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Titolo	Metal Impurities in Silicon- and Germanium-Based Technologies : Origin, Characterization, Control, and Device Impact // by Cor Claeys, Eddy Simoen
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Disciplina	620.11295 620.11297
Soggetti	Optical materials Electronics - Materials Microwaves Optical engineering Semiconductors Electronic circuits Materials science Optical and Electronic Materials Microwaves, RF and Optical Engineering Electronic Circuits and Devices Characterization and Evaluation of Materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Preface -- Introduction -- Basic Properties of Metals in Semiconductors -- Sources of Metals in Si and Ge Processing -- Characterization and Detection of Metals in Silicon and Germanium -- Electrical Activity of Metals in Si and Ge -- Impact of Metals on Silicon Devices and Circuits -- Gettering and Passivation of Metals in Silicon and Germanium -- Modeling and Simulation of Metals in Silicon and Germanium -- Conclusions.
Sommario/riassunto	This book gives a unique review of different aspects of metallic contaminations in Si and Ge-based semiconductors. All important

metals are discussed including their origin during crystal and/or device manufacturing, their fundamental properties, their characterization techniques and their impact on the electrical device performance. Several control and possible gettering approaches are addressed. The book is a reference for researchers and engineers studying advanced and state-of-the-art micro- and nano-electronic semiconductor devices and circuits. It has an interdisciplinary nature by combining different disciplines such as material science, defect engineering, device processing, defect and device characterization and device physics and engineering.

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