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Book Review

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Name reactions and reagents in organic synthesis

Wiley-VCH, 2005, 2nd edition, pp; price 882 pp. price £51.50/€75.00 ISBN 0-471-22854-0 (hardcover)

It has taken 17 years for the second edition of Name Reactions and Reagents in Organic Synthesis to be published, and it differs substantially from the first edition by the inclusion of many modern name reactions, instead of exclusively dealing with the old tried and true. In addition, reactions which have little contemporary use in organic synthesis have been removed. For a newer name reaction to be included in this edition the rule of thumb used was that it had to be cited by multiple authors. The new edition also contains an extremely useful second section that lists alphabetically name reagents and reagents where acronyms are often used instead of the actual name in the current literature. A two-page format is adopted for each name reaction, and the name reactions are also listed alphabetically.

A basic generalized definition/formula is followed by the accepted, or a proposed, mechanism. The authors have tried to convey current mechanistic thinking and special care has been taken to show intermediates, proton exchange and in some cases transition states. The mechanism is followed by a notes section which describes major highlights of the reaction, recent examples of use and related reactions. Where possible, examples from journals that seem to be most commonly accessible to students and professionals alike have been used. References to secondary literature sources are given where more detailed discussions on topics introduced in the book are available. The name reagents and acronyms section uses a onepage layout for each entry and includes the chemical structure, chemical name (CAS number), commercial availability or preparation, notes, examples of use and references.

This new edition is a much more exhaustive collection than its predecessor, addressing more than 500 reactions (and rearrangements) plus over 200 name reagents and reagent acronyms. Such extensive coverage probably accounts for the somewhat limited detail and explanation presented for some entries.

The breadth of coverage in this text extends well beyond the confines of a typical undergraduate organic chemistry course. This, combined with the lack of detail presented, suggests that this publication is intended principally as a comprehensive reference work, suitable for postgraduate students and practising synthetic organic chemists, rather than as a direct teaching tool. The authors recommend that readers, 'Feel free to write in the text . . . use any available blank space to add your own notes. Transform this into your book of name reactions! It is intended to serve as a starting point'. In conclusion, I believe this publication meets this aim and is an excellent starting point to a vast array of named chemical reactions. It would be a valuable addition to any library and an invaluable reference source in any synthetic organic chemistry laboratory.

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