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Altri autori (Persone)	BinderWolfgang (Wolfgang H.)
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Nota di contenuto	pt. 1. Design of self-healing materials -- pt. 2. Polymer dynamics -- pt. 3. Supramolecular systems -- pt. 4. Analysis and friction detection in self-healing polymers : macroscopic, mircoscopic and nanoscopic techniques.
Sommario/riassunto	Self-healing is a well-known phenomenon in nature: a broken bone merges after some time and if skin is damaged, the wound will stop bleeding and heals again. This concept can be mimicked in order to create polymeric materials with the ability to regenerate after they have suffered degradation or wear. Already realized applications are used in aerospace engineering, and current research in this fascinating field shows how different self- healing mechanisms proven successful by nature can be adapted to produce even more versatile materials. The book combines the knowledge of an international panel of experts in the field and provides the reader with chemical and physical concepts for self-healing polymers, including aspects of biomimetic processes of healing in nature. It shows how to design self-healing polymers and explains the

dynamics in these systems.

Different self-healing concepts such as encapsulated systems and supramolecular systems are detailed.

Chapters on analysis and friction detection in self-healing polymers and on applications round off the book.

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