

*Journal of Organometallic Chemistry*, 216 (1981) C69—C70  
Elsevier Sequoia S.A., Lausanne — Printed in The Netherlands

## Book reviews

---

*Rearrangements in Ground and Excited States*, edited by P. de Mayo, Vol. 2, Academic Press, New York, 1980, xii + 431 pages, \$77.00, £43.20

Although there is nothing in the title to suggest it, this is essentially a volume for organometallic chemists, and an unusually good one it is. Six of the seven chapters are concerned with inorganic and organometallic compounds, and in each case the choice of author or authors is excellent.

The first essay (each chapter is called an essay in the book), entitled "Rearrangements. A theoretical approach" (93 pages, 119 refs.) is by N. Epiotis, S. Shaik, and William Zander, and is concerned with the theory and application of qualitative potential energy surfaces for organic reactions. Then A. Pelter gives an authoritative account of "Rearrangements involving boron" (53 pages, 201 refs.), and this is followed by "Molecular rearrangements of organosilicon compounds", by A.G. Brook and A.R. Bassindale (79 pages, 238 refs.). This is a model of what such an 'essay' should be; it is comprehensive within its defined scope, but so well organized that the principles show clearly through the wealth of information, and is not just a survey but rather a creative synthesis. (It is not quite as complete as its title might suggest, however, because in contrast to some of the other essays it deals only with rearrangements in which no groups leave or enter the molecule.)

The next essay entitled "The polytopal rearrangements at phosphorus" (43 pages, 187 refs.) is, very appropriately, by F. Westheimer, who played such an important role in the development of this branch of chemistry; much of the account is rightly concerned with enzymological aspects. This is followed by the longest essay, that on "Rearrangements in coordination complexes" (106 pages, 323 refs.), by W.G. Jackson and A.M. Sargeson, which reveals the order which can be discerned in the very large amount of information, often fragmentary, which is available. The last essay is on "Fluxional molecules: reversible thermal intramolecular rearrangements of metal carbonyls" (43 pages, 109 refs.), and is by F.A. Cotton (from whose work, in 1958, the subject stems) and B.E. Hanson; the treatment is necessarily selective, and is intended to develop principles rather than provide comprehensive information; the account is written with evident authority.

The book is well produced, and the index is good as indexes go these days. At its price it represents very good value indeed, and even if it cost several times as much it is hard to see how any institute concerned with research in organometallic chemistry could afford to be without it.

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

COLIN EABORN