

Superlattice to Nanoelectronics

Superlattice to Nanoelectronics provides a historical overview of the early work performed by Tsu and Esaki, to orient those who want to enter into this nanoscience. It describes the fundamental concepts and goes on to answer many questions about today's 'Nanoelectronics'. It covers the applications and types of devices which have been produced, many of which are still in use today. This historical perspective is important as a guide to what and how technology and new fundamental ideas are introduced and developed. The author communicates a basic understanding of the physics involved from first principles, whilst adding new depth, using simple mathematics and explanation of the background essentials. Topics covered include* Introductory materials * Superlattice, Bloch oscillations and transport * Tunneling in QWs to QDs * Optical properties: optical transitions, size dependent dielectric constant, capacitance and doping * Quantum devices: New approaches without doping and heterojunctions - quantum confinement via geometry and multipole electrodes. Issues of robustness, redundancy and I/O. Researchers, course students and research establishments should read this book, written by the leading expert in nanoelectronics and superlattices.

Auf Anfrage

Nicht mehr lieferbar

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