

Organic Syntheses Based on Name Reactions

Organic chemists are in the habit of attaching a name (usually the name of the discoverer or those of the discoverers) to specific reactions or reagents. These “name reactions” help to convey information about specific transformations without the necessity to explain the finer details. The rapid expansion of the scientific literature has seen the number of name reactions grow enormously. Consequently, in the third edition of the book *Organic Syntheses Based on Name Reactions* A. Hassner and his coauthor I. Namboothiri have included as many as 750 named transformations. Despite the sheer number of transformations, which makes the book the most extensive of its kind, the authors have managed to limit the book to a compact size. A unique feature is the inclusion of a typical experimental procedure for every reaction, which is consistent with the subtitle “A practical guide ...”.

After forewords by D. Seebach and S. Danishefsky, the book starts with a brief but useful overview of the many reactions and reagents that it covers, by grouping related transformations together. This section is very helpful, as also are the many cross-references throughout the main text. In the following main part of the book, every name reaction or reagent is treated according to a general scheme: each entry starts with the name of the transformation and a general classification. This is followed by a short description (one to four sentences) and a reaction scheme. In most cases the scheme contains not only the starting materials and products, but also important intermediates and/or a brief mechanistic description. Below the scheme, a typical reaction procedure is described for every entry. The procedures are usually short but adequate. Finally, every entry ends with a list of literature references (usually 10–15), starting with the seminal publications and including reviews,

asymmetric variants (if appropriate), and applications of the reaction from the very recent literature (up to 2011). The main section of the book is followed by a very useful index consisting of separate sections for names, reagents, reactions, and functional group transformations. Most importantly, this extensive index makes the vast amount of information in this book easily accessible.

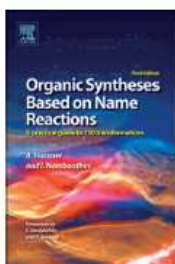
Today, even 750 transformations are no longer enough to cover all known name reactions and reagents. Consequently, the authors had to make choices, and in general their selection is convincing and includes not only important general transformations but also many name reactions from more specialized fields such as heterocyclic or nucleoside chemistry. In this new edition, the authors have even used the opportunity to include many important reactions from the last decade, covering fields such as asymmetric organocatalysis. Not all of these “new” name reactions are fully established yet, and therefore the coverage of these new transformations cannot be complete.

The question remains: who should be interested in this book? A student of organic chemistry will probably get the most extensive list of name reactions that is available, including some of the latest developments in a number of areas. This makes the book useful as a guide to modern organic synthesis and as a source for exercises, although some students might want more in-depth information, especially on reaction mechanisms, than is given by this book. Clearly, the combination of a powerful index section, the experimental procedures, and the affordable price ensures a place for this book on the laboratory shelf of the practicing synthetic chemist as a quick and inspiring guide to modern organic chemistry.

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Organic syntheses based on name reactions: a practical guide to 750 transformations (3rd edn)

Alfred Hassner and Irishi Namboothiri

Elsevier

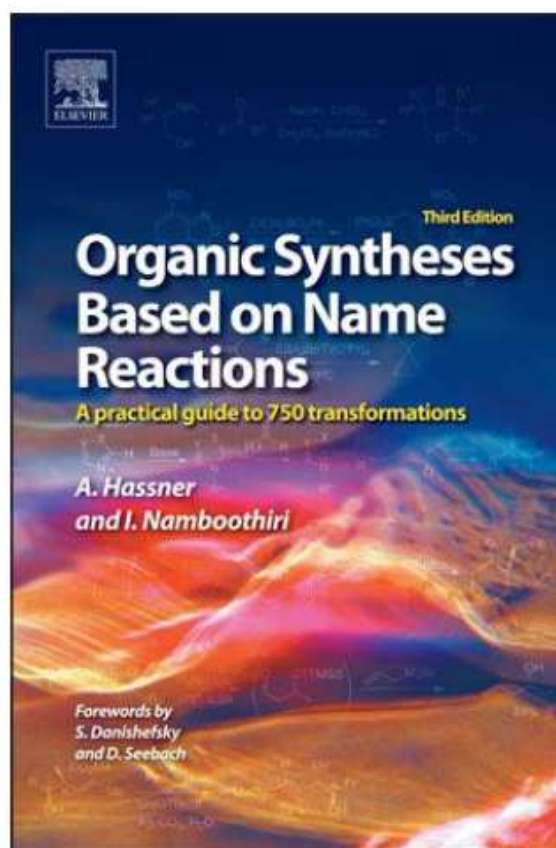
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Reviewed by *Simon Sprague*

(http://www.amazon.co.uk/gp/product/0080966306/ref=as_li_ss_tl?ie=UTF8&tag=chemistryworld-21&linkCode=as2&camp=1634&creative=19450&creativeASIN=0080966306) In this new edition the authors deliver a comprehensive guide to named reactions in organic synthesis. Woven between the classic named reactions which will be familiar to most readers are many which may not – over the course of the various editions, Hassner and colleagues have assigned names to a huge number of transformations which, whilst useful, were previously anonymous. Some may inevitably object to particular names being selected over others during this process; such is the nature of collaborative science. These concerns should, however, be pushed aside since what results is truly an invaluable resource, documenting genuinely useful reactions in an accessible and concise format.

The layout of the main text, whilst highly informative, is clear and compact. Each reaction is afforded up to one page. Yet within that relatively meagre space, the authors manage to give a description of the transformation (including mechanistic considerations where appropriate), a full and specific experimental procedure, and a series of



carefully chosen references, in each case ranging from the seminal publication to some recent examples.

So often books that incorporate experimental procedures can feel stodgy or disjointed; this book avoids those pitfalls with aplomb. Having all the information together means no more hunting in appendices for relevant references, and gives an idea of practical considerations before the reader embarks on an extensive literature search. Furthermore, reactions are effectively cross-referenced within the text and the book features an excellent – yet characteristically compact – index, including a table in which reactions are sorted by functional group transformation.

Readers familiar with one or both of the previous two editions will certainly want to investigate this latest version; the improvements go far beyond cosmetic changes and deliver an excellent reference text that would be an asset to libraries and bookshelves everywhere.

Purchase this book from [Amazon.co.uk \(http://www.amazon.co.uk/gp/product/0080966306/ref=as_li_ss_tl?ie=UTF8&tag=chemistryworld-21&linkCode=as2&camp=1634&creative=19450&creativeASIN=0080966306\)](http://www.amazon.co.uk/gp/product/0080966306/ref=as_li_ss_tl?ie=UTF8&tag=chemistryworld-21&linkCode=as2&camp=1634&creative=19450&creativeASIN=0080966306).

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This review is from: *Organic Syntheses Based on Name Reactions, Third Edition: a practical guide to 750 transformations (Hardcover)*

The book "Organic Syntheses Based on Name Reactions" by Hassner and Namboorthi is excellent and truly updated with most recent literature. D.Mal

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