

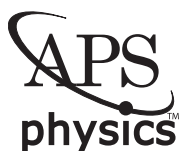
ARTICLES

Structure, structural phase transitions, mechanical properties, defects

- Contrasting behavior of covalent and molecular carbon allotropes exposed to extreme ultraviolet and soft x-ray free-electron laser radiation (*11 pages*) 214101
M. Toufarová, V. Hájková, J. Chalupský, T. Burian, J. Vacík, V. Vorlíček, L. Vyšín, J. Gaudin, N. Medvedev, B. Ziaja, M. Nagasono, M. Yabashi, R. Sobierajski, J. Krzywinski, H. Sinn, M. Störmer, K. Koláček, K. Tiedtke, S. Toleikis, and L. Juha
- Structural transformations in $(1-x)\text{Na}_{0.5}\text{Bi}_{0.5}\text{TiO}_3$ - $x\text{BaTiO}_3$ single crystals studied by Raman spectroscopy (*12 pages*) 214102
G. de la Flor, T. Malcherek, S. Gorfman, and B. Mihailova
- Atomic structure of a decagonal Al-Pd-Mn phase (*7 pages*) 214103
Marek Mihalkovič, Johannes Roth, and Hans-Rainer Trebin
- Temperature hysteresis of the order-disorder transition in carbon-supersaturated α -Fe (*8 pages*) 214104
P. Maugis, F. Danoix, H. Zapolsky, S. Cazottes, and M. Gouné
- Low-temperature structure and the ferroelectric phase transitions in the CdTiO_3 perovskite (*7 pages*) 214105
Brendan J. Kennedy, Qingdi Zhou, Shipeng Zhao, Fanhao Jia, Wei Ren, and Kevin S. Knight
- Investigation of surface/bulk stresses of nanoparticles with diffusive interfaces using the phase field crystal model (*17 pages*) 214106
Ming-Wei Liu and Kuo-An Wu
- Enhancement of electrocaloric response through quantum effects (*6 pages*) 214107
P. Jouzdani, S. Cuozzo, S. Lisenkov, and I. Ponomareva
- Critical role of the coupling between the octahedral rotation and A-site ionic displacements in PbZrO_3 -based antiferroelectric materials investigated by *in situ* neutron diffraction (*9 pages*) 214108
Teng Lu, Andrew J. Studer, Dehong Yu, Ray L. Withers, Yujun Feng, Hua Chen, S. S. Islam, Zhuo Xu, and Yun Liu

Inhomogeneous, disordered, and partially ordered systems

- Anderson localization transitions with and without random potentials (*9 pages*) 214201
Trithip Devakul and David A. Huse
- Glass-like thermal conductivity in nanostructures of a complex anisotropic crystal (*7 pages*) 214202
Annie Weathers, Jesús Carrete, John P. DeGrave, Jeremy M. Higgins, Arden L. Moore, Jaehyun Kim, Natalio Mingo, Song Jin, and Li Shi



CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 96, NUMBER 21

DECEMBER 2017-1(I)

Implementation of rigorous renormalization group method for ground space and low-energy states of local Hamiltonians (<i>12 pages</i>)	214203
Brenden Roberts, Thomas Vidick, and Olexei I. Motrunich	
☞ Multifractality of wave functions on a Cayley tree: From root to leaves (<i>15 pages</i>)	214204
M. Sonner, K. S. Tikhonov, and A. D. Mirlin	
☞ Multifractal metal in a disordered Josephson junctions array (<i>10 pages</i>)	214205
M. Pino, V. E. Kravtsov, B. L. Altshuler, and L. B. Ioffe	
Resilience of hidden order to symmetry-preserving disorder (<i>16 pages</i>)	214206
Marcello Calvanese Strinati, Davide Rossini, Rosario Fazio, and Angelo Russomanno	
Impurity position and lattice distortion in a Mn-doped Bi ₂ Te ₃ topological insulator investigated by x-ray fluorescence holography and x-ray absorption fine structure (<i>12 pages</i>)	214207
Shinya Hosokawa, Jens Rüdiger Stellan, Tomohiro Matsushita, Naohisa Happe, Koji Kimura, Koichi Hayashi, Yoshihiro Ebisu, Toru Ozaki, Hiroyuki Ikemoto, Hiroyuki Setoyama, Toshihiro Okajima, Yoshitaka Yoda, Hirofumi Ishii, Yen-Fa Liao, Mamoru Kitaura, and Minoru Sasaki	
Configuration memory in patchwork dynamics for low-dimensional spin glasses (<i>7 pages</i>)	214208
Jie Yang and A. Alan Middleton	
Transversal magnetoresistance and Shubnikov–de Haas oscillations in Weyl semimetals (<i>20 pages</i>)	214209
J. Klier, I. V. Gornyi, and A. D. Mirlin	
Efficient generation of series expansions for $\pm J$ Ising spin glasses in a classical or a quantum field (<i>12 pages</i>)	214210
R. R. P. Singh and A. P. Young	
Dynamics, dynamical systems, lattice effects:	
Explicit construction of quasiconserved local operator of translationally invariant nonintegrable quantum spin chain in prethermalization (<i>20 pages</i>)	214301
Cheng-Ju Lin and Olexei I. Motrunich	
Vibrational effects in x-ray absorption and resonant inelastic x-ray scattering using a semiclassical scheme (<i>12 pages</i>)	214302
Mathias P. Ljungberg	
Anomalous thermal expansion, negative linear compressibility, and high-pressure phase transition in ZnAu ₂ (CN) ₄ : Neutron inelastic scattering and lattice dynamics studies (<i>8 pages</i>)	214303
Mayanak K. Gupta, Baltej Singh, Ranjan Mittal, Mohamed Zbiri, Andrew B. Cairns, Andrew L. Goodwin, Helmut Schober, and Samrath L. Chaplot	
Magnetism	
Transient spin dynamics in a single-molecule magnet (<i>7 pages</i>)	214401
H. Hammar and J. Fransson	
Antiferromagnetic order in the Hubbard model on the Penrose lattice (<i>17 pages</i>)	214402
Akihisa Koga and Hirokazu Tsunetsugu	
Pinning of magnetic skyrmions in a monolayer Co film on Pt(111): Theoretical characterization and exemplified utilization (<i>11 pages</i>)	214403
Dusan Stosic, Teresa B. Luderer, and Milorad V. Milošević	

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 96, NUMBER 21

DECEMBER 2017-1(I)

Negative magnetothermal resistance in a disordered two-dimensional antiferromagnet (7 pages)	214404
Naoya Arakawa and Jun-ichiro Ohe	
Ni and CoO spin cantings induced by Fe layer in Ni/CoO/Fe/vicinal MgO(001) (10 pages)	214405
Q. Li, M. Yang, A. T. N'Diaye, Q. Y. Dong, A. Scholl, A. T. Young, N. Gao, E. Arenholz, C. Hwang, J. Li, and Z. Q. Qiu	
Direct observation of spin-quadrupolar excitations in $\text{Sr}_2\text{CoGe}_2\text{O}_7$ by high-field electron spin resonance (16 pages)	214406
Mitsuru Akaki, Daichi Yoshizawa, Akira Okutani, Takanori Kida, Judit Romhányi, Karlo Penc, and Masayuki Hagiwara	
Theory of the magnetism in $\text{La}_2\text{NiMnO}_6$ (7 pages)	214407
Prabuddha Sanyal	
Spin-orbit interaction driven dimerization in one-dimensional frustrated magnets (11 pages)	214408
Shang-Shun Zhang, Nitin Kaushal, Elbio Dagotto, and Cristian D. Batista	
Magnon-induced superconductivity in field-cooled spin-1/2 antiferromagnets (9 pages)	214409
Naoum Karchev	
Spin-torque diode frequency tuning via soft exchange pinning of both magnetic layers (5 pages)	214410
A. A. Khudorozhkov, P. N. Skirdkov, K. A. Zvezdin, P. M. Vetoshko, and A. F. Popkov	
Antiferromagnetic structure of exchange-coupled $\text{La}_{0.7}\text{Sr}_{0.3}\text{FeO}_3$ thin films studied using angle-dependent x-ray absorption spectroscopy (7 pages)	214411
Yue Jia, Rajesh V. Chopdekar, Padraic Shafer, Elke Arenholz, Zhiqi Liu, Michael D. Biegalski, and Yayoi Takamura	
Antiferromagnetic resonance excited by oscillating electric currents (6 pages)	214412
Volker Sluka	
Skyrmion robustness in noncentrosymmetric magnets with axial symmetry: The role of anisotropy and tilted magnetic fields (9 pages)	214413
A. O. Leonov and I. Kézsmárki	
Random-field-induced disordering mechanism in a disordered ferromagnet: Between the Imry-Ma and the standard disordering mechanism (11 pages)	214414
Juan Carlos Andresen, Helmut G. Katzgraber, and Moshe Schechter	
Magnetic excitations in the ground state of $\text{Yb}_2\text{Ti}_2\text{O}_7$ (11 pages)	214415
Viviane Peçanha-Antonio, Erxi Feng, Yixi Su, Vladimir Pomjakushin, Franz Demmel, Lieh-Jeng Chang, Robert J. Aldus, Yinguo Xiao, Martin R. Lees, and Thomas Brückel	
Nanoclustering phase competition induces the resistivity hump in colossal magnetoresistive manganites (6 pages)	214416
Kalpataru Pradhan and Seiji Yunoki	
Determination of the element-specific complex permittivity using a soft x-ray phase modulator (6 pages)	214417
Y. Kubota, Y. Hirata, J. Miyawaki, S. Yamamoto, H. Akai, R. Hobara, Sh. Yamamoto, K. Yamamoto, T. Someya, K. Takubo, Y. Yokoyama, M. Araki, M. Taguchi, Y. Harada, H. Wadati, M. Tsunoda, R. Kinjo, A. Kagamihata, T. Seike, M. Takeuchi, T. Tanaka, S. Shin, and I. Matsuda	
Magnetic anisotropy in antiferromagnetic hexagonal MnTe (8 pages)	214418
D. Kriegner, H. Reichlova, J. Grenzer, W. Schmidt, E. Ressouche, J. Godinho, T. Wagner, S. Y. Martin, A. B. Shick, V. V. Volobuev, G. Springholz, V. Holý, J. Wunderlich, T. Jungwirth, and K. Výborný	

(Continued)

Magnetic-field–temperature phase diagram of alternating ferrimagnetic chains: Spin-wave theory from a fully polarized vacuum (9 pages)	214419
W. M. da Silva and R. R. Montenegro-Filho	
Dzyaloshinskii-Moriya interaction in α -Fe ₂ O ₃ measured by magnetic circular dichroism in resonant inelastic soft x-ray scattering (9 pages)	214420
Jun Miyawaki, Shigemasa Suga, Hidenori Fujiwara, Masato Urasaki, Hidekazu Ikeno, Hideharu Niwa, Hisao Kiuchi, and Yoshihisa Harada	
Intrinsic damping phenomena from quantum to classical magnets: An <i>ab initio</i> study of Gilbert damping in a Pt/Co bilayer (7 pages)	214421
Farzad Mahfouzi, Jinwoong Kim, and Nicholas Kioussis	
Electric-field-induced modulation of the anomalous Hall effect in a heterostructured itinerant ferromagnet SrRuO ₃ (7 pages)	214422
Hayato Mizuno, Kihito T. Yamada, Daisuke Kan, Takahiro Moriyama, Yuichi Shimakawa, and Teruo Ono	
Enhanced magneto-optical Kerr effect at Fe/insulator interfaces (6 pages)	214423
Bo Gu, Saburo Takahashi, and Sadamichi Maekawa	
Magnetism of the spin-1 tetramer compound A ₂ Ni ₂ Mo ₃ O ₁₂ (A = Rb or K) (8 pages)	214424
Masashi Hase, Akira Matsuo, Koichi Kindo, and Masashige Matsumoto	
Exploring the origins of the Dzyaloshinskii-Moriya interaction in MnSi (8 pages)	214425
C. Dhital, L. DeBeer-Schmitt, Q. Zhang, W. Xie, D. P. Young, and J. F. DiTusa	
Absence of static magnetic order in nonsuperconducting FeSe thin films on SrTiO ₃ (001) revealed by the magnetism of Se vacancies (5 pages)	214426
Weijiong Chen, Zijun Tian, Ping Li, Weidong Luo, and C. L. Gao	
Hysteresis in a bimetallic holmium complex: A synergy between electronic and nuclear magnetic interactions (8 pages)	214427
Marta Viciano-Chumillas, Florian Koprowiak, Ilpo Mutikainen, Wolfgang Wernsdorfer, Talal Mallah, and Hélène Bolvin	
Investigation of the spin-1 honeycomb antiferromagnet BaNi ₂ V ₂ O ₈ with easy-plane anisotropy (14 pages)	214428
E. S. Klyushina, B. Lake, A. T. M. N. Islam, J. T. Park, A. Schneidewind, T. Guidi, E. A. Goremychkin, B. Klemke, and M. Månsson	
Domain walls in single-chain magnets (15 pages)	214429
Vivien Pianet, Matias Urdampilleta, Thierry Colin, Rodolphe Clérac, and Claude Coulon	
Intrinsic spin-orbit torque in a single-domain nanomagnet (9 pages)	214430
A. Kalitsov, S. A. Nikolaev, J. Velev, M. Chshiev, and O. Mryasov	
Tuning the antiferromagnetic helical pitch length and nanoscale domain size in Fe ₃ PO ₄ O ₃ by magnetic dilution (7 pages)	214431
M. J. Tarne, M. M. Bordelon, S. Calder, J. R. Neilson, and K. A. Ross	
Antiferromagnetic Mott insulating state in the single-component molecular material Pd(tmdt) ₂ (6 pages)	214432
Rina Takagi, Dita Puspita Sari, Saidah Sakinah Mohd-Tajudin, Retno Ashi, Isao Watanabe, Shoji Ishibashi, Kazuya Miyagawa, Satomi Ogura, Biao Zhou, Akiko Kobayashi, and Kazushi Kanoda	

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 96, NUMBER 21

DECEMBER 2017-1(I)

Observation of ferromagnetic ordering in a stable α -Co(OH) ₂ phase grown on a MoS ₂ surface (10 pages)	214433
Anup Debnath, Shatabda Bhattacharya, and Shyamal K. Saha	
Anisotropic magnetoresistance across Verwey transition in charge ordered Fe ₃ O ₄ epitaxial films (8 pages)	214434
Xiang Liu, Wenbo Mi, Qiang Zhang, and Xixiang Zhang	
Enhancement of thermovoltage and tunnel magneto-Seebeck effect in CoFeB-based magnetic tunnel junctions by variation of the MgAl ₂ O ₄ and MgO barrier thickness (7 pages)	214435
Torsten Huebner, Ulrike Martens, Jakob Walowski, Alexander Boehnke, Jan Krief, Christian Heiliger, Andy Thomas, Günter Reiss, Timo Kuschel, and Markus Münzenberg	
Magnetic structure of Ba(TiO)Cu ₄ (PO ₄) ₄ probed using spherical neutron polarimetry (8 pages)	214436
P. Babkevich, L. Testa, K. Kimura, T. Kimura, G. S. Tucker, B. Roessli, and H. M. Rønnow	
Spin-orbit driven phenomena in the isoelectronic $L1_0$ -Fe(Pd,Pt) alloys from first principles (7 pages)	214437
J. Kudrnovský, V. Drchal, and I. Turek	
Emergent Ising degrees of freedom above a double-stripe magnetic ground state (18 pages)	214438
Guanghua Zhang and Rebecca Flint	
Magnetostructural coupling and magnetodielectric effects in the A-site cation-ordered spinel LiFeCr ₄ O ₈ (9 pages)	214439
Rana Saha, R. Dhanya, Christophe Bellin, Keevin Béneut, Arpan Bhattacharyya, A. Shukla, Chandrabhas Narayana, E. Suard, J. Rodríguez-Carvajal, and A. Sundaresan	
Absorption of diffusive spin current in surface and bulk states of a topological insulator (5 pages)	214440
Akiyo Nomura, Nariaki Nasaka, Takaharu Tashiro, Takao Sasagawa, and Kazuya Ando	
Ising order in a magnetized Heisenberg chain subject to a uniform Dzyaloshinskii-Moriya interaction (12 pages)	214441
Yang-Hao Chan, Wen Jin, Hong-Chen Jiang, and Oleg A. Starykh	
Neutron diffraction study on single-crystalline UAu ₂ Si ₂ (6 pages)	214442
Chihiro Tabata, Milan Klicpera, Bachir Ouladdiaf, Hiraku Saito, Michal Vališka, Klára Uhlířová, Naoyuki Miura, Vladimír Sechovský, and Hiroshi Amitsuka	
Néel temperature and reentrant H - T phase diagram of quasi-two-dimensional frustrated magnets (15 pages)	214443
Burkhard Schmidt and Peter Thalmeier	
Superfluidity and superconductivity	
Current-carrying states in Fulde-Ferrell-Larkin-Ovchinnikov superconductors (9 pages)	214501
K. V. Samokhin and B. P. Truong	
Chiral spin condensation in a one-dimensional optical lattice (6 pages)	214502
Ying-Hai Wu, Xiaopeng Li, and S. Das Sarma	
Raman-active E_{2g} phonon in MgB ₂ : Electron-phonon interaction and anharmonicity (7 pages)	214503
Yu. S. Ponosov and S. V. Streltsov	
 No evidence for orbital loop currents in charge-ordered YBa ₂ Cu ₃ O _{6+x} from polarized neutron diffraction (10 pages)	214504
T. P. Croft, E. Blackburn, J. Kulda, Ruixing Liang, D. A. Bonn, W. N. Hardy, and S. M. Hayden	
High-pressure effects on nonfluorinated BiS ₂ -based superconductors La _{1-x} M _x OBiS ₂ ($M = \text{Ti}$ and Th) (5 pages)	214505
Y. Fang, D. Yazici, I. Jeon, and M. B. Maple	

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 96, NUMBER 21

DECEMBER 2017-1(I)

Superconducting gap symmetry of the BiS ₂ -based superconductor LaO _{0.5} F _{0.5} BiSSe elucidated through specific heat measurements (5 pages)	214506
Naoki Kase, Yusuke Terui, Tomohito Nakano, and Naoya Takeda	
Self-consistent calculation of the flux-flow conductivity in diffusive superconductors (10 pages)	214507
A. Vargunin and M. A. Silaev	
Dissipation in a superconducting artificial atom due to a single nonequilibrium quasiparticle (12 pages)	214508
D. V. Nguyen, G. Catelani, and D. M. Basko	
Noise switching at a dynamical critical point in a cavity-conductor hybrid (8 pages)	214509
Andrew D. Armour, Björn Kubala, and Joachim Ankerhold	
Guiding thermomagnetic avalanches with soft magnetic stripes (11 pages)	214510
V. K. Vlasko-Vlasov, F. Colauto, T. Benseman, D. Rosenmann, and W.-K. Kwok	
Three-qubit direct dispersive parity measurement with tunable coupling qubits (17 pages)	214511
A. Ciani and D. P. DiVincenzo	
Kosterlitz-Thouless signatures in the low-temperature phase of layered three-dimensional systems (9 pages)	214512
Adam Rançon and Nicolas Dupuis	
Dual structure in the charge excitation spectrum of electron-doped cuprates (12 pages)	214513
Matías Bejas, Hiroyuki Yamase, and Andrés Greco	
☞ Superconductivity in three-dimensional spin-orbit coupled semimetals (16 pages)	214514
Lucile Savary, Jonathan Ruhman, Jörn W. F. Venderbos, Liang Fu, and Patrick A. Lee	
Anomalous Josephson effect controlled by an Abrikosov vortex (12 pages)	214515
S. Mironov, E. Goldobin, D. Koelle, R. Kleiner, Ph. Tamarat, B. Lounis, and A. Buzdin	
Tunneling conductance in semiconductor-superconductor hybrid structures (15 pages)	214516
John Stenger and Tudor D. Stanescu	
☞ Phase-driven collapse of the Cooper condensate in a nanosized superconductor (8 pages)	214517
Alberto Ronzani, Sophie D'Ambrosio, Pauli Virtanen, Francesco Giazotto, and Carles Altimiras	

ERRATA

Erratum: Symmetry-broken dissipative exchange flows in thin-film ferromagnets with in-plane anisotropy [Phys. Rev. B 96 , 134434 (2017)] (1 page)	219901(E)
Ezio Iacocca, T. J. Silva, and Mark A. Hoefer	
Publisher's Note: Multiscale dynamics of helicity-dependent all-optical magnetization reversal in ferromagnetic Co/Pt multilayers [Phys. Rev. B 96 , 224421 (2017)] (1 page)	219902(E)
R. Medapalli, D. Afanasiev, D. K. Kim, Y. Quessab, S. Manna, S. A. Montoya, A. Kirilyuk, Th. Rasing, A. V. Kimel, and E. E. Fullerton	