

PEER-REVIEWED PUBLICATIONS

- [1] Hamza Nasir, Daniel Balazs, Muhammad Nauman, Ezekiel Horsley, Subin Kim, Young-June Kim, and **K. A. Modic**. Magnetic fields in monoclinic α - RuCl_3 reveal rhombohedral inclusions underlying apparent oscillations. *preprint arXiv:2605.13444*, 2026. doi:[10.48550/arXiv.2605.13444](https://doi.org/10.48550/arXiv.2605.13444)
- [2] Joao C. Inácio, J. Schwab, G. Rakhmanova, S. Safari, V. Zambra, H. Nasir, S. Paschen, **K. A. Modic**, Fakher F. Assaad, and Toshihiro Sato. Dynamical magnetotropic susceptibility as a new probe of Kitaev materials and beyond. *preprint arXiv:2605.00568*, 2026. doi:[10.48550/arXiv.2605.00568](https://doi.org/10.48550/arXiv.2605.00568)
- [3] Valeska Zambra, Amit Nathwani, Muhammad Nauman, Sylvia K. Lewin, Corey E. Frank, Nicholas P. Butch, Arkady Shekhter, B. J. Ramshaw, and **K. A. Modic**. Giant transverse magnetic fluctuations at the edge of re-entrant superconductivity in UTe_2 . *Nature Communications*, 17(1):3742, 2026. doi:[10.1038/s41467-026-71899-7](https://doi.org/10.1038/s41467-026-71899-7)
- [4] Toshihiro Sato, B. J. Ramshaw, **K. A. Modic**, and Fakher F. Assaad. Scale-invariant magnetic anisotropy in α - RuCl_3 : A quantum monte carlo study. *Physical Review B*, 110(20):L201114, 2024. doi:[10.1103/PhysRevB.110.L201114](https://doi.org/10.1103/PhysRevB.110.L201114)
- [5] D. G. Franco, R. Avalos, D. Hafner, **K. A. Modic**, Yu Prots, O. Stockert, A. Hoser, P. J. W. Moll, M. Brando, A. A. Aligia, et al. Frustrated magnetism in octahedra-based $\text{Ce}_6\text{Ni}_6\text{P}_{17}$. *Physical Review B*, 109(5):054405, 2024. doi:[10.1103/PhysRevB.109.054405](https://doi.org/10.1103/PhysRevB.109.054405)
- [6] A. Shekhter, R. D. McDonald, B. J. Ramshaw, and **K. A. Modic**. Magnetotropic susceptibility. *Phys. Rev. B*, 108(3):035111, 2023. doi:[10.1103/PhysRevB.108.035111](https://doi.org/10.1103/PhysRevB.108.035111)
- [7] **K. A. Modic**, Ross D. McDonald, J. P. C. Ruff, Maja D. Bachmann, You Lai, Johanna C. Palmstrom, David Graf, Mun Chan, F. F. Balakirev, J. B. Betts, G. S. Boebinger, Marcus Schmidt, Michael J. Lawler, D. A. Sokolov, Philip J. W. Moll, B. J. Ramshaw, and Arkady Shekhter. Scale-invariant magnetic anisotropy in RuCl_3 at high magnetic fields. *NATURE PHYSICS*, 17:240–244, 2021. doi:[10.1038/s41467-018-06412-w](https://doi.org/10.1038/s41467-018-06412-w)
- [8] Máté Hartstein, Yu-Te Hsu, **K. A. Modic**, Juan Porras, Toshinao Loew, Matthieu Le Tacon, Huakun Zuo, Jinhua Wang, Zengwei Zhu, Mun K Chan, Ross D. McDonald, Gilbert G. Lonzarich, Bernhard Keimer, Suchitra E. Sebastian, and Neil Harrison. Hard antinodal gap revealed by quantum oscillations in the pseudogap regime of underdoped high- T_c superconductors. *NATURE PHYSICS*, 16:841–847, 2020. doi:[10.1038/s41567-020-0910-0](https://doi.org/10.1038/s41567-020-0910-0)
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