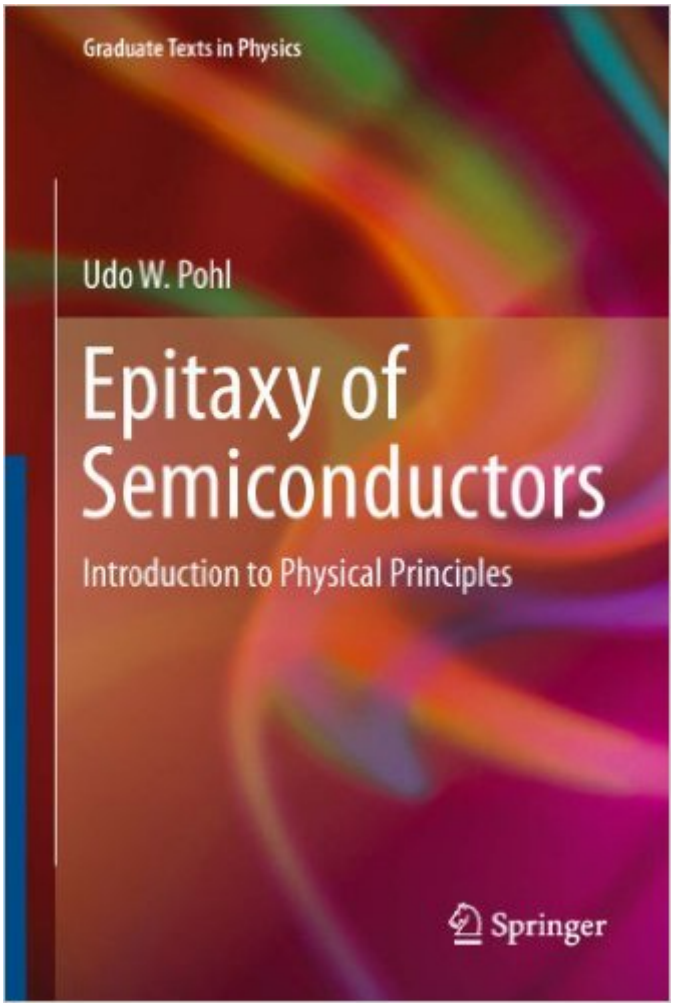
Epitaxy Of Semiconductors: Introduction To Physical Principles (Graduate Texts In Physics)



Synopsis

Introduction to Epitaxy provides the essential information for a comprehensive upper-level graduate course treating the crystalline growth of semiconductor heterostructures. Heteroepitaxy represents the basis of advanced electronic and optoelectronic devices today and is considered one of the top fields in materials research. The book covers the structural and electronic properties of strained epitaxial layers, the thermodynamics and kinetics of layer growth, and the description of the major growth techniques metalorganic vapor phase epitaxy, molecular beam epitaxy and liquid phase epitaxy. Cubic semiconductors, strain relaxation by misfit dislocations, strain and confinement effects on electronic states, surface structures and processes during nucleation and growth are treated in detail. The Introduction to Epitaxy requires only little knowledge on solid-state physics. Students of natural sciences, materials science and electrical engineering as well as their lecturers benefit from elementary introductions to theory and practice of epitaxial growth, supported by pertinent references and over 200 detailed illustrations.

Book Information

File Size: 6614 KB

Print Length: 334 pages

Page Numbers Source ISBN: 3642329691

Publisher: Springer; 2013 edition (January 11, 2013)

Publication Date: January 11, 2013

Sold by:Â Digital Services LLC

Language: English

ASIN: B00BLS4S4E

Text-to-Speech: Enabled

X-Ray: Not Enabled

Word Wise: Not Enabled

Lending: Not Enabled

Enhanced Typesetting: Not Enabled

Best Sellers Rank: #1,146,388 Paid in Kindle Store (See Top 100 Paid in Kindle Store) #17 inÂ Kindle Store > Kindle eBooks > Nonfiction > Science > Chemistry > Crystallography #51 inÂ Kindle Store > Kindle eBooks > Engineering & Transportation > Engineering > Electrical & Electronics > Semiconductors #135 inÂ Kindle Store > Kindle eBooks > Nonfiction > Science > Chemistry > Physical & Theoretical

Epitaxy of Semiconductors: Introduction to Physical Principles (Graduate Texts in Physics) Advanced Physics of Electron Transport in Semiconductors and Nanostructures (Graduate Texts in Physics) Many-Body Quantum Theory in Condensed Matter Physics: An Introduction (Oxford Graduate Texts) The Physics of Low-dimensional Semiconductors: An Introduction Einstein in Matrix Form: Exact Derivation of the Theory of Special and General Relativity without Tensors (Graduate Texts in Physics) General Relativity (Graduate Texts in Physics) Geometry, Topology and Physics, Second Edition (Graduate Student Series in Physics) Gauge Theories in Particle Physics, Second Edition (Graduate Student Series in Physics) Optical Processes in Semiconductors (Prentice-Hall electrical engineering series. Solid state physical electronics series) Chemical Physics of Nanostructured Semiconductors The Solid State: An Introduction to the Physics of Crystals for Students of Physics, Materials Science, and Engineering (Oxford Physics Series) Books of Breathing and Related Texts -Late Egyptian Religious Texts in the British Museum Vol.1 (Catalogue of the Books of the Dead and Other Religious Texts in the British Museum) Principles of Growth and Processing of Semiconductors Introduction to Smooth Manifolds (Graduate Texts in Mathematics, Vol. 218) Introduction to Smooth Manifolds (Graduate Texts in Mathematics) Riemannian Manifolds: An Introduction to Curvature (Graduate Texts in Mathematics) An Introduction to Knot Theory (Graduate Texts in Mathematics) Lie Groups, Lie Algebras, and Representations: An Elementary Introduction (Graduate Texts in Mathematics) An Introduction to Banach Space Theory (Graduate Texts in Mathematics) Insider’s Guide to Graduate Programs in Clinical and Counseling Psychology (Insider’s Guide to Graduate Programs in Clinical & Counseling Psychology)