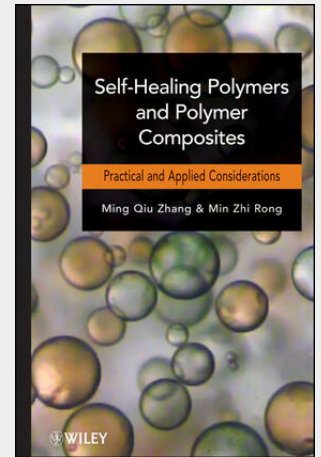


## Self-Healing Polymers and Polymer Composites

This book covers the fundamentals, theory, design, fabrication, characterization, and application of self-healing polymers and polymer composites. Innovative routes that correlate materials chemistry to the self-healing functionality are summarized for future industrial use. Throughout the book, the authors emphasize integration of existing techniques and / or novel synthetic approaches for target-oriented materials design and fabrication. With this book, experienced readers will gain a comprehensive view of the emerging field, while new researchers will understand the framework for creating new materials or new applications.

A state-of-art guide on the interdisciplinary aspects of design, chemistry, and physical properties of bio-inspired self-healing polymers Inspired by the natural self-healing properties that exist in living organisms--for example, the regenerative ability of humans to heal from cuts and broken bones--interest in self-healing materials is gaining more and more attention. Addressing the broad advances being made in this emerging science, Self-Healing Polymers and Polymer Composites incorporates fundamentals, theory, design, fabrication, characterization, and application of self-healing polymers and polymer composites to describe how to prepare self-healing polymeric materials, how to increase the speed of crack repair below room temperature, and how to broaden the spectrum of healing agent species. Some of the information readers will discover in this book include: \* Focus on engineering aspects and theoretical backgrounds of smart materials \* The systematic route for developing techniques and materials to advance the research and applications of self-healing polymers \* Integration of existing techniques and introduction of novel synthetic approaches and target-oriented materials design and fabrication \* Techniques for characterizing the healing process of polymers and applications of self-healing polymers and polymer composites \* Practical aspects of self-healing technology in various industrial fields, such as electronics, automotive, construction, chemical production, and engineering With this book, readers will have a comprehensive understanding of this emerging field, while new researchers will understand the framework necessary for innovating new self-healing solutions.



**155,50 €**

145,33 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

**Artikelnummer:** 9780470497128

**Medium:** Buch

**ISBN:** 978-0-470-49712-8

**Verlag:** Wiley

**Erscheinungstermin:** 06.09.2011

**Sprache(n):** Englisch

**Auflage:** 1. Auflage 2011

**Produktform:** Gebunden

**Gewicht:** 782 g

**Seiten:** 440

**Format (B x H):** 161 x 241 mm

