

of the text, will help to clarify the technical aspects of the procedures for initiates in the field of steroid analysis. The many tables of data included and the excellent bibliographies found at the end of each chapter will ensure the usefulness and maintain the value of these books for the expert and the novice in the steroid field for many years to come.

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Ion Exchange. By FRIEDRICH HELFFERICH, Shell Development Company, Emeryville, California; Lecturer at the University of California, Berkeley. McGraw-Hill Book Company, Inc., 330 West 42nd Street, New York 36, N. Y. 1962. ix + 624 pp. 16 × 23.5 cm. Price, \$16.00.

"Ion Exchange" is essentially a straightforward English version of "Ionenaustauscher," first published in German in 1959. Although the format and style of the original version have been preserved generally in the translation, the author has wisely taken the opportunity to revise, expand and polish the original treatise to a state very close to perfection. In particular, the author has tried to bring the reader completely abreast of recent developments in the expansive field of ion exchange and to render the contents of the book palatable even to the mathematically disinclined by separating the qualitative and quantitative treatments in such a manner that the more casual reader can skip all mathematical equations and deductions without loss in continuity. The most substantial revision has been wrought in Chapter 9, which deals with the practical and theoretical aspects of the operation of ion-exchange columns, by the addition of eleven figures, seventy-one references and thirty-five pages of text.

This new English edition of "Ion Exchange" is without a doubt the most complete, lucid and authoritative account of the intricacies of ion exchange which is available to students and workers in the ion-exchange field.

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Atomic Spectra. By H. G. KUHN, F. R. S. Academic Press, Inc., 111 Fifth Avenue, New York 3, N. Y., 1962. xvi + 436 pp. 16 × 23 cm. Price, \$13.00.

There has been a real need for a current book on atomic spectra suitable as an introductory text but extensive enough to serve as a reference work. Kuhn's book fulfills this need very well by maintaining a good balance between interpretation of spectra by means of the Bohr-Sommerfeld theory and quantum mechanics. Likewise, the mathematical portions have been well supplemented with descriptive material.

An introductory chapter on theoretical methods is used to present the formulas and techniques used in later chapters, which aids greatly in maintaining continuity in the text. This is not intended as a general introduction to quantum mechanical methods, and references to advanced works are given for the more complex treatments. The major deficiency in this chapter lies in the introduction of terms without clear definitions, and thus possibly confusing the beginning student. This reviewer would also have preferred a more complete section on dipole radiation and intensities. This is an important area in present studies on atomic spectra and unfortunately it is not always well understood by beginners in the field.

The principal sections in this book are simple spectra (136 pages), periodic table and X-ray spectra (27 pages), complex spectra (75 pages), hyperfine structure and isotope shift (59 pages) and width and shape of spectral lines (23 pages). The latter two sections are particularly good and serve as a review of the significant work done in these areas.

In general, the format of the book is good and the illustrations excellent. The subject index is rather short and could be improved. An excellent bibliography enhances the volume's usefulness as a reference work. This book is heartily recommended to all chemists and physicists interested in the origin and interpretation of atomic spectra.

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BOOKS RECEIVED

January 10, 1963–February 10, 1963

EUGENE W. BERG. "Physical and Chemical Methods of Separation." McGraw-Hill Book Company, Inc. 330 West 42nd Street, New York 36, N. Y. 1963. 366 pp. \$12.50.

CHARLES M. HERZFELD, Editor-in Chief. F. G. BRICKWEDDE, Edited by. "Temperature Its Measurement and Control in Science and Industry." Volume Three. Part 1. "Basic Concepts, Standards and Methods." Reinhold Publishing Corporation, 430 Park Avenue, New York 22, N. Y. 1962. 848 pp. \$27.50.

KATHERINE BLOOD HOFFMAN. "Chemistry for the Applied Sciences." Prentice-Hall, Inc., Englewood Cliffs, New Jersey. 1963. 429 pp. \$6.95.

LEE H. HORSLEY with the coöperation of WILLIAM S. TAMPLIN. "Azeotropic Data—II. Number 35, Advances in Chemistry Series." American Chemical Society, 1155 Sixteenth Street, N. W., Washington 6, D. C. 1962. 100 pp. \$4.50.

GUSTAV KORTÜM. "Anleitungen für die Chemische Laboratoriumspraxis." Band II. "Kolorimetrie, Photometrie, und Spektrometrie. Eine Anleitung zur Ausführung von Absorptions-, Emissions-, Fluoreszenz-, Streuungs-, Trübungs- und Reflexionsmessungen." Vierte Neubearbeitete und Erweiterte Auflage. Springer-Verlag, Heidelberger Platz 3, Germany. 1962. 464 pp. DM. 48.

K. B. LEBEDEV, Translated by L. RONSON in Collaboration with A. A. WOOLF. "The Chemistry of Rhenium." Butterworth and Co. (Publishers) Ltd. London, 88 Kingsway, W. C. 2, England. 1962. 105 pp. \$7.50.

W. O. LUNDBERG, Edited By. "Autoxidation and Antioxidants in Two Volumes." Volume II. Interscience Publishers, John Wiley and Sons, 440 Park Avenue South, New York 16, N. Y. 1962. 1156 pp. \$25.00.

EMIL J. MARGOLIS. "Qualitative Anion-Cation Analysis. An Interpretative Laboratory Text of Semimicro Procedure in Basic College Chemistry." John Wiley and Sons, Inc. 440 Park Avenue South, New York, 16, N. Y. 1962. 300 pp. \$5.00.

EUGEN MÜLLER, Edited by. With O. BAYER, H. MEERWEIN and K. ZIEGLER. "Methoden der Organischen Chemie (Houben-Weyl)." "Vierte, Vollig Neu Gestaltete Auflage." Band XIV. "Makromolekulare Stoffe." Teil 2. Georg Thieme Verlag, Herdweg 63, Stuttgart, Germany. 1963. 1251 pp. DM. 272. Vorbestellpreis DM. 244.80.

J. R. PARTINGTON. "A History of Chemistry." Volume Three. St. Martin's Press, Inc., 175 Fifth Avenue, New York 10, N. Y. 1963. 854 pp. \$25.00.

KURT RANERATH. "Dünnschicht-Chromatographie." Verlag Chemie, G.m.b.H., Weinheim/Bergstr., Postfach 149., Germany. 1962. 243 pp. DM. 22.

E. H. RODD, Edited by. "Chemistry of Carbon Compounds." Volume V. "Miscellaneous. General Index." American Elsevier Publishing Company, Inc., 52 Vanderbilt Avenue, New York 17, N. Y. 1962. 912 pp. \$29.00.

E. T. SEVERS. "Rheology of Polymers." Reinhold Publishing Corporation, 430 Park Avenue, New York 22, N. Y. 1963. 180 pp. \$7.50.

EGON STAHL, Edited by. "Dünnschicht-Chromatographie. Ein Laboratoriumshandbuch." Springer-Verlag, Heidelberger Platz 3, Berlin-Wilmersdorf, Germany. 1963. 534 pp. DM. 56.

EDWARD STAUNTON WEST. "Textbook of Biophysical Chemistry." Third Edition. The Macmillan Company, 60 Fifth Avenue, New York 11, N. Y. 1963. 435 pp. \$9.50.

P. G. WATSON and D. E. S. TRUMAN. "Metabolic Intergrations." W. Heffer and Sons Ltd., Cambridge, England. 1962. 9 pp. Price, 6 Shillings net.