

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 84, NUMBER 9

SEPTEMBER 2011-1(I)

Stability of the current-carrying state in nonhomogeneous MgB_2 films (5 pages)	094533
S. Treiber, C. Stahl, G. Schütz, and J. Albrecht	
Spin Hall effect at interfaces between HgTe/CdTe quantum wells and metals (7 pages)	094534
M. Guigou, P. Recher, J. Cayssol, and B. Trauzettel	

COMMENTS

Comment on “Interplay of defect cluster and the stability of xenon in uranium dioxide from density functional calculations” (2 pages)	096101
Boris Dorado, Bernard Amadon, Gérald Jomard, Michel Freyss, and Marjorie Bertolus	
Comment on “Determination of the bulk melting temperature of nickel using Monte Carlo simulations: Inaccuracy of extrapolation from cluster melting temperatures” (3 pages)	096102
J.-P. Harvey and A. E. Gheribi	
Reply to “Comment on ‘Determination of the bulk melting temperature of nickel using Monte Carlo simulations: Inaccuracy of extrapolation from cluster melting temperatures’ ” (3 pages)	096103
J. H. Los and R. J. M. Pellenq	

ERRATA

Erratum: Possible Bose-Einstein condensate of magnons in single-crystalline $\text{Pb}_2\text{V}_3\text{O}_9$ [Phys. Rev. B 81 , 132401 (2010)] (1 page)	099901(E)
B. S. Conner, H. D. Zhou, Y. J. Jo, L. Balicas, C. R. Wiebe, J. P. Carlo, Y. J. Uemura, A. A. Aczel, T. J. Williams, and G. M. Luke	
Erratum: First-principles prediction of high-capacity, thermodynamically reversible hydrogen storage reactions based on $(\text{NH}_4)_2\text{B}_{12}\text{H}_{12}$ [Phys. Rev. B 83 , 064112 (2011)] (1 page)	099902(E)
Wenhao Q. Sun, C. Wolverton, A. R. Akbarzadeh, and V. Ozolins	
Publisher’s Note: Elastic properties of the rare-earth dititanates $R_2\text{Ti}_2\text{O}_7$ ($R=\text{Tb}$, Dy , and Ho) [Phys. Rev. B 83 , 184434 (2011)] (1 page)	099903(E)
Y. Nakanishi, T. Kumagai, M. Yoshizawa, K. Matsuhira, S. Takagi, and Z. Hiroi	

Strong pinning and vortex energy distributions in single-crystalline $\text{Ba}(\text{Fe}_{1-x}\text{Co}_x)_2\text{As}_2$ (8 pages)	094517
S. Demirdiř, C. J. van der Beek, Y. Fasano, N. R. Cejas Bolecek, H. Pastoriza, D. Colson, and F. Rullier-Albenque	
Disordered polyhalide anion effect on the Fermi surface of the incommensurate organic superconductor $(\text{MDT-TSF})\text{I}_{0.77}\text{Br}_{0.52}$ (6 pages)	094518
Tadashi Kawamoto, Takehiko Mori, Kengo Enomoto, Takako Konoike, Taichi Terashima, Shinya Uji, Hiroshi Kitagawa, Kazuo Takimiya, and Tetsuo Otsubo	
Role of degeneracy, hybridization, and nesting in the properties of multiorbital systems (13 pages)	094519
Andrew Nicholson, Qinlong Luo, Weihao Ge, José Riera, Maria Daghofer, George B. Martins, Adriana Moreo, and Elbio Dagotto	
Topological superconductivity, topological confinement, and the vortex quantum Hall effect (5 pages)	094520
M. Cristina Diamantini and Carlo A. Trugenberger	
Josephson effects in one-dimensional supersolids (9 pages)	094521
Masaya Kunimi, Yuki Nagai, and Yusuke Kato	
Strong pinning and elastic to plastic vortex crossover in Na-doped CaFe_2As_2 single crystals (7 pages)	094522
N. Haberkorn, M. Miura, B. Maiorov, G. F. Chen, W. Yu, and L. Civale	
Crossover between different regimes of inhomogeneous superconductivity in planar superconductor-ferromagnet hybrids (10 pages)	094523
A. Yu. Aladyshkin, J. Fritzsche, R. Werner, R. B. G. Kramer, S. Guénon, R. Kleiner, D. Koelle, and V. V. Moshchalkov	
Oxygen ordering in the high- T_c superconductor $\text{HgBa}_2\text{CaCu}_2\text{O}_{6+\delta}$ as revealed by perturbed angular correlation (10 pages)	094524
T. M. Mendonça, J. G. Correia, H. Haas, P. Odier, P. B. Tavares, M. R. da Silva, A. M. L. Lopes, A. M. Pereira, J. N. Gonçalves, J. S. Amaral, C. Darie, and J. P. Araujo	
Conductance spectroscopy of a correlated superconductor in a magnetic field in the Pauli limit: Evidence for strong correlations (12 pages)	094525
Jan Kaczmarczyk, Mariusz Sadzikowski, and Jozef Spałek	
Coexistence of superconductivity and incommensurate magnetic order (6 pages)	094526
Andrzej Ptok, Maciej M. Mařka, and Marcin Mierzejewski	
Current-voltage characteristic of narrow superconducting wires: Bifurcation phenomena (6 pages)	094527
V. V. Baranov, A. G. Balanov, and V. V. Kabanov	
Ring of BEC pools as a trap for persistent flow (7 pages)	094528
Jacek Dziarmaga, Marek Tylutki, and Wojciech H. Zurek	
Self-consistent T -matrix theory of superconductivity (13 pages)	094529
B. řopík, P. Lipavský, M. Männel, K. Morawetz, and P. Matlock	
Uncorrelated behavior of fluxoids in superconducting double networks (3 pages)	094530
I. Sochnikov, I. Bořović, A. Shaulov, and Y. Yeshurun	
Magnetic properties of lightly doped antiferromagnetic $\text{YBa}_2\text{Cu}_3\text{O}_y$ (10 pages)	094532
O. P. Sushkov	

(Continued)

Majorana edge states in interacting two-chain ladders of fermions (<i>6 pages</i>)	094503
Meng Cheng and Hong-Hao Tu	
Antiferromagnetic order and superlattice structure in nonsuperconducting and superconducting Rb _y Fe _{1.6+x} Se ₂ (<i>9 pages</i>)	094504
Meng Wang, Miaoyin Wang, G. N. Li, Q. Huang, C. H. Li, G. T. Tan, C. L. Zhang, Huiibo Cao, Wei Tian, Yang Zhao, Y. C. Chen, X. Y. Lu, Bin Sheng, H. Q. Luo, S. L. Li, M. H. Fang, J. L. Zarestky, W. Ratcliff, M. D. Lumsden, J. W. Lynn, and Pengcheng Dai	
Controlling non-Abelian statistics of Majorana fermions in semiconductor nanowires (<i>8 pages</i>)	094505
Jay D. Sau, David J. Clarke, and Sumanta Tewari	
Magnetic breakdown and quantum oscillations in electron-doped high-temperature superconductor Nd _{2-x} Ce _x CuO ₄ (<i>8 pages</i>)	094506
Jonghyoun Eun and Sudip Chakravarty	
Superfluid-insulator transition in the disordered two-dimensional Bose-Hubbard model (<i>9 pages</i>)	094507
Fei Lin, Erik S. Sørensen, and D. M. Ceperley	
Enhancement of the critical temperature in cuprate superconductors by inhomogeneous doping (<i>15 pages</i>)	094508
Lilach Goren and Ehud Altman	
Thermally activated relaxation of shear stress in solid ⁴ He confined in aerogel (<i>9 pages</i>)	094509
A. Rabbani and J. R. Beamish	
Pseudogap-like phase in Ca(Fe _{1-x} Co _x) ₂ As ₂ revealed by ⁷⁵ As NQR (<i>5 pages</i>)	094510
S.-H. Baek, H.-J. Grafe, L. Harnagea, S. Singh, S. Wurmehl, and B. Büchner	
Origin of the hysteresis of the current voltage characteristics of superconducting microbridges near the critical temperature (<i>11 pages</i>)	094511
D. Yu. Vodolazov and F. M. Peeters	
 Pressure gradients in solid ⁴ He: Thermal quenching and annealing (<i>9 pages</i>)	094512
A. Suhel and J. R. Beamish	
Muon-spin rotation measurements of the magnetic penetration depth in the iron-based superconductor Ba _{1-x} Rb _x Fe ₂ As ₂ (<i>7 pages</i>)	094513
Z. Guguchia, Z. Shermadini, A. Amato, A. Maisuradze, A. Shengelaya, Z. Bukowski, H. Luetkens, R. Khasanov, J. Karpinski, and H. Keller	
Charging of superconducting layers and resonance-related hysteresis in the current-voltage characteristics of coupled Josephson junctions (<i>7 pages</i>)	094514
Yu. M. Shukrinov and M. A. Gaafar	
Microscopic theory of type-1.5 superconductivity in multiband systems (<i>9 pages</i>)	094515
Mihail Silaev and Egor Babaev	
Peculiarities of the superconducting gaps and the electron-boson interaction in TmNi ₂ B ₂ C as seen by point-contact spectroscopy (<i>9 pages</i>)	094516
Yu. G. Naidyuk, O. E. Kvitnitskaya, L. V. Tiutrina, I. K. Yanson, G. Behr, G. Fuchs, S.-L. Drechsler, K. Nenkov, and L. Schultz	

(Continued)

Magnetic exchange interactions in BaMn ₂ As ₂ : A case study of the J_1 - J_2 - J_c Heisenberg model (43 pages)	094445
D. C. Johnston, R. J. McQueeney, B. Lake, A. Honecker, M. E. Zhitomirsky, R. Nath, Y. Furukawa, V. P. Antropov, and Yogesh Singh	
Low-frequency noise in serial arrays of MgO-based magnetic tunnel junctions (7 pages)	094446
Wenzhe Zhang, Qiang Hao, and Gang Xiao	
Determination of the Fe magnetic anisotropies and the CoO frozen spins in epitaxial CoO/Fe/Ag(001) (6 pages)	094447
J. Li, Y. Meng, J. S. Park, C. A. Jenkins, E. Arenholz, A. Scholl, A. Tan, H. Son, H. W. Zhao, Chanyong Hwang, Y. Z. Wu, and Z. Q. Qiu	
Magnetic excitations in the geometric frustrated multiferroic CuCrO ₂ (7 pages)	094448
M. Frontzek, J. T. Haraldsen, A. Podlesnyak, M. Matsuda, A. D. Christianson, R. S. Fishman, A. S. Sefat, Y. Qiu, J. R. D. Copley, S. Barilo, S. V. Shiryayev, and G. Ehlers	
Dzyaloshinsky-Moriya interaction and long lifetime of the spin state in the Cu ₃ triangular spin cluster by inelastic neutron scattering measurements (6 pages)	094449
K. Iida, Y. Qiu, and T. J. Sato	
Incommensurate spin order in the metallic perovskite MnVO ₃ (5 pages)	094450
Mikael Markkula, Angel M. Arevalo-Lopez, Anna Kusmartseva, Jennifer A. Rodgers, Clemens Ritter, Hua Wu, and J. Paul Attfield	
Magnetic phase diagram of an extended J_1 - J_2 model on a modulated square lattice and its implications for the antiferromagnetic phase of K _y Fe _x Se ₂ (9 pages)	094451
Rong Yu, Pallab Goswami, and Qimiao Si	
Destruction of valence-bond order in a $S = \frac{1}{2}$ sawtooth chain with a Dzyaloshinskii-Moriya term (9 pages)	094452
Zhihao Hao (郝志浩), Yuan Wan, Ioannis Rousochatzakis, Julia Wildeboer, A. Seidel, F. Mila, and O. Tchernyshyov	
 Spin-wave excitations in the ferromagnetic metallic and in the charge-, orbital-, and spin-ordered states in Nd _{1-x} Sr _x MnO ₃ with $x \approx 0.5$ (12 pages)	094453
H. Ulbrich, F. Krüger, A. A. Nugroho, D. Lamago, Y. Sidis, and M. Braden	
Magnonic minibands in antidot lattices with large spin-wave propagation velocities (9 pages)	094454
S. Neusser, G. Duerr, S. Tacchi, M. Madami, M. L. Sokolovskyy, G. Gubbiotti, M. Krawczyk, and D. Grundler	
Suppression of geometric frustration by magnetoelastic coupling in AuCrS ₂ (8 pages)	094455
S. J. E. Carlsson, G. Rousse, I. Yamada, H. Kuriki, R. Takahashi, F. Lévy-Bertrand, G. Giriat, and A. Gauzzi	
Enhanced exchange and reduced magnetization of Gd in an Fe/Gd/Fe trilayer (5 pages)	094456
M. Romera, M. Muñoz, M. Maicas, J. M. Michalik, J. M. de Teresa, C. Magén, and J. L. Prieto	
Superfluidity and superconductivity	
Circuit influence on Cooper-pair current in solid-state entanglers (6 pages)	094501
Vladimir Bubanja and Shuichi Iwabuchi	
Nondeterministic ultrafast ground-state cooling of a mechanical resonator (5 pages)	094502
Yong Li, Lian-Ao Wu, Ying-Dan Wang, and Li-Ping Yang	

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 84, NUMBER 9

SEPTEMBER 2011-1(I)

Antiferromagnetic order and Kondo effect in single-crystalline Ce_2IrSi_3 (6 pages)	094430
Maria Szlawska and Dariusz Kaczorowski	
Kinetic Monte Carlo simulations of a model for heat-assisted magnetization reversal in ultrathin films (7 pages)	094431
W. R. Deskins, G. Brown, S. H. Thompson, and P. A. Rikvold	
Localized electron states and spin polarization in Co/Ni(111) overlayers (6 pages)	094432
F. Gimbert, L. Calmels, and S. Andrieu	
Spiral spin state in a zigzag spin-chain system (11 pages)	094433
Meihua Chen and Chong Der Hu	
Structural and magnetic characteristics of MnAs nanoclusters embedded in Be-doped GaAs (8 pages)	094434
D. W. Rench, P. Schiffer, and N. Samarth	
Crossover from antiferromagnetic to ferromagnetic ordering in the semi-Heusler alloys $\text{Cu}_{1-x}\text{Ni}_x\text{MnSb}$ with increasing Ni concentration (9 pages)	094435
Madhumita Halder, S. M. Yusuf, Amit Kumar, A. K. Nigam, and L. Keller	
Coexistence of singlet and ordered $S = \frac{1}{2}$ moments in the ground state of the triclinic quantum magnet CuMoO_4 (7 pages)	094436
S. Haravifard, K. Fritsch, T. Asano, J. P. Clancy, Z. Yamani, G. Ehlers, T. Nishimura, Y. Inagaki, T. Kawae, I. Swainson, and B. D. Gaulin	
 Higgs transitions of spin ice (20 pages)	094437
Stephen Powell	
Crystal structure and magnetic properties of $6H\text{-SrMnO}_3$ (6 pages)	094438
Alexei A. Belik, Yoshitaka Matsushita, Yoshio Katsuya, Masahiko Tanaka, Taras Kolodiazny, Masaaki Isobe, and Eiji Takayama-Muromachi	
Microscopic approach to orientational order of domain walls (9 pages)	094439
Daniel G. Barci and Daniel A. Stariolo	
Low-temperature heat transport in the layered spin-dimer compound $\text{Ba}_3\text{Mn}_2\text{O}_8$ (6 pages)	094440
W. P. Ke, X. M. Wang, C. Fan, Z. Y. Zhao, X. G. Liu, L. M. Chen, Q. J. Li, X. Zhao, and X. F. Sun	
Field-dependent anisotropic magnetoresistance and planar Hall effect in epitaxial magnetite thin films (5 pages)	094441
N. Naftalis, A. Kaplan, M. Schultz, C. A. F. Vaz, J. A. Moyer, C. H. Ahn, and L. Klein	
Visualization and quantitative analysis of spatiotemporal behavior in a first-order thermal spin transition: A stress-driven multiscale process (8 pages)	094442
A. Slimani, F. Varret, K. Boukheddaden, C. Chong, H. Mishra, J. Haasnoot, and S. Pillet	
Relieving frustration: The case of antiferromagnetic Mn_3 molecular triangles (10 pages)	094443
J. Liu, C. Koo, A. Amjad, P. L. Feng, E.-S. Choi, E. del Barco, D. N. Hendrickson, and S. Hill	
Finite-size effects on the dynamic susceptibility of CoPhOMe single-chain molecular magnets in presence of a static magnetic field (15 pages)	094444
M. G. Pini, A. Rettori, L. Bogani, A. Lascialfari, M. Mariani, A. Caneschi, and R. Sessoli	

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 84, NUMBER 9

SEPTEMBER 2011-1(I)

Phase diagram of the orthorhombic, lightly lutetium doped EuMnO_3 magnetoelectric system (12 pages)	094414
J. Oliveira, J. Agostinho Moreira, A. Almeida, M. R. Chaves, J. M. M. da Silva, J. B. Oliveira, M. A. Sá, P. B. Tavares, R. Ranjith, and W. Prellier	
Effect of the size distribution of magnetic nanoparticles on metastability in magnetization relaxation (8 pages) . . .	094415
Yoh Yamamoto and Kyungwha Park	
Magnetization textures in NiPd nanostructures (8 pages)	094416
J.-Y. Chauleau, B. J. McMorran, R. Belkhou, N. Bergeard, T. O. Menteş, M.Á. Niño, A. Locatelli, J. Unguris, S. Rohart, J. Miltat, and A. Thiaville	
Carrier-mediated interlayer exchange, ground-state phase diagrams, and transition temperatures of magnetic thin films (12 pages)	094417
M. Stier and W. Nolting	
Direct observation of the ferrimagnetic coupling of <i>A</i> -site Cu and <i>B</i> -site Fe spins in charge-disproportionated $\text{CaCu}_3\text{Fe}_4\text{O}_{12}$ (4 pages)	094418
M. Mizumaki, W. T. Chen, T. Saito, I. Yamada, J. Paul Attfield, and Y. Shimakawa	
Vison states and confinement transitions of $\mathbb{Z}_2$ spin liquids on the kagome lattice (13 pages)	094419
Yejin Huh, Matthias Punk, and Subir Sachdev	
Spin-orbit coupling in d^2 ordered double perovskites (13 pages)	094420
Gang Chen and Leon Balents	
Spontaneous toroidal moment and field-induced magnetotoroidic effects in $\text{Ba}_2\text{CoGe}_2\text{O}_7$ (4 pages)	094421
Pierre Toledano, Dmitry D. Khalyavin, and Laurent C. Chapon	
Effect of pressure on phase stability in Fe-Cr alloys (6 pages)	094422
A. V. Ponomareva, A. V. Ruban, O.Yu. Vekilova, S. I. Simak, and I. A. Abrikosov	
Origin and control of exchange-bias-like phenomenon in coupled ferromagnetic [Pt/Co]/NiFe bilayers (8 pages)	094423
A. Bollero, V. Baltz, L. D. Buda-Prejbeanu, B. Rodmacq, and B. Dieny	
Phase diagram of the J_1 - J_2 - J_3 Heisenberg model on the honeycomb lattice: A series expansion study (5 pages)	094424
J. Oitmaa and R. R. P. Singh	
Field-tuned Fermi liquid in quantum critical $\text{YFe}_2\text{Al}_{10}$ (7 pages)	094425
K. Park, L. S. Wu, Y. Janssen, M. S. Kim, C. Marques, and M. C. Aronson	
Magnetic properties of vanadium oxide nanotubes and nanolayers (11 pages)	094426
S. V. Demishev, A. L. Chernobrovkin, V. V. Glushkov, A. V. Grigorieva, E. A. Goodilin, H. Ohta, S. Okubo, M. Fujisawa, T. Sakurai, N. E. Sluchanko, N. A. Samarin, and A. V. Semeno	
Magnetic structure of $\text{Er}_2\text{Ti}_2\text{O}_7$ (11 pages)	094427
A. K. R. Briffa, R. J. Mason, and M. W. Long	
Dynamics of topological defects in a two-dimensional magnetic domain stripe pattern (8 pages)	094428
N. Abu-Libdeh and D. Venus	
Pressure-induced changes in the structural and magnetic properties of $\text{YFe}_2\text{D}_{4.2}$ (10 pages)	094429
O. Isnard, V. Paul-Boncour, Z. Arnold, C. V. Colin, T. Leblond, J. Kamarad, and H. Sugiura	

(Continued)

Ultrasonic wave transport in a system of disordered resonant scatterers: Propagating resonant modes and hybridization gaps (9 pages)	094305
M. L. Cowan, J. H. Page, and Ping Sheng	
Magnetism	
Parametric excitation of eigenmodes in microscopic magnetic dots (6 pages)	094401
Henning Ulrichs, Vladislav E. Demidov, Sergej O. Demokritov, and Sergei Urazhdin	
²³⁷ Np nuclear relaxation rate in heavy fermion superconductor NpPd ₅ Al ₂ (5 pages)	094402
H. Chudo, Y. Tokunaga, S. Kambe, H. Sakai, Y. Haga, T. D. Matsuda, Y. Ōnuki, H. Yasuoka, D. Aoki, Y. Homma, and R. E. Walstedt	
Spin liquid in a single crystal of the frustrated diamond lattice antiferromagnet CoAl ₂ O ₄ (8 pages)	094403
O. Zaharko, N. B. Christensen, A. Cervellino, V. Tsurkan, A. Maljuk, U. Stuhr, C. Niedermayer, F. Yokaichiya, D. N. Argyriou, M. Boehm, and A. Loidl	
Controllable spin-transfer torque on an antiferromagnet in a dual spin-valve (5 pages)	094404
Jacob Linder	
Nuclear magnetic resonance of the inequivalent carbon atoms in the organic spin-liquid material EtMe ₃ Sb[Pd(dmit) ₂] ₂ (5 pages)	094405
T. Itou, K. Yamashita, M. Nishiyama, A. Oyamada, S. Maegawa, K. Kubo, and R. Kato	
Evolution of phonon Raman spectra with orbital ordering in spinel MnV ₂ O ₄ (8 pages)	094406
K. Takubo, R. Kubota, T. Suzuki, T. Kanzaki, S. Miyahara, N. Furukawa, and T. Katsufuji	
Orbital ordering in the geometrically frustrated MgV ₂ O ₄ : <i>Ab initio</i> electronic structure calculations (5 pages)	094407
Sudhir K. Pandey	
Size-dependent magnetic ordering and spin dynamics in DyPO ₄ and GdPO ₄ nanoparticles (18 pages)	094408
Marco Evangelisti, Tibi G. Sorop, Oleg N. Bakharev, Dirk Visser, Adrian D. Hillier, Juan J. Alonso, Markus Haase, Lynn A. Boatner, and L. Jos de Jongh	
Enhanced spin transfer torque effect for transverse domain walls in cylindrical nanowires (9 pages)	094409
Matteo Franchin, Andreas Knittel, Maximilian Albert, Dmitri S. Chernyshenko, Thomas Fischbacher, Anil Prabhakar, and Hans Fangohr	
Precise determination of quantum critical points by the violation of the entropic area law (7 pages)	094410
J. C. Xavier and F. C. Alcaraz	
Magnetic and polar phases and dynamical clustering in multiferroic layered solid solutions CuCr _{1-x} In _x P ₂ S ₆ (8 pages)	094411
W. Kleemann, V. V. Shvartsman, P. Borisov, J. Banys, and Yu. M. Vysochanskii	
Nanoscale dissipation and magnetoresistive 1/ <i>f</i> noise in spin valves (7 pages)	094412
Zhu Diao, E. R. Nowak, K. M. Haughey, and J. M. D. Coey	
Magneto-optical coupling in ferromagnetic thin films investigated by vector-magneto-optical generalized ellipsometry (6 pages)	094413
K. Mok, G. J. Kovács, J. McCord, L. Li, M. Helm, and H. Schmidt	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 84, NUMBER 9

SEPTEMBER 2011-1(I)

Phase states of dynamically compressed cerium (<i>11 pages</i>)	094120
V. M. Elkin, V. N. Mikhaylov, A. V. Petrovtsev, and F. J. Cherne	
Exothermic relaxation and endothermic recrystallization of amorphous zirconium tungstate (<i>6 pages</i>)	094121
G. R. Ramos, J. Catafesta, J. E. Zorzi, J. A. H. da Jornada, and C. A. Perottoni	
First-principles study of the solid solution of hydrogen in lanthanum (<i>13 pages</i>)	094122
Gunther Schöllhammer, Peter Herzig, Walter Wolf, Peter Vajda, and Klaus Yvon	
Precursor dynamics in the ferroelectric phase transition of barium titanate single crystals studied by Brillouin light scattering (<i>9 pages</i>)	094123
Jae-Hyeon Ko, Tae Hyun Kim, K. Roleder, D. Rytz, and Seiji Kojima	
Structural role of vacancies in the phase transition of $\text{Ge}_2\text{Sb}_2\text{Te}_5$ memory materials (<i>5 pages</i>)	094124
T. H. Lee and S. R. Elliott	
Inhomogeneous, disordered, and partially ordered systems	
Quantitative microscopic measurement of void distribution in shear bands in $\text{Zr}_{66.7}\text{Cu}_{33.3}$ metallic glass (<i>7 pages</i>)	094201
A. C. Y. Liu, D. M. Paganin, L. Bourgeois, P. N. H. Nakashima, R. T. Ott, and M. J. Kramer	
Elliptical normal modes and stop band reconfiguration in multimode birefringent one-dimensional magnetophotonic crystals (<i>9 pages</i>)	094202
Ashim Chakravarty, Miguel Levy, Amir A. Jalali, Zhuoyuan Wu, and Alexander M. Merzlikin	
Structure of typical states of a disordered Richardson model and many-body localization (<i>9 pages</i>)	094203
F. Buccheri, A. De Luca, and A. Scardicchio	
Light propagation and Anderson localization in disordered superlattices containing dispersive metamaterials: Effects of correlated disorder (<i>7 pages</i>)	094204
D. Mogilevtsev, F. A. Pinheiro, R. R. dos Santos, S. B. Cavalcanti, and L. E. Oliveira	
Effect of long-range order on elastic properties of $\text{Pd}_{0.5}\text{Ag}_{0.5}$ alloy from first principles (<i>6 pages</i>)	094205
E. K. Delczeg-Czirjak, E. Nurmi, K. Kokko, and L. Vitos	
Collective modes in a saturated lithium-ammonia solution as a probe of the response of the low-density homogeneous electron gas (<i>6 pages</i>)	094206
C. Petrillo, F. Sacchetti, E. Guarini, L. E. Bove, and F. Demmel	
Dynamics, dynamical systems, lattice effects:	
Phase transitions and thermodynamic properties of yttria, Y_2O_3 : Inelastic neutron scattering shell model and first-principles calculations (<i>11 pages</i>)	094301
Preyoshi P. Bose, M. K. Gupta, R. Mittal, S. Rols, S. N. Achary, A. K. Tyagi, and S. L. Chaplot	
Phonon-phonon interactions in transition metals (<i>6 pages</i>)	094302
Laurent Chaput, Atsushi Togo, Isao Tanaka, and Gilles Hug	
Charging-assisted hydrogen release mechanism in layered boron hydride (<i>6 pages</i>)	094303
Teshaye A. Abteu and Peihong Zhang	
Prediction of Raman spectra with ultrasoft pseudopotentials (<i>13 pages</i>)	094304
Kazutoshi Miwa	

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 84, NUMBER 9

SEPTEMBER 2011-1(I)

Damage and ablation thresholds of fused-silica in femtosecond regime (10 pages)	094104
B. Chimier, O. Utéza, N. Sanner, M. Sentis, T. Itina, P. Lassonde, F. Légaré, F. Vidal, and J. C. Kieffer	
Epitaxial strain and electric boundary condition effects on the structural and ferroelectric properties of BiFeO ₃ films (10 pages)	094105
Florian Johann, Alessio Morelli, Daniel Biggemann, Miryam Arredondo, and Ionela Vrejoiu	
Distribution of unresolvable anisotropic microstructures revealed in visibility-contrast images using x-ray Talbot interferometry (9 pages)	094106
Wataru Yashiro, Sébastien Harasse, Katsuyuki Kawabata, Hiroaki Kuwabara, Takashi Yamazaki, and Atsushi Momose	
Dielectric properties and lattice dynamics of α -PbO ₂ -type TiO ₂ : The role of soft phonon modes in pressure-induced phase transition to baddeleyite-type TiO ₂ (8 pages)	094107
Yongqing Cai, Chun Zhang, and Yuan Ping Feng	
Antipolar phase in multiferroic BiFeO ₃ at high pressure (5 pages)	094108
D. P. Kozlenko, A. A. Belik, A. V. Belushkin, E. V. Lukin, W. G. Marshall, B. N. Savenko, and E. Takayama-Muromachi	
Intriguing sequence of GaFeO ₃ structures and electronic states to 70 GPa (8 pages)	094109
R. Arielly, W. M. Xu, E. Greenberg, G. Kh. Rozenberg, M. P. Pasternak, G. Garbarino, S. Clark, and R. Jeanloz	
Computational study of the structural phases of ZnO (7 pages)	094110
Mahlagha P. Molepo and Daniel P. Joubert	
Infrared response of α - and β -phases of LiFe ₅ O ₈ (5 pages)	094111
V. G. Ivanov, A. P. Litvinchuk, N. D. Todorov, M. V. Abrashev, and V. Marinova	
Polarization switching and relaxation dynamics of bismuth layered ferroelectric thin films: Role of oxygen defect sites and crystallinity (10 pages)	094112
Ji Hye Lee, Ran Hee Shin, and William Jo	
Diffuse x-ray scattering from stacking faults in <i>a</i> -plane GaN epitaxial layers (8 pages)	094113
M. Barchuk, V. Holý, D. Kriegner, J. Stangl, S. Schwaiger, and F. Scholz	
Evidence of bulk photovoltaic effect and large tensor coefficient in ferroelectric BiFeO ₃ thin films (5 pages)	094115
Wei Ji, Kui Yao, and Yung C. Liang	
Coexistence of ferroelectric triclinic phases in highly strained BiFeO ₃ films (6 pages)	094116
Zuhuang Chen, S. Prosandeev, Z. L. Luo, Wei Ren, Yajun Qi, C. W. Huang, Lu You, C. Gao, I. A. Kornev, Tom Wu, Junling Wang, P. Yang, T. Sritharan, L. Bellaiche, and Lang Chen	
Efficient method for Li doping of α -rhombohedral boron (13 pages)	094117
H. Dekura, K. Shirai, and A. Yanase	
<i>Ab initio</i> study of intrinsic defects in zirconolite (8 pages)	094118
Jack Mulroue, Andrew J. Morris, and Dorothy M. Duffy	
Elastic constants of hcp ⁴ He: Path-integral Monte Carlo results versus experiment (6 pages)	094119
Luis Aldemar Peña Ardila, Silvio A. Vitiello, and Maurice de Koning	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 84, NUMBER 9

SEPTEMBER 2011-1(I)

Electron spin coherence in antiferromagnetically coupled binuclear Mn complexes (<i>4 pages</i>)	092402
Y. Krupskaya, R. Zaripov, E. Vavilova, V. Miluykov, I. Bezkishko, D. Krivolapov, O. Kataeva, O. Sinyashin, E. Hey-Hawkins, V. Voronkova, K. Salikhov, V. Kataev, and B. Büchner	
Magnetization oscillations induced by spin current in a paramagnetic disc (<i>4 pages</i>)	092403
Abraham Slachter and Bart Jan van Wees	
Influence of interfacial roughness on exchange bias in core-shell nanoparticles (<i>4 pages</i>)	092404
R. F. L. Evans, D. Bate, R. W. Chantrell, R. Yanes, and O. Chubykalo-Fesenko	
Local magnetism in the molecule-based metamagnet [Ru ₂ (O ₂ CMe) ₄] ₃ [Cr(CN) ₆] probed with implanted muons (<i>4 pages</i>)	092405
Tom Lancaster, Francis L. Pratt, Stephen J. Blundell, Andrew J. Steele, Peter J. Baker, Jack D. Wright, Isao Watanabe, Randy S. Fishman, and Joel S. Miller	
Superfluidity and superconductivity	
First- and second-order magnetic and structural transitions in BaFe _{2(1-x)} Co _{2x} As ₂ (<i>4 pages</i>)	092501
C. R. Rotundu and R. J. Birgeneau	
Electric-field effect on electron-doped infinite-layer Sr _{0.88} La _{0.12} CuO _{2+x} thin films (<i>4 pages</i>)	092502
L. Fruchter, F. Bouquet, and Z. Z. Li	
Quantum phase transitions in the attractive extended Bose-Hubbard model with a three-body constraint (<i>4 pages</i>)	092503
Yung-Chung Chen, Kwai-Kong Ng, and Min-Fong Yang	
Raman scattering study of electron-doped Pr _x Ca _{1-x} Fe ₂ As ₂ superconductors (<i>4 pages</i>)	092504
A. P. Litvinchuk, Bing Lv, and C. W. Chu	
Distinct superconducting states in the pressure-induced metallic structures of the nominal semimetal Bi ₄ Te ₃ (<i>4 pages</i>)	092505
J. R. Jeffries, A. L. Lima Sharma, P. A. Sharma, C. D. Spataru, S. K. McCall, J. D. Sugar, S. T. Weir, and Y. K. Vohra	
Interfacial electronic and magnetic properties of a Y _{0.6} Pr _{0.4} Ba ₂ Cu ₃ O ₇ /La _{2/3} Ca _{1/3} MnO ₃ superlattice (<i>4 pages</i>) . . .	092506
Jian Liu, B. J. Kirby, B. Gray, M. Kareev, H.-U. Habermeier, G. Cristiani, J. W. Freeland, and J. Chakhalian	
Lattice expansion from isotope substitution in iron-based superconductors (<i>4 pages</i>)	092507
Oleg Kim and Mats Granath	

ARTICLES

Structure, structural phase transitions, mechanical properties, defects

<i>Ab initio</i> study of the cubic-to-hexagonal phase transition promoted by interstitial hydrogen in iron (<i>6 pages</i>) . . .	094101
A. Castedo, J. Sanchez, J. Fulla, M. C. Andrade, and P. L. de Andres	
Role of carbon and nitrogen in Fe ₂ C and Fe ₂ N from first-principles calculations (<i>10 pages</i>)	094102
C. M. Fang, M. A. van Huis, J. Jansen, and H. W. Zandbergen	
Cooperative grain boundary sliding and nanograin nucleation process in nanocrystalline, ultrafine-grained, and polycrystalline solids (<i>10 pages</i>)	094103
S. V. Bobylev, N. F. Morozov, and I. A. Ovid'ko	

(Continued)

BRIEF REPORTS

Structure, structural phase transitions, mechanical properties, defects

- Theoretical investigation of xenon-hydrogen solids under pressure using *ab initio* DFT and *GW* calculations (4 pages) 092101
T. Kaewmaraya, Duck Young Kim, S. Lebègue, C. J. Pickard, R. J. Needs, and Rajeev Ahuja
- Melting temperature of tungsten from two *ab initio* approaches (4 pages) 092102
L. G. Wang, A. van de Walle, and D. Alfè
- Evolutionary search for superhard materials: Methodology and applications to forms of carbon and TiO₂ (4 pages) 092103
Andriy O. Lyakhov and Artem R. Oganov
- Geometric resonances in far-infrared reflectance spectra of PbTiO₃ ceramics (4 pages) 092104
J. Hlinka, E. Simon, C. Bogicevic, F. Karolak, and P.-E. Janolin
- Molecular oxygen tetramer (O₂)₄: Intermolecular interactions and implications for the ϵ solid phase (4 pages) ... 092105
Massimiliano Bartolomei, Estela Carmona-Novillo, Marta I. Hernández, Jesús Pérez-Ríos, José Campos-Martínez, and Ramón Hernández-Lamonedá
- Predicting dislocation climb: Classical modeling versus atomistic simulations (3 pages) 092106
Emmanuel Clouet

Inhomogeneous, disordered, and partially ordered systems

- Origin of splitting of the second peak in the pair-distribution function for metallic glasses (4 pages) 092201
S. P. Pan, J. Y. Qin, W. M. Wang, and T. K. Gu

Dynamics, dynamical systems, lattice effects:

- Pressure behavior of the sound velocity of liquid water at room temperature in the terahertz regime (4 pages) 092301
M. Santoro, F. A. Gorelli, T. Scopigno, M. Krisch, F. Sette, and G. Ruocco

Magnetism

- Route towards finding large magnetic anisotropy in nanocomposites: Application to a W_{1-x}Re_x/Fe multilayer (4 pages) 092401
Sumanta Bhandary, Oscar Grånäs, Laszlo Szunyogh, Biplab Sanyal, Lars Nordström, and Olle Eriksson

