

Book reviews

Homoatomic Rings, Chains and Macromolecules of Main Group Elements; edited by A.L. Rheingold. Elsevier Scientific Publishing Co., Amsterdam - Oxford - New York, 1977, xvi + 616 pages, Dfl. 195.00; U.S. \$79.95.

This volume arises partly out of the IXth Hudson Symposium on "Homoatomic Rings and Chains of Main Group Elements" held at Plattsburgh, N.Y. (U.S.A.) in April 1976. It provides the first broad appraisal of the chemistry of main group homoatomic structures, with concentration on advances made in the last decade.

The first four chapters serve as a general introduction; they deal with Dynamic Aspects of Homoatomic Catenation (J.R. Van Wazer), Structures of Homoatomic Catenates (R. Allman), Photoelectron Spectroscopy and Molecular Orbital Investigations of Homoatomic Bonding (A.H. Cowley), and Physical Aspects of Main Group Homonuclear Bonding (P. Politzer). More specific articles then deal with Homoatomic Bonding in Alkali-Metal Suboxides (A. Simon), Boron Catenation and the Poly-Boron Halides (P. Timms), Heteroatom Stabilized Group III Homocatenated Rings (T.P. Fehlner), The Conjugative Properties of Polysilanes and Catenated σ -Systems (C.G. Pitt), Properties and Formation Reactions of Cyclic Polysilanes (E. Hengge), Kinetics of Polysilane Decomposition (M.A. Ring), Di-, Poly- and Cyclo-stannanes (W.P. Neumann), Approaches to Stabilized ($p-p$) π Bonds to Silicon and Germanium (M.D. Curtis), Conformations and Long-Range Interactions in Permethylpolysilanes (A.L. Allred, C.A. Ernst and M.A. Ratner), Catenation of Phosphorus Atoms (H.G. von Schnering), Solution Structures of Cyclopolyphosphines (J.L. Mills), Structure and Dynamics of Some Metallated Phosphine Chains (K.G. Caulton), Extended Structure Homonuclear Catenates of the Group V Elements (A.L. Rheingold), Cyclopolyphosphine and Arsine Complexes of Transition Metals (B.O. West), Phosphito-Phosphanes (Phosphoryl-Phosphanes) (E. Fluck and D. Weber), Some Unusual Allotropes of Elemental Sulfur - A Stereochemical Consideration (M. Schmidt), Charge Distribution in Neutral and Ionic Elemental Chains and Rings (B. Meyer, L.B. Peter and K.D. Spitzer), Polychalcogenide Anions (T. Chivers), Sulfur, Selenium and Tellurium Cations Containing Homonuclear Bonds (J. Passmore), Polyhalogen Cations and Polyhalide Anions (K.-F. Tebbe).

Organometallic chemists will find this a very useful volume. The main literature coverage is complete to December 1976, but last-minute addenda extend it well into 1977.

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