1. Record Nr. UNINA9910733726603321

Autore	Boer Karl W.
Titolo	Semiconductor Physics / / by Karl W. Böer, Udo W. Pohl
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2023
ISBN	3-031-18286-3
Edizione	[2nd ed. 2023.]
Descrizione fisica	1 online resource (1408 pages)
Disciplina	621.38152 537.622
Soggetti	Semiconductors Optical materials Electrical engineering Physics Solid state physics Optical Materials Electrical and Electronic Engineering Applied and Technical Physics Electronic Devices
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Part I Bonding and Structure -- Part II Phonons -- Part III Energy Bands -- Part IV Photons -- Part V Defects -- Part VI Transport -- Part VII Generation-Recombination -- Part VIII Kinetics.
Sommario/riassunto	This handbook gives a complete and detailed survey of the field of semiconductor physics. It addresses every fundamental principle, the most important research topics and results, as well as conventional and emerging new areas of application. Additionally it provides all essential reference material on crystalline bulk, low-dimensional, and amorphous semiconductors, including valuable data on their optical, transport, and dynamic properties. This updated and extended second edition includes essential coverage of rapidly advancing areas in semiconductor physics, such as topological insulators, quantum optics, magnetic nanostructures and spintronic systems. Richly illustrated and

authored by a duo of internationally acclaimed experts in solar energy and semiconductor physics, this handbook delivers in-depth treatment of the field, reflecting a combined experience spanning several decades as both researchers and educators. Offering a unique perspective on many issues, Semiconductor Physics is an invaluable reference for physicists, materials scientists and engineers throughout academia and industry.