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Nota di contenuto	Environmental Issues and Waste Management Technologies in the Ceramic and Nuclear Industries X; Contents; Preface; Nuclear and Hazardous Waste Forms and Fuels- Processing and Technology; Vitrification Testing and Demonstration for the Hanford Waste Treatment and Immobilization Plant; Bubbling as a Means to Enhance Joule Heated Ceramic Melter Production Rates for Vitrifying Radioactive Wastes; High Level Waste Processing Experience with Increased Waste Loadings; DWPF Glass Air-Lift Pump Life Cycle Testing and Plant

Implementation

Corrosion Resistance of Metal Electrodes in an Iron Phosphate MeltFluidized Bed Steam Reforming (FBSR) of Organic and Nitrate Containing Salt Supernate; Steam Reformation of Sodium Bearing Waste: Pros & Cons; ANSTO's Waste Form Research and Development Capabilities; Stabilization of Arsenic-Bearing Iron Hydroxide Solid Wastes in Polymeric Matrices; Effect of Thermal Treatment Conditions on Microstructure and Composition of High Temperature Reactor Fuel Kernel; Glass Waste Forms-Modelling, Properties, and Testing Predicting Phase Equilibria of Spinel-Forming Constituents in Waste Glass SystemsLiquidus Temperature and One Percent Crystal Content Models for Initial Hanford HLW Glasses; Dependency of Sulfate Solubility on Melt Composition and Melt Polymerization; Evaluation of Glass from The DWPF Melter; Redox Activity of Rhenium in Silicate Glasses; Analysis of Defense Waste Processing Facility Products with Laser Induced Breakdown Spectroscopy; The Structural Chemistry of Molybdenum in Model High Level Nuclear Waste Glasses, Investigated by MO K-Edge X-Ray Absorption Spectroscopy

Ceramic Waste Forms-Formulation and TestingAlpha Decay Damage in Ceramic Waste Forms-Microstructural Aspect; Charge Compensation in Ca(La)TiO3 Solid Solutions; Hollandite Ceramics: Effect of Composition on Melting Temperature; Chemical Durability of Iron-Substituted Hollandite Ceramics for Cesium Immobilization; Titanate Ceramics for Immobilization of U-Rich Wastes; Waste Form Development for the Solidification of PDCF/MOX Liquid Waste Streams; Solidification of Sodium Bearing Waste Using Hydroceramic and Portland Cement Binders

Grout Formulations For Closing Hanford High-Level Waste Tanks-Bench-Scale StudyChemical Solution Deposition of CaCu3Ti4O12 Thin Films; Author Index; Keyword Index

Sommario/riassunto

These proceedings capture advances in the state of knowledge in nuclear and waste materials science and technology. In addition, the proceedings addresses the environmental issues associated with ceramic processing. Included are the status of environmental issues and their solutions, both current and proposed.