

PTU

# PHYSICAL REVIEW B<sup>TM</sup>

## CONDENSED MATTER AND MATERIALS PHYSICS

Articles Published in MARCH 2013

15(II)

*Published by*  
AMERICAN PHYSICAL SOCIETY<sup>TM</sup>

Volume 87

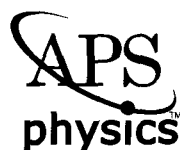
Third Series

Number 12

## RAPID COMMUNICATIONS

### Electronic structure and strongly correlated systems

- Emergent phases of nodeless and nodal superconductivity separated by antiferromagnetic order in iron-based superconductor  $(\text{Ca}_4\text{Al}_2\text{O}_6)\text{Fe}_2(\text{As}_{1-x}\text{P}_x)_2$ :  $^{75}\text{As}$ - and  $^{31}\text{P}$ -NMR studies (5 pages) ..... 121101(R)  
H. Kinouchi, H. Mukuda, Y. Kitaoka, P. M. Shirage, H. Fujihisa, Y. Gotoh, H. Eisaki, and A. Iyo
- Periodic Anderson model with electron-phonon correlated conduction band (4 pages) ..... 121102(R)  
Peng Zhang, Peter Reis, Ka-Ming Tam, Mark Jarrell, Juana Moreno, Fakhre Assaad, and A. K. McMahan
- Time-resolved resistive switching on manganite surfaces: Creep and  $1/f^\alpha$  noise signatures indicate pinning of nanoscale domains (5 pages) ..... 121103(R)  
Jon-Olaf Krispeneit, Christin Kalkert, Bernd Damaschke, Vasily Moshnyaga, and Konrad Samwer
- Terahertz quantum Hall effect of Dirac fermions in a topological insulator (5 pages) ..... 121104(R)  
A. M. Shuvaev, G. V. Astakhov, G. Tkachov, C. Brüne, H. Buhmann, L. W. Molenkamp, and A. Pimenov
- Magnetic-field induced multiferroicity in a quantum critical frustrated spin liquid (4 pages) ..... 121105(R)  
F. Schrettle, S. Krohns, P. Lunkenheimer, A. Loidl, E. Wulf, T. Yankova, and A. Zheludev
- Strong effects of cation vacancies on the electronic and dynamical properties of FeO (5 pages) ..... 121106(R)  
Urszula D. Wdowik, Przemysław Piekarczyk, Krzysztof Parlinski, Andrzej M. Oleś, and Józef Korecki
- Competition between the structural phase transition and superconductivity in  $\text{Ir}_{1-x}\text{Pt}_x\text{Te}_2$  as revealed by pressure effects (4 pages) ..... 121107(R)  
A. Kiswandhi, J. S. Brooks, H. B. Cao, J. Q. Yan, D. Mandrus, Z. Jiang, and H. D. Zhou
- Quantum states of muons in fluorides (5 pages) ..... 121108(R)  
J. S. Möller, D. Ceresoli, T. Lancaster, N. Marzari, and S. J. Blundell
- Magnetic inhomogeneity in a multiferroic  $\text{EuTiO}_3$  thin film (4 pages) ..... 121109(R)  
Yanan Geng, J. H. Lee, D. G. Schlom, J. W. Freeland, and Weida Wu
- Resonant and nonresonant processes in attosecond streaking from metals (4 pages) ..... 121110(R)  
A. G. Borisov, D. Sánchez-Portal, A. K. Kazansky, and P. M. Echenique
- Evidence for a direct band gap in the topological insulator  $\text{Bi}_2\text{Se}_3$  from theory and experiment (5 pages) ..... 121111(R)  
I. A. Nechaev, R. C. Hatch, M. Bianchi, D. Guan, C. Friedrich, I. Aguilera, J. L. Mi, B. B. Iversen, S. Blügel, Ph. Hofmann, and E. V. Chulkov
- Fluctuation-induced pair density wave in itinerant ferromagnets (5 pages) ..... 121112(R)  
G. J. Conduit, C. J. Pedder, and A. G. Green



Topological phase transition in a generalized Kane-Mele-Hubbard model: A combined quantum Monte Carlo and Green's function study ( <i>5 pages</i> ) .....	121113(R)
Hsiang-Hsuan Hung, Lei Wang, Zheng-Cheng Gu, and Gregory A. Fiete	
<b>Semiconductors I: bulk</b>	
Bragg x-ray ptychography of a silicon crystal: Visualization of the dislocation strain field and the production of a vortex beam ( <i>4 pages</i> ) .....	121201(R)
Yukio Takahashi, Akihiro Suzuki, Shin Furutaku, Kazuto Yamauchi, Yoshiki Kohmura, and Tetsuya Ishikawa	
Adiabatic transformation as a search tool for new topological insulators: Distorted ternary Li <sub>2</sub> AgSb-class semiconductors and related compounds ( <i>5 pages</i> ) .....	121202(R)
Hsin Lin, Tanmoy Das, Yung Jui Wang, L. A. Wray, S.-Y. Xu, M. Z. Hasan, and A. Bansil	
Including fringe fields from a nearby ferromagnet in a percolation theory of organic magnetoresistance ( <i>5 pages</i> ) .....	121203(R)
N. J. Harmon, F. Macià, F. Wang, M. Wohlgenannt, A. D. Kent, and M. E. Flatté	
<b>Semiconductors II: surfaces, interfaces, microstructures, and related topics</b>	
High Curie temperatures at low compensation in the ferromagnetic semiconductor (Ga,Mn)As ( <i>4 pages</i> ) .....	121301(R)
M. Wang, K. W. Edmonds, B. L. Gallagher, A. W. Rushforth, O. Makarovskiy, A. Patanè, R. P. Campion, C. T. Foxon, V. Novak, and T. Jungwirth	
Keldysh effective action theory for universal physics in spin- $\frac{1}{2}$ Kondo dots ( <i>4 pages</i> ) .....	121302(R)
Sergey Smirnov and Milena Grifoni	
 Coulomb-driven organization and enhancement of spin-orbit fields in collective spin excitations ( <i>5 pages</i> ) .....	121303(R)
F. Baboux, F. Perez, C. A. Ullrich, I. D'Amico, G. Karczewski, and T. Wojtowicz	
Inversion asymmetry effects in modulation-doped Cd <sub>1-x</sub> Mn <sub>x</sub> Te quantum wells ( <i>5 pages</i> ) .....	121304(R)
C. Rice, D. Wolverson, A. Moskalenko, S. J. Bending, G. Karczewski, and T. Wojtowicz	
<b>Surface physics, nanoscale physics, low-dimensional systems</b>	
Metal-insulator transition and phase separation in doped AA-stacked graphene bilayer ( <i>5 pages</i> ) .....	121401(R)
A. O. Sboychakov, A. L. Rakhmanov, A. V. Rozhkov, and Franco Nori	
Optical conductivity of twisted bilayer graphene ( <i>5 pages</i> ) .....	121402(R)
C. J. Tabert and E. J. Nicol	
Switching of a quantum dot spin valve by single molecule magnets ( <i>5 pages</i> ) .....	121403(R)
Fatemeh Rostamzadeh Renani and George Kirczenow	
Measurement of layer breathing mode vibrations in few-layer graphene ( <i>7 pages</i> ) .....	121404(R)
Chun Hung Lui and Tony F. Heinz	
Electron waiting times in non-Markovian quantum transport ( <i>4 pages</i> ) .....	121405(R)
Konrad H. Thomas and Christian Flindt	
Third harmonic generation in graphene and few-layer graphite films ( <i>5 pages</i> ) .....	121406(R)
Nardeep Kumar, Jatinder Kumar, Chris Gerstenkorn, Rui Wang, Hsin-Ying Chiu, Arthur L. Smirl, and Hui Zhao	

(Continued)

Graphene nanoribbons on vicinal SiC surfaces by molecular beam epitaxy ( <i>4 pages</i> ) . . . . .	121407(R)
Takashi Kajiwara, Yuzuru Nakamori, Anton Visikovskiy, Takushi Iimori, Fumio Komori, Kan Nakatsuji, Kazuhiko Mase, and Satoru Tanaka	
Theory of unconventional quantum Hall effect in strained graphene ( <i>5 pages</i> ) . . . . .	121408(R)
Bitan Roy, Zi-Xiang Hu, and Kun Yang	
Tuning and probing interfacial bonding channels for a functionalized organic molecule by surface modification ( <i>5 pages</i> ) . . . . .	121409(R)
G. Mercurio, O. Bauer, M. Willenbockel, B. Fiedler, T. Sueyoshi, C. Weiss, R. Temirov, S. Soubatch, M. Sokolowski, and F. S. Tautz	

## ARTICLES

**Electronic structure and strongly correlated systems**

Initial stage of quasiparticle decay in fermionic systems ( <i>8 pages</i> ) . . . . .	125101
Y. Pavlyukh, J. Berakdar, and A. Rubio	
Spin-boson coupling in continuous-time quantum Monte Carlo ( <i>7 pages</i> ) . . . . .	125102
Junya Otsuki	
Electronic structure of Rh-based $\text{CuRh}_{0.9}\text{Mg}_{0.1}\text{O}_2$ oxide thermoelectrics ( <i>5 pages</i> ) . . . . .	125103
P. Vilmercati, E. Martin, C. Parks Cheney, F. Bondino, E. Magnano, F. Parmigiani, T. Sasagawa, and N. Mannella	
Dimensionality effects in the local density of states of ferromagnetic hosts probed via STM: Spin-polarized quantum beats and spin filtering ( <i>11 pages</i> ) . . . . .	125104
A. C. Seridonio, S. C. Leandro, L. H. Guessi, E. C. Siqueira, F. M. Souza, E. Vernek, M. S. Figueira, and J. C. Egues	
Entanglement entropy at generalized Rokhsar-Kivelson points of quantum dimer models ( <i>10 pages</i> ) . . . . .	125105
Alexander Selem, C. M. Herdman, and K. Birgitta Whaley	
Kantorovich dual solution for strictly correlated electrons in atoms and molecules ( <i>6 pages</i> ) . . . . .	125106
Christian B. Mendl and Lin Lin	
Zero phase delay induced by wavefront modulation in photonic crystals ( <i>5 pages</i> ) . . . . .	125107
Guoyan Dong, Ji Zhou, and Luzhong Cai	
Direction-selective emission with small angular divergence from a subwavelength aperture using radiative waveguide modes ( <i>8 pages</i> ) . . . . .	125108
Wook-Jae Lee, Jong-Bum You, Kyungmook Kwon, Byoungun Park, and Kyoungsik Yu	
Wigner crystallization in two dimensions: Evolution from long- to short-ranged forces ( <i>6 pages</i> ) . . . . .	125109
Benjamin M. Fregoso and C. A. R. Sá de Melo	
Thermally activated recovery of electrical conductivity in $\text{LaAlO}_3/\text{SrTiO}_3$ ( <i>4 pages</i> ) . . . . .	125110
Snir Seri, Moty Schultz, and Lior Klein	
Vacancy-suppressed lattice conductivity of high- <i>ZT</i> $\text{In}_4\text{Se}_{3-x}$ ( <i>7 pages</i> ) . . . . .	125111
Hyo Seok Ji, Hyoungchul Kim, Changhoon Lee, Jong-Soo Rhyee, Moo Hwan Kim, Massoud Kaviani, and Ji Hoon Shim	

*(Continued)*

Ground-state phase diagram of the asymmetric Hubbard model with geometrical frustration ( <i>6 pages</i> ) . . . . .	125112
S. Yamaki, K. Seki, and Y. Ohta	
Impurity model for non-equilibrium steady states ( <i>5 pages</i> ) . . . . .	125113
Camille Aron, Cedric Weber, and Gabriel Kotliar	
Twisted quantum double model of topological phases in two dimensions ( <i>33 pages</i> ) . . . . .	125114
Yuting Hu, Yidun Wan, and Yong-Shi Wu	
Generalized inclusion of short-range ordering effects in the coherent potential approximation for complex-unit-cell materials ( <i>13 pages</i> ) . . . . .	125115
Alberto Marmodoro, Arthur Ernst, Sergei Ostanin, and Julie B. Staunton	
Nature of the electronic band gap in lanthanide oxides ( <i>6 pages</i> ) . . . . .	125116
Roland Gillen, Stewart J. Clark, and John Robertson	
Nonlinear quenching of densely excited states in wide-gap solids ( <i>19 pages</i> ) . . . . .	125117
Joel Q. Grim, K. B. Ucer, A. Burger, P. Bhattacharya, E. Tupitsyn, E. Rowe, V. M. Buliga, L. Trefilova, A. Gektin, G. A. Bizarri, W. W. Moses, and R. T. Williams	
Linear systems approach to describing and classifying Fano resonances ( <i>6 pages</i> ) . . . . .	125118
I. Avrutsky, R. Gibson, J. Sears, G. Khitrova, H. M. Gibbs, and J. Hendrickson	
Crystal field ground state of the orthorhombic Kondo semiconductors $\text{CeOs}_2\text{Al}_{10}$ and $\text{CeFe}_2\text{Al}_{10}$ ( <i>6 pages</i> ) . . . . .	125119
F. Strigari, T. Willers, Y. Muro, K. Yutani, T. Takabatake, Z. Hu, S. Agrestini, C.-Y. Kuo, Y.-Y. Chin, H.-J. Lin, T. W. Pi, C. T. Chen, E. Weschke, E. Schierle, A. Tanaka, M. W. Haverkort, L. H. Tjeng, and A. Severing	
Crystal structure and magnetic properties of honeycomb-like lattice antiferromagnet $p\text{-BIP-V}_2$ ( <i>8 pages</i> ) . . . . .	125120
Hironori Yamaguchi, Shintaro Nagata, Masami Tada, Kenji Iwase, Toshio Ono, Sadafumi Nishihara, Yuko Hosokoshi, Tokuro Shimokawa, Hiroki Nakano, Hiroyuki Nojiri, Akira Matsuo, Koichi Kindo, and Takashi Kawakami	
Effects of pressure on the ferromagnetic state of the charge density wave compound $\text{SmNiC}_2$ ( <i>5 pages</i> ) . . . . .	125121
B. Woo, S. Seo, E. Park, J. H. Kim, D. Jang, T. Park, H. Lee, F. Ronning, J. D. Thompson, V. A. Sidorov, and Y. S. Kwon	
Electron spin resonance shifts in $S = 1$ antiferromagnetic chains ( <i>10 pages</i> ) . . . . .	125122
Shunsuke C. Furuya, Yoshitaka Maeda, and Masaki Oshikawa	
Probing the electrodynamic local density of states with magnetoelectric point scatterers ( <i>7 pages</i> ) . . . . .	125123
Andrej Kwadrin and A. Femius Koenderink	
Extremely correlated Fermi liquids: The formalism ( <i>23 pages</i> ) . . . . .	125124
B. Sriram Shastry	
Microscopic evidence for $4f$ localization with reduced particle size in correlated electron system $\text{CePd}_3$ ( <i>5 pages</i> ) . . . . .	125125
S. K. Mohanta, S. N. Mishra, Kartik K. Iyer, and E. V. Sampathkumaran	
Exponential decay of spin-spin correlation between distant defect states produced by contour hydrogenation of polycyclic aromatic hydrocarbon molecules ( <i>10 pages</i> ) . . . . .	125126
G. Chiappe, E. Louis, A. Guijarro, E. San-Fabián, and J. A. Vergés	

(Continued)

Time reversal symmetry breaking chiral spin liquids: Projective symmetry group approach of bosonic mean-field theories ( <i>17 pages</i> ) . . . . .	125127
Laura Messio, Claire Lhuillier, and Grégoire Misguich	
Resistor model for the electrical transport in quasi-one-dimensional organic (TMTSF) <sub>2</sub> PF <sub>6</sub> superconductors under pressure ( <i>5 pages</i> ) . . . . .	125128
H. Meier, P. Auban-Senzier, C. Pépin, and D. Jérôme	
Hidden ( $\pi,0$ ) instability as an itinerant origin of bicollinear antiferromagnetism in Fe <sub>1+x</sub> Te ( <i>7 pages</i> ) . . . . .	125129
Ming-Cui Ding, Hai-Qing Lin, and Yu-Zhong Zhang	
Distinguishing particle-hole conjugated fractional quantum Hall states using quantum-dot-mediated edge transport ( <i>19 pages</i> ) . . . . .	125130
Hsin-Hua Lai and Kun Yang	
Dimensionality effects on the optical diffraction from opal-based photonic structures ( <i>8 pages</i> ) . . . . .	125131
M. V. Rybin, I. S. Sinev, A. K. Samusev, K. B. Samusev, E. Yu. Trofimova, D. A. Kurdyukov, V. G. Golubev, and M. F. Limonov	
Electronic structures and phonon free energies of LaCoO <sub>3</sub> using hybrid-exchange density functional theory ( <i>9 pages</i> ) . . . . .	125132
S. Mukhopadhyay, M. W. Finnis, and N. M. Harrison	
Electronic structure of the kagome staircase compounds Ni <sub>3</sub> V <sub>2</sub> O <sub>8</sub> and Co <sub>3</sub> V <sub>2</sub> O <sub>8</sub> ( <i>10 pages</i> ) . . . . .	125133
J. Laverock, B. Chen, A. R. H. Preston, K. E. Smith, N. R. Wilson, G. Balakrishnan, P.-A. Glans, and J.-H. Guo	
Density-functional study of perovskite-type hydride LiNiH <sub>3</sub> and its synthesis: Mechanism for formation of metallic perovskite ( <i>6 pages</i> ) . . . . .	125134
Shigeyuki Takagi, Hiroyuki Saitoh, Naruki Endo, Ryutaro Sato, Tamio Ikeshoji, Motoaki Matsuo, Kazutoshi Miwa, Katsutoshi Aoki, and Shin-ichi Orimo	
Pressure dependence of the charge density wave in 1T-TaS <sub>2</sub> and its relation to superconductivity ( <i>5 pages</i> ) . . . . .	125135
T. Ritschel, J. Trinckauf, G. Garbarino, M. Hanfland, M. v. Zimmermann, H. Berger, B. Büchner, and J. Geck	
Optical-magnetism-induced transparency in a metamaterial ( <i>6 pages</i> ) . . . . .	125136
Ling Qin, Kun Zhang, Ru-Wen Peng, Xiang Xiong, Wei Zhang, Xian-Rong Huang, and Mu Wang	
Thin metamaterial Luneburg lens for surface waves ( <i>5 pages</i> ) . . . . .	125137
J. A. Dockrey, M. J. Lockyear, S. J. Berry, S. A. R. Horsley, J. R. Sambles, and A. P. Hibbins	
Magnetism of iron and nickel from rotationally invariant Hirsch-Fye quantum Monte Carlo calculations ( <i>8 pages</i> ) . . . . .	125138
A. S. Belozеров, I. Leonov, and V. I. Anisimov	
Area law and real-space renormalization ( <i>6 pages</i> ) . . . . .	125139
Andrew J. Ferris	
Edge spin excitations and reconstructions of integer quantum Hall liquids ( <i>14 pages</i> ) . . . . .	125140
Yuhui Zhang and Kun Yang	
Magnetic transition in a correlated band insulator ( <i>5 pages</i> ) . . . . .	125141
A. Euverte, S. Chiesa, R. T. Scalettar, and G. G. Batrouni	

*(Continued)*

Melting of the orbital order in $\text{LaMnO}_3$ probed by NMR (6 pages) . . . . .	125142
A. Trokiner, S. Verkhovskii, A. Gerashenko, Z. Volkova, O. Anikeenok, K. Mikhalev, M. Eremin, and L. Pinsard-Gaudart	
Phase-dependent reversible nonreciprocity in complex metamolecules (7 pages) . . . . .	125143
Sunkyu Yu, Daniel R. Mason, Xianji Piao, and Namkyoo Park	
Classification and symmetry properties of scaling dimensions at Anderson transitions (26 pages) . . . . .	125144
I. A. Gruzberg, A. D. Mirlin, and M. R. Zirnbauer	
Topological phases of spin chains (16 pages) . . . . .	125145
Kasper Duivenvoorden and Thomas Quella	
Quantum criticality and first-order transitions in the extended periodic Anderson model (7 pages) . . . . .	125146
I. Hagymási, K. Itai, and J. Sólyom	
Chiral RKKY interaction in $\text{Pr}_2\text{Ir}_2\text{O}_7$ (8 pages) . . . . .	125147
Rebecca Flint and T. Senthil	
Strain effects to optimize thermoelectric properties of hole-doped $\text{La}_2\text{NiO}_{4+\delta}$ via <i>ab initio</i> calculations (7 pages) . . . . .	125148
Victor Pardo, Antia S. Botana, and Daniel Baldomir	
Screening and nonlocal correlations in the extended Hubbard model from self-consistent combined <i>GW</i> and dynamical mean field theory (21 pages) . . . . .	125149
Thomas Ayrál, Silke Biermann, and Philipp Werner	
Hall effect measurements on epitaxial $\text{SmNiO}_3$ thin films and implications for antiferromagnetism (9 pages) . . . . .	125150
Sieu D. Ha, R. Jaramillo, D. M. Silevitch, Frank Schoofs, Kian Kerman, John D. Baniecki, and Shriram Ramanathan	
<b>Semiconductors I: bulk</b>	
Intrinsic small polarons in rutile $\text{TiO}_2$ (6 pages) . . . . .	125201
Shan Yang (杨山), A. T. Brant, N. C. Giles, and L. E. Halliburton	
Effect of hyperfine-induced spin mixing on the defect-enabled spin blockade and spin filtering in GaNAs (6 pages) . . . . .	125202
Y. Puttison, X. J. Wang, I. A. Buyanova, and W. M. Chen	
Electronic origin of the conductivity imbalance between covalent and ionic amorphous semiconductors (5 pages) . . . . .	125203
Hui-Xiong Deng, Su-Huai Wei, Shu-Shen Li, Jingbo Li, and Aron Walsh	
Molecular hyperfine fields in organic magnetoresistance devices (4 pages) . . . . .	125204
Ronaldo Giro, Flávia P. Rosselli, Rafael dos Santos Carvalho, Rodrigo B. Capaz, Marco Cremona, and Carlos A. Achete	
Anharmonic resonant Raman modes in $\text{Mg}_{0.2}\text{Zn}_{0.8}\text{O}$ (5 pages) . . . . .	125205
Jesse Huso, John L. Morrison, Leah Bergman, and Matthew D. McCluskey	
Incorporation of nitrogen in $\text{Co:ZnO}$ studied by x-ray absorption spectroscopy and x-ray linear dichroism (6 pages) . . . . .	125206
D. Schauries, V. Ney, S. K. Nayak, P. Entel, A. A. Guda, A. V. Soldatov, F. Wilhelm, A. Rogalev, K. Kummer, F. Yakhou, and A. Ney	
Optical polarization of nuclear ensembles in diamond (7 pages) . . . . .	125207
Ran Fischer, Andrey Jarmola, Pauli Kehayias, and Dmitry Budker	

(Continued)

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

Relation between the interband dipole and momentum matrix elements in semiconductors ( <i>17 pages</i> ) . . . . .	125301
B. Gu, N. H. Kwong, and R. Binder	
Electronic and optical properties of ZnO quantum dots under hydrostatic pressure ( <i>7 pages</i> ) . . . . .	125302
Zaiping Zeng, Christos S. Garoufalis, Sotirios Baskoutas, and Gabriel Bester	
Native defects in tetradymite $\text{Bi}_2(\text{Te}_x\text{Se}_{3-x})$ topological insulators ( <i>6 pages</i> ) . . . . .	125303
Lin-Lin Wang, Mianliang Huang, Srinivasa Thimmaiah, Aftab Alam, Sergey L. Bud'ko, Adam Kaminski, Thomas A. Lograsso, Paul Canfield, and Duane D. Johnson	
Exciton localization mechanisms in wurtzite/zinc-blende GaAs nanowires ( <i>7 pages</i> ) . . . . .	125304
A. M. Graham, P. Corfdir, M. Heiss, S. Conesa-Boj, E. Uccelli, A. Fontcuberta i Morral, and R. T. Phillips	
Impact of wetting-layer density of states on the carrier relaxation process in low indium content self-assembled (In,Ga)As/GaAs quantum dots ( <i>7 pages</i> ) . . . . .	125305
M. Syperek, M. Baranowski, G. Şek, J. Misiewicz, A. Löffler, S. Höfling, S. Reitzenstein, M. Kamp, and A. Forchel	
Radiative coupling of quantum dots in photonic crystal structures ( <i>16 pages</i> ) . . . . .	125306
Momchil Minkov and Vincenzo Savona	
Pseudospin dynamics in multimode polaritonic Josephson junctions ( <i>7 pages</i> ) . . . . .	125307
G. Pavlovic, G. Malpuech, and I. A. Shelykh	
Dangling-bond defect in a-Si:H: Characterization of network and strain effects by first-principles calculation of the EPR parameters ( <i>7 pages</i> ) . . . . .	125308
G. Pfanner, C. Freysoldt, J. Neugebauer, F. Inam, D. Drabold, K. Jarolimek, and M. Zeman	
Coulomb interaction signatures in self-assembled lateral quantum dot molecules ( <i>8 pages</i> ) . . . . .	125309
Xinran R. Zhou, Jihoon H. Lee, Gregory J. Salamo, Miquel Royo, Juan I. Climente, and Matthew F. Doty	
Kinetic Monte Carlo simulations of the growth of silicon germanium pyramids ( <i>6 pages</i> ) . . . . .	125310
Philippe Gaillard, Jean-Noël Aqa, and Thomas Frisch	
Dynamic control of magnetically trapped indirect excitons using external magnetic bias: Transition from two- to one-dimensional lattice ( <i>7 pages</i> ) . . . . .	125311
A. Abdelrahman and Byoung S. Ham	
<b>Surface physics, nanoscale physics, low-dimensional systems</b>	
Indirect exchange interaction between magnetic adatoms in monolayer $\text{MoS}_2$ ( <i>7 pages</i> ) . . . . .	125401
F. Parhizgar, H. Rostami, and Reza Asgari	
Anisotropic RKKY interaction in spin-polarized graphene ( <i>7 pages</i> ) . . . . .	125402
F. Parhizgar, Reza Asgari, Saeed H. Abedinpour, and M. Zareyan	
Structural and electronic distortions in individual carbon nanotubes under laser irradiation in the electron microscope ( <i>5 pages</i> ) . . . . .	125403
David Rossouw, Matthieu Bugnet, and Gianluigi A. Botton	

*(Continued)*



Large-scale maximal entanglement and Majorana bound states in coupled circuit quantum electrodynamic systems ( <i>9 pages</i> ) .....	125404
Myung-Joong Hwang and Mahn-Soo Choi	
Topological phases in gated bilayer graphene: Effects of Rashba spin-orbit coupling and exchange field ( <i>14 pages</i> ) .....	125405
Zhenhua Qiao, Xiao Li, Wang-Kong Tse, Hua Jiang, Yugui Yao, and Qian Niu	
Phase-locked magnetoconductance oscillations as a probe of Majorana edge states ( <i>9 pages</i> ) .....	125406
M. Diez, I. C. Fulga, D. I. Pikulin, M. Wimmer, A. R. Akhmerov, and C. W. J. Beenakker	
Cobalt epitaxial nanoparticles on CaF <sub>2</sub> /Si(111): Growth process, morphology, crystal structure, and magnetic properties ( <i>16 pages</i> ) .....	125407
N. S. Sokolov, S. M. Sutorin, B. B. Krichevstov, V. G. Dubrovskii, S. V. Gastev, N. V. Sibirev, D. A. Baranov, V. V. Fedorov, A. A. Sitnikova, A. V. Nashchekin, V. I. Sakharov, I. T. Serenkov, T. Shimada, T. Yanase, and M. Tabuchi	
One-dimensional Van Hove polaritons ( <i>7 pages</i> ) .....	125408
K. B. Arnardottir, O. Kyriienko, M. E. Portnoi, and I. A. Shelykh	
Anomalous response to gate voltage application in mesoscopic LaAlO <sub>3</sub> /SrTiO <sub>3</sub> devices ( <i>5 pages</i> ) .....	125409
D. Rakhmilevitch, I. Neder, M. Ben Shalom, A. Tsukernik, M. Karpovski, Y. Dagan, and A. Palevski	
Modulated SiC nanowires: Molecular dynamics study of their thermal properties ( <i>8 pages</i> ) .....	125410
Konstantinos Termentzidis, Thibaut Barreateau, Yuxiang Ni, Samy Merabia, Xanthippi Zianni, Yann Chalopin, Patrice Chantrenne, and Sebastian Volz	
Electronic transport in two-dimensional Si:P $\delta$ -doped layers ( <i>9 pages</i> ) .....	125411
E. H. Hwang and S. Das Sarma	
Spin-dependent electronic processes and long-lived spin coherence of deep-level trap sites in CdS nanocrystals ( <i>8 pages</i> ) .....	125412
K. J. van Schooten, J. Huang, D. V. Talapin, C. Boehme, and J. M. Lupton	
Significance of the Casimir force and surface roughness for actuation dynamics of MEMS ( <i>7 pages</i> ) .....	125413
Wijnand Broer, George Palasantzas, Jasper Knoester, and Vitaly B. Svetovoy	
Electronic properties of twisted trilayer graphene ( <i>7 pages</i> ) .....	125414
E. Suárez Morell, M. Pacheco, L. Chico, and L. Brey	
Phonon softening and direct to indirect band gap crossover in strained single-layer MoSe <sub>2</sub> ( <i>5 pages</i> ) .....	125415
S. Horzum, H. Sahin, S. Cahangirov, P. Cudazzo, A. Rubio, T. Serin, and F. M. Peeters	
Evolution of the persistent spin helix in the presence of Hartree-Fock fields ( <i>9 pages</i> ) .....	125416
Matthias C. Lüffe, Jeroen Danon, and Tamara S. Nunner	
Interaction effects in electric transport through self-assembled molecular monolayers ( <i>9 pages</i> ) .....	125417
Martin Leijnse	
Pseudomagnetoexcitons in strained graphene bilayers without external magnetic fields ( <i>7 pages</i> ) .....	125418
Zhigang Wang, Zhen-Guo Fu, Fawei Zheng, and Ping Zhang	
Non-Abelian gauge fields and quadratic band touching in molecular graphene ( <i>6 pages</i> ) .....	125419
Fernando de Juan	

*(Continued)*

Quantitative adsorbate structure determination under catalytic reaction conditions ( <i>4 pages</i> ) . . . . .	125420
D. Kreikemeyer-Lorenzo, W. Unterberger, R. Blume, M. Hävecker, T. C. R. Rocha, A. Knop-Gericke, R. Schlögl, T. J. Lerofholi, D. A. Duncan, and D. P. Woodruff	
Influence of the image charge effect on excitonic energy structure in organic-inorganic multiple quantum well crystals ( <i>5 pages</i> ) . . . . .	125421
Hidetsugu Takagi, Hideyuki Kunugita, and Kazuhiro Ema	
Scattering approach to frequency-dependent current noise in Fabry-Pérot graphene devices ( <i>13 pages</i> ) . . . . .	125422
Jan Hammer and Wolfgang Belzig	
Quantum dot-quantum dot interactions mediated by a metal nanoparticle: Towards a fully quantum model ( <i>11 pages</i> )	125423
Ryan D. Artuso and Garnett W. Bryant	
Divergence of the thermal conductivity in uniaxially strained graphene ( <i>6 pages</i> ) . . . . .	125424
Luiz Felipe C. Pereira and Davide Donadio	
Low-frequency optical conductivity in graphene and in other scale-invariant two-band systems ( <i>5 pages</i> ) . . . . .	125425
Ádám Bácsi and Attila Virosztek	
Anisotropic Debye model for the thermal boundary conductance ( <i>14 pages</i> ) . . . . .	125426
Z. Chen, Z. Wei, Y. Chen, and C. Dames	
Theory of carrier density in multigated doped graphene sheets with quantum correction ( <i>4 pages</i> ) . . . . .	125427
Ming-Hao Liu (劉明豪)	
Spectral and transport properties of the two-dimensional Lieb lattice ( <i>13 pages</i> ) . . . . .	125428
M. Niță, B. Ostahie, and A. Aldea	
Single-electron source: Adiabatic versus nonadiabatic emission ( <i>17 pages</i> ) . . . . .	125429
Michael Moskalets, Géraldine Haack, and Markus Büttiker	
Origin of surface stress on late transition metal surfaces: <i>Ab initio</i> local stress and tight-binding model ( <i>6 pages</i> )	125430
Yoshinori Shiihara, Masanori Kohyama, and Shoji Ishibashi	