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Soggetti	Materials - Analysis Polymers Materials Green chemistry Characterization and Analytical Technique Materials Engineering Green Chemistry
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Chapter 1: Synthesis of Biobased Polymers: From Aliphatics to Aromatics -- Chapter 2: An Environmental Perspective towards Designing of Sustainable Polymers -- Chapter 3: Biobased Anisotropic Designer Particles -- Chapter 4: Alternating Copolymers based on Amino Acids and Peptides -- Chapter 5: Biodegradable Nanocomposite Foam: Processing, Structure and Properties -- Chapter 6: Synthesis and Characterization of Functional Polylactides -- Chapter 7: Synthesis of Biocompatible Thermo-Responsive Polymers -- Chapter 8: Functionalization of Cellulose and its Derivatives: Processing and Characterization -- Chapter 9: DSC and WAXS Studies on the Effects of Silk Nanocrystals on Crystallization of Poly (L-Lactic Acid) -- Chapter 10: Polyhydroxyalkanoates: Origin, Sustainability and Applications -- Chapter 11: Biodegradable Copolyester based Natural Fibers-Polymer Composites -- Chapter 12: Degradation and Assimilation of Petrochemical based Polymers -- Chapter 13: Design of Sustainable Packaging-A greener approach -- Chapter 14: Sustainable Polymers:

Extraction, Synthesis and Assessment -- Chapter 15: Sustainable Polymers Based On Aliphatic Polyester Platform: A Critical Assessment -- Chapter 16: Life Cycle Assessment of Chitosan -- Chapter 17: Synthesis Strategies of Biomedical Grade Plastics -- Chapter 18: Polymers from Carbon dioxide - A Route Towards a Sustainable Future.

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Sommario/riassunto

This book discusses synthesis and characterization of sustainable polymers. The book covers opportunities and challenges of using sustainable polymers to replace existing petroleum based feedstock. This volume provides insights into the chemistry of polymerization, and discusses tailoring the properties of the polymers at the source in order fit requirements of specific applications. The book also covers processing of these polymers and their critical assessment. The book will be of use to chemists and engineers in the industry and academia working on sustainable polymers and their commercialization to replace dependence on petroleum-based polymers.

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