PHYSICAL REVIEW B **THIRD SERIES, VOLUME 81, NUMBER 12** **MARCH 2010-15(II)**

Erratum: *Ab initio* study of subsurface diffusion of Cu on the H-passivated Si(001) surface [Phys. Rev. B **80**, 155426 (2009)] *(2 pages)* . . . . . 129902(E)
A. Rodriguez-Prieto and D. R. Bowler

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 81, NUMBER 12 MARCH 2010-15(II)

Atomic superlattice formation mechanism revealed by scanning tunneling microscopy and kinetic Monte Carlo simulations *(7 pages)* 125438
X. P. Zhang, B. F. Miao, L. Sun, C. L. Gao, An Hu, H. F. Ding, and J. Kirschner

Si/Ge exchange mechanisms at the Ge(105) surface *(5 pages)* 125439
S. Cereda and F. Montalenti

Kinetic model for the long term stability of contaminated monoatomic nanowires *(12 pages)* 125440
P. Vélez, S. A. Dassie, and E. P. M. Leiva

Calculation of tip enhanced Raman scattering caused by nanoparticle plasmons acting on a molecule placed near a metallic film *(16 pages)* 125441
Pavel I. Geshev, Ulrich Fischer, and Harald Fuchs

Boron nitride formation on magnesium studied by *ab initio* calculations *(10 pages)* 125442
S. Riikonen, A. S. Foster, A. V. Krasheninnikov, and R. M. Nieminen

Surface core-level shifts on clean Si(001) and Ge(001) studied with photoelectron spectroscopy and density functional theory calculations *(6 pages)* 125443
P. E. J. Eriksson and R. I. G. Uhrberg

Response of nanoparticle structure to different types of surface environments: Wide-angle x-ray scattering and molecular dynamics simulations *(6 pages)* 125444
Hengzhong Zhang, Bin Chen, Yang Ren, Glenn A. Waychunas, and Jillian F. Banfield

First-principles study of graphene edge properties and flake shapes *(8 pages)* 125445
Chee Kwan Gan and David J. Srolovitz

Gundlach oscillations and Coulomb blockade of Co nanoislands on MgO/Mo(100) investigated by scanning tunneling spectroscopy at 300 K *(7 pages)* 125446
C. Pauly, M. Grob, M. Pezzotta, M. Pratzer, and M. Morgenstern

Effects of bonding type and interface geometry on coherent transport through the single-molecule magnet Mn_{12} *(12 pages)* 125447
Kyungwha Park, Salvador Barraza-Lopez, Víctor M. García-Suárez, and Jaime Ferrer

Structural and magnetic properties of $Tc_n@C_{60}$ endohedral metalofullerenes: First-principles predictions *(5 pages)* 125448
Philippe F. Weck, Eunja Kim, Kenneth R. Czerwinski, and David Tománek

COMMENTS

Comment on "Imaging the atomic orbitals of carbon atomic chains with field-emission electron microscopy" *(2 pages)* 127401
Nicola Manini and Giovanni Onida

Reply to "Comment on 'Imaging the atomic orbitals of carbon atomic chains with field-emission electron microscopy' " *(2 pages)* 127402
I. M. Mikhailovskij, E. V. Sadanov, T. I. Mazilova, V. A. Ksenofontov, and O. A. Velicodnaja

ERRATA

Publisher's Note: Surface-induced polarity inversion in ZnO nanowires [Phys. Rev. B **80**, 201304(R) (2009)] *(1 page)* . . . . . 129901(E)
Giancarlo Cicero, Andrea Ferretti, and Alessandra Catellani

(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 81, NUMBER 12 MARCH 2010-15(II)

Observation of Raman *G*-band splitting in top-doped few-layer graphene *(7 pages)* 125421
Matteo Bruna and Stefano Borini

Electrical conductance of Rh atomic contacts under electrochemical potential control *(5 pages)* 125422
Tatsuya Konishi, Manabu Kiguchi, and Kei Murakoshi

Density functional theory study of clean, hydrated, and defective alumina $(1\bar{1}02)$ surfaces *(16 pages)* 125423
Sara E. Mason, Christopher R. Iceman, Thomas P. Trainor, and Anne M. Chaka

Induced chiral Dirac fermions in graphene by a periodically modulated magnetic field *(6 pages)* 125424
Lei Xu, Jin An, and Chang-De Gong

Migration of gold atoms in graphene ribbons: Role of the edges *(5 pages)* 125425
Wei Zhang, Litao Sun, Zijian Xu, Arkady V. Krasheninnikov, Ping Huai, Zhiyuan Zhu, and F. Banhart

Spin relaxation due to deflection coupling in nanotube quantum dots *(11 pages)* 125426
Mark S. Rudner and Emmanuel I. Rashba

Structural analysis of multilayer graphene via atomic moiré interferometry *(6 pages)* 125427
David L. Miller, Kevin D. Kubista, Gregory M. Rutter, Ming Ruan, Walt A. de Heer, Phillip N. First, and Joseph A. Stroscio

Theory of pseudospin excitations in coaxial nanotubes *(10 pages)* 125428
B. Scharf, J. Fabian, and A. Matos-Abiague

Magnetotransport in anisotropic Pb films and monolayers *(7 pages)* 125429
D. Lükermann, M. Gauch, M. Czubanowski, H. Pfnür, and C. Tegenkamp

Nonequilibrium quantum criticality in bilayer itinerant ferromagnets *(17 pages)* 125430
So Takei, William Witczak-Krempa, and Yong Baek Kim

Finite-element modeling of spontaneous emission of a quantum emitter at nanoscale proximity to plasmonic waveguides *(11 pages)* 125431
Yuntian Chen, Torben Roland Nielsen, Niels Gregersen, Peter Lodahl, and Jesper Mørk

Normal-incidence x-ray standing-wave determination of the adsorption geometry of PTCDA on Ag(111): Comparison of the ordered room-temperature and disordered low-temperature phases *(12 pages)* 125432
A. Hauschild, R. Temirov, S. Soubatch, O. Bauer, A. Schöll, B. C. C. Cowie, T.-L. Lee, F. S. Tautz, and M. Sokolowski

Magnetism of substitutional Co impurities in graphene: Realization of single π vacancies *(6 pages)* 125433
E. J. G. Santos, D. Sánchez-Portal, and A. Ayuela

Unusual Raman dispersion for *D* and 2*D* lines in high-curvature single-walled carbon nanotubes revealed by ^{13}C isotope substitution *(5 pages)* 125434
F. Simon, V. Zólyomi, R. Pfeiffer, H. Kuzmany, J. Koltai, and J. Kürti

Rashba and intrinsic spin-orbit interactions in biased bilayer graphene *(11 pages)* 125435
Ralph van Gelderen and C. Morais Smith

Equilibrium thermal vibrations of carbon nanotubes *(5 pages)* 125436
Edward H. Feng and Reese E. Jones

Electron density distribution and screening in rippled graphene sheets *(12 pages)* 125437
Marco Gibertini, Andrea Tomadin, Marco Polini, A. Fasolino, and M. I. Katsnelson

(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 81, NUMBER 12 MARCH 2010-15(II)

Phase readout of a charge qubit capacitively coupled to an open double quantum dot *(5 pages)* 125404
Christoph Kreisbeck, Franz J. Kaiser, and Sigmund Kohler

Nanostructures: Scattering beyond the Born approximation *(7 pages)* 125405
S. V. Grigoriev, A. V. Syromyatnikov, A. P. Chumakov, N. A. Grigoryeva, K. S. Napolskii, I. V. Roslyakov, A. A. Eliseev, A. V. Petukhov, and H. Eckerlebe

Transient effects in the backscattered current of a Luttinger liquid *(6 pages)* 125406
Mariano J. Salvay, Hugo A. Aita, and Carlos M. Naón

Temperature-dependent transport and $1/f$ noise mechanisms in single-walled carbon nanotube films *(6 pages)* 125407
Ashkan Behnam, Amlan Biswas, Gijs Bosman, and Ant Ural

Electronic damping of anharmonic adsorbate vibrations at metallic surfaces *(12 pages)* 125408
Jean Christophe Tremblay, Serge Monturet, and Peter Saalfrank

Strain effect on quantum conductance of graphene nanoribbons from maximally localized Wannier functions *(5 pages)* 125409
R. Rasuli, H. Rafii-Tabar, and A. Iraji zad

Thermal rectification in nanosized model systems: A molecular dynamics approach *(12 pages)* 125410
Mohammad Alaghemandi, Frédéric Leroy, Florian Müller-Plathe, and Michael C. Böhm

Optical near-field absorption at a metal tip far from plasmonic resonance *(5 pages)* 125411
J. Houard, A. Vella, F. Vurpillot, and B. Deconihout

Photoinduced adiabatic state transfer in low-dimensional electronic systems *(5 pages)* 125412
Jun-ichi Inoue

Electrostatic plasmon resonances of metal nanospheres in layered geometries *(10 pages)* 125413
Jesper Jung, Thomas Garm Pedersen, Thomas Søndergaard, Kjeld Pedersen, Arne Nylandsted Larsen, and Brian Bech Nielsen

Deformation and transfer doping of a single-walled carbon nanotube adsorbed on metallic substrates *(12 pages)* 125414
Kazume Nishidate and Masayuki Hasegawa

Ab initio study of phonon-induced dephasing of plasmon excitations in silver quantum dots *(6 pages)* 125415
Zhenyu Guo, Bradley F. Habenicht, Wan-Zhen Liang, and Oleg V. Prezhdo

Solid-liquid interface free energy through metadynamics simulations *(11 pages)* 125416
Stefano Angioletti-Uberti, Michele Ceriotti, Peter D. Lee, and Mike W. Finnis

Structural origin of perpendicular magnetic anisotropy in epitaxial $CoPt_3$ nanostructures grown on $WSe_2(0001)$ *(9 pages)* 125417
F. Liscio, M. Maret, C. Meneghini, S. Mobilio, O. Proux, D. Makarov, and M. Albrecht

Structure of the (010) surface of the orthorhombic complex metallic alloy T-Al_3(Mn,Pd) *(12 pages)* 125418
Th. Deniozou, R. Addou, A. K. Shukla, M. Heggen, M. Feuerbacher, M. Krajčí, J. Hafner, R. Widmer, O. Gröning, V. Fournée, J.-M. Dubois, and J. Ledieu

Induced charge generated by a potential well in graphene *(5 pages)* 125419
Alexander I. Milstein and Ivan S. Terekhov

Electron transport in multiterminal molecular devices: A density functional theory study *(6 pages)* 125420
Kamal K. Saha, Wenchang Lu, J. Bernholc, and Vincent Meunier

(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 81, NUMBER 12 MARCH 2010-15(II)

Shot noise reduction of space charge limited electron injection through a Schottky contact for a GaN diode *(5 pages)* 125321
W. Chandra, L. K. Ang, and X. Zhou

Single-electron transistors studied by microwave and far-infrared absorption: Theoretical results and experimental proposal *(9 pages)* 125322
Ioan Bâldea and Horst Köppel

Imaging and manipulating electrons in a one-dimensional quantum dot with Coulomb blockade microscopy *(6 pages)* 125323
Jiang Qian, Bertrand I. Halperin, and Eric J. Heller

Temperature dependence of GaAs random laser characteristics *(6 pages)* 125324
Toshihiro Nakamura, Toru Takahashi, and Sadao Adachi

Inclined dislocation-pair relaxation mechanism in homoepitaxial green GaInN/GaN light-emitting diodes *(6 pages)* 125325
Mingwei Zhu (朱明伟), Shi You (尤适), Theeradetch Detchprohm, Tanya Paskova, Edward A. Preble, Drew Hanser, and Christian Wetzel

Correlated hybridization induced super-Poissonian noise in quantum dots *(6 pages)* 125326
B. H. Wu and J. C. Cao

Polaritonic analogue of Datta and Das spin transistor *(5 pages)* 125327
R. Johne, I. A. Shelykh, D. D. Solnyshkov, and G. Malpuech

Charge-optimized many-body potential for the hafnium/hafnium oxide system *(12 pages)* 125328
Tzu-Ray Shan (單子睿), Bryce D. Devine, Travis W. Kemper, Susan B. Sinnott, and Simon R. Phillpot

Transient Bloch oscillation with the symmetry-governed phase in semiconductor superlattices *(6 pages)* 125329
T. Unuma, Y. Ino, M. Kuwata-Gonokami, G. Bastard, and K. Hirakawa

Nuclear polarization in quantum point contacts in an in-plane magnetic field *(5 pages)* 125330
Y. Ren, W. Yu, S. M. Frolov, J. A. Folk, and W. Wegscheider

Bidirectional single-electron counting and the fluctuation theorem *(5 pages)* 125331
Y. Utsumi, D. S. Golubev, M. Marthaler, K. Saito, T. Fujisawa, and Gerd Schön

Side jumps in the spin Hall effect: Construction of the Boltzmann collision integral *(9 pages)* 125332
Dimitrie Culcer, E. M. Hankiewicz, Giovanni Vignale, and R. Winkler

Stark effect, polarizability, and electroabsorption in silicon nanocrystals *(7 pages)* 125333
Ceyhun Bulutay, Mustafa Kulakci, and Raşit Turan

Surface physics, nanoscale physics, low-dimensional systems

Chemical reactivity on surfaces: Modeling the imide synthesis from DATP and PTCDA on Au(111) *(5 pages)* 125401
E. Rauls, S. Blankenburg, and W. G. Schmidt

Analytical model and molecular dynamics simulations of the size dependence of flow stress in amorphous intermetallic nanowires at temperatures near the glass transition *(13 pages)* 125402
Yujie Wei, Allan F. Bower, and Huajian Gao

First-principles study of the dipole layer formation at metal-organic interfaces *(17 pages)* 125403
Paul C. Rusu, Gianluca Giovannetti, Christ Weijtens, Reinder Coehoorn, and Geert Brocks

(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 81, NUMBER 12 MARCH 2010-15(II)

Interlayer screening effect in graphene multilayers with *ABA* and *ABC* stacking *(7 pages)* 125304
Mikito Koshino

Condensation phase diagram of cavity polaritons in GaN-based microcavities: Experiment and theory *(11 pages)* 125305
Jacques Levrat, Raphaël Butté, Eric Feltin, Jean-François Carlin, Nicolas Grandjean, Dmitry Solnyshkov, and Guillaume Malpuech

Carrier multiplication in bulk and nanocrystalline semiconductors: Mechanism, efficiency, and interest for solar cells *(6 pages)* 125306
Christophe Delerue, Guy Allan, J. J. H. Pijpers, and M. Bonn

Scattering cross section of metal catalyst atoms in silicon nanowires *(7 pages)* 125307
Troels Markussen, Riccardo Rurali, Xavier Cartoixà, Antti-Pekka Jauho, and Mads Brandbyge

Transport through open quantum dots: Making semiclassics quantitative *(19 pages)* 125308
Iva Březinová, Ludger Wirtz, Stefan Rotter, Christoph Stampfer, and Joachim Burgdörfer

Dimensional dependence of weak localization corrections and spin relaxation in quantum wires with Rashba spin-orbit coupling *(18 pages)* 125309
P. Wenk and S. Kettemann

Charge carrier injection into insulating media: Single-particle versus mean-field approach *(15 pages)* 125310
Yu. A. Genenko, S. V. Yampolskii, C. Melzer, K. Stegmaier, and H. von Seggern

Huge splitting of polariton states in microcavities under stress *(8 pages)* 125311
R. Balili, B. Nelsen, D. W. Snoke, R. H. Reid, L. Pfeiffer, and K. West

Electron spin resonance study of Si/SiGe quantum dots *(9 pages)* 125312
F. Lipps, F. Pezzoli, M. Stoffel, C. Deneke, J. Thomas, A. Rastelli, V. Kataev, O. G. Schmidt, and B. Büchner

Anisotropic spin dynamics of confined electrons in CdTe/ZnTe quantum structures *(10 pages)* 125313
Shinichi Tomimoto, Shinsuke Nozawa, Yoshikazu Terai, Shinji Kuroda, Kôki Takita, and Yasuaki Masumoto

Carrier capture by threading dislocations in (In,Ga)N/GaN heteroepitaxial layers *(5 pages)* 125314
U. Jahn, O. Brandt, E. Luna, X. Sun, H. Wang, D. S. Jiang, L. F. Bian, and H. Yang

Effects of screened Coulomb impurities on autoionizing two-electron resonances in spherical quantum dots *(4 pages)* 125315
Michael Genkin and Eva Lindroth

Electron-electron scattering and magnetoresistance of ballistic microcontacts *(9 pages)* 125316
K. E. Nagaev and T. V. Kostyuchenko

Role of intramolecular dynamics on intermolecular coupling in cyanine dye *(6 pages)* 125317
T. Virgili, L. Lüer, G. Cerullo, G. Lanzani, S. Stagira, D. Coles, A. J. H. M. Meijer, and D. G. Lidzey

Majorana fermions in a tunable semiconductor device *(10 pages)* 125318
Jason Alicea

Theory of polarization-controlled polariton logic gates *(9 pages)* 125319
T. Ostatnický, I. A. Shelykh, and A. V. Kavokin

Nonlinear growth in the amplitude of radiation-induced magnetoresistance oscillations *(6 pages)* 125320
R. G. Mani, C. Gerl, S. Schmult, W. Wegscheider, and V. Umansky

(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 81, NUMBER 12 MARCH 2010-15(II)

Semiconductors I: bulk

Impact ionization rates for Si, GaAs, InAs, ZnS, and GaN in the *GW* approximation *(5 pages)* 125201
Takao Kotani and Mark van Schilfgaarde

Strain-induced, off-diagonal, same-atom parameters in empirical tight-binding theory suitable for [110] uniaxial strain applied to a silicon parametrization *(9 pages)* 125202
Timothy B. Boykin, Mathieu Luisier, Mehdi Salmani-Jelodar, and Gerhard Klimeck

Relation between the built-in voltage in organic light-emitting diodes and the zero-field voltage as measured by electroabsorption *(5 pages)* 125203
R. J. de Vries, S. L. M. van Mensfoort, R. A. J. Janssen, and R. Coehoorn

Relating the open-circuit voltage to interface molecular properties of donor:acceptor bulk heterojunction solar cells *(8 pages)* 125204
Koen Vandewal, Kristofer Tvingstedt, Abay Gadisa, Olle Inganäs, and Jean V. Manca

Electron and phonon scattering in the high-temperature thermoelectric $La_3Te_{4-z}M_z$ (M=Sb,Bi) *(11 pages)* . . . 125205
Andrew F. May, Espen Flage-Larsen, and G. Jeffrey Snyder

Sub-band-gap photoconductivity in Co^{2+}-doped ZnO *(5 pages)* 125206
Claire A. Johnson, Tiffany C. Kaspar, Scott A. Chambers, G. Mackay Salley, and Daniel R. Gamelin

Optical spectra of ZnO in the far ultraviolet: First-principles calculations and ellipsometric measurements *(8 pages)* 125207
Paola Gori, Munise Rakel, Christoph Cobet, Wolfgang Richter, Norbert Esser, Axel Hoffmann, Rodolfo Del Sole, Antonio Cricenti, and Olivia Pulci

Twisted polydiacetylene quantum wire: Influence of conformation on excitons in polymeric quasi-one-dimensional systems *(11 pages)* 125208
A. Al Choueiry, T. Barisien, J. Holcman, L. Legrand, M. Schott, G. Weiser, M. Balog, J. Deschamps, S. G. Dutremez, and J.-S. Filhol

Stark effect and Franz-Keldysh effect of a quantum wire realized by conjugated polymer chains of a diacetylene 3NPh2 *(11 pages)* 125209
Gerhard Weiser, Laurent Legrand, Thierry Barisien, Antoine Al Choueiry, Michel Schott, and Sylvain Dutremez

Charge carrier photogeneration and decay dynamics in the poly(2,7-carbazole) copolymer PCDTBT and in bulk heterojunction composites with $PC_{70}BM$ *(6 pages)* 125210
Minghong Tong, Nelson E. Coates, Daniel Moses, Alan J. Heeger, Serge Beaupré, and Mario Leclerc

Origin of d^0 magnetism in II-VI and III-V semiconductors by substitutional doping at anion site *(5 pages)* 125211
Kesong Yang, Rongqin Wu, Lei Shen, Yuan Ping Feng, Ying Dai, and Baibiao Huang

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

Fractional topological excitations and quantum phase transition in a bilayer two-dimensional electron gas adjacent to a superconductor film *(6 pages)* 125301
Ningning Hao, Wei Zhang, Zhigang Wang, Yupeng Wang, and Ping Zhang

Edge-induced spin polarization in two-dimensional electron gas *(7 pages)* 125302
P. Bokes and F. Horváth

Additional carrier-mediated ferromagnetism in GdN *(5 pages)* 125303
Anand Sharma and Wolfgang Nolting

(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 81, NUMBER 12 MARCH 2010-15(II)

Multichannel multiple scattering calculation of $L_{2,3}$-edge spectra of TiO_2 and $SrTiO_3$: Importance of multiplet coupling and band structure *(6 pages)* 125121
Peter Krüger

Functional renormalization group study of the interacting resonant level model in and out of equilibrium *(12 pages)* 125122
C. Karrasch, M. Pletyukhov, L. Borda, and V. Meden

Gauge-invariant formulation of spin-current density-functional theory *(7 pages)* 125123
Saeed H. Abedinpour, G. Vignale, and I. V. Tokatly

General class of metamaterial transformation slabs *(10 pages)* 125124
Ilaria Gallina, Giuseppe Castaldi, Vincenzo Galdi, Andrea Alù, and Nader Engheta

Quasiparticle band structures and lifetimes in noble metals using Gaussian orbital basis sets *(10 pages)* 125125
Zhijun Yi, Yuchen Ma, Michael Rohlfing, V. M. Silkin, and E. V. Chulkov

Matrix product state approach for a two-lead multilevel Anderson impurity model *(11 pages)* 125126
Andreas Holzner, Andreas Weichselbaum, and Jan von Delft

Quantum 120° model on pyrochlore lattice: Orbital ordering in MnV_2O_4 *(10 pages)* 125127
Gia-Wei Chern, Natalia Perkins, and Zhihao Hao

First-principles and experimental analysis of f^n-$f^{n-1}d^1$ absorption spectra and multiplet energy levels of Pr^{3+}, Nd^{3+}, and U^{3+} in $LiYF_4$ *(18 pages)* 125128
Shinta Watanabe, Kazuyoshi Ogasawara, Masahito Yoshino, and Takanori Nagasaki

Geometrical frustration versus magnetic order in the heavy-fermion antiferromagnet YbAgGe under high pressure *(5 pages)* 125129
K. Sengupta, M. K. Forthaus, H. Kubo, K. Katoh, K. Umeo, T. Takabatake, and M. M. Abd-Elmeguid

Density matrix renormalization group for bosonic quantum Hall effect *(7 pages)* 125130
D. L. Kovrizhin

Metal-insulator transitions and magnetism in correlated band insulators: FeSi and $Fe_{1-x}Co_xSi$ *(10 pages)* 125131
V. V. Mazurenko, A. O. Shorikov, A. V. Lukoyanov, K. Kharlov, E. Gorelov, A. I. Lichtenstein, and V. I. Anisimov

Terahertz spectroscopy of low-energy excitations in charge-ordered $La_{0.25}Ca_{0.75}MnO_3$ *(10 pages)* 125132
T. Zhang, E. Zhukova, B. Gorshunov, D. Wu, A. S. Prokhorov, V. I. Torgashev, E. G. Maksimov, and M. Dressel

Anisotropic crystal field, Mott gap, and interband excitations in TiOCl: An electron energy-loss study *(4 pages)* 125133
Roberto Kraus, Bernd Büchner, Martin Knupfer, Sebastian Glawion, Michael Sing, and Ralph Claessen

Three-dimensional topological phases in a layered honeycomb spin-orbital model *(9 pages)* 125134
Gia-Wei Chern

Optimizing Wilson's momentum shell renormalization group *(6 pages)* 125135
A. Tröster

Systematic investigation of a family of gradient-dependent functionals for solids *(10 pages)* 125136
Philipp Haas, Fabien Tran, Peter Blaha, Luana S. Pedroza, Antonio J. R. da Silva, Mariana M. Odashima, and Klaus Capelle

(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 81, NUMBER 12 MARCH 2010-15(II)

Monte Carlo simulation of the semimetal-insulator phase transition in monolayer graphene *(9 pages)* 125105
Wes Armour, Simon Hands, and Costas Strouthos

Maximal symmetrization and reduction of fields: Application to wave functions in solid-state nanostructures *(33 pages)* 125106
S. Dalessi and M.-A. Dupertuis

Possible charge-density wave transition in $PrPt_2Si_2$ *(5 pages)* 125107
M. Kumar, V. K. Anand, C. Geibel, M. Nicklas, and Z. Hossain

Spin dynamics in the electron-doped Kondo insulator $Yb_{1-x}Zr_xB_{12}$ (x=0.2) *(5 pages)* 125108
K. S. Nemkovski, P. A. Alekseev, J.-M. Mignot, E. A. Goremychkin, A. A. Nikonov, O. E. Parfenov, V. N. Lazukov, N. Yu. Shitsevalova, and A. V. Dukhnenko

Deconfinement transition and dimensional crossover in the Bechgaard-Fabre salts: Pressure- and temperature-dependent optical investigations *(11 pages)* 125109
A. Pashkin, M. Dressel, M. Hanfland, and C. A. Kuntscher

Nonequilibrium dynamics of a two-channel Kondo system due to a quantum quench *(5 pages)* 125110
Zurab Ratiani and Aditi Mitra

Fractional quantum Hall effect and featureless Mott insulators *(7 pages)* 125111
A. A. Burkov

Models of mesoscopic time-resolved current detection *(20 pages)* 125112
Adam Bednorz and Wolfgang Belzig

Real-time dynamics of particle-hole excitations in Mott insulator-metal junctions *(8 pages)* 125113
Luis G. G. V. Dias da Silva, Khaled A. Al-Hassanieh, Adrian E. Feiguin, Fernando A. Reboredo, and Elbio Dagotto

Spin gaps and spin-flip energies in density-functional theory *(12 pages)* 125114
K. Capelle, G. Vignale, and C. A. Ullrich

Evolution of electronic structure from insulator to superconductor in $Bi_2Sr_{2-x}La_x(Ca,Y)Cu_2O_{8+\delta}$ *(5 pages)* 125115
K. Tanaka, T. Yoshida, K. M. Shen, D. H. Lu, W. S. Lee, H. Yagi, A. Fujimori, Z.-X. Shen, Risdiana, T. Fujii, and I. Terasaki

Tuning the properties of complex transparent conducting oxides: Role of crystal symmetry, chemical composition, and carrier generation *(16 pages)* 125116
Julia E. Medvedeva and Chaminda L. Hettiarachchi

Fusion of the LAPW and LMTO methods: The augmented plane wave plus muffin-tin orbital method *(5 pages)* 125117
Takao Kotani and Mark van Schilfgaarde

Theory of Raman and resonant inelastic x-ray scattering from collective orbital excitations in $YTiO_3$ *(16 pages)* 125118
L. J. P. Ament and G. Khaliullin

Many-body large polaron optical conductivity in $SrTi_{1-x}Nb_xO_3$ *(9 pages)* 125119
J. T. Devreese, S. N. Klimin, J. L. M. van Mechelen, and D. van der Marel

Optical characterization of Bi_2Se_3 in a magnetic field: Infrared evidence for magnetoelectric coupling in a topological insulator material *(8 pages)* 125120
A. D. LaForge, A. Frenzel, B. C. Pursley, Tao Lin, Xinfei Liu, Jing Shi, and D. N. Basov

(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 81, NUMBER 12 MARCH 2010-15(II)

Probing charging and localization in the quantum Hall regime by graphene $p-n-p$ junctions *(4 pages)* . . . . . 121407(R)
Jairo Velasco, Jr., Gang Liu (刘钢), Lei Jing (荆雷), Philip Kratz, Hang Zhang (张航), Wenzhong Bao (包文中), Marc Bockrath, and Chun Ning Lau (劉津寧)

Signatures of Klein tunneling in disordered graphene *p-n-p* junctions *(4 pages)* . . . . . 121408(R)
E. Rossi, J. H. Bardarson, P. W. Brouwer, and S. Das Sarma

Discontinuous Euler instability in nanoelectromechanical systems *(4 pages)* . . . . . 121409(R)
Guillaume Weick, Fabio Pistolesi, Eros Mariani, and Felix von Oppen

Patterns in strained-layer heteroepitaxy: Beyond the Frenkel-Kontorova model *(4 pages)* . . . . . 121410(R)
Joshua D. Howe, Prateek Bhopale, Yogesh Tiwary, and Kristen A. Fichthorn

Role of carbon surface diffusion on the growth of epitaxial graphene on SiC *(4 pages)* . . . . . 121411(R)
Taisuke Ohta, N. C. Bartelt, Shu Nie, Konrad Thürmer, and G. L. Kellogg

First-principles analysis of electron-phonon interactions in graphene *(4 pages)* . . . . . 121412(R)
K. M. Borysenko, J. T. Mullen, E. A. Barry, S. Paul, Y. G. Semenov, J. M. Zavada, M. Buongiorno Nardelli, and K. W. Kim

CO oxidation on fully oxygen covered Ru(0001): Role of step edges *(4 pages)* . . . . . 121413(R)
Željko Šljivančanin and Bjørk Hammer

Absence of a metallic phase in charge-neutral graphene with a random gap *(3 pages)* . . . . . 121414(R)
J. H. Bardarson, M. V. Medvedyeva, J. Tworzydło, A. R. Akhmerov, and C. W. J. Beenakker

Electron-hole asymmetry in single-walled carbon nanotubes probed by direct observation of transverse quasidark excitons *(4 pages)* . . . . . 121415(R)
Yuhei Miyauchi, Hiroshi Ajiki, and Shigeo Maruyama

Resonant electron capture by C_{60} ions at a metal surface with projected band gap *(4 pages)* . . . . . 121416(R)
S. Wethekam, H. Zettergren, Ch. Linsmeier, H. Cederquist, and H. Winter

General theory of Zitterbewegung *(4 pages)* . . . . . 121417(R)
Gyula Dávid and József Cserti

ARTICLES

Electronic structure: wide-band, narrow-band, and strongly correlated systems

Microwave dielectric study of spin-Peierls and charge-ordering transitions in $(TMTTF)_2PF_6$ salts *(6 pages)* 125101
Alexandre Langlois, Mario Poirier, Claude Bourbonnais, Pascale Foury-Leylekian, Alec Moradpour, and Jean-Paul Pouget

Efficient implementation of the *GW* approximation within the all-electron FLAPW method *(16 pages)* 125102
Christoph Friedrich, Stefan Blügel, and Arno Schindlmayr

Anomalous scaling of fermions and order parameter fluctuations at quantum criticality *(8 pages)* 125103
P. Strack, S. Takei, and W. Metzner

Stationary, dynamical, and spectral electronic properties of a correlated random ladder model with coexisting extended and localized states *(6 pages)* 125104
F. A. B. F. de Moura, R. A. Caetano, and M. L. Lyra

(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).