Book Reviews

Gmelin Handbook of Inorganic and Organometallic Chemistry, 8th edition Th, Thorium, Supplement Volume D4, Chromatography, Chemistry in Nonaqueous Solutions
Springer-Verlag, Berlin, 1991, pp. 215 + xiv. ISBN 3-540-93636X

This is the last volume of the current opus to deal with thorium, and it covers the literature to the end of 1990. It deals with two different subjects. The first 128 pages deal with chromatography of thorium compounds of Th^{IV}, with the exception of ion exchange column chromatography, to which an entire volume has already been devoted. As is usual with Gmelin, the data are presented in tremendous detail. If you need to chromatograph thorium compounds, the methods are all described, column size, packing, temperatures, retention volumes, separations on papers, *etc.*, *etc.* The question which springs to mind concerns the size of the constituency for such information.

The next 85 pages deal with thorium chemistry in non-aqueous solutions. The principal concern is not with reactivity but with conductivities and molecular-weight data (all tabulated in detail), solubility and dissolution, and finally complexes with agents such as Schiff bases, amines, cycloalkenes, though this is a very small part of the material.

This book is written by two experts, who are clearly meticulous in the usual Gmelin fashion and highly competent. My reservation is the potential market for material of this kind. The Gmelin series is a treasure of value to all the community. I hope it can survive the competition of the newer methods of data retrieval. If problems do arise, perhaps concentration on the more marketable areas of the subject may help to overcome them.

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Solid Supports and Catalysts in Organic Synthesis
Ed. K. Smith, Ellis Horwood and Prentis Hall, New York, 1992, 338 pages, US$85.00. ISBN 0-13-639998-3

This book contains an interesting collection of twelve reviews by an international panel of authors. It begins with two chapters, one describing the nature and structure of the various inorganic solids which are used as catalysts and supports, and one dealing with the preparation and relevant properties of organic polymers as supports. This section is followed by four chapters dealing with various traditional organic reactions which can be improved by the use of solid supports and catalysts. The chapters in this section are classified by the type of solid used rather than reaction type and so there are chapters dealing with amorphous inorganic solids; clays and other lamellar solids; zeolites; and polymeric resins. Part three of the book contains three chapters on solid supports and catalysts in biological chemistry and molecular biology, and, as one would expect, the topics of solid phase peptide synthesis; solid phase oligonucleotide synthesis; and immobilised biocatalysts are dealt with. A final part contains chapters on individual topics of current research, such as hydrogenation; designing microreactors; and microwave activation of reactions on solid supports.

This is useful complication, being an excellent introductory reference book for the practising synthetic organic chemist. Under its title it deals with a wide variety of topics. It is an excellent primer on the use of solid supports and catalysts and details of practical techniques are not neglected. The book is well indexed.

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Academic Press Dictionary of Science and Technology
C.G. Morris (ed.), Academic Press, San Diego, CA, 1992, xxxii + 2342 pages. £68.00. ISBN 0-12-200400-0

This book is described as 'The New Standard of Excellence' by the publishers, who state that to ensure