

Book review

Carbosilanes: Synthesis and Reactions: by G. Fritz and E. Matern, Springer Verlag, Berlin etc., 1986, vi + 258 pages DM 188. ISBN 0-471-83441-6

This book is unusual in that it is concerned with a branch of chemistry created and developed almost entirely by one of the authors, Professor G. Fritz, and his group in Karlsruhe. The work was very challenging and experimentally difficult, especially in the earlier years when satisfactory identification methods were less readily available, and anyone reading this book will appreciate the skill, dedication, and persistence which must have been required. Especially remarkable has been the extent to which X-ray diffraction studies have in recent years confirmed the structures of many complex polycyclic compounds suggested some years ago by Professor Fritz on the basis of interpretation of limited physical data in the light of his detailed knowledge of the field and his informed intuitions.

Carbosilanes are compounds in which silicon and carbon atoms alternate in the molecular skeleton. They can thus be regarded as related to silicon carbide, and are attracting increasing attention because of growing industrial interest in polymers with Si-C backbones. After a brief general introduction (3 pages), the authors present an appropriately detailed account (94 pages) of the ways in which carbosilanes have made, then review their reactions (118 pages), and finally outline the results of structural investigations on them. A high proportion of the 212 references, and an even higher proportion of the important references, are necessarily to papers from the Karlsruhe group.

At present the book (which is well produced and reasonably priced) will be mainly of interest to specialist organosilicon chemists, who will welcome this clear and detailed review of the work of the group over a period of about 30 years, especially since most of the original papers were in German and their content thus less conveniently accessible to the great majority of those interested. As time goes by it is likely to be consulted more and more often by other types of chemists, as interest in polymers with Si-C frameworks increases.

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