

mental equation occurs twice. A number of other errors occur; as p. 26, that the δ rays obey the light laws; p. 39, that U X dissolves in the *ether* layer, in the separation by Crookes' method and p. 55 that thorium occurs chiefly in Ceylon. However, the story of radioactivity is inherently so interesting that, in spite of these errors, the book will not disappoint the reader who wishes to learn the present state of our knowledge of radioactive transformations and suspected transmutations.

HERBERT N. MCCOY.

Outlines of Organic Chemistry. By F. J. MOORE, PH.D., Associate Professor of Organic Chemistry in the Massachusetts Institute of Technology. New York City: John Wiley & Sons. 1910. pp. ix + 315. Cloth, \$1.50.

The book is the outgrowth of a series of lectures given to students whose principal work is in Physics, Biology and Sanitary Engineering. It differs from most elementary texts in that a few of the customary subjects are omitted and in those subjects considered only a few compounds are taken up, but these are discussed fully and clearly. Its aim seems to be "to teach not much but well." The almost complete absence of empirical formulas is noticeable.

Typographical errors incident to a first edition are found in formulas on pages 47, 94, 159 and 184. Most teachers of chemistry will object to oxidation or reduction reactions being written with the symbols O_9 or H_4 where ordinary oxidations or reductions are being described, pages 112, 251, 254, 261, 264, 266, 272, 281, 284 and 293. The formula for an isocyanide, page 74, and the spelling of the plural of formula, page 84, should be changed to agree with modern chemical usage.

Organic chemistry is being recognized as a subject of general interest and for the needs of the average students in the short courses, which are being given in increasing numbers by the American colleges and universities, this text will be found to serve excellently.

RALPH H. MCKEE.

Handbuch der landwirtschaftlichen Bakteriologie. By DR. F. LÖHNIS. Berlin: Gebrüder Borntraeger. 8vo. viii + 907 pp.

The development of agricultural science, like that of any other science, is marked by the appearance, from time to time, of books that summarize and interpret the data scattered in current publications. The present volume may be deservedly included in this list of important books, both for the unusual richness of the reference material contained in it and for the scholarly interpretation of the almost endless array of facts dealing with some of the agricultural relations of bacteria.

The five divisions of the book are arranged as follows: (1) Occurrence and Activities of Microorganisms in Foodstuffs, 97 pp.; (2) Occurrence and Activities of Microorganisms in the Retting of Flax and Hemp and in the Fermentation of Tobacco, 16 pp.; (3) Occurrence and Activities