

PHYSICAL REVIEW B

For editorial and subscription correspondence,
please see inside front cover
(ISSN: 0163-1829)

PERIODICALS
Postmaster send address changes to:
American Institute of Physics
Suite 1NO1
2 Huntington Quadrangle
Melville, NY 11747-4502

THIRD SERIES, VOLUME 63, NUMBER 3

CONTENTS

15 JANUARY 2001-I

Subject Matter Categories for Physical Review B	iii
Physical Review B Editorial Policies and Practices	iv
Physical Review B Information for Contributors	viii
Guidelines for Estimating Length for Physical Review B	xi

BRIEF REPORTS

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

Exact solution for a disordered correlated electron model (4 pages)	033101
A. A. Zvyagin	
^{23}Na and ^{29}Si NMR Knight shifts in the silicon clathrate $\text{Na}_{16}\text{Cs}_8\text{Si}_{136}$ (4 pages)	033102
Ganesh K. Ramachandran, Jianjun Dong, Otto F. Sankey, and Paul F. McMillan	
Low temperature threshold field of $\text{K}_{0.3}\text{MoO}_3$ determined by dielectric measurements (4 pages)	033103
X. N. Jing, He Haifeng, S. L. Li, and Zhang Dianlin	
Polarized Raman scattering study of terminal stretching modes in $\text{K}_{0.30}\text{MoO}_3$ (4 pages)	033104
Shigeru Nishio and Masato Kakihana	
Semiclassical theory of magnetic quantum oscillations in a two-dimensional multiband canonical Fermi liquid (3 pages)	033105
A. S. Alexandrov and A. M. Bratkovsky	
Resonant inverse photoemission spectroscopy at the prethreshold of the $\text{Ce-}N_{4,5}$ absorption edge in CePd_3 (4 pages)	033106
K. Kanai, T. Terashima, A. Kotani, T. Uozumi, G. Schmerber, J. P. Kappler, J. C. Parlebas, and S. Shin	
Strong discontinuities in the complex photonic band structure of transmission metallic gratings (4 pages)	033107
S. Collin, F. Pardo, R. Teissier, and J.-L. Pelouard	
Electron correlation effects in the spectral momentum density of graphite (4 pages)	033108
M. Vos, A. S. Kheifets, E. Weigold, and F. Aryasetiawan	

Semiconductors I: bulk

Conductivity in boron-doped diamond (4 pages)	033201
Rinat F. Mamin and Takashi Inushima	
Effects of Rayleigh scattering on photovoltaic spectra associated with 1s orthoexcitons in Cu_2O (4 pages) ...	033202
A. Mori, N. Naka, and N. Nagasawa	
Signature of an intrinsic point defect in $\text{GaN}_x\text{As}_{1-x}$ (4 pages)	033203
N. Q. Thinh, I. A. Buyanova, P. N. Hai, W. M. Chen, H. P. Xin, and C. W. Tu	



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

Unequal dependence of the dephasing rates for inhomogeneously broadened excitons on the intensities of the exciting beams in four-wave-mixing measurements (4 pages)	033301
Bipul Pal, A. V. Gopal, and A. S. Vengurlekar	
Surface structure and core-level shifts in lead chalcogenide (001) surfaces (4 pages)	033302
Alessandra Satta and Stefano de Gironcoli	
Type I band alignment in the $\text{GaN}_x\text{As}_{1-x}/\text{GaAs}$ quantum wells (4 pages)	033303
I. A. Buyanova, G. Pozina, P. N. Hai, W. M. Chen, H. P. Xin, and C. W. Tu	
Model for surfactant-mediated growth of Ge on Pb-covered Si(111) surfaces (4 pages)	033304
Janusz Bęben, Ing-Shouh Hwang, Tien-Chih Chang, and Tien T. Tsong	
Vacancy diffusion kinetics in arsenic-rich nonstoichiometric AlAs/GaAs heterostructures (3 pages)	033305
S. Balasubramanian, S. W. Mansour, M. R. Melloch, and D. D. Nolte	
Resonant Raman scattering in GaAs induced by an embedded InAs monolayer (3 pages)	033306
J. Maultzsch, S. Reich, A. R. Goñi, and C. Thomsen	
Exciton-phonon coupled states in CuCl quantum cubes (4 pages)	033307
Jialong Zhao, Selvakumar V. Nair, and Yasuaki Masumoto	
Magnetotunneling in a two-dimensional electron-hole system near equilibrium (4 pages)	033308
E. M. González, Y. Lin, and E. E. Mendez	
Direct atomistic observation of a contact process between crystalline silicon surfaces at room temperature (4 pages)	033309
Tokushi Kizuka	
Interface states in photonic crystal heterostructures (4 pages)	033310
Lan-Lan Lin and Zhi-Yuan Li	
Valence-band offset of the lattice-matched $\beta\text{-FeSi}_2(100)/\text{Si}(001)$ heterostructure (4 pages)	033311
Haider M. Al-Allak and Stewart J. Clark	
Magnetotransport through semiconductor superlattices (4 pages)	033312
F. Elsholz, A. Wacker, E. Schöll, M. Kast, G. Strasser, and E. Gornik	
Photoluminescence study of a bimodal size distribution of Ge/Si(001) quantum dots (4 pages)	033313
V. Yam, Vinh Le Thanh, Y. Zheng, P. Boucaud, and D. Bouchier	
Quadruple-period ordering along [110] in a $\text{GaAs}_{0.87}\text{Sb}_{0.13}$ alloy (4 pages)	033314
Zhenyang Zhong, J. H. Li, J. Kulik, P. C. Chow, A. G. Norman, A. Mascarenhas, J. Bai, T. D. Golding, and S. C. Moss	
Mechanisms for extra conductance plateaus in quantum wires (4 pages)	033315
Kenji Hirose, Shu-Shen Li, and Ned S. Wingreen	
Far-infrared excitations in rectangular antidot arrays (4 pages)	033316
M. Hochgräfe, B. P. van Zyl, Ch. Heyn, D. Heitmann, and E. Zaremba	

Surface physics, low-dimensional systems, and related topics

Optical properties of aligned carbon nanotube systems studied by the effective-medium approximation method (4 pages)	033401
Wengang Lü, Jinming Dong, and Zhen-Ya Li	
Stiction, adhesion energy, and the Casimir effect in micromechanical systems (4 pages)	033402
E. Buks and M. L. Roukes	
Anisotropic island growth during submonolayer epitaxy (4 pages)	033403
Ch. Heyn	
Step bunching on TaC(910) due to attractive step-step interactions (4 pages)	033404
J.-K. Zuo, Tianjiao Zhang, J. F. Wendelken, and D. M. Zehner	
Adsorption geometries and vibrational modes of C_2H_2 on the Si(001) surface (4 pages)	033405
Yoshitada Morikawa	

ARTICLES

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

- Tunneling spectroscopy of $R\text{Te}_2$ ($R=\text{La, Ce}$) and possible coexistence between charge-density waves and magnetic order (5 pages) 035101
M. H. Jung, T. Ekino, Y. S. Kwon, and T. Takabatake
- Relaxation rate of excited electrons in metals: A nonperturbative calculation based on kinetic theory (6 pages) 035102
I. Nagy, J. I. Juaristi, and P. M. Echenique
- Spin-orbit coupling in the actinide elements: A critical evaluation of theoretical equilibrium volumes (5 pages) 035103
L. Nordström, J. M. Wills, P. H. Andersson, P. Söderlind, and O. Eriksson
- Perturbation expansion for the two-dimensional Hubbard model (10 pages) 035104
V. Zlatić, B. Horvatić, B. Dolički, S. Grabowski, P. Entel, and K.-D. Schotte
- Optical and magneto-optical properties and electronic structures of single-crystalline $R\text{Al}_2$ ($R=\text{Y, La, Ce, Pr, and Lu}$) (8 pages) 035105
R. J. Lange, S. J. Lee, K. J. Kim, P. C. Canfield, and D. W. Lynch
- Electronic structure of Co_xTiSe_2 and Cr_xTiSe_2 (8 pages) 035106
A. N. Titov, A. V. Kuranov, V. G. Pleschev, Yu. M. Yarmoshenko, M. V. Yablonskikh, A. V. Postnikov, S. Plogmann, M. Neumann, A. V. Ezhov, and E. Z. Kurmaev
- Combined photoemission and inverse photoemission study of HfS_2 (8 pages) 035107
M. Traving, T. Seydel, L. Kipp, M. Skibowski, F. Starrost, E. E. Krasovskii, A. Perlov, and W. Schattke
- Theory of photon Bloch oscillations in photonic crystals (11 pages) 035108
G. Malpuech, A. Kavokin, G. Panzarini, and A. Di Carlo
- Breakdown of the Landau-Fermi liquid in two dimensions due to umklapp scattering (18 pages) 035109
C. Honerkamp, M. Salmhofer, N. Furukawa, and T. M. Rice
- Variational study of the extended Hubbard-Holstein model on clusters of variable site spacing (11 pages) 035110
Marcello Acquarone, Mario Cuoco, Canio Noce, and Alfonso Romano

Semiconductors I: bulk

- Formation of defect complexes by electron-irradiation of hydrogenated crystalline silicon (7 pages) 035201
Masashi Suezawa
- Zeeman spectrum of the 1s exciton in very diluted $\text{Cd}_{1-x}\text{Co}_x\text{Te}$ compounds (9 pages) 035202
M. Zielinski, C. Rigaux, A. Mycielski, and M. Menant
- Hydrogen-related complexes formed by electron-irradiation of hydrogenated silicon (6 pages) 035203
Masashi Suezawa
- X-ray and neutron scattering study of Si-rich Si-Ge single crystals (7 pages) 035204
D. Le Bolloc'h, J. L. Robertson, H. Reichert, S. C. Moss, and M. L. Crow

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

- Theoretical study on resonant transmission of acoustic phonons propagating through a superlattice-liquid interface (6 pages) 035301
Seiji Mizuno
- Excitonic contributions to the quantum-confined Pockels effect (8 pages) 035302
A. A. Toropov, E. L. Ivchenko, O. Krebs, S. Cortez, P. Voisin, and J. L. Gentner
- Intersection and anticrossing of far-infrared modes in elliptical quantum dots with tunable ellipticity (5 pages) 035303
M. Hochgräfe, Ch. Heyn, and D. Heitmann

Quantum Hall solitons with intertwined spin and pseudospin at $\nu=1$ (12 pages)	035304
Sankalpa Ghosh and R. Rajaraman	
Pseudospin anisotropy classification of quantum Hall ferromagnets (10 pages)	035305
T. Jungwirth and A. H. MacDonald	
Computational design of compounds for monolithic integration in optoelectronics (12 pages)	035306
Tairan Wang, N. Moll, Kyeongjae Cho, and J. D. Joannopoulos	
Microcavity polariton linewidths in the weak-disorder regime (5 pages)	035307
P. Borri, W. Langbein, U. Woggon, J. R. Jensen, and J. M. Hvam	
Absolute total cross sections for electron-stimulated desorption of hydrogen and deuterium from silicon(111) measured by second harmonic generation (5 pages)	035308
M. M. Albert and N. H. Tolk	
Strain effect in silicon-on-insulator materials: Investigation with optical phonons (11 pages)	035309
J. Camassel, L. A. Falkovsky, and N. Planes	
Small polaron formation in dangling-bond wires on the Si(001) surface (4 pages)	035310
D. R. Bowler and A. J. Fisher	
Adsorption of group III and group V metals on Si(001): One-dimensional versus two-dimensional growth (5 pages)	035311
Noboru Takeuchi	
Theoretical analysis of the density of states and phase times: Application to resonant electromagnetic modes in finite superlattices (7 pages)	035312
M. L. H. Lahlouli, A. Akjouj, B. Djafari-Rouhani, L. Dobrzynski, M. Hammouchi, E. H. El Boudouti, A. Nougouai, and B. Kharbouch	
Electrical transport of composite fermions at $\nu=\frac{3}{2}$ (6 pages)	035313
V. C. Karavolas and G. P. Triberis	
Collective excitations in symmetric p -type GaAs/Al _x Ga _{1-x} As quantum wells (12 pages)	035314
Shun-Jen Cheng and Rolf R. Gerhardt	
Exclusion principle and screening of excitons in GaN/Al _x Ga _{1-x} N quantum wells (4 pages)	035315
Pierre Bigenwald, Alexey Kavokin, Bernard Gil, and Pierre Lefebvre	
Systematics in the nanoparticle band gap of ZnS and Zn _{1-x} M _x S ($M=\text{Mn, Fe, Ni}$) for various dopant concentrations (5 pages)	035316
M. Behboudnia and P. Sen	
Electron spectrum of magnetic interface structures based on narrow-gap semiconductors (6 pages)	035317
N. Malkova, I. Gómez, and F. Domínguez-Adame	
Determination of strain fields and composition of self-organized quantum dots using x-ray diffraction (13 pages)	035318
I. Kegel, T. H. Metzger, A. Lorke, J. Peisl, J. Stangl, G. Bauer, K. Nordlund, W. V. Schoenfeld, and P. M. Petroff	
Kondo effect in multielectron quantum dots at high magnetic fields (6 pages)	035319
C. Tejedor and L. Martín-Moreno	
Determination of the complex microwave photoconductance of a single quantum dot (5 pages)	035320
H. Qin, F. Simmel, R. H. Blick, J. P. Kotthaus, W. Wegscheider, and M. Bichler	
Spin transitions in a small Si quantum dot (4 pages)	035321
L. P. Rokhinson, L. J. Guo, S. Y. Chou, and D. C. Tsui	
Surface physics, low-dimensional systems, and related topics	
Generalizing the environment-dependent interaction potential for carbon (7 pages)	035401
N. A. Marks	

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 63, NUMBER 3

15 JANUARY 2001-I

Ag/Cu(111) surface structure and metal epitaxy by impact-collision ion-scattering spectroscopy and scanning tunneling microscopy (<i>10 pages</i>)	035402
Kenji Umezawa, Shigemitsu Nakanishi, Masamichi Yoshimura, Kaoru Ojima, Kazuyuki Ueda, and Walter M. Gibson	
Tunable single-electron tunneling behavior of ligand-stabilized gold particles on self-assembled monolayers (<i>7 pages</i>)	035403
Bing Wang, Haiqian Wang, Huixiang Li, Changgan Zeng, J. G. Hou, and Xudong Xiao	
Collective and single-particle excitations in Raman scattering of multilayer δ -doped systems (<i>7 pages</i>)	035404
V. Anjos and L. Ioriatti	
Morphology and magnetic properties of thin films of Rh on highly oriented pyrolytic graphite (<i>8 pages</i>)	035405
A. Goldoni, A. Baraldi, G. Comelli, F. Esch, R. Larciprete, S. Lizzit, and G. Paolucci	
Monte Carlo simulation of polycrystalline thin film deposition (<i>8 pages</i>)	035406
P. Bruschi, A. Nannini, and F. Pieri	
Kinetic Monte Carlo simulation of nucleation on patterned substrates (<i>7 pages</i>)	035407
L. Nurminen, A. Kuronen, and K. Kaski	
Electronic diffraction tomography by Green's functions and singular values decompositions (<i>5 pages</i>)	035408
A. Mayer	

ERRATA

Erratum: Photoconductivity in CdSe quantum dot solids [Phys. Rev. B 62 , 2669 (2000)] (<i>1 page</i>)	039901(E)
C. A. Leatherdale, C. R. Kagan, N. Y. Morgan, S. A. Empedocles, M. A. Kastner, and M. G. Bawendi	
Erratum: Giant multilayer fullerene structures with symmetrically arranged defects [Phys. Rev. B 62 , 6979 (2000)] (<i>1 page</i>)	039902(E)
A. Pérez-Garrido	

Cumulative Author Index	xiii
-----------------------------------	------