

ARTICLES

Structure, structural phase transitions, mechanical properties, defects

- Antiphase domain growth: Correlation functions and structure factors in the scaling regime (*12 pages*) 094101
Ulrike Zweck and Michael Leitner

- High-energy-density polymeric carbon oxide: Layered C_xO_y solids under pressure (*9 pages*) 094102
Chuli Sun, Wei Guo, Jinlong Zhu, Xiang Li, and Yugui Yao

- Simulations of spatially and angle-resolved vibrational electron energy loss spectroscopy for a system with a planar defect (*12 pages*) 094103
Paul M. Zeiger and Ján Rusz

- Chern number and Berry curvature for Gaussian mixed states of fermions (*6 pages*) 094104
Lukas Wawer and Michael Fleischhauer

- Magic numbers for vibrational frequency of charged particles on a sphere (*6 pages*) 094105
Shota Ono

-  Interacting defects generate stochastic fluctuations in superconducting qubits (*13 pages*) 094106
J. H. Béjanin, C. T. Earnest, A. S. Sharafeldin, and M. Mariani

- Experimental thermal equation of state of $B2-KCl$ (*6 pages*) 094107
B. A. Chidester, E. C. Thompson, R. A. Fischer, D. L. Heinz, V. B. Prakapenka, Y. Meng, and A. J. Campbell

- Flexocaloric effect near a ferroelastic transition (*9 pages*) 094108
Marcel Porta, Teresa Castán, Avadh Saxena, and Antoni Planes

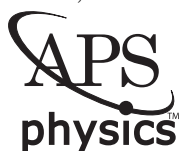
- Pressure-induced phase transition and phonon softening in $h-Lu_{0.6}Sc_{0.4}FeO_3$ (*9 pages*) 094109
K. A. Smith, S. P. Ramkumar, N. C. Harms, A. J. Clune, S.-W. Cheong, Z. Liu, E. A. Nowadnick, and J. L. Musfeldt

- Resonant-scattering hybrid device for multiband acoustic topology valley transmission (*10 pages*) 094110
Zhen Huang, Jiuhui Wu, Chang Wang, Shaokun Yang, and Fuyin Ma

Inhomogeneous, disordered, and partially ordered systems

- Disorder and phase diagrams of higher-order topological insulators (*14 pages*) 094201
Yu-Song Hu, Yue-Ran Ding, Jie Zhang, Zhi-Qiang Zhang, and Chui-Zhen Chen

- Interplay and competition between disorder and flat band in an interacting Creutz ladder (*11 pages*) 094202
Takahiro Orito, Yoshihito Kuno, and Ikuo Ichinose



	Path integral approach unveils role of complex energy landscape for activated dynamics of glassy systems (26 pages)	094203
	Tommaso Rizzo	
	Charge doping effects on magnetic properties of single-crystal $\text{La}_{1-x}\text{Sr}_x(\text{Cr}_{0.2}\text{Mn}_{0.2}\text{Fe}_{0.2}\text{Co}_{0.2}\text{Ni}_{0.2})\text{O}_3$ ($0 \leq x \leq 0.5$) high-entropy perovskite oxides (8 pages)	094204
	Alessandro R. Mazza, Elizabeth Skoropata, Jason Lapano, Jie Zhang, Yogesh Sharma, Brianna L. Musico, Veerle Keppens, Zheng Gai, Matthew J. Brahlek, Adriana Moreo, Dustin A. Gilbert, Elbio Dagotto, and Thomas Z. Ward	
	Fluctuation-driven transitions in localized insulators: Intermittent metallicity and path chaos precede delocalization (21 pages)	094205
	Valentina Ros and Markus Müller	
	Dynamics, dynamical systems, lattice effects:	
	Probing the superfluid-insulator phase transition by a non-Hermitian external field (8 pages)	094301
	X. Z. Zhang and Z. Song	
	Photoexcited carrier dynamics of thin film Cd_3As_2 grown on a $\text{GaAs}(111)B$ substrate by molecular beam epitaxy (10 pages)	094302
	Guihao Zhai, Jialin Ma, Hailong Wang, Jialiang Ye, Ting Li, Ying Li, Gaoming Liang, Jianhua Zhao, Xiaoguang Wu, and Xinhui Zhang	
	Coupling of microwave photons to optical and acoustic magnon modes in the layered antiferromagnetic insulator CrCl_3 (6 pages)	094303
	Qi Zhang, Jianshu Xue, Yitong Sun, Jiajun Guo, Yanxue Chen, Yufeng Tian, Shishen Yan, and Lihui Bai	
	Measurement-induced purification in large- N hybrid Brownian circuits (32 pages)	094304
	Gregory S. Bentsen, Subhayan Sahu, and Brian Swingle	
	Microscopic dynamics of lithium diffusion in single crystal of the solid-state electrolyte $\text{La}_{2/3-x}\text{Li}_{3x}\text{TiO}_3$ ($x = 0.13$) studied by quasielastic neutron scattering (7 pages)	094305
	Masato Matsuura, Yasuyuki Fujiwara, Hiroki Moriwake, Koji Ohara, and Yukinobu Kawakita	
	Fate of symmetry protected coherence in open quantum system (9 pages)	094306
	Tian-Shu Deng (邓天舒) and Lei Pan (潘磊)	
	Determination of local defect density in diamond by double electron-electron resonance (10 pages)	094307
	Shang Li, Huijie Zheng, Zaili Peng, Mizuki Kamiya, Tomoyuki Niki, Viktor Stepanov, Andrey Jarmola, Yasuhiro Shimizu, Susumu Takahashi, Arne Wickenbrock, and Dmitry Budker	
	Classical approaches to prethermal discrete time crystals in one, two, and three dimensions (10 pages)	094308
	Andrea Pizzi, Andreas Nunnenkamp, and Johannes Knolle	
	Quantum chaos and ensemble inequivalence of quantum long-range Ising chains (16 pages)	094309
	Angelo Russomanno, Michele Fava, and Markus Heyl	
	Dual adaptive sampling and machine learning interatomic potentials for modeling materials with chemical bond hierarchy (10 pages)	094310
	Hongliang Yang, Yifan Zhu, Erting Dong, Yabei Wu, Jiong Yang, and Wenqing Zhang	
	Exact zeros of the Loschmidt echo and quantum speed limit time for the dynamical quantum phase transition in finite-size systems (8 pages)	094311
	Bozhen Zhou, Yumeng Zeng, and Shu Chen	

(Continued)

Magnetism

Coexistence of low-frequency spin-torque ferromagnetic resonance and unidirectional spin Hall magnetoresistance (9 pages)	094401
Motomi Aoki, Ei Shigematsu, Ryo Ohshima, Teruya Shinjo, Masashi Shiraishi, and Yuichiro Ando	
High- T_C ferromagnetic inverse Heusler alloys: A comparative study of Fe_2RhSi and Fe_2RhGe (9 pages)	094402
Y. Venkateswara, S. Shanmukharao Samatham, Akhilesh Kumar Patel, P. D. Babu, Manoj Raama Varma, K. G. Suresh, and Aftab Alam	
 Magnetic proximity effect in magnetic-insulator/heavy-metal heterostructures across the compensation temperature (9 pages)	094403
Jackson J. Bauer, Patrick Quarterman, Alexander J. Grutter, Bharat Khurana, Subhajit Kundu, K. Andre Mkhoyan, Julie A. Borchers, and Caroline A. Ross	
Tunable competing magnetic anisotropies and spin reconfigurations in ferrimagnetic $\text{Fe}_{100-x}\text{Gd}_x$ alloy films (14 pages)	094404
A. Chanda, J. E. Shoup, N. Schulz, D. A. Arena, and H. Srikanth	
Critical behavior in the van der Waals itinerant ferromagnet Fe_4GeTe_2 (9 pages)	094405
Suchanda Mondal, Nazir Khan, Smruti Medha Mishra, Biswarup Satpati, and Prabhat Mandal	
Anisotropic magnetothermal transport in Co_2MnGa thin films (11 pages)	094406
Philipp Ritzinger, Helena Reichlova, Dominik Kriegner, Anastasios Markou, Richard Schlitz, Michaela Lammel, Daniel Scheffler, Gyu Hyeon Park, Andy Thomas, Pavel Středa, Claudia Felser, Sebastian T. B. Goennenwein, and Karel Vyborny	
Worldline algorithm by oracle-guided variational autoregressive network (8 pages)	094407
Zhifang Shi, Yuchuang Cao, Qiangqiang Gu, and Ji Feng	
Generalized model of MnSi-like spiral magnets (9 pages)	094408
K. P. W. Hall and S. H. Curnoe	
Anomalous Gilbert damping induced by the coexisting static and dynamic coupling in Fe/Pd/Fe trilayers (6 pages)	094409
Yan Li, Yang Li, Rui Sun, Na Li, Zi-Zhao Gong, Xu Yang, Zong-Kai Xie, Hao-Liang Liu, Wei He, Xiang-Qun Zhang, and Zhao-Hua Cheng	
Diffusion and operator entanglement spreading (8 pages)	094410
Vincenzo Alba	
Time evolution of an infinite projected entangled pair state: Neighborhood tensor update (10 pages)	094411
Jacek Dziarmaga	
Switching the perpendicular magnetization of a magnetic insulator by magnon transfer torque (7 pages)	094412
C. Y. Guo, C. H. Wan, M. K. Zhao, C. Fang, T. Y. Ma, X. Wang, Z. R. Yan, W. Q. He, Y. W. Xing, J. F. Feng, and X. F. Han	
Theoretical study of quantum spin liquids in $S = \frac{1}{2}$ hyper-hyperkagome magnets: Classification, heat capacity, and dynamical spin structure factor (14 pages)	094413
Li Ern Chern and Yong Baek Kim	
 Determination of spin chirality using x-ray magnetic circular dichroism (7 pages)	094414
Gerrit van der Laan	

(Continued)

Effective exchange interaction for terahertz spin waves in iron layers (<i>11 pages</i>)	094415
L. Brandt, U. Ritzmann, N. Liebing, M. Ribow, I. Razdolski, P. Brouwer, A. Melnikov, and G. Woltersdorf	
Quantum paramagnetism and magnetization plateaus in a kagome-honeycomb Heisenberg antiferromagnet (<i>15 pages</i>)	094416
Meghadeepa Adhikary, Arnaud Ralko, and Brijesh Kumar	
Theoretical study of extrinsic spin current generation in ferromagnets induced by anisotropic spin-flip scattering (<i>15 pages</i>)	094417
Yuta Yahagi, Daisuke Miura, Akimasa Sakuma, and Jakub Železný	
Spin spiral and topological Hall effect in Fe_3Ga_4 (<i>7 pages</i>)	094418
Mahdi Afshar and Igor I. Mazin	
Sum rules of <i>L</i> -edge x-ray magnetic circularly polarized emission for 3 <i>d</i> transition metals (<i>14 pages</i>)	094419
Akihiro Koide, Takuji Nomura, and Toshiya Inami	
Suppression of antiferromagnetic order and strong ferromagnetic spin fluctuations in $\text{Ca}(\text{Co}_{1-x}\text{Ni}_x)_2\text{As}_2$ single crystals (<i>18 pages</i>)	094420
Santanu Pakhira, Y. Lee, Liqin Ke, V. Smetana, A.-V. Mudring, Thomas Heitmann, David Vaknin, and D. C. Johnston	
 Magnetic properties and signatures of moment ordering in the triangular lattice antiferromagnet KCeO_2 (<i>11 pages</i>)	094421
Mitchell M. Bordelon, Xiaoling Wang, Daniel M. Pajerowski, Arnab Banerjee, Mark Sherwin, Craig M. Brown, M. S. Eldeeb, T. Petersen, L. Hozoi, U. K. Röbber, Martin Mourigal, and Stephen D. Wilson	
Anomalous spin waves in CsFeCl_3 and RbFeCl_3 (<i>7 pages</i>)	094422
L. Stoppel, S. Hayashida, Z. Yan, A. Podlesnyak, and A. Zheludev	
Carrier-induced ferromagnetism in two-dimensional magnetically doped semiconductor structures (<i>7 pages</i>)	094423
V. A. Stephanovich, E. V. Kirichenko, G. Engel, Yu. G. Semenov, and K. W. Kim	
Piezomagnetism of superconducting iron chalcogenides (<i>8 pages</i>)	094424
V. D. Fil, D. V. Fil, G. A. Zvyagina, K. R. Zhekov, I. V. Bilych, D. A. Chareev, M. P. Kolodyazhnaya, A. Bludov, and E. Nazarova	
Meron-antimeron crystals in noncentrosymmetric itinerant magnets on a triangular lattice (<i>11 pages</i>)	094425
Satoru Hayami and Ryota Yambe	
Skyrmion elongation, duplication, and rotation by spin-transfer torque under spatially varying spin current (<i>6 pages</i>)	094426
Floris van Duijn, Javier Osca, and Bart Sorée	
Unidirectional emission and reconfigurability of channeled spin waves from a vortex core in a teardrop-shaped nanopatch (<i>10 pages</i>)	094427
D. Osuna Ruiz, E. L. Martin, A. P. Hibbins, and F. Y. Ogrin	
 $\text{MoP}_3\text{SiO}_{11}$: A $4d^3$ honeycomb antiferromagnet with disconnected octahedra (<i>10 pages</i>)	094428
Danis I. Badrtdinov, Lei Ding, Clemens Ritter, Jan Hembacher, Niyaz Ahmed, Yurii Skourski, and Alexander A. Tsirlin	
Effects of hydrogen absorption on magnetism in $\text{Ni}_{80}\text{Fe}_{20}/\text{Y}/\text{Pd}$ trilayers (<i>12 pages</i>)	094429
Charles Weiss, René Hübner, Martin Saunders, Anna Semisalova, Jonathan Ehrler, Nataliia Schmidt, Johannes Seyd, Manfred Albrecht, Shadab Anwar, Jürgen Lindner, Kay Potzger, and Mikhail Kostylev	

(Continued)

Spin-orbit torque in a Ni-Fe single layer (9 pages)	094430
Takeshi Seki, Yong-Chang Lau, Satoshi Iihama, and Koki Takanashi	
Extent of frustration in the classical Kitaev- Γ model via bond anisotropy (11 pages)	094431
Ahmed Rayyan, Qiang Luo, and Hae-Young Kee	
Orbital angular momentum transfer in molecular magnets (11 pages)	094432
Mahboubeh Mahdavi, Zahra Amini Sabegh, Hamid R. Hamed, and Mohammad Mahmoudi	
Magnetic relaxation time for an ensemble of nanoparticles with randomly aligned easy axes: A simple expression (11 pages)	094433
Artek R. Chalifour, Jonathon C. Davidson, Nicholas R. Anderson, Thomas M. Crawford, and Karen L. Livesey	
Effect of magnons on the temperature dependence and anisotropy of spin-orbit torque (14 pages)	094434
Frank Freimuth, Stefan Blügel, and Yuriy Mokrousov	
Superfluidity and superconductivity	
Phonon-mediated superconductivity in bismuthates by nonadiabatic pairing (8 pages)	094501
Dominik Szczęśniak, Adam Z. Kaczmarek, Ewa A. Drzazga-Szczęśniak, and Radosław Szczęśniak	
Electronic structure, electron-phonon coupling, and superconductivity in noncentrosymmetric ThCoC ₂ from <i>ab initio</i> calculations (14 pages)	094502
Gabriel Kuderowicz, Paweł Wójcik, and Bartłomiej Wiendlocha	
Disorder-robust <i>p</i> -wave pairing with odd-frequency dependence in normal metal–conventional superconductor junctions (7 pages)	094503
Tomas Löthman, Christopher Triola, Jorge Cayao, and Annica M. Black-Schaffer	
Possible two-component spin-singlet pairings in Sr ₂ RuO ₄ (9 pages)	094504
San-Jun Zhang, Da Wang, and Qiang-Hua Wang	
Disorder-induced currents as signatures of chiral superconductivity (8 pages)	094505
Madhuparna Karmakar and R. Ganesh	
Theory of a pair density wave on a quasi-one-dimensional lattice in the Hubbard model (8 pages)	094506
Soma Yoshida, Keiji Yada, and Yukio Tanaka	
Ultrafast transient reflectivity measurements of optimally doped Bi _{2+x} Sr _{2-x} CaCu ₂ O _{8+δ} with disorder (9 pages)	094507
Y. Toda, S. Tsuchiya, M. Oda, T. Kurosawa, S. Katsumata, M. Naseska, T. Mertelj, and D. Mihailovic	
Emergence of well-screened states in a superconducting material of the CaFe ₂ As ₂ family (6 pages)	094508
Ram Prakash Pandeya, Anup Pradhan Sakhya, Sawani Datta, Tanusree Saha, Giovanni De Ninno, Rajib Mondal, C. Schlueter, A. Gloskovskii, Paolo Moras, Matteo Jugovac, Carlo Carbone, A. Thamizhavel, and Kalobaran Maiti	
Coexistence of vortex arrays and surface capillary waves in spinning prolate superfluid ⁴ He nanodroplets (11 pages)	094509
Martí Pi, José María Escartín, Francesco Ancilotto, and Manuel Barranco	
Internal structure of localized quantized vortex tangles (6 pages)	094510
Tomo Nakagawa, Sosuke Inui, and Makoto Tsubota	

(Continued)

Strain-induced spin vortex and Majorana Kramers pairs in doped topological insulators with nematic superconductivity (8 pages)	094511
R. S. Akzyanov and A. L. Rakhmanov	
Positive and negative chemical pressure effects investigated in electron-doped FeSe films with an electric-double-layer structure (6 pages)	094512
N. Shikama, Y. Sakishita, F. Nabeshima, and A. Maeda	
Fluctuation spectroscopy in granular superconductors with application to boron-doped nanocrystalline diamond (12 pages)	094513
D. T. S. Perkins, G. M. Klemencic, J. M. Fellows, and R. A. Smith	
BCS-BEC crossover in a two-band superconductor with odd-parity hybridization (11 pages)	094514
G. N. Bremm, M. A. Continentino, and T. Micklitz	
Probing the superconducting ground state of noncentrosymmetric high-entropy alloys using muon-spin rotation and relaxation (8 pages)	094515
Kapil Motla, Arushi, P. K. Meena, D. Singh, P. K. Biswas, A. D. Hillier, and R. P. Singh	
Exploring multichannel superconductivity in ThFeAsN (10 pages)	094516
Fabian Schrodri, Fairaja Cheenicode Kabeer, Alex Aperis, and Peter M. Oppeneer	
Ballistic SNS sandwich as a Josephson junction (13 pages)	094517
Edouard B. Sonin	
Odd-frequency pairing inherent in a Bogoliubov Fermi liquid (14 pages)	094518
Tatsuya Miki, Shun-Ta Tamura, Shoma Iimura, and Shintaro Hoshino	
Microwave response of superconductors that obey local electrodynamics (10 pages)	094519
František Herman and Richard Hlubina	
Strong-coupling corrections to hard domain walls in superfluid $^3\text{He-B}$ (9 pages)	094520
M. J. Rudd, P. Senarath Yapa, A. J. Shook, J. Maciejko, and J. P. Davis	
Two-fluid coexistence and phase separation in a one-dimensional model with pair hopping and density interactions (17 pages)	094521
Lorenzo Gotta, Leonardo Mazza, Pascal Simon, and Guillaume Roux	
Specific heat and gap structure of a nematic superconductor: Application to FeSe (18 pages)	094522
Kazi Ranjibul Islam, Jakob Böker, Ilya M. Eremin, and Andrey V. Chubukov	
Moving vortices in anisotropic superconductors (9 pages)	094523
V. G. Kogan and N. Nakagawa	
Phase diagram of the Hubbard model on a square lattice: A cluster slave-spin study (12 pages)	094524
Ming-Huan Zeng, Tianxing Ma, and Y.-J. Wang	
Nonballistic transport characteristics of superconducting point contacts (6 pages)	094525
Ritesh Kumar and Goutam Sheet	
Critical current in thin flat superconductors with Bean-Livingston and geometrical barriers (18 pages)	094526
G. P. Mikitik	

(Continued)

RKKY interaction in a spin-split superconductor (<i>8 pages</i>)	094527
Atousa Ghanbari and Jacob Linder	
Interaction of magnons with plasmons in a system of antiferromagnetic insulators coupled to a superconductor microwave cavity through interfacial exchange interaction (<i>9 pages</i>)	094528
A. G. Mal'shukov	
Symmetry, nodal structure, and Bogoliubov Fermi surfaces for nonlocal pairing (<i>33 pages</i>)	094529
Carsten Timm and Ankita Bhattacharya	

ERRATA

Erratum: Quasi-two-dimensional magnetic correlations in $\text{Ni}_2\text{P}_2\text{S}_6$ probed by ^{31}P NMR [Phys. Rev. B 102 , 064429 (2020)] (<i>1 page</i>)	099901(E)
A. P. Dioguardi, S. Selter, U. Peeck, S. Aswartham, M.-I. Sturza, R. Murugesan, M. S. Eldeeb, L. Hozoi, B. Büchner, and H.-J. Grafe	
Erratum: Crystal symmetry based selection rules for anharmonic phonon-phonon scattering from a group theory formalism [Phys. Rev. B 103 , 184302 (2021)] (<i>1 page</i>)	099902(E)
Runqing Yang, Shengying Yue, Yujie Quan, and Bolin Liao	
Erratum: Experimental determination of the critical spin-glass correlation length in single-crystal CuMn [Phys. Rev. B 102 , 064427 (2020)] (<i>4 pages</i>)	099903(E)
G. G. Kenning, D. L. Schlagel, and V. Thompson	