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Soggetti	Ceramics Glass Composite materials Chemistry, Physical and theoretical Manufactures Ceramics, Glass, Composites, Natural Materials Physical Chemistry Manufacturing, Machines, Tools, Processes
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Nota di contenuto	Introduction -- Aqueous Colloidal Injection Molding of Ceramics Based on Gelation -- Gel-Tape-Casting of Ceramic Substrates -- Gelation Forming Process for Low Toxicity System -- Generation, Development, Inheritance, and Control of the Defects during the Transformation from Suspension to Green Body -- The Gel-Casting of Non-Oxide Ceramics -- Application of New Colloidal Forming -- The New Methods and Techniques Based on Gel-Casting -- Novel In-situ Coagulation casting of Ceramic Suspensions.
Sommario/riassunto	This book discusses several new, near-net-shape techniques for fabricating highly reliable, high-performance, complex ceramic parts. In the context of materials design, the creation of high-performance ceramic products of desired shapes has led to the need for new ceramic forming processes. The near-net-shape techniques combine both injection-molding and colloidal-forming processes. Reviewing and summarizing the research and latest advances, the book is divided into 6 parts: (1) the basic theory, development, and application of the

colloidal injection molding of ceramics; (2) the tape casting technology; (3) the reliability of the product; (4) the colloidal injection molding of Si₃N₄ and SiC; (5) low-toxicity systems; and (6) the novel in-situ coagulation casting of ceramic suspensions via controlled release of high-valence counter ions and dispersant removal. It is intended for researchers and graduates in materials science and engineering.
