

Phosphorus Heterocycles II. Edited by Raj Kumar Bansal (University of Rajasthan, Jaipur, India). From the Series, Topics in Heterocyclic Chemistry, 21. Edited by R. R. Gupta. Springer-Verlag: Berlin, Heidelberg. 2010. xxii + 210 pp. \$259. ISBN 978-3-642-12253-8.

Phosphorus chemistry continues to illuminate many aspects of organic and inorganic chemistry. Many of the published articles and chapters focus on phosphines and catalysis, so I opened the book with some anticipation. There are six chapters, the first of which is not strictly in keeping with the title since the phosphorus atoms are all exocyclic! The second chapter purports to cover the synthesis and biological activity of 2,5-dihydro-1,2-oxaphosphol-2-oxide. The syntheses were certainly described, but the biological impact of the molecules—though included as a reason for the review—was dismissed in one line in the conclusion; I am none the wiser if they are beneficial or toxic. The chapter on *N*-heterocyclic phosphines provided a welcome overview of the area and seems to be the most topical at this time. Further chapters on heterocycles containing a stereogenic phosphorus atom, trialkylphenyl phospholes, and diazaphospholes complete the slim volume.

Overall, this book provides a detailed view of some subtopics in phosphorus heterocyclic chemistry. If read in combination with Volume I, it might offer a slightly broader perspective, but in general, the individual chapters, with one notable exception, seem too narrow in scope to be truly beneficial to any other than *P*-heterocyclic *cognicentii*. The volume represents a possible addition to libraries and the collections of specialists in the area, but it is not likely to offer much for a broader readership.

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JA107961J

10.1021/ja107961j

Catalytic Asymmetric Synthesis, 3rd ed. Edited by Iwao Ojima (Stony Brook University, Stony Brook, NY). John Wiley & Sons, Inc.: Hoboken, NJ. 2010. xviii + 998 pp. \$175.00. ISBN 978-0-470-17577-4.

Given that asymmetric reactions are now routinely carried out catalytically, this third edition of Ojima's book should be welcomed by chemists engaged in the synthesis of any sort of chiral molecule. As the editor notes in the introduction, his aim with this edition is to highlight the many emerging areas of asymmetric catalysis. Indeed, the 20 chapters by recognized experts in the field are not just updates of the second edition but rather are a collection of topical and very readable reviews of some 30–40 pages in length. There are a few longer reviews, such as the one on asymmetric allylic substitution, that offer exhaustive treatments of the topic at hand; however, most are short, useful commentaries on asymmetric catalytic processes of current interest. In almost every case, the reviews are not simply made up of mind-numbing tables of numbers or lists of reactions but rather contain useful introductions, comments, and discussions about the topics included, although the problems found in a particular area receive little mention.

The overall coverage is impressive and includes everything from organocatalysis through asymmetric transition-metal-catalyzed processes to asymmetric polymerization. Despite the abundance of figures and the many references in each of the subject areas, their treatment is generally not exhaustive. Nonetheless, the chapters are very informative and appear to review the major developments in each of the areas.

Most chapters contain a good list of references with complete coverage of the literature through 2006. Many have some 2007 references, and some even have a few from 2008. Like many compilations of reviews, the subject index of the book is of limited use. For example, the only listing of "proline" in the index refers to comments about its use in a chapter on asymmetric amplification and autocatalysis, in spite of the fact that its use is mentioned in the chapter on organocatalysis, as would be expected.

Overall, this book would be a useful addition to the library of a scientist engaged in catalysis in general and in asymmetric catalysis in particular. It is clearly a must-have for any comprehensive library.

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JA107734C

10.1021/ja107734c