

Recent publications by IBM authors

The information listed here is supplied by the Institute for Scientific Information and other outside sources. Reprints of the papers may be obtained by writing directly to the first author cited. Information on books may be obtained by writing the publisher.

• Papers and books are listed alphabetically by author.

A

M. J. M. Abadie (University of Montpellier 2, F-34060 Montpellier, France) and B. K. Appelt (IBM, Endicott, NY), **Photocalorimetry Study of Photosensitive Materials**, *Bulletin de la Société Chimique de France*, No. 1, 20-24 (1988).

F. F. Abraham, I. P. Batra (IBM Corporation, 650 Harry Road, San Jose, CA 95120), and S. Ciraci (Bilkent University, Ankara, Turkey), **Effect of Tip Profile on Atomic-Force Microscope Images: A Model Study**, *Physical Review Letters* **60**, No. 13, 1314-1317 (1988).

J. A. Abrahamson (President's Strategic Defense Initiation Organization, Washington, DC), R. N. Perle (American Enterprise Institute for Public Policy Research, Washington, DC), R. L. Garwin (IBM, Yorktown Heights, NY), and C. Sagan (Cornell University, Ithaca, NY), **SDI: Vision or Delusion?**, *Issues in Science and Technology* **4**, No. 2, 82-92 (1988).

G. Agopian, P. James, S. Knee, and S. Sharfstein (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), **A Novel Technique for Determining Magnet Cleanliness—NMR Spectroscopy**, *IEEE Transactions on Magnetics* **MAG-23**, No. 5, Part II, 3602-3604 (1987).

J. C. Agüí (Universidad Politécnica, 28040 Madrid, Spain) and J. Jiménez (IBM, Madrid, Spain), **On the Performance of Particle Tracking**, *Journal of Fluid Mechanics* **185**, 447-468 (1987).

R. D. Allen and J. L. Hedrick (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Synthesis and Properties of Xylenyl Ether Dimethylsiloxane Triblock Polymers**, *Polymer Bulletin* **19**, No. 2, 103-110 (1988).

E. Y. Andrei (Rutgers University, Piscataway, NJ 08854), D. C. Glattli, F. I. B. Williams (CEA Saclay, Gif-sur-Yvette, France), and M. Heiblum (IBM, Yorktown Heights, NY), **Low Frequency Collective Excitations in the Quantum-Hall System**, *Surface Science* **196**, Nos. 1-3, 501-506 (1988).

T. C. Arnoldussen (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), **Film Head Read Resolution and Frequency Response Analysis**, *IEEE Transactions on Magnetics* **MAG-23**, No. 5, Part II, 3152-3154 (1987).

M. Artaki (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Hot-Electron Flow in an Inhomogeneous Field**, *Applied Physics Letters* **52**, No. 2, 141-143 (1988).

D. D. Awschalom, G. Grinstein, J. Yoshino, H. Munekata, and L. L. Chang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Dimensional Dependence of Magnetic Susceptibility in Dilute Magnetic Semiconductor Superlattices**, *Surface Science* **196**, Nos. 1-3, 649-653 (1988).

B

M. Baig (IBM European Center for Scientific and Engineering Computing, Via Giorgione 159, 00147 Rome, Italy), **Simulation of the $\lambda\phi^4$ Lattice Theory on a Loosely Coupled Array of Processors**, *Computer Physics Communications* **47**, Nos. 2 & 3, 181-186 (1987).

D. W. Bailey, C. J. Staton (University of Illinois, 1101 West Springfield Avenue, Urbana, IL 61801), M. A. Artaki (IBM, Yorktown Heights, NY), K. Hess (University of Illinois, Urbana, IL), F. W. Wise, and C. L. Tang (Cornell University, Ithaca, NY), **Ensemble Monte Carlo Simulations of Femtosecond Energy Relaxation of Photoexcited Electrons in Bulk GaAs**, *Solid State Electronics* **31**, No. 3/4, 467-470 (1988).

C. T. Baker (IBM Corporation, P.O. Box 390, Poughkeepsie, NY 12602), **Effects of Field Service on Software Reliability**, *IEEE Transactions on Software Engineering* **14**, No. 2, 254-258 (1988).

P. Ballone, W. Andreoni (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), R. Car, and M. Parrinello (International School of Advanced Studies, Trieste, Italy), **Equilibrium Structures and Finite Temperature Properties of Silicon Microclusters from *Ab initio* Molecular-Dynamics Calculations**, *Physical Review Letters* **60**, No. 4, 271-274 (1988).

W. Banks, R. Kroeker, and L. Nunnelley (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), **Frequency Composition of Perturbed Slider Motion**, *IEEE Transactions on Magnetics* MAG-23, No. 5, Part II, 3462-3463 (1987).

G. Banzhaf, M. Gaertner, and D. Langhorst (IBM Germany, Schönaicherstrasse 220, 7030 Böblingen, Federal Republic of Germany), **Interpreting ASCII Terminal Input for 3270 Protocol Emulation**, *Computer Standards and Interfaces* 7, No. 3, 247-256 (1988).

A. E. Baratz and A. Segall (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Reliable Link Initialization Procedures**, *IEEE Transactions on Communications* 36, No. 2, 144-152 (1988).

Y. Bard (IBM Corporation, 101 Main Street, Cambridge, MA 02142), **Rule-Based Inferencing Functions for APL Applications**, *IEEE Expert* 3, No. 1, 42-52 (1988).

P. E. Batson and M. F. Chisholm (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Anisotropy in the Near-Edge Absorption Fine Structure of $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$** , *Physical Review B* 37, No. 1, 635-637 (1988).

I. A. Beardsley (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and H. N. Bertram (University of California at San Diego, La Jolla), **Imaging Effects in Contact Recording on Particulate Media**, *IEEE Transactions on Magnetics* MAG-23, No. 6, 3922-3926 (1987).

C. H. Bennett (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), N. Margolus, and T. Toffoli (MIT Laboratory for Computer Science, Cambridge, MA), **Bond-Energy Variables for Ising Spin-Glass Dynamics**, *Physical Review B* 37, No. 4, 2254 (1988).

R. Benzi, S. Patarnello, and P. Santangelo (IBM European Center for Scientific and Engineering Computation, Via Giorgione 159, 00147 Rome, Italy), **Self-Similar Coherent Structures in Two-Dimensional Decaying Turbulence**, *Journal of Physics A* 21, No. 5, 1221-1237 (1988).

M. Bern (University of California, Berkeley, CA 94720), M. Klawe (IBM, San Jose, CA), and A. Wong (University of California, Berkeley), **Bounds on the Convex Label Number of Trees**, *Combinatorica* 7, No. 3, 221-230 (1987).

B. S. Berry and W. C. Pritchett (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Computer Modeling of Relaxation Peaks Involving a Gaussian Distribution of Activation Energies**, *Physica Status Solidi (B)* 144, No. 1, 375-384 (1987).

I. Bertini, L. Banci (University of Florence, I-50121 Florence, Italy), R. D. Brown III, S. H. Koenig (IBM, Yorktown Heights, NY), and C. Luchinat (University of Bologna, Italy), **Electronic Relaxation of a Copper (II) Dimer in a Macromolecular Complex as Evaluated from Solvent Proton Relaxation**, *Inorganic Chemistry* 27, No. 5, 951-953 (1988).

J. Bescos, J. H. Altamirano, A. Santisteban, and J. Santamaria (IBM Corporation, Paseo Castellana 4, E-28001 Madrid, Spain), **Digital Restoration Models for Color Imaging**, *Applied Optics* 27, No. 2, 419-425 (1988).

G. L. Best (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Comparison of Optical and Capacitive Measurements of Slider Dynamics**, *IEEE Transactions on Magnetics* MAG-23, No. 5, Part II, 3453-3455 (1987).

R. E. Bethel (IBM Corporation, 9500 Godwin Drive, Manassas, VA 22110) and R. G. Rahikka (Naval Surface Weapons Center, Silver Springs, MD), **An Optimum First-Order Time Delay Tracker**, *IEEE Transactions on Aerospace and Electronic Systems*, AES-23, No. 6, 718-725 (1987).

D. S. Bethune, A. C. Luntz (IBM Corporation, 650 Harry Road, San Jose, CA 95120), J. K. Sass (Fritz-Haber-Institut der Max-Planck-Gesellschaft, Berlin, Federal Republic of Germany), and D. K. Roe (Portland State University, OR), **Optical Analysis of Thin-Layer Electrochemical Cells for Infrared Spectroscopy of Adsorbates**, *Surface Science* 197, Nos. 1/2, 44-66 (1988).

D. S. Bethune, M. D. Williams, and A. C. Luntz (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Laser IR Polarization Spectroscopy at Surfaces**, *Journal of Chemical Physics* 88, No. 5, 3322-3330 (1988).

B. Bhushan (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and R. M. Phelan (IBM, Tucson, AZ), **Overview of Challenger Space Shuttle Tape-Data Recovery Study**, *IEEE Transactions on Magnetics* MAG-23, No. 5, Part II, 3179-3183 (1987).

B. Bhushan (IBM Corporation, Tucson, AZ 85744), J. C. Wyant (University of Arizona, Tucson), and J. Meiling (WYKO Corporation, Tucson, AZ), **A New Three-Dimensional Non-Contact Digital Optical Profiler**, *Wear* 122, No. 3, 301-312 (1988).

G. Binnig and H. Rohrer (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **Scanning Tunneling Microscopy: From Birth to Adolescence**, *Uspekhi Fizicheskikh Nauk* 154, No. 2, 261-278 (1988).

M. Blaum (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Systematic Unidirectional Burst Detecting Codes**, *IEEE Transactions on Computers* 37, No. 4, 453-457 (1988).

K. W. Blazey, A. M. Portis, and J. G. Bednorz (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **Microwave Study of the Critical State in High- T_c Superconductors**, *Solid State Communications* 65, No. 10, 1153-1156 (1988).

J. Bleuse, P. Voisin, M. Voos (Ecole Normale Supérieure, 24 Rue Lhomond, F-75231 Paris Cedex 05, France), L. L. Chang, and L. Esaki (IBM, Yorktown Heights, NY), **Experimental Investigation of the Quantum Photovoltaic Effect in InAs GaSb Semiconductor Superlattices**, *Journal de Physique*, 48, No. C5, 183-186 (1987).

J. Bleuse, P. Voisin, M. Voos (Groupe de Physique de Solide, l'Ecole Normale Supérieure, 24 Rue Lhomond, 5231 Paris Cedex 05, France), H. Munekata, L. L. Chang, and L. Esaki (IBM, Yorktown Heights, NY), **Investigation of the Quantum Photovoltaic Effect in InAs-GaSb Semiconductor Superlattices**, *Applied Physics Letters* 52, No. 6, 462-464 (1988).

N. Bobroff and A. Rosenbluth (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Alignment Errors from Resist Coating Topography**, *Journal of Vacuum Science and Technology B* 6, No. 1, 403-408 (1988).

G. L. Bona, F. Meier, H. C. Siegmann (Laboratorium für Festkörperphysik, 8093 Zürich, Switzerland), and R. F. Gambino (IBM, Yorktown Heights, NY), **Amorphous GdCo: Effect of Surface Segregation on Reading of the Magnetization by Spin-Polarized Photoemission**, *Applied Physics Letters* **52**, No. 4, 334-336 (1988).

G. L. Bona, F. Meier, H. C. Siegmann (Laboratorium für Festkörperphysik, ETH-Hönggerberg, 8093 Zürich, Switzerland), and R. J. Gambino (IBM, Yorktown Heights, NY), **Unidirectional Anisotropy in Surface Magnetism of Amorphous GdCo**, *Applied Physics Letters* **52**, No. 2, 166-168 (1988).

S. S. Bose, B. Lee, M. H. Kim, G. E. Stillman (University of Illinois, Urbana, IL 61801), and W. I. Wang (IBM, Yorktown Heights, NY), **Influence of the Substrate Orientation on Si Incorporation in Molecular-Beam Epitaxial GaAs**, *Journal of Applied Physics* **63**, No. 3, 743-748 (1988).

G. Bouchard, L. Lau (IBM Corporation, 650 Harry Road, San Jose, CA 95120), and F. E. Talke (University of California at San Diego, La Jolla), **An Investigation of Non-Repeatable Spindle Runout**, *IEEE Transactions on Magnetics* **MAG-23**, No. 5, Part II, 3687-3689 (1987).

H. R. Brown (IBM Corporation, 650 Harry Road, San Jose, CA 95120), E. J. Kramer (Cornell University, Ithaca, NY), and R. A. Bubeck (The Dow Chemical Company, Midland, MI), **Effect of Deformation Ratio and Fibril Deformation in Fatigue of Polystyrene**, *Journal of Material Science* **23**, No. 1, 248-252 (1988).

J. A. Brum, P. Voisin, M. Voos (Ecole Normale Supérieure, 24 rue Lhomond, F-75231 Paris, France), L. L. Chang, and L. Esaki (IBM, Yorktown Heights, NY), **Oscillator Strengths of Interband Magneto-Optical Transitions in Strained-Layer Heterostructures**, *Surface Science* **196**, Nos. 1-3, 545-550 (1988).

G. Burns, F. H. Dacol (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), G. Kliche, W. König (Max-Planck-Institut für Festkörperforschung, Stuttgart, Federal Republic of Germany), and M. W. Shafer (IBM, Yorktown Heights, NY), **Raman and Infrared Studies of Sr_2TiO_4 : A Material Isomorphic to $(\text{La}, \text{Sr})_2\text{CuO}_4$ Superconductors**, *Physical Review B* **37**, No. 7, 3381-3388 (1988).

J. M. Burrige (IBM United Kingdom Ltd., Winchester, SO23 8RY, Hampshire, United Kingdom), **Biomolecules and Beholders: The Paradox of Descriptive Models**, *Speculations in Science and Technology* **10**, No. 4, 339-344 (1987).

C

L.-F. Cabrera (IBM Corporation, 650 Harry Road, San Jose, CA 95120), E. Hunter (Sun Microsystems, Inc., Mountain View, CA), M. J. Karels (University of California, Berkeley), and D. A. Mosher (Pyramid Technology Corporation, Mountain View, CA), **User-Process Communication Performance in Networks of Computers**, *IEEE Transactions on Software Engineering* **14**, No. 1, 38-53 (1988).

S. R. Cain (IBM Corporation, 1701 North Street, Endicott, NY 13760), **On the Interpretation of Polyoxymethylene Valence XPS Spectra Using Band Calculations**, *Chemical Physics Letters* **143**, No. 4, 361-365 (1988).

J. M. Calleja, C. López, C. Tejedor (Universidad Autónoma de Madrid, Cantoblanco, 28049 Madrid, Spain), L. Viña, E. E. Méndez,

W. I. Wang (IBM, Yorktown Heights, NY), M. Staines, and M. Cardona (Max-Planck-Institut für Festkörperforschung, Stuttgart, Federal Republic of Germany), **Study of Electric Field Effects on the Electronic Structure of Quantum Wells by Resonant Raman Scattering**, *Surface Science* **196**, Nos. 1/3, 578-583 (1988).

S. Caracciolo (Scuola Normale Superiore, INFN-Sezione di Pisa, Pisa, Italy) and S. Patarnello (IBM European Center for Scientific and Engineering Computing, Rome, Italy), **Effects of Frustration on the Orderings of Multi-Valued Spin Systems**, *Physics Letters A* **126**, No. 4, 233-238 (1988).

P. Carnevali (IBM European Center for Scientific and Engineering Computing, Via Giorgione 159, 00147 Rome, Italy), **Timing Results of Some Internal Sorting Algorithms of the IBM 3090**, *Parallel Computing* **6**, No. 1, 115-117 (1988).

M.-M. Chan, C. Ortiz, G. Lim, R. Sigsbee, and G. Castillo (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Effects of Deposition and Oxidation Processes on Magnetic and Structural Properties of Iron Oxide Films**, *IEEE Transactions on Magnetics* **MAG-23**, No. 5, Part II, 3423-3425 (1987).

S. Chandrasekar (Purdue University, West Lafayette, IN 47907) and B. Bhushan (IBM, San Jose, CA), **Control of Surface Finishing Residual Stresses in Magnetic Recording Head Materials**, *Journal of Tribology* **110**, No. 1, 87-92 (1988).

A. Chang and M. F. Mergen (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **801 Storage: Architecture and Programming**, *ACM Transactions on Computer Systems* **6**, No. 1, 28-50 (1988).

C.-A. Chang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Effects of Silver and Gold on the YBaCuO Superconducting Thin Films with the Use of Ag/Cu/BaO/ Y_2O_3 and Au/Cu/BaO/ Y_2O_3 Structures**, *Applied Physics Letters* **52**, No. 11, 924-926 (1988).

P. T. Chang, J. Lee, R. Jensen (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), and H. Sussner (IBM, San Jose, CA), **Design and Performance of Dual-Element Side-by-Side Heads**, *IEEE Transactions on Magnetics* **MAG-23**, No. 5, Part II, 2934-2936 (1987).

B. A. Chappell, T. I. Chappell, S. E. Schuster, H. M. Segmuller, J. W. Allan, R. L. Franch, and P. J. Restle (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Fast CMOS ECL Receivers with 100-mV Worst-Case Sensitivity**, *IEEE Journal of Solid-State Circuits* **23**, No. 1, 59-67 (1988).

A. Chattopadhyay, P. V. Madhavan, J. L. Whitten (State University of New York, Stony Brook, NY 11794), C. R. Fischer (City University of New York, Flushing, NY), and I. P. Batra (IBM, San Jose, CA), **Surface- π Bonding in the (2×1) Reconstruction of Si(111)**, *Journal of Molecular Structure* **406**, 63-78 (1988).

C. L. Chen (IBM Corporation, P.O. Box 390, Poughkeepsie, NY 12602), **Exhaustive Test Pattern Generation Using Cyclic Codes**, *IEEE Transactions on Computers* **37**, No. 2, 225-228 (1988).

K. S. Choe (IBM Corporation, Hopewell Junction, NY 12533), J. A. Stefani, J. K. Tien (Columbia University, New York, NY), and J. P. Wallace (Casting Analysis Corporation, Weyers Cave, VA), **Eddy**

Current Measurement of Crystal Axial Thermal Profiles During Czochralski Silicon Crystal Growth, *Journal of Crystal Growth* **88**, No. 1, 39–52 (1988).

K. S. Choe and T. H. Strudwick (IBM Corporation, Hopewell Junction, NY 12533), **Pregrowth Ambient Gas Analysis of Czochralski Si Crystal Puller**, *Journal of the Electrochemical Society* **135**, No. 3, 706–710 (1988).

J. J. Chu, L. J. Chen (National Tsing Hua University, Hsinchu 300, Taiwan, Republic of China), and K. N. Tu (IBM, Yorktown Heights, NY), **Localized Epitaxial Growth of IrSi₃ on (111) Silicon and (001) Silicon**, *Journal of Applied Physics* **63**, No. 4, 1163–1167 (1988).

J. O. Chu, D. B. Beach, R. D. Estes, and J. M. Jasinski (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Absolute Rate Constants for Silylene Reactions with Diatomic Molecules**, *Chemical Physics Letters* **143**, No. 2, 135–139 (1988).

C. T. Chuang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **The Effect of Extrinsic Base Encroachment on the Switch-On Transient of Advanced Narrow-Emitter Bipolar Transistors**, *IEEE Transactions on Electron Devices* **35**, No. 3, 309–313 (1988).

I. Cidon (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Yet Another Distributed Depth-First-Search Algorithm**, *Information Processing Letters* **26**, No. 6, 301–305 (1988).

S. Ciraci (Bilkent University, Ankara, Turkey) and I. P. Batra (IBM, San Jose, CA), **Novel Electronic Properties of a Potassium Overlayer on Si(001)-(2 × 1)**, *Reply*, *Physical Review Letters* **60**, No. 6, 547 (1988).

S. Ciraci (Bilkent University, Ankara, Turkey) and I. P. Batra (IBM, San Jose, CA), **Surface Metallization of Silicon by Potassium Adsorption on Si(001)-(2 × 1)**, *Physical Review B* **37**, No. 6, 2955–2967 (1988).

L. A. Clevenger, C. V. Thompson, R. C. Cammarata (Massachusetts Institute of Technology, Cambridge, MA 02139), and K. N. Tu (IBM, Yorktown Heights, NY), **Reaction Kinetics of Nickel/Silicon Multilayer Films**, *Applied Physics Letters* **52**, No. 10, 795–797 (1988).

J. Cocke (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **The Search for Performance in Scientific Processors**, *Communications of the ACM* **31**, No. 3, 250–253 (1988).

S. M. Colley (Australian National University, Canberra, ACT 2600, Australia), S. J. P. Todd, and N. R. Campling (IBM UK, United Kingdom), **Three Dimensional Computer Graphics for Archaeological Data Exploration, an Example from Saxon Southampton**, *Journal of Archaeological Science* **15**, No. 1, 99–106 (1988).

G. Comelli, J. Stöhr, W. Jark (IBM Corporation, 650 Harry Road, San Jose, CA 95120), and B. B. Pate (Stanford University, CA), **Extended X-Ray Absorption Fine-Structure Studies of Diamond and Graphite**, *Physical Review B* **37**, No. 9, 4383–4389 (1988).

R. F. Cook and A. G. Schrott (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Calcium Segregation to Grain Boundaries in Alumina**, *Journal of the American Ceramic Society* **71**, No. 1, 50–58 (1988).

M. Copel and R. M. Tromp (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Structural Perfection of the Si(111)-(1 × 1) As Surface**, *Physical Review B* **37**, No. 5, 2766–2769 (1988).

G. Couturier (Université de Bordeaux I, 33405 Talence, France), J. Yoshino (Tokyo Institute of Technology, Japan), L. L. Chang, and S. von Molnar (IBM, Yorktown Heights, NY), **Optical Transmission Under Magnetic Fields in CdTe/CdMnTe Superlattices**, *Journal de Physique* **48**, No. C5, 341–344 (1987).

W. Crooks and W. C. Leung (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), **Generation of Radial Striations on Particulate Coated Magnetic Disks**, *IEEE Transactions on Magnetics* **MAG-23**, No. 5, Part II, 3146–3148 (1987).

D

A. Davidson, A. Palevski, M. J. Brady, R. B. Laibowitz, R. Koch, M. Scheuermann, and C. C. Chi (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **In situ Resistance of Y₁Ba₂Cu₃O_x Films During Anneal**, *Applied Physics Letters* **52**, No. 2, 157–159 (1988).

S. L. Delage, S.-J. Jeng, D. Jousse, and S. S. Iyer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **High Conductivity Polycrystalline Silicon Obtained by Molecular Beam Deposition**, *Applied Physics Letters* **52**, No. 12, 999–1001 (1988).

J. E. Demuth, E. J. Von Lenen, R. M. Tromp, and R. J. Hamers (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Local Electronic Structure and Surface Geometry of Ag on Si(111)**, *Journal of Vacuum Science and Technology B* **6**, No. 1, 18–26 (1988).

E. G. Derouane, J.-M. Andre (Facultés Universitaires Notre Dame de la Paix, Rue Bruxelles 61, B-5000 Namur, Belgium), and A. A. Lucas (IBM, San Jose, CA), **Surface Curvature Effects in Physisorption and Catalysis by Microporous Solids and Molecular Sieves**, *Journal of Catalysis* **110**, No. 1, 58–73 (1988).

R. G. DeVoe, C. Fabre, K. Jungmann, J. Hoffnagle, and R. G. Brewer (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Precision Optical-Frequency-Difference Measurements**, *Physical Review A* **37**, No. 5, 1802–1805 (1988).

S. H. Dhong, N. C.-C. Lu, W. Hwang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and S. A. Parke (IBM, Essex Junction, VT), **High-Speed Sensing Scheme for CMOS DRAM's**, *IEEE Journal of Solid-State Circuits* **23**, No. 1, 34–40 (1988).

D. M. Dias, B. R. Iyer, and P. S. Yu (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Tradeoffs Between Coupling Small and Large Processors for Transaction Processing**, *IEEE Transactions on Computers* **37**, No. 3, 310–320 (1988).

A. F. Diaz (IBM Corporation, 650 Harry Road, San Jose, CA 95120), J. F. Robinson, and H. B. Mark (University of Cincinnati, Ohio), **Electrochemistry and Electrode Applications of Electroactive/Conductive Polymers**, *Advances in Polymer Science* **84**, 113–139 (1988).

T. R. Dinger and S. W. Tozer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Cuprate Superconductors, Old Behavior in New Materials**, *Nature* **332**, No. 6161, 204 (1988).

D. P. DiVincenzo (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Nonlinear Optics as a Probe of Chiral Ordering in Amorphous Semiconductors**, *Physical Review B* **37**, No. 3, 1245-1261 (1988).

W. Drube and F. J. Himpsel (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Unoccupied Surface States of (1 × 1) Sb Overlayers on GaAs(110) and InP(110)**, *Physical Review B* **37**, No. 2, 855-857 (1988).

E

T. Egami, C. D. Graham, Jr., W. Dmowski, P. Zhou, P. J. Flanders (University of Pennsylvania, Philadelphia, PA 19104), E. E. Marinero, H. Notarys, and C. Robinson (IBM, San Jose, CA), **Anisotropy and Coercivity of Amorphous RE-TM Films**, *IEEE Transactions on Magnetics* **MAG-23**, No. 5, Part I, 2269-2271 (1987).

B. G. Elmegreen (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Magnetic Cloud Collision Fronts**, *Astrophysical Journal* **326**, No. 2, Part 1, 616-638 (1988).

V. J. Emery (Brookhaven National Laboratory, Upton, NY 11973) and C. Noguera (IBM, Rüschlikon, Switzerland), **Critical Properties of a Spin Half Chain with Competing Interactions**, *Physical Review Letters* **60**, No. 7, 631-634 (1988).

A. Erbil, G. S. Cargill III, R. Frahm, and R. F. Boehme (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Total-Electron-Yield Current Measurements for Near-Surface Extended X-Ray-Absorption Fine Structure**, *Physical Review B* **37**, No. 5, 2450-2464 (1988).

L. Esaki (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **The Evolution of Quantum Structures**, *Journal de Physique* **48**, No. C5, 1-12 (1987).

L. Esaki, L. Vina, E. E. Mendez, and L. L. Chang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Optical Spectroscopy of Excitons in Quantum Wells**, *Journal of Luminescence* **40 & 41**, 12-16 (1988).

M. W. Evans, C. G. Lie, and E. Clementi (IBM Corporation, Neighborhood Road, Kingston, NY 12401), **Symmetry Properties of Cross Correlation Functions in Molecular Liquids**, *Journal of Molecular Liquids* **37**, Nos. 3/4, 231-247 (1988).

M. W. Evans, G. C. Lie, and E. Clementi (IBM Corporation, Neighborhood Road, Kingston, NY 12401), **Molecular Dynamics of the Bromochlorofluoromethanes in a Right Circularly Polarized Field**, *Zeitschrift für Physik D* **7**, No. 4, 397-403 (1988).

M. W. Evans, W. Luken, G. C. Lie, and E. Clementi (IBM Corporation, Neighborhood Road, Kingston, NY 12401), **Molecular Dynamics Simulation of Direct Laboratory Frame Cross Correlations in Spherical, Plate-Like, and Rod-Like Molecules**, *Journal of Chemical Physics* **88**, No. 4, 2685-2691 (1988).

F

W. G. Faix (IBM Deutschland GmbH, D-7032 Sindelfingen, Federal Republic of Germany), W. Schramm, F. Vix, G. Weichbrodt, and R. Henkelmann (Technical University of Munich, Federal Republic of

Germany), **Determination of Particle Bound Trace Metals in High Purity Hydrogen Chloride**, *Fresenius Zeitschrift für Analytische Chemie* **329**, No. 8, 847-852 (1988).

F. F. Fang, T. P. Smith III, and S. L. Wright (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Landau-Level Broadening and Scattering Time in Modulation Doped GaAs/AlGaAs Heterostructures**, *Surface Science* **196**, Nos. 1-3, 310-315 (1988).

F. W. Farley (Harvard University, Cambridge, MA 02138), L. V. Novakoski, M. K. Dubey, G. M. Nathanson, and G. M. McClelland (IBM, San Jose, CA), **Statistical Intramolecular Vibration-Rotation Energy Transfer in Isolated Polyatomic Molecules: Electric Deflection Studies**, *Journal of Chemical Physics* **88**, No. 2, 1460-1461 (1988).

R. Fauquembergue, J. L. Thobel, P. Descheerder (Université des Sciences et Techniques de Lille 1, F-59655 Villeneuve D'Ascq, France), P. Pernisek, and P. Wolf (IBM, Rüschlikon, Switzerland), **The Submicron Inverted MODFET I-GaAs/N⁺-AlGaAs: A 2D Monte-Carlo Study**, *Solid State Electronics* **31**, No. 3/4, 595-598 (1988).

L. E. Felton, J. A. Schwarz (Syracuse University, Syracuse, NY 13244), and J. R. Lloyd (IBM, Hopewell Junction, NY), **A Comparison of the Median Time to Failure with Temperature Ramp Resistance Analysis to Characterize Electromigration to Determine Electromigration Kinetic Parameters**, *Thin Solid Films* **155**, No. 2, 209-215 (1987).

J. S.-Y. Feng and R. D. Harper (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), **Pulse Distortion in Transactions Recorded with Thin Film Pole Tips**, *IEEE Transactions on Magnetics* **MAG-23**, No. 5, Part I, 2082-2084 (1987).

B. I. Finkelstein and W. C. Williams (IBM Corporation, Tucson, AZ 85744), **Noise Sources in Magneto-Optic Recording**, *Applied Optics* **27**, No. 4, 703-709 (1988).

S. Finkelstein, M. Schkolnick, and P. Tiberio (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Physical Database Design for Relational Databases**, *ACM Transactions on Database Systems* **13**, No. 1, 91-128 (1988).

U. Ch. Fischer (Ernst Leitz Wetzlar GmbH, 7750 Konstanz, Federal Republic of Germany), U. T. Dürig, and D. W. Pohl (IBM, Rüschlikon, Switzerland), **Near-Field Optical Scanning Microscopy in Reflection**, *Applied Physics Letters* **52**, No. 4, 249-251 (1988).

M. V. Fischetti and D. J. DiMaria (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Hot Electrons in SiO₂: Ballistic to Steady-State Transport**, *Solid State Electronics* **31**, No. 3/4, 629-636 (1988).

M. P. A. Fisher (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Resonantly Enhanced Quantum Decay: A Time-Dependent Wentzel-Kramers-Brillouin Approach**, *Physical Review B* **37**, No. 1, 75-82 (1988).

E. A. Fitzgerald, D. G. Ast (Cornell University, Ithaca, NY 14853), P. D. Kirchner, G. D. Pettit, and J. M. Woodall (IBM, Yorktown Heights, NY), **Structure and Recombination in InGaAs/GaAs Heterostructures**, *Journal of Applied Physics* **63**, No. 3, 693-703 (1988).

G. Fortuno (IBM Corporation, Hopewell Junction, NY 12533), **Study of Reactive Ion Etching of Si and SiO₂ for CF₃Cl_x Gases**, *Plasma Chemistry and Plasma Processing* **8**, No. 4, 19–34 (1988).

E. M. Foster (IBM Corporation, Route 17C, Owego, NY 13827), **The Electrical Effect of Single-Chip CMOS Packages**, *IEEE Transactions on Components, Hybrids, and Manufacturing Technology* **CHMT-10**, No. 4, 593–603 (1987).

J. S. Foster, J. E. Frommer, and P. C. Arnett (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Molecular Manipulation Using a Tunnelling Microscope**, *Nature* **331**, No. 6154, 324–326 (1988).

D. J. Frank (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and C. J. Lobb (Harvard University, Cambridge, MA), **Highly Efficient Algorithm for Percolative Transport Studies in Two Dimensions**, *Physical Review B* **37**, No. 1, 302–307 (1988).

D. R. Fredkin (University of California at San Diego, La Jolla, CA 92093) and T. R. Koehler (IBM, San Jose, CA), **Numerical Micromagnetics by the Finite Element Method**, *IEEE Transactions on Magnetics* **MAG-23**, No. 5, Part II, 3385–3387 (1987).

P. P. Freitas and T. S. Plaskett (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Transport Mechanisms in Y₁Ba₂Cu₃O_{6+x} Superconductors in the Metallic and the Semiconducting Regimes**, *Physical Review B* **37**, No. 7, 3657–3659 (1988).

B. H. Fromson (Brompton Hospital, London, SW3 6HP, England) and D. M. Denison (IBM United Kingdom, Winchester), **Quantitative Features in the Computed Tomography of Healthy Lungs**, *Thorax* **43**, No. 2, 120–126 (1988).

A. L. Furtado (IBM Brasil, Estrada da Canoa, 3520, 22.610, Rio de Janeiro, Brazil), **Towards Functional Programming in Prolog**, *ACM Sigplan Notices* **23**, No. 3, 43–51 (1988).

G

W. J. Gallagher, T. K. Worthington, T. R. Dinger, F. Holtzberg, D. L. Kaiser, and R. L. Sandstrom (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Anisotropy in the Magnetic Properties of Single-Crystal Y₁Ba₂Cu₃O_{7-x}**, *Physica B+C* **148**, Nos. 1–3, 228–232 (1987).

N. Garcia and E. Stoll (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **Elastic Quantum Resistance Between Metallic Interfaces**, *Physical Review B* **37**, No. 9, 4415–4418 (1988).

R. Garwin (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **A Blueprint for Radical Weapons Cuts**, *Bulletin of the Atomic Scientists* **44**, No. 2, 10–13 (1988).

S. M. Gates (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Adsorption Kinetics of SiH₄, Si₂H₆ and Si₃H₈ on the Si(111)-(7 × 7) Surface**, *Surface Science* **195**, Nos. 1/2, 307–329 (1988).

P. D. Gerber (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Exact Solution of the Proximity Effect Equation by a Splitting Method**, *Journal of Vacuum Science and Technology B* **6**, No. 1, 432–435 (1988).

T. N. T. Goodman (University of Dundee, Dundee DD1 4HN, Scotland) and C. A. Micchelli (IBM, Yorktown Heights, NY), **Corner Cutting Algorithms for the Bézier Representation of Free Form Curves**, *Linear Algebra and Its Applications* **99**, 225–252 (1988).

J. Gotro, B. Appelt, M. Yandrasits, and T. Ellis (IBM Corporation, 1701 North Street, Endicott, NY 13760), **Thermoanalytical Investigation of Composite Lamination**, *Polymer Composites* **8**, No. 4, 222–231 (1987).

J. D. Gould and J. Salaun (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Behavioral Experiments on Handmarkings**, *ACM Transactions on Office Information Systems* **5**, No. 4, 358–377 (1987).

A. Gupta and G. Koren (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Direct Laser Writing of Superconducting Patterns of Y₁Ba₂Cu₃O_{7-x}**, *Applied Physics Letters* **52**, No. 8, 665–666 (1988).

A. Gupta, G. Koren, E. A. Giess, N. R. Moore, E. J. O'Sullivan, and E. I. Cooper (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Y₁Ba₂Cu₃O_{7-x} Thin Films Grown by a Simple Spray Deposition Technique**, *Applied Physics Letters* **52**, No. 2, 163–165 (1988).

M. C. Gutzwiller and B. B. Mandelbrot (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Invariant Multifractal Measures in Chaotic Hamiltonian Systems, and Related Structures**, *Physical Review Letters* **60**, No. 8, 673–676 (1988).

H

J. W. Halley (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and H. B. Shore (San Diego State University, CA), **Model for the Role of Oxygen Defects in Oxygen-Defect Superconductors**, *Physical Review B* **37**, No. 1, 525–528 (1988).

K. D. Hanna (IBM Corporation, 36 Avenue R, Poincaré, F-75116 Paris, France), J. C. Chastang, Y. Pouliquen, G. Renard, L. Asfar (Hotel Dieu Hospital, Paris, France), and G. O. Waring (Emory Eye Center, Atlanta, GA), **Excimer Laser Keratectomy for Myopia with a Rotating Slit Delivery System**, *Archives of Ophthalmology* **106**, No. 2, 245–250 (1988).

C. S. Harder, B. Van Zegbroeck, H. Meier, W. Patrick, and P. Vettiger (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **5.2-GHz Bandwidth Monolithic GaAs Optoelectronic Receiver**, *IEEE Electron Device Letters* **9**, No. 4, 171–173 (1988).

J. Harland (Monash University, Clayton, Victoria 3168, Australia) and J. Jaffar (IBM, Yorktown Heights, NY), **On Parallel Unification for Prolog**, *New Generation Computing* **5**, No. 3, 259–279 (1987).

M. Hart (The University, Manchester M13 9PL, England), W. Parrish, M. Bellotto, and G. S. Lim (IBM, San Jose, CA), **The Refractive-Index Correction in Powder Diffraction**, *Acta Crystallographica A* **44**, Part 2, 193–197 (1988).

R. Haskin, Y. Malachi, W. Sawdon, and G. Chan (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Recovery Management in QuickSilver**, *ACM Transactions on Computer Systems* **6**, No. 1, 82–108 (1988).

M. Heiblum (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Ballistic Transport**, *Solid State Electronics* **31**, No. 3/4, 617-618 (1988).

M. Heiblum, K. Seo (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), H. P. Meier (IBM, Rüschlikon, Switzerland), and T. W. Hickmott (IBM, Yorktown Heights, NY), **Observation of Ballistic Holes**, *Physical Review Letters* **60**, No. 9, 828-831 (1988).

J. E. Heidenreich III, J. R. Paraszczak (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), M. Moisan, and G. Sauve (Université de Montreal, Quebec, Canada), **Electron Energy Distributions in Oxygen Microwave Plasmas**, *Journal of Vacuum Science and Technology B* **6**, No. 1, 288-292 (1988).

D. Henderson (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **An Explicit Expression for the Solvent Contribution to the Force Between Colloidal Particles Using a Hard Sphere Model**, *Journal of Colloid and Interface Science* **121**, No. 2, 486-490 (1988).

W. H. Henkels (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Dynamic Capacitance Effects in DRAM Word Lines**, *IEEE Proceedings* **135**, No. 1, 1-6 (1988).

F. Herman (IBM Corporation, 650 Harry Road, San Jose, CA 95120), R. V. Rasowski, and W. Y. Hsu (E. I. du Pont de Nemours and Company, Wilmington, DE), **Electronic Structure of $\text{La}_4\text{BaCu}_5\text{O}_{13-x}$** , *Physical Review B* **37**, No. 4, 2309-2312 (1988).

K. Hermansson, G. C. Lie, and E. Clementi (IBM Corporation, Neighborhood Road, Kingston, NY 12401), **On Velocity Scaling in Molecular Dynamics Simulations**, *Journal of Computational Chemistry* **9**, No. 3, 200-203 (1988).

F. J. Himpsel (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Inverse Photoemission**, *Journal of Physics and Chemistry of Solids* **49**, No. 1, 3-8 (1988).

H. Hiraoka, T. J. Chuang, and H. Masuhara (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Dopant-Induced Ablation of Polymers by a 308-nm Excimer Laser**, *Journal of Vacuum Science and Technology B* **6**, No. 1, 463-465 (1988).

A. J. Hoffman (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **On Greedy Algorithms for Series Parallel Graphs**, *Mathematical Programming* **40**, No. 2, 197-204 (1988).

A. J. Hoffman (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and A. C. Tucker (State University of New York, Stony Brook), **Greedy Packing and Series-Parallel Graphs**, *Journal of Combinatorial Theory A* **47**, No. 1, 6-15 (1988).

G. W. Hoffmann, M. L. Bartlett, G. Pawletta, L. Ray (University of Texas, Austin, TX 78712), J. F. Amann, K. Jones, J. B. McClelland (Los Alamos National Laboratory, NM), R. W. Ferguson (Rutgers State University, New Brunswick, NJ), M. M. Gazzaly (University of Minnesota, Minneapolis), B. C. Clark (Ohio State University, Columbus), and R. L. Mercer (IBM, Yorktown Heights, NY), **Large Angle $\vec{P} + {}^{40}\text{Ca}$ Elastic Scattering at 497.5 MeV**, *Physical Review C* **37**, No. 3, 1307-1310 (1988).

J. Hoffnagle (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Proposal for Continuous White-Light Cooling of an Atomic Beam**, *Optics Letters* **13**, No. 2, 102-104 (1988).

R. F. Hoyt, S. E. Millman, and D. E. Horne (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Motion Pictures of Air Bearing Dynamics Under Stressed Conditions**, *IEEE Transactions on Magnetics MAG-23*, No. 5, Part II, 3459-3461 (1987).

H.-C. W. Huang, R. Cook, D. R. Campbell, P. Ronsheim, W. Rausch, and B. Cunningham (IBM Corporation, Hopewell Junction, NY 12533), **Platinum Silicide Contact to Arsenic-Doped Polycrystalline Silicon**, *Journal of Applied Physics* **63**, No. 4, 1111-1116 (1988).

T. C. Huang (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Quantitative X-Ray Fluorescence Analysis of Single-Layer and Multilayer Thin Films**, *Thin Solid Films* **157**, No. 2, 283-290 (1988).

I

S. S. Iyer, S. L. Delage, and G. J. Scilla (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Origin and Reduction of Interfacial Boron Spikes in Silicon Molecular Beam Epitaxy**, *Applied Physics Letters* **52**, No. 6, 486-488 (1988).

J

C. Jacoboni (Università di Modena, I-41100 Modena, Italy) and P. J. Price (IBM, Yorktown Heights, NY), **Interaction Between Layers by Electron-Electron Scattering**, *Solid State Electronics* **31**, No. 3/4, 649-652 (1988).

J. M. Jasinski and J. O. Chu (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Absolute Rate Constants for the Reaction of Silylene with Hydrogen, Silane, and Disilane**, *Journal of Chemical Physics* **88**, No. 3, 1678-1687 (1988).

P. M. Jones and P. H. Kasai (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Ga Atom-Ethylene Complex: Matrix Isolation ESR Study**, *Journal of Physical Chemistry* **92**, No. 5, 1060-1061 (1988).

M. B. Josephs (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **The Date Refinement Calculator for Z Specifications**, *Information Processing Letters* **27**, No. 1, 29-33 (1988).

D. Jousse, J. Kanicki (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), D. T. Krick, and P. M. Lenahan (Pennsylvania State University, University Park), **Electron-Spin-Resonance Study of Defects in Plasma-Enhanced Chemical Vapor Deposited Silicon Nitride**, *Applied Physics Letters* **52**, No. 6, 445-447 (1988).

K

D. L. Kaiser, F. Holtzberg, M. F. Chisholm, and T. K. Worthington (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Growth and Microstructure of Superconducting $\text{YBa}_2\text{Cu}_3\text{O}_x$ Single Crystals**, *Journal of Crystal Growth* **85**, No. 4, 593-598 (1987).

S. B. Kaplan (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Structure in the Rectifying Behavior of Mesoscopic Si MOSFETS**, *Surface Science* **196**, Nos. 1-3, 93-100 (1988).

J. A. Kash (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), S. S. Jha (Tata Institute of Fundamental Research, Bombay, India), and J. C. Tsang (IBM, Yorktown Heights, NY), **Picosecond Raman Studies of the Fröhlich Interaction in Semiconductor Alloys**, *Reply*, *Physical Review Letters* **60**, No. 9, 864 (1988).

J. A. Kash and J. C. Tsang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Secondary Emission Studies of Hot Carrier Relaxation in Polar Semiconductors**, *Solid State Electronics* **31**, No. 3/4, 419-424 (1988).

P. Kasiraj, D. E. Horne, and J. S. Best (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **A Method for the Magneto-Optic Imaging of Magnetization Time Evolution in Thin Films**, *IEEE Transactions on Magnetics* **MAG-23**, No. 5, Part I, 2161-2163 (1987).

R. Kawai (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and M. Kawai (Waseda University, Tokyo, Japan), **Theory of the Low-Energy Surface Okorokov Excitation for Studying Excited States of Atoms in Collision with Surfaces**, *Surface Science* **195**, No. 3, 535-556 (1988).

E. Kaxiras (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and E. Manousakis (Florida State University, Tallahassee), **Ground State of the Strong-Coupling Hubbard Hamiltonian: A Numerical Diagonalization Study**, *Physical Review B* **37**, No. 1, 656-658 (1988).

R. D. Kendrick and C. S. Yannoni (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **High-Power ^1H - ^{19}F Excitation in a Multiple-Resonance Single-Coil Circuit**, *Journal of Magnetic Resonance* **75**, No. 3, 506-508 (1987).

R. B. King (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Elastic Analysis of Some Punch Problems for a Layered Medium**, *International Journal of Solids and Structures* **23**, No. 12, 1657-1664 (1988).

A. Kloczkowski, G. R. Luckhurst (University of Southampton, Southampton SO9 5NH, Hants, England), G. R. Luckhurst, and R. W. Phippen (IBM United Kingdom, Winchester), **A Visual Representation for the Shapes of Flexible Mesogenic Molecules**, *Liquid Crystals* **3**, No. 2, 185-194 (1988).

T. T. Kodas, T. H. Baum, and P. B. Comita (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Gold Crystal Growth by Photothermal Laser-Induced Chemical Vapor Deposition**, *Journal of Crystal Growth* **87**, No. 2/3, 378-382 (1988).

S. H. Koenig, M. Spiller, R. D. Brown III (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and G. L. Wolf (Pittsburgh NMR Institute, Pittsburgh, PA), **Investigation of the Biochemical State of Paramagnetic Ions In Vivo Using the Magnetic Field Dependence of $1/T_1$ of Tissue Protons (NMRD Profile), Applications to Contrast Agents for Magnetic Resonance Imaging**, *Nuclear Medicine and Biology* **15**, No. 1, 23-29 (1988).

R. Koepcke (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Smoother Periodic Data**, *Journal of Dynamic Systems, Measurements and Control* **110**, No. 1, 107-108 (1988).

R. E. Koon (IBM Corporation, Highway 52 & NW 37 Street, Rochester, MN 55901), **The Channel Design Decision, A Model and an Application**, *Market Science* **6**, No. 2, 177-178 (1987).

H. W. P. Koops, R. Weiel, D. P. Kern (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and T. H. Baum (IBM, San Jose, CA), **High-Resolution Electron-Beam Induced Deposition**, *Journal of Vacuum Science and Technology B* **6**, No. 1, 417-481 (1988).

S. P. Kowalczyk, Y. H. Kim, G. F. Walker, and J. Kim (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Polyimide on Copper: The Role of Solvent in the Formation of Copper Precipitates**, *Applied Physics Letters* **52**, No. 5, 375-376 (1988).

W. Krakow and T. M. Shaw (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Evaluation of High-Resolution Electron Microscopy as a Method for Studying Y-Ba-Cu-O Superconductors**, *Journal of Electron Microscopy Technique* **8**, No. 3, 273-284 (1988).

J. Kübler, K.-H. Höck, J. Sticht (Technische Hochschule Darmstadt, D-6100 Darmstadt, Federal Republic of Germany), and A. R. Williams (IBM, Yorktown Heights, NY), **Density Functional Theory of Non-Collinear Magnetism**, *Journal of Physics F* **18**, No. 3, 469-483 (1988).

K. S. Kundert (Hewlett-Packard, Santa Rosa, CA 95404), G. B. Sorkin (IBM, Yorktown Heights, NY), and A. Sangiovanni-Vincentelli (University of California, Berkeley, CA 94720), **Applying Harmonic Balance to Almost-Periodic Circuits**, *IEEE Transactions on Microwave Theory and Techniques* **36**, No. 2, 366-378 (1988).

K. Kunitatsu, M. G. Samant, H. Seki, and M. R. Philpott (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **A Study of HSO_4^- and SO_4^{2-} Co-Adsorption on a Platinum Electrode in Sulfuric Acid by In-situ FT-IR Reflection Absorption Spectroscopy**, *Journal of Electroanalytical Chemistry and Interfacial Electrochemistry* **243**, No. 1, 203-208 (1988).

L

R. B. Laibowitz, R. H. Koch, P. Chaudhari, and R. J. Gambino (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Fabrication and Properties of Thin Superconducting Oxide Films**, *Physica B+C* **148**, Nos. 1-3, 182-184 (1987).

S. E. Lambert, I. L. Sanders, A. M. Patlach, and M. T. Krounbi (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Recording Characteristics of Submicron Discrete Magnetic Tracks**, *IEEE Transactions on Magnetics* **MAG-23**, No. 5, Part II, 3690-3692 (1987).

R. Landauer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Computation: A Fundamental Physical View**, *Speculations in Science and Technology* **10**, No. 4, 292-302 (1987).

W. F. Lange III (IBM Corporation, P.O. Box 1900, Boulder, CO 80302), M. Enomoto (National Research Institute of Metals, Ibaraki, Japan), and H. I. Aaronson (Carnegie Mellon University, Pittsburgh, PA), **The Kinetics of Ferrite Nucleation at Austenite Grain Boundaries in Fe-C Alloys**, *Metallurgical Transactions* **19A**, No. 3, 427-440 (1988).

S. E. Laux, D. J. Frank, and F. Stern (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Quasi One-Dimensional Electron State in a Split-Gate GaAs/AlGaAs Heterostructure**, *Surface Science* **196**, Nos. 1-3, 101-106 (1988).

F. K. LeGoues (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **The Microstructure of $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ Thin Films on SrTiO_3 Substrate**, *Philosophical Magazine B* **57**, No. 2, 167-177 (1988).

J. A. Kash and J. C. Tsang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Secondary Emission Studies of Hot Carrier Relaxation in Polar Semiconductors**, *Solid State Electronics* **31**, No. 3/4, 419-424 (1988).

P. Kasiraj, D. E. Horne, and J. S. Best (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **A Method for the Magneto-Optic Imaging of Magnetization Time Evolution in Thin Films**, *IEEE Transactions on Magnetics* **MAG-23**, No. 5, Part I, 2161-2163 (1987).

R. Kawai (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and M. Kawai (Waseda University, Tokyo, Japan), **Theory of the Low-Energy Surface Okorokov Excitation for Studying Excited States of Atoms in Collision with Surfaces**, *Surface Science* **195**, No. 3, 535-556 (1988).

E. Kaxiras (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and E. Manousakis (Florida State University, Tallahassee), **Ground State of the Strong-Coupling Hubbard Hamiltonian: A Numerical Diagonalization Study**, *Physical Review B* **37**, No. 1, 656-658 (1988).

R. D. Kendrick and C. S. Yannoni (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **High-Power ^1H - ^{19}F Excitation in a Multiple-Resonance Single-Coil Circuit**, *Journal of Magnetic Resonance* **75**, No. 3, 506-508 (1987).

R. B. King (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Elastic Analysis of Some Punch Problems for a Layered Medium**, *International Journal of Solids and Structures* **23**, No. 12, 1657-1664 (1988).

A. Kloczkowski, G. R. Luckhurst (University of Southampton, Southampton SO9 5NH, Hants, England), G. R. Luckhurst, and R. W. Phippen (IBM United Kingdom, Winchester), **A Visual Representation for the Shapes of Flexible Mesogenic Molecules**, *Liquid Crystals* **3**, No. 2, 185-194 (1988).

T. T. Kodas, T. H. Baum, and P. B. Comita (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Gold Crystal Growth by Photothermal Laser-Induced Chemical Vapor Deposition**, *Journal of Crystal Growth* **87**, No. 2/3, 378-382 (1988).

S. H. Koenig, M. Spiller, R. D. Brown III (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and G. L. Wolf (Pittsburgh NMR Institute, Pittsburgh, PA), **Investigation of the Biochemical State of Paramagnetic Ions In Vivo Using the Magnetic Field Dependence of $1/T_1$ of Tissue Protons (NMRD Profile), Applications to Contrast Agents for Magnetic Resonance Imaging**, *Nuclear Medicine and Biology* **15**, No. 1, 23-29 (1988).

R. Koepcke (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Smoother Periodic Data**, *Journal of Dynamic Systems, Measurements and Control* **110**, No. 1, 107-108 (1988).

R. E. Koon (IBM Corporation, Highway 52 & NW 37 Street, Rochester, MN 55901), **The Channel Design Decision, A Model and an Application**, *Market Science* **6**, No. 2, 177-178 (1987).

H. W. P. Koops, R. Weiel, D. P. Kern (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and T. H. Baum (IBM, San Jose, CA), **High-Resolution Electron-Beam Induced Deposition**, *Journal of Vacuum Science and Technology B* **6**, No. 1, 417-481 (1988).

S. P. Kowalczyk, Y. H. Kim, G. F. Walker, and J. Kim (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Polyimide on Copper: The Role of Solvent in the Formation of Copper Precipitates**, *Applied Physics Letters* **52**, No. 5, 375-376 (1988).

W. Krakow and T. M. Shaw (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Evaluation of High-Resolution Electron Microscopy as a Method for Studying Y-Ba-Cu-O Superconductors**, *Journal of Electron Microscopy Technique* **8**, No. 3, 273-284 (1988).

J. Kübler, K.-H. Höck, J. Sticht (Technische Hochschule Darmstadt, D-6100 Darmstadt, Federal Republic of Germany), and A. R. Williams (IBM, Yorktown Heights, NY), **Density Functional Theory of Non-Collinear Magnetism**, *Journal of Physics F* **18**, No. 3, 469-483 (1988).

K. S. Kundert (Hewlett-Packard, Santa Rosa, CA 95404), G. B. Sorkin (IBM, Yorktown Heights, NY), and A. Sangiovanni-Vincentelli (University of California, Berkeley, CA 94720), **Applying Harmonic Balance to Almost-Periodic Circuits**, *IEEE Transactions on Microwave Theory and Techniques* **36**, No. 2, 366-378 (1988).

K. Kunitatsu, M. G. Samant, H. Seki, and M. R. Philpott (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **A Study of HSO_4^- and SO_4^{2-} Co-Adsorption on a Platinum Electrode in Sulfuric Acid by In-situ FT-IR Reflection Absorption Spectroscopy**, *Journal of Electroanalytical Chemistry and Interfacial Electrochemistry* **243**, No. 1, 203-208 (1988).

L

R. B. Laibowitz, R. H. Koch, P. Chaudhari, and R. J. Gambino (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Fabrication and Properties of Thin Superconducting Oxide Films**, *Physica B+C* **148**, Nos. 1-3, 182-184 (1987).

S. E. Lambert, I. L. Sanders, A. M. Patlach, and M. T. Krounbi (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Recording Characteristics of Submicron Discrete Magnetic Tracks**, *IEEE Transactions on Magnetics* **MAG-23**, No. 5, Part II, 3690-3692 (1987).

R. Landauer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Computation: A Fundamental Physical View**, *Speculations in Science and Technology* **10**, No. 4, 292-302 (1987).

W. F. Lange III (IBM Corporation, P.O. Box 1900, Boulder, CO 80302), M. Enomoto (National Research Institute of Metals, Ibaraki, Japan), and H. I. Aaronson (Carnegie Mellon University, Pittsburgh, PA), **The Kinetics of Ferrite Nucleation at Austenite Grain Boundaries in Fe-C Alloys**, *Metallurgical Transactions* **19A**, No. 3, 427-440 (1988).

S. E. Laux, D. J. Frank, and F. Stern (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Quasi One-Dimensional Electron State in a Split-Gate GaAs/AlGaAs Heterostructure**, *Surface Science* **196**, Nos. 1-3, 101-106 (1988).

F. K. LeGoues (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **The Microstructure of $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ Thin Films on SrTiO_3 Substrate**, *Philosophical Magazine B* **57**, No. 2, 167-177 (1988).

F. K. LeGoues, M. Liehr, M. Renier, and W. Krakow (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Microstructure of Epitaxial Ag/Si(111) and Ag/Si(100) Interfaces**, *Philosophical Magazine B* **57**, No. 2, 179-189 (1988).

L. Lerer (Technion-Israel Institute of Technology, 32000 Haifa, Israel) and M. Tismenetsky (IBM, Haifa, Israel), **Generalized Bezoutian and Matrix Equations**, *Linear Algebra and Its Applications* **99**, 123-160 (1988).

R. Linsker (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Self-Organization in a Perceptual Network**, *Computer* **21**, No. 3, 105-117 (1988).

J. Lo, C. Hwang, T. C. Huang, and R. Campbell (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Near-Zero Magnetostriction NiFe Films Deposited by Ion Beam Sputtering**, *IEEE Transactions on Magnetics* **MAG-23**, No. 5, Part II, 3065-3067 (1987).

S. H. Lu, Z. Q. Wang, S. C. Wu, C. K. C. Lok, J. Quinn, Y. S. Li, D. Tian, F. Jona (State University of New York, Stony Brook, NY 11794), and P. M. Marcus (IBM, Yorktown Heights, NY), **Structure and Electronic Properties of a Surface Alloy of Pd and Cu on Cu(001)**, *Physical Review B* **37**, No. 8, 4296-4298 (1988).

P. Lustenberger, H. Rohrer (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), R. Christoph, and H. Siegenthaler (Universität Bern, Switzerland), **Scanning Tunneling Microscopy at Potential Controlled Electrode Surfaces in Electrolytic Environment**, *Journal of Electroanalytical Chemistry and Interfacial Electrochemistry* **243**, No. 1, 225-235 (1988).

R. T. Lynch (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Modeling the Performance of Optical-Recording Read Channels**, *Applied Optics* **27**, No. 4, 723-727 (1988).

C. Lyons and W. Moreau (IBM Corporation, Hopewell Junction, NY 12533), **Aqueous Processable Portable Conformable Mask (PCM) for Submicron Lithography**, *Journal of the Electrochemical Society* **135**, No. 1, 193-197 (1988).

M

E. V. MacDonald (IBM United Kingdom Ltd., Portsmouth PO6 3AU, England) and G. M. Cochrane (University of Southampton, England), **The Occupational Physicians' View**, *Baillieres Clinical Rheumatology* **1**, No. 3, 623-644 (1987).

R. M. Macfarlane (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **A Study of Excited State Dynamics of Rare Earth Ions in Solids by Coherent Transients and Spectral Holeburning**, *Journal of Luminescence* **40 & 41**, 3-6 (1988).

R. M. Macfarlane and J.-C. Vial (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Spectral Holeburning by Population Storage in Metastable Zeeman and Optical Sublevels of the ND³⁺ Ion**, *Journal of Luminescence* **40 & 41**, 505-506 (1988).

H. Maletta (Institut für Festkörperforschung, KFA, 5170 Jülich, Federal Republic of Germany), M. W. Shafer, T. Penney, B. L. Olson, A. M. Torressen, and R. L. Greene (IBM, Yorktown Heights, NY), **Antiferromagnetic Correlations and Superconductivity in the La₂CuO₄ Class of Oxides**, *Physica B+C* **148**, Nos. 1-3, 233-236 (1987).

O. A. Mantilla and H. A. McLain (IBM Corporation, 1701 North Street, Endicott, NY 13760), **High-Speed Input/Output Device for Controlled Atmospheres**, *Journal of Vacuum Science and Technology A* **6**, No. 1, 169-171 (1988).

E. E. Marinero, D. C. Miller, A. E. Bell, A. Gupta, R. N. Payne, and H. Notarys (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Oxidation Induced Magnetic and Structural Changes in Magneto-Optical Alloys**, *IEEE Transactions on Magnetics* **MAG-23**, No. 5, Part I, 2629-2631 (1987).

A. Marmur (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Penetration of a Small Drop into a Capillary**, *Journal of Colloid and Interface Science* **122**, No. 1, 209-219 (1988).

W. T. Masselink, N. Braslau, D. LaTulipe, W. I. Wang, and S. L. Wright (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Electron Velocity at High Electric Fields in AlGa/GaAs Modulation-Doped Heterostructures**, *Solid State Electronics* **31**, No. 3/4, 337-340 (1988).

M. J. Matthewson (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Adhesion of Spheres by Thin Liquid Films**, *Philosophical Magazine A* **57**, No. 2, 207-216 (1988).

T. W. McDaniel (IBM Corporation, Tucson, AZ 85744) and M. Mansuripur (Boston University, MA), **Numerical Simulation of Thermomagnetic Writing in RE-TM Films**, *IEEE Transactions on Magnetics* **MAG-23**, No. 5, Part II, 2943-2945 (1987).

T. R. McGuire and R. J. Gambino (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Faraday Rotation in Ternary Nd-Co-Fe Amorphous Films**, *IEEE Transactions on Magnetics* **MAG-23**, No. 5, Part II, 3211-3213 (1987).

C. M. Melas, P. Arnett, I. Beardsley (IBM Corporation, 650 Harry Road, San Jose, CA 95120), and D. Palmer (IBM, Rochester, MN), **Nonlinear Superposition in Saturation Recording of Disk Media**, *IEEE Transactions on Magnetics* **MAG-23**, No. 5, Part I, 2079-2081 (1987).

E. E. Mendez (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Resonant Tunneling in Semiconductor Heterostructures**, *Journal de Physique* **48**, No. C5, 423-430 (1987).

C. Mendoza (IBM Venezuela, P.O. Box 388, Caracas 1010A, Venezuela) and C. J. Zeippen (Observatoire de Paris, Meudon, France), **Photoionisation Cross Sections of the Ground States of Neutral Si, P and S**, *Journal of Physics B* **21**, No. 2, 259-266 (1988).

S. M. Metwalli, A. R. Ragab, A. H. Kamel (Kuwait University, P.O. Box 5969, Safat 13060, Kuwait), and A. A. Saheb (IBM Kuwait, Safat), **Determination of Plastic Stress-Strain Behavior by Digital Image Processing Techniques**, *Experimental Mechanics* **27**, No. 4, 414-422 (1987).

T. C. Moore, C. O. Britt (University of Texas, Austin, TX 78712), and C. G. Wade (IBM Instruments, San Jose, CA), **Power Efficient Double-Resonance NMR Probe for Electromagnets**, *Review of Scientific Instruments* **59**, No. 1, 159-162 (1988).

J. F. Morar and M. Wittmer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Metallic CaSi, Epitaxial Films on Si**, *Physical Review B* **37**, No. 5, 2618-2621 (1988).

I. Morgenstern and D. Würtz (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **Monte Carlo Simulations for Two-Dimensional Quantum Systems**, *Zeitschrift für Physik B* 70, No. 1, 115-120 (1988).

V. L. Moruzzi, J. F. Janak (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and K. Schwarz (Technical University of Vienna, Austria), **Calculated Thermal Properties of Metals**, *Physical Review B* 37, No. 2, 790-799 (1988).

K. A. Müller, K. W. Blazey, J. G. Bednorz, and M. Takashige (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **Superconducting Glassy State in High- T_c Oxides**, *Physica B+C* 148, No. 1-3, 149-154 (1987).

G. P. Mulligan (IBM Corporation, 1701 North Street, Endicott, NY 13760), **On Nonlinear Temperature Dependence of Thermal Strain**, *Communications in Applied Numerical Methods* 4, No. 2, 157-160 (1988).

H. Munekata, T. P. Smith III, F. F. Fang, L. Esaki, and L. L. Chang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Electrons and Holes in InAs-Ga(Al)Sb(As) Quantum Wells**, *Journal de Physique* 48, No. C5, 151-154 (1987).

N

M. I. Nathan (University of Minnesota, Minneapolis, MN 55455), W. P. Dumke (IBM, Yorktown Heights, NY), K. Wrenner (Cornell University, Ithaca, NY), S. Tiwari, S. L. Wright, and K. A. Jenkins (IBM, Yorktown Heights, NY), **Electron Mobility in p-Type GaAs**, *Applied Physics Letters* 52, No. 8, 654-656 (1988).

J. S. Nelson, C. Y. Fong (University of California, Davis, CA 95616), L. Guttman (Argonne National Laboratory, Argonne, IL), and I. P. Batra (IBM, San Jose, CA), **Effects on Vibrational and Electronic Properties of Removing Hydrogen Atoms in Hydrogenated Amorphous Silicon**, *Physical Review B* 37, No. 5, 2622-2629 (1988).

Ch. Neumann, A. Nöthe (Universität Dortmund, Postfach 50 05 00, D-4600 Dortmund 50, Federal Republic of Germany), and N. O. Lipari (IBM, Yorktown Heights, NY), **Two-Photon Magnetoabsorption of ZnTe, CdTe, and GaAs**, *Physical Review B* 37, No. 2, 922-932 (1988).

A. R. Neureuther (University of California, Berkeley, CA 94720) and C. G. Willson (IBM, San Jose, CA), **Reduction in X-Ray Lithography Shot Noise Exposure Limit by Dissolution Phenomena**, *Journal of Vacuum Science and Technology B* 6, No. 1, 167-173 (1988).

D. M. Newns (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and N. Read (Massachusetts Institute of Technology, Cambridge), **Mean-Field Theory of Intermediate Valence/Heavy Fermion Systems**, *Advances in Physics* 36, No. 6, 799-849 (1987).

D. Nix (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Should Computers Know What You Can Do With Them?**, *Teachers College Record* 89, No. 3, 418-430 (1988).

V. Novotny, G. Itzyne, A. Homola, and L. Franco (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Corrosion of Thin Film Cobalt Based Magnetic Recording Media**, *IEEE Transactions on Magnetics* MAG-23, No. 5, Part II, 3645-3647 (1987).

I. C. Noyan (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Plastic Deformation of Solid Spheres**, *Philosophical Magazine A* 57, No. 1, 127-141 (1988).

L. Nunnally, R. D. Harper, and M. Burleson (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), **Time Domain Noise-Induced Jitter: Theory and Precise Measurement**, *IEEE Transactions on Magnetics* MAG-23, No. 5, Part I, 2383-2385 (1987).

O

G. S. Oehrlein (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Capacitance-Voltage Properties of Thin Ta₂O₅ Films on Silicon**, *Thin Solid Films* 156, No. 2, 207-299 (1988).

G. S. Oehrlein, G. J. Scilla, and S.-J. Jeng (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Efficiency of Oxygen Plasma Cleaning of Reactive Ion Damaged Silicon Surfaces**, *Applied Physics Letters* 52, No. 11, 907-909 (1988).

H. L. Ong (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Electro-Optical Properties of Guest-Host Nematic Liquid-Crystal Displays**, *Journal of Applied Physics* 63, No. 4, 1247-1249 (1988).

Y. Ouchi, H. Takano, H. Takezoe (Tokyo Institute of Technology, 2-12-1 Okayama, Meguro-ku, Tokyo 152, Japan), and A. Fukuda (IBM Japan, Tokyo), **Zig-zag Defects and Disclinations in the Surface Stabilized Ferroelectric Liquid Crystals**, *Japanese Journal of Applied Physics* 27, No. 1, 1-7 (1988).

P

J. Pacansky, R. J. Waltman, H. Coufal, and R. Cox (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **New Methods for Preparing Organic Layered Photoconductors**, *Radiation Physics and Chemistry C* 31, Nos. 4-6, 853-875 (1988).

D. Palmer, P. Ziperovich (IBM Corporation, Rochester, MN 55901), R. Wood, and T. D. Howell (IBM, San Jose, CA), **Identification of Nonlinear Write Effects Using Pseudorandom Sequences**, *IEEE Transactions on Magnetics* MAG-23, No. 5, Part I, 2377-2379 (1987).

S. T. Pantelides, W. A. Harrison, and F. Yndurain (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Pseudo-Jahn-Teller Effect and Chemical Rebonding: Two Distinct Physical Phenomena**, *Physical Review B* 37, No. 2, 1016-1018 (1988).

S. I. Park, C. C. Tsuei, and K. N. Tu (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Effect of Oxygen Deficiency on the Normal and Superconducting Properties of YBa₂Cu₃O_{7- δ}** , *Physical Review B* 37, No. 4, 2305-2308 (1988).

S. S. P. Parkin, E. M. Engler, V. Y. Lee, and R. B. Beyers (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Dependence of Magnetic Properties of Pellets of Nominal Composition YBa₂Cu₃O_{7- δ} on Processing Conditions**, *Physical Review B* 37, No. 1, 131-136 (1988).

W. Parrish (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and M. Hart (The University, Manchester, United Kingdom), **Advantages of Synchrotron Radiation for Polycrystalline Diffractometry**, *Zeitschrift für Kristallographie* 179, No. 1/4, 161-173 (1987).

G. L. Patton, S. S. Iyer, S. L. Delage, S. Tiwari, and J. M. C. Stork (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Silicon-Germanium-Base Heterojunction Bipolar Transistors by Molecular Beam Epitaxy**, *IEEE Electron Device Letters* **9**, No. 4, 165-167 (1988).

L. C. Percival and T. K. Noonan (IBM Corporation, P.O. Box 12195, Research Triangle Park, NC 27709), **Computer Network Operation: Applicability of the Vigilance Paradigm to Key Tasks**, *Human Factors* **29**, No. 6, 685-694 (1987).

M. R. Philpott, P. S. Bagus, C. J. Nelin, and H. Seki (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Vibrational and Electronic Properties of Cyanide Adsorbed on Metal Electrodes**, *Journal of Electron Spectroscopy and Related Phenomena* **45**, 169-175 (1987).

C. A. Pickover (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Pattern Formation and Chaos in Networks**, *Communications of the ACM* **31**, No. 2, 136-151 (1988).

J. J. Pireaux, M. Vermeersch, C. Grégoire, P. A. Thiry, R. Caudano (Facultés Universitaires Notre Dame de la Paix, Rue Bruxelles 61, B-5000 Namur, Belgium), and T. C. Clarke (IBM, San Jose, CA), **The Aluminum-Polyimide Interface: An Electron-Induced Vibrational Spectroscopy Approach**, *Journal of Chemical Physics* **88**, No. 5, 3353-3362 (1988).

M. Plischke (Simon Fraser University, Burnaby, B.C. V5A 1S6, Canada) and D. Henderson (IBM, San Jose, CA), **Pair Correlation Functions and Density Profiles in the Primitive Model of the Electric Double Layer**, *Journal of Chemical Physics* **88**, No. 4, 2712-2718 (1988).

D. W. Pohl (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **STM: Tip of an Iceberg**, *Ultramicroscopy* **24**, No. 1, 74 (1988).

A. M. Portis (University of California, Berkeley, CA 94720), K. W. Blazey, K. A. Müller, and J. G. Bednorz (IBM, Rüschlikon, Switzerland), **Microwave Magneto-Surface Impedance of High- T_c Superconductors**, *Europhysics Letters* **5**, No. 5, 467-472 (1988).

S. E. Pratsinis (University of Cincinnati, Cincinnati, OH 45221), T. T. Kodas (IBM, San Jose, CA), and A. Sood (ALCOA Laboratories, Alcoa Center, PA), **Design of Laminar Flow Condensers for Production of Monodisperse Aerosols**, *Industrial & Engineering Chemistry Research* **27**, No. 1, 105-110 (1988).

P. J. Price (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Tunneling in AlGaAs by Γ -X Scattering**, *Surface Science* **196**, Nos. 1-3, 394-398 (1988).

R

H. Rarback, D. Shu, S. C. Feng (Brookhaven National Laboratory, Upton, NY 11973), H. Ade, J. Kirz, I. McNulty (State University of New York, Stony Brook), D. P. Kern, T. H. P. Chang, Y. Vladimirovsky (IBM, Yorktown Heights, NY), N. Iskander, D. Attwood, K. McQuaid, and S. Rothman (Lawrence Berkeley Laboratory, Berkeley, CA), **Scanning X-Ray Microscope with 75-nm Resolution**, *Review of Scientific Instruments* **59**, No. 1, 52-59 (1988).

L. Ray, G. W. Hoffmann, M. L. Barlett, J. D. Lumpe (University of Texas, Austin, TX 78712), B. C. Clark (Ohio State University, Columbus), S. Hama (University of Alberta, Edmonton, Canada), and R. L. Mercer (IBM, Yorktown Heights, NY), **Relativistic Impulse Approximation Description of Polarized Proton Elastic Scattering from Polarized ^{13}C** , *Physical Review C* **37**, No. 3, 1169-1182 (1988).

C. T. Rettner and D. J. Auerbach (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Molecular Beam Studies of Vibrational Energy Transfer and Vibrational Activation in Molecule-Surface Collisions**, *Journal of Electron Spectroscopy and Related Phenomena* **45**, 335-350 (1987).

B. Riccò, P. Olivo (Università di Bologna, Viale Risorgimento 2, 40136 Bologna, Italy), T. N. Nguyen, T.-S. Kuan (IBM, Yorktown Heights, NY), and G. Ferriani (Arthur Andersen & Company, Bologna, Italy), **Oxide-Thickness Determination in Thin-Insulator MOS Structures**, *IEEE Transactions on Electron Devices* **35**, No. 4, 432-438 (1988).

P. G. Rickerl, J. G. Stephanie, and P. Slota, Jr. (IBM Corporation, 1701 North Street, Endicott, NY 13760), **Processing of Photosensitive Polyimides for Packaging Applications**, *IEEE Transactions on Components, Hybrids, and Manufacturing Technology* **CHMT-10**, No. 4, 690-694 (1987).

S. A. Rishton, H. Schmid, D. P. Kern, H. E. Luhn, T. H. P. Chang, G. A. Sai-Halasz, M. R. Wordeman, E. Ganin, and M. Polcari (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Lithography for Ultrashort Channel Silicon Field Effect Transistor Circuits**, *Journal of Vacuum Science and Technology B* **6**, No. 1, 140-145 (1988).

W. P. Risk, J.-C. Baumert, G. C. Bjorklund, F. M. Schellenberg, and W. Lenth (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Generation of Blue Light by Intracavity Frequency Mixing of the Laser and Pump Radiation of a Miniature Neodymium:Yttrium Aluminum Garnet Laser**, *Applied Physics Letters* **52**, No. 2, 85-87 (1988).

G. Robinson (IBM United Kingdom Ltd., Hursley Park, Winchester SO21 2JN, Hampshire, United Kingdom), **Technology: Promise and Paradox**, *Speculations in Science and Technology* **10**, No. 4, 286-291 (1987).

S. M. Rosnagel (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Gas Density Reduction Effects in Magnetrons**, *Journal of Vacuum Science and Technology A* **6**, No. 1, 19-24 (1988).

D. Rugar, C.-J. Lin, and R. Geiss (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Submicron Domains for High Density Magneto-Optic Data Storage**, *IEEE Transactions on Magnetics* **MAG-23**, No. 5, Part I, 2263-2265 (1987).

S

M. G. Samant, M. F. Toney, G. L. Borges (IBM Corporation, 650 Harry Road, San Jose, CA 95120), L. Blum (College of Natural Sciences, Rio Piedras, PR), and O. R. Melroy (IBM, San Jose, CA), **Grazing Incidence X-Ray Diffraction on Lead Monolayers at a Silver (111) and Gold (111) Electrode/Electrolyte Interface**, *Journal of Physical Chemistry* **92**, No. 1, 220-225 (1988).

- M. A. Sanborn (IBM Corporation, P.O. Box 390, Poughkeepsie, NY 12602), **Facilities & Material Handling Systems Series: Part 10, Computer Control Strategy for a Flexibly Automated Conveyor System**, *Industrial Engineering* **20**, No. 2, 48-53 (1988).
- P. Santhanam, C. C. Chi, and W. W. Molzen (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Flux Quantization in Periodic Networks Containing Tiles with Irrational Ratio of Areas**, *Physical Review B* **37**, No. 4, 2360-2363 (1988).
- D. D. Saperstein (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Perturbation of the Infrared Absorption Spectra of Aromatic Adsorbates in Microporous Carbons by the Christiansen Effect**, *Journal of Physical Chemistry* **91**, No. 27, 6659-6666 (1987).
- J. Savir and W. H. McAnney (IBM Corporation, P.O. Box 390, Poughkeepsie, NY 12602), **Random Pattern Testability of Delay Faults**, *IEEE Transactions on Computers* **37**, No. 3, 291-300 (1988).
- M. Schärli, H. Kiess, G. Harbecke (RCA Laboratories Ltd., Badenerstrasse 569, CH-8049 Zürich, Switzerland), W. Berlinger, K. W. Blazey, and K. A. Müller (IBM, Rüschlikon, Switzerland), **E. S. R. of BF_4^- Doped Polythiophene**, *Synthetic Metals* **22**, No. 4, 317-336 (1988).
- H. Schmid, S. A. Rishton, D. P. Kern, S. Washburn, R. A. Webb, A. Kleinsasser, T. H. P. Chang, and A. Fowler (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Fabrication of Quantum Devices in Metals and Semiconductors**, *Journal of Vacuum Science and Technology B* **6**, No. 1, 122-126 (1988).
- T. Schneider, A. Politi, and M. P. Sorensen (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **Diffusion of a One-Dimensional Lattice and Quantum Localization**, *Physical Review A* **37**, No. 3, 948-959 (1988).
- J. Schneir, R. Sonnenfeld, O. Marti, P. K. Hansma (University of California, Santa Barbara, CA 93106), J. E. Demuth, and R. J. Hamers (IBM, Yorktown Heights, NY), **Tunneling Microscopy, Lithography, and Surface Diffusion on an Easily Prepared, Atomically Flat Gold Surface**, *Journal of Applied Physics* **63**, No. 3, 717-721 (1988).
- D. E. Seeger and M. G. Rosenfield (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Clearing Resist from Alignment Mark Areas Using an Excimer Laser**, *Journal of Vacuum Science and Technology B* **6**, No. 1, 399-402 (1988).
- B. V. Shanabrook, O. J. Glembocki, D. A. Broido (Naval Research Laboratory, Washington, DC 20375), L. Viña, and W. I. Wang (IBM, Yorktown Heights, NY), **Optical Properties of GaAs/AlGaAs Multiple Quantum Wells Grown in the [111] Crystallographic Direction**, *Journal de Physique* **48**, No. C5, 235-238 (1987).
- R. M. Shelby, M. D. Levenson, and S. H. Perlmutter (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Bistability and Other Effects in a Nonlinear Fiber-Optic Ring Resonator**, *Journal of the Optical Society B* **5**, No. 2, 347-357 (1988).
- K. K. Shih, A. Aviram, and C. R. Guarnieri (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Preparation and Properties of Resistive Films**, *Thin Solid Films* **157**, No. 1, 21-27 (1988).
- B. D. Shriver (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Artificial Neural System**, *Computer* **21**, No. 3, 8-9 (1988).
- M. Shub (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), D. Tischler (Northwestern University, Evanston, IL), and R. F. Williams (City University of New York, Flushing), **The Newtonian Graph of a Complex Polynomial**, *SIAM Journal of Mathematical Analysis* **19**, No. 1, 246-256 (1988).
- M. Sidi and I. Cidon (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **A Multi-Station Packet-Radio Network**, *Performance Evaluation* **8**, No. 1, 65-72 (1988).
- P. Simon, F. Gervais (National Center of Scientific Research, F-45071 Orleans 2, France), and E. Courtens (IBM, Rüschlikon, Switzerland), **Paraelectric Ferroelectric Phase Transitions of KH_2PO_4 and KH_2AsO_4 Studied by Infrared Reflectivity**, *Physical Review B* **37**, No. 4, 1969-1979 (1988).
- A. Skumanich (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and N. M. Amer (IBM, Yorktown Heights, NY), **Light-Induced Defects in Hydrogenated Amorphous Silicon Alloys**, *Applied Physics Letters* **52**, No. 8, 643-644 (1988).
- T. P. Smith III and F. F. Fang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Upper-Subband Transport in GaAs Heterostructures**, *Physical Review B* **37**, No. 8, 4303-4305 (1988).
- T. P. Smith III, H. Mune-kata, L. L. Chang, F. F. Fang, and L. Esaki (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Magnetic-Field-Induced Transitions in $\text{InAs}/\text{Ga}_{1-x}\text{Al}_x\text{Sb}$ Heterostructures**, *Surface Science* **196**, Nos. 1-3, 687-693 (1988).
- T. P. Smith III, W. I. Wang, F. F. Fang, L. L. Chang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), T. Pham, and H. D. Drew (University of Maryland, College Park), **Magnetotransport and Cyclotron Resonance in AlAs Quantum Wells**, *Surface Science* **196**, Nos. 1-3, 287-292 (1988).
- R. W. Snyder and C. W. Sheen (IBM Corporation, 1701 North Street, Endicott, NY 13760), **FT-IR Analysis of High-Temperature Solid-Phase Reactions Using GC-IR Software**, *Applied Spectroscopy* **42**, No. 2, 296-298 (1988).
- R. Sobolewski (University of Rochester, Rochester, NY 14627), D. R. Dykaar, T. Y. Hsiang, C. Vanneste, and C. C. Chi (IBM, Yorktown Heights, NY), **Chaos in Pulse-Driven Josephson Junctions**, *Physical Review B* **37**, No. 7, 3778-3781 (1988).
- S. A. Solin, N. Garcia (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), S. Vieira, and M. Hortal (Universidad Autónoma de Madrid, Spain), **Field-Induced Orientation of Nonlevitated Microcrystals of Superconducting $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$** , *Physical Review Letters* **60**, No. 8, 744-747 (1988).
- V. S. Speriosu, S. S. P. Parkin (IBM Corporation, 650 Harry Road, San Jose, CA 95120), and C. H. Wilts (California Institute of Technology, Pasadena), **Standing Spinwaves in $\text{FeMn}/\text{NiFe}/\text{FeMn}$ Exchange-Bias Structures**, *IEEE Transactions on Magnetics* **MAG-23**, No. 5, Part II, 2999-3001 (1987).

P. Srinivasan and A. P. Ghosh (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Ablation of Liquid Benzene by Pulsed Ultraviolet (248 or 308 nm) Laser Radiation**, *Chemical Physics Letters* **143**, No. 6, 546-550 (1988).

R. Srinivasan (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Mechanism of Ultraviolet Laser Ablation of Organic Solids**, *Physical Review Letters* **60**, No. 4, 381 (1988).

J. A. Stefani, J. K. Tien (Columbia University, New York, NY 10027), K. S. Choe (IBM, Hopewell Junction, NY), and J. P. Wallace (Casting Analysis Corporation, Weyers Cave, VA), **Eddy Current Monitoring System and Data Reduction Protocol for Czochralski Silicon Crystal Growth**, *Journal of Crystal Growth* **88**, No. 1, 30-38 (1988).

S. Succi (IBM European Center for Scientific and Engineering Computing, Via Giorgione 159, 00147 Rome, Italy), **Cellular Automata Modeling of IBM 3090/VF**, *Computer Physics Communications* **47**, Nos. 2 & 3, 173-180 (1987).

S. Succi (IBM European Center for Scientific and Engineering Computation, Via Giorgione 159, 00147 Rome, Italy), **Triangular Versus Square Lattice Gas Automata for Analysis of Two-Dimensional Vortex Fields**, *Journal of Physics A* **21**, No. 1, L43-L49 (1988).

A. J. Symonds (IBM Corporation, P.O. Box 390, Poughkeepsie, NY 12602), **Creating a Software-Engineering Knowledge Base**, *IEEE Software* **5**, No. 2, 50-56 (1988).

T

H. Takagi and M. Murata (IBM Japan Ltd., No. 36 Kowa Building, 5-19 Sanban-cho, Chiyoda-Ku, Tokyo 102, Japan), **Output Processes of Slotted Persistent CSMA and CSMA/CD Systems**, *Computer Networks and ISDN Systems* **13**, Nos. 4 & 5, 333-346 (1987).

D. D. Tang and C.-T. Chuang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **A Circuit Concept for Reducing Soft Error in High-Speed Memory Cells**, *IEEE Journal of Solid-State Circuits* **23**, No. 1, 201-203 (1988).

Y.-S. Tang (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and L. Osse (State University of Groningen, The Netherlands), **Zig-zag Domains and Metal Film Disk Noise**, *IEEE Transactions on Magnetics* **MAG-23**, No. 5, Part 1, 2371-2373 (1987).

M. Tanimoto (Nagoya University, Nagoya, 464, Japan), N. Chiba (Sony Corporation, Atsugi, Japan), H. Yasui (NEC Corporation, Kawasaki, Japan), and M. Murakami (IBM, Fujisawa, Japan), **TAT (Time-Axis Transform) Bandwidth Compression System of Picture Signals**, *IEEE Transactions on Communications* **36**, No. 3, 347-354 (1988).

M. Tatham, R. A. Taylor, J. F. Ryan (Claredon Laboratory, Parks Road, Oxford, OX1 3PU, United Kingdom), W. I. Wang (IBM, Yorktown Heights, NY), and C. T. Foxon (Philips Research Laboratories, Redhill, United Kingdom), **Energy Relaxation in p- and n-GaAs Quantum Wells: Confinement Effects**, *Solid State Electronics* **31**, No. 3/4, 459-462 (1988).

M. A. Taubenblatt (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Photothermal Absorption Microprobe Infrared Spectroscopy of a Single 1- μ m Organic Particle**, *Applied Physics Letters* **52**, No. 12, 951-953 (1988).

T. N. Theis, P. M. Mooney, and S. L. Wright (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Electron Localization by a Metastable Donor Level in n-GaAs: A New Mechanism Limiting the Free-Carrier Density**, *Physical Review Letters* **60**, No. 4, 361-364 (1988).

S. Tiwari (IBM Corporation, P. O. Box 218, Yorktown Heights, NY 10598), **A New Effect at High Currents in Heterostructure Bipolar Transistors**, *IEEE Electron Device Letters* **9**, No. 3, 142-144 (1988).

S. Tiwari and D. J. Frank (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Barrier and Recombination Effects in the Base-Emitter Junction of Heterostructure Bipolar Transistors**, *Applied Physics Letters* **52**, No. 12, 993-995 (1988).

J. B. Torrance, Y. Tokura, A. Nazzari, and S. S. P. Parkin (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Metallic, but Not Superconducting, La-Ba (and La-Sr) Copper Oxides**, *Physical Review Letters* **60**, No. 6, 542-545 (1988).

U

C. P. Umbach, A. N. Broers, C. G. Williams, R. Koch, and R. B. Laibowitz (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Nanolithography with an Acid Catalyzed Resist**, *Journal of Vacuum Science and Technology B* **6**, No. 1, 319-322 (1988).

C. Urdaneta, A. Largo-Cabrero, J. Lievin, G. C. Lie, and E. Clementi (IBM Corporation, Neighborhood Road, Kingston, NY 12401), **Gaussian Functions in Hylleraas-Cl Calculations I. Ground State Energies for H_2 , HeH^+ , and H_3^+** , *Journal of Chemical Physics* **88**, No. 3, 2091-2093 (1988).

V

M. F. Vallat, D. J. Plazek (University of Pittsburgh, Pittsburgh, PA 15261), and B. Bhushan (IBM, San Jose, CA), **Effects of Thermal Treatment of Biaxially Oriented Poly(ethylene terephthalate). III. Creep Behavior Following Various Thermal Histories**, *Journal of Polymer Science B* **26**, No. 3, 555-567 (1988).

C. G. Van de Walle (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and R. M. Martin (Xerox Palo Alto Research Center, CA), **Comment on "Heterojunction Valence-Band-Discontinuity Dependence of Face Orientation"**, *Physical Review B* **37**, No. 9, 4801-4802 (1988).

M. Y. Vardi (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **The Universal-Relation Data Model for Logical Independence**, *IEEE Software* **5**, No. 2, 80-85 (1988).

H. O. Villar, M. Dupuis, and E. Clementi (IBM Corporation, Neighborhood Road, Kingston, NY 12401), **Ab initio Study of Charged Polyenes as Charge-Carrier Models in Conducting Polymers**, *Physical Review B* **37**, No. 5, 2520-2528 (1988).

H. O. Villar, M. Dupuis, and E. Clementi (IBM Corporation, Neighborhood Road, Kingston, NY 12401), **Defects in Doped Polyacetylene: An ab initio Infrared and Raman Spectroscopy of Solitons**, *Journal of Chemical Physics* **88**, No. 4, 2859-2860 (1988).

H. O. Villar, M. Dupuis, J. D. Watts, G. J. B. Hurst, and E. Clementi (IBM Corporation, Neighborhood Road, Kingston, NY 12401), **Structure, Vibrational Spectra, and IR Intensities of Polyenes from *Ab Initio* SCF Calculations**, *Journal of Chemical Physics* **88**, No. 2, 1003-1009 (1988).

L. Viña (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Spectroscopic Studies of Excitonic Fine Structure Under Electric Fields**, *Surface Science* **196**, Nos. 1-3, 569-577 (1988).

L. Viña, L. L. Chang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and J. Yoshino (Tokyo Institute of Technology, Japan), **Raman Scattering and Excitation Spectroscopy in CdTe/CdMnTe Superlattices**, *Journal de Physique* **48**, No. C5, 317-320 (1987).

Y. Vladimirovsky, D. Kern, T. H. P. Chang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), D. Attwood (Lawrence Berkeley Laboratory, Berkeley, CA), H. Ade, J. Kirz, I. McNulty (State University of New York, Stony Brook), H. Rarback, and D. Shu (Brookhaven National Laboratory, Upton, NY), **High Resolution Fresnel Zone Plates for Soft X-Rays**, *Journal of Vacuum Science and Technology B* **6**, No. 1, 311-315 (1988).

S. von Molnár, A. Torressen, D. Kaiser, F. Holtzberg, and T. Penney (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Low-Temperature Specific Heat of Single-Crystal $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ Regimes**, *Physical Review B* **37**, No. 7, 3762-3765 (1988).

V. Vukanovic, G. A. Takacs, E. A. Matuszak (Rochester Institute of Technology, Rochester, NY 14623), F. D. Egitto, F. Emmi, and R. S. Horwath (IBM, Endicott, NY), **Plasma Etching of Organic Materials. II. Polyimide Etching and Passivation Downstream of an $\text{O}_2\text{-CF}_4\text{-Ar}$ Microwave Plasma**, *Journal of Vacuum Science and Technology B* **6**, No. 1, 66-71 (1988).

W

J. J. Wainer, A. B. Fowler, and R. A. Webb (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Magnetic Field Effects in Strongly Localized Quasi-1D MOSFETS**, *Surface Science* **196**, Nos. 1-3, 134-138 (1988).

O. Watanuki, K. Sueoka, and K. G. Ashar (IBM Japan Ltd., 5-19 Sanbancho, Chiyoda-ku, Tokyo 102, Japan), **Direct Measurement of Side Fringe Field and Two-Dimensional Head Field Using High-Resolution Inductive Loop**, *IEEE Transactions on Magnetics MAG-23*, No. 5, Part II, 3164-3166 (1987).

K.-Y. Whang, A. Ammann, A. Bolmarcich, M. Hanrahan, G. Hochgesang, K.-T. Huang, A. Khorasani, R. Krishnamurthy, G. Sockut, P. Sweeney, V. Waddle, and M. Zloof (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Office-by-Example: An Integrated Office System and Database Manager**, *ACM Transactions on Office Information Systems* **5**, No. 4, 393-427 (1987).

M. D. Williams, D. S. Bethune, and A. C. Luntz (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Coexistence of Precursor and Direct Dynamics: The Sticking of O_2 on a Pt(111) Surface**, *Journal of Chemical Physics* **88**, No. 4, 2843-2845 (1988).

V. S. Williams, A. L. Landesman, R. V. Shack, D. Vukobratovich (University of Arizona, Tucson, AZ 85721), and B. Bhushan (IBM, San Jose, CA), ***In situ* Microviscoelastic Measurements by**

Polarization-Interferometric Monitoring of Indentation Depth, *Applied Optics* **27**, No. 3, 541-546 (1988).

S. Wimer (IBM Israel, Scientific Center, Technion City, Haifa 32000, Israel) and I. Koren (University of Massachusetts, Amherst), **Analysis of Strategies for Constructive General Block Placement**, *IEEE Transactions on Computer-aided Design of Integrated Circuits and Systems* **7**, No. 3, 371-377 (1987).

P. Wolkow and Ph. Avouris (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Atom-Resolved Surface Chemistry Using Scanning Tunneling Microscopy**, *Physical Review Letters* **60**, No. 11, 1049-1052 (1988).

R. Wood (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), **Jitter vs. Additive Noise in Magnetic Recording: Effects on Detection**, *IEEE Transactions on Magnetics MAG-23*, No. 5, Part I, 2683-2685 (1987).

S. C. Woronick, B. X. Yang, A. Krol, Y. H. Kao (State University of New York, Stony Brook, NY 11790), H. Munekata, L. L. Chang (IBM, Yorktown Heights, NY), and J. C. Phillips (State University of New York, Buffalo), **X-Ray Reflectivity of InAs/GaAs Heterostructures with Surface and Interfacial Roughness**, *Journal de Physique* **48**, No. C5, 51-56 (1987).

C. G. Woychik (IBM Corporation, 1701 North Street, Endicott, NY 13760) and T. B. Massalski (Carnegie Mellon University, Pittsburgh, PA), **Phase Stability Relationships and Glass Formation in the System Cu/Ag/In**, *Metallurgical Transactions A* **19**, No. 1, 13-21 (1988).

O. Wright (IBM Corporation, Old Orchard Road, Armonk, NY 10504), **Squeezing the Test Cycle**, *Aerospace America* **26**, No. 2, 17-19 (1988).

D. Würtz, T. Schneider, and M. P. Soerensen (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **Electromagnetic Wave Propagation in Quasiperiodically Stratified Media**, *Physica A* **148**, Nos. 1 & 2, 343-355 (1988).

Y

A. C. M. Yang and H. R. Brown (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Solvent-Induced Local Deformation Zones in Polyimide Films Adhered to a Rigid Substrate**, *Journal of Material Science* **23**, No. 1, 65-71 (1988).

J. A. Yarmoff, A. Teleb-Ibrahimi, F. R. McFeely, and Ph. Avouris (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Chemical Selectivity in Photon-Stimulated Desorption of Fluorine from Silicon**, *Physical Review Letters* **60**, No. 10, 960-963 (1988).

P. S. Yu (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), C. M. Krishna (University of Massachusetts, Amherst), and Y.-H. Lee (IBM, Yorktown Heights, NY), **Optimal Design and Sequential Analysis of VLSI Testing Strategy**, *IEEE Transactions on Computers* **37**, No. 3, 339-347 (1988).