

from higher plants and microbial sources which were not covered elsewhere in the text but of sufficient scientific interest as possible new agents.

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Terpenoids and Steroids, Vol. 10. Senior Reporter, J. R. HANSON. The Royal Society of Chemistry, Burlington House, London W1V 0BN, England. 1981. 284 pp. 15 × 22 cm. (Available from: Special Issues Sales, American Chemical Society, 1155 16th Street, N.W., Washington, DC 20036.)

This is the 10th volume on terpenoids and steroids in the valuable series first published 11 years ago. The aim of the series is to provide systematic, comprehensive, and critical reviews of progress in the major areas of chemical research. This volume reviews literature published between September 1978 and August 1979.

Volume 10 does not contain a subject index but is organized in a systematic manner that facilitates the location of information. There is also an extensive author index which is helpful to those following the research of a given individual. The book contains 1700 chemical structures and is documented with 1900 references, conveniently listed on the page of each chapter where first noted.

Part I, which covers the terpenoids, is divided into chapters that include sesquiterpenoids, diterpenoids, triterpenoids, and carotenoids and polyterpenoids. Chapters on monoterpenoids and the biosynthesis of terpenoids and steroids, unlike many of the earlier volumes, are not included. The chapter on monoterpenoids will be included in the next volume.

Part II, which covers the steroids, is divided into two chapters. The chapter on physical methods includes sections on structure and conformation, NMR spectroscopy, chiroptical phenomenon, mass spectrometry, miscellaneous physical properties, and analytical methods. The chapter on steroid reactions and partial syntheses contains sections devoted to each of these topics.

The first section is divided topically according to the more common functional groups and such important subjects as molecular rearrangements, functionalization of nonactivated positions, and photochemical reactions. The second section on partial syntheses, covers cholestane derivatives, vitamin D and its metabolites, pregnanes, androstanes and oestrans, cardenolides, heterocyclic steroids, and microbiological oxidations.

An unusual variety of terpenoid structures, particularly from insect and marine sources, has been included in this volume. The sharp increase in the use of high-field ¹H-NMR and ¹³C-NMR is evident in this review.

The six reporters who prepared this volume are to be commended for maintaining the high standards set by the previous volumes in this series. Everyone interested in the chemistry of terpenoids and/or steroids should have access to this volume and the others in the series.

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Lexikon der Hilfsstoffe für Pharmazie, Kosmetik und angrenzende Gebiete. By HERBERT P. FIEDLER, Editio Cantor Aulendorf, D-7960 Aulendorf, West Germany, 2 Volumes, 1081 pp., 17 × 24 cm., 1981, Price: 245 DM.

In view of the scarcity of textbooks dealing exclusively with excipients, the revised and expanded edition of the *Lexikon der Hilfsstoffe* is a timely contribution to the reference libraries of pharmaceutical companies,

regulatory agencies, and schools of pharmacy. Comparison of the contents with the original one-volume edition published in 1970 demonstrates the evolution of a broader and more critical attitude toward available technical information on excipients.

The author has provided a series of tables listing specific physical properties of excipients, types of surfactants used in pharmaceutical or cosmetic preparations, HLB values, MAC (maximum workplace concentration) values, colorants suitable for cosmetic preparations, and a table of the German and English titles of selected excipients together with their Merck Index and Chemical Abstracts Registry Numbers where appropriate.

The main body of the text lists excipients in alphabetical order with information on their physical, chemical, and biological properties. There is considerable variation in coverage between excipients, which reflects the author's judgment or the extent of information available to him. It is clear that Dr. Fiedler has made a special effort to make these volumes useful to English-speaking pharmaceutical scientists. However, the construction of some of the interminable German sentences may create impatience in readers with a limited knowledge of the language.

As far as this reviewer knows, no similarly detailed encyclopedia of excipients has appeared in the English language. Until this gap is properly filled, the *Lexikon der Hilfsstoffe* will remain a valuable source book for pharmaceutical scientists engaged in dosage form design, production, and control.

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USAN and the USP Dictionary of Drug Names 1982. United States Pharmacopeial Convention, 12601 Twinbrook Parkway, Rockville, MD 20852. 1981. 614 pp. 21 × 28 cm. Price \$25.00 (Foreign: \$40.00 AO rate, \$27.00 surface rate).

The 1982 edition of *USAN and the USP Dictionary of Drug Names* has been updated in some subtle but important ways. The entry format and familiar orange cover are the same but the book itself is 104 pages longer than last year. There are 96 new adopted names in this edition, inclusive to June 15, 1981. Many International Nonproprietary Names and graphic formulas from the World Health Organization's listings have been added as well as the molecular weights of compounds where appropriate.

There are over 17,000 entries and 2043 adopted names in this issue. The three appendixes and five lists that appear in the back of the book are the same as last year.

USAN is the officially recognized source of drug names for the USP, the National Formulary, and the major source used by the FDA in referring to drug substances. Consequently, this book is an invaluable reference to those in the drug trade and health professionals.

Staff Review

Synthesis with Stable Isotopes of Carbon, Nitrogen, and Oxygen. By DONALD G. OTT. Wiley, 605 Third Ave., New York, NY 10016. 1981. 224 pp. 16 × 24 cm. Price \$28.50.

This book is designed for chemists who are confronted with the need to prepare a compound with a stable isotope of carbon, nitrogen, or oxygen. It is intended to be useful for individuals actively involved in labeled compound synthesis as well as for chemists just entering the field.

Although compounds are presented in chapters according to functional groups, not all compounds appear in designated chapters. However, the text contains an index that lists all labeled compounds. The compounds are cited in the index as a product of synthetic procedures or as a reactant. Unfortunately, the index does not indicate information other than the compounds.

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.

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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.

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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.

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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.

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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