1. Record Nr. UNINA9910813787203321

Autore	Li Guoqiang
Titolo	Self-healing composites : shape memory polymer based structures / / Guoqiang Li
Pubbl/distr/stampa	Chichester, England : , : Wiley, , 2015 ©2015
ISBN	1-118-45245-3 1-118-45246-1 1-118-45244-5
Edizione	[1st ed.]
Descrizione fisica	1 online resource (389 p.)
Classificazione	TEC013000
Disciplina	620.1/18
Soggetti	Composite materials Self-healing 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 at the end of each chapters and index.
Nota di contenuto	Self-Healing Composites: Shape Memory Polymer Based Structures; Contents; Preface; 1 Introduction; 1.1 Thermosetting Polymers; 1.2 Thermosetting Polymer Composites in Structure Applications; 1.3 Damage in Fiber Reinforced Thermosetting Polymer Composite Structures; 1.3.1 Damage in Laminated Composites; 1.3.2 Damage in Sandwich Composites; 1.3.3 Damage in 3-D Woven Fabric Reinforced Composites; 1.3.4 Damage in Grid Stiffened Composites; 1.4 Repair of Damage in Thermosetting Polymer Composite Structures; 1.5 Classification of Self-Healing Schemes; 1.6 Organization of This Book; References 2 Self-Healing in Biological Systems2.1 Self-Healing in Plants; 2.2 Seal-Healing in Animals; 2.2.1 Self-Healing by Self-Medicine; 2.2.2 Self-Healing Lizard; 2.2.3 Self-Healing Starfish; 2.2.4 Self-Healing of Sea Cucumbers; 2.2.5 Self-Healing of Earthworms; 2.2.6 Self-Healing of Salamanders; 2.3 Self-Healing in Human Beings; 2.3.1 Psychological Self-Healing; 2.3.2 Physiological Self-Healing; 2.4 Summary; 2.5 Implications from Nature; References; 3 Thermoset Shape Memory Polymer and Its Syntactic Foam; 3.1 Characterization of Thermosetting SMP and SMP Based Syntactic Foam

Sommario/riassunto

"We hope this book will provide some background information for readers who are interested in using SMPs for self-healing"--