Record Nr. UNINA9910462866503321 Advances in ceramic materials: special topic volume with invited **Titolo** papers only / / edited by Ping Xiao and Brian Ralph Pubbl/distr/stampa Zurich; ; Enfield, New Hampshire: ,: Trans Tech, , [2009] ©2009 **ISBN** 3-03813-259-4 Descrizione fisica 1 online resource (152 p.) Collana Materials science forum, , 0255-5476 ; ; volume 606 Altri autori (Persone) XiaoPing, Prof RalphBrian Disciplina 620.1/4 Soggetti Ceramic materials Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and indexes. Nota di contenuto Advances in Ceramic Materials; Preface; Table of Contents; Thermal Barrier Coatings on Nickel Superalloy Substrates; Silicon Nitride Ceramics; Challenges in Integration of Piezoelectric Ceramics in Micro Electromechanical Systems; When Should Microwaves Be Used to Process Technical Ceramics?; Ceramic and Glass Matrix Composites Containing Carbon Nanotubes: Stresses in Multilayered Ceramics Subjected to Biaxial Flexure Tests; Advanced Nano-Scale Metrology for the Characterization of Ceramic Materials in the Scanning Electron Microscope Finite Element Calculation of Sintering Deformation Using Limited Experimental DataMicrostructural Modeling of Ferroelectric Materials: State of the Art, Challenges and Opportunities; Processing, Microstructure and Properties of Nanograin Barium Titanate Ceramics by Spark Plasma Sintering; Keywords Index; Authors Index Sommario/riassunto This topical book, containing as it does state-of-the-art reviews, neatly encompasses the current status of research into ceramic materials. The topics covered include: Thermal barrier coatings on nickel superalloy substrates; Silicon nitride ceramics; Challenges to the integration of piezoelectric ceramics into micro-electromechanical systems; When

should microwaves be used to process technical ceramics?: Ceramic

and glass matrix composites containing carbon nanotubes; Stresses in multilayered ceramics subjected to biaxial flexure; Advanced nanoscale metrology for the characterization of cer