

BOOK REVIEW

Isotopic Assessment of Heterogeneous Catalysis. By John Happel. Academic Press, San Diego, 1986. 196 pp. \$49.95.

Isotopic tracing has been an exceedingly important tool in the development and understanding of catalysts for industrial applications. This book is a very thorough formal treatment of the subject. The several chapters include a general introduction and treatment of such subjects as the choice of intermediates and reaction steps, the enumeration of reaction mechanisms, the superposition modeling of mechanisms, steady-state tracing, identifiability and distinguishability of models using transient tracing techniques, and the development of rate equations. The book

contains a complete mathematical formalism which will be of great value to chemical engineers. However, the treatment is aimed at a broad spectrum of readers. Scientists and technologists will be interested in the insight which is provided for catalyst development and the structure of multiple overall reactions in which by-product formation occurs along with that of the desired product. This book will be a worthwhile addition to the library of most catalytic chemists.

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