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Autore	Winnacker Albrecht
Titolo	The Physics Behind Semiconductor Technology // by Albrecht Winnacker
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Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (286 pages)
Collana	Physics and Astronomy Series
Disciplina	541.35 537.622
Soggetti	Semiconductors Optical materials Solid state physics Telecommunication Electronics Optical Materials Electronic Devices Microwaves, RF Engineering and Optical Communications Electronics and Microelectronics, Instrumentation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Crystal Structure and Energy Bands -- Transport of Charge Carriers -- Donors and Acceptors -- Carrier Statistics -- Fabrication of Electronic Si -- Lattice Defects -- Compound Semiconductors -- Amorphous Semiconductors.
Sommario/riassunto	This textbook teaches the physics and technology of semiconductors, highlighting the strong interdependence between the engineering principles and underlying physical fundamentals. It focuses on conveying a basic understanding of the physics, materials, and processes involved in semiconductor technology without relying on detailed derivations. The book features separate comments on the key physical principles covered, allowing the reader to quickly grasp the

take-home message. Chapter-end questions and answers round out this compact book, making it a helpful and dependable resource for physicists, electrical engineers, and materials scientists working with electronic materials. Aimed at upper-level undergraduate students and written by an author with extensive experience in both industry and academia, this textbook gives physicists the opportunity to learn about the materials and technology behind semiconductors, while providing engineers and materials scientists a deeper understanding of the physics behind the technology.
