

BOOK REVIEW

Concepts in Catalysis. By ERIC K. RIDEAL; Academic Press, New York/London, 1968. 194 pp. \$8.50.

Fifty years ago Macmillan, in London, published a book, entitled: "Catalysis in Theory and Practice." This book was written by two young British scientists, E. K. Rideal and H. S. Taylor, and it has given a strong and stimulating push on catalysis. Both scientists, now Sir Eric Rideal and Sir Hugh Taylor, respectively, have been active in catalysis and related subjects ever since; both are still active on the advisory board of the well-known series: *Advances in Catalysis* (Academic Press, New York/London), the first volume of which was published in 1948 and opened with an article written by Hugh S. Taylor, while both scientists are still well cited in the newest addition of this series (Vol. 19, 1969).

Sir Eric has now surprised us with a new addition to his works: "Concepts in Catalysis" (Academic Press, New York/London). Next to his more general work on surface chemistry which he executed during his Cambridge career, he always kept his great interest in catalysis. The present book was written after his retirement from Cambridge, when he moved to London, where the Imperial College in South Kensington offered him the opportunity to work and to study. He, apparently, has studied extensively; in the Acknowledgment, Sir Eric mentions many compilations from which he has drawn information; reading his book I discovered that he has used even more compilations than he states.

In the Introduction Sir Eric confesses that his study revealed to him that the progress of catalysis, which is going on in various industrial and in academic institutes, has led "to a truly frightening expansion of the literature on the subject." After remarking that the compilation

of a book on heterogeneous catalysis would present a formidable task, he states that "for personal reasons" he has "ventured to put pen to paper in an attempt to portray some aspects of the subject which have impressed me."

The book is not meant to be an all-embracing work on catalysis, in general, or on heterogeneous catalysis in particular. It has a strong personal character, and it cannot replace any other book on catalysis; it should be read (not studied) additionally, by anyone who is interested to learn the impressions, which the progress of catalysis has made on one of the pioneers of about 50 years ago. It is somewhat amusing—but at the same time it is a good warning—when we read on page 2 of the Introduction: "In looking over the manuscript I note that several of the views expressed appear to be mutually exclusive." How true!

The book has no literature citations, which is, indeed, not necessary for a book of this character.

After the Introduction, seven Chapters follow, viz., *General Properties of Catalysis*, *Condensation and Evaporation*, *Thermal Changes and Reaction Kinetics*, *Catalytic Oxidation*, *Catalytic Hydrogenation*, *Catalysis in Hydrocarbons*, and *Organic Synthesis and Decompositions*, followed by a Subject Index.

The book can be recommended to anyone who wishes to learn to know the impressions which the progress of catalysis has made on one of the pioneers of about fifty years ago. It should certainly be in the library of any university, or industrial laboratory, where work on catalytic problems is of interest.

J. H. DE BOER

*Laboratory of Chemical Engineering
Technological University of Delft
Delft, The Netherlands*