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Altri autori (Persone)	CollaertNadine
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Nota di contenuto	Front Cover; Contents; Preface; I. Integration of Multi-Gate Devices (FinFET); 1. Introduction to Multi-Gate Devices and Integration Challenges; 2. Dry Etching Patterning Requirements for Multi-Gate Devices; 3. High-k Dielectrics and Metal Gate Electrodes on SOI MuGFETs; 4. Doping, Contact and Strain Architectures for Highly Scaled FinFETs; II. Circuit-Related Aspects; 5. Variability and Its Implications for FinFET SRAM; 6. Specific Features of MuGFETs at High Temperatures over a Wide Frequency Range; 7. ESD Protection in FinFET Technology; III. Exploratory Devices and Characterization Tools 8. The Junctionless Nanowire Transistor 9. The Variational Principle: A Valuable Ally Assisting the Self-Consistent Solution of Poisson's Equation and Semi-Classical Transport Equations; 10. New Tools for the Direct Characterisation of FinFETs; 11. Dopant Metrology in Advanced FinFETs
Sommario/riassunto	This book covers one of the most important device architectures that have been widely researched to extend the transistor scaling: FinFET. Starting with theory, the book discusses the advantages and the integration challenges of this device architecture. It addresses in detail the topics such as high-density fin patterning, gate stack design, and source/drain engineering, which have been considered challenges for the integration of FinFETs. The book also addresses circuit-related aspects, including the impact of variability on SRAM design, ESD

design, and high-T operation. It discusses a new d
