

rocks, contains two papers (one on the >3-billion-year-old sediments of southern Africa) that lose nothing in translation to Phanerozoic conditions and that have much to offer for investigators of younger strata.

L. L. SLOSS

Department of Geological Sciences,
Northwestern University,
Evanston, IL 60208

Some Other Books of Interest

Foundry Processes. Their Chemistry and Physics. SEYMOUR KATZ and CRAIG F. LANDEFELD, Eds. Plenum, New York, 1988. xii, 525 pp., illus. \$89.50. General Motors Research Laboratories Symposia Series. From a symposium, Warren, MI, Sept. 1986.

The Physical Properties of Liquid Metals. TAKAMICHI IDA and RODERICK I. L. GUTHRIE. Clarendon (Oxford University Press), New York, 1988. xviii, 288 pp., illus. \$75.

The ability to "handle great amounts of data by computational means, using new and more complicated treatments than we could deal with before" has made foundry processing into a "new science," Robert A. Frosch writes in his foreword to *Foundry Processes*. Hence the choice of this "subject with ancient beginnings" for a symposium in a series that has generally been focused on "new and emerging" areas of technology. The symposium brought together some 145 participants from universities and industry, including a few representatives from outside North America. In all, the proceedings volume consists of 16 long and 4 shorter papers on topics "carefully selected to address important issues." An opening set devoted to "fundamentals" includes a "critical overview" of foundry processing and discussions of physicochemical phenomena in iron casting, slags and their refining capacities, and the partition of alloying elements in cast iron. The remaining papers are presented in sections on the production of liquid metals (including processes in cupolas and ladles and the modeling thereof), on their purification, and on casting defects. (The subject of melt solidification was excluded from the symposium as too broad to be adequately treated in the time available.) The papers, which are clearly intended for those already knowledgeable about foundry processes, are each preceded by an abstract and followed by transcribed discussion from the symposium.

Also noting the recent advances in process metallurgy, the authors of *The Physical Properties of Liquid Metals* observe that, despite the importance of a knowledge of the physi-

cal chemistry of liquid metals in the manufacture of high-quality metallic materials, there has heretofore been no book on the subject intended specifically for materials engineers and metallurgists. Here they set out to provide such a book, assuming some elementary knowledge of statistical and quantum mechanics. They hope especially to provide guidance for hydrodynamical analyses, which "are playing an increasingly important role" but where "accurate theoretical predictions are still not available" for some parameters and "considerable discrepancies exist among experimental values," to provide an up-to-date account of continuum theory as applied to liquid metals, and more generally to demonstrate the importance of the microscopic approach to the processing of liquid metals. The authors present the subject in eight chapters, on general properties, structure, density, thermodynamic properties, surface tension, viscosity, diffusion, and electrical and thermal conductivity. The book also includes a list of symbols used, appendixes on the "application of some expressions to molten salts" and on SI units and physical constants, a list of references, and author and subject indexes.

—K.L.

Books Received

The Academic Life. Small Worlds, Different Worlds. Burton R. Clark. Carnegie Foundation, Princeton, NJ, 1987 (distributor, Princeton University Press, Princeton, NJ). xxx, 360 pp. \$28.40; paper, \$24.50. A Carnegie Foundation Special Report.

AIDS in Children, Adolescents and Heterosexual Adults. An Interdisciplinary Approach to Prevention. Raymond F. Schinazi and André J. Nahmias, Eds. Elsevier, New York, 1988. xxviii, 443 pp., illus. Paper, \$34.95. From a conference, Atlanta, GA, Feb. 1987.

Amber. The Golden Gem of the Ages. Patty C. Rice. 2nd ed. Kosciuszko Foundation, New York, 1987 (distributor, Geoscience Press, Prescott, AZ). xii, 289 pp., illus. \$29.95; paper, \$19.95.

American Education. The National Experience, 1783-1876. Lawrence A. Cremin. Harper and Row, New York, 1988. xiv, 607 pp. Paper, \$35. Reprint, 1980 ed.

Atomic Physics with Positrons. J. W. Humberston and E. A. G. Armour, Eds. Plenum, New York, 1987. xvi, 456 pp., illus. \$89.50. NATO Advanced Science Institutes Series B, vol. 169. From a workshop, London, U.K., July 1987.

Bacterial Endotoxins. Pathophysiological Effects, Clinical Significance, and Pharmacological Control. Jack Levin et al., Eds. Liss, New York, 1988. xxii, 417 pp., illus. \$70. Progress in Clinical and Biological Research, vol. 272. From a conference, Amsterdam, the Netherlands, May 1987.

The Biochemical Pathology of Astrocytes. Michael D. Nornberg, Leif Hertz, and Arne Schousboe, Eds. Liss, New York, 1988. xxiv, 638 pp., illus. \$118. Neurology and Neurobiology, vol. 39. From a symposium, Miami, FL, May 1987.

Biological Control. Pacific Prospects. D. F. Waterhouse and K. R. Norris. Inkata, Melbourne, Australia, 1988 (U.S. distributor, International Specialized Book Services, Portland, OR). viii, 454 pp., illus. \$130.

Biological Organization. Macromolecular Interactions at High Resolution. Roger M. Burnett and Henry J. Vogel, Eds. Academic Press, San Diego, CA, 1987. xiv, 359 pp., illus. \$81.50. Based on a symposium, Harriman, NY, May-June 1985.

Biology of Isolated Adult Cardiac Myocytes. William A. Clark, Robert S. Docker, and Thomas K. Borg, Eds. Elsevier, New York, 1988. xii, 441 pp., illus. \$95. From a workshop, Pacific Grove, CA, Sept. 1987.

Brain Structure, Learning, and Memory. Joel L. Davis, Robert W. Newburgh, and Edward J. Wegman, Eds. Published for the American Association for the Advancement of Science by Westview, Boulder, CO, 1988. xvi, 301 pp., illus. Paper, \$35. AAAS Selected Symposium Series, vol. 105. Based on a symposium, New York, May 1984.

Catalog of Chromosome Aberrations in Cancer. Felix Mitelman. 3rd ed. Liss, New York, 1988. xxiv, 1146 pp., \$165.

Coastal-Offshore Ecosystem Interactions. Bengt-Owe Jansson, Ed. Springer-Verlag, New York, 1988. xvi, 367 pp., illus. Paper, \$41.80. Lecture Notes on Coastal and Estuarine Studies, vol. 22. From a symposium, Tiburon, CA, April 1986.

Color for Philosophers. Unweaving the Rainbow. C. L. Hardin. Hackett, Indianapolis, IN, 1988. xxiv, 243 pp., illus., + plates. \$32.50; paper, \$16.

Colorado Flora. William A. Weber. Colorado Associated University Press, Boulder, 1988. xviii, 530 pp., illus. Paper, \$14.50. Reprint, 1987 edition.

Comparative Invertebrate Neurochemistry. G. G. Lunt and R. W. Olsen, Eds. Cornell University Press, Ithaca, NY, 1988. viii, 327 pp., illus. \$52.

The Complex Analytic Theory of Teichmüller Spaces. Subhashis Nag. Wiley-Interscience, New York, 1988. xiv, 427 pp. \$54.95. Canadian Mathematical Society Series of Monographs and Advanced Texts.

Computation of Solution Equilibria. A Guide to Methods in Potentiometry, Extraction, and Spectrophotometry. M. Meloun, J. Havel, and E. Högföldt. Horwood, Chichester, U.K., and Halsted (Wiley), New York, 1988. xii, 297 pp., illus. \$69.95. Ellis Horwood Series in Analytical Chemistry.

Computer Simulation of Liquids. M. P. Allen and D. J. Tildesley. Clarendon (Oxford University Press), New York, 1988. xx, 385 pp., illus., + microfiche in pocket. \$95.

Concepts in Biochemistry. William K. Stephenson. 3rd ed. Wiley, New York, 1988. x, 229 pp., illus. Paper, \$19.40.

The Concepts of Science. From Newton to Einstein. Lloyd Motz and Jefferson Hane Weaver. Plenum, New York, 1988. x, 435 pp., \$23.50.

The Conquest of the Microchip. Hans Queisser. Harvard University Press, Cambridge, MA, 1988. xii, 200 pp., illus., + plates. \$24.95. Translated from the German edition (Munich, 1985) by Diane Crawford-Burkhardt.

Control of Head Movement. Barry W. Peterson and Frances J. Richmond. Oxford University Press, New York, 1988. xiv, 322 pp., illus. \$47.95.

Coping, Behavior, and Adaptation in Prison Inmates. Edward Zamble and Frank J. Porporino. Springer-Verlag, New York, 1988. xvi, 204 pp. \$40. Research in Criminology.

The Curse. A Cultural History of Menstruation. Janice Delaney, Mary Jane Lupton, and Emily Toth. 2nd ed. University of Illinois Press, Champaign, 1988. xvi, 334 pp. \$29.95; paper, \$10.95.

Darwinism and the Divine in America. Protestant Intellectuals and Organic Evolution, 1859-1900. Jon H. Roberts. University of Wisconsin Press, Madison, 1988. xviii, 339 pp. \$26.75. History of American Thought and Culture.

Design and Analysis of Integrated Manufacturing Systems. W. Dale Compton, Ed. National Academy Press, Washington, DC, 1988. viii, 239 pp., illus. \$29.50. Based on a conference, Washington, DC, Feb. 1987.

Dictionary of Effects and Phenomena in Physics. Descriptions, Applications, Tables. Joachim Schubert. VCH, New York, 1988. xiv, 140 pp. \$24.95.

The Diffusion of Medical Innovations. An Applied Network Analysis. Mary L. Fennell and Richard B. Warnecke. Plenum, New York, 1988. xiv, 285 pp. \$34.50. Environment, Development, and Public Policy.

Doctors. The Biography of Medicine. Sherwin B. Nuland. Knopf, New York, 1988. xxii, 519 pp., illus. \$24.95.

Eclipse. David and Carol Allen. Allen and Unwin, Winchester, MA, 1988. viii, 123 pp., illus. Paper, \$16.95.

Ecological Relationships of Plants and Animals. Henry F. Howe and Lynn C. Westley. Oxford University Press, New York, 1988. xiv, 273 pp., illus. \$29.95. Intended to be understandable to those "with only a good course in introductory biology."