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Nota di contenuto	Silicometallics vs. Organometallics and Catalysis – General Guidelines -- Recent Advances and Applications of Group 10 Transition Metal Hydrosilylation Catalysts -- State of the Art in Rhodium and Iridium Catalyzed Hydrosilylation Reactions -- Recent Development of Cobalt-Catalyzed Hydrosilylation Reactions: New Catalysts, Mechanistic Understandings and Future Trends -- Iron and Manganese Catalysed Hydrosilylation Reactions -- Catalysis of Hydrosilylation Processes with the Participation of Ionic Liquids -- Hydrosilylation Catalysis for One-pot Synthesis -- Hydrosilylation of Carbon—Carbon Multiple Bonds in Organic Synthesis.
Sommario/riassunto	This volume describes the latest advances and perspectives in hydrosilylation, with a focus on new organometallic catalysts and their mechanistic aspects. Hydrosilylation is the reaction of SiH with carbon-carbon, carbon-heteroatom or heteroatom-heteroatom bonds and is the most fundamental and elegant method for laboratory and industrial synthesis of organosilicon molecular and macromolecular compounds. Yet these reactions do require a catalyst, for which initially homogeneous noble metal catalyst, mainly platinum, rhodium, iridium or ruthenium were used. However the high prices, metallic residues of

these valuable catalysts as well as issues with product purification, did increase the interest in developing new catalysts. Noteworthy in this regard are the recently developed hydrosilylation reactions using catalysts based on earth-abundant transition metals (for example Mn, Fe, Co, Ni) and heterogeneous catalysts presented here. This volume of *Topics in Organometallic Chemistry* is written for scientists interested in silicon chemistry and its catalytic aspects, but can also be used as valuable handbook for postgraduate and advanced undergraduate students working with organometallic chemistry, catalysis as well as synthesis of fine chemicals.
