

1. Record Nr.	UNINA9911019234503321
Titolo	Advanced ceramic coatings and interfaces : a collection of papers presented at the 30th International Conference on Advanced Ceramics and Composites, January 22-27, 2006, Cocoa Beach, Florida / / editors, Dongming Zhu, Uwe Schulz ; general editors, Andrew Wereszczak, Edgar Lara-Curzio
Pubbl/distr/stampa	Hoboken, NJ, : Wiley, c2007
ISBN	9786612315015 9781282315013 1282315013 9780470291320 047029132X 9780470291733 0470291737
Descrizione fisica	1 online resource (336 p.)
Collana	Ceramic engineering and science proceedings, , 0196-6219 ; ; v. 27/3
Altri autori (Persone)	ZhuDongming SchulzUwe WereszczakAndrew Lara-CurzioEdgar <1963->
Disciplina	620.14 620.1404
Soggetti	Ceramic coating Refractory coating
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 index.
Nota di contenuto	Advanced Ceramic Coatings and Interfaces; Contents; Preface; Introduction; Advanced Thermal Barrier Coating Development and Testing; Relation of Thermal Conductivity with Process Induced Anisotropic Void Systems in EB-PVD PYSZ Thermal Barrier Coatings; Segmentation Cracks in Plasma Sprayed Thin Thermal Barrier Coatings; Design of Alternative Multilayer Thick Thermal Barrier Coatings; Creep Behaviour of Plasma Sprayed Thermal Barrier Coatings; Corrosion Rig Testing of Thermal Barrier Coating Systems; Thermal Properties of

Nanoporous YSZ Coatings Fabricated by EB-PVD
Oxidation Behavior and Main Causes for Accelerated Oxidation in
Plasma Sprayed Thermal Barrier CoatingsCrack Growth and
Delamination of Air Plasma-Sprayed Y₂O₃-ZrO₃ TBC After Formation of
TGO Layer; Lanthanum-Lithium Hexaaluminate-A New Material for
Thermal Barrier Coatings in Magnetoplumbite Structure-Material and
Process Development; 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 Al₂O₃-Y₂O₃ Materials, Y₂SiO₅
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/FeAlN 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 SrCeO₃ 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
