

1. Record Nr.	UNINA9910139732703321
Titolo	Renewable polymers [[electronic resource] ] : synthesis, processing, and technology // edited by Vikas Mittal
Pubbl/distr/stampa	Hoboken, N.J., : John Wiley Salem, Mass., : Scrivener, c2012
ISBN	1-283-43230-7 9786613432308 1-61344-889-9 1-118-21767-5 1-118-21768-3 1-118-21769-1
Descrizione fisica	1 online resource (504 p.)
Classificazione	TEC009010
Altri autori (Persone)	MittalVikas
Disciplina	547/.7
Soggetti	Plant polymers - Biotechnology Polymerization Green technology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Renewable Polymers: Synthesis, Processing, and Technology; Contents; Preface; List of Contributors; 1. Polymers from Renewable Resources; 1.1 Introduction; 1.2 Naturally Renewable Methylene Butyrolactones; 1.3 Renewable Rosin Acid-Degradable Caprolactone Block Copolymers; 1.4 Plant Oils as Platform Chemicals for Polymer Synthesis; 1.5 Biosourced Stereocontrolled Polytriazoles; 1.6 Polymers from Naturally Occurring Monoterpene; 1.7 Polymerization of Biosourced 2-(Methacryloyloxy)ethyl Tiglate; 1.8 Oxypropylation of Rapeseed Cake Residue; 1.9 Copolymerization of Naturally Occurring Limonene 1.10 Polymerization of Lactides1.11 Nanocomposites Using Renewable Polymers; 1.12 Castor Oil Based Thermosets; References; 2. Design, Synthesis, Property, and Application of Plant Oil Polymers; 2.1 Introduction; 2.2 Triglyceride Polymers; 2.2.1 Formation and Copolymerization of Monoglycerides and Diglycerides; 2.2.2 Copolymerization of Fatty Acids; 2.2.3 Polymerization of Functionalized

Triglycerides; 2.3 Summary; References; 3. Advances in Acid Mediated Polymerizations; 3.1 Introduction; 3.2 Problems Inherent to Cationic Olefin Polymerization  
3.3 Progress Toward Cleaner Cationic Polymerizations  
3.3.1 Improvements Resulting from Initiator System Design; 3.3.1.1 Progress in Homogeneous Initiator Systems; 3.3.1.2 Developments in Heterogeneous Initiator Systems; 3.4 Environmental Benefits via New Process Conditions; 3.5 Cationic Polymerization of Monomers Derived from Renewable Resources; 3.6 Sustainable Synthesis of Monomers for Cationic Polymerization; References; 4. Olive Oil Wastewater as a Renewable Resource for Production of Polyhydroxyalkanoates; 4.1 Polyhydroxyalkanoates (PHAs): Structure, Properties, and Applications  
4.2 PHA Production Processes Employing Pure Microbial Cultures  
4.3 PHA Production Processes Employing Mixed Microbial Cultures; 4.3.1 The Acidogenic Fermentation Stage: Key Aspects; 4.3.2 The Mixed Microbial Culture (MMC) Selection Stage; 4.3.3 The PHA Accumulation Stage; 4.4. Olive Oil Mill Effluents (OMEs) as a Possible Feedstock for PHA Production; 4.4.1 Olive Oil Production; 4.4.2 Chemical and Physical Characteristic of OMEs; 4.4.3 Wastewater Treatment and Disposal Alternatives; 4.4.4 Biological Wastewater Treatment; 4.5 OMEs as Feedstock for PHA Production; 4.6 Concluding Remarks  
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5. Atom Transfer Radical Polymerization (ATRP) for Production of Polymers from Renewable Resources; 5.1 Introduction; 5.2 Atom Transfer Radical Polymerization (ATRP); 5.2.1 General Considerations; 5.2.2 Kinetics of ATRP; 5.2.3 Macromolecular Architecture; 5.2.4 Choice of Reaction Medium; 5.3 Synthetic Strategies to Develop Functional Material Based on Renewable Resources - Composition, Topologies and Functionalities; 5.3.1 Use of Functional Initiators; 5.3.2 Modified Processes; 5.4 Sustainable Sources for Monomers with a Potential for Making Novel Renewable Polymers  
5.4.1 Plant Oil Derived Monomers -Fatty Acid Acrylates/Methacrylates

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## Sommario/riassunto

Presents the synthesis, technology and processing details of a large range of polymers derived from renewable resources. It has been a long-term desire to replace polymers from fossil fuels with the more environmentally friendly polymers generated from renewable resources. Now, with the recent advancements in synthesis technologies and the finding of new functional monomers, research in this field has shown strong potential in generating better property polymers from renewable resources. A text describing these advances in synthesis, processing, and technology of such pol

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