

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 86, NUMBER 22

DECEMBER 2012-1(II)

Coherent Cooper-pair pumping by magnetic flux control (<i>8 pages</i>)	224510
S. Gasparinetti and I. Kamleitner	
Zero-bias conductance peak in Majorana wires made of semiconductor/superconductor hybrid structures (<i>11 pages</i>)	224511
Chien-Hung Lin, Jay D. Sau, and S. Das Sarma	
<i>c</i> -axis optical sum in underdoped superconducting cuprates (<i>7 pages</i>)	224512
J. P. Carbotte and E. Schachinger	
Self-induced pinning of vortices in the presence of ac driving force in magnetic superconductors (<i>7 pages</i>)	224513
Lev N. Bulaevskii and Shi-Zeng Lin	
Hydrostatic and uniaxial pressure dependence of superconducting transition temperature of KFe_2As_2 single crystals (<i>4 pages</i>)	224514
Sergey L. Bud'ko, Yong Liu, Thomas A. Lograsso, and Paul C. Canfield	

COMMENTS

Comment on "Three-dimensional imaging of a phase object from a single sample orientation using an optical laser" (<i>2 pages</i>)	226101
Haiqing Wei and Shiyuan Liu	
Reply to "Comment on 'Three-dimensional imaging of a phase object from a single sample orientation using an optical laser' " (<i>2 pages</i>)	226102
Chien-Chun Chen, Huaidong Jiang, Lu Rong, Sara Salha, Rui Xu, Thomas G. Mason, and Jianwei Miao	
Comment on "Symmetry of Kelvin-wave dynamics and the Kelvin-wave cascade in the $T = 0$ superfluid turbulence" (<i>4 pages</i>)	226501
Victor S. L'vov and Sergey V. Nazarenko	
Reply to "Comment on 'Symmetry of Kelvin-wave dynamics and the Kelvin-wave cascade in the $T = 0$ superfluid turbulence' " (<i>2 pages</i>)	226502
E. B. Sonin	

Dynamic off-centering of Cr^{3+} ions and short-range magneto-electric clusters in CdCr_2S_4 (7 pages)	224418
G. N. P. Oliveira, A. M. Pereira, A. M. L. Lopes, J. S. Amaral, A. M. dos Santos, Y. Ren, T. M. Mendonça, C. T. Sousa, V. S. Amaral, J. G. Correia, and J. P. Araújo	
Organic magnetic tunnel junctions: The role of metal-molecule interface (6 pages)	224419
S. H. Liang, D. P. Liu, L. L. Tao, X. F. Han, and Hong Guo	
Giant magnetic anisotropy in Mn_3O_4 investigated by $^{55}\text{Mn}^{2+}$ and $^{55}\text{Mn}^{3+}$ NMR (5 pages)	224420
Changsoo Kim, Euna Jo, Byeongki Kang, Sangil Kwon, Soonchil Lee, Jeong Hyun Shim, Takehiko Suzuki, and Takuro Katsufuji	
Ho and Fe magnetic ordering in multiferroic $\text{HoFe}_3(\text{BO}_3)_4$ (5 pages)	224421
D. K. Shukla, S. Francoual, A. Skaugen, M. v. Zimmermann, H. C. Walker, L. N. Bezmaternykh, I. A. Gudim, V. L. Temerov, and J. Strempfer	
Entanglement entropy and spectra of the one-dimensional Kugel-Khomskii model (22 pages)	224422
Rex Lundgren, Victor Chua, and Gregory A. Fiete	
Low-frequency and shot noises in $\text{CoFeB}/\text{MgO}/\text{CoFeB}$ magnetic tunneling junctions (9 pages)	224423
Tomonori Arakawa, Takahiro Tanaka, Kensaku Chida, Sadashige Matsuo, Yoshitaka Nishihara, Daichi Chiba, Kensuke Kobayashi, Teruo Ono, Akio Fukushima, and Shinji Yuasa	
Superfluidity and superconductivity	
Josephson current and density of states in proximity circuits with s_{+-} superconductors (5 pages)	224501
Stanislav Apostolov and Alex Levchenko	
Direct evidence of chemical and crystallographic phase separation in $\text{K}_{0.65}\text{Fe}_{1.74}\text{Se}_2$ (5 pages)	224502
S. Landsgesell, D. Abou-Ras, D. Alber, K. Prokeš, and T. Wolf	
Excitations of amorphous solid helium (10 pages)	224503
Jacques Bossy, Jacques Ollivier, Helmut Schober, and H. R. Glyde	
Magnetoresistance oscillations in superconducting strips: A Ginzburg-Landau study (8 pages)	224504
G. R. Berdiyrov, X. H. Chao, F. M. Peeters, H. B. Wang, V. V. Moshchalkov, and B. Y. Zhu	
Fluctuations of the vortex line density in turbulent flows of quantum fluids (5 pages)	224505
Sergey K. Nemirovskii	
🌀 Spin-triplet supercurrent in Co/Ni multilayer Josephson junctions with perpendicular anisotropy (4 pages)	224506
E. C. Gingrich, P. Quarterman, Yixing Wang, R. Loloee, W. P. Pratt, Jr., and Norman O. Birge	
🌀 Possible multigap superconductivity and magnetism in single crystals of superconducting $\text{La}_2\text{Pt}_3\text{Ge}_5$ and $\text{Pr}_2\text{Pt}_3\text{Ge}_5$ (6 pages)	224507
N. H. Sung, C. J. Roh, K. S. Kim, and B. K. Cho	
Extended Lawrence-Doniach model: The temperature evolution of the in-plane magnetic field anisotropy (12 pages)	224508
M. D. Croitoru and A. I. Buzdin	
Possible charge instabilities in two-dimensional doped Mott insulators (12 pages)	224509
Matías Bejas, Andrés Greco, and Hiroyuki Yamase	

(Continued)

Spin injection from a half-metal at finite temperatures (<i>8 pages</i>)	224402
K. D. Belashchenko, J. K. Glasbrenner, and A. L. Wysocki	
☞ Dualism of the $5f$ electrons of the ferromagnetic superconductor UGe_2 as seen in magnetic, transport, and specific-heat data (<i>14 pages</i>)	224403
R. Troć, Z. Gajek, and A. Pikul	
Towards the chemical tuning of entanglement in molecular nanomagnets (<i>5 pages</i>)	224404
I. Siloi and F. Troiani	
Two-wave mixing in nonlinear magnetization dynamics: A perturbation expansion of the Landau-Lifshitz-Gilbert equation (<i>7 pages</i>)	224405
J. Marsh and R. E. Camley	
Low-energy effective theory and two distinct critical phases in a spin- $\frac{1}{2}$ frustrated three-leg spin tube (<i>5 pages</i>)	224406
Yang Zhao, Shou-Shu Gong, Yong-Jun Wang, and Gang Su	
Canted antiferromagnetism on a nanodimensional spherical surface geometry: The case of MnCO_3 small hollow nanospheres (<i>11 pages</i>)	224407
Jin Bae Lee, Won G. Hong, Hae Jin Kim, Z. Jagličić, S. Jazbec, M. Wencka, A. Jelen, and J. Dolinšek	
Sign of the superexchange coupling between next-nearest neighbors in EuO (<i>6 pages</i>)	224408
Pan Liu, Juan A. Colón Santana, Qilin Dai, Xianjie Wang, Peter A. Dowben, and Jinke Tang	
Paired chiral spin liquid with a Fermi surface in $S = 1$ model on the triangular lattice (<i>16 pages</i>)	224409
Samuel Bieri, Maksym Serbyn, T. Senthil, and Patrick A. Lee	
First-principles determination of the rhombohedral magnetostriction of $\text{Fe}_{100-x}\text{Al}_x$ and $\text{Fe}_{100-x}\text{Ga}_x$ alloys (<i>6 pages</i>)	224410
Yanning Zhang, Hui Wang, and Ruqian Wu	
Gapless edge states and their stability in two-dimensional quantum magnets (<i>7 pages</i>)	224411
Takafumi Suzuki and Masahiro Sato	
ESR intensity and the Dzyaloshinsky-Moriya interaction of the nanoscale molecular magnet V_{15} (<i>8 pages</i>)	224412
Manabu Machida, Toshiaki Iitaka, and Seiji Miyashita	
Magnetic order induced by Fe substitution of Al site in the heavy-fermion systems $\alpha\text{-YbAlB}_4$ and $\beta\text{-YbAlB}_4$ (<i>6 pages</i>)	224413
Kentaro Kuga, Gregory Morrison, LaRico Treadwell, Julia Y. Chan, and Satoru Nakatsuji	
Magnetization reversal in Ni/FeF_2 heterostructures with the coexistence of positive and negative exchange bias (<i>9 pages</i>)	224414
Miroslavna Kovylyna, Rafael Morales, Amílcar Labarta, and Xavier Batlle	
Electronic and magnetic properties of bimetallic $L1_0$ cuboctahedral clusters by means of fully relativistic density-functional-based calculations (<i>9 pages</i>)	224415
R. Cuadrado and R. W. Chantrell	
Longitudinal and transverse static spin fluctuations in layered ferromagnets and antiferromagnets (<i>8 pages</i>)	224416
A. Katanin	
Quantum phase transition in Heisenberg-Kitaev model (<i>11 pages</i>)	224417
Robert Schaffer, Subhro Bhattacharjee, and Yong Baek Kim	

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 86, NUMBER 22

DECEMBER 2012-1(II)

Scaling coefficient for three-dimensional grain coalescence of ZnO on Si(111) (6 pages)	224108
Marcel Ruth and Cedrik Meier	
Decomposition kinetics of Fe-Cr solid solutions during thermal aging (13 pages)	224109
Enrique Martínez, Oriane Senninger, Chu-Chun Fu, and Frédéric Soisson	
Low-energy structures of zinc borohydride $\text{Zn}(\text{BH}_4)_2$ (8 pages)	224110
Tran Doan Huan, Maximilian Amsler, Vu Ngoc Tuoc, Alexander Willand, and Stefan Goedecker	
Pressure dependence of the monoclinic phase in $(1-x)\text{Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{O}_3$ - $x\text{PbTiO}_3$ solid solutions (6 pages) . . .	224111
Muhtar Ahart, Stanislav Sinogeikin, Olga Shebanova, Daijo Ikuta, Zuo-Guang Ye, Ho-kwang Mao, R. E. Cohen, and Russell J. Hemley	
 Defect stability in phase-field crystal models: Stacking faults and partial dislocations (12 pages)	224112
Joel Berry, Nikolas Provatas, Jörg Rottler, and Chad W. Sinclair	
<i>Ab initio</i> simulations of hot dense methane during shock experiments (8 pages)	224113
Benjamin L. Sherman, Hugh F. Wilson, Dayanthie Weeraratne, and Burkhard Militzer	
Enhancement of dielectric constant of BaTiO_3 nanoparticles studied by resonant x-ray emission spectroscopy (4 pages)	224114
Nobuo Nakajima, Megumi Oki, Yoichi Isohama, Hiroshi Maruyama, Yasuhisa Tezuka, Kotaro Ishiji, Toshiaki Iwazumi, and Kozo Okada	
Inhomogeneous, disordered, and partially ordered systems	
Structural properties of glassy Ge_2Se_3 from first-principles molecular dynamics (12 pages)	224201
Sébastien Le Roux, Assil Bouzid, Mauro Boero, and Carlo Massobrio	
Thermodynamic integration based on classical atomistic simulations to determine the Gibbs energy of condensed phases: Calculation of the aluminum-zirconium system (22 pages)	224202
J.-P. Harvey, A. E. Gheribi, and P. Chartrand	
Dynamics, dynamical systems, lattice effects:	
Lattice dynamics in Bi_2Te_3 and Sb_2Te_3 : Te and Sb density of phonon states (9 pages)	224301
D. Bessas, I. Sergueev, H.-C. Wille, J. Perßon, D. Ebling, and R. P. Hermann	
Dynamics of confined cavity modes in a phononic crystal slab investigated by <i>in situ</i> time-resolved experiments (5 pages)	224302
R. Marchal, O. Boyko, B. Bonello, J. Zhao, L. Belliard, M. Oudich, Y. Pennec, and B. Djafari-Rouhani	
Phononic filter effect of rattling phonons in the thermoelectric clathrate $\text{Ba}_8\text{Ge}_{40+x}\text{Ni}_{6-x}$ (9 pages)	224303
H. Euchner, S. Pailhès, L. T. K. Nguyen, W. Assmus, F. Ritter, A. Haghighirad, Y. Grin, S. Paschen, and M. de Boissieu	
Electrostriction and guidance of acoustic phonons in optical fibers (6 pages)	224304
Jean-Charles Beugnot and Vincent Laude	
Magnetism	
Accelerating the switching of magnetic nanoclusters by anisotropy-driven magnetization dynamics (6 pages)	224401
Corina Etz, Marcio Costa, Olle Eriksson, and Anders Bergman	

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 86, NUMBER 22

DECEMBER 2012-1(II)

Evidence of a critical hole concentration in underdoped $\text{YBa}_2\text{Cu}_3\text{O}_y$ single crystals revealed by ^{63}Cu NMR (5 pages)	220504(R)
S.-H. Baek, T. Loew, V. Hinkov, C. T. Lin, B. Keimer, B. Büchner, and H.-J. Grafe	
Unique phase diagram with narrow superconducting dome in $\text{EuFe}_2(\text{As}_{1-x}\text{P}_x)_2$ due to Eu^{2+} local magnetic moments (4 pages)	220505(R)
Y. Tokiwa, S.-H. Hübner, O. Beck, H. S. Jeevan, and P. Gegenwart	
Splitting of the zero-bias conductance peak as smoking gun evidence for the existence of the Majorana mode in a superconductor-semiconductor nanowire (5 pages)	220506(R)
S. Das Sarma, Jay D. Sau, and Tudor D. Stanescu	
Model description of the supersolid state in $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$ (4 pages)	220508(R)
A. M. Tsvelik	
Effect of pressure on the neutron spin resonance in the unconventional superconductor $\text{FeTe}_{0.6}\text{Se}_{0.4}$ (5 pages)	220509(R)
K. Marty, A. D. Christianson, A. M. dos Santos, B. Sipos, K. Matsubayashi, Y. Uwatoko, J. A. Fernandez-Baca, C. A. Tulk, T. A. Maier, B. C. Sales, and M. D. Lumsden	
 BiS_2 -based layered superconductor $\text{Bi}_4\text{O}_4\text{S}_3$ (5 pages)	220510(R)
Yoshikazu Mizuguchi, Hiroshi Fujihisa, Yoshito Gotoh, Katsuhiro Suzuki, Hidetomo Usui, Kazuhiko Kuroki, Satoshi Demura, Yoshihiko Takano, Hiroki Izawa, and Osuke Miura	
 Hydrostatic-pressure tuning of magnetic, nonmagnetic, and superconducting states in annealed $\text{Ca}(\text{Fe}_{1-x}\text{Co}_x)_2\text{As}_2$ (5 pages)	220511(R)
E. Gati, S. Köhler, D. Guterding, B. Wolf, S. Knöner, S. Ran, S. L. Bud'ko, P. C. Canfield, and M. Lang	

ARTICLES

Structure, structural phase transitions, mechanical properties, defects

First-principles study of the structural and elastic properties of rhenium-based transition-metal alloys (9 pages)	224101
Maarten de Jong, David L. Olmsted, Axel van de Walle, and Mark Asta	
First-principles study of hexagonal tungsten trioxide: Nature of lattice distortions and effect of potassium doping (6 pages)	224102
Peter Krüger, Issam Koutiri, and Sylvie Bourgeois	
Release of helium from vacancy defects in yttria-stabilized zirconia under irradiation (7 pages)	224103
Xin Ou, Reinhard Kögler, Hong-Bo Zhou, Wolfgang Anwand, Jörg Grenzer, René Hübner, Matthias Voelskow, Maik Butterling, Shengqiang Zhou, and Wolfgang Skorupa	
Polymorphism and melt in high-pressure tantalum (18 pages)	224104
Justin B. Haskins, John A. Moriarty, and Randolph Q. Hood	
Phase transitions in ferroelectric $\text{Pb}_{0.5}\text{Sr}_{0.5}\text{TiO}_3$ films probed by spectroscopic ellipsometry (6 pages)	224105
M. Tyunina, A. Dejneka, D. Chvostova, J. Levoska, M. Plekh, and L. Jastrabik	
Neutron scattering study of ferroelectric $\text{Sn}_2\text{P}_2\text{S}_6$ under pressure (8 pages)	224106
P. Ondrejovic, M. Kempa, Y. Vysokhanskii, P. Saint-Grégoire, P. Bourges, K. Z. Rushchanskii, and J. Hlinka	
Influence of Ni on the lattice stability of Fe-Ni alloys at multimegabar pressures (6 pages)	224107
O. Yu. Vekilova, S. I. Simak, A. V. Ponomareva, and I. A. Abrikosov	

(Continued)

RAPID COMMUNICATIONS

Structure, structural phase transitions, mechanical properties, defects

- Birefringence and polarization rotation in resonant x-ray diffraction (4 pages) 220101(R)
Yves Joly, S. P. Collins, Stéphane Grenier, Helio C. N. Tolentino, and Maurizio De Santis

- Atomistic modeling of phase transformations: Point-defect concentrations and the time-scale problem (5 pages) 220102(R)
M. Nastar and F. Soisson

Dynamics, dynamical systems, lattice effects:

- Phonon softening and dispersion in EuTiO₃ (5 pages) 220301(R)
David S. Ellis, Hiroshi Uchiyama, Satoshi Tsutsui, Kunihisa Sugimoto, Kenichi Kato,
Daisuke Ishikawa, and Alfred Q. R. Baron

- Fluctuating-surface-current formulation of radiative heat transfer for arbitrary geometries (5 pages) 220302(R)
Alejandro W. Rodriguez, M. T. Homer Reid, and Steven G. Johnson

Magnetism

- Field-tuned critical fluctuations in YFe₂Al₁₀: Evidence from magnetization, ²⁷Al NMR, and NQR investigations (5 pages) 220401(R)
P. Khuntia, A. M. Strydom, L. S. Wu, M. C. Aronson, F. Steglich, and M. Baenitz

- Identifying the spectroscopic modes of multiferroic BiFeO₃ (5 pages) 220402(R)
Randy S. Fishman, Nobuo Furukawa, Jason T. Haraldsen, Masaaki Matsuda, and Shin Miyahara

- Magnetic structural change of Sr₂IrO₄ upon Mn doping (5 pages) 220403(R)
S. Calder, G.-X. Cao, M. D. Lumsden, J. W. Kim, Z. Gai, B. C. Sales, D. Mandrus, and A. D. Christianson

Superfluidity and superconductivity

- Minimal electronic models for superconducting BiS₂ layers (5 pages) 220501(R)
Hidetomo Usui, Katsuhiro Suzuki, and Kazuhiko Kuroki

- Abrupt enhancement of noncentrosymmetry and appearance of a spin-triplet superconducting state in Li₂(Pd_{1-x}Pt_x)₃B beyond $x = 0.8$ (5 pages) 220502(R)
S. Harada, J. J. Zhou, Y. G. Yao, Y. Inada, and Guo-qing Zheng

- Quantum state sensitivity of an autoresonant superconducting circuit (4 pages) 220503(R)
K. W. Murch, E. Ginossar, S. J. Weber, R. Vijay, S. M. Girvin, and I. Siddiqi

