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Nota di contenuto	From the Contents: Introduction -- Prospects for Elemental 2D Materials -- Vision on Organosilicon Chemistry and Silicene -- From Graphene to Silicene – A Theoretical/Historical Approach -- Expected Properties of Free-Standing Silicene.
Sommario/riassunto	This book discusses the processing and properties of silicene, including the historical and theoretical background of silicene, theoretical predictions, the synthesis and experimental properties of silicene and the potential applications and further developments. It also

presents other similar monolayer materials, like germanene and phosphorene. Silicene, a new silicon allotrope with a graphene-like, honeycomb structure, has recently attracted considerable interest, because its topology affords it the same remarkable electronic properties as those of graphene. Additionally, silicene may have the potential advantage of being easily integrated in current Si-based nano/micro-electronics, offering novel technological applications. Silicene was theoretically conjectured a few years ago as a stand-alone material. However, it does not exist in nature and had to be synthesized on a substrate. It has since been successfully synthesized and multi-layer silicene structures are already being discussed. Within just a few years, silicene is now on the brink of technological applications in electronic devices.