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Nota di contenuto	Innovative Processing and Synthesis of Ceramics, Glasses, and Composites VI; Contents; Preface; Microwave Processing; Sintering Wear Parts with Microwave Heating; Sintering Uniformity and Reproducibility with 2.45 GHz Microwaves in an Industrial Sized Chamber; A Novel Approach to Understanding Microwave Heating of Zirconia; Synthesis of Nanocrystalline Diamond Films by Microwave Plasma CVD; Microwave Drill for Ceramics; Combustion Synthesis; Analysis of the Formation of FGM Structures via Combustion Synthesis: Modeling Studies; In-situ Formation of Porous Articles by Combustion Synthesis

Reaction Forming; Fabrication of Mullite-Zirconia Composites by Reaction Sintering of Zircon, Alumina, and Zirconia Dopant Mixtures; Sol-Gel Synthesis; Sol-Gel Process for Synthesis of Yttrium Aluminum Garnet; Sol-Gel Coated Hi-Nicalon Fibers for Reinforced Ceramic Matrix Composites; Gel-Casting; Preparation of Quartz Crucible via Gel-Casting Process; Plasma Processing; Effect of Powder Characteristics on Phase Transformation in Plasma Sprayed Alumina-13 Wt% Titania Coatings; Electrophoresis; Electrophoretic Assembly of Micron Scale Silica Particles; Polymer Processing
High-Performance Boron Nitride Fibers from Polyalkyl-Aminoborazines; Chemical Processing; Aluminum Carbonate as an Alumina Precursor; Supercritical Method; Supercritical Extraction of Binder and Plasticizer with Carbon Dioxide and Ethylene from BaTiO₃ Multilayer Ceramic Capacitors; Functionally Graded Materials; Three-Dimensional Printing (3DP) of Gradient-Index (GRIN) Lenses; Composites; Confocal Raman Imaging of (Uncoated/Coated) HPZ Fibers Reinforcing Ceramic Matrix Composites, Before and After Alkaline Corrosion
Synthesis and Characterization of Al₂O₃-TiC Composite Powders from Carbon Coated Precursors; Porous Ceramics; New Developments in Nanometric Porous Mullite, Spinel, and Aluminas; Surface Modification; High Density Infrared Surface Treatment of Ceramics; Characterization; Characterization of Ceramic Micro Tubular Membranes; Index

Sommario/riassunto

This collection of papers describes the various innovative techniques and approaches for synthesis and processing of novel ceramics, glass, and composite materials and their fabrication in various forms, shapes, and complex structures. Special emphasis is given to state-of-the-art methods such as reaction bonding, microwave, CVD, CVI, electrophoresis, sol-gel, plasma, combustion, and more.
