

thoritative account of a key area comprehensively covering both theory and practice of enzymatic transformations in nonaqueous media.

Each chapter draws on the minimum of significant work to bring the reader to the current state of the art. A valuable feature of each chapter is the concluding remarks wherein authors outline key areas of research that need further development.

The first chapter sets the stage for the remaining chapters by providing key industrial examples and an analysis of the commercial demand for enantioselective reactions. The second chapter presents and interprets models for selection of nonaqueous solvents and solid supports used in enzymatic transformations. This is followed by chapters describing the effect of nonaqueous media on enzyme conformation and mechanism.

Sih and co-authors provide an excellent review of enantioselective enzymatic hydrolysis and transesterification in nonaqueous media. Particularly interesting is their review of changes in lipase specificity after chemical treatment.

The unique ability of lipases and hydrolases to specifically derivatize one hydroxyl of monosaccharides is discussed. Advances in this field have rendered practical heretofore impractical synthetic procedures producing pre-selected polysaccharides.

The concluding chapters on enzymatic transformation of synthetic interest and peptide synthesis provide both wide-ranging examples and interpretations that will aid the practitioner in selection of a system to meet their needs.

Final chapters deal with the theory and practice of enzymatic transformations on a large scale.

The true value of a book of this thrust is in its potential to aid the student and research scientist in understanding and using the systems discussed. In both regards, the organization and content of this book are right on target.

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NP970116H

10.1021/np970116h

Second Supplement to the 2nd Edition of Rodd's Chemistry of Carbon Compounds, Vol. IV, Heterocyclic compounds, Part E. Edited by M. Sainsbury (University of Bath, England). Elsevier Science Limited, Oxford, England. 1997. xiv + 692 pp. 15 × 22.5 cm. \$447.75. ISBN 0-444-827536.

The advertisement for this book promises that it will provide "easy access to a vast amount of data, presented in a concise yet readable form...a detailed index allowing rapid location of reaction types, synthetic procedures or individual compounds". In this reviewer's opinion, comprehensive reviews of the chemical literature should more or less report, summarize, correct, analyze, reinterpret, and extend published research. Reviews that do the latter

three of these are rare and generally found in new and rapidly emerging fields. On the other hand, "reviews" that only report and summarize published research are increasingly more common, and probably unnecessary, due to their ease of compilation from *Chemical Abstracts* by computer search. Structure-, subject-, or compound-driven searches can in a few minutes provide the abstracts and bibliography ready for organization and editing into a review manuscript. Unless the review author critically reads each reference, errors in the original paper may go undetected and any reinterpretation, analysis, and extension of a research field in the review is unlikely.

So what kind of review is this one? Factually it covers six-membered monoheterocyclic compounds containing heteroatoms from Groups IV (Si, Ge, Sn) and VI (O, S, Se, Te) divided into Chapter 20 dealing with oxygen compounds and Chapter 21, which discusses the remaining heteroatoms. This parallels the organization of the original 2nd Edition published in 1977 and the First Supplement published in 1989 except that neither lead nor iodine heterocycles are included (in spite of a subtitle stating that heteroatoms from Group VII are included). The author of these chapters, Professor R. Livingstone, is the same as in the original 2nd Edition and First Supplement. The time period covered by the book is not explicitly stated but references as early as 1982 were noted with most between 1987 and 1994 consistent with a two year publication lag in this series. The preface was written in January 1997.

The book is a collection of one-to-two sentence abstracts, with literature citation, of articles on compounds that fit the organizational scheme, which is solely by structure. The emphasis on synthesis, reactions, or properties varies depending on the point of the original reference (or abstract). Thus, if a series of compounds was prepared for evaluation of their bioactivity, the specific structures are given, but not the method of synthesis.

The index of over 2000 items also is almost solely organized by structure with less than a dozen references to reaction types, procedures, or properties. In contrast to the original Edition, no citations to natural sources were found, although they are promised in the index guide. Neither an author index nor a compiled bibliography is included.

In summary, "easy access" is possible only for specific compounds or classes, and the information provided is exactly that which is easily obtained by computer search of *Chemical Abstracts*. Coverage is limited, but undefined, so a complete literature search will require additional sources. Considering limited library budgets and the hefty price of this book, I could not recommend it to our librarian for purchase.

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NP970119U

10.1021/np970119u