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v. 3. 2001. Theoretical aspects of compounds containing Si, Ge, Sn and Pb / Miriam Karni, Yitzhak Apeloig, Jürgen Kapp and Paul von R. Schleyer -- (Helium I)-photoelectron spectra of silicon compounds : history and achievements concerning their molecular states / H. Bock and B. Solouki -- ^{29}Si NMR experiments in solutions of organosilicon compounds / Jan Schraml -- Silyl radicals / C. Chatgililoglu and C.H. Schiesser -- Recent advances in the chemistry of silicon-silicon multiple bonds / Manfred Weidenbruch -- Recent developments in the chemistry of compounds with silicon-nitrogen bonds / Peter Neugebauer, Bettina Jaschke and Uwe Klingebiel -- Organosilicon halides : synthesis and properties / Uwe Herzog -- Synthesis of multiply bonded phosphorus compounds using silylphosphines and silylphosphides / Masaaki Yoshifuji and Kozo Toyota -- Polysilanes : conformations, chromotropism and conductivity / Robert West -- Nanostructured hybrid organic-inorganic solids : from molecules to materials / Bruno Boury and Robert J.P. Corriu -- Polysiloles and related silole-containing polymers / Shigehiro Yamaguchi and Kohei Tamao -- Polysilanols / Paul D. Lickiss -- Silicon-based dendrimers and hyperbranched polymers / David Y. Son -- Biotechnology reveals new routes to synthesis and structural control of silica and polysilsesquioxanes / Daniel E. Morse -- Chemistry on silicon surfaces / Cheol Ho Choi and Mark S. Gordon -- Silyl migrations / Mitsuo Kira and Takeaki Iwamoto -- Kinetic studies of the reactions of $\text{Si}=\text{C}$ and $\text{Si}=\text{Si}$ bonds / Tracy L. Morkin, Thomas R. Owens and William J. Leigh -- Ion-molecule reactions of silicon cations / Simonetta Fornarini.

Sommario/riassunto

Each book in "The Chemistry of Functional Groups" series is designed to cover all aspects of one of the important functional groups in organic chemistry. Emphasis is placed on the functional group treated and on the effects which it exerts on chemical and physical properties, primarily in the immediate vicinity of the group in question and secondarily on the behaviour of the whole molecule.; This volume, which is also available in two parts, deals with organic compounds containing carbon-silicon bonds, including derivatives with other heteroatoms, and reviews new developments of organosilicon chemistry in the last decade, such as multiple bonds to silicon.