

ternational Astronomical Union binding agreements during the past 25 years. A long gazetteer gives the origins of the accepted names of the most prominent surface features on Mars and its two satellites. In addition, Martian maps constructed by Schiaparelli, Richard Proctor, Eugène Antoniadi and the US Geological Survey are reproduced.

Science and Technology in East Asia. N. Sivin, ed. 260 pp. Science History (Neale Watson), New York, 1977. \$9.95 clothbound, \$5.95 paperbound

The 19 papers reprinted in this volume were first published in the history of science journal *Isis* over a sixty-year period stretching from 1914 to 1976. The papers (17 on Chinese science and technology and 2 on Japanese science) are divided into four areas: quantitative sciences, qualitative sciences, technology and cultural interaction. Sivin notes that "The study of Far Eastern science and technology is the antithesis of a narrow speciality. It encompasses every variety of technical thought and action by a majority of civilized humanity over the whole sweep of history. . . . The East Asian technical traditions are still open country—among the last remaining—in a built-up world of scholarship. Over it one may pursue problems in any direction they lead, so long as they remain worth the chase." —CBW

new books

Particles, Nuclei and High-Energy Physics

Deeper Pathways in High-Energy Physics (Proc. of the 14th High-Energy Physics meeting under the aegis of Orbis Scientiae, Univ. of Miami, Coral Gables, Fla., January 1977) (Studies in the Natural Sciences, Vol. 12). A. Perlmutter, L. F. Scott, eds. 743 pp. Plenum, New York, 1977. \$59.50

Advances in Nuclear Physics, Vol. 9. M. Baranger, E. Vogt, eds. 264 pp. Plenum, New York, 1977. \$24.50

Cargèse Lectures in Physics, Vol. 7 (Lectures and seminars delivered at the Institute d'Etudes Scientifiques, Cargèse, France, Summer 1972). M. Lévy, ed. 501 pp. Gordon and Breach, New York, 1977. \$48.00

Methods in Subnuclear Physics, Vol. 5, Parts 1 and 2 (Proc. of the 5th session of the International School of Elementary Particle Physics, Herceg Novi, Yugoslavia, September 1969). M. Nikolić, ed. 496 and 364 pp. Gordon and Breach, New York, 1977. \$110.00

Lectures on Group Theory and Particle Theory. H. Bacry. 580 pp. Gordon and Breach, New York, 1977. \$70.00

High Energy Particle Interactions:

Physics and Applications, Vol. 2 (Proc. of a conf. held at Smolenice Castle, November 1975). D. Krupa, J. Pišút, eds. 500 pp. VEDA, Bratislava, 1976. (Price not stated)

Atomic, Molecular and Chemical Physics

Infrared and Raman Spectroscopy, Part C (Practical Spectroscopy Series, Vol. 1). E. G. Brame, Jr., J. G. Grasselli, eds. 323 pp. Dekker, New York, 1977. \$36.50

Statistical Mechanics, Part B: Time-Dependent Processes (Modern Theoretical Chemistry, Vol. 6). B. J. Berne, ed. 362 pp. Plenum, New York, 1977. \$39.50

Electricity, Magnetism and Fields

Electromagnetic Vibrations, Waves, and Radiation. G. Bekefi, A. H. Barrett. 664 pp. MIT, Cambridge, 1977. \$17.50

Quantum Electronics and Lasers

Optics and Lasers: An Engineering Physics Approach (Series in Optical Sciences, Vol. 5). M. Young. 207 pp. Springer-Verlag, Berlin, 1977. DM 52.00

Laser Spectroscopy III (Proc. of the Third Inter. Conf., Jackson Lodge, Wyoming, July 1977). (Series in Optical Sciences, Vol. 7). J. L. Hall, J. L. Carlsten, eds. 468 pp. Springer-Verlag, Berlin, 1977. \$29.50

Chemical and Biochemical Applications of Lasers, Vol. 3. C. B. Moore, ed. 325 pp. Academic, New York, 1977. \$16.50

Fluids and Plasmas

Fluid Dynamics/Dynamique des Fluides (Lectures delivered at the Summer School of Theoretical Physics, Les Houches, France, July 1973). R. Balian, J.-L. Puebe, eds. 677 pp. Gordon and Breach, New York, 1977. \$69.00

Coherent Non-Linear Interaction of Waves in Plasmas. J. Weiland, H. Wilhelmsson. 353 pp. Pergamon, Elmsford, N.Y., 1977. \$27.50

Physical Fluid Dynamics. D. J. Tritton. 362 pp. Van Nostrand Reinhold, New York, 1977. \$27.50 clothbound, \$11.95 paperbound

Crystallography, Low-Temperature and Solid-State Physics

Amorphous Magnetism II (Proc. of the 2nd Int. Symposium, Troy, N.Y., August 1976). R. A. Levy, R. Hasegawa, eds. 680 pp. Plenum, New York, 1977. \$59.50

Dynamics of Solids and Liquids by Neutron Scattering (Topics in Current Physics, Vol. 3). S. W. Lovesey, T. Springer, eds. 379 pp. Springer-Verlag, New York, 1977. \$31.70

International Thermodynamic Tables of the Fluid State, Vol. 4: Helium-4. S. Angus, K. M. de Reuck, eds. 265 pp. Pergamon, Elmsford, N.Y., 1977. \$35.00

Astronomy, Cosmology and Space Physics

The Creation of the Universe. D. E. Fisher. 119 pp. Bobbs-Merrill, New York, 1977.

Your Best Source FOR "Off-The-Shelf" OPTICS IN THE U.S.A.



ROLYN OPTICS
300 North Roly Place
P.O. Box 148 • Arcadia, Calif. 91006

Circle No. 46 on Reader Service Card

SUPER CONDUCTING MAGNETS

FREE NEW
BROCHURE



Complete magnet systems or simply state-of-the-art magnets. *YOUR RESEARCH DESERVES THE BEST.* Contact: Dr. Howard Coffey

**AMERICAN
MAGNETICS, INC.**
P.O. BOX R, 461 LABORATORY RD.
OAK RIDGE, TN 37830
TELEPHONE 615/482-1056

Circle No. 47 on Reader Service Card



SEMICONDUCTOR ENGINEERS

A major semiconductor firm located in the southwest has immediate openings for the following:

SENIOR DEVICE ENGINEER

MS in EE or Physics (Ph.D. preferred) with strong background in device modeling and characterization of high frequency or high power silicon transistors (BiPolar or FET). Some experience with silicon processing is also necessary.

SENIOR DEVICE ENGINEER

MS in EE or Physics (Ph.D. preferred) with experience in III-V MESFET design and processing (discrete or integrated circuit). Some experience with device characterization at microwave frequencies is also necessary.

SENIOR METALLIZATION ENGINEER

MS in Physics with 3-5 years experience in thin film metallization. Knowledge of IC device metallization systems preferred. Responsible for development and evaluation of metallization systems directed toward next generation BiPolar IC's.

Qualified applicants should send resume including salary history to:

Box# 178, Physics Today

Equal Employment Opportunity/Affirmative Action Employer

IR Detector Research Engineer

The Honeywell Electro-Optics Center is expanding its R&D efforts in modern solid state quantum and thermal infrared detectors. We have an immediate opening for an R&D engineer/scientist with a background in solid state electrical engineering or physics with engineering application experience. Responsibilities include the design, development, and implementation of laboratory experiments for device evaluation and development as well as the monitoring and evaluation of fabrication procedures. You'll work closely with engineers and customers at all levels. An MS or equivalent in Electrical Engineering or Physics is required.

Located in Lexington, Massachusetts, the Honeywell Electro-Optics Center has maintained its leadership in $Hg_{1-x}Cd_xTe$ infrared quantum detector science and technology through continued emphasis on $Hg_{1-x}Cd_xTe$ material science, semi-conductor physics, and device processing. Individuals who wish to develop their professional careers in the furtherance of modern solid state detector science and technology should contact Mr. H.W. Roberts, Professional Staffing, Honeywell Electro-Optics Center, 2 Forbes Road, Lexington, Massachusetts 02173.

Honeywell
ELECTRO-OPTICS CENTER
An Equal Opportunity Employer

\$8.95 clothbound, \$5.95 paperbound

Space, Time, and Gravity: The Theory of the Big Bang and Black Holes. R. M. Wald. 131 pp. Univ. of Chicago, Chicago, 1977. \$10.95

White Holes: Cosmic Gushers in the Universe. J. Gribbin. 296 pp. Delacorte, New York, 1977. \$8.95 clothbound, \$4.95 paperbound

The Solar Output and Its Variation (Proc. of Solar Output Workshop, Boulder, Colorado, April 1976). O. R. White, ed. 526 pp. Colorado Associated U.P., Boulder, 1977. \$8.95

Solar Noise Storms (Int. Series in Natural Philosophy, Vol. 90). E. Ø. Elgarøy. 363 pp. Pergamon, Elmsford, N.Y., 1977. \$18.00

Radio Galaxies: Radiation transfer, Dynamics, Stability and Evolution of a Synchrotron Plasmon (Int. Series in Natural Philosophy, Vol. 89). A. G. Pacholczyk. 293 pp. Pergamon, Elmsford, N.Y., 1977. \$25.00

Geophysics and Planetary Science

Transient Waves in Visco-Elastic Media (Developments in Solid Earth Geophysics, Vol. 10). N. H. Ricker. 278 pp. Elsevier, Amsterdam, 1977. (price not stated)

Principles of Isotope Geology. G. Faure. 464 pp. Wiley, New York, 1977. \$19.95

Meteorite Craters (Benchmark Papers in Geology, Vol. 36). G. J. H. McCall, ed. 364 pp. Dowden, Hutchinson and Ross, Stroudsburg, Pa. (Distributor: Halsted, New York), 1977. \$35.00

Modeling and Prediction of the Upper Layers of the Ocean (Proc. of a NATO Advanced Study Institute, Urbino, Italy, 1975). E. B. Kraus, ed. 325 pp. Pergamon, Elmsford, N.Y., 1977. \$12.50

Biological and Medical Physics

Neurophysics. A. C. Scott. 340 pp. Wiley-Interscience, New York, 1977. \$24.95

Cryobiochemistry: An Introduction. P. Douzou. 286 pp. Academic, London, 1977. £12.60

The Physical Principles of Diagnostic Radiology. P. Sprawls Jr. 365 pp. University Park, Baltimore, 1977. \$24.50

Thermodynamic Network Analysis of Biological Systems. J. Schnakenberg. 143 pp. Springer-Verlag, New York, 1977. \$16.80

Theory and Mathematical Physics

Generalized Functions, Vols. 1-5. I. M. Gel'fand, G. E. Shilov (vols. 1-3); I. M. Gel'fand, N. Ya. Vilenkin (vol. 4), and I. M. Gel'fand, M. I. Graev, N. Ya. Vilenkin (vol. 5). 423, 261, 222, 384, 449 pp., respectively. Academic, New York, 1977 (paperbound reissues of 1964-68 editions). \$9.00-\$9.50 each volume; \$39.50 set

Mathematics and the Universe: An Interpretation Based on the Theory of Relativity. E. T. Lawrence. 106 pp. Vantage, New York, 1977. \$8.95

Optimal Estimation in Approximation Theory (Proc. of an Int. Symp., Freudenstadt, W. Germany, September 1976). C. A. Micchelli, T. J. Rivlin, eds. 300 pp. Plenum, New York, 1977. \$29.50

Introduction to Group Characters. W. Ledermann. 174 pp. Cambridge U.P., New York, 1977. \$19.95 clothbound, \$6.95 paperbound

Instrumentation and Techniques

Illustrating Basic (A Simple Programming Language). D. Alcock. 134 pp. Cambridge U.P., New York, 1977. \$10.95 clothbound, \$3.95 spiral bound

Lead-Acid Batteries. H. Bode. 387 pp. Wiley-Interscience, New York, 1977. \$29.00

Electron Microscopy in the Study of Materials (The Structures and Properties of Solids, Vol. 7). P. J. Grundy, G. A. Jones. 174 pp. Crane, Russak, New York, 1976. \$19.50 clothbound, \$9.50 paperbound

Raster-Elektronenmikroskopie. L. Reimer, G. Pfefferkorn. 282 pp. Springer-Verlag, Berlin, 1977. \$34.40

History, Philosophy, Society and Government

The Way of Discovery: An Introduction to the Thought of Michael Polanyi. R. Gelwick. 181 pp. Oxford U.P., New York, 1977. \$12.95 clothbound, \$3.50 paperbound

Deutsche Akademie der Naturforscher Leopoldina 1652-1977. (Acta Historica Leopoldina, Supplementum 1). G. Uschmann, ed. 104 pp. Deutsche Akademie der Naturforscher Leopoldina, Halle/Salle, E. Germany, 1977. (Price not stated)

A Sense of the Future: Essays in Natural Philosophy. J. Bronowski. 286 pp. MIT, Cambridge, 1977. \$12.50

Scientists under Hitler: Politics and the Physics Community in the Third Reich. A. D. Beyerchen. 287 pp. Yale U.P., New Haven, 1977. \$18.50

The History of Meteorology: to 1800. H. H. Frisinger. 148 pp. Science History (Neale Watson), New York, 1977. \$15.00

Student Texts and Popularizations

Portrait of Nature: The World as Seen by Modern Science. A. Cottrell. 236 pp. Scribner's, New York, 1977 (first edition, 1975). \$4.95 paperbound

The Loom of Creation: A study of the purpose and the forces that weave the pattern of existence. D. Milner, E. Smart. 319 pp. Harper and Row, New York, 1976. \$14.95

Introductory Physics: A Problem-Solving Approach. J. D. Wall. 546 pp. Heath, Lexington, Mass., 1977. \$10.95

The Flying Circus of Physics with Answers. J. Walker. 295 pp. Wiley, New York, 1977. \$6.95

Professor E. McSquared's Original, Fantastic and Highly Edifying Calculus Primer, Parts 1 and 2. H. Swann, J. Johnson. 213 pp. Kaufmann, Los Altos, Calif. 1977. \$7.95 paperbound, \$15.95 clothbound

MAGNETIC SHIELDING

MATERIAL

- CO-NETIC AA Alloy
High Permeability
.002" to .100" thick

EXCLUSIVE

Perfection Annealed — No further anneal required if severe forming is avoided.

- NETIC S3-6 Alloy — High Saturation Induction.
.004" to .095" thick
- Immediate Shipment from Stock



MAGNETIC SHIELD DIV.



PERFECTION MICA CO.
740 North Thomas Drive
Bensenville, Ill. 60106, USA
Phone 312 / 766-7800
TWX 910-256-4815

SEND FOR NEW MG-4
Material, Application
and Fabrication Guide.

*Complimentary Foil
Samples Included.*

Circle No. 49 on Reader Service Card

TANCE ☐ MAGNETIC SUSCEPTIBILITY ☐ THERMOPOWER ☐

FOR THE ULTIMATE IN SENSITIVITY...

You can't beat the SQUID. And for the ultimate in a versatile laboratory SQUID system, you can't beat our Model MPS.

If the signal you're interested in can be converted into an electric current, voltage, or magnetic field, chances are this unprecedented sensitivity is within easy reach. Contact us to find out why so many low temperature research physicists turn to SHE when they encounter an "impossible" measuring problem.



S.H.E. CORPORATION CRYOGENIC INSTRUMENTS AND SYSTEMS
4174 SORRENTO VALLEY BLVD. | SAN DIEGO, CA 92121 | TEL: (714) 453-6300 | TELEX: 697903

Circle No. 50 on Reader Service Card