

The book was found

Plastics From Bacteria: Natural Functions And Applications (Microbiology Monographs)



Synopsis

Due to the possibility that petroleum supplies will be exhausted in the next decades to come, more and more attention has been paid to the production of bacterial plastics including polyhydroxyalkanoates (PHA), polylactic acid (PLA), poly(butylene succinate) (PBS), biopolyethylene (PE), poly(trimethylene terephthalate) (PTT), and poly(p-phenylene) (PPP). These are well-studied polymers containing at least one monomer synthesized via bacterial transformation. Among them, PHA, PLA and PBS are well known for their biodegradability, whereas PE, PTT and PPP are probably less biodegradable or are less studied in terms of their biodegradability. Over the past years, their properties and applications have been studied in detail and products have been developed. Physical and chemical modifications to reduce their cost or to improve their properties have been conducted. PHA is the only biopolyester family completely synthesized by biological means. They have been investigated by microbiologists, molecular biologists, biochemists, chemical engineers, chemists, polymer experts, and medical researchers for many years. PHA applications as bioplastics, fine chemicals, implant biomaterials, medicines, and biofuels have been developed. Companies have been established for or involved in PHA related R&D as well as large scale production. It has become clear that PHA and its related technologies form an industrial value chain in fermentation, materials, feeds, and energy to medical fields.

Book Information

Series: Microbiology Monographs (Book 14)

Hardcover: 450 pages

Publisher: Springer; 2010 edition (January 4, 2010)

Language: English

ISBN-10: 3642032869

ISBN-13: 978-3642032868

Product Dimensions: 6.2 x 1.1 x 9.1 inches

Shipping Weight: 1.7 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #2,352,993 in Books (See Top 100 in Books) #142 in Books > Medical Books > Basic Sciences > Bacteriology #227 in Books > Engineering & Transportation > Engineering > Chemical > Plastics #1511 in Books > Textbooks > Engineering > Chemical Engineering

[Download to continue reading...](#)

Plastics from Bacteria: Natural Functions and Applications (Microbiology Monographs) Plastics in

Medical Devices, Second Edition: Properties, Requirements, and Applications (Plastics Design Library) The Effect of UV Light and Weather on Plastics and Elastomers, Third Edition (Plastics Design Library) Fatigue and Tribological Properties of Plastics and Elastomers, Second Edition (Plastics Design Library) Feedstock Recycling and Pyrolysis of Waste Plastics: Converting Waste Plastics into Diesel and Other Fuels Leadership Roles and Management Functions in Nursing: Theory and Application (Marquis, Leadership Roles and Management Functions in Nursing) Microsoft Excel 2013 Functions & Formulas Quick Reference Card (4-page Cheat Sheet focusing on examples and context for intermediate-to-advanced functions and formulas- Laminated Guide) Microsoft Excel 2010 Functions & Formulas Quick Reference Guide (4-page Cheat Sheet focusing on examples and context for intermediate-to-advanced functions and formulas- Laminated Guide) Mims' Medical Microbiology: With STUDENT CONSULT Online Access, 5e (Medical Microbiology Series) Herbal Antibiotics, 2nd Edition: Natural Alternatives for Treating Drug-resistant Bacteria Herbal Antibiotics: Natural Alternatives for Treating Drug-Resistant Bacteria (Medicinal Herb Guide) Plastics Packaging 2E: 'Properties, Processing, Applications and Regulations Natural Remedies for Dogs : 101 Safe & Natural Essential Oils' Remedies for Your DOG: (Natural Remedies For Dogs, Essential Oils Remedies For Dogs, Natural Dog Care, Recipes For Dogs, Home Remedies) Cell Biology of Tooth Enamel Formation: Functional Electron Microscopic Monographs (Monographs in Oral Science, Vol. 14) Bergey's Manual of Systematic Bacteriology: Volume One : The Archaea and the Deeply Branching and Phototrophic Bacteria (Bergey's Manual of Systematic Bacteriology 2nd Edition) Role of gut bacteria in human toxicology and pharmacology Bacteria for Breakfast: Probiotics for Good Health A New IBS Solution: Bacteria-The Missing Link in Treating Irritable Bowel Syndrome Why Size Matters: From Bacteria to Blue Whales Androgens and Androgen Receptor: Mechanisms, Functions, and Clini Applications

[Dmca](#)