

Some few subjects have called for no enlargement, like tables for reduction of volumes of gases to standard conditions. Such subjects as Elasticity, Capillarity, Viscosity, Thermal Expansion, Index of Refraction, each require about one-half more space than in the edition of 1894. Tables of Vapor-pressure, of Solubilities, and of Thermochemistry, each take about three times the former space. The most interesting point of difference between the second and third editions is seen in the tables on Solubilities. The seventeen pages entitled "Solubility of Salts.....in Water" in the edition of 1894, have, in the present edition, been transformed, by the results of studies guided by the phase rule, into sixty pages entitled "Equilibrium between Water and Inorganic Substances," and containing about forty diagrams exhibiting illustrative curves.

The tables of Electrical Conductivity have been much improved, but with some compression. Changes in other matters hardly call for specific mention.

This collection of tables would be indispensable even if the execution had left something to be desired. But the whole work of collection and selection, and editing, has obviously been performed with the thoroughness, the good judgment, and the skill and accuracy, which we had learned confidently to expect from its distinguished editors and from the contributors whom they should select.

In the first edition, Landolt's initial appeared at the bottom of not quite one-third of all the pages, and Börnstein's on nearly two-fifths. In the present edition, Landolt's name appears only in the title. The name of Börnstein, sometimes accompanied by another, appears on many more pages than before, and the third editor, Meyerhoffer, contributes about as many pages as did Landolt twenty years ago. Chemists feel towards the editors of 1883 and 1894, and will feel towards the editors of 1905, a gratitude which they would be glad of some opportunity to express, and congratulate them on the successful completion of a work so admirable in plan and so satisfactory in execution.

Good presswork and sound and durable paper do credit to the publisher; the binding is of doubtful durability.

EDWARD W. MORLEY.

**RADIUM AND RADIOACTIVE SUBSTANCES.** Their Application Especially to Medicine. By CHAS. BASKERVILLE, PH.D., Professor of Chemistry

and Director of the Laboratory, College of the City of New York, formerly of the University of North Carolina. Philadelphia: Williams, Brown and Earle. 1905. 164 pp. Price, \$1.00.

As stated in the preface, the object of this book is "To fill a demand for an inexpensive non-mathematical work on the subject of radium and its application to medicine." The success which has attended the author's efforts is not perfectly apparent. The limited space which has been devoted to the discussion of the various topics has necessitated a briefness of treatment which is not always conducive to clearness of meaning, and the great number and variety of original papers to which reference is made have led to a condensation of material which not infrequently results in ambiguity. A lack of system in the presentation of the subject is apparent in a number of instances, as, for example, where separate sections are devoted to the discussion of actinium and "emanium" without any mention of their probable identity, and where the similarity between polonium and radio-tellurium is likewise disregarded.

The value of the book is much enhanced by the introduction of a generous series of references to individual papers which may possibly afford a convenient directory to some of those desiring to consult the original literature on the subject.

The chapters on the physiological action of radio-active substances and other therapeutic radiations cover about forty pages. It is stated in the preface that "The writer is not in a position to harmonize the contradictory evidence given in reputable medical journals as to the therapeutic uses of the salts of radium, consequently the observations have been impartially reported."

The general appearance of the volume is neat and attractive.

B. B. BOLTWOOD.

SPECTROSCOPY. By E. C. C. BALY, F.I.C., Lecturer on Spectroscopy, University College, London. London and New York: Longmans, Green & Co. 1905. Crown 8vo, vi + 568 pp. Cloth. Price, \$2.80.

This volume is the latest of the series of Text-Books of Physical Chemistry, edited by Sir William Ramsay. It devotes 47 pages to a historical account, about 300 pages to prism, grating, and interferometer spectroscopic apparatus and methods of investigating the visible and invisible regions of spectra, with a chapter on efficiency of spectroscopes, and about 180 pages to the methods of production and nature of spectra, the Zeeman effect, series