

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 79, NUMBER 23

CONTENTS

JUNE 2009-15(I)

BRIEF REPORTS

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

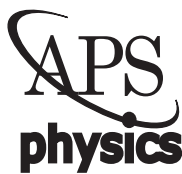
- Probing the interface of $\text{Fe}_3\text{O}_4/\text{GaAs}$ thin films by hard x-ray photoelectron spectroscopy (*4 pages*) 233101
M. Paul, A. Müller, A. Ruff, B. Schmid, G. Berner, M. Mertin, M. Sing, and R. Claessen
- Band structure of a photonic crystal with the clathrate Si-34 lattice (*4 pages*) 233102
Pavel N. Dyachenko, Nataliya D. Kundikova, and Yuri V. Miklyaev
- Exciton-exciton interactions in CdWO_4 irradiated by intense femtosecond vacuum ultraviolet pulses (*4 pages*) 233103
M. Kirm, V. Nagirnyi, E. Feldbach, M. De Grazia, B. Carré, H. Merdji, S. Guizard, G. Geoffroy, J. Gaudin, N. Fedorov, P. Martin, A. Vasil'ev, and A. Belsky
- Guiding terahertz waves along subwavelength channels (*4 pages*) 233104
A. I. Fernández-Domínguez, Esteban Moreno, L. Martín-Moreno, and F. J. García-Vidal
- Numerical renormalization group calculations of ground-state energy: Application to correlation effects in the adsorption of magnetic impurities on metal surfaces (*4 pages*) 233105
Rok Žitko
- Electrical resistivity, high-resolution thermal expansion, and heat capacity measurements of the charge-density wave compound $\gamma\text{-Mo}_4\text{O}_{11}$ (*4 pages*) 233106
M. S. da Luz, A. de Campos, B. D. White, and J. J. Neumeier
- Effective properties of amorphous metamaterials (*4 pages*) 233107
C. Helgert, C. Rockstuhl, C. Etrich, C. Menzel, E.-B. Kley, A. Tünnermann, F. Lederer, and T. Pertsch

Semiconductors I: bulk

- Time-dependent density-functional approach for exciton binding energies (*4 pages*) 233201
V. Turkowski, A. Leonardo, and C. A. Ullrich
- Facile synthesis of highly stable $\alpha\text{-Si}$ by ion implantation of low-keV H isotopes (*4 pages*) 233202
O. Moutanabbir, R. Scholz, U. Gösele, and B. Terreault

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

- Anomalous polarization of the photoluminescence from anisotropic colloidal CdSe nanocrystals subject to external magnetic fields (*4 pages*) 233301
S. V. Goupalov



Copyright 2009 by The American Physical Society



1098-0121(20090615)79:23;1-6

(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).

Edge-state Fabry-Perot interferometer as a high-sensitivity charge detector (<i>4 pages</i>)	233302
P. K. Pathak and Kicheon Kang	
Edge versus interior in the chemical bonding of graphene materials (<i>4 pages</i>)	233303
Michael R. Philpott and Yoshiyuki Kawazoe	
Stress relaxation scenario for buried quantum dots (<i>4 pages</i>)	233304
V. V. Chaldyshev, N. A. Bert, A. L. Kolesnikova, and A. E. Romanov	
Selection rules for optical transitions in PbSe nanocrystal quantum dots: Drastic effect of structure inversion asymmetry (<i>4 pages</i>)	233305
S. V. Goupalov	
Measurement of binding energy of negatively charged excitons in GaAs/Al _{0.3} Ga _{0.7} As quantum wells (<i>4 pages</i>)	233306
V. V. Solovyev and I. V. Kukushkin	
Photoluminescence dynamics and Auger fountain in three-dimensional Si/SiGe multilayer nanostructures (<i>4 pages</i>)	233307
E.-K. Lee, D. J. Lockwood, J.-M. Baribeau, A. M. Bratkovsky, T. I. Kamins, and L. Tsybeskov	
Intrinsic optical gain of ultrathin silicon quantum wells from first-principles calculations (<i>4 pages</i>)	233308
Yuji Suwa and Shin-ichi Saito	
Plasmonic metaresonances: Molecular resonances in quantum dot-metallic nanoparticle conjugates (<i>4 pages</i>)	233309
S. M. Sadeghi	
Surface physics, nanoscale physics, low-dimensional systems	
Electronic properties of silicon nanotubes with distinct bond lengths (<i>4 pages</i>)	233401
J. E. Bunder and James M. Hill	
Suppression of the superconducting transition temperature of doped graphene due to thermal fluctuations of the order parameter (<i>4 pages</i>)	233402
V. M. Loktev and V. Turkowski	
Growth of curved graphene sheets on graphite by chemical vapor deposition (<i>4 pages</i>)	233403
I. Kholmanov, E. Cavaliere, M. Fanetti, C. Cepek, and L. Gavioli	
Edge-disorder-dependent transport length scales in graphene nanoribbons: From Klein defects to the superlattice limit (<i>4 pages</i>)	233404
Alessandro Cresti and Stephan Roche	
Transition from during- to post-collision multifragmentation in cluster surface impact (<i>4 pages</i>)	233405
A. Kaplan, A. Bekkerman, B. Tsipinyuk, and E. Kolodney	
Theoretical calculation for the ultraviolet optical properties of single-walled carbon nanotubes (<i>4 pages</i>)	233406
Yoshiteru Takagi and Susumu Okada	
Charge and spin states of metal atoms adsorbed on ultrathin MgO/Fe(001) films (<i>4 pages</i>)	233407
Jinwoo Park, B. D. Yu, and Hanchul Kim	
Calcium-hydroxyl group complex for potential hydrogen storage media: A density functional theory study (<i>4 pages</i>)	233408
Manh Cuong Nguyen, Moon-Hyun Cha, Keunsu Choi, Yealee Lee, and Jisoon Ihm	

(Continued)

Magnetization measurement of a possible high-temperature superconducting state in amorphous carbon doped with sulfur (4 pages)	233409
Israel Felner and Yakov Kopelevich	

ARTICLES

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

 Scaling and transferability of the interaction-energy functional of the inhomogeneous Hubbard model (9 pages)	235101
Matthieu Saubanère and G. M. Pastor	
Generalization of correlated electron-ion dynamics from nonequilibrium Green's functions (9 pages)	235102
Yu Wang	
Anharmonic softening of Raman active phonons in iron-pnictides: Estimating the Fe isotope effect due to anharmonic expansion (6 pages)	235103
M. Granath, J. Bielecki, J. Holmlund, and L. Börjesson	
Incoherent optical conductivity and breakdown of the generalized Drude formula in quasi-one-dimensional bad metallic systems (9 pages)	235104
I. Kupčić	
Electronic and vibrational density of states through the metal-insulator transition in amorphous yttrium-silicon alloy thin films (6 pages)	235105
B. L. Zink and F. Hellman	
Core-hole effect in the one-particle approximation revisited from density functional theory (16 pages)	235106
Vincent Mauchamp, Michel Jaouen, and Peter Schattschneider	
Quasiparticles in the Kondo lattice model at partial fillings of the conduction band using the density matrix renormalization group (9 pages)	235107
Sebastian Smerat, Ulrich Schollwöck, Ian P. McCulloch, and Herbert Schoeller	
Low-temperature galvanomagnetic, magnetic, and thermoelectric properties of $\text{Mo}_3\text{Sb}_{7-x}\text{Te}_x$ ($x=0.0, 0.3, 1.0, 1.6$, and 1.8) (12 pages)	235108
C. Candolfi, B. Lenoir, A. Dauscher, J. Hejtmánek, and J. Tobola	
Classical theory for second-harmonic generation from metallic nanoparticles (9 pages)	235109
Yong Zeng, Walter Hoyer, Jinjie Liu, Stephan W. Koch, and Jerome V. Moloney	
First-order reversal curve measurements of the metal-insulator transition in VO_2 : Signatures of persistent metallic domains (7 pages)	235110
J.-G. Ramírez, A. Sharoni, Y. Dubi, M. E. Gómez, and Ivan K. Schuller	
Galvanomagnetic properties and noise in a barely metallic film of V_2O_3 (5 pages)	235111
Clara Grygiel, Alain Pautrat, and Pierre Rodière	
Fast impurity solver based on equations of motion and decoupling (9 pages)	235112
Qingguo Feng, Yu-Zhong Zhang, and Harald O. Jeschke	
Electronic hybridization effect on $4f$ electron crystal field states of $\text{PrOs}_4\text{P}_{12}$ (6 pages)	235113
Kazuaki Iwasa, Kotaro Saito, Youichi Murakami, and Hitoshi Sugawara	
Quasiparticle band structures of the antiferromagnetic transition-metal oxides MnO , FeO , CoO , and NiO (8 pages)	235114
C. Rödl, F. Fuchs, J. Furthmüller, and F. Bechstedt	

(Continued)

Effect of substituting of S for O: The sulfide perovskite BaZrS ₃ investigated with density functional theory (6 pages)	235115
Joseph W. Bennett, Ilya Grinberg, and Andrew M. Rappe	
Anderson disorder in graphene nanoribbons: A local distribution approach (5 pages)	235116
Gerald Schubert, Jens Schleede, and Holger Fehske	
Nanoscale phase separation and superconductivity in the one-dimensional Hirsch model (8 pages)	235117
Alberto Anfossi, Cristian Degli Esposti Boschi, and Arianna Montorsi	
Revisiting magnetic coupling in transition-metal-benzene complexes with maximally localized Wannier functions (8 pages)	235118
Hongming Weng, Taisuke Ozaki, and Kiyoyuki Terakura	
Two-loop functional renormalization group approach to the one- and two-dimensional Hubbard model (13 pages)	235119
A. A. Katanin	
Effects of impurities in spin Bose-metal phase on a two-leg triangular strip (7 pages)	235120
Hsin-Hua Lai and Olexei I. Motrunich	
Negative refraction, negative phase velocity, and counterposition in bianisotropic materials and metamaterials (5 pages)	235121
Tom G. Mackay and Akhlesh Lakhtakia	
Defects in codoped NiO with gigantic dielectric response (4 pages)	235122
Ping Wu, Valeri Ligatchev, Zhi Gen Yu, Jianwei Zheng, Michael B. Sullivan, and Yingzhi Zeng	
Electronic and optical properties of single-walled carbon nanotubes under a uniform transverse electric field: A first-principles study (5 pages)	235123
T. H. Cho, W. S. Su, T. C. Leung, Wei Ren, and C. T. Chan	
Nernst effect in the electron-doped cuprate superconductors (9 pages)	235124
Andreas Hackl and Subir Sachdev	
DFT+U calculations of the ground state and metastable states of uranium dioxide (8 pages)	235125
Boris Dorado, Bernard Amadon, Michel Freyss, and Marjorie Bertolus	
Titanium nitride: A correlated metal at the threshold of a Mott transition (7 pages)	235126
H. Allmaier, L. Chioncel, and E. Arrigoni	
Delocalization and hybridization enhance the magnetocaloric effect in Cu-doped Ni ₂ MnGa (5 pages)	235127
S. Roy, E. Blackburn, S. M. Valvidares, M. R. Fitzsimmons, S. C. Vogel, M. Khan, I. Dubenko, S. Stadler, N. Ali, S. K. Sinha, and J. B. Kortright	
Charge transfer transitions in multiferroic BiFeO ₃ and related ferrite insulators (16 pages)	235128
R. V. Pisarev, A. S. Moskvina, A. M. Kalashnikova, and Th. Rasing	
Many-body Green's function approach to attosecond nonlinear x-ray spectroscopy (9 pages)	235129
Upendra Harbola and Shaul Mukamel	
Low-energy theory of the $t-t'-t''-U$ Hubbard model at half-filling: Interaction strengths in cuprate superconductors and an effective spin-only description of La ₂ CuO ₄ (22 pages)	235130
J.-Y. P. Delannoy, M. J. P. Gingras, P. C. W. Holdsworth, and A.-M. S. Tremblay	

(Continued)

Detecting charge and lattice dynamics in photoinduced charge-order melting in perovskite-type manganites using a 30-femtosecond time resolution (7 pages)	235131
Hiroyuki Matsuzaki, Hirotaka Uemura, Masakazu Matsubara, Tsuyoshi Kimura, Yoshinori Tokura, and Hiroshi Okamoto	
Transport in disordered graphene nanoribbons (5 pages)	235132
Ivar Martin and Ya. M. Blanter	
Effective Coulomb interactions in solids under pressure (8 pages)	235133
Jan M. Tomczak, T. Miyake, R. Sakuma, and F. Aryasetiawan	
Semiconductors I: bulk	
Infrared spectroscopic studies on incorporating the effect of metallic ions into a <i>M</i> -DNA double helix (8 pages)	235201
H. Matsui, N. Toyota, M. Nagatori, H. Sakamoto, and K. Mizoguchi	
Optimization of Mn doping in group-IV-based dilute magnetic semiconductors by electronic codopants (13 pages)	235202
Hua Chen, Wenguang Zhu, Efthimios Kaxiras, and Zhenyu Zhang	
First-principles study of the $\text{Co}_2\text{FeSi}(001)$ surface and $\text{Co}_2\text{FeSi}/\text{GaAs}(001)$ interface (10 pages)	235203
Sh. Khosravizadeh, S. Javad Hashemifar, and Hadi Akbarzadeh	
Doubly resonant Raman electron paramagnetic transitions of Cr^{3+} in ruby ($\text{Al}_2\text{O}_3:\text{Cr}^{3+}$) (7 pages)	235204
X. Lu, S. Venugopalan, Hyunjung Kim, M. Grimsditch, S. Rodriguez, and A. K. Ramdas	
 Photoluminescence quenching of tris-(8-hydroxyquinoline) aluminum thin films at interfaces with metal oxide films of different conductivities (8 pages)	235205
Jun Mei, M. Scott Bradley, and Vladimir Bulović	
 Theory of charge transport in organic crystals: Beyond Holstein's small-polaron model (11 pages)	235206
Frank Ortmann, Friedhelm Bechstedt, and Karsten Hannewald	
Magnetic properties of the superconducting state of iron-based superconductors (8 pages)	235207
Kangjun Seo, Chen Fang, B. Andrei Bernevig, and Jiangping Hu	
Codoping of aluminum and gallium with nitrogen in ZnO: A comparative first-principles investigation (9 pages)	235208
X. M. Duan, C. Stampfl, M. M. M. Bilek, and D. R. McKenzie	
Optical characterization of $\text{Zn}_{0.95-x}\text{Be}_x\text{Mn}_{0.05}\text{Se}$ mixed crystals (8 pages)	235209
D. O. Dumcenco, C. T. Huang, Y. S. Huang, F. Firszt, S. Łękowski, H. Męczyńska, A. Marasek, and K. K. Tiong	
Theory of the neutral nitrogen-vacancy center in diamond and its application to the realization of a qubit (6 pages)	235210
Adam Gali	
Semiconductors II: surfaces, interfaces, microstructures, and related topics	
Interference of heavy holes in an Aharonov-Bohm ring (11 pages)	235301
Dimitrije Stepanenko, Minchul Lee, Guido Burkard, and Daniel Loss	
Magnetoabsorption in InSb quantum-well heterostructures (7 pages)	235302
J. M. S. Orr, K.-C. Chuang, R. J. Nicholas, L. Buckle, M. T. Emeny, and P. D. Buckle	

(Continued)

Selective suppression of Dresselhaus or Rashba spin-orbit coupling effects by the Zeeman interaction in quantum dots (13 pages)	235303
B. Szafran, M. P. Nowak, S. Bednarek, T. Chwiej, and F. M. Peeters	
Temperature-dependent Drude transport in a two-dimensional electron gas (5 pages)	235304
D. S. Novikov	
Determination of the Voigt constant of phthalocyanines by magneto-optical Kerr-effect spectroscopy (7 pages)	235305
M. Fronk, B. Bräuer, J. Kortus, O. G. Schmidt, D. R. T. Zahn, and G. Salvan	
Temperature dependence of hot-carrier relaxation in PbSe nanocrystals: An <i>ab initio</i> study (7 pages)	235306
Hua Bao, Bradley F. Habenicht, Oleg V. Prezhdo, and Xiulin Ruan	
Observation of percolation-induced two-dimensional metal-insulator transition in a Si MOSFET (6 pages)	235307
L. A. Tracy, E. H. Hwang, K. Eng, G. A. Ten Eyck, E. P. Nordberg, K. Childs, M. S. Carroll, M. P. Lilly, and S. Das Sarma	
Impact of the crystal structure of HfO ₂ on the transport properties of model HfO ₂ /Si/HfO ₂ silicon-on-insulator field-effect transistors: A combined DFT-scattering theory approach (9 pages)	235308
G. Giorgi, L. R. C. Fonseca, A. Korkin, and K. Yamashita	
Diagrammatic real-time approach to adiabatic pumping through metallic single-electron devices (11 pages)	235309
Nina Winkler, Michele Governale, and Jürgen König	
Metastable zinc-blende MgS structure: Combined experimental and theoretical study (10 pages)	235310
C. Bocchi, A. Catellani, F. Germini, L. Nasi, J. K. Morrod, K. A. Prior, and G. Calestani	
Fluctuation theorem in a quantum-dot Aharonov-Bohm interferometer (9 pages)	235311
Yasuhiro Utsumi and Keiji Saito	
Negative lateral conductivity of hot electrons in a biased superlattice (8 pages)	235312
A. Hernández-Cabrera, P. Aceituno, and F. T. Vasko	
Origin of the “0.25 anomaly” in the nonlinear conductance of a quantum point contact (5 pages)	235313
S. Ihnatsenka and I. V. Zozoulenko	
Optical-phonon scattering and theory of magneto-polarons in a quantum well in a strong magnetic field (8 pages)	235314
Yu Chen, N. Regnault, R. Ferreira, Bang-Fen Zhu, and G. Bastard	
 Gapless layered three-dimensional fractional quantum Hall states (11 pages)	235315
Michael Levin and Matthew P. A. Fisher	
Enhanced single-photon emission in the near infrared from a diamond color center (5 pages)	235316
Igor Aharonovich, Chunyuan Zhou, Alastair Stacey, Julius Orwa, Stefania Castelletto, David Simpson, Andrew D. Greentree, François Treussart, Jean-Francois Roch, and Steven Prawer	
Phase-field modeling of anomalous spiral step growth on Si(001) surface (6 pages)	235317
Yan-Mei Yu, Bang-Gui Liu, and Axel Voigt	
 Ultrafast singlet and triplet dynamics in microcrystalline pentacene films (8 pages)	235318
Henning Marciniak, Igor Pugliesi, Bert Nickel, and Stefan Lochbrunner	
Formation and electronic states of In nanoclusters on the Si(111)-7×7 surface (7 pages)	235319
Jung Hoon Byun, Jin Sung Shin, Pil Gyu Kang, Hojin Jeong, and Han Woong Yeom	

(Continued)

Alteration of first-order phase transition by stress cycles in a MnAs layer on step-bunched GaAs(331)B (6 pages)	235320
Y. Takagaki, C. Herrmann, B. Jenichen, and J. Herfort	
☞ Critical behavior of a point contact in a quantum spin Hall insulator (22 pages)	235321
Jeffrey C. Y. Teo and C. L. Kane	
Ferromagnetic properties of p -(Cd,Mn)Te quantum wells: Interpretation of magneto-optical measurements by Monte Carlo simulations (11 pages)	235322
A. Lipińska, C. Simserides, K. N. Trohidou, M. Goryca, P. Kossacki, A. Majhofer, and T. Dietl	
Memory effect on the multiphoton coherent destruction of tunneling in the electron transport of nanoscale systems driven by a periodic field: A generalized Floquet approach (6 pages)	235323
Tak-San Ho, Shih-Han Hung, Hsing-Ta Chen, and Shih-I Chu	
Effective mass suppression in a ferromagnetic two-dimensional electron liquid (4 pages)	235324
Reza Asgari, T. Gokmen, B. Tanatar, Medini Padmanabhan, and M. Shayegan	
Luminescence spectra of quantum dots in microcavities. I. Bosons (17 pages)	235325
Fabrice P. Laussy, Elena del Valle, and Carlos Tejedor	
Luminescence spectra of quantum dots in microcavities. II. Fermions (20 pages)	235326
Elena del Valle, Fabrice P. Laussy, and Carlos Tejedor	
Magnetization in two-dimensional electron gas in a perpendicular magnetic field: The roles of edge states and spin-orbit coupling (8 pages)	235327
Zhigang Wang, Wei Zhang, and Ping Zhang	
Sum rules and universality in electron-modulated acoustic phonon interaction in a free-standing semiconductor plate (7 pages)	235328
Shigeyasu Uno, Darryl Yong, and Nobuya Mori	
Spin-orbit interactions in bilayer exciton-condensate ferromagnets (15 pages)	235329
Y.-P. Shim and A. H. MacDonald	
Stoichiometry and Bravais lattice diversity: An <i>ab initio</i> study of the GaSb(001) surface (6 pages)	235330
O. Romanyuk, F. Grosse, and W. Braun	
Coherent {001} interfaces between rocksalt and zinc-blende crystal structures (6 pages)	235331
H. Groiss, G. Hesser, W. Heiss, F. Schäffler, R. Leitsmann, F. Bechstedt, K. Koike, and M. Yano	
Effect of the surrounding oxide on the photoabsorption spectra of Si nanocrystals (6 pages)	235332
Laura Koponen, Lasse O. Tunturivuori, Martti J. Puska, and Risto M. Nieminen	
Zero-field spin splitting and spin-dependent broadening in high-mobility InSb/In _{1-x} Al _x Sb asymmetric quantum well heterostructures (10 pages)	235333
A. M. Gilbertson, W. R. Branford, M. Fearn, L. Buckle, P. D. Buckle, T. Ashley, and L. F. Cohen	
Path to Wigner localization in circular quantum dots (5 pages)	235334
Lang Zeng, W. Geist, W. Y. Ruan, C. J. Umrigar, and M. Y. Chou	
Disorder and temperature renormalization of interaction contribution to the conductivity in two-dimensional In _x Ga _{1-x} As electron systems (8 pages)	235335
G. M. Minkov, A. V. Germanenko, O. E. Rut, A. A. Sherstobitov, and B. N. Zvonkov	
Real-time simulations of nonequilibrium transport in the single-impurity Anderson model (6 pages)	235336
F. Heidrich-Meisner, A. E. Feiguin, and E. Dagotto	

(Continued)

<i>R</i> -matrix method for quantum transport simulations in discrete systems (5 pages)	235337
Gennady Mil'nikov, Nobuya Mori, and Yoshinari Kamakura	
Surface physics, nanoscale physics, low-dimensional systems	
☞ Noise in frequency-modulation dynamic force microscopy (23 pages)	235401
Jérôme Polesel-Maris, Miguel Angel Venegas de la Cerda, David Martrou, and Sébastien Gauthier	
Enhanced magnetoresistance due to charging effects in a molecular nanocomposite spin device (5 pages) ...	235402
Daiki Hatanaka, Shinichi Tanabe, Haruka Kusai, Ryo Nouchi, Takayuki Nozaki, Teruya Shinjo, Yoshishige Suzuki, Hai Wang, Koki Takanashi, and Masashi Shiraishi	
Thermoelectric and Seebeck coefficients of granular metals (25 pages)	235403
Andreas Glatz and I. S. Beloborodov	
Interference effects on the transport characteristics of a benzene single-electron transistor (16 pages)	235404
D. Darau, G. Begemann, A. Donarini, and M. Grifoni	
Pumping current and conductance of a Luttinger liquid in the presence of two time-dependent impurities at finite temperatures (5 pages)	235405
Mariano J. Salvay	
Energy relaxation of hot Dirac fermions in graphene (5 pages)	235406
Wang-Kong Tse and S. Das Sarma	
Tuning the electrical resistivity of semiconductor thin films by nanoscale corrugation (6 pages)	235407
Shota Ono and Hiroyuki Shima	
☞ Few-electron physics in a nanotube quantum dot with spin-orbit coupling (6 pages)	235408
B. Wunsch	
Role of substrate on nucleation and morphology of gold nanoparticles produced by pulsed laser deposition (6 pages)	235409
V. Resta, C. N. Afonso, E. Piscopiello, and G. Van Tendeloo	
First-principles study of γ -Al ₂ O ₃ (100) surface (7 pages)	235410
C. Y. Ouyang, Ž. Šljivančanin, and A. Baldereschi	
Inelastic scattering in metal-H ₂ -metal junctions (5 pages)	235411
I. S. Kristensen, M. Paulsson, K. S. Thygesen, and K. W. Jacobsen	
Guided propagation along quadrupolar chains of plasmonic nanoparticles (12 pages)	235412
Andrea Alù and Nader Engheta	
Epitaxial orientations of <i>para</i> -sexiphenyl platelets grown on alkali halide (001) surfaces (10 pages)	235413
Detlef-M. Smilgies and Edward J. Kintzel, Jr.	
Inelastic scattering in a local polaron model with quadratic coupling to bosons (12 pages)	235414
Thomas Olsen	
Interface states and anomalous quantum oscillations in hybrid graphene structures (6 pages)	235415
C. P. Puls, N. E. Staley, and Y. Liu	
Surface second-harmonic generation from scattering of surface plasmon polaritons from radially symmetric nanostructures (13 pages)	235416
Lina Cao, N. C. Panoiu, Ravi D. R. Bhat, and R. M. Osgood, Jr.	
Density functional study of Pt ₄ clusters adsorbed on a carbon nanotube support (7 pages)	235417
Nguyen Thanh Cuong, Ayumu Sugiyama, Akihiko Fujiwara, Tadaoki Mitani, and Dam Hieu Chi	

(Continued)

Phonon-assisted dynamical Coulomb blockade in a thin suspended graphite sheet (8 pages)	235418
A. Chepelianskii, P. Delplace, A. Shailos, A. Kasumov, R. Deblock, M. Monteverde, C. Ojeda-Aristizabal, M. Ferrier, S. Guéron, and H. Bouchiat	
Tailoring band gaps of insulators by adsorption at surface defects: Benzoic acids on NaCl surfaces (17 pages)	235419
Wei Chen, Christoph Tegenkamp, Herbert Pfnür, and Thomas Bredow	
Adsorption and dissociation of H ₂ O on in-plane-polarized BaTiO ₃ (001) surfaces and their relation to ferroelectricity (11 pages)	235420
Grégory Geneste and Brahim Dkhil	
Linear ripples and traveling circular ripples produced on polymers by thermal AFM probes (7 pages)	235421
Enrico Gnecco, Elisa Riedo, William P. King, Seth R. Marder, and Robert Szoszkiewicz	
Irradiation-enhanced adsorption and trapping of O ₂ on nanoporous water ice (6 pages)	235422
J. Shi, B. D. Teolis, and R. A. Baragiola	
Curvature-induced anisotropic spin-orbit splitting in carbon nanotubes (5 pages)	235423
L. Chico, M. P. López-Sancho, and M. C. Muñoz	
Defect-pinned nucleation, growth, and dynamic coalescence of Ag islands on MgO(001): An <i>in situ</i> grazing-incidence small-angle x-ray scattering study (10 pages)	235424
C. Revenant, G. Renaud, R. Lazzari, and J. Jupille	
Superstructures of oxygen and sulphur on a Fe(110) surface via fast atom diffraction (15 pages)	235425
A. Schüller, M. Busch, J. Seifert, S. Wethekam, H. Winter, and K. Gärtner	
Electronic and vibrational properties at the ZnPc/Ag(110) interface (10 pages)	235426
P. Amsalem, L. Giovanelli, J. M. Themlin, and T. Angot	
Modification of surface electronic properties on alloy surfaces: Standing waves on a Cu-9 at. % Al(111) surface observed by STM (4 pages)	235427
Yinghui Yu, Keisuke Sagisaka, and Daisuke Fujita	
Photogalvanic effect and photoconductance in a quantum channel with a single short-range scatterer (9 pages)	235428
M. A. Pyataev and S. N. Ulyanov	
Renormalization of the phonon spectrum in semiconducting single-walled carbon nanotubes studied by Raman spectroscopy (9 pages)	235429
Anindya Das and A. K. Sood	
Electric-field effects on the diffusion of Si and Ge adatoms on Si(001) studied by density functional simulations (5 pages)	235430
Yao He and J. G. Che	
Density of states in disordered graphene (9 pages)	235431
Klaus Ziegler, Balázs Dóra, and Peter Thalmeier	
Ballistic versus electronic processes in ion-induced nanostructuring of ionic surfaces (8 pages)	235432
F. Krok, S. R. Saeed, Z. Postawa, and M. Szymonski	
Carrier density and magnetism in graphene zigzag nanoribbons (5 pages)	235433
J. Jung and A. H. MacDonald	
Influence of ultrathin water layer on the van der Waals/Casimir force between gold surfaces (7 pages)	235434
G. Palasantzas, V. B. Svetovoy, and P. J. van Zwol	

(Continued)

Modeling of film growth by cluster deposition: The effect of size and energy (5 pages)	235435
K. Meinander and K. Nordlund	
Model for the electrocatalysis of hydrogen evolution (10 pages)	235436
E. Santos, A. Lundin, K. Pötting, P. Quaino, and W. Schmickler	
Structural and electronic properties of Ge-Si, Sn-Si, and Pb-Si dimers on Si(001) from density-functional calculations (6 pages)	235437
Binghai Yan, Kota Tomatsu, Bing Huang, Andreia Luisa da Rosa, Gang Zhou, Bing-Lin Gu, Wenhui Duan, Fumio Komori, and Thomas Frauenheim	
Size-dependent surface-plasmon-enhanced photoluminescence from silver nanoparticles embedded in silica (8 pages)	235438
Oleg A. Yeshchenko, Igor M. Dmitruk, Alexandr A. Alexeenko, Mykhaylo Yu. Losytskyy, Andriy V. Kotko, and Anatoliy O. Pinchuk	
Self-assembly, dynamics, and structure of Si magic clusters (9 pages)	235439
Weijie Ong, Eng Soon Tok, Harman Johll, and Hway Chuan Kang	
Water on graphene: Hydrophobicity and dipole moment using density functional theory (5 pages)	235440
O. Leenaerts, B. Partoens, and F. M. Peeters	
Adsorption and diffusion of SCH ₃ radicals and Au(SCH ₃) ₂ complexes on the unreconstructed Au(111) surface in the submonolayer coverage regime (12 pages)	235441
Andreas Franke and Eckhard Pehlke	
Field-induced gap and quantized charge pumping in a nanoscale helical wire (6 pages)	235442
Xiao-Liang Qi and Shou-Cheng Zhang	
First-principles calculations of hyperfine structure in <i>M</i> -doped Si ₁₆ H ₁₆ fullerene cages (<i>M</i> =Cr, Mn, and Fe) (7 pages)	235443
Mohammad Saeed Bahramy, Vijay Kumar, and Yoshiyuki Kawazoe	
Electronic structure calculations for a carbon nanotube capacitor with a dielectric medium (8 pages)	235444
Kazuyuki Uchida and Atsushi Oshiyama	

COMMENTS

Comment on “Raman spectra of misoriented bilayer graphene” (2 pages)	237401
Zhenhua Ni, Yingying Wang, Ting Yu, Yumeng You, and Zexiang Shen	
Reply to “Comment on ‘Raman spectra of misoriented bilayer graphene’ ” (2 pages)	237402
P. Poncharal, A. Ayari, T. Michel, and J.-L. Sauvajol	

ERRATA

Erratum: Conductivity of suspended and non-suspended graphene at finite gate voltage [Phys. Rev. B 78 , 085418 (2008)] (1 page)	239901(E)
T. Stauber, N. M. R. Peres, and A. H. Castro Neto	
Erratum: Theory of the energy-spectrum dependence of the electronic thermoelectric tunneling coefficients of a quantum dot [Phys. Rev. B 78 , 165327 (2008)] (1 page)	239902(E)
X. Zianni	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 79, NUMBER 23

JUNE 2009-15(I)

Erratum: Atmospheric pressure induced atomic diffusion into solid crystal [Phys. Rev. B 79 , 155405 (2009)] (1 page)	239903(E)
J. K. Bal and S. Hazra	
Publisher's Note: Role of substrate on nucleation and morphology of gold nanoparticles produced by pulsed laser deposition [Phys. Rev. B 79 , 235409 (2009)] (1 page)	239904(E)
V. Resta, C. N. Afonso, E. Piscopiello, and G. Van Tendeloo	