

tensammetry of (mostly organic) substances which under such conditions do not participate in electron exchange. The fifth and last chapter of the book provides a description of some of the advantages which accrue to a.c. polarography and tensammetry in the elucidation of electrode processes.

"Alternating Current Polarography and Tensammetry" provides the reader with a good, if essentially noncritical, account of developments in these fields up to, as it turns out, about 1960. He is likely to come away, as did the Reviewer, with a small feeling of disenchantment from the fact that, despite its quite recent publication date, the book affords little suggestion of the important developments which occurred between 1960 and 1963 in the areas of instrumentation and a.c. harmonic voltammetry.

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Treatise on Analytical Chemistry. Part I. Theory and Practice. Volume 4. Edited by I. M. KOLTHOFF and PHILIP J. ELVING, with the assistance of ERNEST B. SANDELL, School of Chemistry, University of Minnesota, Minneapolis, Minn. Interscience Publishers, John Wiley and Sons, Inc., 605 Third Ave., New York 16, N. Y. 1963. 954 pp. 17 × 24 cm. Price, \$25.00.

To write a concise, critical, comprehensive, and systematic treatment of all aspects of classical and modern analytical chemistry would be a Herculean task, if not an impossible one, for any one person, so rapidly has analytical chemistry grown within the past twenty years. The alternative is to pool the techniques and skills of a large group of analysts who are specialists in their respective fields and to present their subjects in a systematic multi-volume work. This the editors of the "Treatise on Analytical Chemistry" are undertaking. When complete the Treatise will present a concise, critical, and comprehensive treatment of classical and modern analytical chemistry and is being published in three parts, each containing a number of volumes. It is not intended, however, to be such an exhaustive work as the "Handbuch der analytischen Chemie" by Fresenius and Jander. The analytical chemistry of the elements is covered in Part II, and Part III is devoted to analytical chemistry in industry.

Volume 4 of Part I consists of two sections (D-1 and D-2) and contains 15 chapters with 18 contributing authors. C. N. Reilley served as section advisor. Magnetic field methods of analysis are treated in Section D-1 and electrical methods of analysis in Section D-2. Topics covered in the respective chapters are: Chapter 38 (L. N. Mulay), "Analytical Applications of Magnetic Susceptibility"; Chapter 39 (N. F. Chamberlain), "Nuclear Magnetic Resonance"; Chapter 40 (F. W. Malpolder and R. A. Brown), "Mass Spectrometry"; Chapter 41 (S. Rubin), "Ion-Scattering Methods"; Chapter 42 (C. N. Reilley), "Fundamentals of Electrode Processes"; Chapter 43 (C. N. Reilley and R. W. Murray), "Introduction to Electrochemical Techniques"; Chapter 44 (P. Delahay), "Chronoamperometry and Chronopotentiometry"; Chapter 45 (N. H. Furman), "Potentiometry"; Chapter 46 (L. Meites), "Voltammetry at the Dropping Mercury Electrode (Polarography)"; Chapter 47 (R. N. Adams), "Voltammetry at Electrodes with Fixed Surfaces"; Chapter 48 (N. Tanaka), "Electrodeposition"; Chapter 49 (D. D. DeFord and J. W. Miller), "Coulometric Analysis"; Chapter 50 (I. Shain), "Stripping Analysis"; Chapter 51 (J. W. Loeveland), "Conductometry and Oscillometry"; and Chapter 52 (B. W. Thomas and R. Pertel), "Measurement of Capacity: Analytical Uses of the Dielectric Constant."

There are many schematic diagrams, figures, graphs, and tables that add much to the clarity and usefulness of the book. Many references are listed at the end of each chapter and total more than 2200. The book is well indexed (33 pp.) and in addition, each chapter is headed by an extensive and well-organized table of contents. Printing and paper are good, and the book has an attractive cloth binding.

Volume 4 of Part I maintains the high standard set by preceding volumes in the Treatise and is an authoritative and up-to-date reference work on magnetic field and electrical methods of analysis.

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BOOKS RECEIVED

June, 1964

HERBERT BUDZIKIEWICZ, CARL DJERASSI, and DUDLEY H. WILLIAMS. "Structure Elucidation of Natural Products by Mass Spectrometry." Volume I. "Alkaloids." Holden-Day, Inc., 728 Montgomery St., San Francisco, Calif. 1964. 233 pp. \$10.50.

G. CHARLOT. "Colorimetric Determination of Elements. Principles and Methods." American Elsevier Publishing Co., Inc., 52 Vanderbilt Ave., New York 17, N. Y. 1964. 449 pp. \$18.00.

F. P. DWYER and D. P. MELLOR, Editors. "Chelating Agents and Metal Chelates." Academic Press, Inc., 111 Fifth Ave., New York 3, N. Y. 1964. 530 pp. \$17.00.

SIDNEY GOLDEN. "Elements of the Theory of Gases." Addison-Wesley Publishing Co., Inc., Reading, Mass. 1964. 154 pp. \$15.00.

FRANCES M. HAMER. "The Cyanine Dyes and Related Compounds." John Wiley and Sons, Inc., 605 Third Ave., New York, N. Y. 1964. 790 pp. \$45.00.

MANFRED HESSE. "Indolalkaloide in Tabellen." Springer-Verlag, Heidelberger Platz 3, Berlin-Wilmersdorf (West), Germany. 1964. 212 pp. DM 24.

GERHARD JANDER and EWALD BLASIUS. "Einführung in das anorganische-chemische Praktikum." S. Hirzel Verlag Stuttgart N, Birkenwaldstrasse 185A. Schleissfach 347, Germany. 1964. 483 pp. DM 19.80.

WILLIAM D. McELROY. "Cell Physiology and Biochemistry." Second Edition. "Foundations of Modern Biology Series." Prentice-Hall, Inc., Englewood Cliffs, N. J. 1964. 120 pp. \$1.75 paper, \$3.75 cloth.

H. N. MUNRO and J. B. ALLISON. "Mammalian Protein Metabolism." Academic Press, Inc., 111 Fifth Ave., New York, 3, N. Y. 1964. 566 pp. \$18.50.

A. N. NESMEYANOV. "Selected Works in Organic Chemistry." The Macmillan Co., 60 Fifth Ave., New York 11, N. Y. 1964. 1172 pp. \$30.00.

L. S. PALATNIK and A. I. LANDAU. "Phase Equilibria in Multi-component Systems." Holt, Rinehart and Winston, Inc., 383 Madison Ave., New York, N. Y. 1964. 454 pp. \$15.00.

CHARLES N. REILLEY, Editor. "Advances in Analytical Chemistry and Instrumentation." Volume 3. John Wiley and Sons, Inc., 605 Third Ave., New York, N. Y. 1964. 523 pp. \$15.00.

H. REISS. "Progress in Solid State Chemistry." Volume I. The Macmillan Co., 60 Fifth Ave., New York 11, N. Y. 1964. 536 pp. \$17.50.

HANS RUDOLF SCHWEIZER. "Künstliche Organische Farbstoffe und Ihre Zwischenprodukte." Springer-Verlag, Heidelberger Platz 3, Berlin-Wilmersdorf (West), Germany. 1964. 542 pp. DM 49.60.

SAMSON SEMENOVICH KUTATELADZE. "Fundamentals of Heat Transfer." Academic Press, Inc., 111 Fifth Ave., New York 3, N. Y. 1964. 485 pp. \$14.50.

J. C. SYLVESTER, Editor. "Antimicrobial Agents and Chemotherapy, 1963. Proceedings of the Third Interscience Conference on Antimicrobial Agents and Chemotherapy, Washington, D. C. October 28-30, 1963." American Society for Microbiology, 115 Huron View Blvd., Ann Arbor, Mich. 1964. 806 pp. \$12.00.

A. V. TOPCHIEV, Editor. English edition edited by R. A. Holroyd. "Radiolysis of Hydrocarbons." American Elsevier Publishing Co., Inc., 52 Vanderbilt Ave., New York 17, N. Y. 1964. 232 pp. \$11.00.

TADEUSZ URBANSKI. "Chemistry and Technology of Explosives." Volume I. The Macmillan Co., 60 Fifth Ave., New York 11, N. Y. 1964. 635 pp. \$15.00.