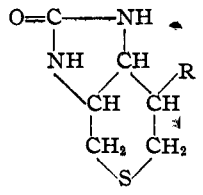

VII

Formulas Ib, V, VI and VII involve the assumption that the carbon atom attached to the sulfur and proximal to the side chain can be oxidized to a carboxyl group. If this assumption be invalid, then only Ia remains. As material becomes available, the various questions raised in this Letter will be explored.

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NEW BOOKS

Practical Methods in Biochemistry. By FREDERICK C. KOCH, Frank P. Hixon Distinguished Service Professor of Biochemistry, University of Chicago. Third edition (revised). The Williams and Wilkins Company, Baltimore, Maryland, 1941. ix + 314 pp. 16 × 24 cm. 18 figs. Price, $2.25.

In this edition, a number of typographical errors have been corrected, and new methods for the determination of uric, lactic and pyruvic acids have been added. Otherwise there are few changes from the second edition [reviewed in THIS JOURNAL, **60**, 1270 (1938)]. The passages previously commented upon by the reviewer remain unchanged.

JOHN T. EDSALL

The Special Theory of Relativity. By HERBERT DINGLE, D.Sc., D.I.C., A.R.C.S., Professor of Natural Philosophy, Imperial College of Science and Technology. Chemical Publishing Co., Inc., 234 King Street, Brooklyn, N. Y., 1941. vi + 94 pp. 10 × 16.5 cm. Price, $1.50.

Short as it is, this little book manages to contain good, bad, and indifferent material. Its general comments on the significance of the theory, contained in the first and last chapter and scattered in some other parts, are its best feature. The anti-metaphysical emphasis and the warnings against hypostatization of mathematical concepts should receive general approbation, though doubtless only occasional complete agreement—the tone is still a bit too subjective for the reviewer's taste, for example. The algebraic developments which fill most of the three chapters before the last are standard material, more or less indifferently well done. As for the *bad* part of the book, a glance at Chapters III and IV will reveal it to any physicist, and probably make him shudder to think of its ever being used as a text for "Honours Physics Students" or for anyone else. A beginning student may feel merely that the argument on pages 23 and 24, in which the Michelson-Morley experiment is "explained," is confusingly brief. To the reviewer—and most physicists would probably agree—it seems to show only the writer's immunity to any inkling of the nature of a physical argument or proof. After this, one is only shocked rather than surprised to find, in Chapter IV, that the author apparently believes that t would not need to appear in the Lorentz transformation equations if only the mean solar second were defined in such a way as to escape a change in value of about one-millionth per cent. per century, due to tidal friction.

Professor Dingle's ability to talk well *about* theories is considerable, and most of us can get pleasure and a certain amount of profit from listening. When he tries to expound a theory *itself* in its essentials, the result is very different. What he has done for the general theory, which is discussed only in a general and interpretative way in the last chapter, seems quite good, as far as it goes. It is the spectacle of what happens to the special theory in this ittle book which keeps one from hoping he will go farther.

WENDELL H. FURRY

A Brief Course in Organic Chemistry. By REYNOLD C. FUSON, RALPH CONNOR, CHARLES C. PRICE AND H. R. SNYDER. John Wiley and Sons, Inc., New York, N. Y., 1941. x + 248 pp. 15 × 23 cm. Price, $2.50.

This short but interesting text for students in agriculture, home economics, veterinary medicine, pre-dentistry and pre-medicine is noteworthy for its thoroughly up-to-date treatment of natural products and of the applications of organic chemistry. Emphasis is placed on the biochemical aspects of the subject. Benzene is introduced after the first few chapters on aliphatic hydrocarbons, and aromatic compounds are discussed along with aliphatic for each succeeding class. This permits laboratory work from the start with the more easily handled aromatic substances. The laboratory manual, comprising the last fifty pages, is well coördinated with the text. The book is well and concisely written, but especially the material in the early chapters will need explanation and expansion in order that students can acquire a sufficient familiarity with the fundamentals to appreciate the somewhat advanced chapters that follow.

THOMAS L. JACOBS

Chemical Engineers' Handbook. JOHN H. PERRY, Ph.D., Editor, E. I. du Pont de Nemours and Co.; Member, American Institute of Chemical Engineers, American Chemical Society, Franklin Institute, American Society for Advancement of Science, Society for the Promotion of Engineering Education. Second edition. McGraw-Hill Book Co., Inc., 330 West 42nd St., New York, N. Y., 1941. xviii + 3029 pp. Illustrated. 12.5 × 18.5 cm. Price, $10.00.

The second edition of this well-known Chemical Engineers' Handbook has been thoroughly revised and enlarged to include advances in the theory and practice of chemical engineering since the first edition was published in 1934. The greatest expansion has been made in the sections dealing with "Gas Adsorption and Solvent Extraction," "Mechanical Separations," "Flow of Fluids" and in the "Index." These expansions have been offset in part by the elimination of the section on "Patents and Patent Laws" of the old edition. The expansion amounts to 420 pages, bringing the volume to 3029 pages. In spite of the use of paper so thin that printing on the reverse side shows through, the volume is inconveniently thick. In the reviewer's opinion it would be better to have made this expansion by means of a new format giving more area per page rather than by using more pages. But this is a minor criticism. The Editor and his large and distinguished staff have earned the thanks of the profession.

GRINNELL JONES

Textbook of Quantitative Analysis. By WILLIAM THOMAS HALL, Professor Emeritus of Analytical Chemistry at the Massachusetts Institute of Technology. Third Edition. John Wiley and Sons, Inc., 440 Fourth Avenue, New York, N. Y., 1941. xiv + 364 pp. Illustrated. 15 × 23.5 cm. Price, $3.00.

With the publication of the third edition of Professor Hall's book, a number of important changes have been made, and these are listed in the preface. In Chapter IV, the table of the color change Intervals of Indicators has been expanded, a very good section on Buffer Solutions, and a complete table of the Clark and Lubs buffers have been added. The theory of the color change of indicators has been completely rewritten. In Chapter V, the theory of Oxidation–Reduction has been modernized, and the reviewer only regrets that the calculation of the gram equivalent weights of "redox" substances in Chapter III has not been brought up-to-date to conform with the theory in this later chapter. Chapter VII covering the uses of ceric sulfate now contains a discussion of redox indicators. A table of adsorption indicators has been added in Chapter IX, together with the ions for which they are suitable, and the conditions favorable to their use. In Chapter X, a section on colloidal phenomena in conjunction with precipitation has been added, and the discussion of co-precipitation and post-precipitation revised in accordance with present-day ideas.

The second part, dealing with more complicated analyses, such as steel, silicate rocks, etc., also has been revised. Steel is analyzed according to the methods used by the chemists of the U. S. Steel Corporation and the National Bureau of Standards. The section on Potentiometric Analysis has been rewritten, omitting a number of the details of manipulation because, to quote the author, "numerous forms of apparatus are now on sale and the makers of the various instruments supply full details for their use." A good discussion of the glass electrode has also been added.

The publishers, John Wiley and Sons, are to be congratulated on the improved appearance of the text, and the care they observed in proof-reading. Only two typographical errors were noted, namely, *phthalate* was misspelled on page 73 and again on page 321.

The new edition should win even more enthusiastic admirers for Professor Hall's teaching methods of analytical chemistry than did the two earlier ones.

LOUIS WALDBAUER

BOOKS RECEIVED

November 10, 1941–December 10, 1941

W. L. BADGER and E. M. BAKER. "Inorganic Chemical Technology." Second edition. McGraw-Hill Book Company, Inc., 330 West 42nd Street, New York, N. Y. 237 pp. $2.50.

C. A. BROWNE and F. W. ZERBAN. "Physical and Chemical Methods of Sugar Analysis." Third edition. John Wiley and Sons, Inc., 440 Fourth Avenue, New York, N. Y. 1353 pp. $15.00.

W. BERNARD KING. "Semimicro Experiments in General Chemistry." Prentice-Hall, Inc., 70 Fifth Avenue, New York, N. Y., 137 pp. $2.50.

G. R. MERRILL, A. R. MACORMAC, and H. R. MAUERSBERGER. "American Cotton Handbook." American Cotton Handbook Company, 303 Fifth Avenue, New York, N. Y. 1024 pp. $4.80.

LUKE E. STEINER. "Introduction to Chemical Thermodynamics." McGraw-Hill Book Company, Inc., 330 West 42nd Street, New York, N. Y. 516 pp. $4.00.

HAROLD H. STRAIN. "Chromatographic Adsorption Analysis." Interscience Publishers, Inc., 215 Fourth Avenue, New York, N. Y. 222 pp. $3.75.

ROBERT L. WEBER. "Temperature Measurement and Control." The Blakiston Company, 1012 Walnut Street, Philadelphia, Pa. 430 pp. $4.00.

JOHN H. YOE and LANDON A. SARVER. "Organic Analytical Reagents." John Wiley and Sons, Inc., 440 Fourth Avenue, New York, N. Y. 339 pp. $4.00.

L. ZECHMEISTER and L. CHOLNOKY. "Principles and Practice of Chromatography." Translated from the Second and Enlarged German Edition by A. L. Bacharach and F. A. Robinson. John Wiley and Sons, Inc., 440 Fourth Avenue, New York, N. Y. 362 pp. $5.00.

Proceedings, Fourth Annual Meeting, American Society of Brewing Chemists, May 15–17, 1941, Palmer House, Chicago, Illinois. American Society of Brewing Chemists, 64 East Lake Street, Chicago, Illinois. 151 pp.