

An over-all evaluation of this volume would be that it succeeds with articles on small topics such as glove boxes, but is less than successful in varying degrees with articles on major areas such as gas chromatography. A pleasant surprise was the excellence of the index. This reviewer was left with the feeling that, overall, this volume is not quite up to the standards set by the companion series in organic chemistry.

DEPARTMENT OF CHEMISTRY
ILLINOIS INSTITUTE OF TECHNOLOGY
CHICAGO, ILLINOIS 60616

DONALD G. GARDNER

Inorganic Reaction Mechanisms. By J. O. EDWARDS. W. A. Benjamin, Inc., 2465 Broadway, New York, N. Y. 1964. xii + 190 pp. 16 × 23.5 cm. Price \$7.00.

This little book is number five in a series intended collectively to form a treatise on inorganic chemistry. It is contemplated that an instructor might use one or more others from the series to serve jointly as the text for a course in inorganic chemistry. By itself, the book is intended to serve as a specialistic introduction to the research field.

The book is written in a clear and somewhat informal style; there are few typographical errors. After about 45 pages of introductory material on transition-state theory, interpretive use of rate laws, linear free energy relationships, acid-base theories and the like, succeeding chapters then take up various types of reactions. Included are substitution and charge-transfer reactions of coordination compounds, free radical and peroxide reactions, and a concluding chapter on "unsolved problems." No gas phase reactions are considered.

Some specific negative reactions are the following. The discussion of diagrams of energy and free energy *vs.* "reaction coordinate" seems confusing and superficial. Also, this writer believes the use of the S_N1 and S_N2 designation to be an unfortunate carry-over from organic chemistry, and would therefore have preferred to see in this book less of such labeling and more physical chemistry in the discussion of octahedral substitution reactions. The treatment of charge-transfer reactions is restricted to some now relatively old theory. Except for occasional passing notes, photochemistry goes unmentioned, as does the

study of very fast reactions. The general impression is one of knowledgeable but only occasionally original analysis of the literature.

On the positive side, the book definitely provides through its referencing an entrée into recent literature on areas of active research interest. When used as a text it will allow the instructor to present the topic of reaction mechanisms with a modern flavor. The book should, in fact, be quite useful in an undergraduate course in inorganic chemistry.

As a more general comment, the current trend toward having various series of "monographs" from which an instructor selects a group to constitute his text does make available up-to-date material written by research-conscious scientists. This is especially valuable in rapidly developing fields such as inorganic chemistry. In the long run, however, and particularly as such fields stabilize, the single, large text which develops the student along with the subject may be pedagogically more sound. In the context of the present situation, however, Professor Edwards has made a very commendable contribution to teachers and students.

DEPARTMENT OF CHEMISTRY
UNIVERSITY OF SOUTHERN CALIFORNIA
LOS ANGELES, CALIFORNIA

ARTHUR W. ADAMSON

BOOKS RECEIVED

December 1964

- ANDRE J. DE BETHUNE and NANCY A. SWENDEMAN LOUD. "Standard Aqueous Electrode Potentials and Temperature Coefficients at 25°C." Clifford A. Hampel, 8501 Harding Ave., Skokie, Ill. 60077. 1964. 19 pp. \$1.95.
- F. ALBERT COTTON, Editor. "Progress in Inorganic Chemistry." Volume 6. John Wiley and Sons, Inc., 605 Third Ave., New York 16, N. Y. 1964. 350 pp. \$14.
- HAROLD SCHAFER. "Chemical Transport Reactions." Academic Press Inc., 111 Fifth Ave., New York, N. Y. 10003. 1964. xi + 161 pp. \$6.80.
- GEORGE A. OLAH, Editor. "Friedel-Crafts and Related Reactions." Parts I and II. Volume III. Part I, xxvi + 910 pp.; Part II, xxii + 695 pp. John Wiley and Sons, Inc., 605 Third Ave., New York 16, N. Y. 1964. \$60 (for both books).