Modern Reduction Methods; edited by P. G. Andersson and I. J. Munslow, Wiley-VCH: Weinheim, **2008**, hardcover, 502 pp., € 149, ISBN: 978-3-527-31862-9

Excellent survey about reduction of organic compounds

Reductive transformations are currently the most common chemical reactions to install stereogenic information. The significance of this particular asymmetric reaction type is underlined by the Nobel Prize 2001 in chemistry. In general, addition of hydrogen or an equivalent thereof is added to multiple bonds. The regio- and stereoselectivity is either chemically achieved at activated multiple bonds by the polarization or at non-activated systems by sterical effects as well as secondary interactions. In the last two decades, important developments and breakthroughs occurred in the field of reductions. Consequently, a book dealing with modern and practical aspects of reductions takes the importance and the significance of this field into account. Since the topic is very broad, the book focuses necessarily on the hydrogenation, hydroboration, hydrometalation and silylation reactions.

Andersson and his co-worker Munslow edited the monograph about the modern reduction methods. The book exhibits a clear and well-organized concept. The eighteen chapters are divided in four major sections with respect to the converted substrates. The first section deals with the hydrogenation as well as with hydroboration and hydrosilylation of alkenes. The second section consisting of five chapters is devoted to the conversion of substrates with a carbonyl group as reactive moiety. In addition to the previously mentioned transformations transfer hydrogenations as well as enzyme-catalyzed reductions of carbonyls are treated in detail. The third section is represented by a set of four chapters which survey the imino reduction. This type of reaction has received recently significant attention because of the achievements in organocatalysis. The last section entitled "miscellaneous reductions" contains further five chapters. Most surprisingly, organo-

catalysis is treated there in an individual chapter. Other reviewed topics cover alkyne reduction, reductive aldol coupling, dissolving metals and hydrometalation reactions. The quality of the chapters is very high throughout the whole book. The individual topics are well surveyed and the chapters are enriched by mechanistic schemes. The well-chosen representative and seminal examples create a complete picture for the reader. Electrochemical reductions are only mentioned in the context of electroenzymatic processes. Unfortunately, the more recent work in cofactor regeneration is not covered. Several other subjects, like reduction of arenes are also not treated within this book.

The book was prepared with great care. Typos in the written part and the schemes are rare, e.g., missing charges in scheme on page 89. In several methodical surveys the tables provide data for enantiomeric excess but often no absolute configuration of the product is given.

The reader might have problems to find a specific topic since the index is rather small. However, the book is an excellent survey about reduction of multiple bonds and treats the topic far beyond textbooks. The monograph allows every scientist a fast entry into the field of reduction reactions. The literature is mostly covered up to mid of 2006. With about 2500 references and many citations leading to existing reviews and further reading, the book will be an indispensable reference source in its respective field. Therefore, the book will definitely find its place in every good scientific library. For all chemists dealing with asymmetric synthesis this book will be compulsory reading.

Siegfried R. Waldvogel, Kekulé-Institut für Organische Chemie und Biochemie, University Bonn, Germany