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 75, NUMBER 11 *CONTENTS* **MARCH 2007-15(I)**

BRIEF REPORTS

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

Boundary hopping and the mobility edge in the Anderson model in three dimensions *(4 pages)* 113101
Viktor Z. Cerovski

Backscattering off a dynamical impurity in one-dimensional Fermi systems: A perturbative computation *(4 pages)* 113102
Carlos M. Naón and Mariano J. Salvay

Charge gap in the one-dimensional extended Hubbard model at quarter filling *(4 pages)* 113103
K. Sano and Y. Ōno

Out-of-plane dispersion of a two-dimensional photonic crystal *(4 pages)* 113104
G. Alagappan, X. W. Sun, M. B. Yu, and P. Shum

Semiconductors I: bulk

Local structure around Mn atoms in Si crystals implanted with Mn^+ studied using x-ray absorption spectroscopy techniques *(4 pages)* 113201
A. Wolska, K. Lawniczak-Jablonska, M. Klepka, M. S. Walczak, and A. Misiuk

Role of nematic order in conjugated polymer spectroscopy *(4 pages)* 113202
M. J. Winokur, H. Cheun, M. Knaapila, A. P. Monkman, and U. Scherf

Electric-field-dependent percolation model of charge-carrier mobility in amorphous organic semiconductors *(4 pages)* 113203
B. N. Limketkai, P. Jadhav, and M. A. Baldo

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

Effects of density imbalance on the BCS-BEC crossover in semiconductor electron-hole bilayers *(4 pages)* 113301
P. Pieri, D. Neilson, and G. C. Strinati

Coherent response of a quantum dot exciton driven by a rectangular spectrum optical pulse *(4 pages)* 113302
A. J. Ramsay, R. S. Kolodka, F. Bello, P. W. Fry, W. K. Ng, A. Tahraoui, H. Y. Liu, M. Hopkinson, D. M. Whittaker, A. M. Fox, and M. S. Skolnick

Analysis of spin pumping in asymmetric ring conductors with the Aharonov-Casher effect *(4 pages)* 113303
B. H. Wu and J. C. Cao

Copyright 2007 by The American Physical Society

(Continued)

1098-0121(20070315)75:11;1-S

PHYSICAL REVIEW B **THIRD SERIES, VOLUME 75, NUMBER 11** **MARCH 2007-15(I)**

Hyperfine-interaction-induced critical exponents in the quantum Hall effect *(4 pages)* 113304
V. Kagalovsky and I. Vagner

Interpretation of the Fano lineshape reversal in quantum waveguides *(4 pages)* 113305
Shachar Klaiman, Nimrod Moiseyev, and H. R. Sadeghpour

Two-phonon assisted exciton spin relaxation due to exchange interaction in spherical quantum dots *(4 pages)* 113306
P. Nahálková, D. Sprinzl, P. Malý, P. Němec, V. N. Gladilin, and J. T. Devreese

Shape oscillations: A walk through the phase diagram of strained islands *(4 pages)* 113307
M. Stoffel, A. Rastelli, J. Stangl, T. Merdzhanova, G. Bauer, and O. G. Schmidt

Hydrogen-induced Sb atom reconstruction $\sqrt{3}\times\sqrt{3}\rightarrow 2\times 1$ on Si(111) as an example of a six-state model *(4 pages)* 113308
V. Petrauskas and E. E. Tornau

Density functional study of Si(001)/Si(110) and Si(100)/Si(110) interfaces *(4 pages)* 113309
Adrian Ciucivara, B. R. Sahu, Sachin Joshi, Sanjay K. Banerjee, and Leonard Kleinman

Hole spin polarization in GaAs:Mn/AlAs multiple quantum wells *(4 pages)* 113310
V. F. Sapega, O. Brandt, M. Ramsteiner, K. H. Ploog, I. E. Panaiotti, and N. S. Averkiev

Surface physics, nanoscale physics, low-dimensional systems

Enhancing the topological structures of defected carbon nanotubes with adsorbed hydrocarbon radicals at low temperatures *(4 pages)* 113401
R. L. Zhou, H. Y. He, and B. C. Pan

Strength modulation of quantum-well states in Pb islands with periodic distortions on Si(111) *(4 pages)* 113402
S. M. Lu, M. C. Yang, W. B. Su, C. L. Jiang, T. Hsu, C. S. Chang, and Tien T. Tsong

Phenol near Ni(111), Ni(110), and Ni(221) surfaces in a vertical ring geometry: A density functional study of the oxygen-surface bonding and O-H cleavage *(4 pages)* 113403
Luca M. Ghiringhelli, Riccarda Caputo, and Luigi Delle Site

Electronic structures of the self-assembled monolayer of molecules of symmetric disulfides of benzoic acid *(4 pages)* 113404
Y.-H. Tang and M.-H. Tsai

Core-shell nanoparticles with self-regulating plasmonic functionality *(4 pages)* 113405
M. B. Cortie, A. Dowd, N. Harris, and M. J. Ford

Tuning the electronic structure of graphene nanoribbons through chemical edge modification: A theoretical study *(4 pages)* 113406
Z. F. Wang, Qunxiang Li, Huaixiu Zheng, Hao Ren, Haibin Su, Q. W. Shi, and Jie Chen

Pseudodiffusive magnetotransport in graphene *(4 pages)* 113407
Elsa Prada, Pablo San-Jose, Bernhard Wunsch, and Francisco Guinea

Argon scattering from Ru(0001): Calculations and comparison with experiment *(4 pages)* 113408
W. W. Hayes and J. R. Manson

Temperature behavior of the photoluminescence decay of semiconducting carbon nanotubes: The effective lifetime *(4 pages)* 113409
D. Karaiskaj, A. Mascarenhas, Jong Hyun Choi, Rachel Graff, and Michael S. Strano

(Continued)

PHYSICAL REVIEW B **THIRD SERIES, VOLUME 75, NUMBER 11** **MARCH 2007-15(I)**

Atomic scattering as a probe of polymer surface and thin film dynamics *(4 pages)* 113410
M. A. Freedman, A. W. Rosenbaum, and S. J. Sibener

Electronic and transport properties of bismuth nanolines for applications in molecular electronics *(4 pages)* 113411
R. V. Belosludov, A. A. Farajian, H. Mizuseki, K. Miki, and Y. Kawazoe

ARTICLES

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

Efficient multiscale algorithms for solution of self-consistent eigenvalue problems in real space *(11 pages)* . . . 115101
Nimal R. Wijesekera, Guogang Feng, and Thomas L. Beck

Pseudogaps in strongly correlated metals: Optical conductivity within the generalized dynamical mean-field theory approach *(11 pages)* 115102
E. Z. Kuchinskii, I. A. Nekrasov, and M. V. Sadovskii

Fermi liquid instabilities in the spin channel *(25 pages)* 115103
Congjun Wu, Kai Sun, Eduardo Fradkin, and Shou-Cheng Zhang

Metamaterial homogenization approach with application to the characterization of microstructured composites with negative parameters *(15 pages)* 115104
Mário G. Silveirinha

Characterization and electronic structure calculations of the antiferromagnetic insulator Ca_3FeRhO_6 *(5 pages)* 115105
Volker Eyert, Udo Schwingenschlögl, Raymond Frésard, Antoine Maignan, Christine Martin, Ninh Nguyen, Christian Hackenberger, and Thilo Kopp

Magnetoresistance oscillations in a periodically modulated two-dimensional electron gas: The magnetic-breakdown approach *(14 pages)* 115106
V. M. Gvozdikov

Resonant inelastic x-ray scattering of curium oxide *(7 pages)* 115107
K. O. Kvashnina, S. M. Butorin, D. K. Shuh, J.-H. Guo, L. Werme, and J. Nordgren

Three-dimensional light focusing in inverse opal photonic crystals *(6 pages)* 115108
Kun Ren, Zhi-Yuan Li, XiaoBin Ren, Shuai Feng, Bingying Cheng, and Daozhong Zhang

Polarizational stopping power of heavy-ion diclusters in two-dimensional electron liquids *(9 pages)* 115109
D. Ballester, A. M. Fuentes, and I. M. Tkachenko

Importance of the V $3d-$O $2p$ hybridization in the Mott-Hubbard material V_2O_3 *(5 pages)* 115110
R. J. O. Mossanek and M. Abbate

Spin dynamics in a weakly itinerant magnet from ^{29}Si NMR in MnSi *(5 pages)* 115111
M. Corti, F. Carbone, M. Filibian, Th. Jarlborg, A. A. Nugroho, and P. Carretta

Theory of core-level photoemission and the x-ray edge singularity across the Mott transition *(5 pages)* 115112
P. S. Cornaglia and A. Georges

Structural, electronic, and magnetic properties of Mn-doped Ge nanowires by *ab initio* calculations *(6 pages)* 115113
J. T. Arantes, Antônio J. R. da Silva, and A. Fazzio

(Continued)

PHYSICAL REVIEW B **THIRD SERIES, VOLUME 75, NUMBER 11** **MARCH 2007-15(I)**

Electromagnetic characterization of planar metamaterials by oblique angle spectroscopic measurements *(7 pages)* 115114
T. Driscoll, D. N. Basov, W. J. Padilla, J. J. Mock, and D. R. Smith

Photoluminescence of $HgTe/Hg_{1-x}Cd_xTe$ superlattices and a study of minibands *(8 pages)* 115115
C. R. Becker, S. D. Hatch, F. Goschenhofer, V. Latussek, J. M. Dell, and L. Faraone

First-principles perturbative computation of dielectric and Born charge tensors in finite electric fields *(6 pages)* 115116
Xinjie Wang and David Vanderbilt

Energy dependence of exact muffin-tin-orbital structure constants *(11 pages)* 115117
A. E. Kissavos, L. Vitos, and I. A. Abrikosov

Ultrashort lifetime expansion for indirect resonant inelastic x-ray scattering *(9 pages)* 115118
Luuk J. P. Ament, Filomena Forte, and Jeroen van den Brink

Ground-state properties of the attractive one-dimensional Bose-Hubbard model *(15 pages)* 115119
Norman Oelkers and Jon Links

Selective optical probing of the charge-density-wave phases in $NbSe_3$ *(5 pages)* 115120
K. Shimatake, Y. Toda, and S. Tanda

Quantum criticality around metal-insulator transitions of strongly correlated electron systems *(23 pages)* 115121
Takahiro Misawa and Masatoshi Imada

Crossover from incoherent-metal to Fermi-liquid behavior in CuV_2S_4: Transport and magnetic properties upon substituting Zn for Cu *(10 pages)* 115122
I. Naik, C. S. Yadav, and A. K. Rastogi

Diamagnetism of nodal fermions *(10 pages)* 115123
Amit Ghosal, Pallab Goswami, and Sudip Chakravarty

Electromagnetic Green's tensor and local density of states calculations for collections of spherical scatterers *(9 pages)* 115124
V. Yannopapas and N. V. Vitanov

Influence of vibrational modes on the electronic properties of DNA *(8 pages)* 115125
Benjamin B. Schmidt, Matthias H. Hettler, and Gerd Schön

Cation charge anomalies and high-κ dielectric behavior in $DyScO_3$: *Ab initio* density-functional and self-interaction-corrected calculations *(6 pages)* 115126
Pietro Delugas, Vincenzo Fiorentini, Alessio Filippetti, and Geoffrey Pourtois

Molecular microelectrostatic view on electronic states near pentacene grain boundaries *(14 pages)* 115127
Stijn Verlaak and Paul Heremans

Metal-insulator transition in Na_xTiO_2 (x=0.20–0.25) *(5 pages)* 115128
Hiroya Sakurai, Masaki Kato, Kazuyoshi Yoshimura, Naohito Tsujii, and Koji Kosuge

Giant dielectric permittivity and magnetocapacitance in $La_{0.875}Sr_{0.125}MnO_3$ single crystals *(4 pages)* 115129
R. F. Mamin, T. Egami, Z. Marton, and S. A. Migachev

Fractal feature of localized electronic states in Fibonacci arrays of Aharonov-Bohm rings *(11 pages)* 115130
Atsushi Nomata and Shinkichi Horie

Performance on molecules, surfaces, and solids of the Wu-Cohen GGA exchange-correlation energy functional *(14 pages)* 115131
Fabien Tran, Robert Laskowski, Peter Blaha, and Karlheinz Schwarz

(Continued)

PHYSICAL REVIEW B **THIRD SERIES, VOLUME 75, NUMBER 11** **MARCH 2007-15(I)**

Electron correlation effects on Lehmann spectra of one-body Green functions for insulating states caused by the Coulomb repulsion *(8 pages)* 115132
Norikazu Tomita and Keiichiro Nasu

Electron transmission between normal and heavy electron metallic phases in a Kondo lattice system *(6 pages)* 115133
M. A. N. Araújo and A. H. Castro Neto

Semiconductors I: bulk

Atomistic modeling of the (**a**+**c**)-mixed dislocation core in wurtzite GaN *(10 pages)* 115201
I. Belabbas, A. Béré, J. Chen, S. Petit, M. Akli Belkhir, P. Ruterana, and G. Nouet

Optimized Tersoff potential parameters for tetrahedrally bonded III-V semiconductors *(9 pages)* 115202
D. Powell, M. A. Migliorato, and A. G. Cullis

Room-temperature stimulated emission of ZnO: Alternatives to excitonic lasing *(9 pages)* 115203
Claus Klingshirn, Robert Hauschild, Johannes Fallert, and Heinz Kalt

First-principles calculations of the band gap of $Hf_xSi_{1-x}O_2$ and $Zr_xSi_{1-x}O_2$ alloys *(8 pages)* 115204
E. P. Nakhmedov, E. Nadimi, M. Bouhassoune, C. Radehaus, and K. Wieczorek

Stability of I_3 complexes in III-V compound semiconductors by tight-binding molecular dynamics *(7 pages)* 115205
G. Zollo and F. Gala

Local-density-functional calculations of the vacancy-oxygen center in Ge *(8 pages)* 115206
A. Carvalho, R. Jones, J. Coutinho, V. J. B. Torres, S. Öberg, J. M. Campanera Alsina, M. Shaw, and P. R. Briddon

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

Topological Hunds rules and the electronic properties of a triple lateral quantum dot molecule *(12 pages)* 115301
Marek Korkusinski, Irene Puerto Gimenez, Pawel Hawrylak, Louis Gaudreau, Sergei A. Studenikin, and Andrew S. Sachrajda

Strongly nonexponential time-resolved fluorescence of quantum-dot ensembles in three-dimensional photonic crystals *(5 pages)* 115302
Ivan S. Nikolaev, Peter Lodahl, A. Floris van Driel, A. Femius Koenderink, and Willem L. Vos

Stark effect on the exciton spectra of vertically coupled quantum dots: Horizontal field orientation and nonaligned dots *(7 pages)* 115303
B. Szafran, F. M. Peeters, and S. Bednarek

Superstructure manipulation on a clean Ge(001) surface by carrier injection using an STM *(10 pages)* 115304
Y. Takagi, K. Nakatsuji, Y. Yoshimoto, and F. Komori

Exciton impact-ionization dynamics modulated by surface acoustic waves in GaN *(8 pages)* 115305
J. Pedrós, Y. Takagaki, T. Ive, M. Ramsteiner, O. Brandt, U. Jahn, K. H. Ploog, and F. Calle

Interfacial structure, bonding and composition of InAs and GaSb thin films determined using coherent Bragg rod analysis *(7 pages)* 115306
C. N. Cionca, D. A. Walko, Y. Yacoby, C. Dorin, J. Mirecki Millunchick, and R. Clarke

Disentanglement and decoherence in two-spin and three-spin systems under dephasing *(12 pages)* 115307
Kevin Ann and Gregg Jaeger

(Continued)

PHYSICAL REVIEW B **THIRD SERIES, VOLUME 75, NUMBER 11** **MARCH 2007-15(I)**

Spin-orbit-induced torque in a collinear spin valve: A possible route to design fast magnetic memory *(6 pages)* 115308
T. P. Pareek

Magnetic-field asymmetry of mesoscopic *dc* rectification in Aharonov-Bohm rings *(5 pages)* 115309
L. Angers, E. Zakka-Bajjani, R. Deblock, S. Guéron, H. Bouchiat, A. Cavanna, U. Gennser, and M. Pollianski

Collapse of nonequilibrium charge states in an isolated quantum dot using surface acoustic waves *(5 pages)* 115310
R. J. Schneble, M. Kataoka, C. J. B. Ford, C. H. W. Barnes, D. Anderson, G. A. C. Jones, I. Farrer, D. A. Ritchie, and M. Pepper

Fowler-Nordheim-like local injection of photoelectrons from a silicon tip *(11 pages)* 115311
A. C. H. Rowe and D. Paget

Variation of band bending at the surface of Mg-doped InGaN: Evidence of *p*-type conductivity across the composition range *(7 pages)* 115312
P. D. C. King, T. D. Veal, P. H. Jefferson, C. F. McConville, Hai Lu, and W. J. Schaff

Unified description of phase lapses, population inversion, and correlation-induced resonances in double quantum dots *(22 pages)* 115313
Vyacheslavs Kashcheyevs, Avraham Schiller, Amnon Aharony, and Ora Entin-Wohlman

Electronically modulated two-dimensional plasmons coupled to surface plasmon modes *(9 pages)* 115314
Godfrey Gumbs and Danhong Huang

Magnetoanisotropy of electron-correlation-enhanced tunneling through a quantum dot *(5 pages)* 115315
E. E. Vdovin, Yu. N. Khanin, O. Makarovsky, Yu. V. Dubrovskii, A. Patanè, L. Eaves, M. Henini, C. J. Mellor, K. A. Benedict, and R. Airey

Single layer of Mn in a GaAs quantum well: A ferromagnet with quantum fluctuations *(7 pages)* 115316
Roger G. Melko, Randy S. Fishman, and Fernando A. Reboredo

Atomic scale structure and optical emission of $Al_xGa_{1-x}As/GaAs$ quantum wells *(7 pages)* 115317
C. Ropers, M. Wenderoth, L. Winking, T. C. G. Reusch, M. Erdmann, R. G. Ulbrich, M. Grochol, F. Grosse, R. Zimmermann, S. Malzer, and G. H. Döhler

Valley splitting theory of SiGe/Si/SiGe quantum wells *(12 pages)* 115318
Mark Friesen, Sucismita Chutia, Charles Tahan, and S. N. Coppersmith

Tip-induced energy shift in Au/Fe(100) quantum wells *(5 pages)* 115319
S. Ogawa, S. Heike, H. Takahashi, and T. Hashizume

Electron spin polarization through interactions between excitons, trions, and the two-dimensional electron gas *(7 pages)* 115320
Z. Chen, R. Bratschitsch, S. G. Carter, S. T. Cundiff, D. R. Yakovlev, G. Karczewski, T. Wojtowicz, and J. Kossut

Observation of surface polarity dependent phonons in SiC by deep ultraviolet Raman spectroscopy *(5 pages)* 115321
S. Nakashima, T. Mitani, T. Tomita, T. Kato, S. Nishizawa, H. Okumura, and H. Harima

Resonances of trion states in quantum dot molecules tuned by an electric field *(7 pages)* 115322
Marcos H. Degani and Marcelo Z. Maialle

(Continued)

PHYSICAL REVIEW B **THIRD SERIES, VOLUME 75, NUMBER 11** **MARCH 2007-15(I)**

Edge magnetoplasmons in a partially screened two-dimensional electron gas on a helium surface *(7 pages)* 115323
M. I. Goksu, M. Kim, K. A. Mantey, and A. J. Dahm

Universal quantum computing with correlated spin-charge states *(6 pages)* 115324
Jordan Kyriakidis and Guido Burkard

Magnetophonon oscillations in the negative differential conductance of dilute nitride $GaAs_{1-x}N_x$ submicron diodes *(4 pages)* 115325
G. Allison, S. Spasov, A. Patanè, L. Eaves, A. Ignatov, D. K. Maude, M. Hopkinson, and R. Airey

Long-range order in the Bose-Einstein condensation of polaritons *(8 pages)* 115326
D. Sarchi and V. Savona

Offset energies at organic semiconductor heterojunctions and their influence on the open-circuit voltage of thin-film solar cells *(11 pages)* 115327
Barry P. Rand, Diana P. Burk, and Stephen R. Forrest

Carbon nanotubes and their interaction with the surface of diamond *(16 pages)* 115328
S. J. Sque, R. Jones, S. Öberg, and P. R. Briddon

Self-consistent theory for dynamic responses of mesoscopic systems *(9 pages)* 115329
Yabin Yu, Q. H. Liu, Jun Quan, and Y. H. Tang

Electron-spin dephasing in $GaAs/Al_{0.34}Ga_{0.66}As$ quantum wells with a gate-controlled electron density *(8 pages)* 115330
I. Ya. Gerlovin, Yu. P. Efimov, Yu. K. Dolgikh, S. A. Eliseev, V. V. Ovsyankin, V. V. Petrov, R. V. Cherbunin, I. V. Ignatiev, I. A. Yugova, L. V. Fokina, A. Greilich, D. R. Yakovlev, and M. Bayer

Model of thermal terahertz light emission from a two-dimensional electron gas *(8 pages)* 115331
M. Richter, S. Butscher, M. Schaarschmidt, and A. Knorr

Quantum pump driven fermionic Mach-Zehnder interferometer *(10 pages)* 115332
S.-W. V. Chung, M. Moskalets, and P. Samuelsson

Probing energy barriers and quantum confined states of buried semiconductor heterostructures with ballistic carrier injection: An experimental study *(5 pages)* 115333
Wei Yi, Venkatesh Narayanamurti, Joshua M. O. Zide, Seth R. Bank, and Arthur C. Gossard

Cooling of radiative quantum-dot excitons by terahertz radiation: A spin-resolved Monte Carlo carrier dynamics model *(9 pages)* 115334
Fredrik Boxberg, Jukka Tulkki, Go Yusa, and Hiroyuki Sakaki

Minimal realization of the orbital Kondo effect in a quantum dot with two leads *(6 pages)* 115335
P. G. Silvestrov and Y. Imry

Resonant tunneling versus thermally activated transport through strained $Si_{1-x}Ge_x/Si/Si_{1-x}Ge_x$ quantum wells *(9 pages)* 115336
Julia A. Berashevich, Viktor E. Borisenko, Jean-Louis Lazzari, and François Arnaud D'Avitaya

Exciton dissociation and hole escape in the thermal photoluminescence quenching of (Ga,In)(N,As) quantum wells *(5 pages)* 115337
M. Hugues, B. Damilano, J.-Y. Duboz, and J. Massies

Thermopower measurements on pentacene transistors *(6 pages)* 115338
Adrian von Mühlenen, Nicolas Errien, Michel Schaer, Marie-Noëlle Bussac, and Libero Zuppiroli

(Continued)

PHYSICAL REVIEW B **THIRD SERIES, VOLUME 75, NUMBER 11** **MARCH 2007-15(I)**

Surface physics, nanoscale physics, low-dimensional systems

Lifetime and polarization of the radiative decay of excitons, biexcitons, and trions in CdSe nanocrystal quantum dots *(7 pages)* 115401
Marco Califano, Alberto Franceschetti, and Alex Zunger

Dependence of the final-state effect on the coupling between a CdSe nanoparticle and its neighbors studied with photoemission spectroscopy *(8 pages)* 115402
Pin-Jiun Wu, Ku-Ding Tsuei, Meng-Ting Hsieh, Kung-Hwa Wei, and Keng S. Liang

Diffusion in a one-dimensional system with nearest and next-nearest neighbor interactions: Exact analysis based on the kinetic lattice gas model *(12 pages)* 115403
S. H. Payne and H. J. Kreuzer

Strain-induced change in electronic structure of Cu(100) *(12 pages)* 115404
D. Sekiba, Y. Yoshimoto, K. Nakatsuji, Y. Takagi, T. Iimori, S. Doi, and F. Komori

Chemical ordering and kinetic roughening at metal-electrolyte interfaces *(13 pages)* 115405
P. Córdoba-Torres

Current-voltage curves for molecular junctions: Effect of substitutients *(6 pages)* 115406
Charles W. Bauschlicher, Jr. and John W. Lawson

Density-functional theory study on the arrangement of adsorbed formate molecules on Cu(110) *(14 pages)* . . . 115407
N. Atodiresei, K. Schroeder, and S. Blügel

First-principles study of indium-stabilized {103} facets in Ge quantum dots *(5 pages)* 115408
Feng-Chuan Chuang

Nonadiabatic potential-energy surfaces by constrained density-functional theory *(10 pages)* 115409
Jörg Behler, Bernard Delley, Karsten Reuter, and Matthias Scheffler

Microscopic current dynamics in nanoscale junctions *(8 pages)* 115410
Na Sai, Neil Bushong, Ryan Hatcher, and Massimiliano Di Ventra

Initial stages of heteroepitaxial Mg growth on W(110): Early condensation, anisotropic strain, and self-organized patterns *(9 pages)* 115411
L. Aballe, A. Barinov, A. Locatelli, T. O. Mentes, and M. Kiskinova

Domain growth in the interacting adsorbate: Nonsymmetric particle jump model *(6 pages)* 115412
Magdalena A. Załuska-Kotur, Stanislaw Krukowski, Andrzej Łusakowski, and Łukasz A. Turski

Spectra and correlated wave functions of two electrons confined in a quasi-one-dimensional nanostructure *(12 pages)* 115413
Tokuei Sako and Geerd H. F. Diercksen

Extended electron states in lateral quantum dot molecules investigated with photoluminescence *(7 pages)* 115414
T. v. Lippen, A. Yu. Silov, and R. Nötzel

Structured and viscous water in subnanometer gaps *(6 pages)* 115415
Tai-De Li, Jianping Gao, Robert Szoszkiewicz, Uzi Landman, and Elisa Riedo

Evidence of environmental strains on charge injection in silole-based organic light-emitting diodes *(6 pages)* 115416
N. Huby, L. Hirsch, L. Aubouy, P. Gerbier, A. Van Der Lee, F. Amy, and A. Kahn

Electronic structure and thermodynamic stability of double-layered $SrTiO_3$(001) surfaces: *Ab initio* simulations *(13 pages)* 115417
Eugene Heifets, Sergei Piskunov, Eugene A. Kotomin, Yuri F. Zhukovskii, and Donald E. Ellis

(Continued)

PHYSICAL REVIEW B **THIRD SERIES, VOLUME 75, NUMBER 11** **MARCH 2007-15(I)**

Early stages of radiation damage in graphite and carbon nanostructures: A first-principles molecular dynamics study *(5 pages)* 115418
Oleg V. Yazyev, Ivano Tavernelli, Ursula Rothlisberger, and Lothar Helm

Calculating carbon nanotube–catalyst adhesion strengths *(6 pages)* 115419
Peter Larsson, J. Andreas Larsson, Rajeev Ahuja, Feng Ding, Boris I. Yakobson, Haiming Duan, Arne Rosén, and Kim Bolton

Fanlike aggregations on seeds by parallel ballistic flux: Experimental results and Monte Carlo simulations of the growth of three-dimensional Si structures *(4 pages)* 115420
D.-X. Ye and T.-M. Lu

Quantum states of a hydrogen atom adsorbed on Cu(100) and (110) surfaces *(7 pages)* 115421
Nobuki Ozawa, Tanglaw Roman, Hiroshi Nakanishi, Wilson Agerico Diño, and Hideaki Kasai

Contact epitaxy by deposition of Cu, Ag, Au, Pt, and Ni nanoclusters on (100) surfaces: Size limits and mechanisms *(9 pages)* 115422
T. T. Järvi, A. Kuronen, K. Meinander, K. Nordlund, and K. Albe

Kohn anomalies and nonadiabaticity in doped carbon nanotubes *(11 pages)* 115423
Nicolas Caudal, A. Marco Saitta, Michele Lazzeri, and Francesco Mauri

Reflection high-energy positron diffraction study on Si(111)-$\sqrt{3}\times\sqrt{3}$-Ag surface *(7 pages)* 115424
Y. Fukaya, A. Kawasuso, and A. Ichimiya

Fermi liquid theory of a Fermi ring *(10 pages)* 115425
T. Stauber, N. M. R. Peres, F. Guinea, and A. H. Castro Neto

Role of electron-phonon interactions and external strain on the electronic properties of semiconducting carbon nanotubes *(7 pages)* 115426
D. Karaiskaj and A. Mascarenhas

Photon-assisted transport in a carbon nanotube calculated using Green's function techniques *(5 pages)* 115427
P. A. Orellana and M. Pacheco

Wannier functions of isolated bands in one-dimensional crystals *(17 pages)* 115428
A. Bruno-Alfonso and D. R. Nacbar

Bias dependence of tunneling-electron-induced molecular fluorescence from porphyrin films on noble-metal substrates *(5 pages)* 115429
H. W. Liu, Y. Ie, R. Nishitani, Y. Aso, and H. Iwasaki

ERRATA

Erratum: Density functional study of the adsorption of a C_{60} monolayer on Ag(111) and Au(111) surfaces [Phys. Rev. B **69**, 165417 (2004)] *(1 page)* . . . . . 119901(E)
Lin-Lin Wang and Hai-Ping Cheng