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 1NO1
2 Huntington Quadrangle
Melville, NY 11747-4502

THIRD SERIES, VOLUME 83, NUMBER 13 *CONTENTS* **APRIL 2011-1(I)**

RAPID COMMUNICATIONS

Magnetism

Lattice modulation induced by magnetic order in the magnetoelectric helimagnet $Ba_{0.5}Sr_{1.5}Zn_2Fe_{12}O_{22}$ *(4 pages)* . . . . . 130401(R)
T. Asaka, X. Z. Yu, Y. Hiraoka, K. Kimoto, T. Hirayama, T. Kimura, and Y. Matsui

BRIEF REPORTS

Structure, structural phase transitions, mechanical properties, defects

Nonleaky surface acoustic waves on a textured rigid surface *(4 pages)* 132101
Zhaojian He, Han Jia, Chunyin Qiu, Yangtao Ye, Rui Hao, Manzhu Ke, and Zhengyou Liu

Elastic anisotropy of ε-Fe under conditions at the Earth's inner core *(4 pages)* 132102
Xiang-Rong Chen, Zhao-Yi Zeng, Zhong-Li Liu, Ling-Cang Cai, and Fu-Qian Jing

Atomistic modeling of multiple amorphous-amorphous transitions in SiO_2 and GeO_2 glasses at megabar pressures *(4 pages)* 132103
V. V. Brazhkin, A. G. Lyapin, and Kostya Trachenko

Scaling of maximum strength with grain size in nanotwinned fcc metals *(4 pages)* 132104
Yujie Wei

Influence of dc bias electric field on Vogel-Fulcher dynamics in relaxor ferroelectrics *(4 pages)* 132105
V. Bobnar, A. Eršte, X.-Z. Chen, C.-L. Jia, and Q.-D. Shen

Impact of lattice vibrations on equation of state of the hardest boron phase *(4 pages)* 132106
E. I. Isaev, S. I. Simak, A. S. Mikhaylushkin, Yu. Kh. Vekilov, E. Yu. Zarechnaya, L. Dubrovinsky, N. Dubrovinskaia, M. Merlini, M. Hanfland, and I. A. Abrikosov

Inhomogeneous, disordered, and partially ordered systems

Search for a disordered phase in solid ^{3}He deformed *in situ (4 pages)* 132201
A. A. Lisunov, V. A. Maidanov, V. Yu. Rubanskyi, S. P. Rubets, E. Ya. Rudavskii, A. S. Rybalko, and V. A. Tikhiy

Dynamics, dynamical systems, lattice effects:

Thermal conductivity of compressed H_2O to 22 GPa: A test of the Leibfried-Schlömann equation *(4 pages)* 132301
Bin Chen, Wen-Pin Hsieh, David G. Cahill, Dallas R. Trinkle, and Jie Li

Copyright 2011 by American Physical Society

1098-0121(20110401)83:13;1-3

(Continued)

Selected for a Viewpoint in *Physics*. Please visit http://physics.aps.org/.

The editors and referees of PRB find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. B 77, 130001 (2008).

PHYSICAL REVIEW B **THIRD SERIES, VOLUME 83, NUMBER 13** **APRIL 2011-1(I)**

Magnetism

Numerical search for diabolical points in the energy spectrum of the single-molecule magnet Fe_8 *(3 pages)* 132401
Feifei Li and Anupam Garg

Influence of plural scattering on the quantitative determination of spin and orbital moments in electron magnetic chiral dichroism measurements *(4 pages)* 132402
Ján Rusz, Hans Lidbaum, Stefano Rubino, Björgvin Hjörvarsson, Peter M. Oppeneer, Olle Eriksson, and Klaus Leifer

Magnetic structure of $EuFe_2P_2$ studied by neutron powder diffraction *(4 pages)* 132403
D. H. Ryan, J. M. Cadogan, Shenggao Xu, Zhu'an Xu, and Guanghan Cao

Threshold photoemission magnetic circular dichroism of perpendicularly magnetized Ni films on Cu(001): Theory and experiment *(4 pages)* 132404
M. Kronseder, J. Minár, J. Braun, S. Günther, G. Woltersdorf, H. Ebert, and C. H. Back

Spin caloritronics in magnetic tunnel junctions: *Ab initio* studies *(4 pages)* 132405
Michael Czerner, Michael Bachmann, and Christian Heiliger

Superfluidity and superconductivity

^{23}Na and ^{75}As NMR study of antiferromagnetism and spin fluctuations in NaFeAs single crystals *(4 pages)* 132501
L. Ma, G. F. Chen, Dao-Xin Yao, J. Zhang, S. Zhang, T.-L. Xia, and Weiqiang Yu

Effect of varying iron content on the transport properties of the potassium-intercalated iron selenide $K_xFe_{2-y}Se_2$ *(4 pages)* 132502
D. M. Wang, J. B. He, T.-L. Xia, and G. F. Chen

Numerical study of velocity statistics in steady counterflow quantum turbulence *(4 pages)* 132503
Hiroyuki Adachi and Makoto Tsubota

Pressure- and temperature-induced structural phase transitions of $CaFe_2As_2$ and $BaFe_2As_2$ studied in the Hund's rule correlation picture *(4 pages)* 132504
Wei Ji (季威), Xun-Wang Yan (闫循旺), and Zhong-Yi Lu (卢仲毅)

Superconducting junctions from doped nonsuperconducting CuO_2 layers *(4 pages)* 132505
V. M. Loktev and Yu. G. Pogorelov

Anomalous vortex-ring velocities induced by thermally excited Kelvin waves and counterflow effects in superfluids *(4 pages)* 132506
Giorgio Krstulovic and Marc Brachet

Symmetry-imposed signatures at the pseudogap crossover in κ-(BEDT-TTF)$_2X$ organic superconductors *(4 pages)* 132507
Mario Poirier, Maxime Dion, and David Fournier

Fresnel aperture diffraction: A phase-sensitive probe of the pairing symmetry of a superconductor *(4 pages)* 132508
C. S. Liu and W. C. Wu

Structure of vacancy-ordered single-crystalline superconducting potassium iron selenide *(4 pages)* 132509
P. Zavalij, Wei Bao, X. F. Wang, J. J. Ying, X. H. Chen, D. M. Wang, J. B. He, X. Q. Wang, G. F. Chen, P.-Y. Hsieh, Q. Huang, and M. A. Green

(Continued)

Selected for a Viewpoint in *Physics*. Please visit http://physics.aps.org/.

The editors and referees of PRB find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. B 77, 130001 (2008).

PHYSICAL REVIEW B **THIRD SERIES, VOLUME 83, NUMBER 13** **APRIL 2011-1(I)**

ARTICLES

Structure, structural phase transitions, mechanical properties, defects

Dynamics of the contact between a ruthenium surface with a single nanoasperity and a flat ruthenium surface: Molecular dynamics simulations *(11 pages)* 134101
Alan Barros de Oliveira, Andrea Fortini, Sergey V. Buldyrev, and David Srolovitz

Order-disorder phase transition in $CePt_4In$: Evidence from ^{115}In and ^{195}Pt NMR studies *(9 pages)* 134102
Bogdan Nowak

Local structural and chemical ordering of nanosized $Pt_{3\pm\delta}Co$ probed by multiple-scattering x-ray absorption spectroscopy *(10 pages)* 134103
Giorgia Greco, Agnieszka Witkowska, Emiliano Principi, Marco Minicucci, and Andrea Di Cicco

Coherent phonons in pyrochlore titanates $A_2Ti_2O_7$ (A = Dy, Gd, Tb): A phase transition in $Dy_2Ti_2O_7$ at 110 K *(6 pages)* 134104
N. Kamaraju, Sunil Kumar, Surajit Saha, Surjeet Singh, R. Suryanarayanan, A. Revcolevschi, and A. K. Sood

Phase stability and structural temperature dependence in sodium niobate: A high-resolution powder neutron diffraction study *(9 pages)* 134105
S. K. Mishra, R. Mittal, V. Yu. Pomjakushin, and S. L. Chaplot

Effect of La doping on the ferroic order in Pb-based perovskite-type relaxor ferroelectrics *(12 pages)* 134106
B. J. Maier, A.-M. Welsch, B. Mihailova, R. J. Angel, J. Zhao, C. Paulmann, J. M. Engel, W. G. Marshall, M. Gospodinov, D. Petrova, and U. Bismayer

Structural and vibrational properties of the van der Waals compound $(N_2)_{11}He$ up to 135 GPa *(6 pages)* 134107
S. Ninet, G. Weck, P. Loubeyre, and F. Datchi

Phonon calculations in cubic and tetragonal phases of $SrTiO_3$: A comparative LCAO and plane-wave study *(9 pages)* 134108
Robert A. Evarestov, Evgeny Blokhin, Denis Gryaznov, Eugene A. Kotomin, and Joachim Maier

Experimental and theoretical study of structural properties and phase transitions in $YAsO_4$ and $YCrO_4$ *(12 pages)* 134109
D. Errandonea, R. Kumar, J. López-Solano, P. Rodríguez-Hernández, A. Muñoz, M. G. Rabie, and R. Sáez Puche

High pressure x-ray diffraction study of the volume collapse in $Ba_{24}Si_{100}$ clathrate *(8 pages)* 134110
P. Toulemonde, D. Machon, A. San Miguel, and M. Amboage

First-principles simulation of cyanogen under high pressure: Formation of paracyanogen and an insulating carbon nitride solid *(8 pages)* 134111
Mohammad Khazaei, Madhvendra Nath Tripathi, and Yoshiyuki Kawazoe

Radial deformation and its related energy variations of single-walled carbon nanotubes *(8 pages)* 134113
Weibang Lu, Tsu-Wei Chou, and Byung-Sun Kim

First-principles prediction of post-pyrite phase transitions in germanium dioxide *(6 pages)* 134114
Haruhiko Dekura (出倉春彦), Taku Tsuchiya (土屋卓久), and Jun Tsuchiya (土屋旬)

(Continued)

Selected for a Viewpoint in *Physics*. Please visit http://physics.aps.org/.

The editors and referees of PRB find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. B 77, 130001 (2008).

PHYSICAL REVIEW B **THIRD SERIES, VOLUME 83, NUMBER 13** **APRIL 2011-1(I)**

Inherent strength of grain boundaries in tungsten *(7 pages)* 134115
I. M. Mikhailovskij, T. I. Mazilova, V. N. Voyevodin, and A. A. Mazilov

Theory of prospective perovskite ferroelectrics with double rocksalt order *(7 pages)* 134116
Anindya Roy and David Vanderbilt

Critical events, entropy, and the grain boundary character distribution *(12 pages)* 134117
K. Barmak, E. Eggeling, M. Emelianenko, Y. Epshteyn, D. Kinderlehrer, R. Sharp, and S. Ta'asan

Highly optimized embedded-atom-method potentials for fourteen fcc metals *(20 pages)* 134118
H. W. Sheng, M. J. Kramer, A. Cadien, T. Fujita, and M. W. Chen

Effects of boundaries and point defects on energetics and dynamics of domain walls *(8 pages)* 134119
Ing-Shouh Hwang, Chung-Kai Fang, and Shih-Hsin Chang

Structural and thermodynamic properties of liquid Na-Li and Ca-Li alloys at high pressure *(6 pages)* 134120
A. M. Teweldeberhan and S. A. Bonev

Effects of pressure and temperature on the thermal conductivity of $Sn_2P_2S_6$ *(7 pages)* 134121
O. Andersson, O. Chobal, I. Rizak, V. Rizak, and V. Sabadosh

Amorphous silicon under mechanical shear deformations: Shear velocity and temperature effects *(10 pages)* 134122
Ali Kerrache, Normand Mousseau, and Laurent J. Lewis

Linking local structure and properties in perovskites containing equal concentrations of manganese and ruthenium *(9 pages)* 134123
Graham King, Rebecca A. Ricciardo, Jennifer R. Soliz, Patrick M. Woodward, and Anna Llobet

Correlation factors for interstitial-mediated self-diffusion in the diamond lattice: Kinetic lattice Monte Carlo approach *(5 pages)* 134124
Renyu Chen and Scott T. Dunham

Inhomogeneous, disordered, and partially ordered systems

Raman spectra of cubic and amorphous $Ge_2Sb_2Te_5$ from first principles *(8 pages)* 134201
Gabriele C. Sosso, Sebastiano Caravati, Riccardo Mazzarello, and Marco Bernasconi

Phase diagram, structure, and electronic properties of $(Ga_{1-x}Zn_x)(N_{1-x}O_x)$ solid solutions from DFT-based simulations *(6 pages)* 134202
Li Li, James T. Muckerman, Mark S. Hybertsen, and Philip B. Allen

Microwave realization of quasi-one-dimensional systems with correlated disorder *(10 pages)* 134203
O. Dietz, U. Kuhl, H.-J. Stöckmann, N. M. Makarov, and F. M. Izrailev

Complexity of waves in nonlinear disordered media *(19 pages)* 134204
C. Conti and L. Leuzzi

Atomic structure and electronic properties of the Si_xSb_{100-x} phase-change memory material *(8 pages)* 134205
Ashok K. Verma, P. Modak, A. Svane, and N. E. Christensen

Ab initio molecular dynamics study of the metallization of liquid selenium under pressure *(7 pages)* 134206
Satoshi Ohmura and Fuyuki Shimojo

Transmission eigenchannels in a disordered medium *(6 pages)* 134207
Wonjun Choi, Allard P. Mosk, Q-Han Park, and Wonshik Choi

(Continued)

Selected for a Viewpoint in *Physics*. Please visit http://physics.aps.org/.

The editors and referees of PRB find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. B 77, 130001 (2008).

PHYSICAL REVIEW B **THIRD SERIES, VOLUME 83, NUMBER 13** **APRIL 2011-1(I)**

Dynamics, dynamical systems, lattice effects:

Nonequilibrium dynamics of the Holstein polaron driven by an external electric field *(7 pages)* 134301
Lev Vidmar, Janez Bonča, Marcin Mierzejewski, Peter Prelovšek, and Stuart A. Trugman

Lattice study of the incommensurate ω phase transition in Zr-Nb alloys *(13 pages)* 134302
H. Kubo and S. Farjami

Majorana path integral for nonequilibrium dynamics of two-level systems *(8 pages)* 134303
Tigran A. Sedrakyan and Victor M. Galitski

Dynamics of iron atoms across the pressure-induced Invar transition in Pd_3Fe *(8 pages)* 134304
M. L. Winterrose, L. Mauger, I. Halevy, A. F. Yue, M. S. Lucas, J. A. Muñoz, H. Tan, Y. Xiao, P. Chow, W. Sturhahn, T. S. Toellner, E. E. Alp, and B. Fultz

Ab initio nuclear momentum distributions in lithium hydride: Assessing nonadiabatic effects *(10 pages)* 134305
Maciej Krzystyniak and Felix Fernandez-Alonso

Magneto-acoustic study of single crystalline $UCu_{0.95}Ge$ *(5 pages)* 134401
S. Yasin, A. V. Andreev, Y. Skourski, J. Wosnitza, S. Zherlitsyn, and A. A. Zvyagin

Micromagnetic understanding of stochastic resonance driven by spin-transfer-torque *(9 pages)* 134402
G. Finocchio, I. N. Krivorotov, X. Cheng, L. Torres, and B. Azzerboni

Weak first-order quantum phase transition in the spin-tetrahedron system $Cu_2Te_2O_5Br_2$ without lattice contributions *(5 pages)* 134403
X. Wang, K. Syassen, M. Johnsson, R. Moessner, K.-Y. Choi, and P. Lemmens

Electronic structure of Co^{2+} ions in anatase Co:TiO_2 in relation to heterogeneity and structural defects *(5 pages)* 134404
Y. J. Lee, M. P. de Jong, and W. G. van der Wiel

Magnetism

Enhanced ferromagnetism from electron-electron interactions in double-exchange-type models *(4 pages)* 134405
Nuri A. Yazdani and Malcolm P. Kennett

Structure-property relations in the distorted ordered double perovskite Sr_2InReO_6 *(6 pages)* 134406
Haitao Gao, Anna Llobet, Joachim Barth, Jürgen Winterlik, Claudia Felser, Martin Panthöfer, and Wolfgang Tremel

Origin of superhyperfine interactions in the antiferromagnetic ring Cr_7Ni *(3 pages)* 134407
C. Schlegel, J. van Slageren, G. Timco, R. E. P. Winpenny, and M. Dressel

Size-dependent electric voltage controlled magnetic anisotropy in multiferroic heterostructures: Interface-charge and strain comediated magnetoelectric coupling *(6 pages)* 134408
Jia-Mian Hu, Ce-Wen Nan, and Long-Qing Chen

Excitation spectrum of multiferroics at finite temperatures *(8 pages)* 134409
Thomas Michael and Steffen Trimper

Shape of spin density wave versus temperature in AFe_2As_2 (A = Ca, Ba, Eu): A Mössbauer study *(12 pages)* 134410
A. Błachowski, K. Ruebenbauer, J. Żukrowski, K. Rogacki, Z. Bukowski, and J. Karpinski

(Continued)

Selected for a Viewpoint in *Physics*. Please visit http://physics.aps.org/.

The editors and referees of PRB find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. B 77, 130001 (2008).

PHYSICAL REVIEW B **THIRD SERIES, VOLUME 83, NUMBER 13** **APRIL 2011-1(I)**

Absence of static magnetic order in lightly-doped $Ti_{1-x}Sc_xOCl$ down to 1.7 K *(5 pages)* 134411
A. A. Aczel, G. J. MacDougall, F. L. Ning, J. A. Rodriguez, S. R. Saha, F. C. Chou, T. Imai, and G. M. Luke

Competition between supersolid phases and magnetization plateaus in the frustrated easy-axis antiferromagnet on a triangular lattice *(24 pages)* 134412
Luis Seabra and Nic Shannon

Switching properties of a tunneling junction connected to a spin valve *(6 pages)* 134413
P. Weinberger

Magnetic phase diagram of α-$NdIr_2Si_2$ *(9 pages)* 134414
M. Mihalik, J. Pospíšil, A. Hoser, and V. Sechovský

Magnetic properties of the heavy-fermion antiferromagnet $CeMg_3$ *(6 pages)* 134416
Pranab Kumar Das, Neeraj Kumar, R. Kulkarni, and A. Thamizhavel

Competition between vanadium tetramerization and trimerization in $Ba_{1-x}Sr_xV_{13}O_{18}$ *(5 pages)* 134417
M. Ikeda, T. Okuda, K. Kato, M. Takata, and T. Katsufuji

Langevin spin dynamics *(9 pages)* 134418
Pui-Wai Ma and S. L. Dudarev

Néel to staggered dimer order transition in a generalized honeycomb lattice Heisenberg model *(8 pages)* 134419
Argha Banerjee, Kedar Damle, and Arun Paramekanti

Order-disorder induced magnetic structures of $FeMnP_{0.75}Si_{0.25}$ *(7 pages)* 134420
Matthias Hudl, Per Nordblad, Torbjörn Björkman, Olle Eriksson, Lennart Häggström, Martin Sahlberg, Yvonne Andersson, Erna-Krisztina Delczeg-Czirjak, and Levente Vitos

Monte Carlo simulation with tensor network states *(6 pages)* 134421
Ling Wang, Iztok Pižorn, and Frank Verstraete

Orbital topology, interlayer spin coupling, and magnetic anisotropy of the $CuFeO_2$ compound *(5 pages)* 134422
M. Malvestuto, F. Bondino, E. Magnano, T. T. A. Lummen, P. H. M. van Loosdrecht, and F. Parmigiani

Solvable limit for the SU(N) Kondo model *(6 pages)* 134423
Solomon F. Duki

Fingerprinting the magnetic behavior of antiferromagnetic nanostructures using remanent magnetization curves *(9 pages)* 134424
M. J. Benitez, O. Petracic, H. Tüysüz, F. Schüth, and H. Zabel

Thermodynamic Casimir force: A Monte Carlo study of the crossover between the ordinary and the normal surface universality class *(16 pages)* 134425
Martin Hasenbusch

Room-temperature ferromagnetism in Mn-implanted amorphous Ge *(9 pages)* 134426
L. Ottaviano, A. Continenza, G. Profeta, G. Impellizzeri, A. Irrera, R. Gunnella, and O. Kazakova

Spin-glass-like state in GdCu: Role of phase separation and magnetic frustration *(7 pages)* 134427
A. Bhattacharyya, S. Giri, and S. Majumdar

(Continued)

Selected for a Viewpoint in *Physics*. Please visit http://physics.aps.org/.

The editors and referees of PRB find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. B 77, 130001 (2008).

PHYSICAL REVIEW B **THIRD SERIES, VOLUME 83, NUMBER 13** **APRIL 2011-1(I)**

Incommensurate spin Luttinger liquid phase in a model for the spin-Peierls materials TiOBr and TiOCl *(7 pages)* 134428
D. Mastrogiuseppe, C. Gazza, and A. Dobry

Temperature-dependent magnetic second-harmonic generation from Fe nanostructures grown on vicinal W(110) *(8 pages)* 134429
L. Carroll, J. P. Cunniffe, K. Fleischer, S. Ryan, and J. F. McGilp

Effect of carrier doping on the formation and collapse of magnetic polarons in lightly hole-doped $La_{1-x}Sr_xCoO_3$ *(8 pages)* 134430
A. Podlesnyak, G. Ehlers, M. Frontzek, A. S. Sefat, A. Furrer, Th. Strässle, E. Pomjakushina, K. Conder, F. Demmel, and D. I. Khomskii

Thermodynamics of the antiferromagnetic Heisenberg model on the checkerboard lattice *(9 pages)* 134431
Ehsan Khatami and Marcos Rigol

Determination of the spin-flip time in ferromagnetic $SrRuO_3$ from time-resolved Kerr measurements *(6 pages)* . . . 134432
C. L. S. Kantner, M. C. Langner, W. Siemons, J. L. Blok, G. Koster, A. J. H. M. Rijnders, R. Ramesh, and J. Orenstein

Spin fluctuations on the verge of a ferromagnetic quantum phase transition in $Ni_3Al_{1-x}Ga_x$ *(9 pages)* 134433
Jinhu Yang, Bin Chen, Hiroto Ohta, Chishiro Michioka, Kazuyoshi Yoshimura, Hangdong Wang, and Minghu Fang

Retardation effects in the Landau-Lifshitz-Gilbert equation *(9 pages)* 134434
Thomas Bose and Steffen Trimper

Magnetization and susceptibility of ion-irradiated granular magnetite films *(8 pages)* 134435
W. Jiang, J. S. McCloy, A. S. Lea, J. A. Sundararajan, Q. Yao, and Y. Qiang

Positive antiphase boundary domain wall magnetoresistance in Fe_3O_4 (110) heteroepitaxial films *(9 pages)* 134436
R. G. S. Sofin, S. K. Arora, and I. V. Shvets

Use of Stevens coefficients for the prediction of magnetic transitions in pseudobinary $R_{1-x}R'_xAl_2$ alloys: Application to $Tm_{1-x}Tb_xAl_2$ *(10 pages)* 134437
Mahmud Khan, D. Paudyal, Ya. Mudryk, K. A. Gschneidner Jr., and V. K. Pecharsky

Noncollinear spin-density-wave antiferromagnetism in FeAs *(6 pages)* 134438
E. E. Rodriguez, C. Stock, K. L. Krycka, C. F. Majkrzak, P. Zajdel, K. Kirshenbaum, N. P. Butch, S. R. Saha, J. Paglione, and M. A. Green

Quantum spin ladders of non-Abelian anyons *(12 pages)* 134439
Didier Poilblanc, Andreas W. W. Ludwig, Simon Trebst, and Matthias Troyer

Superfluidity and superconductivity

Dispersive magnetometry with a quantum limited SQUID parametric amplifier *(8 pages)* 134501
M. Hatridge, R. Vijay, D. H. Slichter, John Clarke, and I. Siddiqi

Electronic instabilities in iron-based superconductors: A variational Monte Carlo study *(4 pages)* 134502
Fan Yang, Hui Zhai, Fa Wang, and Dung-Hai Lee

(Continued)

Selected for a Viewpoint in *Physics*. Please visit http://physics.aps.org/.

The editors and referees of PRB find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. B 77, 130001 (2008).

PHYSICAL REVIEW B **THIRD SERIES, VOLUME 83, NUMBER 13** **APRIL 2011-1(I)**

Rearrangement of the antiferromagnetic ordering at high magnetic fields in SmFeAsO and $SmFeAsO_{0.9}F_{0.1}$ single crystals *(9 pages)* 134503
S. Weyeneth, P. J. W. Moll, R. Puzniak, K. Ninios, F. F. Balakirev, R. D. McDonald, H. B. Chan, N. D. Zhigadlo, S. Katrych, Z. Bukowski, J. Karpinski, H. Keller, B. Batlogg, and L. Balicas

Ideal quantum nondemolition measurement of a flux qubit at variable bias *(7 pages)* 134504
Ying-Dan Wang, Xiaobo Zhu, and Christoph Bruder

In-plane anisotropy of electrical resistivity in strain-detwinned $SrFe_2As_2$ *(6 pages)* 134505
E. C. Blomberg, M. A. Tanatar, A. Kreyssig, N. Ni, A. Thaler, Rongwei Hu, S. L. Bud'ko, P. C. Canfield, A. I. Goldman, and R. Prozorov

Mixed-state Hall effect and flux pinning in $Ba(Fe_{1-x}Co_x)_2As_2$ single crystals ($x = 0.08$ and 0.10) *(8 pages)* 134506
L. M. Wang, Un-Cheong Sou, H. C. Yang, L. J. Chang, Cheng-Maw Cheng, Ku-Ding Tsuei, Y. Su, Th. Wolf, and P. Adelmann

Variational cluster approach for strongly correlated lattice bosons in the superfluid phase *(13 pages)* 134507
Michael Knap, Enrico Arrigoni, and Wolfgang von der Linden

Electronic correlation effects in superconducting picene from *ab initio* calculations *(5 pages)* 134508
Gianluca Giovannetti and Massimo Capone

Spectrum of turbulent Kelvin-waves cascade in superfluid helium *(14 pages)* 134509
Andrew W. Baggaley and Carlo F. Barenghi

Osmotic pressure of $^3He/^4He$ mixtures at the crystallization pressure and at millikelvin temperatures *(8 pages)* 134510
Anssi Salmela, Alexander Sebedash, Juho Rysti, Elias Pentti, and Juha Tuoriniemi

Supersolid polar molecules beyond pairwise interactions *(6 pages)* 134511
Lars Bonnes and Stefan Wessel

Superconducting tubular wires in transverse magnetic fields *(8 pages)* 134512
Yasunori Mawatari

Angle-resolved photoemission spectroscopy of superconducting LiFeAs: Evidence for strong electron-phonon coupling *(6 pages)* 134513
A. A. Kordyuk, V. B. Zabolotnyy, D. V. Evtushinsky, T. K. Kim, I. V. Morozov, M. L. Kulić, R. Follath, G. Behr, B. Büchner, and S. V. Borisenko

Critical current densities in ultrathin $Ba(Fe,Co)_2As_2$ microbridges *(6 pages)* 134514
D. Rall, K. Il'in, K. Iida, S. Haindl, F. Kurth, T. Thersleff, L. Schultz, B. Holzapfel, and M. Siegel

Magnetism and Mott transition: A slave-rotor study *(6 pages)* 134515
Wing-Ho Ko and Patrick A. Lee

Surface spectral function in the superconducting state of a topological insulator *(11 pages)* 134516
Lei Hao and T. K. Lee

Domain walls in normal and superconducting states of iron pnictides *(6 pages)* 134517
Huaixiang Huang, Degang Zhang, Tao Zhou, and C. S. Ting

Majorana meets Coxeter: Non-Abelian Majorana fermions and non-Abelian statistics *(6 pages)* 134518
Shigehiro Yasui, Kazunori Itakura, and Muneto Nitta

(Continued)

Selected for a Viewpoint in *Physics*. Please visit http://physics.aps.org/.

The editors and referees of PRB find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. B 77, 130001 (2008).

PHYSICAL REVIEW B **THIRD SERIES, VOLUME 83, NUMBER 13** **APRIL 2011-1(I)**

Effects of disorder on the transmission of nodal fermions through a d-wave superconductor *(6 pages)* 134519
J. K. Asbóth, A. R. Akhmerov, M. V. Medvedyeva, and C. W. J. Beenakker

Interplay between magnetism, structure, and strong electron-phonon coupling in binary FeAs under pressure *(7 pages)* 134520
J. R. Jeffries, N. P. Butch, H. Cynn, S. R. Saha, K. Kirshenbaum, S. T. Weir, Y. K. Vohra, and J. Paglione

Calorimetric evidence of strong-coupling multiband superconductivity in $Fe(Te_{0.57}Se_{0.43})$ single crystal *(7 pages)* 134521
J. Hu, T. J. Liu, B. Qian, A. Rotaru, L. Spinu, and Z. Q. Mao

Character of the structural and magnetic phase transitions in the parent and electron-doped $BaFe_2As_2$ compounds *(10 pages)* 134522
M. G. Kim, R. M. Fernandes, A. Kreyssig, J. W. Kim, A. Thaler, S. L. Bud'ko, P. C. Canfield, R. J. McQueeney, J. Schmalian, and A. I. Goldman

Thermal and voltage activated excess $1/f$ noise in $FeTe_{0.5}Se_{0.5}$ epitaxial thin films *(7 pages)* 134523
C. Barone, S. Pagano, I. Pallecchi, E. Bellingeri, M. Putti, and C. Ferdeghini

Quasiclassical description of a superconductor with a spin density wave *(10 pages)* 134524
A. Moor, A. F. Volkov, and K. B. Efetov

ERRATA

Erratum: Spin-dependent boundary conditions for isotropic superconducting Green's functions [Phys. Rev. B **80**, 184511 (2009)] *(1 page)* . . . . . 139901(E)
Audrey Cottet, Daniel Huertas-Hernando, Wolfgang Belzig, and Yuli V. Nazarov

Erratum: Computational study of the generation of crystal defects in a bcc metal target irradiated by short laser pulses [Phys. Rev. B **77**, 214108 (2008)] *(1 page)* . . . . . 139902(E)
Zhibin Lin, Robert A. Johnson, and Leonid V. Zhigilei

Erratum: First-principles prediction of a high-pressure hydrous phase of AlOOH [Phys. Rev. B **83**, 054115 (2011)] *(1 page)* . . . . . 139903(E)
Jun Tsuchiya and Taku Tsuchiya

Publisher's Note: Bound states of two spin-$\frac{1}{2}$ fermions in a synthetic non-Abelian gauge field [Phys. Rev. B **83**, 094515 (2011)] *(1 page)* . . . . . 139904(E)
Jayantha P. Vyasanakere and Vijay B. Shenoy

Erratum: Influence of carbon on the kinetics of He migration and clustering in α-Fe from first principles [Phys. Rev. B **80**, 134109 (2009)] *(1 page)* . . . . . 139905(E)
C. J. Ortiz, M. J. Caturla, C. C. Fu, and F. Willaime

Publisher's Note: Microstructure and ordering of iron vacancies in the superconductor system $K_yFe_xSe_2$ as seen via transmission electron microscopy [Phys. Rev. B **83**, 140505(R) (2011)] *(1 page)* . . . . . 139906(E)
Z. Wang, Y. J. Song, H. L. Shi, Z. W. Wang, Z. Chen, H. F. Tian, G. F. Chen, J. G. Guo, H. X. Yang, and J. Q. Li

Selected for a Viewpoint in *Physics*. Please visit http://physics.aps.org/.

The editors and referees of PRB find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. B 77, 130001 (2008).