1. Record Nr. UNINA9910366597203321 Shape Memory Polymers, Blends and Composites: Advances and Titolo Applications / / edited by Jyotishkumar Parameswaranpillai, Suchart Siengchin, Jinu Jacob George, Seno Jose Singapore:,: Springer Singapore:,: Imprint: Springer,, 2020 Pubbl/distr/stampa 981-13-8574-2 **ISBN** Edizione [1st ed. 2020.] Descrizione fisica 1 online resource (X, 329 p. 193 illus., 134 illus. in color.) Collana Advanced Structured Materials, , 1869-8433 ; ; 115 620.11 Disciplina Engineering—Materials Soggetti Polymers Ceramics Glass Composites (Materials) Composite materials Materials Engineering **Polymer Sciences** Ceramics, Glass, Composites, Natural Materials Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Introduction to Shape Memory Polymers, Polymer Blends and Nota di contenuto Composites: State of The Art, Opportunities, New Challenges and Future Outlook -- Classification of Shape Memory Polymers, Polymer Blends and Composites -- Novel Techniques for the Preparation of Shape Memory Polymers, Polymer Blends and Composites at Micro and Nano Scales -- Rheology of Shape Memory Polymers Polymer Blends and Composites -- Microscopy of Shape Memory Polymers, Polymer Blends and Composites -- Dynamical Mechanical Thermal Analysis of Shape Memory Polymers, Polymer Blends and Composites --Differential Scanning Thermal Analysis of Shape Memory Polymers, Polymer Blends and Composites -- Thermal Stability of Shape Memory

> Polymers Polymer Blends and Composites -- Mechanical Properties (Shape Memory Properties by Tensile and Tree Point Bending, Fracture Behavior, Toughening Etc. of Shape Memory Polymers, Polymer Blends

and Composites -- Completely Biodegradable Shape Memory Polymers, Blends and Composites -- Optical, Electrical and Magnetic Properties of Shape Memory Polymers Polymer Blends and Composites -- Spectroscopy and Other Miscellanies Techniques for The Characterization of Shape Memory Polymer Blends and Composites -- Modeling of Shape Memory Polymer Blends and Composites -- Applications of Shape Memory Polymer Blends and Composites.

Sommario/riassunto

This book explores the recent advances in the field of shape memory polymers, whose ease of manufacturing and wide range of potential applications have spurred interest in the field. The book presents details about the synthesis, processing, characterization, and applications of shape memory polymers, their blends and composites. It provides a correlation of physical properties of shape memory polymers with macro, micro and nano structures. The contents of this book will be of interest to researchers across academia and industry.