

short summary of earlier studies (up to 1991) is followed by six chapters which describe different glycosidation strategies for solid-phase syntheses and suitable linkers for binding saccharide structures to polymeric supports. These chapters show that many different glycosidation methods applicable to polymeric supports have already been investigated, for example, glycal-based methods, the use of glycosyl sulfoxides, the trichloroacetimidate method, and methods based on thio- and pentenyl-glycosides and on glycosyl phosphate. As well as explaining the basic principles and mechanisms, the authors provide details of synthetic sequences and of compound libraries that have been prepared. A separate section is devoted to the use of a soluble polyethylene-glycol-monomethyl ether (MPEG) in carbohydrate chemistry, in addition to references to MPEG in individual chapters describing methods. The important question of "on-bead" reaction control is mentioned in one chapter, with special regard to studies using ^1H and ^{13}C NMR spectroscopy, although unfortunately it is too brief. The final third of the book contains excellent articles about the preparation of combinatorial carbohydrate libraries. Aspects covered include bidirectional synthetic methods, libraries of compounds in solution, random libraries, and the preparation and investigation of biologically relevant glycopeptide libraries.

The book provides a mainly well-balanced survey of combinatorial oligosaccharide chemistry. Unfortunately it has not always been possible to avoid overlapping of subject matter between chapters. For example, the use of trichloroacetimidate glycosides on MPEG resins is reported in detail in two places. Also, in a few of the chapters the authors have failed to treat their subject matter from a critical and unbiased standpoint. In this new and rapidly developing field, in which many of the procedures are still at an early and juvenile stage, it is especially important to carefully examine the advantages and disadvantages, the scope, and limitations of different approaches, and to consider how well they compare with conventional solution chemistry methods. Lastly, in some chapters the figures show a lack of care and consistency in their preparation; the

book could have been improved by more careful attention to these.

However, these criticisms do not detract seriously from the value of the contents, and therefore we can recommend the book to interested readers, as it is the first comprehensive monograph on the subject.

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Chiral Intermediates. By *Cynthia A. Challener*. Ashgate Publishing Ltd., Hampshire 2001. 804 pp, hardcover \$ 295.00.—ISBN 0-566-08412-0

The first impression of a book with a large number of drawings is certainly determined by its drawings' quality. However, in "Chiral Intermediates", the approximately 4000 formulas and drawings do not leave a good impression. Firstly there is an inconsistent and unorthodox usage of wedged bonds for designating chiral centers. Secondly there are quite a few structures that are, at least, confusing if not even a steric paradox (e.g. camphoric acid, camphor quinone, ketopinic acid). Formulas are also drawn in various different formats and sizes (e.g. oversized fig. 3.33, undersized fig. 4.15). The arbitrary use of wedged bond symbolism, Haworth formulas, and Fisher projections is as confusing as it seems to be coincidental whether and which chiral centers are represented (e.g. pp. 442–443, 490–493, 526–527, etc.). As a consequence of the numerous formal inconsistencies, it is not surprising that factual errors occur. For example: all chiral centers of the 2-alkyl-1,2-epoxides (p. 525) are represented with the wrong configuration; false use of stereo descriptors are also to be found in entries 3663/64 (2-methyldodecanic acid and alcohol, respectively), 3940/41 (nirvanol), 3039/40 (2-chloro-1-hexadecanediol), 2605 (2-ethylhexylamine), and 2170/71 (represents *meso*-dimethyl succinate); to highlight but a few. Taking these multiple faults into consideration it is not surprising that under an entry X, a totally different molecule Y can be found (p. 586 hydropic acid alias 5-hydroxytetracycline).

Although this discussion already indicates a poor assessment, the question of the content and the purpose of the book still remain to be answered. The book aims to provide the chemical professional with a comprehensive listing of available chiral chemicals and specific data of interest. Part I, chapter I of the book gives a short introduction and overview of chirality. It continues with a short chapter that describes the increasing demand for chiral (enantiomerically pure) compounds and two chapters covering the supply of enantiomerically pure chemicals (isolation, separation, and synthesis). The main entries (part II) of the book describe 4734 chiral compounds and represent most of them. They are alphabetically listed, giving CAS registry number, EINECS number, and Merck index number. Other trade names, manufacturers, some physical properties, and specific rotations are also provided. However, contrary to the claims on the book cover the latter is only true for a maximum of two thirds of the entries for the optical rotations and even less for other physical properties. After all 4734 entries have been processed, part III of the book gives indexes of CAS and EINECS numbers, names, and synonyms. A mailing list of suppliers and manufacturers then completes the volume. Let's come to the main question: Is the provided information really helpful for chemical work and research and can they justify the high price of \$ 299? Rather not. Probably, in this day and age, the majority of work places can easily access most of the provided information from common databases (e.g. SciFinder, Beilstein, ACD-Finder) that are, in addition, updated on a regular basis. Whether all of the referred companies still exist in two years or operate under the same name is rather uncertain. However, what is quite certain is that in two years there will be more than 4734 chiral compounds on the market. My first impression was not wrong. I am sorry, but I cannot recommend a "chemical catalogue" which is riddled with inaccuracies and numerous faults.

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