

PHYSICAL REVIEW B

CONDENSED MATTER

THIRD SERIES, VOLUME 55, NUMBER 19

CONTENTS

15 MAY 1997-I

BRIEF REPORTS

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

Single-particle gap above the Verwey transition in Fe_3O_4	12 813
J.-H. Park, L. H. Tjeng, J. W. Allen, P. Metcalf, and C. T. Chen	
Holographic gratings by spatial modulation of the Curie-Weiss temperature in photorefractive $\text{K}_{1-x}\text{Li}_x\text{Ta}_{1-y}\text{Nb}_y\text{O}_3\text{:Cu,V}$	12 818
Aharon J. Agranat, Meir Razvag, Michal Balberg, and Gabby Bitton	
Insulating gap in FeO: Correlations and covalency	12 822
I. I. Mazin and V. I. Anisimov	
Magneto-x-ray effects in transition-metal alloys	12 826
H. J. Gotsis and P. Strange	
Singlet and triplet doped-hole configurations in $\text{La}_2\text{Cu}_{0.5}\text{Li}_{0.5}\text{O}_4$	12 829
V. I. Anisimov, S. Yu. Ezhov, and T. M. Rice	
Spectral statistics of disordered metals in the presence of several Aharonov-Bohm fluxes	12 833
G. Montambaux	

Semiconductors I: bulk

Structural and electronic properties of group-III nitrides	12 836
Dirk Vogel, Peter Krüger, and Johannes Pollmann	
Inelastic interaction of electrons with lattice waves in many-valley-model semiconductors at low temperature	12 840
N. Chakrabarti and D. P. Bhattacharya	
Light diffraction on Gunn-domain gratings	12 844
L. Subačius, V. Gružinskas, E. Starikov, P. Shiktorov, and K. Jarašiūnas	
Quantum beats of exciton polaritons in hexagonal CdS crystals	12 848
D. Weber, W. Petri, U. Woggon, C. F. Klingshirn, S. Shevel, and E. O. Göbel	
Nucleation-limited amorphization of GaAs at elevated temperatures	12 852
R. A. Brown and J. S. Williams	

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

Biexcitons in one-dimensional systems with electron-hole exchange interactions	12 856
Kunio Ishida	
Dynamical localization and absolute negative conductance in an ac-driven double quantum well	12 860
Ramón Aguado and Gloria Platero	
Energy-loss rates of heavy and light charged particles in a two-dimensional electron gas	12 864
A. Bergara, I. Nagy, and P. M. Echenique	
Quantum conductance of the single-electron transistor	12 868
Xiaohui Wang	
Microscopic wave functions for incompressible quantum liquids in smooth confining potentials	12 872
Sergio De Filippo	
Photoluminescence mechanism for blue-light-emitting porous silicon	12 876
G. G. Qin, X. S. Liu, S. Y. Ma, J. Lin, G. Q. Yao, X. Y. Lin, and K. X. Lin	

(Continued)

Shot noise of sequential tunneling in a triple-barrier resonant-tunneling diode	12 880
S.-T. Yau, H. B. Sun, P. J. Edwards, and P. Lynam	

Surface physics, low-dimensional systems, and related topics

Photoelectron spectroscopy of small chromium clusters: Observation of even-odd alternations and theoretical interpretation	12 884
Lai-Sheng Wang, Hongbin Wu, and Hansong Cheng	
STM study of formic acid adsorption on Cu(110)	12 888
Stephen Poulston, Roger A. Bennett, Adrian H. Jones, and Michael Bowker	
Interplay between stick-slip motion and structural phase transitions in dry sliding friction	12 892
A. Buldum and S. Ciraci	
Surface atomic structure of $c(2 \times 2)$ -Si on Cu(110)	12 896
J. A. Martín-Gago, R. Fasel, J. Hayoz, R. G. Agostino, D. Naumović, P. Aebi, and L. Schlapbach	
Strained interface of lattice-mismatched wafer fusion	12 899
Z. L. Liao	
Direct observation of mobility and interactions of oxygen molecules chemisorbed on the Ag(110) surface	12 902
J. V. Barth, T. Zambelli, J. Wintterlin, R. Schuster, and G. Ertl	
Electrical phase transitions on the alkali-metal-adsorbed Si(001) surfaces	12 906
Ki-Dong Lee and Jinwook Chung	
Conductance quantization histograms of gold nanowires at 4 K	12 910
J. L. Costa-Krämer, N. García, and H. Olin	
Hydrogen-induced changes of the electronic states in ultrathin single-crystal vanadium layers	12 914
L.-C. Duda, P. Isberg, P. H. Andersson, P. Skytt, B. Hjörvarsson, J.-H. Guo, C. Sâthe, and J. Nordgren	

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

Specific heat of the two-dimensional Hubbard model	12 918
Daniel Duffy and Adriana Moreo	
Charged-boson fluid in two and three dimensions	12 925
V. Apaja, J. Halinen, V. Halonen, E. Krotscheck, and M. Saarela	
Algorithms for Korringa-Kohn-Rostoker electronic structure calculations in any Bravais lattice	12 946
E. Bruno and B. Ginatempo	
Electronic states on a fractal: The consequences of self-energy variation	12 956
R. F. S. Andrade and H. J. Schellnhuber	
Spin-charge separation, anomalous scaling, and the coherence of hopping in exactly solved two-chain models	12 963
Nic Shannon, Yanmin Li, and Nicholas d'Ambrumenil	
Multifractal properties of the wave functions of the square-lattice tight-binding model with next-nearest-neighbor hopping in a magnetic field	12 971
I. Chang, K. Ikezawa, and M. Kohmoto	
Semiempirical Hartree-Fock calculations for pure and Li-doped KTaO_3	12 976
R. I. Eglitis, A. V. Postnikov, and G. Borstel	
Second-order nonlinear optical properties of bond-alternating dipolar structures	12 982
Y. M. Cai, S. Yamada, O. Zamani-Khamiri, A. F. Garito, and K. Y. Wong	
Interchain coupling model for quasi-one-dimensional π -conjugated organic ferromagnets	12 989
W. Z. Wang, Z. L. Liu, and K. L. Yao	

(Continued)

Semiconductors I: bulk

Stability of deep donor and acceptor centers in GaN, AlN, and BN	12 995
C. H. Park and D. J. Chadi	
Minima of the muon depolarization rate in $\text{Cd}_{1-x}\text{Mn}_x\text{Te}$	13 002
A. Golnik, A. Weidinger, Ch. Niedermayer, C. Bernhard, and E. Recknagel	
Crystal-field model of vanadium in 6H silicon carbide	13 009
B. Kaufmann, A. Dörnen, and F. S. Ham	
Infrared studies of hydrogenated amorphous carbon ($\alpha\text{-C:H}$) and its alloys ($\alpha\text{-C:H,N,F}$)	13 020
S. Liu, S. Gangopadhyay, G. Sreenivas, S. S. Ang, and H. A. Naseem	
<i>Ab initio</i> calculations of the pressure-induced structural phase transitions for four II-VI compounds	13 025
Michel Côté, Oleg Zakharov, Angel Rubio, and Marvin L. Cohen	

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

Theoretical study of the Si/GaAs(001)- $c(4\times 4)$ surface	13 032
J. M. Bass and C. C. Matthai	
Synthesis of epitaxial ternary $\text{Co}_{1-x}\text{Fe}_x\text{Si}_2$ silicides with CsCl- and CaF_2 -type cubic structures on Si(111) by codeposition techniques	13 040
S. Hong, C. Pirri, P. Wetzel, and G. Gewinner	
Antimony-stabilized GaAs(001)(2×4) reconstructions	13 051
W. G. Schmidt and F. Bechstedt	
Quantum-confined biexcitons in $\text{Si}_{1-x}\text{Ge}_x$ grown on Si(001)	13 058
Kai Shum, P. M. Mooney, L. P. Tilly, and J. O. Chu	
Interband mixing between two-dimensional states localized in a surface quantum well and heavy-hole states of the valence band in a narrow-gap semiconductor	13 062
V. A. Larionova and A. V. Germanenko	
Theory of photoluminescence from modulation-doped self-assembled quantum dots in a magnetic field	13 066
Arkadiusz Wojs and Pawel Hawrylak	
Ionized impurity scattering in periodically δ -doped InP	13 072
A. B. Henriques, L. C. D. Gonçalves, N. F. Oliveira, Jr., P. L. Souza, and B. Yavich	
Electric fields and valence-band offsets at strained [111] heterojunctions	13 080
S. Picozzi, A. Continenza, and A. J. Freeman	
Electron trajectories in rectangular antidot superlattices	13 088
S. Lüthi, T. Vancura, K. Ensslin, R. Schuster, G. Böhm, and W. Klein	
Electron mobility in Si δ -doped GaAs with spatial correlations in the distribution of charged impurities	13 093
J. M. Shi, P. M. Koenraad, A. F. W. van de Stadt, F. M. Peeters, G. A. Farias, J. T. Devreese, J. H. Wolter, and Z. Wilamowski	
Orientational superlattices formed by CuPt-ordered zinc-blende semiconductor alloys	13 100
Yong Zhang and A. Mascarenhas	
Magnetoplasmons of a two-dimensional electron gas with equilibrium density inhomogeneities	13 111
F. A. Reboredo and C. R. Proetto	
Coherent-photon-assisted cotunneling in a Coulomb blockade device	13 118
Karsten Flensberg	
High-precision measurements of the quantized Hall resistance: Experimental conditions for universality	13 124
Beat Jeckelmann, Blaise Jeanneret, and Dave Inglis	
$\nu=\frac{1}{2}$ quantum Hall effect in the Aharonov-Casher geometry in a mesoscopic ring	13 135
R. Mélin and B. Douçot	
Theory of carriers bound to In isoelectronic δ -doping layers in GaAs	13 148
M. Di Ventura and K. A. Mäder	
Exciton diamagnetic shifts in self-formed closely stacked InAs/GaAs quantum dots	13 155
Mitsuru Sugawara, Yoshiaki Nakata, Kohki Mukai, and Hajime Shoji	

(Continued)

Spin-density and charge-density excitations in quantum wires	13 161
Arne Brataas, A. G. Mal'shukov, Christoph Steinebach, Vidar Gudmundsson, and K. A. Chao	
Auger-process-induced charge separation in semiconductor nanocrystals	13 173
Victor I. Klimov and Duncan W. McBranch	
Many-body effects in the quasi-one-dimensional magnetoplasma	13 180
M. Bayer, Ch. Schlier, Ch. Gréus, A. Forchel, S. Benner, and H. Haug	
Surface physics, low-dimensional systems, and related topics	
Reconstruction of surface morphology from coherent x-ray reflectivity	13 193
I. A. Vartanyants, J. A. Pitney, J. L. Libbert, and I. K. Robinson	
Influence of mode polarizations on the inelastic He-scattering spectrum: High-order commensurate Xe monolayer adsorbed on Cu(110)	13 203
C. Ramseyer, V. Pouthier, C. Girardet, P. Zeppenfeld, M. Büchel, V. Diercks, and G. Comsa	
Effect of laser intensity on the properties of carbon plasmas and deposited films	13 213
H. C. Ong and R. P. H. Chang	
Thickness-dependent fcc to bcc structural change in iron films: Use of a 2-ML Ni/W(110) substrate	13 221
H. L. Johnston, C. S. Arnold, and D. Venus	
Thresholds for the phase formation of cubic boron nitride thin films	13 230
H. Hofsäss, H. Feldermann, M. Sebastian, and C. Ronning	
Theory of giant Raman scattering from semicontinuous metal films	13 234
F. Brouers, S. Blacher, A. N. Lagarkov, Andrey K. Sarychev, Patrice Gadenne, and Vladimir M. Shalaev	
Photon-stimulated desorption of O(^3P) and NO($^2\Pi$) from NaNO ₃ single crystals	13 246
Karen Knutsen and Thomas M. Orlando	
Photostimulated desorption of CO from geologic calcite following 193-nm irradiation	13 253
Kenneth M. Beck, David P. Taylor, and Wayne P. Hess	
Density-functional calculation of electronic friction of ions and atoms on metal surfaces	13 263
A. Liebsch	
Comparative study of the stopping power of graphite and diamond	13 275
W. Käferböck, W. Rössler, V. Necas, P. Bauer, M. Peñalba, E. Zarate, and A. Arnau	
Geometrical effects on the magnetism of small Ni clusters	13 279
S. Bouarab, A. Vega, M. J. López, M. P. Iñiguez, and J. A. Alonso	
Electronic properties of transition-metal clusters: Consideration of the spillover in a bulk parametrization	13 283
Javier Guevara, Francisco Parisi, Ana Maria Llois, and Mariana Weissmann	
Metal-cluster ionization energy: A profile-insensitive exact expression for the size effect	13 288
Michael Seidl, John P. Perdew, Marta Brajczewska, and Carlos Fiolhais	
Geometric and electronic structure of PbNa ₆ clusters	13 293
Yang Jinlong, Deng Kaiming, Xiao Chuanyun, and Wang Kelin	
Dynamical and geometrical aspects of NO chemisorption on transition metals: Rh, Pd, and Pt	13 298
W. Mannstadt and A. J. Freeman	
Surface diffusion of Ge on Si(111): Experiment and simulation	13 304
C. E. Allen, R. Ditchfield, and E. G. Seebauer	

COMMENTS

Comment on "Surface silicon-deuterium bond energy from gas-phase equilibration"	13 314
Conyers Herring and Chris G. Van de Walle	
Reply to "Comment on 'Surface silicon-deuterium bond energy from gas-phase equilibration'"	13 319
W. R. Wampler, S. M. Myers, and D. M. Follstaedt	

Errata

Erratum: Tight bound and convexity constraint on the exchange-correlation-energy functional in the low-density limit, and other formal tests of generalized-gradient approximations [Phys. Rev. B 48 , 11 638 (1993)]	13 321
Mel Levy and John P. Perdew	
Erratum: Estimates of electronic interaction parameters for LaMO_3 compounds ($M=\text{Ti-Ni}$) from <i>ab initio</i> approaches [Phys. Rev. B 54 , 11 199 (1996)]	13 322
Priya Mahadevan, N. Shanthi, and D. D. Sarma	
Erratum: Formation of bound excitons by photoexcited carriers in <i>p</i> -type GaAs revealed by picosecond luminescence spectroscopy [Phys. Rev. B 54 , 17 591 (1996)]	13 322
Rajesh Kumar, A. S. Vengurlekar, S. S. Prabhu, Silvano De Franceschi, and Fabio Beltram	
Cumulative Author Index	13 323