

Journal Publications

2025

Bulk and surface electron scattering in disordered Bi_2Te_3 probed by quasiparticle interference, V. Nagorkin, S. Schimmel, P. Gebauer, A. Isaeva, D. Baumann, A. Koitzsch, B. Büchner, C. Hess,
[Phys. Rev. B 111, 115111 \(2025\)](#)

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Fermi arcs dominating the electronic surface properties of trigonal PtBi_2 , S. Hoffmann, S. Schimmel, R. Vocaturo, J. Puig, G. Shipunov, O. Janson, S. Aswartham, D. Baumann, B. Büchner, J. van den Brink, Y. Fasano, J. I. Facio, C. Hess,
[Adv. Phys. Res. 2400150 \(2024\)](#)

Surface superconductivity in the topological Weyl semimetal $t\text{-PtBi}_2$, S. Schimmel, Y. Fasano, S. Hoffmann, J. Besprosvanny, L. T. Corredor, J. Puig, B.-C. Elshalem, B. Kalisky, G. Shipunov, D. Baumann, S. Aswartham, B. Büchner, C. Hess,
[Nature Communications 15, 9895 \(2024\)](#)

Phonon thermal transport shaped by strong spin-phonon scattering in a Kitaev material $\text{Na}_2\text{Co}_2\text{TeO}_6$, X. Hong, M. Gillig, W. Yao, L. Janssen, V. Kocsis, S. Gass, Y. Li, A. U. B. Wolter, B. Büchner, C. Hess,
[npj Quantum Materials 9, 18 \(2024\)](#)

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Spinon Heat Transport in the Three-Dimensional Quantum Magnet $\text{PbCuTe}_2\text{O}_6$, X. Hong, M. Gillig, A. R. N. Hanna, S. Chillal, A. T. M. Nazmul Islam, B. Lake, B. Büchner, C. Hess,
[Phys. Rev. Lett. 131, 256701 \(2023\)](#)

Anomalous Nernst effect in the topological and magnetic material MnBi_4Te_7 , M. Ceccardi, A. Zeugner, L. C. Folkers, C. Hess, B. Büchner, D. Marré, A. Isaeva, F. Cagliaris,
[npj Quantum Materials 8, 76 \(2023\)](#)

Phononic-magnetic dichotomy of the thermal Hall effect in the Kitaev-Heisenberg candidate material $\text{Na}_2\text{Co}_2\text{TeO}_6$, M. Gillig, X. Hong, C. Wellm, V. Kataev, W. Yao, Y. Li, B. Büchner, C. Hess,
[Phys. Rev. Research 5, 043110 \(2023\)](#)

Berezinskii–Kosterlitz–Thouless Transition in the Type-I Weyl Semimetal PtBi_2 , A. Veyrat, V. Labracherie, D. L. Bashlakov, F. Cagliaris, J. I. Facio, G. Shipunov, T. Charvin, R. Acharya, Y. Naidyuk, R. Giraud, J. van den Brink, B. Büchner, C. Hess, S. Aswartham, J. Dufouleur,
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Heat transport of the kagomé Heisenberg quantum spin liquid candidate $\text{YCu}_3(\text{OH})_{6.5}\text{Br}_{2.5}$: localized magnetic excitations and spin gap,

X. Hong, M. Behnami, L. Yuan, B. Li, W. Brenig, B. Büchner, Y. Li, C. Hess,
[Phys. Rev. B 106, L220406 \(2022\)](#)

Absence of hexagonal-to-square lattice transition in LiFeAs vortex matter,
S. Hoffmann, R. Schlegel, C. Salazar, S. Sykora, P. K. Nag, P. Khanenko, R. Beck, S. Aswartham, S. Wurmehl, B. Büchner, Y. Fasano, C. Hess,

[Phys. Rev. B 106, 134507 \(2022\)](#)

Ubiquitous enhancement of nematic fluctuations across the phase diagram of iron based superconductors probed by the Nernst effect,

C. Wuttke, F. Caglieris, S. Sykora, F. Steckel, X. Hong, S. Ran, S. Khim, R. Kappenberger, S. L. Bud'ko, P. C. Canfield, S. Wurmehl, S. Aswartham, B. Büchner, C. Hess,

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Absence of nematic instability in LiFeAs ,

M. Wissmann, F. Caglieris, X. Hong, S. Aswartham, A. Vorobyova, I. Morozov, B. Büchner, C. Hess,

[Phys. Rev. B 106, 054508 \(2022\)](#)

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X. Hong, S. Sykora, F. Caglieris, M. Behnami, I. Morozov, S. Aswartham, V. Grinenko, K. Kihou, C.-H. Lee, B. Büchner, C. Hess,

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Spin liquid evidence at the edge and in bulk,

A. U. B. Wolter, C. Hess,

[Nature Physics 18, 378 \(2022\)](#)

A robust thermoelectric module based on $\text{MgAgSb}/\text{Mg}_3(\text{Sb,Bi})_2$ with a conversion efficiency of 8.5% and a maximum cooling of 72 K,

P. Ying, L. Wilkens, H. Reith, N. Perez Rodriguez, X. Hong, Q. Lu, C. Hess, K. Nielsch, R. He,

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Thermal transport of the frustrated spin-chain mineral linarite: Magnetic heat transport and strong spin-phonon scattering,

M. Gillig, X. Hong, P. Sakrikar, G. Bastien, A. U. B. Wolter, L. Heinze, S. Nishimoto, B. Büchner, C. Hess,

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N. Pérez, A. U. B. Wolter, Y. Li, B. Büchner, C. Hess,
[Phys. Rev. B 104, 144426 \(2021\)](#)

Laser-Assisted Floating Zone Growth of BaFe_2S_3 Large-Sized Ferromagnetic-Impurity-Free
Single Crystals,
M. L. Amigó, A. Maljuk, K. Manna, Q. Stahl, C. Felser, C. Hess, A. U. B. Wolter, J. Geck, S.
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[Crystals 11, 758 \(2021\)](#)

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Evidence for a percolative Mott insulator-metal transition in doped Sr_2IrO_4 ,
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Strain derivative of thermoelectric properties as a sensitive probe for nematicity,
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Thermoelectric Properties of Novel Semimetals: A Case Study of YbMnSb_2 ,
Y. Pan, F.-R. Fan, X. Hong, B. He, C. Le, W. Schnelle, Y. He, K. Imasato, H. Borrmann, C.
Hess, B. Büchner, Y. Sun, C. Fu, G. J. Snyder, C. Felser,
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High-field thermal transport properties of the Kitaev quantum magnet $\alpha\text{-RuCl}_3$: evidence for
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R. Hentrich, X. Hong, M. Gillig, F. Caglieris, M. Culo, M. Shahrokhvand, U. Zeitler, M.
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Spectroscopic evidence of nematic fluctuations in LiFeAs,
Z. Sun, P. K. Nag, S. Sykora, J. M. Guevara, S. Hoffmann, C. Salazar, T. Hänke, R.

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C. Hess,
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