

deals more especially with the physical and physico-chemical relations existing between the textile fibres and the dyestuffs and mordants employed in the processes of dyeing. The advanced theories pertaining to solutions and the nature and properties of colloids are especially considered, and an attempt is made to arrive at a satisfactory explanation of the dyeing process through the application of these theories. The author has collated a large number of fragmentary observations relative to the subject, though he has not yet systematized his array of facts into as logical a sequence as would be desirable. As a result, the book is rather heterogeneous, and in style somewhat disconnected and fragmentary, and among the many citations of conflicting theories, the reader is sometimes left in doubt as to just which idea the author intends to emphasize as being the true one. The book, however, will prove of considerable value to the advanced chemist who is specializing in the technical field of dyeing, and through the many good suggestions advanced by the author, it will no doubt considerably stimulate both physical and chemical research in a field which has been entirely too much neglected by the trained scientist.

J. MERRITT MATTHEWS.

RECENT PUBLICATIONS.

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LEITLINIEN DER CHEMIE. 7 Gemeinverständl. Vorträge aus der Geschichte der Chemie. By W. Ostwald. Leipzig: Akadem. Verlagsgesellschaft. 1906. 5 + 308 pp. 6.60 marks.

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CHEMISTRY AND PHYSICS OF DYEING. Account of Relations Between Fibres and Dyes, etc. By W. P. Dreaper. London: Churchill. 1906. 320 pp. 10/6.

TOXINS AND ANTITOXINS. Trans. from the German by C. A. Mitchell. By C. Oppenheimer. London: Griffin. 1906. 282 pp. 7/6.

BEEF SUGAR MANUFACTURE. By H. Classen. Authorized Translation from the 2d German Edition. By W. T. Hall and G. M. Rolfe. New York: Wiley. 1906. 14 + 280 pp. \$3.00.

A TEXT-BOOK OF ELEMENTARY ANALYTICAL CHEMISTRY, QUALITATIVE AND VOLUMETRIC. By J. H. Long. 3rd Ed. Rev. and Enlarged. Phila.: Blakiston. 1906. 11 + 299 pp. \$2.50.

A HISTORY OF CHEMISTRY. By F. P. Armitage. New York: Longmans. 1906. 20 + 259 pp. \$1.60.

SERVICE CHEMISTRY. By V. B. Lewes and J. S. S. Brame. Manual of its Application in Naval and Military Services. 3rd Ed. London: Glaiser. 1906. 692 pp. 16/.

VORLESUNGEN ÜBER CHEMISCHE TECHNOLOGIE. 2 Aufl. By H. Wichelhaus. Berlin: Siemens. 1906. 16 marks.

DER WEIN U. SEINE CHEMIE. Praktisches Handbuch der Entsteh., Untersuchg. u. Begutachtg. des Weines auf Grundlage der Einschläg. Gesetzl. By P. Arauner. Kitzingen: A. Wirth. 1906. 9 + 186 pp. 5/.

CHEMISCH-ANALYTISCHE UNTERSUCHUNG DER HIERONYMUS-QUELLE IN NEIDERKOWITZ BEI SIERCK I. LOTH. By H. Biltz and E. Küppers. Wiesbaden: Kreidel. 1906. 13 pp. 60 marks.

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