
Although name reactions represent a complex vocabulary, they are in particular useful in organic synthesis for communication among chemists. Name reactions include information about employed reagents, applied reaction conditions and the mechanistic course for such a conversion. Moreover, name reactions help to memorize and cluster these individual transformations. Consequently, high-quality books which provide a good survey of named reaction or reviews on particular named transformations are definitely welcomme.

The two volume set is edited by Jie Jack Li, who is well-known from other books in the area of named reactions or heterocyclic chemistry. The editor claims in the preface that the current book will be part of a series Comprehensive Name Reactions. Noteworthy, a three volume set with a very similar title was recently released by the same publishing house (Synthesis 2010, 892). The title of the current monograph might be misleading since most treated name reactions belong certainly not to the classical homologation transformations. Unfortunately, that might keep potential readers from open this book – and it is definitely worth to have a look into these volumes!

The editor convinced a distinguished group of scientists from academia and industry to contribute to this book. In total 57 named transformations are treated with unique reviews covering the relevant and actual literature up to 2008. The individual name reactions are treated systematically: First a general description is provided, followed by historical and mechanistic aspects. Particular attention was given to the variations and improvements as well as synthetic utility. At least two experimental procedures and references close such a section. The individual chapters are mostly carefully prepared and contain well chosen and up-to-date examples from industrial research as well as academia. The book is designed for graduate students and professional research chemists who are interested in a particular named reaction. In this book, currently the best surveys for a respective topic are provided.

The monograph is organized in four major sections: Organometallics, carbon-chain homologations, radical chemistry and rearrangements, wherein the latter represents the content of the second volume. From the arrangement of sections/chapters no outlining concept of the book is visible. However, mistakes and typos are rare and the passionate style, in which most chapters are written, will guarantee an enjoyable reading.

The index is well made, but covers only the individual volume. Therefore, the reader will have some effort to locate a certain topic. Hopefully, the editor will provide with the final books in this series a comprehensive index.

In conclusion, the two volume set represents a valuable and premium source of information about the treated name reactions. Consequently, the book fills in the gaps of previous surveys. Despite the misleading title this book is highly recommended and will be a compulsory reading for synthetically oriented chemists. Therefore, this indispensable book will have its place in every good library collection.

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