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Soggetti	Building materials Polymers Engineering—Materials Materials science Chemical engineering Structural Materials Polymer Sciences Materials Engineering Characterization and Evaluation of Materials Industrial Chemistry/Chemical Engineering
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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Modern Aspects of Fracture Mechanics in the Industrial Application of Polymers -- Advanced Structure-Sensitive Methods for Analyzing Cracks and Fracture Surfaces -- Fracture Mechanics and Related Methods for Analyzing the Fracture Safety and Lifetime of Plastic Pipe Materials -- Deformation Behavior and Fracture Mechanics Characteristics of Polymer Films and Adhesive Systems -- Fatigue Crack Propagation, Lifetime and Long-term Mechanical Behavior of Thermoplastics and Elastomers -- Influence of Aging on Mechanical and Fracture Mechanics Performance of Thermoplastics and Elastomers -- Mechanical Properties and Fracture of Elastomers – Influence of Composition, Reinforcement and Crosslinking -- Rolling Resistance, Friction and Wear of Elastomeric Components.

Sommario/riassunto

This book covers the most recent advances in the deformation and fracture behaviour of polymer material. It provides deeper insight into related morphology–property correlations of thermoplastics, elastomers and polymer resins. Each chapter of this book gives a comprehensive review of state-of-the-art methods of materials testing and diagnostics, tailored for plastic pipes, films and adhesive systems as well as elastomeric components and others. The investigation of deformation and fracture behaviour using the experimental methods of fracture mechanics has been the subject of intense research during the last decade. In a systematic manner, modern aspects of fracture mechanics in the industrial application of polymers for bridging basic research and industrial development are illustrated by multifarious examples of innovative materials usage. This book will be of value to scientists, engineers and in polymer materials science.
