BOOKS

Chemical Kinetics in Homogeneous Systems, Mowbray Ritchie, John Wiley and Sons, New York (1966). University Chemical Texts No. 2, 115 pages, $2.95.

This is the second in a series of short paper-bound books devoted to selected areas in physical chemistry. This one is concerned with the kinetics of thermal, photochemical, and radiation chemical reactions and acid-base catalysis. The treatment lies at an intermediate level, and is descriptive and nonmathematical.

Thermal reactions are treated in an introductory chapter (15 pages), in a chapter on complex reactions (27 pages), and in a chapter on theories of reaction (11 pages). This material, although highly condensed, is the standard fare available in many modern undergraduate texts. The chapter on photochemical reactions (37 pages) is the unique one in the book. The survey provided here, including discussion of experimental techniques, reaction mechanisms, and molecular energy states, is not to be found elsewhere in such succinct form. The final chapters deal with radiation chemistry (7 pages) and acid-base catalysis (15 pages). The account of initial acts in radiation chemistry is somewhat vague. Track effects are barely hinted at.

The references provided at the end of most chapters are to review articles on specialized topics. References to broad treatments are not given. A number of typographical errors in the notation exist, which although annoying, are recognizable as such. An error in fact is the statement that Co^{60} is derived from Ni^{60}.

The brevity of the book sometimes leads to such compression of information that cohesiveness and continuity are missing, and the essential unity of the overall subject is masked. This defect could have been remedied somewhat by providing an introductory discussion of the different types of homogeneous reactions, their similarities, and differences.

This book will hold some interest, with the imperfections noted, for the novice seeking a wider knowledge of kinetics and for the practicing engineer who desires a short up-to-date review.

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