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Titolo	Environmental degradation of engineering materials & materials engineering and technologies : selected, peer reviewed papers from the 4th International Conference on Environmental Degradation of Engineering Materials and 5th International Conference on Materials Engineering and Technologies (EDEMET 2011), May 15-18, 2011, Gdansk, Poland // edited by Jerzy Labanowski and Andrzej Zielinski
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ISBN	3-03813-696-4
Descrizione fisica	1 online resource (268 p.)
Collana	Solid State Phenomena, , 1662-9787 ; ; Volume 183
Altri autori (Persone)	abanowskiJerzy <1957-> ZielinskiAndrzej <1947->
Disciplina	363.7
Soggetti	Materials - Biodegradation Materials - Deterioration Electronic books.
Lingua di pubblicazione	Inglese
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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 indexes.
Nota di contenuto	Environmental Degradation of Engineering Materials & Materials Engineering and Technologies; Preface; Table of Contents; Electrochemical Deposition of the Ca-P Coatings on the Porous Nanocrystalline Ti-6Al-4V Alloy; Study of Iron-Based Alloys in Solid Oxide Fuel Cell Temperature and Atmosphere Conditions, Effect of a Silver-Coating; FEM Analysis of Lower Premolar Root Canal Filling; Effect of Cavitation on Absorption and Transport of Hydrogen in Iron; Prevention to Hydrogen Degradation of Steel; Determination of Failure Causes of a Steam Turbine Casing Effect of the Ceramic Dispersion in the Nickel Matrix Composite Coatings on Corrosion Properties after Plastic Working Iodine-Induced Stress Corrosion Cracking of Zircaloy-4: Identification of Critical Parameters Involved in Intergranular to Transgranular Crack Propagation; Application of EIS to Study the Corrosion Resistance of Passivated NiTi Shape Memory Alloy in Simulated Body Fluid;

Perovskites in Solid Oxide Fuel Cells; The Effect of Low-Temperature Glow Discharge Nitriding of Duplex Stainless Steel on Absorption and Desorption of Hydrogen
Quality Investigation of Au Nanoarrays for Biosensing
Application Preparation and Characterization of TiO₂ Nanostructures for Catalytic CO₂ Photoconversion; Influence of Type of Material on Performance of Hydraulic Components in Thermal Shock Conditions; Underwater Welding of Duplex Stainless Steel; Degradation of Gel-Coat Layer in Glass/Polyester Laminate in Seawater Environment; Effect of Crystallization Process at Cryogenic Conditions on the Functional Properties of the SUPERSTON Alloy Used in Production the Ship's Propellers; Microbial Aspects in Corrosion Studies of Stainless Steels Numerical Modeling of Magnetorheological Elastomers Microstructure Behavior under Magnetic Field Surface Modification of Pure Titanium by TiB Precipitation; Formation of High Corrosion Resistant Nanotubular Layers on Titanium Alloy Ti₁₃Nb₁₃Zr; Electrochemical Properties of Ni-Cr and Co-Cr Alloys Used in Prosthodontics; Wear and Corrosion Characteristics of the Layers Type (Mn-P) Formed on Aluminium Alloys; Formation of Porous Structure of the Metallic Materials Used on Bone Implants; Experimental Investigations of MREs Behavior under the Cyclic Load
Evaluation of Hydrogen Degradation by In Situ Ultrasonic Testing

Sommario/riassunto

The purpose of this collection is to disseminate the latest developments in the field of the environmental degradation of structural materials, hydrogen degradation, stress corrosion cracking, hydrogen and corrosion fatigue. The result is an excellent guide to the experimental study and modeling of environmentally-assisted cracking, advanced materials technologies and case studies of materials failure in various industrial applications. Review from Book News Inc.: Conferences held in May 2011, in Gdansk, Poland, provided a forum for materials scientists and engineers working in environmental d
