

models for elucidating the pathway-dependent mechanisms of long-range electron-transfer processes.

Whilst it is hard to find much to criticize in any of the individual contributions to this volume, it is difficult to envisage at whom the book is aimed. The concept of holding a meeting of this type is an excellent one, with the primary benefit coming to the participants. However, it must be added that a scientist wishing to broaden the experimental base being applied to a particular problem might not necessarily consider volumes such as this to be their primary source of inspiration.

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Chemistry of Iron

J. Silver (ed)

Blackie Academic and Professional, Glasgow, 1993
306 pp. £69.00.

This book is intended to provide a general introduction and overview to the main areas of current interest in iron chemistry and to direct readers from a variety of scientific backgrounds to prime literature sources for in-depth studies. It is written at a level which is claimed to be suitable for use by graduates in chemistry, biochemistry, physics, geology, materials science and biology. It probably is the first, as the editor claims, to provide a comprehensive review of the important chemistry of iron in both its elemental and combined forms. Other works devoted to specific aspects of iron chemistry, e.g. the monographs by Koerner von Gustorf *et al.* on the organic chemistry of iron (1978, 1981) have of course been available for some time and are now rather out of date.

The book is divided into eight chapters, each of which is written by authors who are active in the subject. A general introduction to iron chemistry (J. Silver) is followed by chapters on industrial chemistry of iron and its compounds (F. J. Berry), inorganic chemistry of iron (E. Sinn), organo-iron compounds (P. L. Pauson), spectroscopic methods for the study of iron chemistry (B. W. Fitzsimmons), biological iron (J. G. Leigh, G. R. Moore and M. T. Wilson), models

for iron biomolecules (A. K. Powell) and iron chelators of clinical significance (R. C. Hider and S. Singh). Over 200 pages are devoted to organo-iron complexes and biological aspects, perhaps reflecting the current level and emphasis of interest in these areas. In view of this, I suspect that geochemists, materials scientists and metallurgists will find the book of rather more limited use than (for example) organometallic chemists, biochemists and clinical biologists.

The chapter on organo-iron compounds (96 pages), which is probably of most interest to the readers of *Applied Organometallic Chemistry*, contains sections on iron carbonyls, cyclopentadienyl iron complexes, η^1 – η^6 hydrocarbon complexes, miscellaneous complexes and practical applications of organo-iron compounds. This is a comprehensive, well-written review which provides a welcome up-to-date addition to the literature. In contrast, I feel that the brief chapter (11 pages) on spectroscopic methods for the study of iron chemistry—essentially Mössbauer spectroscopy—seems somewhat out of place in a book of this kind, particularly so when considerably more than half of it is devoted to the theory of a well-established technique and only three pages contain examples involving iron chemistry. The chapters on biological aspects are interesting and well written; even though closely related reviews have appeared elsewhere (see references to Chapter 6), the accounts given here do provide an excellent overview of the field.

Considering that this is a multi-author work, the editor has done a good job in integrating and linking the contents of the various chapters and in ensuring a reasonably consistent style throughout. There are some inconsistencies, for example the references to some chapters include titles, some do not and others contain a mix of the two. Typographical errors are few, although I did note a rather unfortunate one concerning the 'pyrophobic' nature of finely divided iron. However, these are small points which detract little from the conclusion that (with the inclusion of a number of 1992 references) the book provides an up-to-date overview of the chemistry of iron in a single volume which also serves as an excellent source of reference.

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