

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.

• Journals are listed alphabetically by title; papers are listed sequentially for each journal.

A

A Diffusional Model for Transient Liquid Phase Bonding, S. R. Cain (IBM Corporation, 1701 North Street, Endicott, NY 13760) et al., *Acta Materialia* **45**, No. 2, 701-707 (1997).

Universal Critical Quantum Properties of Cuprate Superconductors, T. Schneider (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), *Acta Physica Polonica A* **91**, No. 1, 203-212 (1997).

Iterative Methods for Solving $Ax = B$, GMRES/FOM Versus QMR/BiCG, J. Cullum (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Advances in Computational Mathematics* **6**, No. 1, 1-24 (1996).

An Approximation Algorithm for Minimum Cost Vertex Connectivity Problems, R. Ravi (Carnegie Mellon University, Pittsburgh, PA 15213) and D. P. Williamson, *Algorithmica* **18**, No. 1, 21-43 (1997).

On a Family of Filters Arising in Wavelet Construction, C. A. Micchelli (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Applied and Computational Harmonic Analysis* **4**, No. 1, 38-50 (1997).

Ultrasensitive Laser Measurements Without Tears, P. C. D. Hobbs (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Applied Optics* **36**, No. 4, 903-920 (1997).

Atomic Scale Structure and Electronic Properties of Ga₂/GaAs Superlattices, R. S. Goldman (University of Michigan, Ann Arbor, MI 48109) et al., *Applied Physics Letters* **69**, No. 24, 3698-3700 (1996).

Periodic Electric Field Poling of $KTiOPo_4$ Using Chemical Patterning, W. P. Risk (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and S. D. Lau, *Applied Physics Letters* **69**, No. 26, 3999-4001 (1996).

Dewetting of Molten Sn on Au/Cu/Cr Thin-Film Metallization, C. Y. Liu (University of California, Los Angeles, CA 90095) et al., *Applied Physics Letters* **69**, No. 26, 4014-4016 (1996).

Fabrication and Characterization of Ion-Exchanged Wave Guides in Potassium Titanyl Arsenate, W. P. Risk (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and G. M. Loiacono, *Applied Physics Letters* **69**, No. 27, 4157-4158 (1996).

Nanoscale Replication for Scanning Probe Data Storage, B. D. Terris (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Applied Physics Letters* **69**, No. 27, 4262-4264 (1996).

An Amorphous Silicon Thin-Film Transistor Fabricated at 125°C by DC Reactive Magnetron Sputtering, C. S. McCormick (University of Illinois, 1101 West Springfield Avenue, Urbana, IL 61801) et al., *Applied Physics Letters* **70**, No. 2, 226-227 (1997).

Curved Crystal Lattice in Resolidified Submicron Al Lines, M. J. C. Vandenhomberg (Delft University of Technology, P.O. Box 5046, NL-2600 GA Delft, The Netherlands) et al., *Applied Physics Letters* **70**, No. 3, 318-320 (1997).

Determining Magnetic Anisotropies from Hysteresis Loops, W. Weber (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) et al., *Applied Physics Letters* **70**, No. 4, 520-522 (1997).

A Field-Effect Transistor Based on the Mott Transition in a Molecular Layer, C. Zhou (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Applied Physics Letters* **70**, No. 5, 598-600 (1997).

Beam Divergence and Waist Measurements of Laser Diodes by Near-Field Scanning Optical Microscopy, W. D. Herzog (Boston University, Boston, MA 02215) et al., *Applied Physics Letters* **70**, No. 6, 688–690 (1997).

Picosecond Hot Electron Light Emission from Submicron Complementary Metal Oxide Semiconductor Circuits, J. C. Tsang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and J. A. Kash, *Applied Physics Letters* **70**, No. 7, 889–891 (1997).

Nuclear Magnetic Resonance Using a High-Temperature Superconducting Quantum Interference Device, S. Kumar (Quantum Magnetics, Inc., San Diego, CA 92121) et al., *Applied Physics Letters* **70**, No. 8, 1037–1039 (1997).

From Statistical Knowledge Bases to Degrees of Belief, F. Bacchus (Stanford University, Stanford, CA 94305) et al., *Artificial Intelligence* **87**, No. 1–2, 75–143 (1996).

A Theory Attributing Optical Diffuse Interstellar Absorption Bands, Unidentified Infrared-Emission Bands, and Cloud Reddening to H-2 Nonlinear Absorption, P. P. Sorokin (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and J. H. Glowina, *Astrophysical Journal* **473**, No. 2, 900–920 (1996).

Intercloud Structure in a Turbulent Fractal Interstellar Medium, B. G. Elmegreen (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Astrophysical Journal* **477**, No. 1, 196–203 (1997).

Collisional Excitation of H₂O by H₂ Molecules, T. R. Phillips (Scientific Systems Applications, Inc., New York, NY 10025) et al., *Astrophysical Journal Supplement Series* **107**, No. 1, 467–474 (1996).

An Automatic Differentiation Technique for Sensitivity Analysis of Numerical Advection Schemes in Air Quality Models, D. Hwang (IBM Corporation, Research Triangle Park, NC 27709) et al., *Atmospheric Environment* **31**, No. 6, 879–888 (1997).

B

Intermetallic Phases at the Cathodically Polarized Interface Platinum/Polycrystalline Yttria-Stabilized Zirconia, G. B. Barbi (University of Pavia, Viale Taramelli 16, I-27100 Pavia, Italy) et al., *Berichte der Bunsen Gesellschaft für Physikalische Chemie* **101**, No. 1, 59–64 (1997).

Ab-Initio Computational Studies on the Structures and Energetics of Hole Transport Molecules: Triphenylamine, J. Pacansky (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Bulletin of the Chemical Society of Japan* **70**, No. 1, 55–59 (1997).

C

Far Infrared Transmittance of Sc₂ at C₈₄, and Er₂ at C₈₂, S. M. Grannan (University of California, Berkeley, CA 94720) et al., *Chemical Physics Letters* **264**, No. 3–4, 359–365 (1997).

On the Origin of the Gauche Effect: A Quantum Chemical Study of 1,2-Difluoroethane, O. Engkvist (Lund University, Box 124, S-22100 Lund, Sweden) et al., *Chemical Physics Letters* **265**, No. 1–2, 19–23 (1997).

Trimethylene Isomers and Propene: Structural and Vibrational Properties from Density Functional Theory, M. Boero (IBM Corporation, Säumerstrasse 4; 8803 Rüschlikon, Switzerland) and W. Andreoni, *Chemical Physics Letters* **265**, No. 1–2, 24–34 (1997).

An Electromechanical Amplifier Using a Single Molecule, C. Joachim (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) and J. K. Gimzewski, *Chemical Physics Letters* **265**, No. 3–5, 353–357 (1997).

Decomposition of Poly(Perfluorinated Ethers): Effect of End-Groups on Main-Chain Degradation and Product Formation, J. Pacansky (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and R. J. Waltman, *Chemistry of Materials* **8**, No. 12, 2788–2791 (1996).

Polyimide Nanofoams Based on Ordered Polyimides Derived from Poly(Amic Alkyl Esters): PMDA/4-BDAF, K. R. Carter (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Chemistry of Materials* **9**, No. 1, 105–118 (1997).

Benzoylpivaloylmethanide Precursors for the Chemical Beam Epitaxy of Oxide Thin Films I. Synthesis, Characterization, and Use of Yttrium Benzoylpivaloylmethanide, E. Fritsch (University of Zurich, CH-8057 Zurich, Switzerland) et al., *Chemistry of Materials* **9**, No. 1, 127–134 (1997).

DNA Sequencing on a Ship, G. Wallraff (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Chemtech* **27**, No. 2, 22–32 (1997).

What Will Happen in the Next 50 Years?, T. Selker (IBM Corporation, 650 Harry Road, San Jose, CA 95120), *Communications of the ACM* **40**, No. 2, 88–89 (1997).

Application Performance on the MIT Alewife Machine, F. T. Chong (University of California, Davis, CA 95616) et al., *Computer* **29**, No. 12, 57+ (1996).

Trusting Mobile User Devices and Security Modules, A. Pfitzmann (Technical University of Dresden, D-01062 Dresden, Germany) et al., *Computer* **30**, No. 2, 61–68 (1997).

Customizing System Software Using OO Frameworks, N. Islam (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Computer* **30**, No. 2, 69–78 (1997).

MSSTART: A Random Access Algorithm for the IEEE-802.14 HFC Network, C. Bisdikian (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Computer Communications* **19**, No. 11, 876–887 (1996).

Block Loss Reduction in ATM Networks, V. Srinivasan (IBM Corporation, Research Triangle Park, NC 27709) et al., *Computer Communications* **19**, No. 13, 1077–1091 (1996).

Access Architecture for a Multiprotocol Broad-Band Backbone, W. Doeringer (Palatine State College, D-67549 Worms, Germany) et al., *Computer Networks and ISDN Systems* **29**, No. 2, 137-155 (1997).

Design and Performance of a Threshold-Based Load Balancing Scheme in an ATM Switch, S. Chowdhury (NEC USA, 4 Independence Way, Princeton, NJ 08540) and B. Sengupta, *Computer Networks and ISDN Systems* **29**, No. 2, 157-164 (1997).

Algorithm for Efficient Generation of Link-State Updates in ATM Networks, M. Peyravian (IBM Corporation, Research Triangle Park, NC 27709) and R. Onvural, *Computer Networks and ISDN Systems* **29**, No. 2, 237-247 (1997).

Kinematic Tolerance Analysis, L. Joskowicz (Purdue University, West Lafayette, IN 47907) et al., *Computer-Aided Design* **29**, No. 2, 147-157 (1997).

Some Remarks on Multivariate Chebyshev Polynomials, T. J. Rivlin (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Computers and Mathematics with Applications* **33**, No. 1-2, 223-228 (1997).

Scanning SQUID Microscope Tests of the Symmetry of the High T_c Gap, J. R. Kirtley (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Czechoslovak Journal of Physics* **46**, No. S6, 3169-3176 (1996).

D

A Conceptual Theory of Part-Whole Relations and Its Applications, P. Gerstl (IBM Germany GmbH, Vangerowstrasse 18, D-69115 Heidelberg, Germany) and S. Pribbenow, *Data & Knowledge Engineering* **20**, No. 3, 305-322 (1996).

A Linear Time Algorithm for Computing the Intersection of All Odd Cycles in a Graph, L. Z. Cai (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and B. Schieber, *Discrete Applied Mathematics* **73**, No. 1, 27-34 (1997).

Order Preserving Assignments Without Contiguity, D. Alevras (IBM Corporation, Wayne, PA 19087), *Discrete Mathematics* **163**, No. 1-3, 1-11 (1997).

E

Power Supply Reliability: A Practical Improvement Guide, K. H. Pflueger (IBM Germany, Mainz, Germany), *EDN* **42**, No. 5, 151+ (1997).

Acute Stress Effects on the Adrenal-Cortex in the Rat: A Biochemical and Immunohistochemical Study, D. Pignatelli (Fac. Med. Porto, Inst. Histo. and Embriol., Oporto, Portugal) et al., *Endocrine Research* **22**, No. 4, 445-451 (1996).

Optimizing Nuclear Power Plant Refueling with Mixed Integer Programming, F. Fourcade (Georgia Institute of Technology, Atlanta, GA 30332) et al., *European Journal of Operational Research* **97**, No. 2, 269-280 (1997).

Circular Dichroism in STM-Excited Luminescence on Metals, A. L. V. Deparga (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) and S. F. Alvarado, *Europhysics Letters* **36**, No. 8, 577-582 (1996).

Half-Integer Flux Quantum Effect in Tricrystal $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8-\delta}$, J. R. Kirtley (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Europhysics Letters* **36**, No. 9, 707-712 (1996).

Relaxational Dynamics of Polar Nanodomains in $\text{Sr}_{1-x}\text{Ca}_x\text{TiO}_3$, $x = 0.002$, W. Kleemann (Gerhard Mercator University of Duisburg, D-47048 Duisburg, Germany), *Europhysics Letters* **37**, No. 2, 145-150 (1997).

I

Application Development as an Engineering Discipline: Revolution or Evolution?, N. Bieberstein (IBM Corporation, Chaussee Bruxelles 135, B-1310 La Hulpe, Belgium), *IBM Systems Journal* **36**, No. 1, 4-11 (1997).

Family Traits in Business Objects and Their Applications, R. Prins (IBM Nederland, Europalaan 440, NL-3526 KS Utrecht, The Netherlands) et al., *IBM Systems Journal* **36**, No. 1, 12-31 (1997).

Bridging Traditional and Object Technologies: Creating Transitional Applications, A. H. Lindsey (IBM Corporation, Research Triangle Park, NC 27709) and P. R. Hoffman, *IBM Systems Journal* **36**, No. 1, 32-48 (1997).

The COBOL Jigsaw Puzzle: Fitting Object-Oriented and Legacy Applications Together, E. S. Flint (IBM Corporation, 555 Bailey Avenue, San Jose, CA 95161), *IBM Systems Journal* **36**, No. 1, 49-65 (1997).

Object Persistence in Object-Oriented Applications, V. Srinivasan (IBM Corporation, 555 Bailey Avenue, San Jose, CA 95141) and D. T. Chang, *IBM Systems Journal* **36**, No. 1, 66-87 (1997).

Debugging DB2/CS Client/Server Applications, M. Meier (IBM Corporation, 555 Bailey Avenue, San Jose, CA 95141) et al., *IBM Systems Journal* **36**, No. 1, 88-101 (1997).

Workflow-Based Applications, F. Leymann (IBM Corporation, Hanns Kelmm Strasse 45, D-71034 Böblingen, Germany) and D. Roller, *IBM Systems Journal* **36**, No. 1, 102-123 (1997).

The Effects of the Business Model on Object-Oriented Software Development Productivity, T. E. Potok (IBM Corporation, Research Triangle Park, NC 27709) and M. A. Vouk, *IBM Systems Journal* **36**, No. 1, 140-161 (1997).

Parallel Interactive Visualization of Three-Dimensional Mantle Convection, K. E. Jordan (IBM Corporation, 40 Wyman Street, Waltham, MA 02254) et al., *IEEE Computational Science & Engineering* **3**, No. 4, 29-37 (1996).

Multigrid Methods in Science and Engineering, C. C. Douglas (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *IEEE Computational Science & Engineering* 3, No. 4, 55–68 (1996).

A 70-GHz F(T) Low Operating Bias Self-Aligned P-Type SiGe MODFET, M. Arafa (University of Illinois, Urbana, IL 61801) et al., *IEEE Electron Device Letters* 17, No. 12, 586–588 (1996).

Single Chip 4 × 500-MBD CMOS Transceiver, A. X. Widmer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *IEEE Journal of Solid-State Circuits* 31, No. 12, 2004–2014 (1996).

A 3-V 4-GHz NMOS Voltage-Controlled Oscillator with Integrated Resonator, M. Soyuer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *IEEE Journal of Solid-State Circuits* 31, No. 12, 2042–2045 (1996).

An 8-Bit Prefetch Circuit for High-Bandwidth DRAM, T. Sunaga (IBM Japan, Ltd., Yasu, Shiga 52023, Japan) et al., *IEEE Journal of Solid-State Circuits* 32, No. 1, 105–110 (1997).

A DC-DC Converter for Short-Channel CMOS Technologies, S. K. Reynolds (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *IEEE Journal of Solid-State Circuits* 32, No. 1, 111–113 (1997).

A Resonant Switching Write Driver for Magnetic Recording, R. J. Reay (Linear Technology Corporation, Milpitas, CA 95035) et al., *IEEE Journal of Solid-State Circuits* 32, No. 2, 267–269 (1997).

Improved Neural Heuristics for Multicast Routing, E. Gelenbe (Duke University, Durham, NC 27708) et al., *IEEE Journal on Selected Areas in Communications* 15, No. 2, 147–155 (1997).

On the Future of Wavelength Routing Networks, O. Gerstel (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *IEEE Network* 10, No. 6, 14–20 (1996).

Distributed Feedback Gain-Coupled Lasers Based on InGaAs Quantum Wire Arrays, J. Robadey (École Polytechnique Fédérale de Lausanne, CH-1015 Lausanne, Switzerland) et al., *IEEE Photonics Technology Letters* 9, No. 1, 5–7 (1997).

An Adaptive Propagation Prediction Program for Land Mobile Radio Systems, H. P. Stern (University of Alabama, P.O. Box 870286, Tuscaloosa, AL 35487) et al., *IEEE Transactions on Broadcasting* 43, No. 1, 56–63 (1997).

On the Capture Probability for a Large Number of Stations, B. Hajek (University of Illinois, 1101 West Springfield Avenue, Urbana, IL 61801) et al., *IEEE Transactions on Communications* 45, No. 2, 254–260 (1997).

Design and Optimization of Pin Fin Heat Sinks for Low-Velocity Applications, H. Shaikatullah (IBM Corporation, 1701 North Street, Endicott, NY 13760) et al., *IEEE Transactions on Components Packaging and Manufacturing Technology Part A* 19, No. 4, 486–494 (1996).

Electrical Characteristics of High-Performance Pin-in-Socket and Pad-on-Pad Connectors, A. Deutsch (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *IEEE Transactions on Components Packaging and Manufacturing Technology Part B* 20, No. 1, 64–77 (1997).

Hardware Starting Approximation Method and Its Application to the Square Root Operation, E. M. Schwarz (IBM Corporation, P.O. Box 950, Poughkeepsie, NY 12602) and M. J. Flynn, *IEEE Transactions on Computers* 45, No. 12, 1356–1369 (1996).

On Variable Scope of Parity Protection in Disk Arrays, P. A. Franaszek (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598) and J. T. Robinson, *IEEE Transactions on Computers* 46, No. 2, 234–240 (1997).

Neutral Base Recombination and Its Influence on the Temperature Dependence of Early Voltage and Current Gain Early Voltage Product in UHV/CVD SiGe Heterojunction Bipolar Transistors, A. J. Joseph (IBM Corporation, P.O. Box A, Essex Junction, VT 05452) et al., *IEEE Transactions on Electron Devices* 44, No. 3, 404–413 (1997).

Dynamic Threshold Voltage MOSFET (DTMOS) for Ultra-Low Voltage VLSI, F. Assaderaghi (IBM Corporation, Route 52, Hopewell Junction, NY 12533) et al., *IEEE Transactions on Electron Devices* 44, No. 3, 414–422 (1997).

Priority Encoding Transmission, A. Albanese (International Computer Science Institute, Berkeley, CA 94704) et al., *IEEE Transactions on Information Theory* 42, No. 6, 1737–1744 (1996).

Linearity Testing in Characteristic-2, M. Bellare (University of California, La Jolla, CA 92093) et al., *IEEE Transactions on Information Theory* 42, No. 6, 1781–1795 (1996).

A Linear Bound for Sliding-Block Decoder Window Size II, J. J. Ashley (IBM Corporation, 650 Harry Road, San Jose, CA 95120), *IEEE Transactions on Information Theory* 42, No. 6, 1913–1924 (1996).

Complexity and Sliding-Block Decodability, J. J. Ashley (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *IEEE Transactions on Information Theory* 42, No. 6, 1925–1947 (1996).

On the Decoding Delay of Encoders for Input-Constrained Channels, J. J. Ashley (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *IEEE Transactions on Information Theory* 42, No. 6, 1948–1956 (1996).

The Relative Value of Labeled and Unlabeled Samples in Pattern Recognition with an Unknown Mixing Parameter, V. Castelli (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and T. M. Cover, *IEEE Transactions on Information Theory* 42, No. 6, 2102–2117 (1996).

Fault-Tolerant Cube Graphs and Coding Theory, J. Bruck (California Institute of Technology, Pasadena, CA 91125) and C. T. Ho, *IEEE Transactions on Information Theory* 42, No. 6, 2217–2221 (1996).

Parallel Mining of Association Rules, R. Agrawal (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and J. C. Shafer, *IEEE Transactions on Knowledge and Data Engineering* **8**, No. 6, 962-969 (1996).

Performance Analysis of Dynamic Finite Versioning Schemes: Storage Cost vs. Obsolescence, A. Merchant (Hewlett-Packard Laboratories, 1501 Page Mill Road, Palo Alto, CA 94303) et al., *IEEE Transactions on Knowledge and Data Engineering* **8**, No. 6, 985-1001 (1996).

Magneto-optic and Infrared Study of $(Y_{3-y}Ce_y)(Fe, Ga)(5O)_{12}$ Garnet Films I. Effect of Variable Ce Content and Heat Pulse Annealing, S. A. Lopez-Rivera (University of Los Andes, Merida 5101, Venezuela) et al., *IEEE Transactions on Magnetics* **33**, No. 1, 788-794 (1997).

Hardness and Tribochemical Evaluation of Ultra-Thin CH_x and CN_x Overcoats, X. H. Yun (University of California, Berkeley, CA 94720) et al., *IEEE Transactions on Magnetics* **33**, No. 1, 938-943 (1997).

Texture-Induced Noise and Its Impact on System Performance, G. H. Lin (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193) et al., *IEEE Transactions on Magnetics* **33**, No. 1, 950-955 (1997).

Narrow Track Recording Characteristics in Thin-Film Media, J. G. Zhu (University of Minnesota, Minneapolis, MN 55455) et al., *IEEE Transactions on Magnetics* **33**, No. 1, 984-989 (1997).

An Application of Petri-Net Reduction for ADA Tasking Deadlock Analysis, S. M. Shatz (University of Illinois, Chicago, IL 60607) et al., *IEEE Transactions on Parallel and Distributed Systems* **7**, No. 12, 1307-1322 (1996).

Detection of Strong Unstable Predicates in Distributed Programs, V. K. Garg (University of Texas, Austin, TX 78712) and B. Waldecker, *IEEE Transactions on Parallel and Distributed Systems* **7**, No. 12, 1323-1333 (1996).

Performance of Multistage Bus Networks for a Distributed Shared Memory Multiprocessor, L. N. Bhuyan (Texas A&M University, College Station, TX 77843) et al., *IEEE Transactions on Parallel and Distributed Systems* **8**, No. 1, 82-95 (1997).

Experimental Observations of Steady Anodic Vacuum Arcs with Thermionic Cathodes, G. Benstetter (IBM Corporation, P.O. Box A, Essex Junction, VT 05452), *IEEE Transactions on Plasma Science* **24**, No. 6, 1389-1393 (1996).

Automatic Test Generation for Predicates, A. Paradkar (IBM Corporation, P.O. Box 704, Yorktown Heights, NY 10598) et al., *IEEE Transactions on Reliability* **45**, No. 4, 515-530 (1996).

The Cache Assignment Problem and Its Application to Database Buffer Management, H. Levy (Tel Aviv University, IL-69978 Tel Aviv, Israel) et al., *IEEE Transactions on Software Engineering* **22**, No. 11, 827-838 (1996).

Neural Network Learning Based on Stochastic Sensitivity Analysis, M. Koda (IBM Japan, Ltd., Tokyo 106, Japan), *IEEE Transactions on Systems B* **27**, No. 1, 132-135 (1997).

Control Flow Versus Data Flow-Based Scheduling: Combining Both Approaches in an Adaptive Scheduling System, R. A. Bergamaschi (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *IEEE Transactions on Very Large Scale Integration Systems* **5**, No. 1, 82-100 (1997).

Implementation and Analysis of an Image-Based Global Illumination Framework for Animated Environments, J. Nimeroff (University of Pennsylvania, 200 South 33rd Street, Philadelphia, PA 19104) et al., *IEEE Transactions on Visualization and Computer Graphics* **2**, No. 4, 283-298 (1996).

The Layout of Virtual Paths in ATM Networks, O. Gerstel (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *IEEE/ACM Transactions on Networking* **4**, No. 6, 873-884 (1996).

A Heuristic to Minimize the Total Weighted Tardiness with Sequence-Dependent Setups, Y. H. Lee (Samsung Electric Co., Ltd., P.O. Box 37, Suwon 449900, South Korea) et al., *IIE Transactions* **29**, No. 1, 45-52 (1997).

Time-Space Tradeoffs for Undirected Graph Traversal by Graph Automata, P. Beame (University of Washington, Seattle, WA 98195) et al., *Information and Computation* **130**, No. 2, 101-129 (1996).

Synthesis and Crystal Structure of the Alkylbismuth Diiodides: A Family of Extended One-Dimensional Organometallic Compounds, D. B. Mitzi (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Inorganic Chemistry* **35**, No. 26, 7614-7619 (1996).

Trading Cost of Reuse in KBS Development Using Explicit Ontologies, M. Hori (IBM Japan, Ltd., 1623-14 Shimotsuruma, Yamato, Kanagawa 242, Japan), *International Journal of Human-Computer Studies* **46**, No. 2-3, 319-325 (1997).

Ab-Initio Molecular Dynamics Calculations to Study Catalysis, K. Schwarz (Vienna Technical University, Getreidemarkt 9-158, A-1060 Vienna, Austria) et al., *International Journal of Quantum Chemistry* **61**, No. 3, 369-380 (1997).

Study of Sediment Distribution in the Area of the Panuco River Plume by Means of Remote Sensing, J. Lira (University Nacional Autonoma Mexico, Mexico City 04510, DF, Mexico) et al., *International Journal of Remote Sensing* **18**, No. 1, 171-182 (1997).

J

Fabrication of an Integrated Silicon-Based Lens for Low Energy Miniaturized Electron Columns, M. Despont (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) et al., *Japanese Journal of Applied Physics Part 1* **35**, No. 12B, 6641-6647 (1996).

Interactions Between Servo Loops of an Optical Disk Drive, T. Semba (IBM Japan, Ltd., 1623-14 Shimotsuruma, Yamato, Kanagawa 242, Japan) et al., *Japanese Journal of Applied Physics Part I* **36**, No. 1B, 557-561 (1997).

Method for Normalizing the Write Laser Power of Magneto-optical Disk Drives by Using a Calibration Disk, S. Hara (Fujita Health University, 1-98 Kutsukake Cho, Toyoake, Aichi 47011, Japan) et al., *Japanese Journal of Applied Physics Part I* **36**, No. 1B, 577-580 (1997).

XPS Analysis of Fluorinated Polyimides, L. P. Buchwalter (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Journal of Adhesion Science and Technology* **10**, No. 11, 1141-1152 (1996).

An XPS Study of Argon Ion Beam and Oxygen RIE Modified BPDA-PDA Polyimide as Related to Adhesion, R. Flitsch (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and D. Y. Shih, *Journal of Adhesion Science and Technology* **10**, No. 12, 1241-1253 (1996).

Three-Dimensional Finite Element Analysis of Subsurface Stresses and Shakedown Due to Repeated Sliding on a Layered Medium, E. R. Kral (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and K. Komvopoulos, *Journal of Applied Mechanics—Transactions of the ASME* **63**, No. 4, 967-973 (1996).

Correlation of Buffer Strain Relaxation Modes with Transport Properties of Two-Dimensional Electron Gases, R. S. Goldman (University of Michigan, Ann Arbor, MI 48109) et al., *Journal of Applied Physics* **80**, No. 12, 6849-6854 (1996).

Simple Method for the Calculation of the Deformation Profiles in Chiral Nematic Liquid Crystal Cells with Asymmetric Pretilt, C. J. Chen (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Journal of Applied Physics* **81**, No. 1, 70-73 (1997).

Controlled Cluster Condensation into Preformed Nanometer-Sized Pits, H. Hovel (University of Dortmund, D-44221 Dortmund, Germany) et al., *Journal of Applied Physics* **81**, No. 1, 154-158 (1997).

Energy Distributions of Zr/O/W Schottky Electron Emission, H. S. Kim (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Journal of Applied Physics* **81**, No. 1, 461-465 (1997).

Bistable Reflective Cholesteric Liquid Crystal Display, M. H. Lu (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Journal of Applied Physics* **81**, No. 3, 1063-1066 (1997).

Interference of Locally Excited Surface Plasmons, L. Novotny (Battelle Memorial Institute, P.O. Box 999, Richland, WA 99352) et al., *Journal of Applied Physics* **81**, No. 4, 1798-1806 (1997).

Dynamics of the Formation of Cd₄ from the Direct Reaction of Incident D-Atom with Cd₃/Cu(111), C. T. Rettner (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Journal of Chemical Physics* **105**, No. 22, 115-122 (1996).

Design of Optimized Photorefractive Polymers: A Novel Class of Chromophores, R. Wortmann (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Journal of Chemical Physics* **105**, No. 23, 637-647 (1996).

Dynamics of Collision-Induced Desorption: Ar-Xe/Pt(111), M. Persson (Chalmers University of Technology, S-41296, Gothenburg, Sweden) et al., *Journal of Chemical Physics* **106**, No. 8, 3370-3386 (1997).

Femtosecond Studies of Exciton Dynamics in a Novel Main Chain Chiral Conjugated Poly(Arylenevinylene), J. Z. Zhang (University of California, Santa Cruz, CA 95064) et al., *Journal of Chemical Physics* **106**, No. 9, 3710-3720 (1997).

Dynamics of Poly(Oxyethylene) Melts: Comparison of C-13 Nuclear Magnetic Resonance Spin Lattice Relaxation and Dielectric Relaxation as Determined from Simulations and Experiments, G. D. Smith (University of Missouri, Columbia, MO 65211) et al., *Journal of Chemical Physics* **106**, No. 9, 3798-3805 (1997).

A Linear Programming Instance with Many Crossover Events, S. Mizuno (Institute of Statistics and Mathematics, Minato Ku, Tokyo 106, Japan) et al., *Journal of Complexity* **12**, No. 4, 474-479 (1996).

Parallel Computation of Second Derivatives of RHF Energy on Distributed Memory Computers, A. M. Marquez (Fac. Quim Seville, E-41012 Seville, Spain) et al., *Journal of Computational Chemistry* **18**, No. 2, 159-168 (1997).

Construction of the Mesh and the Torus Tolerating a Large Number of Faults, H. Tamaki (IBM Japan, Ltd., 1623-14 Shimotsuruma, Yamato, Nara 242, Japan), *Journal of Computer and System Sciences* **53**, No. 3, 371-379 (1996).

Internal Release Agents for Electrophotographic Toners, T. E. Karis (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and C. M. Seymour, *Journal of Imaging Science and Technology* **40**, No. 5, 462-471 (1996).

A Theory of Knowledge and Ignorance for Many Agents, J. Y. Halpern (IBM Corporation, 650 Harry Road, San Jose, CA 95120), *Journal of Logic and Computation* **7**, No. 1, 79-108 (1997).

Fermi Surface and Extended Van Hove Singularity in the Noncuprate Layered Perovskite Superconductor Sr_{1-x}RuO₄, D. H. Lu (Forschungszentrum Karlsruhe, INF, D-76021, Karlsruhe, Germany) et al., *Journal of Low Temperature Physics* **105**, No. 5-6, 1587-1592 (1996).

Preparation and Analysis of Planar Deformations of Thermoplastics: A Review, S. Osawa (Science University of Tokyo, Onoda, Yamaguchi 756, Japan) et al., *Journal of Macromolecular Science—Reviews in Macromolecular Chemistry and Physics* **C37**, No. 1, 149-198 (1997).

Magnetic Interactions and Anisotropy in Amorphous TbFe Films, C. Prados (Inst. Magnetismo Aplicado, P.O. Box 155, E-28230 Las Rozas Madrid, Madrid, Spain) et al., *Journal of Magnetism and Magnetic Materials* **165**, No. 1-3, 414-416 (1997).

Lowering the Formation Temperature of the C54-TiSi₂ Phase Using a Metallic Interfacial Layer, C. Cabral (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Journal of Materials Research* **12**, No. 2, 304-307 (1997).

The Stability of Si_{1-x}Ge_x Strained Layers on Small-Area Trench-Isolated Silicon, K. Schonenberg (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Journal of Materials Research* **12**, No. 2, 364-370 (1997).

Voronoi Diagrams of Polygons: A Framework for Shape Representation, N. Mayya (Unit 10, 2660 Meadowvale Boulevard, Mississauga, Ontario L5N 6M6, Canada) and V. T. Rajan, *Journal of Mathematical Imaging and Vision* **6**, No. 4, 355-378 (1996).

Optimizations for Efficient Array Redistribution on Distributed Memory Multicomputers, S. Ramaswamy (Computer Systems & Research Laboratory, 1308 West Main Street, Urbana, IL 61801) et al., *Journal of Parallel and Distributed Computing* **38**, No. 2, 217-228 (1996).

Efficient Message-Passing Interface (MPI) for Parallel Computing on Clusters of Workstations, J. Bruck (California Institute of Technology, Pasadena, CA 91125) et al., *Journal of Parallel and Distributed Computing* **40**, No. 1, 19-34 (1997).

A Migratable User Level Process Package for PVM, R. B. Konuru (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Journal of Parallel and Distributed Computing* **40**, No. 1, 81-102 (1997).

Clock Synchronization on a Multicomputer, B. Abali (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Journal of Parallel and Distributed Computing* **40**, No. 1, 118-130 (1997).

Infrared Study of the Reactions of Atomic Deuterium with Amorphous Silicon Monohydride, S. S. Lee (New York University, New York, NY 10003) et al., *Journal of Physical Chemistry* **100**, No. 51, 15-20 (1996).

Oxygen Diffusion and Charge Transport in the Cuprate Superconductors, E. Haufe (University of Tübingen, D-72076 Tübingen, Germany) et al., *Journal of Physics and Chemistry of Solids* **58**, No. 1, 139-144 (1997).

A Low-Temperature Insulating Phase at $V = 1.5$ for Two-Dimensional Holes in High Mobility SiSi_{1-x}Ge_x Heterostructures with Landau Level Degeneracy, R. B. Dunford (Florida State University, 1800 East Paul Dirac Drive, Tallahassee, FL 32306) et al., *Journal of Physics—Condensed Matter* **9**, No. 7, 1565-1574 (1997).

The Important Role of Heteroaromatics in the Design of Efficient Second-Order Nonlinear Optical Molecules: Theoretical Investigation on Push-Pull Heteroaromatic Stilbenes, P. R. Varanasi (IBM Corporation, Route 52, Hopewell Junction, NY 12533) et al., *Journal of the American Chemical Society* **118**, No. 49, 2443-2448 (1996).

Photogeneration of Amines from Alpha-Keto Carbamates: Photochemical Studies, J. F. Cameron (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Journal of the American Chemical Society* **118**, No. 51, 2925-2937 (1996).

(Dicyanomethylene)Pyran Derivatives with C_{2v} Symmetry: An Unusual Class on Nonlinear Optical Chromophores, C. R. Moylan (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Journal of the American Chemical Society* **118**, No. 51, 2950-2955 (1996).

Combined Static and Dynamic Density Functional Study of the Ti(IV) Constrained Geometry Catalyst (CpSiH₂NH)TIR⁺ I. Resting States and Chain Propagation, T. K. Woo (University of Calgary, 2500 University Drive, Calgary, Alberta T2N 1N4, Canada) et al., *Journal of the American Chemical Society* **118**, No. 51, 3021-3030 (1996).

Synthesis and Solid-State Chemistry of CH₃BiI₂: A Structure with an Extended One-Dimensional Organometallic Framework, S. M. Wang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Journal of the American Chemical Society* **119**, No. 4, 724-732 (1997).

Efficient Routing in Optical Networks, A. Aggarwal (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Journal of the Association for Computing Machinery* **43**, No. 6, 973-1001 (1996).

Nonlinear Dynamics of Limiting Current in the Flow-Modulated Uniform Injection Cell, J. A. Medina (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and D. T. Schwartz, *Journal of the Electrochemical Society* **144**, No. 1, 155-164 (1997).

Electron-Beam Microcolumns for Lithography and Related Applications, T. H. P. Chang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Journal of Vacuum Science & Technology B* **14**, No. 6, 3774-3781 (1996).

Experimental Evaluation of a 20 × 20 mm Footprint Microcolumn, E. Kratschmer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Journal of Vacuum Science & Technology B* **14**, No. 6, 3792-3796 (1996).

Energy Distributions of Field-Emitted Electrons from Carbide Tips and Tungsten Tips with Diamond-Like Carbon Coatings, M. L. Yu (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Journal of Vacuum Science & Technology B* **14**, No. 6, 3797-3801 (1996).

The Electrostatic Moving Objective Lens and Optimized Deflection Systems for Microcolumns, M. G. R. Thomson (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Journal of Vacuum Science & Technology B* **14**, No. 6, 3802-3807 (1996).

High-Resolution Electron-Beam Lithography Using ZEP-520 and KrS Resists at Low Voltage, D. M. Tanenbaum (Cornell University, Ithaca, NY 14853) et al., *Journal of Vacuum Science & Technology B* **14**, No. 6, 3829-3833 (1996).

Theory of Beam-Induced Substrate Heating, T. R. Groves (IBM Corporation, Route 52, Hopewell Junction, NY 12533), *Journal of Vacuum Science & Technology B* **14**, No. 6, 3839-3844 (1996).

Energy Spread in Liquid-Metal Ion Sources at Low Currents, J. C. Beckman (Stanford University, Stanford, CA 94305) et al., *Journal of Vacuum Science & Technology B* **14**, No. 6, 3911-3915 (1996).

High-Resolution Silicon Patterning with Self-Assembled Monolayer Resists, M. J. Lercel (IBM Corporation, P.O. Box A, Essex Junction, VT 05452) et al., *Journal of Vacuum Science & Technology B* **14**, No. 6, 4085-4090 (1996).

Impact of Reduced Resist Thickness on Deep Ultraviolet Lithography, T. Azuma (Toshiba Co. Ltd., Saiwai Ku, 1 Komukai Toshiba Cho, Kawasaki, Kanagawa 210, Japan) et al., *Journal of Vacuum Science & Technology B* **14**, No. 6, 4246-4251 (1996).

Correlation of UVIHS Resist Chemistry to Dissolution Rate Measurements, J. Thackeray (Shipley Co. Inc., Marlborough, MA 01752) et al., *Journal of Vacuum Science & Technology B* **14**, No. 6, 4267-4271 (1996).

Extendibility of X-ray Lithography to ≤ 130 nm Ground Rules in Complex Integrated Circuit Patterns, S. Hector (Motorola Inc., Austin, TX 78721) et al., *Journal of Vacuum Science & Technology B* **14**, No. 6, 4288-4293 (1996).

Predicting Inplane Distortion from Electron-Beam Lithography on X-ray Mask Membranes, D. L. Laird (University of Wisconsin, Stoughton, WI 53589) et al., *Journal of Vacuum Science & Technology B* **14**, No. 6, 4308-4313 (1996).

X-ray Induced Mask Contamination and Particulate Monitoring in X-ray Steppers, C. Capasso (Motorola Inc., Austin, TX 78721) et al., *Journal of Vacuum Science & Technology B* **14**, No. 6, 4336-4340 (1996).

Multiple Pass Writing Optimization for Proximity X-ray Mask-Making Using Electron-Beam Lithography, D. M. Puisto (IBM Corporation, P.O. Box A, Essex Junction, VT 05452) et al., *Journal of Vacuum Science & Technology B* **14**, No. 6, 4341-4344 (1996).

Fabrication of X-ray Lithography Masks with Optical Lithography, D. LaTulipe (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Journal of Vacuum Science & Technology B* **14**, No. 6, 4345-4349 (1996).

Image Placement Errors in X-ray Masks Induced by Changes in Resist Stress During Electron-Beam Writing, R. E. Acosta (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and D. Puisto, *Journal of Vacuum Science & Technology B* **14**, No. 6, 4354-4358 (1996).

L

Dynamic Viscoelastic Properties of Liquid Polymer Films Studied by Atomic Force Microscopy, M. C. Friedenberg (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and C. M. Mate, *Langmuir* **12**, No. 25, 6138-6142 (1996).

Holographic Storage Promises High Data Density, J. Ashley (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Laser Focus World* **32**, No. 11, 81+ (1996).

A Detailed Derivation of Extended Jones Matrix Representation for Twisted Nematic Liquid Crystal Displays, A. Lien (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Liquid Crystals* **22**, No. 2, 171-175 (1997).

M

Scattering Properties of Multicomponent Polymer Solutions: Polyelectrolytes, Homopolymer Mixtures and Diblock Copolymer, R. Borsali (Stanford University, Stanford, CA 94305), *Macromolecular Chemistry and Physics* **197**, No. 12, 3947-3994 (1996).

Living Free Radical Polymerization of Macromonomers: Preparation of Well-Defined Graft Copolymers, C. J. Hawker (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Macromolecular Chemistry and Physics* **198**, No. 1, 155-166 (1997).

Cross-Linked Polyimide Foams Derived from Poly(Imide-Propylene Oxide) Copolymers, J. L. Hedrick (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Macromolecular Chemistry and Physics* **198**, No. 2, 549-559 (1997).

NEXAFS Studies on the Surface Orientation of Buffed Polyimides, M. G. Samant (University of Massachusetts, Amherst, MA 01003) et al., *Macromolecules* **29**, No. 26, 8334-8342 (1996).

Heterocycle-Activated Aromatic Nucleophilic Substitution of AB(2) Poly(Aryl Ether Phenylquinoxaline) Monomers III, S. Srinivasan (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Macromolecules* **29**, No. 26, 8543-8545 (1996).

Microporous Cyanurate Networks via Chemically Induced Phase Separation, J. Kiefer (Swiss Federal Institute of Technology, CH-1015 Lausanne, Switzerland) et al., *Macromolecules* **29**, No. 26, 8546-8548 (1996).

Dynamics of Poly(Vinyl Acetate) in Bulk and on Silica, F. D. Blum (University of Missouri, Rolla, MO 65409) et al., *Macromolecules* **29**, No. 27, 8740-8745 (1996).

Microscopic Molecular Reorientation of Alignment Layer Polymer Surfaces Induced by Rubbing and Its Effects on LC Pretilt Angles, K. W. Lee (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Macromolecules* **29**, No. 27, 8894-8899 (1996).

Strain Relaxation and Dislocations in SiGe/Si Structures, P. M. Mooney (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Materials Science & Engineering R—Reports* **17**, No. 3, 105–146 (1996).

Characterization of Semiconductor Laser Diodes by Beam Injection Techniques, A. Jakubowicz (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), *Materials Science and Engineering B* **42**, No. 1–3, 1–7 (1996).

A Globally Convergent Lagrangian Barrier Algorithm for Optimization with General Inequality Constraints and Simple Bounds, A. R. Conn (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Mathematics of Computation* **66**, No. 217, 261+ (1997).

The Varying Nature of Fluorine–Oxygen Bonds, T. J. Lee (NASA, Ames Research Center, Moffett Field, CA 94035) et al., *Molecular Physics* **89**, No. 5, 1359–1372 (1996).

Reconstruction and Decomposition Algorithms for Biorthogonal Multiwavelets, C. A. Micchelli (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and Y. S. Xu, *Multidimensional Systems and Signal Processing* **8**, No. 1–2, 31–69 (1997).

N

Multiple Message Broadcasting in the Postal Model, A. Barnoy (Tel Aviv University, IL-69978 Tel Aviv, Israel) and S. Kipnis, *Networks* **29**, No. 1, 1–10 (1997).

The Ultimate Trip, C. Pickover (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *New Scientist* **152**, No. 2061, 50–52 (1996).

Scalar Quarkonium and the Scalar Glueball, D. Weingarten (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Nuclear Physics B* **S53**, 232–235 (1997).

Scalar Quarkonium Masses, W. Lee (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and D. Weingarten, *Nuclear Physics B* **S53**, 236–238 (1997).

O

Polarization Dependent Contrast of Near-Field and Far-Field Propagating Signal Intensities in C-Mode Scanning Near-Field Optical Microscopy/Photon Scanning Tunneling Microscopy, K. Kobayashi (IBM Japan, Ltd., 1623-14 Shimotsuruma, Yamato, Kanagawa 242, Japan) and O. Watanuki, *Optical Review* **3**, No. 6B, 447–449 (1996).

Observation of Coherent Transients by Use of Current Switching of a Semiconductor Diode Laser, R. M. Macfarlane (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and M. Zhu, *Optics Letters* **22**, No. 4, 248–250 (1997).

P

A Simulation Model for Meandering Rivers and Their Associated Sedimentary Environments, P. Meakin (University of Oslo, P.O. Box 1048, N-0316 Oslo, Norway) et al., *Physica A* **233**, No. 3–4, 606–618 (1996).

High Oxygen Pressure Synthesis, Structure and Properties of the Infinite Chain Compound $\text{Sr}_{0.73}\text{CuO}_2$, J. Karpinski (ETH Zurich, CH-8093 Zurich, Switzerland) et al., *Physica C* **274**, No. 1–2, 99–106 (1997).

The Role of Contamination in SrCuO Reactions at High Pressure, Y. H. Wang (Columbia University, Palisades, NY 10964) et al., *Physica C* **275**, No. 1–2, 52–64 (1997).

Half-Integer Flux Quantum Effect in Cuprate Superconductors: A Probe of Pairing Symmetry, C. C. Tsuei (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Physica Scripta* **T66**, 212–214 (1996).

Field-Dependent Thermoelectric Power and Thermal Conductivity in Multilayered and Granular Giant Magnetoresistive Systems, J. Shi (Motorola Inc., 2100 Elliott Road, Tempe, AZ 85226) et al., *Physical Review B* **54**, No. 21, 5273–5283 (1996).

Grain Boundary Effects on the Magnetoresistance Properties of Perovskite Manganite Films, A. Gupta (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Physical Review B* **54**, No. 22, 5629–5632 (1996).

Quantum Monte Carlo Evidence for D-Wave Pairing in the Two-Dimensional Hubbard Model at a Van Hove Singularity, T. Husslein (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Physical Review B* **54**, No. 22, 6179–6182 (1996).

Simplex Method for Calculating Two-Particle Spectral Densities in Two-Dimensional Interacting Electron Systems, D. M. Newns (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and P. C. Pattnaik, *Physical Review B* **54**, No. 23, 6313–6316 (1996).

Lattice Dynamics of the Ni(977) Surface, G. Witte (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and J. P. Toennies, *Physical Review B* **55**, No. 3, 1395–1397 (1997).

Band Alignment in $\text{ZnSe}/\text{Zn}_{1-x}\text{Cd}_x\text{Mn}_x\text{Se}$ Quantum-Well Structures, W. Y. Yu (State University of New York, Buffalo, NY 14260) et al., *Physical Review B* **55**, No. 3, 1602–1606 (1997).

Conductance Through a Single Atom, H. Mehrez (Bilkent University, TR-06533, Bilkent, Ankara, Turkey) et al., *Physical Review B* **55**, No. 4, 1981–1984 (1997).

Conduction Through Single Mg and Na Atoms Linking Two Macroscopic Electrodes, N. D. Lang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Physical Review B* **55**, No. 7, 4113–4116 (1997).

Missing Motor of On-Off Intermittency, J. G. Vonhardenberg (CNR, I-10125 Turin, Italy) et al., *Physical Review E* **55**, No. 1, 58–64 (1997).

Physical Symmetry and Lattice Symmetry in the Lattice Boltzmann Method, N. Z. Cao (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Physical Review E* **55**, No. 1, R21–R24 (1997).

Ionic Diffusion in a Ternary Superionic Conductor: An Ab-Initio Molecular Dynamics Study, S. Wengert (ETH Zurich, CH-8092 Zurich, Switzerland) et al., *Physical Review Letters* **77**, No. 25, 5083-5085 (1996).

Two-Ion Interference: Bragg Scattering and Superradiance, R. G. Brewer (IBM Corporation, 650 Harry Road, San Jose, CA 95120), *Physical Review Letters* **77**, No. 26, 5153-5156 (1996).

Resonant Photoemission at the 2P Edges of Ni: Resonant Raman and Interference Effects, M. Weinelt (University of Uppsala, Box 530, S-75121 Uppsala, Sweden) et al., *Physical Review Letters* **78**, No. 5, 967-970 (1997).

Reynolds Stress Analysis of EMHD-Controlled Wall Turbulence I. Streamwise Forcing, C. H. Crawford (IBM Corporation, 522 South Road, Poughkeepsie, NY 12601) and G. E. Karniadakis, *Physics of Fluids* **9**, No. 3, 788-806 (1997).

Perfect Quantum Error Correction Coding in 24 Laser Pulses, S. L. Braunstein (University of Ulm, D-89069 Ulm, Germany) and J. A. Smolin, *Physics Review A* **55**, No. 2, 945-950 (1997).

MAAD Scientists and Others Do Numerical Fracture Studies, F. F. Abraham (IBM Corporation, 650 Harry Road, San Jose, CA 95120), *Physics Today* **50**, No. 2, 15+ (1997).

Epoxide Hydrolase Activities in the Microsomes and the Soluble Fraction from Vicia-Sativa Seedlings, F. Pinot (University of California, Davis, CA 95616) et al., *Plant Physiology and Biochemistry* **35**, No. 2, 103-110 (1997).

1-N-Acetylspermidine in Roots of Maize Seedlings, M. Deagazio (CNR, Via Salaria KM 29, I-00016, Monterotondo, Roma, Italy) et al., *Plant Science* **121**, No. 2, 143-149 (1996).

Electroforming of Electronic Devices, L. T. Romankiw (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *Plating and Surface Finishing* **84**, No. 1, 10-16 (1997).

Chemically Induced Phase Separation: A New Technique for the Synthesis of Macroporous Epoxy Networks, J. Kiefer (ETH Zurich, CH-1015 Lausanne, Switzerland) et al., *Polymer* **37**, No. 25, 5715-5725 (1996).

Low-Stress Polyimide Block Copolymers, J. L. Hedrick (IBM Corporation, 650 Harry Road, San Jose, CA 95120) et al., *Polymer* **38**, No. 3, 605-613 (1997).

Imide-Aryl Ether Phenylquinoxalines II., J. L. Hedrick (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and R. Twieg, *Polymer* **38**, No. 4, 995-999 (1997).

Photothermal and Clastic Characterization of a Hardened Steel Rod, C. Glorieux (Katholieke University of Leuven, Celestijnenlaan 200D, B-3001 Louvain, Belgium) et al., *Progress in Materials Science* **6**, S406-S408 (1996).

S

A Unified Theory Based on SO(5) Symmetry of Superconductivity and Antiferromagnetism, S. C. Zhang (Stanford University, Stanford, CA 94305), *Science* **275**, No. 5303, 1089-1096 (1997).

Fabrication of a Silicon-Pyrex-Silicon Stack by ac Anodic Bonding, M. Despont (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) et al., *Sensors and Actuators A* **55**, No. 2-3, 219-224 (1996).

Dipole Transfer and Charge Transfer Contributions to the Work Function Change of Semiconducting Thin Films: Experiment and Theory, H. Geistlinger (Leipzig Halle Ltd., D-04301 Leipzig, Germany) et al., *Sensors and Actuators B* **34**, No. 1-3, 499-505 (1996).

Navigating in Unfamiliar Geometric Terrain, A. Blum (Carnegie Mellon University, Pittsburgh, PA 15213) et al., *SIAM Journal on Computing* **26**, No. 1, 110-137 (1997).

Optimizing Procedure Calls in Block-Structured Languages, J. P. Goodwin (IBM Corporation, Research Triangle Park, NC 27709) and E. F. Gehringer, *Software Practice and Experience* **26**, No. 12, 1385-1414 (1996).

Cold Dust and Galaxy Morphology: A New Perspective, B. G. Elmegreen (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), *South African Journal of Science* **92**, No. 9, 413-416 (1996).

Room Temperature Supramolecular Repositioning at Molecular Interfaces Using a Scanning Tunneling Microscope, M. T. Cuberes (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) et al., *Surface Science* **371**, No. 1, L231-L234 (1997).

The Effects of an External Electric Field on the Adatom Surface Bond: H and Al Adsorbed on Si(111), H. C. Akpati (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Surface Science* **372**, No. 1-3, 9-20 (1997).

Nanometer Size Platinum Particle Arrays: Catalytic and Surface Chemical Properties, P. W. Jacobs (University of California, Berkeley, CA 94704) et al., *Surface Science* **372**, No. 1-3, L249-L253 (1997).

T

Parallel Devs: A Parallel, Hierarchical, Modular Modeling Formalism and Its Distributed Simulator, A. C. H. Chow (IBM Corporation, 11400 Burnet Road, Austin, TX 78758), *T. Soc. Com. S.* **13**, No. 2, 55-67 (1996).

Special Issue: Global Cooperation in Science, Engineering, and Medicine: Statements, P. Chaudhari (IBM Corporation, Old Orchard Road, Armonk, NY 10504), *Technology in Society* **19**, No. 1, 43-45 (1997).

Growth and Characterization of Ta/W Multiscalar and Multilayer Composite Films, A. K. Malhotra (IBM Corporation, Route 52, Hopewell Junction, NY 12533) et al., *Thin Solid Films* **286**, No. 1-2, 196-202 (1996).

Epitaxial Growth of Metals by Sputter Deposition, G. R. Harp (Ohio University, Dept. of Physics and Astronomy, Athens, OH 45701) and S. S. P. Parkin, *Thin Solid Films* **288**, No. 1-2, 315-324 (1996).

Formation of Crystalline Metal-Rich Silicide in Thin-Film Titanium/Silicon Reactions, L. A. Clevenger (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) et al., *Thin Solid Films* **289**, No. 1-2, 220-226 (1996).

Al-Sm and Al-Dy Alloy Thin Films with Low Resistivity and High Thermal Stability for Microelectronic Conductor Lines, S. Takayama (IBM Japan, Ltd., 1623-14 Shimotsuruma, Yamato, Kanagawa 242, Japan) and N. Tsutsui, *Thin Solid Films* **289**, No. 1-2, 289-294 (1996).

TiSi₂ Phase Transformation Characteristics on Narrow Devices, G. L. Miles (IBM Corporation, P.O. Box A, Essex Junction, VT 05452) et al., *Thin Solid Films* **291**, 469-472 (1996).

Evaluation of Barriers for B-Diffusion and P-Diffusion into As-Doped Polysilicon, M. D. Naeem (IBM Corporation, P.O. Box A, Essex Junction, VT 05452) et al., *Thin Solid Films* **291**, 485-492 (1996).

Surface Potential and Magnetic Recording Media Tribology, V. J. Novotny (Seagate Technology, Scotts Valley, CA 95066) et al., *Tribology Transactions* **40**, No. 1, 69-74 (1997).