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 87, NUMBER 24 *CONTENTS* **JUNE 2013-15(II)**

RAPID COMMUNICATIONS

Electronic structure and strongly correlated systems

Formation of orbital-selective electron states in $LaTiO_3/SrTiO_3$ superlattices *(5 pages)* . . . . . 241101(R)
Frank Lechermann, Lewin Boehnke, and Daniel Grieger

Evolution of magnetic interactions in a pressure-induced Jahn-Teller driven magnetic dimensionality switch *(5 pages)* . . . . . 241102(R)
S. Ghannadzadeh, J. S. Möller, P. A. Goddard, T. Lancaster, F. Xiao, S. J. Blundell, A. Maisuradze, R. Khasanov, J. L. Manson, S. W. Tozer, D. Graf, and J. A. Schlueter

Understanding the entanglement entropy and spectra of 2D quantum systems through arrays of coupled 1D chains *(5 pages)* . . . . . 241103(R)
Andrew J. A. James and Robert M. Konik

Transport characterization of Kondo-correlated single-molecule devices *(6 pages)* . . . . . 241104(R)
G. D. Scott, D. Natelson, S. Kirchner, and E. Muñoz

Why MgFeGe is not a superconductor *(4 pages)* . . . . . 241105(R)
Harald O. Jeschke, I. I. Mazin, and Roser Valentí

Spectroscopic indications of polaronic behavior of the strong spin-orbit insulator $Sr_3Ir_2O_7$ *(6 pages)* . . . . . 241106(R)
P. D. C. King, T. Takayama, A. Tamai, E. Rozbicki, S. McKeown Walker, M. Shi, L. Patthey, R. G. Moore, D. Lu, K. M. Shen, H. Takagi, and F. Baumberger

Mott transition extremely sensitive to impurities in $Ca_3Ru_2O_7$ revealed by hard x-ray photoemission studies *(5 pages)* 241107(R)
S. Tsuda, N. Kikugawa, K. Sugii, S. Uji, S. Ueda, M. Nishio, and Y. Maeno

Flat bands with Berry curvature in multilayer graphene *(4 pages)* . . . . . 241108(R)
Akshay Kumar and Rahul Nandkishore

Semiconductors I: bulk

Bowing of the defect formation energy in semiconductor alloys *(5 pages)* . . . . . 241201(R)
Jie Ma and Su-Huai Wei

Exciton interaction with a spatially defined charge accumulation layer in the organic semiconductor diindenoperylene *(5 pages)* . . . . . 241202(R)
N. H. Hansen, C. Wunderlich, A. K. Topczak, E. Rohwer, H. Schwoerer, and J. Pflaum

Copyright 2013 by American Physical Society

(Continued)

1098-0121(20130615)87:24;1-D

Selected for a Viewpoint in *Physics*. Please visit http://physics.aps.org/.

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 87, NUMBER 24 JUNE 2013-15(II)

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

Excitonic Rabi oscillations in self-assembled quantum dots in the presence of a local field effect *(4 pages)* . . . . . 241301(R)
Kenta Asakura, Yasuyoshi Mitsumori, Hideo Kosaka, Keiichi Edamatsu, Kouichi Akahane, Naokatsu Yamamoto, Masahide Sasaki, and Naoki Ohtani

Postselected indistinguishable single-photon emission from the Mollow triplet sidebands of a resonantly excited quantum dot *(5 pages)* . . . . . 241302(R)
S. Weiler, D. Stojanovic, S. M. Ulrich, M. Jetter, and P. Michler

Optimal local control of coherent dynamics in custom-made nanostructures *(5 pages)* . . . . . 241303(R)
Thomas Blasi, Mario F. Borunda, Esa Räsänen, and Eric J. Heller

Terahertz lasing from intersubband polariton-polariton scattering in asymmetric quantum wells *(5 pages)* . . . . . 241304(R)
Simone De Liberato, Cristiano Ciuti, and Chris C. Phillips

Surface physics, nanoscale physics, low-dimensional systems

Superconductor-nanowire devices from tunneling to the multichannel regime: Zero-bias oscillations and magnetoconductance crossover *(6 pages)* . . . . . 241401(R)
H. O. H. Churchill, V. Fatemi, K. Grove-Rasmussen, M. T. Deng, P. Caroff, H. Q. Xu, and C. M. Marcus

Kondo effect in a quantum dot side-coupled to a topological superconductor *(5 pages)* . . . . . 241402(R)
Minchul Lee, Jong Soo Lim, and Rosa López

Currents and pseudomagnetic fields in strained graphene rings *(5 pages)* . . . . . 241403(R)
D. Faria, A. Latgé, S. E. Ulloa, and N. Sandler

Engineering quantum spin Hall effect in graphene nanoribbons via edge functionalization *(5 pages)* . . . . . 241404(R)
Gabriel Autès and Oleg V. Yazyev

Proposal for the detection and braiding of Majorana fermions in a quantum spin Hall insulator *(5 pages)* . . . . . 241405(R)
Shuo Mi, D. I. Pikulin, M. Wimmer, and C. W. J. Beenakker

Band-edge exciton states in a single-walled carbon nanotube revealed by magneto-optical spectroscopy in ultrahigh magnetic fields *(4 pages)* . . . . . 241406(R)
Weihang Zhou, Tatsuya Sasaki, Daisuke Nakamura, Huaping Liu, Hiromichi Kataura, and Shojiro Takeyama

Orbital anisotropy in paramagnetic manganese oxide nanostripes *(5 pages)* . . . . . 241407(R)
S. Altieri, F. Allegretti, W. Steurer, S. Surnev, M. Finazzi, V. Sessi, N. B. Brookes, S. Valeri, and F. P. Netzer

Phonon-mediated superconductivity in electron-doped single-layer MoS_2: A first-principles prediction *(5 pages)* 241408(R)
Yizhi Ge and Amy Y. Liu

Controllable valley and spin transport in ferromagnetic silicene junctions *(4 pages)* . . . . . 241409(R)
Takehito Yokoyama

Confined plasmons in graphene microstructures: Experiments and theory *(5 pages)* . . . . . 241410(R)
Jared H. Strait, Parinita Nene, Wei-Min Chan, Christina Manolatou, Sandip Tiwari, Farhan Rana, Joshua W. Kevek, and Paul L. McEuen

Electronic thermal conductivity measurements in intrinsic graphene *(5 pages)* . . . . . 241411(R)
S. Yiğen, V. Tayari, J. O. Island, J. M. Porter, and A. R. Champagne

(Continued)

Selected for a Viewpoint in *Physics*. Please visit http://physics.aps.org/.

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 87, NUMBER 24** **JUNE 2013-15(II)**

Heat diode effect and negative differential thermal conductance across nanoscale metal-dielectric interfaces *(5 pages)* . . . . . 241412(R)
Jie Ren and Jian-Xin Zhu

Fermi gas behavior of a one-dimensional metallic band of Pt-induced nanowires on Ge(001) *(5 pages)* . . . . . 241413(R)
K. Yaji, I. Mochizuki, S. Kim, Y. Takeichi, A. Harasawa, Y. Ohtsubo, P. Le Fèvre, F. Bertran, A. Taleb-Ibrahimi, A. Kakizaki, and F. Komori

Excitation spectroscopy of few-electron states in artificial diatomic molecules *(4 pages)* . . . . . 241414(R)
T. Hatano, Y. Tokura, S. Amaha, T. Kubo, S. Teraoka, and S. Tarucha

ARTICLES

Electronic structure and strongly correlated systems

Extremely correlated Fermi liquids: Self-consistent solution of the second-order theory *(11 pages)* 245101
Daniel Hansen and B. Sriram Shastry

Inhomogeneous superconducting phases in the frustrated Kondo-Heisenberg chain *(14 pages)* 245102
Ariel Dobry, Akbar Jaefari, and Eduardo Fradkin

Measuring the quantum geometry of Bloch bands with current noise *(5 pages)* 245103
Titus Neupert, Claudio Chamon, and Christopher Mudry

Anisotropic Dirac electronic structures of AMnBi$_2$ (A = Sr,Ca) *(10 pages)* 245104
Geunsik Lee, Muhammad A. Farhan, Jun Sung Kim, and Ji Hoon Shim

Disorder-controlled superconductivity at $YBa_2Cu_3O_7/SrTiO_3$ interfaces *(4 pages)* 245105
J. Garcia-Barriocanal, A. M. Perez-Muñoz, Z. Sefrioui, D. Arias, M. Varela, C. Leon, S. J. Pennycook, and J. Santamaria

Mechanisms for sub-gap optical conductivity in Herbertsmithite *(13 pages)* 245106
Andrew C. Potter, T. Senthil, and Patrick A. Lee

Reduced density matrix after a quantum quench *(22 pages)* 245107
Maurizio Fagotti and Fabian H. L. Essler

Electronic structure and chemical bonding in PuO_2 *(13 pages)* 245108
Yu. A. Teterin, K. I. Maslakov, A. Yu. Teterin, K. E. Ivanov, M. V. Ryzhkov, V. G. Petrov, D. A. Enina, and St. N. Kalmykov

Dimensionality-controlled Mott transition and correlation effects in single-layer and bilayer perovskite iridates *(6 pages)* 245109
Q. Wang, Y. Cao, J. A. Waugh, S. R. Park, T. F. Qi, O. B. Korneta, G. Cao, and D. S. Dessau

Coexistence of Dirac and massive carriers in α-(BEDT-TTF)$_2$I$_3$ under hydrostatic pressure *(5 pages)* 245110
M. Monteverde, M. O. Goerbig, P. Auban-Senzier, F. Navarin, H. Henck, C. R. Pasquier, C. Mézière, and P. Batail

Optical phonons and the soft mode in 2H-NbSe$_2$ *(8 pages)* 245111
F. Weber, R. Hott, R. Heid, K.-P. Bohnen, S. Rosenkranz, J.-P. Castellan, R. Osborn, A. H. Said, B. M. Leu, and D. Reznik

(Continued)

Selected for a Viewpoint in *Physics*. Please visit http://physics.aps.org/.

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 87, NUMBER 24** **JUNE 2013-15(II)**

Helical Fermi arcs and surface states in time-reversal invariant Weyl semimetals *(5 pages)* 245112
Teemu Ojanen

Universal origin of unconventional $1/f$ noise in the weak-localization regime *(6 pages)* 245113
C. Barone, F. Romeo, A. Galdi, P. Orgiani, L. Maritato, A. Guarino, A. Nigro, and S. Pagano

Band structure tunability in MoS_2 under interlayer compression: A DFT and *GW* study *(8 pages)* 245114
C. Espejo, T. Rangel, A. H. Romero, X. Gonze, and G.-M. Rignanese

Magnetic field effects on the finite-frequency noise and ac conductance of a Kondo quantum dot out of equilibrium *(18 pages)* 245115
Sarah Y. Müller, Mikhail Pletyukhov, Dirk Schuricht, and Sabine Andergassen

Excited states in polydiacetylene chains: A density matrix renormalization group study *(16 pages)* 245116
Gergely Barcza, William Barford, Florian Gebhard, and Örs Legeza

First-principles study of compensation mechanisms in negatively charged $LaGaO_3/MgAl_2O_4$ interfaces *(10 pages)* 245117
Alejandro Rébola, Dillon D. Fong, Jeffrey A. Eastman, Serdar Öğüt, and Peter Zapol

Many-body quasiparticle spectrum of Co-doped ZnO: A *GW* perspective *(7 pages)* 245118
I. Abdolhosseini Sarsari, C. D. Pemmaraju, Hadi Salamati, and S. Sanvito

One-dimensional lattice model with an exact matrix-product ground state describing the Laughlin wave function *(9 pages)* 245119
Zheng-Yuan Wang and Masaaki Nakamura

Effective theory of fractional topological insulators in two spatial dimensions *(28 pages)* 245120
Predrag Nikolić

Origin and transport signatures of spin-orbit interactions in one- and two-dimensional $SrTiO_3$-based heterostructures *(11 pages)* 245121
Younghyun Kim, Roman M. Lutchyn, and Chetan Nayak

Common quantum phase transition in quasicrystals and heavy-fermion metals *(5 pages)* 245122
V. R. Shaginyan, A. Z. Msezane, K. G. Popov, G. S. Japaridze, and V. A. Khodel

Quantum Hall effect of two-component bosons at fractional and integral fillings *(14 pages)* 245123
Ying-Hai Wu and Jainendra K. Jain

Boson peak in overdoped manganites $La_{1-x}Ca_xMnO_3$ *(5 pages)* 245124
B. Gorshunov, E. Zhukova, V. I. Torgashev, L. S. Kadyrov, E. A. Motovilova, F. Fischgrabe, V. Moshnyaga, T. Zhang, R. Kremer, U. Pracht, S. Zapf, and M. Dressel

Tripartite composite fermion states *(16 pages)* 245125
G. J. Sreejith, Ying-Hai Wu, A. Wójs, and J. K. Jain

Topological insulators in transition-metal intercalated graphene: The role of *d* electrons in significantly increasing the spin-orbit gap *(5 pages)* 245127
Yuanchang Li, Peizhe Tang, Pengcheng Chen, Jian Wu, Bing-Lin Gu, Ying Fang, S. B. Zhang, and Wenhui Duan

(Continued)

Selected for a Viewpoint in *Physics*. Please visit http://physics.aps.org/.

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 87, NUMBER 24** **JUNE 2013-15(II)**

Drude weight of the spin-$\frac{1}{2}$ XXZ chain: Density matrix renormalization group versus exact diagonalization *(10 pages)* 245128
C. Karrasch, J. Hauschild, S. Langer, and F. Heidrich-Meisner

More realistic Hamiltonians for the fractional quantum Hall regime in GaAs and graphene *(16 pages)* 245129
Michael R. Peterson and Chetan Nayak

Production of minimally entangled typical thermal states with the Krylov-space approach *(6 pages)* 245130
G. Alvarez

Magneto-optical conductivity of Weyl semimetals *(6 pages)* 245131
Phillip E. C. Ashby and J. P. Carbotte

Analytic wave functions for neutral bulk excitations in fractional quantum Hall fluids *(6 pages)* 245132
Bo Yang

Probing the Rashba effect via the induced magnetization around a Kondo impurity *(7 pages)* 245133
R. Chirla, C. P. Moca, and I. Weymann

Ballistic charge transport in graphene and light propagation in periodic dielectric structures with metamaterials: A comparative study *(14 pages)* 245134
Yury P. Bliokh, Valentin Freilikher, and Franco Nori

Padé approximant approach for obtaining finite-temperature spectral functions of quantum impurity models using the numerical renormalization group technique *(18 pages)* 245135
Žiga Osolin and Rok Žitko

Atomic multiplets at the $L_{2,3}$ edge of 3*d* transition metals and the ligand K edge in x-ray absorption spectroscopy of ionic systems *(8 pages)* 245136
P. Olalde-Velasco, J. Jiménez-Mier, J. Denlinger, and W.-L. Yang

Semiconductors I: bulk

Cationic vacancies and anomalous spectral-weight transfer in $Ti_{1-x}Ta_xO_2$ thin films studied via polarization-dependent near-edge x-ray absorption fine structure spectroscopy *(9 pages)* 245201
Dong-Chen Qi, Arkajit Roy Barman, Lamjed Debbichi, S. Dhar, Iman Santoso, Teguh Citra Asmara, Humair Omer, Kesong Yang, Peter Krüger, Andrew T. S Wee, T. Venkatesan, and Andrivo Rusydi

Signatures of coherent propagation of blue polaritons in Cu_2O *(6 pages)* 245202
Johannes Schmutzler, Dietmar Fröhlich, and Manfred Bayer

Intrinsic point defects in $CuInSe_2$ and $CuGaSe_2$ as seen via screened-exchange hybrid density functional theory *(16 pages)* 245203
Johan Pohl and Karsten Albe

Nearly hyperuniform network models of amorphous silicon *(6 pages)* 245204
Miroslav Hejna, Paul J. Steinhardt, and Salvatore Torquato

Native defects and hydrogen impurities in Ag_3PO_4 *(5 pages)* 245205
Pakpoom Reunchan and Naoto Umezawa

Ab initio characterization of a Ni-related defect in diamond: The W8 center *(5 pages)* 245206
Thomas Chanier and Adam Gali

(Continued)

Selected for a Viewpoint in *Physics*. Please visit http://physics.aps.org/.

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 87, NUMBER 24 JUNE 2013-15(II)

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

Bipolar-driven large linear magnetoresistance in silicon at low magnetic fields *(4 pages)* 245301
Michael P. Delmo, Eiji Shikoh, Teruya Shinjo, and Masashi Shiraishi

Giant corrugations in Bi_2Se_3 layers grown on high-index InP substrates *(9 pages)* 245302
Y. Takagaki, B. Jenichen, and J. Tominaga

Origin of negative magnetoresistance of GaAs/(Ga,Mn)As core-shell nanowires *(6 pages)* 245303
Christian Butschkow, Elisabeth Reiger, Andreas Rudolph, Stefan Geißler, Daniel Neumaier, Marcello Soda, Dieter Schuh, Georg Woltersdorf, Werner Wegscheider, and Dieter Weiss

Anomalous D'yakonov-Perel' spin relaxation in semiconductor quantum wells under a strong magnetic field in the Voigt configuration *(6 pages)* 245304
Y. Zhou, T. Yu, and M. W. Wu

Efficient upconverted photocurrent through an Auger process in disklike InAs quantum structures for intermediate-band solar cells *(7 pages)* 245305
David M. Tex, Itaru Kamiya, and Yoshihiko Kanemitsu

Spin dynamics of a Mn atom in a semiconductor quantum dot under resonant optical excitation *(9 pages)* 245306
S. Jamet, H. Boukari, and L. Besombes

First-principles analysis of MoS_2/Ti_2C and MoS_2/Ti_2CY_2 (Y = F and OH) all-2D semiconductor/metal contacts *(7 pages)* 245307
Li-Yong Gan, Yu-Jun Zhao, Dan Huang, and Udo Schwingenschlögl

Terahertz photovoltaic detection of cyclotron resonance in the regime of radiation-induced magnetoresistance oscillations *(8 pages)* 245308
R. G. Mani, A. N. Ramanayaka, Tianyu Ye, M. S. Heimbeck, H. O. Everitt, and W. Wegscheider

Thermally induced spin polarization of a two-dimensional electron gas *(5 pages)* 245309
A. Dyrdał, M. Inglot, V. K. Dugaev, and J. Barnaś

Nonequilibrium quantum transport through a dissipative resonant level *(19 pages)* 245310
Chung-Hou Chung, Karyn Le Hur, Gleb Finkelstein, Matthias Vojta, and Peter Wölfle

Controlling edge state transport in a HgTe topological insulator by superlattice effect *(7 pages)* 245311
L.-Z. Lin, F. Cheng, L. B. Zhang, D. Zhang, and Wen Yang

Quasiparticle band structures and interface physics of SnS and GeS *(7 pages)* 245312
Brad D. Malone and Efthimios Kaxiras

Influence of Förster interaction on light emission statistics in hybrid systems *(11 pages)* 245313
T. Sverre Theuerholz, Alexander Carmele, Marten Richter, and Andreas Knorr

Steering photon statistics in single quantum dots: From one- to two-photon emission *(9 pages)* 245314
G. Callsen, A. Carmele, G. Hönig, C. Kindel, J. Brunnmeier, M. R. Wagner, E. Stock, J. S. Reparaz, A. Schliwa, S. Reitzenstein, A. Knorr, A. Hoffmann, S. Kako, and Y. Arakawa

Fractional quantum Hall effect in a tilted magnetic field *(9 pages)* 245315
Z. Papić

(Continued)

Selected for a Viewpoint in *Physics*. Please visit http://physics.aps.org/.

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 87, NUMBER 24** **JUNE 2013-15(II)**

Influence of exciton spin relaxation on the photoluminescence spectra of semimagnetic quantum dots *(12 pages)* 245316
Ł. Kłopotowski, Ł. Cywiński, M. Szymura, V. Voliotis, R. Grousson, P. Wojnar, K. Fronc, T. Kazimierczuk, A. Golnik, G. Karczewski, and T. Wojtowicz

Surface physics, nanoscale physics, low-dimensional systems

Transition between direct and indirect band gap in silicon nanocrystals *(9 pages)* 245401
V. Kocevski, O. Eriksson, and J. Rusz

Accuracy of exchange-correlation functionals and effect of solvation on the surface energy of copper *(7 pages)* 245402
Matthew Fishman, Houlong L. Zhuang, Kiran Mathew, William Dirschka, and Richard G. Hennig

Emergent momentum scale, localization, and van Hove singularities in the graphene twist bilayer *(10 pages)* 245403
S. Shallcross, S. Sharma, and O. Pankratov

Inelastic electron tunneling spectroscopy at local defects in graphene *(7 pages)* 245404
J. Fransson, J.-H. She, L. Pietronero, and A. V. Balatsky

Effects of steps and ordered defects on Cu(110) surface states *(6 pages)* 245405
P. D. Lane, D. S. Martin, D. Hesp, G. E. Isted, and R. J. Cole

Origins of conductance anomalies in a *p*-type GaAs quantum point contact *(9 pages)* 245406
Y. Komijani, M. Csontos, T. Ihn, K. Ensslin, Y. Meir, D. Reuter, and A. D. Wieck

First-principles quantum transport with electron-vibration interactions: A maximally localized Wannier functions approach *(11 pages)* 245407
Sejoong Kim and Nicola Marzari

Generic miniband structure of graphene on a hexagonal substrate *(7 pages)* 245408
J. R. Wallbank, A. A. Patel, M. Mucha-Kruczyński, A. K. Geim, and V. I. Fal'ko

Quantification of curvature effects in boron and carbon nanotubes: Band structures and ballistic current *(9 pages)* 245409
Viktor Bezugly, Hagen Eckert, Jens Kunstmann, Felix Kemmerich, Hakim Meskine, and Gianaurelio Cuniberti

Spin-pumping and inelastic electron tunneling spectroscopy in topological insulators *(5 pages)* 245410
Aaron Hurley, Awadhesh Narayan, and Stefano Sanvito

Transport and STM studies of hyperbolic surface states of topological insulators *(7 pages)* 245411
Udit Khanna, Saurabh Pradhan, and Sumathi Rao

Resonant hot charge-transfer excitations in fullerene-porphyrin complexes: Many-body Bethe-Salpeter study *(10 pages)* 245412
Ivan Duchemin and Xavier Blase

Friedel oscillations at the Dirac cone merging point in anisotropic graphene and graphenelike materials *(10 pages)* 245413
Clément Dutreix, Liviu Bilteanu, Anu Jagannathan, and Cristina Bena

Low-energy electron reflectivity of graphene on copper and other substrates *(19 pages)* 245414
N. Srivastava, Qin Gao, M. Widom, R. M. Feenstra, Shu Nie, K. F. McCarty, and I. V. Vlassiouk

Optimizing atomic resolution of force microscopy in ambient conditions *(10 pages)* 245415
Daniel S. Wastl, Alfred J. Weymouth, and Franz J. Giessibl

(Continued)

Selected for a Viewpoint in *Physics*. Please visit http://physics.aps.org/.

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 87, NUMBER 24** **JUNE 2013-15(II)**

Resonant manifestations of chiral excitons in Faraday and Kerr effects in a topological insulator film *(7 pages)* . . . 245416
D. K. Efimkin and Yu. E. Lozovik

Interplay between quantum confinement and dielectric mismatch for ultrashallow dopants *(7 pages)* 245417
J. A. Mol, J. Salfi, J. A. Miwa, M. Y. Simmons, and S. Rogge

Rigidity of the conductance of an anchored dithioazobenzene optomechanical switch *(8 pages)* 245418
M. Zemanová Dieśková, I. Štich, and P. Bokes

Spin current pumping in helical Luttinger liquids *(9 pages)* 245419
D. Ferraro, G. Dolcetto, R. Citro, F. Romeo, and M. Sassetti

Selenium adsorption on Mo(110): A first-principles investigation *(9 pages)* 245420
Guido Roma and Letizia Chiodo

Spin-orbit-mediated spin relaxation in monolayer MoS_2 *(8 pages)* 245421
H. Ochoa and R. Roldán

Suppression of surface p-wave superconductivity in disordered topological insulators *(7 pages)* 245422
G. Tkachov

Thermoelectric performance of a driven double quantum dot *(14 pages)* 245423
Stefan Juergens, Federica Haupt, Michael Moskalets, and Janine Splettstoesser

Hybrid particle-in-cell/molecular dynamics simulation of swift-ion tracks in LiF *(9 pages)* 245424
Yaroslav Cherednikov, Si Neng Sun, and Herbert M. Urbassek

Landau level mixing and the fractional quantum Hall effect *(15 pages)* 245425
I. Sodemann and A. H. MacDonald

Interplay of Aharonov-Bohm and Berry phases in gate-defined graphene quantum dots *(7 pages)* 245426
Julia Heinl, Martin Schneider, and Piet W. Brouwer

Spin-polarized $\nu = 0$ state of graphene: A spin superconductor *(5 pages)* 245427
Qing-feng Sun and X. C. Xie

Screening and gap generation in bilayer graphene *(14 pages)* 245428
T. Stroucken, J. H. Grönqvist, and S. W. Koch

All-optical Hall effect by the dynamic toroidal moment in a cavity-based metamaterial *(5 pages)* 245429
Zheng-Gao Dong, Jie Zhu, Xiaobo Yin, Jiaqi Li, Changgui Lu, and Xiang Zhang

Absence of a Dirac cone in silicene on Ag(111): First-principles density functional calculations with a modified effective band structure technique *(5 pages)* 245430
Yun-Peng Wang and Hai-Ping Cheng

Effective models for strong correlations and edge magnetism in graphene *(12 pages)* 245431
Manuel J. Schmidt, Michael Golor, Thomas C. Lang, and Stefan Wessel

Anomalous phase relations of quantum size effects in ultrathin Pb films on Si(111) *(6 pages)* 245432
Jisun Kim, Chendong Zhang, Jungdae Kim, Hongjun Gao, Mei-Yin Chou, and Chih-Kang Shih

Resonance-enhanced inelastic He-atom scattering from subsurface optical phonons of Bi(111) *(7 pages)* 245433
Patrick Kraus, Anton Tamtögl, Michael Mayrhofer-Reinhartshuber, Giorgio Benedek, and Wolfgang E. Ernst

(Continued)

Selected for a Viewpoint in *Physics*. Please visit http://physics.aps.org/.

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 87, NUMBER 24** **JUNE 2013-15(II)**

Polyatomic bismuth impacts into germanium: Molecular dynamics study *(8 pages)* 245434
Christian Anders, Karl-Heinz Heinig, and Herbert M. Urbassek

Transport across a junction of topological insulators and a superconductor *(15 pages)* 245435
Abhiram Soori, Oindrila Deb, K. Sengupta, and Diptiman Sen

Rashba-type spin splitting from interband scattering in quasiparticle interference maps *(5 pages)* 245436
Manuel Steinbrecher, Hasmik Harutyunyan, Christian R. Ast, and Daniel Wegner

Persistent current induced by vacuum fluctuations in a quantum ring *(6 pages)* 245437
O. V. Kibis, O. Kyriienko, and I. A. Shelykh

Selected for a Viewpoint in *Physics*. Please visit http://physics.aps.org/.

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).