

chapters will come to an appreciation of the nature of living systems as revealed by their response to ionizing radiations.

The format is excellent; the table of contents supplemented by a good index guides the reader. Generous illustrations, data, and graphs make this a highly commendable presentation of an extensive subject.

The Thirteen Steps to the Atom: A Photographic Exploration. By Charles-Noël Martin. Translated from French by B. B. Rafter. 256 pp. Franklin Watts, Inc., New York, 1959. \$4.95. Reviewed by Cyril Stanley Smith, *Institute for the Study of Metals, University of Chicago*.

THIS is a pleasant book, containing 117 excellent photographs showing structural details of organic and inorganic matter at scales from a tenth of a millimeter down to a few angstroms. It is meant for the general public, which will be filled with wonder at the beauty and significance of invisible structure, but many scientists will find it a good antidote to the effects of intensive preoccupation with structure on a single scale. The book has its faults. The author missed a good opportunity to give depth to his treatment by a discussion of ions and crystals; the implication that a NaCl crystal is composed of molecules is old fashioned to say the least. Metallurgists will be surprised to read that metal crystals range in size from 0.7 to 3 microns. There is almost nothing on interatomic forces of any sort and surface energy is barely mentioned. Likewise the rudimentary mathematics of space-filling, which surely is central to a proper treatment of the author's theme, is ignored. It is an enjoyable book nevertheless.

Books Received

THEORY OF UNIMOLECULAR REACTIONS. By Noel B. Slater. 230 pp. Cornell U. Press, Ithaca, N. Y., 1959. \$4.75.

THE TRANSITS OF VENUS: A Study of Eighteenth-Century Science. By Harry Woolf. 258 pp. Princeton U. Press, Princeton, N. J., 1959. \$6.00.

EYE, FILM, AND CAMERA IN COLOR PHOTOGRAPHY. By Ralph M. Evans. 410 pp. John Wiley & Sons, Inc., New York, 1959. \$8.95.

NOMOGRAPHY (2nd Revised Ed.). By A. S. Levens. 296 pp. John Wiley & Sons, Inc., New York, 1959. \$8.50.

UNIVERSITY MATHEMATICS: A Textbook for Students of Science & Engineering (2nd Revised Ed.). By Joseph Blakey. 581 pp. Philosophical Library, Inc., New York, 1959. \$10.00.

THE OCEAN OF AIR. By David I. Blumenstock. 457 pp. Rutgers U. Press, New Brunswick, N. J., 1959. \$6.75.

HANDBOOK OF AUTOMATION, COMPUTATION, AND CONTROL. Vol. 2, Computers and Data Processing. Edited by Eugene M. Grabbe, Simon Ramo, Dean E. Wooldridge. 31 chapters. John Wiley & Sons, Inc., New York, 1959. \$17.50.

REPORT OF THE FLUID FUEL REACTORS TASK FORCE: to the Div. of Reactor Development, AEC. TID-8507. 188 pp. OTS, Dept. of Commerce, Washington, D. C. Paperbound \$1.75.

TASK FORCE EVALUATION REPORT—SMALL-SIZED NUCLEAR POWER PLANT PROGRAM. Atomic Energy Comm. TID-8508. 59 pp. OTS, Dept. of Commerce, Washington, D. C. Paperbound \$1.75.

DOVER REPRINTS. *A Treatise on Algebraic Plane Curves* (Reprint of 1st Ed.), by Julian Lowell Coolidge, 513 pp., \$2.45. *The Theory of Numbers and Diophantine Analysis* (Reprints of 1914 & 1915 Eds.), by Robert D. Carmichael, 118 pp., \$1.35. *An Elementary Treatise on Fourier's Series and Spherical, Cylindrical, and Ellipsoidal Harmonics: with Applications to Problems in Mathematical Physics* (Reprint of 1893 Ed.), by William Elwood Byerly, 287 pp., \$1.75. *Algebraic Theories* (Reprint of 1926 Ed.), by Leonard E. Dickson, 276 pp., \$1.50. Dover Publications, Inc., New York, 1959. All paperbound.

HARPER SCIENCE LIBRARY REPRINTS. *On Understanding Physics* (Reprint of 1938 Ed.), by W. H. Watson, 146 pp., \$1.25. *Space, Time and Gravitation: An Outline of the General Relativity Theory* (Reprint of 1920 Ed.), by Sir Arthur Eddington, 216 pp., \$1.35. *Readings in the Literature of Science* (Reprint), edited by William C. & Margaret Dampier, 275 pp., \$1.50. *Introduction to Mathematical Thinking: The Formation of Concepts in Modern Mathematics* (Reprint of 1951 Ed.), by Friedrich Waismann, translated from German by Theodore J. Benac, 260 pp., \$1.40. *A History of Science Technology and Philosophy in the 16th and 17th Centuries* (Reprint of 2nd Ed.), by A. Wolf, Vol. 1, 349 pp., Vol. 2, 338 pp., \$1.95 each. Harper & Brothers, New York, 1959. All paperbound.

ELEKTRONENBEUGUNG: Theorie, Praxis und industrielle Anwendungen. By Ernst Bauer. 233 pp. Verlag Moderne Industrie, Munich, Germany, 1958. DM 32.00.

ATOMIC ENERGY IN THE SOVIET UNION. By Arnold Kramish. 232 pp. Stanford U. Press, Stanford, Calif., 1959. \$4.75.

FONCTIONS SPHÉRIQUES DE LEGENDRE ET FONCTIONS SPHÉROÏDALES, Vol. 3. By Louis Robin. 289 pp. Gauthier-Villars, Paris, France, 1959. Clothbound \$12.42; paperbound \$11.40.

AN INTRODUCTION TO DIFFERENTIAL GEOMETRY. By T. J. Willmore. 317 pp. Oxford U. Press, New York, 1959. \$5.60.

LA MENACE RADIOACTIVE: Danger des retombées radioactives provenant des explosions nucléaires. By A. Pirie, et al. 128 pp. Dunod, Paris, France, 1959. Paperbound 950 fr.

FLUID DYNAMICS. By D. E. Rutherford. 226 pp. (Oliver & Boyd, England) Interscience Publishers, Inc., New York, 1959. \$1.95.

AMERICAN UNIVERSITIES AND FEDERAL RESEARCH. By Charles V. Kidd. 272 pp. The Belknap Press of Harvard U. Press, Cambridge, Mass., 1959. \$6.00.

FERRITES: Physical Properties of Ferrimagnetic Oxides in Relation to Their Technical Applications. By J. Smit and H. P. J. Wijn. 369 pp. John Wiley & Sons, Inc., New York, 1959. \$10.00.

MATHEMATICS AND THE PHYSICAL WORLD. By Morris Kline. 482 pp. Thomas Y. Crowell Co., New York, 1959. \$6.00.

PHYSIKALISCHE KERNCHEMIE. By Ulrich Schindewolf. 194 pp. Friedr. Vieweg & Sohn, Braunschweig, Germany, 1959. DM 19.80.

ENERGY DISSIPATION BY FAST ELECTRONS. By L. V. Spencer. 70 pp. NBS Monograph 1. US Govt. Printing Office, Washington, D. C. Paperbound \$4.45.

READING GERMAN FOR SCIENTISTS. By Hans Eichner and Hans Hein. 207 pp. John Wiley & Sons, Inc., New York, 1959. \$5.25.