

Book Review

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Handbook of Reagents for Organic Synthesis. Reagents for High-throughput Solid-phase and Solution-phase Organic Synthesis

Wiley-VCH, 2005;
392 pp; price £75.00/€112.50,
ISBN 0-470-86298-X (hardcover)

This is the sixth title in the *Handbook of Reagents for Organic Synthesis* series. Originating from the acclaimed eight-volume *Encyclopaedia of Reagents for Organic Synthesis*, the intention behind the handbook series was to select information from the *Encyclopaedia*, and its electronic sequel *e-EROS*, having the highest probability of repeated consultation, and combine this into affordable, enlightening compilations that would find their way into the laboratories of all practicing synthetic chemists. The first four handbooks were published in 1999 and covered the following themes: *Oxidizing and Reducing Reagents*; *Acidic and Basic Reagents*; *Activating Agents and Protecting Groups*; *Reagents, Auxiliaries and Catalysts for C–C Bond Formation*. The fifth member of this series made its appearance in 2003, entitled *Chiral Reagents for Asymmetric Synthesis*.

The overall intent of this volume was to assemble into a manageable

format as much indispensable information on high-throughput solid-phase and solution-phase organic synthesis as possible. This volume contains articles, written by experts from around the globe, on resins and linkers, polymer-supported reagents, solid agents such as alumina and K10 clays, soluble scavengers and scavenger resins, fluororous reagents, additives and other modern tools used in high-throughput organic synthesis. In order to assist the researcher's quest for relevant additional information, and inspiration, a listing of recent reviews and monographs follows the introduction. As with the previous publications in this series, a masthead format is utilized to provide relevant information about each reagent at a glance. This includes a brief description of use, the structure, molecular formula and weight, alternate name, physical data, form supplied and handling storage and precautions. For some entries, preparative methods and purification technique are also given. There then follows a description of the synthetic uses and key transformations of a reagent, which are illustrated throughout with equations. For example, the entry for alumina covers its use in dehydration and elimination reactions, addition and condensation reactions, epoxide formation and openings, oxidations, reductions and miscellaneous

reactions, including rearrangements. Reference to the original literature is made throughout the text. Most entries are concluded with a list of related reagents. No attempt has been made to group the reagents in anything other than alphabetical order. However, the incorporation of detailed indexes into the volume facilitates the easy retrieval of any desired information.

This volume will be an invaluable reference source for those medicinal, polymer, peptide and combinatorial chemists who utilize high-throughput solid- and solution-phase organic synthesis during the course of their work. The extensive use of equations will allow considerable benefit, in terms of current awareness, to be derived by simply browsing through the text. In conclusion, this volume has fulfilled its aims and deserves to find its way into the laboratories of all practicing synthetic chemists.

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