

Journal of Organometallic Chemistry, 297 (1985) C23
Elsevier Sequoia S.A., Lausanne — Printed in The Netherlands

Book review

Advanced Organic Chemistry; by J. March, Wiley, New York etc., 3rd edition, 1985, xiv + 1346 pages, £46.20.

This new edition of a highly regarded textbook will be warmly welcomed. The organization of the book is similar to that in the earlier editions, but of the 10000 references some 5000 are said to be new; there are even a few references to 1984 publications (for example, to work on Si=C and Si=Si bonds).

The updating of such a wide-ranging account of "reactions, mechanisms, and structures" in organic chemistry must have been a massive task, and very many students and teachers of chemistry will be grateful to Dr. March. There were sections in which I thought that there should have been more rewriting to take account of the recent advances instead of minimal insertions into the old text or addition of footnotes; for example, in my view more attention should have been given to the work of T.W. Bentley and P.v.R. Schleyer and their coworkers on the effects of solvents in aliphatic nucleophilic substitutions, and students should not these days be left with the impression that solvolysis of t-butyl halides is a simple S_N1 process. (However, there are leading references to the Bentley-Schleyer work.) I also think that mention could appropriately be made of the work of P.J. Kropp on photoassisted solvolysis of alkyl iodides.

Organometallic compounds are considered at appropriate points, especially, of course, in the chapters on aliphatic electrophilic substitution and additions to multiple bonds. Failure to consult literature later than 1967 results in the erroneous impression that cleavages of $ArSnMe_3$ bonds by base involve generation of Ar^- carbanions, whereas there is later evidence that they do not, although corresponding cleavages of $ArSiMe_3$ do have this mechanism, and have given much information about substituent effects in such reactions and about isotope effects in reactions of carbanions with protic solvents. The author could not possibly be expected, however, to have taken account of every recent advance in each specialized field, and is to be congratulated on the overall excellence of his presentation rather than criticised for the few errors or omissions.

For its quality and size this book is reasonably priced; it should be in the possession of any serious advanced student or research worker in the field of organic chemistry, and has much to offer to many organometallic chemists.

COLIN EABORN

School of Chemistry and Molecular Sciences
University of Sussex, Brighton BN1 9QJ (Great Britain)