

In many cases, the synthesis of a compound is provided in detail, but sometimes the reader is referred to a reference. References are used liberally throughout the text. The author indicates that the text does not contain all syntheses that have been developed for stable isotopes considered in the book, and states that the preparations presented represent types of reaction methods and techniques that may be applicable to many products other than those shown in the text. The efficient synthesis of key intermediates has been considered to be particularly important.

The text is concise, unique, and useful for individuals wishing to synthesize labeled compounds with stable isotopes and should be beneficial to all chemists involved in this area of research.

Reviewed by Stanley M. Shaw
Bionucleonics Department
Purdue University
West Lafayette, IN 47907

Anionic Polymeric Drugs. Edited by L. G. DONARUMA, R. M. OTTENBRITE, and O. VOGL. Wiley, 605 Third Ave. New York, NY 10016. 1980. 356 pp. 15×23 cm. Price \$39.50.

This work is written as a first volume in a series to be published under the heading "Polymers in Biology and Medicine." The series is aimed at integrating knowledge in polymer sciences; it deals with endogenous polymers on one hand, and synthetic polymers used in biological and medical applications on the other.

The book is written by a number of experts, each contributing in their field. The work presents an overview of polymers as drugs, drug carriers, drug delivery systems, and as biopolymers in medicine. The structure and biological activity of polysaccharides and polycarboxylic acids are reviewed, with a discussion of the synthesis, characterization, and chelating properties of polycarboxylic acids.

An extensive review is provided of the divinyl ether-maleic anhydride copolymers (Pyran copolymer) and related structures. The discussion ranges from a captivating historical background through an in-depth discussion on a range of biological activities as they relate to structure, including the effects of polymers on the immune system. Subsequently the work expands on antiviral activity, effect on mixed-function oxidases, interferon induction, and antitumor activity.

The monograph represents a thorough and broad review of the chemistry, physics, characterization, pharmacological, and physiological effects of polyanions with emphasis on the so-called Pyran polymers which have been studied most extensively. The editors have succeeded in bridging the gap between polymer science, biology, and medicine by providing a balanced mix that brings the reader up to date with the frontier of this fundamental research.

Reviewed by Felix Theeuwes
Vice President, Product
Research and Development
Alza Corporation
Palo Alto, CA 94304

Foreign Compound Metabolism in Mammals, Vol. 6. A Specialist Periodical Report. Senior Reporter D. E. HATHWAY. The Royal Society of Chemistry, Burlington House, London, W1V 0BN, England, 1981. 390 pp. 13 × 22 cm. Price \$138.00.

This book is the latest in a series of literature reviews on the titled subject which are compiled by Dr. Hathway and associates every two years. For the most part, the organization of the book follows the format introduced in the previous volume. With the exception of the first chapter on pharmacokinetics, the emphasis is on papers published during 1978 and 1979 pertaining to the biotransformation of xenobiotics. Although most of the book is devoted to drugs, there are chapters on "Industrial Chemicals and Miscellaneous Organic Compounds," "Agricultural Chemicals," and "Food Additives."

This series represents the closest thing available to a systematic, periodic review of both the conceptual and compound-oriented aspects of the drug metabolism literature. Although the reviewed literature is 2-3

years old, a search of the *Science Citation Index* for the cited references can bring anyone up to date in the areas of drug metabolism covered in a relatively short time. The material presented appears adequately indexed to allow this volume to be used for reference purposes. In contrast to the previous volume, an author index has been omitted. This is not a serious loss because most workers are more interested in following a particular subject or compound rather than an author (other than themselves). The table of contents is as sufficiently detailed as a subject index whereas the "Index of Compounds and Metabolites" at the back of the book lists specific compounds discussed.

Despite a few lapses found, *e.g.*, misspelling my name, eliminating three coauthors (reference 43 on p. 205) and misplacing reference 60 on p. 207, the authors appear to have succeeded in producing a valuable (and expensive) contribution to the practice of drug metabolism.

Reviewed by Morton A. Schwartz
Department of Biochemistry
and Drug Metabolism
Hoffmann-La Roche Inc.
Nutley, NJ 07110

Steroid Analysis by HPLC: Recent Applications (Chromatographic Science Series, Volume 16). Edited by MARIE P. KAUTSKY, Dekker, Inc., 270 Madison Avenue, New York, New York 10016, 1981. 397 pages bound and illustrated. 15 × 23 cm. \$45 (Price is 15% higher outside the U.S. and Canada).

This book is divided into 11 major sections on: Bile acids, cardiac glycosides and related steroids, progestins, synthetic adrenocorticosteroids in pharmaceutical preparations and biological fluids, estrogens, D vitamins, determination of sterol intermediates in cholesterol biosynthesis, steroid hormones in adrenal and testicular cells, enzymatic steroid epimers, and analysis of natural and synthetic hormones in foods and feeds.

This volume is a collection of reviews by practicing chromatographers who describe their own work in detail and review in less detail work done by numerous others. Some 1980 references are cited but most are from 1979 or before. Recent reviews are included in the 654 references cited in the eleven sections. However, the editor states that the volume makes no attempt to include all of the recent applications of HPLC to steroid analysis.

The book is written for practicing analytical chemists, presenting laboratory tested approaches to problems in steroid separation and quantitation. Sufficient details are included to enable the analyst to quickly set up a system that would give satisfactory chromatography for routine analyses. This book would be a good source for information for any chromatographer who may be faced with an analysis in the steroid field for the first time. It could also be used for the purpose of reviewing any topic in the subject areas for developing new ideas, and for identifying key references. However, anyone using this book for the latter purpose should also supplement the information by surveying the current literature, since the publication rate of recent advances in the steroid area has been growing rapidly.

Reviewed by Robert E. Graham
Food and Drug Administration
Dallas District
Dallas, TX 75204

Food Chemicals Codex, Third Edition. Prepared by the Committee on Codex Specifications, Food and Nutrition Board, Division of Biological Sciences, Assembly of Life Sciences, National Research Council, National Academy of Sciences, 2101 Constitution Ave., N.W., Washington, D.C. 20418. 1981. 735 pp. Price \$45.00.

The *Food Chemicals Codex* is the definitive source of information on food additives and processing aids. This new edition has been extensively revised and updated since the second edition, published in 1972. Over 800 food ingredients and processing materials are included in 776 monographs, 113 of which are new. A series of 400 IR spectra for many