

Flux quanta driven by high-density currents in low-impurity V_3Si and $LuNi_2B_2C$: Free flux flow and fluxon-core size effect (5 pages)	134524
A. A. Gapud, S. Moraes, R. P. Khadka, P. Favreau, C. Henderson, P. C. Canfield, V. G. Kogan, A. P. Reyes, L. L. Lumata, D. K. Christen, and J. R. Thompson	

COMMENTS

Comment on “Interaction of a surface wave with a dislocation” (3 pages)	136101
E. Zolotoyabko and D. Shilo	
Reply to “Comment on ‘Interaction of a surface wave with a dislocation’ ” (3 pages)	136102
Agnès Maurel, Vincent Pagneux, Felipe Barra, and Fernando Lund	
Comment on “Nature of the high-pressure tricritical point in $MnSi$ ” (1 page)	136401
Sergei M. Stishov	
Reply to “Comment on ‘Nature of the high-pressure tricritical point in $MnSi$ ’ ” (2 pages)	136402
M. Otero-Leal, F. Rivadulla, S. S. Saxena, K. Ahilan, and J. Rivas	
Comment on “Isotope effect in high- T_c superconductors” (4 pages)	136501
A. S. Alexandrov and G. M. Zhao	
Reply to “Comment on ‘Isotope effect in high- T_c superconductors’ ” (6 pages)	136502
Dale R. Harshman, John D. Dow, and Anthony T. Fiory	

ERRATA

Publisher’s Note: Resonant inelastic x-ray scattering in electronically quasi-zero-dimensional CuB_2O_4 [Phys. Rev. B 80 , 092509 (2009)] (1 page)	139901(E)
J. N. Hancock, G. Chabot-Couture, Y. Li, G. A. Petrakovskii, K. Ishii, I. Jarrige, J. Mizuki, T. P. Devereaux, and M. Greven	
Publisher’s Note: Crystal structure of the rhombohedral phase of $PbZr_{1-x}Ti_xO_3$ ceramics at room temperature [Phys. Rev. B 80 , 104109 (2009)] (1 page)	139902(E)
H. Yokota, N. Zhang, A. E. Taylor, P. A. Thomas, and A. M. Glazer	
Publisher’s Note: Dielectric and vibrational properties of bixbyite sesquioxides [Phys. Rev. B 80 , 104301 (2009)] (1 page)	139903(E)
Pietro Delugas, Vincenzo Fiorentini, and Alessio Filippetti	
Publisher’s Note: Universal critical behavior in single crystals and films of $YBa_2Cu_3O_{7-\delta}$ [Phys. Rev. B 80 , 104518 (2009)] (1 page)	139904(E)
Hua Xu, Su Li, Steven M. Anlage, C. J. Lobb, M. C. Sullivan, Kouji Segawa, and Yoichi Ando	

Spectral decomposition and matrix element effects in scanning tunneling spectroscopy of $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ (14 pages)	134509
Jouko Nieminen, Ilpo Suominen, R. S. Markiewicz, Hsin Lin, and A. Bansil	
Using spin-polarized neutron reflectivity to probe mesoscopic vortex states in a Pb thin-film superconductor (6 pages)	134510
A. J. Drew, M. W. Wisemayer, D. O. G. Heron, S. Lister, S. L. Lee, A. Potenza, C. H. Marrows, R. M. Dalgliesh, T. R. Charlton, and S. Langridge	
Scattering problem in nonequilibrium quasiclassical theory of metals and superconductors: General boundary conditions and applications (22 pages)	134511
Matthias Eschrig	
Sliding Abrikosov vortex lattice in the presence of a regular array of columnar pinning centers: ac conductivity and criticality near the transition to a pinned state (13 pages)	134512
T. Maniv, B. Rosenstein, I. Shapiro, and B. Ya. Shapiro	
Current-phase relation in a Josephson junction coupled with a magnetic dot (6 pages)	134513
A. V. Samokhvalov	
Temperature dependence of resistivity and Hall coefficient in strongly disordered NbN thin films (5 pages)	134514
Madhavi Chand, Archana Mishra, Y. M. Xiong, Anand Kamlapure, S. P. Chockalingam, John Jesudasan, Vivas Bagwe, Mintu Mondal, P. W. Adams, Vikram Tripathi, and Pratap Raychaudhuri	
Theory of fractional vortex escape in a long Josephson junction (11 pages)	134515
K. Vogel, W. P. Schleich, T. Kato, D. Koelle, R. Kleiner, and E. Goldobin	
Ferromagnetic Josephson junctions with steplike interface transparency (12 pages)	134516
N. G. Pugach, M. Yu. Kupriyanov, A. V. Vedyayev, C. Lacroix, E. Goldobin, D. Koelle, R. Kleiner, and A. S. Sidorenko	
Relaxation of Josephson qubits due to strong coupling to two-level systems (10 pages)	134517
Clemens Müller, Alexander Shnirman, and Yuriy Makhlin	
Theory of resistivity upturns in metallic cuprates (7 pages)	134518
W. Chen, Brian M. Andersen, and P. J. Hirschfeld	
Band-structure reorganization across the magnetic transition in BaFe_2As_2 seen via high-resolution angle-resolved photoemission (6 pages)	134519
Guodong Liu, Haiyun Liu, Lin Zhao, Wentao Zhang, Xiaowen Jia, Jianqiao Meng, Xiaoli Dong, Jun Zhang, G. F. Chen, Guiling Wang, Yong Zhou, Yong Zhu, Xiaoyang Wang, Zuyan Xu, Chuangtian Chen, and X. J. Zhou	
Logarithmic contribution to the electrical resistivity in $(\text{Ru}_{1-x}\text{Ir}_x)\text{Sr}_2\text{GdCu}_2\text{O}_8$ compounds (6 pages)	134520
S. Garcia, S. Andrade, R. F. Jardim, F. C. Fonseca, M. S. Torikachvili, and A. H. Lacerda	
Temperature dependence of the order parameter of cuprate superconductors (8 pages)	134521
Alexander Mihlin and Assa Auerbach	
Dendritic instability of the magnetic flux in thermally anisotropic type-II superconductors (7 pages)	134522
E. E. Dvash, I. Shapiro, and B. Ya. Shapiro	
Anisotropic thermal expansion of $\text{Fe}_{1.06}\text{Te}$ and $\text{FeTe}_{0.5}\text{Se}_{0.5}$ single crystals (4 pages)	134523
S. L. Bud'ko, P. C. Canfield, A. S. Sefat, B. C. Sales, M. A. McGuire, and D. Mandrus	

(Continued)

Single-crystal neutron diffraction study of short-range magnetic correlations in Tb_5Ge_4 (5 pages)	134422
W. Tian, A. Kreyssig, J. L. Zarestky, L. Tan, S. Nandi, A. I. Goldman, T. A. Lograsso, D. L. Schlagerl, K. A. Gschneidner, V. K. Pecharsky, and R. J. McQueeney	
Magnetic properties of the $S=\frac{3}{2}$ geometrically frustrated double perovskites $\text{La}_2\text{LiRuO}_6$ and Ba_2YRuO_6 (7 pages)	134423
Tomoko Aharen, John E. Greedan, Fanlong Ning, Takashi Imai, Vladimir Michaelis, Scott Kroeker, Haidong Zhou, Chris R. Wiebe, and Lachlan M. D. Cranswick	
Influence of Ni/Mn cation order on the spin-phonon coupling in multifunctional $\text{La}_2\text{NiMnO}_6$ epitaxial films by polarized Raman spectroscopy (8 pages)	134424
K. D. Truong, M. P. Singh, S. Jandl, and P. Fournier	
Short-time domain-wall dynamics in the random-field Ising model with a driving field (7 pages)	134425
N. J. Zhou, B. Zheng, and Y. Y. He	
Resonant impurity scattering and electron-phonon scattering in the electrical resistivity of Cr thin films (12 pages)	134426
Z. Boekelheide, David W. Cooke, E. Helgren, and F. Hellman	
$s=\frac{1}{2}$ antiferromagnetic Heisenberg model on fullerene-type symmetry clusters (9 pages)	134427
N. P. Konstantinidis	
Spin fluctuations in the antiferromagnetic metal $\text{Nb}_{12}\text{O}_{29}$ (9 pages)	134428
J.-G. Cheng, J.-S. Zhou, J. B. Goodenough, H. D. Zhou, C. R. Wiebe, T. Takami, and T. Fujii	
Structure, magnetic ordering, and Kondo effect in $(\text{Ce}_{1-x}\text{Nd}_x)_3\text{Al}$ (6 pages)	134429
Lingwei Li, Ryoichi Yamagata, Katsuhiko Nishimura, and Hitoshi Yamaoka	
Superfluidity and superconductivity	
Effective spin-flip scattering in diffusive superconducting proximity systems with magnetic disorder (10 pages)	134501
D. A. Ivanov, Ya. V. Fominov, M. A. Skvortsov, and P. M. Ostrovsky	
Nonequilibrium electrons in tunnel structures under high-voltage injection (5 pages)	134502
N. B. Kopnin, Y. M. Galperin, J. Bergli, and V. M. Vinokur	
Resolution of two apparent paradoxes concerning quantum oscillations in underdoped high- T_c superconductors (8 pages)	134503
Xun Jia, Pallab Goswami, and Sudip Chakravarty	
Model for the temperature dependence of the quasiparticle interference pattern in the measured scanning tunneling spectra of underdoped cuprate superconductors (5 pages)	134504
Dan Wulin, Yan He, Chih-Chun Chien, Dirk K. Morr, and K. Levin	
Vortex states in iron-based superconductors with collinear antiferromagnetic cores (8 pages)	134505
Hong-Min Jiang, Jian-Xin Li, and Z. D. Wang	
Quantum Monte Carlo simulation of spin-polarized tritium (8 pages)	134506
I. Bešlić, L. Vranješ Markić, and J. Boronat	
Critical velocity of a clean one-dimensional superconductor (10 pages)	134507
Tzu-Chieh Wei and Paul M. Goldbart	
Superfluid to Mott insulator transition of hardcore bosons in a superlattice (11 pages)	134508
Itay Hen and Marcos Rigol	

(Continued)

Acoustic detection of the magnetocaloric effect: Application to Gd and $\text{Gd}_{5.09}\text{Ge}_{2.03}\text{Si}_{1.88}$ (7 pages)	134406
A. O. Guimarães, M. E. Soffner, A. M. Mansanares, A. A. Coelho, A. Magnus G. Carvalho, M. J. M. Pires, S. Gama, and E. C. da Silva	
Magnetic diffuse scattering of neutrons in an ordered Fe_3Pt Invar alloy (6 pages)	134407
Yorihiko Tsunoda, Masao Takasaka, and Syusuke Hosoda	
Magnetic properties of mixed-valence iron phosphate glasses (9 pages)	134408
Hirofumi Akamatsu, Satoshi Oku, Koji Fujita, Shunsuke Murai, and Katsuhisa Tanaka	
Lattice dynamics in the <i>ab</i> - and <i>bc</i> -spiral spin-ordered states of perovskite manganites (6 pages)	134409
J. S. Lee, N. Kida, Y. Yamasaki, R. Shimano, and Y. Tokura	
Theory of vortex states in magnetic nanodisks with induced Dzyaloshinskii-Moriya interactions (8 pages)	134410
A. B. Butenko, A. A. Leonov, A. N. Bogdanov, and U. K. Rößler	
Magnetic structure of EuFe_2As_2 as determined by resonant x-ray scattering (5 pages)	134411
Javier Herrero-Martín, Valerio Scagnoli, Claudio Mazzoli, Yixi Su, Ranjan Mittal, Yinguo Xiao, Thomas Brueckel, Neeraj Kumar, S. K. Dhar, A. Thamizhavel, and Luigi Paolasini	
Magnetization dynamics of soft films with thickness-dependent anisotropy (18 pages)	134412
Vincent Dubuget, André Thiaville, François Duverger, Sébastien Dubourg, Olivier Acher, and Anne-Lise Adenot-Engelvin	
Classical to quantum mapping for an unconventional phase transition in a three-dimensional classical dimer model (14 pages)	134413
Stephen Powell and J. T. Chalker	
Magnetic order and dynamics of the charge-ordered antiferromagnet $\text{La}_{1.5}\text{Sr}_{0.5}\text{CoO}_4$ (15 pages)	134414
L. M. Helme, A. T. Boothroyd, R. Coldea, D. Prabhakaran, C. D. Frost, D. A. Keen, L. P. Regnault, P. G. Freeman, M. Enderle, and J. Kulda	
Magnetic energies of single submicron permalloy rectangles determined via magnetotransport (7 pages)	134415
André Kobs, Hendrik Spahr, Daniel Stickler, Sebastian Hankemeier, Robert Frömter, and Hans Peter Oepen	
Microscopic model and phase diagrams of the multiferroic perovskite manganites (22 pages)	134416
Masahito Mochizuki and Nobuo Furukawa	
Magnetization and magnetoelectric effect in $\text{Bi}_{1-x}\text{La}_x\text{FeO}_3$ ($0 \leq x \leq 0.15$) (6 pages)	134417
G. Le Bras, D. Colson, A. Forget, N. Genand-Riondet, R. Tourbot, and P. Bonville	
Exchange bias in $\text{Fe}/\text{Fe}_3\text{O}_4$ core-shell magnetic nanoparticles mediated by frozen interfacial spins (6 pages)	134418
Quy Khac Ong, Alexander Wei, and Xiao-Min Lin	
Training effect of exchange-bias bilayers within the domain state model (8 pages)	134419
A. G. Biternas, U. Nowak, and R. W. Chantrell	
Modulated phases of a one-dimensional sharp interface model in a magnetic field (6 pages)	134420
Alessandro Giuliani, Joel L. Lebowitz, and Elliott H. Lieb	
Magnetocaloric effect in dipolar chains of magnetic nanoparticles with collinear anisotropy axes (6 pages)	134421
D. Serantes, D. Baldomir, M. Pereiro, B. Hernando, V. M. Prida, J. L. Sánchez Llamazares, A. Zhukov, M. Ilyn, and J. González	

(Continued)

Reconciling the Pauling bond length picture and Vegard's law in a mixed crystal: An x-ray fluorescence holographic study (7 pages)	134123
Shinya Hosokawa, Naohisa Happo, and Kouichi Hayashi	
Inhomogeneous, disordered, and partially ordered systems	
Disordered Potts model on the diamond hierarchical lattice: Numerically exact treatment in the large- q limit (8 pages)	134201
Ferenc Iglói and Loïc Turban	
General mechanism for negative capacitance phenomena (6 pages)	134202
J. Shulman, Y. Y. Xue, S. Tsui, F. Chen, and C. W. Chu	
Dynamics, dynamical systems, lattice effects, quantum solids	
Local structural changes in excited $\text{Ti}^{3+}:\text{Al}_2\text{O}_3$ studied by time-resolved XANES (6 pages)	134301
E. Vorobeva, S. L. Johnson, P. Beaud, C. J. Milne, M. Benfatto, and G. Ingold	
Neutron spectroscopy of H impurities in PdD: Covibrations of the H and D atoms (7 pages)	134302
V. E. Antonov, A. I. Davydov, V. K. Fedotov, A. S. Ivanov, A. I. Kolesnikov, and M. A. Kuzovnikov	
Propagation of sound beams behind sonic crystals (7 pages)	134303
V. J. Sánchez-Morcillo, K. Staliunas, V. Espinosa, I. Pérez-Arjona, J. Redondo, and E. Soliveres	
<i>Ab initio</i> lattice dynamics and thermal expansion of Cu_2O (6 pages)	134304
Klaus-Peter Bohnen, Rolf Heid, Lothar Pintschovius, Aloysius Soon, and Catherine Stampfl	
Dynamic group velocity control in a mechanically tunable photonic-crystal coupled-resonator optical waveguide (10 pages)	134305
Kehan Tian, William Arora, Satoshi Takahashi, John Hong, and George Barbastathis	
Mechanisms for thermal conduction in various polymorphs of methane hydrate (16 pages)	134306
Niall J. English, John S. Tse, and Declan J. Carey	
Magnetism	
Influence of three-dimensional dynamics on the training effect in ferromagnet-antiferromagnet bilayers (7 pages)	134401
Paolo Biagioni, Antonio Montano, and Marco Finazzi	
Spin and orbital moment in amorphous $\text{Co}_{68}\text{Fe}_{24}\text{Zr}_8$ layers (8 pages)	134402
Thomas Hase, Hossein Raanaei, Hans Lidbaum, Cecilia Sánchez-Hanke, Stuart Wilkins, Klaus Leifer, and Björgvin Hjörvarsson	
Influence of a transport current on magnetic anisotropy in gyrotropic ferromagnets (11 pages)	134403
Ion Garate and A. H. MacDonald	
High-pressure magnetic study of Fe-Ni and Fe-Pt Invar alloys (6 pages)	134404
L. Nataf, F. Decremps, J. C. Chervin, O. Mathon, S. Pascarelli, J. Kamarád, F. Baudelet, A. Congeduti, and J. P. Itié	
Anisotropic magnetoresistance of spin-orbit coupled carriers scattered from polarized magnetic impurities (14 pages)	134405
Maxim Trushin, Karel Výborný, Peter Moraczewski, Alexey A. Kovalev, John Schliemann, and T. Jungwirth	

(Continued)

Nanoscale duplex oxide growth during early stages of oxidation of Cu-Ni(100) (5 pages)	134106
Guangwen Zhou, Dillon D. Fong, Liang Wang, Paul H. Fuoss, Peter M. Baldo, Loren J. Thompson, and Jeffrey A. Eastman	
First-principles calculations of MnB ₂ , TcB ₂ , and ReB ₂ within the ReB ₂ -type structure (10 pages)	134107
Sezgin Aydin and Mehmet Simsek	
Modeling proton transfer and polarons in a molecular crystal diamino-dinitroethylene (12 pages)	134108
Anna V. Kimmel, David Muñoz Ramo, Peter V. Sushko, Alexander L. Shluger, and Maija M. Kuklja	
Influence of carbon on the kinetics of He migration and clustering in α -Fe from first principles (10 pages) . . .	134109
C. J. Ortiz, M. J. Caturla, C. C. Fu, and F. Willaime	
High-resolution TEM investigation of structure and composition of polar Pd/ZnO interfaces (9 pages)	134110
Mitsuhiro Saito, Thomas Wagner, Gunther Richter, and Manfred Rühle	
Theoretical investigation of the vibrational properties of BeH ₂ and Li ₂ BeH ₄ (5 pages)	134111
H. Iddir, P. Zapol, and A. I. Kolesnikov	
First-principles phase diagram calculations for the HfC-TiC, ZrC-TiC, and HfC-ZrC solid solutions (7 pages)	134112
O. Adjaoud, G. Steinle-Neumann, B. P. Burton, and A. van de Walle	
Self-doping in boron sheets from first principles: A route to structural design of metal boride nanostructures (8 pages)	134113
Hui Tang and Sohrab Ismail-Beigi	
Mechanical resonance of the austenite/martensite interface and the pinning of the martensitic microstructures by dislocations in Cu _{74.08} Al _{23.13} Be _{2.79} (8 pages)	134114
E. K. H. Salje, H. Zhang, H. Idrissi, D. Schryvers, M. A. Carpenter, X. Moya, and A. Planes	
Cold versus hot shear banding in bulk metallic glass (6 pages)	134115
Y. Q. Cheng, Z. Han, Y. Li, and E. Ma	
Phase diagrams of epitaxial Pb(Zr,Ti)O ₃ ultrathin films from first principles (6 pages)	134116
David Sichuga, I. Ponomareva, and L. Bellaiche	
Orientational structures in solid para-hydrogen in the broken symmetry phase (5 pages)	134117
Massimo Moraldi	
Formation of Y ₂ O ₃ nanoclusters in nanostructured ferritic alloys during isothermal and anisothermal heat treatment: A kinetic Monte Carlo study (11 pages)	134118
C. Hin, B. D. Wirth, and J. B. Neaton	
Monoclinic to tetragonal transformations in hafnia and zirconia: A combined calorimetric and density functional study (13 pages)	134119
Xuhui Luo, Wei Zhou, Sergey V. Ushakov, Alexandra Navrotsky, and Alexander A. Demkov	
Jahn-Teller transition of Fe ₂ TiO ₄ observed by maximum entropy method at high pressure and low temperature (10 pages)	134120
Takamitsu Yamanaka, Tetsuro Mine, Sachiko Asogawa, and Yuki Nakamoto	
Size-distribution evolution of ion-beam-synthesized nanoclusters in silica (10 pages)	134121
C. W. Yuan, D. O. Yi, I. D. Sharp, S. J. Shin, C. Y. Liao, J. Guzman, J. W. Ager, III, E. E. Haller, and D. C. Chrzan	
Site occupation in the Cr-Ru and Cr-Os σ phases (9 pages)	134122
Marcel H. F. Sluiter and Alain Pasturel	

(Continued)