

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 79, NUMBER 15

APRIL 2009-15(I)

Electronic transitions in disk-shaped quantum dots induced by twisted light (<i>7 pages</i>)	155450
G. F. Quinteiro and P. I. Tamborenea	
Quasibound states of Schrödinger and Dirac electrons in a magnetic quantum dot (<i>8 pages</i>)	155451
M. Ramezani Masir, A. Matulis, and F. M. Peeters	

ERRATA

Erratum: Dramatic enhancement in energy harvesting for a narrow range of dimensions in piezoelectric nanostructures [Phys. Rev. B 78 , 121407(R) (2008)] (<i>2 pages</i>)	159901(E)
M. S. Majdoub, P. Sharma, and T. Çağın	

Influence of long range Coulomb interaction on the electronic Mach-Zehnder interferometer of quantum Hall edge states (5 pages)	155435
Hyun C. Lee	
Molecular dynamics simulation of tensile elongation of carbon nanotubes: Temperature and size effects (9 pages)	155436
Chun Tang, Wanlin Guo, and Changfeng Chen	
Crossover between multipole Coulomb and Kubas interactions in hydrogen adsorption on metal-graphene complexes (5 pages)	155437
Gyubong Kim, Seung-Hoon Jhi, Seokho Lim, and Noejung Park	
Pb chains on reconstructed Si(335) surface (7 pages)	155438
Mariusz Krawiec	
Electronic structure of fluorinated multiwalled carbon nanotubes studied using x-ray absorption and photoelectron spectroscopy (12 pages)	155439
M. M. Brzhezinskaya, V. E. Muradyan, N. A. Vinogradov, A. B. Preobrajenski, W. Gudat, and A. S. Vinogradov	
Alloying effects on the optical properties of $\text{Ge}_{1-x}\text{Si}_x$ nanocrystals from time-dependent density functional theory and comparison with effective-medium theory (7 pages)	155440
Silvana Botti, Hans-Christian Weissker, and Miguel A. L. Marques	
Critical and excess current through an open quantum dot: Temperature and magnetic-field dependence (6 pages)	155441
H. I. Jørgensen, K. Grove-Rasmussen, K. Flensberg, and P. E. Lindelof	
Scanning tunneling microscopy currents on locally disordered graphene (10 pages)	155442
N. M. R. Peres, Shan-Wen Tsai, J. E. Santos, and R. M. Ribeiro	
Critical thickness for the agglomeration of thin metal films (7 pages)	155443
C. Boragno, F. Buatier de Mongeot, R. Felici, and I. K. Robinson	
Magnetic ordering effects in a Mn-modulation-doped high mobility two-dimensional hole system (8 pages)	155444
Ursula Wurstbauer and Werner Wegscheider	
Effect of dielectric environment on the ultraviolet optical absorption of single-walled carbon nanotubes (5 pages)	155445
Yoichi Murakami and Shigeo Maruyama	
Energy transfer in quasibinary and collective scattering events at a Ag(001) surface (6 pages)	155446
M. P. Ray, R. E. Lake, and C. E. Sosolik	
High-resolution electron energy loss spectra of reconstructed Si(100) surfaces: First-principles study (10 pages)	155447
Lucia Caramella, Conor Hogan, Giovanni Onida, and Rodolfo Del Sole	
3p valence photoelectron spectrum of Ar clusters (7 pages)	155448
Uwe Hergenhahn, Silko Barth, Volker Ulrich, Melanie Mucke, Sanjeev Joshi, Toralf Lischke, Andreas Lindblad, Torbjörn Rander, Gunnar Öhrwall, and Olle Björneholm	
Coulomb explosion as a probe to understand the mechanism of electron stripping from ions interacting with crystalline solids (8 pages)	155449
David Martín y Marero, Nuria Gordillo, and Raquel González-Arrabal	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 79, NUMBER 15

APRIL 2009-15(I)

Electronic band structure and ensemble effect in monolayers of linear molecules investigated by photoelectron spectroscopy (8 pages)	155418
M. Häming, J. Ziroff, E. Salomon, O. Seitz, D. Cahen, A. Kahn, A. Schöll, F. Reinert, and E. Umbach	
Electronic and optical excitations in Ag_n clusters ($n=1-8$): Comparison of density-functional and many-body theories (14 pages)	155419
Murilo L. Tiago, Juan C. Idrobo, Serdar Ögüt, Julius Jellinek, and James R. Chelikowsky	
Nonlinear Mie theory for second-harmonic and sum-frequency scattering (9 pages)	155420
Alex G. F. de Beer and Sylvie Roke	
Topological description of the Stone-Wales defect formation energy in carbon nanotubes and graphene (17 pages)	155421
Elif Ertekin, D. C. Chrzan, and Murray S. Daw	
Surface core-level shifts at vicinal tungsten surfaces (7 pages)	155422
Xubing Zhou and J. L. Erskine	
Designing plasmonic systems using optical coupling between nanoparticles (10 pages)	155423
T. J. Davis, K. C. Vernon, and D. E. Gómez	
Modeling ultrashort-pulse laser ablation of dielectric materials (10 pages)	155424
B. H. Christensen and P. Balling	
Molecular dynamics simulations of phase transitions in argon-filled single-walled carbon nanotube bundles under high pressure (8 pages)	155425
K. V. Shanavas and Surinder M. Sharma	
Phase diagrams and optical properties of phosphide, arsenide, and antimonide binary and ternary III-V nanoalloys (8 pages)	155426
G. Guisbiers, M. Wautelet, and L. Buchaillot	
Size-dependent effect of ion bombardment on Au nanoparticles on top of various substrates: Thermodynamically dominated capillary forces versus sputtering (10 pages)	155427
A. Klimmer, P. Ziemann, J. Biskupek, U. Kaiser, and M. Flesch	
Structural and electronic properties of rare earth silicide nanowires on Si(557) (11 pages)	155428
Martina Wanke, Karolin Löser, Gerhard Pruskil, and Mario Dähne	
Generalized transfer matrix theory of electronic transport through a graphene waveguide (12 pages)	155429
Haidong Li, Lin Wang, Zhihuan Lan, and Yisong Zheng	
Electronic structure in gapped graphene with a Coulomb potential (5 pages)	155430
Wei Zhu, Zhengfei Wang, Qinwei Shi, K. Y. Szeto, Jie Chen, and J. G. Hou	
π junction qubit in monolayer graphene (5 pages)	155431
Colin Benjamin and Jiannis K. Pachos	
Bonding at the organic/metal interface: Adenine to Cu(110) (5 pages)	155432
V. Feyer, O. Plekan, K. C. Prince, F. Šutara, T. Skála, V. Cháb, V. Matolín, G. Stenuit, and P. Umari	
Polarization and rumpling in oxide monolayers deposited on metallic substrates (5 pages)	155433
Jacek Goniakowski and Claudine Noguera	
Understanding doping effects in biosensing using carbon nanotube network field-effect transistors (7 pages)	155434
Jiantong Li and Shi-Li Zhang	

(Continued)

Surface physics, nanoscale physics, low-dimensional systems

Polarization splitter of surface polaritons (<i>6 pages</i>)	155401
Qiang Bai, Jing Chen, Cong Liu, Ji Xu, Chen Cheng, Nian-Hai Shen, and Hui-Tian Wang	
Bilayer graphene with single and multiple electrostatic barriers: Band structure and transmission (<i>8 pages</i>)	155402
Michaël Barbier, P. Vasilopoulos, F. M. Peeters, and J. Milton Pereira, Jr.	
Theory of multiwall carbon nanotubes as waveguides and antennas in the infrared and the visible regimes (<i>17 pages</i>)	155403
M. V. Shuba, G. Ya. Slepian, S. A. Maksimenko, C. Thomsen, and A. Lakhtakia	
Two- and three-dimensional band structure of ultrathin Ni on Cu(001) (<i>10 pages</i>)	155404
Moritz Hoesch, Vladimir N. Petrov, Matthias Muntwiler, Matthias Hengsberger, Jorge Lobo Checa, Thomas Greber, and Jürg Osterwalder	
Atmospheric pressure induced atomic diffusion into solid crystal (<i>6 pages</i>)	155405
J. K. Bal and S. Hazra	
Resistivity of thin Cu films with surface roughness (<i>6 pages</i>)	155406
Youqi Ke, Ferdows Zahid, V. Timoshevskii, Ke Xia, D. Gall, and Hong Guo	
Effects of substrate and electric fields on charges in carbon nanotubes (<i>6 pages</i>)	155407
Zhao Wang	
Electronic transport in intermediate sized carbon nanotubes (<i>5 pages</i>)	155408
M. Ahlskog, O. Herranen, A. Johansson, J. Leppäniemi, and D. Mtsuko	
Graphene nanoribbons: Photonic crystal waveguide analogy and minigap stripes (<i>10 pages</i>)	155409
Henri Benisty	
Intermixing-driven scenario for the growth of nanowires on (110) metal surfaces (<i>5 pages</i>)	155410
Oleg V. Stepanyuk, Nikolay N. Negulyaev, Pavel A. Ignatiev, Marek Przybylski, Wolfram Hergert, Alexander M. Saletsky, and Jürgen Kirschner	
Stability of charged Si-doped heterofullerenes: A first-principles molecular dynamics study (<i>6 pages</i>)	155411
Masahiko Matsubara and Carlo Massobrio	
Time-evolution growth of Ag nanolayers on differently-passivated Si(001) surfaces (<i>6 pages</i>)	155412
J. K. Bal and S. Hazra	
Phonon thermal conduction in graphene: Role of Umklapp and edge roughness scattering (<i>12 pages</i>)	155413
D. L. Nika, E. P. Pokatilov, A. S. Askerov, and A. A. Balandin	
Strong asymmetric effect of lattice mismatch on epilayer structure in thin-film deposition (<i>5 pages</i>)	155414
Pai-Yi Hsiao, Zhuo-Han Tsai, Jia-Hong Huang, and Ge-Ping Yu	
Kondo resonance in the conductance of CoPc/Au(111) and TBrPP-Co/Cu(111) (<i>10 pages</i>)	155415
J. M. Aguiar-Hualde, G. Chiappe, E. Louis, E. V. Anda, and J. Simonin	
Systematic stability analysis of the renormalization group flow for the normal-superconductor-normal junction of Luttinger liquid wires (<i>7 pages</i>)	155416
Sourin Das, Sumathi Rao, and Arijit Saha	
Phonon renormalization in doped bilayer graphene (<i>7 pages</i>)	155417
A. Das, B. Chakraborty, S. Piscanec, S. Pisana, A. K. Sood, and A. C. Ferrari	

(Continued)

Electron spin relaxation in cubic GaN quantum dots: Perturbation theory and exact diagonalization study (7 pages)	155309
M. Q. Weng, Y. Y. Wang, and M. W. Wu	
Scenario for fractional quantum Hall effect in bulk isotropic materials (6 pages)	155310
F. J. Burnell, B. Andrei Bernevig, and D. P. Arovas	
Enhancing nitrogen solubility in GaAs and InAs by surface kinetics: An <i>ab initio</i> study (12 pages)	155311
Hazem Abu-Farsakh and Jörg Neugebauer	
Hexagon-on-cube versus cube-on-cube epitaxy: The case of ZnSe(111) on SrTiO ₃ (001) (5 pages)	155312
B. Rache Salles, K. Kunc, M. Eddrief, V. H. Etgens, F. Finocchi, and F. Vidal	
Dynamics of bulk-to-surface electron transitions on Si(001)-(2×1) studied by time-resolved two-photon photoemission spectroscopy (8 pages)	155313
S. Tanaka, T. Ichibayashi, and K. Tanimura	
Raman scattering by acoustic phonons in wurtzite ZnO prismatic nanoparticles (5 pages)	155314
P.-M. Chassaing, F. Demangeot, N. Combe, L. Saint-Macary, M. L. Kahn, and B. Chaudret	
Discontinuous conductance of bichromatically ac-gated quantum wires (6 pages)	155315
Tomasz Kwapiński, Sigmund Kohler, and Peter Hänggi	
Water-induced polaron formation at the pentacene surface: Quantum mechanical molecular mechanics simulations (10 pages)	155316
Tobias Cramer, Thomas Steinbrecher, Thorsten Koslowski, David A. Case, Fabio Biscarini, and Francesco Zerbetto	
Entangled photons from a strongly coupled quantum dot-cavity system (7 pages)	155317
Robert Johnne, Nikolay A. Gippius, and Guillaume Malpuech	
Spin coherence of holes and electrons in undoped CdTe/(Cd,Mg)Te quantum wells (8 pages)	155318
E. A. Zhukov, D. R. Yakovlev, M. Gerbracht, G. V. Mikhailov, G. Karczewski, T. Wojtowicz, J. Kossut, and M. Bayer	
First-principles calculations of the magnetic properties of (Cd,Mn)Te nanocrystals (10 pages)	155319
C. Echeverría-Arrondo, J. Pérez-Conde, and A. Ayuela	
Silicon nanocrystallites in a SiO ₂ matrix: Role of disorder and size (9 pages)	155320
Roberto Guerra, Ivan Marri, Rita Magri, Layla Martin-Samos, Olivia Pulci, Elena Degoli, and Stefano Ossicini	
Ground state properties of a laterally confined two-dimensional electron gas (5 pages)	155321
L. Dandrea, F. Pederiva, and E. Lipparini	
Controlling transition matrix elements and relaxation in a two-electron double quantum dot (7 pages)	155322
Carlos F. Destefani, Chris McDonald, Suren Sukiasyan, and Thomas Brabec	
Spin- $\frac{3}{2}$ physics of semiconductor hole nanowires: Valence-band mixing and tunable interplay between bulk-material and orbital bound-state spin splittings (16 pages)	155323
D. Csontos, P. Brusheim, U. Zülicke, and H. Q. Xu	
Probing excitons and biexcitons in coupled quantum dots by coherent two-dimensional optical spectroscopy (10 pages)	155324
E. G. Kavousanaki, O. Roslyak, and S. Mukamel	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 79, NUMBER 15

APRIL 2009-15(I)

Correlated substitution in paramagnetic Mn ²⁺ -doped ZnO epitaxial films (9 pages)	155203
T. C. Droubay, D. J. Keavney, T. C. Kaspar, S. M. Heald, C. M. Wang, C. A. Johnson, K. M. Whitaker, D. R. Gamelin, and S. A. Chambers	
Power dependence of pure spin current injection by quantum interference (6 pages)	155204
Brian A. Ruzicka and Hui Zhao	
Self-consistent T-matrix theory of semiconductor light-absorption and luminescence (21 pages)	155205
N. H. Kwong, G. Rupper, and R. Binder	
First-principles study of hydrogenated amorphous silicon (11 pages)	155206
K. Jarolimek, R. A. de Groot, G. A. de Wijs, and M. Zeman	
Theory of weak localization in ferromagnetic (Ga,Mn)As (13 pages)	155207
Ion Garate, Jairo Sinova, T. Jungwirth, and A. H. MacDonald	
Current-induced spin torques in III-V ferromagnetic semiconductors (9 pages)	155208
Dimitrie Culcer, M. E. Lucassen, R. A. Duine, and R. Winkler	
Structural characterization of pressure-induced amorphous silicon (8 pages)	155209
B. Haberl, A. C. Y. Liu, J. E. Bradby, S. Ruffell, J. S. Williams, and P. Munroe	
Raman scattering study of the long-wavelength longitudinal-optical-phonon-plasmon coupled modes in high-mobility InN layers (9 pages)	155210
Ramon Cuscó, Jordi Ibáñez, Esther Alarcón-Lladó, Luis Artús, Tomohiro Yamaguchi, and Yasushi Nanishi	
Semiconductors II: surfaces, interfaces, microstructures, and related topics	
Coverage-dependent faceting of Au chains on Si(557) (9 pages)	155301
I. Barke, F. Zheng, S. Bockenhauer, K. Sell, V. v. Oeynhausen, K. H. Meiwes-Broer, S. C. Erwin, and F. J. Himpsel	
Phonon-assisted tunneling and two-channel Kondo physics in molecular junctions (5 pages)	155302
Luis G. G. V. Dias da Silva and Elbio Dagotto	
Anisotropic tunneling magnetoresistance and tunneling anisotropic magnetoresistance: Spin-orbit coupling in magnetic tunnel junctions (19 pages)	155303
A. Matos-Abiadue and J. Fabian	
Chemisorption of small fullerenes C _n (n=28,32,36,40,44,48,60) on the Si(001)-c(2×1) surface (13 pages)	155304
Shujuan Yao, Chenggang Zhou, Bo Han, Ting Fan, Jinping Wu, Liang Chen, and Hansong Cheng	
Evanescent channels and scattering in cylindrical nanowire heterostructures (14 pages)	155305
P. N. Racec, E. R. Racec, and H. Neidhardt	
Spin polarization in quantum wires: Influence of Dresselhaus spin-orbit interaction and cross-section effects (8 pages)	155306
L. Villegas-Lelovsky, C. Trallero-Giner, M. Rebello Sousa Dias, V. Lopez-Richard, and G. E. Marques	
Positive binding energy of a biexciton confined in a localization center formed in a single In _x Ga _{1-x} N/GaN quantum disk (6 pages)	155307
R. Bardoux, A. Kaneta, M. Funato, Y. Kawakami, A. Kikuchi, and K. Kishino	
Bloch oscillation, dynamical localization, and optical probing of electron gases in quantum-dot superlattices in high electric fields (19 pages)	155308
Danhong Huang, S. K. Lyo, and Godfrey Gumbs	

(Continued)

 Berry phase of dislocations in graphene and valley conserving decoherence (<i>13 pages</i>)	155111
A. Mesaros, D. Sadri, and J. Zaanen	
Self-trapping of polarons with off-diagonal coupling (<i>8 pages</i>)	155112
Jin Sun, Yang Zhao, and Wanzhen Liang	
Structural discrimination via density functional theory and lattice dynamics: Monoclinic Mg_2NiH_4 (<i>7 pages</i>)	155113
J. F. Herbst and L. G. Hector, Jr.	
Calculated magnetic exchange interactions in high-temperature superconductors (<i>6 pages</i>)	155114
Xiangang Wan, Thomas A. Maier, and Sergej Y. Savrasov	
How the hydrogen bond in NH_4F is revealed with Compton scattering (<i>4 pages</i>)	155115
B. Barbiellini, Ch. Bellin, G. Loupiau, T. Buslaps, and A. Shukla	
Transport properties of quasi-one-dimensional KRu_4O_8 (<i>5 pages</i>)	155116
W. Kobayashi	
Oscillation of dynamic conductance of $\text{Al-C}_n\text{-Al}$ structures: Nonequilibrium Green's function and density functional theory study (<i>6 pages</i>)	155117
Bin Wang, Yunjin Yu, Lei Zhang, Yadong Wei, and Jian Wang	
Electronic structure studies of BaFe_2As_2 by angle-resolved photoemission spectroscopy (<i>10 pages</i>)	155118
J. Fink, S. Thirupathaiah, R. Ovsyannikov, H. A. Dürr, R. Follath, Y. Huang, S. de Jong, M. S. Golden, Yu-Zhong Zhang, H. O. Jeschke, R. Valentí, C. Felser, S. Dastjani Farahani, M. Rotter, and D. Johrendt	
Hyperfine structure and hyperfine coherent properties of praseodymium in single-crystalline $\text{La}_2(\text{WO}_4)_3$ by hole-burning and photon-echo techniques (<i>11 pages</i>)	155119
O. Guillot-Noël, Ph. Goldner, F. Beaudoux, Y. Le Du, J. Lejay, A. Amari, A. Walther, L. Rippe, and S. Kröll	
Permutation-symmetric critical phases in disordered non-Abelian anyonic chains (<i>12 pages</i>)	155120
L. Fidkowski, H.-H. Lin, P. Titum, and G. Refael	
Exact solution of the infinite- U Hubbard problem and other models in one dimension (<i>6 pages</i>)	155121
Brijesh Kumar	
Route to low-scattering cylindrical cloaks with finite permittivity and permeability (<i>4 pages</i>)	155122
Sheng Xi, Hongsheng Chen, Baile Zhang, Bae-Ian Wu, and Jin Au Kong	
Magnetic phase transition in CoO under high pressure: A challenge for $\text{LSDA}+U$ (<i>9 pages</i>)	155123
Wenxu Zhang, Klaus Koepernik, Manuel Richter, and Helmut Eschrig	
Power flow associated with the Goos-Hänchen shift of a normally incident electromagnetic beam reflected off an antiferromagnet (<i>11 pages</i>)	155124
F. Lima, T. Dumelow, E. L. Albuquerque, and J. A. P. da Costa	
Semiconductors I: bulk	
Electron spin relaxation in paramagnetic $\text{Ga}(\text{Mn})\text{As}$ quantum wells (<i>12 pages</i>)	155201
J. H. Jiang, Y. Zhou, T. Korn, C. Schüller, and M. W. Wu	
Nonsubstitutional single-atom defects in the $\text{Ge}_{1-x}\text{Sn}_x$ alloy (<i>12 pages</i>)	155202
C. I. Ventura, J. D. Fuhr, and R. A. Barrio	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 79, NUMBER 15

APRIL 2009-15(I)

Role of the Au/GaAs(111) interface on the wurtzite-structure formation during GaAs nanowire growth by a vapor-liquid-solid mechanism (<i>4 pages</i>)	153406
Toru Akiyama, Yuya Haneda, Kohji Nakamura, and Tomonori Ito	
Holey metal films make perfect endoscopes (<i>4 pages</i>)	153407
J. Jung, F. J. García-Vidal, L. Martín-Moreno, and J. B. Pendry	
Uniformly oriented, ellipsoidal nanovoids in glass created by electric-field-assisted dissolution of metallic nanoparticles (<i>4 pages</i>)	153408
M. Leitner, H. Peterlik, B. Sepiol, H. Graener, M. Beleites, and G. Seifert	
Interactions between Ag nanoclusters on carburized W(110) (<i>4 pages</i>)	153409
Martin Gabl, Magdalena Bachmann, Norbert Memmel, and Erminald Bertel	
Koshino-Taylor effect in graphene (<i>4 pages</i>)	153410
A. Cano	

ARTICLES

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

Implementing and testing the AM05 spin density functional (<i>13 pages</i>)	155101
Ann E. Mattsson and Rickard Armiento	
Electron-phonon bound states and impurity band formation in quantum wells (<i>7 pages</i>)	155102
Bruna P. W. de Oliveira and Stephan Haas	
Effects of magnetic ordering on dynamical conductivity: Optical investigations of EuFe ₂ As ₂ single crystals (<i>10 pages</i>)	155103
D. Wu, N. Barišić, N. Drichko, S. Kaiser, A. Faridian, M. Dressel, S. Jiang, Z. Ren, L. J. Li, G. H. Cao, Z. A. Xu, H. S. Jeevan, and P. Gegenwart	
Time evolution of correlations in strongly interacting fermions after a quantum quench (<i>8 pages</i>)	155104
Salvatore R. Manmana, Stefan Wessel, Reinhard M. Noack, and Alejandro Muramatsu	
Path integral Monte Carlo and density functional molecular dynamics simulations of hot, dense helium (<i>18 pages</i>)	155105
B. Militzer	
Correlated-electron description of the photophysics of thin films of π -conjugated polymers (<i>6 pages</i>)	155106
D. Psiachos and S. Mazumdar	
Assessing the performance of recent density functionals for bulk solids (<i>14 pages</i>)	155107
Gábor I. Csonka, John P. Perdew, Adrienn Ruzsinszky, Pier H. T. Philipsen, Sébastien Lebègue, Joachim Paier, Oleg A. Vydrov, and János G. Ángyán	
Superradiance transition in one-dimensional nanostructures: An effective non-Hermitian Hamiltonian formalism (<i>9 pages</i>)	155108
G. L. Celardo and L. Kaplan	
Spin-phonon coupling in antiferromagnetic Bi ₂ Sr ₂ CoO _{6+δ} : An infrared reflectance study (<i>8 pages</i>)	155109
H. C. Hsu, F. C. Chou, K. Koyama, K. Watanabe, and H. L. Liu	
GW approach to Anderson model out of equilibrium: Coulomb blockade and false hysteresis in the <i>I-V</i> characteristics (<i>12 pages</i>)	155110
Catalin D. Spataru, Mark S. Hybertsen, Steven G. Louie, and Andrew J. Millis	

(Continued)