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Ceramic and Nuclear Industries VII; Contents; Preface; Recycling of Ceramic Byproducts; Refractory Recycling-Concept to Reality; Recycling of Aluminum Dross to Sialon-Based Ceramics by Nitriding Combustion; Recycling of the Waste Waters into Porcelainized Stoneware Ceramic Tiles: Effect on the Rheological, Thermal, and Aesthetical Properties; Mineral Processing Techniques for Recycling Investment-Casting Shell; Environmental Treatment Technology and Policy
 Exposure to Crystalline Silica in the Italian Ceramic Tile Industry: Present State and Future Prospects
 Managing Potential Ceramic Fiber Health Concerns Through Technology and Product Stewardship; Characterization of Defense Nuclear Waste Using Hazardous Waste Guidance. Status of the Evolving Process at Hanford; The European Ceramic Tile Industry and the New Approach to Environmental Protection; Vitrification and Process Technologies; West Valley Demonstration Project: Vitrification Campaign Summary
 Waste Glass Processing Requirements of the Hanford Tank Waste Treatment and Immobilization Plant
 Influence of Glass Property Restrictions on Hanford HLW Glass Volume; Vitrification and Testing of Hanford Pretreated HLW Sludge Mixed with Flowsheet Quantities of Secondary Wastes; Vitrification and Testing of Hanford Pretreated Low Activity Waste; Corrosion of Ni-Cr Alloys in Molten Salts and Hanford LAW Waste Glass; Technology Roadmapping Focuses Vitrification at the INEEL; Glass Formulation for Direct Vitrification of INEEL Calcine HLW
 A Snapshot of Melt Rate Testing and Reductant Selection for the INEEL Sodium-Bearing Waste Vitrification Program
 The Cold Crucible Melter: High-Performance Waste Vitrification; Millimeter-Wave Monitoring of Nuclear Waste Glass Melts-An Overview; Cold Cap Monitoring using Millimeter Wave Technology; Furnace System Development for the Plutonium Immobilization Program; Plutonium Immobilization Project Phase 2 Cold Pour Test; Real-Time Determination of the Redox State of Glasses-Direct Potentiometry vs. Chemical Analysis; Crystallization in Nuclear Waste Forms
 Crystallization in High-Level Waste Glasses
 Effect of Crystallization on High-Level Waste Glass Corrosion; The Effect of Glass Composition on Crystallinity and Durability for INEEL Run 78 Calcine Waste Simulant; Chemical Durability and Characterization; Long-Term Corrosion Tests with Hanford Glasses; Dissolution Kinetics of High-Level Waste Glasses and Performance of Glass in a Repository Environment; Analysis of Layer Structures Formed During Vapor Hydration Testing of High-Sodium Waste Glasses; Kinetics of Alteration in Vapor Phase Hydration Tests on High Sodium Waste Glass
 TCLP Leaching Prediction from the "THERMOTM" Model for Borosilicate Glasses

Sommario/riassunto

Composed from two symposia conducted at the 2001 Annual Meeting of The American Ceramic Society, this new volume details the advances in the state of knowledge in nuclear and waste materials science and technology. Highlighted are areas of rapid change such as in the application, development, and testing of ceramics and glasses in the nuclear and waste industries. As companies begin to focus on ¿green ceramics¿ and the manufacturing of environmentally friendly products, the development of innovative processing approaches and novel environmental treatment technologies soon follows. These