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Disciplina	621.38152 620.11
Soggetti	Semiconductors Optical materials Electronic materials Manufactures Lasers Photonics Microwaves Optical engineering Nanotechnology Optical and Electronic Materials Manufacturing, Machines, Tools, Processes Optics, Lasers, Photonics, Optical Devices Microwaves, RF and Optical Engineering Nanotechnology and Microengineering
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Technological background -- Basic components -- Flash lamps -- Process management and process control -- FLA assisted deposition -- Temperature -- Thermal budget -- Temperature measurements -- Temperature simulations -- FLA for semiconductors -- Defect engineering -- Doping -- Crystallization -- Semiconductor nanostructures -- Beyond semiconductors -- Transparent conducting oxides -- Metallic films -- High-k materials and dielectrics -- Flexible

substrates -- Outlook.

Sommario/riassunto

This book provides a comprehensive survey of the technology of flash lamp annealing (FLA) for thermal processing of semiconductors. It gives a detailed introduction to the FLA technology and its physical background. Advantages, drawbacks and process issues are addressed in detail and allow the reader to properly plan and perform their own thermal processing. Moreover, this books gives a broad overview of the applications of flash lamp annealing, including a comprehensive literature survey. Several case studies of simulated temperature profiles in real material systems give the reader the necessary insight into the underlying physics and simulations. This book is a valuable reference work for both novice and advanced users.