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
P.O. Box 41
Annapolis Junction, MD 20701

THIRD SERIES, VOLUME 92, NUMBER 11 *CONTENTS* **SEPTEMBER 2015-15(I)**

ARTICLES

Electronic structure and strongly correlated systems

Many-body effects and ultraviolet renormalization in three-dimensional Dirac materials *(32 pages)* 115101
Robert E. Throckmorton, Johannes Hofmann, Edwin Barnes, and S. Das Sarma

Direct detection of density of gap states in C_{60} single crystals by photoemission spectroscopy *(7 pages)* 115102
Fabio Bussolotti, Janpeng Yang, Masahiro Hiramoto, Toshihiko Kaji, Satoshi Kera, and Nobuo Ueno

Efficient evaluation of high-order moments and cumulants in tensor network states *(20 pages)* 115103
Colin G. West, Artur Garcia-Saez, and Tzu-Chieh Wei

Orbital-free extension to Kohn-Sham density functional theory equation of state calculations: Application to silicon dioxide *(5 pages)* 115104
Travis Sjostrom and Scott Crockett

Symmetric minimally entangled typical thermal states *(16 pages)* 115105
Benedikt Bruognolo, Jan von Delft, and Andreas Weichselbaum

Competition between excitonic charge and spin density waves: Influence of electron-phonon and Hund's rule couplings *(7 pages)* 115106
Tatsuya Kaneko, Bernd Zenker, Holger Fehske, and Yukinori Ohta

Lieb-Liniger model with exponentially decaying interactions: A continuous matrix product state study *(9 pages)* 115107
Julián Rincón, Martin Ganahl, and Guifre Vidal

Approaching many-body localization from disordered Luttinger liquids via the functional renormalization group *(7 pages)* 115108
C. Karrasch and J. E. Moore

Mott physics and spin fluctuations: A unified framework *(6 pages)* 115109
Thomas Ayral and Olivier Parcollet

Magnetotransport measurements of the surface states of samarium hexaboride using Corbino structures *(11 pages)* 115110
S. Wolgast, Y. S. Eo, T. Öztürk, G. Li, Z. Xiang, C. Tinsman, T. Asaba, B. Lawson, F. Yu, J. W. Allen, K. Sun, L. Li, Ç. Kurdak, D.-J. Kim, and Z. Fisk

Dimerized ground states in spin-S frustrated systems *(10 pages)* 115111
C. A. Lamas and J. M. Matera

Copyright 2015 by American Physical Society

(Continued)

1098-0121(20150915)92:11;1-S

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 92, NUMBER 11** **SEPTEMBER 2015-15(I)**

Magnetism and metal-insulator transition in oxygen-deficient $SrTiO_3$ *(5 pages)* 115112
Alejandro Lopez-Bezanilla, P. Ganesh, and Peter B. Littlewood

Polarization of near-field light induced with a plasmonic nanoantenna *(5 pages)* 115113
Sergey S. Kharintsev, Alexander I. Fishman, Sergei G. Kazarian, and Myakzyum Kh. Salakhov

Magnetic ground-state properties of noncentrosymmetric $CePt_3B_{1-x}Si_x$ *(8 pages)* 115114
D. Rauch, P. Horenburg, S. Hartwig, F. J. Litterst, S. Süllow, H. Luetkens, C. Baines, S. Yamazaki, H. Hidaka, H. Amitsuka, and E. Bauer

Visualizing Majorana bound states in one and two dimensions using the generalized Majorana polarization *(7 pages)* 115115
N. Sedlmayr and C. Bena

Role of commensurate and incommensurate low-energy excitations in the paramagnetic to hidden-order transition of URu_2Si_2 *(6 pages)* 115116
P. G. Niklowitz, S. R. Dunsiger, C. Pfleiderer, P. Link, A. Schneidewind, E. Faulhaber, M. Vojta, Y.-K. Huang, and J. A. Mydosh

Quantum treatment of the Bose-Einstein condensation in nonequilibrium systems *(8 pages)* 115117
H. Flayac, I. G. Savenko, M. Möttönen, and T. Ala-Nissila

Calibrating transition-metal energy levels and oxygen bands in first-principles calculations: Accurate prediction of redox potentials and charge transfer in lithium transition-metal oxides *(11 pages)* 115118
Dong-Hwa Seo (서동화), Alexander Urban, and Gerbrand Ceder

Topological nature of the $FeSe_{0.5}Te_{0.5}$ superconductor *(7 pages)* 115119
Zhijun Wang, P. Zhang, Gang Xu, L. K. Zeng, H. Miao, Xiaoyan Xu, T. Qian, Hongming Weng, P. Richard, A. V. Fedorov, H. Ding, Xi Dai, and Zhong Fang

Density-dependent synthetic magnetism for ultracold atoms in optical lattices *(10 pages)* 115120
Sebastian Greschner, Daniel Huerga, Gaoyong Sun, Dario Poletti, and Luis Santos

Universal postquench coarsening and aging at a quantum critical point *(23 pages)* 115121
Pia Gagel, Peter P. Orth, and Jörg Schmalian

Thermal fractionalization of quantum spins in a Kitaev model: Temperature-linear specific heat and coherent transport of Majorana fermions *(6 pages)* 115122
Joji Nasu, Masafumi Udagawa, and Yukitoshi Motome

Double-expansion impurity solver for multiorbital models with dynamically screened U and J *(15 pages)* 115123
Karim Steiner, Yusuke Nomura, and Philipp Werner

First-principles calculation of charged capacitors under open-circuit conditions using the orbital-separation approach *(6 pages)* 115124
Shusuke Kasamatsu, Satoshi Watanabe, and Seungwu Han

Multiplicity of solutions to GW-type approximations *(7 pages)* 115125
F. Tandetzky, J. K. Dewhurst, S. Sharma, and E. K. U. Gross

Spin-wave approach for entanglement entropies of the J_1-J_2 Heisenberg antiferromagnet on the square lattice *(14 pages)* 115126
Nicolas Laflorencie, David J. Luitz, and Fabien Alet

(Continued)

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 92, NUMBER 11** **SEPTEMBER 2015-15(I)**

☞ Dynamics of fractionalization in quantum spin liquids *(20 pages)* 115127
J. Knolle, D. L. Kovrizhin, J. T. Chalker, and R. Moessner

Projective construction of the $\mathbb{Z}_k$ Read-Rezayi fractional quantum Hall states and their excitations on the torus geometry *(18 pages)* 115128
Cécile Repellin, Titus Neupert, B. Andrei Bernevig, and Nicolas Regnault

☞ Area law and its violation: A microscopic inspection into the structure of entanglement and fluctuations *(23 pages)* 115129
Irénée Frérot and Tommaso Roscilde

Chebyshev matrix product state approach for time evolution *(13 pages)* 115130
Jad C. Halimeh, Fabian Kolley, and Ian P. McCulloch

High-order terms in the renormalized perturbation theory for the Anderson impurity model *(10 pages)* 115131
Vassilis Pandis and Alex C. Hewson

Surface calculations with asymptotically long-ranged potentials in the full-potential linearized augmented plane-wave method *(7 pages)* 115132
Lin-Hui Ye

Interplay of magnetic order, pairing, and phase separation in a one-dimensional spin-fermion model *(7 pages)* . . . 115133
Wenjian Hu, Richard T. Scalettar, and Rajiv R. P. Singh

Entanglement area law from specific heat capacity *(7 pages)* 115134
Fernando G. S. L. Brandão and Marcus Cramer

Finite density matrix renormalization group algorithm for anyonic systems *(23 pages)* 115135
Robert N. C. Pfeifer and Sukhwinder Singh

Electrically tunable transport in the antiferromagnetic Mott insulator Sr_2IrO_4 *(6 pages)* 115136
C. Wang, H. Seinige, G. Cao, J.-S. Zhou, J. B. Goodenough, and M. Tsoi

Exact ground states and topological order in interacting Kitaev/Majorana chains *(12 pages)* 115137
Hosho Katsura, Dirk Schuricht, and Masahiro Takahashi

Long-range Coulomb interaction and Majorana fermions *(6 pages)* 115138
Areg Ghazaryan and Tapash Chakraborty

Ground-state entanglement constrains low-energy excitations *(11 pages)* 115139
Isaac H. Kim and Benjamin J. Brown

Improved description of metal oxide stability: Beyond the random phase approximation with renormalized kernels *(7 pages)* 115140
Thomas S. Jauho, Thomas Olsen, Thomas Bligaard, and Kristian S. Thygesen

Quasi-two-dimensional Fermi surfaces of the heavy-fermion superconductor Ce_2PdIn_8 *(5 pages)* 115141
K. Götze, J. Klotz, D. Gnida, H. Harima, D. Aoki, A. Demuer, S. Elgazzar, J. Wosnitza, D. Kaczorowski, and I. Sheikin

From Hund's insulator to Fermi liquid: Optical spectroscopy study of K doping in $BaMn_2As_2$ *(5 pages)* 115142
D. E. McNally, S. Zellman, Z. P. Yin, K. W. Post, Hua He, K. Hao, G. Kotliar, D. Basov, C. C. Homes, and M. C. Aronson

(Continued)

☞ 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 92, NUMBER 11** **SEPTEMBER 2015-15(I)**

Tunable site- and orbital-selective Mott transition and quantum confinement effects in $La_{0.5}Ca_{0.5}MnO_3$ nanoclusters *(9 pages)* 115143
A. Valli, H. Das, G. Sangiovanni, T. Saha-Dasgupta, and K. Held

Thermoelectric probe for Fermi surface topology in the three-dimensional Rashba semiconductor BiTeI *(5 pages)* 115144
T. Ideue, L. Ye, J. G. Checkelsky, H. Murakawa, Y. Kaneko, and Y. Tokura

Quantum critical exponents for a disordered three-dimensional Weyl node *(5 pages)* 115145
Björn Sbierski, Emil J. Bergholtz, and Piet W. Brouwer

Detecting Goldstone modes with entanglement entropy *(11 pages)* 115146
Bohdan Kulchytskyy, C. M. Herdman, Stephen Inglis, and Roger G. Melko

Spin-orbit coupling and proximity effects in metallic carbon nanotubes *(10 pages)* 115147
Piotr Chudzinski

Discretized Abelian Chern-Simons gauge theory on arbitrary graphs *(25 pages)* 115148
Kai Sun, Krishna Kumar, and Eduardo Fradkin

Spin-orbit interaction driven collective electron-hole excitations in a noncentrosymmetric nodal loop Weyl semimetal *(6 pages)* 115149
Kyo-Hoon Ahn, Kwan-Woo Lee, and Warren E. Pickett

Sudden gap closure across the topological phase transition in $Bi_{2-x}In_xSe_3$ *(5 pages)* 115150
Rui Lou, Zhonghao Liu, Wencan Jin, Haifeng Wang, Zhiqing Han, Kai Liu, Xueyun Wang, Tian Qian, Yevhen Kushnirenko, Sang-Wook Cheong, Richard M. Osgood, Jr., Hong Ding, and Shancai Wang

Fractional topological phases in three-dimensional coupled-wire systems *(9 pages)* 115152
Tobias Meng

Effects of Cr substitution on the magnetic and transport properties and electronic states of $SrRuO_3$ epitaxial thin films *(6 pages)* 115153
Kaori Kurita, Akira Chikamatsu, Kei Shigematsu, Tsukasa Katayama, Hiroshi Kumigashira, Tomoteru Fukumura, and Tetsuya Hasegawa

Photoexcited states of the harmonic honeycomb iridate γ-Li_2IrO_3 *(8 pages)* 115154
J. P. Hinton, S. Patankar, E. Thewalt, A. Ruiz, G. Lopez, N. Breznay, A. Vishwanath, J. Analytis, J. Orenstein, J. D. Koralek, and I. Kimchi

Composite fermion model for entanglement spectrum of fractional quantum Hall states *(5 pages)* 115155
Simon C. Davenport, Iván D. Rodríguez, J. K. Slingerland, and Steven H. Simon

Semiconductors I: bulk

Vector magnetometry based on $S = \frac{3}{2}$ electronic spins *(7 pages)* 115201
Sang-Yun Lee, Matthias Niethammer, and Jörg Wrachtrup

First-principles study of anisotropic thermoelectric transport properties of IV-VI semiconductor compounds SnSe and SnS *(13 pages)* 115202
Ruiqiang Guo, Xinjiang Wang, Youdi Kuang, and Baoling Huang

Origin of the positive spin-$\frac{1}{2}$ photoluminescence-detected magnetic resonance in π-conjugated materials and devices *(6 pages)* 115203
Ying Chen, Min Cai, Emily Hellerich, Ruth Shinar, and Joseph Shinar

(Continued)

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 92, NUMBER 11** **SEPTEMBER 2015-15(I)**

Free-carrier dynamics and band tails in $Cu_2ZnSn(S_xSe_{1-x})_4$: Evaluation of factors determining solar cell efficiency *(7 pages)* 115204
Le Quang Phuong, Makoto Okano, Genki Yamashita, Masaya Nagai, Masaaki Ashida, Akira Nagaoka, Kenji Yoshino, and Yoshihiko Kanemitsu

Quantum anomalous Hall effect with field-tunable Chern number near Z_2 topological critical point *(7 pages)* 115205
Le Quy Duong, Hsin Lin, Wei-Feng Tsai, and Y. P. Feng

Theoretical model of dynamic spin polarization of nuclei coupled to paramagnetic point defects in diamond and silicon carbide *(18 pages)* 115206
Viktor Ivády, Krisztián Szász, Abram L. Falk, Paul V. Klimov, David J. Christle, Erik Janzén, Igor A. Abrikosov, David D. Awschalom, and Adam Gali

Coupled rate and transport equations modeling proportionality of light yield in high-energy electron tracks: CsI at 295 K and 100 K; CsI:Tl at 295 K *(26 pages)* 115207
Xinfu Lu, Qi Li, G. A. Bizarri, Kan Yang, M. R. Mayhugh, P. R. Menge, and R. T. Williams

Optical power-driven electron spin relaxation regime crossover in Mn-doped bulk GaAs *(5 pages)* 115208
F. Münzhuber, T. Kiessling, W. Ossau, L. W. Molenkamp, and G. V. Astakhov

Semiconductors II: surfaces, interfaces, microstructures, and related topics

Insensitivity of spin dynamics to the orbital angular momentum transferred from twisted light to extended semiconductors *(5 pages)* 115301
M. Cygorek, P. I. Tamborenea, and V. M. Axt

Rashba effect in single-layer antimony telluroiodide SbTeI *(5 pages)* 115302
Houlong L. Zhuang, Valentino R. Cooper, Haixuan Xu, P. Ganesh, Richard G. Hennig, and P. R. C. Kent

Coherent manipulation of a Majorana qubit by a mechanical resonator *(7 pages)* 115303
P. Zhang and Franco Nori

Reconstruction of electrostatic field at the interface leads to formation of two-dimensional electron gas at multivalent (110) $LaAlO_3/SrTiO_3$ interfaces *(13 pages)* 115304
Yin-Long Han, Yue-Wen Fang, Zhen-Zhong Yang, Cheng-Jian Li, Lin He, Sheng-Chun Shen, Zhong-Zhong Luo, Guo-Liang Qu, Chang-Min Xiong, Rui-Fen Dou, Xiao Wei, Lin Gu, Chun-Gang Duan, and Jia-Cai Nie

Theory of optical spin control in quantum dot microcavities *(13 pages)* 115305
D. S. Smirnov, M. M. Glazov, E. L. Ivchenko, and L. Lanco

Controlled tunneling-induced dephasing of Rabi rotations for high-fidelity hole spin initialization *(7 pages)* 115306
P.-L. Ardelt, T. Simmet, K. Müller, C. Dory, K. A. Fischer, A. Bechtold, A. Kleinkauf, H. Riedl, and J. J. Finley

Monolayer II-VI semiconductors: A first-principles prediction *(10 pages)* 115307
Hui Zheng, Xian-Bin Li, Nian-Ke Chen, Sheng-Yi Xie, Wei Quan Tian, Yuanping Chen, Hong Xia, S. B. Zhang, and Hong-Bo Sun

Incorporation of Mn in $Al_xGa_{1-x}N$ probed by x-ray absorption and emission spectroscopy, high-resolution microscopy, x-ray diffraction, and first-principles calculations *(9 pages)* 115308
Mauro Rovezzi, Wolfgang Schlögelhofer, Thibaut Devillers, Nevill Gonzalez Szwacki, Tian Li, Rajdeep Adhikari, Pieter Glatzel, and Alberta Bonanni

(Continued)

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 92, NUMBER 11** **SEPTEMBER 2015-15(I)**

Influence of dislocation strain fields on the diffusion of interstitial iron impurities in silicon *(11 pages)* 115309
Benedikt Ziebarth, Matous Mrovec, Christian Elsässer, and Peter Gumbsch

Chiral electromagnetic waves in Weyl semimetals *(4 pages)* 115310
Alexander A. Zyuzin and Vladimir A. Zyuzin

Measurement of exciton correlations using electrostatic lattices *(10 pages)* 115311
M. Remeika, J. R. Leonard, C. J. Dorow, M. M. Fogler, L. V. Butov, M. Hanson, and A. C. Gossard

Four-wave mixing in quantum wells using femtosecond pulses with Laguerre-Gauss modes *(8 pages)* 115312
Déborah Persuy, Marc Ziegler, Olivier Crégut, Kuntheak Kheng, Mathieu Gallart, Bernd Hönerlage, and Pierre Gilliot

Surface physics, nanoscale physics, low-dimensional systems

Spin pairs in a weakly coupled many-electron quantum dot *(6 pages)* 115401
S. Hellmüller, D. Bischoff, T. Müller, M. Beck, K. Ensslin, and T. Ihn

Time-dependent heat flow in interacting quantum conductors *(9 pages)* 115402
Guillem Rosselló, Rosa López, and Jong Soo Lim

Dynamical behavior of a dangling bond dimer on a hydrogenated semiconductor: Ge(001):H *(7 pages)* 115403
Szymon Godlewski, Marek Kolmer, Jakub Lis, Rafal Zuzak, Bartosz Such, Wojciech Gren, Marek Szymonski, and Lev Kantorovich

Switchable valley injection into graphene *(5 pages)* 115404
Chen Hu, Wengang Lu, Wei Ji, Guanghua Yu, Yu Yan, and Jiao Teng

Sublattice segregation of hydrogen adsorbates in carbon nanotubes *(8 pages)* 115405
James Lawlor and Mauro S. Ferreira

Two-dimensional electron gas at the $PbTiO_3/SrTiO_3$ interface: An *ab initio* study *(11 pages)* 115406
Binglun Yin, Pablo Aguado-Puente, Shaoxing Qu, and Emilio Artacho

Giant nonlinearity via breaking parity-time symmetry: A route to low-threshold phonon diodes *(13 pages)* 115407
Jing Zhang, Bo Peng, Şahin Kaya Özdemir, Yu-xi Liu, Hui Jing, Xin-you Lü, Yu-long Liu, Lan Yang, and Franco Nori

Energy transport of surface phonon polaritons propagating along a chain of spheroidal nanoparticles *(13 pages)* 115409
Jose Ordonez-Miranda, Laurent Tranchant, Sergei Gluchko, and Sebastian Volz

Heterostructure symmetry and the orientation of the quantum Hall nematic phases *(9 pages)* 115410
J. Pollanen, K. B. Cooper, S. Brandsen, J. P. Eisenstein, L. N. Pfeiffer, and K. W. West

Surface phase diagram and stability of (001) and (111) $LiMn_2O_4$ spinel oxides *(10 pages)* 115411
Soo Kim, Muratahan Aykol, and C. Wolverton

Investigating the differences between Co adatoms states on surfaces of selected bismuth chalcogenides *(9 pages)* 115412
M. Waśniowska, M. Sikora, M. Dobrzański, T. Eelbo, M. M. Soares, M. Rams, I. Miotkowski, R. Wiesendanger, R. Berndt, Z. Kąkol, and A. Kozłowski

Electron transport properties of sub-3-nm diameter copper nanowires *(10 pages)* 115413
Sarah L. T. Jones, Alfonso Sanchez-Soares, John J. Plombon, Ananth P. Kaushik, Roger E. Nagle, James S. Clarke, and James C. Greer

(Continued)

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 92, NUMBER 11** **SEPTEMBER 2015-15(I)**

Coulomb-exchange effects in nanowires with spin splitting due to a radial electric field *(9 pages)* 115414
F. S. Gray, T. Kernreiter, M. Governale, and U. Zülicke

Deeper insight into phase relations in ultrathin Pb films *(8 pages)* 115415
Ro-Ya Liu, Angus Huang, Chien-Chung Huang, Chang-Yeh Lee, Chung-Huang Lin, Cheng-Maw Cheng, Ku-Ding Tsuei, Horng-Tay Jeng, Iwao Matsuda, and S.-J. Tang

Electromagnetic force on structured metallic surfaces *(5 pages)* 115416
Andrew H. Velzen and Kevin J. Webb

Quantized topological Hall effect in skyrmion crystal *(6 pages)* 115417
Keita Hamamoto, Motohiko Ezawa, and Naoto Nagaosa

Effect of gate voltage on spin transport along α-helical protein *(7 pages)* 115418
Ting-Rui Pan, Ai-Min Guo, and Qing-Feng Sun

Periodic arrays of intercalated atoms in twisted bilayer graphene: An *ab initio* investigation *(7 pages)* 115419
R. H. Miwa, P. Venezuela, and Eric Suárez Morell

Effect of inhomogeneities and substrate on the dynamics of the metal-insulator transition in VO_2 thin films *(11 pages)* 115420
M. Rodriguez-Vega, M. T. Simons, E. Radue, S. Kittiwatanakul, J. Lu, S. A. Wolf, R. A. Lukaszew, I. Novikova, and E. Rossi

Monolayer charge-neutral graphene on platinum with extremely weak electron-phonon coupling *(5 pages)* 115421
Wei Yao, Eryin Wang, Ke Deng, Shuzhen Yang, Wenyun Wu, Alexei V. Fedorov, Sung-Kwan Mo, Eike F. Schwier, Mingtian Zheng, Yohei Kojima, Hideaki Iwasawa, Kenya Shimada, Kaili Jiang, Pu Yu, Jia Li, and Shuyun Zhou

Waveguiding by a locally resonant metasurface *(6 pages)* 115422
A. A. Maznev and V. E. Gusev

Spin-dependent coherent transport in a double quantum dot system *(7 pages)* 115423
L. S. Petrosyan and T. V. Shahbazyan

Maximizing the purity of a qubit evolving in an anisotropic environment *(19 pages)* 115424
Xiaoya Judy Wang, Stefano Chesi, and W. A. Coish

Single-electron tunneling with slow insulators *(13 pages)* 115425
S. A. Fedorov, N. M. Chtchelkatchev, O. G. Udalov, and I. S. Beloborodov

Collision-dominated nonlinear hydrodynamics in graphene *(16 pages)* 115426
U. Briskot, M. Schütt, I. V. Gornyi, M. Titov, B. N. Narozhny, and A. D. Mirlin

Peeling of multilayer graphene creates complex interlayer sliding patterns *(7 pages)* 115427
Topi Korhonen and Pekka Koskinen

Topological surface states and Fermi arcs of the noncentrosymmetric Weyl semimetals TaAs, TaP, NbAs, and NbP *(11 pages)* 115428
Yan Sun, Shu-Chun Wu, and Binghai Yan

Nonlinear magnetic dynamics in a nanomagnet–topological insulator heterostructure *(7 pages)* 115429
Xiaopeng Duan, Xi-Lai Li, Yuriy G. Semenov, and Ki Wook Kim

(Continued)

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 92, NUMBER 11** **SEPTEMBER 2015-15(I)**

Infrared absorption of closely aligned heterostructures of monolayer and bilayer graphene with hexagonal boron nitride *(6 pages)* 115430
D. S. L. Abergel and Marcin Mucha-Kruczyński

Deep-to-shallow level transition of Re and Nb dopants in monolayer MoS_2 with dielectric environments *(4 pages)* 115431
Ji-Young Noh, Hanchul Kim, Minkyu Park, and Yong-Sung Kim

Localization length scales of triplet excitons in singlet fission materials *(7 pages)* 115432
Sam L. Bayliss, Karl J. Thorley, John E. Anthony, Hélène Bouchiat, Neil C. Greenham, and Alexei D. Chepelianskii

Quantum anomalous Hall effect in graphene coupled to skyrmions *(6 pages)* 115433
J. L. Lado and J. Fernández-Rossier

Mesoscopic organization of cobalt thin films on clean and oxygen-saturated Fe(001) surfaces *(9 pages)* 115434
M. Riva, A. Picone, D. Giannotti, A. Brambilla, G. Fratesi, G. Bussetti, L. Duò, F. Ciccacci, and M. Finazzi

Effects of strain and oxygen vacancies on the ferroelectric and antiferrodistortive distortions in $PbTiO_3/SrTiO_3$ superlattice *(12 pages)* 115435
Menglei Li, Jia Li, Long-Qing Chen, Bing-Lin Gu, and Wenhui Duan

Tunable spin helical Dirac quasiparticles on the surface of three-dimensional HgTe *(9 pages)* 115436
Chang Liu, Guang Bian, Tay-Rong Chang, Kedong Wang, Su-Yang Xu, Ilya Belopolski, Irek Miotkowski, Helin Cao, Koji Miyamoto, Chaoqiang Xu, Christian E. Matt, Thorsten Schmitt, Nasser Alidoust, Madhab Neupane, Horng-Tay Jeng, Hsin Lin, Arun Bansil, Vladimir N. Strocov, Mark Bissen, Alexei V. Fedorov, Xudong Xiao, Taichi Okuda, Yong P. Chen, and M. Zahid Hasan

Energy levels of bilayer graphene quantum dots *(11 pages)* 115437
D. R. da Costa, M. Zarenia, Andrey Chaves, G. A. Farias, and F. M. Peeters

Quasiparticle band gaps, excitonic effects, and anisotropic optical properties of the monolayer distorted 1*T* diamond-chain structures ReS_2 and $ReSe_2$ *(7 pages)* 115438
Hong-Xia Zhong, Shiyuan Gao, Jun-Jie Shi, and Li Yang

Structure and stability of Si/Ag(110) nanoribbons *(11 pages)* 115439
Conor Hogan, Stefano Colonna, Roberto Flammini, Antonio Cricenti, and Fabio Ronci

Screening and plasmons in pure and disordered single- and bilayer black phosphorus *(12 pages)* 115440
Fengping Jin, Rafael Roldán, Mikhail I. Katsnelson, and Shengjun Yuan

Monte Carlo studies of the self-correcting properties of the Majorana quantum error correction code under braiding *(18 pages)* 115441
Fabio L. Pedrocchi, N. E. Bonesteel, and David P. DiVincenzo

Spin relaxation in graphene with self-assembled cobalt porphyrin molecules *(6 pages)* 115442
S. Omar, M. Gurram, I. J. Vera-Marun, X. Zhang, E. H. Huisman, A. Kaverzin, B. L. Feringa, and B. J. van Wees

Observation of two distinct negative trions in tungsten disulfide monolayers *(7 pages)* 115443
Abdelaziz Boulesbaa, Bing Huang, Kai Wang, Ming-Wei Lin, Masoud Mahjouri-Samani, Christopher Rouleau, Kai Xiao, Mina Yoon, Bobby Sumpter, Alexander Puretzky, and David Geohegan

Energy splitting of image states induced by the surface potential corrugation of InAs(111)*A (6 pages)* 115444
Jesús Martínez-Blanco, Steven C. Erwin, Kiyoshi Kanisawa, and Stefan Fölsch

(Continued)

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 92, NUMBER 11** **SEPTEMBER 2015-15(I)**

Spin-split antibonding molecular ground state in manganese-doped quantum dot molecules *(9 pages)* 115445
Fanyao Qu, L. Villegas-Lelovsky, and P. C. Morais

Chiral currents in one-dimensional fractional quantum Hall states *(12 pages)* 115446
Eyal Cornfeld and Eran Sela

Spectral diffusion and its influence on the emission linewidths of site-controlled GaN nanowire quantum dots *(7 pages)* 115447
M. Holmes, S. Kako, K. Choi, M. Arita, and Y. Arakawa

Simple operation sequences to couple and interchange quantum information between spin qubits of different kinds *(10 pages)* 115448
Sebastian Mehl and David P. DiVincenzo

Phonon excitation by electron beams in nanographenes *(5 pages)* 115449
J. R. M. Saavedra and F. Javier García de Abajo

Photoacoustic generation by a gold nanosphere: From linear to nonlinear thermoelastics in the long-pulse illumination regime *(16 pages)* 115450
Amaury Prost, Florian Poisson, and Emmanuel Bossy

COMMENTS

Comment on "Single-point kinetic energy density functionals: A pointwise kinetic energy density analysis and numerical convergence investigation" *(3 pages)* 117101
S. B. Trickey, Valentin V. Karasiev, and Debajit Chakraborty

Reply to "Comment on 'Single-point kinetic energy density functionals: A pointwise kinetic energy density analysis and numerical convergence investigation' " *(4 pages)* 117102
Junchao Xia and Emily A. Carter

ERRATA

Erratum: Optical measurement of doping efficiency in poly(3-hexylthiophene) solutions and thin films [Phys. Rev. B **91**, 085205 (2015)] *(1 page)* . . . . . 119901(E)
Chenchen Wang, Duc T. Duong, Koen Vandewal, Jonathan Rivnay, and Alberto Salleo

Publisher's Note: Charge and spin quantum fluctuations in the doped strongly coupled Hubbard model on the honeycomb lattice [Phys. Rev. B **92**, 045105 (2015)] *(1 page)* . . . . . 119902(E)
F. G. Ribeiro and M. D. Coutinho-Filho

Erratum: Angle-resolved and core-level photoemission study of interfacing the topological insulator $Bi_{1.5}Sb_{0.5}Te_{1.7}Se_{1.3}$ with Ag, Nb, and Fe [Phys. Rev. B **92**, 075127 (2015)] *(1 page)* . . . . . 119903(E)
N. de Jong, E. Frantzeskakis, B. Zwartsenberg, Y. K. Huang, D. Wu, P. Hlawenka, J. Sańchez-Barriga, A. Varykhalov, E. van Heumen, and M. S. Golden

Erratum: Chiral gauge field and axial anomaly in a Weyl semimetal [Phys. Rev. B **87**, 235306 (2013)] *(1 page)* 119904(E)
Chao-Xing Liu, Peng Ye, and Xiao-Liang Qi

Publisher's Note: Direct imaging of coherent quantum transport in graphene *p-n-p* junctions [Phys. Rev. B **92**, 125414 (2015)] *(1 page)* . . . . . 119905(E)
E. D. Herbschleb, R. K. Puddy, P. Marconcini, J. P. Griffiths, G. A. C. Jones, M. Macucci, C. G. Smith, and M. R. Connolly

(Continued)

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 92, NUMBER 11** **SEPTEMBER 2015-15(I)**

Publisher's Note: Origin of the metal-insulator transition in ultrathin films of $La_{2/3}Sr_{1/3}MnO_3$
[Phys. Rev. B **92**, 125123 (2015)] *(1 page)*. . . . . 119906(E)
Zhaoliang Liao, Fengmiao Li, Peng Gao, Lin Li, Jiandong Guo, Xiaoqing Pan, R. Jin, E. W. Plummer, and Jiandi Zhang

Publisher's Note: Direct detection of density of gap states in C_{60} single crystals by photoemission spectroscopy
[Phys. Rev. B **92**, 115102 (2015)] *(1 page)*. . . . . 119907(E)
Fabio Bussolotti, Janpeng Yang, Masahiro Hiramoto, Toshihiko Kaji, Satoshi Kera, and Nobuo Ueno