
For organic chemists named reactions and reagents constitute a very important vocabulary which summarizes reaction conditions, employed reagents as well as the mechanistic course of the transformation. In the past decade numerous books were published surveying named transformations and reagents for specific fields of organic chemistry. Consequently, only certain areas were sufficiently covered in those publications. A comprehensive book covering all named reactions and reagents was long desired and could consequently emerge as the ultimate reference book.

Zerong Wang undertook this heroic endeavor to write such a book. It is carefully prepared in an encyclopedia style and covers 701 named reaction or reagents. Due to the size, the book is divided in three volumes, wherein the named transformations are listed in an alphabetical order. Each entry for a named transformation is structured in historical background, general scheme, mechanism, applications, related transformations, and cited preparative examples. The entries are richly decorated with references.

To a certain point, the selection of the named reactions will be of course a personal choice as well as the order of the cited names and the specific naming of these conversions. The book of Wang is mainly devoted to older transformations. He presents a number of similar conversions with different names exhibiting subtle alterations. In the current edition I definitely missed several named reactions from heterocyclic chemistry, e.g., Wenker synthesis for aziridines and their conversion in the Heine reaction. Many modern reagents are not mentioned despite their utmost significance in total synthesis of complex molecules, e.g. Oppolzer’s sultam, Burgess reagent and many more.

In general, the selection of the references was well done. All three volumes include almost 37,000 references which cover the literature up to 2006. Sometimes it is hard to recognize the reviews on a particular named topic. The chosen preparative examples are mostly representative and will give the reader a good inspiration about the preparative efforts connected with such a conversion. In some rare cases the incomplete transformations (page 351) are described or wrong examples have been chosen, e.g. for the Finkelstein reaction only the aromatic variation which is mostly copper catalyzed and has a complete different mechanistic background (page 1060).

The cross-references for the individual name reactions are very useful and should allow the reader to find most of the related transformations. In the third volume several appendices are given. The appendix “reaction type summary” offers schematic surveys which depict all transformations to a specific class of compound. This is very useful for the reader for a quick overview and unique in this book, whereas the listing of seminal publications is redundant and occupies almost 300 pages.

Because of the enormous amount of cited literature this particular book will be an indispensable reference system. Despite the mentioned weak points the book is recommend for scientific libraries which will complete by this the topic of name reactions. In combination with other books dealing with modern reagents the area will be covered in a real comprehensive manner.

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