1. Record Nr. UNINA9910791911103321

Titolo	Electrophoretic deposition : fundamentals and applications IV : selected, peer reviewed papers from the 4th International Conference on Electrophoretic Deposition: Fundamentals and Applications, October 2-7, 2011, Puerto Vallarta, Mexico / / editors, A.R. Boccaccini [et al.]
Pubbl/distr/stampa	Durnten-Zurich, Switzerland, : Trans Tech Publications, 2012
ISBN	3-03813-692-1
Descrizione fisica	1 online resource (224 p.)
Collana	Key engineering materials, , 1662-9809 ; ; v. 507
Disciplina	671.7/3 671.73
Soggetti	Electrophoretic deposition
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 and indexes.
Nota di contenuto	Electrophoretic Deposition: Fundamentals and Applications IV; Foreword, Conference Chairs, International Organising Committee, Acknowledgements and Photograph of Participants; Table of Contents; I. Advanced Experimental Techniques and Theoretical Approaches; Development of Diffusion Barrier Coatings for Mitigation of Fuel-Cladding Chemical Interactions; Hybrid Electrophoretic Deposition with Anodization Process for Superhydrophilic Surfaces to Enhance Critical Heat Flux; Textured Ti3SiC2 by EPD in a Strong Magnetic Field; Pulse Electric Fields for EPD of Thermal Barrier Coatings Triethanolamine as an Additive in the Electrophoretic Deposition of TiTe3O8 Thick Films Electrophoretic Deposition onto Ionic Liquid Layers; AC Electrophoresis, a New Technique for Deposition of Ceramic Nanoparticles; Introduction, Application and Mechanism; Direct Numerical Simulations of Electrophoretic Deposition of Charged Colloidal Suspensions; Fundamentals of Pulsed and Direct Current Electrophoretic Infiltration Kinetics; II. Nanostructured Materials, Carbon Nanotubes and Thin Films; AFM Characterization of the Nanoparticles Arrangement by Electrophoretic Deposition High Voltage Electrophoretic Deposition of Aligned Nanoforests for Scalable Nanomanufacturing of Electrochemical Energy Storage Devices Thin Films of Europium (III) Doped-TiO2 Prepared by Electrophoretic

Deposition from Nanoparticulate Sols; Current Measurements as a Direct Diagnostic for Sub-Monolayer Growth of Nanoparticle Films in Non-Polar Electrophoretic Deposition; A Controlled Colloidal Destabilization Approach for the Electrophoretic Deposition (EPD) from Cobalt Ferrite and Magnetite Nanoparticles Suspensions in Diethylene Glycol
Selective Deposition of TiO2 during Monolayer Formation of TiO2 and Iron Oxide Nanocrystals by Electrophoretic Deposition in Non-Polar Solvents Electrophoretic Deposition of Cadmium Sulfide Nanoparticles: Electric Field and Particle Size Effects; Cadmium Sulfide and Zinc Sulfide Nanostructures Formed by Electrophoretic Deposition; Electrochemical Functionalization of Single-Walled Carbon Nanotubes Films Obtained by Electrophoretic Deposition; Fabrication of Polyaniline/Carbon Nanotubes Composites Using Carbon Nanotubes Films Obtained by Electrophoretic Deposition
III. Biomaterials and Biological Entities Confocal Microscope Studies of Living Cells Deposited Using Alternating Current Electrophoretic Deposition (AC-EPD); Electrophoretic Deposition of PEEK-TiO2 Composite Coatings on Stainless Steel; Electrophoretic Deposition of Bioactive Glass Coatings on Ti12Mo5Ta Alloy; Corrosion Resistance Study of Electrophoretic Deposited Hydroxyapatite on Stainless Steel for Implant Applications; IV. EPD Integrated Manufacturing Technologies; EPD of Phosphors for Display and Solid State Lighting Technologies Macro- and Microscale Fabrication by Field Assisted Nanoparticle Assembly - The Challenging Path from Science to Engineering

Sommario/riassunto

The contributions to this special collection cover a wide range of subject areas related to EPD and reflect the impressive versatility of that technique for materials processing. The topics discussed range from theoretical studies of the fundamental mechanisms of EPD, to novel techniques which exploit EPD for the efficient and cost-effective fabrication of a variety of advanced materials.