

## Book reviews

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### **Fieser and Fieser: Reagents For Organic Synthesis, Volume 16**

M Fieser

Wiley, New York, 1992

£43.95 ISBN 0 471 52721 1

Volume 16 constitutes the latest in the Fieser and Fieser series, which no synthetic chemist can afford to be without. This book follows the same successful format of previous volumes in providing an up-to-date, critical and concise appraisal of reagents for organic synthesis.

The volume covers most of the useful new synthetic reagents described in the literature from 1989 through to 1991 with a noticeable emphasis on organometallic reagents. The referencing, and particularly the cross-referencing, to previous volumes and reagents is excellent. While this text is primarily designed as a desk-top rapid reference book I still find this series to be a pleasurable browsing experience; one can discover a wealth of new ideas and information in a visual fashion. Long may this invaluable series continue.

### **P R Jenkins Organometallic Reagents in Synthesis Oxford Chemistry Primers**

Oxford University Press, Oxford, 1992

£4.99.

ISBN 0 198 55666 7

This volume constitutes a new addition to the rapidly growing family of Oxford Chemistry Primers. These texts are directed at all students of organic chemistry and are designed to provide concise introductions to various important topics—in this particular case, on the use of polar organometallic reagents for organic synthesis. Knowledge of this area is essential to the proper understanding of the subject and is at the heart of much current organic synthetic methodology. In this short primer, Paul Jenkins has covered most of the important general concepts and the topic is presented in a very readable form with excellent illustrations of relevant reactions. The mechanistic arguments are adequately discussed although I would have welcomed a more detailed discussion of single-electron transfer sequences rather than having to rely totally on the two-electron approach. Nevertheless, this is very useful text which will be of considerable use to students and is offered at a bargain price. I believe this series will develop into a highly collectable and useful introductory compilation of key areas of organic chemistry.

### **Advanced Organic Chemistry: Reactions, Mechanisms and Structure 4th edn**

Jerry March

Wiley, New York, 1992

1512 pp. £24.95 (paperback), £45.50 (cloth).

ISBN 0471581488

This latest edition of Jerry March's *Advanced Organic Chemistry* follows the tradition set in early editions as being the single most useful general reference available to the organic chemist. The difference from previous editions lies primarily in the updating of terminology and references—about 5000 new references among a total of 15 000.

The book is divided into two parts. Part One discusses structure and bonding, acids and bases, photochemistry and the effects of structure on reactivity. This is described as an introduction to Part Two, but do not be misled—March's book is, as its title says, a text on advanced organic chemistry and it is not designed for the beginner in the field!

Part Two is concerned with organic reactions and mechanism, with each chapter concentrating on a different reaction type or basic mechanism. Each chapter is split in two, giving first details of mechanism and reactivity, then considering all the significant reactions belonging to the subject area.

By taking a mechanistic-led approach, March's book does not provide a separate chapter on organometallic reagents but these are dealt with thoroughly when they arise.

The book has two Appendices—one on literature sources and searching and the other a classification of reactions by type of compound synthesized. This latter appendix is invaluable as a method of finding how to make a particular functionality in this mechanism-based book. While very dry in tone, all in all, *Advanced Organic Chemistry* has to be highly recommended.

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### **Synthetic Fluorine Chemistry**

G A Olah, R D Chambers and G K S Prakash (eds)

John Wiley, New York, 1992

402 pages. £75.00.

ISBN 0471543705

Synthetic Fluorine Chemistry is based on papers read in February 1990 at a research symposium dedicated to