

Microscale NMR and MRI conference 2025

29.6. – 02.07.2025
Buhlsche Mühle Ettlingen

Sunday, June 29th

Opening Session

- 15:00 – 18:30 Arrival & check-in at Hotel Watthalden
- 18:30 – 19:30 Welcome Reception at Buhlsche Mühle
- 19:30 – 21:00 Keynote by Jürgen Hennig
microNMR: Limits and Opportunities
- 21:00 – 22:00 Refreshments

Monday, June 30th

Session 1: Miniaturisation I (Chair: Jan G. Korvink)

- 08:30 – 09:15 Registration Desk at Buhlsche Mühle
- 09:15 – 10:00 Welcome – Spirit of HyPERiON
- 10:00 – 10:45 Dominik Bucher (TU Munich)
Small volume NMR with quantum sensors in diamond
- 10:45 – 11:30 Christian Degen (ETH Zurich)
Can we do DNP with single nitrogen-vacancy centers?
- 11:30 – 12:00 Coffee Break

Session 2: Miniaturisation II (Chair: Mazin Jouda)

- 12:00 – 12:45 John Blanchard (University of Maryland)
High-Performance NMR Microscopy Detected With Solid-State Qubits
- 12:45 – 13:30 Michael Tayler (ICFO Institute of Photonic Sciences)
Small instrumentation for NMR at small magnetic fields
- 13:30 – 14:30 Lunch Break
- 14:30 – 17:00 City tour Ettlingen
- 17:00 – 17:30 Group Photo
- 17:30 – 21:00 Poster Session & Get Together

Tuesday, July 1st

Session 3: Beating Boltzmann I (Chair: Kerstin Münnemann)

- 09:30 – 10:15 Arno Kentgens (Radboud Universiteit)
Development of high-sensitivity NMR in a microfluidic context
- 10:15 – 11:00 Coffee Break

Session 4: Beating Boltzmann II (Chair: Guinevere Mathies)

- 11:00 – 11:45 Klaus Lips (Helmholtz Zentrum Berlin)
EPR on a Chip for operando characterization of energy materials
- 11:45 – 12:30 Niels Nielsen (Aarhus University)
Recent progress in pulsed DNP at low-field NMR sensors for industrial process control
- 12:30 – 14:00 Lunch Break

Session 5: Throughput and in situ I (Chair: Jürgen Brandner)

- 14:00 – 14:45 Kazuyuki Takeda (Kyoto University)
Single-crystal NMR in powder and compact hardware – from membrane transducer to para-hydrogen generator
- 14:45 – 15:30 Rafael Brüscheiler (Ohio State University)
Machine learning and other advances for the automated analysis of complex NMR spectra at high and low magnetic field

15:30 – 16:00 Coffee Break

Session 6: Throughput and in situ II (Chair: Marcel Utz)

- 16:00 – 16:45 Irene Marco Rius (IBEC)
Lab-on-a-Chip Analysis Using Benchtop NMR Technology
- 16:45 – 17:30 Victoria Gomez (Universidad de Castilla-La Mancha)
Microcoils in Photo-CIDNP: Revealing New Potential in NMR Research
- 17:30 – 18:30 Exceptional PhD Student Talks
Chun Him Lee – Karlsruhe Institute of Technology
Billy Salgado – RPTU Kaiserslautern
Dmitrii Zasukhin – Karlsruhe Institute of Technology
Max Vöhringer – Karlsruhe Institute of Technology
- 18:30 – 23:30 Banquet Dinner at Watt's

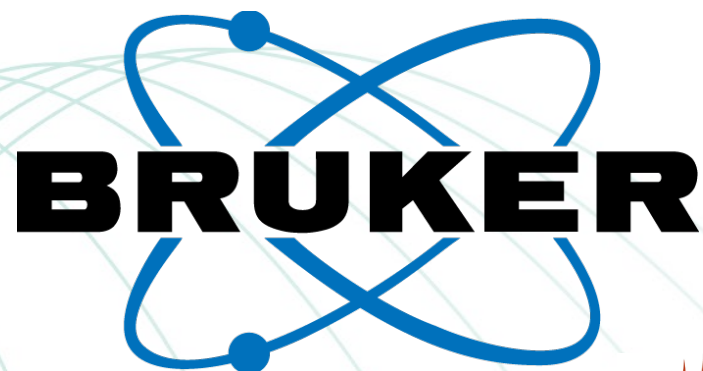
Session 7: Throughput and in situ III (Chair: Gisela Guthausen)

- 09:00 – 09:45 Raiker Witter (Tallinn University of Technology)
60 MHz compact magnet spectrometer, with fast MAS in a 18mm bore
- 09:45 – 10:30 Rachel Martin (University of California, Irvine)
NMR probes for everyone!
- 10:30 – 11:00 Coffee Break

Session 8: Beating Boltzmann III (Chair: Sören Lehmkuhl)

- 11:00 – 11:45 Thomas Prisner (Goethe University Frankfurt)
High-field DNP at room temperature
- 11:45 – 12:30 Dmitry Budker (Johannes Gutenberg University Mainz)
Enabled by hyperpolarization: zero- to ultralow-field NMR
- 12:30 End of Conference

Many thanks to our sponsors



OXFORD
INSTRUMENTS



SIEMENS
Healthineers

voxalytic

 **Zurich**
Instruments

HYPERSPIN



Funded by