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and Crystallization Tendency of a Borosilicate Glass Containing MoO3; The Immobilisation of a Chloride Containing Actinide Waste Surrogate in Calcium Aluminosilicate Glasses; International Studies of Enhanced Waste Loading and Improved Melt Rate For High Alumina Concentration Nuclear Waste Glasses; Leach Testing Applied to the Investigation of Long-Term Behavior of High-Level Waste Glass: French Experience SCK·CEN R&D on the Interaction between Nuclear Waste Glass and Clay Near- and Far-Field MaterialsGLAMOR-Or How We Achieved a Common Understanding on the Decrease of Glass Dissolution Kinetics; Characterization of Vitrified Savannah River Site SB4 Waste Surrogate Produced in Cold Crucible Induction Melter; Accelerated Weathering of Waste Glass at 90°C with the Pressurized Unsaturated Flow (PUF) Apparatus: Implications for Predicting Glass Corrosion with a Reactive Transport Model; The Product Consistency Test (PCT): How and Why it Was Developed
GREEN TECHNOLOGIES FOR MATERIALS MANUFACTURING AND PROCESSINGGreen Process for Recovery of Copper; Exploiting Hall-Petch Strengthening for Sustainability; Novel Process Development with Continuous Casting and Precise Forging for AI-Si Alloys to Produce an Engine Piston; Pilot Testing of a Green, No-Waste Process to Maximize Value from Hot Aluminum Dross; Effect of Bismuth on the Tensile Properties and Dry Machining Performance of AL-12.7 wt% Si Alloy; Engineering Decisions to Green the Automobile Supply Chain; Novel Ceramic Forming Methods with a Reactive Organic Binder Environmental Assessment of Manufacturing with Carbon NanotubesNitrate Fining and Emissions During Glass Manufacturing; Low-Cost Solid Geopolymeric Material for Water Purification; Exergy Analysis on Life Cycle of Ceramic Parts; Anion Exchange Property of As (III), As(V), Se(lV), CrR(VI) and B(III) with Hydrotalcite-Like Compounds; Preparation of Metal Oxide Photocatalyst by Soft Solution Process with Anion Exchange Resin; Photocatalytically Efficient Zinc Oxide Microstructural Assembly; Author Index

Sommario/riassunto

This book documents a special collection of articles from a select group of invited prominent scientists from academia, national laboratories and industry who presented their work at the symposia on Environmental and Energy Issues at the 2008 Materials Science and Technology (MS&T'08) conference held in Pittsburgh, PA. These articles represent a summary of the presentations focusing on topics in nuclear, environmental, and green engineering were held, including a discussion of Waste Glass Leach Testing and Modeling.