

role in this activity, in respect of both computational and experimental aspects, and it is very appropriate that he should be a co-editor of this timely and excellent volume. Furthermore the authors of the various chapters are active contributors to the fields they survey, and the overall impression is one of enthusiasm, immediacy, and authority.

The chapters are as follows: 'Bonding, structures and energies in organolithium compounds', by A. Streitwieser, S. M. Bachrach, A. Dorigo, and P. v. R. Schleyer; 'Theoretical studies of aggregates of lithium compounds', by A.-M. Sapse, D. C. Jain, and K. Raghavachari; 'Comparison of lithium and hydrogen bonds', by S. Scheiner; 'Lithium atom matrix reactions with small molecules', by L. Manceron and L. Andrews; 'NMR of organometallic compounds: general aspects and application of two-dimensional heteronuclear Overhauser effect spectroscopy (HOESY)', by W. Bauer; 'Aspects of the thermochemistry of lithium compounds', by J. F. Liebman, J. A. M. Simoes and S. W. Slayden; 'From "carbanions" to carbenoids: the structure of lithiated amines and lithiated ethers', by G. Boche, J.C.W. Lohrenz, and A. Opel; 'Complexes of inorganic lithium salts', by R. Snaith and D. S. Wright; 'Structures of lithium salts of heteroatom compounds', by F. Pauer and P. P. Power; 'Synthetic ionophores for lithium ions', by R. A. Bartsch, V. Ramesh, R. O. Bach, T. Shono, and K. Kimura; 'Preparations and reactions of polyolithium organic compounds', by A. Maercker.

I found it a little surprising that the first chapter, dealing with calculations on structures and energies of various types of organolithium compounds, contains no mention of lithate ions of the known type R_2Li^- (especially since Professor Schleyer has himself carried out relevant calculations on the prototype Me_2Li^-) but this is a very minor omission.

The book is well produced, with clear diagrams, and is a bargain at today's prices. It can be recommended without qualification.

Colin Eaborn
School of Chemistry and Molecular Sciences
University of Sussex
Brighton BN1 9QJ
UK

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Gmelin Handbook of Inorganic and Organometallic Chemistry

8th Edn. Ga. Supplement Vol. D2. Coordination Compounds 2. Springer, Berlin, 1995, xiv + 264 pages, DM1650.

ISBN 3-540-93708-0

This volume contains further chapters in the treatment of coordination chemistry of gallium begun in

Supplement Vol. D1. They deal with complexes of Ga(III) involving ligands containing nitrogen alone, or nitrogen and oxygen together, as donor atoms, namely: complexes with N-heterocycles (including phthalocyanines (which take up 123 pages); complexes with amino alcohols; complexes with amino carboxylic acids; complexes with amides, peptides or urea; complexes with proteins; complexes with hydrazinecarboxylic acid or hydrazides; complexes with hydroxamic acids; complexes with oximes or nitroso compounds; complexes with amine oxides or aminooxy radicals; and complexes with nitro hydrocarbons.

The complexes with proteins are of particular interest because of the widespread use of isotopes of gallium as diagnostic agents in medicine and in the mechanism of uptake of gallium in tumours.

The volume does not deal with organogallium complexes, but many of the latter would, of course, form related complexes with the ligands described. The editors (M. Kotowski and M. Mirbach) and their co-authors have done the usual excellent job we associate with the Gmelin series, and the production overall is of the expected high standard. The cost is also high (ca. £730 and US\$1100 at the time of writing), and one can only envy institutions that take all the volumes in this fine series, both for having them available and for having the resources to afford them.

Colin Eaborn
School of Chemistry and Molecular Sciences
University of Sussex
Brighton BN1 9QJ
UK

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Organosilicon Chemistry II: from molecules to materials

N. Auner and J. Weis (eds.), VCH Weinheim, 1996, 852 pages, DM 188.
ISBN 3-527-29254-3

This volume consists of articles, 94 in all, based on lectures and posters presented at the meeting 'II Münchner Silicontage' (Second Munich Silicon Days) held in Munich in 1994. They are divided into four sections: 'Tetravalent organosilicon compounds: chemistry and structure'; 'Organosubstituted silicon with unusual coordination numbers'; 'Organosilicon metal compounds: their use in organosilicon synthesis, coordination chemistry and catalysis'; 'Silicon polymers: formation and application'.

The individual contributions vary greatly in signifi-

cance, and most of the material will by now have been published in full elsewhere. But overall they give a good idea of the present state of organosilicon chemistry and the direction in which it is going. There are some articles of considerable importance however; in particular, that entitled 'The nature of organosilicon cations and their interactions', by C. Maerker, J. Kapp and P.v.R. Schleyer, represents a major contribution in a field of intense current interest.

The book is well produced, with colour used effectively on a few pages.

Colin Eaborn
School of Chemistry and Molecular Sciences
University of Sussex
Brighton BN1 9QJ
UK

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