FONDAZIONE BRUNO KESSLER
FUTURE BUILT ON KNOWLEDGE

Patent title:	**Method for the construction of a low reflectance semiconductor substrate (Metodo per la realizzazione di un substrato semiconduttore a bassa riflettanza)**
FBK center:	CMM
Inventor(s):	Scauso Pietro (Università Milano Bicocca), Bagolini Alvise (Fondazione Bruno Kessler), Bellutti Pierluigi (Fondazione Bruno Kessler)
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Proprietor(s):	Fondazione Bruno Kessler (Bruno Kessler Foundation)
IP status:	Patent pending. Available for license or assignment
Patent family:	—
Application(s):	Generation of black silicon and other high surface/volume ratio surfaces
Keyword(s):	Low reflectance semiconductor substrate, Silicon anisotropic etching, High surface/volume ratio
Abstract:	The present invention concerns a method to obtain black silicon by means of resputtering of mask composites during anisotropic etching. Black silicon consists of thin vertical structures (grass) that can be generated by deep reactive ion etching (DRIE) of a silicon substrate. The structures formation depends on micromasking, which is highly dependent on etching condition fluctuations, making it hard to reproduce the same feature. Scope of the proposed method is to provide a reliable and highly reproducible process for the generation of black silicon in silicon anisotropic etching, based on control of micromasking.