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## Book reviews

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*Chemistry With Ultrasound*; edited by T.J. Mason, Elsevier Applied Science, London, 1990, viii + 195 pages, £46 (hardcover). ISBN 1-85166-422-X.

This book appears as Volume 28 of "Critical Reports on Applied Chemistry" published for the Society of Chemical Industry. It is at least the fourth book to be published on this relatively new subject within the last three years.

All of the five authors are well known names in the field; three of them are from the Coventry Polytechnic group which has established itself as the foremost academic centre for sonochemistry in the U.K. The titles of the chapters and the authors are: Introduction (T.J. Mason); Sonochemical Aspects of Inorganic and Organometallic Chemistry Including Catalysis (J. Lindley); Ultrasonically Assisted Organic Synthesis (R.S. Davidson); Polymers (J.P. Lorimer); and Equipment (T.J. Goodwin). The chapter of most obvious interest to readers of this journal is that by Lindley but there is much of interest in the organic synthesis chapter which covers the preparation of, for example, Grignard reagents and organo-lithium, zinc, silicon, and boron compounds. There is in fact some overlap between these two chapters; for example, Boudjouk's preparation of tetramesityldisilene is given on both page 49 and on page 71. There is an index and references into 1988 are covered.

Those new to sonochemistry will find the Introduction and the Equipment chapters of particular interest and those already with some experience in the field will find the two chapters on synthetic chemistry of great use. Organometallic chemists should note that in the first two chapters approximately 25 and 10%, respectively, of the references are from the journal *Ultrasonics* with which many people will not be familiar and which is an important journal in the field.

The book is well written and produced with few errors. Those thinking of buying a book on the subject will ask how this book compares with those by T.J. Mason and J.P. Lorimer, *Sonochemistry Theory, Applications and Uses of Ultrasound in Chemistry*, S.V. Ley and C.M.R. Low, *Ultrasound in Synthesis*, and that edited by K.S. Suslick, *Ultrasound, Its Chemical Physical and Biological Effects*. The book currently under review contains more references on synthesis with ultrasound in only slightly fewer pages than that by Ley and Low and so it should be the more useful book. The other two books are longer and more wide-ranging and give a more comprehensive coverage of the field, the better of the two being that edited by Suslick.

Those thinking of buying a personal copy of a book on ultrasound will probably consider the least expensive first (that by Mason and Lorimer) and this would certainly be a better buy than the book currently under review. Libraries should consider buying two of the books, probably those edited by Mason and by Suslick.