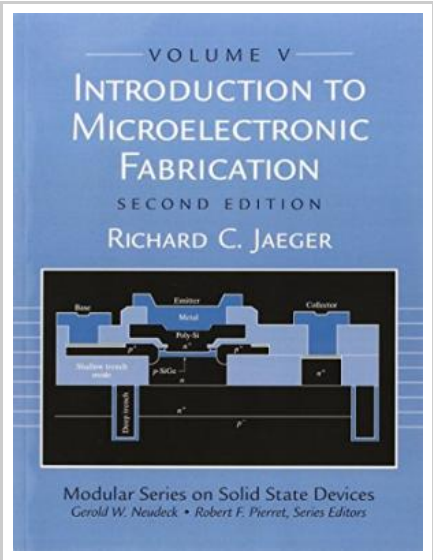


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Introduction to Microelectronic Fabrication: Volume 5 of Modular Series on Solid State Devices (2nd Edition)

By Jaeger, Richard C.

Prentice Hall, 2001. Book Condition: New. Brand New, Unread Copy in Perfect Condition. A+ Customer Service! Summary: (NOTE:Each chapter concludes with Summary, References, and Problems.) Preface. 1. An Overview of Microelectronic Fabrication. A Historical Perspective. An Overview of Monolithic Fabrication Processes and Structures. Metal-Oxide-Semiconductor (MOS) Processes. Basic Bipolar Processing. Safety. 2. Lithography. The Photolithographic Process. Etching Techniques. Photomask Fabrication. Exposure Systems. Exposure Sources. Optical and Electron Microscopy. Further Reading. 3. Thermal Oxidation of Silicon. The Oxidation Process. Modeling Oxidation. Factors Influencing Oxidation Rate. Dopant Redistribution During Oxidation. Masking Properties of Silicon Dioxide. Technology of Oxidation. Oxide Quality. Selective Oxidation and Shallow Trench Formation. Oxide Thickness Characterization. Process Simulation. 4. Diffusion. The Diffusion Process. Mathematical Model for Diffusion. The Diffusion Coefficient. Successive Diffusions. Solid-Solubility Limits. Junction Formation and Characterization. Sheet Resistance. Generation-Depth and Impurity Profile Measurement. Diffusion Simulation. Diffusion Systems. Gettering. 5. Ion Implantation. Implantation Technology. Mathematical Model for Ion Implantation. Selective Implantation. Junction Depth and Sheet Resistance. Channeling, Lattice Damage, and Annealing. Shallow Implantation. Source Listing 6. Film Deposition. Evaporation. Sputtering. Chemical Vapor Deposition. Epitaxy. Further

Reviews

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