

**Organic Synthesis Workbook III**; by T. Kinzel, F. Major, T. Redert, F. Stecker, J. Zinngrebe, N. Tölle and C. Raith, Wiley-VCH: Weinheim, 2007, softcover, 300 pp, € 37.90, ISBN 978-3-527-31665-6

The authors of the *Organic Synthesis Workbook*, PhD students from the group of Prof. Dr. H. c. L. F. Tietze, couldn't have chosen a better cover than Rodin's *Thinker* for their book. Planning an efficient synthesis, the right selection of a reagent, the rationalisation of selectivities – all this needs a deep understanding of the methods and fundamental principles of organic chemistry. Experience and, first and foremost, practice, are the keys to success in becoming a true master in this art. The *Organic Synthesis Workbook* series is an excellent instrument to exercise organic synthesis and to bring it to perfection.

The development of modern synthetic chemistry is fast-paced and this is reflected in the third volume of the *Organic Synthesis Workbook*. In 14 chapters, a wide range of new synthetic methods are covered on the basis of recent total syntheses published between 2002 and 2006. In doing so, key reactions like enantioselective Heck reactions, Evans aldol reactions or palladium-catalyzed domino Wacker–Heck reactions are discussed. Also included are asymmetric methods such as organocatalysis, enantioselective reduction of ketones or asymmetric epoxidation of alkenes, as well as the crotylation of aldehydes illustrated at the stereoselective synthesis of cystothiazole B by Panek et al. Furthermore, three chapters deal with pericyclic reactions (inverse-electron-demand Diels–Alder, photochemical cycloadditions and [3,3]-sigmatropic Ireland–Claisen rearrangement). Needless to say, important reaction like alkene metathesis or macrolactonisations are also not forgotten. Modern strategies for the assembly of carbon–carbon double bonds are debated, using the example of Brückner's synthesis of peridinin.

The presentation of the third volume follows the successful design of its predecessors with one exception: The newly introduced subchapter 'Key Chemistry' outlines in a brief and concise way the key step or strategy used in the following synthesis. After that comes the synthetic 'fill-in-the-blank' scheme, which is followed by the discussion of the solutions. Every chapter finishes with a short summary and references. Noteworthy also are the list of abbreviations at the end of the book, as well as a detailed index, which makes it easy to find information and examples for specific reactions or topics.

The examples chosen are characterized by elegance and efficient use of general applicable synthetic methods. Thereby, not only are the understanding of strategies and how to plan a synthesis exercised, but the repertoire of reactions is extended. I consider the *Organic Synthesis Workbook III* as a fine tool to apply, deepen and refresh the organic synthetic knowledge, not only for advanced chemists, but also for PhD students. The good impression is not blurred by some mistakes (e.g., p. 141, p. 142, p. 184, p. 190, p. 246). However, the book is not suitable for learning new reactions and their mechanisms, nor for understanding reactivities and selectivities in depth, but this is not the intention of this book. The treatises in the solutions are too brief for this purpose and appropriate textbooks and the literature should be consulted. The 'Key Chemistry' subchapter with the corresponding references is a good start for further self-study.

In summary, I recommend the *Organic Synthesis Workbook III* as an excellent training companion, and hope that this third volume is not the last!

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