

Additions and Corrections

Combinatorial Organic Synthesis of Highly Functionalized Pyrrolidines: Identification of a Potent Angiotensin Converting Enzyme Inhibitor from a Mercaptoacyl Proline Library [*J. Am. Chem. Soc.* 1995, 117, 7029–7030].

MARTIN M. MURPHY, JOHN R. SCHULLEK, ERIC M. GORDON, AND MARK A. GALLOP*

Page 7030: The acyl chloride derived from 2(*S*)-3-acetyl mercaptoisobutyric acid was used in this work as stated. The stereochemistry of the mercaptoisobutyryl group has been erroneously represented in Figures 2, 3, and 4 with the 2(*R*) configuration.

JA9550337

Book Reviews

Organosulfur Chemistry—Synthetic Aspects. Edited by Philip Page (University of Liverpool, U.K.). Academic Press: London. 1995. x + 277 pp. \$55.00. ISBN 0-12-543560-6.

This book is the first of a new series that plans to treat a broad range of topics in organosulfur chemistry, including bio-organic and physical organic aspects. The theme of the present volume is synthesis, and five topics in this area are reviewed by separate authors.

The first chapter (G. Solladié and M. C. Carreño) deals with synthetic uses of optically active β -keto sulfoxides and related compounds, including their preparation (largely via the Andersen method), stereo-selective reduction, and the asymmetric cycloaddition chemistry of related alkenyl and dienyl sulfoxides. Applications to a variety of total syntheses illustrate these processes. Chapter 2 (D. Crich) covers the free radical chemistry of sulfur compounds, treating reactions based on sulfur-centered radicals (e.g., additions, cyclizations), the use of sulfur compounds as precursors of alkyl radicals (e.g., desulfurizations, deoxygenations of thionocarbonates, decarboxylations or thiohydroxamates). A brief section is included on C–S bond-forming reactions of sulfur compounds with carbon radicals. C. M. Rayner reviews synthetic transformations using thiiranium ions in Chapter 3. The formation of these electrophilic intermediates and their further reactions with both carbon and heteroatom nucleophiles are described, with particular attention to the stereo- and regiochemistry. Examples of applications include glycosylations and electrophilic cyclizations. The fourth and longest chapter is on 1,3-dithioacetals (W. W. Wood). Coverage is provided of the preparation and synthetic uses of these compounds, including metalation chemistry, radical reactions, diastereoselective processes at various sites in 2-substituents, and functional group transformations of the dithioacetal moiety itself. A section on 1,3-dithioacetals in the pharmaceutical and agrochemical industries provides interesting additional material. The last chapter by R. Okazaki is on the chemistry of thioaldehydes. It deals separately with transient and stable members of this class and describes methods for their generation, their spectroscopic and other properties, and their further transformation by, for example, cycloadditions or ene reactions. Although thioaldehydes are not commonly thought of as reagents or intermediates in synthesis, some aspects of their chemistry as described in this chapter (most notably cycloadditions) suggest that they may have future potential in this regard.

In general, all five chapters provide thoughtful and judiciously chosen material on their respective topics, rather than an exhaustive coverage. The book is well-written and clearly illustrated, with relatively few typographical or related errors. Most of the chapters cover the literature through 1992, with a few citations of more recent references. This book will be of interest to specialists working in organosulfur chemistry,

but its ultimate value to a broader readership will depend on the timely publication of subsequent volumes in this series and the complementarity of the individual topics.

T. G. Back, *University of Calgary*

JA9552499

Admixtures in Crystallization. Edited by Jaroslav Nyvlt (Czech Academy of Sciences, Prague) and Joachin Ulrich (University of Bremen, FRG). VCH: New York. 1995. 390 pp. \$190.00. ISBN 3-527-28739-6.

Industrial crystallization is often considered more of a magic than a science because of the great number and variety of effects that admixtures, even in the smallest amounts, have on nucleation, crystal growth, crystal shape, and dissolution. This book summarizes present information spread through various literature. It also provides information for over 200 organic and inorganic admixtures used in crystallization of over 300 organic and inorganic substances in table format to facilitate the proper choice of additives to obtain the required product quality. It has over 1700 literature references and a short introduction to crystallization, with a focus on admixtures.

JA955362Z

The Logic of Chemical Synthesis. Edited by E. J. Corey and Xue-Min Cheng (Harvard University, Cambridge). Wiley: New York. 1995. 436 pp. \$24.95. ISBN 0-471-11594-0.

The title of this three-part volume derives from a key theme of the book—the logic underlying the rational analysis of complex synthetic problems. Although the book deals almost exclusively with molecules of biological origin, which are ideal for developing the fundamental ideas of multistep synthetic design because of their architectural complexity and variety, the approach taken is fully applicable to other types of carbon-based structures.

Part 1 outlines the basic concepts of retrosynthetic analysis and the general strategies for generating possible synthetic pathways by logical reduction of molecular complexity. Part 2, a collection of multistep syntheses, provides much integrated information on synthetic methods and pathways for the construction of interesting target molecules. Part 3 is intended to balance the coverage of Parts 1 and 2 and to serve as a convenient guide to the now enormous literature of multistep synthesis.

JA955363R

*Unsigned book reviews are by the Book Review Editor.