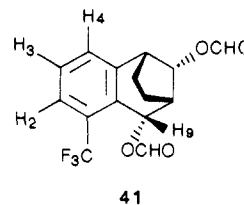


relatively lipid soluble compounds, the depletion of C_{out} was at most 2-fold.

Gary L. Grunewald,* Kimberly M. Markovich, and Daniel J. Sall: Binding Orientation of Amphetamine and Norfenfluramine Analogues in the Benzonorbornene and Benzbicyclo[3.2.1]octane Ring Systems at the Active Site of Phenylethanolamine *N*-Methyltransferase (PNMT).

Page 2191. In structures 41-44 and 51-55, the stereochemistry of the oxygenated function at the benzylic position is incorrectly drawn. In all cases the stereo-

chemistry should be represented with a dashed (rather than solid) line. For example, compound 41 should be as drawn below.



Book Reviews

Hetero Diels-Alder Methodology in Organic Synthesis.

Organic Chemistry, a Series of Monographs, Volume 47.

Dale L. Boger and Steven N. Weinreb. Series Editor: Harry H. Wasserman. Academic Press Inc., Harcourt Brace Jovanovich, San Diego. 1987. x + 366 pp. 16 × 23 cm. ISBN 0-12-110860-0. \$89.00.

The hetero Diels-Alder reaction has, in recent years, become firmly established as a strategy for the construction of complex natural products. The present volume is an important addition to this excellent series of monographs on organic chemistry and is written by two of the foremost advocates of this synthetic methodology.

The book is divided into 10 chapters, the first six of which deal with the use of various types of heterodienophiles. The remaining four chapters are concerned with the reactions of several classes of heterodienes. Throughout the work the emphasis is upon the practical significance of the hetero Diels-Alder reaction though in many cases this is of necessity due to the paucity of existing mechanistic information.

Many of the examples cited in this work are presented in tabular form, which includes such information as reaction conditions and yields as well as references to the original literature. This layout makes the book an ideal reference for the practicing chemist since it allows a rapid preliminary assessment of the value of the methodology for their own particular needs. The text is well supported by over 1000 references covering the literature through 1986.

This work succeeds well in its major aim of drawing the attention of organic chemists to the power of the hetero Diels-Alder reaction for stereoselective synthesis. It should, however, also suggest areas of fruitful research for the mechanistic organic chemist. The book should be included in the library of all academic and industrial institutions where synthetic organic chemistry is an integral endeavor.

Smith Kline & French Laboratories
Philadelphia, Pennsylvania 19101

John D. Elliott

Chemical Research Faculties. An International Directory, 2nd Edition. Coordinated by Meg Marshall. American Chemical Society, Washington, D.C. 1988. xlvii + 689 pp. ISBN 0-8412-1017-9. \$159.95.

This is the second edition of *Chemical Research Faculties*. The first edition (1984) derived from a need within the scientific community for current information about chemical colleagues throughout the world. The present edition details descriptions of areas of specialization and research conducted in 107 countries; it complements similar information on university faculties in the United States and Canada which is contained in the *ACS Directory of Graduate Research 1987*. This compilation derives

from data collection initiated in December 1986 in which representatives from 149 countries were contacted. Listings are included for more than 11 500 individual faculty members, their field of interest, and their current research. *Chemical Research Faculties* also provides information on 72 chemical societies, including addresses, principal officers, publications, structures, and membership enrollments. The first 558 pages list faculties of various departments of chemistry in the countries included. The next 23 pages list corresponding chemical engineering societies. This is followed by 99 pages devoted to an Index of Research Subjects, and seven pages that present an Index of Institutions.

The book is one which provides invaluable information that should be available in all libraries, academic institutions, chemically oriented businesses, and chemical societies. The objective of the American Chemical Society in compiling this volume, i.e., to foster international communication to increase and improve scientific developments serving humanity, has been admirably achieved.

Staff

Neuromethods. 9. Neuronal Microenvironment. Edited by Alan A. Boulton, Glen B. Baker, and Wolfgang Walz. Humana Press, Clifton, NJ. 1988. xxvi + 732 pp. ISBN 0-89603-15-2. \$94.50.

This latest volume in the *Neuromethods* series is directed toward a relatively new area of neuroscience, the neuronal microenvironment. It is based on the observation that 20% of the brain volume is extracellular space and is a functional compartment in itself. By virtue of its changes in electrolyte composition and volume it influences neuronal excitability and, indeed, many pathological processes. For example, stroke, ischemia, anoxia, and epilepsy involve dramatic changes in these factors. The 14 chapters in the book clearly describe information on the topic and latest techniques in ultrastructural and extracellular space, computer tomography and NMR, energy metabolism, ion and water shifts, ion-selective microelectrodes, voltammetric microsensors, brain slice preparations, cell cultures, techniques for assessing pathways and fluid dynamics in the blood-brain barrier and cerebral spinal fluid choroid plexus, cerebral spinal fluid system, arachnoid membrane, fluid compartment analysis, metabolic activity, patch clamp methods, acid-base balance, and calcium, magnesium, and hydrogen ion concentrations.

This is the first book dedicated to methodological approach for the study of the "neuronal microenvironment". It will serve as an important source of information to neuroscientists planning to initiate research in this promising, new, and rapidly developing area.

Staff