

### Book reviews

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*Sonochemistry: The Uses Of Ultrasound in Chemistry*, edited by T.J. Mason, Royal Society of Chemistry, Cambridge, 1990, xiii + 157 pages, £35 (softcover). ISBN 0-85186-293-4.

This is the fourth book to be either written or edited by Professor Mason to have been published in the last three years. (For reviews of the earlier books see *J. Organomet. Chem.*, 375 (1989) C57; 396 (1990) C25; and 407 (1991) C16.) Unfortunately, the rate of publication of new research results has not been as rapid and the result is that this volume repeats to a large extent what has appeared in previous books.

The book comprises eleven chapters covering a wide range of areas: general introduction; general principles; diagnosis, inspection and monitoring; power ultrasound; sources of ultrasound; organic synthesis; free radical reactions; heterogeneous catalysis; polymer chemistry; chemical technology; and scale-up considerations. The chapters are all written by well known authorities in the field, but only the chapter on Ultrasound in Diagnosis, Inspection and Monitoring (C.S. Gartside and M.M. Robins) is completely new; this new chapter, although of interest for general reading, contains almost no chemistry and will probably be of little direct use to readers of this journal. The chapter on Ultrasound in Heterogeneous Catalysis (J. Lindley) covers a wide variety of reactions and is substantially rewritten and expanded from the corresponding accounts in earlier books. This chapter well repays reading.

The other chapters often contain many of the same diagrams, figures, and chemical equations that have been seen before. For example, Table 1.2 and Figure 1.1 in the book under review appear almost identically as Table 1.1 and Figure 1.1 in *Sonochemistry: Theory, Applications and Uses of Ultrasound in Chemistry* (by T.J. Mason and J.P. Lorimer) and Figures 7.2 to 7.6 can be found as Schemes 10 to 14 in the Chapter by J.-L. Luche in *Advances in Sonochemistry Volume 1* (Ed. T.J. Mason). This repetition means that anyone who has already bought a book on ultrasound should look very carefully at their need before considering this book.

Although the book is well produced it is not without errors but they are not usually of great chemical importance. The book is also rather expensive at £35 for 157 pages in softback form, and libraries would do better to buy one of its more substantial hardback competitors, which do not cost a great deal more. Despite these criticisms the book gives a good coverage of the field, with some slightly more up to date references than the earlier volumes on the subject, and will be a useful purchase for a newcomer to the field.