

Book Reviews

Organic Synthesis Based on Name Reactions and Unnamed Reactions. A. Hassner and C. Stumer. Elsevier Science Inc., New York. 1994. xiii + 452 pp. 17 × 24.5 cm. ISBN 0-08-040279-8. \$39.50.

As organic chemistry developed during the past century, numerous synthetically useful reactions and reagents have been discovered which have become known by the name of their discoverer. In recent decades, it has become impractical, if not impossible, to remember all the useful chemical transformations or reagents by name. Previous editions of *The Merck Index* contained compilations of named reactions, and other recent books have dealt with the subject in a limited fashion.

In this book, the authors have provided an updated and rather thorough listing of name reactions and reagents useful in synthetic chemistry. Each name reaction presented includes a brief explanation of the transformation with a specific example presented in a reaction scheme format followed by several leading literature citations. In addition, the authors include some experimental details of the specific reaction example listed. This unique feature is very useful for the synthetic practitioner who may require experimental information on a given transformation for planning purposes.

Four indices are included, a name index with cross references to multiple names, a reagent index, an index to the type of reaction, and an index to the interconversion among functional groups.

This book is highly recommended to anyone involved in organic synthesis and is a requisite addition to all chemistry libraries.

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Burger's Medicinal Chemistry and Drug Discovery. Volume 1. Principles and Practice. Edited by Manfred Wolff. John Wiley & Sons, New York. 1995. xi + 1064 pp. 18.5 × 26 cm. ISBN 0-471-57556-9. \$195.00.

This is the first volume of the fifth edition of a noble piece of work begun by Alfred Burger many years ago. It is now in the very capable hands of editor Manfred Wolff who has compiled a work worthy of past editions. This first volume is made up of four parts: (I) The Drug Discovery Process, (II) Product Development Issues, (III)

Structural Medicinal Chemistry, and (IV) Drug Discovery Technologies.

The four chapters in part I begin with an historical review of medicinal chemistry. This is followed by chapters on Management of Drug Discovery, Intellectual Property, and Information Science. These are well-written and should be of great value to scientists in industry. Of special value is the chapter on the intellectual property, bringing together in one place a large amount of valuable information on patents.

Part II on Drug Development Issues focuses on four major considerations in the drug development process: pharmacodynamics, metabolism, allergy, and carcinogenicity. These vital issues are covered by authorities in very lucid chapters. Benet and Perotti, writing on absorption, distribution, and elimination, have put together a very useful discussion of these issues for both industrialist and academician. The chapter by Testa deserves special praise for its organization, content, and style. The inclusion of structure-metabolism relationships is of great value. The chapter on allergy by C. W. Parker and the one on carcinogenicity by H. S. Rosenkrantz are very well done.

Part III on Structural Medicinal Chemistry includes chapters on three-dimensional design, drug receptors, and binding forces. These are well-written and include much state of the art information. The chapter on Drug Receptors by M. Williams, D. C. Deecher, and J. P. Sullivan is a good review of this subject.

Part IV is composed of 12 chapters, over half of the book. This part includes chapters on chemical information, QSAR, molecular modeling, mass screening, analog design, prodrug design, and natural products. The chapter on molecular modeling by G. Marshall is very well-written and usefully illustrated. The chapter on QSAR is disappointing in that it omits the more recent and widely used structure indices built up from topology and information theory. The final chapter on natural products by A. D. Buss and R. D. Waigle is well-written and a necessary reminder that this is still an essential area of drug discovery.

The book is an essential addition to the libraries of any medicinal chemist from graduate student on up to retired philosopher. Even the undergraduate should have access to the wealth of information contained. The first volume is an outstanding work and is highly praised as a fountain of information in drug studies and research.

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