

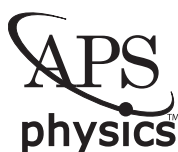
RAPID COMMUNICATIONS

Structure, structural phase transitions, mechanical properties, defects

- Photoinduced stabilization and enhancement of the ferroelectric polarization in $\text{Ba}_{0.1}\text{Sr}_{0.9}\text{TiO}_3/\text{La}_{0.7}\text{Ca}(\text{Sr})_{0.3}\text{MnO}_3$ thin film heterostructures (5 pages) 020101(R)
Y. M. Sheu, S. A. Trugman, L. Yan, C.-P. Chuu, Z. Bi, Q. X. Jia, A. J. Taylor, and R. P. Prasankumar

Magnetism

- Frequency dependence of magnetization reversal in thin Fe(100) films (5 pages) 020401(R)
K. Zhernenkov, D. Gorkov, B. P. Toperverg, and H. Zabel
- Unraveling the origins of electromechanical response in mixed-phase bismuth ferrite (7 pages) 020402(R)
R. K. Vasudevan, M. B. Okatan, Y. Y. Liu, S. Jesse, J.-C. Yang, W.-I. Liang, Y.-H. Chu, J. Y. Li, S. V. Kalinin, and V. Nagarajan
- Magnetic excitations in stripe-ordered $\text{La}_{1.875}\text{Ba}_{0.125}\text{CuO}_4$ studied using resonant inelastic x-ray scattering (5 pages) 020403(R)
M. P. M. Dean, G. Dellea, M. Minola, S. B. Wilkins, R. M. Konik, G. D. Gu, M. Le Tacon, N. B. Brookes, F. Yakhov-Harris, K. Kummer, J. P. Hill, L. Braicovich, and G. Ghiringhelli
- Magnons in ultrathin ferromagnetic films with a large perpendicular magnetic anisotropy (5 pages) 020404(R)
H. J. Qin, Kh. Zakeri, A. Ernst, T.-H. Chuang, Y.-J. Chen, Y. Meng, and J. Kirschner
- Disorder-induced mechanism for positive exchange bias fields (4 pages) 020405(R)
Orlando V. Billoni, Francisco A. Tamarit, and Sergio A. Cannas
- Orbital-resolved spin model for thermal magnetization switching in rare-earth-based ferrimagnets (5 pages) 020406(R)
S. Wienholdt, D. Hinzke, K. Carva, P. M. Oppeneer, and U. Nowak
- Proposal for realizing Majorana fermions in chains of magnetic atoms on a superconductor (5 pages) 020407(R)
S. Nadj-Perge, I. K. Drozdov, B. A. Bernevig, and Ali Yazdani
- Two-step spin-switchable tetranuclear Fe(II) molecular solid: *Ab initio* theory and predictions (4 pages) 020408(R)
Pablo Maldonado, Sudipta Kanungo, Tanusri Saha-Dasgupta, and Peter M. Oppeneer



Superfluidity and superconductivity

Dispersive spin excitations in highly overdoped cuprates revealed by resonant inelastic x-ray scattering (<i>5 pages</i>)	020501(R)
M. Le Tacon, M. Minola, D. C. Peets, M. Moretti Sala, S. Blanco-Canosa, V. Hinkov, R. Liang, D. A. Bonn, W. N. Hardy, C. T. Lin, T. Schmitt, L. Braicovich, G. Ghiringhelli, and B. Keimer	
Topologically trivial zero-bias conductance peak in semiconductor Majorana wires from boundary effects (<i>5 pages</i>)	020502(R)
Dibyendu Roy, Nilanjan Bondyopadhyaya, and Sumanta Tewari	
Pressure phase diagram and quantum criticality of CePt ₂ In ₇ single crystals (<i>4 pages</i>)	020503(R)
V. A. Sidorov, Xin Lu, T. Park, Hanoh Lee, P. H. Tobash, R. E. Baumbach, F. Ronning, E. D. Bauer, and J. D. Thompson	
Multiband superconductivity and nanoscale inhomogeneity at oxide interfaces (<i>5 pages</i>)	020504(R)
S. Caprara, J. Biscaras, N. Bergeal, D. Bucheli, S. Hurand, C. Feuillet-Palma, A. Rastogi, R. C. Budhani, J. Lesueur, and M. Grilli	
Optimizing the superconducting transition temperature and upper critical field of Sn _{1-x} In _x Te (<i>4 pages</i>)	020505(R)
R. D. Zhong, J. A. Schneeloch, X. Y. Shi, Z. J. Xu, C. Zhang, J. M. Tranquada, Q. Li, and G. D. Gu	
Effect of magnetic field on the competition between superconductivity and charge order below the pseudogap state (<i>5 pages</i>)	020506(R)
H. Meier, M. Einenkel, C. Pépin, and K. B. Efetov	
Heat capacity of single-crystal Cu _x TiSe ₂ superconductors (<i>5 pages</i>)	020507(R)
J. Kačmarčík, Z. Pribulová, V. Pal'uchová, P. Szabó, P. Husaníková, G. Karapetrov, and P. Samuely	

ARTICLES

Structure, structural phase transitions, mechanical properties, defects

Decoupling crossover in asymmetric broadside coupled split-ring resonators at terahertz frequencies (<i>5 pages</i>) . . .	024101
G. R. Keiser, A. C. Strikwerda, K. Fan, V. Young, X. Zhang, and R. D. Averitt	
Bistability of ferroelectric domain walls: Morphotropic boundary and strain effects (<i>11 pages</i>)	024102
P. V. Yudin, A. K. Tagantsev, and N. Setter	
Polytypic transformations in SiC: Diffuse x-ray scattering and Monte Carlo simulations (<i>10 pages</i>)	024103
A. Boulle, D. Dompont, I. Galben-Sandulache, and D. Chaussende	
Migration-induced field-stabilized polar phase in strontium titanate single crystals at room temperature (<i>10 pages</i>)	024104
Juliane Hanzig, Matthias Zschornak, Florian Hanzig, Erik Mehner, Hartmut Stöcker, Barbara Abendroth, Christian Röder, Andreas Talkenberger, Gerhard Schreiber, David Rafaja, Sibylle Gemming, and Dirk C. Meyer	
Low-temperature structural effects in the (TMTSF) ₂ PF ₆ and AsF ₆ Bechgaard salts (<i>15 pages</i>)	024105
P. Foury-Leylekian, S. Petit, I. Mirebeau, G. André, M. de Souza, M. Lang, E. Ressouche, A. Moradpour, and J.-P. Pouget	
Effect of a built-in electric field in asymmetric ferroelectric tunnel junctions (<i>8 pages</i>)	024106
Yang Liu, Xiaojie Lou, Manuel Bibes, and Brahim Dkhil	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 88, NUMBER 2

JULY 2013-1(II)

Formation and switching of defect dipoles in acceptor-doped lead titanate: A kinetic model based on first-principles calculations (<i>10 pages</i>)	024107
Paul Erhart, Petra Träskelin, and Karsten Albe	
Thermodynamic stability of alkali-metal–zinc double-cation borohydrides at low temperatures (<i>9 pages</i>)	024108
Tran Doan Huan, Maximilian Amsler, Riccardo Sabatini, Vu Ngoc Tuoc, Nam Ba Le, Lilia M. Woods, Nicola Marzari, and Stefan Goedecker	
Electronic structure and stability of hyperstoichiometric UO_{2+x} under pressure (<i>16 pages</i>)	024109
Jianwei Wang, Rodney C. Ewing, and Udo Becker	
First-order versus second-order phase transformation in AuZn (<i>10 pages</i>)	024110
M. Sanati, R. C. Albers, T. Lookman, and A. Saxena	
Melting curve of face-centered-cubic nickel from first-principles calculations (<i>5 pages</i>)	024111
Monica Pozzo and Dario Alfè	
Pair potentials and equation of state of solid <i>para</i> -hydrogen to megabar pressure (<i>6 pages</i>)	024112
Tokunbo Omiyinka and Massimo Boninsegni	
Evidence for local monoclinic structure, polarization rotation, and morphotropic phase transitions in $(1-x)\text{BiFeO}_3$ - $x\text{BaTiO}_3$ solid solutions: A high-energy synchrotron x-ray powder diffraction study (<i>12 pages</i>)	024113
Anar Singh, Chikako Moriyoshi, Yoshihiro Kuroiwa, and Dhananjai Pandey	
Piezoelectric properties of twinned ferroelectric perovskites with head-to-head and tail-to-tail domain walls (<i>9 pages</i>)	024114
P. Ondrejčovic, P. Marton, M. Guennou, N. Setter, and J. Hlinka	
First-principles study of helium, carbon, and nitrogen in austenite, dilute austenitic iron alloys, and nickel (<i>26 pages</i>)	024115
D. J. Hepburn, D. Ferguson, S. Gardner, and G. J. Ackland	
☞ Thermodynamic and mechanical properties of copper precipitates in α -iron from atomistic simulations (<i>14 pages</i>)	024116
Paul Erhart, Jaime Marian, and Babak Sadigh	
Temperature-driven phase transformation in Y_3Co : Neutron scattering and first-principles studies (<i>7 pages</i>)	024117
A. Podlesnyak, G. Ehlers, H. Cao, M. Matsuda, M. Frontzek, O. Zaharko, V. A. Kazantsev, A. F. Gubkin, and N. V. Baranov	
Experimental evidence of orbital order in α - B_{12} and γ - B_{28} polymorphs of elemental boron (<i>8 pages</i>)	024118
Swastik Mondal, Sander van Smaalen, Gleb Parakhonskiy, Siriyara Jagannatha Prathapa, Leila Noohinejad, Elena Bykova, Natalia Dubrovinskaia, Dmitry Chernyshov, and Leonid Dubrovinsky	
First-principles studies of phase stability and crystal structures in Li-Zn mixed-metal borohydrides (<i>10 pages</i>)	024119
Yongli Wang, Yongsheng Zhang, and C. Wolverton	
Pressure-induced structural transitions and metallization in Ag_2Te (<i>5 pages</i>)	024120
Zhao Zhao, Shibing Wang, Haijun Zhang, and Wendy L. Mao	

(Continued)

Deconfining the rotational Goldstone mode: The superconducting quantum liquid crystal in (2+1) dimensions (5 pages)	024121
Aron J. Beekman, Kai Wu, Vladimir Cvetkovic, and Jan Zaanen	

Inhomogeneous, disordered, and partially ordered systems

Quantum corrections to the polarizability and dephasing in isolated disordered metals (12 pages)	024201
M. Treiber, P. M. Ostrovsky, O. M. Yevtushenko, J. von Delft, and I. V. Lerner	

Dynamics, dynamical systems, lattice effects:

Lattice dynamics of piezoelectric copper metaborate CuB_2O_4 (15 pages)	024301
R. V. Pisarev, K. N. Boldyrev, M. N. Popova, A. N. Smirnov, V. Yu. Davydov, L. N. Bezmaternykh, M. B. Smirnov, and V. Yu. Kazimirov	

Self-consistent basis generation scheme for polaron and bipolaron systems (4 pages)	024302
Monodeep Chakraborty and B. I. Min	

Tunable active acoustic metamaterials (8 pages)	024303
Bogdan-Ioan Popa, Lucian Zigoneanu, and Steven A. Cummer	

Accurate calculations of phonon dispersion in CaF_2 and CeO_2 (5 pages)	024304
Yi Wang, Lei A. Zhang, Shunli Shang, Zi-Kui Liu, and Long-Qing Chen	

Real-time sub-Ångstrom imaging of reversible and irreversible conformations in rhodium catalysts and graphene (12 pages)	024305
Christian Kisielowski, Lin-Wang Wang, Petra Specht, Hector A. Calderon, Bastian Barton, Bin Jiang, Joo H. Kang, and Robert Cieslinski	

Equilibration and coarsening in the quantum $O(N)$ model at infinite N (10 pages)	024306
Anushya Chandran, Arun Nanduri, S. S. Gubser, and S. L. Sondhi	

Magnetism

Manipulation of spin state of iron porphyrin by chemisorption on magnetic substrates (9 pages)	024401
Sumanta Bhandary, Barbara Brena, Pooja M. Panchmatia, Iulia Brumboiu, Matthias Bernien, Claudia Weis, Bernhard Krumme, Corina Etz, Wolfgang Kuch, Heiko Wende, Olle Eriksson, and Biplab Sanyal	

Incommensurate dynamic correlations in the quasi-two-dimensional spin liquid BiCu_2PO_6 (8 pages)	024402
K. W. Plumb, Zahra Yamani, M. Matsuda, G. J. Shu, B. Koteswararao, F. C. Chou, and Young-June Kim	

Magnetostructural transition, metamagnetism, and magnetic phase coexistence in $\text{Co}_{10}\text{Ge}_3\text{O}_{16}$ (7 pages)	024403
Phillip T. Barton, Ram Seshadri, Anna Llobet, and Matthew R. Suchomel	

Effects of alloying and strain on the magnetic properties of Fe_{16}N_2 (9 pages)	024404
Liqin Ke, Kirill D. Belashchenko, Mark van Schilfhaarde, Takao Kotani, and Vladimir P. Antropov	

Ferromagnetic amorphous oxides in the EuO-TiO_2 system studied by the Faraday effect in the visible region and the x-ray magnetic circular dichroism at the $\text{Eu } M_{4,5}$ and $L_{2,3}$ edges (9 pages)	024405
Takahiro Kawamoto, Koji Fujita, Hirofumi Akamatsu, Tetsuya Nakamura, Toyohiko Kinoshita, Masaichiro Mizumaki, Naomi Kawamura, Motohiro Suzuki, Yoshiro Kususe, Shunsuke Murai, and Katsuhisa Tanaka	

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 88, NUMBER 2

JULY 2013-1(II)

Thermally induced dynamics in ultrathin magnetic tunnel junctions (<i>11 pages</i>)	024406
P. Ogrodnik, G. E. W. Bauer, and Ke Xia	
Nonplanar ground states of frustrated antiferromagnets on an octahedral lattice (<i>22 pages</i>)	024407
Sophia R. Sklan and Christopher L. Henley	
Crystal chirality and skyrmion helicity in MnSi and (Fe, Co)Si as determined by transmission electron microscopy (<i>4 pages</i>)	024408
D. Morikawa, K. Shibata, N. Kanazawa, X. Z. Yu, and Y. Tokura	
Muon spin relaxation study of spin-glass freezing in the Heusler compound $\text{Ru}_{1.9}\text{Fe}_{0.1}\text{CrSi}$ (<i>5 pages</i>)	024409
Masahiko Hiroi, Toru Hisamatsu, Takao Suzuki, Kazuki Ohishi, Yasuyuki Ishii, and Isao Watanabe	
Finite-temperature phase diagram of the classical Kitaev-Heisenberg model (<i>11 pages</i>)	024410
Craig Price and Natalia B. Perkins	
Highly frustrated magnetism in SrHo_2O_4 : Coexistence of two types of short-range order (<i>8 pages</i>)	024411
O. Young, A. R. Wildes, P. Manuel, B. Ouladdiaf, D. D. Khalyavin, G. Balakrishnan, and O. A. Petrenko	
 Giant vertical magnetization shift induced by spin canting in a $\text{Co}/\text{Ca}_2\text{Ru}_{0.98}\text{Fe}_{0.02}\text{FeO}_4$ heterostructure (<i>5 pages</i>)	024413
S. J. Yuan, L. Li, T. F. Qi, L. E. DeLong, and G. Cao	
Controlling toroidal moments by crossed electric and magnetic fields (<i>5 pages</i>)	024414
M. Baum, K. Schmalzl, P. Steffens, A. Hiess, L. P. Regnault, M. Meven, P. Becker, L. Bohatý, and M. Braden	
Electric field driven dynamic percolation in electronically phase separated $(\text{La}_{0.4}\text{Pr}_{0.6})_{0.67}\text{Ca}_{0.33}\text{MnO}_3$ thin films (<i>5 pages</i>)	024415
Hyoungjeen Jeon and Amlan Biswas	
Phenomenological crystal-field model of the magnetic and thermal properties of the Kondo-like system UCu_2Si_2 (<i>12 pages</i>)	024416
R. Troć, Z. Gajek, A. Pikul, H. Misiorek, E. Colineau, and F. Wastin	
Magnetoelastic effects in doped Fe_2P (<i>8 pages</i>)	024417
Z. Gercsi, E. K. Delczeg-Czirjak, L. Vitos, A. S. Wills, A. Daoud-Aladine, and K. G. Sandeman	
Spin gap and the nature of the $4d^3$ magnetic ground state in the frustrated fcc antiferromagnet Ba_2YRuO_6 (<i>6 pages</i>)	024418
J. P. Carlo, J. P. Clancy, K. Fritsch, C. A. Marjerrison, G. E. Granroth, J. E. Greedan, H. A. Dabkowska, and B. D. Gaulin	
Overscreened Kondo fixed point in $S = 1$ spin liquid (<i>9 pages</i>)	024419
Maksym Serbyn, T. Senthil, and Patrick A. Lee	
Ultrafast magnon transistor at room temperature (<i>8 pages</i>)	024420
Kevin A. van Hoogdalem and Daniel Loss	
Tunability versus deviation sensitivity in a nonlinear vortex oscillator (<i>4 pages</i>)	024421
S. Y. Martin, C. Thirion, C. Hoarau, C. Baraduc, and B. Diény	
Microscopic derivation of spin-transfer torque in ferromagnets (<i>6 pages</i>)	024422
Ran Cheng and Qian Niu	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 88, NUMBER 2

JULY 2013-1(II)

Superconductivity and non-Fermi-liquid behavior of $\text{La}_3\text{Pd}_4\text{Si}_4$ and $\text{Ce}_3\text{Pd}_4\text{Si}_4$ (7 pages)	024423
F. Kneidinger, H. Michor, E. Bauer, A. Gribov, A. Lipatov, Y. Seropegin, J. Sereni, and P. Rogl	
X-ray magnetic circular dichroism experiments and theory of transuranium Laves phase compounds (14 pages)	024424
F. Wilhelm, R. Eloirdi, J. Ruz, R. Springell, E. Colineau, J.-C. Griveau, P. M. Oppeneer, R. Caciuffo, A. Rogalev, and G. H. Lander	
Fast domain-wall propagation in uniaxial nanowires with transverse fields (5 pages)	024425
Arseni Goussev, Ross G. Lund, J. M. Robbins, Valeriy Slastikov, and Charles Sonnenberg	
Electronic structure and exchange interactions in cobalt-phthalocyanine chains (9 pages)	024426
Wei Wu, N. M. Harrison, and A. J. Fisher	
Dynamical mean-field theory for quantum spin systems: Test of solutions for magnetically ordered states (7 pages)	024427
Junya Otsuki and Yoshio Kuramoto	
Field and temperature-driven magnetic reversal of spin-flop coupled epitaxial Fe/MnPd bilayers (9 pages)	024428
Wei Zhang and Kannan M. Krishnan	
Magnetic moment suppression in $\text{Ba}_3\text{CoRu}_2\text{O}_9$: Hybridization effect (5 pages)	024429
S. V. Streltsov	
Superfluidity and superconductivity	
Vortex states and Majorana fermions in spin-orbit coupled semiconductor-superconductor hybrid structures (8 pages)	024501
Kristofer Björnson and Annica M. Black-Schaffer	
Nonlocal correlations in a proximity-coupled normal-metal (7 pages)	024502
Taewan Noh, Sam Davis, and Venkat Chandrasekhar	
Orbital upper critical field of type-II superconductors with pair breaking (7 pages)	024503
V. G. Kogan and R. Prozorov	
Anomalous angular dependence of the upper critical induction of orthorhombic ferromagnetic superconductors with completely broken p -wave symmetry (11 pages)	024504
Christopher Lörcher, Jingchuan Zhang, Qiang Gu, and Richard A. Klemm	
Comparison of charge modulations in $\text{La}_{1.875}\text{Ba}_{0.125}\text{CuO}_4$ and $\text{YBa}_2\text{Cu}_3\text{O}_{6.6}$ (4 pages)	024505
V. Thampy, S. Blanco-Canosa, M. García-Fernández, M. P. M. Dean, G. D. Gu, M. Först, T. Loew, B. Keimer, M. Le Tacon, S. B. Wilkins, and J. P. Hill	
Quantum oscillations of the specific heat in d -wave superconductors with loop current order (11 pages)	024506
Luyang Wang and Oskar Vafek	
Quantum Monte Carlo study of spin-polarized deuterium (10 pages)	024507
I. Bešlić, L. Vranješ Markić, J. Casulleras, and J. Boronat	
Anomalous metallic state and anisotropic multiband superconductivity in $\text{Nb}_3\text{Pd}_{0.7}\text{Se}_7$ (9 pages)	024508
Q. R. Zhang, D. Rhodes, B. Zeng, T. Besara, T. Siegrist, M. D. Johannes, and L. Balicas	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 88, NUMBER 2

JULY 2013-1(II)

Electrostatic tuning of the properties of disordered indium-oxide films near the superconductor-insulator transition (<i>5 pages</i>)	024509
Yeonbae Lee, Aviad Frydman, Tianran Chen, Brian Skinner, and A. M. Goldman	
Phonon-roton modes of liquid ^4He beyond the roton in the porous medium MCM-41 (<i>8 pages</i>)	024510
R. T. Azuah, S. O. Diallo, M. A. Adams, O. Kirichek, and H. R. Glyde	
Transport properties of topological superconductor–Luttinger liquid junctions: A real-time Keldysh approach (<i>13 pages</i>)	024511
Roman M. Lutchyn and Jacob H. Skrabacz	
Josephson-Majorana cycle in topological single-electron hybrid transistors (<i>6 pages</i>)	024512
Nicolas Didier, Marco Gibertini, Ali G. Moghaddam, Jürgen König, and Rosario Fazio	
Plastic response of dislocation glide in solid helium under dc strain-rate loading (<i>8 pages</i>)	024513
Caizhi Zhou, Jung-Jung Su, Matthias J. Graf, Charles Reichhardt, Alexander V. Balatsky, and Irene J. Beyerlein	
Pressure dependence of the superconducting transition temperature of the filled skutterudite $\text{YFe}_4\text{P}_{12}$ (<i>8 pages</i>)	024514
J.-G. Cheng, J.-S. Zhou, K. Matsubayashi, P. P. Kong, Y. Kubo, Y. Kawamura, C. Sekine, C. Q. Jin, J. B. Goodenough, and Y. Uwatoko	
 Absence of zero-energy surface bound states in $\text{Cu}_x\text{Bi}_2\text{Se}_3$ studied via Andreev reflection spectroscopy (<i>8 pages</i>)	024515
Haibing Peng, Debtanu De, Bing Lv, Fengyan Wei, and Ching-Wu Chu	
Quantum-critical pairing in electron-doped cuprates (<i>17 pages</i>)	024516
Yuxuan Wang and Andrey Chubukov	
Universal behavior of two-dimensional bosonic gases at Berezinskii-Kosterlitz-Thouless transitions (<i>15 pages</i>)	024517
Giacomo Ceccarelli, Jacopo Nespolo, Andrea Pelissetto, and Ettore Vicari	