Science, Truth, and Democracy is unparalleled in the literature and is likely to become the standard philosophical text about ethical issues in science. This book would be very useful for stimulating discussion in graduate student seminars and other kinds of scientific discussion groups. On the whole I recommend Kitcher's book to every reader of this journal and hope it will spark animated discussions, disagreements, and humane changes to chemistry and to science as a whole.

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Handbook of Heterogeneous Catalytic Hydrogenation for Organic Synthesis. By *Shigeo Nishimura.* Wiley-Interscience, New York 2001. 700 pp., hardcover $ 185.00.—ISBN 0-471-49698-2

Catalytic hydrogenation is a well established area and represents the most important application of heterogeneous catalysts in liquid-phase reactions. The handbook by Nishimura is intended for synthetic chemists in research laboratories and in industry, and focuses on the old and still timely problem of selectivity.

Many factors can influence the success or failure of a science book. A frequently underestimated parameter is the timing. The right timing was one of the reasons why G. C. Bond's book *Catalysis by Metals* became a bestseller: there was already enough information available for writing an exciting survey, but the exponential development of the field had not yet begun. This ideal moment is definitely past for heterogeneous catalytic hydrogenation. In the 1960s and 1970s many comprehensive books on the selectivity problem in catalytic hydrogenation of complex organic molecules appeared (from, for example, P. N. Rylander and R. L. Augustine, to mention only two among the many authors). Since then the available information has grown enormously. This interest is driven by the technical importance of heterogeneous catalytic hydrogenation in the environmentally benign synthesis of fine and specialty chemicals.

To be able to handle the amount of available information, most of the authors of recent books in the field limit the scope to some scientifically or technically attractive topics, rather than attempting to write a comprehensive review. However, Nishimura has chosen the classical approach and covered the hydrogenation of all important types of compounds and functional groups. In order to limit the length and provide a reasonable overview on the topic, he has focused explicitly on the experimental guidelines and mainly avoided the mechanistic aspects of catalytic hydrogenation. This approach is attractive for practical chemists who wish to search for the appropriate catalyst and reaction conditions. The handbook is a good starting point for finding a solution to a problem, or at least a useful analogy to start from.

The volume comprises 13 chapters covering the preparation of catalysts, typical reactors and reaction conditions, and—in greater detail—the hydrogenation of various types of functional groups. The text is illustrated by numerous schemes, equations, and tables. The special difficulties arising in the reduction of molecules possessing two or more reducible functional groups, and the stereochemistry of hydrogen addition, are also discussed.

Unfortunately, many of the methods described are quite old and some areas of recent interest are poorly represented. The overall impression left by reading the book is that no significant development has been achieved in the past 50 years except for some broadening of the scope of useful reactions. It is astonishing, for example, that the roles of modifiers, inhibitors, and poisons are discussed on the basis of Maxted's theory developed 50 years ago.

Similarly, the reader will find few literature references to new and highly effective hydrogenation catalysts. In the chapter describing typical catalyst preparation methods, most of the recipes are older than 50 years. It is fascinating to read this historical collection, but the practical chemist is well advised to buy commercially available materials produced by modern technologies.

Despite the shortcomings, the material is well presented and the handbook is rich in information. Compared to previous books in the field, this work offers a considerably better coverage of the Japanese literature. This, in view of the outstanding activity of Japanese scientists in fine chemicals catalysis, is gratifying.

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