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Book reviews

Comprehensive Chemical Kinetics, Vol. 8, Proton Transfer. Editors C. H. Bamford and C. F. H. Tipper, Elsevier Scientific Publishing Co., Amsterdam /Oxford/New York, 1977, xi + 261 pages, U.S. \$ 39.95; D.fl. 97.50.

Proton transfers are of special interest to some organometallic chemists because of the useful analogies which can be drawn between cleavages of C-H bonds and some C-metal sigma-bonds, and one of the three chapters of this book, that by F. Hibbert (97 pages), is specifically concerned with proton transfer to and from carbon. This provides a useful general review, but is not quite as well furnished with recent references as one would hope; only 17 of the 216 references are to papers later than 1972, only one isolated reference is made to the excellent volume entitled "Proton-Transfer Reactions" (edited by E. F. Caldin and V. Gold) which appeared in 1975, and there is no mention of the very relevant monograph by E. Buncl entitled "Carbanions : Mechanistic and Isotopic Aspects" which also appeared in 1975.

A chapter (64 pages) by J. E. Crooks deals with proton transfers to and from atoms other than carbon, and is a well-presented summary, though again there are relatively few recent references; only about 15 of the total of 108 references have dates in the 1970's, although one 1976 paper is cited. But much less satisfactory from this point of view is the chapter by A. V. Willi dealing with Homogeneous Catalysis of Organic Reactions (mainly acid-base), since there are very few references later than 1968 and the manuscript is said to have been completed in 1970 (though, oddly enough, one 1974 reference is given). The preface and the outline on the dust-jacket are misleading while being factually accurate in stating that this chapter deals "mainly with acid-base catalysis, but also with nucleophilic catalysis and catalysis by metal ions", since only 4 pages of the total of 95 are devoted to these latter types.

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