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 24 *CONTENTS* **DECEMBER 2015-15(II)**

RAPID COMMUNICATIONS

Electronic structure and strongly correlated systems

Non-Fermi-liquid nature and exotic thermoelectric power in the heavy-fermion superconductor UBe_{13} *(6 pages)* . . . . . 241101(R)
Yusei Shimizu, Alexandre Pourret, Georg Knebel, Alexandra Palacio-Morales, and Dai Aoki

Characterizing featureless Mott insulating state by quasiparticle interference: A dynamical mean field theory view *(5 pages)* . . . . . 241102(R)
Shantanu Mukherjee and Wei-Cheng Lee

RKKY interaction of magnetic impurities in Dirac and Weyl semimetals *(5 pages)* . . . . . 241103(R)
Hao-Ran Chang, Jianhui Zhou, Shi-Xiong Wang, Wen-Yu Shan, and Di Xiao

Interface between heavy fermions and normal electrons investigated by spatially resolved nuclear magnetic resonance *(5 pages)* . . . . . 241105(R)
Takayoshi Yamanaka, Masaaki Shimozawa, Ryota Endo, Yuta Mizukami, Hiroaki Shishido, Takahito Terashima, Takasada Shibauchi, Yuji Matsuda, and Kenji Ishida

Matrix-product-state method with a dynamical local basis optimization for bosonic systems out of equilibrium *(5 pages)* . . . . . 241106(R)
C. Brockt, F. Dorfner, L. Vidmar, F. Heidrich-Meisner, and E. Jeckelmann

Local representation of the electronic dielectric response function *(5 pages)* . . . . . 241107(R)
Xiaochuan Ge and Deyu Lu

Optical evidence for a Weyl semimetal state in pyrochlore $Eu_2Ir_2O_7$ *(4 pages)* . . . . . 241108(R)
A. B. Sushkov, J. B. Hofmann, G. S. Jenkins, J. Ishikawa, S. Nakatsuji, S. Das Sarma, and H. D. Drew

Unidirectional transport in electronic and photonic Weyl materials by Dirac mass engineering *(6 pages)* . . . . . 241109(R)
Ren Bi and Zhong Wang

Beam engineering for selective and enhanced coupling to multipolar resonances *(5 pages)* . . . . . 241110(R)
Tanya Das, Prasad P. Iyer, Ryan A. DeCrescent, and Jon A. Schuller

Efficient and long-lived Zeeman-sublevel atomic population storage in an erbium-doped glass fiber *(5 pages)* . . . . 241111(R)
Erhan Saglamyurek, Thomas Lutz, Lucile Veissier, Morgan P. Hedges, Charles W. Thiel, Rufus L. Cone, and Wolfgang Tittel

Copyright 2015 by American Physical Society

(Continued)

1098-0121(20151215)92:24;1-Q

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 24** **DECEMBER 2015-15(II)**

Control of exciton transport using quantum interference *(6 pages)* . . . . . 241112(R)
Mark T. Lusk, Charles A. Stafford, Jeramy D. Zimmerman, and Lincoln D. Carr

Electron spin resonance modes in a strong-leg ladder in the Tomonaga-Luttinger liquid phase *(5 pages)* . . . . . 241113(R)
M. Ozerov, M. Maksymenko, J. Wosnitza, A. Honecker, C. P. Landee, M. M. Turnbull, S. C. Furuya, T. Giamarchi, and S. A. Zvyagin

Glass-ferroic composite caused by the crystallization of ferroic glass *(5 pages)* . . . . . 241114(R)
Yuanchao Ji, Xiangdong Ding, Dong Wang, Kazuhiro Otsuka, and Xiaobing Ren

Proposed platform to study interaction-enabled topological phases with fermionic particles *(5 pages)* . . . . . 241115(R)
Ching-Kai Chiu, D. I. Pikulin, and M. Franz

Vector optical activity in the Weyl semimetal TaAs *(5 pages)* . . . . . 241116(R)
M. R. Norman

Local probing of nuclear bath polarization with a single electronic spin *(5 pages)* . . . . . 241117(R)
P. London, R. Fischer, I. Alvizu, J. R. Maze, and D. Gershoni

Pressure-induced quantum phase transitions in a YbB_6 single crystal *(5 pages)* . . . . . 241118(R)
Yazhou Zhou, Dae-Jeong Kim, Priscila Ferrari Silveira Rosa, Qi Wu, Jing Guo, Shan Zhang, Zhe Wang, Defen Kang, Wei Yi, Yanchun Li, Xiaodong Li, Jing Liu, Peiquan Duan, Ming Zi, Xiangjun Wei, Zheng Jiang, Yuying Huang, Yi-feng Yang, Zachary Fisk, Liling Sun, and Zhongxian Zhao

Semiconductors I: bulk

Direct observation of the E_- resonant state in $GaAs_{1-x}Bi_x$ *(4 pages)* . . . . . 241201(R)
K. Alberi, D. A. Beaton, and A. Mascarenhas

Stress effects on the Raman spectrum of an amorphous material: Theory and experiment on *a*-Si:H *(6 pages)* . . . . 241202(R)
David A. Strubbe, Eric C. Johlin, Timothy R. Kirkpatrick, Tonio Buonassisi, and Jeffrey C. Grossman

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

Edge-state transport in graphene *p-n* junctions in the quantum Hall regime *(5 pages)* . . . . . 241301(R)
Nikolai N. Klimov, Son T. Le, J. Yan, Pratik Agnihotri, Everett Comfort, Ji Ung Lee, David B. Newell, and Curt A. Richter

Polarization anisotropy of the emission from type-II quantum dots *(5 pages)* . . . . . 241302(R)
P. Klenovský, D. Hemzal, P. Steindl, M. Zíková, V. Křápek, and J. Humlíček

Hydrogenation-induced atomic stripes on the $2H$-MoS_2 surface *(5 pages)* . . . . . 241303(R)
Sang Wook Han, Won Seok Yun, J. D. Lee, Y. H. Hwang, J. Baik, H. J. Shin, Wang G. Lee, Young S. Park, and Kwang S. Kim

Spin chemical potential bias induced surface current evidenced by spin pumping into the topological insulator Bi_2Te_3 *(5 pages)* . . . . . 241304(R)
Faris Basheer Abdulahad, Jin-Han Lin, Yung Liou, Wen-Kai Chiu, Liang-Juan Chang, Ming-Yi Kao, Jun-Zhi Liang, Dung-Shing Hung, and Shang-Fan Lee

Efficient formation of excitons in a dense electron-hole plasma at room temperature *(5 pages)* . . . . . 241305(R)
Andreas Hangleiter, Zuanming Jin, Marina Gerhard, Dimitry Kalincev, Torsten Langer, Heiko Bremers, Uwe Rossow, Martin Koch, Mischa Bonn, and Dmitry Turchinovich

(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 24** **DECEMBER 2015-15(II)**

Contrasting influence of charged impurities on transport and gain in terahertz quantum cascade lasers *(5 pages)* . . . . . 241306(R)
Thomas Grange

Surface physics, nanoscale physics, low-dimensional systems

Direct transition resonance in atomically uniform topological Sb(111) thin films *(5 pages)* . . . . . 241401(R)
Guang Bian, Caizhi Xu, Tay-Rong Chang, Xiaoxiong Wang, Saavanth Velury, Jie Ren, Hao Zheng, Horng-Tay Jeng, T. Miller, M. Zahid Hasan, and T.-C. Chiang

Conductivity corrections for topological insulators with spin-orbit impurities: Hikami-Larkin-Nagaoka formula revisited *(5 pages)* . . . . . 241402(R)
P. Adroguer, Weizhe E. Liu, D. Culcer, and E. M. Hankiewicz

Strongly hybridized plasmon-photon modes in optoplasmonic microtubular cavities *(4 pages)* . . . . . 241403(R)
Y. Yin, S. L. Li, S. Giudicatti, C. Y. Jiang, L. B. Ma, and O. G. Schmidt

Valley-based Cooper pair splitting via topologically confined channels in bilayer graphene *(5 pages)* . . . . . 241404(R)
Alexander Schroer, Peter G. Silvestrov, and Patrik Recher

Intermolecular artifacts in probe microscope images of C_{60} assemblies *(6 pages)* . . . . . 241405(R)
Samuel Paul Jarvis, Mohammad Abdur Rashid, Adam Sweetman, Jeremy Leaf, Simon Taylor, Philip Moriarty, and Janette Dunn

Polarization-dependent photocurrents in polar stacks of van der Waals solids *(5 pages)* . . . . . 241406(R)
Y. B. Lyanda-Geller, Songci Li, and A. V. Andreev

Gapped excitations of unconventional fractional quantum Hall effect states in the second Landau level *(5 pages)* . . . . . 241407(R)
U. Wurstbauer, A. L. Levy, A. Pinczuk, K. W. West, L. N. Pfeiffer, M. J. Manfra, G. C. Gardner, and J. D. Watson

Vibrational spectrum renormalization by enforced coupling across the van der Waals gap between MoS_2 and WS_2 monolayers *(5 pages)* . . . . . 241408(R)
Wen Fan, Xi Zhu, Feng Ke, Yabin Chen, Kaichen Dong, Jie Ji, Bin Chen, Sefaattin Tongay, Joel W. Ager, Kai Liu, Haibin Su, and Junqiao Wu

Tunneling in graphene–topological insulator hybrid devices *(5 pages)* . . . . . 241409(R)
H. Steinberg, L. A. Orona, V. Fatemi, J. D. Sanchez-Yamagishi, K. Watanabe, T. Taniguchi, and P. Jarillo-Herrero

Self-stabilizing temperature-driven crossover between topological and nontopological ordered phases in one-dimensional conductors *(5 pages)* . . . . . 241410(R)
Bernd Braunecker and Pascal Simon

Measurement of electronic heat dissipation in highly disordered graphene *(5 pages)* . . . . . 241411(R)
N. Hemsworth, F. Mahvash, P. L. Lévesque, M. Siaj, R. Martel, and T. Szkopek

Mimicking localized surface plasmons with dielectric particles *(5 pages)* . . . . . 241412(R)
Alexis Devilez, Xavier Zambrana-Puyalto, Brian Stout, and Nicolas Bonod

(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 24 DECEMBER 2015-15(II)

ARTICLES

Electronic structure and strongly correlated systems

Precise all-electron dynamical response functions: Application to COHSEX and the RPA correlation energy *(12 pages)* 245101
Markus Betzinger, Christoph Friedrich, Andreas Görling, and Stefan Blügel

Interaction-driven capacitance in graphene electron-hole double layer in strong magnetic fields *(10 pages)* 245102
Bahman Roostaei

From $J_{\text{eff}} = 1/2$ insulator to p-wave superconductor in single-crystal $Sr_2Ir_{1-x}Ru_xO_4$ ($0 \leqslant x \leqslant 1$) *(6 pages)* 245103
S. J. Yuan, S. Aswartham, J. Terzic, H. Zheng, H. D. Zhao, P. Schlottmann, and G. Cao

Magnetic and electronic states in $(LaMnO_3)_2(SrMnO_3)_2$ superlattice exhibiting a large negative magnetoresistance *(8 pages)* 245104
Hironori Nakao, Takaaki Sudayama, Masato Kubota, Jun Okamoto, Yuichi Yamasaki, Youichi Murakami, Hiroyuki Yamada, Akihito Sawa, and Kazuaki Iwasa

Many-body effects in graphene beyond the Dirac model with Coulomb interaction *(10 pages)* 245105
N. Yu. Astrakhantsev, V. V. Braguta, and M. I. Katsnelson

Time-dependent many-variable variational Monte Carlo method for nonequilibrium strongly correlated electron systems *(11 pages)* 245106
Kota Ido, Takahiro Ohgoe, and Masatoshi Imada

Quantum phase transition triggering magnetic bound states in the continuum in graphene *(6 pages)* 245107
L. H. Guessi, Y. Marques, R. S. Machado, K. Kristinsson, L. S. Ricco, I. A. Shelykh, M. S. Figueira, M. de Souza, and A. C. Seridonio

℘ *Ab initio* downfolding for electron-phonon-coupled systems: Constrained density-functional perturbation theory *(15 pages)* 245108
Yusuke Nomura and Ryotaro Arita

℘ Quantifying electronic correlation strength in a complex oxide: A combined DMFT and ARPES study of $LaNiO_3$ *(9 pages)* 245109
E. A. Nowadnick, J. P. Ruf, H. Park, P. D. C. King, D. G. Schlom, K. M. Shen, and A. J. Millis

Gauge fields in graphene with nonuniform elastic deformations: A quantum field theory approach *(7 pages)* 245110
Enrique Arias, Alexis R. Hernández, and Caio Lewenkopf

Edge states for the Kalmeyer-Laughlin wave function *(15 pages)* 245111
Benedikt Herwerth, Germán Sierra, Hong-Hao Tu, J. Ignacio Cirac, and Anne E. B. Nielsen

Current correlations in a Majorana beam splitter *(8 pages)* 245112
Arbel Haim, Erez Berg, Felix von Oppen, and Yuval Oreg

Covalency effects reflected in the magnetic form factor of low-dimensional cuprates *(6 pages)* 245113
V. V. Mazurenko, I. V. Solovyev, and A. A. Tsirlin

Gapped and gapless short-range-ordered magnetic states with $(\frac{1}{2}, \frac{1}{2}, \frac{1}{2})$ wave vectors in the pyrochlore magnet $Tb_{2+x}Ti_{2-x}O_{7+\delta}$ *(7 pages)* 245114
E. Kermarrec, D. D. Maharaj, J. Gaudet, K. Fritsch, D. Pomaranski, J. B. Kycia, Y. Qiu, J. R. D. Copley, M. M. P. Couchman, A. O. R. Morningstar, H. A. Dabkowska, and B. D. Gaulin

(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 24** **DECEMBER 2015-15(II)**

Impact of short-range order on transport properties of the two-dimensional metal $PdCrO_2$ *(5 pages)* 245115
Ramzy Daou, Raymond Frésard, Sylvie Hébert, and Antoine Maignan

Interaction between x-ray and magnetic vortices *(5 pages)* 245116
Michel van Veenendaal

Ab initio many-body Green's function calculations of optical properties of LiF at high pressures *(8 pages)* 245117
Catalin D. Spataru, Luke Shulenburger, and Lorin X. Benedict

Interaction correction to the magnetoelectric polarizability of $\mathbb{Z}_2$ topological insulators *(6 pages)* 245118
Karin Everschor-Sitte, Matthias Sitte, and Allan H. MacDonald

Fractional Chern insulator phase at the transition between checkerboard and Lieb lattices *(7 pages)* 245119
Błażej Jaworowski, Andrei Manolescu, and Paweł Potasz

Transport and magnetotransport in three-dimensional Weyl semimetals *(7 pages)* 245120
Navneeth Ramakrishnan, Mirco Milletari, and Shaffique Adam

Synthetic helical liquids with ultracold atoms in optical lattices *(9 pages)* 245121
J. C. Budich, C. Laflamme, F. Tschirsich, S. Montangero, and P. Zoller

Bosonic symmetry-protected topological phases with reflection symmetry *(11 pages)* 245122
Tsuneya Yoshida, Takahiro Morimoto, and Akira Furusaki

Excitons in van der Waals heterostructures: The important role of dielectric screening *(13 pages)* 245123
S. Latini, T. Olsen, and K. S. Thygesen

Flat-band ferromagnetism and spin waves in topological Hubbard models *(16 pages)* 245124
R. L. Doretto and M. O. Goerbig

Transport through a correlated interface: Auxiliary master equation approach *(10 pages)* 245125
Irakli Titvinidze, Antonius Dorda, Wolfgang von der Linden, and Enrico Arrigoni

Electrochemical phase diagrams for Ti oxides from density functional calculations *(13 pages)* 245126
Liang-Feng Huang and James M. Rondinelli

Evidence for a diamondlike electronic band structure of Si multilayers on Ag(111) *(6 pages)* 245127
S. K. Mahatha, P. Moras, P. M. Sheverdyaeva, R. Flammini, K. Horn, and C. Carbone

Fermion loops and improved power-counting in two-dimensional critical metals with singular forward scattering *(9 pages)* 245128
Tobias Holder and Walter Metzner

Optical properties of $TlNi_2Se_2$: Observation of pseudogap formation *(5 pages)* 245129
X. B. Wang, H. P. Wang, Hangdong Wang, Minghu Fang, and N. L. Wang

All-dielectric reciprocal bianisotropic nanoparticles *(6 pages)* 245130
Rasoul Alaee, Mohammad Albooyeh, Aso Rahimzadegan, Mohammad S. Mirmoosa, Yuri S. Kivshar, and Carsten Rockstuhl

Ab initio computation of the transition temperature of the charge density wave transition in $TiSe_2$ *(8 pages)* 245131
Dinh Loc Duong, Marko Burghard, and J. Christian Schön

(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 24** **DECEMBER 2015-15(II)**

Finite-size effects in Luther-Emery phases of Holstein and Hubbard models *(16 pages)* 245132
J. Greitemann, S. Hesselmann, S. Wessel, F. F. Assaad, and M. Hohenadler

Optical study of $BaFe_2As_2$ under pressure: Coexistence of spin-density-wave gap and superconductivity *(8 pages)* 245133
E. Uykur, T. Kobayashi, W. Hirata, S. Miyasaka, S. Tajima, and C. A. Kuntscher

Entanglement spectrum and entangled modes of highly excited states in random XX spin chains *(8 pages)* 245134
Mohammad Pouranvari and Kun Yang

Valence fluctuations and empty-state resonance for Fe adatom on a surface *(6 pages)* 245135
S. N. Iskakov, V. V. Mazurenko, M. V. Valentyuk, and A. I. Lichtenstein

Spin-lattice coupling across the singular magnetostructural transition in $Pr_{0.5}Sr_{0.5}CoO_3$ by x-ray magnetic circular dichroism *(7 pages)* 245136
J. Padilla-Pantoja, J. Herrero-Martín, E. Pellegrin, P. Gargiani, S. M. Valvidares, A. Barla, and J. L. García-Muñoz

Dynamical structure factors and excitation modes of the bilayer Heisenberg model *(20 pages)* 245137
M. Lohöfer, T. Coletta, D. G. Joshi, F. F. Assaad, M. Vojta, S. Wessel, and F. Mila

Gauge-discontinuity contributions to Chern-Simons orbital magnetoelectric coupling *(15 pages)* 245138
Jianpeng Liu and David Vanderbilt

Demonstrating non-Abelian statistics of Majorana fermions using twist defects *(10 pages)* 245139
Huaixiu Zheng, Arpit Dua, and Liang Jiang

Interplay between unidirectional and bidirectional charge-density-wave orders in underdoped cuprates *(9 pages)* 245140
Yuxuan Wang and Andrey V. Chubukov

Many-body localization proximity effect *(5 pages)* 245141
Rahul Nandkishore

Semiconductors I: bulk

Manganese spin dephasing mechanisms in ferromagnetic (Ga,Mn)As *(7 pages)* 245201
I. V. Krainov, V. F. Sapega, N. S. Averkiev, G. S. Dimitriev, K. H. Ploog, and E. Lähderanta

Difference in linear polarization of biaxially strained $In_xGa_{1-x}N$ alloys on nonpolar a-plane and m-plane GaN *(9 pages)* 245202
Siyuan Zhang, Ying Cui, James T. Griffiths, Wai Y. Fu, Christoph Freysoldt, Jörg Neugebauer, Colin J. Humphreys, and Rachel A. Oliver

Bipolar polaron pair recombination in polymer/fullerene solar cells *(8 pages)* 245203
Alexander J. Kupijai, Konstantin M. Behringer, Florian G. Schaeble, Natalie E. Galfe, Michael Corazza, Suren A. Gevorgyan, Frederik C. Krebs, Martin Stutzmann, and Martin S. Brandt

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

Early stages of the Schottky barrier formation in submonolayer Pt on $SrTiO_3$ (001) *(6 pages)* 245301
Hosung Seo and Alexander A. Demkov

Observation of unconventional splitting of Landau levels in strained graphene *(6 pages)* 245302
Si-Yu Li, Ke-Ke Bai, Long-Jing Yin, Jia-Bin Qiao, Wen-Xiao Wang, and Lin He

(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 24** **DECEMBER 2015-15(II)**

Multistability and spin diffusion enhanced lifetimes in dynamic nuclear polarization in a double quantum dot *(5 pages)* 245303
F. Forster, M. Mühlbacher, D. Schuh, W. Wegscheider, G. Giedke, and S. Ludwig

Electron-electron interactions, topological phase, and optical properties of a charged artificial benzene ring *(9 pages)* 245304
Isil Ozfidan, Milos Vladisavljevic, Marek Korkusinski, and Pawel Hawrylak

Phase diagram of a quantum Coulomb wire *(6 pages)* 245305
G. Ferré, G. E. Astrakharchik, and J. Boronat

Enhanced light emission from top-emitting organic light-emitting diodes by optimizing surface plasmon polariton losses *(10 pages)* 245306
Cornelius Fuchs, Paul-Anton Will, Martin Wieczorek, Malte C. Gather, Simone Hofmann, Sebastian Reineke, Karl Leo, and Reinhard Scholz

Andreev transport in a correlated ferromagnet-quantum-dot-superconductor device *(9 pages)* 245307
I. Weymann and K. P. Wójcik

Optical properties of surfaces with supercell *ab initio* calculations: Local-field effects *(10 pages)* 245308
Nicolas Tancogne-Dejean, Christine Giorgetti, and Valérie Véniard

Optical spin readout method in a quantum dot using the ac Stark effect *(13 pages)* 245309
Edward B. Flagg and Glenn S. Solomon

Oxygen-stabilized triangular defects in hexagonal boron nitride *(7 pages)* 245310
S. P. Huber, E. Gullikson, R. W. E. van de Kruijs, F. Bijkerk, and D. Prendergast

Surface physics, nanoscale physics, low-dimensional systems

Fractional quantum Hall states versus Wigner crystals in wide quantum wells in the half-filled lowest and second Landau levels *(16 pages)* 245401
N. Thiebaut, N. Regnault, and M. O. Goerbig

Electromagnetic energy sink *(17 pages)* 245402
C. A. Valagiannopoulos, J. Vehmas, C. R. Simovski, S. A. Tretyakov, and S. I. Maslovski

Compensation of phonon-induced renormalization of vacuum Rabi splitting in large quantum dots: Towards temperature-stable strong coupling in the solid state with quantum dot-micropillars *(10 pages)* 245403
C. Hopfmann, A. Musiał, M. Strauß, A. M. Barth, M. Glässl, A. Vagov, M. Strauß, C. Schneider, S. Höfling, M. Kamp, V. M. Axt, and S. Reitzenstein

Langevin dynamics of a heavy particle and orthogonality effects *(16 pages)* 245404
Mark Thomas, Torsten Karzig, and Silvia Viola Kusminskiy

C_{60}-induced Devil's Staircase transformation on a Pb/Si(111) wetting layer *(6 pages)* 245405
Lin-Lin Wang, Duane D. Johnson, and Michael C. Tringides

Theoretical studies of graphene nanoribbon quantum dot qubits *(8 pages)* 245406
Chih-Chieh Chen and Yia-Chung Chang

Atomic structure and electronic properties of the two-dimensional (Au,Al)/Si(111)2×2 compound *(7 pages)* . . . 245407
D. V. Gruznev, L. V. Bondarenko, A. V. Matetskiy, A. Y. Tupchaya, E. N. Chukurov, C. R. Hsing, C. M. Wei, S. V. Eremeev, A. V. Zotov, and A. A. Saranin

(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 24** **DECEMBER 2015-15(II)**

Exploiting hydrogenation for thermal rectification in graphene nanoribbons *(8 pages)* 245408
Claudio Melis, Giuliana Barbarino, and Luciano Colombo

Effects of dephasing on quantum adiabatic pumping with nonequilibrium initial states *(10 pages)* 245409
Longwen Zhou, Da Yang Tan, and Jiangbin Gong

Hall quantization and optical conductivity evolution with variable Berry phase in the α-T_3 model *(9 pages)* 245410
E. Illes, J. P. Carbotte, and E. J. Nicol

Nonequilibrium phonon mean free paths in anharmonic chains *(7 pages)* 245411
K. Sääskilahti, J. Oksanen, S. Volz, and J. Tulkki

Conductance, valley and spin polarizations, and tunneling magnetoresistance in ferromagnetic-normal-ferromagnetic junctions of silicene *(9 pages)* 245412
Ruchi Saxena, Arijit Saha, and Sumathi Rao

Self-complementary metasurfaces for linear-to-circular polarization conversion *(9 pages)* 245413
J. D. Baena, J. P. del Risco, A. P. Slobozhanyuk, S. B. Glybovski, and P. A. Belov

Anomalous behavior in the magneto-optics of a gapped topological insulator *(12 pages)* 245414
C. J. Tabert and J. P. Carbotte

Li adsorption versus graphene intercalation on Ir(111): From quenching to restoration of the Ir surface state *(6 pages)* 245415
P. Pervan, P. Lazić, M. Petrović, I. Šrut Rakić, I. Pletikosić, M. Kralj, M. Milun, and T. Valla

Density functional theory calculations of the electric-field-induced Dirac cones and quantum valley Hall state in ABA-stacked trilayer graphene *(5 pages)* 245416
Kyu Won Lee and Cheol Eui Lee

Cold spots in quantum systems far from equilibrium: Local entropies and temperatures near absolute zero *(12 pages)* 245417
Abhay Shastry and Charles A. Stafford

Full counting statistics of vibrationally assisted electronic conduction: Transport and fluctuations of thermoelectric efficiency *(18 pages)* 245418
Bijay Kumar Agarwalla, Jian-Hua Jiang, and Dvira Segal

Resonant unidirectional and elastic scattering of surface plasmon polaritons by high refractive index dielectric nanoparticles *(11 pages)* 245419
Andrey B. Evlyukhin and Sergey I. Bozhevolnyi

Lowering the lasing threshold of distributed feedback lasers with loss *(6 pages)* 245420
V. Yu. Shishkov, A. A. Zyablovsky, E. S. Andrianov, A. A. Pukhov, A. P. Vinogradov, A. V. Dorofeenko, and A. A. Lisyansky

High-field response of gated graphene at terahertz frequencies *(9 pages)* 245421
Hadi Razavipour, Wayne Yang, Abdeladim Guermoune, Michael Hilke, David G. Cooke, Ibraheem Al-Naib, Marc M. Dignam, François Blanchard, Hassan A. Hafez, Xin Chai, Denis Ferachou, Tsuneyuki Ozaki, Pierre L. Lévesque, and Richard Martel

Landau-Zener interference at bichromatic driving *(12 pages)* 245422
Florian Forster, Max Mühlbacher, Ralf Blattmann, Dieter Schuh, Werner Wegscheider, Stefan Ludwig, and Sigmund Kohler

(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 24** **DECEMBER 2015-15(II)**

Tuning of the electron g factor in defect-free GaAs nanodisks *(9 pages)* 245423
Li-Wei Yang, Yi-Chia Tsai, Yiming Li, Akio Higo, Akihiro Murayama, S. Samukawa, and O. Voskoboynikov

Merging of the Dirac points in electronic artificial graphene *(11 pages)* 245424
J. Feilhauer, W. Apel, and L. Schweitzer

Kinetic theory of spin-polarized systems in electric and magnetic fields with spin-orbit coupling. I. Kinetic equation and anomalous Hall and spin-Hall effects *(20 pages)* 245425
K. Morawetz

Kinetic theory of spin-polarized systems in electric and magnetic fields with spin-orbit coupling. II. RPA response functions and collective modes *(23 pages)* 245426
K. Morawetz

Mechanistic transition of heat conduction in two-dimensional solids: A study of silica bilayers *(6 pages)* 245427
Yanlei Wang, Zhigong Song, and Zhiping Xu

AA-stacked bilayer square ice between graphene layers *(5 pages)* 245428
M. Sobrino Fernandez Mario, M. Neek-Amal, and F. M. Peeters

Collapsed armchair single-walled carbon nanotubes as an analog of closed-edged bilayer graphene nanoribbons *(13 pages)* 245429
Masayuki Hasegawa, Kazume Nishidate, and Noriyuki Yoshimoto

Spectral properties of superconductors with ferromagnetically ordered magnetic impurities *(14 pages)* 245430
Daniel Persson, Oleksii Shevtsov, Tomas Löfwander, and Mikael Fogelström

Excitonic and nematic instabilities on the surface of topological Kondo insulators *(9 pages)* 245431
Bitan Roy, Johannes Hofmann, Valentin Stanev, Jay D. Sau, and Victor Galitski

Cavity quantum electrodynamics with mesoscopic topological superconductors *(15 pages)* 245432
Olesia Dmytruk, Mircea Trif, and Pascal Simon

Dynamical Coulomb blockade of tunnel junctions driven by alternating voltages *(12 pages)* 245433
Hermann Grabert

Rigid unit modes in sp-sp^2 hybridized carbon systems: Origin of negative thermal expansion *(6 pages)* 245434
Cheol-Woon Kim, Seoung-Hun Kang, and Young-Kyun Kwon

Exciton polaritons in two-dimensional dichalcogenide layers placed in a planar microcavity: Tunable interaction between two Bose-Einstein condensates *(11 pages)* 245435
Mikhail I. Vasilevskiy, Darío G. Santiago-Pérez, Carlos Trallero-Giner, Nuno M. R. Peres, and Alexey Kavokin

Quantum fluctuations stabilize skyrmion textures *(7 pages)* 245436
A. Roldán-Molina, M. J. Santander, A. S. Nunez, and J. Fernández-Rossier

Topological dephasing in the $\nu = 2/3$ fractional quantum Hall regime *(11 pages)* 245437
Jinhong Park, Yuval Gefen, and H.-S. Sim

Quantum transport properties of graphene in the presence of randomly distributed spin-orbit coupling impurities *(6 pages)* 245438
Zhe Liu, Mingfeng Zhu, and Yisong Zheng

(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 24** **DECEMBER 2015-15(II)**

An artificial Rb atom in a semiconductor with lifetime-limited linewidth *(9 pages)* 245439
Jan-Philipp Jahn, Mathieu Munsch, Lucas Béguin, Andreas V. Kuhlmann, Martina Renggli, Yongheng Huo, Fei Ding, Rinaldo Trotta, Marcus Reindl, Oliver G. Schmidt, Armando Rastelli, Philipp Treutlein, and Richard J. Warburton

Chiral separation and chiral magnetic effects in a slab: The role of boundaries *(15 pages)* 245440
E. V. Gorbar, V. A. Miransky, I. A. Shovkovy, and P. O. Sukhachov

Inhomogeneous nuclear spin polarization induced by helicity-modulated optical excitation of fluorine-bound electron spins in ZnSe *(11 pages)* 245441
F. Heisterkamp, A. Greilich, E. A. Zhukov, E. Kirstein, T. Kazimierczuk, V. L. Korenev, I. A. Yugova, D. R. Yakovlev, A. Pawlis, and M. Bayer

Growth and electronic structure of epitaxial single-layer WS_2 on Au(111) *(7 pages)* 245442
Maciej Dendzik, Matteo Michiardi, Charlotte Sanders, Marco Bianchi, Jill A. Miwa, Signe S. Grønborg, Jeppe V. Lauritsen, Albert Bruix, Bjørk Hammer, and Philip Hofmann

Boundary conditions for transition-metal dichalcogenide monolayers in the continuum model *(10 pages)* 245443
Csaba G. Péterfalvi, Andor Kormányos, and Guido Burkard

Simulation of supersymmetric quantum mechanics in a Cooper-pair box shunted by a Josephson rhombus *(6 pages)* 245444
Jascha Ulrich, Daniel Otten, and Fabian Hassler