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 91, NUMBER 24 *CONTENTS* **JUNE 2015-15(II)**

RAPID COMMUNICATIONS

Electronic structure and strongly correlated systems

Real-time observation of collective excitations in photoemission *(5 pages)* . . . . . 241101(R)
C. Lemell, S. Neppl, G. Wachter, K. Tőkési, R. Ernstorfer, P. Feulner, R. Kienberger, and J. Burgdörfer

Field-induced quadrupolar quantum criticality in PrV_2Al_{20} *(5 pages)* . . . . . 241102(R)
Yasuyuki Shimura, Masaki Tsujimoto, Bin Zeng, Luis Balicas, Akito Sakai, and Satoru Nakatsuji

Quasilocal critical nature of cooperative paramagnetic fluctuations in $CaRuO_3$ metal *(5 pages)* . . . . . 241103(R)
J. Gunasekera, L. Harriger, T. Heitmann, A. Dahal, H. Knoll, and D. K. Singh

Noise due to neutral modes in the $\nu = 2/3$ fractional quantum Hall state *(5 pages)* . . . . . 241104(R)
So Takei, Bernd Rosenow, and Ady Stern

Fermionic symmetry-protected topological phase induced by interactions *(5 pages)* . . . . . 241105(R)
Shang-Qiang Ning, Hong-Chen Jiang, and Zheng-Xin Liu

Coupled-wire construction of chiral spin liquids *(5 pages)* . . . . . 241106(R)
Tobias Meng, Titus Neupert, Martin Greiter, and Ronny Thomale

Finite-temperature superconducting correlations of the Hubbard model *(5 pages)* . . . . . 241107(R)
Ehsan Khatami, Richard T. Scalettar, and Rajiv R. P. Singh

Plasmon signature in Dirac-Weyl liquids *(5 pages)* . . . . . 241108(R)
Johannes Hofmann and S. Das Sarma

Using weak measurements to extract the Z_2 index of a topological insulator *(5 pages)* . . . . . 241109(R)
Zohar Ringel

Kitaev magnetism in honeycomb $RuCl_3$ with intermediate spin-orbit coupling *(5 pages)* . . . . . 241110(R)
Heung-Sik Kim, Vijay Shankar V., Andrei Catuneanu, and Hae-Young Kee

Density functional plus dynamical mean-field theory of the spin-crossover molecule $Fe(phen)_2(NCS)_2$ *(5 pages)* . . . . . 241111(R)
Jia Chen, Andrew J. Millis, and Chris A. Marianetti

Magnetic circular dichroism of nonresonant x-ray Raman scattering *(5 pages)* . . . . . 241112(R)
N. Hiraoka, M. Takahashi, W. B. Wu, C. H. Lai, K. D. Tsuei, and D. J. Huang

Copyright 2015 by American Physical Society

(Continued)

1098-0121(20150615)91:24;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 91, NUMBER 24** **JUNE 2015-15(II)**

Spin fluctuations in the exotic metallic state of Sr_2RuO_4 studied with β-NMR *(6 pages)* . . . . . 241113(R)
D. L. Cortie, T. Buck, M. H. Dehn, R. F. Kiefl, C. D. P. Levy, R. M. L. McFadden, G. D. Morris, M. R. Pearson, Z. Salman, Y. Maeno, and W. A. MacFarlane

Surface versus bulk Dirac state tuning in a three-dimensional topological Dirac semimetal *(5 pages)* . . . . . 241114(R)
Madhab Neupane, Su-Yang Xu, Nasser Alidoust, Raman Sankar, Ilya Belopolski, Daniel S. Sanchez, Guang Bian, Chang Liu, Tay-Rong Chang, Horng-Tay Jeng, BaoKai Wang, Guoqing Chang, Hsin Lin, Arun Bansil, Fangcheng Chou, and M. Zahid Hasan

Computational design of nanoclusters by property-based genetic algorithms: Tuning the electronic properties of $(TiO_2)_n$ clusters *(5 pages)* . . . . . 241115(R)
Saswata Bhattacharya, Benjamin H. Sonin, Christopher J. Jumonville, Luca M. Ghiringhelli, and Noa Marom

Finite-size scaling with modified boundary conditions *(4 pages)* . . . . . 241116(R)
Sandro Sorella

Solving the fermion sign problem in quantum Monte Carlo simulations by Majorana representation *(5 pages)* . . . . 241117(R)
Zi-Xiang Li, Yi-Fan Jiang, and Hong Yao

Efficient continuous-time quantum Monte Carlo algorithm for fermionic lattice models *(5 pages)* . . . . . 241118(R)
Mauro Iazzi and Matthias Troyer

Field-direction control of the type of charge carriers in nonsymmorphic IrO_2 *(5 pages)* . . . . . 241119(R)
M. Uchida, W. Sano, K. S. Takahashi, T. Koretsune, Y. Kozuka, R. Arita, Y. Tokura, and M. Kawasaki

Relation between c-f hybridization and magnetic ordering in $CeRu_2Al_{10}$: An optical conductivity study of $Ce(Ru_{1-x}Rh_x)_2Al_{10}$ ($x \leqslant 0.05$) *(5 pages)* . . . . . 241120(R)
Shin-ichi Kimura, Hiroshi Tanida, Masafumi Sera, Yuji Muro, Toshiro Takabatake, Takashi Nishioka, Masahiro Matsumura, and Riki Kobayashi

Semiconductors I: bulk

Temperature and carrier-density dependence of electron-hole scattering in silicon investigated by optical-pump terahertz-probe spectroscopy *(5 pages)* . . . . . 241201(R)
T. Terashige, H. Yada, Y. Matsui, T. Miyamoto, N. Kida, and H. Okamoto

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

Probing many-body quantum states in single InAs quantum dots: Terahertz and tunneling spectroscopy *(5 pages)* 241301(R)
Y. Zhang, K. Shibata, N. Nagai, C. Ndebeka-Bandou, G. Bastard, and K. Hirakawa

Spin responses and effective Hamiltonian for the two-dimensional electron gas at the oxide interface $LaAlO_3/SrTiO_3$ *(5 pages)* . . . . . 241302(R)
Jianhui Zhou, Wen-Yu Shan, and Di Xiao

Spinless composite fermions in an ultrahigh-quality strained Ge quantum well *(4 pages)* . . . . . 241303(R)
Q. Shi, M. A. Zudov, C. Morrison, and M. Myronov

Metallic state of low-mobility silicon at high carrier density induced by an ionic liquid *(4 pages)* . . . . . 241304(R)
JJ Nelson and A. M. Goldman

Quantum dot nonlinearity through cavity-enhanced feedback with a charge memory *(5 pages)* . . . . . 241305(R)
Morten P. Bakker, Thomas Ruytenberg, Wolfgang Löffler, Ajit Barve, Larry Coldren, Martin P. van Exter, and Dirk Bouwmeester

(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 91, NUMBER 24 JUNE 2015-15(II)

Surface physics, nanoscale physics, low-dimensional systems

Manipulating the magnetic state of a carbon nanotube Josephson junction using the superconducting phase *(5 pages)* . . . . . 241401(R)
R. Delagrange, D. J. Luitz, R. Weil, A. Kasumov, V. Meden, H. Bouchiat, and R. Deblock

Andreev reflection in edge states of time-reversal-invariant Landau levels *(5 pages)* . . . . . 241402(R)
K. G. S. H. Gunawardana and Bruno Uchoa

Dirac cone metric and the origin of the spin connections in monolayer graphene *(4 pages)* . . . . . 241403(R)
Bo Yang

Floquet interface states in illuminated three-dimensional topological insulators *(6 pages)* . . . . . 241404(R)
H. L. Calvo, L. E. F. Foa Torres, P. M. Perez-Piskunow, C. A. Balseiro, and Gonzalo Usaj

Spin relaxation via exchange with donor impurity-bound electrons *(5 pages)* . . . . . 241405(R)
Lan Qing, Jing Li, Ian Appelbaum, and Hanan Dery

Topological transitions in spin interferometers *(5 pages)* . . . . . 241406(R)
Henri Saarikoski, J. Enrique Vázquez-Lozano, José Pablo Baltanás, Fumiya Nagasawa, Junsaku Nitta, and Diego Frustaglia

Revisiting the measurement of the spin relaxation time in graphene-based devices *(5 pages)* . . . . . 241407(R)
H. Idzuchi, A. Fert, and Y. Otani

ARTICLES

Electronic structure and strongly correlated systems

Calculation of magnetic oscillations via the magnetic-field-containing relativistic tight-binding approximation method: Revisiting the de Haas–van Alphen effect *(9 pages)* 245101
Dipendra Bahadur Hamal, Masahiko Higuchi, and Katsuhiko Higuchi

Observation of the Kondo effect in a quadruple quantum dot *(5 pages)* 245102
Runan Shang, Hai-Ou Li, Gang Cao, Guodong Yu, Ming Xiao, Tao Tu, Guang-Can Guo, Hongwen Jiang, A. M. Chang, and Guo-Ping Guo

Ab initio study of the electronic properties and thermodynamic stability of supported and functionalized two-dimensional Sn films *(9 pages)* 245103
Ana Suarez Negreira, William G. Vandenberghe, and Massimo V. Fischetti

Virtual topological insulators with real quantized physics *(12 pages)* 245104
Emil Prodan

First-principles investigation of organic photovoltaic materials C_{60}, C_{70}, [C_{60}]PCBM, and bis-[C_{60}]PCBM using a many-body G_0W_0-Lanczos approach *(8 pages)* 245105
Xiaofeng Qian, Paolo Umari, and Nicola Marzari

Pumping conductance, the intrinsic anomalous Hall effect, and statistics of topological invariants *(12 pages)* 245107
Jan Dahlhaus, Roni Ilan, Daniel Freed, Michael Freedman, and Joel E. Moore

Controlling electric, magnetic, and chiral dipolar emission with PT-symmetric potentials *(9 pages)* 245108
Hadiseh Alaeian and Jennifer A. Dionne

(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 91, NUMBER 24** **JUNE 2015-15(II)**

Quantum phase transition in the $\mathbb{Z}_3$ Kitaev-Potts model *(10 pages)* 245110
Razieh Mohseninia, Saeed S. Jahromi, Laleh Memarzadeh, and Vahid Karimipour

Multiorbital kinetic effects on charge ordering of frustrated electrons on the triangular lattice *(9 pages)* 245111
C. Février, S. Fratini, and A. Ralko

Spin texture of generic helical edge states *(14 pages)* 245112
Alexia Rod, Thomas L. Schmidt, and Stephan Rachel

Influence of Ti doping on the incommensurate charge density wave in $1T$-TaS_2 *(6 pages)* 245113
X. M. Chen, A. J. Miller, C. Nugroho, G. A. de la Peña, Y. I. Joe, A. Kogar, J. D. Brock, J. Geck, G. J. MacDougall, S. L. Cooper, E. Fradkin, D. J. Van Harlingen, and P. Abbamonte

Implications of the band gap problem on oxidation and hydration in acceptor-doped barium zirconate *(13 pages)* 245114
Anders Lindman, Paul Erhart, and Göran Wahnström

Topological Hall effect in thin films of the Heisenberg ferromagnet EuO *(5 pages)* 245115
Y. Ohuchi, Y. Kozuka, M. Uchida, K. Ueno, A. Tsukazaki, and M. Kawasaki

Electronic correlations in Fe at Earth's inner core conditions: Effects of alloying with Ni *(10 pages)* 245116
O. Yu. Vekilova, L. V. Pourovskii, I. A. Abrikosov, and S. I. Simak

Photoinduced in-gap excitations in the one-dimensional extended Hubbard model *(5 pages)* 245117
Hantao Lu, Can Shao, Janez Bonča, Dirk Manske, and Takami Tohyama

Resonant inelastic x-ray scattering study of electronic excitations in insulating $K_{0.83}Fe_{1.53}Se_2$ *(8 pages)* 245118
H. Gretarsson, T. Nomura, I. Jarrige, A. Lupascu, M. H. Upton, Jungho Kim, D. Casa, T. Gog, R. H. Yuan, Z. G. Chen, N.-L. Wang, and Young-June Kim

Phase diagram of the spin-$\frac{1}{2}$ triangular J_1-J_2 Heisenberg model on a three-leg cylinder *(11 pages)* 245119
S. N. Saadatmand, B. J. Powell, and I. P. McCulloch

Exchange-correlation potentials with proper discontinuities for physically meaningful Kohn-Sham eigenvalues and band structures *(10 pages)* 245120
Andreas Görling

Zero-energy bound states in a nodal topological lattice *(6 pages)* 245121
Soo-Yong Lee and Jung Hoon Han

Entanglement entropy near Kondo-destruction quantum critical points *(14 pages)* 245122
J. H. Pixley, Tathagata Chowdhury, M. T. Miecnikowski, Jaimie Stephens, Christopher Wagner, and Kevin Ingersent

Quasiparticle spectrum and plasmonic excitations in the topological insulator Sb_2Te_3 *(8 pages)* 245123
I. A. Nechaev, I. Aguilera, V. De Renzi, A. di Bona, A. Lodi Rizzini, A. M. Mio, G. Nicotra, A. Politano, S. Scalese, Z. S. Aliev, M. B. Babanly, C. Friedrich, S. Blügel, and E. V. Chulkov

Bound states of three fermions forming symmetry-protected topological phases *(7 pages)* 245124
Chong Wang

Phase diagram of the Hubbard model on the anisotropic triangular lattice *(12 pages)* 245125
Manuel Laubach, Ronny Thomale, Christian Platt, Werner Hanke, and Gang Li

(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 91, NUMBER 24** **JUNE 2015-15(II)**

Possible non-Abelian Moore-Read state in double-layer bosonic fractional quantum Hall system *(8 pages)* 245126
W. Zhu, S. S. Gong, D. N. Sheng, and L. Sheng

Many-body effects in topological Kondo insulators *(10 pages)* 245127
Jason Iaconis and Leon Balents

Nonlocal effective medium approximation for metallic nanorod metamaterials *(7 pages)* 245128
Tao Geng, Songlin Zhuang, Jie Gao, and Xiaodong Yang

Fermi surface instabilities in $CeRh_2Si_2$ at high magnetic field and pressure *(9 pages)* 245129
A. Palacio Morales, A. Pourret, G. Seyfarth, M.-T. Suzuki, D. Braithwaite, G. Knebel, D. Aoki, and J. Flouquet

Z_2 gauge theory description of the Mott transition in infinite dimensions *(11 pages)* 245130
Rok Žitko and Michele Fabrizio

Topological color code and symmetry-protected topological phases *(14 pages)* 245131
Beni Yoshida

Ferroelectric properties of charge-ordered α-(BEDT-TTF)$_2$I$_3$ *(7 pages)* 245132
P. Lunkenheimer, B. Hartmann, M. Lang, J. Müller, D. Schweitzer, S. Krohns, and A. Loidl

Berry curvature and orbital angular momentum of electrons in angle-resolved photoemission spectroscopy *(5 pages)* 245133
Ryuji Takahashi and Naoto Nagaosa

Unified theory of spiral magnetism in the harmonic-honeycomb iridates α, β, and γ Li_2IrO_3 *(8 pages)* 245134
Itamar Kimchi, Radu Coldea, and Ashvin Vishwanath

Role of real-space micromotion for bosonic and fermionic Floquet fractional Chern insulators *(12 pages)* 245135
Egidijus Anisimovas, Giedrius Žlabys, Brandon M. Anderson, Gediminas Juzeliūnas, and André Eckardt

Berry phase in cuprate superconductors *(7 pages)* 245136
N. Doiron-Leyraud, T. Szkopek, T. Pereg-Barnea, C. Proust, and G. Gervais

Role of layer packing for the electronic properties of the organic superconductor (BEDT-TTF)$_2$Ag(CF$_3$)$_4$(TCE) *(8 pages)* 245137
Michaela Altmeyer, Roser Valentí, and Harald O. Jeschke

Explicit Hamiltonians inducing volume law for entanglement entropy in fermionic lattices *(13 pages)* 245138
Giacomo Gori, Simone Paganelli, Auditya Sharma, Pasquale Sodano, and Andrea Trombettoni

Chiral spin liquids in arrays of spin chains *(12 pages)* 245139
Gregory Gorohovsky, Rodrigo G. Pereira, and Eran Sela

Photoinduced switching to metallic states in the two-dimensional organic Mott insulator dimethylphenazine-tetrafluorotetracyanoquinodimethane with anisotropic molecular stacks *(10 pages)* 245140
Hiroyuki Matsuzaki, Masa-aki Ohkura, Yu Ishige, Yoshio Nogami, and Hiroshi Okamoto

Quenched crystal-field disorder and magnetic liquid ground states in $Tb_2Sn_{2-x}Ti_xO_7$ *(6 pages)* 245141
B. D. Gaulin, E. Kermarrec, M. L. Dahlberg, M. J. Matthews, F. Bert, J. Zhang, P. Mendels, K. Fritsch, G. E. Granroth, P. Jiramongkolchai, A. Amato, C. Baines, R. J. Cava, and P. Schiffer

(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 91, NUMBER 24** **JUNE 2015-15(II)**

Superconducting gap evolution in overdoped $BaFe_2(As_{1-x}P_x)_2$ single crystals through nanocalorimetry *(5 pages)* 245142
D. Campanini, Z. Diao, L. Fang, W.-K. Kwok, U. Welp, and A. Rydh

Pairing of weakly correlated electrons in the platinum-based centrosymmetric superconductor $SrPt_3P$ *(7 pages)* 245143
T. Shiroka, M. Pikulski, N. D. Zhigadlo, B. Batlogg, J. Mesot, and H.-R. Ott

Imprint of topological degeneracy in quasi-one-dimensional fractional quantum Hall states *(14 pages)* 245144
Eran Sagi, Yuval Oreg, Ady Stern, and Bertrand I. Halperin

Sublattice effect on topological surface states in complex $(SnTe)_{n>1}(Bi_2Te_3)_{m=1}$ compounds *(5 pages)* 245145
S. V. Eremeev, T. V. Menshchikova, I. V. Silkin, M. G. Vergniory, P. M. Echenique, and E. V. Chulkov

Electronic structure of NiO: Antiferromagnetic transition and photoelectron spectra in the ordered phase *(17 pages)* 245146
R. Eder

Excitation spectra and correlation functions of quantum Su-Schrieffer-Heeger models *(11 pages)* 245147
Manuel Weber, Fakher F. Assaad, and Martin Hohenadler

Homotopy theory of strong and weak topological insulators *(10 pages)* 245148
Ricardo Kennedy and Charles Guggenheim

Sensitivity of angle-resolved photoemission to short-range antiferromagnetic correlations *(5 pages)* 245149
R. Wallauer, S. Sanna, E. Lahoud, P. Carretta, and A. Kanigel

Spin-charge-separated quasiparticles in one-dimensional quantum fluids *(24 pages)* 245150
F. H. L. Essler, R. G. Pereira, and I. Schneider

Role of Bloch mode reshaping and disorder correlation length on scattering losses in slow-light photonic crystal waveguides *(10 pages)* 245151
Nishan Mann, Mark Patterson, and Stephen Hughes

Analytical theory for proton correlations in common-water ice I_h *(5 pages)* 245152
S. V. Isakov, R. Moessner, S. L. Sondhi, and D. A. Tennant

Long-lived nonequilibrium states in the Hubbard model with an electric field *(9 pages)* 245153
Alexander V. Joura, J. K. Freericks, and Alexander I. Lichtenstein

Quantum Monte Carlo for correlated out-of-equilibrium nanoelectronic devices *(18 pages)* 245154
Rosario E. V. Profumo, Christoph Groth, Laura Messio, Olivier Parcollet, and Xavier Waintal

Phase transition in bulk single crystals and thin films of VO_2 by nanoscale infrared spectroscopy and imaging *(10 pages)* 245155
Mengkun Liu, Aaron J. Sternbach, Martin Wagner, Tetiana V. Slusar, Tai Kong, Sergey L. Bud'ko, Salinporn Kittiwatanakul, M. M. Qazilbash, Alexander McLeod, Zhe Fei, Elsa Abreu, Jingdi Zhang, Michael Goldflam, Siyuan Dai, Guang-Xin Ni, Jiwei Lu, Hans A. Bechtel, Michael C. Martin, Markus B. Raschke, Richard D. Averitt, Stuart A. Wolf, Hyun-Tak Kim, Paul C. Canfield, and D. N. Basov

Accuracy of downfolding based on the constrained random-phase approximation *(12 pages)* 245156
Hiroshi Shinaoka, Matthias Troyer, and Philipp Werner

(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 91, NUMBER 24** **JUNE 2015-15(II)**

Negative longitudinal magnetoresistance in Dirac and Weyl metals *(11 pages)* 245157
A. A. Burkov

Density functional description of Coulomb blockade: Adiabatic versus dynamic exchange correlation *(8 pages)* 245158
Zhen-Fei Liu and Kieron Burke

Semiconductors I: bulk

Disorder and localization effects on the local spectroscopic and infrared optical properties of $Ga_{1-x}Mn_xAs$ *(7 pages)* 245201
Huawei Gao, Cristian Cernov, T. Jungwirth, and Jairo Sinova

Improved predictions of the physical properties of Zn- and Cd-based wide band-gap semiconductors: A validation of the ACBN0 functional *(9 pages)* 245202
Priya Gopal, Marco Fornari, Stefano Curtarolo, Luis A. Agapito, Laalitha S. I. Liyanage, and Marco Buongiorno Nardelli

Investigation of the dispersion and the effective masses of excitons in bulk $2H$-MoS_2 using transition electron energy-loss spectroscopy *(6 pages)* 245203
Carsten Habenicht, Martin Knupfer, and Bernd Büchner

Crystal and electronic structure of BiTeI, AuTeI, and PdTeI compounds: A dispersion-corrected density-functional study *(12 pages)* 245204
Sümeyra Güler-Kılıç and Çetin Kılıç

Temporal and spatial evolution of nuclear polarization in optically pumped InP *(13 pages)* 245205
J. B. Miller, C. A. Klug, K. L. Sauer, and J. P. Yesinowski

ESR measurements of phosphorus dimers in isotopically enriched ^{28}Si silicon *(10 pages)* 245206
S. Shankar, A. M. Tyryshkin, and S. A. Lyon

Structural and electrical properties of metastable defects in hydrogenated amorphous silicon *(6 pages)* 245207
J. Melskens, A. Schnegg, A. Baldansuren, K. Lips, M. P. Plokker, S. W. H. Eijt, H. Schut, M. Fischer, M. Zeman, and A. H. M. Smets

Role of incoherent dynamics in determining the electrical response of exciton-polaron complexes in pulsed magnetic resonance *(8 pages)* 245208
T. L. Keevers and D. R. McCamey

Strain and electric field control of hyperfine interactions for donor spin qubits in silicon *(8 pages)* 245209
M. Usman, C. D. Hill, R. Rahman, G. Klimeck, M. Y. Simmons, S. Rogge, and L. C. L. Hollenberg

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

Probing charge fluctuator correlations using quantum dot pairs *(8 pages)* 245301
V. Purohit, B. Braunecker, and B. W. Lovett

Fluctuation and commensurability effect of exciton density wave *(6 pages)* 245302
Sen Yang, L. V. Butov, B. D. Simons, K. L. Campman, and A. C. Gossard

Prediction of inelastic light scattering spectra from electronic collective excitations in GaAs/AlGaAs core-multishell nanowires *(9 pages)* 245303
Miquel Royo, Andrea Bertoni, and Guido Goldoni

(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 91, NUMBER 24** **JUNE 2015-15(II)**

Multiexciton dynamics in tailored band-gap quasi-one-dimensional systems *(15 pages)* 245304
J. Szeszko, V. V. Belykh, A. Rudra, B. Dwir, N. N. Sibeldin, and E. Kapon

Hydrogen adsorbed at N-polar InN: Significant changes in the surface electronic properties *(8 pages)* 245305
A. Eisenhardt, S. Krischok, and M. Himmerlich

Theory of box-model hyperfine couplings and transport signatures of long-range nuclear-spin coherence in a quantum-dot spin valve *(16 pages)* 245306
Stefano Chesi and W. A. Coish

First-principles simulations of a graphene-based field-effect transistor *(6 pages)* 245307
Yun-Peng Wang and Hai-Ping Cheng

Voltage bistability of coherent electron injection and nonlinear dynamics of a Bloch oscillation in a semiconductor superlattice *(11 pages)* 245308
C. Minot, V. S. Jagtap, E. Galopin, J. C. Harmand, S. Barbay, and J. Mangeney

Gate-controlled semimetal-topological insulator transition in an InAs/GaSb heterostructure *(6 pages)* 245309
Kyoichi Suzuki, Yuichi Harada, Koji Onomitsu, and Koji Muraki

Bright sink-type localized states in exciton-polariton condensates *(7 pages)* 245310
Michał Kulczykowski, Nataliya Bobrovska, and Michał Matuszewski

Trap-limited carrier recombination in single-walled carbon nanotube heterojunctions with fullerene acceptor layers *(8 pages)* 245311
Andrew J. Ferguson, Anne-Marie Dowgiallo, Dominick J. Bindl, Kevin S. Mistry, Obadiah G. Reid, Nikos Kopidakis, Michael S. Arnold, and Jeffrey L. Blackburn

Imaging ambipolar two-dimensional carriers induced by the spontaneous electric polarization of a polar semiconductor BiTeI *(10 pages)* 245312
Y. Kohsaka, M. Kanou, H. Takagi, T. Hanaguri, and T. Sasagawa

Surface physics, nanoscale physics, low-dimensional systems

Equilibrium segregation patterns and alloying in Cu/Ni nanoparticles: Experiments versus modeling *(11 pages)* 245401
M. Hennes, J. Buchwald, U. Ross, A. Lotnyk, and S. G. Mayr

Transport in indium-decorated graphene *(8 pages)* 245402
U. Chandni, Erik A. Henriksen, and J. P. Eisenstein

Tuning the electronic structure of silicene and germanene by biaxial strain and electric field *(7 pages)* 245403
Jia-An Yan, Shang-Peng Gao, Ryan Stein, and Gregory Coard

Molecule-assisted ferromagnetic atomic chain formation *(7 pages)* 245404
Manohar Kumar, Kiran Kumar Vidya Sethu, and Jan M. van Ruitenbeek

Boltzmann-Langevin theory of Coulomb drag *(12 pages)* 245405
W. Chen, A. V. Andreev, and A. Levchenko

Controllable spin entanglement production in a quantum spin Hall ring *(11 pages)* 245406
Anders Ström, Henrik Johannesson, and Patrik Recher

(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 91, NUMBER 24** **JUNE 2015-15(II)**

Plasmons in spin-polarized graphene: A way to measure spin polarization *(5 pages)* 245407
Amit Agarwal and Giovanni Vignale

Core-shell nanostructure in a $Ge_{0.9}Mn_{0.1}$ film observed via structural and magnetic measurements *(9 pages)* 245408
P. Dalmas de Réotier, E. Prestat, P. Bayle-Guillemaud, M. Boukhari, A. Barski, A. Marty, M. Jamet, A. Suter, T. Prokscha, Z. Salman, E. Morenzoni, and A. Yaouanc

Electrically tunable Dirac-point resonance induced by a nanomagnet absorbed on the topological insulator surface *(5 pages)* 245409
Rui-Qiang Wang, L. Sheng, M. Yang, Baigeng Wang, and D. Y. Xing

Exciton quasicondensation in one-dimensional systems *(8 pages)* 245410
Yochai Werman and Erez Berg

Electronic and geometric structure of graphene/SiC(0001) decoupled by lithium intercalation *(7 pages)* 245411
F. Bisti, G. Profeta, H. Vita, M. Donarelli, F. Perrozzi, P. M. Sheverdyaeva, P. Moras, K. Horn, and L. Ottaviano

Quantum mechanics of a spin-orbit coupled electron constrained to a space curve *(4 pages)* 245412
Carmine Ortix

Portlandite crystal: Bulk, bilayer, and monolayer structures *(8 pages)* 245413
Y. Aierken, H. Sahin, F. Iyikanat, S. Horzum, A. Suslu, B. Chen, R. T. Senger, S. Tongay, and F. M. Peeters

Patterning graphene with a helium ion microscope: Observation of metal-insulator transition induced by disorder *(4 pages)* 245414
E. N. D. Araujo, J. C. Brant, B. S. Archanjo, G. Medeiros-Ribeiro, F. Plentz, and E. S. Alves

Single-valley engineering in graphene superlattices *(8 pages)* 245415
Yafei Ren, Xinzhou Deng, Zhenhua Qiao, Changsheng Li, Jeil Jung, Changgan Zeng, Zhenyu Zhang, and Qian Niu

Keeping a spin qubit alive in natural silicon: Comparing optimal working points and dynamical decoupling *(10 pages)* 245416
S. J. Balian, Ren-Bao Liu, and T. S. Monteiro

Thermal conductance boost in phononic crystal nanostructures *(4 pages)* 245417
Roman Anufriev and Masahiro Nomura

Vortex detection and quantum transport in mesoscopic graphene Josephson-junction arrays *(6 pages)* 245418
C. L. Richardson, S. D. Edkins, G. R. Berdiyorov, C. J. Chua, J. P. Griffiths, G. A. C. Jones, M. R. Buitelaar, V. Narayan, F. Sfigakis, C. G. Smith, L. Covaci, and M. R. Connolly

Counting statistics and dephasing transition in an electronic Mach-Zehnder interferometer *(13 pages)* 245419
A. Helzel, L. V. Litvin, I. P. Levkivskyi, E. V. Sukhorukov, W. Wegscheider, and C. Strunk

Spin texture with a twist in momentum space for Tl/Si(111) *(6 pages)* 245420
Sebastian D. Stolwijk, Kazuyuki Sakamoto, Anke B. Schmidt, Peter Krüger, and Markus Donath

Effective-mass theory for the anisotropic exciton in two-dimensional crystals: Application to phosphorene *(8 pages)* 245421
Elsa Prada, J. V. Alvarez, K. L. Narasimha-Acharya, F. J. Bailen, and J. J. Palacios

(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 91, NUMBER 24** **JUNE 2015-15(II)**

Transport and particle-hole asymmetry in graphene on boron nitride *(9 pages)* 245422
Ashley M. DaSilva, Jeil Jung, Shaffique Adam, and Allan H. MacDonald

Reconstructing phonon mean-free-path contributions to thermal conductivity using nanoscale membranes *(6 pages)* 245423
John Cuffe, Jeffrey K. Eliason, A. A. Maznev, Kimberlee C. Collins, Jeremy A. Johnson, Andrey Shchepetov, Mika Prunnila, Jouni Ahopelto, Clivia M. Sotomayor Torres, Gang Chen, and Keith A. Nelson

Topography of the graphene/Ir(111) moiré studied by surface x-ray diffraction *(6 pages)* 245424
Fabien Jean, Tao Zhou, Nils Blanc, Roberto Felici, Johann Coraux, and Gilles Renaud

Influence of [0001] tilt grain boundaries on the destruction of the quantum Hall effect in graphene *(6 pages)* 245425
Anders Bergvall, Johan M. Carlsson, and Tomas Löfwander

Formation of a mixed ordered termination on the surface of $LaAlO_3$(001) *(6 pages)* 245426
A. J. H. van der Torren, S. J. van der Molen, and J. Aarts

Magnetic exchange and nonequilibrium spin current through interacting quantum dots *(14 pages)* 245427
Silas Hoffman and Yaroslav Tserkovnyak

Theory of unconventional spin states in surfaces with non-Rashba spin-orbit interaction *(9 pages)* 245428
Kokin Nakajin and Shuichi Murakami

Effect of broadening in the weak-coupling limit of vibrationally coupled electron transport through molecular junctions and the analogy to quantum dot circuit QED systems *(11 pages)* 245429
Rainer Härtle and Manas Kulkarni

Magnetic adatoms as memory bits: A quantum master equation analysis *(13 pages)* 245430
Christian Karlewski, Michael Marthaler, Tobias Märkl, Timofey Balashov, Wulf Wulfhekel, and Gerd Schön

Modified Schottky emission to explain thickness dependence and slow depolarization in $BaTiO_3$ nanowires *(9 pages)* 245431
Y. Qi, J. M. P. Martirez, Wissam A. Saidi, J. J. Urban, W. S. Yun, J. E. Spanier, and A. M. Rappe

Chiral properties of topological-state loops *(6 pages)* 245432
Marko M. Grujić, Milan Ž. Tadić, and François M. Peeters

Adsorption of metal nanoparticles on carbon substrates and epitaxial graphene: Assessing models for dispersion forces *(21 pages)* 245433
G. D. Förster, F. Rabilloud, and F. Calvo

Atomic structure and mechanical properties of carbyne *(7 pages)* 245434
A. Timoshevskii, S. Kotrechko, and Yu. Matviychuk

Separation of heat and charge currents for boosted thermoelectric conversion *(11 pages)* 245435
Francesco Mazza, Stefano Valentini, Riccardo Bosisio, Giuliano Benenti, Vittorio Giovannetti, Rosario Fazio, and Fabio Taddei

Orbital Josephson interference in a nanowire proximity-effect junction *(14 pages)* 245436
Kaveh Gharavi and Jonathan Baugh