

BOOK REVIEW

Transition Metal Intermediates in Organic Synthesis; by C. W. BIRD, Logos Press/Academic Press Inc., New York, 1967, vii + 280 pages, \$13 (£3)

This volume is concerned with reactions of utility in organic syntheses which proceed through intermediates having bonds between carbon and transition metals. Heterogeneous reactions are mentioned only when they are closely related mechanistically or functionally to those of homogeneous reactions on which the emphasis is heavily placed. The topics considered are as follows: oligomerisation of acetylenes; oligomerisation of olefins; hydrogen migration reactions; the oxidation of olefins by platinum metal compounds; the mechanism of the carbonyl insertion reaction; the hydroformylation reaction; carboxylation reactions; other carbonylation reactions; decarbonylation and desulphonylation reactions; homogeneous hydrogenation. The literature seems to have been thoroughly covered. The approach is largely descriptive, with little critical discussion of mechanisms, and extensive use is made of tables.

The book will be of great value to organic chemists seeking to use the relatively new synthetic routes described, and, indeed, few chemists involved in organic synthesis could fail to profit from having it at hand. It will also be much used by industrial and other chemists who wish to see exactly which catalysts have been used for the reactions listed, and even the experienced transition metal chemist will find it very helpful as a systematic index to work this rapidly developing area of chemistry.

The book is photoreproduced from typed pages and printed offset, and this reviewer finds the appearance of the pages displeasing, and somewhat trying to read, but diagrams and equations are clearly printed.

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