

Additions and Corrections

¹⁷O NMR Study of Chromium(VI) Ions in Water [*J. Am. Chem. Soc.* **1996**, *118*, 7969–7980]. NICOLA E. BRASCH, DAVID A. BUCKINGHAM,* A. BRAM EVANS, AND CHARLES R. CLARK

Page 7970, ref 12 should read: Authors of refs 4–6 and 9 have ...

Page 7971, the first of eqs 21 should read: $\dot{U} = \beta(V + WY/Z) - 2\alpha UX$.

Page 7971, the tenth line from bottom should read: the rate at which label is being received by Y from X ...

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Book Reviews

Comprehensive Supramolecular Chemistry. 11 Volumes. Editor-in-chief Jean-Marie Lehn (Université Louis Pasteur, France). Edited by Jerry L. Atwood (University of Missouri), J. Eric Davies (University of Lancaster, U.K.), David D. Macnicol (University of Glasgow), and Fritz Vogtle (Friedrich-Willhelms-Universität, Germany). Pergamon: Oxford. 1996. 6672 pp. \$4320. ISBN 0-08-040610-6 (set).

This massive work is the latest in a series of treatises from Pergamon Press that attempt to organize and lend coherence to selected areas of chemical research. It follows 1991's *Comprehensive Organic Synthesis*, and is being published alongside the "sequels" to two older sets on organometallic and heterocyclic chemistry. Taken together or on their own, these treatises are very useful research-level introductions to their respective fields.

Comprehensive Supramolecular Chemistry is an eleven-volume set that covers the gamut of this relatively new and rapidly expanding area of research. The term "supramolecular chemistry" was coined to describe the inquiry into the structure and behavior of large molecular entities that exist beyond the covalent bond, held together instead by intermolecular forces. This field emerged from the study of crown ethers and cryptands in the 1960s, and owes much to earlier concepts of host–guest chemistry, coordination theory, and Fischer's lock-and-key image. Supramolecular chemistry is a highly interdisciplinary field, and this is reflected in the breadth of this publication's topics. The volumes cover, respectively, molecular recognition (for cationic and molecular guests), cyclodextrins, reactivity and transport (bioorganic and bioinorganic), crystal engineering, two- and three-dimensional inorganic networks, physical methods, templating, self-assembly and self-organization, and finally supramolecular technology. Treatment of the synthetic, structural, and analytical aspects of supramolecular chemistry is balanced with coverage of its materials science and life sciences applications.

Each volume is edited by an expert in that particular subfield, and the editor-in-chief is Jean-Marie Lehn, who shared the 1987 Nobel Prize in chemistry for his work in host–guest chemistry and molecular recognition. Several hundred authors contributed the 197 chapters that occupy over 6000 pages of illustrated text. Chemists who use this work will probably do so mainly in order to obtain a convenient and organized entry into the primary literature of this field, which is quite extensive. Literature coverage in several chapters examined for this review appears to extend through 1994. Each chapter concludes with a lengthy bibliography, and each volume contains a full author index to the references found therein, as well as a subject index. Volume 11 of the set is a cumulative subject index, further aiding the location of specific pieces of information.

With a price tag of over \$4300, this is not a casual purchase for most libraries or chemical laboratories. But the Pergamon treatises are carefully edited and will serve as useful research tools for many years. *Comprehensive Supramolecular Chemistry* takes its place

alongside past entries in the series, and is a worthwhile acquisition for libraries that can afford it.

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Advances in Heterocyclic Natural Product Synthesis. Vol. 3. Edited by William H. Pearson (University of Michigan). JAI Press, Inc.: Greenwich, CT. 1996. ix + 288 pp. \$97.50. ISBN 1-55938-426-3.

This book, third in a series, highlights recent progress in the arena of heterocycle synthesis and methodology as applied to natural products. On the whole it is interesting and informative with each of the chapters individually comprehensive. This book should be of interest to all researchers in the area of heterocycle chemistry.

The first chapter (by Ciufolini) outlines the development and application of new reactions in heterocycle chemistry. A pyridine-forming reaction is presented in the context of pyridoacridine alkaloids, and the photochemical creation of quaternary carbon centers in quinone olefin photoadducts is detailed. Chapter two (by Knapp) is a full historical account of aspects and application and iodolactamizations. It details the creative use of imidates for iodolactamization involved in the synthesis of ezoaminuroic acid and slaframine. The third chapter (by Aube and Ghosh) details an asymmetric oxaziridine-based ring-expansion approach leading to the total synthesis of (+)-yohimbine. Several asymmetric approaches to yohimbine from 1978 to the present are outlined. Chapter four (by Hua and Chen) is a review of the use of chiral α -sulfinyl ketimines in the synthesis of chiral amino alcohols and amino acids. The synthesis of heterocyclic natural products using palladium-catalyzed 1,4-oxidations of conjugated dienes is described in chapter five (by Andersson and Backvall). Many natural products are presented such as tropane and pyrrolizidine alkaloids. The last chapter (by Czerwinski and Cook) reviews use of the Pictet–Spengler reaction in a stereocontrolled fashion. Synthetic and mechanistic studies are presented as well as use in the total synthesis of alkaloids.

On the whole, this book contains hundreds of references to the primary literature through 1994. It is an important addition to the library of heterocycle synthesis.

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