

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 79, NUMBER 3

JANUARY 2009-15(I)

- Tunneling dynamics of a hydroxyl group adsorbed on Cu(110) (*6 pages*) 035423
T. Kumagai, M. Kaizu, H. Okuyama, S. Hatta, T. Aruga, I. Hamada, and Y. Morikawa

ERRATA

- Erratum: Reflection and diffraction at the end of a cylindrical dielectric nanowire: Exact analytical solution
[Phys. Rev. B **78**, 085318 (2008)] (*1 page*) 039901(E)
V. G. Bordo

	Bond length contraction in cobalt nanoislands on Cu(001) analyzed by surface x-ray diffraction (9 pages)	035406
	O. Mironets, H. L. Meyerheim, C. Tusche, V. S. Stepanyuk, E. Soyka, H. Hong, P. Zschack, N. Jeutter, R. Felici, and J. Kirschner	
	Metamaterial with negative index due to chirality (6 pages)	035407
	E. Plum, J. Zhou, J. Dong, V. A. Fedotov, T. Koschny, C. M. Soukoulis, and N. I. Zheludev	
	Morphology-induced magnetic phase transitions in Fe deposits on MgO films investigated with XMCD and STM (8 pages)	035408
	P. Torelli, S. Benedetti, P. Luches, L. Gragnaniello, J. Fujii, and S. Valeri	
	Tunneling, conductance, and wavevector filtering through magnetic barriers in bilayer graphene (8 pages)	035409
	M. Ramezani Masir, P. Vasilopoulos, and F. M. Peeters	
	Comparing the image potentials for intercalated graphene with a two-dimensional electron gas with and without a gated grating (6 pages)	035410
	Godfrey Gumbs, Danhong Huang, and P. M. Echenique	
	Quasi-bound states induced by one-dimensional potentials in graphene (6 pages)	035411
	H. Chau Nguyen, M. Tien Hoang, and V. Lien Nguyen	
	Ultrathin nickel films on Cu(001): Loss of strong ferromagnetism (7 pages)	035412
	Volker Renken and Markus Donath	
	Interface energies of (100) _{YSZ} and (111) _{YSZ} epitaxial islands on (0001) _{α-Al₂O₃} substrates from first principles (12 pages)	035413
	F. Lallet, N. Olivi-Tran, and Laurent J. Lewis	
	Effect of ion migration on the self-assembly of porous nanostructures in anodic oxides (7 pages)	035414
	L. G. Stanton and A. A. Golovin	
	Electron and phonon transport in silicon nanowires: Atomistic approach to thermoelectric properties (7 pages)	035415
	Troels Markussen, Antti-Pekka Jauho, and Mads Brandbyge	
	Resonating-valence-bond ground state of lithium nanoclusters (4 pages)	035416
	D. Nissenbaum, L. Spanu, C. Attacalite, B. Barbiellini, and A. Bansil	
	Nearly-free-electron effective model for conducting nanotubes (11 pages)	035417
	C. E. Cordeiro, A. Delfino, and T. Frederico	
	Reduced damping of surface plasmons at low temperatures (5 pages)	035418
	Mingzhao Liu (刘铭钊), Matthew Pelton, and Philippe Guyot-Sionnest	
	Vertex renormalization in dc conductivity of doped chiral graphene (12 pages)	035419
	E. Cappelluti and L. Benfatto	
	Structural and vibrational properties of two-dimensional Mn _x O _y layers on Pd(100): Experiments and density functional theory calculations (12 pages)	035420
	C. Franchini, R. Podloucky, F. Allegretti, F. Li, G. Parteder, S. Surnev, and F. P. Netzer	
	Electric field tuning of the band gap in graphene multilayers (7 pages)	035421
	A. A. Avetisyan, B. Partoens, and F. M. Peeters	
	Systematic tight-binding study of optical second-harmonic generation in carbon nanotubes (6 pages)	035422
	Thomas G. Pedersen and Kjeld Pedersen	

(Continued)

Charge transport through weakly open one-dimensional quantum wires (<i>6 pages</i>)	035319
N. B. Kopnin, Y. M. Galperin, and V. M. Vinokur	
Diagrammatic Monte Carlo simulation of nonequilibrium systems (<i>18 pages</i>)	035320
Philipp Werner, Takashi Oka, and Andrew J. Millis	
Optical activity in chiral media composed of three-dimensional metallic meta-atoms (<i>5 pages</i>)	035321
Carsten Rockstuhl, Christoph Menzel, Thomas Paul, and Falk Lederer	
Optical pumping and negative luminescence polarization in charged GaAs quantum dots (<i>9 pages</i>)	035322
Andrew Shabaev, Eric A. Stinaff, Allan S. Bracker, Daniel Gammon, Alexander L. Efros, Vladimir L. Korenev, and Igor Merkulov	
Spin Hall effect on the kagome lattice with Rashba spin-orbit interaction (<i>7 pages</i>)	035323
Guocai Liu, Ping Zhang, Zhigang Wang, and Shu-Shen Li	
X-ray diffraction investigation of a three-dimensional Si/SiGe quantum dot crystal (<i>10 pages</i>)	035324
Vaclav Holý, Julian Stangl, Thomas Fromherz, Rainer T. Lechner, Eugene Wintersberger, Günther Bauer, Christian Dais, Elisabeth Müller, and Detlev Grützmacher	
Exciton-phonon scattering and photoexcitation dynamics in <i>J</i> -aggregate microcavities (<i>6 pages</i>)	035325
Paolo Michetti and Giuseppe C. La Rocca	
Coherent control of localization, entanglement, and state superpositions in a double quantum dot with two electrons (<i>6 pages</i>)	035326
G. E. Murgida, D. A. Wisniacki, and P. I. Tamborenea	
Reflectance-anisotropy spectroscopy and surface differential reflectance spectra at the Si(100) surface: Combined experimental and theoretical study (<i>8 pages</i>)	035327
Maurizia Palummo, Nadine Witkowski, Olivier Pluchery, Rodolfo Del Sole, and Yves Borensztein	
Signature of monolayer and bilayer fluctuations in the width of (Al,Ga)N/GaN quantum wells (<i>7 pages</i>)	035328
F. Natali, Y. Cordier, J. Massies, S. Vezian, B. Damilano, and M. Leroux	
Optical and structural properties of InP quantum dots embedded in (Al _x Ga _{1-x}) _{0.51} In _{0.49} P (<i>8 pages</i>)	035329
W.-M. Schulz, R. Roßbach, M. Reischle, G. J. Beirne, M. Bommer, M. Jetter, and P. Michler	
Bunching visibility for correlated photons from single GaAs quantum dots (<i>6 pages</i>)	035330
T. Kuroda, T. Belhadj, M. Abbarchi, C. Mastrandrea, M. Gurioli, T. Mano, N. Ikeda, Y. Sugimoto, K. Asakawa, N. Koguchi, K. Sakoda, B. Urbaszek, T. Amand, and X. Marie	
Surface physics, nanoscale physics, low-dimensional systems	
Gap plasmon-polariton nanoresonators: Scattering enhancement and launching of surface plasmon polaritons (<i>8 pages</i>)	035401
Jesper Jung, Thomas Søndergaard, and Sergey I. Bozhevolnyi	
Vacuum space-charge effects in solid-state photoemission (<i>12 pages</i>)	035402
S. Hellmann, K. Rossnagel, M. Marczyński-Bühlöw, and L. Kipp	
Hot-electron-mediated desorption rates calculated from excited-state potential energy surfaces (<i>12 pages</i>)	035403
Thomas Olsen, Jeppe Gavnholdt, and Jakob Schiøtz	
Resonant Raman scattering of nanocavity-confined acoustic phonons (<i>6 pages</i>)	035404
N. D. Lanzillotti-Kimura, A. Fainstein, B. Jusserand, and A. Lemaître	
Ferromagnetism in armchair graphene nanoribbons (<i>9 pages</i>)	035405
Hsiu-Hau Lin, Toshiya Hikihara, Horng-Tay Jeng, Bor-Luen Huang, Chung-Yu Mou, and Xiao Hu	

(Continued)

Statistical electron excitation in a double quantum dot induced by two independent quantum point contacts (9 pages)	035303
U. Gasser, S. Gustavsson, B. Küng, K. Ensslin, T. Ihn, D. C. Driscoll, and A. C. Gossard	
Nonlocal charge transport mediated by spin diffusion in the spin Hall effect regime (5 pages)	035304
D. A. Abanin, A. V. Shytov, L. S. Levitov, and B. I. Halperin	
Particle emission from chemically enhanced electron-beam-induced etching of Si: An approach for zero-energy secondary-ion mass spectrometry (4 pages)	035305
N. Vanhove, P. Lievens, and W. Vandervorst	
<i>Ab initio</i> study of charge trapping and dielectric properties of Ti-doped HfO ₂ (8 pages)	035306
D. Muñoz Ramo, A. L. Shluger, and G. Bersuker	
Influence of substrate surface polarity on homoepitaxial growth of ZnO layers by chemical vapor deposition (7 pages)	035307
Markus R. Wagner, Til P. Bartel, Ronny Kirste, Axel Hoffmann, Joachim Sann, Stefan Lautenschläger, Bruno K. Meyer, and C. Kisielowski	
Universal aspects of photocurrent-voltage characteristics in dye-sensitized nanocrystalline TiO ₂ photoelectrochemical cells (6 pages)	035308
J. S. Agnaldo, J. C. Cressoni, and G. M. Viswanathan	
Engineering photon cascades from multiexciton complexes in a self-assembled quantum dot by a lateral electric field (8 pages)	035309
Marek Korkusinski, Michael E. Reimer, Robin L. Williams, and Pawel Hawrylak	
Formation of three-dimensional quantum-dot superlattices in amorphous systems: Experiments and Monte Carlo simulations (11 pages)	035310
M. Buljan, U. V. Desnica, M. Ivanda, N. Radić, P. Dubček, G. Dražić, K. Salamon, S. Bernstorff, and V. Holý	
Hydrogen-induced metallicity of SrTiO ₃ (001) surfaces: A density functional theory study (7 pages)	035311
Feng Lin, Shanying Wang, Fawei Zheng, Gang Zhou, Jian Wu, Bing-Lin Gu, and Wenhui Duan	
Conductance of the capacitively coupled single-electron transistor with a Tomonaga-Luttinger liquid island in the Coulomb blockade regime (9 pages)	035312
Vladimir Bubanja and Shuichi Iwabuchi	
Quantum dot to quantum wire transition of <i>m</i> -plane GaN islands (8 pages)	035313
B. Amstatt, J. Renard, C. Bougerol, E. Bellet-Amalric, B. Gayral, and B. Daudin	
 Time-resolved charge detection with cross-correlation techniques (5 pages)	035314
B. Küng, O. Pfäffli, S. Gustavsson, T. Ihn, K. Ensslin, M. Reinwald, and W. Wegscheider	
Measurement-based approach to entanglement generation in coupled quantum dots (10 pages)	035315
Avinash Kolli, Brendon W. Lovett, Simon C. Benjamin, and Thomas M. Stace	
Photon statistics as a probe for exciton correlations in coupled nanostructures (6 pages)	035316
A. Carmele, A. Knorr, and M. Richter	
Fundamental steps towards interface amorphization during silicon oxidation: Density functional theory calculations (5 pages)	035317
A. Hemeryck, A. Estève, N. Richard, M. Djafari Rouhani, and Y. J. Chabal	
Conductivity of the Si(111)7×7 dangling-bond state (6 pages)	035318
Marie D'angelo, Keiko Takase, Nobuhiro Miyata, Toru Hirahara, Shuji Hasegawa, Akinori Nishide, Manami Ogawa, and Iwao Matsuda	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 79, NUMBER 3

JANUARY 2009-15(I)

Magnetic field dependence and bottlenecklike behavior of the ESR spectra in YbRh_2Si_2 (6 pages)	035122
J. G. S. Duque, E. M. Bittar, C. Adriano, C. Giles, L. M. Holanda, R. Lora-Serrano, P. G. Pagliuso, C. Rettori, C. A. Pérez, Rongwei Hu, C. Petrovic, S. Maquilon, Z. Fisk, D. L. Huber, and S. B. Oseroff	
Critical behavior of density of states near Fermi energy in low-dimensional disordered metals (7 pages)	035123
E. Şaşıoğlu, S. Çalışkan, and M. Kumru	
Density-gradient-corrected embedded atom method (8 pages)	035124
Gang Wu, Gang Lu, Carlos J. García-Cervera, and Weinan E	
Electronic structure of CrN: A borderline Mott insulator (10 pages)	035125
Aditi Herwadkar and Walter R. L. Lambrecht	

Semiconductors I: bulk

Influence of alkyl chain length on charge transport in symmetrically substituted poly(2,5-dialkoxy- <i>p</i> -phenylenevinylene) polymers (10 pages)	035201
Sachetan M. Tuladhar, Marc Sims, James Kirkpatrick, Robert C. Maher, Amanda J. Chatten, Donal D. C. Bradley, Jenny Nelson, Pablo G. Etchegoin, Christian B. Nielsen, Philippe Massiot, Wayne N. George, and Joachim H. G. Steinke	
Effect of carrier confinement on exchange coupling in dilute magnetic semiconductors with self-organized nanocolumns (9 pages)	035202
S. Caprara, V. N. Men'shov, V. V. Tugushev, P. M. Echenique, and E. V. Chulkov	
Unification of the electrical behavior of defects, impurities, and surface states in semiconductors: Virtual gap states in CdO (5 pages)	035203
P. D. C. King, T. D. Veal, P. H. Jefferson, J. Zúñiga-Pérez, V. Muñoz-Sanjose, and C. F. McConville	
Linear magnetoresistance in $\text{Ag}_{2+\delta}\text{Se}$ thin films (5 pages)	035204
M. von Kreutzbruck, G. Lembke, B. Mogwitz, C. Korte, and J. Janek	
Native defect-induced multifarious magnetism in nonstoichiometric cuprous oxide: First-principles study of bulk and surface properties of $\text{Cu}_{2-\delta}\text{O}$ (15 pages)	035205
Aloysius Soon, Xiang-Yuan Cui, Bernard Delley, Su-Huai Wei, and Catherine Stampfl	
Negative donors in bulk Si and Si/SiO ₂ quantum wells in a magnetic field (8 pages)	035206
Jun-ichi Inoue, Tomo Chiba, Akiko Natori, and Jun Nakamura	
Defect complexes and cluster doping of InN: First-principles investigations (16 pages)	035207
X. M. Duan and C. Stampfl	
☞ Spin noise of conduction electrons in <i>n</i> -type bulk GaAs (11 pages)	035208
Scott A. Crooker, Lili Cheng, and Darryl L. Smith	

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

Direct strain and elastic energy evaluation in rolled-up semiconductor tubes by x-ray microdiffraction (12 pages)	035301
A. Malachias, Ch. Deneke, B. Krause, C. Mocuta, S. Kiravittaya, T. H. Metzger, and O. G. Schmidt	
Γ -X mixing in phosphorus-doped silicon nanocrystals: Improvement of photon generation efficiency (9 pages)	035302
Vladimir A. Belyakov and Vladimir A. Burdov	

(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).

CONTENTS - Continued

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 79, NUMBER 3

JANUARY 2009-15(I)

Lattice Green's function approach to the solution of the spectrum of an array of quantum dots and its linear conductance (13 pages)	035107
N. M. R. Peres, T. Stauber, and J. M. B. Lopes dos Santos	
Band-gap measurements of bulk and nanoscale hematite by soft x-ray spectroscopy (7 pages)	035108
B. Gilbert, C. Frandsen, E. R. Maxey, and D. M. Sherman	
Dilution effect in correlated electron systems with orbital degeneracy (11 pages)	035109
Takayoshi Tanaka and Sumio Ishihara	
Resonant soft x-ray inelastic scattering and soft x-ray emission study of the electronic structure of α -MoO ₃ (8 pages)	035110
T. Learmonth, C. McGuinness, P.-A. Glans, B. Kennedy, J. St. John, J.-H. Guo, M. Greenblatt, and K. E. Smith	
Analysis of azimuthal-angle scans in resonant x-ray Bragg diffraction and parity even and odd atomic multipoles in the multiferroic modification of the terbium manganate TbMnO ₃ (11 pages)	035111
V. Scagnoli and S. W. Lovesey	
Features of spin-charge separation in the equilibrium conductance through finite rings (7 pages)	035112
Julián Rincón, A. A. Aligia, and K. Hallberg	
Hopping dynamics of interacting polarons (12 pages)	035113
S. Ciuchi and S. Fratini	
Transport properties of the Mo ₃ Sb ₇ compound (6 pages)	035114
C. Candolfi, B. Lenoir, A. Dauscher, E. Guilmeau, J. Hejtmanek, J. Tobola, B. Wiendlocha, and S. Kaprzyk	
Effective Hamiltonian of a three-orbital Hubbard model on the pyrochlore lattice: Application to LiV ₂ O ₄ (25 pages)	035115
K. Hattori and H. Tsunetsugu	
Investigation of local symmetry effects on the electronic structure of manganites: Hexagonal YMnO ₃ versus orthorhombic LaMnO ₃ (9 pages)	035116
Deok-Yong Cho, S.-J. Oh, Dong Geun Kim, A. Tanaka, and J.-H. Park	
Electronic structure of Ni and Mo silicides investigated by x-ray emission spectroscopy and density functional theory (6 pages)	035117
Ignace Jarrige, Nathalie Capron, and Philippe Jonnard	
Artificial plasma formed by connected metallic wires at infrared frequencies (15 pages)	035118
Mário G. Silveirinha	
Three-dimensional band structure of highly metallic Na _{0.8} WO ₃ by angle-resolved photoemission spectroscopy (6 pages)	035119
Satyabrata Raj, Anirban Chakraborty, Debraj Choudhury, Takafumi Sato, Takashi Takahashi, Priya Mahadevan, Jun Fujii, Ivana Vobornik, and D. D. Sarma	
Modal analysis and coupling in metal-insulator-metal waveguides (17 pages)	035120
Şükrü Ekin Kocabaş, Georgios Veronis, David A. B. Miller, and Shanhui Fan	
Electron tunneling into a quantum wire in the Fabry-Pérot regime (24 pages)	035121
Stefano Pugnetti, Fabrizio Dolcini, Dario Bercioux, and Hermann Grabert	

(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).

Geometry-induced charge separation on a helicoidal ribbon (<i>4 pages</i>)	033404
Victor Atanasov, Rossen Dandoloﬀ, and Avadh Saxena	
Giant thermopower and figure of merit in single-molecule devices (<i>4 pages</i>)	033405
C. M. Finch, V. M. García-Suárez, and C. J. Lambert	
Thermal-radiation-induced nonequilibrium carriers in intrinsic graphene (<i>4 pages</i>)	033406
P. N. Romanets, F. T. Vasko, and M. V. Strikha	
Surface plasmon excitation on magnetoactive materials (<i>4 pages</i>)	033407
Luca Sapienza and Dominic Zerulla	
Surface morphology and characterization of thin graphene films on SiC vicinal substrate (<i>4 pages</i>)	033408
J. Penuelas, A. Ouerghi, D. Lucot, C. David, J. Gierak, H. Estrade-Szwarcopf, and C. Andreazza-Vignolle	
Mechanism for self-formation of periodic grating structures on a metal surface by a femtosecond laser pulse (<i>4 pages</i>)	033409
Shuji Sakabe, Masaki Hashida, Shigeki Tokita, Shin Namba, and Kiminori Okamuro	
Off-gap interface reflectivity of electron waves in Fabry-Pérot resonators (<i>4 pages</i>)	033410
F. Schiller, A. Leonardo, E. V. Chulkov, P. M. Echenique, and J. E. Ortega	
Electron emission induced by grazing impact of H^+ and He^+ ions on a Cu(001) surface: Low-energy electron diffraction study (<i>4 pages</i>)	033411
T. Bernhard and H. Winter	
Barrier-free substitutional doping of graphene sheets with boron atoms: <i>Ab initio</i> calculations (<i>4 pages</i>)	033412
Renato B. Pontes, A. Fazzio, and Gustavo M. Dalpian	
Magnetic doping of the golden cage cluster $M @ Au_{16}^-$ ($M=Fe, Co, Ni$) (<i>4 pages</i>)	033413
Lei-Ming Wang, Jaeil Bai, Anne Lechtken, Wei Huang, Detlef Schooss, Manfred M. Kappes, Xiao Cheng Zeng, and Lai-Sheng Wang	

ARTICLES

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

Effect of Cr substitution on the electronic structure of $CuAl_{1-x}Cr_xO_2$ (<i>7 pages</i>)	035101
David O. Scanlon, Aron Walsh, Benjamin J. Morgan, Graeme W. Watson, David J. Payne, and Russell G. Egdell	
Tuning the bond-order wave phase in the half-filled extended Hubbard model (<i>8 pages</i>)	035102
Manoranjan Kumar, S. Ramasesha, and Z. G. Soos	
Anisotropy and magnetism in the LSDA+U method (<i>12 pages</i>)	035103
Erik R. Ylvisaker, Warren E. Pickett, and Klaus Koepernik	
Fermi surface of the Pr-based filled skutterudite compound $PrOs_4P_{12}$ (<i>5 pages</i>)	035104
H. Sugawara, Y. Iwahashi, K. Magishi, T. Saito, K. Koyama, H. Harima, D. Kikuchi, H. Sato, T. Endo, R. Settai, and Y. Ōnuki	
Physical properties and electronic evolution of $Sr_2FeMo_{1-x}Nb_xO_6$ ($0 \leq x \leq 1$) (<i>8 pages</i>)	035105
B.-G. Park, Y.-H. Jeong, J.-H. Park, J. H. Song, J.-Y. Kim, H.-J. Noh, H.-J. Lin, and C. T. Chen	
Highly efficient photoinduced phase transition in an organic radical crystal via two-photon absorption process (<i>4 pages</i>)	035106
Toyoki Kon, Seiji Oguri, Ikufumi Katayama, Tetsuya Kodaira, and Jun Takeda	

(Continued)