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Conclusions

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3.8.2 In Material Industry: PHAs as Polymeric Materials 3.8.2.1 PHAs as Biodegradable Plastics and Fiber Materials; 3.8.2.2 PHAs as Medical Implant Materials; 3.8.2.3 PHAs as Drug Delivery Carrier; 3.8.3 Fine Chemical Industry: PHA Chiral Monomers; 3.8.4 Application of PHA Granule Surface Proteins; 3.8.5 Production of Tailor-Made Biopolyester Nanoparticles and Potential Applications; 3.8.6 Future Development of PHA-Based Industry; 3.8.6.1 The Development of Low-Cost PHA Production Technology; 3.8.6.2 Unusual PHAs with Special Properties; 3.8.6.3 High Value Added Applications
3.8.6.4 Other Future Applications 3.8.6.5 Microbial Synthesis of Poly (lactic acid) (PLA); 3.8.7 Applications of PHA Inclusions as Functionalized Biobeads; 3.8.7.1 Bioseparations; 3.8.7.2 Drug Delivery; 3.8.7.3 Protein Purification; 3.8.7.4 Enzyme Immobilization; 3.8.7.5 Diagnostics and Imaging; 3.8.7.6 Vaccine Delivery; 3.9 Conclusions and Outlook; Acknowledgments; References; Chapter 4 Synthesis, Properties, and Mathematical Modeling of Biodegradable Aliphatic Polyesters Based on 1,3-Propanediol and Dicarboxylic Acids; 4.1 Introduction; 4.1.1 Aliphatic Polyesters
4.1.2 Production of 1,3-Propanediol

Sommario/riassunto

Collating otherwise hard-to-get and recently acquired knowledge in one work, this is a comprehensive reference on the synthesis, properties, characterization, and applications of this eco-friendly class of plastics. A group of internationally renowned researchers offer their first-hand experience and knowledge, dealing exclusively with those biodegradable polyesters that have become increasingly important over the past two decades due to environmental concerns on the one hand and newly-devised applications in the biomedical field on the other. The result is an unparalleled overview for the
