

### Book review

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*Olefin Metathesis*; by K.J. Ivin, Academic Press, London, 1983, pp. 399 + x, £41.00. ISBN 0-12-377050-5.

The first report on catalysed olefin metathesis which clearly recognised the nature of the reaction observed appeared in 1964. Barely twenty years later the subject gives rise to a book of some 400 pages with more than 900 references. Perhaps surprisingly, the direct application of olefin metathesis in industry is rather limited, but the consequences of this reaction for our understanding of organometallic chemistry have been considerable.

This is a comprehensive and lucid account of olefin metathesis which has become too big a subject for normal reviews. The book starts with a résumé of the various catalyst systems and then follows with a detailed discussion of the carbene mechanism. Next comes a chapter on "related reactions". This must necessarily be subjective and selective, but is fair and stimulating, and includes such complex matters as Ziegler—Natta catalysis.

The major part of the book deals with examples of metathesis grouped in terms of the olefins or other unsaturated species involved, viz., terminal alkenes, acyclic dienes, acetylenes, etc. This part seems comprehensive, as far as I could judge, and will make a very useful reference section.

The last part of the book gives it a great deal of its attraction. A chapter on industrial applications hints at the complex interactions between chemistry and economics which determine whether a chemical process is commercially viable. Finally an appendix of some 30 pages lists landmarks and recent work on metathesis. This will provoke people to check through to discover whether their own work is one of the (many) landmarks. Since my own work is included, I shall forgive the omission of my name from a reference! However, it is encouraging that the author should chance his arm and allow his opinions some rein.

In summary, a comprehensive, critical, balanced, and useful book, thoroughly to be recommended to anyone in the field or considering entering it.

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