

BRIEF REPORTS

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

- Wave-vector dependence in quasielastic neutron scattering 10 703
C. A. Condat
- Lithium site preference and electronic structure of $\text{Li}_4\text{V}_3\text{O}_8$ 10 707
R. Benedek, M. M. Thackeray, and L. H. Yang
- Ion-induced formation of colloids in LiF at 15 K 10 711
K. Schwartz, G. Wirth, C. Trautmann, and T. Steckenreiter
- Acoustic anomaly in the antiferrodistortive phase transition of KHCO_3 studied by Brillouin scattering 10 715
S. Takasaka, Y. Tsujimi, and T. Yagi
- Pressure-induced phase transitions in Pa metal from first-principles theory 10 719
Per Söderlind and Olle Eriksson
- Smearing of the reconstructive phase transition in pure and mixed $\text{LiK}_{1-x}\text{Rb}_x\text{SO}_4$ crystals 10 722
A. Righi, P. Bourson, M. A. Pimenta, and R. L. Moreira
- Central peak in SrTiO_3 studied by dielectric spectroscopy 10 726
Rolandas Mizaras and Alois Loidl
- Time-differential perturbed-angular-correlation studies on ^{117}In and ^{111}Cd in $\text{Li}_{0.995}\text{Cd}_{0.005}\text{NbO}_3$ 10 730
Yoshitaka Ohkubo, Shin-ichi Uehara, Yoichi Kawase, Jin Nakamura, Takuya Okada, Shizuko Ambe,
Fumitoshi Ambe, and Kichizo Asai

Inhomogeneous, disordered, and partially ordered systems

- Two-dimensional disordered photonic crystals with an average periodic lattice 10 734
Hongqiang Li, Bingying Cheng, and Daozhong Zhang
- Optical absorption in Fibonacci lattices at finite temperature 10 737
A. Rodríguez and F. Domínguez-Adame
- Effective response of strongly nonlinear composites: Exact results against approximate methods 10 740
K. W. Yu and K. P. Yuen

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

- Bond percolation on two-dimensional random lattices 10 743
H. P. Hsu, M. C. Huang, and K. J. Ling
- Molecular-dynamics-simulation study of the two-dimensional lattice structure of the Cu-1 plane
in $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$ 10 747
J. D. Fan, G. L. Zhao, T. Edis, and Y. M. Malozovsky
- Effect of pressure on Raman phonons in zirconium metal 10 751
H. Olijnyk and A. P. Jephcoat
- Phonon superlattice transport 10 754
Per Hyldgaard and G. D. Mahan
- Anisotropic inelastic nuclear absorption 10 758
A. I. Chumakov, R. Rüffer, A. Q. R. Baron, H. Grünsteudel, H. F. Grünsteudel, and V. G. Kohn



Electron-phonon-interaction-driven anharmonic mode-mode coupling in ferroelectrics: The origin of acoustic-mode anomalies	10 762
A. Bussmann-Holder	

Magnetism

Critical exponents of the pure and random-field Ising models	10 766
Thierry Jolicœur and Jean-Claude Le Guillou	
Valence bond mapping of antiferromagnetic spin chains	10 770
J. Dukelsky and S. Pittel	
Singlet ground state of the bilinear-biquadratic exchange Hamiltonian	10 774
A. Tanaka and T. Idogaki	
Coupled spin-lattice transition in $U_2Rh_3Si_5$: Thermal expansions and magnetization	10 778
T. Takeuchi, T. Yamada, Y. Miyako, K. Oda, K. Kindo, B. Becker, S. Ramakrishnan, A. A. Menovsky, G. J. Nieuwenhuys, and J. A. Mydosh	
Finite-size behavior of the three-state Potts model on the quasiperiodic octagonal tiling	10 782
D. Ledue, T. Boutry, D. P. Landau, and J. Teillet	
High-field ESR and proton NMR in TDAE- C_{70}	10 786
Denis Arçon, R. Blinc, P. Cevc, G. Chouteau, and A.-L. Barra	
Ferromagnetic state with spin canting in $La_{0.52}Gd_{0.15}Ca_{0.33}MnO_3$	10 789
Z. B. Guo, H. Huang, W. P. Ding, and Y. W. Du	
Anomalous magnetic relaxation in ferritin	10 793
Jonathan R. Friedman, U. Voskoboinik, and M. P. Sarachik	
Magnetic interactions in Fe-Cr-based nanocrystalline alloys	10 797
N. Randrianantoandro, A. Ślawska-Waniewska, and J. M. Greneche	
Formation of a ferromagnetic silicide at the Fe/Si(100) interface	10 801
R. Kläsches, C. Carbone, W. Eberhardt, C. Pampuch, O. Rader, T. Kachel, and W. Gudat	
Interface resistances of magnetic multilayers	10 805
Kees M. Schep, Jeroen B. A. N. van Hoof, Paul J. Kelly, Gerrit E. W. Bauer, and John E. Inglesfield	
Manifestations of hyperfine interaction in plasticity	10 809
M. Molotskii and V. Fleurov	
Orbital effects in the inelastic magnetic scattering of x rays	10 812
D. Kechrakos, K. N. Trohidou, and S. Taddei	

Superfluidity and superconductivity

Thermoelectric power anomalies and electron-phonon interaction in nonequilibrium solid solutions $Al_{1-x}Si_x$	10 816
N. E. Sluchanko, V. V. Glushkov, S. V. Demishev, M. V. Kondrin, N. A. Samarin, A. K. Savchenko, A. O. Orlov, G. L. Snider, V. V. Brazhkin, and V. V. Moshchalkov	
Anisotropic resistivity and normal-state magnetoresistance of RNi_2B_2C ($R=Y, Lu, Er, Ho$)	10 820
I. R. Fisher, J. R. Cooper, and P. C. Canfield	
Specific heat and ac susceptibility of $Hg_{0.8}Cu_{0.2}Ba_2CuO_{4+\delta}$ single crystals with $T_C=95$ K	10 824
B. Billon, M. Charalambous, O. Riou, J. Chaussy, and D. Pelloquin	
Nature of the Josephson barrier in electron-beam-written $YBa_2Cu_3O_{7-\delta}$ junctions	10 828
B. M. Hinaus, M. S. Rzechowski, B. A. Davidson, J. E. Nordman, K. Siangchaew, and M. Libera	
Evidence for a depinning transition in the vortex quasilattice of $Bi_2Sr_2CaCu_2O_{8+\delta}$	10 832
C. D. Dewhurst and R. A. Doyle	
Gaussian, three-dimensional-XY, and lowest-Landau-level scalings in the low-field fluctuation magnetoconductivity of $Bi_2Sr_2CaCu_2O_8$	10 836
R. Menegotto Costa, P. Pureur, L. Ghivelder, J. A. Campá, and I. Rasines	

Model for the low-temperature magnetic phases observed in doped $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$	10 840
Niels Hessel Andersen and Gennadi Uimin	

ARTICLES

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

Stacking faults in magnesium	10 844
N. Chetty and M. Weinert	
Structural characterization of Ag_2GeS_3 glass by anomalous wide-angle x-ray scattering	10 852
P. Armand, A. Ibanez, J.-M. Tonnerre, B. Bouchet-Fabre, and E. Philippot	
Ferrielectric ordering in lamellar CuInP_2S_6	10 860
V. Maisonneuve, V. B. Cajipe, A. Simon, R. Von Der Muhll, and J. Ravez	
Local structural changes in KNbO_3 under high pressure	10 869
A. I. Frenkel, F. M. Wang, S. Kelly, R. Ingalls, D. Haskel, E. A. Stern, and Y. Yacoby	
High-pressure four-coordinated structure of SiO_2	10 878
J. S. Tse, D. D. Klug, Y. Le Page, and M. Bernasconi	
Effect of pressure and temperature on the lifetime of Cr^{3+} in yttrium aluminum garnet	10 882
Y. R. Shen and K. L. Bray	
Averaged methods for vortex-string evolution	10 892
C. J. A. P. Martins and E. P. S. Shellard	
Luminescence properties of ZrO_2 -CaO eutectic crystals with ordered lamellar microstructure activated with Er^{3+} ions	10 907
R. I. Merino, J. A. Pardo, J. I. Peña, G. F. de la Fuente, A. Larrea, and V. M. Orera	
Site-selective spectroscopy of Tm^{3+} centers in $\text{CaF}_2:\text{Tm}^{3+}$	10 916
Nicholas M. Strickland and Glynn D. Jones	
Observation of acoustic coherent backscattering	10 930
Keiji Sakai, Ken Yamamoto, and Kenshiro Takagi	

Inhomogeneous, disordered, and partially ordered systems

Structural studies of glassy $(\text{Li}_2\text{S})_{0.5}(\text{SiS}_2)_{0.5}$ by isotopic-substitution neutron diffraction	10 934
J. H. Lee, A. Pradel, G. Taillades, M. Ribes, and S. R. Elliott	
Observation of long-range correlations in temporal intensity fluctuations of light	10 942
Frank Scheffold, Wolfram Härtl, Georg Maret, and Egon Matijević	
Dimensional crossover of weak localization in a magnetic field	10 953
C. Mauz, A. Rosch, and P. Wölflé	
Nonlinear response of composite materials containing coated spheres: Giant enhancement due to the particle structure and distribution	10 963
Liang Fu and Lorenzo Resca	

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

Dynamic model of anisotropic x-ray refraction	10 970
X. R. Huang, Yong Li, W. J. Liu, and S. S. Jiang	

Magnetism

Spin-liquid phases in two-dimensional frustrated XY models	10 975
P. Simon	
Relaxation function theory of the quantum spin- $\frac{1}{2}$ Heisenberg antiferromagnets at finite temperatures	10 982
Y.-J. Wang, M.-R. Li, and C.-D. Gong	

Quantum transitions of the Néel vector in small antiferromagnets	10 993
Rong Lü, Peifang Zhang, Jia-Lin Zhu, and Lee Chang	
Quasi-one-dimensional spin- $\frac{1}{2}$ Heisenberg magnets in their ordered phase: Correlation functions	11 001
Fabian H. L. Essler, Alexei M. Tsvelik, and Gesualdo Delfino	
Effect of cobalt doping on the magnetic properties of the spin-Peierls cuprate CuGeO_3	11 014
P. E. Anderson, J. Z. Liu, and R. N. Shelton	
Metallic ferromagnetism in a band model: Intra-atomic versus interatomic exchange	11 022
J. E. Hirsch	
Exact renormalization-group study of aperiodic Ising quantum chains and directed walks	11 031
Ferenc Igloi, Loïc Turban, Dragi Karevski, and Ferenc Szalma	
Spin-density-wave clusters in PdMn spin-glass alloys	11 051
Y. Tsunoda, N. Hiruma, J. L. Robertson, and J. W. Cable	
Spin dynamics in hole-doped NiO from ^7Li NMR in $\text{Ni}_{1-x}\text{Li}_x\text{O}$	11 056
M. Corti, S. Marini, A. Rigamonti, F. Tedoldi, D. Capsoni, and V. Massarotti	
Nonmagnetic-magnetic crossover in the $\text{URu}_{1-x}\text{Pd}_x\text{Ga}$ system	11 065
V. H. Tran, R. Troć, P. de V. du Plessis, G. André, and F. Bourée	
Perpendicular and in-plane magnetic anisotropy in epitaxial Cu/Ni/Cu/Si(111) ultrathin films	11 073
G. Gubbiotti, G. Carlotti, G. Socino, F. D'Orazio, F. Lucari, R. Bernardini, and M. De Crescenzi	
Phase transition in the one-dimensional Kondo lattice model with attractive electron-electron interaction	11 084
Naokazu Shibata, Manfred Sigrist, and Elmar Heeb	
Uniaxial Fermi-surface nesting and spin-density-wave transition in the heavy-fermion compound $\text{Ce(Ru}_{0.85}\text{Rh}_{0.15})_2\text{Si}_2$	11 092
S. Murayama, C. Sekine, A. Yokoyanagi, K. Hoshi, and Y. Onuki	
Quantum Ising model in a transverse random field: A density-matrix renormalization-group analysis	11 097
A. Juozapavičius, S. Caprara, and A. Rosengren	
Thermally activated resonant magnetization tunneling in molecular magnets: Mn_{12}Ac and others	11 102
D. A. Garanin and E. M. Chudnovsky	
Theoretical analysis of the magnetization and of the paramagnetic and diamagnetic magneto-optical effects in Pr-substituted yttrium iron garnets using quantum theory	11 119
Jiehui Yang, You Xu, Fang Zhang, and Maurice Guillot	
Structural and magnetic phase transitions of Fe on stepped Cu(111)	11 134
J. Shen, M. Klaua, P. Ohresser, H. Jenniches, J. Barthel, Ch. V. Mohan, and J. Kirschner	
Negative magnetoresistance in crystals of the paramagnetic intercalation compound Mn_xTiS_2	11 144
H. Negishi, H. Yamada, K. Yuri, M. Sasaki, and M. Inoue	
Polarized isomers of Na clusters and anomalous magnetic response	11 149
C. Kohl, B. Fischer, and P.-G. Reinhard	
Phase diagrams of the three-dimensional semi-infinite Blume-Emery-Griffiths model	11 155
A. Bakchich and M. El Bouziani	
Surface critical behavior of the semi-infinite Blume-Emery-Griffiths model	11 161
A. Bakchich and M. El Bouziani	
Crossover from non-Fermi-liquid to Fermi-liquid behavior in the magnetoresistivity of $\text{U}_{0.9}\text{Th}_{0.1}\text{Be}_{13}$	11 169
R. P. Dickey, M. C. de Andrade, J. Herrmann, M. B. Maple, F. G. Aliev, and R. Villar	
Superfluidity and superconductivity	
Correlated phonons and the T_c -dependent dynamical phonon anomalies	11 174
T. Hakioglu and H. Türeci	
Long-range phase-coherent effects in the transport properties of mesoscopic superconductor-normal-metal structures	11 184
Anatoly F. Volkov and Hideaki Takayanagi	

Flux penetration in slab-shaped type-I superconductors	11 195
Hemant Bokil and Onuttom Narayan	
Point-like and line-like melting of the vortex lattice in the universal phase diagram of layered superconductors ...	11 201
A. E. Koshelev	
Local electronic structure of defects in superconductors	11 213
Michael E. Flatté and Jeff M. Byers	
ac Josephson effect for asymmetric superconducting junctions	11 232
Magnus Hurd, Supriyo Datta, and Philip F. Bagwell	
Overscreening of magnetic impurities in $d_{x^2-y^2}$ -wave superconductors	11 246
Carlos R. Cassanello and Eduardo Fradkin	
Bogoliubov-quasiparticle spectra of the effective d -wave model for cuprate superconductivity	11 262
Y. Ohta, M. Yamaguchi, and R. Eder	
Thermal conductivity of $\text{SmBa}_2\text{Cu}_3\text{O}_{7-\delta}$ oxidized at 250 bar: A comparison of the phonon and electron models ...	11 267
T. Plackowski, A. Jeżowski, Z. Bukowski, C. Sułkowski, and H. Misiorek	
Critical-state model with a secondary high-field peak in $J_c(B)$	11 273
T. H. Johansen, M. R. Koblishka, H. Bratsberg, and P. O. Hetland	
Superconducting-gap-node spectroscopy using nonlinear electrodynamics	11 279
Igor Žutić and Oriol T. Valls	
^{63}Cu and ^{89}Y NMR study of an optimally doped $\text{YBa}_2\text{Cu}_3\text{O}_{6.94}$ single crystal	11 294
T. Auler, M. Horvatić, J. A. Gillet, C. Berthier, Y. Berthier, P. Ségansan, and J. Y. Henry	
Dissipation near T_c in a textured $(\text{Bi,Pb})_2\text{Sr}_2\text{Ca}_2\text{Cu}_3\text{O}_y$ silver-clad tape	11 299
G. C. Han and C. K. Ong	
Spin susceptibility and pseudogap in $\text{YBa}_2\text{Cu}_4\text{O}_8$: An approach via a charge-density-wave instability	11 305
I. Eremin, M. Eremin, S. Varlamov, D. Brinkmann, M. Mali, and J. Roos	
CeO_2 compatibility with $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ in superconducting-film multilayers	11 312
Yu. A. Boikov, T. Claeson, D. Erts, F. Bridges, and Z. Kvitky	
Errata	
Erratum: Suppression of the superconducting gap and the spin-fluctuation gap of $\text{YBa}_2\text{Cu}_3\text{O}_y$ ($y=7.0$ and 6.76) by Zn substitution as measured by Gd^{3+} electron-spin resonance [Phys. Rev. B 50 , 3442 (1994)]	11 320
A. Jánosy, J. R. Cooper, L.-C. Brunel, and A. Carrington	
Erratum: Metallic ferromagnetism in a single-band model: Effect of band filling and Coulomb interactions [Phys. Rev. B 54 , 6364 (1996)]	11 320
J. C. Amadon and J. E. Hirsch	
Erratum: Strong-coupling expansions for the anharmonic Holstein model and for the Holstein-Hubbard model [Phys. Rev. B 54 , 9372 (1996)]	11 321
J. K. Freericks and G. D. Mahan	
Cumulative Author Index	11 326