



Field Effect Transistors, A Comprehensive Overview: From Basic Concepts to Novel Technologies (Hardback)

By Pouya Valizadeh

John Wiley and Sons Ltd, United States, 2016. Hardback. Condition: New. 1. Auflage. Language: English. Brand new Book. This book discusses modern-day Metal Oxide Semiconductor Field Effect Transistors (MOSFETs) and future trends of transistor devices. This book provides an overview of Field Effect Transistors (FETs) by discussing the basic principles of FETs and exploring the latest technological developments in the field. It covers and connects a wide spectrum of topics related to semiconductor device physics, physics of transistors, and advanced transistor concepts. This book contains six chapters. Chapter 1 discusses electronic materials and charge. Chapter 2 examines junctions, discusses contacts under thermal-equilibrium, metal-semiconductor contacts, and metal-insulator-semiconductor systems. Chapter 3 covers traditional planar Metal Oxide Semiconductor Field Effect Transistors (MOSFETs). Chapter 4 describes scaling-driving technological variations and novel dimensions of MOSFETs. Chapter 5 analyzes Heterojunction Field Effect Transistors (FETs) and also discusses the challenges and rewards of heteroepitaxy. Finally, Chapter 6 examines FETs at molecular scales.* Links the discussion of contemporary transistor devices to physical processes * Material has been class-tested in undergraduate and graduate courses on the design of integrated circuit components taught by the author * Contains examples and end-of-chapter problems Field Effect Transistors, A Comprehensive Overview: From Basic...



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Reviews

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