

CONTENTS - Continued

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 85, NUMBER 9

MARCH 2012-1(I)

Multiband effects on β -FeSe single crystals (5 pages)	094515
Hechang Lei (雷和畅), D. Graf, Rongwei Hu (胡荣伟), Hyejin Ryu (류혜진), E. S. Choi, S. W. Tozer, and C. Petrovic	
Topological superconductivity and Majorana fermions in metallic surface states (9 pages)	094516
Andrew C. Potter and Patrick A. Lee	
Signature of the long range triplet proximity effect in the density of states (7 pages)	094517
Miloš Knežević, Luka Trifunovic, and Zoran Radović	
Driven superconducting proximity effect in interacting quantum dots (6 pages)	094518
Ali G. Moghaddam, Michele Governale, and Jürgen König	
Distinct oxygen hole doping in different layers of $\text{Sr}_2\text{CuO}_{4-\delta}/\text{La}_2\text{CuO}_4$ superlattices (11 pages)	094519
S. Smadici, J. C. T. Lee, A. Rusydi, G. Logvenov, I. Bozovic, and P. Abbamonte	
Single magnetic impurity in a spin-imbalanced superfluid Fermi gas (9 pages)	094520
Jian Li and C. S. Ting	
Probing the order parameter of superconducting LiFeAs using Pb/LiFeAs and Au/LiFeAs point-contact spectroscopy (6 pages)	094521
Xiaohang Zhang, Bumsung Lee, Seunghyun Khim, Kee Hoon Kim, Richard L. Greene, and Ichiro Takeuchi	

ERRATA

Erratum: Laser-driven single shock compression of fluid deuterium from 45 to 220 GPa [Phys. Rev. B 79 , 014112 (2009)] (1 page)	099901(E)
D. G. Hicks, T. R. Boehly, P. M. Celliers, J. H. Eggert, S. J. Moon, D. D. Meyerhofer, and G. W. Collins	
Publisher's Note: Two gaps with one energy scale in cuprate superconductors [Phys. Rev. B 85 , 054509 (2012)] (1 page)	099902(E)
Shiping Feng, Huaisong Zhao, and Zheyu Huang	
Erratum: Lattice constants from semilocal density functionals with zero-point phonon correction [Phys. Rev. B 85 , 014111 (2012)] (1 page)	099903(E)
Pan Hao, Yuan Fang, Jianwei Sun, Gábor I. Csonka, Pier H. T. Philipsen, and John P. Perdew	
Publisher's Note: Elastic constants of hcp ^4He : Path-integral Monte Carlo results versus experiment [Phys. Rev. B 84 , 094119 (2011)] (1 page)	099904(E)
Luis Aldemar Peña Ardila, Silvio A. Vitiello, and Maurice de Koning	
Erratum: Spontaneous spin current due to triplet superconductor-ferromagnet interfaces [Phys. Rev. B 80 , 224520 (2009)] (1 page)	099905(E)
P. M. R. Brydon	
Erratum: Density of states spectra in ferromagnet/superconductor/ferromagnet heterostructures [Phys. Rev. B 83 , 214506 (2011)] (1 page)	099906(E)
Hao Meng, Lin Wen, Guo-Qiao Zha, and Shi-Ping Zhou	

Superfluidity and superconductivity

⁷⁵ As NMR study of the growth of paramagnetic-metal domains due to electron doping near the superconducting phase in LaFeAsO _{1-x} F _x (5 pages)	094501
N. Fujiwara, T. Nakano, Y. Kamihara, and H. Hosono	
Inverse Landau-Zener-Stückelberg problem for qubit-resonator systems (10 pages)	094502
S. N. Shevchenko, S. Ashhab, and Franco Nori	
Experimental demonstration of Aharonov-Casher interference in a Josephson junction circuit (9 pages)	094503
I. M. Pop, B. Douçot, L. Ioffe, I. Protopopov, F. Lecocq, I. Matei, O. Buisson, and W. Guichard	
Anomalous in-plane magnetoresistance in a EuFe ₂ As ₂ single crystal: Evidence of strong spin-charge-lattice coupling (7 pages)	094504
Y. Xiao, Y. Su, S. Nandi, S. Price, B. Schmitz, C. M. N. Kumar, R. Mittal, T. Chatterji, N. Kumar, S. K. Dhar, A. Thamizhavel, and Th. Brückel	
LDA + DMFT study of the effects of correlation in LiFeAs (6 pages)	094505
Johannes Ferber, Kateryna Foyevtsova, Roser Valentí, and Harald O. Jeschke	
Isotropic superconducting gaps with enhanced pairing on electron Fermi surfaces in FeTe _{0.55} Se _{0.45} (6 pages)	094506
H. Miao, P. Richard, Y. Tanaka, K. Nakayama, T. Qian, K. Umezawa, T. Sato, Y.-M. Xu, Y. B. Shi, N. Xu, X.-P. Wang, P. Zhang, H.-B. Yang, Z.-J. Xu, J. S. Wen, G.-D. Gu, X. Dai, J.-P. Hu, T. Takahashi, and H. Ding	
Spin fluctuations and superconductivity in powders of Fe _{1+x} Te _{0.7} Se _{0.3} as a function of interstitial iron concentration (8 pages)	094507
C. Stock, E. E. Rodriguez, and M. A. Green	
Evidence of quantum phase slip effect in titanium nanowires (7 pages)	094508
J. S. Lehtinen, T. Sajavaara, K. Yu. Arutyunov, M. Yu. Presnjakov, and A. L. Vasiliev	
Three-dimensional electronic structure and interband nesting in the stoichiometric superconductor LiFeAs (6 pages)	094509
T. Hajiri, T. Ito, R. Niwa, M. Matsunami, B. H. Min, Y. S. Kwon, and S. Kimura	
 Fermi-surface topology and low-lying electronic structure of the iron-based superconductor Ca ₁₀ (Pt ₃ As ₈)(Fe ₂ As ₂) ₅ (6 pages)	094510
Madhab Neupane, Chang Liu, Su-Yang Xu, Yung-Jui Wang, Ni Ni, J. M. Allred, L. A. Wray, N. Alidoust, Hsin Lin, R. S. Markiewicz, A. Bansil, R. J. Cava, and M. Z. Hasan	
Scanning Hall probe microscopy of unconventional vortex patterns in the two-gap MgB ₂ superconductor (7 pages)	094511
J. Gutierrez, B. Raes, A. V. Silhanek, L. J. Li, N. D. Zhigadlo, J. Karpinski, J. Tempere, and V. V. Moshchalkov	
Imaging the coexistence of a superconducting phase and a charge-density modulation in the K _{0.73} Fe _{1.67} Se ₂ superconductor using a scanning tunneling microscope (5 pages)	094512
Peng Cai, Cun Ye, Wei Ruan, Xiaodong Zhou, Aifeng Wang, Meng Zhang, Xianhui Chen, and Yayu Wang	
Half-vortex unbinding and Ising transition in constrained superfluids (7 pages)	094513
Lars Bonnes and Stefan Wessel	
Long Josephson tunnel junctions with doubly connected electrodes (13 pages)	094514
R. Monaco, J. Mygind, and V. P. Koshelets	

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 85, NUMBER 9

MARCH 2012-1(I)

Spin transport in ferromagnetic/normal-metal tunnel junction arrays (5 pages)	094421
J. Johansson	
CeRu ₂ Al ₂ B: A local-moment 4 <i>f</i> magnet with a complex <i>T-H</i> phase diagram (7 pages)	094422
R. E. Baumbach, H. Chudo, H. Yasuoka, F. Ronning, E. D. Bauer, and J. D. Thompson	
Field tuning of ferromagnetic domain walls on elastically coupled ferroelectric domain boundaries (4 pages)	094423
Kévin J. A. Franke, Tuomas H. E. Lahtinen, and Sebastiaan van Dijken	
Spin-state transition in Ba ₂ Co ₉ O ₁₄ (6 pages)	094424
J.-G. Cheng, J.-S. Zhou, Z. Hu, M. R. Suchomel, Y. Y. Chin, C. Y. Kuo, H.-J. Lin, J. M. Chen, D. W. Pi, C. T. Chen, T. Takami, L. H. Tjeng, and J. B. Goodenough	
Damping dependence in dynamic magnetic hysteresis of single-domain ferromagnetic particles (6 pages)	094425
H. El Mrabti, P. M. Déjardin, S. V. Titov, and Yu. P. Kalmykov	
Paramagnetic heavy-fermion ground state in single-crystalline UIr ₂ Zn ₂₀ (8 pages)	094426
P. Swatek, M. Daszkiewicz, and D. Kaczorowski	
Exchange-bias effect at La _{0.75} Sr _{0.25} MnO ₃ /LaNiO ₃ interfaces (5 pages)	094427
J. C. Rojas Sánchez, B. Nelson-Cheeseman, M. Granada, E. Arenholz, and L. B. Steren	
Circumstantial evidence for hydrogen-induced surface magnetism on Pd(110) (5 pages)	094428
P. Amann, M. Cordin, J. Redinger, S. D. Stolwijk, K. Zumbrägel, M. Donath, E. Bertel, and A. Menzel	
Chiral modulations and reorientation effects in MnSi thin films (12 pages)	094429
E. A. Karhu, U. K. Rößler, A. N. Bogdanov, S. Kahwaji, B. J. Kirby, H. Fritzsche, M. D. Robertson, C. F. Majkrzak, and T. L. Monchesky	
☞ Spin-orbit effects in heavy-atom organic radical ferromagnets (9 pages)	094430
Stephen M. Winter, Richard T. Oakley, Alexey E. Kovalev, and Stephen Hill	
Interplay between the magnetic and electric degrees of freedom in multiferroic Co ₃ TeO ₆ (5 pages)	094431
Wen-Hsien Li, Chin-Wei Wang, Daniel Hsu, Chi-Hung Lee, Chun-Ming Wu, Chih-Chieh Chou, Hung-Duen Yang, Yang Zhao, Sung Chang, Jeffrey W. Lynn, and Helmuth Berger	
Magnetic and structural properties of single-crystalline Er ₅ Si ₄ (10 pages)	094432
Ya. Mudryk, Niraj K. Singh, V. K. Pecharsky, D. L. Schlagel, T. A. Lograsso, and K. A. Gschneidner Jr.	
Influence of a helical anisotropy profile on the static and dynamic properties of a soft magnetic layer (8 pages)	094433
M. Gloanec, S. Dubourg, O. Acher, F. Duverger, D. Plessis, and A. Bonneau-Brault	
Geometric fluctuations in a two-dimensional quantum antiferromagnet (4 pages)	094434
Anuradha Jagannathan, Benoît Douçot, Attila Szallas, and Stefan Wessel	
Magnetodielectric effect and phonon properties of compressively strained EuTiO ₃ thin films deposited on (001)(LaAlO ₃) _{0.29} -(SrAl _{1/2} Ta _{1/2} O ₃) _{0.71} (10 pages)	094435
S. Kamba, V. Goian, M. Orlita, D. Nuzhnyy, J. H. Lee, D. G. Schlom, K. Z. Rushchanskii, M. Ležaić, T. Birol, C. J. Fennie, P. Gemeiner, B. Dkhil, V. Bovtun, M. Kempa, J. Hlinka, and J. Petzelt	
Neutron diffraction, magnetic, and magnetoelectric studies of phase transitions in multiferroic Mn _{0.90} Co _{0.10} WO ₄ (10 pages)	094436
I. Urcelay-Olabarria, E. Ressouche, A. A. Mukhin, V. Yu. Ivanov, A. M. Balbashov, G. P. Vorobev, Yu. F. Popov, A. M. Kadomtseva, J. L. García-Muñoz, and V. Skumryev	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 85, NUMBER 9

MARCH 2012-1(I)

Spin-spin correlation function of the two-dimensional XY model with weak site or bond dilution (9 pages)	094405
Oleksandr Kapikranian	
Antiferromagnetism in the spin-gap system NaV_2O_5 : Muon spin rotation measurements (6 pages)	094406
Vyacheslav G. Storchak, Oleg E. Parfenov, Dmitry G. Eshchenko, Roger L. Lichti, Patrick W. Mengyan, Masahiko Isobe, and Yutaka Ueda	
Spin- $\frac{1}{2}$ J_1 - J_2 Heisenberg antiferromagnet on a square lattice: A plaquette renormalized tensor network study (6 pages)	094407
Ji-Feng Yu and Ying-Jer Kao	
Independent ferroelectric contributions and rare-earth-induced polarization reversal in multiferroic TbMn_2O_5 (7 pages)	094408
N. Leo, D. Meier, R. V. Pisarev, N. Lee, S.-W. Cheong, and M. Fiebig	
High-field multifrequency ESR in the $S = \frac{5}{2}$ kagome-lattice antiferromagnet $\text{KFe}_3(\text{OH})_6(\text{SO}_4)_2$ (11 pages)	094409
T. Fujita, H. Yamaguchi, S. Kimura, T. Kashiwagi, M. Hagiwara, K. Matan, D. Grohol, D. G. Nocera, and Y. S. Lee	
Two-orbital quantum spin model of magnetism in the iron pnictides (7 pages)	094410
Chen Liu, Dao-Xin Yao, and Anders W. Sandvik	
Neutron scattering study of the magnetic microstructure of nanocrystalline gadolinium (17 pages)	094411
Frank Döbrich, Joachim Kohlbrecher, Melissa Sharp, Helmut Eckerlebe, Rainer Birringer, and Andreas Michels	
Flipping magnetization induced by noncollinear ferromagnetic-antiferromagnetic exchange coupling (6 pages)	094412
B. Y. Wang, C. H. Chuang, S. S. Wong, J. J. Chiou, W. C. Lin, Y. L. Chan, D. H. Wei, and Minn-Tsong Lin	
Antiferromagnetism in Cr_3Al and relation to semiconducting behavior (8 pages)	094413
Z. Boekelheide, T. Saerbeck, Anton P. J. Stampfl, R. A. Robinson, D. A. Stewart, and F. Hellman	
⚡ Kinetic control of structural and magnetic states in $\text{LuBaCo}_4\text{O}_7$ (8 pages)	094414
S. Avci, O. Chmaissem, H. Zheng, A. Huq, D. D. Khalyavin, P. W. Stephens, M. R. Suchomel, P. Manuel, and J. F. Mitchell	
Magnetic structure and properties of NaFeSO_4F and NaCoSO_4F (8 pages)	094415
B. C. Melot, G. Rousse, J.-N. Chotard, M. C. Kemei, J. Rodríguez-Carvajal, and J.-M. Tarascon	
Attenuation characteristics of spin-pumping signal due to traveling spin waves (6 pages)	094416
Sankha Subhra Mukherjee, Praveen Deorani, Jae Hyun Kwon, and Hyunsoo Yang	
Entanglement entropy dynamics of disordered quantum spin chains (8 pages)	094417
Ferenc Iglói, Zsolt Szatmári, and Yu-Cheng Lin	
Majorana spin liquids and projective realization of $\text{SU}(2)$ spin symmetry (17 pages)	094418
Gang Chen, Andrew Essin, and Michael Hermele	
Theoretical investigation of the inverse Faraday effect via a stimulated Raman scattering process (13 pages)	094419
Daria Popova, Andreas Bringer, and Stefan Blügel	
Magnetoresistance in fcc Ni/graphene/fcc Ni(111) junctions (8 pages)	094420
R. Sato, T. Hiraiwa, J. Inoue, S. Honda, and H. Itoh	

(Continued)

Study of pressure-induced amorphization in sulfur using <i>ab initio</i> molecular dynamics (9 pages)	094112
Dušan Plašienka and Roman Martoňák	
High-pressure amorphous phase of vanadium pentaoxide (8 pages)	094113
A. K. Arora, Tomoko Sato, Taku Okada, and Takehiko Yagi	
Inhomogeneous, disordered, and partially ordered systems	
Elastic and anelastic properties of densified vitreous B ₂ O ₃ : Relaxations and anharmonicity (8 pages)	094201
Giovanni Carini Jr., Giuseppe Carini, Gaspare Tripodo, Gaetano Di Marco, and Edmondo Gilioli	
Mott glass to superfluid transition for random bosons in two dimensions (28 pages)	094202
S. Iyer, D. Pekker, and G. Refael	
☞ Förster-mediated spectral diffusion in disordered organic materials (12 pages)	094203
Franziska Fennel and Stefan Lochbrunner	
Bounds and self-consistent estimates for elastic constants of polycrystals of hcp solid He ⁴ (8 pages)	094204
James G. Berryman	
Dynamics, dynamical systems, lattice effects:	
Enhancement of the phonon-sideband luminescence in semiconductor microcavities (12 pages)	094301
C. N. Böttge, M. Kira, and S. W. Koch	
Optical conductivity of polarons: Double phonon cloud concept verified by diagrammatic Monte Carlo simulations (5 pages)	094302
G. De Filippis, V. Cataudella, A. S. Mishchenko, and N. Nagaosa	
Theory of rigid-plane phonon modes in layered crystals (11 pages)	094303
K. H. Michel and B. Verberck	
Flow-induced resonance shift in sonic slit array metamaterials (6 pages)	094304
J. Christensen and M. Willatzen	
Phonon anharmonicity of rutile TiO ₂ studied by Raman spectrometry and molecular dynamics simulations (11 pages)	094305
Tian Lan, Xiaoli Tang, and Brent Fultz	
Magnetism	
Thermal spin current and magnetothermopower by Seebeck spin tunneling (8 pages)	094401
R. Jansen, A. M. Deac, H. Saito, and S. Yuasa	
Interplay of magnetism, Fermi surface reconstructions, and hidden order in the heavy-fermion material URu ₂ Si ₂ (10 pages)	094402
G. W. Scheerer, W. Knafo, D. Aoki, G. Ballon, A. Mari, D. Vignolles, and J. Flouquet	
Quantum deflagration and supersonic fronts of tunneling in molecular magnets (10 pages)	094403
D. A. Garanin and Saaber Shoyeb	
Analysis of quantum coherence in bismuth-doped silicon: A system of strongly coupled spin qubits (16 pages)	094404
M. H. Mohammady, G. W. Morley, A. Nazir, and T. S. Monteiro	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 85, NUMBER 9

MARCH 2012-1(I)

Phase diagram as a function of doping level and pressure in the $\text{Eu}_{1-x}\text{La}_x\text{Fe}_2\text{As}_2$ system (4 pages)	092503
M. Zhang, J. J. Ying, Y. J. Yan, A. F. Wang, X. F. Wang, Z. J. Xiang, G. J. Ye, P. Cheng, X. G. Luo, Jiangping Hu, and X. H. Chen	
Doping evolution of the optical scattering rate and effective mass of $\text{Bi}_2\text{Sr}_{2-x}\text{La}_x\text{CuO}_6$ (4 pages)	092504
Y. M. Dai, B. Xu, P. Cheng, H. Q. Luo, H. H. Wen, X. G. Qiu, and R. P. S. M. Lobo	
Direct numerical demonstration of sign-preserving quasiparticle interference via an impurity inside a vortex core in an unconventional superconductor (4 pages)	092505
Yuki Nagai, Noriyuki Nakai, and Masahiko Machida	

ARTICLES

Structure, structural phase transitions, mechanical properties, defects

Structural aspects of the relaxation process in spin crossover solids: Phase separation, mapping of lattice strain, and domain wall structure (13 pages)	094101
W. Nicolazzi and S. Pillet	
Configuration and binding energy of multiple hydrogen atoms trapped in monovacancy in bcc transition metals (8 pages)	094102
Kazuhito Ohsawa, Keisuke Eguchi, Hideo Watanabe, Masatake Yamaguchi, and Masatoshi Yagi	
^4He crystal quality and rotational response in a transparent torsional oscillator (6 pages)	094103
A. D. Fefferman, X. Rojas, A. Haziot, S. Balibar, J. T. West, and M. H. W. Chan	
Transmutation in $^{90}\text{SrF}_2$: A density functional theory study of phase stability in ZrF_2 (11 pages)	094104
M. Sassi, B. P. Uberuaga, C. R. Stanek, and N. A. Marks	
Uniaxial versus hydrostatic pressure-induced phase transitions in CaFe_2As_2 and BaFe_2As_2 (7 pages)	094105
Milan Tomić, Roser Valentí, and Harald O. Jeschke	
Pressure-induced phonon softenings and the structural and magnetic transitions in CrO_2 (5 pages)	094106
Sooran Kim, Kyoo Kim, Chang-Jong Kang, and B. I. Min	
Interfacial polarization and pyroelectricity in antiferrodistortive structures induced by a flexoelectric effect and rotostriction (9 pages)	094107
Anna N. Morozovska, Eugene A. Eliseev, Maya D. Glinchuk, Long-Qing Chen, and Venkatraman Gopalan	
Diffuse scattering anisotropy and inhomogeneous lattice deformations in the lead magnoniobate relaxor PMN above the Burns temperature (7 pages)	094108
R. G. Burkovsky, A. V. Filimonov, A. I. Rudskoy, K. Hirota, M. Matsuura, and S. B. Vakhrushev	
Electron dynamics of shocked polyethylene crystal (7 pages)	094109
Patrick L. Theofanis, Andres Jaramillo-Botero, William A. Goddard III, Thomas R. Mattsson, and Aidan P. Thompson	
Insulators containing $\text{CuCl}_4\text{X}_2^{2-}$ ($\text{X} = \text{H}_2\text{O}, \text{NH}_3$) units: Origin of the orthorhombic distortion observed only for $\text{CuCl}_4(\text{H}_2\text{O})_2^{2-}$ (9 pages)	094110
P. García-Fernández, J. M. García-Lastra, A. Trueba, M. T. Barriuso, J. A. Aramburu, and M. Moreno	
Validating molecular dynamics with direct imaging of radiation damage debris (6 pages)	094111
P. D. Lane, G. J. Galloway, R. J. Cole, M. Caffio, R. Schaub, and G. J. Ackland	

(Continued)

BRIEF REPORTS

Structure, structural phase transitions, mechanical properties, defects

- Stimulated Raman scattering from ice-VIII by shock-induced compression in liquid water (*4 pages*) 092101
Zhiwei Men, Zuowei Li, Mi Zhou, Guohui Lu, Bo Zou, Zhanlong Li, and Chenglin Sun

- Empirical oscillating potentials for alloys from *ab initio* fits and the prediction of quasicrystal-related structures in the Al-Cu-Sc system (*4 pages*) 092102
Marek Mihalkovič and C. L. Henley

- Detection and decoherence of level-crossing resonances of ⁸Li in Cu (*5 pages*) 092103
K. H. Chow, A. I. Mansour, I. Fan, R. F. Kiefl, G. D. Morris, Z. Salman, T. Dunlop, W. A. MacFarlane, H. Saadaoui, O. Mosendz, B. Kardasz, B. Heinrich, J. Jung, C. D. P. Levy, M. R. Pearson, T. J. Parolin, D. Wang, M. D. Hossain, Q. Song, and M. Smadella

Dynamics, dynamical systems, lattice effects:

- Wavelength dependence of photoinduced deformation in BiFeO₃ (*4 pages*) 092301
B. Kundys, M. Viret, C. Meny, V. Da Costa, D. Colson, and B. Doudin

Magnetism

- Interplay of heating and helicity in all-optical magnetization switching (*5 pages*) 092401
Sabine Alebrand, Alexander Hassdenteufel, Daniel Steil, Mirko Cinchetti, and Martin Aeschlimann

- Magnetic field switching of the charge-density-wave state in the lanthanide intermetallic SmNiC₂ (*5 pages*) 092402
N. Hanasaki, Y. Nogami, M. Kakinuma, S. Shimomura, M. Kosaka, and H. Onodera

- Quantum dynamics of a nanomagnet driven by spin-polarized current (*4 pages*) 092403
Yong Wang and L. J. Sham

Superfluidity and superconductivity

- Quantum magnetic oscillations and angle-resolved photoemission from impurity bands in cuprate superconductors (*4 pages*) 092501
A. S. Alexandrov

- Flux-quantum-discretized dynamics of magnetic flux entry, exit, and annihilation in current-driven mesoscopic type-I superconductors (*4 pages*) 092502
G. R. Berdiyrov, A. D. Hernández-Nieves, M. V. Milošević, F. M. Peeters, and D. Domínguez

