

READ TODAY'S BEST NONLINEAR RESEARCH ON THE WEB FREE!

Select articles
from the
journal **Chaos**
are at your
fingertips

Already recognized for its accessible presentation of the latest international research on nonlinear phenomena, **Chaos** reaches out to you in a whole new way. You can now read and download—at no cost—some of the finest recent articles from this leading interdisciplinary journal published by the American Institute of Physics. Simply visit the journal's Web site at:

www.aip.org/journals/chaos

There's even more **FREE** online access for you when you subscribe to the print edition, including:

- Access to an online version of **Chaos** up to 3 weeks before print publication.
- Online access to every **Chaos** issue ever published! The complete **Chaos** archive includes 7 years of cutting-edge nonlinear research—and it's yours to tap any time you want via the Web.
- A subscription to PINET Plus, giving you access to AIP's SPIN abstracts database, plus searchable directories from leading science organizations, and tables of contents for AIP and Member Society publications.

For more information and
subscription rates
call toll free: (800) 344-6902,
fax: (516) 349-9704, or
e-mail to: mktg@aip.org.

**AMERICAN
INSTITUTE
OF PHYSICS**

500 Sunnyside Boulevard
Woodbury, NY 11797

tandem mirrors and the like and soon thereafter by inertial confinement with laser and particle beam drivers.

Although Fowler's book is written with admirable attention to the basic physics, it contains not a single equation, except for some simple algebraic formulas in a mathematical appendix. It is fascinating to follow an accurate but literary description of the Vlasov equation. Similarly, there are fine prose descriptions of the energy principle, for judging gross magnetohydrodynamic stability, and of the free-energy principle, for judging the readiness with which plasma can create turbulence and microscopic instabilities. Alvin Weinberg, a wise, early director of the Oak Ridge National Laboratory, admonished fusion scientists to strive for the "dullest of plasmas," and these principles point the way.

The book contains eight color figures, nicely balanced between reality and hope. Included are a detailed engineering drawing of a neutral-beam injector, a photograph of the interior of the Tokamak Fusion Test Reactor, laser-heated hot zones on the wall of a target for inertial confinement fusion, and also artful, airbrushed renderings of the International Thermonuclear Experimental Reactor and the National Ignition Facility. In the chapter on inertial confinement fusion, the book contains a crisp explanation of what only a few years ago were called "classified targets." With characteristic clarity, Fowler outlines the problems connected with Rayleigh-Taylor instabilities and laser-plasma interactions in laser fusion targets.

Although intended for nonspecialists, *The Fusion Quest* is not appropriate for drowsy, bedtime reading, since some concentration is required to follow the careful review of most of the key technologies, from neutral beam injectors to lasers to nonlinear crystals for laser frequency multiplication. Fowler uses apt similes to clarify physical ideas. For example: "When a laser beam is passed through the KDP [potassium dihydrogen phosphate] crystal, the electrons in the crystal oscillate at the frequency of the laser beam. At low intensity, the electron motion is oscillatory at the pure frequency characteristic of the color of the laser light. However, as the laser intensity is increased, this pure oscillation becomes perturbed and develops a second-harmonic component that in turn generates a laser beam at the second harmonic, in the same way that a bugle player can jump an octave from low C to high C."

Toward the end of the book there is a remarkably sober analysis of the political history of controlled fusion in

the United States, of the way fusion policy was set at the Department of Energy in the heady days of strong national support, in response to the oil embargoes of the 1970s, and of the painful reversal of fortune that started in the 1980s—and continues to this day in spite of truly remarkable scientific and technical progress.

Having read the book, I found it hard not to feel profound sympathy and admiration for those who have devoted their lives to realizing controlled fusion. Let us hope that the Greek poet Cavafy, steeped in the tradition of the hero Prometheus, speaks prophetically to the controlled fusion community:

"As you set out for Ithaka
hope the voyage is a long one,
full of adventure, full of
discovery . . .

Keep Ithaka always in your
mind.

Arriving there is what you are
destined for.

But do not hurry the journey
at all.

Better it last for years,
so you are old by the time
you reach the island,
wealthy with all you have
gained on the way,
not expecting Ithaka to
make you rich."

WILLIAM HAPPER
Princeton University
Princeton, New Jersey

NEW BOOKS

Chemical Physics

Relativistic Effects in Chemistry. Part A: Theory and Techniques. K. Balasubramanian. Wiley, New York, 1997. 301 pp. \$74.95 hc ISBN 0-471-30400-X

Statistical Mechanics for Chemists. J. Goodisman. Wiley, New York, 1997. 344 pp. \$64.95 hc ISBN 0-471-16812-2

Unimolecular Reaction Dynamics: Theory and Experiments. *The International Series of Monographs on Chemistry.* T. Baer, W. L. Hase. Oxford U. P., New York, 1996. 438 pp. \$75.00 hc ISBN 0-19-507494-7

Computers and Computational Physics

Coloured Petri Nets: Basic Concepts, Analysis Methods and Practical Use, Vol. 3. Monographs in Theoretical Computer Science. K. Jensen. Springer-Verlag, New York, 1997. 265 pp. \$54.95 hc ISBN 3-540-62867-3

Computational Physics: Problem Solving with Computers. R. H. Landau, M. J. Páez Mejía. Wiley, New York, 1997. 520 pp. \$49.95 hc ISBN 0-471-11590-8, Diskette

Information Systems Reengineering. J. S. P. Fong, S.-M. Huang. Springer-Verlag, New York, 1997. 250 pp. \$39.50 pb ISBN 981-3083-15-8

Visualization and Mathematics: Experiments, Simulations and Environments. H.-C. Hege, K. Polthier, eds. Springer-Verlag, New York, 1997. 386 pp. \$99.00 hc ISBN 3-540-61269-6

Condensed Matter Physics

Fundamentals of Semiconductor Physics and Devices. R. Enderlein, N. J. M. Horing. World Scientific, River Edge, N.J., 1997. 771 pp. \$83.00 hc ISBN 981-02-2387-0

Handbook of Liquid Crystal Research. P. J. Collings, J. S. Patel, eds. Oxford U. P., New York, 1997. 600 pp. \$195.00 hc ISBN 0-19-508442-X

The Physics of Structural Phase Transitions. M. Fujimoto. Springer-Verlag, New York, 1997. 247 pp. \$69.00 hc ISBN 0-387-94856-2

The Physics of Superconductors: Introduction to Fundamentals and Applications. V. V. Schmidt. Springer-Verlag, New York, 1997. 206 pp. \$59.95 hc ISBN 3-540-61243-2

Simulations for Solid State Physics: An Interactive Resource for Students and Teachers. R. H. Silsbee, J. Dräger. Cambridge U. P., New York, 1997. 348 pp. \$80.00 hc ISBN 0-521-59094-9, CD-ROM

Soft Interfaces: The 1994 Dirac Memorial Lecture. P. G. de Gennes. Cambridge U. P., New York, 1997. 117 pp. \$19.95 hc ISBN 0-521-56417-4

The Theory of Superconductivity in the High- T_c Cuprates. Princeton Series in Physics. P. W. Anderson. Princeton U. P., Princeton, N.J., 1997. 446 pp. \$49.50 hc ISBN 0-691-04365-5

Cosmology and Relativity

Is the Universe Open or Closed? Cambridge Lecture Notes in Physics 7. P. Coles, G. Ellis. Cambridge U. P., New York, 1997. 236 pp. \$32.95 pb ISBN 0-521-56689-4

Relativistic Gravitation and Gravitational Radiation. Cambridge Contemporary Astrophysics. Proc. Wksp., Les Houches, Haute Savoie, France, Sep.-Oct. 1995. J.-A. Marck, J.-P. Lasota, eds. Cambridge U. P., New York, 1997. 475 pp. \$74.95 hc ISBN 0-521-59065-5, CD-ROM

Energy and Environment

Direct Energy Conversion: Fundamentals of Electric Power Production. R. Decher. Oxford U. P., New York, 1997. 258 pp. \$49.00 hc ISBN 0-19-509572-3

Environmental Technologies and Trends: International and Policy Perspectives. Environmental Engineering. R. K. Jain, Y. Aurelle, C. Cabassud, M. Roustan, S. P. Shelton, eds. Springer-Verlag, New York, 1997. 398 pp. \$129.50 hc ISBN 3-540-61342-0

The Nuclear Fuel Cycle: From Ore to Wastes. P. D. Wilson, ed. Oxford U. P., New York, 1996. 323 pp. \$55.00 hc ISBN 0-19-856540-2

A NEW STANDARD IN MAGNETIC MEASUREMENT VERSATILITY...



MULTIPURPOSE PRECISION MAGNETOMETER

- Operates as a Gaussmeter, Low Field Magnetometer, Fluxmeter, Thermometer and Magnet Field Controller
- Measurement of four channels, display of eight parameters simultaneously
- High precision, high speed data acquisition

Magnetizers • Electromagnets • Magnetic Measurement Services • Helmholtz Coils and Solenoids • Pulse Systems
Vibrating Sample Magnetometers • Hysteresisgraphs • Magneto-Optical and Magneto-Resistive Measurement Systems



LDJ Electronics, Inc.

1280 E. Big Beaver Rd. • Troy, MI 48063 • (248) 528-2202 • FAX (248) 689-2525
E-Mail: info@LDJ-Electronics.com • Web: www.LDJ-Electronics.com

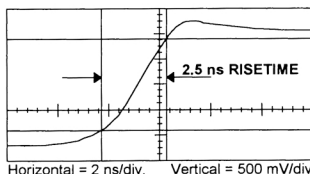
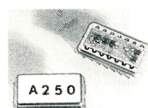
Circle number 39 on Reader Service Card

CHARGE SENSITIVE PREAMPLIFIERS

If you are using Solid State Detectors, Proportional Counters, Photodiodes, PM Tubes, CEMs or MCPs and want the best performance, try an **AMPTTEK CHARGE SENSITIVE PREAMPLIFIER**

STATE-OF-THE-ART

A250



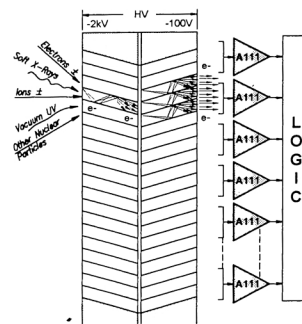
External FET
FET can be cooled
Noise: <100 e⁻ RMS (Room Temp.)
<20 e⁻ RMS (Cooled FET)
Gain-Bandwidth $f_c > 1.5$ GHz
Power: 19 mW typical
Slew rate: >475 V/ μ s

APPLICATIONS

- Aerospace
- Portable Instrumentation
- Nuclear Plant Monitoring
- Imaging
- Research Experiments
- Medical & Nuclear Electronics
- Electro-Optical Systems

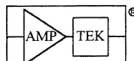
THE INDUSTRY STANDARD

A111



A Microchannel Plate (MCP) Array
Connected to Multiple A111s

Visit us now
www.amptek.com



AMPTTEK INC. 6 De Angelo Drive, Bedford, MA 01730 U.S.A.
Tel: +1 (781) 275-2242 Fax: +1 (781) 275-3470
e-mail: sales@amptek.com www.amptek.com

Circle number 40 on Reader Service Card

Fluids

Fluid Mechanics: Problems and Solutions. J. H. Spurk. Springer-Verlag, New York, 1997. 601 pp. \$45.00 *hc* ISBN 3-540-61652-7

Geophysics

Earth's Deep Interior: The Doornbos Memorial Volume. *The Fluid Mechanics of Astrophysics and Geophysics 7.* D. J. Crossley, ed. Gordon and Breach, Amsterdam, The Netherlands, 1997. 453 pp.

\$110.00 *hc* ISBN 90-5699-032-2

Geochemical Reaction Modeling: Concepts and Applications. C. M. Bethke. Oxford U. P., New York, 1996. 397 pp. \$55.00 *hc* ISBN 0-19-509475-1

Late Palaeozoic and Early Mesozoic Circum-Pacific Events and Their Global Correlation. *World and Regional Geology 10.* J. M. Dickins, ed. Cambridge U. P., New York, 1997. 245 pp. \$110.00 *hc* ISBN 0-521-47175-3

History and Philosophy

The Einstein Tower: An Intertexture of Dynamic Construction, Relativity Theory, and Astronomy. *Writing Science.* K. Hentschel. Stanford U. P., Stanford, Calif., 1997. 226 pp. \$45.00 *hc* ISBN 0-8047-2824-0

A Half-Century of the Journal of Polymer Science. D. A. Tirrell, E. M. Pearce, M. Sawamoto, E. J. Amis, eds. Wiley, New York, 1997. 695 pp. \$39.00 *hc* ISBN 0-471-17824-1

Image and Logic: A Material Culture of Microphysics. P. Galison. U. of Chicago P., Chicago, 1997. 955 pp. \$90.00 *hc* (\$34.95 *pb*) ISBN 0-226-27916-2 *hc* (0-226-27917-0 *pb*)

In Search of Divine Reality: Science as a Source of Inspiration. L. Schäfer. U. of Arkansas P., Fayetteville, Ark., 1997. 235 pp. \$18.00 *pb* ISBN 1-55728-468-7

J. J. Thomson and the Discovery of the Electron. E. A. Davis, I. J. Falconer. Taylor & Francis, Bristol, Pa., 1997. 243 pp. \$29.95 *pb* ISBN 0-7484-0720-0

Old Wine New Flasks: Reflections on Science and Jewish Tradition. R. Hoffmann, S. L. Schmidt. W. H. Freeman, New York, 1997. 362 pp. \$28.95 *hc* ISBN 0-7167-2899-0

Physics in the Nineteenth Century. R. D. Purrington. Rutgers U. P., New Brunswick, N.J., 1997. 249 pp. \$55.00 *hc* (\$25.00 *pb*) ISBN 0-8135-2441-5 *hc* (0-8135-2442-3 *pb*)

Prompt and Utter Destruction: Truman and the Use of Atomic Bombs against Japan. J. S. Walker. U. of North Carolina Press, Chapel Hill, N.C., 1997. 142 pp. \$34.95 *hc* (\$14.95 *pb*) ISBN 0-8078-2361-9 *hc* (0-8078-4662-7 *pb*)

Selected Scientific Papers of Sir Rudolf Peierls: With Commentary. *World Scientific Series in 20th Century Physics 19.* R. H. Dalitz, R. Peierls, eds. World Scientific, River Edge, N.J., 1997. 805 pp. \$148.00 *hc* (\$77.00 *pb*) ISBN 981-02-2692-6 *hc* (981-02-2693-4 *pb*)

Skywatchers, Shamans & Kings: Astronomy and the Archaeology of Power. *Wiley Popular Science.* E. C. Krupp. Wiley, New York, 1997. 364 pp. \$27.95 *hc* ISBN 0-471-04863-1

The Truth of Science: Physical Theories and Reality. R. G. Newton. Harvard U. P., Cambridge, Mass., 1997. 260 pp. \$27.00 *hc* ISBN 0-674-91092-3

Van der Waals and Molecular Science. A. Ya. Kipnis, B. E. Yavelov, J. S. Rowlinson. Oxford U. P., New York, 1996. 313 pp. \$105.00 *hc* ISBN 0-19-855210-6

Instrumentation and Techniques

Cryocoolers 9. Proc. Conf., Waterville Valley, N.H., Jun. 1996. R. G. Ross Jr., ed. Plenum, New York, 1997. 967 pp. \$195.00 *hc* ISBN 0-306-45511-0

Cryogenic Regenerative Heat Exchangers. *The International Cryogenics Monograph Series.* R. A. Ackermann. Plenum, New York, 1997. 224 pp. \$89.50 *hc*

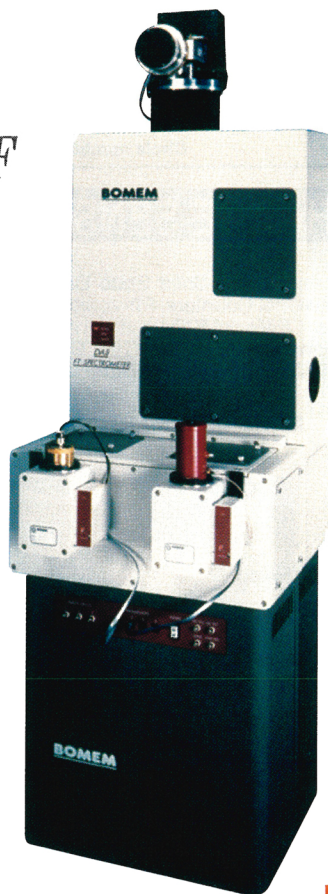


THE DA8 RESEARCH-GRADE FTIR

THE FRUIT OF TEAMWORK

Research requires teamwork — at Bomem, we understood that from the beginning. Our Quality-Driven team is ready to support you with the best product for your most demanding applications.

**Add us to your team!
Contact Bomem for more information.**



BOMEM

450, Saint-Jean-Baptiste Ave, Québec, Québec Canada G2E 5S5
Phone: (418) 877 2944 • North America: (800) 858 FTIR • Europe 31 73 644 0030
Fax: (418) 877 2834 • e-mail: FTIR@bomem.qc.ca



Circle number 41 on Reader Service Card

ISBN 0-306-45449-1

Discovering Curves and Surfaces with Maple®. G. Klimek, M. Klimek. Springer-Verlag, New York, 1997. 217 pp. \$49.00 *hc* ISBN 0-387-94890-2, *Diskette*

Electromagnetics: Theory, Techniques, and Engineering Paradigms. G. Franceschetti. Plenum, New York, 1997. 568 pp. \$115.00 *hc* ISBN 0-306-45527-7

Electrospray Ionization Mass Spectrometry: Fundamentals, Instrumentation, and Applications. R. B. Cole, ed. Wiley, New York, 1997. 577 pp. \$84.95 *hc* ISBN 0-471-14564-5

High-Pressure Techniques in Chemistry and Physics: A Practical Approach. *The Practical Approach in Chemistry Series.* W. B. Holzapfel, N. S. Isaacs, eds. Oxford U. P., New York, 1997. 388 pp. \$145.00 *hc* ISBN 0-19-855811-2

Introducing C++ for Scientists, Engineers and Mathematicians. D. M. Capper. Springer-Verlag, New York, 1997 [1994, reissued]. 502 pp. \$42.95 *pb* ISBN 0-387-19847-4

Lasers in Chemistry. 3rd edition. D. L. Andrews. Springer-Verlag, New York, 1997 [1990]. 232 pp. \$57.95 *pb* ISBN 3-540-61982-8

NMR Spectroscopy: Processing Strategies. P. Bigler. VCH (Wiley), New York, 1997. 249 pp. \$99.00 *hc* ISBN 3-527-28812-0, *CD-ROM*

Nuclear Magnetic Resonance and Relaxation. B. Cowan. Cambridge U. P., New York, 1997. 434 pp. \$95.00 *hc* ISBN 0-521-30393-1

Remote Sensing: The Image Chain Approach. J. R. Schott. Oxford U. P., New York, 1997. 394 pp. \$59.95 *hc* ISBN 0-19-508726-7

Spectra Interpretation of Organic Compounds. E. Pretsch, J. T. Clerc. VCH (Wiley), New York, 1997. 175 pp. \$90.00 *hc* ISBN 3-527-28826-0, *CD-ROM*

Statistical Analysis of Extreme Values: From Insurance, Finance, Hydrology and Other Fields. R.-D. Reiss, M. Thomas. Birkhäuser, Boston, 1997. 316 pp. \$64.50 *pb* ISBN 0-8176-5768-1, *CD-ROM*

Transient Temperature in Engineering and Science. B. Lawton, G. Klingenberg. Oxford U. P., New York, 1996. 584 pp. \$150.00 *hc* ISBN 0-19-856260-8

Materials Science

Annual Review of Materials Science, Vol. 27. E. N. Kaufmann, ed. Annual Reviews Inc., Palo Alto, Calif., 1997. 670 pp. \$80.00 *hc* ISBN 0-8243-1727-0

Basic Theory of Surface States. *Monographs on the Physics and Chemistry of Materials* 46. S. G. Davison, M. Steslicka. Oxford U. P., New York, 1996 [1992]. 223 pp. \$29.95 *pb* ISBN 0-19-851896-X

Dynamics of Crystal Surfaces and Interfaces. *Fundamental Materials Research.* P. M. Duxbury, T. J. Pence, eds. Plenum, New York, 1997. 247 pp. \$95.00 *hc* ISBN 0-306-45619-2

Electronic Excitations at Metal Surfaces. *Physics of Solids and Liquids.* A.

Liebsch. Plenum, New York, 1997. 336 pp. \$85.00 *hc* ISBN 0-306-45545-5

Optical Diagnostics for Thin Film Processing. I. P. Herman. Academic Press, San Diego, Calif., 1996. 783 pp. \$89.00 *hc* ISBN 0-12-342070-9

Physical Chemistry of Surfaces. 6th edition. A. W. Adamson, A. P. Gast. Wiley, New York, 1997 [1960]. 784 pp. \$69.95 *hc* ISBN 0-471-14873-3

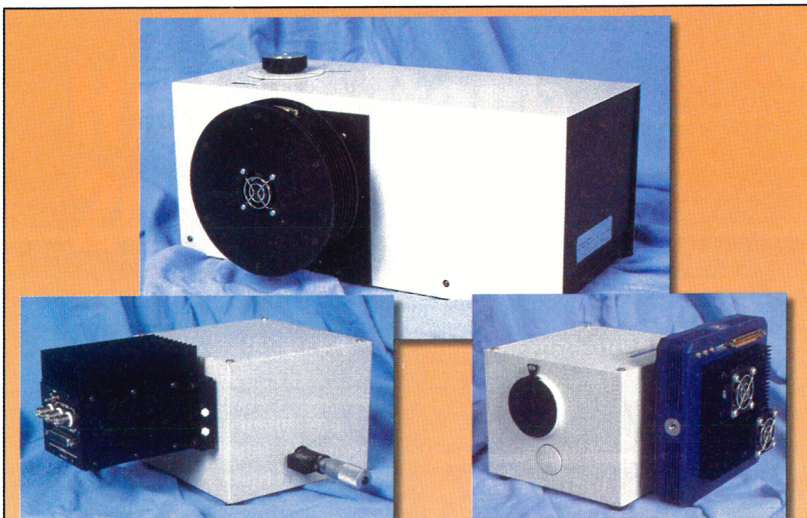
Rare-Earth Iron Permanent Magnets. *Monographs on the Physics and Chemistry of Materials* 54. J. M. D. Coey, ed. Oxford

U. P., New York, 1996. 522 pp. \$135.00 *hc* ISBN 0-19-851792-0

Nonlinear Science and Chaos

The Emergence of Complexity in Mathematics, Physics, Chemistry, and Biology. *Pontificiae Academiae Scientiarum Scripta Varia* 89. Proc. Plenary Session, Casina Pio IV, Vatican City, Oct. 1992. B. Pullman, ed. Princeton U. P., Princeton, N.J., 1996. 472 pp. \$39.50 *pb* ISBN 0-691-01238-5

Fractal River Basins: Chance and Self-



Spectrograph Systems

Looking for a *high-quality, low-cost* spectrograph system? TVC Jarrell-Ash has combined the best in detector systems with the best in spectrographs to provide systems with the power and performance you demand at a price that will stretch your R&D dollars further. With three different detectors and three different focal lengths to choose from, we would be happy to configure a system for your specific application. Just give us a call!

Features

- ◆ Complete CCD and Linear Array Systems
- ◆ Low Stray Light
- ◆ High Efficiency
- ◆ Superior Spectral Resolution
- ◆ 156mm, 275mm, 500mm Focal Lengths
- ◆ Low Cost

TVC Jarrell-Ash
Thermo Vision Colorado

Call 1-800-747-3308

2527 Foresight Circle
Grand Junction, CO 81505 USA
Phone 970-241-3308 • Fax 970-241-6618

Email: info@tvcinstruments.com • Web: www.tvcinstruments.com

Circle number 42 on Reader Service Card

Organization. I. Rodríguez-Iturbe, A. Rinaldo. Cambridge U. P., New York, 1997. 547 pp. \$100.00 *hc* ISBN 0-521-47398-5

Laws of Chaos: Invariant Measures and Dynamical Systems in One Dimension. *Probability and Its Applications.* A. Boyarsky, P. Góra. Birkhäuser, Boston, 1997. 399 pp. \$59.95 *hc* ISBN 0-8176-4003-7

Quantum Chaos and Mesoscopic Systems: Mathematical Methods in the Quantum Signatures of Chaos. *Mathematics and Its Applications 397.* N. E. Hurt. Kluwer Academic, Norwell, Mass., 1997. 331 pp. \$166.00 *hc* ISBN 0-7923-4459-6

Quantum versus Chaos: Questions Emerging from Mesoscopic Cosmos. *Fundamental Theories of Physics 87.* K. Nakamura. Kluwer Academic, Norwell, Mass., 1997. 213 pp. \$99.00 *hc* ISBN 0-7923-4557-6

Nuclear Physics

Advances in Nuclear Science and Technology, Vol. 25. J. Lewins, M. Becker, eds. Plenum, New York, 1997. 281 pp. \$110.00 *hc* ISBN 0-306-45604-4

Experimental Techniques in Nuclear Physics. D. N. Poenaru, W. Greiner, eds. Walter de Gruyter, New York, 1997. 649 pp. DM398.00 *hc* ISBN 3-11-014467-0

Optics and Photonics

Electromagnetic Pulse Propagation in Causal Dielectrics. *Springer Series on Wave Phenomena 16.* K. E. Oughstun, G. C. Sherman. Springer-Verlag, New York, 1997 [1994]. 465 pp. \$99.95 *hc* ISBN 3-540-57892-7

Introduction to Optical Engineering. F. T. S. Yu, X. Yang. Cambridge U. P., New York, 1997. 409 pp. \$110.00 *hc* (\$44.95 *pb*) ISBN 0-521-57366-1 *hc* (0-521-57493-5 *pb*)

Physical Optics. S. A. Akhmanov, S. Yu. Nikitin. Oxford U. P., New York, 1997. 488 pp. \$110.00 *hc* ISBN 0-19-851795-5

Rotating Mirror Streak and Framing Cameras. E. A. Igel, M. Kristiansen. SPIE, Bellingham, Wash., 1997. 109 pp. \$42.00 *pb* ISBN 0-8194-2461-7

Particle Physics

Nonlinear Dynamics in Particle Accelerators. *World Scientific Series on Nonlinear Science A 23.* R. Dilao, R. Alves-Pires. World Scientific, River Edge, N.J., 1996. 223 pp. \$39.00 *hc* ISBN 981-02-2517-2

On the Role of Division, Jordan and Related Algebras in Particle Physics. F. Gürsey, C.-H. Tze. World Scientific, River Edge, N.J., 1996. 461 pp. \$96.00 *hc* ISBN 981-02-2863-5

Proceedings of the 14th International Conference on Particles and Nuclei, Panic '96. Proc. Conf., Williamsburg, Va., May 1996. C. E. Carlson, J. J. Domingo, eds. World Scientific, River Edge, N.J., 1997. 755 pp. \$128.00 *hc* ISBN 981-02-3003-6

Proceedings of the 28th International Conference on High Energy Physics, Vols. 1 and 2. Proc. Conf., Warsaw, Poland, Jul. 1996. Z. Ajduk, A. K. Wroblewski, eds. World Scientific, River Edge, N.J., 1997. 1798

pp. \$129.00 set *hc* ISBN 981-02-2874-0 set
Relativistic Quantum Mechanics: Wave Equations. 2nd revised edition. W. Greiner. Springer-Verlag, New York, 1997 [1990]. 424 pp. \$59.95 *pb* ISBN 3-540-61621-7

Plasmas and Fusion

Advanced Space Plasma Physics. R. A. Treumann, W. Baumjohann. Imperial College P., London, United Kingdom, 1997. 381 pp. \$68.00 *hc* ISBN 1-86094-026-9

Basic Space Plasma Physics. W. Baumjohann, R. A. Treumann. Imperial College P., London, United Kingdom, 1996. 329 pp. \$58.00 *hc* ISBN 1-86094-017-X

Current Trends in International Fusion Research. Proc. Symp., Washington, DC, Nov. 1994. E. Panarella, ed. Plenum, New York, 1997. 595 pp. \$159.50 *hc* ISBN 0-306-45513-7

Gas Discharge Physics. Corrected edition. Yu. P. Raizer. Springer-Verlag, New York, 1997 [1991]. 449 pp. \$65.00 *hc* ISBN 3-540-19462-2

Tokamaks. *The Oxford Engineering Science Series 48.* 2nd edition. J. Wesson. Oxford U. P., New York, 1997. 680 pp. \$185.00 *hc* ISBN 0-19-856293-4

Popularizations

Einstein's Mirror. T. Hey, P. Walters. Cambridge U. P., New York, 1997. 291 pp. \$69.95 *hc* (\$27.95 *pb*) ISBN 0-521-43504-8 *hc* (0-521-43532-3 *pb*)

Five Golden Rules: Great Theories of 20th-Century Mathematics— and Why They Matter. J. L. Casti. Wiley, New York, 1996. 235 pp. \$16.95 *pb* ISBN 0-471-19337-2

The Last Recreations: Hydras, Eggs, and Other Mathematical Mystifications. M. Gardner. Copernicus (Springer-Verlag), New York, 1997. 392 pp. \$25.00 *hc* ISBN 0-387-94929-1

Merlin's Tour of the Universe. N. de Grasse Tyson. Main Street Books (Doubleday), New York, 1997. 299 pp. \$12.95 *pb* ISBN 0-385-48835-1

The Pinball Effect: How Renaissance Water Gardens Made the Carburetor Possible— and Other Journeys through Knowledge. J. Burke. Back Bay Books (Little, Brown), Boston, 1997. 310 pp. \$13.95 *pb* ISBN 0-316-11610-6

The Science Class You Wish You Had . . . The Seven Greatest Scientific Discoveries in History and the People Who Made Them. D. E. Brody, A. R. Brody. Perigee Books (Berkley Publishing Group), New York, 1997. 376 pp. \$14.00 *pb* ISBN 0-399-52313-8

Visions: How Science Will Revolutionize the 21st Century. Anchor Books (Doubleday), New York, 1997. 403 pp. \$24.95 *hc* ISBN 0-385-48498-4

What Is Mathematics, Really? R. Hersch. Oxford U. P., New York, 1997. 343 pp. \$35.00 *hc* ISBN 0-19-511368-3

Society and Government

Bits of Power: Issues in Global Access

to Scientific Data. Committee on Issues in the Transborder Flow of Scientific Data, U.S. National Committee for CODATA, Commission on Physical Sciences, Mathematics, and Applications, National Research Council. National Academy P., Washington, DC, 1997. 235 pp. \$44.95 *hc* ISBN 0-309-05635-7

Space and Planetary Science

Comets and the Origin and Evolution of Life. P. J. Thomas, C. F. Chyba, C. P. McKay, eds. Springer-Verlag, New York, 1997. 296 pp. \$29.00 *hc* ISBN 0-387-94650-0

Statistical Physics

Quantum Geometry: A Statistical Field Theory Approach. *Cambridge Monographs on Mathematical Physics.* J. Ambjørn, B. Durhuus, T. Jonsson. Cambridge U. P., New York, 1997. 363 pp. \$100.00 *hc* ISBN 0-521-46167-7

Theory and Mathematical Methods

Conformal Invariants, Inequalities, and Quasiconformal Maps. *Canadian Mathematical Society Series of Monographs and Advanced Texts.* G. D. Anderson, M. K. Vamanamurthy, M. K. Vuorinen. Wiley, New York, 1997. 505 pp. \$69.95 *hc* ISBN 0-471-59486-5, *Diskette*

The End of Certainty: Time, Chaos, and the New Laws of Nature. I. Prigogine. The Free Press, New York, 1997. 228 pp. \$24.00 *hc* ISBN 0-684-83705-6

Euclidean Quantum Gravity on Manifolds with Boundary. *Fundamental Theories of Physics.* G. Esposito, A. Yu. Kamenshchik, G. Pollifrone. Kluwer Academic, Norwell, Mass., 1997. 319 pp. \$154.00 *hc* ISBN 0-7923-4472-3

The Family Problem: New Internal Algebraic and Geometric Regularities. G. L. Fitzpatrick. Nova Scientific Press, Issaquah, Wash., 1997. 99 pp. \$24.95 *hc* ISBN 0-9655695-0-0

Foundations of Quantum Mechanics in the Light of New Technology. *Advanced Series in Applied Physics 4.* S. Nakajima, Y. Murayama, A. Tonomura, eds. World Scientific, River Edge, N.J., 1996. 482 pp. \$86.00 *hc* ISBN 981-02-2844-9

Galois Cohomology. J.-P. Serre (translated from the French by P. Ion). Springer-Verlag, New York, 1997. 210 pp. \$59.95 *hc* ISBN 3-540-61990-9

Information Dynamics and Open Systems: Classical and Quantum Approach. *Fundamental Theories of Physics.* R. S. Ingarden, A. Kossakowski, M. Ohya. Kluwer Academic, Norwell, Mass., 1997. 307 pp. \$154.00 *hc* ISBN 0-7923-4473-1

Interpreting the Quantum World. J. Bub. Cambridge U. P., New York, 1997. 298 pp. \$49.95 *hc* ISBN 0-521-56082-9

An Introduction to Quantum Theory. *Oxford Graduate Texts in Mathematics 1.* K. Hannabuss. Oxford U. P., New York, 1997. 380 pp. \$65.00 *hc* ISBN 0-19-853794-8

Low-Dimensional Applications of Quantum Field Theory. *NATO ASI Series B: Physics 362.* L. Baulieu, V. Kazakov, M. Picco, P. Windey, eds. Plenum, New York, 1997. 373 pp. \$129.50 *hc* ISBN 0-306-45686-9

The Mathematical Beauty of Physics: A Memorial Volume for Claude Itzykson. *Advanced Series in Mathematical Physics 24.* Proc. Conf., Saclay, France, Jun. 1996. J. M. Drouffe, J. B. Zuber, eds. World Scientific, River Edge, N.J., 1997. 366 pp. \$86.00 *hc* ISBN 981-02-2807-4

The Numerical Solution of Integral Equations of the Second Kind. *Cambridge Monographs on Applied and Computational Mathematics 4.* K. E. Atkinson. Cambridge U. P., New York, 1997. 552 pp. \$69.95 *hc* ISBN 0-521-58391-8

Quantum Communication, Computing, and Measurement. Proc. Conf., Shizuoka, Japan, Sep. 1996. O. Hirota, A. S. Holevo, C. M. Caves, eds. Plenum, New York, 1997. 546 pp. \$139.50 *hc* ISBN 0-306-45685-0

Random Walks and Random Environments, Vol. 1: Random Walks. B. D. Hughes. Oxford U. P., New York, 1995. 631 pp. \$95.00 *hc* ISBN 0-19-853788-3

Random Walks and Random Environments, Vol. 2: Random Environments. B. D. Hughes. Oxford U. P., New York, 1996. 526 pp. \$115.00 *hc* ISBN 0-19-853789-1

Scattering Theory of Classical and Quantum N-Particle Systems. *Texts and Monographs in Physics.* J. Dereziński, C. Gérard. Springer-Verlag, New York, 1997. 444 pp. \$89.95 *hc* ISBN 3-540-62066-4

The Theory and Applications of Reaction-Diffusion Equations: Patterns and Waves. *Oxford Applied Mathematics and Computing Science Series.* 2nd edition. P. Grindrod. Oxford U. P., New York, 1996 [1991]. 275 pp. \$55.00 *hc* ISBN 0-19-850004-1

Undergraduate Texts and Education

Adviser, Teacher, Role Model, Friend: On Being a Mentor to Students in Science and Engineering. National Academy of Sciences, National Academy of Engineering, Institute of Medicine. National Academy P., Washington, DC, 1997. 84 pp. \$7.95 *pb* ISBN 0-309-06363-9

Beginning Calculations in Physical Chemistry. *Workbooks in Chemistry.* B. R. Johnson, S. K. Scott. Oxford U. P., New York, 1997. 166 pp. \$24.95 *pb* ISBN 0-19-855965-8

Elements of Mechanics. D. Williams. Oxford U. P., New York, 1997. 251 pp. \$70.00 *hc* (\$29.95 *pb*) ISBN 0-19-851881-1 *hc* (0-19-851880-3 *pb*)

Physical Chemistry: A Molecular Approach. D. A. McQuarrie, J. D. Simon. University Science Books, Sausalito, Calif., 1997. 1270 pp. \$76.00 *hc* ISBN 0-935702-99-7

The Physics of Oscillations and Waves: With Applications in Electricity and Mechanics. I. Bloch. Plenum, New York, 1997. 317 pp. \$89.50 *hc* ISBN 0-306-45721-0

Miscellaneous

Advances in Statistical Decision Theory and Applications. *Statistics for Industry and Technology.* S. Panchapakesan, N. Balakrishnan, eds. Birkhäuser, Boston, 1997. 448 pp. \$79.95 *hc* ISBN 0-8176-3965-9

The CIM Debacle: Methodologies to Facilitate Software Interoperability. V. Singh. Springer-Verlag, New York, 1997. 198 pp. \$59.00 *hc* ISBN 981-3083-21-2

Hydrocarbon Resins. R. Mildenberg, M.

Zander, G. Collin. VCH (Wiley), New York, 1997. 179 pp. \$140.00 *hc* ISBN 3-527-28617-9

Pigeon Poo, the Universe and Car Paint— and Other Awesome Science Moments. *New Moments in Science I.* K. Kruszelnicki. Harper Collins, New York, 1997 [1996, reissued]. 175 pp. \$17.50 *pb* ISBN 0-7322-5723-9

Principles of Linear Systems. P. E. Sarachik. Cambridge U. P., New York, 1997. 283 pp. \$80.00 *hc* (\$34.95 *pb*) ISBN 0-521-57057-3 *hc* (0-521-57606-7 *pb*) ■

High Voltage 20¢/Volt

The PS300 programmable power supply series provides up to 5kV at 25 Watts for laboratory and ATE applications. These supplies offer a wide range of features including programmable current and voltage limits, selectable overload response, and short circuit protection.

Dual LED displays monitor both output current and voltage, while a third display allows error-free front panel entry. A full GPIB interface is available for ATE systems.

The combination of features, price, and performance make the PS300 series the perfect choice for laboratory or systems use.

\$1150.00

PS350	0 to 5kV
PS325	0 to 2.5kV
PS310	0 to 1.25 kV

25 Watts output power
0.001% regulation
0.1% accuracy
Low output ripple
Dual polarity
Voltage and current readouts

GPIB Interface \$495



Stanford Research Systems

1290 D Reamwood Avenue, Sunnyvale, CA 94089
TEL (408) 744-9040 FAX 4087449049 TLX 706891 SRS UD

Circle number 43 on Reader Service Card