

PHYSICAL REVIEW B

For editorial and subscription correspondence,
please see inside front cover
(ISSN: 1098-0121)

PERIODICALS
Postmaster send address changes to:
APS Subscription Services
Suite 1N01
2 Huntington Quadrangle
Melville, NY 11747-4502

THIRD SERIES, VOLUME 75, NUMBER 1

CONTENTS

JANUARY 2007-1(I)

Physical Review B Editorial Policies and Practices	iii
Physical Review B Information for Contributors	vii
Subject Matter Categories for Physical Review B	x

BRIEF REPORTS

Structure, structural phase transitions, mechanical properties, defects

Orientational order parameters in the lead ytterbium tantalate phase transition (<i>4 pages</i>)	012101
Sang-Jin Ahn, Seung-Woo Yi, Jong-Jean Kim, Jai-Hyun Kim, and Woong Kil Choo	
Phase retrieval from exactly oversampled diffraction intensity through deconvolution (<i>4 pages</i>)	012102
Changyong Song, Damien Ramunno-Johnson, Yoshinori Nishino, Yoshiki Kohmura, Tetsuya Ishikawa, Chien-Chun Chen, Ting-Kuo Lee, and Jianwei Miao	
Molecular dynamics calculations of the crystal-melt interfacial mobility for hexagonal close-packed Mg (<i>4 pages</i>)	012103
Z. G. Xia, D. Y. Sun, M. Asta, and J. J. Hoyt	
Maxwell-Wagner relaxations and their contributions to the high permittivity of calcium copper titanate ceramics (<i>4 pages</i>)	012104
Wei Li and Robert W. Schwartz	
Exact analytical solution to the electronic transport in an N -coupled quantum dot array (<i>4 pages</i>)	012105
B. H. Teng, H. K. Sy, Z. C. Wang, Y. Q. Sun, and H. C. Yang	
Pressure-induced isostructural phase transition of metal-doped silicon clathrates (<i>4 pages</i>)	012106
Toshiaki Iitaka	
Ultrafast critical dynamics of a ferroelectric phase transition in $\text{Pb}_{1-x}\text{Ge}_x\text{Te}$ (<i>4 pages</i>)	012107
Rong Lu, Muneaki Hase, Masahiro Kitajima, Shinichi Nakashima, and Shunji Sugai	

Inhomogeneous, disordered, and partially ordered systems

Electronic bonding transition in compressed SiO_2 glass (<i>4 pages</i>)	012201
Jung-Fu Lin, Hiroshi Fukui, David Prendergast, Takuo Okuchi, Yong Q. Cai, Nozomu Hiraoka, Choong-Shik Yoo, Andrea Trave, Peter Eng, Michael Y. Hu, and Paul Chow	

Dynamics, dynamical systems, lattice effects, quantum solids

Ytterbium divalency and lattice disorder in near-zero thermal expansion YbGaGe (<i>4 pages</i>)	012301
C. H. Booth, A. D. Christianson, J. M. Lawrence, L. D. Pham, J. C. Lashley, and F. R. Drymiotis	



Copyright 2007 by The American Physical Society



1098-0121(20070101)75:1;1-Q

(Continued)

Anderson transition of the plasma oscillations of one-dimensional disordered Wigner lattices (<i>4 pages</i>)	012302
Shimul Akhanjee and Joseph Rudnick	
Heterogeneous states observed in the CD ₄ -CH ₄ system (<i>4 pages</i>)	012303
Alexander I. Krivchikov, Piotr Stachowiak, Elwira Pisarska, and Andrzej Jeżowski	
Magnetism	
Observation of periodic oscillations in magnetization-induced second harmonic generation at the Mn/Co interface (<i>4 pages</i>)	012401
V. K. Valev, A. Kirilyuk, F. Dalla Longa, J. T. Kohlhepp, B. Koopmans, and Th. Rasing	
Nonlinear response of single-molecule magnets: Field-tuned quantum-to-classical crossovers (<i>4 pages</i>)	012402
R. López-Ruiz, F. Luis, A. Millán, C. Rillo, D. Zueco, and J. L. García-Palacios	
Effect of spacer layer thickness on the magnetic and magnetotransport properties of Fe ₃ O ₄ /Cu/Ni ₈₀ Fe ₂₀ spin valve structures (<i>4 pages</i>)	012403
D. Tripathy, A. O. Adeyeye, and S. Shannigrahi	
Connecting the timescales in picosecond remagnetization experiments (<i>4 pages</i>)	012404
Marija Djordjevic and Markus Münzenberg	
Magnetic excitations from the singlet dimerized state in Na ₂ Co ₂ (C ₂ O ₄) ₃ (H ₂ O) ₂ (<i>4 pages</i>)	012405
M. Matsuda, S. Wakimoto, K. Kakurai, Z. Honda, and K. Yamada	
Critical behavior of the field-dependent susceptibility in single-crystal La _{0.73} Ba _{0.27} MnO ₃ (<i>3 pages</i>)	012406
Wei Li, H. P. Kunkel, X. Z. Zhou, Gwyn Williams, Y. Mukovskii, and D. Shulyatev	
Pressure-temperature phase diagram of multiferroic Ni ₃ V ₂ O ₈ (<i>4 pages</i>)	012407
R. P. Chaudhury, F. Yen, C. R. dela Cruz, B. Lorenz, Y. Q. Wang, Y. Y. Sun, and C. W. Chu	
Vortices in thin ferromagnetic films and the skyrmion number (<i>2 pages</i>)	012408
O. A. Tretiakov and O. Tchernyshyov	
Orbital-spin-phonon coupling in Jahn-Teller-distorted LaMnO ₃ : Softening of the 490 and 610 cm ⁻¹ Raman-active modes (<i>4 pages</i>)	012409
Jiasi Xu, Jung H. Park, and Hyun M. Jang	
Unconventional relaxation in antiferromagnetic CoRh ₂ O ₄ nanoparticles (<i>4 pages</i>)	012410
R. N. Bhowmik and R. Ranganathan	
Relationship between magnetic and structural properties of Ni thin films on GaAs(100) and bulk bcc Ni: First-principles calculations (<i>4 pages</i>)	012411
Sergii Khmelevskiy and Peter Mohn	
Effect of disorder on the thermodynamic phase transition in La _{0.70} Ca _{0.30} MnO ₃ (<i>4 pages</i>)	012412
J. A. Souza, J. J. Neumeier, and R. F. Jardim	
Size-dependent scaling of perpendicular exchange bias in magnetic nanostructures (<i>4 pages</i>)	012413
Gregory Malinowski, Manfred Albrecht, Ildico L. Guhr, J. M. D. Coey, and Sebastiaan van Dijken	
Spin-wave dispersion in half-doped La _{3/2} Sr _{1/2} NiO ₄ (<i>4 pages</i>)	012414
D. X. Yao and E. W. Carlson	
E-band excitations in the magnetic Keplerate molecule Fe ₃₀ (<i>4 pages</i>)	012415
O. Waldmann	

Superfluidity and superconductivity

Kinetic-energy-stabilized superconductivity in cuprates (<i>3 pages</i>)	012501
D. J. Singh	
Motions of quantized vortices attached to a boundary in alternating currents of superfluid ^4He (<i>4 pages</i>)	012502
H. Yano, N. Hashimoto, A. Handa, M. Nakagawa, K. Obara, O. Ishikawa, and T. Hata	
Pairing symmetry and upward curvature of the upper critical field in superconducting $\text{Na}_{0.35}\text{CoO}_2 \cdot y\text{H}_2\text{O}$ (<i>4 pages</i>)	012503
Jun-Ting Kao, Jiunn-Yuan Lin, and Chung-Yu Mou	
Size effects on the quenching to the normal state of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ thin-film superconductors (<i>4 pages</i>)	012504
Mauricio Ruibal, Gonzalo Ferro, Manuel R. Osorio, Jesús Maza, José A. Veira, and Félix Vidal	
Mismatch-induced type transition of a superconductor: Investigation using Ginzburg-Landau theory (<i>4 pages</i>)	012505
Ioannis Giannakis, Defu Hou, Mei Huang, and Hai-cang Ren	
Detailed magnetic excitation spectra of ordered and disordered spin ladders (<i>4 pages</i>)	012506
Brian M. Andersen and Olav F. Syljuåsen	
Observation of mesoscopic conductance fluctuations in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ grain boundary Josephson junctions (<i>4 pages</i>)	012507
A. Tagliacozzo, D. Born, D. Stornaiuolo, E. Gambale, D. Dalena, F. Lombardi, A. Barone, B. L. Altshuler, and F. Tafuri	
Intrinsic electronic superconducting phases at 60 K and 90 K in double-layer $\text{YBa}_2\text{Cu}_3\text{O}_{6+\delta}$ (<i>4 pages</i>)	012508
T. Honma and P. H. Hor	

ARTICLES**Structure, structural phase transitions, mechanical properties, defects**

Reaction energetics and crystal structure of $\text{Li}_4\text{BN}_3\text{H}_{10}$ from first principles (<i>11 pages</i>)	014101
Donald J. Siegel, C. Wolverton, and V. Ozoliņš	
First-principles study of vacancy formation in hydroxyapatite (<i>9 pages</i>)	014102
Katsuyuki Matsunaga and Akihide Kuwabara	
Structural studies of gadolinium at high pressure and temperature (<i>6 pages</i>)	014103
D. Errandonea, R. Boehler, B. Schwager, and M. Mezouar	
Compressibility measurements and phonon spectra of hexagonal transition-metal nitrides at high pressure: $\epsilon\text{-TaN}$, $\delta\text{-MoN}$, and Cr_2N (<i>9 pages</i>)	014104
Emmanuel Sognard, Olga Shebanova, and Paul F. McMillan	
Unified static renormalization-group treatment of finite-temperature crossovers close to a quantum critical point (<i>14 pages</i>)	014105
M. T. Mercaldo, L. De Cesare, I. Rabuffo, and A. Caramico D'Auria	
Modified Lennard-Jones potentials for Cu and Ag based on the dense gaslike model of viscosity for liquid metals (<i>9 pages</i>)	014106
Y. N. Zhang, L. Wang, S. Morioka, and W. M. Wang	
Nonequilibrium statistical mechanics of the evolution of dislocation structures (<i>11 pages</i>)	014107
A. H. W. Ngan and Robb Thomson	

Ferroelectric displacements in multiferroic $\text{Y}(\text{Mn,Ga})\text{O}_3$ (4 pages)	014108
U. Adem, A. A. Nugroho, A. Meetsma, and T. T. M. Palstra	
High-pressure phases of titanium: First-principles calculations (5 pages)	014109
A. K. Verma, P. Modak, R. S. Rao, B. K. Godwal, and R. Jeanloz	
<i>Ab initio</i> study of Cr interactions with point defects in bcc Fe (12 pages)	014110
Pär Olsson, Christophe Domain, and Janne Wallenius	
Effects of vacancies on the properties of disordered ferroelectrics: A first-principles study (5 pages)	014111
L. Bellaiche, Jorge Íñiguez, Eric Cockayne, and B. P. Burton	
Time-differential observation of the ortho-para conversion of liquid D_2 under irradiation (12 pages)	014112
K. Mishima, M. Utsuro, Y. Nagai, M. Tanaka, T. Kohmoto, Y. Fukuda, Y. Kiyanagi, and M. Ooi	
Electromagnetically induced switching of ferroelectric thin films (9 pages)	014113
J.-G. Caputo, E. V. Kazantseva, and A. I. Maimistov	
Theory of low-energy electron diffraction for detailed structural determination of nanomaterials: Ordered structures (11 pages)	014114
G. M. Gavaza, Z. X. Yu, L. Tsang, C. H. Chan, S. Y. Tong, and M. A. Van Hove	
Inhomogeneous, disordered, and partially ordered systems	
Absence of extended states in a ladder model of DNA (5 pages)	014201
E. Díaz, A. Sedrakyan, D. Sedrakyan, and F. Domínguez-Adame	
Orientation-dependent NMR study of the giant-unit-cell intermetallics $\beta\text{-Al}_3\text{Mg}_2$, Bergman-phase $\text{Mg}_{32}(\text{Al,Zn})_{49}$, and $\xi'\text{-Al}_{74}\text{Pd}_{22}\text{Mn}_4$ (15 pages)	014202
P. Jeglič, M. Komelj, M. Klanjšek, U. Tkalec, S. Vrtnik, M. Feuerbacher, and J. Dolinšek	
Comparison of ion sites and diffusion paths in glasses obtained by molecular dynamics simulations and bond valence analysis (11 pages)	014203
Christian Müller, Egbert Zienicke, Stefan Adams, Junko Habasaki, and Philipp Maass	
Solid-liquid phase diagrams for binary metallic alloys: Adjustable interatomic potentials (9 pages)	014204
H.-S. Nam, M. I. Mendelev, and D. J. Srolovitz	
Interpretation of low-temperature nuclear quadrupole resonance spectra in $\text{La}_{1.875}\text{Ba}_{0.125}\text{CuO}_4$ in terms of two-dimensional spin superstructure (10 pages)	014205
Boris V. Fine	
Microscopic origin of concentration fluctuations over intermediate range distances in network-forming disordered systems (4 pages)	014206
Carlo Massobrio and Alfredo Pasquarello	
First-principles calculations of cohesive energies in the Al-Co binary alloy system (10 pages)	014207
M. Mihalkovič and M. Widom	
Monte Carlo study of thermodynamic properties and clustering in the bcc Fe-Cr system (12 pages)	014208
M. Yu. Lavrentiev, R. Drautz, D. Nguyen-Manh, T. P. C. Klaver, and S. L. Dudarev	
Effect of disorder in an orbitally ordered Jahn-Teller insulator (10 pages)	014209
Sanjeev Kumar, Arno P. Kampf, and Pinaki Majumdar	

Dynamics, dynamical systems, lattice effects, quantum solids

Parallel replica dynamics for driven systems: Derivation and application to strained nanotubes (9 pages)	014301
Blas Pedro Uberuaga, Steven J. Stuart, and Arthur F. Voter	
Zone-center phonons in NaV_2O_5 : A comprehensive <i>ab initio</i> study including Raman spectra and electron-phonon interaction (13 pages)	014302
J. Spitaler, E. Ya. Sherman, and C. Ambrosch-Draxl	
Determination of Compton profiles at solid surfaces from first-principles calculations (7 pages)	014303
Christoph Lemell, Andres Arnau, and Joachim Burgdörfer	
Theoretical prediction of the nondiffractive propagation of sonic waves through periodic acoustic media (7 pages)	014304
Isabel Pérez-Arjona, Víctor J. Sánchez-Morcillo, Javier Redondo, Víctor Espinosa, and Kestutis Staliunas	
Orientational order in the molecular solids N_2 , CO , and O_2 investigated via combined excitations with FTIR (13 pages)	014305
M. Vetter, A. P. Brodyanski, S. A. Medvedev, and H. J. Jodl	
Volume and pressure dependence of ground-state and lattice-dynamical properties of BaF_2 from density-functional methods (11 pages)	014306
K. Schmalzl	
Quantum dynamics of polaron formation (5 pages)	014307
Li-Chung Ku and S. A. Trugman	

Magnetism

Magnetic moments of small bimetallic clusters: Co_nMn_m (6 pages)	014401
Mark B. Knickelbein	
Formation of magnetic clusters in the strongly frustrated hollandite vanadium oxide $\text{V}_{7.22}\text{O}_8(\text{OH})_8\text{Cl}_{0.77}(\text{H}_3\text{O})_{2.34}$ (8 pages)	014402
Natasha A. Chernova, J. Katana Ngala, Peter Y. Zavalij, and M. Stanley Whittingham	
Transport properties of magnetic tunnel junctions with Co_2MnSi electrodes: The influence of temperature-dependent interface magnetization and electronic band structure (10 pages)	014403
J. Schmalhorst, A. Thomas, S. Kämmerer, O. Schebaum, D. Ebke, M. D. Sacher, G. Reiss, A. Hütten, A. Turchanin, A. Götzhäuser, and E. Arenholz	
Magnon bands of N -leg integer-spin antiferromagnetic systems in the weak-interchain-coupling regime (10 pages)	014404
Masahiro Sato and Masaki Oshikawa	
Octahedral tilts and electronic correlations in $\text{La}_{7/8}\text{Sr}_{1/8}\text{MnO}_3$ (6 pages)	014405
J. Geck, P. Wochner, S. Kiele, P. Reutler, A. Revcolevschi, and B. Büchner	
Magnetic domain replication in interacting bilayers with out-of-plane anisotropy: Application to Co/Pt multilayers (6 pages)	014406
V. Baltz, A. Marty, B. Rodmacq, and B. Dieny	
Magnetization reversal in (Ga,Mn)As/MnO exchange-biased structures: Investigation by planar Hall effect (11 pages)	014407
Z. Ge, W. L. Lim, S. Shen, Y. Y. Zhou, X. Liu, J. K. Furdyna, and M. Dobrowolska	

Spin dynamics of Fe_7M ($M=\text{Zn}, \text{Mn}$) heterometallic rings probed by neutron spectroscopy (8 pages)	014408
T. Guidi, J. R. D. Copley, Y. Qiu, S. Carretta, P. Santini, G. Amoretti, G. Timco, R. E. P. Winpenny, C. L. Dennis, and R. Caciuffo	
Vanadium magnetoelectric multipoles in V_2O_3 (8 pages)	014409
S. W. Lovesey, J. Fernández-Rodríguez, J. A. Blanco, D. S. Sivia, K. S. Knight, and L. Paolasini	
Spin-orbital gap of multiorbital antiferromagnet with geometrical frustration (8 pages)	014410
Hiroaki Onishi and Takashi Hotta	
Vector chirality and inhomogeneous magnetization in frustrated spin tubes in high magnetic fields (5 pages)	014411
Masahiro Sato and Tôru Sakai	
Effective critical behavior of the two-dimensional Ising spin glass with bimodal interactions (8 pages)	014412
Helmut G. Katzgraber, L. W. Lee, and I. A. Campbell	
Contactless measurements of Shubnikov-de Haas oscillations in the magnetically ordered state of CeAgSb_2 and SmAgSb_2 single crystals (7 pages)	014413
Ruslan Prozorov, Matthew D. Vannette, German D. Samolyuk, Stephanie A. Law, Sergey L. Bud'ko, and Paul C. Canfield	
Effect of Mo substitution in the $n=3$ Ruddlesden-Popper compound $\text{Ca}_4\text{Mn}_3\text{O}_{10}$ (7 pages)	014414
W. J. Lu, Y. P. Sun, R. Ang, X. B. Zhu, and W. H. Song	
Memory effect and spin-glass-like behavior in Co-Ag granular films (7 pages)	014415
J. Du, B. Zhang, R. K. Zheng, and X. X. Zhang	
Magnetic cellular automata and the formation of glassy and magnetic structures from a chain of magnetic particles (13 pages)	014416
D. M. Forrester, K. E. Kürten, and F. V. Kusmartsev	
Mössbauer study of ultrathin Fe/Al multilayer films (9 pages)	014417
D. Kaptás, J. Balogh, T. Kemény, L. F. Kiss, L. Bujdosó, A. Kovács, A. Hirata, and I. Vincze	
Observation of two spin gap energies in the filled skutterudite compound $\text{CeOs}_4\text{Sb}_{12}$ (8 pages)	014418
D. T. Adroja, J.-G. Park, E. A. Goremychkin, K. A. McEwen, N. Takeda, B. D. Rainford, K. S. Knight, J. W. Taylor, Jeongmi Park, H. C. Walker, R. Osborn, and Peter S. Riseborough	
Electronic structure of a Mn_{12} molecular magnet: Theory and experiment (9 pages)	014419
D. W. Boukhvalov, M. Al-Saqr, E. Z. Kurmaev, A. Moewes, V. R. Galakhov, L. D. Finkelstein, S. Chiuzaian, M. Neumann, V. V. Dobrovitski, M. I. Katsnelson, A. I. Lichtenstein, B. N. Harmon, K. Endo, J. M. North, and N. S. Dalal	
Three-dimensional micromagnetic simulations of magnetic excitations in cylindrical nanodots with perpendicular anisotropy (8 pages)	014420
N. Vukadinovic and F. Boust	
Homogeneous versus spiral phases of hole-doped antiferromagnets: A systematic effective field theory investigation (17 pages)	014421
C. Brügger, C. P. Hofmann, F. Kämpfer, M. Pepe, and U.-J. Wiese	
Bulk electronic properties of the bilayered manganite $\text{La}_{1.2}\text{Sr}_{1.8}\text{Mn}_2\text{O}_7$ from hard-x-ray photoemission (5 pages)	014422
F. Offi, P. Torelli, M. Sacchi, P. Lacovig, A. Fondacaro, G. Paolicelli, S. Huotari, G. Monaco, C. S. Fadley, J. F. Mitchell, G. Stefani, and G. Panaccione	

Electronic mechanism for the coexistence of ferroelectricity and ferromagnetism (5 pages)	014423
C. D. Batista, J. E. Gubernatis, and Wei-Guo Yin	
Zigzag spin- S chain near the ferromagnet-antiferromagnet transition point (9 pages)	014424
D. V. Dmitriev, V. Ya. Krivnov, and J. Richter	
Phase transition in ultrathin magnetic films with long-range interactions: Monte Carlo simulation of the anisotropic Heisenberg model (7 pages)	014425
M. Rapini, R. A. Dias, and B. V. Costa	
Spin gap behavior in $\text{Cu}_2\text{Sc}_2\text{Ge}_4\text{O}_{13}$ studied using ^{45}Sc nuclear magnetic resonance (4 pages)	014426
C. S. Lue, C. N. Kuo, T. H. Su, and G. J. Redhammer	
Anomalous pressure effect on the remanent lattice striction of a $(\text{La},\text{Pr})_{1.2}\text{Sr}_{1.8}\text{Mn}_2\text{O}_7$ bilayered manganite single crystal (6 pages)	014427
M. Matsukawa, A. Tamura, S. Nimori, R. Suryanarayanan, T. Kumagai, Y. Nakanishi, M. Apostu, A. Revcolevschi, K. Koyama, and N. Kobayashi	
Magnetic momentum density, Fermi surface, and directional magnetic Compton profiles in $\text{LaSr}_2\text{Mn}_2\text{O}_7$ and $\text{La}_{1.2}\text{Sr}_{1.8}\text{Mn}_2\text{O}_7$ (8 pages)	014428
P. E. Mijnders, S. Kaprzyk, B. Barbiellini, Yinwan Li, J. F. Mitchell, P. A. Montano, and A. Bansil	
X-ray magnetic circular dichroism of Heusler alloy $\text{Co}_2\text{Cr}_{1-x}\text{Fe}_x\text{Al}$ epitaxial thin films (8 pages)	014429
R. Kelekar, H. Ohldag, and B. M. Clemens	
Current-driven ferromagnetic resonance, mechanical torques, and rotary motion in magnetic nanostructures (12 pages)	014430
Alexey A. Kovalev, Gerrit E. W. Bauer, and Arne Brataas	
Casimir-energy-induced confinement and deconfinement of spinons in a two-dimensional anisotropic nonlinear σ model (9 pages)	014431
Antonio R. Moura, Afranio R. Pereira, and Antonio S. T. Pires	
Effect of epitaxial strain on the exchange-bias properties of $[\text{La}_{0.67}\text{Ca}_{0.33}\text{MnO}_3/\text{La}_{0.33}\text{Ca}_{0.67}\text{MnO}_3]_{15}$ multilayers: Resonant x-ray scattering measurements (11 pages)	014432
C. Christides, P. P. Deen, N. Moutis, E. Houssakou, L. Bouchenoire, and K. Prassides	
Inelastic scattering in ferromagnetic and antiferromagnetic spin valves (9 pages)	014433
R. A. Duine, P. M. Haney, A. S. Núñez, and A. H. MacDonald	
Exchange bias relaxation in reverse magnetic fields (5 pages)	014434
Haiwen Xi, Scott Franzen, Sining Mao, and Robert M. White	
Heavy electrons from Hund's rule and short-range antiferromagnetism (5 pages)	014435
Karyn Le Hur	
Probing multiferroicity and spin-spin interactions via dielectric measurements on Y-doped HoMnO_3 in high magnetic fields (5 pages)	014436
R. Vasic, H. D. Zhou, E. Jobilong, C. R. Wiebe, and J. S. Brooks	
Multiple ground state competition under pressure in $\beta\text{-Sr}_{0.33}\text{V}_2\text{O}_5$ (5 pages)	014437
Touma Yamauchi, Hiroaki Ueda, Jun-Ichi Yamaura, and Yutaka Ueda	
Simultaneous control of growth mode and ferromagnetic ordering in Co-doped ZnO layers with Zn polarity (9 pages)	014438
Hiroaki Matsui and Hitoshi Tabata	

Quantum phase transitions and quantum fidelity in free fermion graphs (<i>13 pages</i>)	014439
Marco Cozzini, Paolo Giorda, and Paolo Zanardi	
Nonlinear phenomenological model of magnetic dissipation for large precession angles: Generalization of the Gilbert model (<i>6 pages</i>)	014440
Vasil Tiberkevich and Andrei Slavin	
Four-state nonstationary models in multistate Landau-Zener theory (<i>7 pages</i>)	014441
V. N. Ostrovsky, M. V. Volkov, J. P. Hansen, and S. Selstø	
Evidence of modified ferromagnetism at a buried Permalloy/CoO interface at room temperature (<i>6 pages</i>)	014442
S. Roy, C. Sanchez-Hanke, S. Park, M. R. Fitzsimmons, Y. J. Tang, J. I. Hong, David J. Smith, B. J. Taylor, X. Liu, M. B. Maple, A. E. Berkowitz, C.-C. Kao, and S. K. Sinha	
Theoretical study of doped $\text{Ti}_2\text{Mn}_2\text{O}_7$ and $\text{Ti}_2\text{Mn}_2\text{O}_7$ under pressure (<i>9 pages</i>)	014443
Molly De Raychaudhury, T. Saha-Dasgupta, and D. D. Sarma	
Superfluidity and superconductivity	
Enhancement of superconductivity by exchange bias (<i>5 pages</i>)	014501
D. Stamopoulos, E. Manios, and M. Pissas	
Macroscopic quantum tunneling in globally coupled series arrays of Josephson junctions (<i>4 pages</i>)	014502
M. V. Fistul	
Phonons and d -wave pairing in the two-dimensional Hubbard model (<i>5 pages</i>)	014503
Carsten Honerkamp, Henry C. Fu, and Dung-Hai Lee	
Temperature dependence of transport spin polarization in NdNi_5 from point-contact Andreev reflection (<i>7 pages</i>)	014504
Sourin Mukhopadhyay, Pratap Raychaudhuri, Devang A. Joshi, and C. V. Tomy	
Dynamics of water in the $\text{Na}_{0.3}\text{CoO}_2 \cdot 1.4\text{H}_2\text{O}$ superconductor (<i>6 pages</i>)	014505
V. García Sakai, E. Mamontov, J. W. Lynn, L. Viciu, and R. J. Cava	
Thermal expansion of Josephson junctions as an elastic response to an effective stress field (<i>6 pages</i>)	014506
S. Sergeenkov, G. Rotoli, G. Filatrella, and F. M. Araujo-Moreira	
Transfer-matrix approach to multiband Josephson junctions (<i>12 pages</i>)	014507
S. Graser and T. Dahm	
Microscopic modeling of phonon dynamics and charge response in metallic BaBiO_3 (<i>12 pages</i>)	014508
Claus Falter, Thomas Bauer, and Thomas Trautmann	
Large Ca isotope effect in the CaC_6 superconductor (<i>6 pages</i>)	014509
D. G. Hinks, D. Rosenmann, H. Claus, M. S. Bailey, and J. D. Jorgensen	
Size-dependent anisotropic diamagnetic screening in superconducting Sn nanowires (<i>5 pages</i>)	014510
T. G. Sorop and L. J. de Jongh	
Rapid-state purification protocols for a Cooper pair box (<i>12 pages</i>)	014511
E. J. Griffith, C. D. Hill, J. F. Ralph, H. M. Wiseman, and Kurt Jacobs	
Phase diagrams of ferromagnet-superconductor multilayers with misaligned exchange fields (<i>18 pages</i>)	014512
Tomas Löfwander, Thierry Champel, and Matthias Eschrig	

Bulk and surface low-energy excitations in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ studied by high-resolution angle-resolved photoemission spectroscopy (7 pages)	014513
K. Nakayama, T. Sato, K. Terashima, H. Matsui, T. Takahashi, M. Kubota, K. Ono, T. Nishizaki, Y. Takahashi, and N. Kobayashi	
Magnetic excitations in La-based cuprate superconductors: Slave-boson mean-field analysis of the two-dimensional t - J model (9 pages)	014514
Hiroyuki Yamase	
Role of interband scattering in neutron irradiated MgB_2 thin films by scanning tunneling spectroscopy measurements (5 pages)	014515
R. Di Capua, H. U. Aebersold, C. Ferdeghini, V. Ferrando, P. Orgiani, M. Putti, M. Salluzzo, R. Vaglio, and X. X. Xi	
Bond-stretching phonon anomalies and charge fluctuations in copper oxide superconductors (8 pages)	014516
S. Cojocaru, R. Citro, and M. Marinaro	
Suppression of Cooper-pair tunneling in superconducting charge boxes in tunable electromagnetic environments (6 pages)	014517
Watson Kuo, C. S. Wu, J. H. Shyu, and C. D. Chen	
Density functional theory of vortex lattice melting in layered superconductors: A mean-field substrate approach (10 pages)	014518
A. De Col, G. I. Menon, and G. Blatter	
Oscillations of the superconducting temperature induced by quantum well states in thin metallic films: Numerical solution of the Bogoliubov-de Gennes equations (9 pages)	014519
A. A. Shanenko, M. D. Croitoru, and F. M. Peeters	
Thermoelectric transport near pair breaking quantum phase transition out of d -wave superconductivity (5 pages)	014520
Daniel Podolsky, Ashvin Vishwanath, Joel Moore, and Subir Sachdev	
Theory of superfluids with population imbalance: Finite-temperature and BCS-BEC crossover effects (16 pages)	014521
Qijin Chen, Yan He, Chih-Chun Chien, and K. Levin	
Superconductor-to-normal transitions in dissipative chains of mesoscopic grains and nanowires (37 pages) . . .	014522
Gil Refael, Eugene Demler, Yuval Oreg, and Daniel S. Fisher	
Theoretical approach to electronic screening and correlated superconductivity in carbon nanotubes (6 pages)	014523
S. Bellucci, M. Cini, P. Onorato, and E. Perfetto	
Theoretical analysis of measurement crosstalk for coupled Josephson phase qubits (17 pages)	014524
Abraham G. Kofman, Qin Zhang, John M. Martinis, and Alexander N. Korotkov	
Magnetic-field-induced superconductor-insulator-metal transition in an organic conductor: An infrared magneto-optical imaging spectroscopic study (5 pages)	014525
Tatsuhiko Nishi, Shin-ichi Kimura, Toshiharu Takahashi, Hojun Im, Yong-seung Kwon, Takahiro Ito, Kazuya Miyagawa, Hiromi Taniguchi, Atsushi Kawamoto, and Kazushi Kanoda	
Trapped resonant fermions above the superfluid transition temperature (7 pages)	014526
Chi-Ho Cheng and Sung-Kit Yip	

CONTENTS - Continued

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 75, NUMBER 1

JANUARY 2007-1(I)

Controlled terahertz frequency response and transparency of Josephson chains and superconducting multilayers (7 pages)	014527
V. A. Yampol'skii, Sergey Savel'ev, O. V. Usatenko, S. S. Mel'nik, F. V. Kusmartsev, A. A. Krokhin, and Franco Nori	
Quantum phases of superconducting quantum dot arrays (6 pages)	014528
Sujit Sarkar	
Patterns close to the critical field in type-I superconductors (8 pages)	014529
Mariela Menghini and Rinke J. Wijngaarden	

COMMENTS

Comment on "London model for the levitation force between a horizontally oriented point magnetic dipole and superconducting sphere" (5 pages)	016501
Qiong-Gui Lin	
Comment on "London model for the levitation force between a horizontally oriented point magnetic dipole and superconducting sphere" (4 pages)	016502
D. Palaniappan	

ERRATA

Erratum: Interfacial coupling and its size dependence in PbTiO_3 and $\text{PbMg}_{1/3}\text{Nb}_{2/3}\text{O}_3$ multilayers [Phys. Rev. B 74 , 184104 (2006)] (1 page)	019901(E)
R. Ranjith, R. Nikhil, and S. B. Krupanidhi	
Publisher's Note: Unusual sequence of phase transitions in MnAs: First-principles study [Phys. Rev. B 74 , 214422 (2006)] (1 page)	019902(E)
L. M. Sandratskii and E. Şaşıoğlu	
Erratum: Effects of long-wave inhomogeneities of the exchange and elastic force constants in the framework of the coherent potential approximation [Phys. Rev. B 74 , 174415 (2006)] (1 page)	019903(E)
V. A. Ignatchenko and V. A. Felk	
Erratum: Motion of micron-size particles in turbulent helium II [Phys. Rev. B 74 , 184506 (2006)] (1 page)	019904(E)
Y. A. Sergeev, C. F. Barenghi, and D. Kivotides	
Publisher's Note: Ultrafast critical dynamics of a ferroelectric phase transition in $\text{Pb}_{1-x}\text{Ge}_x\text{Te}$ [Phys. Rev. B 75 , 012107 (2007)] (1 page)	019905(E)
Rong Lu, Muneaki Hase, Masahiro Kitajima, Shinichi Nakashima, and Shunji Sugai	
Erratum: Screening cloud in the k -channel Kondo model: Perturbative and large- k results [Phys. Rev. B 57 , 432 (1998)] (1 page)	019906(E)
Victor Barzykin and Ian Affleck	