

Book review

Metal β -Diketonates and Allied Derivatives; by R.C. Mehrotra, R. Bohra and D.P. Gaur, London, Academic Press, 1978, 382 pages, £20.50.

Metal β -diketonates have played a prominent role in the development of coordination chemistry. The parent ligands are derived from acetylacetonate (acacH) and $[M(\text{acac})_n]$ complexes represent a classic case of metal chelates, although exceptionally the ligand may be bound through carbon rather than to two oxygen centres.

The use of the word "metal" is perhaps not entirely appropriate, since, for example, boron, silicon and phosphorus compounds are mentioned, although only rather briefly. The authors claim to present a concise account of recent developments in the field. I note what appear to me to be many striking omissions, *e.g.*, the use of diketene in synthesis of the title compounds; or their use in catalysis, as in Ziegler-Natta systems. The total number of references is 1890, but there are only a very few citations beyond 1975.

I do not believe that the book will be easy to use. My preference would have been for a division into compounds by element, or group of elements, rather than the method which the authors have adopted, which may be illustrated by reference to the chapter headings: Metal β -diketonates: introduction; Oxygen-bonded β -diketonato complexes; Carbon-bonded β -diketonato complexes; Metal thio- β -diketonates: introduction; Metal derivatives of thio- β -diketonates; Applications of metal β -diketonates.

Emphasis is on structural work, but to my mind interest in this topic has receded in recent years. There are a number of errors. As an example, platinum tetrakis (β -diketonates) are referred to in the index, whereas in the text it is clear that the element in question is either Pa or Pu, neither of which is listed in the index.

Undoubtedly the book will find some use, not least as a source of references, but on balance I find it unsatisfactory in many ways, although I recognise the useful original contributions made by Professor Mehrotra's group to the field.

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