

CONTENTS - Continued

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 108, NUMBER 9

SEPTEMBER 2023-1(I)

Noise-induced transition from superfluid to vortex state in two-dimensional nonequilibrium polariton condensates: Semianalytical treatment (9 pages)	094510
Vladimir N. Gladilin and Michiel Wouters	
Robust and tunable coreless vortices and fractional vortices in chiral d -wave superconductors (24 pages)	094511
P. Holmvall, N. Wall-Wennerdal, and A. M. Black-Schaffer	
Interplay between nonequilibrium quasiparticle relaxation and dynamic supercurrent enhancement in aluminum superconducting constriction junctions (10 pages)	094512
Shung-Kang Koh, Pei-Yuan Li, Ching-Ping Lee, Io-Chun Hoi, Yen-Hsiang Lin, Chung-Yu Mou, Dah-Chin Ling, Yung-Fu Chen, Cen-Shawn Wu, and Jeng-Chung Chen	
Proximity-induced equilibrium supercurrent and perfect superconducting diode effect due to band asymmetry (7 pages)	094513
Pavan Hosur and Daniel Palacios	
 ac Josephson effect in a gate-tunable Cd_3As_2 nanowire superconducting weak link (8 pages)	094514
R. Haller, M. Osterwalder, G. Fülöp, J. Ridderbos, M. Jung, and C. Schönenberger	
Higgs amplitude mode in ballistic superconducting hybrid junctions (12 pages)	094515
P. Vallet and J. Cayssol	
 Constraints on the superconducting state of Sr_2RuO_4 from elastocaloric measurements (20 pages)	094516
Grgur Palle, Clifford Hicks, Roser Valentí, Zhenhai Hu, You-Sheng Li, Andreas Rost, Michael Nicklas, Andrew P. Mackenzie, and Jörg Schmalian	
Finite momentum superconductivity in superconducting hybrids: Orbital mechanism (12 pages)	094517
M. Yu. Levichev, I. Yu. Pashenkin, N. S. Gusev, and D. Yu. Vodolazov	
DC Josephson effect between two Yu-Shiba-Rusinov bound states (8 pages)	094518
Subrata Chakraborty, Danilo Nikolić, Rubén Seoane Souto, Wolfgang Belzig, and Juan Carlos Cuevas	
Vital influence of hydrogen σ antibonding states on high- T_c superconductivity in SH_3 under ultrahigh pressure (10 pages)	094519
Jian-Feng Zhang, Bo Zhan, Miao Gao, Kai Liu, Xinguo Ren, Zhong-Yi Lu, and Tao Xiang	
Probing the order parameter symmetry of two-dimensional superconductors by twisted Josephson interferometry (14 pages)	094520
Jiewen Xiao, Yaar Vituri, and Erez Berg	

ERRATA

Erratum: Small-angle neutron scattering in the fully polarized phase of noncollinear magnets with interfacial-like Dzyaloshinskii-Moriya interaction [Phys. Rev. B 106 , 174408 (2022)] (1 page)	099901(E)
Oleg I. Utesov	

CONTENTS - Continued

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 108, NUMBER 9

SEPTEMBER 2023-1(I)

Tuning the magnetic properties of the CrMnFeCoNi Cantor alloy (10 pages)	094437
Timothy A. Elmslie, Jacob Startt, Yang Yang, Sujeily Soto-Medina, Emma Zappala, Mark W. Meisel, Michele V. Manuel, Benjamin A. Frandsen, Rémi Dingreville, and James J. Hamlin	
Magnetic twisting in an artificial ferrimagnet: Anisotropic magnetoresistance on Py/Gd/Pt/Gd/Pt/SiN _x multilayers (9 pages)	094438
Kai Zhang, Y. X. Niu, Yang Meng, Hong-Wu Zhao, and J. Li	
Effective rectification of terahertz electromagnetic fields in a ferrimagnetic iron garnet (13 pages)	094439
T. G. H. Blank, E. A. Mashkovich, K. A. Grishunin, C. F. Schippers, M. V. Logunov, B. Koopmans, A. K. Zvezdin, and A. V. Kimel	
In-plane anisotropy of single- <i>q</i> and multiple- <i>q</i> ordered phases in the antiferromagnetic metal CeRh ₂ Si ₂ (8 pages)	094440
Hiraku Saito, Fusako Kon, Hiroyuki Hidaka, Hiroshi Amitsuka, Cho Kwanghee, Masato Hagihara, Takashi Kamiyama, Shinichi Itoh, and Taro Nakajima	
Dzyaloshinskii-Moriya interaction at epitaxial ferromagnet/semiconductor interface (6 pages)	094441
Shuto Kimura, Michihiro Yamada, Takumi Okuno, Kentarou Sawano, Kohei Hamaya, and Kazuya Ando	
Observation of two-channel anomalous Hall effect in perpendicularly magnetized NiCo ₂ O ₄ epitaxial films (9 pages)	094442
Guowei Zhou, Penghua Kang, Huihui Ji, Jiarui Dou, Siqi Wang, and Xiaohong Xu	
Superfluidity and superconductivity	
Niobium substitution suppresses the superconducting critical temperature of pressurized MoB ₂ (7 pages)	094501
J. Lim, S. Sinha, A. C. Hire, J. S. Kim, P. M. Dee, R. S. Kumar, D. Popov, R. J. Hemley, R. G. Hennig, P. J. Hirschfeld, G. R. Stewart, and J. J. Hamlin	
Superconductivity of cerium at quasihydrostatic pressure up to 54 GPa (5 pages)	094502
Y. N. Zhang, D. J. Su, Z. Y. Shan, Z. H. Yang, J. W. Zhang, R. Li, M. Smidman, and H. Q. Yuan	
Proximity effect of time-reversal symmetry broken noncentrosymmetric superconductors (17 pages)	094503
Tim Kokkeler, Alexander Golubov, Sebastian Bergeret, and Yukio Tanaka	
Higher-order nodal hinge states in doped superconducting topological insulator (6 pages)	094504
Sayed Ali Akbar Ghorashi, Jennifer Cano, Enrico Rossi, and Taylor L. Hughes	
Microwave conductivity due to impurity scattering in cuprate superconductors (16 pages)	094505
Minghuan Zeng, Xiang Li, Yongjun Wang, and Shiping Feng	
Interplay of hyperbolic plasmons and superconductivity (11 pages)	094506
Andrey Grankin and Victor Galitski	
Pressure-induced switching of electronic nematicity in the iron-based ladder materials BaFe ₂ (S _{1-x} Se _x) ₃ (<i>x</i> = 0–1) (6 pages)	094507
Takuya Aoyama, Rinto Nojima, Touru Yamauchi, Yoshinori Imai, and Kenya Ohgushi	
Quantum geometry of singlet superconductors (11 pages)	094508
David Porlles and Wei Chen	
Frustrated superconducting junction with tricomponent pairing gap functions (12 pages)	094509
Chao Xu, Wang Yang, and Congjun Wu	

(Continued)

Calculated iron $L_{2,3}$ x-ray absorption and x-ray magnetic circular dichroism of spin-crossover $\text{Fe(phen)}_2(\text{NCS})_2$ molecules adsorbed on a Cu(001) surface (15 pages)	094423
R. Pasquier and M. Alouani	
Scaling exponents of conductivity-like and resistivity-like Gilbert damping with spin-orbit parameter in oriented hcp $\text{Co}_{1-x}\text{Ir}_x$ soft magnetic films (8 pages)	094424
Sha Zhang, Chenhu Zhang, Quanzhi Zhang, Xiaolong Fan, Liang Qiao, Tianyong Ma, Tao Wang, Meizhen Gao, and Fashen Li	
Spatially anisotropic $S = 1$ square-lattice antiferromagnet with single-ion anisotropy realized in a Ni(II) pyrazine- n, n' -dioxide coordination polymer (19 pages)	094425
Jamie L. Manson, Daniel M. Pajerowski, Jeffrey M. Donovan, Brendan Twamley, Paul A. Goddard, Roger Johnson, Jesper Bendix, John Singleton, Tom Lancaster, Stephen J. Blundell, Jacek Herbrych, Peter J. Baker, Andrew J. Steele, Francis L. Pratt, Isabel Franke-Chaudet, Ross D. McDonald, Alex Plonczak, and Pascal Manuel	
Theoretical study of the effect of lattice dynamics on the damping constant of FePt at finite temperature (9 pages)	094426
Ivan Kurniawan, Yoshio Miura, Guangzong Xing, Terumasa Tadano, and Kazuhiro Hono	
Spin Nernst effect and spatiotemporal dynamic simulation of topological magnons in the antiferromagnet Cu_3TeO_6 (9 pages)	094427
Yizhi Liu, Chen Fang, Shaoqin Jiang, Yuan Li, and Limei Xu	
Quantum fluctuation in rotation velocity of a levitated magnetic particle (10 pages)	094428
T. Sato, Daigo Oue, M. Matsuo, and T. Kato	
Field-dependent anisotropic room-temperature ferromagnetism in Cr_3Te_4 (8 pages)	094429
Aina Wang, Azizur Rahman, Zan Du, Jun Zhao, Fanying Meng, Wei Liu, Jiyu Fan, Chunlan Ma, Min Ge, Li Pi, Lei Zhang, and Yuheng Zhang	
Transmon probe for quantum characteristics of magnons in antiferromagnets (10 pages)	094430
Vahid Azimi-Mousolou, Anders Bergman, Anna Delin, Olle Eriksson, Manuel Pereiro, Danny Thonig, and Erik Sjöqvist	
Electronic noise of a single skyrmion (11 pages)	094431
Kang Wang, Yiou Zhang, Vineetha Bheemarasetty, See-Chen Ying, and Gang Xiao	
Lattice strain effects on the finite-temperature magnetism of two-dimensional single-layer CrI_3 (13 pages)	094432
Dongqi Luo, Weishan Xue, Xihui Yang, Yu Ni, Zhe Yuan, Yi Liu, and Yun Song	
Evidence of Kitaev interaction in monolayer $1T\text{-CrTe}_2$ (12 pages)	094433
Can Huang, Bingjie Liu, Lingzi Jiang, Yanfei Pan, Jiyu Fan, Daning Shi, Chunlan Ma, Qiang Luo, and Yan Zhu	
Fingerprint of vortexlike flux closure in an isotropic Nd-Fe-B bulk magnet (7 pages)	094434
Mathias Bersweiler, Yojiro Oba, Evelyn Pratami Sinaga, Inma Peral, Ivan Titov, Michael P. Adams, Venus Rai, Konstantin L. Metlov, and Andreas Michels	
Magnetic ground state of CrOCl : A first-principles study (7 pages)	094435
Haoran Zhu, Peixuan Liu, Xu Zuo, and Bin Shao	
Skyrmion-bimeron dynamic conversion in magnetic nanotracks (7 pages)	094436
M. A. Castro, D. Altbir, D. Galvez-Poblete, R. M. Corona, S. Oyarzún, A. R. Pereira, S. Allende, and V. L. Carvalho-Santos	

(Continued)

Spin semimetallic behavior and sublattice spin crossover in the fully compensated ferrimagnetic half-Heusler compound $(\text{Co}_{0.5}\text{Mn}_{0.5})\text{MnAl}$ (12 pages)	094407
R. Harikrishnan, Jatin Kumar Bidika, B. R. K. Nanda, Arout J. Chelvane, S. D. Kaushik, P. D. Babu, and Harish Kumar Narayanan	
Magnetism control with enhanced hard magnetic temperature in heterostructures based on the van der Waals magnet Fe_5GeTe_2 (8 pages)	094408
Chunsheng Wang, Kejia Zhu, Yupeng Ma, Longyu Lu, Tao Hu, Liang Li, Xucai Kan, Yimin Xiong, Yingying Zhang, Guopeng Wang, Zhengcao Li, and Mingliang Tian	
CrTe_2 as a two-dimensional material for topological magnetism in complex heterobilayers (8 pages)	094409
Nihad Abuawwad, Manuel dos Santos Dias, Hazem Abusara, and Samir Lounis	
Ground state properties of quantum skyrmions described by neural network quantum states (11 pages)	094410
Ashish Joshi, Robert Peters, and Thore Posske	
Symmetry-protected topological phases, conformal criticalities, and duality in exactly solvable $\text{SO}(n)$ spin chains (11 pages)	094411
Sreejith Chulliparambil, Hua-Chen Zhang, and Hong-Hao Tu	
Magnetic structure of the magnetoelectric material $\text{Ba}_2\text{MnGe}_2\text{O}_7$ (8 pages)	094412
A. Sazonov, H. Thoma, R. Dutta, M. Meven, A. Gukasov, R. Fittipaldi, V. Granata, T. Masuda, B. Náfrádi, and V. Hutanu	
Electrical and magnetic control of spin-lattice configuration and magnon-ferroin hybridization in a two-dimensional multiferroic model (7 pages)	094413
Ka Shen	
Topological Hall-like magnetoresistance humps in anomalous Hall loops caused by planar Hall effect (7 pages)	094414
Chunjie Yan, Zui Tao, Zhenyu Gao, Zishuang Li, Xiao Xiao, Haozhe Wang, Lina Chen, and Ronghua Liu	
Checkerboard bubble lattice formed by octuple-period quadruple- Q spin density waves (13 pages)	094415
Satoru Hayami	
Chern insulating state with double- Q ordering wave vectors at the Brillouin zone boundary (11 pages)	094416
Satoru Hayami	
Multiferroic domain relaxation in $(\text{NH}_4)_2[\text{FeCl}_5(\text{H}_2\text{O})]$ (9 pages)	094417
S. Biesenkamp, K. Schmalzl, P. Becker, L. Bohatý, and M. Braden	
Multipolar spin liquid in an exactly solvable model for $j_{\text{eff}} = \frac{3}{2}$ moments (13 pages)	094418
Vanuildo S. de Carvalho, Hermann Freire, and Rodrigo G. Pereira	
Ising magnetoresistance induced by Ising spin-orbit coupling (8 pages)	094420
Duo Zhao, Jiaqian Sun, Wei Tang, and Yu-Jia Zeng	
All-optical magnetization control in CrI_3 monolayers: A microscopic theory (8 pages)	094421
A. Kudlis, M. Kazemi, Y. Zhumagulov, H. Schrautzer, A. I. Chernov, P. F. Bessarab, I. V. Iorsh, and I. A. Shelykh	
Strong magnon-magnon coupling between ferromagnetic resonances in $\text{Co}_{90}\text{Zr}_{10}/\text{Ta}/\text{Fe}_{20}\text{Ni}_{80}$ multilayers (6 pages)	094422
Keke Ma, Chaozhong Li, Zhenhui Hao, C. K. Ong, and Guozhi Chai	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 108, NUMBER 9

SEPTEMBER 2023-1(I)

Detecting prethermal Floquet phases of Rydberg atom arrays (<i>9 pages</i>)	094302
Somsubhra Ghosh, Diptiman Sen, and K. Sengupta	
Scattering quantum walk framework for two-dimensional materials: The case of honeycomb lattice structures (<i>22 pages</i>)	094303
B. F. Venancio, H. S. Ghizoni, and M. G. E. da Luz	
☞ Topology, criticality, and dynamically generated qubits in a stochastic measurement-only Kitaev model (<i>14 pages</i>)	094304
Adithya Sriram, Tibor Rakovszky, Vedika Khemani, and Matteo Ippoliti	
Spatiotemporally ordered patterns in a chain of coupled dissipative kicked rotors (<i>14 pages</i>)	094305
Angelo Russomanno	
Dynamical bulk-boundary correspondence and dynamical quantum phase transitions in higher-order topological insulators (<i>13 pages</i>)	094306
T. Małowski and N. Sedlmayr	
Model of ultrashort-pulse laser excitation of bulk and thin film dielectrics: Coupling material excitation and electric field propagation (<i>9 pages</i>)	094307
Peter S. Snehrup, Søren H. Møller, and Peter Balling	
Full counting statistics across the entanglement phase transition of non-Hermitian Hamiltonians with charge conservation (<i>13 pages</i>)	094308
Tian-Gang Zhou, Yi-Neng Zhou, and Pengfei Zhang	
Lessons from the harmonic oscillator: Reconciliation of the frequency-resolved frozen phonon multislice method with other theoretical approaches (<i>20 pages</i>)	094309
Paul M. Zeiger, Juri Barthel, Leslie J. Allen, and Ján Ruzs	
Magnetism	
Two-orbital spin-fermion model study of ferromagnetism in the honeycomb lattice (<i>6 pages</i>)	094401
Kaidi Xu, Di Hu, Jun Chen, Haoshen Ye, Lin Han, Shan-Shan Wang, and Shuai Dong	
Ferromagnetic resonance damping mechanisms in CoFeB thin films with Cr substitution (<i>11 pages</i>)	094402
Christian Lacroix, Kaan Oguz, John Michael David Coey, and David Ménard	
Ultrafast demagnetization and its relation to microscopic momentum scattering dynamics in a Rashba ferromagnet (<i>9 pages</i>)	094403
Svenja Vollmar, Kai Leckron, and Hans Christian Schneider	
Effect of electron-phonon scattering on the anomalous Hall conductivity of Fe ₃ Sn: A kagome ferromagnetic metal (<i>7 pages</i>)	094404
Achintya Low, Susanta Ghosh, Soumya Ghorai, and Setti Thirupathaiah	
Implementation of the density functional perturbation theory for generalized susceptibility in the projector augmented wave framework (<i>13 pages</i>)	094405
Xiaoqiang Liu, Yihao Lin, and Ji Feng	
Reducing the magnetic dead layer to one unit cell in ultrathin films of manganites using spin-orbit coupling (<i>9 pages</i>)	094406
Biying Ye, Boyu Liu, Yang Yin, Huanyu Zhang, Yi Zhu, Zhifei Zhu, Wentao Liao, Wenping Gao, Hangwen Guo, Xiaodong Zhou, Wenbin Wang, Changlin Zheng, Lifeng Yin, Yinyan Zhu, Hongjun Xiang, and Jian Shen	

(Continued)

Thermal and mechanical properties and the structural phase transition under pressure in AlIn_2As_2 ($A = \text{Ca, Sr, Ba}$) (21 pages)	094111
Wen-Ti Guo, Zhigao Huang, and Jian-Min Zhang	
Understanding the difference in fragility of the bcc phases of highly compressed P, As, and Sb through first-principles investigations (8 pages)	094112
Masaaki Geshi, Hiroki Funashima, and Gayan Prasad Hettiarachchi	
Shockley-Read-Hall recombination and trap levels in $\text{In}_{0.53}\text{Ga}_{0.47}\text{As}$ point defects from first principles (9 pages)	094113
Christian Dam Vedel, Tue Gunst, Søren Smidstrup, and Vihar P. Georgiev	
Liouvillian gap and out-of-equilibrium dynamics of a sunburst Kitaev ring: From local to uniform dissipation (13 pages)	094114
Alessio Franchi and Francesco Tarantelli	
Lattice distortions, moiré phonons, and relaxed electronic band structures in magic-angle twisted bilayer graphene (30 pages)	094115
Bo Xie and Jianpeng Liu	
Inhomogeneous, disordered, and partially ordered systems	
Seeking a many-body mobility edge with matrix product states in a quasiperiodic model (17 pages)	094201
Nicholas Pomata, Sriram Ganeshan, and Tzu-Chieh Wei	
Stabilizing confined quasiparticle dynamics in one-dimensional polar lattice gases (9 pages)	094202
Guo-Qing Zhang and L. F. Quezada	
Anatomy of the fragmented Hilbert space: Eigenvalue tunneling, quantum scars, and localization in the perturbed random regular graph (23 pages)	094203
Daniil Kochergin, Ivan M. Khaymovich, Olga Valba, and Alexander Gorsky	
Subdiffusive spin transport in disordered classical Heisenberg chains (12 pages)	094204
Adam J. McRoberts, Federico Balducci, Roderich Moessner, and Antonello Scardicchio	
Renormalization view on resonance proliferation between many-body localized phases (13 pages)	094205
Jared Jeyaretnam, Christopher J. Turner, and Arijeet Pal	
<i>Ab initio</i> studies of the impact of the Debye-Waller factor on the structural and dynamical properties of amorphous semiconductors: The case of <i>a</i> -Si (14 pages)	094206
Devilal Dahal, Raymond Atta-Fynn, Stephen R. Elliott, and Parthapratim Biswas	
Anomalous Floquet-Anderson insulator with quasiperiodic temporal noise (6 pages)	094207
Peng-Peng Zheng, Christopher I. Timms, and Michael H. Kolodrubetz	
Effect of screening on the relaxation dynamics in a Coulomb glass (11 pages)	094208
Preeti Bhandari, Vikas Malik, and Moshe Schechter	
Anderson localization and swing mobility edge in curved spacetime (17 pages)	094209
Shan-Zhong Li, Xue-Jia Yu, Shi-Liang Zhu, and Zhi Li	
Dynamics, dynamical systems, lattice effects:	
Measuring Dirac cones in a brick-wall lattice microwave metamaterial (7 pages)	094301
Bing Li, Simon Yves, Alexandre Delory, Shiqi Liu, Mathias Fink, and Fabrice Lemoult	

(Continued)

EDITORIALS AND ANNOUNCEMENTS

Editorial: To Review Is to Be (1 page)	090001
Randall D. Kamien	

ARTICLES

Structure, structural phase transitions, mechanical properties, defects

Coupled magnetostructural continuum model for multiferroic BiFeO ₃ (17 pages)	094101
John Mangeri, Davi Rodrigues, Monica Graf, Sudipta Biswas, Olle Heinonen, and Jorge Íñiguez	
Cluster expansion constructed over Jacobi-Legendre polynomials for accurate force fields (15 pages)	094102
M. Domina, U. Patil, M. Cobelli, and S. Sanvito	
Dual-band acoustic higher-order topological metamaterial composed of meta-atoms and meta-molecules (9 pages)	094103
Changlin Ding, Jianbing Shi, Yibao Dong, Yun Bai, Shilong Zhai, and Xiaopeng Zhao	
Phase transition and evidence of fast-scrambling phase in measurement-only quantum circuits (12 pages)	094104
Yoshihito Kuno, Takahiro Orito, and Ikuo Ichinose	
Oxygen pressure modulated magnetism and magnetic anisotropy of epitaxial transparent Yb ₂ Ti ₂ O ₇ pyrochlore films (8 pages)	094105
Ming-Yuan Yan, Zhen-Tao Pang, Zhao-Cai Wang, Zhong-Nan Xi, Li-Da Chen, Xiao-Yu Zhang, Yu-Qi Wang, Ren-Kui Zheng, Yu Deng, and Shan-Tao Zhang	
Uniform and staggered electric axial moment in a zigzag chain (9 pages)	094106
Satoru Hayami	
Zigzag chain order of LiVSe ₂ developing away from the vanadium trimer phase transition boundary (9 pages) ...	094107
K. Kojima, N. Katayama, K. Sugimoto, N. Hirao, Y. Ohta, and H. Sawa	
Calculation of the energies of the multideterminant states of the nitrogen vacancy center in diamond with quantum Monte Carlo (15 pages)	094108
K. A. Simula and I. Makkonen	
Hafnia HfO ₂ is a proper ferroelectric (10 pages)	094109
Aldo Raeliarijaona and R. E. Cohen	
Pressure-induced structural transformations in (1-x)Na _{0.5} Bi _{0.5} TiO ₃ -xBaTiO ₃ at the morphotropic phase boundary (15 pages)	094110
Constanze Rösche, Tiziana Boffa-Ballaran, and Boriana Mihailova	



(Continued)



2469-9950(20230901)108:9;1-5