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Delamination of Air Plasma-Sprayed Y,O,-ZrO, TBC After Formation of TGO Layer; Lanthanum-Lithium Hexaaluminate-A New Material for Thermal Barrier Coatings in Magnetoplumbite Structure-Material and Process Dewlopment; Modeling and Life Prediction of Thermal Barrier Coatings; Simulation of Stress Development and Crack Formation in APS-TBCS For Cyclic Oxidation Loading and Comparison with Experimental Observations
Numerical Simulation of Crack Growth Mechanisms Occurring Near the Bondcoat Surface in Air Plasma Sprayed Thermal Barrier CoatingsComparison of the Radiative Two-Flux and Diffusion Approximations; Damage Prediction of Thermal Barrier Coating; Environmental Barrier Coatings for Si-Based Ceramics; The Water-Vapour Hot Gas Corrosion Behavior of AI2O3-Y2O3 Materials, Y2Si05 and Y3O12-Coated Alumina in a Combustion Environment; Evaluation of Environmental Barrier Coatings for SiC/SiC Composites
Life Limiting Properties of Uncoated and Environmental-Barrier Coated Silicon Nitride at Higher TemperatureMultilayer EBC for Silicon Nitride; Non-Destructive Evaluation of Thermal and Environmental Barrier Coatings; Characterization of Cracks in Thermal Barrier Coatings Using Impedance Spectroscopy; Nondestructive Evaluation Methods for High Temperature Ceramic Coatings; Nondestructive Evaluation of Environmental Barrier Coatings in CFCC Combustor Liners; Ceramic Coatings for Spacecraft Applications; Charging of Ceramic Materials Due to Space-Based Radiation Environment
Spacecraft Thermal Management via Control of Optical Properties in the Near Solar EnvironmentMultifunctional Coatings and Interfaces; Preparation of Carbon Fiber Reinforced Silicon Oxycarbide Composite by Polyphenylsilsesquioxane Impregnation and Their Fracture Behavior; Interfacial Processing Via CVD For Nicalon Based Ceramic Matrix Composites; Coatings of Fe/FeAIN Thin Films; Polymeric and Ceramic-Like Coatings on the Basis of SiN(C) Precursors for Protection of Metals Against Corrosion and Oxidation
Effect of Temperature and Spin-Coating Cycles on Microstructure Evolution for Tb-Substituted SrCeO, Thin Membrane Films

Sommario/riassunto

Recent advances in coating development, processing, microstructure and property characterization, and life prediction are included in this book, which came from the proceedings of the 30th International Conference on Advanced Ceramics and Composites, January 22-27, 2006, Cocoa Beach, Florida. Organized and sponsored by The American Ceramic Society and The American Ceramic Society's Engineering Ceramics Division in conjunction with the Nuclear and Environmental Technology Division.. Integrated structural, environmental properties and functionality through advanced coating processing and structu