

from start to finish would not also be able to attack the same material in the more conventional form. As for the graduate student studying the theory of metals and alloys, there is no doubt that another book by the same author ("Atomic Theory for Students of Metallurgy," The Institute of Metals, 1952), which covers essentially the same subject matter in conventional text-book form, would be a far more useful volume. Nevertheless, the present book may provide one who has already been exposed to the subject matter with a pleasant way to review the material and to increase his physical insight into the principles of quantum theory.

A. S. NOWICK

Nuclear and Radiochemistry. Gerhart Friedlander and Joseph W. Kennedy. John Wiley and Sons, Inc., New York (1955). 468 pages. \$7.50.

This book is a new, revised edition of the widely used *Introduction to Radiochemistry*, written primarily as a text book of a graduate or senior undergraduate course in radiochemistry. The book is divided into thirteen chapters. It begins with a general survey of radioactivity, nuclear structure, and the elementary principles and methods for studying nuclear reactions. The rate equations of radioactive transformations are then derived and applied to a number of problems. This section is followed by an elementary but instructive survey of nuclear states and the related radioactive processes and a discussion of the interaction of radiation with matter with many useful applications. The theory and methods for the detection and measurement of radiation are then taken up in the three consecutive chapters. A brief but well-written review of radioactivity applied to chemistry is given in Chapter 11. Two new chapters have been added to this edition: Chapter 12 gives a survey of the design and operation of nuclear reactors, and Chapter 13 contains a stimulating discussion on some cosmic problems, viz., the production of energy in stars, cosmic rays, geo- and cosmochronology, and the genesis of the elements.

The effectiveness of presentation and the clarity of discussion which characterized the earlier edition is maintained in the present book. The list of references at the end of each chapter has been revised and expanded. An up-to-date table of nuclides is given in Appendix G. The isotopic masses listed in this table should be very useful and convenient for computations regarding nuclear reactions. Answers to most of the exercises are given. These exercises are often as instructive as the text itself and were included by the authors as an integral part of the course. Undoubtedly, *Nuclear and Radiochemistry* will continue to be the most widely used text book of introductory radiochemistry for many years to come.

J. H. WANG

Thermodynamics from the Classic and Generalized Standpoints. Joseph Louis Finck. Bookman Associates, New York (1955). 224 pages. \$7.50.

This book is of interest to advanced students and those engaged in research in thermodynamics and applied fields. It is clearly written, well organized, and does not