

Conference Program

Monday, 6 June

Session 1 (chair: Pál Jedlovsky):

18.30-19.20: **Ellen Backus** (Vienna, Austria): *Water at interfaces: from wetting to atmospheric chemistry*

19.00-21.00: Welcome reception

Tuesday, 7 June

08.30-09.00: Conference opening

Session 2 (chair: Miguel Jorge):

09.00-09.50: **Pavel Jungwirth** (Prague, Czech Republic): *Electrons in liquid ammonia and in water: from blue electrolytes to golden metals*

09.50-10.10: **Zuzana Benková** (Bratislava, Slovakia): *Molecular dynamics simulations of interactions of SARS-CoV-2 spike protein with graphene during initial stage of adsorption*

10.10-10.30: **Krisztina László** (Budapest, Hungary): *Chemical stability of graphene oxide in aqueous suspensions*

10.30-11.10: Coffee break

Session 3 (chair: Abdenacer Idrissi):

11.10-11.40: **Makoto Ohta** (Sendai, Japan): *Flow chamber for evaluation of Endothelial cell adhesion on stent struts*

11.40-12.00: **Dávid Juriga** (Budapest, Hungary): *Application of poly(aspartamides) in drug delivery*

12.00-12.20: **István Szabó** (Gödöllő, Hungary): *Observing long term bacterial colonization of polypropylene microplastics in a freshwater lake by optical and molecular methods*

12.20-12.40: **Shereen Farah** (Budapest, Hungary): *Long-term aging of concentrated aqueous graphene oxide suspension seen by various analytical techniques*

12.40-13.00: **Krisztina Tóth** (Budapest, Hungary): *Nanofibrous biocompatible polymer-based drug-delivery implants*

13.00-14.30: Lunch

Session 4 (chair: István Szilágyi):

14.30-15.20: **Anna Salvati** (Groningen, the Netherlands): *Dissecting how cells internalize and process nano-sized drug carriers for nanomedicine applications*

15.20-15.50: Coffee break

15.50-18.30: POSTER SESSION

19.00-22.00: Wine tasting (optional event)

Wednesday, 8 June

Session 5 (chair: Milán Szőri):

09.00-09.50: **Urs Hafeli** (Vancouver, Canada): *Targeting Rheumatoid Arthritis Using Nanomedicines*

09.50-10.10: **Constantinos Voniatis** (Budapest, Hungary): *Polysuccinimide/Polycaprolactone composite meshes for surgical tissue engineering*

10.10-10.30: **Abdenacer Idrissi** (Lille, France): *Local structure in mixtures of ionic liquid with molecular solvent*

10.30-11.00: Coffee break

Session 6 (chair: Etelka Tombácz):

11.00-11.20: **Oksana Bilous** (Vienna, Austria): *Field-induced structural transitions in magnetic granulate*

11.20-11.40: **Barnabás Horváth** (Veszprém, Hungary): *Nonlinear dynamic susceptibility of magnetic fluids in symmetry breaking dc magnetic fields*

11.40-12.00: **Levente Novák** (Debrecen, Hungary): *Paramagnetic metal chelates of polycarboxylamino-type macromolecules: high relaxivity complexes without coordinated inner sphere water?*

12.00-12.20: **Erzsébet Illés** (Szeged, Hungary): *Biocompatible folate targeted cobalt ferrite nanoparticles for magnetic hyperthermia*

12.20-12.40: **Andrey Kuznetsov** (Vienna, Austria): *Magnetic and structural equilibrium properties of multicore nanoparticle suspensions and bimodal ferrofluids*

12.40-13.00: **Nikoletta Kovács** (Nagykanizsa, Hungary): *Glyphosate/AMPA adsorption on magnetite: measure the trace amounts and separate simply*

13.00-14.30: Lunch

Session 7 (chair: Zuzana Benková):

14.30-15.20: **Cristoph Dellago** (Vienna, Austria): *Simulating bulk and interfacial water with neural network potentials*

15.20-15.50: Coffee break

15.50-16.20: **Judit Puskas** (Wooster, USA): *Synthesis and characterization of folate-targeted monodisperse PEG-based conjugates made by chemo-enzymatic methods for cancer diagnosis and treatment*

16.20-16.40: **Sofia Kantorovich** (Vienna, Austria): *Magneto-rheology of clusters formed by magnetic polymers*

16.40-17.00: **Rita Pázmány** (Budapest, Hungary): *Ultrasound induced, easy-to-store porous poly(aspartic acid) based electrospun scaffolds*

Thursday, 9 June

Session 8 (chair: Tamás Szabó):

09.00-09.50: **Julius G. Vancso** (Enschede, the Netherlands): *Marine biofouling: The surface science challenge and some lessons to learn*

09.50-10.10: **Attila Csicsor** (Szeged, Hungary): *Antioxidant effect of humic substances: an overview*

10.10-10.30: **Zsófia Árok** (Szeged, Hungary): *Effect of brine salinity on the solution properties of polymers for enhanced oil recovery*

10.30-11.00: Coffee break

Session 9 (chair: Krisztina László):

11.00-11.20: **István Szilágyi** (Szeged, Hungary): *Heteroaggregation of nanozymes and latex particles for highly stable antioxidant colloids*

11.20-11.40: **Miguel Jorge** (Glasgow, UK): *Sticky-MARTINI – a reactive coarse-grained model for self-assembly in materials synthesis*

11.40-12.00: **Ivan Novikau** (Vienna, Austria): *Behavior of a magnetic nanogel in a shear flow*

12.00-12.20: **Mónika Kéri** (Debrecen, Hungary): *Application of NMR relaxation methods for colloids and interfaces*

12.20-12.40: **Tamás Szabó** (Szeged, Hungary): *Removal of caine anesthetics from water, saline solutions and model wastewaters using nanofiltration membranes*

12.40-13.00: **Ferenc Ender** (Budapest, Hungary): *Development of laboratory electrospinning as a tool for the entrapment of biomolecules*

13.00-14.30: Lunch

Session 10 (chair: Dezső Boda):

14.30-15.20: **Athanasios Nenes** (Lausanne, Switzerland): *The importance of aerosol acidity and its impacts*

15.20-16.00: Coffee break

16.00-16.20: **Mirjam Balbisi** (Budapest, Hungary): *Computer simulation investigation of the adsorption of acetamide under atmospheric and interstellar conditions*

16.20-16.40: **Milán Szőri** (Miskolc, Hungary): *Molecular simulation of the passive membrane penetration by the products of the CO₂ and 1,3-butadiene reaction for a greener technology*

16.40-17.00: **Zsófia Sarkadi** (Veszprém, Hungary): *Scaling in uniformly charged and bipolar nanopores through a modified Dukhin number*

Friday, 10 June

Session 11 (chair: István Bányai):

09.00-09.30: **Dezső Boda** (Veszprém, Hungary): *Physics, Chemistry, Biology, and Beyond: A Complex Systems Perspective*

09.30-09.50: **Balázs Fábián** (Frankfurt am Main, Germany): *Martini Cholesterol gives membranes the chills – and what you can do about it*

09.50-10.10: **Krisztina S. Nagy** (Budapest, Hungary): *Development of poly(aspartic acid) based hydrogels for tissue engineering purposes*

10.10-10.30: **Ákos Juhász** (Budapest, Hungary): *Characterizing 3D biodegradable artificial matrices*

10.30-11.10: Coffee break

Session 12 (chair: Angéla Jedlovsky-Hajdú):

11.10-12.00: **András Dinnyés** (Gödöllő, Hungary): *Human induced pluripotent stem cell-derived cardiomyocyte maturation on elastic bioactive electrospun materials to obtain an adult heart organotypic model*

12.00-12.20: **Péter Ádám** (Budapest, Hungary): *Space tests of porous aluminum oxide insulation fibers*

12.20-12.40: **Máté Csontos** (Debrecen, Hungary): *Study of bentonite hydration by NMR relaxometry and chemometrics*

12.40-13.00: **Áron Bóna** (Nagykanizsa, Hungary): *The effect of annealing and layer numbers on the ion exchange capacity of polyelectrolyte multilayer nanofiltration membranes*

13.00-13.15 Conference closing

13.15-14.30: Lunch

List of Posters

1. **Mónika Bak** (Budapest, Hungary): *Building a solid-like layer on the interface of two immiscible liquids using a polyelectrolyte and an opposite charged conventional surfactant*
2. **Diána Balogh-Weiser** (Budapest, Hungary): *Development of nanostructured biomimetic catalysts for the investigation of drug metabolism*
3. **Katalin Bere** (Szeged, Hungary): *Modelling the colloidal behavior of nano-sized particles in natural waters*
4. **Áron Bóna** (Nagykanizsa, Hungary): *The Effect of Surfactants on Polyelectrolyte Multilayer Nanofiltration Membranes*
5. **Bálint Budavári** (Budapest, Hungary): *Preparation and characterization of liposomal corticosteroids*
6. **Attila Csicsor** (Szeged, Hungary): *Impact of humic substances on the living organisms*
7. **Jennifer N. Enemmoh** (Leeds, UK): *Heavy-metal-removal-using-combined-Clinoptilolite-ion-exchange-and-co-precipitation-coagulation-techniques*
8. **Sándor Guba** (Veszprém, Hungary): *Determination of intrinsic loss power of magnetic fluid with differential thermometric system*
9. **Anna Harsányi** (Budapest, Hungary): *Preparation of highly fluorescent soft nanoparticles for bioimaging applications*
10. **Zoltán Horváth** (Budapest, Hungary): *Zn-loaded nanofiber based wound dressings*
11. **Tomáš Hrivnák** (Bratislava, Slovakia): *Atomistic and coarse-grained molecular dynamics study of self-diffusion of poly(alkyl acrylate) chains in melt*
12. **Ákos Juhász** (Budapest, Hungary): *Mechanical testing of nanofiber matrices with an affordable rupture detection system*
13. **Edit Kaszab** (Gödöllő, Hungary): *The potential role of antibiotic resistant environmental Pseudomonas species in microplastic colonization*
14. **Gábor Koplányi** (Budapest, Hungary): *Functionalized nanoparticles for efficient isolation and immobilization of a recombinant transaminase*
15. **Patrik Kula** (Prague, Czech Republic): *The shape of near-critical interfaces*
16. **Sándor Mester** (Zalaegerszeg, Hungary): *Polarizabilities and electric field induced forces in periodic two-component linear dielectric sphere chains*
17. **Roland Nagy** (Zalaegerszeg, Hungary): *Investigation of the sedimentation characterization of magnetorheological fluids*
18. **Mónika Nanys** (Budapest, Hungary): *Biodegradable, three-dimensional fiber structures created by electrospinning – the effect of humidity*
19. **Dávid Nyul** (Debrecen, Hungary): *The effect of ionic liquid on the morphology and surface character of carbon aerogels seen by NMR*
20. **Veronika Pálos** (Budapest, Hungary): *Optimization and potential medical application of fibrous structures made of polysuccinimide / inorganic salt mixture*

21. **Vanda Papp** (Debrecen, Hungary): *NMR characterization of cement binders related to the radioactive waste conditioning*
22. **Kadosa Sajdik** (Szeged, Hungary): *Monitoring the effect of pH and ionic strength on the interaction between Bovine Serum albumin molecules and graphene oxide nanosheets*
23. **Evelin Sánta-Bell** (Budapest, Hungary): *Stabilization of selectively complexed His-tagged enzymes on magnetic nanoparticles*
24. **Gergely Stankovits** (Budapest, Hungary): *The contribution of mucin in the in vitro mucoadhesion measured on hydrogel substrates*
25. **Gergő D. Tóth** (Budapest, Hungary): *Formulation of Lipases into Polymer Nanofibers for Pancreatin Replacement Therapies*
26. **Ildikó Y. Tóth** (Szeged, Hungary): *Solvent specific evaporation from CNT buckypapers with different functionalization*
27. **Mónika Valiskó** (Veszprém, Hungary): *A scaling parameter for selectivity in the infinitely long nanopore limit: extension to multivalent electrolytes*
28. **Viktória Varga** (Szeged, Hungary): *Preparation, characterization and stability of magnetite nanoflowers*
29. **Constantinos Voniatis** (Budapest, Hungary): *Application differences of liquid and gel alcohol based handrubs formulations*