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Titolo	Multifunctional Epoxy Resins : Self-Healing, Thermally and Electrically Conductive Resins / / edited by Nishar Hameed, Jaworski C. Capricho, Nisa Salim, Sabu Thomas
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Descrizione fisica	1 online resource (439 pages)
Collana	Engineering Materials, , 1868-1212
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Soggetti	Polymers Composite materials Materials Composites Materials Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1 - Introduction to multifunctional epoxy resins – fundamentals, state of the art and challenges -- Part 1- Self-healing resins -- Chapter 2 - Basics of self-healing epoxy systems General concepts, behavior and mechanism -- Chapter 3 - Mechanism of extrinsic and intrinsic self-healing in polymer systems -- Chapter 4 - Synthetic design of self-healing epoxy systems.-Chapter 5 - State of art in intrinsic self-healing epoxy networks (advantages, issues and outlook) -- Chapter 6 - Epoxy based corrosion resistant and self-healing coatings -- Chapter 7 - Self-healing epoxy resin with multi stimuli-responsive behavior -- Chapter 8 - Bioinspired self-healing epoxy resins -- Chapter 9 - Modelling and Simulation of self-healing systems -- Part 2- Shape memory resins -- Chapter 10 - Basics of shape memory systems General concepts, behavior and mechanism) -- Chapter 11 - Synthetic approaches of shape memory epoxy systems -- Chapter 12 - Properties and characterization of shape memory resins -- Chapter 13 - Modelling and Simulation in shape memory systems -- Chapter 14 - Applications of shape memory epoxy systems -- Part 3 - Thermally conductive resin systems -- Chapter 15 - Fundamentals of

thermal conductivity in polymer network -- Chapter 16 - Imparting thermal conductivity in epoxy: Approaches and mechanism -- Chapter 17 - Modelling, simulation and machine learning in thermally conductive epoxy materials -- Chapter 18 - Applications of thermally conductive resins -- Part 4 – Electrically conductive epoxy resins -- Chapter 19 - Fundamentals of electrical conductivity in polymers -- Chapter 20 - Imparting electrical conductivity in epoxy: Approaches and mechanism -- Chapter 21 - Modelling, simulation and machine learning in electrically conductive epoxy materials.-Chapter 22 - Applications of electrically conductive epoxy resins. .

Sommario/riassunto

This book consolidates information about multifunctional epoxy as a frontier material, its composites, engineering and applications in a very detailed manner that encompasses the entire spectrum of up-to-date literature citations, current market trends and patents. It highlights latest experimental and theoretical studies on the atypical properties of epoxy resins such as self-healing, thermally and electrically conductivity; and its applications in devices where there is reliance on unsustainable sourced inorganic materials with comparable properties. It caters to polymer chemists, physicists and engineers who are interested in the field of next generation epoxy polymers.

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Titolo	Cellular & molecular biology letters
Pubbl/distr/stampa	[Wrocaw, Poland], : [Polish Academy of Sciences, Committee of Biochemistry and Biophysics], : [Polish Network for Molecular and Cell Biology UNESCO/PAN] [Berlin, Germany], : Springer [Berlin, Germany], : De Gruyter London, : BioMed Central
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