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Titolo	Challenges in Mechanics of Time-Dependent Materials, Volume 2 : Proceedings of the 2014 Annual Conference on Experimental and Applied Mechanics // edited by H. Jerry Qi, Bonnie Antoun, Richard Hall, Hongbing Lu, Alex Arzoumanidis, Meredith Silberstein, Jevan Furmanski, Alireza Amirkhizi, Joamin Gonzalez-Gutierrez
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Collana	Conference Proceedings of the Society for Experimental Mechanics Series, , 2191-5652
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Soggetti	Materials - Analysis Characterization and Analytical Technique
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapter.
Nota di contenuto	Unimorph Shape Memory Polymer Actuators Incorporating Transverse Curvature in the Substrate -- Yield Criterion for Polymeric Matrix Under Static and Dynamic Loading -- Investigating Uncertainty in SHPB Modeling and Characterization of Soft Materials -- Diffusion of Chemically Reacting Fluids Through Nonlinear Elastic Solids and 1D Stabilized Solutions -- Effect of Temperature on Mechanical Property Degradation of Polymeric Materials -- Small Strain Plasticity Behavior of 304L Stainless Steel in Glass-to-Metal Seal Applications.-Observations of Rate-Dependent Fracture of Locally Weakened Interfaces in Adhesive Bonds -- Keynote: Time Dependent Response of Composite Materials to Mechanical and Electrical Fields (40-min) -- Characterizing the Temperature Dependent Spring-back Behavior of Poly(methyl Methacrylate) (PMMA) for Hot Embossing -- Thermomechanical Fatigue Evaluation of Haynes® 230® for Solar Receiver Applications -- Viscoelastic Characterization of Fusion Processing in Bimodal Polyethylene Blends -- Viscoelastic Properties for PMMA Bar Over a Wide Range of Frequencies -- Implementation of Fractional Constitutive Equations Into the Finite Element Method -- Effect of Pressure on

Damping Properties of Granular Polymeric Materials -- Flow of Dry Grains Inside Rotating Drums -- Statistical Prediction of Tensile Creep Failure Time of Unidirectional CFRP -- Thermal Crystallinity and Mechanical Behavior of Polyethylene Terephthalate -- Effect of UV Exposure on the Mechanical Properties of POSS Reinforced Epoxy Nanocomposites -- Overcoming Challenges in Material Characterization of Polymers at Intermediate Strain Rates -- Prediction of Statistical Distribution of Solder Joint Fatigue Lifetime Using Hybrid Probabilistic Approach -- Effect of Moisture and Anisotropy in Multilayer SU-8 Thin Films -- Shrinkage Coefficient: Drying Microcrack Indicator -- Thermo-fluid Modeling of the Friction Extrusion Process.

Sommario/riassunto

Challenges in Mechanics of Time-Dependent Materials, Volume 2: Proceedings of the 2014 Annual Conference on Experimental and Applied Mechanics, the second volume of eight from the Conference, brings together contributions to this important area of research and engineering. The collection presents early findings and case studies on fundamental and applied aspects of Experimental Mechanics, including papers in the following general technical research areas: Metallic, Polymeric and Composite Materials o Effects of Extreme Environments including Radiation Resistance, Damage, and Aging o Challenges in Time-dependent Behavior Modeling of Low, Moderate and High Strain Rates o Effects of Inhomogeneities on the Time-Dependent Behavior o Time dependent granular materials · Composite, Hybrid and Multifunctional Materials o Challenges in Time-dependent Behavior Modeling Viscoelastoplasticity and Damage o Effects of Interfaces and Interphases on the Time-Dependent Behavior · Mechanics of materials from advanced manufacturing, such as additive manufacturing o Property characterization from AM o Process modeling and simulations of AM o Material design using AM · Time-dependent and Small-scale Effects in Micro/Nano-scale Testing .
