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Soggetti	Ceramics Glass Composites (Materials) Composite materials Structural materials Optical materials Electronic materials Nanotechnology Materials—Surfaces Thin films Materials science Ceramics, Glass, Composites, Natural Materials Structural Materials Optical and Electronic Materials Surfaces and Interfaces, Thin Films Characterization and Evaluation of Materials
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Preface -- Overview of Conventional Sintering -- Modelling “nano-effects” in sintering -- Nanoscaled Grain Growth -- Effect of Powder

Characteristics on Nanosintering -- Discrete Element Method Sintering Simulation: A grain-scale simulation approach -- Sintering of Porous Materials -- Electric Field and Current Effects on Sintering -- Field Assisted Sintering Mechanisms -- Effects of Applied Stress and Heating Rate in Field Assisted Sintering -- Characterization of Microstructures Before, During and After Densification.

Sommario/riassunto

Sintering process studies have re-emerged strongly in the past decade due to extensive discussions about the stabilization of nanoparticles and nanostructures, and the development of controlled nanograined bulk materials. This book presents the state-of-art in experiments and theory of assisted sintering, nanosintering and grain growth. The scope ranges from powder metallurgy to ceramic and composites processing. The challenges of conventional and novel sintering and grain growth in nanopowders and nanostructures are addressed, being useful for students as well as professionals interested in sintering at the nanoscale.
