

Respective influence of in-plane and out-of-plane spin-transfer torques in magnetization switching of perpendicular magnetic tunnel junctions (<i>9 pages</i>)	104430
A. A. Timopheev, R. Sousa, M. Chshiev, L. D. Buda-Prejbeanu, and B. Dieny	
Reconfigurable large-area magnetic vortex circulation patterns (<i>8 pages</i>)	104431
Robert Streubel, Florian Kronast, Ulrich K. Röbber, Oliver G. Schmidt, and Denys Makarov	
Superfluidity and superconductivity	
Nonreciprocal transmission of microwaves through a long Josephson junction (<i>6 pages</i>)	104501
A. L. Pankratov, K. G. Fedorov, M. Salerno, S. V. Shitov, and A. V. Ustinov	
Equilibrium surface current and role of U(1) symmetry: Sum rule and surface perturbations (<i>15 pages</i>)	104502
Yasuhiro Tada	
Vortex-assisted mechanism of photon counting in a superconducting nanowire single-photon detector revealed by external magnetic field (<i>9 pages</i>)	104503
D. Yu. Vodolazov, Yu. P. Korneeva, A. V. Semenov, A. A. Korneev, and G. N. Goltsman	
Itinerant ferromagnetism and $p + ip'$ superconductivity in doped bilayer silicene (<i>8 pages</i>)	104504
Li-Da Zhang, Fan Yang, and Yugui Yao	
Pairing symmetry of the one-band Hubbard model in the paramagnetic weak-coupling limit: A numerical RPA study (<i>11 pages</i>)	104505
A. T. Rømer, A. Kreisel, I. Eremin, M. A. Malakhov, T. A. Maier, P. J. Hirschfeld, and B. M. Andersen	
Correlation of the superconducting critical temperature with spin and orbital excitations in $(\text{Ca}_x\text{La}_{1-x})(\text{Ba}_{1.75-x}\text{La}_{0.25+x})\text{Cu}_3\text{O}_y$ as measured by resonant inelastic x-ray scattering (<i>11 pages</i>)	104507
David Shai Ellis, Yao-Bo Huang, Paul Olalde-Velasco, Marcus Dantz, Jonathan Pellicciari, Gil Drachuck, Rinat Ofer, Galina Bazalitsky, Jorge Berger, Thorsten Schmitt, and Amit Keren	
Kerr coefficients of plasma resonances in Josephson junction chains (<i>10 pages</i>)	104508
T. Weißl, B. Küng, E. Dumur, A. K. Feofanov, I. Matei, C. Naud, O. Buisson, F. W. J. Hekking, and W. Guichard	
Mass superflux in solid helium: The role of ^3He impurities (<i>12 pages</i>)	104509
Ye. Vekhov and R. B. Hallock	
Homogeneous isotropic superfluid turbulence in two dimensions: Inverse and forward cascades in the Hall-Vinen-Bekharevich-Khalatnikov model (<i>9 pages</i>)	104510
Vishwanath Shukla, Anupam Gupta, and Rahul Pandit	
Triplet p_z -wave pairing in quasi-one-dimensional $\text{A}_2\text{Cr}_3\text{As}_3$ superconductors ($\text{A} = \text{K}, \text{Rb}, \text{Cs}$) (<i>15 pages</i>)	104511
Xianxin Wu, Fan Yang, Congcong Le, Heng Fan, and Jiangping Hu	
Isotropic in-plane quenched disorder and dilution induce a robust nematic state in electron-doped pnictides (<i>10 pages</i>)	104512
Shuhua Liang, Christopher B. Bishop, Adriana Moreo, and Elbio Dagotto	
Parity effect and single-electron injection for Josephson junction chains deep in the insulating state (<i>7 pages</i>)	104513
K. Cedergren, S. Kafanov, J.-L. Smir, J. H. Cole, and T. Duty	
Multiple signatures of topological transitions for interacting fermions in chain lattices (<i>10 pages</i>)	104514
Y.-H. Chan, Ching-Kai Chiu, and Kuei Sun	

CONTENTS - Continued

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 92, NUMBER 10

SEPTEMBER 2015-1(II)

Extraction of exchange parameters in transition-metal perovskites (6 pages)	104415
A. Furrer, A. Podlesnyak, and K. W. Krämer	
Finite-temperature scaling of spin correlations in a partially magnetized Heisenberg $S = \frac{1}{2}$ chain (6 pages)	104416
M. Hälg, D. Hüvonen, N. P. Butch, F. Demmel, and A. Zheludev	
Direct visualization of memory effects in artificial spin ice (10 pages)	104417
Ian Gilbert, Gia-Wei Chern, Bryce Fore, Yuyang Lao, Sheng Zhang, Cristiano Nisoli, and Peter Schiffer	
Systematic study of the exchange interactions in Gd-doped GaN containing N interstitials, O interstitials, or Ga vacancies (9 pages)	104418
Alexander Thiess, Stefan Blügel, Peter H. Dederichs, Rudolf Zeller, and Walter R. L. Lambrecht	
Simultaneous measurements of terahertz emission and magneto-optical Kerr effect for resolving ultrafast laser-induced demagnetization dynamics (8 pages)	104419
T. J. Huisman, R. V. Mikhaylovskiy, A. Tsukamoto, Th. Rasing, and A. V. Kimel	
Fermi surface topology and hot spot distribution in the Kondo lattice system CeB ₆ (6 pages)	104420
Madhab Neupane, Nasser Alidoust, Ilya Belopolski, Guang Bian, Su-Yang Xu, Dae-Jeong Kim, Pavel P. Shibayev, Daniel S. Sanchez, Hao Zheng, Tay-Rong Chang, Horng-Tay Jeng, Peter S. Riseborough, Hsin Lin, Arun Bansil, Tomasz Durakiewicz, Zachary Fisk, and M. Zahid Hasan	
Electronic structure and magnetism of K-intercalated iron chalcogenides (7 pages)	104421
S. K. Panda, I. Dasgupta, and T. Saha-Dasgupta	
Analytical description of ballistic spin currents and torques in magnetic tunnel junctions (9 pages)	104422
M. Chshiev, A. Manchon, A. Kalitsov, N. Ryzhanova, A. Vedyayev, N. Strelkov, W. H. Butler, and B. Dieny	
High-field magnetic behavior and forced-ferromagnetic state in an ErFe ₁₁ TiH single crystal (5 pages)	104423
N. V. Kostyuchenko, A. K. Zvezdin, E. A. Tereshina, Y. Skourski, M. Doerr, H. Drulis, I. A. Pelevin, and I. S. Tereshina	
Spin wave eigenmodes in transversely magnetized thin film ferromagnetic wires (10 pages)	104424
Zheng Duan, Ilya N. Krivorotov, Rodrigo E. Arias, Nathalie Reckers, Sven Stienen, and Jürgen Lindner	
Ferromagnetic Kondo behavior in UAuBi ₂ single crystals (7 pages)	104425
P. F. S. Rosa, Yongkang Luo, E. D. Bauer, J. D. Thompson, P. G. Pagliuso, and Z. Fisk	
Incommensurate antiferromagnetism induced by a charge density wave in the cubic phase of TbGe _{2.85} (7 pages)	104426
A. V. Tsvyashchenko, D. A. Salamatina, V. A. Sidorov, A. E. Petrova, L. N. Fomicheva, S. E. Kichanov, A. V. Salamatina, A. Velichkov, D. R. Kozlenko, A. V. Nikolaev, G. K. Ryasny, O. L. Makarova, D. Menzel, and M. Budzynski	
Electronic, magnetic, transport, and thermal properties of single-crystalline UFe ₂ Al ₁₀ (14 pages)	104427
R. Troć, M. Samsel-Czekala, E. Talik, R. Wawryk, Z. Gajek, and M. Pasturel	
Localization in a random XY model with long-range interactions: Intermediate case between single-particle and many-body problems (10 pages)	104428
Alexander L. Burin	
Itinerant antiferromagnetism in FeMnP _{0.8} Si _{0.2} single crystals (6 pages)	104429
B. C. Sales, M. A. Susner, B. S. Conner, J. Q. Yan, and A. F. May	

(Continued)

Lattice-level observation of the elastic-to-plastic relaxation process with subnanosecond resolution in shock-compressed Ta using time-resolved <i>in situ</i> Laue diffraction (8 pages)	104305
C. E. Wehrenberg, A. J. Comley, N. R. Barton, F. Coppari, D. Fratanduono, C. M. Huntington, B. R. Maddox, H.-S. Park, C. Plechaty, S. T. Prsbrey, B. A. Remington, and R. E. Rudd	
Quenches and dynamical phase transitions in a nonintegrable quantum Ising model (7 pages)	104306
Shraddha Sharma, Sei Suzuki, and Amit Dutta	
Magnetism	
Nonequilibrium dynamical renormalization group: Dynamical crossover from weak to infinite randomness in the transverse-field Ising chain (14 pages)	104401
Markus Heyl and Matthias Vojta	
Direct observation of symmetry-specific precession in a ferrimagnet (6 pages)	104402
P. Warnicke, E. Stavitski, J.-S. Lee, A. Yang, Z. Chen, X. Zuo, S. Zohar, W. E. Bailey, V. G. Harris, and D. A. Arena	
Gilbert-like damping caused by time retardation in atomistic magnetization dynamics (8 pages)	104403
Danny Thonig, Jürgen Henk, and Olle Eriksson	
Exchange spring switching in Er-doped DyFe ₂ /YFe ₂ magnetic thin films (11 pages)	104404
G. B. G. Stenning, G. J. Bowden, P. A. J. de Groot, G. van der Laan, A. I. Figueroa, P. Bencok, P. Steadman, and T. Hesjedal	
Magnetic phase transition in Fe-doped topological insulator Bi ₂ Se ₃ (5 pages)	104405
Jeongwoo Kim and Seung-Hoon Jhi	
Tailoring the magnetodynamic properties of nanomagnets using magnetocrystalline and shape anisotropies (10 pages)	104406
Vegard Flovik, Ferran Macià, Joan Manel Hernández, Rimantas Bručas, Maj Hanson, and Erik Wahlström	
Tuning the magnetic anisotropy in single-layer crystal structures (8 pages)	104407
E. Torun, H. Sahin, C. Bacaksiz, R. T. Senger, and F. M. Peeters	
Electronic and magnetic properties of GaFeO ₃ : <i>Ab initio</i> calculations for varying Fe/Ga ratio, inner cationic site disorder, and epitaxial strain (11 pages)	104408
J. Atanelov and P. Mohn	
Stochastic approximation of dynamical exponent at quantum critical point (10 pages)	104411
Shinya Yasuda, Hidemaro Suwa, and Synge Todo	
Curvature-induced domain wall pinning (6 pages)	104412
Kostiantyn V. Yershov, Volodymyr P. Kravchuk, Denis D. Sheka, and Yuri Gaididei	
Antiferromagnetism at $T > 500$ K in the layered hexagonal ruthenate SrRu ₂ O ₆ (7 pages)	104413
C. I. Hiley, D. O. Scanlon, A. A. Sokol, S. M. Woodley, A. M. Ganose, S. Sangiao, J. M. De Teresa, P. Manuel, D. D. Khalyavin, M. Walker, M. R. Lees, and R. I. Walton	
Symmetric tensor networks and practical simulation algorithms to sharply identify classes of quantum phases distinguishable by short-range physics (49 pages)	104414
Shenghan Jiang and Ying Ran	

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 92, NUMBER 10

SEPTEMBER 2015-1(II)

Defect-induced faceted blue phosphorene nanotubes (7 pages)	104104
Yierpan Aierken, Ortwin Leenaerts, and François M. Peeters	
Mimicking surface plasmons in acoustics at low frequency (7 pages)	104105
Li Quan, Feng Qian, Xiaozhou Liu, Xiufen Gong, and Paul A. Johnson	
Defect-strain engineering for multiferroic and magnetoelectric properties in epitaxial (110) ferroelectric lead titanate (8 pages)	104106
Tao Xu, Takahiro Shimada, Yasumitsu Araki, Jie Wang, and Takayuki Kitamura	
Mechanical strength and electronic instabilities in ultra-incompressible platinum dinitrides (6 pages)	104107
R. F. Zhang, D. Legut, Z. H. Fu, S. Veprek, Q. F. Zhang, and H. K. Mao	
Probing magnetostructural correlations in multiferroic $\text{HoAl}_3(\text{BO}_3)_4$ (15 pages)	104108
H. Zhang, T. Yu, Z. Chen, C. S. Nelson, L. N. Bezmaternykh, A. M. M. Abeykoon, and T. A. Tyson	
Modification of Pt/Co/Pt film properties by ion irradiation (10 pages)	104109
K. A. Avchaciov, W. Ren, F. Djurabekova, K. Nordlund, I. Sveklo, and A. Maziewski	
Wave propagation in two-dimensional viscoelastic metamaterials (14 pages)	104110
Yan-Feng Wang, Yue-Sheng Wang, and Vincent Laude	
Inhomogeneous, disordered, and partially ordered systems	
Field-induced detrapping in doped organic semiconductors with Gaussian disorder and different carrier localizations on host and guest sites (6 pages)	104201
M. Scheb, C. Zimmermann, and C. Jungemann	
Low-frequency conductivity in many-body localized systems (11 pages)	104202
Sarang Gopalakrishnan, Markus Müller, Vedika Khemani, Michael Knap, Eugene Demler, and David A. Huse	
Collective excitations in liquid and glassy 3-methylpentane (6 pages)	104203
Paola Benassi, Michele Nardone, Andrea Giugni, Giacomo Baldi, and Aldo Fontana	
Scaling of critical wave functions at topological Anderson transitions in one dimension (8 pages)	104204
Eoin Quinn, Thomas Cope, Jens H. Bardarson, and Alexander Ossipov	
Dynamics, dynamical systems, lattice effects:	
Spin depolarization effect induced by charge state conversion of nitrogen vacancy center in diamond (8 pages)	104301
Xiang-Dong Chen, Lei-Ming Zhou, Chang-Ling Zou, Cong-Cong Li, Yang Dong, Fang-Wen Sun, and Guang-Can Guo	
Phonons in the multiferroic langasite $\text{Ba}_3\text{NbFe}_3\text{Si}_2\text{O}_{14}$: Evidence for symmetry breaking (9 pages)	104302
C. Toulouse, M. Cazayous, S. de Brion, F. Levy-Bertrand, H. Barkaoui, P. Lejay, L. Chaix, M. B. Lepetit, J. B. Brubach, and P. Roy	
Velocity autocorrelation in liquid parahydrogen by quantum simulations for direct parameter-free computations of neutron cross sections (8 pages)	104303
E. Guarini, M. Neumann, U. Bafle, M. Celli, D. Colognesi, E. Farhi, and Y. Calzavara	
Honeycomb phononic crystals with self-similar hierarchy (5 pages)	104304
Davood Mousanezhad, Sahab Babae, Ranajay Ghosh, Elsadig Mahdi, Katia Bertoldi, and Ashkan Vaziri	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 92, NUMBER 10

SEPTEMBER 2015-1(II)

Magnetic field induced polar phase in the chiral magnet CsCuCl_3 (5 pages)	100406(R)
Atsushi Miyake, Jumpei Shibuya, Mitsuru Akaki, Hidekazu Tanaka, and Masashi Tokunaga	
Atomic-scale detection of magnetic impurity interactions in bulk semiconductors (5 pages)	100407(R)
Benjamin Geisler and Peter Kratzer	
Thermodynamic magnon recoil for domain wall motion (5 pages)	100408(R)
Peng Yan, Yunshan Cao, and Jairo Sinova	
Superfluidity and superconductivity	
Disorder-induced power-law response of a superconducting vortex on a plane (5 pages)	100501(R)
N. Shapira, Y. Lamhot, O. Shpielberg, Y. Kafri, B. J. Ramshaw, D. A. Bonn, Ruixing Liang, W. N. Hardy, and O. M. Auslaender	
 Spin polarization enhanced by spin-triplet pairing in Sr_2RuO_4 probed by NMR (5 pages)	100502(R)
K. Ishida, M. Manago, T. Yamanaka, H. Fukazawa, Z. Q. Mao, Y. Maeno, and K. Miyake	
Anomalous Josephson effect in d -wave superconductor junctions on a topological insulator surface (5 pages)	100503(R)
Bo Lu, Keiji Yada, A. A. Golubov, and Yukio Tanaka	
Inversion symmetry of Josephson current as test of chiral domain wall motion in Sr_2RuO_4 (6 pages)	100504(R)
Kohta Saitoh, Satoshi Kashiwaya, Hiromi Kashiwaya, Yasunori Mawatari, Yasuhiro Asano, Yukio Tanaka, and Yoshiteru Maeno	
Homes scaling in ionic liquid gated $\text{La}_2\text{CuO}_{4+x}$ thin films (5 pages)	100505(R)
J. Kinney, J. Garcia-Barriocanal, and A. M. Goldman	
Anomalous transport phenomena in $p_x + ip_y$ superconductors (5 pages)	100506(R)
Songci Li, A. V. Andreev, and B. Z. Spivak	
Odd-frequency triplet superconductivity at the helical edge of a topological insulator (5 pages)	100507(R)
François Crépin, Pablo Burset, and Björn Trauzettel	
Observation of two-dimensional bulk electronic states in the superconducting topological insulator heterostructure $\text{Cu}_x(\text{PbSe})_5(\text{Bi}_2\text{Se}_3)_6$: Implications for unconventional superconductivity (5 pages)	100508(R)
K. Nakayama, H. Kimizuka, Y. Tanaka, T. Sato, S. Souma, T. Takahashi, Satoshi Sasaki, Kouji Segawa, and Yoichi Ando	
Superfluid density of a pseudogapped superconductor near the superconductor-insulator transition (4 pages)	100509(R)
M. V. Feigel'man and L. B. Ioffe	

ARTICLES

Structure, structural phase transitions, mechanical properties, defects

Interband transitions in epitaxial ferroelectric films of NaNbO_3 (6 pages)	104101
M. Tyunina, D. Chvostova, L. D. Yao, A. Dejneka, T. Kocourek, M. Jelinek, and S. van Dijken	
Predicting vacancy-mediated diffusion of interstitial solutes in α -Fe (14 pages)	104102
Caroline Barouh, Thomas Schuler, Chu-Chun Fu, and Thomas Jourdan	
Lattice stability and high-pressure melting mechanism of dense hydrogen up to 1.5 TPa (8 pages)	104103
Hua Y. Geng, R. Hoffmann, and Q. Wu	

(Continued)

RAPID COMMUNICATIONS

Structure, structural phase transitions, mechanical properties, defects

- Local atomic and electronic structures in ferromagnetic topological insulator Cr-doped $(\text{Bi}_x\text{Sb}_{1-x})_2\text{Te}_3$ studied by XAFS and *ab initio* calculations (5 pages) 100101(R)
Zhen Liu, Xinyuan Wei, Jiajia Wang, Hong Pan, Fuhao Ji, Mao Ye, Zhongqin Yang, and Shan Qiao

Dynamics, dynamical systems, lattice effects:

- Observation of shape-preserving accelerating underwater acoustic beams (5 pages) 100301(R)
Uri Bar-Ziv, Aharon Postan, and Mordechai Segev
- Non-Markovian effects in electronic and spin transport (5 pages) 100302(R)
Pedro Ribeiro and Vitor R. Vieira
- From soft harmonic phonons to fast relaxational dynamics in $\text{CH}_3\text{NH}_3\text{PbBr}_3$ (5 pages) 100303(R)
I. P. Swainson, C. Stock, S. F. Parker, L. Van Eijck, M. Russina, and J. W. Taylor
- Space-time gradient metasurfaces (6 pages) 100304(R)
Y. Hadad, D. L. Sounas, and A. Alu
- ☞ Dynamics of many-body localization in a translation-invariant quantum glass model (5 pages) 100305(R)
Merlijn van Horssen, Emanuele Levi, and Juan P. Garrahan

Magnetism

- Hydrogenic states of monopoles in diluted quantum spin ice (5 pages) 100401(R)
Olga Petrova, Roderich Moessner, and S. L. Sondhi
- ☞ Relativistic interaction Hamiltonian coupling the angular momentum of light and the electron spin (4 pages) 100402(R)
Ritwik Mondal, Marco Berritta, Charles Paillard, Surendra Singh, Brahim Dkhil, Peter M. Oppeneer, and L. Bellaïche
- Magnetic three states of matter: A quantum Monte Carlo study of spin liquids (6 pages) 100403(R)
Yoshitomo Kamiya, Yasuyuki Kato, Joji Nasu, and Yukitoshi Motome
- High antiferromagnetic transition temperature of the honeycomb compound SrRu_2O_6 (5 pages) 100404(R)
W. Tian, C. Svoboda, M. Ochi, M. Matsuda, H. B. Cao, J.-G. Cheng, B. C. Sales, D. G. Mandrus, R. Arita, N. Trivedi, and J.-Q. Yan
- Domain walls within domain walls in wide ferromagnetic strips (5 pages) 100405(R)
Touko Herranen and Lasse Laurson

