

BOOK REVIEW

Homogeneous Transition-Metal Catalysis—A Gentle Art. By CHRISTOPHER MASTERS. Chapman & Hall/Methuen, Inc., London, 1981. 277 pp., hardcover \$25.00, paperback, \$12.50.

This short book presents a general and introductory overview of the subject of homogeneous catalysis by transition metals. The book is suited for a novice wishing an introduction before engaging more sophisticated treatments, or for the individual wishing only a survey of this field.

The book begins with a short introduction, in Chapter I, to such pertinent aspects as definitions of catalysis, descriptions of bonding in transition-metal complexes, and the role of metal–ligand bonding in catalytic activation. The succeeding chapters present a rather chronological survey of transition-metal catalysts by proceeding from descriptions of operating catalyst systems to discussions of systems in development, and, finally, to a projection of likely future

directions. A useful list of 448 references follows the text and 5 or 10 general references for further reading are given after each chapter.

Detailed or thorough coverage of this broad subject is, of course, not possible in any book of just 255 short ($4 \times 6\frac{1}{2}$ in.) pages. As a result, coverage is limited to a discussion of several of the best known or most widely used transition-metal-catalyzed reactions. For example, the section on hydrogenation is limited to a discussion of $\text{RhCl}(\text{PPh}_3)_3$, $\text{Co}(\text{CN})_5^{3-}$, and $\text{RuCl}_2(\text{PPh}_3)_3$ as catalysts. A reader using the text as an introduction and the references as an ingress to the literature of a particular area of the field will benefit from reading this book.

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