

tience in the report and a number of specific examples are cited to show that for some services allocation shifts are both feasible and desirable.

Titanium Handbook

The latest volume of the Gmelin Handbuch der Anorganischen Chemie (System No. 41, *Titan*, 481 pp.; Gmelin Institute; Weinheim, Germany, 1951; available in U. S. from Walter J. Johnson, Inc., and Stechert-Hafner, Inc., New York, \$27.20) is a comprehensive review of the pertinent world literature through 1949 on the chemistry, physics, metallurgy, geology, and technology of the element titanium, including its alloys and compounds. A concise and carefully prepared reference work, the handbook has a detailed index at the beginning to permit the rapid location of information.

Sun and Stars

As its title indicates, *Physics of the Sun and Stars* (by W. H. McCrea; 192 pp.; Hutchinson's University Library; London; 1950; \$2.00) deals with the individual study of these bodies and does not consider such other astrophysical phenomena as galaxies. Neither historical nor particularly mathematical, this book is an exposition of those physical ideas made use of by astronomy, such as the structure of matter and atomic spectra, and their application in explaining the behavior of the sun and the stars.

Cosmology

Information obtained from the new 200-inch telescope at Mt. Palomar is certain to profoundly affect our knowledge of the universe, its past and its future. In the 100 text pages of *Cosmological Theory* (by G. C. McVittie; Methuen & Co.; London; 1949; \$1.50) Professor McVittie has included the basic observational and theoretical information on this subject that was available before results could be obtained from Palomar, including compact treatments of tensor calculus and general relativity. The expanding universe of relativity and Milne's kinematical theory of the universe are considered in some detail.

Microscopic Photos

Equipment and conventional techniques for making photomicrographs with a compound microscope at low, medium, and high magnifications up to 2500 diameters are described in a new Kodak Industrial Data Book (*Photography Through the Microscope*, 68 pp. Eastman Kodak Co., Rochester 4, N. Y., 1952. \$0.50.) Also discussed are such specialized techniques as photomacrography, cine photomicrography, electron microscopy, and ultraviolet, infrared, and phase contrast photomicrography. Numerous tables, charts, and illustrations are provided, and a bibliography lists references to leading books and articles on the subject. The data book is to be included as a standard section in the *Kodak Industrial Handbook*.

Books Received

X-RAY CRYSTALLOGRAPHIC TECHNOLOGY. By André Guinier (Translated by T. L. Tipler). 330 pp. Hilger and Watts Ltd., London, England, 1952. U. S. distributor: Jarrell-Ash Company, Boston, Massachusetts. \$9.50.

EXERCISES IN EXPERIMENTAL PHYSICS. Edited by N. C. B. Allen and L. H. Martin. 237 pp. (Melbourne University Press, Melbourne, Australia) Cambridge University Press, New York, 1952. \$5.50.

PROBLEMS OF LIFE. An Evaluation of Modern Biological Thought. By Ludwig von Bertalanffy. 216 pp. John Wiley and Sons, Inc., New York, 1952. \$4.00.

LOW TEMPERATURE PHYSICS. Four Lectures. By F. E. Simon, N. Kurti, J. F. Allen, and K. Mendelssohn. 132 pp. Academic Press Inc., New York, 1952. \$3.50.

HARWELL—THE BRITISH ATOMIC ENERGY RESEARCH ESTABLISHMENT 1946-1951. Prepared by the Ministry of Supply and the Central Office of Information (England). 128 pp. Philosophical Library, Inc., New York, 1952. Paperbound, \$3.75.

INTRODUCTION TO CONCEPTS AND THEORIES IN PHYSICAL SCIENCE. By Gerald Holton. 650 pp. Addison-Wesley Press, Inc., Cambridge, Massachusetts, 1952. \$6.50.

LITTLE SHIP ASTRO-NAVIGATION. By M. J. Rantzen. 160 pp. Philosophical Library, New York, 1952. \$4.75.

VECTOR ANALYSIS. By Earl C. Rex. 88 pp. Wm. C. Brown Company, Dubuque, Iowa, 1952. Paperbound, \$3.25.

DESCRIPTION OF A MAGNETIC DRUM CALCULATOR. The Annals of the Computation Laboratory of Harvard University. Volume XXV. By the Staff of the Computation Laboratory. 318 pp. Harvard University Press, Cambridge, Massachusetts, 1952. \$8.00.

ADVANCES IN ELECTRONICS. Volume IV. Edited by L. Marton. 344 pp. Academic Press Inc., New York, 1952. \$7.80.

GEOGRAPHY OF LIVING THINGS. By M. S. Anderson. 202 pp. Philosophical Library, New York, 1952. \$2.75.

HIGH-ENERGY PARTICLES. By Bruno Rossi. 569 pp. Prentice-Hall, Inc., New York, 1952. \$12.50.

STORAGE TUBES AND THEIR BASIC PRINCIPLES. By M. Knoll and B. Kazan. 143 pp. John Wiley and Sons, Inc., New York, 1952. \$3.00.

I.R.S.I.A. RAPPORT ANNUEL. Exercice 1951. 193 pp. Institut pour l'Encouragement de la Recherche Scientifique dans l'Industrie et l'Agriculture. Brussels, Belgium, 1952.

REVIEW OF ELECTRONIC DIGITAL COMPUTERS. Papers and Discussions Presented at the Joint AIEE-IRE Computer Conference, December, 1951. 114 pp. American Institute of Electrical Engineers, New York, 1952. \$3.50.

UHF PRACTICES AND PRINCIPLES. By Allan Lytel. 390 pp. John F. Rider Publishers, Inc., New York, 1952. \$6.60.

MECHANICS. Part I: Statics; Part II: Dynamics. By J. L. Meriam. 671 pp. John Wiley and Sons, Inc., New York, 1952. Each Volume \$4.00.

INORGANIC CHEMISTRY. An Advanced Textbook. By Therald Moeller. 966 pp. John Wiley and Sons, Inc., New York, 1952. \$10.00.

28 SCIENCE FICTION STORIES OF H. G. WELLS. 915 pp. Dover Publications, Inc., New York, 1952. \$3.95.

ANNUAL REVIEW OF PHYSICAL CHEMISTRY. Volume III. Edited by G. K. Rollefson and R. E. Powell. 416 pp. Annual Reviews, Inc., Stanford, California, 1952. \$6.00.