

PHYSICAL REVIEW B

CONDENSED MATTER AND MATERIALS PHYSICS

THIRD SERIES, VOLUME 57, NUMBER 5

CONTENTS

1 FEBRUARY 1998-I

BRIEF REPORTS

Structure, structural phase transitions, mechanical properties, defects, etc.

Hydrogen atoms in KH_2PO_4 crystals	2643
S. D. Setzler, K. T. Stevens, L. E. Halliburton, M. Yan, N. P. Zaitseva, and J. J. DeYoreo	
High-precision determination of atomic positions in crystals: The case of 6H- and 4H-SiC	2647
A. Bauer, J. Kräußlich, L. Dressler, P. Kuschnerus, J. Wolf, K. Goetz, P. Käckell, J. Furthmüller, and F. Bechstedt	
Structures of H_2S : Phases I' and IV under high pressure	2651
H. Fujihisa, H. Yamawaki, M. Sakashita, K. Aoki, S. Sasaki, and H. Shimizu	
Single crystal of colloidal silica particles in a dilute aqueous dispersion as studied by a two-dimensional ultrasmall-angle x-ray scattering	2655
Toshiki Konishi and Norio Ise	
Sequence of martensitic transformations in Ni-Mn-Ga alloys	2659
V. A. Chernenko, C. Seguí, E. Cesari, J. Pons, and V. V. Kokorin	

Inhomogeneous, disordered, and partially ordered systems

Sound-wave scattering in silica	2663
A. Wischniewski, U. Buchenau, A. J. Dianoux, W. A. Kamitakahara, and J. L. Zarestky	
Theory of electric-field-induced photoluminescence quenching in disordered molecular solids	2667
M. C. J. M. Vissenberg and M. J. M. de Jong	

Dynamics, dynamical systems, lattice effects, quantum solids, etc.

Temperature dependence of the Raman-active B_{1g} and A_{1g} modes in $\text{YNi}_2\text{B}_2\text{C}$	2671
T. Hirata and H. Takeya	
Association of broad icosahedral Raman bands with substitutional disorder in SiB_3 and boron carbide	2675
T. L. Aselage and D. R. Tallant	

Magnetism

Stochastic resonance in an electron-spin–nuclear-spin system	2679
D. Gourier and D. Gerbault	
Difficulties of weak localization theory for thin metal films with magnetic impurities	2683
Guohong Li, Mingling Chen, Guoliang Liu, Min Wang, Shiguang Wang, and Shousheng Yan	
Magnetic resonance in the spin-Peierls compound α' - NaV_2O_5	2687
S. Schmidt, W. Palme, B. Lüthi, M. Weiden, R. Hauptmann, and C. Geibel	
Bandwidth-controlled magnetic and electronic transitions in $\text{La}_{0.5}\text{Ca}_{0.5-x}\text{Sr}_x\text{MnO}_3$ ($0 \leq x \leq 0.5$) distorted perovskite	2690
A. Sundaresan, P. L. Paulose, R. Mallik, and E. V. Sampathkumaran	
Observation of polarization and intensity oscillations in secondary electrons emitted from Ag/Fe(110)	2694
Takashi Furukawa and Kazuyuki Koike	
Charge screening and magnetic anisotropy in metallic rare-earth systems	2697
V. Yu. Irkhin and Yu. P. Irkhin	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 57, NUMBER 5

1 FEBRUARY 1998-I

Magnetic phase transition in two dimensions: An experimental study on a system of amorphous ultrathin-film multilayers	2701
Ch. V. Mohan, H. Kronmüller, and M. Kelsch	
Infrared spectra of giant magnetoresistance Fe/Cr/Fe trilayers	2705
S. Uran, M. Grimsditch, Eric E. Fullerton, and S. D. Bader	

Superfluidity and superconductivity

Order parameter and magnetic field of a vortex line pinned at a point defect: Ginzburg-Landau theory	2709
Mark Friesen and Paul Muzikar	
Magnetic moment interaction in the anyon superconductor	2713
M. Eliashvili and G. Tsitsishvili	
Interference effect heat conductance in a Josephson junction and its detection in an rf SQUID	2717
Glen D. Guttman, Eshel Ben-Jacob, and David J. Bergman	
Dissipative dynamics of quantum vortices in superconducting arrays	2720
Mahn-Soo Choi, Sung-Ik Lee, and M. Y. Choi	
Elastic lattice in a random potential	2724
Eugene M. Chudnovsky and Ronald Dickman	
Pseudogaps: A third peak in the fermion spectral function	2728
Oleg Tchernyshyov	
Magnetism of V, Mo, and Co surface impurities on Pb measured by their pair-breaking effect	2732
D. Garrett, H. Beckmann, and G. Bergmann	

ARTICLES

Structure, structural phase transitions, mechanical properties, defects, etc.

Ultrasonic study of the two-step martensitic phase transformation in Ni ₂ MnGa	2735
T. E. Stenger and J. Trivisonno	
Effects of partial coherence on the scattering of x rays by matter	2740
S. K. Sinha, M. Tolan, and A. Gibaud	
Multichain Frenkel-Kontorova model for interfacial slip	2759
J. Röder, J. E. Hammerberg, B. L. Holian, and A. R. Bishop	
Theory of instability phenomena and order-disorder transition in CsCl-type crystals	2767
Yutaka Aikawa and Katsuhiko Fujii	
Ground states of one-dimensional commensurate-incommensurate transition models with double-well interactions	2771
Aiguo Xu, Guangrui Wang, Shigang Chen, and Bambi Hu	
Spectral features of resonant radiative x-ray Raman scattering by polymers and solids	2780
Faris Gel'mukhanov and Hans Ågren	
Structural instability and electronic excitations in Nb ₃ Sn	2793
B. Sadigh and V. Ozoliņš	

Inhomogeneous, disordered, and partially ordered systems

Experimental and theoretical study of the temperature and concentration dependence of the short-range order in Pt-V alloys	2801
David Le Bolloc'h, René Caudron, and Alphonse Finel	
Kinetic-freezing dynamics of the supercooled liquid state in 2-cyclooctylamino-5-nitropyridine	2812
J. Dolinšek, M. Koren, and R. Kind	
Surface structures of cleaved icosahedral Al-Pd-Mn single quasicrystals after heat treatment	2821
Ph. Ebert, F. Yue, and K. Urban	

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 57, NUMBER 5

1 FEBRUARY 1998-I

Plasmon-polariton fractal spectra in quasiperiodic multilayers	2826
M. S. Vasconcelos and E. L. Albuquerque	
Periodic features in the dynamic structure factor of the quasiperiodic period-doubling lattice	2834
Anathnath Ghosh and S. N. Karmakar	
Two-dimensional tunable photonic crystals	2841
Alex Figotin, Yuri A. Godin, and Ilia Vitebsky	
Formation of magnetic moments in crystalline, quasicrystalline, and liquid Al-Mn alloys	2849
J. Hafner and M. Krajčí	

Dynamics, dynamical systems, lattice effects, quantum solids, etc.

Density of neutral solitons in weakly disordered Peierls chains	2861
M. V. Mostovoy, M. T. Figge, and J. Knoester	
Raman spectroscopy of orthorhombic perovskitelike YMnO_3 and LaMnO_3	2872
M. N. Iliev, M. V. Abrashev, H.-G. Lee, V. N. Popov, Y. Y. Sun, C. Thomsen, R. L. Meng, and C. W. Chu	
Ultrafast nonequilibrium dynamics of electrons in metals	2878
Vitalyi E. Gusev and Oliver B. Wright	
Temperature dependence of the elastic moduli of diamond: A Brillouin-scattering study	2889
E. S. Zouboulis, M. Grimsditch, A. K. Ramdas, and S. Rodriguez	

Magnetism

Molecular-field approach to the spin-Peierls transition in CuGeO_3	2897
Ralph Werner and Claudius Gros	
Pressure-dependent electrical resistivity of $R\text{Co}_2$ compounds (R = rare earth)	2904
R. Hauser, E. Bauer, and E. Gratz	
Random and exchange anisotropy in consolidated nanostructured Fe and Ni: Role of grain size and trace oxides on the magnetic properties	2915
Jörg F. Löffler, Jürg P. Meier, Bernard Doudin, Jean-Philippe Ansermet, and Werner Wagner	
Surface effects on the magnetic properties of ultrafine cobalt particles	2925
M. Respaud, J. M. Broto, H. Rakoto, A. R. Fert, L. Thomas, B. Barbara, M. Verelst, E. Snoeck, P. Lecante, A. Mosset, J. Osuna, T. Ould Ely, C. Amiens, and B. Chaudret	
Nuclear magnetic relaxation in an Ising-like antiferromagnet CsCoCl_3 : Domain-wall dynamics	2936
T. Kohmoto, T. Goto, S. Maegawa, N. Fujiwara, Y. Fukuda, M. Kunitomo, and M. Mekata	
Quasiclassical size effects for the extraordinary Hall effect in magnetic sandwiches	2943
N. Ryzhanova, A. Vedyayev, A. Crépieux, and C. Lacroix	
Calculation of giant magnetoresistance in laterally confined multilayers in the current-in-plane geometry	2950
Kingshuk Majumdar, Jian Chen, and Selman Hershfield	
Giant magnetoresistance in $\text{Fe}_{1-x}\text{Co}_x/\text{Cr}(001)$ trilayers	2955
C. T. Yu, K. Westerholt, K. Theis-Bröhl, V. Leiner, Th. Zeidler, and H. Zabel	
Voltage-controlled colossal magnetoresistance in manganite/normal-metal heterostructures	2963
M. Ziese, S. Sena, C. Shearwood, H. J. Blythe, M. R. J. Gibbs, and G. A. Gehring	
Field-induced incommensurate-to-commensurate transition in $\text{Ba}_2\text{CuGe}_2\text{O}_7$	2968
A. Zheludev, S. Maslov, G. Shirane, Y. Sasago, N. Koide, and K. Uchinokura	
Magnetic properties of the t - J model in two- and three-dimensional lattices	2979
Zhe Chang	
Nonequilibrium Kondo impurity: Perturbation about an exactly solvable point	2991
Kingshuk Majumdar, Avraham Schiller, and Selman Hershfield	

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 57, NUMBER 5

1 FEBRUARY 1998-I

Superfluidity and superconductivity

Electrons and cavitation in liquid helium	3000
J. Classen, C.-K. Su, M. Mohazzab, and H. J. Maris	
Masses and phase structure in the Ginzburg-Landau model	3011
K. Kajantie, M. Karjalainen, M. Laine, and J. Peisa	
Hidden non-Abelian gauge symmetries in doped planar antiferromagnets	3017
K. Farakos and N. E. Mavromatos	
Ground-state properties of the doped three-leg t - J ladder	3031
Steven R. White and D. J. Scalapino	
Tunneling spectrum into a d -wave superconductor with a time-reversal-symmetry-broken surface state	3038
Jian-Xin Zhu and C. S. Ting	
Effect of anisotropy on the imaginary part of the conductivity in layered superconductors	3045
C. Jiang and J. P. Carbotte	
Acoustic attenuation in a type-II superconductor at high magnetic fields	3051
G. M. Bruun, V. Nikos Nicopoulos, and N. F. Johnson	
Shapes of flux domains in the intermediate state of type-I superconductors	3058
Alan T. Dorsey and Raymond E. Goldstein	
Surface instabilities and vortex transport in current-carrying superconductors	3073
I. Aranson and V. Vinokur	
Specific heat and critical fields of the organic superconductor β'' -(BEDT-TTF) $_2$ SF $_5$ CH $_2$ CF $_2$ SO $_3$	3084
S. Wanka, J. Hagel, D. Beckmann, J. Wosnitzer, J. A. Schlueter, J. M. Williams, P. G. Nixon, R. W. Winter, and G. L. Gard	
Phenomenological interpretations of the ac Hall effect in the normal state of YBa $_2$ Cu $_3$ O $_7$	3089
Anatoley T. Zheleznyak, Victor M. Yakovenko, H. D. Drew, and I. I. Mazin	
Hole motion in an arbitrary spin background: Beyond the minimal spin-polaron approximation	3099
Matthias Vojta and Klaus W. Becker	
Mode separation of the Josephson plasma in Bi $_2$ Sr $_2$ CaCu $_2$ O $_{8+\delta}$	3108
Itsuhiro Kakeya, Koichi Kindo, Kazuo Kadowaki, Saburo Takahashi, and Takashi Mochiku	
Elastic and spin-fluctuation-mediated inelastic Josephson tunneling between anisotropic superconductors	3116
Yung-mau Nie and L. Coffey	
Onsager loop transition and first-order flux-line lattice melting in high- T_c superconductors	3123
A. K. Nguyen and A. Sudbø	
Length-scale-dependent vortex-antivortex unbinding in epitaxial Bi $_2$ Sr $_2$ CaCu $_2$ O $_{8+\delta}$ films	3144
L. Miu, G. Jakob, P. Haibach, Th. Kluge, U. Frey, P. Voss-de Haan, and H. Adrian	
Vortex-liquid entanglement in Bi $_2$ Sr $_2$ CaCu $_2$ O $_{8+\delta}$ films in the presence of quenched disorder	3151
L. Miu, G. Jakob, P. Haibach, F. Hillmer, H. Adrian, and C. C. Almasan	
Chemical bonding between host and guest in the (HgBr $_2$) $_{0.5}$ Bi $_2$ Sr $_{1.5-x}$ La $_x$ Ca $_{1.5}$ Cu $_2$ O $_y$ ($x=0.0, 0.2$, and 0.4) superconducting-insulating nanocomposite system	3156
Seong-Ju Hwang, Seung-Joo Kim, and Jin-Ho Choy	

COMMENTS

Comment on "Pressure and temperature diagram of polymerized fullerite"	3164
Bertil Sundqvist	
Reply to "Comment on 'Pressure and temperature diagram of polymerized fullerite' "	3166
L. Marques, J.-L. Hodeau, M. Núñez-Regueiro, and M. Perroux	
Comment on "Computer model for transient grating experiments and its application to analysis of LiTaO $_3$ "	3167
H. J. Bakker	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 57, NUMBER 5

1 FEBRUARY 1998-I

Errata

Erratum: Effect of the form of the height-height correlation function on diffuse x-ray scattering from a self-affine surface [Phys. Rev. B 48 , 2873 (1993)]	3169
G. Palasantzas and J. Krim	
Erratum: Resistive transitions of thin film superconductors in a magnetic field [Phys. Rev. B 55 , 15 183 (1997)] ..	3169
M. H. Theunissen and P. H. Kes	
Erratum: Positive moment of an inductively coupled Josephson-junction array [Phys. Rev. B 56 , 6169 (1997)]	3170
Mahesh Chandran	
Cumulative Author Index	3171