



Contribution ID: 41

Type: **invited presentation**

## Fundamental physics with NMR: from high field to lower than low

*Wednesday 10 September 2025 11:10 (30 minutes)*

Recent work of our group and collaborators will be described, including the progress towards measuring parity violation in chiral molecules [1] and a novel type of nuclear-spin oscillators [2].

[1] Erik Van Dyke, James Eills, Kirill Sheberstov, John Blanchard, Manfred Wagner, Robert Graf, Andrés Emilio Wedenig, Konstantin Gaul, Robert Berger, Rudolf Pietschnig, Denis Kargin, Danila A. Barskiy, and Dmitry Budker, Towards detection of molecular parity violation via chiral co-sensing: the  $1\text{H}/31\text{P}$  model system, DOI: 10.1039/D5CP00126A; Phys. Chem. Chem. Phys., 2025, 27, 6092-6103, <https://arxiv.org/abs/2412.20997>

[2] Jingyan Xu, Raphael Kircher, Oleg Tretiak, Dmitry Budker, and Danila A. Barskiy, Quantum Magnetic J-Oscillators, <https://arxiv.org/abs/2504.06498> (2025)

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**Session Classification:** Session