

New Books

LAYERED SUPERCONDUCTORS: FABRICATION, PROPERTIES AND APPLICATIONS

Proceedings of Symposium of the Materials Research Society, held in San Francisco in 1992. Edited by D.T. Shaw, C.C. Tsuei, T.R. Schneider and Y. Shiohara.

These proceedings contain 141 papers presented at the symposium. The contributions address the fundamentals of superconductors and superconductivity, procedures for preparing superconductors layer-by-layer, vortex dynamics, flux pinning, microstructures, growth kinetics and critical currents. There are 74 papers which contain information on fabrication and properties of superconductors and their applications. Most of the papers deal with the properties and applications of YBCO superconductors.

Materials Research Society, Pittsburgh, USA, 1992, 929 pp., US\$74.00.

RAW MATERIALS FOR THE REFRACTORIES INDUSTRY

The 1993 edition of this handbook comprises articles on the world's refractory industry and the major raw materials used. It will also contain buyer's guide to the world's refractory materials suppliers. Among the minerals included are: andalusite, baddeleyite, bauxite, chromite, dolomite, graphite, magnesite, silica sand, zircon and others.

Metal Bulletin Books Ltd., England, 1993, US\$141.00 (Europe).

NON-FERROUS METAL WORKS OF THE WORLD

The 6th edition of the directory provides an up-to-date information on the world's non-ferrous metal smelters, refiners and semi-fabricators. Nearly 2000 companies in 105 countries are covered. The company section lists companies alphabetically and country-by-country. Each entry gives details of company name, address, telephone/telex/fax numbers, management contacts, ownership, year established, capital, number of employees, plant location, processes, raw materials used, products made, sales offices, subsidiaries/associates and overseas agents. The Buyer's Guide lists companies under the products which they produce. This latest edition reflects, for the first time, new developments and changes in the former USSR, Eastern Europe and China.

Metal Bulletin Books Ltd., England, 1993, US\$317.00 (Europe).

FLOTATION PLANTS: ARE THEY OPTIMIZED?

Edited By D. Malhotra

A collection of 25 contributions arranged into sections such as: Management/Operating Philosophy, Reagent, Equipment, Instrumentation and Control, Optimization of Operating Parameters, Innovative Directions. Soc. Min. Engineers AIME (Littleton), 1993, 179 pp.

DIELECTRIC PROPERTIES OF HETEROGENEOUS MATERIALS

Progress in Electromagnetics Research, Vol. 6. Edited by A. Priou.

Elsevier, Amsterdam 1992, 398 pp., US\$82.00.

Collection of eleven papers on subjects such as estimation of permittivities of solids from measurements on pulverized or granular materials, prediction of electromagnetic properties of ferrite composites, effective permeability of mixtures, and others.

THE PHYSICAL SEPARATION AND RECOVERY OF METALS FROM WASTE

By T.J. Veasey, R.J. Wilson and D.M. Squires.

Gordon and Breach Science Publishers, 1993, 201 pp, US\$70.00

This book deals with the physical processes used for the separation of secondary metals from waste sources. Contents: An introduction to secondary metals processing, Unit operations in secondary metals processing, The processing of fragmentized metal wastes, The processing of granulated metals wastes, The processing of urban waste.

R.M. BOZORTH: FERROMAGNETISM

IEEE Press, New York, 1993, 986 pp, US\$69.95

This classic text on magnetism covers the basics of magnetism, as well as in-depth coverage of magnetic materials. It includes information on magnetic phenomena and theories, magnetic materials, basic magnetization and domain theory, as well as many fundamental expressions, and useful technical data on many materials.

EFFECTIVE AND SAFE WASTE MANAGEMENT

Interfacing sciences and engineering with monitoring and risk analysis.

Edited by R.L. Jolley and R.G.M. Wang

Lewis Publishers Inc., Boca Raton, USA, 1993, 387 pp, US\$79.95

Twenty six papers arranged into sections with headings such as The overview, The method, The application, The monitoring, The toxicology, The risk.

**THEORY AND TECHNOLOGY OF HIGH TEMPERATURE
SUPERCONDUCTORS**

Ioffe Physicotechnical Institute Research Series

Edited by Y.I. Koptev

Nova Science Publishers, Commack, N.Y., USA 1993, 159 pp, US\$81.00.

A collection of ten papers on high-temperature superconductors by Russian researchers.

G. VIDALI: SUPERCONDUCTIVITY: THE NEXT REVOLUTION?

Cambridge University Press 1992, 165 pp, US\$49.95 (hbk), \$16.95 (pbk)

Technical material is presented as a historical narrative that leads one along the path of intellectual and technological development. An interesting review of the book by R.J. Cava was published in *Nature* 364 (1993), 297.

R.S. ELLIOTT: ELECTROMAGNETICS

History, Theory and Applications

IEEE Press, New York 1993, 656 pp, US\$59.95

A reprint of the classic text provides a fundamental understanding of electromagnetics and contains chapters on magnetostatics, dielectric magnetic and conducting materials.

**W.A. CASSADY: A SHORT COURSE IN PERMANENT MAGNET
MATERIALS**

SJL Publishing Co., Hanna, IN, USA, 1993, 192 pp, US\$63.50.

The book provides a general understanding of permanent magnets. The first six chapters cover the history, technical descriptions, material specifications and design factors of magnetic materials, primarily rare earth permanent magnets. The book also lists the primary users and applications of permanent magnets, the commercial sources of rare earth permanent magnets which include 59 commercial manufacturers, distributors and processors of permanent magnets.

**PROCEEDINGS OF 12TH INTERNATIONAL WORKSHOP ON RARE
EARTH MAGNETS AND THEIR APPLICATIONS**
**PROCEEDINGS OF 7TH INTERNATIONAL SYMPOSIUM ON MAGNETIC
ANISOTROPY AND COERCIVITY IN RARE EARTH
TRANSITION METAL ALLOYS**

Proceedings of two conferences held in Canberra, ACT, Australia, in July 1992 and dedicated to the memory of Karl Strnat.

RIC, Iowa State University, 1993. US\$150.00 for two-volume set, US\$75.00 for either volume alone.

R.F. HARRINGTON: FIELD COMPUTATION BY MOMENT METHODS

An IEEE reprinting of this classic 1968 edition which is the first book to explore the computation of electromagnetic fields by method of moments, the most popular method for the numerical solution of electromagnetic field problems. Key topics include: electrostatic fields, wire antennas and scatterers, transmission lines and waveguides, two-dimensional electromagnetic fields and others.
IEEE Press USA, 1993, 240 pp, US\$32.95 (hardcover).

H.T. ROMAN: BUILDING INTERNAL TEAM PARTNERSHIPS

This book shows how to be an effective team-builder and creatively solve problems to improve project management. Filled with hints on how to structure and administer teams effectively, this book will be of value for engineering managers and team members alike. Topics include: building the project team partnership, financing the team, marketing and advertising, motivating and gaining team support.
IEEE Press USA, 1993, US\$19.95

R.C. DORF (ED.): THE ELECTRICAL ENGINEERING HANDBOOK

The most up-to-date and extensive reference contains over 2600 pages of definitions, tables and formulas with extensive cross-referencing and indexing system. Partial table of contents: circuits, signal processing, electronics, electromagnetics, electrical effects and devices, energy, digital devices, computer engineering, biomedical systems, mathematics, symbols, physical constants.
IEEE Press USA, 1993, 2692 pp, US\$89.95.