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Microstructural Design for Si-B4C-Diamond SystemFabrication of High Volume Fraction SiCp/Al Metal Matrix Composites; Densification and Microstructural Properties of Boron-Carbide in Spark Plasma Sintering; Modeling Heat Transfer During Sublimation Growth of Silicon Carbide Single Crystals by Physical Vapor Transport; Development of Nano Zirconia Toughened Alumina for Ceramic Armor Applications; Microstructure Property Relationship in Cermic Armor Materials; NONDESTRUCTIVE CHARACTERIZATION; Ultrasonic Nondestructive Characterization and its Correlation to Alumina Microstructure
Low Velocity Impact Damage Characterization of Transparent MaterialsComparison of Penetration Damage in Novel Mg Specimens via Computed Tomography; Application of a Miniaturized Portable Microwave Interference Scanning System for Nondestructive Testing of Composite Ceramic Armor; Statistical Quantification and Sensitivity Prediction of Phased-Array Ultrasonic Data in Composite Ceramic Armor; Ultrasonic Nondestructive Characterization of Oil-Based Clay; PHENOMENOLOGY AND MECHANICS OF CERAMICS SUBJECTED TO BALLISTIC IMPACT
2011 Overview of the Development of Ceramic Armor Technology: Past, Present and the FutureImpact Strength of Glass for Armor Applications; Measurement of Deformation in Alumina Samples Indented at High Strain Rates; Mesoscale Modeling of Dynamic Failure of Ceramic Polycrystals; Multi-Scale Computational Investigations of SiC/B4C Interfaces; Simulation of the Ballistic Impact of Tungsten-Based Penetrators on Confined Hot-Pressed Boron Carbide Targets; Author Index

Sommario/riassunto

This book is a collection of papers from The American Ceramic Society's 35th International Conference on Advanced Ceramics and Composites, held in Daytona Beach, Florida, January 23-28, 2011. This issue includes papers presented in the Armor Ceramics Symposium on topics such as Manufacturing; High-Rate Real-Time Characterization; Microstructural Design; Nondestructive Characterization; and Phenomenology and Mechanics of Ceramics Subjected to Ballistic Impact.