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Sommario/riassunto

This book, edited by Omar Azzaroni and Wolfgang Knoll, explores the advanced applications of graphene field-effect transistors (FETs) in bioelectronic sensing devices. It covers a broad range of topics, including the modeling, fabrication, and application of graphene-based electronic components like inductors, capacitors, and diodes. Key focus areas include the use of graphene and its derivatives, such as graphene oxide and reduced graphene oxide, in biosensors for disease diagnostics, environmental monitoring, and health sensing. The book also discusses the mechanisms of graphene FETs operating in liquid environments, surface modification strategies for enhanced sensing capabilities, and hybrid graphene FETs for gas detection. Intended for researchers and professionals in the fields of materials science, electronics, and bioengineering, the book provides comprehensive insights into the potential of graphene technologies in developing innovative sensing solutions.
