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
Suite 1NO1
2 Huntington Quadrangle
Melville, NY 11747-4502

THIRD SERIES, VOLUME 78, NUMBER 4 *CONTENTS* **JULY 2008-15(II)**

RAPID COMMUNICATIONS

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

Role of backflow correlations for the nonmagnetic phase of the t–t' Hubbard model *(4 pages)* . . . . . 041101(R)
Luca F. Tocchio, Federico Becca, Alberto Parola, and Sandro Sorella

Crystal-field excitations in NiO studied with hard x-ray resonant inelastic x-ray scattering at the Ni K edge *(4 pages)* . . . . . 041102(R)
Simo Huotari, Tuomas Pylkkänen, György Vankó, Roberto Verbeni, Pieter Glatzel, and Giulio Monaco

Vectorial four-wave mixing field dynamics from individual excitonic transitions *(4 pages)* . . . . . 041103(R)
Jacek Kasprzak and Wolfgang Langbein

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

Observation of an inter-Landau level quantum coherence in semiconductor quantum wells *(4 pages)* . . . . . 041301(R)
K. M. Dani, I. A. Cotoros, J. Wang, J. Tignon, D. S. Chemla, E. G. Kavousanaki, and I. E. Perakis

Josephson effects in condensates of excitons and exciton polaritons *(4 pages)* . . . . . 041302(R)
I. A. Shelykh, D. D. Solnyshkov, G. Pavlovic, and G. Malpuech

Temperature-induced spin-coherence dissipation in quantum dots *(4 pages)* . . . . . 041303(R)
F. G. G. Hernandez, A. Greilich, F. Brito, M. Wiemann, D. R. Yakovlev, D. Reuter, A. D. Wieck, and M. Bayer

Spin dynamics of two-dimensional electrons in a quantum Hall system probed by time-resolved Kerr rotation spectroscopy *(4 pages)* . . . . . 041304(R)
D. Fukuoka, T. Yamazaki, N. Tanaka, K. Oto, K. Muro, Y. Hirayama, N. Kumada, and H. Yamaguchi

Hybrid skew scattering regime of the anomalous Hall effect in Rashba systems: Unifying Keldysh, Boltzmann, and Kubo formalisms *(4 pages)* . . . . . 041305(R)
Alexey A. Kovalev, Karel Výborný, and Jairo Sinova

Spin-dependent tunneling of single electrons into an empty quantum dot *(4 pages)* . . . . . 041306(R)
S. Amasha, K. MacLean, Iuliana P. Radu, D. M. Zumbühl, M. A. Kastner, M. P. Hanson, and A. C. Gossard

Surface physics, nanoscale physics, low-dimensional systems

Spectral tuning and near-field imaging of photonic crystal microcavities *(4 pages)* . . . . . 041401(R)
Francesca Intonti, Silvia Vignolini, Francesco Riboli, Anna Vinattieri, Diederik S. Wiersma, Marcello Colocci, Laurent Balet, Christelle Monat, Carl Zinoni, Lianhe H. Li, Romuald Houdré, Marco Francardi, Annamaria Gerardino, Andrea Fiore, and Massimo Gurioli

Copyright 2008 by The American Physical Society

1098-0121(20080715)78:4;1-N

(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 78, NUMBER 4** **JULY 2008-15(II)**

Hydrogen storage by spillover on graphene as a phase nucleation process *(4 pages)* . . . . . 041402(R)
Yu Lin, Feng Ding, and Boris I. Yakobson

☙ Electronic and vibronic interactions at weakly bound organic interfaces: The case of pentacene on graphite *(4 pages)* . . . . . 041403(R)
Pavel B. Paramonov, Veaceslav Coropceanu, and Jean-Luc Brédas

Far-infrared signature of the superconducting gap in intercalated graphite CaC_6 *(4 pages)* . . . . . 041404(R)
U. Nagel, D. Hüvonen, E. Joon, J. S. Kim, R. K. Kremer, and T. Rõõm

Effect of quantum confinement of surface electrons on an atomic motion on nanoislands: *Ab initio* calculations and kinetic Monte Carlo simulations *(4 pages)* . . . . . 041405(R)
A. S. Smirnov, N. N. Negulyaev, L. Niebergall, W. Hergert, A. M. Saletsky, and V. S. Stepanyuk

Lattice expansion in nonoxidized FePt nanoparticles: X-ray absorption measurements *(4 pages)* . . . . . 041406(R)
C. Antoniak, A. Trunova, M. Spasova, M. Farle, H. Wende, F. Wilhelm, and A. Rogalev

Optical transitions in Ge/SiGe multiple quantum wells with Ge-rich barriers *(4 pages)* . . . . . 041407(R)
M. Bonfanti, E. Grilli, M. Guzzi, M. Virgilio, G. Grosso, D. Chrastina, G. Isella, H. von Känel, and A. Neels

Topology and electron scattering properties of the electronic interfaces in epitaxial graphene probed by resonant tunneling spectroscopy *(4 pages)* . . . . . 041408(R)
H. Yang, G. Baffou, A. J. Mayne, G. Comtet, G. Dujardin, and Y. Kuk

ARTICLES

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

Quench dynamics and defect production in the Kitaev and extended Kitaev models *(11 pages)* 045101
Shreyoshi Mondal, Diptiman Sen, and K. Sengupta

Dielectric sensing in ϵ-near-zero narrow waveguide channels *(5 pages)* 045102
Andrea Alù and Nader Engheta

Direct evidence of overdamped Peierls-coupled modes in the temperature-induced phase transition in tetrathiafulvalene-chloranil *(12 pages)* 045103
A. Girlando, M. Masino, A. Painelli, N. Drichko, M. Dressel, A. Brillante, R. G. Della Valle, and E. Venuti

Relation between channel and spatial mesoscopic correlations in volume-disordered waveguides *(6 pages)* 045104
Alexey Yamilov

Analytic form for a nonlocal kinetic energy functional with a density-dependent kernel for orbital-free density functional theory under periodic and Dirichlet boundary conditions *(8 pages)* 045105
Gregory S. Ho, Vincent L. Lignères, and Emily A. Carter

Bonding in Zintl phase hydrides: Density functional calculations for SrAlSiH, $SrAl_2H_2$, $SrGa_2H_2$, and $BaGa_2H_2$ *(7 pages)* 045106
Alaska Subedi and David J. Singh

Insulator-metal transition and anomalous sign reversal of the dominant charge carriers in perovskite $BaTiO_{3-\delta}$ *(5 pages)* 045107
T. Kolodiazhnyi

(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 78, NUMBER 4** **JULY 2008-15(II)**

Local atomic and electronic structures around Mg and Al dopants in $LiNiO_2$ electrodes studied by XANES and ELNES and first-principles calculations *(8 pages)* 045108
Kazuyoshi Tatsumi, Yusuke Sasano, Shunsuke Muto, Tomoko Yoshida, Tsuyoshi Sasaki, Kayo Horibuchi, Yoji Takeuchi, and Yoshio Ukyo

Theory of a continuous Mott transition in two dimensions *(13 pages)* 045109
T. Senthil

Destruction of Néel order in the cuprates by electron doping *(21 pages)* 045110
Ribhu K. Kaul, Max A. Metlitski, Subir Sachdev, and Cenke Xu

Analysis of the photoconduction in CaF_2:Eu^{2+} crystals using the microwave resonant cavity technique *(6 pages)* 045111
H. Loudyi, Y. Guyot, S. A. Kazanskii, J.-C. Gâcon, B. Moine, C. Pédrini, and M.-F. Joubert

Persistent positive and transient absolute negative photoconductivity observed in diamond photodetectors *(9 pages)* 045112
Meiyong Liao, Yasuo Koide, Jose Alvarez, Masataka Imura, and Jean-Paul Kleider

Enhancement of thermal transport in the degenerate periodic Anderson model *(14 pages)* 045113
V. Zlatić, R. Monnier, and J. K. Freericks

Time-dependent Gutzwiller theory of pairing fluctuations in the Hubbard model *(17 pages)* 045114
G. Seibold, F. Becca, and J. Lorenzana

Effect of crystal-field splitting and interband hybridization on the metal-insulator transitions of strongly correlated systems *(11 pages)* 045115
Alexander I. Poteryaev, Michel Ferrero, Antoine Georges, and Olivier Parcollet

Popular Kohn-Sham density functionals strongly overestimate many-body interactions in van der Waals systems *(6 pages)* 045116
Alexandre Tkatchenko and O. Anatole von Lilienfeld

Generalized susceptibility of a quasi-one-dimensional system with periodic potential: A model for the organic superconductor $(TMTSF)_2ClO_4$ *(11 pages)* 045117
Yasumasa Hasegawa and Keita Kishigi

Calculation of the conductance of a graphene sheet using the Chalker-Coddington network model *(10 pages)* 045118
I. Snyman, J. Tworzydło, and C. W. J. Beenakker

Density functional perturbation theory with spin-orbit coupling: Phonon band structure of lead *(9 pages)* 045119
Matthieu J. Verstraete, Marc Torrent, François Jollet, Gilles Zérah, and Xavier Gonze

Electronic and magnetic properties of a quasi-one-dimensional spin chain system Sr_3NiRhO_6 *(6 pages)* 045120
S. K. Pandey and Kalobaran Maiti

Self-consistent atomic deformation method for application of density functional theory *(25 pages)* 045121
L. L. Boyer, H. T. Stokes, M. M. Ossowski, and M. J. Mehl

Proposed method for detection of the pseudospin-$\frac{1}{2}$ Berry phase in a photonic crystal with a Dirac spectrum *(5 pages)* 045122
R. A. Sepkhanov, Johan Nilsson, and C. W. J. Beenakker

de Haas–van Alphen oscillations in the charge density wave compound lanthanum tritelluride $LaTe_3$ *(8 pages)* 045123
N. Ru, R. A. Borzi, A. Rost, A. P. Mackenzie, J. Laverock, S. B. Dugdale, and I. R. Fisher

(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 78, NUMBER 4** **JULY 2008-15(II)**

Wannier interpolation scheme for phonon-induced potentials: Application to bulk MgB_2, W, and the (1×1) H-covered W(110) surface *(8 pages)* 045124
Asier Eiguren and Claudia Ambrosch-Draxl

Electronic structure of $FeSi_{1-x}Ge_x$ and $FeGa_3$ investigated by soft x-ray photoelectron spectroscopy complementary to x-ray emission spectroscopy *(7 pages)* 045125
H. Yamaoka, M. Matsunami, R. Eguchi, Y. Ishida, N. Tsujii, Y. Takahashi, Y. Senba, H. Ohashi, and S. Shin

Preconditioning of self-consistent-field cycles in density-functional theory: The extrapolar method *(11 pages)* 045126
P.-M. Anglade and X. Gonze

Bulk sensitive spectroscopy for the valence transition in $YbInCu_4$-based compounds *(7 pages)* 045127
H. Yamaoka, N. Tsujii, K. Yamamoto, A. M. Vlaicu, H. Oohashi, H. Yoshikawa, T. Tochio, Y. Ito, A. Chainani, and S. Shin

Semiconductors I: bulk

Resonant phonon scattering of paraexcitons in Cu_2O *(5 pages)* 045201
Christian Sandfort, Jan Brandt, Dietmar Fröhlich, Manfred Bayer, and Heinrich Stolz

Threshold defect production in silicon determined by density functional theory molecular dynamics simulations *(6 pages)* 045202
E. Holmström, A. Kuronen, and K. Nordlund

$Ga_{1-x}Mn_xAs$/piezoelectric actuator hybrids: A model system for magnetoelastic magnetization manipulation *(14 pages)* 045203
C. Bihler, M. Althammer, A. Brandlmaier, S. Geprägs, M. Weiler, M. Opel, W. Schoch, W. Limmer, R. Gross, M. S. Brandt, and S. T. B. Goennenwein

Growth and shape transition of small silicon self-interstitial clusters *(7 pages)* 045204
Sangheon Lee and Gyeong S. Hwang

Debye relaxation in high magnetic fields *(6 pages)* 045205
J. S. Brooks, R. Vasic, A. Kismarahardja, E. Steven, T. Tokumoto, P. Schlottmann, and S. Kelly

Electron spin resonance and microwave magnetoresistance in Ge:Mn thin films *(9 pages)* 045206
R. Morgunov, M. Farle, M. Passacantando, L. Ottaviano, and O. Kazakova

Electric field effect on energy transfer monitored by bimolecular annihilation *(5 pages)* 045207
C. Gadermaier, F. Grasse, S. Perissinotto, M. Graf, F. Galbrecht, U. Scherf, E. J. W. List, and G. Lanzani

Energy level alignment and chemical interaction at Alq_3/Co interfaces for organic spintronic devices *(6 pages)* 045208
Y. Q. Zhan, M. P. de Jong, F. H. Li, V. Dediu, M. Fahlman, and W. R. Salaneck

Controlling the torsional stochastic switching in phenylene ethynylene oligomer molecules by external electrostatic fields *(5 pages)* 045209
Irina Petreska, Ljupčo Pejov, and Ljupčo Kocarev

Triplet energy transfer in conjugated polymers. I. Experimental investigation of a weakly disordered compound *(8 pages)* 045210
Lekshmi Sudha Devi, Mohammad K. Al-Suti, Carsten Dosche, Muhammad S. Khan, Richard H. Friend, and Anna Köhler

(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 78, NUMBER 4** **JULY 2008-15(II)**

Triplet energy transfer in conjugated polymers. II. A polaron theory description addressing the influence of disorder *(8 pages)* 045211
Ivan I. Fishchuk, Andrey Kadashchuk, Lekshmi Sudha Devi, Paul Heremans, Heinz Bässler, and Anna Köhler

Ordinary and extraordinary phonons and photons: Raman study of anisotropy effects in the polar modes of $MnGa_2Se_4$ *(9 pages)* 045212
P. Alonso-Gutiérrez and M. L. Sanjuán

Coherent Stokes Raman spectroscopy of conduction electron spin flip transitions in $Cd_{1-x}Fe_xTe$: A Van Vleck paramagnet *(4 pages)* 045213
A. Winter, H. Pascher, H. Krenn, I. Miotkowski, and A. K. Ramdas

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

Four-step evolution of spin Hall conductance: Tight-binding electrons with Rashba coupling in a magnetic field *(6 pages)* 045301
Yi-Fei Wang, Yang Zhao, and Chang-De Gong

Spin Nernst effect and Nernst effect in two-dimensional electron systems *(5 pages)* 045302
Shu-guang Cheng, Yanxia Xing, Qing-feng Sun, and X. C. Xie

Spin-dependent processes at the crystalline Si-SiO_2 interface at high magnetic fields *(5 pages)* 045303
D. R. McCamey, G. W. Morley, H. A. Seipel, L. C. Brunel, J. van Tol, and C. Boehme

Acoustic dispersion in a two-dimensional dipole system *(11 pages)* 045304
Kenneth I. Golden, Gabor J. Kalman, Zoltan Donko, and Peter Hartmann

Kondo resonance in the presence of spin-polarized currents *(5 pages)* 045305
Yunong Qi, Jian-Xin Zhu, Shufeng Zhang, and C. S. Ting

Statistics of charge and phase in a ballistic chaotic cavity *(9 pages)* 045306
A. L. R. Barbosa, A. F. Macedo-Junior, and A. M. S. Macêdo

Origin of ferromagnetism of $MnSi_{1.7}$ nanoparticles in Si: First-principles calculations *(7 pages)* 045307
Shin Yabuuchi, Hiroyuki Kageshima, Yukinori Ono, Masao Nagase, Akira Fujiwara, and Eiji Ohta

Statistics of measurement of noncommuting quantum variables: Monitoring and purification of a qubit *(13 pages)* 045308
Hongduo Wei and Yuli V. Nazarov

Two-step versus one-step model of the interpolarization conversion and statistics of CdSe/ZnSe quantum dot elongations *(11 pages)* 045309
A. V. Koudinov, B. R. Namozov, Yu. G. Kusrayev, S. Lee, M. Dobrowolska, and J. K. Furdyna

Effects of different geometries on the conductance, shot noise, and tunnel magnetoresistance of double quantum dots *(14 pages)* 045310
Ireneusz Weymann

Impact of visible light illumination on ultraviolet emission from ZnO nanocrystals *(6 pages)* 045311
S. S. Kurbanov, G. N. Panin, T. W. Kim, and T. W. Kang

Excitons in rolled up nanotubes of type-II semiconductor quantum wells: Theoretical study of a quasi-one-dimensional bosonic gas *(9 pages)* 045312
Mehran Bagheri and Farshad Ebrahimi

Analysis of the exciton-exciton interaction in semiconductor quantum wells *(10 pages)* 045313
Christoph Schindler and Roland Zimmermann

(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 78, NUMBER 4** **JULY 2008-15(II)**

All-optical generation and detection of subpicosecond ac spin-current pulses in GaAs *(5 pages)* 045314
Brian A. Ruzicka, Karl Higley, Lalani K. Werake, and Hui Zhao

Effect of thermal annealing on the hyperfine interaction in InAs/GaAs quantum dots *(9 pages)* 045315
M. Yu. Petrov, I. V. Ignatiev, S. V. Poltavtsev, A. Greilich, A. Bauschulte, D. R. Yakovlev, and M. Bayer

Colossal spin fluctuations in a molecular quantum dot magnet with ferromagnetic electrodes *(15 pages)* 045316
Thibaut Jonckheere, Ken-Ichiro Imura, and Thierry Martin

Thermal transport in a semiconductor heterostructure measured by time-resolved x-ray diffraction *(5 pages)* 045317
Y. M. Sheu, S. H. Lee, J. K. Wahlstrand, D. A. Walko, E. C. Landahl, D. A. Arms, M. Reason, R. S. Goldman, and D. A. Reis

Yb-induced (2×3) and (2×4) reconstructions on Si(100) studied by first-principles calculations and high-resolution core-level photoelectron spectroscopy *(9 pages)* 045318
M. Kuzmin, M. P. J. Punkkinen, P. Laukkanen, R. E. Perälä, M. Ahola-Tuomi, T. Balasubramanian, and I. J. Väyrynen

Local fields and conduction-electron behavior at impurity sites in indium-doped ZnO *(5 pages)* 045319
W. Sato, Y. Itsuki, S. Morimoto, H. Susuki, S. Nasu, A. Shinohara, and Y. Ohkubo

Controlling the interactions between polaritons and molecular vibrations in strongly coupled organic semiconductor microcavities *(5 pages)* 045320
J. Chovan, I. E. Perakis, S. Ceccarelli, and D. G. Lidzey

Magnetic field dependence of the many-electron states in a magnetic quantum dot: The ferromagnetic-antiferromagnetic transition *(13 pages)* 045321
Nga T. T. Nguyen and F. M. Peeters

Dephasing in the electronic Mach-Zehnder interferometer at filling factor $\nu=2$ *(13 pages)* 045322
Ivan P. Levkivskyi and Eugene V. Sukhorukov

Negative differential conductance induced by electronic correlation in a double quantum dot molecule *(6 pages)* 045323
Gustavo A. Lara, Pedro A. Orellana, and Enrique V. Anda

Surface physics, nanoscale physics, low-dimensional systems

Exciton formation in graphene bilayer *(9 pages)* 045401
Raoul Dillenschneider and Jung Hoon Han

Quantum confinement effects on Mn-doped InAs nanocrystals: A first-principles study *(5 pages)* 045402
J. T. Arantes, G. M. Dalpian, and A. Fazzio

Doping of graphene: Density functional calculations of charge transfer between GaAs and carbon nanostructures *(5 pages)* 045403
T. A. G. Eberlein, R. Jones, J. P. Goss, and P. R. Briddon

Energy gaps, magnetism, and electric-field effects in bilayer graphene nanoribbons *(8 pages)* 045404
Bhagawan Sahu, Hongki Min, A. H. MacDonald, and Sanjay K. Banerjee

Electronic properties of bilayer and multilayer graphene *(34 pages)* 045405
Johan Nilsson, A. H. Castro Neto, F. Guinea, and N. M. R. Peres

(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 78, NUMBER 4** **JULY 2008-15(II)**

Ground-state properties of a quasi-one-dimensional electron gas within a dynamical self-consistent mean-field approximation *(11 pages)* 045406
Vinayak Garg, R. K. Moudgil, Krishan Kumar, and P. K. Ahluwalia

Effect of radiation on transport in graphene *(20 pages)* 045407
S. V. Syzranov, M. V. Fistul, and K. B. Efetov

Vibrational stability and electronic structure of a B_{80} fullerene *(4 pages)* 045408
Tunna Baruah, Mark R. Pederson, and Rajendra R. Zope

Bonding of hexagonal BN to transition metal surfaces: An *ab initio* density-functional theory study *(10 pages)* 045409
Robert Laskowski, Peter Blaha, and Karlheinz Schwarz

Vibrational modes and low-temperature thermal properties of graphene and carbon nanotubes: Minimal force-constant model *(13 pages)* 045410
Janina Zimmermann, Pasquale Pavone, and Gianaurelio Cuniberti

Role of the van der Waals interactions on the bonding mechanism of pyridine on Cu(110) and Ag(110) surface: First-principles study *(9 pages)* 045411
N. Atodiresei, V. Caciuc, J.-H. Franke, and S. Blügel

Optical forces near a plasmonic nanostructure *(8 pages)* 045412
Vassilios Yannopapas

Raman *G* band in double-wall carbon nanotubes combining *p* doping and high pressure *(6 pages)* 045413
Pascal Puech, Ahmad Ghandour, Andrei Sapelkin, Cyril Tinguely, Emmanuel Flahaut, David J. Dunstan, and Wolfgang Bacsa

Effect of hydrogen molecules on the electronic transport through atomic-sized metallic junctions in the superconducting state *(6 pages)* 045414
P. Makk, Sz. Csonka, and A. Halbritter

Tilted anisotropic Dirac cones in quinoid-type graphene and α-(BEDT-TTF)$_2$I$_3$ *(10 pages)* 045415
M. O. Goerbig, J.-N. Fuchs, G. Montambaux, and F. Piéchon

Detailed scanning probe microscopy tip models determined from simultaneous atom-resolved AFM and STM studies of the TiO_2(110) surface *(19 pages)* 045416
Georg H. Enevoldsen, Henry P. Pinto, Adam S. Foster, Mona C. R. Jensen, Angelika Kühnle, Michael Reichling, Werner A. Hofer, Jeppe V. Lauritsen, and Flemming Besenbacher

Evidence of local superconductivity in granular Bi nanowires fabricated by electrodeposition *(7 pages)* 045417
Mingliang Tian, Nitesh Kumar, Moses H. W. Chan, and Thomas E. Mallouk

First-principles study of adsorption, diffusion, and charge stability of metal adatoms on alkali halide surfaces *(8 pages)* 045418
M. H. Hakala, O. H. Pakarinen, and A. S. Foster

Radiative interaction of a focused relativistic electron beam in energy-loss spectroscopy of nanoscopic platelets *(11 pages)* 045419
M. A. Itskovsky, H. Cohen, and T. Maniv

Isolated rigid rod behavior of functionalized single-wall carbon nanotubes in solution determined via small-angle neutron scattering *(5 pages)* 045420
A. Urbina, C. Miguel, J. L. Delgado, F. Langa, C. Díaz-Paniagua, and F. Batallán

(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 78, NUMBER 4** **JULY 2008-15(II)**

First-principles study of edge chemical modifications in graphene nanodots *(5 pages)* 045421
Huaixiu Zheng and Walter Duley

Strain relief through stair-rod dislocations in ultrathin epitaxial metal films: Defect geometry and energetics *(6 pages)* 045422
A. Klein, W. Meyer, A. Schmidt, B. Gumler, S. Müller, L. Hammer, and K. Heinz

Sensitivity of catalysis to surface structure: The example of CO oxidation on Rh under realistic conditions *(6 pages)* 045423
J. Gustafson, R. Westerström, A. Mikkelsen, X. Torrelles, O. Balmes, N. Bovet, J. N. Andersen, C. J. Baddeley, and E. Lundgren

Spontaneous formation of Mn nanocluster arrays on a Si(111)-7×7 surface observed with STM *(5 pages)* 045424
Jun-Zhong Wang, Jin-Feng Jia, Zu-Hong Xiong, and Qi-Kun Xue

Three-dimensional numerical modeling of photonic integration with dielectric-loaded SPP waveguides *(8 pages)* 045425
A. V. Krasavin and A. V. Zayats

Surface states and topological invariants in three-dimensional topological insulators: Application to $Bi_{1-x}Sb_x$ *(15 pages)* 045426
Jeffrey C. Y. Teo, Liang Fu, and C. L. Kane

Surface dynamics measurements of silica glass *(9 pages)* 045427
W. Steurer, A. Apfolter, M. Koch, W. E. Ernst, E. Søndergård, J. R. Manson, and B. Holst

Length-dependent oscillations in the dc conductance of laser-driven quantum wires *(9 pages)* 045428
D. F. Martinez, R. A. Molina, and Bambi Hu

Adhesion and friction between individual carbon nanotubes measured using force-versus-distance curves in atomic force microscopy *(9 pages)* 045429
Bharat Bhushan and Xing Ling

Bound states in inhomogeneous magnetic field in graphene: Semiclassical approach *(8 pages)* 045430
A. Kormányos, P. Rakyta, L. Oroszlány, and J. Cserti

Experimental investigation of the ratchet effect in a two-dimensional electron system with broken spatial inversion symmetry *(5 pages)* 045431
S. Sassine, Yu. Krupko, J.-C. Portal, Z. D. Kvon, R. Murali, K. P. Martin, G. Hill, and A. D. Wieck

Atomic-scale friction modulated by a buried interface: Combined atomic and friction force microscopy experiments *(5 pages)* 045432
S. Maier, E. Gnecco, A. Baratoff, R. Bennewitz, and E. Meyer

Insulating behavior of magnetic spots in proton-bombarded graphite *(7 pages)* 045433
K. Schindler, N. García, P. Esquinazi, and H. Ohldag

Nonequilibrium phonon effects on transport properties through atomic and molecular bridge junctions *(24 pages)* 045434
Yoshihiro Asai

Sensitivity of ion-induced sputtering to the radial distribution of energy transfers: A molecular dynamics study *(10 pages)* 045435
S. Mookerjee, M. Beuve, S. A. Khan, M. Toulemonde, and A. Roy

(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 78, NUMBER 4** **JULY 2008-15(II)**

Stability, structure, and electronic properties of chemisorbed oxygen and thin surface oxides on Ir(111) *(12 pages)* 045436
Hong Zhang, Aloysius Soon, Bernard Delley, and Catherine Stampfl

Ablation by ultrashort laser pulses: Atomistic and thermodynamic analysis of the processes at the ablation threshold *(10 pages)* 045437
Arun K. Upadhyay, Nail A. Inogamov, Bärbel Rethfeld, and Herbert M. Urbassek

ERRATA

Publisher's Note: Observation of an ultrahigh-temperature ferromagnetic-like transition in iron-contaminated multiwalled carbon nanotube mats [Phys. Rev. B **77**, 245433 (2008)] *(1 page)* . . . . . 049901(E)
Guo-meng Zhao and Pieder Beeli

Publisher's Note: Four-step evolution of spin Hall conductance: Tight-binding electrons with Rashba coupling in a magnetic field [Phys. Rev. B **78**, 045301 (2008)] *(1 page)* . . . . . 049902(E)
Yi-Fei Wang, Yang Zhao, and Chang-De Gong

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).