

Asymmetric Catalysis; edited by B. Bosnich (*NATO ASI Series E: Applied Sciences, No. 103*), Martinus Nijhoff, Dordrecht, 1986, vii + 160 pages, US \$45.50, £31.95, ISBN 90-247-3259-X.

This book is derived from a workshop on asymmetric catalysis held on Sanibel Island, Florida in January 1984. The eleven participants, from both industrial and academic laboratories, are all world authorities in their fields and their expertise is reflected in an exciting publication.

The book consists of eight Chapters as follows: General Principles (14 pages), Carbon-Hydrogen Bond Formation (23 pages, including asymmetric hydrogenation of alkenes and carbonyls, isomerisation, and hydrosilylation), Carbon-Carbon Bond Formation (40 pages including hydroformylation, hydrocarboxylation, hydrocyanation, alkylation, Grignard coupling, cyclopropanation, codimerisation, and cycloaddition), Asymmetric Oxidation (6 pages including epoxidation and sulphide oxidation), Heterogeneous and Polymer Supported Catalysts (8 pages), Asymmetric Catalysis by Biochemical Systems (16 pages), Economic Significance of Asymmetric Catalysis (33 pages, including many important commercial processes), and Future Trends (7 pages). Whilst the bias of the coverage does reflect the expertise of the participants (for example the very wide use of the Sharpless enantioselective epoxidation technique did seem underrepresented) the authors have in general touched on most of the interesting areas of asymmetric catalysis. The style of the book is informal and extremely readable and the rapid development of this field is clearly conveyed.

In the preface the editor notes that this report was put together in the fifteen days after the workshop, and states that its presentation is more workmanlike than elegant. This is certainly true and there is a liberal sprinkling of typographic errors in the text. Some of the kinetic expressions are a little difficult to follow as subscripts and superscripts mingle on adjacent lines, and some of the abbreviations and acronyms appear a little idiosyncratic or inconsistent. I particularly disliked the use of Ni° for $Ni(0)$ which appears on several occasions. A number of reference numbers have been omitted from the text and the references, though providing an excellent foundation for a newcomer to the subject, are sometimes poorly presented. The diagrams and schemes are, however, plentiful and largely error-free and contribute greatly to the clarity of the volume. The index is brief, incomplete and close to useless, since it is clear that the three page preface was added after it was written, necessitating the addition of three to each page number given. As might be expected from a workshop in January 1984 the references cover only material published before the end of 1983, and this means that a range of new and exciting developments have been omitted. If the editor could put the book together in two weeks it is a pity that the publishers took over two years to get it into the bookshops.

Asymmetric catalysis is an extremely active area of research in synthetic chemistry today, and promises to continue to be so for the foreseeable future. This book brings together the many strands of the subject in a concise and lively manner. It is an excellent introduction to the newcomer in the field and the expert will welcome its clarity of approach and systematic organisation. The study of enantioselective reactions has brought together organic and organometallic chemists, and biochemists and all of these groups will find much to interest them here. The price is quite

high for a fairly slim volume but this is offset by considerable conciseness in presentation and this book can be thoroughly recommended.

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