

## BRIEF REPORTS

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

|                                                                                                                     |      |
|---------------------------------------------------------------------------------------------------------------------|------|
| Einstein relations near the metal-insulator transition .....                                                        | 4003 |
| T. G. Castner                                                                                                       |      |
| Density of states of InI: Theoretical and experimental investigation .....                                          | 4007 |
| M. I. Kolinko                                                                                                       |      |
| Generalized Gutzwiller method for $n \geq 2$ correlated bands: First-order metal-insulator transitions .....        | 4011 |
| J. Bünnemann and W. Weber                                                                                           |      |
| Spectral function of small spin polaron in two-dimensional spherically symmetric antiferromagnetic state .....      | 4015 |
| A. F. Barabanov, R. O. Kuzian, and L. A. Maksimov                                                                   |      |
| Influence of electron-electron scattering on the electrical resistivity caused by oriented line imperfections ..... | 4019 |
| M. L. Huberman and A. W. Overhauser                                                                                 |      |
| Discrepancies between infrared and dc resistivities of $\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$ samples .....   | 4023 |
| K. H. Kim, J. Y. Gu, H. S. Choi, D. J. Eom, J. H. Jung, and T. W. Noh                                               |      |

### Semiconductors I: bulk

|                                                                                                                                                    |      |
|----------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Influence of electron correlations on ground-state properties of III-V semiconductors .....                                                        | 4027 |
| Simon Kalvoda, Beate Paulus, Peter Fulde, and Hermann Stoll                                                                                        |      |
| Interferometric four-wave-mixing spectroscopy on bulk GaAs .....                                                                                   | 4031 |
| M. U. Wehner, J. Hetzler, and M. Wegener                                                                                                           |      |
| Evidence for muonium passivation in $n$ -doped Ge .....                                                                                            | 4035 |
| R. Kadono, R. M. Macrae, K. Nishiyama, and K. Nagamine                                                                                             |      |
| Rhombohedral $\text{C}_{60}$ polymer: A semiconducting solid carbon structure .....                                                                | 4039 |
| Susumu Okada and Susumu Saito                                                                                                                      |      |
| Inverted order of acceptor and donor levels of the Si-related $\text{DX}$ center in $\text{Al}_x\text{Ga}_{1-x}\text{As}$ .....                    | 4042 |
| Subhasis Ghosh and Vikram Kumar                                                                                                                    |      |
| Diffraction pattern of a defect: Two-dimensional angular correlation of positron-annihilation radiation studies of defects in semiconductors ..... | 4046 |
| T. McMullen and Marilyn F. Bishop                                                                                                                  |      |
| Optically enhanced NMR of plastically deformed GaAs .....                                                                                          | 4050 |
| T. Pietraß, A. Bifone, J. Krüger, and J. A. Reimer                                                                                                 |      |

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

|                                                                                                                                         |      |
|-----------------------------------------------------------------------------------------------------------------------------------------|------|
| Formation of quantum dots in twofold cleaved edge overgrowth .....                                                                      | 4054 |
| M. Grundmann and D. Bimberg                                                                                                             |      |
| Exact density of states of a two-dimensional electron gas in a strong magnetic field and a long-range correlated random potential ..... | 4057 |
| Lothar Spies, Walter Apel, and Bernhard Kramer                                                                                          |      |
| Electron-electron interaction in a narrow, disordered electron gas in nonequilibrium .....                                              | 4061 |
| H. Linke, P. Omling, Hongqi Xu, and P. E. Lindelof                                                                                      |      |
| Persistent currents from the competition between Zeeman coupling and spin-orbit interaction .....                                       | 4065 |
| Tie-Zheng Qian, Ya-Sha Yi, and Zhao-Bin Su                                                                                              |      |
| Aharonov-Bohm-type oscillations of thermopower in a quantum-dot ring geometry .....                                                     | 4069 |
| Ya. M. Blanter, C. Bruder, Rosario Fazio, and Herbert Schoeller                                                                         |      |



|                                                                                                                  |      |
|------------------------------------------------------------------------------------------------------------------|------|
| Properties of the single-electron box at arbitrary temperature .....                                             | 4073 |
| Xiaohui Wang                                                                                                     |      |
| Critical conductivity of the quantum Hall system at higher Landau levels .....                                   | 4077 |
| Takamichi Terao                                                                                                  |      |
| Line shape of resonant tunneling between fractional quantum Hall edges .....                                     | 4081 |
| I. J. Maasilta and V. J. Goldman                                                                                 |      |
| Insulator-to-quantum-Hall-liquid transition in an antidot lattice .....                                          | 4085 |
| F. Nihey, M. A. Kastner, and K. Nakamura                                                                         |      |
| Spin-reversed quasielectron excitations in the $\frac{2}{3}$ -filling fractional-quantum-Hall-effect state ..... | 4089 |
| S. I. Dorozhkin, M. O. Dorokhova, R. J. Haug, and K. Ploog                                                       |      |
| Vibronic model for band A emission in diamond .....                                                              | 4093 |
| Suman B. Iyer, G. Ananthakrishna, Brij M. Arora, and J. Chandrasekhar                                            |      |
| Defect modes of stratified dielectric media .....                                                                | 4097 |
| Nian-hua Liu                                                                                                     |      |
| Ag on Au/Si(111): Interfacial interactions on a submicrometer scale .....                                        | 4101 |
| A. Kolmakov, J. Kovac, S. Günther, L. Casalis, L. Gregoratti, M. Marsi, and M. Kiskinova                         |      |

**Surface physics, low-dimensional systems, and related topics**

|                                                                                                                                              |      |
|----------------------------------------------------------------------------------------------------------------------------------------------|------|
| Kinetics of rapid reactions on nanometer catalyst particles .....                                                                            | 4105 |
| V. P. Zhdanov and B. Kasemo                                                                                                                  |      |
| Temperature and momentum dependence of the spectral function of the charge-density wave and of the normal $\alpha$ phase of Pb/Ge(111) ..... | 4109 |
| A. Goldoni, C. Cepek, and S. Modesti                                                                                                         |      |
| Conduction through single Mg and Na atoms linking two macroscopic electrodes .....                                                           | 4113 |
| N. D. Lang                                                                                                                                   |      |
| Bulk and surface $4f$ states of Gd .....                                                                                                     | 4117 |
| R. F. Sabiryanov and S. S. Jaswal                                                                                                            |      |
| Peak rotation in photoelectron diffraction patterns by circularly polarized light .....                                                      | 4120 |
| A. Chassé and P. Rennert                                                                                                                     |      |

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

|                                                                                                                                    |      |
|------------------------------------------------------------------------------------------------------------------------------------|------|
| Optical properties and electronic structures of Ni <sub>3</sub> Al alloys .....                                                    | 4124 |
| Joo Yull Rhee, B. N. Harmon, and D. W. Lynch                                                                                       |      |
| <i>Ab initio</i> theoretical comparative study of magnetic coupling in KNiF <sub>3</sub> and K <sub>2</sub> NiF <sub>4</sub> ..... | 4129 |
| Ibério de P. R. Moreira and Francesc Illas                                                                                         |      |
| Three-particle approximation for transition-metal oxides .....                                                                     | 4138 |
| J. Lægsgaard and A. Svane                                                                                                          |      |
| Magnetic correlations in the two-dimensional Anderson-Hubbard model .....                                                          | 4149 |
| M. Ulmke and R. T. Scalettar                                                                                                       |      |
| Lattice distortion in Cu-based dilute alloys: A first-principles study by the KKR Green-function method .....                      | 4157 |
| N. Papanikolaou, R. Zeller, P. H. Dederichs, and N. Stefanou                                                                       |      |
| Generalized Slater-Koster method for fitting band structures .....                                                                 | 4168 |
| M. D. Stiles                                                                                                                       |      |
| Electronic structure and binding energies of hydrogen-decorated vacancies in Ni .....                                              | 4174 |
| H. Zheng, B. K. Rao, S. N. Khanna, and P. Jena                                                                                     |      |

|                                                                                                                                                                                                                                                                    |      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Spin-0 soliton formation in spin-Peierls systems: Charge-transfer complexes DAP-TCNQ and DAP-DMTCNQ .....                                                                                                                                                          | 4182 |
| Taro Sekikawa, Hiroshi Okamoto, Tadaoki Mitani, Tamotsu Inabe, Yusei Maruyama, and Takayoshi Kobayashi                                                                                                                                                             |      |
| Electronic-transport studies of the organic metals $\alpha$ -(BETS) <sub>2</sub> NH <sub>4</sub> Hg(SCN) <sub>4</sub> and $\alpha$ -(BETS) <sub>2</sub> KHg(SCN) <sub>4</sub> in high magnetic fields, where BETS is bis(ethylenedithio)tetraselenafulvalene ..... | 4191 |
| S. A. Ivanov, C. H. Mielke, T. Coffey, D. A. Howe, C. C. Agosta, B. W. Fravel, and L. K. Montgomery                                                                                                                                                                |      |
| Fermi surface and magnetic phases of the low-carrier-density strongly correlated electron system CeP .....                                                                                                                                                         | 4197 |
| T. Terashima, S. Uji, H. Aoki, W. Joss, Y. Haga, A. Uesawa, and T. Suzuki                                                                                                                                                                                          |      |
| Variation of electronic structure in La <sub>1-x</sub> Sr <sub>x</sub> MnO <sub>3</sub> (0 ≤ x ≤ 0.3) as investigated by optical conductivity spectra .....                                                                                                        | 4206 |
| Y. Okimoto, T. Katsufuji, T. Ishikawa, T. Arima, and Y. Tokura                                                                                                                                                                                                     |      |
| Scaling of the conductivity of Si:B: Anomalous crossover in a magnetic field .....                                                                                                                                                                                 | 4215 |
| S. Bogdanovich, Peihua Dai, M. P. Sarachik, V. Dobrosavljevic, and G. Kotliar                                                                                                                                                                                      |      |
| Specific heat of Si:(P,B) at low temperatures .....                                                                                                                                                                                                                | 4219 |
| S. Wagner, M. Lakner, and H. v. Löhneysen                                                                                                                                                                                                                          |      |
| LEED and photoemission study of the stability of VO <sub>2</sub> surfaces .....                                                                                                                                                                                    | 4225 |
| E. Goering, M. Schramme, O. Müller, R. Barth, H. Paulin, M. Klemm, M. L. denBoer, and S. Horn                                                                                                                                                                      |      |
| Coherent and dissipative dc transport in quasi-one-dimensional systems of coupled polyaniline chains .....                                                                                                                                                         | 4231 |
| R. Hey, F. Gagel, M. Schreiber, and K. Maschke                                                                                                                                                                                                                     |      |
| Ionization of the surface-state electron by half-cycle electric-field pulses .....                                                                                                                                                                                 | 4238 |
| T. F. Jiang                                                                                                                                                                                                                                                        |      |
| Resonant inelastic soft-x-ray scattering from valence-band excitations in 3d <sup>0</sup> compounds .....                                                                                                                                                          | 4242 |
| S. M. Butorin, J.-H. Guo, M. Magnuson, and J. Nordgren                                                                                                                                                                                                             |      |
| Nonequilibrium electron distribution in metals .....                                                                                                                                                                                                               | 4250 |
| D. Bejan and G. Raşeev                                                                                                                                                                                                                                             |      |
| Electronic structure and temperature-induced paramagnetism in LaCoO <sub>3</sub> .....                                                                                                                                                                             | 4257 |
| T. Saitoh, T. Mizokawa, A. Fujimori, M. Abbate, Y. Takeda, and M. Takano                                                                                                                                                                                           |      |
| Electronic structure of the organic conductor $\alpha$ -(BEDT-TTF) <sub>2</sub> I <sub>3</sub> studied by angle-resolved and core-level photoelectron spectroscopy .....                                                                                           | 4267 |
| S. Söderholm, R. T. Girard, and D. Schweitzer                                                                                                                                                                                                                      |      |
| Ions in crystals: The topology of the electron density in ionic materials. I. Fundamentals .....                                                                                                                                                                   | 4275 |
| A. Martín Pendás, Aurora Costales, and Víctor Luaña                                                                                                                                                                                                                |      |
| Ions in crystals: The topology of the electron density in ionic materials. II. The cubic alkali halide perovskites ....                                                                                                                                            | 4285 |
| Víctor Luaña, Aurora Costales, and A. Martín Pendás                                                                                                                                                                                                                |      |
| Photonic band structures of two-dimensional systems fabricated from rods of a cubic polar crystal .....                                                                                                                                                            | 4298 |
| V. Kuzmiak, A. A. Maradudin, and A. R. McGurn                                                                                                                                                                                                                      |      |

**Semiconductors I: bulk**

|                                                                                                              |      |
|--------------------------------------------------------------------------------------------------------------|------|
| Correlation of electrical and optical properties of the vanadium-related C level in silicon .....            | 4312 |
| R. Pässler, H. Pettersson, H. G. Grimmeiss, and K. Schmalz                                                   |      |
| Defect formation during deposition of undoped $\alpha$ -Si:H by rf glow discharge .....                      | 4323 |
| Keiji Maeda, Ikurou Umezu, and Hotaka Ishizuka                                                               |      |
| Angular dependence of the electronic energy loss of 800-keV He ions along the Si<100> direction .....        | 4332 |
| J. H. R. dos Santos, P. L. Grande, M. Behar, H. Boudinov, and G. Schiwietz                                   |      |
| Optical functions of semiconductors beyond density-functional theory and random-phase approximation .....    | 4343 |
| V. I. Gavrilenko and F. Bechstedt                                                                            |      |
| Exact parameter relations and effective masses within $sp^3$ zinc-blende tight-binding models .....          | 4353 |
| J. P. Loehr and D. N. Talwar                                                                                 |      |
| Hole scattering and optical transitions in wide-band-gap nitrides: Wurtzite and zinc-blende structures ..... | 4360 |
| Yu. M. Sirenko, J. B. Jeon, B. C. Lee, K. W. Kim, M. A. Littlejohn, M. A. Stroscio, and G. J. Iafrate        |      |

|                                                                                                                                        |      |
|----------------------------------------------------------------------------------------------------------------------------------------|------|
| Binding energy of the free exciton in indium arsenide .....                                                                            | 4376 |
| P. J. P. Tang, M. J. Pullin, and C. C. Phillips                                                                                        |      |
| Excited states of $\text{Fe}^{3+}$ in GaN .....                                                                                        | 4382 |
| R. Heitz, P. Maxim, L. Eckey, P. Thurian, A. Hoffmann, I. Broser, K. Pressel, and B. K. Meyer                                          |      |
| Theory of acceptor-ground-state description and hot photoluminescence in cubic semiconductors .....                                    | 4388 |
| A. V. Malyshev, I. A. Merkulov, and A. V. Rodina                                                                                       |      |
| Concentration dependence of the exchange interaction in $\text{Pb}_{1-x}\text{Eu}_x\text{Te}$ .....                                    | 4400 |
| M. Górska, J. R. Anderson, J. L. Peng, Y. Oka, J. Y-Jen, I. Mogi, D. Ravot, and Z. Gołacki                                             |      |
| Optical transitions in cubic $\text{HgSe}_{1-y}\text{S}_y$ crystals .....                                                              | 4405 |
| E. Guziewicz, B. J. Kowalski, K. Szamota-Sadowska, W. Szuszkiewicz, and B. A. Orlowski                                                 |      |
| Photoluminescence from metastable states in long-range ordered $(\text{Al}_{0.5}\text{Ga}_{0.5})_{0.51}\text{In}_{0.49}\text{P}$ ..... | 4411 |
| Kenichi Yamashita, Takashi Kita, Hiroshi Nakayama, and Taneo Nishino                                                                   |      |
| Iron group impurities in $\beta\text{-FeSi}_2$ studied by EPR .....                                                                    | 4417 |
| K. Irmscher, W. Gehlhoff, Y. Tomm, H. Lange, and V. Alex                                                                               |      |
| Chemical (dis)order in $a\text{-Si}_{1-x}\text{C}_x\text{:H}$ for $x < 0.6$ .....                                                      | 4426 |
| P. I. Rovira and F. Alvarez                                                                                                            |      |

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

|                                                                                                                                           |      |
|-------------------------------------------------------------------------------------------------------------------------------------------|------|
| Adsorption of elemental S on $\text{Si}(100)2\times 1$ : Surface restoration .....                                                        | 4435 |
| Aris Papageorgopoulos, Adero Corner, M. Kamaratos, and C. A. Papageorgopoulos                                                             |      |
| Resonant guided elastic waves in an adsorbed bilayer: Theoretical analysis of the density of states .....                                 | 4442 |
| E. H. El Boudouti, B. Djafari-Rouhani, and A. Akjouj                                                                                      |      |
| Excitonic properties of zinc-blende $\text{ZnSe/MgS}$ superlattices studied by reflection spectroscopy .....                              | 4449 |
| Hidekazu Kumano, Hiroyuki Nashiki, Ikuo Suemune, Munetaka Arita, Toshio Obinata, Hideki Suzuki, Katsuhiko Uesugi, and Jun'ichiro Nakahara |      |
| Microphotoluminescence studies of single quantum dots. I. Time-resolved experiments .....                                                 | 4456 |
| U. Bockelmann, W. Heller, A. Filoramo, and Ph. Roussignol                                                                                 |      |
| Microphotoluminescence studies of single quantum dots. II. Magnetic-field experiments .....                                               | 4469 |
| U. Bockelmann, W. Heller, and G. Abstreiter                                                                                               |      |
| Carrier relaxation dynamics in quantum dots: Scattering mechanisms and state-filling effects .....                                        | 4473 |
| S. Grosse, J. H. H. Sandmann, G. von Plessen, J. Feldmann, H. Lipsanen, M. Sopanen, J. Tulkki, and J. Ahopelto                            |      |
| Pressure dependence of band offsets in $\text{InAs/Ga}_{1-x}\text{In}_x\text{Sb}$ superlattices .....                                     | 4477 |
| Hyeonsik M. Cheong, William Paul, Michael E. Flatté, and Richard H. Miles                                                                 |      |
| Magnetoresistance in a back-gated surface superlattice .....                                                                              | 4482 |
| A. Soibel, U. Meirav, D. Mahalu, and Hadas Shtrikman                                                                                      |      |
| From Landau levels to universal fluctuations: Level statistics for lateral superlattices .....                                            | 4486 |
| O. Steffens, M. Suhrke, and P. Rotter                                                                                                     |      |
| Generalized two-dimensional mesoscopic quantum transport: Application to disordered quantum wires .....                                   | 4494 |
| I. Vurgaftman and J. R. Meyer                                                                                                             |      |
| Excitons in strained $(\text{Ga,In})\text{Sb/GaSb}$ quantum wells .....                                                                   | 4503 |
| N. Bertru, O. Brandt, R. Klann, A. Mazuelas, W. Ulrici, and K. H. Ploog                                                                   |      |
| Exchange instabilities in semiconductor double-quantum-well systems .....                                                                 | 4506 |
| Lian Zheng, M. W. Ortolano, and S. Das Sarma                                                                                              |      |
| Change of symmetry of the barrier $D^-$ ground state in finite magnetic fields .....                                                      | 4516 |
| Sadayoshi Kanamaru and Naoki Tokuda                                                                                                       |      |
| Heat generation by electric current in nanostructures .....                                                                               | 4522 |
| V. L. Gurevich                                                                                                                            |      |
| Spontaneous charge polarization in single-electron tunneling through coupled nanowires .....                                              | 4530 |
| A. A. Tager, J. M. Xu, and M. Moskovits                                                                                                   |      |

|                                                                                                                                                                          |      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Shot noise in resonant-tunneling structures .....                                                                                                                        | 4539 |
| G. Iannaccone, M. Macucci, and B. Pellegrini                                                                                                                             |      |
| Statistical properties of the low-temperature conductance peak heights for Corbino disks in the quantum Hall regime .....                                                | 4551 |
| N. R. Cooper, B. I. Halperin, Chin-Kun Hu, and I. M. Ruzin                                                                                                               |      |
| Series of magnetoresistance oscillations of a two-dimensional electron gas in a strong periodic magnetic modulation .....                                                | 4558 |
| Q. W. Shi and K. Y. Szeto                                                                                                                                                |      |
| Photoluminescence properties of silicon quantum-well layers .....                                                                                                        | 4563 |
| P. N. Saeta and A. C. Gallagher                                                                                                                                          |      |
| Role of interactions in the energy-loss hopping and recombination of two-dimensional electrons and holes .....                                                           | 4575 |
| J. E. Golub, S. D. Baranovskii, and P. Thomas                                                                                                                            |      |
| Magnetic-field effects on one- and two-hole states in parabolic quantum dots .....                                                                                       | 4580 |
| F. B. Pedersen and Yia-Chung Chang                                                                                                                                       |      |
| Band alignments and offsets in In(As,Sb)/InAs superlattices .....                                                                                                        | 4589 |
| Y. B. Li, D. J. Bain, L. Hart, M. Livingstone, C. M. Ciesla, M. J. Pullin, P. J. P. Tang, W. T. Yuen, I. Galbraith, C. C. Phillips, C. R. Pidgeon, and R. A. Stradling   |      |
| Static and high-frequency electric fields in silicon MOS and MS structures probed by optical second-harmonic generation .....                                            | 4596 |
| C. Ohlhoff, G. Lüpke, C. Meyer, and H. Kurz                                                                                                                              |      |
| Magnetorefectivity of $\text{Pb}_{1-x}\text{Eu}_x\text{Te}$ epilayers and $\text{PbTe}/\text{Pb}_{1-x}\text{Eu}_x\text{Te}$ multiple quantum wells .....                 | 4607 |
| Shu Yuan, Heinz Krenn, Gunther Springholz, Yukio Ueta, Günther Bauer, and Patrick J. McCann                                                                              |      |
| Femtosecond coherent polariton dynamics in the layered III-VI semiconductor InSe .....                                                                                   | 4620 |
| S. Nüsse, P. Haring Bolivar, H. Kurz, F. Levy, A. Chevy, and O. Lang                                                                                                     |      |
| Magnetoluminescence study of $n$ -type modulation-doped $\text{ZnSe}/\text{Zn}_x\text{Cd}_{1-x}\text{Se}$ quantum-well structures .....                                  | 4628 |
| G. Kioseoglou, J. Haetty, H. C. Chang, H. Luo, A. Petrou, T. Schmiedel, and Pawel Hawrylak                                                                               |      |
| Origin of sharp lines in photoluminescence emission from submonolayers of InAs in GaAs .....                                                                             | 4633 |
| C. A. Tran, R. A. Ares, V. A. Karasyuk, S. P. Watkins, G. Letourneau, and R. Leonelli                                                                                    |      |
| Precise solution to a model of the kinetic equation .....                                                                                                                | 4639 |
| I. I. Boiko and A. L. Chudnovskiy                                                                                                                                        |      |
| Random impurity and phonon-scattering processes in multibarrier structures .....                                                                                         | 4645 |
| A. N. Khondker and A. Haque                                                                                                                                              |      |
| <i>Ab initio</i> derived kinetic Monte Carlo model of $\text{H}_2$ desorption from $\text{Si}(100)\text{-}2\times 1$ .....                                               | 4649 |
| Michelle R. Radeke and Emily A. Carter                                                                                                                                   |      |
| Local arrangement of silylene groups on $\text{Si}(100)2\times 1$ after $\text{SiH}_4$ decomposition .....                                                               | 4659 |
| J. Spitzmüller, M. Fehrenbacher, M. Pitter, H. Rauscher, and R. J. Behm                                                                                                  |      |
| Quantum confinement of edge states in Si crystallites .....                                                                                                              | 4665 |
| Shang Yuan Ren                                                                                                                                                           |      |
| Polaron effects in asymmetric semiconductor quantum-well structures .....                                                                                                | 4670 |
| Jun-jie Shi, Xiu-qin Zhu, Zi-xin Liu, Shao-hua Pan, and Xing-yi Li                                                                                                       |      |
| Subbands, exchange, and correlation effects on collective excitations in parabolic-quantum-well wires .....                                                              | 4680 |
| Antonio Newton Borges, Salviano A. Leão, and Oscar Hipólito                                                                                                              |      |
| Edge and strip plasmons in a two-dimensional electron fluid .....                                                                                                        | 4684 |
| S. Rudin and M. Dyakonov                                                                                                                                                 |      |
| Yellow luminescence and related deep states in undoped GaN .....                                                                                                         | 4689 |
| E. Calleja, F. J. Sánchez, D. Basak, M. A. Sánchez-García, E. Muñoz, I. Izpura, F. Calle, J. M. G. Tijero, J. L. Sánchez-Rojas, B. Beaumont, P. Lorenzini, and P. Gibart |      |
| Voltage-probe and imaginary-potential models for dephasing in a chaotic quantum dot .....                                                                                | 4695 |
| P. W. Brouwer and C. W. J. Beenakker                                                                                                                                     |      |

|                                                                                                                                                   |      |
|---------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Quantum waveguide transport with side-branch structures: A recursive algorithm .....                                                              | 4703 |
| Ji-Rong Shi and Ben-Yuan Gu                                                                                                                       |      |
| Deviations from the Gaussian distribution of mesoscopic conductance fluctuations .....                                                            | 4710 |
| M. C. W. van Rossum, Igor V. Lerner, Boris L. Altshuler, and Th. M. Nieuwenhuizen                                                                 |      |
| <b>Surface physics, low-dimensional systems, and related topics</b>                                                                               |      |
| Unusual disordering processes of oxygen overlayers on Rh(111): A combined diffraction study using thermal He atoms and low-energy electrons ..... | 4717 |
| H. Over, S. Schwegmann, D. Cvetko, V. De Renzi, L. Floreano, R. Gotter, A. Morgante, M. Peloi, F. Tommasini, and S. Zennaro                       |      |
| Room-temperature growth of submonolayers of silicon on Si(001) studied with scanning tunneling microscopy .....                                   | 4723 |
| J. van Wingerden, A. van Dam, M. J. Haye, P. M. L. O. Scholte, and F. Tuinstra                                                                    |      |
| Surface atomic geometry of Si(001)-(2×1): A low-energy electron-diffraction structure analysis .....                                              | 4731 |
| H. Over, J. Wasserfall, W. Ranke, C. Ambiatello, R. Sawitzki, D. Wolf, and W. Moritz                                                              |      |
| Adatom-step interactions: Atomistic simulations and elastic models .....                                                                          | 4737 |
| L. E. Shilkrot and D. J. Srolovitz                                                                                                                |      |
| van der Waals interaction between a molecule and a spherical cavity in a metal: Nonlocality and anisotropy effects .....                          | 4745 |
| B. Labani, M. Boustimi, and J. Baudon                                                                                                             |      |
| Vibrational analysis of the 1×1-O overlayer on Ru(0001) .....                                                                                     | 4751 |
| P. He and K. Jacobi                                                                                                                               |      |
| Molecular-orbital study of Li and LiOH adsorption on a Cu(001) surface. II. Cluster-model calculations with image charges .....                   | 4755 |
| Tomonari Sumi, Yoshiko Sakai, and Eisaku Miyoshi                                                                                                  |      |
| Interaction of hydrogen with transition metal fcc(111) surfaces .....                                                                             | 4761 |
| R. Löber and D. Hennig                                                                                                                            |      |
| Infrared and Raman studies of pressure-polymerized C <sub>60</sub> .....                                                                          | 4766 |
| A. M. Rao, P. C. Eklund, J-L. Hodeau, L. Marques, and M. Nunez-Regueiro                                                                           |      |
| Light emission from surface plasmon polaritons mediated by metallic fine particles .....                                                          | 4774 |
| T. Kume, S. Hayashi, and K. Yamamoto                                                                                                              |      |
| Interband absorption of Ru studied by optical absorption of continuous thin films and small particles .....                                       | 4783 |
| E. Anno and T. Yamaguchi                                                                                                                          |      |
| Theoretical study of the valence-level photoemission spectrum of C <sub>6</sub> H <sub>6</sub> adsorbed on Ni, Pd, and Pt metal surfaces .....    | 4787 |
| M. Ohno and W. von Niessen                                                                                                                        |      |
| Growth of ordered domains in a highly anisotropic two-dimensional system .....                                                                    | 4797 |
| O. M. Braun, M. V. Paliy, and M. Peyrard                                                                                                          |      |
| Dependence of inner-shell vacancy production upon distance in hard Li-Al collisions .....                                                         | 4811 |
| John W. Hartman, M. H. Shapiro, T. A. Tombrello, and J. A. Yarmoff                                                                                |      |
| Thin films of the charge-density-wave oxide Rb <sub>0.30</sub> MoO <sub>3</sub> by pulsed-laser deposition .....                                  | 4817 |
| O. C. Mantel, H. S. J. van der Zant, A. J. Steinfert, C. Dekker, C. Træholt, and H. W. Zandbergen                                                 |      |
| Theory of atom transfer with a scanning tunneling microscope .....                                                                                | 4825 |
| Shiwu Gao, M. Persson, and B. I. Lundqvist                                                                                                        |      |
| <b>Errata</b>                                                                                                                                     |      |
| Erratum: Interactions between adsorbed Si dimers on Si(001) [Phys. Rev. B <b>54</b> , 1557 (1996)] .....                                          | 4837 |
| A. van Dam, J. van Wingerden, M. J. Haye, P. M. L. O. Scholte, and F. Tuinstra                                                                    |      |
| <b>Cumulative Author Index</b> .....                                                                                                              | 4838 |