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Titolo	Service Life Prediction of Exterior Plastics : Vision for the Future / / edited by Christopher C. White, Jon Martin, J. Thomas Chapin
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Descrizione fisica	1 online resource (262 p.)
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Soggetti	Mechanics, Applied Solids Coatings Tribology Corrosion and anti-corrosives Physical chemistry Building materials Solid Mechanics Corrosion Physical Chemistry Structural 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 and index.
Nota di contenuto	Predicting Elevated Temperature Ratings of Polymeric Materials -- Laboratory-Based Predictions of Weathering in Outdoor Environments over the Entire Degradation Pathway -- Hydrolysis Kinetics and Lifetime Prediction for Polycarbonate and Polyesters in Solar Energy Applications -- Polycarbonate and Polyesters in Solar Energy Applications -- A Kinetic Model for Predicting Polymeric Neutron Shieldings Lifetime -- How Can We Effectively use Accelerated Methods to Predict the Decorative Properties of PVDF- Based Coatings? A Practical Approach

-- Accelerated Testing: Understanding Experimental Design and Error Propagation -- Thermal Aging of Polyolefin and Effect of Pre-Irradiation of Ray on Degradation -- Test Method Development for Outdoor Exposure and Accelerated Weathering of Vinyl Siding Specimens -- Shelf Life Assessment of Poly (ethylene-co-vinyl acetate) and Polyester-Polyol Resins used as Adhesives -- Accelerated Service Life Testing of Photovoltaic Modules -- Ultra-Accelerated Weathering II: Considerations for Accelerated Data Based Weathering Service Life Predictions -- Quantitative Mapping of Mechanisms for Photoinitiated Coating Degradation -- Polypropylene Numerical Photoageing Simulation by Dose Response Functions with Respect to Irradiation and Temperature– ViPQuali Project -- Impact of Environmental Factors on Polymeric Films used in Protective Glazing Systems.

Sommario/riassunto

This book defines the current state-of-the-art for predicting the lifetime of plastics exposed to weather and outlines future research needed to advance this important field of study. Coverage includes progress in developing new science and test methods to determine how materials respond to weather exposure. This book is ideal for researchers and professionals working in the field of service life prediction. This book also: Examines numerous consensus standards that affect commercial products allowing readers to see the future of standards related to service life prediction Provides the scientific foundation for the latest commercially viable instruments Presents groundbreaking research, including the blueprint of a new test method that will significantly shorten the service life prediction process time Covers two of the latest verified predictive models, which demonstrate realized-potential to transform the field.