

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 1N01
2 Huntington Quadrangle
Melville, NY 11747-4502

THIRD SERIES, VOLUME 82, NUMBER 12

CONTENTS

SEPTEMBER 2010-15(II)

RAPID COMMUNICATIONS

Electronic structure and strongly correlated systems

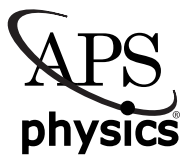
- Effect of noble-metal contacts on doping and band gap of graphene (*4 pages*) 121101(R)
A. Varykhalov, M. R. Scholz, Timur K. Kim, and O. Rader
- Self-consistent calculations of loss-compensated fishnet metamaterials (*4 pages*) 121102(R)
A. Fang, Th. Koschny, and C. M. Soukoulis
- Band-to-band photoluminescence in SrTiO₃ (*4 pages*) 121103(R)
Yasuhiro Yamada and Yoshihiko Kanemitsu
- Phase retrieval based on wave-front relay and modulation (*4 pages*) 121104(R)
Fucai Zhang and J. M. Rodenburg

Semiconductors I: bulk

- ☞ Electron spin coherence of phosphorus donors in silicon: Effect of environmental nuclei (*4 pages*) 121201(R)
Eisuke Abe, Alexei M. Tyryshkin, Shinichi Tojo, John J. L. Morton, Wayne M. Witzel, Akira Fujimoto,
Joel W. Ager, Eugene E. Haller, Junichi Isoya, Stephen A. Lyon, Mike L. W. Thewalt, and
Kohei M. Itoh

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

- ☞ Experimental test for geminate recombination applied to organic solar cells (*4 pages*) 121301(R)
R. A. Street, Sarah Cowan, and A. J. Heeger
- Oscillatory angular dependence of the magnetoresistance in a topological insulator Bi_{1-x}Sb_x (*4 pages*) 121302(R)
A. A. Taskin, Kouji Segawa, and Yoichi Ando
- Thresholdless coherent light scattering from subband polaritons in a strongly coupled microcavity
(*4 pages*) 121303(R)
Johannes Gambari, Antonio I. Fernandez-Dominguez, Stefan A. Maier, Ben S. Williams, Sushil Kumar,
John L. Reno, Qing Hu, and Chris C. Phillips
- ☞ Subband engineering even-denominator quantum Hall states (*4 pages*) 121304(R)
V. W. Scarola, C. May, M. R. Peterson, and M. Troyer
- ☞ Cryogenic scanning force microscopy of quantum Hall samples: Adiabatic transport originating in anisotropic
depletion at contact interfaces (*4 pages*) 121305(R)
F. Dahlem, E. Ahlswede, J. Weis, and K. v. Klitzing



Copyright 2010 by The American Physical Society



1098-0121(20100915)82:12;1-X

(Continued)

☞ The editors and referees of PRB find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. B 77, 130001 (2008).

Exciton spin state mediated photon-photon coupling in a strongly coupled quantum dot microcavity system (4 pages)	121306(R)
S. Reitzenstein, S. Münch, P. Franek, A. Löffler, S. Höfling, L. Worschech, A. Forchel, I. V. Ponomarev, and T. L. Reinecke	
Asymmetric optical nuclear spin pumping in a single uncharged quantum dot (4 pages)	121307(R)
F. Klotz, V. Jovanov, J. Kierig, E. C. Clark, M. Bichler, G. Abstreiter, M. S. Brandt, J. J. Finley, H. Schwager, and G. Giedke	
Electromagnetically induced transparency with an ensemble of donor-bound electron spins in a semiconductor (4 pages)	121308(R)
Maksym Sladkov, A. U. Chaubal, M. P. Bakker, A. R. Onur, D. Reuter, A. D. Wieck, and C. H. van der Wal	
Ripple-to-dome transition: The growth evolution of Ge on vicinal Si(1 1 10) surface (4 pages)	121309(R)
L. Persichetti, A. Sgarlata, M. Fanfoni, and A. Balzarotti	
Robust impurity-scattering spin Hall effect in a two-dimensional electron gas (4 pages)	121310(R)
V. K. Dugaev, M. Inglot, E. Ya. Sherman, and J. Barnaś	
Surface physics, nanoscale physics, low-dimensional systems	
Impact of disorder on the $\nu=2$ quantum Hall plateau in graphene (4 pages)	121401(R)
Jean-Marie Poumirol, Walter Escoffier, Amit Kumar, Bertrand Raquet, and Michel Goiran	
Weak temperature dependence of stress relaxation in as-deposited polycrystalline gold films (4 pages)	121402(R)
J. Leib and C. V. Thompson	
Chiral gap and collective excitations in monolayer graphene from strong coupling expansion of lattice gauge theory (4 pages)	121403(R)
Yasufumi Araki and Tetsuo Hatsuda	
Mode-specific reactivity of CH ₄ on Pt(110)-(1 × 2): The concerted role of stretch and bend excitation (4 pages)	121404(R)
Régis Bisson, Marco Sacchi, and Rainer D. Beck	
Spin-polarized semiconductor induced by magnetic impurities in graphene (4 pages)	121405(R)
Maria Daghofer, Nan Zheng, and Adriana Moreo	
Transverse thermoelectric conductivity of bilayer graphene in the quantum Hall regime (4 pages)	121406(R)
Chang-Ran Wang, Wen-Sen Lu, and Wei-Li Lee	
Flat bands in slightly twisted bilayer graphene: Tight-binding calculations (4 pages)	121407(R)
E. Suárez Morell, J. D. Correa, P. Vargas, M. Pacheco, and Z. Barticevic	
Fluorescence of laser-created electron-hole plasma in graphene (4 pages)	121408(R)
Rainer J. Stöhr, Roman Kolesov, Jens Pflaum, and Jörg Wrachtrup	
Radiation-induced quantum interference in low-dimensional n - p junctions (4 pages)	121409(R)
M. V. Fistul, S. V. Syzranov, A. M. Kadigrobov, and K. B. Efetov	
Generic suppression of conductance quantization of interacting electrons in graphene nanoribbons in a perpendicular magnetic field (4 pages)	121410(R)
A. A. Shylau, I. V. Zozoulenko, H. Xu, and T. Heinzel	
Lateral hopping of CO on Cu(111) induced by femtosecond laser pulses (4 pages)	121411(R)
H. Ueba, Y. Ootsuka, M. Paulsson, and B. N. J. Persson	

(Continued)

Quantifying transition voltage spectroscopy of molecular junctions: <i>Ab initio</i> calculations (4 pages)	121412(R)
Jingzhe Chen, Troels Markussen, and Kristian S. Thygesen	
Variational approach to the excitonic phase transition in graphene (4 pages)	121413(R)
J. Sabio, F. Sols, and F. Guinea	
Nonlinear effects of phonon fluctuations on transport through nanoscale junctions (4 pages)	121414(R)
D. F. Urban, R. Avriller, and A. Levy Yeyati	
Wave-front phase retrieval in transmission electron microscopy via ptychography (4 pages)	121415(R)
F. H��, J. M. Rodenburg, A. M. Maiden, F. Sweeney, and P. A. Midgley	
Electron spectrum of epitaxial graphene monolayers (4 pages)	121416(R)
O. Pankratov, S. Hensel, and M. Bockstedte	
Mechanical compression induced short-range ordering of nanographene spins (4 pages)	121417(R)
Katsunori Takahara, Sijia Hao, Hidekazu Tanaka, Takeshi Kadono, Michikazu Hara, Kazuyuki Takai, and Toshiaki Enoki	
Lattice gauge theory model for graphene (4 pages)	121418(R)
Alessandro Giuliani, Vieri Mastropietro, and Marcello Porta	
Fundamental limits for noncontact transfers between two bodies (4 pages)	121419(R)
Philippe Ben-Abdallah and Karl Joulain	
Spin and valley splittings in multilayered massless Dirac fermion system (4 pages)	121420(R)
Naoya Tajima, Mitsuyuki Sato, Shigeharu Sugawara, Reizo Kato, Yutaka Nishio, and Koji Kajita	

ARTICLES

Electronic structure and strongly correlated systems

Crystal and electronic structures of lithium fluorosulphate based materials for lithium-ion batteries (5 pages)	125101
M. Ramzan, S. Leb��gue, and R. Ahuja	
Dielectric screening and band-structure effects in low-energy photoemission (5 pages)	125102
E. E. Krasovskii, V. M. Silkin, V. U. Nazarov, P. M. Echenique, and E. V. Chulkov	
Collective phonon excitation in KTaO ₃ (7 pages)	125103
Akitoshi Koreeda, Ryuta Takano, Akira Ushio, and Seishiro Saikan	
First-principles investigation on redox properties of <i>M</i> -doped CeO ₂ (<i>M</i> =Mn,Pr,Sn,Zr) (9 pages)	125104
Yuanhao Tang, Hua Zhang, Lixia Cui, Chuying Ouyang, Siqi Shi, Weihua Tang, Hong Li, Jong-Sook Lee, and Liquan Chen	
Finite-temperature Gutzwiller projection for strongly correlated electron systems (8 pages)	125105
Wan-Sheng Wang, Xiang-Mei He, Da Wang, Qiang-Hua Wang, Z. D. Wang, and F. C. Zhang	
Scattering and transport statistics at the metal-insulator transition: A numerical study of the power-law banded random-matrix model (9 pages)	125106
J. A. M��ndez-Berm��dez, Victor A. Gopar, and Imre Varga	
Apical oxygens and correlation strength in electron- and hole-doped copper oxides (24 pages)	125107
C��dric Weber, Kristjan Haule, and Gabriel Kotliar	

(Continued)

Effect of strong correlations on the disorder-induced zero bias anomaly in the two-site Anderson-Hubbard model (9 pages)	125108
Hong-Yi Chen and W. A. Atkinson	
Photovoltaic effect for narrow-gap Mott insulators (8 pages)	125109
Efstratios Manousakis	
Far-infrared cyclotron resonance and Faraday effect in Bi ₂ Se ₃ (5 pages)	125110
A. B. Sushkov, G. S. Jenkins, D. C. Schmadel, N. P. Butch, J. Paglione, and H. D. Drew	
Spontaneous breaking of fourfold rotational symmetry in two-dimensional electron systems as a topological phase transition (7 pages)	125111
M. V. Zverev, J. W. Clark, Z. Nussinov, and V. A. Khodel	
Systematically convergent method for accurate total energy calculations with localized atomic orbitals (9 pages)	125112
S. Azadi, C. Cavazzoni, and S. Sorella	
Energy transfer enhancement by oxygen perturbation of spin-forbidden electronic transitions in aromatic systems (4 pages)	125113
A. Monguzzi, R. Tubino, M. M. Salamone, and F. Meinardi	
Finite-temperature linear conductance from the Matsubara Green's function without analytic continuation to the real axis (7 pages)	125114
C. Karrasch, V. Meden, and K. Schönhammer	
Low-temperature properties of CeRu ₄ Sn ₆ from NMR and specific heat measurements: Heavy fermions emerging from a Kondo-insulating state (10 pages)	125115
E. M. Brüning, M. Brando, M. Baenitz, A. Bentien, A. M. Strydom, R. E. Walstedt, and F. Steglich	
Effects of Zeeman field on a spin Bose-metal phase (10 pages)	125116
Hsin-Hua Lai and Olexei I. Motrunich	
Physical properties of quasi-one-dimensional SrNbO _{3.41} and Luttinger liquid analysis of electrical transport (7 pages)	125117
A. de Campos, M. S. da Luz, C. A. M. dos Santos, A. T. Rice, A. M. Deml, B. D. White, J. J. Neumeier, and J. L. Cohn	
Anyonic entanglement renormalization (17 pages)	125118
Robert König and Ersen Bilgin	
Anomalous dielectric response in the dimer Mott insulator κ -(BEDT-TTF) ₂ Cu ₂ (CN) ₃ (5 pages)	125119
Majed Abdel-Jawad, Ichiro Terasaki, Takahiko Sasaki, Naoki Yoneyama, Norio Kobayashi, Yoshiaki Uesu, and Chisa Hotta	
⚡ Terahertz Kerr and reflectivity measurements on the topological insulator Bi ₂ Se ₃ (9 pages)	125120
G. S. Jenkins, A. B. Sushkov, D. C. Schmadel, N. P. Butch, P. Syers, J. Paglione, and H. D. Drew	
Gain of the kinetic energy of bipolarons in the t - J -Holstein model based on electron-phonon coupling (5 pages)	125121
L. Vidmar and J. Bonča	
Zero energy and chiral edge modes in a p -wave magnetic spin model (8 pages)	125122
G. Kells and J. Vala	

(Continued)

Hybridization and suppression of superconductivity in CeFeAsO_{1-y} : Pressure and temperature dependence of the electronic structure (8 pages)	125123
Hitoshi Yamaoka, Ignace Jarrige, Atsushi Ikeda-Ohno, Satoshi Tsutsui, Jung-Fu Lin, Nao Takeshita, Kiichi Miyazawa, Akira Iyo, Hijiri Kito, Hiroshi Eisaki, Nozumu Hiraoka, Hirofumi Ishii, and Ku-Ding Tsuei	
Flow equation calculation of transient and steady-state currents in the Anderson impurity model (9 pages)	125124
P. Wang and S. Kehrein	
Conductance of DNA molecules: Effects of decoherence and bonding (7 pages)	125125
Matías Zilly, Orsolya Ujsághy, and Dietrich E. Wolf	
Fractional statistics and quantum scaling properties of the integrable Penson-Kolb-Hubbard chain (17 pages)	125126
Carlindo Vitoriano and M. D. Coutinho-Filho	
Experimental determination of the state-dependent enhancement of the electron-positron momentum density in solids (13 pages)	125127
J. Laverock, T. D. Haynes, M. A. Alam, and S. B. Dugdale	
Semiconductors I: bulk	
Magnetocrystalline anisotropy of the GaAs-type semiconductors in a strong magnetic field (5 pages)	125201
P. S. Alekseev and A. P. Alekseeva	
Band-tail shape and transport near the metal-insulator transition in Si-doped $\text{Al}_{0.3}\text{Ga}_{0.7}\text{As}$ (6 pages)	125202
Jennifer Misuraca, Jelena Trbovic, Jun Lu, Jianhua Zhao, Yuzo Ohno, Hideo Ohno, Peng Xiong, and Stephan von Molnár	
Nitrogen composition dependence of electron effective mass in $\text{GaAs}_{1-x}\text{N}_x$ (4 pages)	125203
T. Dannecker, Y. Jin, H. Cheng, C. F. Gorman, J. Buckeridge, C. Uher, S. Fahy, C. Kurdak, and R. S. Goldman	
Detection of trap charge in small molecular organic bulk heterojunction solar cells (6 pages)	125204
Debdutta Ray, Lorenzo Burtone, Karl Leo, and Moritz Riede	
Magnetic interaction in pairwise Mn-doped Si nanocrystals (9 pages)	125205
C. Panse, R. Leitsmann, and F. Bechstedt	
Spin-dependent dynamics of polaron pairs in organic semiconductors (8 pages)	125206
D. R. McCamey, S.-Y. Lee, S.-Y. Paik, J. M. Lupton, and C. Boehme	
Twisted-light-induced optical transitions in semiconductors: Free-carrier quantum kinetics (10 pages)	125207
G. F. Quinteiro and P. I. Tamborenea	
Topological electronic structure in half-Heusler topological insulators (5 pages)	125208
W. Al-Sawai, Hsin Lin, R. S. Markiewicz, L. A. Wray, Y. Xia, S.-Y. Xu, M. Z. Hasan, and A. Bansil	
Defect-induced ferromagnetism in undoped and Mn-doped zirconia thin films (5 pages)	125209
Jan Zippel, Michael Lorenz, Annette Setzer, Gerald Wagner, Nikolai Sobolev, Pablo Esquinazi, and Marius Grundmann	
Comparative <i>ab initio</i> study of half-Heusler compounds for optoelectronic applications (10 pages)	125210
Thomas Gruhn	

(Continued)

Low-temperature hopping and absence of spin-dependent transport in single crystals of cobalt-doped ZnO (7 pages)	125211
N. Sharma, S. Granville, S. C. Kashyap, and J.-Ph. Ansermet	
Semiconductors II: surfaces, interfaces, microstructures, and related topics	
Model of generating either odd or even optical harmonics by varying the coupling parameters between source quantum dots (5 pages)	125301
Weidong Chu, Yan Xie, Suqing Duan, Ning Yang, Wei Zhang, Jia-Lin Zhu, and Xian-Geng Zhao	
Decoherence by electromagnetic fluctuations in double-quantum-dot charge qubits (12 pages)	125302
Diego C. B. Valente, Eduardo R. Mucciolo, and F. K. Wilhelm	
Local structure of indium in quinary (InGa)(AsSbN)/GaAs quantum wells (7 pages)	125303
Jingli Chen, Gianluca Ciatto, Melanie Le Du, Jean-Christophe Harmand, and Frank Glas	
Optoelectronic properties of graphene in the presence of optical phonon scattering (9 pages)	125304
W. Xu, H. M. Dong, L. L. Li, J. Q. Yao, P. Vasilopoulos, and F. M. Peeters	
Relation between symmetry breaking and the anomalous Josephson effect (5 pages)	125305
Jun-Feng Liu and K. S. Chan	
Pressure dependence of the electronic structure of a [311] piezoelectric Ga _{0.85} In _{0.15} As/AlAs superlattice (6 pages)	125306
J. S. Reparaz, L. R. Muniz, A. R. Goñi, M. I. Alonso, G. Rozas, A. Fainstein, S. Saravanan, and P. O. Vaccaro	
Drag effects in a system of electrons and microcavity polaritons (12 pages)	125307
Oleg L. Berman, Roman Ya. Kezerashvili, and Yurii E. Lozovik	
<i>Ab initio</i> study of stabilization of the misfit layer compound (PbS) _{1.14} TaS ₂ (8 pages)	125308
Evgeniya Kabliman, Peter Blaha, and Karlheinz Schwarz	
Spin-dependent tunneling into an empty lateral quantum dot (9 pages)	125309
Peter Stano and Philippe Jacquod	
Optical gaps of free and embedded Si nanoclusters: Density functional theory calculations (6 pages)	125310
Timothy J. Pennycook, George Hadjisavvas, Juan C. Idrobo, Pantelis C. Kelires, and Sokrates T. Pantelides	
Self-excited oscillations of charge-spin accumulation due to single-electron tunneling (7 pages)	125311
D. Radić, A. M. Kadigrobov, L. Y. Gorelik, R. I. Shekhter, and M. Jonson	
Orthogonality catastrophe in ballistic quantum dots: Role of level degeneracies and confinement geometry (10 pages)	125312
Georg Röder and Martina Hentschel	
Parametric instabilities of microcavity polaritons in a periodic potential (5 pages)	125313
A. V. Gorbach and D. V. Skryabin	
⚡ Ultrafast few-fermion optoelectronics in a single self-assembled InGaAs/GaAs quantum dot (7 pages)	125314
M. Zecherle, C. Ruppert, E. C. Clark, G. Abstreiter, J. J. Finley, and M. Betz	
Stabilization of semiconductor surface reconstructions by configurational entropy (5 pages)	125315
O. Romanyuk, F. Grosse, A. Proessdorf, W. Braun, and H. Riechert	

(Continued)

Growth of spatially ordered Ge nanoclusters in an amorphous matrix on rippled substrates (5 pages)	125316
M. Buljan, J. Grenzer, A. Keller, N. Radić, V. Valeš, S. Bernstorff, T. Cornelius, H. T Metzger, and V. Holý	
Electrical excitation of microcavity polaritons by radiative pumping from a weakly coupled organic semiconductor (5 pages)	125317
Grant H. Lodden and Russell J. Holmes	
Electronic and optical properties of nonpolar <i>a</i> -plane GaN quantum wells (13 pages)	125318
S. Schulz, T. J. Badcock, M. A. Moram, P. Dawson, M. J. Kappers, C. J. Humphreys, and E. P. O'Reilly	
Inhomogeneous free-electron distribution in InN nanowires: Photoluminescence excitation experiments (9 pages)	125319
J. Segura-Ruiz, A. Molina-Sánchez, N. Garro, A. García-Cristóbal, A. Cantarero, F. Iikawa, C. Denker, J. Malindretos, and A. Rizzi	
Temperature-dependent photoluminescence of PbS quantum dots in glass: Evidence of exciton state splitting and carrier trapping (9 pages)	125320
Maxim S. Gaponenko, Andrey A. Lutich, Nikolai A. Tolstik, Alexei A. Onushchenko, Alexander M. Malyarevich, Eugene P. Petrov, and Konstantin V. Yumashev	
Coherent control in semiconductor quantum dots: Reduced optical gain thresholds via biexciton control (7 pages)	125321
David Gerbasi, Gregory D. Scholes, and Paul Brumer	
Chaotic transport in the symmetry crossover regime with a spin-orbit interaction (12 pages)	125322
Keiji Saito and Taro Nagao	
Orbital Kondo effect in double quantum dots (9 pages)	125323
Piotr Trocha	
Band-edge biexciton in nanocrystals of semiconductors with a degenerate valence band (14 pages)	125324
A. V. Rodina and Al. L. Efros	
Radial spin helix in two-dimensional electron systems with Rashba spin-orbit coupling (8 pages)	125325
Yuriy V. Pershin and Valeriy A. Slipko	
Role of the surface states in the magnetotransport properties of ultrathin bismuth films (6 pages)	125326
N. Marcano, S. Sangiao, C. Magén, L. Morellón, M. R. Ibarra, M. Plaza, L. Pérez, and J. M. De Teresa	
Valence-band splitting energies in wurtzite InP nanowires: Photoluminescence spectroscopy and <i>ab initio</i> calculations (5 pages)	125327
E. G. Gadret, G. O. Dias, L. C. O. Dacal, M. M. de Lima, Jr., C. V. R. S. Ruffo, F. Iikawa, M. J. S. P. Brasil, T. Chiaramonte, M. A. Cotta, L. H. G. Tizei, D. Ugarte, and A. Cantarero	
Quantum approach to electronic noise calculations in the presence of electron-phonon interactions (7 pages)	125328
Hong-Hyun Park and Gerhard Klimeck	
Surface physics, nanoscale physics, low-dimensional systems	
Effective time-reversal symmetry breaking in the spin relaxation in a graphene quantum dot (5 pages)	125401
P. R. Struck and Guido Burkard	
Antilinear spectral symmetry and the vortex zero modes in topological insulators and graphene (5 pages)	125402
Igor F. Herbut and Chi-Ken Lu	

(Continued)

Oxidation functional groups on graphene: Structural and electronic properties (<i>10 pages</i>)	125403
Jia-An Yan and M. Y. Chou	
Mechanism of Fe impurity motivated ion-nanopatterning of Si (100) surfaces (<i>6 pages</i>)	125404
Jing Zhou and Ming Lu	
Reversed polarized emission in highly strained <i>a</i> -plane GaN/AlN multiple quantum wells (<i>9 pages</i>)	125405
R. Mata, A. Cros, J. A. Budagosky, A. Molina-Sánchez, N. Garro, A. García-Cristóbal, J. Renard, S. Founta, B. Gayral, E. Bellet-Amalric, C. Bougerol, and B. Daudin	
Density functional theory screened-exchange approach for investigating electronic properties of graphene-related materials (<i>5 pages</i>)	125406
Roland Gillen and John Robertson	
Unexpected change in the electronic properties of the Au-graphene interface caused by toluene (<i>8 pages</i>)	125407
H. Pinto, R. Jones, J. P. Goss, and P. R. Briddon	
Phonon-mediated sticking of electrons at dielectric surfaces (<i>10 pages</i>)	125408
R. L. Heinisch, F. X. Bronold, and H. Fehske	
Renormalization of Coulomb interaction in graphene: Determining observable quantities (<i>7 pages</i>)	125409
Fernando de Juan, Adolfo G. Grushin, and María A. H. Vozmediano	
Metastable polymeric nitrogen nanotube from a zigzag sheet phase and first-principles calculations (<i>5 pages</i>)	125410
Anguang Hu, Fan Zhang, and Tom Woo	
☞ Graphene and few-layer graphite probed by second-harmonic generation: Theory and experiment (<i>10 pages</i>)	125411
Jesse J. Dean and Henry M. van Driel	
Origin of insulating behavior of the <i>p</i> -type LaAlO ₃ /SrTiO ₃ interface: Polarization-induced asymmetric distribution of oxygen vacancies (<i>4 pages</i>)	125412
Lixin Zhang, Xiang-Feng Zhou, Hui-Tian Wang, Jing-Jun Xu, Jingbo Li, E. G. Wang, and Su-Huai Wei	
Semiconductor–half metal transition at the Fe ₃ O ₄ (001) surface upon hydrogen adsorption (<i>5 pages</i>)	125413
Gareth S. Parkinson, Narasimham Mulakaluri, Yaroslav Losovyj, Peter Jacobson, Rossitza Pentcheva, and Ulrike Diebold	
Two bonding configurations for individually adsorbed C ₆₀ molecules on Au(111) (<i>5 pages</i>)	125414
Lin Tang, Xin Zhang, Quanmin Guo, Yu-Ning Wu, Lin-Lin Wang, and Hai-Ping Cheng	
☞ “Cube-on-hexagon” orientation relationship for Fe on GaN(000 $\bar{1}$): The missing link in bcc/hcp epitaxy (<i>5 pages</i>)	125415
Cunxu Gao, Oliver Brandt, Steven C. Erwin, Jonas Lähnemann, Uwe Jahn, Bernd Jenichen, and Hans-Peter Schönherr	
Thermodynamic and kinetic properties of the Li-graphite system from first-principles calculations (<i>9 pages</i>)	125416
Kristin Persson, Yoyo Hinuma, Ying Shirley Meng, Anton Van der Ven, and Gerbrand Ceder	
Efficient optical excitation transfer in layered quantum dot nanostructures networked via optical near-field interactions (<i>8 pages</i>)	125417
Makoto Naruse, Erich Runge, Kiyoshi Kobayashi, and Motoichi Ohtsu	

(Continued)

Adsorption of nitro-substituted aromatics on single-walled carbon nanotubes (8 pages)	125418
E. S. Alldredge, Ș. C. Bădescu, N. Bajwa, F. K. Perkins, E. S. Snow, and T. L. Reinecke	
Edge and bulk components of lowest-Landau-level orbitals, correlated fractional quantum Hall effect incompressible states, and insulating behavior in finite graphene samples (7 pages)	125419
Constantine Yannouleas, Igor Romanovsky, and Uzi Landman	
Shell structure and phase relations in electronic properties of metal nanowires from an electron-gas model (9 pages)	125420
Yong Han and Da-Jiang Liu	
Step structure of Si(110)-(16×2) and adsorption of H ₂ O (5 pages)	125421
Martin Setvín, Veronika Brázdová, Kazushi Miki, and David R. Bowler	
Origin of Rh and Pd agglomeration on the CeO ₂ (111) surface (7 pages)	125422
Baihai Li, Obiefune K. Ezekoye, Qiuju Zhang, Liang Chen, Ping Cui, George Graham, and Xiaoqing Pan	
Flat-lens focusing of electrons on the surface of a topological insulator (6 pages)	125423
F. Hassler, A. R. Akhmerov, and C. W. J. Beenakker	
Spin-split electronic states in graphene: Effects due to lattice deformation, Rashba effect, and adatoms by first principles (8 pages)	125424
Samir Abdelouahed, A. Ernst, J. Henk, I. V. Maznichenko, and I. Mertig	
Early stage of the electron kinetics in swift heavy ion tracks in dielectrics (11 pages)	125425
N. A. Medvedev, A. E. Volkov, N. S. Shcheblanov, and B. Rethfeld	
<i>Ab initio</i> study of electron transport in dry poly(G)-poly(C) A-DNA strands (14 pages)	125426
C. D. Pemmaraju, I. Rungger, X. Chen, A. R. Rocha, and S. Sanvito	
Diamond C 1s core-level excitons: Surface sensitivity (7 pages)	125427
Alastair Stacey, Bruce C. C. Cowie, Julius Orwa, Steven Prawer, and Alon Hoffman	
Transmission through a boundary between monolayer and bilayer graphene (14 pages)	125428
Takeshi Nakanishi, Mikito Koshino, and Tsuneya Ando	
Evolution of the Raman spectra from single-, few-, and many-layer graphene with increasing disorder (9 pages)	125429
E. H. Martins Ferreira, Marcus V. O. Moutinho, F. Stavale, M. M. Lucchese, Rodrigo B. Capaz, C. A. Achete, and A. Jorio	
Broadband plasmonic device concentrating the energy at the nanoscale: The crescent-shaped cylinder (9 pages)	125430
Alexandre Aubry, Dang Yuan Lei, Stefan A. Maier, and J. B. Pendry	
Valence band photoemission from the Zn-phthalocyanine/Ag(110) interface: Charge transfer and scattering of substrate photoelectrons (8 pages)	125431
L. Giovanelli, P. Amsalem, T. Angot, L. Petaccia, S. Gorovikov, L. Porte, A. Goldoni, and J.-M. Themlin	
Substrate-induced cooperative effects in water adsorption from density functional calculations (9 pages)	125432
Pepa Cabrera-Sanfelix, M. V. Fernández-Serra, A. Arnau, and D. Sánchez-Portal	
Plasmonic Aharonov-Bohm effect: Optical spin as the magnetic flux parameter (4 pages)	125433
Yuri Gorodetski, Sergey Nechayev, Vladimir Kleiner, and Erez Hasman	

(Continued)

ac-dc voltage profile and four point impedance of a quantum driven system (8 pages)	125434
Federico Foieri and Liliana Arrachea	
Self-consistent screening approximation for flexible membranes: Application to graphene (5 pages)	125435
K. V. Zakharchenko, R. Roldán, A. Fasolino, and M. I. Katsnelson	
Molecular relaxation dynamics in organic monolayer junctions (13 pages)	125436
Stéphane Pleutin, Nicolas Clément, David Guérin, and Dominique Vuillaume	
Double quantum dots in carbon nanotubes (13 pages)	125437
J. von Stecher, B. Wunsch, M. Lukin, E. Demler, and A. M. Rey	
Kondo behavior of anisotropic single atomic spins on a Cu ₂ N molecular layer (4 pages)	125438
M. A. Barral, P. Roura-Bas, A. M. Llois, and A. A. Aligia	
One-dimensional polymeric carbon structure based on five-membered rings in alkaline earth metal dicarbides BeC ₂ and MgC ₂ (6 pages)	125439
Pornjuk Srepusharawoot, Andreas Blomqvist, C. Moysés Araújo, Ralph H. Scheicher, and Rajeev Ahuja	
Sputtering at grazing ion incidence: Influence of adatom islands (10 pages)	125440
Yudi Rosandi, Alex Redinger, Thomas Michely, and Herbert M. Urbassek	
Quantum quench dynamics and population inversion in bilayer graphene (6 pages)	125441
Balázs Dóra, Eduardo V. Castro, and Roderich Moessner	
Coverage-dependent adsorption superstructure transition of C ₆₀ /Cu(001) (7 pages)	125442
Sheng-Syun Wong, Woei Wu Pai, Chia-Hao Chen, and Minn-Tsong Lin	
Collision-induced fusion of two C ₆₀ fullerenes: Quantum chemical molecular dynamics simulations (8 pages)	125443
Jacek Jakowski, Stephan Irle, and Keiji Morokuma	
Combined experimental and <i>ab initio</i> study of the electronic structure of narrow-diameter single-wall carbon nanotubes with predominant (6,4),(6,5) chirality (6 pages)	125444
K. De Blauwe, D. J. Mowbray, Y. Miyata, P. Ayala, H. Shiozawa, A. Rubio, P. Hoffmann, H. Kataura, and T. Pichler	
Epitaxial graphene on 3C-SiC(111) pseudosubstrate: Structural and electronic properties (6 pages)	125445
A. Ouerghi, M. Marangolo, R. Belkhou, S. El Moussaoui, M. G. Silly, M. Eddrief, L. Largeau, M. Portail, B. Fain, and F. Sirotti	
Roughness of silicon nanowire sidewalls and room temperature photoluminescence (6 pages)	125446
Vladimir A. Sivakov, Felix Voigt, Andreas Berger, Gottfried Bauer, and Silke H. Christiansen	
Photocurrent analysis of quantum cascade detectors by magnetotransport (6 pages)	125447
François-Régis Jasnot, Nicolas Péré-Laperne, Louis-Anne de Vaultier, Yves Guldner, Francesca Carosella, Robson Ferreira, Amandine Buffaz, Laetitia Doyennette, Vincent Berger, Mathieu Carras, and Xavier Marcadet	
Fluorite transition metal hydride induced destabilization of the MgH ₂ system in MgH ₂ /TMH ₂ multilayers (TM = Sc, Ti, V, Cr, Y, Zr, Nb, La, Hf) (5 pages)	125448
S. X. Tao, P. H. L. Notten, R. A. van Santen, and A. P. J. Jansen	
Photoinduced absolute negative current in a symmetric molecular electronic bridge (6 pages)	125449
Alexander Prociuk and Barry D. Dunietz	

(Continued)

Observation of electronic energy bands in argon clusters (6 pages)	125450
Marko Förstel, Melanie Mucke, Tiberiu Arion, Toralf Lischke, Silko Barth, Volker Ulrich, Gunnar Öhrwall, Olle Björneholm, Uwe Hergenhahn, and Alex M. Bradshaw	
Interference effects in the Coulomb blockade regime: Current blocking and spin preparation in symmetric nanojunctions (10 pages)	125451
Andrea Donarini, Georg Begemann, and Milena Grifoni	
Boundary of prewetting transition of Ar on a Li surface (7 pages)	125452
Ming Zeng, Jianguo Mi, and Chongli Zhong	
Interaction potentials for fast atoms in front of Al surfaces probed by rainbow scattering (11 pages)	125453
P. Tiwald, A. Schüller, H. Winter, K. Tökesi, F. Aigner, S. Gräfe, C. Lemell, and J. Burgdörfer	
Controllable excitation of gap plasmons by electron beams in metallic nanowire pairs (5 pages)	125454
Wei Cai, Lei Wang, Xinzhen Zhang, Jingjun Xu, and F. Javier García de Abajo	
Rényi entropy of a line in two-dimensional Ising models (8 pages)	125455
J.-M. Stéphan, G. Misguich, and V. Pasquier	
Quantitative investigation of the influence of carbon surfactant on Ge surface diffusion and island nucleation on Si(100) (11 pages)	125456
G. M. Vanacore, M. Zani, G. Isella, J. Osmond, M. Bollani, and A. Tagliaferri	
In situ study of pentacene interaction with archetypal hybrid contacts: Fluorinated versus alkane thiols on gold (6 pages)	125457
Zhang Jia, Vincent W. Lee, Ioannis Kymissis, Luca Floreano, Alberto Verdini, Albano Cossaro, and Alberto Morgante	
Interaction of gold nanotubes with the Si(211) surface: A density functional study (6 pages)	125458
Shyamal Konar, Monoj Das, and Bikash C. Gupta	
Submonolayers of carbon on α -Fe facets: An <i>ab initio</i> study (13 pages)	125459
S. Riikonen, A. V. Krasheninnikov, and R. M. Nieminen	
Nanocrystalline diamond film growth on plastic substrates at temperatures below 100 °C from low- temperature plasma (8 pages)	125460
Kazuo Tsugawa, Masato Ishihara, Jaeho Kim, Yoshinori Koga, and Masataka Hasegawa	

COMMENTS

Comment on “Topological stability of the half-vortices in spinor exciton-polariton condensates” (3 pages)	127301
M. Toledo Solano and Yuri G. Rubo	
Reply to “Comment on ‘Topological stability of the half-vortices in spinor exciton-polariton condensates’ ” (3 pages)	127302
H. Flayac, D. D. Solnyshkov, G. Malpuech, and I. A. Shelykh	

ERRATA

Erratum: Dielectric response to the low-temperature magnetic defect structure and spin state transition in polycrystalline LaCoO ₃ [Phys. Rev. B 79 , 125105 (2009)] (1 page)	129901(E)
Rainer Schmidt, J. Wu, C. Leighton, and I. Terry	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 82, NUMBER 12

SEPTEMBER 2010-15(II)

Erratum: Inhomogeneous spectral moment sum rules for the retarded Green function and self-energy of strongly correlated electrons or ultracold fermionic atoms in optical lattices [Phys. Rev. B 80 , 115119 (2009)] (2 pages)	129902(E)
J. K. Freericks and V. Turkowski	
Erratum: When to trust photoelectron spectra from Kohn-Sham eigenvalues: The case of organic semiconductors [Phys. Rev. B 79 , 201205 (2009)] (1 page)	129903(E)
T. Körzdörfer, S. Kümmel, N. Marom, and L. Kronik	