



Magnetic Resonance of Correlated Electron Materials

Reflection of the workshop

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Many thanks to all of you for your contribution
to and participating in this workshop

Magnetic Resonance of Correlated Electron Materials

79

Total Participants

41

Oral Presentations

17

Posters

11

Countries of
Participants

Country	Participants	Oral Speakers
China	49	15
Japan	13	10
France	4	3
Slovenia	4	4
Croatia	2	2
Germany	2	2
Canada	1	1
Greece	1	1
Italy	1	1
Republic of Korea	1	1
Switzerland	1	1
Total	79	41

Europe 15

MagRes-2026 Conference Summary

Magnetic Resonance of Correlated Electron Materials

Huairou, Beijing | Sept. 7–12,
2026





- We missed participants from US due to unfortunate restrictions by NSF/DOE

Various Topics Covered/Discussed

- NMR continues to play important roles in studies on Quantum magnetism, Superconductivity
- Other topics (topological materials, altermagnets, multiple orders, ...)
- Combined with extreme conditions
- New techniques and new instrumentations
(*cf* Double resonance, Dynamical nuclear polarization...)

NMR/muSR for quantum magnetism (1)

- Phenomena: Magnetization Plateau

1/8 M. Horvatic, 1/3 Y. Ihara, 1/9 F. Bert
looking for exotic states on the plateau,
(localized pinwheel, SL, VBCrystal ...),

Possible Fractional Excitation (spinon, gapped or gapless)

W. Yu, M. Pregelj, A. Zorko, K. Povarov

- Materials: Kagome lattice (Kapellasite, Herbersmithite, Barlowite...)

M. Grbic, Y. Ihara, F. Bert. A. Zorko

Triangle lattice

L. Shu

NMR/muSR for quantum magnetism (2)

Phenomena: Fractional excitations and Kitaev quantum spin liquid

G. Papavassiliou, M. Klanjsek

Materials: Honeycomb lattice

G. Papavassiliou, M. Klanjsek

It is impressive to see that NMR can probe both Majorana Fermion excitations and Vison flux

NMR/muSR for quantum magnetism (3)

- Low dimensional magnetism and spin chains: localized Zhang-Rice triplet
H.J. Grafe, S.-H. Baek
- Heavy Fermions: Ce-, Yb-based, QCP
Y.-K. Luo, H. Sakai
- Flat band
L. Zheng
- Altermagnets
Y.K. Luo, S. Nandi

NMR for superconductivity (1)

- Cuprates: Competition between SC and other orders

G. Simutis, D. Pelc

- Nicklates: SDW/CDW order above the SC transition, mono-, Bi-, tri-layers

H. Mukuda, T. Wu, J. Luo, Y. Wang

NMR for superconductivity (2)

- U-, Ce-based: various degree of freedom
K. Ishida, S. Kitagawa, S. Li
- Transition-metal compounds: spin-triplet pairing, multiple-component order parameter, multiple phases
S. Ogawa
- Kagome-lattice superconductors: multiple gaps, loop current
S. Kawasaki, X.Y. Feng

NMR for topological materials

- Vison flux in Kitaev compound

M. Klanjsek

- Topological semi-metals

W. Papawassiliou, T. Fujii

- Skyrmion

M. Gomilsek

NMR for other topics

- Rear-Earth Hexaborides, metal-organic ferromagnets, 1T-TaS₂: AF quadrupole order
T. Mito, G. Prando, L. Nie
- NMR theory: Y. Zhou, J. Wang
- Posters

Extreme conditions

- High hydrostatic pressure

K. Kitagawa, W. Yu, G.Q. Liu, Y. Ihara, F. Bert, R. Jana

- **Uni-axial Strain**

G. Simutis, S. Kawasaki,

- Low Temperature

M. Horvatic, K. Ishida, S. Kitagawa, X.Y. Feng, S. Li

New methods, New instrumentations

- Optical detected NMR
K. Kitagawa, G.Q.Liu
- AI assisted NMR
K. Kitagawa
- Direct Digital Synthesizer (L. Ma), Bayesian Interface (T. Mito)

Challenging Expts.: small-gamma nuclei, low-f experiments

- ^{33}S -NMR (S.-H. Baek, L. Nie)
- Ba-NMR (M. Klanjsek)
- Low-freq NQR $\sim 0.5\text{MHz}$ (T. Mito)

History of NMR workshops

- Dresden 2005 organized by J. Haase
- Trogir (Croatia) 2010, 2011
- Beijing 2016 organized by G.-q. Zheng
- Dresden2023
- Beijing 2026

Where next MagRes?

Thanks to the program committee

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- Secretaries
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See you on the next occasion!