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Book review

Gmelin Handbook of Inorganic Chemistry. Si — Silicon. Supplement Volume B4. Silicon-Nitrogen Compounds. Springer-Verlag, Berlin etc., 1989. xiii + 353 pages. DM 1,636.00 ISBN 3-540-93582-7.

This is the first supplementary volume on species containing Si-N bonds, and presents material published after 1949. The literature closing date is 1987, but there are some later references.

The first 63 pages are concerned with species containing only silicon and nitrogen, including binary compounds, molecular ions, solids, and anions of the type $\text{Si}_x\text{N}_y^{z-}$. (However, the one well-defined solid nitride, Si_3N_4 , is to be the subject of a separate volume.) The next 81 pages deal with compounds containing Si, N, and H, including aminosilanes, silazanes, compounds containing Si-Si, Si=Si, Si=N, N-N, and N=N bonds, and polymeric silicon imides and imide nitrides. The remaining chapter, of 107 pages, is on *N*-substituted derivatives of the silicon-nitrogen-hydrogen compounds, mainly *N*-organyl species, and silicon pseudohalides containing Si-N bonds. Compounds containing Si-C bonds will be surveyed in other volumes. Appropriate prominence is given to the results of theoretical calculations, and in many cases the accounts show how predictions have been reversed as methods have been refined. A notable feature is that in the table of contents, question marks are placed against compounds, such as H_3SiNC , whose existence is doubtful, which means that the reader can quickly turn to several interesting items about which there is controversy.

The literature searching, the efficiency of the presentation of information, and the quality of production are of the usual high standard associated with the Gmelin series.

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