Record Nr. UNINA9910877859603321 Ceramics in nuclear applications: a collection of papers presented at **Titolo** the 33rd International Conference on Advanced Ceramics and Composites, January 18-23, 2009, Daytona Beach, Florida // edited by Yutai Katoh, Alex Cozzi; volume editors, Dileep Singh, Jonathan Salem Pubbl/distr/stampa Hoboken, NJ,: Wiley, c2010 **ISBN** 1-282-45640-7 9786612456404 0-470-58400-9 0-470-58399-1 Descrizione fisica 1 online resource (218 p.) Collana Ceramic engineering and science proceedings;; 30/10 Altri autori (Persone) KatohYutai CozziAlex SinghDilip SalemJ. A <1960-> (Jonathan A.) Disciplina 620.19304 Soggetti Ceramic materials Nuclear engineering - Materials 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 Ceramics in Nuclear Applications: Contents: Preface: Introduction: SILICON CARBIDE AND CARBON COMPOSITES; Single- and Multi-Lavered Interphases in SiC/SiC Composites Exposed to Severe Conditions: An Overview; Research and Developments on C/C Composite for Very High Temperature Reactor (VHTR) Application; X-Ray Tomographic Characterization of the Macroscopic Porosity of CVI SiC/SiC Composites-Effects on the Elastic Behavior; Mechanical Strength of CTP Triplex Sic Fuel Clad Tubes after Irradiation in MIT Research Reactor under PWR Coolant Conditions; MECHANICAL **PROPERTIES** Behaviors of SiC Fibers at High TemperatureFracture Resistance of Silicon Carbide Composites Using Various Notched Specimens; Optimization of an Interphase Thickness in Hot-Pressed SiCf/SiC

Composites; Validation of Ring-on-Ring Flexural Test for Nuclear

Ceramics Using Miniaturized Specimens; MATERIAL AND COMPONENT PROCESSING: Design, Fabrication, and Testing of Silicon Infiltrated Ceramic Plate-Type Heat Exchangers; Microstructural Studies of Hot Pressed Silicon Carbide Ceramic; Diffusion Bonding of Silicon Carbide to Ferritic Steel; CERAMICS FOR FUEL COATING Fracture Properties of SiC Layer in TRISO-Coated Fuel ParticlesOptimization of Fracture Strength Tests for the Sic Layer of Coated Fuel Particles by Finite Element Analysis; Laser Melting of Spark Plasma Sintered Zirconium Carbide: Thermophysical Properties of a Generation IV Very High Temperature Reactor Material; NUCLEAR FUELS AND WASTES; Development and Testing of a Cement Waste Form for TRU Effluent from the Savannah River Site Mixed Oxide Fuel Fabrication Facility; Frit Optimization for Sludge Batch Processing at the Defense Waste Processing Facility Ceramic Coated Particles for Safe Operation in HTRs and in Long-Term StorageAuthor Index

Sommario/riassunto

Provides a useful one-stop resource for understanding the most valuable aspects of ceramics in nuclear applications.