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Nota di contenuto	Characterization of Polymer Blends: Miscibility, Morphology and Interfaces; Contents; List of Contributors; 1 Polymer Blends: State of the Art, New Challenges, and Opportunities; 1.1 Introduction; 1.2 Miscible and Immiscible Polymer Blends; 1.3 Compatibility in Polymer Blends; 1.4 Topics Covered in this Book; References; 2 Miscible Blends Based on Biodegradable Polymers; 2.1 Introduction; 2.2 Thermodynamic Approach to the Miscibility of Polymer Blends; 2.2.1 Introduction; 2.2.2 Molecular Size and Entropy; 2.2.3 The Regular Solution; 2.2.4 The Flory-Huggins Model; 2.2.5 The Hildebrand Approach 2.2.6 Extension of the Flory-Huggins Model to Systems with Specific Interactions 2.2.7 The Dependence of Miscibility on Blend Composition and Temperature; 2.2.8 The Painter-Coleman Association Model (PCAM); 2.2.9 Analysis of the Miscibility Using Molecular Modeling Calculations; 2.2.10 Classification of Miscible Systems; 2.2.10.1 Entropically Driven Miscible Systems; 2.2.10.2 Enthalpically Driven Miscible Systems; 2.3 Revision of Polymer Blends Based on Biodegradable Polyesters; 2.3.1 Blends Containing Poly(lactic acid) or

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Sommario/riassunto

Filling the gap for a reference dedicated to the characterization of polymer blends and their micro and nano morphologies, this book provides comprehensive, systematic coverage in a one-stop, two-volume resource for all those working in the field. Leading researchers from industry and academia, as well as from government and private research institutions around the world summarize recent technical advances in chapters devoted to their individual contributions. In so doing, they examine a wide range of modern characterization techniques, from microscopy and spectroscopy to diffraction, thermal