

A 2022-es Regensburgban megrendezett DPG nemzetközi kondenzáltanyag-fizika konferencián angol nyelvű előadást (contributed talk) tartottam. Az absztrakt az alábbi kép mellett elérhető a következő [linken](#).

Verhandlungen

der Deutschen Physikalischen Gesellschaft e.V.

Regensburg 2022 – scientific programme

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TT: Fachverband Tiefe Temperaturen

TT 27: Quantum Coherence and Quantum Information Systems (joint session TT/DY)

TT 27.10: Talk

Thursday, September 8, 2022, 12:00–12:15, H22

selection status for this contribution:

Electrically driven spin resonance with bichromatic driving — •ZOLTÁN GYÖRGY¹, ANDRÁS PÁLYI², and GÁBOR SZÉCHENYI¹ — ¹Institute of Physics, Eötvös University, H-1117 Budapest, Hungary — ²Department of Theoretical Physics, Institute of Physics, Budapest University of Technology and Economics, H-1111 Budapest, Hungary

Electrically driven spin resonance (EDSR) is an established tool for controlling semiconductor spin qubits. Here, we theoretically study a frequency-mixing variant of EDSR, where two driving tones with different drive frequencies are applied, and the resonance condition connects the spin Larmor frequency with the sum of the two drive frequencies. Focusing on flopping-mode operation, we calculate the parameter dependence of the Rabi frequency and the Bloch-Siegert shift. A shared-control spin qubit architecture could benefit from this bichromatic EDSR scheme, as it enables simultaneous single-qubit gates.

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