Ninomiya, Kiguchi, and Naito (Pseudodistomins), Saxton (Synthesis of the Aspidosperma Alkaloids), Szántay (Synthetic Studies in Alkaloid Chemistry), and Takamaya and Sakai (Monoterpenoid Indole Alkaloid Syntheses Utilizing Biomimetic Reactions) are up to date and authoritative.

The review by Daly (The Nature and Origin of Amphibian Alkaloids) is particularly timely in view of the recent report by Decker and coworkers (*Science*, **1998**, *279*, 77−81) of a powerful new non-opioid analgesic, ABT-594, a synthetic analog from Abbott Laboratories of the rare frog skin alkaloid epibatidine.

Additional reviews by Brossi (a former editor of the series) and Pei (Biological Activity of Unnatural Alkaloid Enantiomers), Wall and Wani (History and Future Prospects of Camptothecin and Taxol), and Waterman (Alkaloid Chemosystematics) round out the fiftieth volume of a series which has been so consistently useful to alkaloid scientists that it deserves to reach its centennial year.

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**Advances in Asymmetric Synthesis, Vol. 2**. Edited by Alfred Hassner (Bar-Ilan University). JAI Press: Greenwich. 1997. x + 314 pp. $128.50. ISBN 1-59938-797-1.

This book presents an extensive account of several current methods for the preparation of functionalized molecules with high levels of enantioselection. The reader is impressed by the seminal knowledge the respective contributors to this volume have on the subject matter and immediately recognizes them as distinguished researchers in the field of asymmetric synthesis. Volume 2 of this series focuses on the following: (i) the utility of chiral cyclopentadienes in Diels−Alder additions; (ii) the preparation of chiral amines via the stereoselective reactions of chiral 1,3-oxazolidines; (iii) the asymmetric synthesis of α,α-disubstituted β-ketone derivatives; (iv) the preparation of chiral ferrocene derivatives using chemical transformations as well as kinetic resolutions; (v) numerous methods for biocatalytic transformations and enzymatic resolutions. Each topic is discussed thoroughly in the sections following its introduction. Within each section, the relevant transition structures are clearly illustrated within the text to account for the observed levels of asymmetric induction. Each section is well organized with the key points highlighted at the end of the section using a bullet format for clarification. The conclusion of each chapter includes a brief summary which lists the important advances that have been made in the field as well as the future goals of the research. The authors do an especially nice job of emphasizing the limitations of a particular method as well as possible alternatives which provide higher levels of induction. A brief summary of the contents of the individual chapters in this volume follows.

Chapter 1 includes numerous applications of cyclopentadienes derived from the chiral pool in Diels−Alder reactions with symmetric and unsymmetric dienophiles. The chapter illustrates the synthetic concepts via numerous examples relative to the total synthesis of various natural products. Chapter 2 focuses on the preparation of several classes of chiral amines derived from naturally occurring α-amino acids. The primary focus of the chapter involves nucleophilic additions to 1,3-oxazolidines and the transformation of the oxazolidines to synthetically useful chiral amine synthons. Chapter 3 provides an extensive account of methods used to prepare chiral α,α-disubstituted β-ketone derivatives via chiral transition metal catalysts, chiral crown ether complexes, as well as by the addition of achiral electrophiles to chiral ester enolates. This chapter also provides an account of many types of alkylation and conjugate addition reactions to chiral β-enaminoesters. Chapter 4 focuses on the synthesis of chiral ferrocenes with lateral and planar chirality using both chemical and enzymatic methods. This chapter also includes a brief discussion on the application of ferrocenes in asymmetric catalytic reactions. Chapter 5 deals with biocatalytic systems that induce chirality using microorganisms and enzymes. The chapter also suggests models to account for the observed stereochemical outcome of some common enzymatic processes. Chapter 6 includes an overview of some nontraditional microbial transformations such as the hydrolysis of amides, nitriles, and glycosides as well as nitro group reductions, Baeyer−Villiger oxidations, and aldol bond constructions. As a whole, this text will be a useful reference source in the field of asymmetric synthesis for graduate students and professional chemists alike.

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**Molecular Modeling: Basic Principles & Applications, Vol. 5. Methods & Principles in Medicinal Chemistry Series**. By H.-D. Holtje (Heinrich-Heine-University) and G. Folkers (ETH Zurich). VCH: Weinheim. 1997. xii + 194 pp. DM198.00. ISBN 3-527-29384-1.

If the currently popular "Dummies" series of computer books were to publish a volume on molecular modeling this would be it. In the authors' own words "...this is a book to provide support for the beginner", and it fulfills that goal admirably. After a brief philosophical introduction to the concept of models in general, the book explores two broad categories: small molecules and protein modeling. Under the "small molecule" rubric the authors briefly describe, among other topics, data libraries, geometry optimization methods, conformational analysis, and quantum mechanical methods. Protein modeling includes an introduction to protein structure, discussions of knowledge-based modeling, sequence alignment, ligand-binding site interactions, as well several other common topics in the field. "Briefly" is the operative word. The topics are touched upon, as are their general advantages and pitfalls. Don't look for much depth. And do not look for the most current references. For the most part the literature cited seems to be at best from the early 1990s, with much of it considerably older. An interesting concept is the inclusion of a chapter-long "example" after both the small molecule and protein modeling sections. In the former case it is modeling of serotonin receptor ligands, and in the latter, modeling of antigen presentation by MHC class I. The text is enlivened by the inclusion of several color illustrations. However it is hard to imagine how a 1-year-old book on molecular modeling could fail to include any description at all of the immense resources available on the World Wide Web. The book would make an excellent text for an entry-level molecular modeling course, but with the caveat that the instructor must be prepared to build considerably on the themes presented.

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