Record Nr. UNINA9910140287703321 Ceramics for environmental and energy applications II. Volume 246 **Titolo** Ceramic transactions: a collection of papers presented at the 10th Pacific Rim Conference on Ceramic and Glass Technology June 2-6, 2013 Coronado, California / / edited by Fatih Dogan [and eight others] Pubbl/distr/stampa Hoboken, New Jersey:,: Wiley,, 2014 ©2014 **ISBN** 1-118-77132-X 1-118-77149-4 Descrizione fisica 1 online resource (286 p.) Collana Ceramic Transactions, , 1042-1122 ; ; Volume 246 Altri autori (Persone) DoganFatih Disciplina 620.14 Soggetti Ceramic materials - Environmental aspects Ceramics 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 at the end of each chapters and index. Cover; Title Page; Copyright Page; Contents; Preface; Recent Research Nota di contenuto Activities for Future Challenges in Global Energy and Environment in Toyota Central R&D Labs., Inc. (TCRDL); ABSTRACT; INTRODUCTION; COMPACT AND HIGH REPETITION (10HZ) LASER NUCLEAR FUSION; COMPACT SOLAR-PUMPED LASER; SOLAR CELLS; Dye-sensitized Solar Cells: Cu2ZnSnS4 Thin Film Solar Cells: The Third Generation Solar Cells: ARTIFICIAL PHOTOSYNTHESIS OF FORMIC ACID FROM CO2 AND H2O ONLY USING SUNLIGHT; SUMMARY; REFERENCES; SOLID OXIDE FUEL CELLS AND HYDROGEN TECHNOLOGY Structural and Electrical Characterization of Pr (0.15 0.40) as Cathode Materials for Low Temperature SOFC ABSTRACT: INTRODUCTION: EXPERIMENTAL DETAILS: RESULTS AND DISCUSSION: CONCLUSIONS: ACKNOWLEDGMENTS; REFERENCES; Solid Oxide Metal-Air Batteries for Advanced Energy Storage; ABSTRACT; INTRODUCTION; A BRIEF REVIEW ON THE RSOFCS AND HYDROGEN CHEMICAL LOOPING; WORKING PRINCIPLE AND KEY FEATURES OF THE NEW BATTERY; SELECTION OF

REDOX COUPLE ENERGY STORAGE UNIT: CYCLING PERFORMANCES AT

800°C AND 550°C; CONCLUSION; REFERENCES

Fabrication of CeO2/Al Multilayer Thin Films and the Thermal Behavior ABSTRACT; INTRODUCTION; EXPERIMENTAL; RESULT AND DISCUSSION; CONCLUSIONS: ACKNOWLEDGMENTS: REFERENCES: DIRECT THERMAL TO ELECTRICAL ENERGY CONVERSION MATERIALS AND APPLICATIONS; Reduced Strontium Titanate Thermoelectric Materials; ABSTRACT; INTRODUCTION; EXPERIMENTAL PROCEDURE; RESULTS; DISCUSSION; CONCLUSION: ACKNOWLEDGMENTS: REFERENCES: PHOTOVOLTAIC MATERIALS AND TECHNOLOGIES; Densification and Properties of Fluorine Doped Tin Oxide (FTO) Ceramics by Spark Plasma Sintering; ABSTRACT: INTRODUCTION: EXPERIMENTAL PROCEDURES RESULTS AND DISCUSSIONS Densification and Sintering Behaviors of FTO powders; Phase Compositions and Microstructure of FTO ceramics; Electrical Properties of FTO Ceramics; CONCLUSIONS; ACKNOWLEDGMENTS; REFERENCES; Interfacial Character and Electronic Passivation in Amorphous Thin-Film Alumina for Si Photovoltaics; ABSTRACT: INTRODUCTION: EXPERIMENTAL METHODS: Material Deposition: Thermal Processing: Electronic Characterization: Structural Characterization: RESULTS: DISCUSSION: CONCLUSIONS: ACKNOWLEDGMENTS: REFERENCES: CERAMICS FOR NEXT GENERATION **NUCLEAR ENERGY** SiC/SiC Fuel Cladding by NITE Process for Innovative LWR Pre-Composite Ribbon Design and Fabrication ABSTRACT; INTRODUCTION; EXPERIMENTAL: Concept and Fabrication of the PCR: Fabrication of Preforms with the PCR; RESULTS AND DISCUSSION; Concept and Fabrication of the PCR; Fabrication of Preform using the PCR; CONCLUSION: ACKNOWLEDGMENT: REFERENCES: SiC/SiC Fuel Cladding by NITE Process for Innovative Light Water Reactor - Compatibility with High Temperature Pressurized Water; ABSTRACT; INTRODUCTION; THE PLAN OF COMPATIBILITY TEST IN PROJECT SCARLET: THE COMPATIBILITY PRE-TEST; CONCLUSION **ACKNOWLEDGMENT**

Sommario/riassunto

A collection of papers from the below symposia held during the 10th Pacific Rim Conference on Ceramic and Glass Technology (PacRim10), June 2-7, 2013, in Coronado, California 2012: Solid Oxide Fuel Cells and Hydrogen Technology Direct Thermal to Electrical Energy Conversion Materials and Applications Photovoltaic Materials and Technologies Ceramics for Next Generation Nuclear Energy Advances in Photocatalytic Materials for Energy and Environmental Applications Ceramics Enabling Environmental Protection: Clean Air and Water Advanced