12:45 SWMC-O007 CATALYTICALLY ACTIVE COATINGS ENABLING ENVIRONMENT-FRIENDLY LUBRICATION TECHNOLOGIES**
Giovanni Ramirez[1], Osman L Eryilmaz[2], Ali Erdemir[2]
[1]Bruker Nano Surfaces, , United States. [2]Argonne National Laboratory, Energy Systems Division, United States.

▸ **12:45 - 13:15 SWMC-O008 Invited Talk RARE EARTH-DOPED $Y_3Al_5O_{12}$ (YAG) NANOPHOSPHORS: SYNTHESIS AND APPLICATIONS IN ENERGY-SAVINGS DEVICES AND NANOMEDICINE**
Gustavo Alonso Hirata[1]
[1]Centro de Nanociencias y Nanotecnología CNyN-UNAM, Physical-Chemistry of Nanomaterials, Mexico.

▸ **13:15 - 13:45 SWMC-O009 Invited Talk APPLICATION OF GRAPHENE-BASED MATERIALS IN WATER PURIFICATION: FROM NANOSCALE TO SPECIFIC DEVICE**
Baoliang Chen[1]
[1]Zhejiang University, Department of Environmental Sciences, China.

▸ **13:45 - 14:15 SWMC-O010 Invited Talk ENGINEERED NANO-TiO_2 IN SURFACE WATER AND EFFECTS ON TRANSFORMATION OF ORGANIC POLLUTANTS**
Lingyan Zhu[1,2], Wei Wu[1], Xiaomei Shi[1]
[1]Nankai University, Key Laboratory of Pollution Processes and Environmental Criteria, Ministry of Education, College of Environmental Science and Engineering, China. [2]Northwest A&F University, College of Natural Resources and Environment, China.

14:00 - 16:00 Lunch time

Session 3

SESSION CHAIR: GUSTAVO HIRATA

- **16:00 - 16:30 SWMC-O011 Invited Talk NEW LONG LIFE/ SAFER LITHIUM ION BATTERY WITH LOW COST/Li-CORROSION RESISTANT ULTRANANOCRYSTALLINE DIAMOND-COATED COMPONENTS**

  Orlando Hector Auciello[1,2], Elida de Obaldia[3,4], Jesus J. Alcantar Peña[5]

  [1]Original Biomedical Implants-México, , Mexico. [2]University of Texas at Dallas, Materials Science and Engineering and Bioegineering, United States. [3]Universidad Tecnológica de Panamá, , Panama. [4]University of Texas at Dallas, Materials Science and Engineering, United States. [5]The University of Texas at Dallas, Materials Science and Engineering, United States.

- **16:30 - 16:45 SWMC-O012 THE COMPOSITES OF SILICON, METAL OXIDE WITH CARBON NANOMATERIALS AS HIGH CAPACITY ANODES FOR LITHIUM-ION BATTERY**

  Greg Christensen[1], Haiping Hong[1], Christian Widener[1], James Wu[2]

  [1]South Dakota School of Mines and Technology, AMP, United States. [2]National Aeronautics and Space Administration, NASA Glenn Research Center, United States.

- **16:45 - 17:00 SWMC-O013 RECENT DEVELOPMENTS AND ADVANCES IN THE UTILIZATION OF COPPER BASED CATHODES FOR ENERGY STORAGE IN LITHIUM ION-BATTERIES**

  Carlos Juarez Yescas[1], Noe Aguilar Eseiza[1], Gregorio Guzmán González[1], Luis Ignacio Perea Ramírez[1], Alfredo Guevara García[1], Guadalupe Ramos Sanchez[1], Marcelo Galvan[1], Ignacio González[1]

  [1]Universidad Autónoma Metropolitana, Quimica, Mexico.

- **17:00 - 17:15 SWMC-O014 Co-N-DOPING HOLLOW CARBON SPHERES AS ELECTROCATALYST FOR RECHARGEABLE ZINC-AIR BATTERIES**

  Juan Antonio Zapien[1,2], Chen Shengmei[1,2]

  [1]City University of Hong Kong, Center of Super Diamond and Advanced Thin Films (COSDAF), Hong Kong. [2]City University of Hong Kong, Materials Science and Engineering, Hong Kong.

- **17:15 - 17:30 SWMC-O015 THIRD GENERATION SOLAR CELLS SCALE-UP: DYE-SENSITIZED AND TRIPLE-STACK PEROVSKITE MINI-MODULES**

  Dena Pourjafari[1], Renan Andres Escalante Quijano[1], Gerko Oskam[1]

  [1]CINVESTAV-Mérida, Física Aplicada, Mexico.

- **17:30 - 17:45 SWMC-O016 NANOCOMPOSITES OF POLY(METHYLMETHACRYLATE) (PMMA) NANOPARTICLES AND BOEHMITE WITH IMPROVED OPTICAL PROPERTIES**

  Sujey Castellanos[1], Jacobo Aguilar[1], Israel Ceja[2], Arturo Barrera[1], Victor Vladimir Amilcar Fernandez[1]

  [1]Universidad de Guadalajara, Ciencias Tecnológicas, Mexico. [2]Universidad de Guadalajara, Fisica, Mexico.

- **17:45 - 18:00 SWMC-O017 PHOTO-CHARGING EFFECT ON PLASMONIC ELECTRODES FOR SOLAR ENERGY CONVERSION: A QUANTITATIVELY STUDY**

  Julio Villanueva Cab[1], Paul Olalde Velasco[1], Umapada Pal[1]

  [1]Benemerita Universidad Autonoma de Puebla, Instituto de Física, Mexico.

- **18:00 - 18:30 SWMC-O018 Invited Talk ALTERNATIVE ENERGY: ORGANIC SOLAR CELLS**

  Jose-Luis Maldonado[1]

  [1]Centro de Investigaciones en Optica, Centro de Investigaciones en Óptica, Mexico.

- **18:30 - 19:00 SWMC-O019 Invited Talk METAL OXIDE MATERIALS FOR SOLAR ENERGY CONVERSION SYSTEMS**

  Gerko Oskam[1]

  [1]Centro de Investigación y de Estudios Avanzados del IPN - CINVESTAV, Department of Applied Physics, Mexico.

FRIDAY, AUGUST 24
ROOM: TULUM F

Session 4

SESSION CHAIR: ILIANA MEDINA

- **08:00 - 08:30 SWMC-O020 Invited Talk CO-EXPOSURE OF NANOPARTICLES AND TYPICAL ORGANIC TOXICANTS CAUSE ENHANCED TOXICITY TO ZEBRAFISH**

  Bingsheng Zhou[1]

  [1]Chinese Academy of Sciences, institute of Hydrobiology, China.

- **08:30 - 09:00 SWMC-O021 Invited Talk UNDERSTANDING THE INTRINSIC PROPERTIES OF NANOCRYSTALS CONTROLLING THEIR ENVIRONMENTAL AND BIOLOGICAL EFFECTS: THE CRITICAL ROLE OF EXPOSED FACETS**

  Tong Zhang[1], Pedro Alvarez[2], Wei Chen[1]
  [1]Nankai University, College of Environmental Science and Engineering, China. [2]Rice University, Department of Civil and Environmental Engineering, United States.

- **09:00 - 09:30 SWMC-O022 Invited Talk TROPOSPHERIC MULTIPHASE CHEMISTRY ELEVATED BY DIVERSE MASS SPECTROMETRIC TECHNIQUES IN CHINA**

  Jianmin Chen[1], Lin Wang[1], Xin Yang[1]
  [1]Fudan University, Environmental Science & Engineering, China.

- **09:30 - 10:00 SWMC-O023 Invited Talk THE ROLE OF SILVER NANOPARTICLES (AgNPs) ON THE CARDIOVASCULAR PHYSIOLOGY**

  Carmen Gonzalez[1]
  [1]Universidad Autónoma de San Luis Potosí, Facultad de Ciencias Químicas, Mexico.

- **10:00 - 10:30 SWMC-O024 Invited Talk SPECIATION ANALYSIS OF METAL-CONTAINING NANOPARTICLES IN ENVIRONMENTAL SAMPLES**

  Jingfu Liu[1]
  [1]Research Center for Eco-Environmental Sciences of CAS, State Key Laboratory of Environment Chemistry and Ecotoxicology, China.

- **10:30 - 11:00 SWMC-O025 Invited Talk FERRATES: EMERGING ADVANCED MATERIALS IN ENERGY, ENVIRONMENTAL, BIOMEDICAL, AND INDUSTRIAL SYNTHESIS APPLICATIONS**

  Virender Sharma[1]
  [1]Texas A&M University, Environmental and Occupational Health, School of Public Health, United States.

11: 00 - 11:30 COFFEE BREAK

Session 5

SESSION CHAIR: SIJIN LIU

- **12:30 - 12:45 SWMC-O026 THE USE OF WASTE ACTIVATED SLUDGE (WAS) FOR PRODUCTION OF CARBON ADSORBENT AND POROUS CERAMICS**

  Abigail Parra Parra[1], Marina Vlasova[1], Pedro Antonio Márquez Aguilar[1], Veronica Gonzalez Molina[1]
  [1]Universidad Autónoma del Estado de Morelos, Centro de Investigación en Ingeniería y Ciencias Aplicadas, Mexico.

- **12:45 - 13:00 SWMC-O027 SYNTHESIS OF α-Fe_2O_3/TiO_2 FOR PHOTOCATALYTIC AND HETEROGENEOUS PHOTO-FENTON DEGRADATION OF CEFUROXIME IN AQUEOUS MEDIA UNDER SIMULATED SOLAR RADIATION**

  Edgar Emmanuel Hernández Coronado[1], Edgar Jocsan Ruiz Ruiz[1], Laura Hinojosa Reyes[1], Maria de Lourdes Maya Treviño[1], Minerva Villanueva Rodríguez[1]
  [1]Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Mexico.

- **13:00 - 13:30 SWMC-O028 Invited Talk ANTIMONY ADSORPTION AND PHOTOOXIDATION ON TiO_2 FACETS: EXAFS AND DFT STUDY**

  Chuanyong Jing[1]
  [1]Research Center for Eco-Environmental Sciences, State Key Lab of Environmental Chemistry and Ecotoxicology, China.

- **13:30 - 13:45 SWMC-O029 CONTROLLING THE FORMATION AND GROWTH OF METALLIC NANOPARTICLES IN α-Al_2O_3**

  Alejandro Crespo Sosa[1]
  [1]Instituto de Física - Universidad Nacional Autónoma de México, Circuito de la investigación científica, Mexico.

- **13:45 - 14:00 SWMC-O030 SPUTTERED BISMUTH BASED OXIDES FOR PHOTOELECTROCHEMICAL WATER SPLITTING**

  Daynahi Franco[1], Sandra Elizabeth Rodil[1]
  [1]Universidad Nacional Autónoma de México, Instituto de Investigaciones en Materiales, Mexico.

- **14:00 - 14:15 SWMC-O031 OXYGEN CONTENT DETERMINES THE BIO-REACTIVITY AND TOXICITY PROFILES OF CARBON BLACK PARTICLES**

  Sijin Liu[1]
  [1]Research Center for Eco-Environmental Sciences, State Key Laboratory of Environment Chemistry and Ecotoxicology, China.

14:00 - 16:00 Lunch time

Session 6

SESSION CHAIR: SANDRA RODIL

▸ **16:00 - 16:30 SWMC-O032 Invited Talk**
EVALUATION OF A PEPTIDE-MEDIATED STRATEGY FOR ESCAPING THE CAPYURE OF NANOPARTICLES BY IMMUNO SYSTEM
Chunlan Liu[1], Danxia Yu[1], Limin Yang[1], Qiuquan Wang[1]
[1]Xiamen University, Department of Chemistry, China.

■ **16:30 - 16:45 SWMC-O033 DEVELOPMENT AND CHARACTERIZATION OF EFFICIENT NANOVECTORS FOR MOLECULE DELIVERY IN CARDIAC NANOMEDICINE APPLICATIONS**
Omar Lozano[1,2], Anay Fernanda Lázaro Alfaro[2], Alejandro Torres Quintanilla[2], Judith Bernal Ramírez[2], Yuriana Oropeza Almazán[2], Gerardo de Jesús García Rivas[1,2], Héctor Chapoy Villanueva[1,2]
[1]Tecnológico de Monterrey, Centro de Investigación Biomédica, Mexico. [2]Tecnológico de Monterrey, Escuela de Medicina y Ciencias de la Salud, Mexico.

■ **16:45 - 17:00 SWMC-O034 IS NANOSILVER BETTER THAN TRICLOSAN AS BIOCIDE?**
Chengdong Zhang[1,2], Jing Li[2]
[1]Beijing Normal University, School of Environmental Science, China. [2]Nankai University, College of Environmental Science and Engineering, China.

■ **17:00 - 17:15 SWMC-O035 BIOCOMPATIBILITY EVALUATION OF MAGNETIC NANOSTRUCTURED MATERIALS FOR BIOMEDICAL APPLICATIONS**
Iliana Ernestina Medina Ramírez[1]
[1]Universidad Autónoma de Aguascalientes, Chemistry, Mexico.

▸ **17:15 - 17:45 SWMC-O036 Invited Talk**
NANO-BIO INTERACTIONS IN THE CONTEXT OF ENVIRONMENTAL SAFETY
Bing Yan[1]
[1]Shandong University, School of Environmental Sciences and Engineering, China.

Symposium WS

ADVANCED DEFENSE MATERIALS WORKSHOP

Mark Griep / Army Research Laboratory
Anit Giri / Army Research Laboratory
Andres Bujanda / Army Research Laboratory
Patricia Zambrano / Universidad Autonoma de Nuevo León

WEDNESDAY, AUGUST 22
ROOM: MÉXICO

- **08:00 - 08:30 SWS-O001 Invited Talk EXPLOITING BIOLOGY TO TAILOR THE DESIGN OF FUNCTIONAL MATERIALS**
  Rajesh Naik[1], Joseph M. Slocik[1], Zhifeng Kung[1], Kristi Singh[1], Patrick B. Dennis[1]
  [1]Air Force Research Laboratory, Air Force Research Laboratory, United States.
- **08:30 - 09:00 SWS-O002 Invited Talk LACCASES OF NATIVE FUNGUS OF PYCNOPORUS SANGUINEUS AS A POTENTIAL BIOCATALYST FOR THE INACTIVATION AND DEGRADATION OF EXPLOSIVE MOLECULES**
  Roberto Parra Saldivar[1], Magdalena Rostro Alanis[1], Jose Rodriguez Rodriguez[1]
  [1]Instituto Tecnológico y de Estudios Superiores de Monterey, Escuela de Ingeniería y Ciencias, Centro de Biotecnología, Mexico.
- **09:00 - 09:30 SWS-O003 Invited Talk LEVERAGING BIOLOGICAL MOLECULES FOR FUNCTIONAL INORGANIC NANOMATERIALS DEVELOPMENT VIA ATOMIC-SCALE STRUCTURAL CHARACTERIZATION**
  Nicholas Bedford[1]
  [1]The University of New South Wales, School of Chemical Engineering, Australia.
- **09:30 - 09:45 SWS-O004 NANOCSELLULOSES WITH TUANABLE AMPHIPHILICITY AND CHEMICAL FUNCTIONALITIES**
  You-Lo Hsieh[1]
  [1]University of California, Davis, Fiber and Polymer Science, United States.
- **09:45 - 10:00 SWS-O005 MAGNETIC NANOWIRES AS PROBES FOR TACTICAL DETECTION**
  Alejandro Jose Gimenez[1], Eduardo Peña Cabrera[2], Gabriel Luna Bárcenas[1]
  [1]Instituto Politécnico Nacional - IPN, Centro de Investigación y Estudios Avanzados, Mexico. [2]Universidad de Guanajuato, Departamento de Química, Mexico.
- **10:00 - 10:15 SWS-O006 SEARCH FOR ANTARCTIC EXTREMOPHILE MICROORGANISMS FOR BIOREMEDIATION OF ENERGETIC MATERIALS: ISOLATION AND IDENTIFICATION OF TNT-DEGRADING BACTERIA AND IN SILICO IMPROVEMENT OF THEIR ENZYMES**
  Jose Manuel Perez Donoso[1], Maria Angeles Cabrera[1], Juan Jimenez[1], Fernando Gonzalez Nilo[1]
  [1]Universidad Andrés Bello, Center for Bioinformatics and Integrative Biology (CBIB), Chile.
- **10:15 - 10:30 SWS-O007 INCREASING THE THRESHOLD FOR BLAST INDUCED UNCONSCIOUSNESS: MOLECULAR SIMULATIONS OF THE MECHANOSENSITIVE ION CHANNEL TRAAK**
  Ignacio Diaz Franulic[1], Jonathan Canan[2], Fernando Gonzalez Nilo[2]
  [1]Universidad Andrés Bello, Center for Bioinformatics and Integrative Biology (CBIB), Chile. [2]Universidad Andrés Bello, , Chile.

■ **10:30 - 10:45 SWS-O008 DESIGN OF UNIDIRECTIONAL WATER VALVES IN PLANTS**

Jacques Dumais[1], Simon Gravelle[1], Pascal Raux[1]

[1]Universidad Adolfo Ibañez, Faculty of Engineering and Sciences, Chile.

■ **10:45 - 11:00 SWS-O009 A NOVEL CONTROL SYSTEM FOR DISSOLVED OXYGEN FOR WASTEWATER TREATMENT PLANTS AND REAL-TIME MONITORING OF TURBIDITY AND REDOX POTENTIAL**

Danay Carrillo Nieves[1], Alejandro Manzanares[1], Angel M. Villalba Rodríguez[1], Jonathan Saúl García Pérez[1], Hafiz Iqbal[1], Roberto Parra Saldivar[1]

[1]Tecnológico de Monterrey, School of Engineering and Science, Mexico.

11: 00 - 11:30 COFFEE BREAK

11:30 - 12:30 PLENARY IV NOBEL PRIZE IN CHEMISTRY 2016

PROF. BEN L. FERINGA

▸ **12:30 - 13:00 SWS-O010 Invited Talk 3D-PRINTED INFRARED METAMATERIALS**

Joseph Tischler[1], Nick Sharac[1], Michael Meeker[1], Swathi Lyer[1], Chase Ellis[1], Keith Perkins[1], Sharka Prokes[1], Chul Soo Kim[2], Erin Cleveland[1], Diogenes Placencia[1]

[1]Naval Research Laboratory, Electronics S&T Division, United States. [2]Naval Research Laboratory, Optical Sciences Division, United States.

■ **13:00 - 13:15 SWS-O011 STUDY OF MICRO-CRACKING IN INCONEL 718 PROCESSED BY SELECTIVE LASER MELTING.**

Viridiana Lince Quintanilla[1,2], Rigoberto Guzman[1,2], Omar Eduardo López Botello[1,3], Patricia del Carmen Zambrano[1,2]

[1]National Laboratory for Additive and Digital Manufacturing, , Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico. [3]Tecnológico de Monterrey, Escuela de Ingeniería y Ciencias, Mexico.

■ **13:15 - 13:30 SWS-O012 3D MICROFABRICATION USING LASER-INDUCED FORWARD TRANSFER**

Alberto Pique[1], Kristin Charipar[1], Raymond Auyeung[1], Heungsoo Kim[1], Scott Mathews[1], Nicholas Charipar[1]

[1]Naval Research Laboratory, Materials Science & Technology Division, United States.

■ **13:30 - 13:45 SWS-O013 PREDICTION OF TEMPERATURE DISTRIBUTION AND RESIDUAL STRESSES IN A SELECTIVE LASER MELTING PROCESS BASED ON THERMOMECHANICAL MODELS**

Juan Daniel Trejos Taborda[1,2], Luis Arturo Reyes Osorio[1,2], Omar Eduardo López Botello[1,3], Patricia del Carmen Zambrano Robledo[1,2], Flor Araceli García Castillo[1,2]

[1]National Laboratory for Additive and Digital Manufacturing, , Mexico. [2]Universidad Autónoma de Nuevo León, Centro de Investigación e Innovación en Ingeniería Aeronáutica, Mexico. [3]Tecnológico de Monterrey, Escuela de Ingeniería y Ciencias, Mexico.

■ **13:45 - 14:00 SWS-O014 THERMAL AND MECHANICAL CHARACTERIZATION IN 316L STAINLESS STEEL FABRICATED WITH ADDITIVE MANUFACTURING**

Lizangela Guerra[1], Patricia del Carmen Zambrano Robledo[1], Edgar Omar Garcia Sanchez[2], Omar Eduardo López Botello[3], Luis Arturo Reyes Osorio[1]

[1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Centro de Investigación e Innovación en Ingeniería Aeronáutica, Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Programa Doctoral en Ingeniería de Materiales, Mexico. [3]Tecnológico de Monterrey, Escuela de Ingeniería y Ciencias, Mexico.

■ **14:00 - 14:15 SWS-O015 MICROSTRUCTURE PREDICTION OF A SS316L ALLOY MANUFACTURED BY SELECTIVE LASER MELTING**

Rigoberto Guzman[1,2], Viridiana Lince[1,2], Omar Lopez[1,3], Patricia del Carmen Zambrano[1,2]

[1]National Laboratory for Additive and Digital Manufacturing, , Mexico. [2]Universidad Autónoma de Nuevo León, Facultad de Ingenieria Mecanica y Electrica, Mexico. [3]Tecnológico de Monterrey, Escuela de Ingeniería y Ciencias, Mexico.

14:00 - 16:00 Lunch time

▸ **16:00 - 16:30 SWS-O016 Invited Talk MAGNETIC COOLING DEVICES FOR CONTROLLING THE TEMPERATURE OF THE SOLDIER IN THE ARMY**

J Andres Matutes Aquino[1], María Eugenia Botello Zubiate[1], Renee Joselin Saenz Hernandez[1], Carlos Roberto Santillán Rodríguez[1], María Cristina Grijalva Castillo[1], Daniel Soto Parra[1]

[1]Centro de Investigación en Materiales Avanzados, S.C., Física de Materiales, Mexico.

- **16:30 - 17:00 SWS-O017 Invited Talk DEVELOPMENT AND CHARACTERIZATION OF STRAIN GLASS ALLOYS IN $Ni_{49.5}Ti_{50.5}$**
  Robert W. Wheeler[1], Jesse Smith[1], Nathan A. Ley[1], Marcus Young[1]
  [1]University of North Texas, Materials Science and Engineering, United States.

- **17:00 - 17:15 SWS-O018 TORSION FATIGUE TESTS ON THE PROTON EXCHANGE MEMBRANE NAFION 115 , USED IN FUEL CELLS**
  Gonzalo M. Dominguez Almaraz[1], Luis Miguel Torres Duarte[1], C. Jesús Torres Pacheco[1]
  [1]Universidad Michoacana de San Nicolás de Hidalgo, Faculty of Mechanical Engineering, Mexico.

- **17:15 - 17:30 SWS-O019 LEAD-FREE PIEZOELECTRIC CERAMICS AS CANDIDATES ON THE DEVELOPMENT OF MORPHING WINGLETS FOR MILITARY AIRCRAFT**
  Kevin Enrique Jiménez Mora[1], Guillermo Manuel Herrera Pérez[1]
  [1]Centro de Investigación en Materiales Avanzados, S.C., Física de materiales, Mexico.

- **17:30 - 17:45 SWS-O020 CHARACTERIZATION OF MULTILAYER PVD COATINGS FOR TEMPERATURE SENSOR IN THE AIRCRAFT LANDING GEAR**
  Marvin Montoya Rangel[1], Joel Diaz Salgado[1], Citlalli Gaona[1], Nelson Federico Garza Montes de Oca[1], Jose Luis Tristancho Reyes[2], Patricia del Carmen Zambrano Robledo[1], Facundo Almeraya[1]
  [1]Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Mexico. [2]Universidad Tecnológica de Pereira, Facultad de mecánica, Colombia.

- **17:45 - 18:00 SWS-O021 ASSESSMENT OF THE THERMAL SHOCK RESISTANCE AND RELATIONSHIP BETWEEN SINTERING METHODS AND PHYSICAL PROPERTIES OF THE LOW POSITIVE THERMAL EXPANSION MATERIAL AL2W3O12**
  Bojan Marinkovic[1], Luciana Prates Prisco[1], Patricia Pontón[1], Mayara Marzano[1], Carl Romao[2], Mary A White[2]
  [1]Pontifícia Universidade Católica do Rio de Janeiro, Department of Chemical and Materials Engineering, Brazil. [2]Dalhousie University, Department of Chemistry, Canada.

- **18:00 - 18:15 SWS-O022 DEVELOPMENT OF A COMPOSITE MATERIAL BASED ON BAMBOO FIBER FOR AERONAUTICAL APPLICATIONS USING THE ADDITIVE MANUFACTURING TECHNOLOGY**
  July Andrea Taborda Rios[1,2], Omar Eduardo López Botello[1,3], Patricia del Carmen Zambrano Robledo[1,2]
  [1]National Laboratory for Additive and Digital Manufacturing, Mexico. [2]Universidad Autónoma de Nuevo León, Centro de Investigación e Innovación en Ingeniería Aeronáutica, Mexico. [3]Tecnológico de Monterrey, Escuela de Ingeniería y Ciencias, Mexico.

- **18:15 - 18:45 SWS-O023 Invited Talk RESEARCH FUNDING OPPORTUNITIES WITH THE U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND ACROSS NORTH AND LATIN AMERICA**
  Jose Miguel Larenas[1]
  [1]Development And Engineering Command- Americas, Research, United States.

- **18:45 - 19:15 SWS-O024 Invited Talk USAF BASIC SCIENCE PROGRAMS IN LATIN AMERICA**
  Geoff Andersen[1]
  [1]Air Force Research Laboratory, SOARD, United States.

- **19:15 - 19:45 SWS-O025 Invited Talk RESEARCH FUNDING OPPORTUNITIES WITH THE OFFICE OF NAVAL RESEARCH GLOBAL (ONRG) ACROSS LATIN AMERICA**
  Diogenes Placencia[1]
  [1]ONRG Sao Paulo, Naval Reasearch Laboratory, Brazil.

Nombre	Paginas
Abadias, Grégory	27, 28
Abadie, Marc J.	69
Abarca Villarreal, Itzel Amairani	150
Abatal, Mohamed	65
Abate, Antonio	143
Abdullah, Sharmin	249
Abedin, Ashraf	276
Abolghasem, Sepideh	191
Abraham, Alejandro	9
Abundez Barrera, Itzel	173
Aburto Barrera, José María	215
Acevedo Fernández, Juan Jose	103
Acevedo Guzmán, Diego Armando	4
Acevedo Morantes, Maria Teresa	118,121,132 133, 147
Acevedo Peña, Próspero	292
Acevedo, Andrea	191
Acevedo, Diego F.	2, 63, 104
Aceves Mijares, Mariano	23
Aceves Torres, Raul	35, 175
Acosta Alejandro, Jorge Alberto	292, 295
Acosta Chávez, Raúl	36
Acosta Elias, Monica	4, 110
Acosta Enríquez, Milka del Carmen	92
Acosta Flores, Mario	231
Acosta Gentoiu, Mijaela	5
Acosta Humánez, Manuel Fernando	37
Acosta Martinez, Delvis R.	112
Acosta Medina, Carlos	295
Acosta Reynoso, Eduardo Israel	19
Acosta Ruelas, Brenda Jeanneth	275
Acosta Santoyo, Gustavo	284
Acosta Torres, Laura Susana	81
Acosta, Alonso	67
Acosta, Guillermo Enrique	44
Acosta, Ismael	291
Acuna Leal, Daniel Arturo	136
Acuña Campa, Heriberto	115
Acuña González, Narciso	302
Acuña Rodriguez, Sandra Marcela	29, 230
Acuña, Jazmin	284
Adesuji, Elijah Temitope	38
Adhikari, Ashok	254, 260
Adhikari, Santosh	165, 166
Adiguzel, Osman	210
Aernouts, Tom	136, 314
Affonso Fonseca, Fernando Luiz	110
Agarwal, Vivechana	6
Ageorges, Héléne	103
Agrachev, Mikhail	37
Agrawal, Ankit	172
Aguado, Sonia	98
Agudelo Giraldo, Jose Dario	246
Aguilar Aguilar, Fidel Alejandro	285
Aguilar Costumbre, Yareni	291
Aguilar Duque, Julian Israel	53
Aguilar Elguezabal, Alfredo	273
Aguilar Eseiza, Noe	316
Aguilar Fernandez, Enrique	108, 109
Aguilar Franco, Manuel	216
Aguilar Frutis, Miguel A.	30, 159
Aguilar García, Omar	214
Aguilar González, Miguel Angel	293
Aguilar Hernández, Jorge Ricardo	141, 146, 148,222
Aguilar Martinez, Josue A.	136, 253, 256
Aguilar Méndez, Miguel Angel	109
Aguilar Reyes, Ena Athenea	84, 202, 229
Aguilar Treviño, Daniel Hector	295
Aguilar, Cintli	247
Aguilar, Claudio	112, 192, 198, 199
Aguilar, Jacobo	316
Aguilar, José Antonio	275
Aguilar, Julia	295
Aguilar, Manuel	65, 109
Aguilera, Luis Daniel	65, 215
Aguirre Hernández, Luis Angel	200
Aguirre Muñoz, Eduardo	194
Aguirre Tostado, Francisco Servando	78, 87, 88, 91, 92, 144, 146
Aguirre, Rodolfo	249
Ahn, Yeong Hwan	7
Ainsworth, Enrique	308
Akca, Gulcin	106
Ake Turriza, Isabel Guadalupe	233
Al Samman, Talal	206
Alabi, Morotolaoluwa	237
Alain, Jonas	95
Alam, Mohammad K.	213
Alanis Carranza, Luis Edgar	211, 217
Alanis Moreno, Citlalli	297
Alanis, Javier	169
Alarcón Ángeles, Georgina	76
Alarcon Carrillo, Uriel Aldair	225
Alarcón Flores, Gilberto	30, 159
Alarcón Hernández, Cesar de Jesús	80
Alario Franco, Miguel Angel	245
Alatorre Alba, Alexis Gustavo	141
Alatorre Meda, Manuel	7, 84, 85, 112, 114, 116
Alba Rosales, Enrique	54
Albarrán Trujillo, Silvia Edith	143
Albavera Mata, Angel	164
Albinsson, David	47
Albiter Escobar, Elim	292
Albor Aguilera, Maria de Lourdes	139, 140, 144, 145, 146, 148
Albrecht, Manfred	246
Alburquenque, Daniela	45, 51
Alcantar Peña, Jesus J.	9, 102, 316
Alcántar Vázquez, Brenda	283
Alcantar, Jesus	303
Alcaraz Caracheo, Luis Alejandro	65
Alcolea Palafox, Mauricio	38
Aldana, Carlos	20
Aldeco Perez, Eugenia Josefina	70
Alekseeva, Svetlana	47
Alem, Nasim	183
Aleman Ayala, Karina	68, 89, 252
Alemán Ramirez, José Luis	285
Aleman, Miguel Angel	250, 252
Alemany, Pere	168
Alexander Gerasimenko, Yurievich	11
Alexander, Brinkmann	47
Alexandrova, Larissa	68, 69
Alfaro Cuevas Villanueva, Ruth	295
Alfaro Hernandez, Salvador	267
Alfaro Lopez, Hilda Margarita	119, 122
Alfaro Vives, Orlando Ginés	132
Alfonso, Ismeli	199, 210
Alhabeb, Mohamed	185
Ali, Ghulam	118
Allen, Brian	240
Allende Alarcón, Luis Isaac	34
Allende, Sebastian	246
Alloisio, Marina	142
Almaguer Flores, Argelia	97, 102
Almanza Montero, Ovidio	37
Almanza, Efraín	200
Almaraz Córdova, Claudia	139
Almeida, Gabrielli	179
Almendariz Tapia, Francisco Javier	296
Almeraya, Facundo	230, 232, 321
Alonso Gonzalez, Omero	195
Alonso Guzman, Elia Mercedes	220, 221, 233, 234, 235, 237, 294, 295
Alonso Huitron, Juan Carlos	30, 253
Alonso Lemus, Ivonne	8, 120, 121, 126
Alonso Nunez, Gabriel	53, 263
Alonso Pina, Ernesto	265
Alpay, Pamir	310
Alsem, Daan Hein	186
Alshareef, Husam	251
Altamirano Guerrero, Gerardo	210, 239
Altbir, Dora	246
Altuzar Coello, Patricia	191, 192
Alvarado Beltrán, Clemente Guadalupe	90, 91, 298
Alvarado Bonifacio, Antonio	60
Alvarado Cárdenas, Roberto	212
Alvarado Cesar, Francisco	254
Alvarado Estrada, Keila Neri	101
Alvarado Flores, José Juan	288
Alvarado Gil, Juan José	45, 46, 47, 48, 127, 155, 314
Alvarado Hernández, Francisco	114, 194, 196, 207
Alvarado Mendoza, Abraham Gabriel	69, 70
Alvarado Orozco, Juan Manuel	211, 213, 231, 232, 236, 241
Alvarado Pulido, Jose Joaquin	32, 149
Alvarado Rivera, Josefina	90, 91
Alvarado, Alberto	143

Nombre	Paginas
Alvarado, Pedro N.	127
Alvarado, Salvador	289
Alvardo Hernandez, Francisco	200
Alvarenga, Sandra	12
Álvarez Chimal, Rafael	203
Alvarez Contreras, Lorena	273
Alvarez Garcia, Susana	4
Alvarez Lemus, Mayra Angelica	79, 283, 287, 292, 294, 295, 297
Alvarez Lorenzo, C.	105
Alvarez Macias, Carlos	146
Álvarez Méndez, Anabel	119
Alvarez Montaño, Victor	218
Alvarez Perez, Marco Antonio	108
Alvarez Pita, Job Daniel	221, 294
Alvarez Ramirez, Fernando	182, 184
Álvarez Ramírez, Juan Gabriel	121, 139, 249, 250
Alvarez Ramos, Mario Enrique	41, 42, 46, 89, 92, 140, 149
Alvarez Samario, Ivan	252
Alvarez Suarez, Gustavo	147
Alvarez Venicio, Violeta	66
Alvarez Zauco, Edgar	52
Álvarez Zeferino, J. Carlos	159
Alvarez, Fernando	27, 28, 29, 31
Alvarez, Jaime	25
Álvarez, Jonathan	30
Alvarez, Pedro	317
Alzate Cardona, Juan-David	168
Alzate Carvajal, Erika Natalia	4
Alzina, Francesc	155
Amado Briseño, Miguel Angel	89
Amador Ortega, Claudia A.	198
Amaechi, Ifeanyichukwu	270
Amand, Thierry	255, 256
Amanda Camacho, Tanya	7
Amariei, Gerogiana	98
Amaya Parra, Guillermo	53
Amaya Suazo, Franco Josue	148
Ambler, Anthony	307
Ambriz Torres, Jael Madaí	45, 71, 214
Ambrosio Lázaro, Roberto Carlos	23, 24, 25, 89, 90, 92, 93
Amézaga Madrid, Patricia	138, 186
Amirav, Lilac	132
Ammar, Souad	246, 260
Amor, Gabriela	41, 77
Amram, Dor	12
An Wang, Jin	266
Anand, Christopher	172
Anasori, Babak	185
Anaya González, Gabriela Stephania	165
Anaya Monroy, Belen Betsabe	139
Andersen, Geoff	321
Andraca Adame, José Alberto	249, 252, 294
Andrade Caicedo, Henry	79
Andrade Espinosa, Guillermo	288
Andrade Espinoza, Beatriz Adriana	103, 315
Andrade Lobatón, Arizbeth Vianey	138
Andrade Sánchez, Ernesto	129
Andrade, Henry	46
Andrade, Jazmín	291
Angel Huerta, Froylan	255
Angelats Silva, Luis Manuel	229
Angeles Chavez, Carlos	202, 267, 274
Angeles Herrera, Daniel	193
Angeles, Alvaro	202
Angeles, Laura	289
Anguiano Lizarraga, Maria	78
Ania, Conchi O.	2, 283, 285
Anta, Juan Antonio	136, 142, 314
Antipina, Cvetlana	309
Antohe, Stefan	5
Antonello, Sabrina	37
Antonio Hernández, Carlos Hipólito	63, 64
Antonio Hernández, Claudia	24
Antonio, Israel	236
Antonio, Méndez Blas	164
Antono, Erin	127
Antosiewicz, Tomasz	47
Antunes, Vinicius	27, 29
Antúnez Collins, Fidel Eurípides	126, 128
Antúnez García, Joel	165, 168, 258
Anunziata, Oscar	36, 44, 125
Aparicio Martinez, Eider	6
Apatiga Castro, Miguel	73
Apolinar Iribe, Alejandro	146
Aponte, Oscar	24
Aquino González, Laura Victoria	288, 295
Aragon Martinez, Ricardo	288
Araiza Verduzco, Maria Fernanda	84
Araiza, Juan	141
Aramberri, Hugo	154
Aramyan, Artur	303
Arancibia Bulnes, Camilo	8
Aranda Casas, Juan Carlos	207
Aranda Espinoza, Said	113
Aranda Espinoza, Said Eduardo	99
Aranda García, Rubén Jonatan	33, 218, 225, 293
Aranda Suárez, Ivette	58
Aranda, Miguel A. G.	190
Arango Arango, Pedro Jose	106, 232
Arango Vasquez, Daniela	265, 283
Araujo León, Jesús Alfredo	122
Araujo Pérez, Daniel de Jesús	42
Araujo, Daniele Ribeiro	190
Araujo, Francisca Pereira de	85
Araujo, Rinaldo S.	269
Arauz Lara, Bernardo José Luis	99
Arauz Lara, José Luis	97
Arbiol, Jordi	48
Arce Estrada, Elsa Miriam	121, 233
Arce Plaza, Antonio	137
Arcos Alvaro, Diana Griselda	272
Arcos Estrada, Luis Felipe	137
Arcos Gutiérrez, Hugo	242
Arcos Ramos, Rafael	66
Arcos Velázquez, Juan Manuel	309
Ardila Rosas, Natalia	49
Arellanes Lozada, Paulina	236
Arellano Cortaza, José S.	274
Arellano del Río, Clauida del Rocío	275
Arellano Sánchez, Ulises	287
Arellano Sosa, Perla Maria	233
Arellano, Juan Salvador	5, 9
Arellano, Lucía Guadalupe	257
Arenas Alatorre, Jesús Angel	34, 46, 192, 194,195, 203, 224, 246, 255
Arenas Guerrero, Emilio	132
Arenas Hernandez, Alba	38
Arenas Quevedo, Miguel Gonzalo	191
Arenas Ramirez, Diana Paola	30
Arenas Vivo, Ana	98
Arenas, Claudia	45
Arenas, Ma. Concepción	138
Arenillas, Ana	3, 5
Ares Muzio, Oscar	46, 47, 48, 143,145, 149, 155, 313, 314
Arevalo Lopez, Angel M.	246
Arevalo Perez, Juan Carlos	265, 272, 277
Arévalo Sánchez, Gloria	78
Argüelles, Anya	96
Arguello Hernandez, Sandra del Carmen	220, 221
Arias Aguilar, Magda Elisa	233
Arias Andrade, Yeidy Viviana	108
Arias Cerón, Jose Saul	253, 254, 255,256
Arias de Fuentes, Olimpia L.	310
Arias Marín, Eduardo Manuel	68,142
Arias Téllez, José Luis	273
Arias, Raúl	6
Arias, Rodrigo E.	246
Arizaga Ayala, Francisco Javier	165, 253
Arizmendi Morquecho, Ana	40, 51
Arizmendi, Ana	73
Arizpe Chávez, Humberto	13
Armas Perez, Julio Cesar	166, 173, 175
Armendáriz, Imelda	103, 111, 217
Armenta Villegas, Lorena	78
Arnache, Oscar	39
Arnold, Richard	177
Arreaga Salas, David	88
Arreche, Romina	103
Arredondo León, Yesenia	45
Arreola Fernández, Carlos	201
Arreola García, Karla Nayeli	113

Nombre	Paginas
Arreola Pina, Alma Sofía	20
Arreola Rangel, Ricardo	241
Arreola Sanchez, Mauricio	221, 233
Arriaga Hurtado, Luis Gerardo	111
Arriaga, Jesus	24
Arriaga, Luis Gerardo	96
Arriaga, Rodrigo	269
Arrieta Sandoval, Nataly	43
Arroyave, Catalina	292
Arroyave, Raymundo	310
Arroyo Díaz, Ismael	64
Arroyo Reyes, Brenda Lizbeth	77
Arroyo Sánchez, Verónica	20
Arroyo, Benjamín	215
Arslan, Cüneyt	43
Arslan, Ilke	184, 272, 277
Arteaga Arcos, Juan Carlos	79
Arteaga Morales, Aldo	288
Arteaga Syllas, Crista Selene	29
Arzate Vázquez, Israel	78
Asadov, Mirsalim	112, 196, 247, 289
Asadov, Salim	19, 251
Ascencio, Francisco	248
Ashokkumar, Anumol	9
Ashrafi, Behnam	214
Asmis, Knut	279, 280
Asomoza, Maximiliano	287
Asuo, Ivy M.	124
Atantawi, Membarka	34
Atta, Supriya	124
Attfield, J Paul	246
Auciello, Orlando Hector	9, 102, 137, 316
Audifred Aguilar, Jessica Cecilia	77
Aumaitre, Cyril	135
Autschbach, Jochen	42
Auyeung, Raymond	320
Avalos Borja, Miguel	79
Avalos Flores, Julio Cesar	215
Avalos Rendon, Tatiana Lilia	300
Avalos, Martina Cecilia	177, 178
Avancini, Enrico	144
Avelino Flores, Fabiola	96
Avelino Flores, María del Carmen Guadalupe	96
Avellaneda, David	12, 13, 136, 144, 148
Avendaño Gavira, Adriana Nereida	291
Avendaño Gómez, Juan Ramón	109, 112
Avendaño Ibarra, Miguel A.	29, 40, 114, 217
Ávila Avilés, Rodolfo Daniel	40, 165
Ávila García, Alejandro	254
Avila García, Yosuan	19, 103
Avila Guzmán, Jorge Armando	122
Avila Hernández, Ilse Nayeli	107
Ávila Jiménez, Miguel	258
Ávila Lázaro, Israel	126, 296
Avila López, Ulises	220, 294
Avila Nino, Jose Antonio	70
Avila Orta, Carlos Alberto	2, 280
Avila Santos, Manuel	192
Avila, Carlos	93
Avila, Jesus	303
Avilés Cetina, Francis	93, 214, 215, 216
Aviles Monreal, Raul	226
Avilez Garcia, Rocio Guadalupe	142
Ayala Ayala, Maria Teresa	219
Ayala Cortes, Alejandro	8
Ayala Garcia, Ivo Neftali	149, 196
Ayala Villalobos, Scarlett	4
Ayon, Arturo	140, 149
Ayon, Arturo A.	14, 87, 308
Azaizia, Sawsen	255, 256
Azamar Barrios, José Antonio	296
Azizova, Asmet	112
Aztatzi Mendoza, Miguel Ángel	149
Babudurai, Mercyrani	254, 261
Baca Arroyo, Roberto	249
Bacelis Martinez, Reyna Dianela	133
Bachmann, Florian	177
Bader, Samuel	245
Badhan, Riasad	144, 150
Badia, Antonella	111
Badillo Ávila, Miguel Ángel	251
Badillo Campos, Erika Tatiana	208
Bae, Jun Ho	206
Baena Novoa, Alexander	265
Baez Angel, Victor Manuel	220, 221
Baez Gaxiola, Martha Raquel	30
Baez Medina, Hector	252
Báez Rodríguez, Adriana	36, 40, 50
Báez, Sandra	25
Bag, Min	84
Bahena Uribe, Daniel	198
Baile, María Teresa	201, 207
Baizhumanova, Tolkyn	270, 277
Bakaleinikov, Leonid	255, 256
Bakan, Feray	97
Baker, Alexander	246
Baker, Jennifer	135
Bakulin, Artem	88
Balach, Juan	2
Balam Mena, Abraham Isaías	93
Balan, Venkatesh	76
Balboa Palomino, Armando	267
Baldenebro Lopez, Francisco	294
Baldenebro López, Jesús Adrián	54, 141, 294
Balderas Arteaga, Mylai Renata	63, 64
Balderas Cisneros, Francisco de Jesus	110
Balderas Gutiérrez, Juan Nabor	67
Balderas López, José Abraham	218
Balderas, Jesús Uriel	31, 54, 159
Baldo, Pete	11
Baleizão, Carlos	183
Ballardo Rodriguez, Isis Chetzyl	40
Ballesteros Almanza, Maria de Lourdes	78, 103, 104
Ballesteros Arrieta, Karina Marcela	118, 133
Ballor, Joann	206
Balocchi, Andrea	255, 256
Baltazar Hernandez, Victor Hugo	194, 196, 200, 207, 213, 242
Baltazar Zamora, Miguel Angel	220
Bambalaza, Sonwabo	158
Bammer, Manfred	110
Banda Alemán, Jorge Alberto	294
Banerjee, Debika	124
Bansal, Jyoti	261
Banuelos, Jose	192
Bañales, Yoliztli	67
Bañares, Luis	38
Bañuelos, Fortino	270, 272, 276, 298
Bañuelos, Guadalupe	34
Bao, Jiming	131, 182
Barajas Aceves, Martha	250
Barajas Alvarez, Martín Ricardo	201
Barba, Victor	67, 135, 137, 138
Barbero, Cesar Alfredo	2, 43, 58, 63, 67, 104
Barbieria Roque, Leyanet	33
Barbosa García, J. Oracio	138
Barbosa, Simone	77
Barboza Flores, Marcelino	34, 110
Barboza, Adriagni	294
Barcenas Lopez, María Paola	302
Bárcenas Torres, José Diego	288
Barcikowski, Stephan	15
Barnes, Michael	214
Barr, Christopher	11
Barranco Cisneros, Jacob	139, 147
Barraza de León, Lorenzo Efraín	217
Barraza Lopez, Salvadorlopez	18
Barrera Alvarez, Greisy Guadalupe	211, 218
Barrera Alvarez, Mara Elva	304
Barrera Andrade, Jose Manuel	292
Barrera Cardiel, Gerardo	302
Barrera Delgado, Jesus Israel	197
Barrera Torres, Jossue Jared	53
Barrera, Arturo	316
Barrera, Diego	303
Barrera, Miroslava	268
Barrero Moreno, Maria Camila	165
Barreto, Jorge	34, 46, 192, 246
Barrientos Hernández, Francisco Raúl	191
Barrientos, Francisco Raúl	196
Barrios Barrios, Alexander	103
Barrios Capuchino, Juan Jesus	49
Barrios Reyna, María Lizbeth	254
Barroso Flores, Joaquin	172
Barrueta Gomez, Noelia	243
Barthes, J	96
Bartling, Stephan	47
Bartolo Pérez, Pascual	4

Nombre	Paginas
Barzola Quiquia, José	1
Basak, Prasenjit	66
Basaldella, Elena I.	105
Basaran, Ali	247
Baskakov, Sergey	3
Bassim, Nabil	21, 172, 213
Bastía, Richard	80
Bastos, Joao	136, 314
Basurto Sanchez, Rafael	64
Batalla Mayoral, Jessica	53, 112, 274, 309
Batista Rodríguez, Carlos Ramón	143, 144
Batista, Victor S.	131
Bauab, Taís Maria	52
Bauchy, Mathieu	175, 223
Baughman, Jessi	58
Baughman, Ray	9
Bautista Flores, Claudia	5
Bautista Hernandez, Alejandro	20
Bautista Leon, Fidel	220, 221
Bautista Lopez, A.	234
Bautista Margulis, Raul German	215
Bautista Pérez, María Fernanda	109, 112
Bautista Ramírez, María Esther	218
Bazzar, Maasoomeh	102
Becerra García, David	140
Becerra Medina, Moisés Salvador	302
Becerril Estrada, Victor Manuel	290
Becerril Gonzalez Montecinos, Juan Jose	143, 314
Becerril Rodriguez, David	154, 155
Bedford, Nicholas	319
Bedolla Becerril, José Egberto	201, 229
Bedolla Gil, Yaneth	104
Bedolla Jacuinde, Arnoldo	234, 235, 236, 241, 242
Bedoya Perez, Adrian Felipe	289
Behl, Marc	71
Bejar, Luis	112, 192, 198, 199, 210, 235
Bejarano Gaitan, Gilberto	195
Bejarano Peña, Walther Dario	283
Bello Jimenez, Miguel Angel	11, 96
Bello Salgado, Blanca Araceli	64
Bellotti, Natalia	33, 42, 52, 103
Belmares, Sergio	104
Beloborodov, Igor	245
Beltramone, Andrea	3, 44, 124
Beltramone, Andrea Raquel	264
Beltran Conde, Hiram Isaac	159, 160
Beltrán González, Janet	197
Beltran Morales, Alberto	285
Beltran Torres, Melissa	106
Beltran Zuñiga, Manuel Alejandro	230, 237, 241
Beltran, Marcela Regina	15, 166
Ben Abdallah, Philippe	154
Benatti, Emanuel	177
Benavente Castro, Rosario	216
Benavides Obregon, Ana Laura	166, 175
Benavides, Jaime	124
Benitez, J. E. Samaniego-	269
Benitez, Omar Christian	294, 300
Benito, Noelia	48
Benke, Marton	177
Bennett Jackson, Andrew	308
Benson, Jim	48
Berber Solano, Tania Paloma	240, 242
Berhault, Gilles	265, 269
Berman Mendoza, Dainet	4, 35, 87, 90, 91
Bermudez Reyes, Barbara	219
Bermudez Rodriguez, Luis Gabriel	178
Bermudez, Carlos Omar	104
Bermudez, Griselda	218
Bernabe Reyes, Cipriano	221, 233
Bernal Alvarado, José de Jesús	226, 227
Bernal Correa, Roberto	259
Bernal Hernández, Rodolfo	220, 225, 226, 227
Bernal Ramírez, Judith	101, 318
Bernal, José de Jesús	50
Bernardes Filho, Rubens	61
Bernardin, Adriano Michael	52, 285
Bernier, Fabrice	210
Berrellez Reyes, Francisco	4
Bersch, Brian	21
Betancourt Castillo, Irma Elizabeth	211
Betancourt Riera, Rene	5
Betancourt, Israel	12, 199
Bevan, Kirk	132
Beyerlein, Irene	178
Bhaskar, Atul	209
Bhattar, Srikar	276
Bhattarai, Puskar	165
Bhunia, Haripada	66
Biehs, Svend-Age	154
Biener, Juergen	8
Biener, Monika	8
Bilyy, Orest	230, 231, 233
Birnbaum, Peter	205
Biswal, Rajesh Roshan	106, 175, 257, 258, 260, 284, 285, 309
Bivián Castro, Egla Yareth	158
Blancas Blancas, Javier	264
Blancas Flores, Jose Miguel	142
Blancas Herrera, Victor Hugo	221, 295
Blanco Alonso, Oscar	257
Blanco Buitrago, Katherine Andrea	232
Blanco Díaz, Edgar Guadalupe	166
Blanco Flores, Alien	289
Blanco González, Cristina	151
Blandre, Etienne	154
Blanton, Justin	190
Blanton, Tom	190
Bobadilla Valencia, Ana Karla	248
Bocanegra Torres, Israel	222
Bochenkov, Vladimir E.	32
Boehlert, Carl	206
Bogdanowicz, Robert	10
Bogireddy, Naveen Kumar Reddy	271
Bohlen, Jan	208
Bohorquez Bonilla, Emily Dayana	298
Bohorquez Martinez, Carolina	37
Bokhimi, Xim	268
Bolado Martínez, Enrique	114
Bolaina, Brenda	283
Bolaños, Gilberto	165
Bolio López, Gloria Ivette	296
Bollain y Goytia de la Rosa, Juan José	106
Bolluk, Meltem	43
Bolmaro, Raul Eduardo	177, 178
Bongiovanni Abel, Silvestre	67
Bonilla, Linda	105
Borbón Nuñez, Hugo Alejandro	77
Borbon, Susana	50
Borchers, Julie	39
Borja Goyeneche, Estrella Natali	28, 29
Borja Urby, Raul	51, 289
Borkovska, Lyudmyla	253, 258
Borodin, Oleg	117
Borraz, Luis	304
Borrego Morales, Katia	54
Borunda, Adán	303
Bosch, Pablo	104
Botello Rueda, Jorge Adrían	61
Botello Zubiate, María Eugenia	219, 320
Botero Palacio, Luz Elena	41, 74
Botte, Gerardine	1
Boulajaaj, Ahmed	239
Bourgeois, Emilie	9
Brachetti Sibaja, Silvia Beatriz	288
Brandaleze, Elena	178
Brannan, Alexis D.	279
Braunschweig, Holger	280
Bravo Garcia, Yolanda-Elinor	251
Bravo González, Edith	7, 75, 155
Bravo Sánchez, Micael Gerardo	65
Bretado Aragon, Luis Alberto	53, 308
Briano Veloz, Thania Andrea	36
Briggs, Natalie	21
Briones, Edgar	290
Briones, Ricardo	122
Briseño Carmona, Israel A.	218
Britto Hurtado, Ricardo Andres	13
Brody, Harold	310
Broglia, Martin	104
Brokmeier, Heinz-Günter	177, 208
Brown, Donald	178
Brown, Francisco	218, 225
Bruno, Mariano M.	2, 63
Brusilovsky, David	45
Bucio, Emilio	74, 77, 105, 107
Bucio, Lauro	190, 192
Buecheler, Stephan	144

Nombre	Paginas
Buendia, Fernando	15
Bueno, Carlos	143
Buffington, Shelby	71
Buitrago Sierra, Robison	9, 39, 108
Buitrago Torres, Iván-David	74, 168
Buitrago, Jenny	139
Bulir, Jiri	32, 38
Bultheel, Adhemar	15, 192, 265
Bultman, John E	46
Burbano, Miguel	229
Burciaga Díaz, Oswaldo	118, 211, 219
Burelo, Jose Manuel	60
Burgos, Aaron	210, 215
Burgos, Paulina	254, 261
Burillo Amezcua, Guillermina	64,65
Bustamante Lopez, Guadalupe Aide	225, 226
Bustamante Rua, Moises Oswaldo	302
Bustamante, Alexandra	139, 147
Bustillos, José	65
Bustos Martinez, Diana	43
Bustos, Erika	128, 284, 294, 299
Byham, Stephanie	132
C Pinto, Haroldo	29
C. Tavares, Ana	123
Cab, Cesar	6, 160
Cabada, Denisse	105
Cabal Velarde, Javier Gustavo	39, 49
Caballero Briones, Felipe	151
Caballero Hernández, Diana	98
Caballero, Reyna	277
Cabañas Moreno, Jose Gerardo	68, 198, 215
Cabello Ovalle, Eduardo	294
Cabellos Quiroz, Jose Luis	280
Cabellos, José Luis	14, 281
Cabellos, José-Luis	280
Cabral Miramontes, José Ángel	230
Cabrera Alonso, Rodrigo	77
Cabrera Arenas, Víctor	250
Cabrera German, Dagoberto	30, 87, 136, 149
Cabrera Perdomo, Carlos Iván	5
Cabrera Salazar, Jorge Valentin	7
Cabrera Sierra, Roman	198, 201, 235
Cabrera Trujillo, José Manuel	53
Cabrera Trujillo, Remigio	3
Cabrera Vega, Elani	76
Cabrera, Carlos Iván	138
Cabrera, J M.	207
Cabrera, Jose Maria	205, 207, 239, 240
Cabrera, Maria Angeles	319
Cacho Aldaco, Mariana Guadalupe	69
Cacua Madero, Karen Paola	9, 39, 48, 49, 51
Cadena Alcantar, Miguel Angel	85
Cadenas Lopez, Pedro	273
Cadenas, Gregorio	2, 280
Cajas, Paola	118
Calan Canche, José Damián	230, 231, 233
Caldas, Camila	222
Caldera Villalobos, Martín	288, 289
Calderón Arenas, José Antonio	155
Calderón Ayala, Gerardo	4
Calderon Benavides, Hector Alfredo	182, 183, 184
Calderón Bustos, Jeimy	79
Calderón Piñar, Francisco	54
Calderon, Sebastian	183
Caldiño García, Ulises	27,198
Caldonazo, Aline	61
Caligaro, Cynthia	95
Calió, Michele	85
Calixto Rodriguez, Manuela	45, 216, 217
Calixto Rodríguez, María Estela	137
Calixto, Giovana Maria Fioramonti	42
Calixto, Ma. Estela	139, 147
Calleja Arriaga, Wilfrido	113
Calles Martinez, Alipio	5, 67
Calvet, Ivan	147
Calvino Gallardo, Marbella	255
Calvo Ramos, Daniela Kristell	200
Calvo, Jessica	205, 239
Calzada, Lina Angélica	275
Calzada, M Dolores	2
Camacho Alvarez, Ana Laura	260
Camacho Chab, Juan Carlos	95
Camacho Chab, Rafael de Jesús	235
Camacho de la Rosa, Angela	155
Camacho Escobar, Lizbeth	298
Camacho Garcia, Humberto	20
Camacho González, Gabriela Monserrat	35, 251
Camacho González, Mónica Araceli	194, 196,225
Camacho López, Marco Antonio	40, 284
Camacho Montes, Hector	217
Camarena, Veronica Monserrat	201
Cambranis Acosta, Kareli Guadalupe	234
Camic, Busra Tugba	28
Campa Molina, Jorge	11
Campa Rivera, Jesus Alejandro	113
Campana Filho, Sergio Paulo	61, 286
Campbell, Patrick	8
Campillo Alvarado, Gonzalo	279
Campillo Illanes, Bernardo	175
Campillo, Bernardo	179, 196, 217, 218, 232
Campo, Alessio	155
Camporredondo Saucedo, Jesus Emilio	243
Campos Alvarez, Jose	140, 148, 294, 300
Campos Gonzalez, Enrique	19, 149, 256
Campos Sanabria, Virginia	65
Campos Terán, José	31
Campos Zuñiga, Eli Emmanuel	126
Campos, Adriana F	268, 273
Camps, Enrique	12, 47, 149, 254, 284
Can Uc, Bonifacio Alejandro	98, 111
Canal Rodríguez, Maria	3
Canales Lizaola, Monica	5
Canales, Monica Araceli	3
Canan, Jonathan	319
Canché Dzib, José Elías	234, 236
Canché Solís, René Efraín	235
Canche, Jesus	191
Cancino Gordillo, Francisco Enrique	137
Candelario Domínguez, Miguel T.	104
Canepa, Pieremanuele	118
Cano Barrita, Felipe de Jesús	295
Cano Benitez, Cristian Andres	102
Cano Calle, Herminsul de Jesús	49
Cano Castillo, Guadalupe	208
Cano Díaz, Gema Susana	60, 62
Cano, Mario Eduardo	50
Canseco, Miguel Ángel	70
Canto Aguilar, Esdras Josue	151, 314
Canto Ibañez, Jorge	230
Canto Santana, Gabriel Ivan	2
Cañas Mendoza, Luz Adriana	230, 231, 241
Cao, Duyen	136
Capella, Virginia	104
Capula Colindres, Selene Irais	7, 193,197
Car, Roberto	167
Caram, Rubens	179
Carbajal Arizaga, Gregorio Guadalupe	108
Carbajal de la Torre, Georgina	78, 103, 104, 197
Carbajal Franco, Guillermo	46, 173, 272
Carda, Juan	120, 147
Cardenas Cortez, Olda Alexia	80
Cárdenas Galindo, María Guadalupe	107
Cardenas Terrazas, Paola	219
Cardenas, Augusto	41
Cárdenas, Guadalupe	12
Cardona Ramírez, Dagoberto	13, 149
Cardona, Alexander	245
Cardona, Dagoberto	19, 267
Cardozo, Flavio Augusto	286
Carillo Pedraza, Eileen Susana	43
Carillo, Felipe de Jesús	44, 250
Carl Georg, Oertel	179
Carlos Ramirez, Netzahualcoyotl	38, 54
Carman, Greg	246, 307, 308
Carmel, Jason	101
Carmona Carmona, Abraham	270
Carmona Espindola, Javier	164
Carmona García, J. Antonio	183
Carmona T., S.	31, 54, 159
Carmona, Sara Isabel	261, 286
Carnie, Matt	136
Caro Briones, Rubén	69, 70, 101, 109
Carranza Garcia, Juan Carlos	210
Carranza, Diego	245
Carranza, Luis Enrique	210
Carrasco Chavez, Laura A	87, 90
Carrasco, Claudia	146
Carreño Gallardo, Caleb	219

Nombre	Paginas
Carreño Jiménez, Brenda	125, 126
Carreño, Caleb	218, 219
Carreón Aguiñaga, Noé Martín	112
Carreón Álvarez, Clara de la Luz	114
Carreón Castro, María del Pilar	66
Carreón, Hector	199, 235
Carrera Jota, Maria Luz	36, 79
Carrera Nuñez, Oscar	274
Carrera, Karime	40
Carrère, Helene	255, 256
Carrillo Avila, Jair Rafael	98
Carrillo Bucio, Juan Luis	286
Carrillo Castillo, Amanda	76, 87, 88, 89, 90, 91, 92, 105, 299
Carrillo Estrada, José Luis	78, 154, 178
Carrillo Falcón, William Argenis	201
Carrillo López, Jesús	25
Carrillo Nieves, Danay	320
Carrillo Pérez, Ana Bárbara	64
Carrillo Torres, Roberto Carlos	41, 42, 46, 115, 149
Carrillo Varguez, Ana Gabriela	85
Carrillo, Adan	202
Carrillo, Amanda	78, 89, 93
Carro Gastelum, Anaid	159
Carron, Romain	144
Carter, Emily A.	145
Carvajal Quiroz, Eliel	139, 255, 258
Carvente Muñoz, Osvaldo	141
Casalet, Monica	303
Casanova Sánchez, Rafael Benjamín	40
Casanova, Ana	2
Casañas Pimentel, Rocío Guadalupe	112
Casarrubias Alvarez, Angel David	230, 237, 241
Casarrubias Segura, Gildardo	138, 146
Casarrubias, Ricardo	62
Casarruvias Vargas, Heriberto	236
Casas Espinola, Jose Luis	40, 51, 126, 133
Casas Godoy, Leticia	274
Casas Herrera, Bertha Yunuén	199
Casellas, Daniel	239
Cáseres Díaz, Luis Alberto	242
Casier, Remi	59
Casillas Rodriguez, Francisco Javier	192
Castaneda, Homero	235
Castanedo Pérez, Rebeca	140, 251
Castano, Victor	127
Castanos, Brenda	284
Castañeda de la Hoya, Fátima Montserrat	140, 251
Castañeda Facio, Adali Oliva	219
Castañeda Vía, José Alberto	13
Castañeda, Aldo	159
Castañeda, Jesus	141
Castañeda, Luis	35, 251
Castaño Castrillon, Hernan Dario	301
Castaño Meneses, Víctor Manuel	227
Castaño, Victor M.	226
Castell Rodríguez, Andrés Eliú	85
Castellano Torres, Laura Edith	78, 109
Castellanos Águila, Jesús Eduardo	29
Castellanos Arteaga, Laura	62
Castellanos Escamilla, Elva Melisa	67
Castellanos, Arnulfo	176
Castellanos, Miguel	176
Castellanos, Sujey	316
Castilleja Hernandez, Orlando	28
Castillejos Cruz, Bruno Balbino	148
Castillo Alejo, Sheila Miroslava	309
Castillo Alvarado, Fray de Landa	42, 125, 141, 148, 222
Castillo Blum, Silvia Elena	193
Castillo Delgadillo, Ines	264
Castillo Díaz, Luis Alberto	108
Castillo Elizondo, Jaime Arturo	240
Castillo Figueroa, Juan Sebastian	28
Castillo Gallegos, Nayi Cristel	266, 272, 275
Castillo Mixcoatl, Juan	166
Castillo Morales, Martín	210, 242
Castillo Ortega, María Mónica	107
Castillo Palomera, Roger	4, 122, 138, 140, 148, 258, 297
Castillo Rojas, Miguel Ángel	233
Castillo Sanabria, Jazmin	61
Castillo Santillan, Martín	200
Castillo Torres, Elizabeth	200
Castillo Toxqui, Emmanuel	271
Castillo, Roberto Saul	254
Castillo, Santos Jesús	89, 90, 91, 92, 126, 146, 253, 299, 309
Castrejón González, Edgar Omar	166
Castrejón Sánchez, Victor Hugo	6,114, 284, 287, 297
Castrellon Uribe, Jesus	6
Castro Baeza, José	297
Castro Beltrán, Andrés	8, 90, 91, 298
Castro Chong, Alejandra Maria	136, 314
Castro García, Perla Guadalupe	62
Castro Guerrero, Carlos Fernando	61, 232
Castro Hernández, Adalberto	208, 212
Castro Hernández, Jorge Javier	19, 165
Castro Issasi, Cinthya Soreli	304
Castro Monter, Damaris	252
Castro Ramírez, Angela Patricia	108
Castro Rodríguez, Roman	54
Castro Ruiz, Samuel	112
Castro, Cristina	38
Castro, Iván	220
Castro, Javier Servando	194
Castro, Lina Marcela	261, 283, 286
Castro, Miguel	19, 268
Castro, Rigoberto	30
Castrucci, Paola	23
Castruita Avila, Laura G.	243
Castruita, Laura	243
Cauich Cupul, Javier Iván	215
Cauich Rodriguez, Juan Valerio	101
Cavazos García, José Luis	241
Cayetano Castro, Nicolás	195
Cázares Loya, Guadalupe Rafaela	88
Cazares, Guadalupe Rafaela	76
Cázarez Candia, Octavio	294, 300
Cazorla Amorós, Diego	284
Cebada Castillo, Surinam	298
Ceballos Chuc, M. C.	250
Ceballos Mendivil, Laura Guadalupe	54
Ceballos, Manuel	51
Cedano Alvaro, Maria Esther	6
Cedeño Caero, Luis	266
Cedeño Garcidueñas, Verónica Janette	4
Cedeño, Eder	147
Ceder, Gerbrand	118
Cedillo Escalona, Samantha	150
Cedillo González, Erika Iveth	292
Cedillo Valverde, Gerardo	70
Cedillo, Gerardo	74
Cedillos Barraza, Omar	217
Ceh Soberanis, Oscar	304
Ceja, Israel	316
Celaya García, Brenda	288
Celaya Lopez, Christian Alejandro	9
Celik, Elif	97
Celik, Fuat	124
Celis Arias, Vanessa	159, 160
Cely, Ivan Gerardo	248
Cely, Maria Mercedes	230
Cemin, Felipe	28
Cen Puc, Marco Antonio	93
Cepeda Jimenez, Carmen	206
Cepeda Pérez, Elisa Iseth	187
Cerda Rojas, René de Jesús	197, 242
Cerdá, Víctor	160
Cerdan Pasaran, Andrea	150
Cerecedo Saenz, Eduardo	62, 194, 196, 197, 198, 293, 296, 304
Cerezo Ponce, Candido Omar	154
Cerino Córdova, Felipe de Jesús	67, 119
Ceròn Montes, Genaro Ivan	286
Ceron Ramírez, Pablo Victor	226, 227
Ceron, Maira R	8
Cerón, Miguel Ángel	253
Ceron, Pablo Victor	224, 225, 226, 227
Cerruti, Marta	110, 124
Cervantes Cervantes, Jose Miguel	255
Cervantes Díaz, Jose Manuel	96
Cervantes García, Luciano Armando	285
Cervantes López, José Luis	45
Cervantes Sodi, Felipe	109
Cervantes Uc, M.	107
Cervantes Uribe, Adrián	265, 266, 272, 274, 276, 277
Ceseña Quiñonez, José Ignacio	283

Nombre	Paginas
Cesneros Tamayo, Ricardo	52
Cetina Dorantes, Marco de Jesus	140, 145, 314
Cetina Mancilla, Enoc	68
Chab, Vladimir	224
Chacon Nava, Jose G.	235, 241
Chaemchuen, Somboon	157, 158
Chai, Yongming	275
Chaichana, Kaisorn	101
Chaires Rosas, Casandra Paulina	85
Chairez Oria, Isaac	108
Chakaravarthy, Srikanth	253, 260
Chaker, Mohamed	124
Chamorro Cruz, Isaias	209
Chamorro, Ramiro	230
Champeaux, Corinne	48
Chan Bacab, Manuel Jesús	95
Chan Chan, Lerma Hanaiy	68,79
Chan Morales, Daniel	143
Chan, Henry	171, 174
Chan, Maria	136, 171, 174, 184
Chang, Chi-Ning	310
Chang, Jane	39, 307
Chanona Pérez, José Jorge	182, 183
Chanona, Jose Jorge	109
Chapa, Christian	31, 105
Chaperman, Larissa	260
Chapoy Villanueva, Héctor	318
Chapuis, Pierre-Olivier	154
Charipar, Kristin	320
Charipar, Nicholas	320
Chason, Eric	27
Chauhan, Kanchan	77, 315
Chavarria Escamilla, Hervey Gamaliel	266, 267
Chavarría Hernández, Juan Carlos	274
Chávez Alcalá, José Federico	205, 240
Chavez Angel, Emigdio	155
Chávez Arellano, Joaquín	115
Chavez Bautista, Silvestre de Jesus	98
Chavez Bracamont, Karen Analy	111
Chávez Carvayar, José Alvaro	121, 250, 273, 276
Chávez Chávez, A.	12,13
Chávez Cruz, Ana Guadalupe	112
Chávez Cruz, Susana	112
Chávez Díaz, Mercedes Paulina	201
Chávez Fernández, Julián	40, 51
Chavez Flores, David	132
Chavez Garcia, Dalia Holanda	64, 73
Chávez García, Hugo Luis	220, 221, 233, 234, 235, 294, 295
Chávez García, María de Lourdes	284
Chavez Gomez, Karina del Carmen	38
Chavez Güitron, Lorena	78
Chavez Martinez, Margarita	248, 258
Chávez Páez, Martín	63, 70
Chávez Portillo, Melissa	32
Chávez Ramírez, Abraham Ulises	110
Chavez Rivas, Fernando	271
Chavez Ulloa, Emilio	234
Chávez Yuen, Wan Yin	114
Chavez, Andres	308
Chávez, F.	258
Chávez, José	69
Chavez, Jose Juan	249
Chavez, Rosa Hilda	215
Chávez, Sandra Eloísa	215
Chavira, Elizabeth	34, 38, 46, 192, 246, 277, 291
Cheang Wong, Juan Carlos	191
Chegal, Won	34
Chejne, Farid	48, 51
Chelikowsky, James	167
Chen, Baoliang	315
Chen, Cai	246
Chen, Jianmin	317
Chen, Li Fang	287
Chen, Lifang	263, 266
Chen, Wei	317
Cheng, Wei	131
Chepkasov, Ilia	12
Cherkashin, Nikolay	47
Cherukara, Mathew	171, 172, 173, 174, 189
Chevallier, Pascale	105, 111
Chí, Alejandro	304
Chi, Jorge	304
Chianelli, Russell R.	264
Chicardi, Ernesto	83
Chimal Valencia, Obed Arnoldo	52
Chin Acevedo, Suriel Ezequiel	236
Chin, Eunice	101
Chin, Ya-Huei (cathy)	271, 276
Ching, Eleicer	250
Chino Ulloa, Alexis	219
Chino, Alexis	281
Chiñas Figueroa, Sergio Antonio	268
Chiu, Hsien-Chieh	2
Cho, Hyeongjeong	289
Cho, Hyungkoun	133
Cho, Seok Ho	87
Choe, Jungho	178
Choi, Hojoon	288
Choi, Hyunjoo	88
Choi, Kyung Cheol	87
Choi, Yeon-Taek	217
Choi, Yong Nam	159
Cholula Díaz, Jorge Luis	1, 38
Chong, Sayuri	104, 112
Chorilli, Marlus	42, 52
Choudhary, Alok	172
Choy, Kwang Leong	32
Chrisey, Doug	15
Christensen, Greg	316
Chueh, William	186
Chulines Montejo, Fernanda M.	314
Chun, Jaehun	187
Chung, Ding-Wen	173
Chung, Wonseok	9
Cichon, Stanislav	224
Cid Reborido, Alicia	309
Cierpik Gold, Kim	132
Cifuentes Quintal, Miguel Eduardo	18, 136, 168
Cigarroa Mayorga, Oscar Eduardo	13, 29, 40, 50, 98, 114, 217
Cipagauta, Sandra	288
Cisneros Magaña, María Remedios	71
Cisneros Preciado, Jorge	53
Cisneros Tamayo, Ricardo	54
Clausen, Bjorn	178
Cleveland, Erin	320
Cloutier, Sylvain G.	124
Coasne, Benoit	8, 157
Cob Cantu, Jesus Ramon	216
Cobos Murcia, Josè Angel	62, 159, 233, 290
Cobos Reyes, Carlos Antonio	121
Coca Ordoñez, Martín Alberto	3
Coelho Arnt, Ângela Beatriz	234
Cogan, Stuart	73
Cojocaru, Cristian Victor	210
Çokol Çakmak, Melike	97
Colás, Rafael	175, 179, 193, 195, 197, 198, 201, 210, 211, 230, 231, 232, 236, 242
Cole, Jacqueline	166, 167
Cole, M. W.	308, 310, 311
Colín de la Cruz, Jesús Mario	302
Colin Velazquez, Luis	221
Colina Márquez, José	266
Colina Ruiz, Roberto	151
Colina, Coray	59
Colinet, Isabelle	159
Collado Torres, Rosa del Rosario	288, 297
Collins Martínez, Virginia	266
Collins, Christopher R	166
Colmenares Roldan, Gabriel	46
Colnago, Luiz Alberto	61, 286
Combita Merchan, Diego	108
Comoretto, Davide	142
Compañ, Vicente	67
Compean Garcia, Vicente Damian	30, 247
Concepción, Omar	258
Concha Guzmán, María Olga	114
Concheiro, A.	105
Conde Diaz, Jorge Evaristo	14, 149, 290
Coneo Rodriguez, Rusbel	63
Contreras Alcala, Manuel Jesus	304
Contreras Cuevas, Antonio	201, 236
Contreras Hernandez, Geo Rolando	104
Contreras Lòpez, Oscar Edel	4, 90
Contreras Marin, Elizabeth	220, 221, 235
Contreras Muro, Oliver	179
Contreras Navarrete, José de Jesús	45, 71, 214

Nombre	Paginas
Contreras Padilla, Mariel	18
Contreras Puente, Gerardo	141, 144, 145, 146, 148
Contreras Rascon, Jorge Indalecio	254
Contreras Rozo, José Antonio	24
Contreras Ruiz, Miguel Angel	137
Contreras Solorio, David Armando	5, 138
Contreras, Adrian	104
Contreras, Denisse	104
Contreras, José Luis	218, 274, 275, 277
Contreras, Oscar Edel	87
Cook, Cameron	169
Corat, Marcus Alexandre Finzi	85
Cordero García, Adrián	265, 266, 277
Cordero Santiago, Juan Pablo	13
Cordero, Perla	36, 303
Cordoba, Edisson	211
Córdova Acosta, Daniel Raymundo	227
Córdova Bautista, Yolanda	121
Cordova Fraga, Teodoro	50
Córdova Juárez, Carlos Fernando	296
Cordova Rubio, Alejandra	140
Córdova Sánchez, Andrea Estefanía	220
Córdova, Ana	150
Córdova, Gerardo Enrique	271
Corea Téllez, Mónica de la Luz	61, 108
Corea, Monica	33, 69, 70, 112
Corella Madueño, María Alba Guadalupe	114
Coreño Alonso, Oscar	89
Coria Monroy, Christian Selene	140
Corma, Avelino	276
Cornejo Monrroy, Delfino	53, 209
Corona García, Carlos	60
Corona Martínez, Diego Antonio	212
Corona Ruiz, Liliana Trinidad	39, 52
Corral Guerrero, Rosa Ahimé	146
Correa Baena, Juan-Pablo	143
Correa Pacheco, Zormy Nacary	256
Corrêa, Harrison	61
Corredor, Dery Esmeralda	211, 293
Corro Guerrero, Renaldo	103
Corro, Grisel	266, 270, 272, 276, 298
Cortes Carrillo, Eduardo	236
Cortés de Jesús, Luis Enrique	266, 270
Cortes Guzman, Fernando	175
Cortés Herrera, Roberto Benjamín	258
Cortes Jácome, Maria Antonia	202, 266, 267
Cortés Martínez, Raúl	292, 295
Cortes Molina, Juan Jose	219
Cortes Ortiz, William Giovanni	265
Cortés Salinas, Denisse	32
Cortés Santiago, Avelino	165
Cortes Suarez, Jonathan	158
Cortes, Agustin	144
Cortes, Maria Antonia	274
Cortés, Sara	288
Cortez Cruz, Erika Valeria	98
Cortez Elizalde, Jorge	273
Cortez Galaz, Cayetano	226
Cortez Martínez, Edith	309
Cortez Maya, Sandra	114
Cortez Pérez, Patricio Iván	121
Cortez Valadez, Manuel	13
Corvisier, Alan	46
Cosarrubias, Ricardo	60
Cosio, Maria	89
Coskun, Sahin	106
Cosme Bolaños, Ismael	54
Costa, Patricia Sheilla	210, 239
Cota Leal, Marcos Alan	30, 136, 149
Cotto Maldonado, María del C.	295
Courtois, Nicolas	102
Coutinho, Natalia	31
Coutino Gonzalez, Eduardo	41, 45
Coyopol Solis, Antonio	14, 35, 180, 252
Cremades, Ana	269
Crespo Barrera, Paula Montserrat	30, 289
Crespo Sosa, Alejandro	13, 317
Crisostomo Reyez, Margarita Clarisaila	257, 255
Crotte Ledesma, Horacio	255, 256, 266
Cruz Barba, Emilio	62
Cruz Bueno, Jose de Jesus	252
Cruz G, Jorge	257
Cruz Gandarilla, Francisco	177
Cruz Gonzalez, Daniel	218, 225, 293
Cruz Hernandez, Rodolfo Ivan	34
Cruz Irrison, Miguel	24, 43, 139, 255, 257, 258
Cruz Jáuregui, Ma. de la Paz	35
Cruz Leal, Miriam Sarai	258
Cruz Manjarres, Hector	195, 277
Cruz Martínez, Heriberto	122
Cruz Morales, Jorge A.	60
Cruz Moreno, Dulce María Anahí	29
Cruz Muñoz, Beatríz	138
Cruz Olvera, Domingo	15
Cruz Orea, Alfredo	66
Cruz Ortiz, Brenda Rogelina	219
Cruz Pastrana, Frinne Yomeli	296
Cruz Pastrana, Itzayana Lorely	290
Cruz Pérez, Alida Elizabeth	121
Cruz Ramírez, Alejandro	233
Cruz Reyes, Irlanda	291
Cruz Rivera, Jose de Jesus	194
Cruz Silva, Rodolfo	8
Cruz Turcios, Joseph Alejandro	12, 13
Cruz Vázquez, Catalina	220, 225, 226, 227
Cruz Zaragoza, Epifanio	225
Cruz Zavala, Aracely Sarai	139
Cruz, José de Jesus	242
Cruz, Magally	266
Cuadros, Eduardo	218
Cuan Urquizo, Enrique	209
Cuao, Carlos	210
Cuara Diaz, Edgar	1, 8, 98, 271
Cuauhtémoc López, Ignacio	268, 273, 276
Cubillas Gonzalez, Pablo	269
Cucatti, Silvia	27, 29, 31
Cuenca Alvarez, Ricardo	211, 217, 236
Cuenca, Ricardo	220
Cuentas Gallegos, Ana Karina	8, 192
Cuesta Balderas, Alejandro Ivan	42
Cuesta Castro, Diana Paola	74
Cuesta, Ana	190
Cuevas, Juan Carlos	105
Cui, Zhong-Hua	281
Cunha, Rodrigo	64
Cureño Hernández, Karla Estefanía	193
Cussa, Jorgelina	36
Cuvas, Rogelio	263
Czajkowski, Krzysztof	47
Diaz, Gabriela	270
Da Rocha, Marcio Roberto	234
Da Silva Filho, Edson Cavalcanti	85
Dahlberg, Dan	247, 307
Dahotre, Narendra	241
Dainese, Tiziano	37
Dalla Libera Junior, Vilson	58
Dalvit, Diego	154
Damman, Pascal	27
Dang, Hongmei	150
Dapiaggi, Monica	190
Darling, Kris	117
Darmadi, Iwan	47
Das, Partha Pratim	190
Das, Payel	173
Das, Saptarshi	174
Datta, Sujay	58
Datta, Suman	17, 21
Dávalos Sánchez, Aglae	296
Davenport, Timothy	127
David, Denis Gilbert Francis	124
Dávila, José Antonio	251
Daza Casiano, Luis German	54
de Alba, Idania	291
de Aranzamendi, María Carla	178
de Araújo, Jesuina Cassia S	269, 273
de Carlos López, Eduardo	202
de Coss, Romeo	18, 136, 168
de Denko, Alexandra T.	314
de Gortari, Rebeca	302
de Gyves, Josefina	119
de Haro del Río, David Alejandro	269
de Ita de la Torre, Antonio Silvio	27
de Ita, Antonio	216
de Jonge, Niels	187
de Koning, Martijn C.	159
de la Cerna Hernandez, Carla	285, 296
de la Cruz Delgado, Anabel	273
de la Cruz García, Maria de Los Angeles	25

Nombre	Paginas
de la Cruz Hernández, Erick Natividad	294
de la Cruz May, Patricia	138
de la Cruz Morales, José Cosme	235
de la Cruz Romero, Durvel	266, 268, 271, 273
de la Cruz Santiago., Noé	150
de la Cruz, Juan	35
de la Fuente Maldonado, Natali	263, 266
de la Hidalga, Javier	24, 25
de la Luz Merino, Samuel	289
de la Luz Ramos, Andrea	53
de la Luz Tlapaya, Verónica	283
de la Parra Arciniega, Salomé Maribel	122
de la Pena Seaman, Omar	168, 224
de la Peña Reyes, Jonathan Jetzrahel	150
de la Rosa Cruz, Elder	7, 50, 141, 150
de la Rosa, Elder	115
de la Torre Sáenz, L.	120
de la Torre, Angeles G.	190
de León Murguía, Norma Vanessa	216
de Los Reyes, Jose Antonio	264, 274
De Los Santos, Edgar Ulises	218, 220, 236
de Luna Bugallo, Andres	19, 30
de Mello, Mariana Gerardi	179
de Melo Pereira, Osvaldo	148
de Melo, Osvaldo	258
de MouFlores, Francisco	146, 256, 257, 259
de Moure Flores, Francisco	141, 148
de Obaldia, Elida	9, 316
de Pablo, Juan Jose	173, 174, 175
de Puebla, Universidad	198
de Rossi, Francesca	135
de Santiago Luna, Jose	196
de Santiago, Francisco	43, 257
de Sousa, Francisco Ferreira	268
de Souza, Flavio Leandro	133
de Vincentis, Natalia	177
Deaquino Lara, R.	240
Debnath, Dibyendu	58
Deganello, Francesca	123
Del Ángel Meraz, Ebelia	122
del Angel Monroy, Mayra	242
del Angel Montes, Gloria Alicia	265, 266
del Ángel Vicente, Paz	273
del Angel, Paz	270
del Canto, Marcela	45
del Castillo Castro, Teresa	68, 114
del Castillo Vázquez, Roxana Mitzayé	5, 67
del Castillo, Luis Felipe	67
del Gilgio, Auro	110
del Moral Gomez, Amalia Ines	53
del Oso Acevedo, Jose Alfredo	145
del Pozo Mares, Adrian	232
del Pozo Melero, Gonzalo	89
del Pozo, Adrian	218
Del Prado Audelo, María Luisa	116
del Razo, Karla	270
del Rio Carranza, Berenice	267
del Rio de Santiago, Antonio	52
del Rio García, Jose Manuel	70
del Rio Villagran, J. Manuel	50
del Sol Fernandez, Susel	103, 289
del Valle Granda, Javier	247
Delgadillo, Graciela	276
Delgado Alvarez, José Alfredo	219
Delgado Arroyo, Filemon	61
Delgado Garcia, Jorge	109
Delgado García, José Jorge	78
Delgado Jimenez, Nadxiieli	3
Delgado López, Marco Antonio	197, 242
Delgado Macuil, Raul	24
Delgado Montiel, Tomás de Jesús	141
Delgado Niño, Pilar	133
Delgado Pamanes, Miguel Fernando	207
Delgado Romero, Victor Manuel	209
Delgado Salas, Daniel Martín	235
Delgado Venegas, Rogelio	167
Delgado, José Miguel	190
Demadrille, Renaud	135
Demarina, Nataliya	47
Demopoulos, George P.	2
Dennis, Patrick B.	319
Dessources, Samuel	120
Destri, Silvia	142
Dewhurst, Rian D.	280
Deyá, Cecila	42
Dhanak, Vinod R.	144, 146
Di Carlo, Dino	31
Di Mario, Lorenzo	155
Díaz Alonso, Daniela	113
Díaz Cano, Aarón Israel	7, 75, 155, 250
Díaz Cruz, Lilia Alejandra	293
Diaz de la Torre, Sebastian	78, 80, 105
Diaz del Angel, Dinorah	80
Díaz Flores, Laura Lorena	138, 139, 186, 295, 304
Diaz Franulic, Ignacio	319
Díaz Góngora, José Antonio Irán	224
Diaz Gonzalez, Noel	220, 221, 294, 295
Díaz Guillén, José Alonso	118, 211
Diaz Guillen, Mario	61
Diaz León, Christian	107, 301
Díaz León, Edgar Israel	301
Diaz León, Ramón	59, 69
Díaz Martínez, Gladys Yvette	242
Díaz Mieles, David Alejandro	286
Díaz Molina, Maximiliano	61
Diaz Nava, Maria del Carmen	61, 63, 65, 66, 71
Díaz Núñez, Pablo	38
Diaz Ramirez, Mariana Lizeth	277
Díaz Reyes, Joel	47, 199, 254, 255
Diaz Rodriguez, Sergio	111
Dìaz Rodriguez, Tania Gabriela	165, 168
Diaz Salgado, Joel	321
Díaz Sánchez, Angeles del C	227
Diaz Sanchez, Lorena Berenice	58
Diaz Santos, Felix	106
Díaz Torrejón, Cesar	42
Díaz Torres, Esteban	254
Diaz Torres, Luis Armando	224
Diaz Valdes, Elvia	46
Diaz Velazquez, Heriberto	159
Díaz, Alfredo	304
Diaz, Dale	293
Diaz, David	12, 291
Díaz, Gabriela	12, 202, 272
Diaz, Leonardo	264
Díaz, Nancy	64, 274
Díaz, Tomás	14, 35, 142, 180, 252
Dibert, Ana	125, 141, 150
Dinescu, Gheorghe	5
Ding, Feng	18, 20
Dionisio Chávez, N.	105
Distasio Jr., Robert A.	167
Divó Matos, Yamil	160
Diware, Mangesh	34
Dmello, Kyle	279
Dmitri, Molodov	206
Do Carmo, José Vitor Costa	273
Do Minh, Hoat	164
Do Nascimento, Ronaldo Veronês	234
Dobrowolski, Witold	54
Doganay, Doga	106
Dominguez Almaraz, Gonzalo M.	202, 220, 243, 321
Domínguez Arvizu, Jorge Luis	266
Domínguez Benítez, Verónica	175
Domínguez Crespo, Miguel Antonio	288, 297
Domínguez Díaz, Maraolina	140
Domínguez Esquivel, José Manuel	265, 267, 271
Domínguez Gómez, Amos Benjamín	36, 44
Domínguez Horna, Carlos	23
Domínguez Jiménez, Miguel Ángel	25
Domínguez Juárez, Jorge Luis	80
Dominguez Maldonado, Ruben	125, 304
Dominguez Mota, Franciso Javier	220
Dominguez Patiño, Martha Lilia	293, 298
Dominguez Rivera, Marcos	224
Dominguez Rodriguez, Gustavo	2
Dominguez, Jose Manuel	50, 264, 265, 267, 272, 273, 274, 275, 276
Domínguez, Juan Sarid	107
Domínguez, Miguel	93
Dominguez, Miguel Angel	150
Dominguez, Noemi	118
Domínguez, Rocío B	6
Domratcheva Lvova, Lada	45, 71, 214
Donado Perez, Fernando	78
Dong, Jicheng	20
Donneys Victoria, Dayana	299
Donohué Cornejo, Alejandro	105

Nombre	Paginas
Dorantes Dávila, Jesús	37
Dorantes Rodríguez, Rubén	138
Dorantes Rosales, Héctor Javier	195, 216
Doria Delgado, Bruno	231
Dos Santos Garcia, Antonio Juan	246
Dossetti, Victor	154, 178
Douda, Janna	6, 63, 81
Dowgiallo, Anne-Marie	291, 294
Droppa Jr, Roosevelt	29
Du, Jincheng	164
Duarte Moller, Jose Alberto	29, 113, 243
Duarte Urbina, Omar Jose	120
Duarte Zamorano, Roberto Pedro	41, 92
Duarte, Francisco	124
Duarte, Gian Carlos Silva	273
Duarte, Helio Anderson	168
Dueñas Jaco, Andrea Victoria	288
Duffó, Gustavo	229
Duhamel, Jean	59
Dumais, Jacques	320
Duman, Ismail	43
Dumas Bouchiat, Frederic	48
Dunin Borkowski, Rafal	187
Duque Rodríguez, Julio	54
Durán Álvarez, Juan Carlos	260
Durán Arenas, Patricia	149
Durán Herrera, Alejandro	233
Duran Martinez, Adriana Carolina	73, 101
Duran Ramírez, Victor Manuel	192
Duran, Alejandro	258
Durán, Alfonso	285
Durazo Alarcón, Joemi Conchita	79
Durón Sifuentes, Carlos Andrés	118
Durrant, James	131
Dwivedi, Dheerendra K.	193, 201
Dye, Matthew	144, 150
Dzib Pérez, Luis Román	231, 233
Dzugan, Jan	243
E Goodwin, Frank	210, 239
Ebisawa, Mizue	251
Echavarria, Adriana	265, 269, 271
Echavarría, Aida Milena	195
Echevarría Castillo, Frank	191
Echeverry Cardona, Laura María	98
Edrisy, Afsaneh	213
Edwards, Holly J.	146
Edwin, Shian	211
Egger, Alexander	164, 167
Egure Hidalgo, Mildred	302, 303, 107
Eichert, Diane	191
El Filali, Brahim	40, 50, 51, 176
Elias, Conceicao de Maria Vaz	85
Elías, Janet Alejandra	225
Elizalde Galindo, Jose T.	247
Elizalde Huitron, Sergio Alberto	207
Elizalde, S.	207
Elizarraraz Mendiola, Héctor	39
Elizondo Villarreal, Nora	269, 293
Ellena, Javier	54
Ellis, Chase	320
Elsherif, Hesham	21
Encarnación Gómez, Cecilia	267
Encinas Romero, Martín Antonio	102
Encinas Soto, Kareen Krizzan	106
Enciso, Agustín	5, 138
Endo, Morinobu	8
Endrino, Jose Luis	106
Enríquez Pérez, Ángeles	284, 297
Enríquez, Amós Benjamín	147
Enriquez, Francisco Javier	116
Enriquez, Sergio	6
Enríquez-Carrejo, José Luis	265
Equihua, Fabian	243
Erdemir, Ali	315
Erreguin Mejia, Juan Carlos	126
Eryilmaz, Osman L	315
Escalante Garcia, Ismailia Leilani	114
Escalante Garcia, Jose Ivan	220, 233
Escalante Notario, German	146
Escalante Quijano, Renan Andres	135, 142, 143, 313, 316
Escalera Mejia, Edwin	300
Escamilla Flores, Aish Valdemar	104
Escamilla Guerrero, Raúl	255
Escamilla Luna, Osiris	186
Escamilla, Raúl	164, 193, 194
Escobar Aguilar, Jose	264, 265, 298
Escobar Alarcon, Luis	203, 287
Escobar Barrios, Vladimir Alonso	107, 113, 118, 139, 213, 288, 291
Escobar Calderón, Grecia Lizbeth	79
Escobar García, Diana M.	84, 107, 112
Escobar Mora, Nelson Javier	74
Escobar Morales, Beatriz	122
Escobar Ochoa, Flor María	226
Escobar Rincón, Daniel	30, 295
Escobar, Beatriz	120, 121
Escobar, Luis	264, 273
Escobar, Roberto	246
Escobedo Bocardo, José Concepción	112
Escobedo Bretado, Miguel Angel	293
Escobedo Leon, Paloma Topacio	62
Escobedo Morales, Alejandro	200
Escobosa Echavarría, Arturo	52, 258
Escorcia García, José	120, 126, 140, 141
Escrig, Juan	39, 45, 51, 247
Escudero Derat, Roberto	248
Escudero Lourdes, Claudia	77, 113
Escudero, Roberto	247, 248
España Sánchez, Beatriz Liliana	70, 96, 98, 105
España, Claudia Liliana	28
Esparza Muñoz, Rodrigo Alonso	41, 119, 194, 198, 200, 202, 257
Esparza Ponce, Hilda Esperanza	126
Esparza, Diego	125, 139, 141, 150
Esparza, Rodrigo	198, 199, 202
Espejel Ayala, Fabricio	41, 45
Espejel Morales, Raúl Arturo	5
Espericueta González, Diana Leticia	191
Espericueta González, Dora Erika	191
Espino Cortés, Fermin Pascual	33, 39, 65, 128
Espino Gonzalez, Carlos Uriel	221, 294
Espino, Juan	270
Espinola, Fernando	115
Espinosa Aguilar, Beatriz Adriana	235
Espinosa Almeyda, Yoanh	217
Espinosa Andrews, Hugo	83, 107, 286
Espinosa Cardenal, Erika Jazmith	29, 230
Espinosa Cristóbal, León Francisco	105
Espinosa de Los Monteros, Alejandra E.	266
Espinosa Faller, Francisco	151
Espinosa García, Jhonathan Efraín	23
Espinosa Gonzalez, Claudia Guadalupe	14, 43, 271, 272, 277
Espinosa Hernandez, Martha Eugenia	303
Espinosa Luna, Rafael	191
Espinosa Magaña, Francisco	36, 44, 277
Espinosa Medina, Marco Antonio	78, 103, 104, 197
Espinosa Picazo, Alfonso	222
Espinosa Roa, Arian	147
Espinosa Vega, Ramiro	237
Espinosa Villatoro, Erick Leonel	120
Espinosa, Horacio	139
Espinosa, José Eduardo	35, 175
Espinoza Dueñas, Karla Alejandra	268
Espinoza Medina, M. A.	218
Espinoza Perez, Lester Javier	223, 226
Espinoza Salomon, Jose Rafael	256
Espinoza Vazquez, Araceli	234, 237
Espitia Nery, Martin Eduardo	79, 211, 293, 300
Esquinazi, Pablo D.	9, 37
Esquivel Flores, Scarlet Sofia	112
Esquivel Gómez, Aldrhyn Miguel	29
Esquivel Mendez, Lucero Alejandra	144, 148
Esquivel Pereyra, Oswaldo	186
Esquivel Sirvent, Raul	153, 155
Esquivel, Raul	153
Esteban Gomez, Sandra	194
Esteves, Miriam	105
Estevez Espinoza, Ignacio	143
Estévez González, Miriam Rocío	63, 108, 110, 119, 200, 202
Estevez Martinez, Yoxkin	34
Estévez, Miriam	78
Estevez, Octavio	7, 13, 25, 115, 143
Estrada Gasca, Claudio Alejandro	54
Estrada Girón, Yokiushirdhilgilmara	80
Estrada Govea, Esteban	296
Estrada Guel, Ivanovich	194, 195, 207

Nombre	Paginas
Estrada López, Angel	12, 254
Estrada, Gethzemani	73
Estrada, Ivanovich	194, 195, 196, 207
Estrada, Rodolfo Fabian	109
Estrada, Rosa Maria	269
Estrella Gutierrez, Manuel Alejandro	142, 150, 160
Estupiñan Duran, Hugo Armando	96, 106, 125, 235
Ezequiel Alvarado, Marco Alejandro	207
Ezzahri, Younes	46, 47, 48, 155
F. Fuentes, Antonio	118
Fabris, Laura	124
Facchinatto, William	61, 286
Fajardo San Miguel, Gerardo	29, 233
Falcón Castrejón, Reyna Anahí	219
Falcony Guajardo, Ciro	30, 31, 54, 144, 159, 198
Fan, Qing	275
Fanchini, Giovanni	129
Fang, Ranran	35
Fanton, Leonardo	179
Farfán Collí, Brenda Eloísa	234
Farhan, Muhammad	71
Farías Sanabria, Amy	216
Farias Velazquez, Ivan Gerardo	219, 222
Farias, Mario	31, 52
Farias, Melissa	229
Farías, Tania	54
Farigua Perez, Jose Humberto	229
Farinha, José Paulo	183
Farrera Vázquez, Neín	126, 128, 310
Farrera, Neín	176
Farrusseng, David	157
Fassini Michels, Alexandre	28
Fatichi, Alberto	179
Fekete, Ladislav	32
Felde, Imre	175, 242
Felipe, Carlos	258
Felix, Francisco	41
Feng, Zhitting	279
Ferguson, Andrew	173
Feria Miranda, Luis Alberto	297
Fernáncez Escamilla, Victor Vladimir Amilcar	80
Fernández Afonso, Yilian	54
Fernandez Cervantes, Irving	107
Fernández Cueto, Martin	193
Fernández de Córdoba, María C.	285
Fernández Echevarría, Heydi Milagros	191
Fernandez Echeverria, Eduardo	284
Fernandez Garcia, Maria Eufemia	42, 224
Fernández Jiménez, Dora Patricia	255
Fernández Lambert, Gregorio	106, 284, 285
Fernández Lázaro, Fernando	151, 314
Fernández Luqueño, Fabián	120, 121
Fernández Osorio, Ana Leticia	36, 40, 51
Fernández Otero, Toribio	68
Férnandez Peña, Ivan Gabriel	155
Fernández Puig, Soane	110
Fernandez Puron, Angelica	102
Fernández Rodríguez, Daniel	119
Fernandez Tavizon, Salvador	1, 8, 98, 271
Fernandez, Cecilia	284
Fernández, Mariela	52
Fernandez, Victor Vladimir Amilcar	316
Ferraro, Franklin	279
Ferreira Palma, Carlos	195, 216
Ferreira, Adelino	124
Ferreira, Danniel Cabral Leão	85
Ferreira, Edgar Alejandro	43, 51
Ferreira, Fabio Furlan	190
Ferreira, Paulo	183, 186
Ferrer Pacheco, Martha Yasmid	212
Ferrer Peréz, Jorge Alfredo	80
Ferretti, Anna Maria	142
Fest, Andres	43, 143, 147
Fetter, Geolar	97, 105, 106
Feurer, Thomas	144
Fiamingo, Anderson	61
Fibela Esparza, Martin	239
Ficek, Mateusz	10
Fielicke, Andre	279
Fierro González, Juan Carlos	43
Figueroa Carranza, Ramon Antonio	234, 235,237
Figueroa Gerstenmaier, Susana	70
Figueroa Saldivar, Mario Alberto	234
Figueroa Torres, Mayra Zyzlila	293
Figueroa Vargas, Ignacio Alejandro	198, 207, 210, 300
Figueroa, Anabel	277
Figueroa, Carlos Alejandro	27, 28
Fisher, Craig	117
Fitl, Premysl	38
Fitzell, Kevin	39, 307
Fix, Mario	246
Floran Mendoza, Brenda Gabriela	240
Floreano, Luca	224
Flores Acosta, Mario	13
Flores Alatorre Hernández, Leticia	8
Flores Cedillo, Osvaldo	175, 179
Flores Conde, Araceli	254
Flores Conde, Maria Ines	267
Flores De Los Ríos, Juan Pablo	44, 215
Flores Flores, José Ocotlán	108
Flores Fuentes, Naria Adriana	23
Flores Guerrero, Mizraim Uriel	196
Flores Hernandez, Cynthia Graciela	290
Flores Marquez, Jose Manuel	139, 145
Flores Márquez, Juan Angel	266
Flores Martinez, Nancy	246
Flores Martínez, Martín	211, 234
Flores Mena, Jose Eladio	199
Flores Méndez, Javier	25, 87
Flores Morales, Carlos	198
Flores Moreno, Armando	252
Flores Ramirez, Nelly	33, 42, 60, 62
Flores Rojas, G. G.	105, 107
Flores Romero, Erick	191
Flores Romero, Luz María Janine	66
Flores Santos, Leticia	60
Flores Tavira, David Omar	141, 222
Flores Urquizo, Israel Alejandro	113, 115
Flores Valdés, Alfredo	207
Flores Valle, Sergio Odin	267, 290, 305
Flores Vivian, Ismael	29
Flores, Abelardo	68, 215
Flores, Alvaro	149
Flores, Ana Cecilia	25
Flores, Carlos	69
Flores, Hector	84, 112
Flores, Javier	23, 90
Flores, Lucy	304
Flores, Luis	304
Flores, Marcos	146
Flores, Martín	234
Flórez, Johanna Marcela	49
Focarete, Maria Letizia	102
Fomina, Lioudmila	67
Fomine, Serguei	57
Fonseca Hernandez, Gerardo Antonio	108
Fonseca Herreño, Luis Carlos	68, 69
Forero Sandoval, Ivan Yecid	155
Fortunelli, Alessandro	13
Fouillen, Aurelien	111
Fournier, Pierrick	98
Fowler, Debra	310
Fragoso Montes de Oca, Andres Arturo	267, 274
Francàs, Laia	131
Franceschin, Giulia	246
Francis, Leonard	9, 15, 182, 185
Franco Molina, Moisés	98, 99, 106
Franco Rodríguez, Guadalupe	74
Franco Rodriguez, Nancy Elizabeth	96, 256
Franco, Daynahi	317
Frías Márquez, Dora María	79, 283, 292, 297
Fried, Zoltán	175
Frontana Uribe, Bernardo	246
Fu, Fan	144
Fuederer, Tobias	102
Fuentes Cobas, Luis E.	191
Fuentes Corona, Kevin Jesús	223
Fuentes Garcia, Jesus	6, 7
Fuentes Guerrero, Ubeimar	247
Fuentes, Erika	31
Fundora Cruz, Abel	30
Furlan Ferreira, Fabio	110
Furtini, Josy Anteveli Osajima	85
G. Bawendi, Moungi	143
G. Rolón, Bárbara	127, 215, 304
Gaitan Arevalo, Juniet Rebeca	141
Galarza Gutiérrez, Uziel	139

Nombre	Paginas
Galarza, Enrique	205, 206, 208
Galaviz Pérez, Jorge	288
Galeano Upegui, Beatriz Janeth	74
Galeano, Maria Nela	74
Galeazzi Isasmendi, Reina	14, 35, 180, 252
Galicia Aguilar, José Alberto	66
Galicia Apolinar, Jade	159
Galicia Garcia, Porfirio Raùl	286
Galindo Diaz, Jose Yovany	122, 126
Galindo Hernández, Félix	265, 272
Galindo Luna, Arturo Sebastian	298
Galindo Rodríguez, Sergio	99
Galindo Sarmiento, Francisco Javier	90
Galindo Vallarino, Irma C.	2
Galindo Velazquez, Cristian Isael	98
Gallardo Heredia, Marisol	217, 220, 294
Gallardo Hernandez, Salvador	13, 29, 32, 40, 98, 114, 145, 148, 149, 217
Gallardo, Antonio	91
Gallego Gaona, Maria Isabel	74, 79
Gallego Montoya, Anderson	49
Gallegos Leon, Gerardo	60
Gallegos Melgar, Adriana del Carmen	242
Gallegos Perez, Waldo Roberto	292, 298
Gallegos Sánchez, Víctor Jesús	287, 298
Gallegos, Amed	78
Gallina, David	37
Galvan Arellano, Miguel	199, 254
Galván Baena, Rodrio Iván	122
Galván Cabrera, Adriana del Carmen	267
Galván Chaire, Juan Emiliano	241
Galván González, Graciela	160
Galván Martínez, Ricardo	201, 236
Galvan Moroyoqui, José Manuel	115
Galván, César G.	53
Galvan, Donald H.	168, 258
Galvan, Marcelo	316
Galvan, Miguel	142
Galvez Breña, Sarina Alfa	13
Galvez Coy, Diana Carolina	98, 300
Galvis Echeverry, Jose Augusto	20
Gamboa Perera, Fidel Fernando	93, 128, 215
Gamboa Sanchez, Minerva	122, 140, 148
Gamero Melo, Prócoro	300
Gámez Espinosa, Erasmo	33, 42
Ganvir, Rasika	150
Gañán, Piedad	38
Gao, Pu-Xian	134
Gaona Esquivel, Alexa	50
Gaona Martínez, Mauro Javier	231
Gaona, Citlalli	230, 232, 321
Garate Velez, Lorena	77
Garay Marín, Juan David	120
Garay Reyes, Carlos Gamaliel	194, 195, 196, 207
García Acosta, Gilberto Enoc	30
García Alvarado, Guillermo Iván	257
García Báez, Efrén Venancio	104
García Balderas, Iván Enrique	31
García Barrera, Ali Antonio	8
García Beltrán, Geselle	4
García Bórquez, Arturo	51, 197, 216
García Briones, Gabriela Sarahi	49
García Bustos, Ernesto David	13, 65, 211, 234
Garcia Caraveo, A. Valeria	267
García Carvajal, Zaira Y.	107
Garcia Carvajal, Zaira Yunuen	83, 98, 108, 286
Garcia Casillas, Perla Elvia	31, 217
García Castillo, Carmen Cecilia	288
García Castillo, Flor Araceli	209, 320
García Caudillo, Brenda Edith	70
García Chacón, Ashley Saraí	112
Garcia Chiquito, Maybelin Carolina	221, 234, 235
García Cruz, Héctor Iván	109, 286
Garcia de Alva, Mayela	183
Garcia Diaz, Pablo	222
García Domínguez, Giovanni	8, 78, 286
García Domínguez, Norma Alicia	302
García Enriquez, Salvador	61
Garcia Estrada, Martha	182
García Favela, Ana Patricia	112
Garcia Fox, Mario Alejandro	20
Garcia Gaitan, Beatriz	60
Garcia Gallardo, Adriana	89, 91
Garcia Garcia, Anay	222
Garcia Garcia, Dulce Jeanette	200
García García, Víctor	241, 242
García Garrido, Cristina	83
Garcia Gomez, Nora Aleyda	20, 230
Garcia Gonzalez, Alcione	67, 98, 150
Garcia Gonzalez, Leandro	40, 42, 50, 52, 60, 71
García Guajardo, César Iván	120
García Gutiérrez, Diana Fabiola	137, 138, 150
Garcia Gutierrez, Domingo Ixcoatl	137, 138
Garcia Gutierrez, Rafael	4, 14, 34, 87, 90, 91, 137, 140, 148
García Haro, Alma Ruth	220, 227
García Hernández, Adán Gabriel	112
García Hernández, Alitzel Belem	107
García Hernández, Edgar	66
García Hernández, Lilia Jasiel	194, 207
García Hernández, Margarita	36, 79, 274
García Hernández, Rafael	231, 233
Garcia Hernandez, Rosa Adriana	213
García Herrera, John Edison	242
García Hipólito, Manuel	50, 70
Garcia Jacas, Cesar	175
García Juárez, Alejandro	256
Garcia Lara, Adrian Moises	243
García Loera, Antonio Francisco	1
García López, Saul	186
Garcia Lozano, Rodolfo Zola	93
García Macedo, Jorge A.	102
García Macedo, José Antonio	219, 281
Garcia Martín, Susana	245
García Mendoza, María Fernanda	139, 249
García Montes, Saida Mayela	1
García Murillo, Antonieta	44, 250
Garcia Ochoa, Esteban	230
Garcia Ortiz, David Alejandro	97
García Ortiz, Laura	253
Garcia Pacheco, Georgina	23, 121, 129, 219, 252
García Pastor, Francisco Alfredo	218
García Pérez, Israel	219
García Pérez, Jonathan Saúl	320
García Pérez, Rubén Javier	275
García Pérez, Victor I.	97, 102, 203
Garcia Ramirez, Mario Alberto	11, 96
García Ramírez, Patricia	67, 138
García Ramírez, Víctor Alfonso	4
Garcia Ramos, Diego Alejandro	267
García Reyes, Armando	217
Garcia Reyes, Refugio Bernardo	67, 98, 150
García Rincon, Omar	239, 242
García Rivas, Gerardo de Jesús	101, 318
García Rivas, José Luis	60
García Robles, María Reina	29
García Rocha, Miguel	35
García Rodríguez, Francisco Javier	65
García Rodríguez, Rodrigo	133, 141
Garcia Rodriguez, Yasmany	85
García Rueda, Ana Karen	52
García Ruiz, Amado Francisco	199
Garcia Ruiz, Diana Litzajaya	45, 71, 214
García Salcedo, Ricardo	103
Garcia Sanchez, Edgar Omar	240, 320
Garcia Sandoval, Aldo	73, 90, 101
García Serrano, Jesús	252
García Serrano, Luz A.	182, 183
García Silva, Allan Abdías	119
García Solé, José	110
Garcia Tapia, Karelid	77
Garcia Tinoco, Pedro Emmanuel	255, 256, 266
García Tolentino, Carlos Eduardo	42
Garcia Tuta, Yasmin Alejandra	290
Garcia Valenzuela, Jorge Alberto	30, 136, 149
García Valladares, Octavio	145
Garcia Velasco, Amado Carlos	40
Garcia Villarreal, Sergio	253
Garcia Zaleta, David Salvador	288, 297, 299
Garcia Zarate, Marco Antonio	53
García, A. Patricio	15
Garcia, Ariana	125, 139, 141, 150
Garcia, Edwin	127, 164, 187
Garcia, Fernanda	50
García, Godofredo	14, 24, 35, 180, 252
Garcia, Guillermina	59
García, J. Alejandro	143
García, J. Santos	65, 215

Nombre	Paginas
García, Luis Ángel	275
García, Marco A.	208
García, Mario	260
García, Mario Alberto	256
García, Omar	239
Garcia, Oracio	199
García, Sergio	179
García Silva, Allan Abdías	232
Garduño Olvera, Isaías Emmanuel	242
Garibay Febles, Vicente	121
Garnica González, Pedro	214
Garnica Romo, Ma Guadalupe	186
Garnica, Pedro	242
Garrafa Gálvez, Horacio Edgardo	298
Garrido Hernandez, Aristeo	8, 78
Garrido, Efraín	159
Garrido, Pablo	131
Garza Arevalo, Javier Ivan	284, 297
Garza Cervantes, Javier Alberto	110
Garza Hernandez, Raquel	144, 146
Garza Montes De Oca, Nelson Federico	179, 195, 201, 210, 211, 230, 231, 232, 236, 321
Garza Navarro, Marco Antonio	115
Garza Tovar, Lorena Leticia	121, 122
Garzón Fontecha, Angelica	298
Garzón Sanabria, Andrea Juliana	68, 69
Garzon, Angelica	136
Garzón, Carlos Mario	28
Garzón, Ignacio L.	15, 35, 167
Gasca Tirado, José Ramón	125
Gascon, Jorge	157
Gaspar Armenta, Jorge Alberto	175
Gastellou, Erick	14
Gaudisson, Thomas	246
Gauthier, Mario	59
Gauthier, Maxime	210
Gauvin, Raynald	2
Gaviño, Ruben	67
Gaviria Gómez, Ximena	292
Gay, Derek	211
Gazquez, Jose	164
Ge, Mengshu	187
Gedamu, Dawit	124
Geohegan, David	17, 18, 20
Gerasymenko, Nataliya	276
Geronimo Perez, Jose Luis	128
Geronimo Ventura, Alix	139
Gervacio Arciniega, J. Juan	13
Gervilla, Victor	37
Gesiquio Garduño, Miguel	177
Ghaemmaghami, Am	96
Ghisolfi, Alessio	284
Ghosh, Ram Krishna	17, 21
Gibbens Bandala, Brenda	113
Gibbon, James T.	144, 146
Gildo Ortiz, Lorenzo	257
Gilles, Berhault	265
Gimenez, Alejandro Jose	319
Girardeau, Thierry	46
Girardon, Maxime	110
Giri, Anit	117
Girtan, Mihaela	174
Gjerding, Morten	181
Gläsel, Tina	128
Glavin, Nicholas	31, 46
Glossman Mitnik, Daniel	141
Gnade, Bruce	35, 93
Go, Yohan	206
Godavarthi, Srinivas	14, 43, 271, 272, 277
Godfroy, Maxime	135
Godinez Salcedo, Jesus	7
Godínez, Luis A.	290, 299
Godoy Zaragoza, Mario Alberto	114
Goerlitz, Detlef	39
Goetz, Andreas W.	148
Gogotsi, Yury	185
Goh, Eyleen	101
Goiz, Oscar	258
Gökce, Bilal	15
Golan, Yuval	53
Gomes Ghislandi, Marcos	3
Gómez Aguilar, Madai de Jesús	139
Gómez Alcudia, Yaquelín	79
Gómez Álvarez, Agustín	289
Gomez Alvarez, Miguel Angel	250
Gomez Barojas, Estela	5, 24, 25, 270
Gómez Barrena, Mauricio Manuel	284
Gómez Batres, Roberto	96
Gomez Canales, Alonso	70
Gomez Cano, Francisco Javier	28, 223
Gómez Chayres, Erika	225
Gómez Córtes, Antonio	273
Gomez Costa, Marcos B.	36, 125
Gomez Cuaspud, Jairo	120, 147, 247
Gómez Cuaspud, Jairo Alberto	211
Gómez de la Rosa, Nestor Antonio	176
Gómez Dorantes, S.	107
Gomez Esparza, Cynthia Deisy	43, 113, 243
Gómez Espinoza, Víctor Hugo	145
Gomez Heredia, Cindy Lorena	46, 47, 48, 155
Gómez Hernández, Martín	76
Gómez Herrera, María Lucero	253
Gomez Jaimes, Gelen	159
Gómez Luna, Blanca	125
Gómez Mendoza, Gabriela del Pilar	50
Gómez Monsiváis, A. C.	253
Gómez Montaño, Francisco Javier	96
Gomez Pacheco, Oscar Rafael	6
Gomez Puentes, Oscar Javier	235
Gómez Rodríguez, Cristian	253
Gómez Rosas, Gilberto	12, 13, 19, 47, 149, 234, 254, 302
Gomez Salazar, Itzel	137
Gómez Solís, Christian	226, 227
Gomez Torres, Fabiola del Carmen	138, 186
Gómez Torres, Sergio Antonio	275
Gomez Vidales, Virginia	49
Gómez y Gómez, Yolanda de Las Mercedes	218
Gomez Yanez, Carlos	33, 39, 65, 126, 128
Gomez Zamorano, Lauren Yolanda	216, 300
Gomez, Antonio	12, 270, 272, 276
Gomez, Christian	224, 225
Gomez, Claudia	89
Gomez, Elvia	235
Gómez, Heberto	257
Gómez, Idalia	20, 147
Gomez, Jose Luis	269
Gomez, Lauren	294
Gomez, Lorenzo Martinez	271
Gomez, Raúl	150, 164, 193
Gomez, Ricardo	284, 288, 292
Gómez, Víctor	215
Gomis Berenguer, Alicia	2, 283
Gonzaga Segura, Sergio Rubén	208
González Abarca, Luis Enrique	234
González Alatriste, Mario	121
Gonzalez Araiza, Diego Daniel	12, 270, 272
Gonzalez Araos, Martha Patricia	255
González Arredondo, Kaleb Jair	198
González Avila, Marisela	98, 107
González Bravo, Humberto	138
González Castelazo, Paola	168
González Castillo, María del Carmen	49
Gonzalez Castro, Emmanuel	221
González Chan, Irving Josué	137, 146
González Chávez, Bertha Inés	242
Gonzalez Coronel, Valeria Jordana	70
González Cortés, Israel	24
Gonzalez Diaz, Anabel	275
González Díaz, María Ortencia	65, 68
González Domínguez, Martha Isabel	39, 52, 53
Gonzalez Fernandez, Perla Lucero	78
Gonzalez Flores, Carlos Antonio	142
González Flores, Karla Esther	25
González García, Esteban Alberto	80
González García, Federico	191
González García, Julio	263
González García, Pamela	219
González Gómez, Roberto	57
González Gómez, William Santiago	160
González González, Virgilio A.	29
Gonzalez Gutierrez, Carlos	4
González Herrera, José	205
González Izquierdo, Jesús	38
Gonzalez Jimenez, Rodrigo Rodolfo	267
Gonzalez Juárez, Edgar	138
González López, Javier Rodrigo	293
Gonzalez Luna, Luis Alberto	220, 221

Nombre	Paginas
González Macdowell, Luis	38
Gonzalez Mendez, Israel	63
Gonzalez Molina, Veronica	317
Gonzalez Montiel, Marlene	19, 269
Gonzalez Moran, Carlos Omar	213, 237, 284
Gonzalez Morones, Pablo	2, 280
Gonzalez Nilo, Fernando	319
Gonzalez Panzo, Isidro	128
González Pizarro, David Alfredo	44, 50
González Quijano, Diego	138
González Ronquillo, Ana Lilia	23
González Rubio, Guillermo	38
Gonzalez Sanchez, Armando	113
Gonzalez Sanchez, Jorge Antonio	229, 230, 231, 233
Gonzalez Sanchez, Jose Luis	53
Gonzalez Sanchez, Tenoch	142
Gonzalez Sevilla, Jessica Estefania	234
Gonzalez Solano, Manuel	139, 249
González Trujillo, Miguel Angel	139, 140, 145, 148
Gonzalez Uribe, Ivan	303
Gonzalez Urrego, Giovanny Esteban	261, 286
Gonzalez Valdes, Rafael	42, 55
Gonzalez Varela, Daniela	125
González Vargas, César Raymundo	6
González Veláźquez, Jorge Luis	195, 237
Gonzalez Zavala, Fernando	264
González, A. L.	51
Gonzalez, Carmen	113, 317
Gonzalez, Carolina	112
Gonzalez, Diego Enrique	236
González, Edgar	138
González, Federico	266
González, Francisco Javier	31, 77
Gonzalez, G.	207
Gonzalez, Gabriel	31
Gonzalez, Gonzalo	207
Gonzalez, Gregorio	195
Gonzalez, Guillermina	236
González, Ignacio	316
Gonzalez, Jorge Luis	230, 241
González, José Antonio	304
Gonzalez, Karim	175, 260
GONZALEZ, Luis	141
González, Marco Aurelio	216
González, María	109
González, Natalia	84
González, Omar	116
Gonzalez, Victor	23
González, Victoria	113
Goñi Cedeño, Hermilo	248, 258
Gooth, Johannes	154
Gopalakrishnan, Sai Gautam	118, 145
Gordillo Guill?n, Luis David	259
Gordillo Moscoso, Antonio Augusto	107
Gordillo, Gerardo	139
Gordillo, Sandra	178
Gordon, Thorogood	292
Gortárez Jiménez, Maria Alicia	226
Gostovic, Daniel	131
Goto, Motonobu	1
Gotsmann, Bernd	154
Gould, Oliver	71
Gourbilleau, F.	35
Govorov, Alexander	127
Gracia Jiménez, Justo Miguel	297
Gracia y Jiménez, Justo Miguel	297
Graczikoski, Bart	155
Graeve, Olivia	127, 212
Grajales Morales, Weimar Alberto	176
Granada Ramirez, Daladier Alonso	253
Granados Martínez, Francisco Gabriel	45, 71, 214
Granados Samaniego, Jaime	309
Granados Segura, Luis Oscar	110
Graniero Echeverrigaray, Fernando	28
Grätzel, Michael	131, 143
Gravelle, Simon	320
Gray, Stephen	171
Greene, Joe	37
Gregor, Mussler	47
Grendahl, S.	117
Grijalva Arizmendi, Abraham	106
Grijalva Castillo, María Cristina	219, 320
Grisafe, Benjamin	17, 21
Grönbeck, Henrik	14
Grossmann E., Ignacio E.	265
Gruber, Jacob	11
Gruetzmacher, Detlev	47
Grützmacher, Detlev	47
Gu, Yiyi	20
Guadarrama Bello, Dainelys	111
Guadarrama, Patricia	59
Guardián Tapia, René	15, 76, 208, 212, 217
Gudima, A	96
Guduru, Sai	144
Gudymenko, Olexandr	253
Güell, Frank	91
Guerra Gonzalez, Roberto	29
Guerra Pulido, Jaime Octavio	66
Guerra Que, Zenaida	272, 275
Guerra, Jesús Daniel	79
Guerra, Lizangela	240, 320
Guerrero Castellanos, Jose Fermi	303
Guerrero de León, Jesús Alonso	47
Guerrero Fajardo, Carlos Alberto	37, 138, 263, 265
Guerrero Martínez, Andrés	38
Guerrero Mata, Martha Patricia	175, 241
Guerrero Ortega, Lena Priscila Alejandra	118, 121
Guerrero Sanchez, Jonathan	19
Guerrero Serrano, Azdrubal Lobo	39, 49, 191, 247
Guerrero Villalba, Jorge Manuel	92
Guerrero, Diana	292
Guerrero, Edgar	90
Guerrero, Fermi	23
Guerrero, Jorge Manuel	91
Guevara Chavez, Juanita Yazmin	296
Guevara García, Alfredo	316
Guevara Lara, Alfredo	264, 265, 267, 269
Guevara Rodríguez, Felipe de Jesus	58
Guilleminot, Emmanuel	270, 298
Guillén Bonilla, Alex	256, 257
Guillén Bonilla, Héctor	216, 256, 257
Guillén Bonilla, José Trinidad	96, 256, 257
Guillen Carrillo, Daniel Ivan	46
Guillen Cervantes, Angel	29, 40, 114, 217
Guillen, Juan Javier	75
Guisbiers, Gregory	14
Güizado Rodríguez, Marisol	67, 135, 137, 138
Guo, Xiaohang	124
Gurubel Tun, Kelly Joel	73
Gutiérrez Amador, María del Pilar	295
Gutierrez Antonio, Claudia	257
Gutierrez Castañeda, Emmanuel José	205
Gutiérrez Chavarría, Carlos Alberto	213
Gutierrez D., Edmundo A.	257
Gutiérrez Flores, Selena	60
Gutiérrez García, Carmen Judith	45, 71, 214
Gutiérrez González, Carlos F.	83
Gutierrez Gonzalez, Martin Giovanny	79
Gutierrez Heredia, Gerardo	88, 89, 90, 91
Gutierrez Isaza, Diego Alberto	302
Gutiérrez Juárez, Carlos Gustavo	268
Gutiérrez Juárez, Gerardo	54
Gutierrez Junco, Oscar Javer	212
Gutierrez Lonche, Liliana	303
Gutierrez López, Juan Pablo	107
Gutiérrez Martínez, Alberto	220
Gutierrez Martinez, Albina	274
Gutíerrez Martinez, Javier	220
Gutiérrez Moreno, David	151, 314
Gutiérrez Oliva, Soledad	163
Gutiérrez Olvera, Delfino Román	180
Gutierrez Ortega, Jose Antonio	45
Gutiérrez Ortega, Norma Leticia	283
Gutierrez Perez, Maria Elena	276
Gutiérrez Pérez, Victor Hugo	233
Gutiérrez Sánchez, Mariana	107
Gutiérrez Vargas, Gildardo	200
Gutierrez Viezcas, Jose M.	76
Gutierrez Villarreal, Jesus Manuel	175
Gutiérrez Wing, Claudia	75, 274
Gutierrez Zayas Bazán, Karla	140, 141, 146, 148
Gutierrez Zayas Bazán, Patricia	141, 146, 148
Gutierrez, Armando	175
Gutierrez, Edmundo	259
Gutierrez, Silvia	115
Guzmá Mendoza, José	50
Guzmán Campuzano, Alvaro	254
Guzmán Carrillo, Héctor	190

Nombre	Paginas
Guzman Castañeda, Jesus Israel	197, 198, 235
Guzmán Fuentes, Jaime Abraham	45, 71, 214
Guzmán Gonzalez, Carlos Alberto	50, 80
Guzmán González, Gregorio	316
Guzmán López, José Elías	67
Guzmán Lucero, Diego	58
Guzman Mar, Jorge Luis	160, 161, 314
Guzmán Mejía, Erandini	60
Guzman Pantoja, Javier	58
Guzmán Ríos, José Daniel	4
Guzman Santana, Jose Antonio	241
Guzman Saucedo, Ruben	90
Guzmán Tapia, Manuel	202, 220, 243
Guzman Torres, Jose Alberto	220, 234
Guzman, Carlos Alberto	142
Guzmán, Dulce María	75
Guzmán, Gabriela	45
Guzman, Isidro	207
Guzman, Rigoberto	320
H Mok, H Linh	165
H. Abrego, Morelia	60
H. Domínguez, Erick	290
Ha, Changwan	208
Haddad, Paula	95, 110, 190
Hadiev, Viktor	182
Hadjiev, Viktor G.	131, 184
Hadzic, Branka	54
Haenen, Ken	9, 10, 27, 48
Hafiz, Ak	261
Hage, Fredrik	181
Hagfeldt, Anders	143
Haile, Sossina	127
Halim, Wafae	46
Halima, Alem	99
Hall, Timothy	59
Hallen López, José Manuel	201
Halmesova, Kristyna	243
Ham, Moon-Ho	93
Hamayano Lopes Ribeiro, Yuri	124
Hamui Balas, Leon	25, 145
Hanley, Tracey	292
Hannah, Daniel C.	118
Hardcastle, Trevor	181
Harder, Ross	172, 189
Haro Rodriguez, Sergio	193, 195, 197, 198, 201, 202, 242
Hasanova, Ulviya	196
Hasegawa, Tetsuya	251
Hauwiller, Matthew	187
Healey, Keea	132
Hebert, Rainer	310
Hebráud, P.	212
Heid, Rolf	168, 224
Heigl, Michael	246
Heine, Thomas	157, 163, 279
Heinonen, Olle	173
Heiras, Jesus	165
Helen, Reveron	102
Helveg, Stig	182
Henández Flores, Heber	165
Henke, Petr	102
Henkel, Carsten	48, 154
Hennig, Richard	166, 174
Henrique, Beatriz de Lourdes	190
Heredia Cancino, José Antonio	89
Heredia Cervera, Beatriz Eugenia	142
Hernández Lazcano, Elias	196
Hernández Ahuactzi, Irán Fernando	288
Hernández Andrade, Dante	4
Hernández Arrazola, Susana Edith	288, 295
Hernández Arrollo, Aisse	194
Hernandez Arteaga, Aida Catalina	113
Hernandez Avila, Jose Luis	33
Hernández Avila, Juan	193, 196, 197, 198, 224, 232, 252, 293, 296
Hernandez Bautista, Emilio	288, 295
Hernández Belmontes, Humberto	242
Hernandez Bermudez, Jhony Salvatore	195
Hernández Brenes, Giselle	14
Hernández Calderón, Guadalupe Viviana	145
Hernández Carabalí, Luz Amparo	298
Hernández Carrillo, Carlos Gabriel	211, 212
Hernandez Carrillo, Hernan	90
Hernandez Castillo, Daniela Jazmin	287, 294
Hernández Castillo, Yarazett	79
Hernández Castro, Zaira Vianney	243
Hernández Cedillo, Alondra	113
Hernandez Cedillo, Lucero Mescli	80
Hernandez Centeno, Francisco	45, 286
Hernández Cocoletzi, Heriberto	200, 236
Hernandez Como, Norberto	23, 146, 250, 252
Hernandez Contreras, Xochitl Andrea	6, 126, 133
Hernández Coronado, Edgar Emmanuel	317
Hernández Coronado, Héctor	5
Hernandez Cruz, Maria Guadalupe	299
Hernandez Cuevas, Francisco Javier	250, 252, 294
Hernández de la Cruz, Teresa	67
Hernández de la Luz, José Álvaro David	25, 200
Hernández Domínguez, Luis Alberto	139, 141, 146
Hernández Fernández, Eugenio	149
Hernandez García, Rocio Guadalupe	105
Hernández García, Tomás Constantino	113
Hernández González, M.e.	270
Hernández González, María de Jesús	52
Hernández González, Umanel Azazael	194, 196
Hernández Gordillo, Agileo	314
Hernández Granados, Araceli	140
Hernandez Granados, Mayra Alejandra	76
Hernández Guerrero, Oscar	217
Hernández Gutiérrez, Rodolfo	108
Hernandez Hernandez, Alberto	55
Hernández Hernández, Arturo	1, 3, 55, 140, 151
Hernández Hernández, Ernesto	2, 280
Hernández Hernández, Luis Alberto	1, 140, 151
Hernández Hernández, Maricruz	242
Hernandez Hernandez, Miguel	36, 44
Hernandez Herrera, Alfredo	205
Hernández Herrera, Viridiana Gudelia	217
Hernandez Jimenez, Cynthia Dayana	195
Hernández Jiménez, Mariana Giselle	12, 254, 288, 297
Hernández Jiménez, Mariela	297
Hernandez Juárez, Gerardo	14, 43
Hernández Koller, Luis Javier	141
Hernandez Londoño, Carlos Ignacio	122
Hernandez Lopez, Cesar Adrian	96
Hernández López, Juan Manuel	119
Hernández López, Roberto Tito	138, 309
Hernandez Loredo, Norma Estela	113
Hernandez Manzo, Diana Sarai	50
Hernández Martínez, Ángel Ramón	108, 110, 200
Hernández Martínez, Javier	78, 79, 165
Hernández Martínez, Sergio Eliseo	194
Hernández Mendoza, Alonso Guadalupe	290
Hernández Mendoza, Pablo Eusebio	219
Hernandez Meza, Juan Manuel	99
Hernandez Morales, Veronica	274, 288
Hernandez Moreno, Hilario	209, 214, 222
Hernandez Navarro, Carolina	65, 211
Hernandez Orozco, Fructuoso	218
Hernandez Ortiz, Juan Pablo	173, 174
Hernández Ortiz, Oscar Javier	113, 147
Hernández Paredes, Javier	126
Hernández Paz, Juan Francisco	108, 139
Hernández Pérez, Isaías	265
Hernandez Perez, Maria de Los Angeles	129, 141
Hernández Portillo, Yanhsy	122, 126, 128
Hernandez Quiroz, Teresa	40
Hernández Ramirez, Aldo	215, 302
Hernández Ramírez, Araceli	160
Hernández Ramírez, Aracely	314
Hernández Ramírez, Sofía	274
Hernandez Ramon, Luis Alberto	235
Hernandez Rangel, Adriana	102
Hernandez Resandiz, Leonardo Yudiel	6
Hernandez Rivas, Omar	125
Hernandez Rivera, Jose Luis	194
Hernandez Rivera, Luis Felipe	191
Hernandez Rodriguez, M. A. L.	240
Hernández Rojas, Jose Alfonso	66
Hernández Sánchez, Enrique	219, 281
Hernandez Santiago, Felipe	216
Hernández Sebastián, Natiely	113
Hernández Sierra, María Teresa	65
Hernandez Silva, David	208
Hernández Silva, Osiry	19
Hernández Sotomayor, T.	107
Hernandez Tecorralco, Juan	168

Nombre	Paginas
Hernández Téllez, Beatriz	85, 309
Hernandez Tenorio, Celso	60, 67
Hernandez Torres, Jose Eduardo	68
Hernandez Torres, Julian	36, 40, 42, 50
Hernández Torres, María Elena	297
Hernandez Uresti, Diana Berenice	287, 297
Hernandez Valdez, Hada Aurora	80
Hernández Varela, Josué David	182
Hernandez Vasquez, Cesar	139, 144, 145, 148
Hernández Vázquez, Gerardo	120
Hernández Vega, Y. Z.	197
Hernández Velázquez, Juan de Dios	63
Hernández Wagner, Eduardo	53
Hernandez Wong, Joel	175
Hernández Zárate, Kenia Amairany	235
Hernandez, Astrid	289
Hernández, Daniel	6
Hérnandez, Gregorio	20
Hernández, Hilario	235
Hernandez, Jacobo	48
Hernandez, Joel	155
Hernandez, Juan Francisco	36, 43, 103, 270
Hernández, Juan Manuel	293
Hernández, Leonardo	258
Hernández, Luis	5, 138
Hernández, Marco	210
Hernández, Margarita	98
Hernandez, Maria	45, 286
Hernández, María Teresa	65, 215
Hernandez, Marla B.	253
Hernandez, Miguel Angel	266, 270
Hernandez, Olaf	233
Hernandez, Olivia	54
Hernandez, Oscar Jose	198
Hernandez, Raiza	276
Hernandez, Roberto	250, 254, 260, 261
Hernández, Rosaura	69, 70
Hernández, Sara Paola	106
Hernández, Sonia	263
Hernandez, Teresa	50
Hernández, Tomás Constantino	115
Hernandez, Tomasa	225
Hernánez Cristobal, Orlando	45
Herrada, Rosa	299
Herrera Basurto, Raul	52
Herrera Becerra, Raúl	13, 115
Herrera Celis, José	96
Herrera Colin, Lizbeth	294
Herrera Enríquez, Miguel Ángel	85
Herrera Garza, José Ramón	114
Herrera Gomez, Alberto	30
Herrera González, Ana María	39, 252, 288, 289
Herrera Hernandez, Hector	213, 236, 237, 284
Herrera Méndez, Carlos Hernán	296
Herrera Ordoñez, Jorge	63, 69
Herrera Orozco, Israel	293, 298
Herrera Pérez, Gabriel	46
Herrera Pérez, Guillermo Manuel	321
Herrera Perez, Jose Luis	255
Herrera Ramirez, Jose Martin	213, 218, 219
Herrera Rivera, María del Rosario	259
Herrera Torres, Leidy Julieth	147
Herrera Zaldivar, Manuel	40
Herrera Zamora, Dallely Melissa	140, 145, 149, 313, 314
Herrera, Ana Maria	14
Herrera, Bernardo	9, 39, 48, 49
Herrera, Carlos Andres	84
Herrera, Guillermo M	191
Herrera, Héctor	213, 237
Herrera, Manuel	37, 40, 45, 49, 141
Herrera, Raúl	7
Herrera, Sandra	41, 50
Herrero Ansorregui, Irene	245
Heske, Clemens	145
Hicks, Marie-Laure	55
Hidalgo Lopez, Maria Carmen	295
Hidalgo Moyle, Joseline Janai	96
Hidalgo, Francisco	11, 17, 18
Higareda Alvear, America Libertad	194, 198, 199
Higuera Ciapra, Inocencio	78, 79, 165
Higuera Valenzuela, Hiram Jesús	87
Hill Pastor, Laura Marcela	142
Hills, Spencer	174
Hinojos de Hoyos, Ernesto	243
Hinojosa Reyes, Laura	160, 161, 317
Hinojosa, Mariana	291
Hinojosa, Roberto	164, 193
Hinuma, Yoyo	172
Hirata Flores, Gustavo Alonso	77
Hirata, Gustavo Alonso	14, 73, 77, 90, 98, 111, 315
Hirose, Yasushi	251
Hirsch, Andreas	1
Hofmann, Oliver	164, 167
Hoja, Johannes	167
Holguín Patiño, María Paulina	28
Holguin, Carolina	105
Holscher, Christian	85
Hong, Haiping	316
Hong, Sung-Jei	90
Hooper, Katherine	135
Höpfl, Herbert	279
Horakova, Katerina	32, 224
Horcajada, Patricia	98, 158, 159
Horky, Jelena	110
Horley, Paul	25
Hörmann, Lukas	164, 167
Hornbuckle, B.	117
Houben, Lothar	48
Hoy Benitez, Juan	151
Hoyos Palacio, Lina Marcela	46, 74, 79
Hrostea, Laura	174
Hsiao, Yu-Ching	31
Hsieh, Ping-Yen	27
Hsieh, You-Lo	60, 319
Hsu, Julia	135, 251
Htwe, Ss	96
Hu, Jianjun	46
Hu, Jin-Zhao	246
Hu, Sheng	12
Hu, Weike	76
Huang, Ruiyun	127
Huape Padilla, Engelbert	199, 235
Huerta Aguilar, Carlos Alberto	139
Huerta Arcos, Lázaro	255
Huerta Argaez, Eduardo Albert	125, 304
Huerta Cuevas, Evelyn Fernanda	198
Huerta Gonzalez, Oscar Vicente	257
Huerta Guerra, Veronica Jazmin	49
Huerta Pérez, César Iván	3
Huerta, Araceli	183
Huerta, Lázaro	119, 194
Huerta, Oscar	259
Huipe Domratcheva, Ernesto	19
Huipe Nava, Ezequiel	45, 214
Huirache Acuña, Rafael	292, 295
Huirache, Rafael	263, 268, 274
Humbert, Palza	214
Hurtado Arambula, Carlos Alberto	138
Hurtado Castañeda, D. M.	256
Hurtado Morales, Mikel Fernando	13, 20
Hurtado Pájaro, Víctor Manuel	241
Hurtado y de la Peña, Marcela	76
Hurtado, Jose	246
Huseynov, Elchin	252
Hussainova, Irina	2
Hwang, Jinwoo	189, 202
Hyun, Yong-Taek	207
H´ Mok, H ´ Linh	147, 168
Ibáñez, Guillermo	125, 127
Ibarra Montenegro, Laura Cristina	260, 309
Ibarra Prieto, Hector Daniel	115
Ibarra Sanchez, Jose de Jesus	50
Ibarra Sierra, Víctor	255, 256
Ibarra, Jorge	119
Ibarra, Jose de Jesus	216
Ibarra, Miguel Angel	222
Ide, Walther	80
Idígoras, Jesús	136, 142, 314
Igal, Katerine	103
Iglesias, Roilan	139, 146
Ikuhara, Yuichi	117
Ikuhara, Yumi	117
Illescas Sarricolea, C. Abigail	314
Illescas, Javier	61, 63, 65, 66, 71
Illescas, Juan	295
Im, Soohyun	189, 202
Inal, Kaan	206

Nombre	Paginas
Infante Martinez, José Ramiro	59, 69
Iniestra Galindo, María Guadalupe	49
Iniguez Palomares, Ramon Alfonso	113, 115
Instan Ballesteros, Alvaro	142
Iñarritu, Iker	31
Iñiguez Palomares, Ramón Alfonso	106. 115
Íñiguez, Jorge	154, 169
Iqbal, Hafiz	320
Iribarren Alfonso, Augusto A.	54
Irigoyen Pérez, Valeria Alejandra	36
Irribarren, Valentina	84
Isaac Medina, Brian Kostadinov Shalon	215
Isaza, Cesar	213
Ishizaki, Takahiro	218, 232
Isidro Ortega, Frank	3
Islas, Valentin	69
Ismail, Ahmed	144
Iturrios Santos, Isabel	255
Itzmoyotl Toxqui, Adrian	24, 54, 150
Ivanov Valerievich, Igor	305
Ivanov, Roman	2
Ivchenko, Eugeneous	255, 256
Izquierdo de la Cruz, Fátima Zareth	297
Izquierdo Hernández, María Estela	126
Izquierdo Roca , Victor	137
Jacinto, Patricia	260
Jackman, Richard	55, 83, 97, 251, 261
Jacobo Azuara, Araceli	271
Jacobo Cisneros, Luis Ricardo	201
Jácome Acatitla, Gabriela	299
Jadhav, Shrikant	229
Jaime Fonseca, Monica Rosalía	74, 109, 286
Jaimes Aguirre, Laura	111
Jaimes Téllez, Miguel Angel	300
Jain, Akhil	77, 98
Jakubinek, Michael	214
Jalife Jacobo, Said	280
Jalife, Said	280, 281
Jamer, Michelle	39
James J., Spivey	276
Jamnig, Andreas	27
Jan, Kloeckner	155
Jan, Romberg	179
Jana, Aniruddha	164
Janssen, Camiel Hernan Cornelis	64
Jara Medina, Aracelli	236
Jaramillo Castro, Héctor Abraham	194, 196
Jaramillo Gomez, Juan Antonio	40, 176
Jaramillo Gutiérrez, María Inés	133
Jaramillo Morilla, Antonio	221
Jaramillo Ochoa, Liliana	215
Jaramillo Quintero, Oscar	191
Jaramillo, Fredy	127
Jaramillo, Jorge	285
Jaramillo, Victor	285
Jardón Pérez, Luis Enrique	214
Jarquín, Katia	85
Jasso Morales, Josè Luis	242
Jasso Ramos, Luis Ernesto	68
Jasthi, Bharat	237
Javier Villalobos, Erick	202
Jayaraman, Vinoth Kumar	259
Jeindl, Andreas	164, 167
Jelken, Joachim	48
Jens, Freudenberger	179
Jeon, Ji Hoon	7
Jeon, Nari	136
Jeong, Eun Young	125
Jerome, Chevalier	102
Jerome, Claverie	127
Jeronimo Cruz, Rodrigo	74
Jerónimo Pérez, José Luis	126
Jerónimo Rendon, José Juan	144
Jeronimo Rodriguez, Felipe de Jesus	220, 221, 222
Jetter, James	176
Jewell, Eifion	144
Jiang, Guibin	107, 315
Jiang, Yi	71
Jiao, Li	76
Jilg, Veronika	128
Jiménez Alemán, Omar	194, 196, 216, 219, 222
Jiménez Avalos, Jorge Armando	83, 107, 108
Jimenez Barron, Erik Raudel	210
Jimenez Cordova, Karina del Carmen	287, 297
Jimenez Garcia, Gustavo Antonio	192
Jiménez González, Ali Fransuani	169
Jimenez Gonzalez, Antonio Esteban	257
Jiménez González, Octavio	50
Jimenez Halla, Jose Oscar Carlos	280
Jiménez Jiménez, Abel	216
Jiménez Juárez, Rogelio	61
Jimenez Leon, Isidro	128
Jimenez Miranda, Gloria Lesly	30, 144
Jiménez Mora, Kevin Enrique	321
Jimenez Nieto, Adair	179
Jiménez Núñez, María de la Luz	60
Jimenez Olarte, Daniel	144, 148
Jiménez Palomar, Inés	83
Jiménez Pérez, Jose Luis	53, 256
Jiménez Rangel, Kristel Yurien	287
Jiménez Rosales, Angélica	84
Jiménez Sandoval, Sergio Joaquín	202
Jiménez Vázquez, Adriana Guadalupe	276
Jimenez Vega, Florinda	36, 43, 111
Jiménez, Alejandra	148
Jiménez, Alejandro	199
Jiménez, Alondra	105
Jimenez, Daniel	128
Jimenez, Juan	319
Jiménez, Juan Cancio	240
Jimenez, Rebeca	81
Jimenez, Ricardo	24
Jimenez, Rosa Maria	61
Jimínez Vázquez, Adriana Guadalupe	268
Jin, Weiliang	154
Jin, Xiaoting	107
Jing, Chuanyong	317
Jochelavicius, Karen	77
Johny, Jacob	12, 13
Joly, Damien	135
Jones, Jacob	189
Jongpatiwut, Siriporn	264
Joosen, Marloes J.a.	159
José Yacamán, Miguel	213, 264, 273
Jose, Reyes-Gasga	11, 200
Joselevich, Ernesto	48
Joshi Imre, Alexandra	73, 101
Joshi, Sameehan	241
Joulain, Karl	46, 47, 48, 155
Juan Francisco, Rivas Silva	164
Juantorena Ugas, Alina	132, 285
Juarez Arellano, Erick Adrian	236
Juárez Balderas, Carlos	121
Juarez Diaz, Gabriel	199, 200
Juarez Duje, Melinda	64
Juárez Estrada, Miguel Angel	25
Juarez Garcia, Jose Manuel	179
Juarez Gracia, Antonio Gustavo	35
Juarez Lopez, Fernando	211, 236
Juarez Moreno, Karla Oyuky	73, 77, 111
Juárez Onofre, Josúe Elías	44
Juárez Rivera, Olga Rubi	44
Juarez Rosete, Miguel Angel	248
Juárez Santiesteban, Hector	24, 143, 144
Juarez Tapia, Julio Cesar	196, 289
Juárez Vertiz, María Cristina	233
Juarez Yescas, Carlos	316
Juarez, Benito	30
Juarez, Fernando	220
Juárez, Isaac	119
Juárez, José Manuel	213
Juarez, Juliana Maria	3, 36, 125
Juárez, Patricia	98
Juhl, Abigail	46
Juliane, Scharnweber	179
Julio Andres Pedraza Avella	133
Jung, Chan Hee	125
Jung, Jeil	169
Jung, Kiho	288
Jung, Seon-Ho	217
Junior, Adalberto	286
Jupp, Peter E.	177
K Manjreka, Surendra	233
Ka, Ibrahima	124
Kaatz, Forrest	15, 192, 265
Kabachkov, Evgeniy	3
Kacmar, Donna	300
Kadlec, Christelle	32

Nombre	Paginas
Kafarov, Viatcheslav	68, 69
Kafizas, Andreas	131
Kainer, Karl	208
Kakazey, Mykola	192, 212
Kakkar, Ashok	60
Kalevich, Vladimir	255, 256
Kamatchi Jothiramalingam, Sankaran	10, 27, 48
Kamel, Agroui	36
Kanai, Yosuke	169
Kang, Jun	187
Kang, Jun-Yun	178, 179
Kang, Karam	102
Kang, Sang Woo	34
Kang, Suk Hoon	216, 217
Kang, Sungmyung	97
Kang, Zhenhui	134
Kanicioglu, Akin	106
Kanitkar, Swarom Ravindra	276
Kaplan, Ilya	245
Karahan, Özlem	97
Karathuparathottathil Damodharan, Drisya	254, 260, 261
Karine, Glinel	95
Karkamkar, Abhi	8
Karki, Khim	186
Karra, Vikrant	187
Kasko, Andrea M.	60
Kássia de Assis, Lilian	3
Kassiba, Abdel Hadi	46, 260
Kassymkan, Kaysar	277
Katiyar, Ram	142
Katz, Aurélien	210
Kaumenova, Gulnar	270, 277
Kelly, James	212
Kelly, Kevin	172
Kent, Paul	164, 185
Kepaptsoglou, Demie	181
Kervella, Yann	135
Kesarla, Mohan Kumar	271
Khademi, Vahid	206
Khan, Zaeema	97
Kharisov, Boris	77
Khojah, Reem	31
Khomami, Bamin	12
Khomenkova, Larysa	35
Khotseng, Lindiwe	158
Kida, Tetsuya	304
Kim, Byong	179
Kim, Byunghwan	178
Kim, Chaewon	90
Kim, Chul Soo	320
Kim, Donghun	138
Kim, Gwang-Lyeon	179
Kim, Heungsoo	320
Kim, Hyunjong	288
Kim, Hyunuk	157
Kim, Jong Nam	125
Kim, Joo Sung	133
Kim, Jun Oh	34, 44
Kim, Jungjoon	88
Kim, Keun Su	214
Kim, Moon	184
Kim, Sun Hyung	125, 289
Kim, Tae Woo	157
Kim, Taejun	232
Kim, Yong-Bae	217
Kim, Yong-Jin	178
Kim, Young Been	133
Kim, Young Min	206, 207
Kim, Youngmoo	308
Kingon, Angus	307
Kirby, Brian	39
Kirk, Marquis	11
Kisailus, David	123
Kisielowski, Christian	181
Kitiki, Burak	178
Kittel, Achim	153
Kiyohara, Shin	172, 174
Klein Altstedde, Mirko	128
Klie, Robert	182, 184
Klimova, Elena	114
Klimova, Tatiana	265, 268, 273, 275
Klüter, H	96
Knobel, Marcelo	245
Knopf Marques, H	96
Ko, Hsin-Yu	167
Kobayashi, Shunsuke	117
Kober, Edward	172
Kodera, Noriyuki	97
Koel, Bruce	134
Koelzer, Jonas	47
Koenemann, Fabian	154
Kolomys, Oleksandr	258
Kolosovas, Samuel	116
Komsa, Darya N.	168
Kondou, Kouta	37
Kong, Xiang-Tian	127
Koonce, Jonathan	131
Kopecky, Dillon	132
Koropecki, Roberto	24
Korotchenkov, Oleg	254
Kort Kamp, Wilton	154
Kosar, Ali	28
Kosarev, Andrey	54
Koster, Andreas	167
Kovacs, Andras	187
Kozlov, Sergey	14
Kraeusel, Verena	205
Krajczewski, Jan	47
Kratochvilova, Irena	224
Kratz, Karl	71
Kraus, Libor	243
Kräusel, Verena	239
Krishnan, Bindu	12, 13, 136, 144, 148
Krishnan, N. M. Anoop	175, 223
Krishnan, Siva Kumar	118
Kryshtab, Tetyana	81, 253, 254, 258
Krystian, Maciej	110
Kryvko, Andriy	253
Ku Herrera, José de Jesús	79
Kuang, Jie	207
Kudriavtsev, Yuriy	54
Kulkarni, Gajanan	179
Kumar, Deepak	144, 150
Kumar, Gopalakrishnan	118
Kundu, Auni	31, 308
Kung, Zhifeng	319
Kunold, Alejandro	255, 256
Kunstmann, Jens	280
Kurbanzadeh, Tamella	289
Kurish, Jeffrey	310
Kurz, Gerrit	206
Kusper, Matthew	14
Kuwabara, Akihide	117
Kzhyshkowska, Julia	96
la Parola, Valeria	123
Labbé, C.	35
Labrada Delgado, Gladis Judith	2, 4
Laines Canepa, José Ramón	296
Lam Maldonado, Mayda	50, 268, 270, 273
Lamas Martinez, Ramon	195
Lamas, Ramón	193, 201
Lambert, Juliette Alexandra	291
Lancok, Jan	32, 38, 224
Landauro Sáenz, Carlos Vladimir	13
Landeta Cortés, Gerardo	97
Landgrebe, Dirk	205, 239
Lang, Rossano	269
Langhammer, Christoph	47
Langmi, Henrietta	158
Lapas, Luciano C.	153
Lara Canche, Alan Ricardo	137
Lara Castro, René Homero	293
Lara Gomez, Cindy	220, 221, 233, 234, 235, 294, 295
Lara González, Adriana Guadalupe	225
Lara Guevara, Alberto	200
Lara Pérez, Carmen	284
Lara, Angelica	294
Lara, Rosa	210
Lara, Víctor H.	300
Lara, Victor Hugo	287
Lardizabal, Daniel	218
Larenas, Jose Miguel	321
Larios, Eduardo	113, 115
Larrainzar, Edgar	304
Lartundo Rojas, Luis	30, 273, 287, 298
Lasorsa, Carlos	35

Nombre	Paginas
Lastres Danguillecurt, Orlando	310
Lastres, Orlando	125
Laurrabaquio, Guadalupe-Lopez	42
Lavalle, Philippe	95
Lázaro Alfaro, Anay Fernanda	101, 318
Lázaro Covarrubias, Isis Sarahí	97
Lazcano, Zorayda	24
Lazo Jimenez, Luz Maria	64, 246
Lazo Jimenez, Rosa Estela	69
Lazo, Luz María	69
Lea Nienhaus, Lea	143
Leal Cruz, Ana Lilia	256
Leal del Rio, Tatiana Mileydy	35
Leal Solís, Irene	96
Leal, Jesus Javier	216
Ledentsov, Nikolay	47
Ledesma Fosados, Lucero Imelda	267
Ledesma, Brenda	3
Ledesma, Saul	210, 215
Ledezma Ramirez, Diego	210
Ledezma Ramírez, Diego Francisco	242
Ledezma Sillas, Ernesto	219
Ledezma Sillas, José Ernesto	219
Lee, Heeju	159
Lee, Heeyoung	9
Lee, Jaewon	187
Lee, Jongsup	217
Lee, Joun	131
Lee, Keibock	179
Lee, Kye-Man	180
Lee, Mi Jung	88, 89, 90
Lee, Mijung	92, 93
Lee, Sang Jun	34, 44
Lee, Sung-Min	87
Legarreta Arias, Karen Andrea	80
Legorreta Colindres, Luz del Carmen	114
Lei, Danni	48
Lemus Ruiz, José	201
Lendlein, Andreas	71, 111
León Bata, Brandon Iván	296
León Coronado, Jazmyr Alejandro	89
León Deniz, L. V.	107
León Flores, Jesús Alberto	194, 255
León Galván, Ma. Fabiola	77
Leon Lugo, Nathyely Marisol	219
León Madrid, Manuel	227
León Martínez, Frank Manuel	295
León Nataret, Yosemik Arjuna	7, 75, 155, 250
Leon Patiño, Carlos Alberto	84, 202, 210
León Salguero, Edgardo Uriel	91
Leon Solorio, Matilde	233
León Vallejo, Ana María	97
Leon, Andres	298
León, Itzel	299
Leon, Lee	211, 293
Leoni, Matteo	189, 191
Leontie, Liviu	174
Leou, Key-Chyang	10, 27
Leppert, Linn	168
Lepsa, Mihail	47
Lerma Escalera, Albert Isaac	110
Letchworth Weaver, Kendra	174
Letzig, Dietmar	206, 208
Lewis, Anthony	144
Ley Flores, María del Carmen	69, 96
Ley, Nathan A.	321
Leyva Aranda, Viridiana	38
Leyva Gómez, Gerardo	116
Leyva Hernández, Viviana	35
Leyva Ontiveros, Roberto	89, 91
Leyva Ramos, Roberto	55
Leyva Verduzco, Abraham Alejandro	107
Leyva, Elisa	284
Leyva, Viviana	213
Lezama Baldenebro, Anahi	268
Li Puma, Gianluca	299
Li, Chuan	47
Li, Dongsheng	187
Li, Haichen	166
Li, Jing	318
Li, Junjie	15, 182, 185
Li, Liang	174
Li, Qingxuan	75, 76
Li, Rui	214
Li, Xiao	174
Li, Xu	31
Li, Xufan	18, 20, 185
Li, Yaxian	275
Li, Yichuan	275
Li, Yuheng	169
Liao, Hong-Gang	187
Liard, M.	212
Liaudat, A. Cecilia	104
Licea, Liliana	25
Lijanova, Irina	236
Likhanova, Natalya Victorovna	58, 236
Likhatchev, Dimitry	69
Lillo Ramiro, Jessica Judith	91
Lim, Seongjoo	288
Lim, Seongsik	288
Lim, Seoyul	7
Lima Muñoz, Enrique Jaime	277
Limas Ballesteros, Roberto	295
Limon, Patricio	268
Lin, Fan	276
Lin, I-Nan	10, 27, 48
Lin, Yu-Chuan	20
Lin, Zin	154
Linares, Javitt	313
Lince Quintanilla, Viridiana	320
Lince, Viridiana	320
Lira, Manuel Alejandro	209
Liu, Chenguang	275
Liu, Chenze	20
Liu, Chunlan	318
Liu, Dongxia	276
Liu, Gang	207
Liu, Jingfu	317
Liu, Sijin	317
Liu, Xingyu	169
Liva Garrido, María B.	54
Lively, Ryan	158
Liz Marzán, Luis M.	38
Lizama Tzec, Francisco Iván	140, 145, 149 249, 313, 314
Lizardi del Ángel, José Joaquín	145
Lizárraga Álvarez, Efraín	242
Lizarraga Medina, Eder German	52
Llano Guerrero, Erika Agustina	300
Llarena Bravo, Topacio	52
Llombart, Pablo	38
Loaiza García, Sandra Milena	300
Lobach, Anatoliy	3
Lobato Peralta, Diego Ramon	8, 192
Lobo Sánchez, Marta	106
Lobo, Anderson	85
Lobo, Anderson de Oliveira	85
Loeckinger, Johannes	144
Loeffler, Troy	173, 174
Loera Serna, Sandra	158, 159,160
Lom, Fabiola	209
Lombardi, Julien	249
Lomelí Marroquín, Diana	38
Lometo Sánchez, Adam Mauricio	194, 207
Londoño Calderón, Viviana	39
Londoño Restrepo, Sandra Milena	61, 74
Lookman, Turab	173
Lootens, D.	212
Lopes Dias, Marcos	64
Lopez Alcantara, Ruth	237
López Álvarez, Victor Sayil	200
López Alvarez, Yadira Fabiola	192
Lopez Avila, Ramon Mario	301
Lopez Badillo, Claudia	45, 212, 213, 219
López Benítez, Acela	264, 265, 269
López Botello, Omar Eduardo	320, 321
Lopez Cabrera, Rene Salvador	160, 192
López Camacho, Perla Yolanda	79, 192
Lopez Cardona, Jorge Eliecer	13
López Castaños, Karen Alejandra	97
Lopez Castillo, Miguel Angel	250, 252
López Chávez, Oscar	285
López Chico, Dulce Yazmín	273
López Cuellar, Enrique Manuel	97
López Cuevas, Jorge	212, 213, 219, 222
López de Dios, Sergio Antonio	150
Lopez de Paz, Pascual	310
Lopez Delgado, Rosendo	140, 149

Nombre	Paginas
Lopez Diaz de Leon, Carlos	270
López Díaz, Alfonso	232
Lopez Estopier, Rosa Elvia	11, 96
López Flores, Leticia	63, 70
Lopez Galan, Oscar Alberto	272
López García, Luis Edgar	248
López Garnica, Gladys L.	197
Lopez Gastelum, Ana Lucia	34, 126
Lopez Gastelum, Karla Alejandra	276
López Gayou, Valentin	24
López González, Ariadna	114
López González, Mar	58
López González, Ricardo	59, 69
López González, Rodolfo	6
López González, Rosendo	79, 283, 287, 292, 295, 297, 299
López González, Salvador	53
López Guadarrama, Alejandro	314
López Hernández, Ana Victoria	62
López Hernández, Uriel Eduardo	126
López Herrera, Saúl	197
López Hirata, Víctor Manuel	195, 216
Lopez Honorato, Eddie	28, 223, 226, 292, 298, 299
López Juárez, Rigoberto	50, 125, 126, 247
López León, Luis Daimir	220
Lopez Lopez, Eladio	255
López Lozano, Carlos	264
Lopez Lugo, Victor Hugo	253
Lopez Luke, Tzarara	50, 115, 141, 142, 150
López Luna, Edgar	30
López Mancilla, Gerardo	141
Lopez Martínez, Juan Eduardo	147
López Marure, Arturo	79
Lopez Matus, Aldo Kevin	258
Lopez Medina, Javier Alonso	31, 52
López Medina, Ricardo	274, 275
López Méndez, Luis José	59
López Mendoza, Liliana Guadalupe	63
López Mendoza, Mario Alberto	288
López Miranda, José Luis	198
Lopez Morales, Guadalupe	191
López Morales, Salvador	70
López Morelos, Victor Hugo	201, 223
López Ortiz, Susana	224, 225
López Pacheco, Germán	191
Lopez Paniagua, Rosalia	302
López Pavón, Luis Alberto	97, 120
López Paz, Sara	245
López Pérez, Arturo	70
López Pérez, Pablo	1
López Pérez, Pablo A.	3, 55, 140, 151
López Rendón, Roberto	78, 79, 165
Lopez Resendiz, Luis Antonio	234
López Revilla, Rubén	114
López Rivera, Alan Rair	29, 217
López Rocha, Gerardo Gabriel	49
López Rodríguez, Angélica Silvestre	138, 295
López Romero, J. Mauricio	202
Lopez Romero, Rodolfo Ezequiel	248
Lopez Salazar, Primavera	199, 200
López Sánchez, Miguel Alberto	110
Lopez Sandoval, Roman	7
López Santiago, Rebeca	214
Lopez Saucedo, F.	105, 107
López Serrano Ramos, Francisco	64
López Soto, Luis Fernando	44
Lopez Suarez, Alejandra	36
López Tabares, Jessica	248
López Tejeda, Luis Alberto	216
López Téllez, Gustavo	53, 289
López Velázquez, Julio César	286
Lopez Villegas, Edgar Oliver	47, 255
López, Alfonso	229
López, Analía	178
Lopez, Andres	133, 235
López, Aracely	125, 127
López, Betty L.	74
López, Carlos A.	74
López, David	65
López, Diana	9
Lopez, Enrique Alejandro	202
Lopez, Haydee	45, 286
Lopez, Imer	127
López, Israel	40, 41, 50, 51, 121, 149
López, José Jaime	242
López, Jose Roberto	116
López, Mario Alberto	268, 274
Lopez, Natalie	105
Lopez, Omar	320
Lopez, Pascual	176
Lopez, Ramon	310
López, Raul Guillermo	116
López, Sandra	263
Lopéz, Valentín	107
Loría Bastarrachea, María Isabel	65
Losada Losada, Juan David	14
Lotfi, Roghayyeh	185
Louis, Catherine	271
Louvier Hernández, José Francisco	65
Lovera, Javier	300
Loy, Caroline	111
Lozada Morales, Rosendo Leovigildo	198
Lozada, Octavio	198
Lozano Bravo, Ricardo	93
Lozano Hernández, Luis Abraham	149
Lozano Rojas, Ivonne Berenice	198
Lozano Rojas, Karla Jenny	197, 198
Lozano Sotomayor, Paulina	78
Lozano, Karen	75
Lozano, Omar	101, 318
Lü, Bo	37
Lu, Min	55
Luca, Vittorio	292
Lucchesi, Christophe	154
Lucero Acuña, Armando	69, 96
Lucio Garcia, Mónica Arely	122
Lucio Ortiz, Carlos Javier	269
Lucio Porto, Raúl	120
Lugo Loredo, Shadai	50
Luis López, Paola Carolina	141
Luna Alvarez, Jesus Salvador	195, 222
Luna Arias, Juan Pedro	253
Luna Bárcenas, Gabriel	62, 98, 105, 319
Luna Cervantes, Marcos	36
Luna de la Cruz, Ariana del Carmen	295
Luna Domínguez, Jorge Humberto	36, 79
Luna León, Luis Gerardo	309
Luna López, José Alberto	25, 33, 176
Luna Martínez, Juan Francisco	6
Luna Martinez, Mayra Margarita	139
Luna Mayo, Carlos Alfonso	191
Luna Ramírez, Manuel	296
Luna Ramírez, Rosario	264
Luna Rodriguez, Leticia Esmeralda	108
Luna Sánchez, José Luis	256
Luna Sánchez, Rosa María	201
Luna Trujillo, Mayra	290
Luna Zaragoza, Daniel	75
Luna, Jesús Salvador	217
Luna, Salomon	309
Lunagómez Rocha, Ma. Antonia	265, 273, 274
Lundin, Daniel	28
Luo, Alan	207
Luque Ceballos, Jonathan Casildo	13
Luque Morales, Priscy A	78
Luque Morales, Priscy Alfredo	91, 92, 298
Luque, Priscy Alfredo	76, 89
Luviano, Lizbeth	155
Lychagina, Tatiana	177, 179
Lyer, Swathi	320
Lynch, Chris	31, 308
Lysyakova, Liudmila	71
Lyubovsky, Maxim	132
M. Ramírez, Juan	284
M. Yoshimura, Tania	95
Ma, Yimeng	131
Macairan, Jun-Ray	9, 123
Macclesh del Pino, Luis Alejandro	46
Macgillivray, Leonard R.	279
Machado Bertassoli, Bruno	110
Machado de Paula, Mirian Michelle	85
Machado, Bruna	118
Machatschek, Rainhard	111
Machuca Martinez, Fiderman	299
Macías Balleza, Emma Rebeca	61, 80
Macias Ferrer, David	50, 268, 270, 273, 274, 275
Macías García, Ana Isabel	239
Macias Hernandez, Manuel de Jesus	232

Nombre	Paginas
Macias Rodas, Carlos Artemio	310
Macias Rodriguez, Maria Esther	96
Macias, Juan Daniel	155, 314
Macias, Miguel	148
Maciel Cerda, Alfredo	85
Madeira, Michele de Paula	85
Madera Puigcerver, Gonzalo Antonio	214
Madireddy, Sandeep	173
Madonia, Antonino	260
Madrigal Acevedo, Jocelyn	183
Madrigal Magaña, Angel	299
Madrigal Melchor, Jesús	42, 53
Madrigal Olvera, Abigail Eloisa	73, 80
Maestre, David	269
Magallanes Rivera, Ricardo Xicotencatl	294
Magana, Luis Fernando	3, 5, 9, 18
Magaña Aguirre, Jonathan Javier	116
Magaña, Luis Fernando	169
Magasinski, Alexandre	48
Mahalingam, Thaiyan	257
Mahjouri Samani, Masoud	18, 20
Maia Filho, Antonio Luiz Martins	85
Maison, Antoine	210
Makov, Guy	167, 223
Maldonado Altamirano, Patricia	141
Maldonado Alvarez, Arturo	257, 258, 259, 260
Maldonado Arriola, Jesus Antonio	46, 149
Maldonado Bandala, Erick	233
Maldonado Cortés, Demófilo	284
Maldonado Espinosa, Jesus Alberto	140, 151
Maldonado Fiesco, Nanei Mazatl	78
Maldonado Guzman, Vladimir	36, 44
Maldonado Orozco, Maria Cristina	36, 44, 194, 195, 207, 215, 216
Maldonado Pérez, Azalea	114
Maldonado Ruiz, Simitrio	242
Maldonado, A.	253
Maldonado, Cuauhtémoc	242
Maldonado, Jose-Luis	67, 135, 137, 138, 149, 316
Maldonado, Pablo	230
Maldonado, Simitrio	202, 207
Malie Madom Ramaswamy Iyer, Anantharaman	246
Malpica Maldonado, Jonathan Jesús	274, 275
Mamian Mamian, Alfredo	165
Mamidi, Narsimha	75
Mammeri, Fayna	260
Mancilla Almonacid, Daniela	246
Manioudakis, John	123
Mannodi Kanakkithodi, Arun	136, 174
Manríquez González, Ricardo	45
Manriquez, Juan	68, 128, 294, 299
Manriquez, Maria Elena	263
Mansurova, Svetlana	54
Mantelli, Marcia B. H.	48
Manthani, Niketan	280
Mantilla Ramírez, María de Los Ángeles	298
Mantilla, Angeles	273, 287, 297
Mantovani, Diego	75, 104, 105, 111
Manuel Apolinar, Leticia	183
Manzanares, Alejandro	320
Manzanilla, Bielka	304
Manzano Ramirez, Alejandro	4, 125, 190
Manzano Rodríguez, Abel Luis	210
Manzo Robledo, Arturo	118, 121, 290
Maqueda González, Veronica	309
Mara Silva, Jaqueline	61
Maran, Flavio	37
Marangoni, Guilherme Ferrari	234
Marañon, Virginia	141
Marasamy, Latha	6
Marcazzó, Julian	225
Marciano, Fernanda Roberta	85
Mares Briones, Fabian	41
Mares Garcia, America Susana	107
Maria Da Luz, Sandra	58
Mariappan, S. V. Santhana	279
Marie, Xavier	255, 256
Marín Bustamante, Martha Quetzalli	183
Marín García, C. A.	256
Marin Moares, Ernesto	65, 155, 289
Marín Quiroz, Erick	232
Marin Rosas, Pablo	142
Marín Santibáñez, Benjamín Marcos	49
Marín Xicotencatl, Ana Marlen	271
Marina Lara, Erik Armando	141
Marinkovic, Bojan	321
Marino Tinajero, Giancarlo	114
Mariscal Becerra, Luis	31
Mariscal Hernandez, Cesar	218
Markevich, Iryna	253
Marom, Noa	169
Marques, Francisco	31
Márquez Aguilar, Pedro Antonio	212, 317
Márquez Beltrán, César	270
Márquez Berber, Sergio Roberto	301
Márquez Herrera, Alfredo	178
Márquez López, Daniel Martin	290, 305
Márquez Marín, Joaquín	140, 251
Márquez Olivera, Moisés Vicente	217
Márquez Quintos, Edmundo	223
Márquez Ramírez, Estela	271
Marquez, Francisco	295
Marquina, Maria Luisa	164, 193
Marri, Ivan	24
Marriaga Cabrales, Nilson	299
Marroquín, Gustavo	266
Marsico, J.	117
Martel Estrada, Santos Adriana	80, 81, 103, 105, 139
Martelli, Faustino	155
Martin Fuentes, Enric	195
Martin Peon, Maria Gabriela	302
Martin Varguez, Pedro E.	29
Martin, Pablo	192
Martínez Aguilar, Espiridión	168
Martinez Alonso, Claudia	138, 146
Martinez Ara, Luis Arturo	141, 222
Martinez Bautista, Ruben	121
Martínez Benavides, Evelin	78, 79
Martínez Borja, Ana Lilia	6
Martínez Bustos, Fernando	61
Martinez Cartagena, Manuel Eduardo	1, 8, 98, 271
Martínez Casillas, Diana Cristina	8
Martinez Castellanos, Gustavo	284
Martínez Cruz, Lizeth	297
Martínez de Irujo, Xabier	245
Martinez del Rio, Ana Elisa	308
Martínez Domínguez, Edgar Azael	3
Martínez Elena, Asuncion Zeferino	5
Martínez Farías, Francisco	3, 151
Martinez Farias, Francisco Javier	1, 55, 140
Martinez Flores, Cesar	3
Martínez Flores, José Salvador	39, 52
Martínez Galván, Salvador Eduardo	125
Martínez García, Héctor	266
Martínez García, Marcos	34, 45, 114, 252
Martinez Gil, Miguel	30, 136, 149
Martínez Gomez, Claudia	271
Martinez Gomez, L.	272
Martínez González, Claudia Lizbeth	14
Martinez Gonzalez, Jose Adrian	174, 175
Martínez González, José de Jesús	105
Martinez Granados, Gabriela	239
Martínez Gutiérrez, Hugo	7, 68, 69, 195, 215, 294
Martinez Heredia, Ruben	176
Martínez Hernández, Alma	241
Martinez Hernandez, Ana Laura	290
Martínez Hernández, Miryam	102
Martinez Higuera, Aaron Alberto	106, 113, 115
Martínez Juárez, Javier	199, 200
Martinez López, A. G.	250
Martinez Madrid, Miguel	229, 231, 237
Martinez Martinez, Ana Rebeca	295
Martínez Mejía, Gabriela	61
Martínez Mena, Alberto	78
Martínez Mendoza, José Refugio	191
Martínez Miguel, Julisa	285
Martinez Molina, Wilfrido	220, 221, 222, 233, 234, 235, 237, 294, 295
Martínez Montemayor, Sagrario	118
Martínez Morales, María del Carmen	126
Martínez Muñoz, Porfirio Esau	149, 200
Martínez Orozco, Juan Carlos	48, 52
Martinez Palma, Nikte Yolotzin	8
Martínez Pereyra, Gabriel	121
Martinez Perez, Beatriz	107, 114
Martínez Pérez, Carlos Alberto	80, 217, 314
Martínez Peréz, Rosa Veronica	231
Martinez R., Claudia	291

Nombre	Paginas
Martínez Ramírez, Ollín Celeste	78
Martinez Reyes, Jacobo	107
Martinez Reyna, Kari Guadalupe Hortensia	63
Martinez Rojo, Edgar	196
Martínez Rosales, Merced	267
Martinez Rubi, Yadienka	214
Martínez Ruíz, Martín Alberto	112
Martínez Ruvalcaba, Agustin	62
Martinez Salas, Selene Haydee	126
Martínez Salazar, Ana Lidia	274
Martinez Samaguey, Yuri	303, 304, 305
Martínez Sánchez, Roberto	194, 195, 196, 207, 243
Martínez Soto, Juan Manuel	106, 115
Martínez Suárez, Carlos Eduardo	211
Martinez Toledo, Luis Enrique	122
Martinez Valencia, Ana Beatriz	103, 104
Martínez Valencia, Horacio	175
Martínez Vázquez, J. M.	202
Martinez Villafañe, Jesus Fernando	195, 217, 222
Martinez y Rojas, Hector Hugo	125
Martinez Zuñiga, Eduardo Carlos	51
Martinez, Alejandro David	125
Martínez, Arturo	147
Martinez, Aureliano	219
Martínez, Denisse	196
Martinez, Dora Irma	269
Martínez, Eduardo	119
Martinez, Elena	111
Martínez, Espiridión	147, 165
Martinez, Fidel	104
Martínez, Gabriel	106
Martinez, Gabriel Alejandro	104
Martínez, Hernández	248
Martínez, Hiram	25
Martinez, Horacio	140, 231
Martínez, Jesús	25
Martínez, José Manuel	20
Martinez, M. Laura	44, 124, 125, 264
Martinez, Maria Victoria	58, 63
Martinez, Nestor Ivan	230
Martinez, Rocio	7
Martins Alho, Miriam Amelia	289
Martins Rodrigues, Ana Candida	120
Martins, Tatiana	129
Martinson, Alex	136
Marton, Benke	199
Marulanda Arévalo, José Luddey	28
Marzano, Mayara	321
Masao, Katayama	134
Massoni, Eduardo	34
Mata Marquez, Jesus Arturo	292
Mata Ortega, Brenda	158
Mata Padilla, Jose Manuel	2, 50, 98, 280
Mata Ramirez, Jorge	53
Mata, Esther	34
Mathe, Mkhulu	158
Mather, Patrick	71
Mathew, Nithin	172
Mathew, Xavier	142, 143, 144, 146
Mathews, Nini Rose	142
Mathews, Scott	320
Matlock, David	240
Matos, Juan	285
Matsumot Kuwabara, Yasuhiro	24
Matsumoto, Yasuhiro	143, 144, 148, 260
Mattoussi, Hedi	48, 99
Matutes Aquino, J Andres	219, 320
Maurer, Reinhard	163
Mauricio, Reina Araceli	36, 44, 62
May Pat, Alejandro	93, 215
May, Angel G.	309
Maya Anaya, Daniel	107
Maya Cornejo, Jose	119, 198, 202
Maya Treviño, Maria de Lourdes	317
Maya, Fernando	161
Maya, Rafael	263
Mayen Chaires, Jan	233, 242
Mayén Hernández, Sandra Andrea	200, 257
Mayer, Martin	279
Mayer, Matthew T.	131, 143
Mayorga Garay, Marisol	30
Mayorga Rojas, Miguel	79
Mazón Montijo, Dalia	88
Mcconney, Michael	46
Mcnally, Graham	246
Meador, Maryann	58
Meas Vong, Yunny	126, 128
Meda, Lamartine	117
Medellin, Nahum	55
Medina Esquivel, Ruben Arturo	151
Medina Flores, Rafael Antonio	66
Medina Noyola, Magdaleno	63, 70
Medina Pérez, Mauricio Alberto	111
Medina Ramírez, Iliana Ernestina	299, 318
Medina Torres, Luis	80
Medina Vargas, Hugo I.	103
Medina Velazquez, Dulce Yolotzin	27
Medina, Adán	233
Medina, Ariosto	112, 192, 198, 199, 235
Medina, Luis A.	111
Medina, Nelly	302
Medrano Prieto, Hansel Manuel	194, 195, 207
Medrano Valenzuela, Felipe	115
Meeker, Michael	320
Mefford, Tyler	186
Mehta, Ravindra	241
Meiners, Andrés	219
Meixueiro, Daphne	38
Mejía García, Concepción	46, 141, 148, 222
Mejia Gomez, Julieth Alexandra	290
Mejía Granados, Ignacio	236
Mejia Martinez, Mario Aldebaran	195
Mejía Restrepo, Erica	292
Mejia Rodriguez, Daniel	164
Mejía Suaza, Mónica Liliana	74
Mejía Uriarte, Elsi Violeta	5
Mejia, Abraham	199
Mejía, Hernán Darío	195
Mejia, I.	250
Mejía, Ignacio	235, 241, 242
Mejia, Israel	93, 303
Melchor Moncada, Jhon Jairo	109
Meléndez Anzures, Frank Eduardo	97
Meléndez Bustamante, Francisco Javier	164
Melendez Lira, Miguel	50, 140, 151
Melendez, Daniel	295
Melendrez Amavizca, Rodrigo	110, 256
Melgarejo Ramírez, Yaaziel	83
Melgares Camacho, Wilson	66
Melo Banda, Jose Aarón	36, 50, 64, 264, 267, 268, 270, 273, 274, 275
Melo Máximo, Dulce	9
Melo Máximo, Lizbeth	9
Mena Burgos, Vanire	160
Menchaca Arredondo, Jorge Luis	97
Méndez Albores, Alia	97
Mendez Blas, Antonio	137, 139, 147
Mendez Camacho, Yelsin Enrique	103
Méndez Galván, Melissa	44
Méndez Gamboa, José Ángel	151
Mendez Lozano, Nestor Efren	4, 73
Mendez Lozoya, Javier	77
Méndez Méndez, Juan Vicente	182
Méndez Nonell, Juan	212, 213
Mendez Ramirez, Juan	114
Méndez Sánchez, Arturo F.	309
Mendez, Juan	6
Mendez, Leticia	303
Mendez, Patricio	219
Mendez, Paula A.	74
Mendis, Chamini	206
Mendoza Álvarez, Jesús Guillermo	41
Mendoza Alvarez, Julio Gregorio	253, 255
Mendoza Anaya, Demetrio	62, 75, 193, 194, 196, 197, 198, 203, 224, 225, 252
Mendoza Carballo, Jesus Elias	268
Mendoza Cruz, Ruben	115
Mendoza Duarte, Jose Manuel	195
Mendoza Escobedo, Carlos J.	300
Mendoza Galván, Arturo	36, 44
Mendoza González, Clara Luz	144
Mendoza Gonzalez, Norma Yadira	176
Mendoza Gutierrez, Miguel Salvador	53
Mendoza Hernandez, Jose Carlos	274
Mendoza Leal, Gabriela	65, 211
Mendoza Leon, Hector	177
Mendoza Lopez, Maria Luisa	6, 29, 126, 240
Mendoza Nieto, Arturo	125

Nombre	Paginas
Mendoza Peña, Kassim Jose	89
Mendoza Pérez, Jorge Alberto	305
Mendoza Pérez, Rogelio	141, 144, 145
Mendoza Pérez, Víctor Manuel	195
Mendoza Rangel, José Manuel	212, 236
Mendoza Roman, Mara Elena	292
Mendoza Santoyo, Fernando	215
Mendoza Zubia, Edgar Eduardo	105
Mendoza, Aaron	45
Mendoza, Doroteo	5
Mendoza, Gabriela	78
Mendoza, José	196
Mendoza, María Eugenia	74, 103, 169
Mendoza, Rosalva	210
Mendoza, Ruben	264
Meneau Hernández, Rosa I.	54
Menéndez, J. Angel	3, 5
Meneses Rodriguez, David	2, 4, 7, 43, 143
Meneses Roldán, Nahavi Eduardo	295
Meneses, Maricela	24
Menges, Fabian	154
Mercader Trejo, Flora Emperatriz	52
Mercado Lemus, Victor Hugo	242
Mercado Silva, Jesus Alfonso	8, 98
Mercado Zúñiga, Cecilia	14
Mercado, Alejandra Daniela	6
Mercado, Jesus Alfonso	1, 271
Merchiers, Olivier	154
Meredig, Bryce	127
Merino, Gabriel	14, 280, 281
Merlo, Rafael	31
Meroni, Simone	135, 143, 313
Mertinger, Valeria	177, 199
Mesa Zamora, Camilo A.	131
Mésini, Philippe	64
Messina Fernández, Sarah Ruth	141
Messina, Fabrizio	260
Messina, Riccardo	154
Mestres Vila, Lourdes	165, 168
Meza Contreras, Juan Carlos	45
Meza Corona, Ramiro	9
Meza Espinoza, Luis Octavio	24
Meza García, Enrique	239
Meza Mendoza, Guillermo Israel	64
Meza Meza, Juan	213
Meza Montes, Lilia	168
Meza Pardo, Ingrid Guadalupe	159
Meza Rocha, Abraham N.	198
Meza, Alexander	9
Michtchenko, Alexandre	3, 43, 65
Miguel Díaz, Everardo	216
Miki Yoshida, Mario	2, 37, 46, 138, 186
Miljanic, Ognjen	158
Millan Castillo, Cesar	96
Millán Malo, Batriz Marcela	61, 74, 190, 257, 268, 274
Millan Malo, Beatriz	73, 192
Millan Malo, Jose Samuel	248
Millan Ramos, Benjamin	28, 248
Miller, Eric	132
Mimila Arroyo, Jaime	20
Minary, Majid	88
Minea, Tiberiu	28
Mingler, Bernhard	110
Mirabal García, Manuel	49
Miralrio Pineda, Alan Joel	4, 268
Miralrio, Alan	19
Miramontes, Antonio	1
Miranda Avilés, Raul	76
Miranda Cabrera, Faviola Silvia	108
Miranda Durán, Álvaro	24
Miranda Hernandez, J. Guadalupe	218, 284
Miranda Hernández, José Guadalupe	213, 237
Miranda Leal, Omar Salvador	222
Miranda Leão, Rosineide	58
Miranda Lopez, Martin Itzcoatl	253
Miranda Olvera, Alma Delia	267, 276
Miranda Olvera, Rosalba Montserrat	66
Miranda Pacindo, Hector	33
Miranda, Alvaro	43, 257, 258
Miranda, Juana María	128, 294
Miranda, Ricardo	213
Mireles Ramirez, Marcela	89, 91
Miró, María Soledad	52
Mishra, Karuna	142
Misture, Scott	124, 127, 189
Mitre Martínez, Doris Giovanna	297
Miyashita, Tomohiro	232
Miyata, Tomohiro	174, 186
Miyoshi, Toshikazu	58
Mizoguchi, Teruyasu	172, 174, 186
Moctezuma Martiñón, Rosario Esperanza	97
Moctezuma, Edgar	284
Moggio, Ivana	68, 142
Moguel Dominguez, Pablo Ernesto	137
Mohamed Noriega, Nasser	6
Mohan Kumar, K.	272
Mojica Gómez, José	98
Mojica Molina, Hebert Rodrigo	269
Molano Mendoza, Marena	299
Molano Ruales, Diego	248
Molesky, Sean	154
Molina Aldareguia, Jon	240
Molina Brito, Bertha	19, 165
Molina Martinez, Elio Alberto	115
Molina Maturano, Jessica	182
Molina Morales, Mariana	27, 302, 303
Molina Ocampo, Arturo	15, 175, 196, 208, 217, 233
Molina Ramírez, Carlos Andrés	38
Molina Reyes, Joel	38
Molina Rodriguez, Luis	280
Molina, Joel	31, 299
Molina, Maria Alejandra	58, 67
Molinar Diaz, Jesus	31
Molodov, Konstantin	206
Monárrez Cordero, Blanca	186
Monclus, Miguel	240
Mondragón Núñez, Leonardo	98
Mondragon Ornelas, Marco Antonio	221, 294
Mondragón, María de Lourdes	214
Monerris, Melisa	104
Monfil Leyva, Karim	25
Monleon Pradas, Manuel	101
Monroy Avila, Juan David	68, 69
Monroy Barreto, Erick	284
Monroy, Olivia	67
Monsalve Arias, Monica Johanna	103
Monsalve, Alberto	214
Monsalve, Yuliana	74
Montaño Machado, Vanessa	75, 104
Montaño, A. Gabriela	9
Monte Gutierrez, Jorge	137
Montejano Carrizales, Juan Martin	42, 53
Montero Cabrera, Maria Elena	191
Montero Moreno, Josep M.	39
Montero Rangel, Adrian	2
Montes de Oca Ayala, Flavio Tais	115
Montes Frausto, Juana Berenice	111
Montes Gutiérrez, Jorge Arturo	4
Montes Morán, Miguel	3, 5
Montes Ramirez, Eduardo	110, 224
Montes Valenzuela, Isaac	253
Montiel González, Zeuz	88
Montiel Rubies, Gala	289
Monton, Carlos	246
Montoya Davila, Miguel	200
Montoya del Angel, Alejandra	138
Montoya Pacheco, Jazmín	139
Montoya Rangel, Marvin	232, 321
Montoya, José Ascención	274
Montoya, Miguel	207
Moo Yam, Víctor Manuel	231, 234, 235
Moon, Hoi Ri	158
Mora Fonz, David	167
Mora Monroy, Roberto	115
Mora Viquez, Jorge Rodrigo	40
Mora, Kenya	132
Morado Rueda, Christian	236
Morado, Christian de Jesus	220
Morales Acevedo, Arturo	253, 259
Morales Agundez, Catalina Guadalupe	285
Morales Anzures, Fernando	268
Morales Avila, Enrique	111, 112, 113
Morales Barrera, David Antonio	141
Morales Bautista, Jacob	259
Morales Bonilla, Samuel	14
Morales Cepeda, Ana	46, 61
Morales Chávez, Janet	96

Nombre	Paginas
Morales Cruz, Damasio	51
Morales Ibarra, Rodolfo	1
Morales Luna, Michael	255, 266
Morales Martinez, Deni Azucena	304
Morales Mejía, Julio César	276
Morales Morales, David	58
Morales Morales, Francisco	25, 90
Morales Ortuño, Julio César	274
Morales Pacheco, Patricio	80
Morales Peñaloza, Alejandro	1, 55
Morales Pérez, Melisa	218
Morales Ramírez, Ángel de Jesús	27, 79, 211, 291
Morales Reyes, Karla Eriseth	34, 38, 46, 192, 246
Morales Rojas, Hugo	279
Morales Ruiz, Crisoforo	14, 24, 31, 35, 180
Morales Sánchez, Alfredo	25
Morales Sánchez, Marco Antonio	77, 207
Morales Santana, Marcos	104
Morales, Alfredo	23, 24, 25, 28, 90, 93
Morales, Crisoforo	252
Morales, Graciela	75, 104, 116
Morales, Jorge	35, 213
Morales, Monica	29
Moran López, Brenda Yesamin	303
Moran Martinez, Xochitl Aleyda	176
Morán Raya, Carolina	77
Morán, Emilio	245
Morant, Carmen	295
More Chevalier, Joris	32
Moreira Acosta, Joel	122, 125, 126, 128, 176, 310
Morelos Gomez, Aaron	8
Morelos, Oscar	264, 273
Moreno Armenta, María Guadalupe	147
Moreno Barbosa, Eduardo	35, 175, 223
Moreno Bello, Karla Judith	65, 215
Moreno Carcamo, Abel	103
Moreno Cortez, Iván Eleazar	97, 120
Moreno Laguna, Karla	250
Moreno Landeros, V. M.	218
Moreno Landeros, Victor Manuel	218, 220, 236
Moreno Lopez, Ruben Daniel	272
Moreno Moreno, Mario	25
Moreno Palmerin, Joel	179
Moreno Regino, Valeria Detzani	140
Moreno Rincon, Raul	148
Moreno Rodríguez, José Albino	36
Moreno Saavedra, Hilda	67
Moreno Telléz, Carlos Mauricio	29, 212, 230
Moreno Valtierra, Maira	108
Moreno, Juan Roberto	31
Moreno, Mario	23, 24, 25, 90, 93, 150
Moreno, Salvador	88
Morera Boado, Cercis	11
Mori, Kotaro	218
Mori, Shogo	151
Morikawa, Kazuo	251
Morin Martinez, David Arturo	42
Moriwake, Hiroki	117
Morones Ramírez, Jose Ruben	110
Moscoso, Oscar	245
Mosinger, Jirí	102
Mosqueda Laffita, Yodalgis	310
Mosqueda Sanchez, Antonio	222
Mosqueda, Antonio	208, 235
Mosquera Mosquera, Julio Cesar	200
Mosso, Nico	154
Mota Dïaz, Isaac Izcoatl	63
Mota González, María de la Luz	76, 78, 87, 88, 89, 90, 91, 92, 93, 299
Mota Morales, Josue David	69, 96, 119, 200
Mote Medécigo, Héctor	128
Mouhamad, Youmna	144
Mubeen, Syed	131
Mueller, Tim	174
Mueses, Miguel Ángel	266, 299
Mugoni, Consuelo	292
Muhl, Stephen	5, 313
Mukai, Masaki	183
Mukherjee, Dibyendu	12
Mukherjee, Sundeep	117, 241
Mulholland, Gregory	127
Munguia Cervantes, Jacobo Esteban	219
Munguía Huerta, Jorge Eduardo	107
Munguia Martín, Marco Polo	252
Munoz, Francisco	42, 163
Munoz, Rodrigo	118
Munyaneza, Eric	285
Muñiz Martinez, Barbara Alejandra	19
Muñiz Valdez, Carlos Rodrigo	195, 217, 222
Muñiz, Jesus	9, 168
Muñoz Bustos, Carlos	77
Muñoz García, Andrés	302
Muñoz Gracia, Erika	146
Muñoz Juárez, Isaac	80, 105
Muñoz Maciel, Jesus	192
Muñoz Rivera, Luis Carlos	143
Muñoz Ruiz, Abraham Israel	84
Muñoz Saldaña, Juan	213, 219
Muñoz Valdez, Jennifer Alejandra	88
Muñoz Zurita, Ana Luz	25
Muñoz, Efrén de Jesús	90
Muraca, Diego	245
Muratore, Christopher	31, 46
Murcia Rios, Angela M.	168
Murillo Borjas, Bayron Lennin	251
Murillo Bracamontes, Eduardo Antonio	31
Murillo Tovar, Mario Alfonso	298
Murillo, Eduardo	40
Murillo, Gonzalo	91
Muro Ríos, Jacqueline Isamar	191
Muro Urista, Claudia Rosario	65
Muro, Claudia Rosario	61, 71
Murphin Kumar, Paskalis Sahaya	118
Musil, Jindrich	38
Mustafaeva, Solmaz	19, 196, 247, 251
Mustre de León, José	151
Musule Lagunes, Ricardo	296
Musyoka, Nicholas	158
Mutis Gonzalez, Nathalia	61
Mutschler, Angela	95
Myles, Charles W.	168
M´peko, Jean Claude	54
Naccache, Rafik	9, 123
Nafie, Ghada	55
Nagai, Kazukiyo	59
Naik, Rajesh	319
Nakao, Shoichiro	251
Nakashima, Naotoshi	186
Nakouzi, Elias	187
Nanci, Antonio	111
Nanko, Makoto	202
Nañez, Maria de Jesus	241
Narayanan X, Jayanthi	150
Narayanan, Badri	171, 173, 174
Narayanan, Jayanthi	139
Narro García, Roberto	44, 215, 216, 303
Narro Rios, Jorge Sergio	146, 250, 253, 254, 260
Narvaez Morales, Jackeline	245
Narvaez, Lilia	128, 294
Nashed, Youssef	172
Nassar Britos, Tatiane	110, 190
Nassar, Nashaat	55
Nava Andrade, Karina	108
Nava Coronel, Sofía	75
Nava Dino, Claudia Georgina	44, 215, 216, 303
Nava Mendoza, Rufino	268, 274, 288
Nava Reyes, Diana Consuelo	50
Nava, Osvaldo	89
Navarrete Bolaños, Juan	267
Navarrete Damián, Jaime	65
Navarrete Seras, Marco Antonio	220, 233
Navarrete, Michelle	288
Navarro Arias, Diana Karime	109
Navarro Contreras, Hugo R	63, 113
Navarro Gautrín, Rosa Elena	289
Navarro Mendoza, Ricardo	78, 226, 227, 296
Navarro Santos, Pedro	19, 29
Navarro Segura, Maria Edith	40
Navarro Solis, David Jacob	223
Navarro Tovar, Ana Gabriela	292, 298, 299
Navarro Tovar, Gabriela	113
Navarro, Jorge Antonio	242
Navarro, Oracio	19
Navarro, Ricardo	224, 225
Navia, Heidy Catalina	108
Nazario Pérez, Pablo Rodrigo	139
Nealey, Paul	174
Nechache, Riad	124

Nombre	Paginas
Nedev, Nicola	31, 52
Negulescu, Beatrice	174
Neira Velázquez, Maria Guadalupe	2
Nele, Marcio	64
Nelson, Pamela F.	227
Nepal, Niraj K.	165
Neri Cruz, Juan Ernesto	182, 183
Neri Espinoza, Karen Ailed	249, 294
Neri Torres, Elier Ekberg	183
Nesladek, Milos	9
Netazhual Lopantzi, Angel	53
Neto, Antonio de Brito Santiago	269
Nettleship, Ian	307
Netzahual Lopantzi, Angel	47, 255
Neumann, Marcus A.	167
Neupane, Bimal	165, 166
Neupane, Ram	128, 132
Nevárez López, Andrea Roxana	44
Ngoc Ho, Linh	157
Nguyen, Khac Long	154
Nicley, Shannon	9
Nicolás Carlock, José Roberto	178
Nicolás Marin, Miriam Marmara	137
Nicolopoulos, Stavros	190
Niehus, Xochitl	274
Nielsch, Kornelius	39
Niero, Danila Ferreira	52
Nieto Argüello, Alfonso	38
Nieto Munoz, Adriana Marcela	120
Nieto Saldaña, Natividad	270
Nieto Zambrano, Sorelis	251
Nieto, Fabiola	14, 35, 180, 252
Nieves Mendoza, Demetrio	233
Nikitov, Sergey	196, 247
Nikolaenko, Irina	309
Nikolayev, Dmitry	177, 179
Nilsson, Sara	47
Niño Camacho, Isabel Cristina	103
Niño Martínez, Nereyda	106
Niño, Nereyda	104
Nishiwaki, Shiro	144
Niu, Kaiyang	187
Nobre, Tathyane M.	77
Nöchel, Ulrich	71
Nogal, Uriel	155
Nogueira, Nathália	3
Noguez, Cecilia	11, 17, 18, 19, 154, 155, 315
Noh, Sanghoon	216, 217
Nolasco, Víctor Alfredo	253, 263
Noriega Luna, Berenice	283
Noriega Ramirez, Natalia Elisa	299
Noriega, Jose R	91
Noriega, Salvador	209
Noriega, Saúl	284
Noun, Farah	9
Novelo Uc, Julian Pastor	160
Novelo, Omar	34, 192, 246
Novitskaya, Ekaterina	212
Novoa de Leon, Ilse Cristal	6
Novotny, Michal	32, 38
Nowak, Sophie	246
Noyan, Ismail	190
Nuernberg, Natassia Bratti Da Silva	285
Nunez Gonzalez, Jose	285
Nunez Gonzalez, Roberto	258
Núñez de la Osa, Diana	133
Núñez Gaytán, Ana María	64
Núñez Gaytán, María Elena	64
Nuñez Guzman, Ernesto Alberto	222
Nuñez Guzman, Fernando	222
Núñez Mendoza, Bernardo	62
Nuñez Rodriguez, Luis Alberto	102
Nuñez, Diana	132, 147
Nwakanma, Onyekachi	250, 253
Oberhofer, Harald	166
Obidi, Olayide	33
Obregon Garcia, Jesus	219
Obregón, Sergio	41, 43, 50
Obrien, Stephen	249
Ocadiz, Maria del Pilar	307, 310
Ocampo Bello, Jorge Andrés	215
Ocampo García, Blanca Eli	111, 112, 113
Ocampo Macedo, Ricardo Elihu	138
Ocampo Mortera, Miguel Angel	215
Ocampo Perez, Raul	49, 55
Ocampo, Ana Lilia	119
Ocaña, José Luis	234
Ochoa Cáceres, José Martín	289
Ochoa Gamboa, Dalmy Lucia	113, 115
Ochoa Jaimes, Juan Carlos	66
Ochoa Landín, Ramón	89, 91, 146
Ochoa Lara, Martha	36, 44
Ochoa Romero, Doria Alejandra	140
Ochoa, Gustavo	50
Odarych, Volodymyr	254
Odio Chacón, Oscar Fernando	30, 103, 289
Odriozola, Gerardo	70
Ogawa, Daisuke	251
Oh, Gwangtaek	7
Ohkura, Yoshihiro	183
Ojeda Durán, Esteban	25
Ojeda Farías, O.	212
Ojeda Galvan, Hiram Joazet	113
Ojeda López, Reyna	266
Ojeda Morales, Marcia Eugenia	121
Ojeda Perez, Luis Carlos	269, 271
Ojeda, Carmen	294
Oksenberg, Eitan	48
Okunishi, Eiji	183
Olais Govea, Jose Manuel	63, 70
Olalde Velasco, Paul	316
Olalde, Roman	231
Olán Vargas, Lemuel Roberto	160
Olarte Paredes, Alfredo	64, 66, 290
Olarte Villamizar, Jenniffer Katherine	175, 287
Olaya Florez, Jhon Jairo	28, 29
Olea Rogel, Alfredo	4, 140, 148
Olguin Coca, Francisco Javier	220
Olguin, Hugo	84
Olguin, Marco	117
Oliva Arias, Andres Ivan	137, 146, 201, 214, 216
Oliva Avilés, Andrés Iván	214, 216
Olivano Esquivel, Ana Daniela	114
Olivares Gonzalez, Claudia Estefania	220
Olivares Jiménez, Adileily	60
Olivares Navarrete, Rene	97, 102
Olivares Torres, Itzel Arizbe	90
Olivares Xometl, Octavio	236
Olivarez Galván, Juan Carlos	33
Olivas Armendáriz, Imelda	36, 43, 105, 108, 139, 270
Olivas Sarabia, Amelia	92
Olivas, Amelia	89
Oliveira Jr., Osvaldo Novais de	77
Oliveira, Alcineia	268, 269, 273
Oliveira, Ana Paula Saraiva	268
Olivo Alanis, Daniel Simon	67, 150
Olivo Arias, Liliana Patricia	166
Olmedo, Daniel G.	102
Olmos Navarrete, Luis Rafael	222
Olmos, Daniela	147
Olmos, Luis	301, 303
Olvera Amador, María de la Luz	256, 257, 258, 259, 260
Olvera Felix, Carlos	91
Olvera Garza, Lilian	70
Olvera Garza, Lilian Irais	69
Olvera Mancilla, Jessica	68, 69
Olvera Sosa, Miguel	49
Olvera Vazquez, Seydy Lizbeth	233
Olvera, M. de la L.	253
Onchi, Alejandro	65
Ontiveros Rivas, Ana Lucia	298
Ontiveros Tlachi, Rodrigo	85
Oñate Robledo, Hugo	61, 109
Opatova, Katerina	239
Orante Barrón, Victor Ramón	225, 226
Orantes Flores, Harvey de Jesus	122
Ordaz Rodriguez, Ervin Daniel	70
Ordeñana Martinez, Alfredo Silverio	4
Ordonez Miranda, Jose	46, 47, 48, 155
Ordonez, Jose	153
Ordonez, Raymundo	184
Ordoñez Benavides, Jenny Geovanna	46
Ordoñez López, Luis Carlos	274
Ordoñez Ramos, Fredy	39, 51
Ordoñez, Stella	191
Orduña Díaz, Abdú	96
Orduña, Abdú	107

Nombre	Paginas
Orduño Fragoza, Oralia	227
Orea Calderón, Brenda Irais	66
Ornelas Cruz, Ivan de Jesús	139
Ornelas, Carlos Elias	186, 265
Oropeza Almazán, Yuriana	101, 318
Oropeza Ramos, Laura	5
Orozco Álvarez, Carlos	219, 281
Orozco Bladorni, Abraham	107
Orozco Carmona, Victor Manuel	298
Orozco Cruz, Ricardo	236
Orozco González, Pilar	202
Orozco Ic, Mesias	281
Orozco Ruiz, Guillermo Espartaco	18
Orozco, German	123, 128, 294
Orozco, Lina M.	276
Orozco, Victor	96
Orta Gascón, Norma Elisa	208
Ortega Aguilar, Rosa Elena	61, 71
Ortega Aguirre, Samantha	63
Ortega Avíles, Mayahuel	23, 129, 252
Ortega Cardenas, Juana Angelica	148
Ortega Cervantez, Gerardo	5, 7, 46
Ortega Domínguez, Rodrigo Arturo	268
Ortega Garcia, Felipe de Jesus	264
Ortega Lara, Wendy de Lourdes	108
Ortega Lazcano, Jesús Benjamín	193
Ortega López, Mauricio	137, 143, 254, 260
Ortega Miranda, Nicolas	39
Ortega Morales, Benjamín Otto	95
Ortega Reyes, Rosa Dolores	198, 201
Ortega Zarzosa, Gerardo	191
Ortega, David	128
Ortega, Ricardo	215
Ortiz Cardona, Carlos Andrés	202
Ortiz Chi, Filiberto	14, 43, 271, 272, 277
Ortiz Cuellar, Juan Carlos	195, 217, 222, 294
Ortiz Dimas, Erick	1
Ortiz Flores, Abdon	68
Ortiz Jimenez, Orlando	29
Ortiz Landeros, José	126, 291, 298
Ortiz López, Jaime	5, 7, 23
Ortiz Monroy, Luis Santiago	206, 208
Ortiz Mosquera, Jairo Felipe	120
Ortiz Ortega, Euth	96
Ortiz Otálora, César Armando	252
Ortíz Palacios, Jesús	57
Ortiz Quiñonez, Jose Luis	39
Ortiz Ramos, Miguel Angel	39
Ortiz Rojas, Martha	125
Ortiz Sanchez, Juan Carlos	140, 151
Ortiz Trujillo, Isabel	74, 79
Ortiz, Gabriel	54
Ortiz, Jaime	6, 308
Ortiz, Jhonny	215
Oseguera, Joaquin	9, 302
Oskam, Gerko	30, 133, 135, 136, 140, 141, 142, 143, 145, 149, 150, 151, 160, 250, 313, 314, 316
Osorio Arciniega, Rodrigo	98
Osorio de la Rosa, Edith	24
Osorio, Edison	279
Osorio, Edith	143
Osornio Martinez, Carlos Eduardo	31
Ostadhossein, Alireza	185
Osterloh, Frank E.	314
Ostos, Carlos	261, 265, 269, 271, 283, 286
Oswald, Frédéric	135
Otalora Barreno, Diana Maria	29
Otani, Yoshichika	37
Otero Hernández, José Antonio	217
Ott, Annika	154
Ottonelli, Massimo	142
Ouaskit, Said	46
Ouellet Plamondon, Claudiane	129
Oviedo Roa, Raúl	255
Oviedo, Maridely	41
Ow Yang, Cleva	178
Oyama, Ted	264
Oyarvide Carmona, Erick	55
Oyarzun, Simon	246
Oyler, Nathan	189
Oza, Goldie	111, 260
P. Zhilyaev, Alexander	205
Paat Estrella, Josefa de Los Angeles	234
Pabón Gelves, Elizabeth	39, 283
Pabón, Elizabeth	51
Pacheco Aguirre, Francisco Manuel	266
Pacheco Alvarez, Martin Oscar Armando	286
Pacheco Sanchez, Juan Horacio	3, 6, 67
Pacheco Soares, Cristina	85
Pacheco Sosa, J. Guadalupe	271, 273
Pacheco, Gonzalo	214
Pacheco, José Guadalupe	268, 273
Pacheco, José Sergio	242
Pacio Castillo, Mauricio	24
Pacio, Mauricio	143, 165, 168
Padilla Gainza, Victoria Maria	75
Padilla Islas, Miguel Adrian	119, 122
Padilla Martínez, Itzia I.	104, 112
Padilla Rosales, Isela	30
Padilla Salas, Luis Adrian	166, 175
Padilla Vaca, Felipe	105
Padilla, Erika	55
Padilla, Juan Pablo	107, 166
Padron Hernández, W. Y.	250
Paez Morales, Adriana Ines	286, 298
Pakpour Tabrizi, Alexander	55, 251, 261
Pal, Ajay	101
Pal, Mou	137, 142
Pal, Umapada	39, 137, 269, 272, 316
Pala Rosas, Israel	75, 267, 274, 275
Palacios Alquisira, Joaquín	68, 69
Palacios Gallegos, Manuel de Jesus	151
Palacios Márquez, Braulio	25
Palacios Romero, Luis Marcos	118, 300
Palacios Trujillo, César	208
Palacios, Elia	289
Palacios, Liliana	23
Palacios, María de Jesús	69
Palafox Matus, Marco Antonio	126
Palestino Escobedo, Alma Gabriela	49
Palestino, Gabriela	49
Pali, Ramón	65
Pallares García, Arturo	218
Palma, Alejandro	164
Palma, Ricardo	261
Palmer, Richard	15
Palomares Sanchez, Salvador	50, 247
Palomares, Emilio	135
Palomeque Santiago, Jorge F.	58
Palomino Cabello, Carlos	160, 161
Palomino Merino, Martin Rodolfo	35, 175, 223
Palomino Ovando, M. A.	51
Palomino, Martha	20
Palui, Goutam	48
Palummo, Maurizia	18
Pan, Sudip	280, 281
Pan, Xiaoqing	183
Panda, Kalpataru	48
Paniagua Martinez, Ricardo Ernesto	34
Paniagua Mercado, Ana María	216
Paniagua, Manuel Alejandro	235
Panikar, Sandeep	7
Pantoja Enríquez, Joel	125
Papayanopulos Ruiz, Iris Sabday	80
Paquette, Michelle	189
Parada Cano, Yury Esperanza	252
Paraguay, Francisco	51, 160, 253
Paramane, Ashish	66
Páramo García, Ulises	270
Pardo, Marta Lynn	310
Paredes Carrera, Silvia Patricia	51
Paredes Gallardo, Omar Emmanuel	90
Paredes Olguin, Myriam	39, 128
Paredes Sánchez, Cruz	289
Park, Bae Ho	7
Park, Daesun	214
Park, Eun Soo	202
Park, Ji-Sang	136
Park, Jiyoung	217
Park, Jun Young	179
Park, Seong-Jun	179
Park, Seongwon	179
Park, Sung-Taek	179
Parra Mondragon, Miguel Angel	39
Parra Parra, Abigail	317
Parra Saldivar, Roberto	319, 320
Parra Santiago, Jonathan Joaquin	138

Nombre	Paginas
Parra Vargas, Carlos Arturo	247, 252, 290
Parra, Carolina	199
Pasc, Andreea	110
Pascual, Gerald	179
Pastén Chelala, Elías A.	300
Pastor, Cándida	197
Pastor, Ernest	131
Pastor, Gustavo Miguel	37
Pat Herrera, Aaron Ayrton	146
Pat Reyes, Luisa Gisell	304
Patiño Ortiz, Julián	301
Patiño, Francisco	289
Patiño, Nuria	104
Patra, Tarak	174
Patrizia, Calaminici	15, 167
Patterson, Joe	182, 187
Paulose, Maggie	128, 132
Pawelec, Barbara	263
Paz Borbon, Lauro Oliver	15, 167
Paz, Arturo	209
Pazos, Jhon Eyber	20
Pearsall, Frederick	249
Pech May, Nelson Wilbur	127
Pech Pisté, Raúl Armando	93
Pedraza Rosas, Julio Elias	133
Pedraza, Juan	239
Pedro Hernández, Luis-Daniel	45
Pedroza Montero, Martín	78, 110
Pedroza Sandoval, Aurelio	301
Pelaez Cid, Alejandra Alicia	288, 289
Pelayo Cárdenas, José de Jesús	4
Pelayo Ceja, J Elias	149
Pelayo Vázquez, José Benito	288
Pelayo, J. Jesus	15
Pelayo, Jesus	1, 55
Pellenq, Roland	2
Pena Ballesteros, Dario Yesid	106, 235
Pennington, Ashley	124
Peña Ballesteros, Dario Yesid	125
Peña Cabrera, Eduardo	319
Peña Chapa, Juan Luis	143
Peña Leal, José Antonio de Jesús	6
Peña Lecona, Francisco Gerardo	192
Peña Parás, Laura	84, 284
Peña Rodríguez, Ovidio Y.	38
Peña Sierra, Ramón	142, 249, 254
Peña, Ricardo	272
Peña, Yolanda	147
Peñafiel Castro, Jhon Alexander	293
Peñaloza, Karen Alicia	65, 69
Peralta Abarca, Jesús del Carmen	302
Peralta Hernández, Juan Manuel	286
Peralta Perez, Gerardo	242
Peralta Robledo, Ricardo Emmanuel	290, 305
Peralta Rodríguez, Julio Edgar	284, 285
Percebom, Ana Maria	49
Percino, Judith	175
Perdew, John P.	164, 165
Perdigon Lagunes, Pedro	13, 115
Perdomo Rojas, Karen Daniela	286
Perea Ramírez, Luis Ignacio	316
Pereira Almao, Pedro	264
Pereira, Alejandro	45
Pereyra, Andrea M.	105
Pereyra, Jesica Yanina	43, 104
Pérez Aguirre, Jesús Alán	256
Pérez Alcocer, José	160
Perez Bracho, Sonia Valeria	11
Pérez Bueno, José de Jesús	6, 29, 42, 126, 128, 240
Pérez Bustamante, Raúl	242
Pérez Cabrera, Jennipher	274, 275
Perez Campos, Ramiro	119, 194, 198, 199, 202, 257
Pérez Carrillo, Lourdes Adriana	69, 70
Perez Casas, Jesus Abraham	292
Pérez Castellanos, Nora Ariadna	192
Pérez Centeno, A.	12, 13
Perez Centeno, Armando	19, 47, 302
Pérez Chávez, Mario Cesar	226
Pérez Dawn, Eduardo	151
Perez de la Cruz, Carlos Fabian	126, 128
Pérez del Real, Rafael	199
Perez Diaz, Oscar	25
Perez Donoso, Jose Manuel	319
Pérez Figueroa, María Teresa de Jesús	146
Pérez Flores, Daniela	114
Pérez García, María Guadalupe	96, 288
Perez Gonzalez, Francisco Aurelio	179, 195, 201, 210, 211, 230, 231, 232, 236
Pérez González, José	49, 68, 215
Pérez González, Mario	255, 256, 266
Pérez Hernández, Bertha	121
Perez Hernandez, Carlos G.	46
Perez Hernandez, Gerardo	68
Pérez Hernández, Germán	138, 139, 249, 250, 258, 297
Perez Hernandez, Paola	211, 217
Pérez Hernández, Raúl	268, 274
Pérez Huerta, José Samuel	42, 53
Pérez Juache, T. J.	247
Perez Labra, Miguel	196, 289
Pérez Larios, Alejandro	103, 132, 274, 315
Pérez López, Juan Humberto	70
Perez López, Luis Antonio	248
Pérez López, Tezozomoc	231, 234, 235, 236, 237
Pérez Macedo, Pablo Michel	295
Pérez Madrid, Agustin	153
Pérez Martínez, Cinthia Jhovanna	114
Pérez Mazariego, José Luis	194
Pérez Meneses, Joaquín	240
Pérez Muñoz, Diego	28
Pérez Ordóñez, Olga Idalú	131
Perez Osorio, Juan Manuel	80, 108
Perez Patiño, Juan Antonio	29, 195, 230, 231
Pérez Pérez, René	87
Perez Pool, Carlos A.	233
Perez Prado, Maria Teresa	206
Peréz Quiroz, José Trinidad	229, 231, 237
Perez Rabago, Carlos	54, 137, 140
Pérez Ramos, Martha Elva	240
Perez Reyes, Edgar Obed	30, 289
Perez Reyes, Martin	196
Perez Robles, Juan Francisco	63, 69
Pérez Rodriguez, Blanca E.	274
Pérez Rodríguez, Jaime E.	153
Perez Salinas, Patricia	62, 64
Pérez Sánchez, Gerardo Francisco	252, 258
Pérez Sariñana, Bianca Yadira	4, 285, 290, 296
Perez Solis, Ricardo	103
Pérez Sosa, Miguel Angel	121
Perez Soto, Jimmy Rodrigo	140
Perez Tijerina, Eduardo Gerardo	30
Perez Torrero, Esther	108
Perez Valdivia, Nohemí	301, 303
Pérez Valentín, David Jadiel	3
Perez Valverde, Maritza Iveth	74
Perez Vidal, Hermicenda	268, 271, 273, 274, 275
Pérez Zúñiga, Germán	46
Perez, Argelia	46
Perez, Bianca	296
Pérez, Germán A.	240
Pérez, Gustavo	240
Pérez, Héctor	70
Perez, Jaime	153
Perez, Jose Luis	193
Pérez, L. A.	258
Pérez, Lilian	136, 314
Pérez, Luis	210
Perez, Luis Antonio	43, 257
Pérez, Luis Miguel	201
Perez, Maayan	53
Pérez, María de Jesús	200
Pérez, Maximiliano S.	35
Pérez, Ramiro	202
Pérez, René	143
Pérez, Rubén	215
Pérez, Sergio Alfonso	25
Perez, Teresita de Jesus	50
Pérez, Vera	41
Perkins, Keith	320
Perumal, Rajagembu	257
Pescador Rojas, Alfredo	1
Pescador Rojas, Jose Alfredo	55
Peterson, David	132
Petkov, Valeri	191
Peto Gutierrez, Cindy Viridiana	79
Petranovskii, Vitalii	271, 288
Petri, Giuliana	110
Petrov, Roumen	240

Nombre	Paginas
Peza Ledesma, Carmen	190, 288
Peza Ledesma, Carmen Leticia	268, 274
Pfeiffer Perea, Heriberto	125
Pham, Christopher	93
Pham, Tuan A.	8
Phifer, Daniel	184
Philippot, Karine	118
Piamba, Jeferson F.	240
Piamba, Oscar	28
Picas, J A.	207
Picas, Josep	193
Picazo, Omitzu	54
Picciani, Paulo Henrique de Sousa	49
Pichardo Salazar, J. Alfredo	215
Pichardo Salazar, Ulises	215
Piedra, Saul	210
Pilloni, Oscar	5
Pina Luis, Georgina	7, 84, 85, 112, 116, 160
Pinchuk, Anatoliy	47, 110
Pineda Gómez, Posidia	61
Pineda Hernandez, Daniel Alejandro	232
Pineda Huitron, Rosa Maria	240
Pineda Leon, Horacio Antolin	89, 91, 92
Pineda Ojeda, Alondra Lizbeth	256
Pineda Triana, Yaneth	120, 147, 230, 231, 232, 235, 241
Pineda, Ernesto	210
Pineda, Fabiola	229
Pinilla, Fernanda	163
Pino Ramos, Victor Hugo	74, 77, 105
Pino, Yina	121
Pinto Gómez, Juan Felipe	260
Pintor Monroy, Maria Isabel	136, 146, 251
Pinzon, Leny	313
Piña Barba, María Cristina	80, 84, 105, 108, 116
Piñeiro Garcia, Alexis	43, 147
Piñón Reyes, A. C.	87
Piñón Zárate, Gabriela	85
Pio, Edgar	192, 199
Pique, Alberto	320
Piri Santana, Julián	44
pirruccio, Giuseppe	153
Pisoni, Stefano	144
Pizá Ruiz, Pedro	138, 186
Pizarro Konczak, Jaime	284
Placencia, Diogenes	320, 321
Plaisier, Jasper	191
Pobedinskas, Paulius	27
Poblano Salas, Carlos Agustin	230
Pokorny, Petr	38
Pola, Francisco	259, 269, 275
Polednik, Alexander J.	90
Polo, Marco	150
Polokhin, Aleksandr Alexandrovich	11
Polupan, Georgiy	51, 52, 54
Ponce Mosso, Martín	255, 256
Ponce Ortega, Jose Maria	233, 234
Ponce Pedraza, Arturo	186
Ponce Peña, Patricia	293
Ponce Recinos, Edith	138
Ponce, Arturo	246
Ponce, Edith	122, 258, 297
Pontón, Patricia	321
Poot, Carlos	65
Popov, Zakhar	12
Popovitz Biro, Ronit	48
Porcayo Calderon, Jesus	233
Porcionatto, Marimelia	85
Porcu, Pasquale	58
Porras Godínez, Martín R.	74
Porras Holguin, Niyireth Alicia	191
Portales Martínez, Benjamín	50, 264, 273
Portier, X.	35, 258
Portillo Moreno, Oscar	36, 44
Portillo Rodriguez, Benjamin	309
Portillo y Reyes, Roberto	266, 267, 270, 276
Portuguez Pardo, Leobardo	242
Posada Amarillas, Alvaro	13, 167, 258
Posada Briseño, Edelin	99
Post, Ekkehard	224
Poteau, Romuald	191
Poupon, Morgane	32
Pourjafari, Dena	135, 141, 142, 143, 150, 313, 316, 250
Poveda Vargas, Paola Giselle	286
Pozos Guillen, Amaury	84, 107, 112
Prada, Alejandro	38
Pradhan, Bhabendra	93
Prado Chay, David Alberto	274
Prado Navarrete, Enrique	30
Prado Prone, Gina	102
Prados, Antonela M	36
Prates Prisco, Luciana	321
Presbitero, Gerardo	84
Presuel Moreno, Francisco	243
Priego Alvarez, Eddy	126, 128
Proenza Yero, Roger Ammer	132
Prokes, Sharka	320
Prokhorov, Yevgen	62
Prunnila, Mika	153
Puente de León, Carlos Eduardo	41, 121
Puente, Ivan	179, 263
Puentes Camacho, Daniel	70
Puentes Prado, Laura Elena	226
Puga Lechuga, Jorge Rafael	192
Puga, Alejandro	48
Pugh, Coleen	58, 59
Pulgarin Agudelo, Fabian Andres	137, 145
Pulido Aguilar, Raul Alejandro	229
Pulzara Mora, Alvaro	14, 248, 259
Puretzky, Alex	17, 18, 20
Puthirath Balan, Aravind	246
Qin, Fan	131
Qiu, Weiming	136, 314
Qiu, Yuting	76
Qu, Guangbo	314
Quevedo López, Manuel A.	35, 87, 89, 93, 136, 251
Quevedo Robles, Reina Vianey	68
Quevedo, Manuel	31, 87, 88, 146
Quezada Cruz, Maribel	286
Quezada, Jose	45
Qui Zapata, Joaquín Alejandro	286
Quinones Hinojosa, Alfredo	101
Quintal Martínez, Juan Pablo	61
Quintana Owen, Patricia	45, 98, 127, 128, 294, 295
Quintana, Mildred	5, 9, 182, 183
Quintanar Arellano, Itzel Alejandra	69
Quintanar Gago, David Alejandro	227
Quintanar Gerrero, David	116
Quintanar, Carlos	277
Quintero Ortega, Irais Amaranta	61, 78, 109
Quintero Quiroz, Catalina	41, 79
Quintero Torres, Rafael	215
Quintero, Julian	41
Quiñones Galván, J. G.	12, 13, 254, 256, 267
Quiñones Segura, César Augusto	286
Quiñones, César	139, 298
Quiñones, Cesar Augusto	260
Quiñones, José Guadalupe	47, 149, 302
Quirino Gutiérrez, Josephine Inés	232
Quiroga González, Enrique	5, 24, 25, 97, 120, 121
Quiroz Aguilera, David Levi	182, 183
Quiroz Chang, Aransselly Jesus	34
Quiroz Reyes, Cinthya Nathaly	109
Quispe Marcatoma, Justiniano	13
Quispe, Rosa Maria	46
Quitain, Armando T.	304
Quñones Galván, José Guadalupe	19
R. Cortez, Youshiky J.	314
Rabelero, Martín	69, 70
Rack, Philip	17, 18, 20
Radacki, Krzysztof	280
Rahman, Talat	18
Rajan, Krishna	174, 310
Ramakrishna, Rama	307
Ramalinga Viswanathan, Mangalaraja	192
Ramasse, Quentin	181
Ramirez Aparicio, Jeannete	61, 119, 232
Ramírez Argáez, Marco Aureio	214, 219
Ramírez Arias, Miguel Angel	199
Ramirez Bocanegra, Nathalia	269
Ramirez Bon, Rafael	89, 90, 91, 92, 269
Ramírez Caballero, Gustavo Emilio	68, 69
Ramirez Carbellido, Williams	125
Ramírez Cardona, Diego Alejandro	28
Ramírez Castellanos, Jaret del Carmen	290
Ramirez de Arellano Nino Rincon, Juan Manuel	5, 18
Ramírez Esquivel, Obed Yamín	88

Nombre	Paginas
Ramírez García, Eloy	5
Ramírez García, Gonzalo	115
Ramírez García, Jorge	40
Ramirez Gonzalez, Alejandra	288
Ramírez González, Carlos Andrés	133
Ramìrez Guerra, Diana	286
Ramirez Gutierrez, Cristian Felipe	61
Ramírez Hernández, Norma	70
Ramírez Herrera, Claudia Angélica	68, 215
Ramírez Martínez, Candelario	304
Ramirez Meneses, Esther	118, 121
Ramirez Mondragon, Elizabeth	53
Ramírez Montoya, Luis Adrián	5
Ramirez Morales, Erik	139, 249, 250, 258, 297
Ramirez Muñoz, Gerardo	265
Ramírez Ortega, David	292
Ramírez Ortega, Jorge Alberto	256, 257
Ramirez Palma, David Ignacio	175
Ramirez Palma, Lillian Gisela	175
Ramirez Ramirez, Javier Humberto	179, 195, 210, 211, 230, 231, 232, 236
Ramirez Rincon, Jorge Andres	46, 47, 48, 155
Ramírez Rodríguez, Teresa	125
Ramirez Rojas, Juan Gabriel	245
Ramirez Saito, Maria de Los Angeles	99
Ramirez Salinas, Marco	252
Ramirez San Juan, Julio Cesar	166
Ramirez Sanchez, Adan	79
Ramírez Soto, Juan Carlos Isidro	237
Ramirez Suarez, Diego	265
Ramírez Vargas, Mirna	191
Ramírez Velasco, Sergio	137
Ramírez Vinasco, Deisy	202
Ramírez Zamora, Rosa María	283
Ramírez, Araceli	266, 298
Ramirez, Giovanni	315
Ramirez, Gonzalo	115
Ramirez, Jorge	263
Ramirez, Juan	110
Ramirez, Juan Gabriel	247
Ramirez, Juan José	197
Ramírez, Manuel	84
Ramirez, Maria Alicia	222
Ramón de Los Santos, Candelario	295
Ramón Gallegos, Eva	103
Ramos Carrazco, Antonio	4, 87, 90, 91
Ramos Castillo, Carlos Manuel	136
Ramos Delgado, Norma A.	314
Ramos Díiaz, Ivette Alejandra	149
Ramos Fernandez, Enrique V.	157
Ramos Fon Bon, Victor	151
Ramos Garcia, Ruben	166
Ramos Ramirez, Eshela	251, 283
Ramos Ramon, Jesus Alberto	269
Ramos Sanchez, Guadalupe	316
Ramos Sanchez, Víctor Hugo	8, 132
Ramos Serrano, Juan Ramon	24
Ramos, Alma	198
Ramos, Jorge	240
Ramos, Maira	277
Ramos, Manuel Antonio	265, 268, 272
Ramprasad, Rampi	172
Randolph, Katie	132
Rangel Ayala, Miriam	135
Rangel Cortes, Eduardo	1, 3, 19, 55, 140, 151
Rangel Martínez, Daniel	274
Rangel Mendez, Jose Rene	3
Rangel Segura, Ricardo	4, 45
Rangel Vázquez, Israel	265
Rangel, Carlos Alonso	69
Rangel, Ricardo	91
Rasouli, Somaye	186
Rasu Chettiar, Aruna Devi	6
Rativa Parada, Wilson	120
Raux, Pascal	320
Rave Osorio, Laura Cristina	39
Ravell, Estefanía	280, 281
Ravelo, David	99
Rawal, Aditya	292
Raymond Herrera, Oscar	165, 168
Rayo, Patricia	267
Razzaq, Muhammad Yasar	71
Realpe Jimenez, Alvaro	118, 121, 132, 133, 147
Recco, Abel Cándido	28
Recio Colmenares, Carolina Livier	288
Recio, Gonzalo	48
Reda, Mahmoud	276
Reddy, Pramod	154
Reed, Evan	173
Regalado Perez, Eulises	142, 144, 146
Regan, B. C.	185
Regmi, G.	254, 260
Regmi, Ganesh	260
Reguera Ruiz, Edilso	103, 289
Reguera, Edilso	19, 30, 120, 121, 126, 269
Reiber, Andreas	245
Rein, Regis	68
Reisner, Erwin	131
Rementer, Colin	39
Remiasova, Jarmila	32
Remigio Reyes, Gabriela Diana	66
Remolina Millán, Aduljay	148
Ren, Jianwei	158
Ren, Xiaolei	2
Rendón Angeles, Juan Carlos	212, 222
Rendón Belmonte, Mariela	229, 231
Rendón Lara, Eréndira	173
Rendon Vazquez, Luis	51
Rendon, Luis	260
Renero Carrillo, Francisco Javier	113
Renou, Sandra I.	102
Renteria Urquiza, Maite	61
Rentería, David	118
Rentería, Ulises	301
Renz, Michael	276
Reséndiz Mendoza, Luis Martín	250
Resendiz, Luis M.	250
Restrepo Parra, Elisabeth	30, 39, 74, 98, 106, 165, 168, 246, 285, 295
Restrepo, Johan	211
Restrepo, Johans	39
Retana Fernandez, Teresa	65
Reveles, Jonathan Humberto	207
Reyes Banda, Martin Gregorio	144, 146
Reyes Bautista, Jose Angel	126, 128
Reyes Betanzo, Claudia	96
Reyes Blas, Hortensia	108
Reyes Calderón, Francisco	241
Reyes Cervantes, Eric	285
Reyes Chaparro, Itzel	175
Reyes Coronado, David	135
Reyes Corrales, Jorge Luis	141
Reyes Cruz, Victor Esteban	159, 232, 233, 290
Reyes de la Torre, Adriana Isabel	264, 273
Reyes Estebanez, María Manuela	95
Reyes Gómez, Juan	257
Reyes López, Simón Yobanny	105
Reyes Mayer, Adriana	45, 76, 216, 217
Reyes Miranda, Joan	8, 27, 44
Reyes Montero, Armando	125, 126
Reyes Nava, Ja	290
Reyes Nava, Juan Andrés	122
Reyes Osorio, Luis Arturo	209, 320
Reyes Pérez, Martín	289
Reyes Pool, Héctor Paul	110
Reyes Reyes, Marisol	7
Reyes Rodríguez, José Luis	30, 119, 121, 122
Reyes Serrato, Armando	19
Reyes Trejo, Benito	291
Reyes Valderrama, Ma. I.	197, 198
Reyes Valderrama, María Isabel	113, 193, 194, 196, 203, 225, 252, 293, 296
Reyes Zarate, Jose Miguel	191
Reyes, Almendra	111
Reyes, Andres	304
Reyes, Augustina	308
Reyes, Eric	296
Reyes, Itzel	179
Reyes, Mari Carmen	34
Reyes, María Isabel	159, 196
Reyes, Yessica Paola	13
Reyna Alvarado, Jorge	268
Reyna Izaguirre, Diana América	301
Reynosa Martinez, Ana Cecilia	292, 298, 299
Reynosa Morales, L. M.	218
Reynosa Morales, Luis Manuel	220, 236
Reynoso de la Cruz, Héctor Mauricio	54
Reynoso Galvez, Gadi	260

Nombre	Paginas
Reynoso Lara, Edmundo	251
Reynoso Manríquez, Radamés Ricardo	150
Reynoso, Héctor	30
Rhodes, Tenell	308
Riabov, V	96
Ribas Ariño, Jordi	165, 168
Ribeiro, Erick L.	12
Ribeiro, Lavinia	85
Ribeiro, Tânia	183
Riberi, Kevin	43
Ricardez Jimenez, Cristino	150
Ricárdez, Cristino	258
Richards, Ryan	123
Riera Aroche, Raúl	3, 5
Rimmaudo, Ivan	143
Rincón González, Marina	191
Rincon Lopez, Amauri Alberto	288
Rincón, Johan	133
Ringe, Emilie	181
Ringnalda, Jan	183
Rios Campos, Egna Yaroslavh	114
Ríos Hurtado, Jorge Carlos	296
Ríos Jara, David	303
Rios Ramirez, jose Jorge	260
Rios Valdovinos, Edna Iris	259
Rios, Luis Alberto	46
Riquelme Arizmendi, Jorgelí	294, 300
Risso, Pablo	178
Rivarola, Claudia R.	67, 104
Rivas González, Karen	284
Rivas Mercury, José Manuel	179
Rivas Moreno, Frida Karem	70
Rivas Valles, Brayan German	92
Rivas, Diego Israel	230, 237, 241
Rivas, J. M.	125, 139, 141, 150
Rivera Alvarez, Zacarias	54
Rivera Armenta, Jose Luis	64
Rivera Becerril, Ernesto	36, 68
Rivera Chaverra, Maria Jose	30
Rivera de la Rosa, Javier	43, 269
Rivera Enriquez, Claudia Elena	36
Rivera García, Ernesto	57, 67, 303
Rivera Guasco, Ricardo	265
Rivera Medina, Martha Judith	253
Rivera Muñoz, Eric Mauricio	61, 73, 74, 190, 192, 268, 274, 288
Rivera Ordoñez, Jose Guadalupe	123
Rivera Resendiz, Laura Patricia	12
Rivera Rios, Lorena	80
Rivera Rojas, Francisco Antonio	108, 109
Rivera Rojas, Jose Luis	19, 29, 280
Rivera Rosas, Laura Patricia	144
Rivera Tellao, Cesar	9
Rivera Torres, Sonia Azeneth	243
Rivera Trejo, Fabian	304
Rivera Villanueva, José María	159
Rivera, Antonio	38
Rivera, Eric	263
Rivera, Ernesto	58, 63
Rivera, Francisco	101
Rivera, Margarita	66
Rivero Espejel, Ignacio Alfredo	52, 99, 115, 268
Rivero, Ignacio	40
Rivero, Rebeca	104
Riveros, Alejandro	247
Rivoira, Lorena	3, 44, 124
Rizo Estrada, Juan	291
Roa Gacha, Duban	144
Robbins, Sarah	308
Roberts, A.	117
Robertson, Megan	76
Robertson, Salvador	214
Robinson, Joshua	17, 20, 21
Roblero Lucchetti, Josef Galthier	269, 275
Robles Agudo, Minerva	149, 196, 197, 200
Robles Hernandez, Francisco	131, 182, 184, 308
Robles Ocampo, Jose Billerman	137, 149
Robles, Francisco	196, 307
Robles, Irma	290, 299
Rocabruno Valdés, Carolin Ivette	132
Rocha Alonzo, Fernando	276
Rocha Mendoza, Israel	111
Rocha Ramírez, Agustín Hilario	76
Rocha, Maricruz	253
Rodero, Camila Fernanda	42, 52
Rodil, Sandra Elizabeth	28, 97, 102, 314, 317
Rodrigues Miranda, Caetano	128
Rodrigues, Samuel F.	240
Rodríguez Ávila, José Antonio	265
Rodriguez Barrera, Manuel David	243
Rodríguez Beas, Cesar	106, 113
Rodríguez Betancourtt, Verónica María	256, 257
Rodríguez Cabriales, Gustavo	194, 207
Rodriguez Calderon, Ana Gabriela	292
Rodriguez Castañeda, Arlet Ariadne	76
Rodríguez Castellanos, Carlos	160
Rodriguez Castellon, Enrique	269
Rodriguez Castro, Sergio	146
Rodríguez Cruz, Marcelino	126, 128
Rodríguez Diaz, Arheli Zaid	197, 242
Rodriguez Diaz, Roberto Ademar	208
Rodriguez F J, Willars	269
Rodriguez Fragoso, Patricia	253
Rodríguez Fuentes, N.	107
Rodríguez Galicia, José Luis	126, 212, 222
Rodríguez García, J.	202
Rodriguez Garcia, Mario Enrique	61, 74, 200
Rodríguez Gattorno, Geonel	7, 30, 42, 127, 128, 133, 136, 141, 160, 250, 314
Rodríguez Gómez, Arturo	41
Rodriguez Gomez, Axel Ricardo	5
Rodriguez Gomez, Francisco Javier	231, 234, 237
Rodríguez González, Claudia Alejandra	36, 43, 103, 105, 108, 111, 113, 139, 217, 270, 314
Rodríguez Guadarrama, Luis	69
Rodríguez Gutiérrez, Ingrid Guadalupe	133, 314
Rodríguez Hernández, Paola Elideth	256
Rodríguez Hidalgo, María del Rosario	44, 50, 114, 290
Rodríguez Leon, Ericka	106, 113, 115
Rodriguez Llamazares, Saddys Maria	80
Rodríguez López, Aarón	52
Rodríguez López, José Luis	77, 113, 114
Rodriguez Lopez, Ovidio	88, 90
Rodriguez Lopez, Pablo	154
Rodríguez Lugo, Ventura	62, 89, 193, 194, 196, 197, 198, 203, 224, 225, 232, 252, 293, 296, 302, 303, 304
Rodríguez Magdaleno, Karla Arely	48, 52
Rodríguez Mendez, Jheny Adriana	110
Rodríguez Miramontes, Andrea Alejandra	53
Rodriguez Montelongo, Sayma Adriana	116
Rodríguez Morales, Ángel Luis	108
Rodríguez Morales, Luis	1
Rodriguez Morales, Nancy Lizbeth	140, 151
Rodríguez Nañez, José Alfonso	296
Rodríguez Nava, Claudia Estefany	273
Rodríguez Ortiz, G.	202
Rodríguez Padilla, Cristina	98, 99, 106
Rodriguez Paredes, Salvador Antonio	301
Rodriguez Parra, Mario	314
Rodríguez Pérez, Emily Andrea	260, 309
Rodríguez Perez, Manuel Jesús	314
Rodriguez Pinilla, Omar	13
Rodriguez Proenza, Carlos Alberto	132, 198
Rodríguez Ramírez, Nelson	79
Rodriguez Ramirez, Yerania Sarahi	287
Rodriguez Rea, Jonatan	137, 138
Rodríguez Reyna, Evelyn	296
Rodriguez Reyna, Sandra Luz	205
Rodríguez Rivera, Mario Alejandro	113, 147
Rodríguez Rivero, Yuniel Gerardo	116
Rodriguez Rodriguez, Jose	319
Rodríguez Rodríguez, José Iván	4
Rodriguez Rodriguez, Leyanis	116
Rodríguez Rodríguez, Rogelio	83, 107, 286
Rodriguez Rosales, Nelly	222
Rodríguez Santillán, Julia Liliana	294
Rodríguez Santos, Erika Grisel	211, 236
Rodríguez Tobías, Heriberto	75
Rodriguez Valladolid, Rodolfo	53
Rodriguez Varela, Javier	120, 121
Rodríguez Vargas, Elucinque	126
Rodríguez Vázquez, Blanca Esthela	115
Rodríguez Vázquez, Refugio	260
Rodriguez Velazquez, Eustolia	84, 85, 112, 114, 116
Rodriguez Victoria, Angel	200
Rodriguez Villafuerte, Ana Lilian	308

Nombre	Paginas
Rodriguez Villarreal, Omar	84, 175
Rodriguez Wilches, Luis Francisco	212
Rodriguez, Alejandro	154
Rodriguez, Andres	116
Rodriguez, Arheli	197, 201
Rodríguez, Carlos	98, 138, 146
Rodríguez, Edgar	84
Rodríguez, Eduardo	211, 216
Rodriguez, Eugenio	216
Rodriguez, Jose	277
Rodríguez, Juan I.	42, 148
Rodríguez, Juan José	284
Rodríguez, Mario	138
Rodriguez, Nancy	104
Rodríguez, Nelly	200
Rodriguez, Rogelio	108
Rodriguez, Ruben	44, 141
Roesch, Notker	163
Rogel Ramirez, Alejandro de la Cruz	125
Rojas Aguirre, Yareli	59
Rojas Blanco, Lizeth	139, 249, 250, 258, 297
Rojas Calva, Abner Hesli	62, 296
Rojas García, Elizabeth	275
Rojas George, Gabriel	35
rojas hernandez, Armando G	253
Rojas Hernandez, Armando Gregorio	165
Rojas Montoya, Sandra Marcela	63
Rojas Mora, Fabio Arturo	191
Rojas Moreno, Omar Franklin	92
Rojas Olivos, Alejandra	288, 295
Rojas Rodriguez, Ignacio	149, 196, 197, 200
Rojas Salinas, Wilma Betzabe	29
Rojas Trigos, Jose Bruno	155
Rojas Valencia, Oscar	7
Rojas Yañez, Miguel Angel	111
Rojas, Alejandro	155
Rojas, Alex	179
Rojas, Hugo	196
Rojo Blanco, Celia Luz	313
Roldan, Edmundo	196
Romagnoli, Roberto	52
Romales Magaña, Ricardo Luis	198
Román Aguirre, Manuel	132, 273
Román Gutierrez, Alma D.	197
Roman Lopez, Jesus	197
Roman Sedano, Alfonso Monzamodeth	175, 179
Román Valenzuela, Tatiana Ivanova	108, 257
Romano Trujillo, Roman	14, 35, 142, 180, 252
Romanyuk, Mykhaylo	178
Romao, Carl	321
Romcevic, Maja	54
Romcevic, Nebojsa	54
Romero Angeles, Beatriz	215, 302, 303
Romero Arellano, Victor Hugo	50, 80, 142
Romero Argote, Francisco Javier	78
Romero Contreras, Alfredo	145
Romero Cruz, Luis A.	51
Romero Hernandez, Saul	287
Romero Herrero, Beatriz	89
Romero Ibarra, Issis Claudette	256, 264, 298
Romero Ibarra, Josué	34, 38, 246
Romero Jaime, Anderson Klay	91, 92
Romero Lara, Victor Manuel	276
Romero Martínez, Martin	255
Romero Ortiz, Guadalupe	287
Romero Paredes Rubio, Gabriel	254
Romero Toledo, Rafael	274
Romero, Alejandra	31, 299
Romero, J. C.	13
Romero, Manuel	48
Romero, Martin	150, 164, 193, 194
Romero, Sergio	23
Romo Garcia, Frank	87
Romo Uribe, Angel	45, 76, 216, 217
Ropero Vega, Jose Luis	49
Roque de la Puente, Jorge	137
Roquero Tejeda, Pedro	64
Rosado, Gabriel Marcelo de Jesús	37
Rosal, Roberto	98
Rosales Cadena, Isaí	219
Rosales Legaspi, Paola	42
Rosales Mendoza, Sergio	49
Rosales Ortega, Sahad Janyla	64
Rosales Rivera, Andrés	248
Rosales Torres, Conrado	254
Rosales, Pedro	24, 25, 93, 150
Rosas Aburto, Alberto	60, 62, 63, 64
Rosas Burgos, Rodrigo Arturo	87
Rosas Carpinteyro, Roman Oscar	293
Rosas Figueroa, Carlos A.	304
Rosas Huerta, José Luis	194, 255
Rosas Meza, Roman Angel	234, 302
Rosas Trejo, Gerardo Antonio	38, 41, 53, 194, 198
Rosas, Blanca Yamile	142
Rosas, Jose Luis	164, 193
Rosato, Vilma	105
Rosei, Federico	131, 315
Rosenbach, Daniel	47
Rosendo, Enrique	14, 35, 180, 252
Rosero, James	106
Rosiles, Christopher	150
Rosillo de la Torre, Argelia	61, 78, 109
Ross, Aidan	172
Rosser, Timothy E.	131
Rossi, Federico	284, 297
Rossi, Kevin	15
Rostro Alanis, Magdalena	319
Rouleau, Chris	18, 20
Roy, Rene	59
Rozhdestvenskyy, Sergiy	93
Rozo Nuñez, Wilson Elias	232
Rubi, Miguel	153
Rubio Gonzalez, Carlos	302
Rubio Rosas, Efraín	66, 146, 155, 196, 309
Rubio, Alberto	18
Rubio, Efraín	75, 224
Rudamas, Carlos	12
Rudas, Juan Sebastian	213
Rudolph, Tobias	71
Rudoph, Martin	28
Rueda Morales, Gabriela L.	5, 7, 46
Rueda Perez, Edgar Alexander	142
Ruediger, Andreas	34, 270
Ruiz Ciau, Durcy V.	122
Ruiz Cortes, Victor	53
Ruiz Dávila, Claudia Elizabeth	275
Ruiz Deance, Ana Laura	200
Ruíz Esparza Rodríguez, Marco Antonio	194, 195
Ruiz Garcia, Alexis	287
Ruiz García, Jaime	98
Ruiz Gómez, Miguel	7, 30, 41, 42, 133, 141
Ruiz Luna, Haideé	213
Ruiz Mondragon, Jose Jorge	243
Ruiz Ortega, Roberto Carlos	140
Ruiz Peralta, Maria de Lourdes	297
Ruiz Ramírez, José Efraín	294, 300
Ruiz Ramirez, Ruben Ricardo	286
Ruiz Ramos, Rubén	159
Ruiz Ruiz, Edgar Jocsan	317
Ruiz Ruiz, Jorge Carlos	61
Ruiz Ruiz, Rosalia	220
Ruiz Salvador, Rabdel	54
Ruiz Santoyo, Victor	132, 274
Ruiz Torres, Rodolfo	34
Ruiz Trabolsi, Pablo Alfredo	281
Ruiz Valdés, Juan Jacobo	119, 292
Ruiz Vilchez, Julio Adrian	202, 220, 243
Ruiz Virgen, Lazaro	70, 101, 109
Ruiz, Alberto	200, 201, 223, 234
Ruiz, Alison	149
Ruiz, Facundo	44, 50, 104, 106, 116, 291
Ruiz, Isabel	65, 69
Ruiz, Víctor Fabián	12
Rulis, Paul	189
Rumiche Zapata, Francisco Aurelio	13
Rurali, Riccardo	24, 154, 155
Rustagi, Neha	132
Ruzsinszky, Adrienn	164, 165, 166
Ruzzi, Marco	37
Rychagov, Alexey	3
S. Ribeiro, Martha	95
S., Velumani	254, 260
Sa Ngasaeng, Yanika	264
Saade Caballero, Hened	116
Saadi Monroy, Alessary	142
Saavedra Gúzman, Sonia Carolina	49
Saavedra Rodríguez, Gerardo	149
Sabando, Constanza	80

Nombre	Paginas
Sabirov, Ilchat	240
Sadaghiani, Abdolali Khalili	28
Sadati, Monirosadat	174
Saenz Hernandez, Renee Joselin	219, 320
Sáenz López, Jesús David	231
Sáenz Trevizo, Angélica	186
Saenz, Guery	285
Saez Puche, Regino	246
Sajdl, Petr	224
Sajti, Laszlo	110
Sakai, Yuki	167
Sakars, Aleksandrs	3
Sakidja, Ridwan	189
Salas García, Javier	68, 143
Salas Gonzalez, Jesús Antonio	113, 115
Salas Orozco, Marco Felipe	106
Salas Torres, Cristian	75
Salas Torres, Osiris	9
Salas Zamarripa, Adriana	240, 242
Salas, Rodolfo	253
Salaya Geronimo, Evaristo	299
Salazar Aguilar, Alma Daniela	2, 4, 143
Salazar Aguilar, Daniela	43
Salazar Beltrán, Daniel	161
Salazar Garibay, Alonso	178
Salazar Henao, Nicolás Antonio	248
Salazar Hernández, Ma. del Carmen	76
Salazar Hernández, Mercedes	76
Salazar Kuri, Ulises	13, 128
Salazar M., Veronica E.	247
Salazar Marín, David	271
Salazar Martínez, Jhan Danilo	106
Salazar Medina, Alex J.	115, 276
Salazar Muñoz, Verónica E.	247
Salazar Oropeza, Maricruz	120
Salazar Peralta, Araceli	215
Salazar Rábago, Jacob Josafat	43
Salazar Rivera, Luisa Fernanda	253
Salazar Valdez, Alma Sinia Lizet	25
Salazar Vázquez, Dulce Azucena	80
Salazar Villanueva, Martín	39
Salazar Zertuche, Madelyne	118
Salazar, F	96
Salazar, Fernando	258
Salazar, Maria H.	32
Salazar, Samuel	116
Salazar, Ulises	25
Salcedo Abraira, Pablo	159
Salcedo Garrido, Ana María	177
Salcedo Luna, María Cecilia	248, 258
Salcedo Vargas, Mauricio	36, 43
Salcedo, Cecilia	263
Salcedo, Roberto	67
Saldaña Trinidad, Sergio	285, 290, 296
Saldaña, Sergio	296
Saldívar Guerra, Enrique	69
Salem, Mohamed Shaker	39
Sales de Mello, Saron Rosy	28
Salgado Delgado, Areli Marlen	64, 66, 290, 296
Salgado Delgado, René	64, 66, 290
Salgado, Leonardo	291
Salgado, Michelle Judith	35
Saliba, Michael	143
Salinas Bravo, Victor Manuel	119, 232
Salinas Domínguez, Rafael Antonio	107
Salinas Hernández, Pastora	268
Salinas Juarez, Maria Guadalupe	119, 122
Salinas Palafox, Liliana	269
Salinas Rodríguez, Armando	207, 210, 239, 240
Salinas Rodriguez, Eleazar	193, 194, 196, 203, 224, 252, 293, 296, 303
Salinas Sandoval, Martha	53
Salinas, Cecilia	191
Salinas, Eleazar	197, 198
Salles, Fabrice	159
Salles, Geisa	85
Salmerón Guzmán, Mirna	176
Salmeron Quiroz, Bernardino Benito	301, 303
Salmon, Norman	186
Salmones, Jose	274, 275
Salomón Preciado, Ana María	141, 146
Samaniego Benitez, J. Enrique	119, 230, 232
Samaniego Gamez, Pedro	230
Samos Puerto, Angel David	30, 42
Sampieri, Alvaro	97, 106
San Juan Refugio, Zayra Melissa	80
San Martín Martinez, Eduardo	66, 112
Sánchez Ahumada, Diana	90, 91
Sánchez Alarcón, Raúl Ivan	30
Sanchez Angeles, Ericka	287
Sánchez Campos, Daniel	194, 203
Sanchez Castillo, Ariadna	4, 194, 295
Sánchez Castillo, Marco A.	275
Sánchez Castro, M. E.	120
Sanchez Cervantes, Eduardo Maximiano	121, 122, 138, 150
Sánchez Correa, Hamid	115
Sanchez de la Cruz, Eddy	106, 175, 257, 258, 260
Sánchez Delgadillo, José de Jesús	80
Sanchez Diaz, Eric Enrique	213
Sanchez Diaz, Jesus	125, 141, 150
Sanchez Diaz, Juan Carlos	62
Sanchez Diaz, Remedios	85
Sánchez Domínguez, Margarita	38, 40, 41, 51, 121, 284
Sánchez García, Aurora	309
Sanchez Godoy, Humberto Emmanuel	141
Sánchez González, Noe	47, 53, 255
Sánchez Hernández, Yusely Johana	211
Sánchez Jímenez, Abner David	137
Sanchez Juarez, Aaron	146
Sánchez López, Fidelio	266
Sánchez Luna, Mauricio	118
Sánchez Martínez, Daniel	287, 297
Sánchez Mendieta, Víctor	289
Sanchez Mendoza, Alma Victoria	68
Sánchez Miranda, Manuel de Jesús	78, 154
Sánchez Mora, Enrique	5, 23, 24, 51, 254, 266, 270, 276
Sànchez Muñoz, Iliana Iséhy	108
Sanchez Ochoa, Francisco	17, 19
Sanchez Ortega, Gustavo Eduardo	226
Sánchez Ortiz, Omar Augusto	288
Sanchez Padilla, Minerva	35
Sanchez Pardo, Diego Abraham	62
Sanchez Pedrero, Danelia del Carmen	186
Sánchez R., V. M.	144, 256
Sánchez Ramírez, José Francisco	47, 53, 255
Sanchez Rodriguez, Fernando	137
Sánchez Romero, Juan José	74
Sánchez Ruiz, Mónica Fabiola	142
Sánchez Salas, José Luis	299
Sánchez Salas, Roque	8
Sánchez Salazar, Miguel Ángel	14
Sanchez Salinas, Israel Fredy	65
Sánchez Serrano, José Emmanuel	80
Sánchez Silva, Florencio	304
Sánchez Trujillo, Magda G.	197, 198
Sanchez Valente, Jaime	267
Sánchez Vargas, Flor Cecilia	194
Sánchez Vázquez, Astrid Iriana	119, 292, 293
Sanchez Vazquez, Vanessa	160
Sánchez Vergara, María Elena	67
Sánchez Zeferino, Raúl	41, 46, 149
Sanchez, Abigail	62
Sanchez, Felipe	264, 290
Sánchez, Hector	240
Sanchez, Jose Manuel	271
Sanchez, Juan Miguel	166
Sánchez, Magda Gabriela	302, 303, 304
Sánchez, Margarita	297
Sanchez, Ruben	34
Sánchez, Sara Martí	48
Sánchez, Yudenia	142
Sanchez, Yusely	212
Sancy, Mamie	112
Sanders, Ella	48
Sanders, Toby	272
Sandlöbes, Stefanie	206
Sandoval Arriaga, Tannia Rosa Yolanda	80
Sandoval Ferman, Sharon Jeannette	150
Sandoval Garcia, Erick Giovanni	230, 237, 241
Sandoval Jabalera, Raul	36, 44, 215, 216
Sandoval Santana, Juan Carlos	255, 256
Sandoval, Anderson	230, 235
Sandoval, Georgina	79, 266, 274, 276
Sandoval, Maria de Lourdes	164
Sandra Ivonne, Franco Olivares	304

Nombre	Paginas
Sandrino, Bianca	49, 77
Sang, Xiahan	18, 20, 185
Sanjuanero Campos, Ernesto	240
Sankaranarayanan, Subramanian	171, 173, 174, 189
Sanmiguel, Judith	236
Sansores Cuevas, Luis Enrique	9
Sansores, Luis Enrique	4
Santa Marin, Juan Felipe	108
Santacruz Gomez, Karla	110
Santacruz Ortega, Hisila	115, 106, 289, 290
Santacruz, Isabel	190
Santamaria Juarez, Guillermo	5, 24
Santamaria Juarez, Juana Deisy	5, 24, 66
Santana Aranda, Miguel Angel	12, 13, 19, 47, 149, 254, 302
Santana Dorantes, Luis Alonso	250
Santana Medina, Luis Carlos	91
Santana Vázquez, Maricela	7, 115
Santana, Guillermo	145, 146
Santelis Carbajal, Mauro	138
Santer, Svetlana	48
Santes, Victor	264
Santiago de Jesús, Gladiola	225
Santiago García, José Luis	65
Santiago Hurtado, G.	218
Santiago Hurtado, Griselda	218, 220
Santiago Jacinto, Patricia	51
Santiago Salazar, Didier	269
Santiago Santiago, Karina	45, 76, 216, 217
Santiago, Arlette Arizbe	58, 60, 65, 69
Santiago, José Antonio	43
Santillán Rodríguez, Carlos Roberto	219, 320
Santillan, Ingrid	243
Santis Espinosa, L. Fernando	314
Santizo, Itzel	35
Santolalla Vargas, Carlos Eduardo	264
Santos Alvarado, Eder I.	20
Santos Castillo, Jonathan Rene	164
Santos Cruz, David	259
Santos Cruz, José	200, 256, 257, 259
Santos Da Silva, Marcus Vinicius	124
Santos Gómez, A.	51
Santos Gómez, Arturo	23
Santos González, Iris	145
Santos López, Fabiola Jacqueline	49
Santos Mayorga, Ramiro	303, 304, 305
Santos Ramos, Ismael	41
Santos Rodríguez, Elí	80, 81, 105
Santoveña Chavez, Bayron	236
Santoveña Uribe, Alejandro Alan	198
Santoyo, Jaime	99, 266
Sarabia Sainz, Andrei	78
Sarabia, Paulina	263, 285
Sarakinos, Kostas	27, 37
Sarmiento Bustos, Estela	45, 217
Sarracino Martinez, Omar	150
Sarsenova, Rabiga	277
Sasaki, Mitsuru	304
Sasikumar, Kiran	189
Sastré Hernández, Jorge	141, 145, 146, 148
Sastre, Angela	151, 314
Sathish Kumar, Kannaiah	66
Sato, Roberto	5, 34, 46
Sauce Rangel, Victor	222
Sauce, Victor Manuel	208, 235
Sauceda Carvajal, Angel	89, 90
Saucedo Muñoz, Maribel L.	216
Saucedo Orozco, Izcoatl	9
Saucedo, Edgardo	142
Sauzameda, Marysol	62
Savka, Jiri	243
Savkina, Rada	254
Sayago, Jonathan	114
Sayagués, María Jesús	83
Scavia, Guido	142
Schaaf, Pierre	95
Schacht, Persi	264, 273
Schaeben, Helmut	177
Schaepers, Thomas	47
Schaming, Delphine	260
Schatschneider, Bohdan	169
Schell, Norbert	208
Scherbela, Michael	164
Schmidt, Kevin	127
Schmitt, Sarah	47
Schmitt, Tobias	47
Schneider, Joseph	246
Schneider, Raphael	95
Schüffelgen, Peter	47
Schuh, Christopher	12
Schuller, Ivan	246, 247
Schulman, Daniel	174
Schulz, Burkhard	111
Schwenker, Eric	174
Scott, Colleen	285
Searle, Justin	144
Sebastian Pathiyamattom, Joseph	126, 128, 285, 296
Secundino Sánchez, Oscar	47, 53, 255
Sedano Aguilar, Alejandro	208, 217, 233
Segovia Dominguez, Arnold Santiago	287
Segura Campos, Maira Rubí	61
Segura De Jesus, Yara	46
Segura Giraldo, Belarmino	106, 232
Seidman, David	173
Seijas Bellido, Juan Antonio	154
Sekar, Karthick	253, 260
Selvamanickam, Venkat	144
Semetey, Vincent	43
Semma, Brandie	310
Sen, Fatih	174
Senftle, Thomas P.	145
Sengar, Prakhar	77
Sepsi, Mate	177, 199
Sepúlveda Arias, Juan Carlos	108, 109
Sepulveda Garcia, Ximena	300
Sepulveda Guzman, Selene	20
Sepulveda, Abdon	246, 310
Sepulveda, Selene	6, 12, 68, 128, 137, 294
Serafín Muñoz, Alma Hortensia	283
Sergelius, Philip	39
Serizawa, Ai	218, 232
Serkin, Vladimir	272
Serkovic Loli, Laura Natalia	5, 7
Serna, Sergio	196, 217, 218, 232
Serralde Lealba, Juan Ruben	293
Serrano Mejía, Edgar O.	197
Serrano Nava, Manuel Eduardo	15, 192
Serrano Silva, Erika	199
Serrano, Oracio	279
Serrano, Thelma	20
Serrato, Ricardo	269
Serre, Christian	159
Serviles, Miguel Angel	222
Sesento, Griselda	199
Severiano Carrillo, Francisco	24, 254
Sevilla Camacho, Perla Yazmìn	137, 149
Sezen, Meltem	28, 97, 178
Shahbazian Yassar, Reza	119, 186
Shahi, Chandra	165
Shaji, Sadasivan	12, 13, 20, 136, 144, 148
Shamberger, Patrick	310
Shandalov, Michael	53
Shangguan, Junnan	271
Sharac, Nick	320
Sharma, Ashutosh	111
Sharma, Shailesh	261
Sharma, Sreed	12, 13
Sharma, Subhash	37
Sharma, Virender	317
Shcherbyna, Lyudmula	51
Shchukin, Vitaly	47
Sheikh Abbasi, Zahra	37
Shen, Jian	245
Shen, Xiao	250
Shengmei, Chen	316
Sherman, Sydney	101
Shi, Wenqing	179
Shi, Xiaomei	315
Shimada, Yuta	218, 232
Shimizu, Makoto	154
Shin, Youngchul	288
Shluger, Alexander L.	167
Shmid, Volodymyr	254
Shokuhfar, Tolou	103
Shulga, Yury	3
Siche, Raúl	229
Siciliano, Fulvio	240
Sidhik, Siraj	150

Nombre	Paginas
Sierra Avila, Cesar Augusto	102
Sierra Cárdenas, Nestor Alonso	90, 92
Sierra Gomez, Uriel Alejandro	1, 8, 98, 271
Sierra González, Sonia	133
Silahua Pavon, Adib Abiu	14, 43, 265, 271, 272, 273, 275, 276, 277
Siligardi, Cristina	292
Silva Bermudez, Phaedra Suriel	97, 102
Silva González, Nicolás Rutilo	25, 37, 49, 269, 297
Silva Martínez, Susana	275
Silva Orozco, Ramiro	221, 234
Silva Osuna, Estefania Rosario	8
Silva Ramirez, Sonia	116
Silva Rodrigo, Rebeca	267, 270, 273
Silva, Laryssa Roque Da	85
Sim, Eunji	167
Simard, Benoit	214
Simón, Moisés	284
Simpson, Nicola	211
Singh, Anirudha	60
Singh, Kristi	319
Singh, Mudit	131
Singh, Vijay	144, 150
Siqueiros Beltrones, Jesús María	147, 165, 168
Sivaraman, Ganesh	166
Skrabalak, Sara	129, 291
Sledzinska, Marianna	155
Slocik, Joseph M.	319
Smirnov, Aleksey	254
Smith, Jesse	321
Smits, Joost	132
Snyders, Rony	27
Soares, Alexandre	285
Soares, Bluma	222
Soberanes, Yedith	115, 276
Solache Ríos, Marcos José	63
Solana Madruga, Elena	246
Solano Becerra, José	63
Solano Peralta, Alejandro	64
Soler Illia, Galo	298
Solís Canto, Oscar Omar	186
Solis Casados, Dora Alicia	264, 273
Solís Cisneros, Horacio Irán	149
Solis de la Fuente, Mauricio	140
Solis Gonzalez, Obed Andres	112
Solís López, Myriam	250, 254, 260, 261
Solis Pomar, Francisco Jose	30
Solis Silvan, Rudy	126, 128, 296
Solís, Obed Andres	109
Solis, Silvia	287
Solladie, Nathalie	57, 68
Solorza Feria, Omar	68, 119, 121, 122, 215
Solorza, Omar	119
Soltero Ochoa, Isaac	309
Son, Junwoo	88
Sondergeld, Toni	310
Song, Ah-Young	117
Song, Junghan	217
Song, Seungwoo	138
Song, Yang	168
Song, Yi-Hwa	179
Sordo Cruz, Emilio Joaquin	235
Soria, Gustavo	280
Soriano Aguilar, Teresa	60
Soriano Moro, Jesus Guillermo	70
Soriano Rosales, Maria Guadalupe	40
Soriano, José Alfredo	7
Sorroza Martínez, Kendra	63
Sosa Baz, Miguel Ramon	234, 236
Sosa Camposeco, Akari Narayama	24
Sosa Carrasco, Victor Alejandro	247
Sosa Olivier, Jose Aurelio	296
Sosa Rodríguez, Fabiola Sagrario	293
Sosa Rojas, Martín Fernando	294
Sosa Von Putlizt, Guillermo	236, 237
Sosa, Modesto	224, 225, 226, 227
Sosa, Wadi	65
Sosenkin, Vladimir	3
Sosnik, Alejandro	60
Sotelo Lerma, Merida	30, 136, 149
Soto Cruz, Blanca Susana	32
Soto Felix, Magnolia	294
Soto Figueroa, César	44, 50, 114, 290
Soto Gomez, Wilfredo	129
Soto Guzmán, Jesús Adriana	44, 113
Soto Hernández, Jesús	118
Soto Herrera, Gerardo	31
Soto Mercado, Jorge Ramón	19, 165
Soto Ortiz, Claudia Alejandra	292, 298
Soto Parra, Daniel	320
Soto Robles, Carlos Alberto	89
Soto Rojo, Rody Abraham	141
Soto Téllez, María de la Luz	248, 258
Soto, Gerardo	52
Soto, Roosvel	230
Sotolongo García, Roberto Daniel	7
Sotomayor Torres, Clivia	155
Sotomayor, Claudia Elena	52
Souza Damasceno, Barbara	3
Souza, Geovany	129
Souza, Monique Silva	269
Specht, Petra	181
Speer, John	240
Spitsyna, Nataliya	3
Srijanto, Bernadeta	18, 20
Srinivasan, Srilok	173, 174
Stara, Tetyana	253
Stark, John	144
Staroverov, Viktor N.	168
Steinfeld, Aldo	134
Steinhardt, Rachel	309
Steinmeyer, José Ignacio	214
Stemmer, Andreas	154
Stiller, Burkhard	48
Strachan, Alejandro	173
Strelchuk, Victor	258
Strube, Oliver	75
Su, Angela	75
Su, Jinzhan	133, 314
Su, Ming	75, 76, 77
Suárez Alcántara, Karina	286
Suárez López, Jaime Raúl	42, 53
Suárez Moreno, Vivian Liceth	84, 301
Suárez Najera, Luis Eduardo	182
Suarez Quezada, Monserrat	297
Suarez Quezada, Victor Manuel	175, 287, 297
Subramaniam, Velumani	250, 253, 254, 260, 261
Suchiapa Olba, Darwin Francisco	14
Sugich Miranda, Rocío	106, 115
Sugimori, Yuki	186
Suh, Byeong-Chan	206
Suh, Jong Sik	206
Sulbarán Rangel, Belkis Coromoto	50, 142
Sulbaran, Belkis	73, 80
Sulub Sulub, Rita del Rosario	65
Sumpter, Bobby	18, 172
Sun, Jun	207
Sun, Li	55
Sun, Litao	185
Sun, Lizhi	214
Sun, Shuhui	270
Sun, Tao	173
Sun, Weiwei	185
Sundaravel, Balakrishnan	48
Supelano García, Iván	252
Susarrey Arce, Arturo	47, 75
Suss, Matthew	8
Sustaita Torres, Ireri Aydée	198, 201
Suszek, Samantha	52, 99, 268
Sutherland, Duncan S.	32
Sutlu, Tolga	97
Sutter, Eli	187
Suzuki, Sayaka	131
Swaisi, Mohamed	34
Swenson, Dale C.	279
Swinkels, Milo Y.	155
Sydenstsahagun, Thais Helena	61
Sylapak Franco, Talita	61
Szénási, Sándor	175
T. Pereira, Saulo	95
Tabasco Novelo, Carolina	127, 128
Taboada, Pablo	112
Taborda Rios, July Andrea	321
Tafu, Masamoto	292
Tagiyev, Dilgam	112
Taheri, Mitra L.	11
Tai, Nyan-Hwa	27
Taipina, Márcia de Oliveira	179

Nombre	Paginas
Takamatsu, Saori	292
Takeuchi, Noboru	19
Talamás Rohana, Patricia	13, 98, 114
Talavera Leyva, Margarita	219
Tallet, Lorène	95
Tamayo Pérez, Ulises Jesús	53
Tamayo Rivera, Lis	55
Tamblyn, Isaac	171
Tang, Guoyi	207
Tangirala, Venkata Krishna Karthik	194, 203, 225, 252, 257
Taniyama, Noriyuki	304
Tanori Cordova, Judith Celina	38, 54, 92
Tanyeli, Irem	47
Tapia Benavides, Antonio Rafael	265
Tapia Gonzalez, Jorge Alejandro	2
Tapia Hernández, Ana Brenda	3
Tapia Huerta, José Luis	280
Tapia Montalvo, Marcos	51
Tapia Morales, Gabriela	273
Tapia Ramirez, Jose	111, 250
Tapia Rodriguez, Erika Maricela	270
Tapia, Alejandro	6, 160
Tardajos, Gloria	38
Tartalini, Vanina	178
Tasat, Debora R.	102
Tavares Negrete, Jorge Alfonso	61, 109
Tavares Ramirez, Patricia del Carmen	175
Tavera Romero, Fernando	309
Tavira Fuentes, Adolfo	13, 222
Tavizón Alvarado, Gustavo	192
Taylor, Alice	97
Taylor, Spencer	241
Tec Chim, Adrian Isrrael	257, 259
Teja Ruiz, Aislin Michelle	196
Tejada Carbajal, Erick Medardo	305
Tejada, Erick Medardo	296
Tejeda Cruz, Adriana	34, 46, 192, 246, 291
Tejeda Hernandez, Valdemar	61
Tejeda, Adriana	34, 38
Tejeda, Tania	36
Tejo, Felipe	39, 45, 247
Télles, José Guadalupe	93
Téllez Arias, Mercedes Gabriela	69, 218
Tellez Cruz, Miriam Marisol	119, 122
Téllez Salazar, Wendy Noemi	291
Téllez, José Gabriel	263
Téllez, José Oswald	197
Tena García, Juan Rogelio	286
Teofani de la Cruz, Shanty	295
Tepale, Nancy	70
Tepanecatl, Laura Alejandra	20
Teran Mendez, Gerardo	7, 193, 197
Teran Pacheco, Rosse Mary	300
Terrazas Caro, Estefania	62
Terrés, E.	218
Terrones, Mauricio	8, 174
Teshima, Katsuya	117, 131
Tessier, Pierre-Yves	27
Testa, Maria Luisa	123
Thakare, Sandeep	243
Thangarasu, Pandiyan	230
Thanikaikarasan, Sethuramachandran	257
Theresa Thomas, Christeena	250
Thiry, Damien	27
Thomas, Senoy	246
Thompson, Aidan	171
Thonhauser, Timo	169
Thurau, Philipp	153
Thygesen, Kristian	181
Tian, Mengkun	20
Tiburcio Moreno, Jose Antonio	179
Tiburcio Munive, Guillermo del Carmen	296
Tijerina García, Osvaldo	241
Tinoco Magaña, J. C.	250
Tinoco Ruiz, Jose Gerardo	220
Tirado Guízar, Antonio	160
Tirado, Pablo	9, 137
Tischler, Joseph	320
Tiwari, Ayodhya N.	144
Tiwari, Sidhant	246
Tiznado, Hugo	31, 52
Tiznado, William	280
Tkatchenko, Alexandre	167
Tlenkopatchev, Mikhail A.	60
Toalá Hernández, Cleyfi Villanet	296
Todaka, Yoshikazu	219
Toledo Antonio, Jose Antonio	202, 267
Toledo Jaldin, Helen Paola	289
Toledo Marín, Javier	160
Toledo Saulo, Victor	95
Toledo Solano, Miller	51, 270
Toledo, Jose Antonio	266, 274
Toledo, Miller	23
Tolentino Lopez, Dante	210
Tomás Velázquez, Sergio Armando	255, 256, 266
Tongay, Sefaattin	17
Topete, Antonio	31
Torabi, Amin	168
Torchynska, Tetyana	35, 40, 50, 51, 52, 54, 251
Tores Torres, José Gilberto	43, 266
Toro Acevedo, Carlos Andres	109
Toro Labbe, Alejandro	163
Toro Trochez, Jose Luis	43
Torralba Sanchez, Rosalia	272
Torres Acosta, Andres Antonio	212, 234, 235, 237, 293
Torres Arellano, Soleyda	296
Torres Avila, Itzel Pamela	219, 281
Torres Castanedo, Carlos Gerardo	140
Torres Castillo, A. Alberto	205, 206, 208
Torres Castro, Alejandro	29
Torres Ceron, Darwin Augusto	295
Torres Delgado, Gerardo	140, 251
Torres Duarte, Luis Miguel	321
Torres Figueroa, Ana Valeria	114
Torres Flores, Elda Iveth	126
Torres García, Alecia	113, 243
Torres Gómez, Nayely	40, 53
Torres González, Luis Carlos	121
Torres Guerra, Leticia Myriam	287, 298
Torres Guerrero, Veronica Ofelia	196
Torres Islas, Alvaro	231, 232, 298
Torres Jaramillo, Santiago	259
Torres Labra, Emanuel	7
Torres Lopez, Lucero	192
Torres Lubian, Jose Roman	271
Torres Mancera, Pablo	267
Torres Mena, Manuel Alexis	59
Torres Núñez, Agustín	273
Torres Ortíz, Flor Lizeth	214
Torres Osorio, Javier	74, 98, 285
Torres Pacheco, C. Jesús	321
Torres Quintanilla, Alejandro	101, 318
Torres Ricárdez, Rafael	139, 249
Torres Rodriguez, Alejandro del Rey	309
Torres Rojas, Raúl Mauricio	5
Torres Salazar, Maria del Carmen	302
Torres San Miguel, Christopher René	4
Torres Santillan, Esther	7
Torres Solís, Alma Leticia	114
Torres Torres, Carlos	14
Torres Torres, Cesar Alejandro	219
Torres Torres, Gilberto	266, 274, 276
Torres Torres, Jose Gilberto	14, 265, 268, 271, 272, 273, 275, 277
Torres, Aide	288, 297
Torres, Alfonso	24, 25, 93, 150
Torres, America Yazmin	192
Torres, Arturo	93, 150
Torres, César Alejandro	301
Torres, Eduardo	31
Torres, Esther	197
Torres, Fernando	106
Torres, Héctor	201
Torres, Jeevan	125, 141, 150
Torres, Mauricio	210, 215
Torres, Omar	44
Torres, Ruben	301
Toshima, Takeshi	292
Tovar Carrillo, Karla	105
Tovar Gallegos, Luis Eduardo	217
Tovar Martínez, Eduardo	7
Tovar Torres, Marggie Lisbeth	263
Tovar, Karla	105
Townsend, Trevor	293
Trejo Baños, Alejandro	24, 43, 139, 255
Trejo Durán, Mónica	29

Nombre	Paginas
Trejo García, Marco Pablo	175, 223
Trejo Valdéz, Martín Daniel	4
Trejo, Alejandro	258
Trejo, Mónica	51, 77
Trejo, Pablo	35
Trejos Ruiz, Luis Alejandro	300
Trejos Taborda, Juan Daniel	320
Trejos, Luz Adriana	139, 313
Treviño López, Jennifer	232, 236
Triana Pequeño, Jair Gabriel	119
Trickey, Samuel B.	164
Tristán López, Ferdinando	2, 4, 43, 147
Tristancho Reyes, Jose Luis	28, 232, 321
Troncoso, Loreto	51
Trudeau, Charles	124
Trujillo Calderon, Isaias	221, 233, 235, 295
Trujillo González, Daniel E.	148
Trujillo Nolasco, Rosa Maydelid	112
Trujillo Tadeo, Juan José	230, 237, 241
Tsurimaki, Yoichiro	154
Tucker, Garritt	11
Tueysuez, Harun	133, 135
Tufiño Velázquez, Miguel	146, 148
Tummino, Maria Laura	123
Tun Serrano, Manuel Alberto	230,231, 233
Tungatarova, Svetlana	270, 277
Turcheniuk, Kostiantyn	2, 48, 117
Turgeon, Stephane	105
Turkowski, Volodymyr	18
Turner, Michael	59
Turnes Palomino, Gemma	160, 161
Turrén Cruz, Silver Hamill	143
Tzompantzi Flores, Clara	268
Tzompantzi Morales, Francisco	268
Tzompantzi, Francisco Javier	251
Udalov, Oleg	245
Ugalde Alcantara, Magali	277
Ugalde Guerrero, Guadalupe	107
Uitz T., Citlali	109, 112
Ullate Ritchie, Luis Felipe	150
Ulloa Godinez, Sandra Guadalupe	11
Ulrich, Mansfeld	71
Umaña Kossio, Han Noé	69, 96
Unalan, Husnu	106
Unfried, Jimy	230
Ungan, F.	48
Unocic, Ray	18, 20
Unocic, Raymond	20, 185
Urbanic, Ruth Jill	213
Urbano Peña, Maria de Los Angeles	50
Urbano Reyes, Gustavo	159
Ureña Nuñez, Fernando	64
Uribe Lopez, Melina del Carmen	79, 283, 295
Uribe Lopez, Sheila Ariany	79, 295
Uribe Riestra, Gabriela Carolina	215
Uribe Vargas, Hector Manuel	259
Urquizo Monrreal, Patricia	81, 139
Urrego, Dallany	292
Urriolagoitia Calderón, Guillermo Manuel	215, 301
Urriolagoitia Sosa, Guillermo	107 301 302, 303
Urteaga, Raul	24
Uruchurtu Chavarín, Jorge	232
Utrilla Yang, Jesús A.	151
V. Basiuk, Elena	4
Vaca Arciga, Laura Arcelia	29, 243
Vaca, Sveidy	5
Vaillon, Rodolphe	154
Vairapperumal, Tamilmani	47
Valadez Villalobos, Karen L.	136, 142, 150, 314
Valadez, Diego	295
Valadez, Ernesto	139
Valadez, Karen L.	143, 313
Valarezo, María José	101, 109
Valderrama, Alejandro	160
Valdes Becerril, Adriana	40
Valdés González, Arístides Camilo	110
Valdes Pech, Moises Alberto	89
Valdes Saucedo, Omar Alejandro	230
Valdes Tabernero, Miguel A.	240
Valdes, Hugo	58
Valdes, Manuel Alejandro	75, 275
Valdés, Omar U.	264
Valdespino Padilla, Duilio	35
Valdéz Covarrubias, Miguel Ángel	44
Valdez Martínez, Abraham Alejandro	243
Valdez Morales, Ramses Adrian	296
Valdez, Alonso	4
Valdez, Jesus	37, 123
Valdez, Socorro	196
Valdivia Flores, Alejandra	182
Valdivieso, Guadalupe	63
Valencia de Lima, José Ivan	207
Valencia Garcia, Karen	314
Valencia Gómez, Laura	80
Valencia Gómez, Laura Elizabeth	103, 108, 111
Valencia Muñoz, Carolina	80, 300
Valencia Pèrez, Naella Sandivel	286
Valencia, Felipe	34, 213, 214
Valencia, Israel	15
Valenzuela Badilla, Julio	165, 253
Valenzuela León, Angel Rafael	34
Valenzuela Lopez, Maria Teresa	40
Valenzuela Muñiz, Ana María	2, 37, 46
Valenzuela Soto, Huberto	68
Valenzuela Zapata, Miguel Angel	292
Valenzuela, Edgar	119
Valenzuela, Loreto	84
Valenzuela, Miguel	80
Valenzuela, Miguel Ángel	275
Valenzuela, Raul	246
Valero, Laura Luz	68, 143
Vales Pinzón, Caridad	151
Valladares Hernández, Julio César	230
Vallejo Castaneda, Emmanuel	55
Vallejo Hernández, Miguel Ángel	224, 225, 226, 227
Vallejo, Emmanuel	1, 3, 140, 151
Valles, Veronica	264
Valverde Aguilar, Guadalupe	260, 309
Van Bael, Marlies K.	27
Van Benthem, Klaus	185
Van Der Veen, Monique A.	158
Van Duin, Adri	185
Van Vliet, Patrick	133
Vandichel, Matthias	14, 157
Vankova, Nina	279
Vanpoucke, Danny	9, 157
Varela Caselis, Jenaro L.	146
Varela Caselis, Jenaro Leocadio	66, 290
Varela, Victor	158
Vargas Angeles, Juan Manuel	295
Vargas Bazan, Vivian Gudalupe	34
Vargas Galarza, Zully	66
Vargas Galvis, Fabio	212
Vargas Garcia, Jorge Roberto	42, 119, 267
Vargas Gutiérrez, Gregorio	120, 222
Vargas Hernández, Carlos	80
Vargas Hernandez, Jesus	213, 237
Vargas Medina, Ana Cristina	45
Vargas Requena, Claudia Lucia	103, 105, 111
Vargas Requena, Claudia-Lucía	80
Vargas Rodríguez, Guadalupe Iveth	276
Vargas Rodriguez, Lorena	296
Vargas Rodríguez, Yolanda Marina	273, 276
Vargas Vega, Minerva	294, 300
Vargas Villagran, Haydee	265
Vargas, Guillermo	232
Vargas, Joel	58, 60, 65, 69, 298
Vargas, Jorge	15, 191
Vargas, Nicolas	246
Vargas, Vicente	54, 159
Varghese, Oomman	128, 132, 184
Varguez, Arelly	109
Variani, Yuri M.	179
Variola, Fabio	74
Vásquez Aguilar, Abigail	173
Vasquez Espinal, Alejandro	280, 281
Vasquez Garcia, Salomon Ramiro	33, 42, 52, 60, 62
Vasquez Vargas, Diana	186
Vasquez, Victor R	127
Vassallo, Ettore	13
Vayssieres, Lionel	133, 314
Vázquez Acosta, Francisco	293
Vázquez Arenas, Jorge	201, 293
Vázquez Arreguín, Roberto	35
Vazquez Besteiro, Lucas	127
Vazquéz Cuevas, Francisco Gabriel	80
Vázquez Dimas, Alejandro	29

Nombre	Paginas
Vazquez Duhalt, Rafael	315
Vázquez García, Mario	309
Vázquez García, Rosa Angeles	68, 89, 194
Vázquez Garrido, Isaí	265
Vazquez Guerrero, Adriana	295
Vázquez Guevara, Miguel Ángel	267
Vazquez Lepe, Milton Oswaldo	254
Vázquez Lima, Hugo	59
Vazquez Lujano, Jorge	119
Vazquez Mayagoitia, Alvaro	166
Vazquez Mora, Rubí	34
Vazquez Novoa, Laura Guadalupe	39, 254
Vázquez Orduña, Maria Guadalupe	240
Vázquez Rodríguez, Araceli	178
Vazquez Rodriguez, Jose Manuel	299
Vazquez Rodriguez, Sofia	20
Vázquez Torres, Humberto	62, 64, 65
Vazquez Vargas, Diana Aracely	186
Vazquez Vazquez, Eric Fernando	29, 217
Vázquez Velázquez, Rodrigo	287
Vazquez Victorio, Gabriela	246
Vazquez y Parraguirre, Sarai	54
Vázquez Zavala, Armando	266
Vazquez, Alejandro	41, 43, 50, 51, 77
Vazquez, Juvencio	269
Vázquez, Manuel	199
Vázquez, Nadia	85
Vázquez, Octavio	218
Vázquez, Patricia	103
Vazquez, Pedro	263
Vazquez, Rosa Angeles	62, 113, 147, 252, 304
Vázquez, Tamara	218, 275
Vazquez, Victor	195
Vedharathinam, Vedasri	8
Vega Diaz, Sofia Magdalena	2, 4, 43, 143, 147
Vega Flick, Alejandro	127
Vega González, M.	200
Vega Hernández, Miguel Ángel	60, 62
Vega Hernández, Miriam	53, 274
Vega Macotela, Leonardo Gabriel	35, 52, 54
Vega Pérez, Jaime	257
Vega Poot, Alberto Gabriel	133, 135, 142, 145, 250, 313, 314
Vega Rivera, Ana Karen	242
Vega, Edgar	206, 208
Vela, Alberto	164
Velandia Caballero, Oscar Javier	25
Velandia, Wilmer Feney	20
Velarde Delgado, Raúl Agustín	87
Velasco Santos, Carlos	290
Velasco, Aida Ximena	106
Velásquez De Jesús, Arturo	2, 280
Velásquez Rodríguez, José de Jesús	207
Velásquez Salazar, Abilo Andrés	248
Velasquez, Abilo	285
Velásquez, Celso	41
Velasquillo Martínez, Cristina	83, 96
Velasquillo, Cristina	102
Velázquez Altamirano, Julio C.	193
Velázquez Araiza, Julio	220
Velazquez Arjona, Walter Noe	111
Velazquez Castillo, Rodrigo	73, 256
Velázquez Contreras, Enrique F.	276
Velázquez de Jesús, Oscar	35
Velázquez Hernández, Josué Ruben	89
Velazquez Hernandez, Ruben	149, 196
Velázquez Herrera, Franchescoli Didier	105, 106
Velázquez Lozada., Erick	35, 251
Velázquez Osorio, Adrián	121
Velazquez Perez, Judith Alejandra	294
Velazquez Salazar, J. Jesus	264
Velazquez Yedra, Laura Jazmín	287
Velázquez, Víctor	66
Velez Cordero, Juan Rodrigo	99
Vélez Gómez, Jenny Marcela	109
Velez Ruiz, Jose Daniel	261, 286
Velez, Daniela	261
Veliscek Carolan, Jessica	292
Veloz Rodríguez, María Aurora	159, 232, 233, 290
Veloza, luz Angela	108, 109
Velumani, Subramaniam	257
Velusami, Jayaramakrishnanb	54
Venegas Segura, Silvia Paola	293, 298
Venkata Krisgna Karthik, Venkata Krisgna Karthik	224
Ventura Acosta, Norma	45
Ventura Romero, Susana Nohemi	297
Venzo, Alfonso	37
Vera Flores, Janeth	264
Vera Graziano, Ricardo	85
Vera Lopez, Enrique	120, 147, 230, 231, 232, 235
Vera Marquina, Alicia	91, 256
Vera Olvera, Luis Omar	55
Verastegui, Luz Hypatia	269
Verastica Ward, Libia Judith	90, 91
Vercruysse, Florian	240
Verde Gomez, Ysmael	2, 37, 46, 186, 270
Verde Rodarte, Cristina	214
Verdini, Alberto	224
Verdugo Ontiveros, Ana J	78
Verdugo Ontiveros, Ana Janeth	92
Verduzco Martinez, Jorge Alejandro	104
Vergara Aragon, Patricia	260, 309
Vergara Beltran, Ulises Asael	42
Vergara Castañeda, Haydé Azeneth	110
Vergara Hernandez, Erasto	8, 35
Vergara, Héctor	218
Vergara, Miguel	210, 215
Verpoort, Francis	157, 158
Vértiz Vázquez, Liliana	64
Vetrone, Fiorenzo	124
Vetterick, Gregory	11
Vezirova, Leyla	34, 79, 109
Viau, Guillaume	191
Vicente Mendoza, Melquisedec	236
Vicente, Luís	44, 50, 114, 290
Vicente, Melquisedec	220
Vickers, James	132
Victoria Hernández, José	206, 208
Vidal Robles, Esmeralda	270
Vidal Silva, Nicolás	247
Vidal, Miguel Angel	30
Videa, Marcelo	38
Viera Martin, Edumis	118
Viera, Marisa	33
Vieyra Ruiz, Horacio	286
Vigil Castillo, Héctor H.	314
Vigil Galán, Osvaldo	137, 144, 145, 146
Vilchis Nestor, Alfredo Rafael	40, 51, 53, 289
Vilchis, Heber	14, 149, 290
Vilchis, Paloma Alejandra	109
Vilela, Sérgio M.f.	159
Villa Sánchez, Gerardo	75, 284
Villa Villaseñor, Noé	242
Villa, Ruben	195
Villafán Vidales, Heidi	8
Villafuerte Castrejón, María Elena	125, 126, 191
Villagarcía Chávez, Ezequiel	7
Villagomez Galindo, Miguel	104
Villalba Guevara, Joaquin	84
Villalba Rodríguez, Angel M.	320
Villalobos Noriega, Mauro	115
Villalobos, Julio César	218, 232
Villalón Cueto, Juan Alonso	62
Villanueva Cab, Julio	316
Villanueva Castañeda, Miguel	67
Villanueva Guzman, Marcos Ariel	220, 221
Villanueva Mejia, Francisco	19, 29
Villanueva Pérez, Omar Enrique	241
Villanueva Pliego, Heriberto	208, 217
Villanueva Rodríguez, Minerva	314, 317
Villanueva Rosado, Claudia Rossana	304
Villanueva, Julio	145
Villarreal Cárdenas, Luis	59
Villarreal Castellon, Javier	62
Villarreal Contreras, Jesus Gustavo	209
Villarreal Ortega, José Mauro	293
Villarreal, Javier	62
Villarreal, Katya	84
Villarreal, Ruben	89
Villaseñor Cerón, Lesly Sabina	196, 224
Villate Fonseca, Mercy Tatiana	90, 92, 93, 143, 144
Villaurrutia, Rafael	181, 184
Villegas Medina, Gerardo	301, 303
Viltres Cobas, Herlys	30, 51, 103, 289
Vinx, Nathan	27
Virgüez Amaya, Ophyr	147
Virrueta Gordillo, Aremy	151
Visairo Méndez, Rebeca	212

Nombre	Paginas
Visotin, Maxim	12
Vitale, Gerardo	55
Vivaldo Lima, Eduardo	60, 62, 63, 64
Vivaldo, Israel	23, 24, 90
Vivechana, Agarwal	271
Viveros Ramos, Jose Wilbert	221, 295
Vivod, Stephanie	58
Vizcarra, Marco	69, 96
Vizireanu, Sorin	5
Vlasova, Marina	192, 212, 317
Vogel, Sven	178
Voit, Walter	73, 88, 90, 101
Volfkovich, Yurii	3
Volmer, Marius	5
Volpati, Diogo	77
Von Borries Medrano, Erich	109, 286
Vondracek, Martin	32
Vonlanthen, Mireille	67
Vorobyev, Anatoliy	141
Vrana, Ne	96
Vrana, Nihal Engin	95, 96
Wagle, Kamal	165
Wagner, Tino	154
Walczak, Magdalena	229
Walid, Arfi	36
Walter, Michael	168, 265
Wang, Anthony	241
Wang, Baolin	48
Wang, Fujia	2, 48
Wang, Jin An	263, 287, 295
Wang, Kai	17, 18, 20
Wang, Lin	317
Wang, Lin-Wang	187
Wang, Miao	77
Wang, Qianchang	246
Wang, Qiuquan	318
Wang, Xiangke	315
Wang, Xiaopeng	169
Wang, Yong Q.	11
Wang, Yunzhi	202
Wang, Zhiming	127
Warneke, Jonas	279
Warner, Jamie	18, 185
Watson, Trystan	135, 143, 144, 313
Webster, Thomas	11, 73, 83, 85
Weiss, Thomas	144
Wen, Haidan	21
Wentworth, Adam	310
Werner, Skrotzki	179
Wheeler, Robert W.	321
White, Mary A	321
Whitton, Greg	59
Widener, Christian	237, 316
Wijesekera, Olindi	101
Will Cole, Alexandria	308
Willey, Trevor	246
Winther, Kirsten	181
Woehl, Taylor	187
Wöhner, Kevin	279
Wohnrath, Karen	49
Wolfgang Tress, Wolfgang	143
Won, Che Gal	44
Won, Jong-Woo	207
Wood, Brandon	8
Wood, Mitchell	171
Woods, Lilia	154
Wright, Stuart	177
Wruss, Elisabeth	167
Wu, Amanda	178
Wu, Di	184
Wu, Elmer	246
Wu, James	316
Wu, Kai	207
Wu, Wei	315
Wu, Wenzhou	184
Wu, Yacong	76
Xia, Junfei	75
Xia, Yue	224
Xiao, Kai	17, 18, 20, 185
Xiao, Yiran	117
Xiao, Zhuyun	307
Xie, Yu	185
Xin, Hongliang	163, 173
Xin, Huolin	187
Xing, Malcolm	111
Xix, Cynthia	109
Xue, Dong	168
Yahel, Eyal	53
Yakobson, Boris	18, 279
Yam, Marcial	65
Yamada, Tetsuya	117
Yan, Bing	318
Yan, Qimin	165
Yan, Wan	71
Yanagisawa, Kazumichi	212
Yang, Judith	186
Yang, Ke	131
Yang, Kesong	169
Yang, Limin	318
Yang, Sangsun	178
Yang, Shize	187
Yang, Xin	317
Yanushkevic, Kazimir	196
Yanushkevich, Kazimir	247
Yàñez Fernandez, Jorge	286
Yañez Limon, Jose Martin	179
Yañez Maldonado, Yuritzin	284
Yañez Soto, Bernardo	99
Yao, Jian	144
Yao, Zhi Yao	246
Yaron, David J	166
Yarur, Francisco	9
Yashina, Ekaterina	179
Yee Madeira, Hernani	99, 148, 247
Yee, Hernani T	116
Yee, Hernani Tiago	139
Yeh, Chien-Jui	10, 27
Yi, Sangbong	206, 208
Yilmaz, Dundar	185
Yishu, Foo	123
Yoo, Choong-Yul	125
Yoo, Geun Hee	202
Yoon, Hyung Chul	125, 289
Yoon, Mina	18, 20
Yoon, Minyoung	158
You, Bong Sun	206, 207
Young, Marcus	321
Young, Tim	131
Ysiwata Rivera, Alma Patricia	2, 280
Yslas, Edith Ines	104
Yu, Danxia	318
Yu, Ji-Hun	178
Yu, Liping	165
Yudico Anaya, Luis José	308
Yun, Jaecheol	178
Yunhui, Wu	47
Yurtsever, Aycan	37, 123
Yushin, Gleb	2, 48, 117
Zaca Moran, Orlando	24, 96, 255
Zaca Moran, Rafael	166
Zaca, Plácido	107, 166
Zacahua Tlacuatl, Gregorio	271
Zagal, Jose	8
Zalapa Damian, Arturo	220, 221, 234, 235
Zalapa, Arturo	237
Zaldivar Cadena, Antonio Alberto	292, 293
Zambrano Robledo, Patricia	253
Zambrano Robledo, Patricia del Carmen	209, 230, 232, 320, 321
Zambrano, Luis	235
Zambrano, Patricia del Carmen	320
Zamora Mendieta, Jonathan	199
Zamora Peredo, Luis	36, 40, 42, 50, 52, 71
Zamora Plata, Jose Antonio	125
Zamora Tototzintle, Marcial	36, 44
Zanetti, Michelle R. L.	49
Zapata Giraldo, Jenniffer	41, 74
Zapata Lopez, Janis	210
Zapién Castillo, Samuel	64
Zapien, Juan Antonio	123, 316
Zappia, Stefania	142
Zaragoza Contreras, Armando	105
Zaragoza Galán, Gerardo	57
Zaragoza Palacios, Beatriz Guadalupe	92
Zaragoza, Armando	105
Zárate Medina, Juan	41
Zarate Triviï¿½o, Diana Ginette	38, 41, 98, 106
Zárate Triviño, Diana Ginette	97, 99

Nombre	Paginas
Zarate, Abner	43
Zárate, Elvia	77
Zarazúa Morín, Ma. Elvira	287, 298
Zarazua, Isaac	141
Zarco Garcia, Hermilo	70
Zardo, Ilaria	155
Zarraga Nuñez, Ramon	125, 271
Zarrazaga, María	268
Zavala Arce, Rosa Elvira	60
Zavala Arriaga, Maria Mercedes	213
Zavala Contreras, Bruno	290
Zavala Padilla, Guadalupe Trinidad	291
Zavala Rivera, Paul	69, 96, 296
Zavala, Edgar	76
Zavala, José	65
Zavaleta Gutierrez, Nilthon	229
Zayas, Teresa	291
Zazueta Raynaud, Aldo	140, 149
Zebadua Avendaño, Monserrat	141
Zeferino Gonzalez, Isaias	2
Zehe, Alfred	266, 298
Zeifert, Beatriz	218, 274, 275, 298
Zelaya Ángel, Orlando	140, 251
Zeng, Xun	208
Zenteno, Javier	43
Zenteno, Raul	43
Zepeda Alarcon, Eloisa	178
Zepeda Cortez, Yunnuen	98
Zettsu, Nobuyuki	117, 131
Zhai, Hua-Jin	280
Zhang, Chengdong	318
Zhang, Chengqi	48
Zhang, Fu	174
Zhang, Jinyu	207
Zhang, Junyan	276
Zhang, Tong	317
Zhang, Y. Shrike	84
Zhao Hu, Hailin	146
Zhao, Hong-Jian	169
Zhao, Hui	21
Zhao, Pengyang	202
Zhao, Rui	17, 21
Zhao, Wen	20
Zheksenbaeva, Zauresh	270, 277
Zheng, Haimei	187
Zheng, Liyuan	76
Zheng, Wenjing	187
Zhou, Bingsheng	316
Zhou, Qunfang	107
Zhou, Xiaohua	208
Zhou, Xiaowang	249
Zhou, Ye	174
Zhu, Hao	315
Zhu, Lingyan	315
Zhu, Menglin	189
Zhu, Ting	48
Zhu, Yu	57
Zhu, Zhijun	76
Zhumabek, Manapkhan	270
Ziehm, Till	153
Zierold, Robert	39
Ziga, Gildardo Javier	293
Zisman, Alexander	179
Zojer, Egbert	167
Zoleo, Alfonso	37
Zolotukhin, Mikhail	57, 68, 69
Zorrilla Cangas, Cristina	115
Zorrilla, Cristina	7
Zou, Ke	245
Zou, Shan	214
Zouridakis, George	307
Zubia, David	249
Zuev, Vladimir	303, 304, 305
Zuluaga Velez, Augusto	109
Zuluaga, Robin	38
Zumeta Dubé, Inti	126, 133
Zuniga, Ishvari Fernanda	202, 220, 243
Zuno Silva, Jorge	236
Zuñiga Grajeda, Virgilio	73
Zúñiga Islas, Carlos	38, 256
Zuñiga Martinez, Diego Andres	220
Zuñiga Martínez, Jorge	120
Zuñiga Neria, Guillermo Capistrano	75
Zuñiga Reyes, Marco Antonio	137, 149
Zúñiga Rivera, Nancy Jovaana	34
Zúñiga Romero, Cyntia I.	251
Zurita Méndez, Nancy Nelly	78, 103