

Table of Contents

Preface

Thermal Barrier Coatings on Nickel Superalloy Substrates

X. Zhao and P. Xiao 1

Silicon Nitride Ceramics

S. Hampshire 27

Challenges in Integration of Piezoelectric Ceramics in Micro Electromechanical Systems

R.A. Dorey 43

When Should Microwaves Be Used to Process Technical Ceramics?

J. Binner and B. Vaidhyanathan 51

Ceramic and Glass Matrix Composites Containing Carbon Nanotubes

J. Cho and A.R. Boccaccini 61

Stresses in Multilayered Ceramics Subjected to Biaxial Flexure Tests

C.H. Hsueh 79

Advanced Nano-Scale Metrology for the Characterization of Ceramic Materials in the Scanning Electron Microscope

G. Pezzotti, A. Matsutani, M.C. Munisso and W.L. Zhu 93

Finite Element Calculation of Sintering Deformation Using Limited Experimental Data

J.Z. Pan and R.Y. Huang 103

Microstructural Modeling of Ferroelectric Materials: State of the Art, Challenges and Opportunities

S. Leach and R.E. Garcia 119

Processing, Microstructure and Properties of Nanograin Barium Titanate Ceramics by Spark Plasma Sintering

X.H. Wang, X.Y. Deng and L.T. Li 135