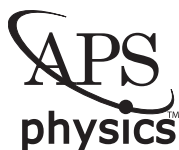


ARTICLES

Structure, structural phase transitions, mechanical properties, defects

- Phase stability of the SrMnO_3 hexagonal perovskite system at high pressure and temperature (10 pages) 214101
Morten Bormann Nielsen, Davide Ceresoli, Paraskevas Parisiades, Vitali B. Prakapenka, Tony Yu,
Yanbin Wang, and Martin Bremholm
- First-principles study of PbTiO_3 under uniaxial strains and stresses (9 pages) 214102
Henu Sharma, Jens Kreisel, and Philippe Ghosez
- Effect of Vegard strains on the extrinsic size effects in ferroelectric nanoparticles (10 pages) 214103
Anna N. Morozovska, Iryna S. Golovina, Sergiy V. Lemishko, Alexander A. Andriiko, Sergiy A. Khainakov,
and Eugene A. Eliseev
- First-principles study of Al-Cu energetics and consequences on athermal formation of Cu-rich
compounds (9 pages) 214104
R. Besson, J. Kwon, L. Thuinet, M.-N. Avettand-Fènoël, and A. Legris
- Incommensurate-to-incommensurate phase transition in Eu metal at high pressures (8 pages) 214105
R. J. Husband, I. Loa, K. A. Munro, E. E. McBride, S. R. Evans, H.-P. Liermann, and M. I. McMahon
- Disclinations in C_{60} molecular layers on $\text{WO}_2/\text{W}(110)$ surfaces (9 pages) 214106
S. I. Bozhko, V. Taupin, M. Lebyodkin, C. Fressengeas, E. A. Levchenko, K. Radikan, O. Lübben,
V. N. Semenov, and I. V. Shvets
- General Einstein relation model in disordered organic semiconductors under quasiequilibrium (6 pages) 214107
Ling Li, Nianduan Lu, Ming Liu, and Heinz Bässler
- Microscopic first-principles model of strain-induced interaction in concentrated size-mismatched alloys (18 pages) 214108
I. A. Zhuravlev, J. M. An, and K. D. Belashchenko
- Potentially multiferroic Aurivillius phase $\text{Bi}_5\text{FeTi}_3\text{O}_{15}$: Cation site preference, electric polarization, and magnetic
coupling from first principles (12 pages) 214109
Axiel Yaël Birenbaum and Claude Ederer
- Space group symmetries of the phases of $(\text{Pb}_{0.94}\text{Sr}_{0.06})(\text{Zr}_x\text{Ti}_{1-x})\text{O}_3$ across the antiferrodistortive phase transition
in the composition range $0.620 \lesssim x \lesssim 0.940$ (11 pages) 214110
Ravindra Singh Solanki, Anatoliy Senyshyn, and Dhananjai Pandey



PHYSICAL REVIEW B	THIRD SERIES, VOLUME 90, NUMBER 21	DECEMBER 2014-1(I)
$Y_{1-x}La_xVO_3$: Effects of doping on orbital ordering (6 pages)		214111
S. Yano, Despina Louca, J. C. Neufeind, J.-Q. Yan, J.-S. Zhou, and J. B. Goodenough		
Dynamics, dynamical systems, lattice effects:		
Optical decoherence studies of $Tm^{3+}:Y_3Ga_5O_{12}$ (7 pages)		214301
C. W. Thiel, N. Sinclair, W. Tittel, and R. L. Cone		
Coexistence of size-dependent and size-independent thermal conductivities in phosphorene (6 pages)		214302
Liyan Zhu, Gang Zhang, and Baowen Li		
Anharmonicity and atomic distribution of SnTe and PbTe thermoelectrics (10 pages)		214303
C. W. Li, J. Ma, H. B. Cao, A. F. May, D. L. Abernathy, G. Ehlers, C. Hoffmann, X. Wang, T. Hong, A. Huq, O. Gourdon, and O. Delaire		
Temperature dependence of electronic eigenenergies in the adiabatic harmonic approximation (15 pages)		214304
S. Poncé, G. Antonius, Y. Gillet, P. Boulanger, J. Laflamme Janssen, A. Marini, M. Côté, and X. Gonze		
Energy-loss- and thickness-dependent contrast in atomic-scale electron energy-loss spectroscopy (8 pages)		214305
Haiyan Tan, Ye Zhu, Christian Dwyer, and Huolin L. Xin		
Analytical Green's function of the multidimensional frequency-dependent phonon Boltzmann equation (7 pages)		214306
Chengyun Hua and Austin J. Minnich		
Magnetism		
Efficient dynamic nuclear polarization of phosphorus in silicon in strong magnetic fields and at low temperatures (8 pages)		214401
J. Järvinen, J. Ahokas, S. Sheludiyakov, O. Vainio, L. Lehtonen, S. Vasiliev, D. Zvezdov, Y. Fujii, S. Mitsudo, T. Mizusaki, M. Gwak, SangGap Lee, Soonchil Lee, and L. Vlasenko		
Manipulating the asymmetry of magnetization reversal in epitaxial CoO/Co films (5 pages)		214402
Hao-Liang Liu, Steven Brems, Yu-Jia Zeng, Kristiaan Temst, André Vantomme, and Chris Van Haesendonck		
Orbital moment anisotropy in ultrathin FePt layers (5 pages)		214403
Márcio M. Soares, Anne D. Lamirand, Aline Y. Ramos, Maurizio De Santis, and Hélio C. N. Tolentino		
Effective spin- $\frac{1}{2}$ exchange interactions in $Tb_2Ti_2O_7$ (9 pages)		214404
S. P. Mukherjee and S. H. Curnoe		
Symmetry-breaking 60°-spin order in the A-site-ordered perovskite $LaMn_3V_4O_{12}$ (6 pages)		214405
Takashi Saito (齊藤高志), Masayuki Toyoda (豊田雅之), Clemens Ritter, Shoubao Zhang (张守宝), Tamio Oguchi (小口多美夫), J. Paul Attfield, and Yuichi Shimakawa (島川祐一)		
Spectroscopic and transport studies of $Co_xFe_{1-x}/MgO(001)$ -based magnetic tunnel junctions (10 pages)		214406
S. Andrieu, L. Calmels, T. Hauet, F. Bonell, P. Le Fèvre, and F. Bertran		
Dissipation due to pure spin-current generated by spin pumping (11 pages)		214407
Tomohiro Taniguchi and Wayne M. Saslow		
Inverse transition in the dipolar frustrated Ising ferromagnet: The role of domain walls (6 pages)		214408
Luciana Araújo Velasque, Daniel A. Stariolo, and Orlando V. Billoni		
Direct measurements of inverse magnetocaloric effects in metamagnetic shape-memory alloy NiCoMnIn (6 pages)		214409
T. Kihara, X. Xu, W. Ito, R. Kainuma, and M. Tokunaga		

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 90, NUMBER 21

DECEMBER 2014-1(I)

Anomalous Hall effect in amorphous $\text{Co}_{40}\text{Fe}_{40}\text{B}_{20}$ (4 pages)	214410
Gang Su, Yufan Li, Dazhi Hou, Xiaofeng Jin, Houfang Liu, and Shouguo Wang	
Polaron-mediated spin correlations in metallic and insulating $\text{La}_{1-x}\text{A}_x\text{MnO}_3$ ($\text{A} = \text{Ca}, \text{Sr}, \text{or Ba}$) (7 pages)	214411
Joel S. Helton, Daniel M. Pajerowski, Yiming Qiu, Yang Zhao, Dmitry A. Shulyatev, Yakov M. Mukovskii, Georgii L. Bychkov, Sergei N. Barilo, and Jeffrey W. Lynn	
Laser-induced magnetization curve (10 pages)	214413
Shintaro Takayoshi, Masahiro Sato, and Takashi Oka	
Edge effects in vortex-based nanocontact oscillators (8 pages)	214414
C. E. Zaspel and G. M. Wysin	
Pt-enhanced anisotropic magnetoresistance in Pt/Fe bilayers (5 pages)	214415
J. X. Li, M. W. Jia, Z. Ding, J. H. Liang, Y. M. Luo, and Y. Z. Wu	
Anomalous spin dynamics in $\text{CdCu}_2(\text{BO}_3)_2$ revealed by ^{11}B NMR and ZF- μSR (7 pages)	214416
W.-J. Lee, S.-H. Do, Sungwon Yoon, Z. H. Jang, B. J. Suh, J. H. Lee, A. P. Reyes, P. L. Kuhns, H. Luetkens, and K.-Y. Choi	
Thermodynamic properties, electron spin resonance, and underlying spin model in $\text{Cu}_3\text{Y}(\text{SeO}_3)_2\text{O}_2\text{Cl}$ (10 pages)	214417
K. V. Zakharov, E. A. Zvereva, P. S. Berdonosov, E. S. Kuznetsova, V. A. Dolgikh, L. Clark, C. Black, P. Lightfoot, W. Kockelmann, Z. V. Pchelkina, S. V. Streltsov, O. S. Volkova, and A. N. Vasiliev	
Transport properties of Dirac ferromagnet (15 pages)	214418
Junji Fujimoto and Hiroshi Kohno	
Spin Hall noise (5 pages)	214419
Akashdeep Kamra, Friedrich P. Witek, Sibylle Meyer, Hans Huebl, Stephan Geprägs, Rudolf Gross, Gerrit E. W. Bauer, and Sebastian T. B. Goennenwein	
Magnetism in cubic manganese-rich Heusler compounds (11 pages)	214420
Lukas Wollmann, Stanislav Chadov, Jürgen Kübler, and Claudia Felser	
Magnetic hyperthermia properties of nanoparticles inside lysosomes using kinetic Monte Carlo simulations: Influence of key parameters and dipolar interactions, and evidence for strong spatial variation of heating power (12 pages)	214421
R. P. Tan, J. Carrey, and M. Respaud	
β -detected NMR of $^8\text{Li}^+$ in Bi, Sb, and the topological insulator $\text{Bi}_{0.9}\text{Sb}_{0.1}$ (13 pages)	214422
W. A. MacFarlane, C. B. L. Tschense, T. Buck, K. H. Chow, D. L. Cortie, A. N. Hariwal, R. F. Kiefl, D. Koumoulis, C. D. P. Levy, I. McKenzie, F. H. McGee, G. D. Morris, M. R. Pearson, Q. Song, D. Wang, Y. S. Hor, and R. J. Cava	
 Magnetic structure and magnetocalorics of GdPO_4 (9 pages)	214423
E. Palacios, J. A. Rodríguez-Velamazán, M. Evangelisti, G. J. McIntyre, G. Lorusso, D. Visser, L. J. de Jongh, and L. A. Boatner	
Magnetic pyroxenes $\text{LiCrGe}_2\text{O}_6$ and $\text{LiCrSi}_2\text{O}_6$: Dimensionality crossover in a nonfrustrated $S = \frac{3}{2}$ Heisenberg model (11 pages)	214424
O. Janson, G. Nénert, M. Isobe, Y. Skourski, Y. Ueda, H. Rosner, and A. A. Tsirlin	
Symmetry-protected topological phases and transition in a frustrated spin- $\frac{1}{2}$ XXZ chain (6 pages)	214425
Hiroshi Ueda and Shigeki Onoda	

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 90, NUMBER 21

DECEMBER 2014-1(I)

Frustration and multicriticality in the antiferromagnetic spin-1 chain (23 pages)	214426
J. H. Pixley, Aditya Shashi, and Andriy H. Nevidomskyy	
Symmetry and magnetoelectric effects in garnet crystals and films (9 pages)	214427
A. I. Popov, D. I. Plokhov, and A. K. Zvezdin	
Experimental and numerical understanding of localized spin wave mode behavior in broadly tunable spatially complex magnetic configurations (10 pages)	214428
Chunhui Du, Rohan Adur, Hailong Wang, Sergei A. Manuilov, Fengyuan Yang, Denis V. Pelekhov, and P. Chris Hammel	
☞ Transport measurements of the spin-wave parameters of thin Mn films (5 pages)	214429
S. Buvaev, S. Ghosh, K. Muttalib, P. Wölfle, and A. Hebard	
☞ Bosonic many-body theory of quantum spin ice (14 pages)	214430
Zhihao Hao, Alexandre G. R. Day, and Michel J. P. Gingras	
Landau-Lifshitz-Bloch equation for exchange-coupled grains (10 pages)	214431
Christoph Vogler, Claas Abert, Florian Bruckner, and Dieter Suess	
Kerr rotation in Cu, Ag, and Au driven by spin accumulation and spin-orbit coupling (7 pages)	214432
Gyung-Min Choi and David G. Cahill	
Nonmonotonic residual entropy in diluted spin ice: A comparison between Monte Carlo simulations of diluted dipolar spin ice models and experimental results (11 pages)	214433
T. Lin, X. Ke, M. Thesberg, P. Schiffer, R. G. Melko, and M. J. P. Gingras	
Yttrium iron garnet thickness and frequency dependence of the spin-charge current conversion in YIG/Pt systems (5 pages)	214434
V. Castel, N. Vlietstra, B. J. van Wees, and J. Ben Youssef	
Defect-induced magnetism in graphite through neutron irradiation (9 pages)	214435
Yutian Wang, Pascal Pochet, Catherine A. Jenkins, Elke Arenholz, Gregor Bukalis, Sibylle Gemming, Manfred Helm, and Shengqiang Zhou	
Origin of the magnetostructural coupling in FeMnP _{0.75} Si _{0.25} (10 pages)	214436
E. K. Delczeg-Czirjak, M. Pereiro, L. Bergqvist, Y. O. Kvashnin, I. Di Marco, Guijiang Li, L. Vitos, and O. Eriksson	
Rotational motion of a magnetic vortex in a circular disk induced by injection of an electric current through an off-centered point contact (5 pages)	214437
Hiroshi Tsukahara and Hiroshi Imamura	
High-resolution structure studies and magnetoelectric coupling of relaxor multiferroic Pb(Fe _{0.5} Nb _{0.5})O ₃ (8 pages)	214438
Hasung Sim, Darren C. Peets, Sanghyun Lee, Seongsu Lee, T. Kamiyama, K. Ikeda, T. Otomo, S.-W. Cheong, and Je-Geun Park	
Superfluidity and superconductivity	
Shear viscosity and imperfect fluidity in bosonic and fermionic superfluids (7 pages)	214501
Rufus Boyack, Hao Guo, and K. Levin	
Topological phase transition driven by a spatially periodic potential (6 pages)	214502
Bo Fu, Huaixiu Zheng, Qunxiang Li, Qinwei Shi, and Jinlong Yang	

(Continued)

Quasi-two-dimensional Fermi gases at finite temperatures (<i>7 pages</i>)	214503
Andrea M. Fischer and Meera M. Parish	
Superconducting pairing mediated by spin fluctuations from first principles (<i>11 pages</i>)	214504
F. Essenberg, A. Sanna, A. Linscheid, F. Tandetzky, G. Profeta, P. Cudazzo, and E. K. U. Gross	
Model of fractionalization of Faraday lines in compact electrodynamics (<i>6 pages</i>)	214505
Scott D. Geraedts and Olexei I. Motrunich	
Internal static electric and magnetic field at the copper site in a single crystal of the electron-doped high- T_c superconductor $\text{Pr}_{1.85}\text{Ce}_{0.15}\text{CuO}_{4-y}$ (<i>8 pages</i>)	214506
Guoqing Wu, F. Zamborsky, A. P. Reyes, P. L. Kuhns, R. L. Greene, and W. G. Clark	
Tunnel spectroscopy of Majorana bound states in topological superconductor/quantum dot Josephson junctions (<i>10 pages</i>)	214507
Guang-Yao Huang, Martin Leijnse, Karsten Flensberg, and H. Q. Xu	
Emergence of magnetism and controlling factors of superconductivity in Li/Na-ammonia cointercalated $\text{FeSe}_{1-z}\text{Te}_z$ (<i>7 pages</i>)	214508
Hechang Lei (雷和畅), Jiangang Guo (郭建刚), Fumitaka Hayashi, and Hideo Hosono	
Roles of intrinsic anisotropy and π -band pairbreaking effects on critical currents in tilted- c -axis MgB_2 films probed by magneto-optical and transport measurements (<i>12 pages</i>)	214509
A. A. Polyanskii, F. Kametani, D. Abrahimov, A. Gurevich, A. Yamamoto, I. Pallecchi, M. Putti, C. Zhuang, T. Tan, and X. X. Xi	
Superconducting proximity effect in topological metals (<i>5 pages</i>)	214510
Kyungmin Lee, Abolhassan Vaezi, Mark H. Fischer, and Eun-Ah Kim	
Two distinct superconducting fluctuation diamagnetisms in $\text{Bi}_2\text{Sr}_{2-x}\text{La}_x\text{CuO}_{6+\delta}$ (<i>4 pages</i>)	214511
H. Xiao, T. Hu, W. Zhang, Y. M. Dai, H. Q. Luo, H. H. Wen, C. C. Almasan, and X. G. Qiu	
Quantum phase transition with a simple variational ansatz (<i>5 pages</i>)	214512
Y. Lutsyshyn, G. E. Astrakharchik, C. Cazorla, and J. Boronat	
Meissner and mesoscopic superconducting states in 1–4 unit-cell FeSe films (<i>9 pages</i>)	214513
L. Z. Deng, B. Lv, Z. Wu, Y. Y. Xue, W. H. Zhang, F. S. Li, L. L. Wang, X. C. Ma, Q. K. Xue, and C. W. Chu	
Distinguishing spin-orbit coupling and nematic order in the electronic spectrum of iron-based superconductors (<i>6 pages</i>)	214514
Rafael M. Fernandes and Oskar Vafek	
Universal scaling of the critical temperature for thin films near the superconducting-to-insulating transition (<i>8 pages</i>)	214515
Yachin Ivry, Chung-Soo Kim, Andrew E. Dane, Domenico De Fazio, Adam N. McCaughan, Kristen A. Sunter, Qingyuan Zhao, and Karl K. Berggren	
Temperature dependence of iron local magnetic moment in phase-separated superconducting chalcogenide (<i>6 pages</i>)	214516
L. Simonelli, T. Mizokawa, M. Moretti Sala, H. Takeya, Y. Mizuguchi, Y. Takano, G. Garbarino, G. Monaco, and N. L. Saini	
Electronic structure of $\text{LaO}_{1-x}\text{F}_x\text{BiSe}_2$ ($x = 0.18$) revealed by photoelectron spectromicroscopy (<i>5 pages</i>)	214517
N. L. Saini, D. Ootsuki, E. Paris, B. Joseph, A. Barinov, M. Tanaka, Y. Takano, and T. Mizokawa	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 90, NUMBER 21

DECEMBER 2014-1(I)

Merging of vortices and antivortices in polariton superfluids (5 pages)	214518
E. Cancellieri, T. Boulier, R. Hivet, D. Ballarini, D. Sanvito, M. H. Szymanska, C. Ciuti, E. Giacobino, and A. Bramati	
Electronic structure reconstruction of $\text{Ca}_{1-x}\text{Pr}_x\text{Fe}_2\text{As}_2$ in the collapsed tetragonal phase (8 pages)	214519
D. F. Xu, D. W. Shen, J. Jiang, Z. R. Ye, X. Liu, X. H. Niu, H. C. Xu, Y. J. Yan, T. Zhang, B. P. Xie, and D. L. Feng	
Superconductivity and phase diagram of $(\text{Li}_{0.8}\text{Fe}_{0.2})\text{OHFeSe}_{1-x}\text{S}_x$ (6 pages)	214520
X. F. Lu, N. Z. Wang, X. G. Luo, G. H. Zhang, X. L. Gong, F. Q. Huang, and X. H. Chen	
Nernst effect beyond the coherence critical field of a nanoscale granular superconductor (6 pages)	214521
S. Lerer, N. Bachar, G. Deutscher, and Y. Dagan	
Quantum magnetoresistance in the Ca-intercalated graphite superconductor CaC_6 (6 pages)	214522
Gang Mu, Qiucheng Ji, Wei Li, Xuguang Xu, Tao Hu, Da Jiang, Zhi Wang, Bo Gao, Xiaoming Xie, and Mianheng Jiang	
Anomalous behavior of T_c and pseudogap in the superconductor $\text{Ca}_x\text{La}_{1-x}\text{Ba}_{1.75-x}\text{La}_{0.25+x}\text{Cu}_3\text{O}_y$ with respect to doping and ion size (5 pages)	214523
J. L. Tallon	
Vortex matter in $U(1)\times U(1)\times \mathbb{Z}_2$ phase-separated superconducting condensates (5 pages)	214524
Julien Garaud and Egor Babaev	
Manipulating textures of rotating superfluid ^3He -A phase in a single narrow cylinder (6 pages)	214525
T. Kunimatsu, H. Nema, R. Ishiguro, M. Kubota, T. Takagi, Y. Sasaki, and O. Ishikawa	