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Nota di contenuto	Chapter 1. Some Applications of Biomaterials in Automotive Industry -- Chapter2. Marine Applications of Natural Fibre-Reinforced Composites: A Manufacturing Case Study -- Chapter 3. Influence of Biodiesel Blends on Characteristics of Gaseous Emissions From Two Stroke, Low Speed Marine Diesel Engines -- Chapter 4. Review of Synthetic Fuels And New Materials Production Based On Pyrolysis Technologies -- Chapter 5. Biodegradable Polymer Based on Proteins and Carbohydrates -- Chapter 6. Application of biopolymers in food industry -- Chapter 7. Application of Edible Films and Coatings in Food Production -- Chapter 8. Biopolymers as Food Packaging Materials -- Chapter 9. New Technologies for the Microclimatic and the Indoor Air Quality Analysis for the Cultural Heritage Protection: The Case Studies Of The Classense Library And Of “Tamo”, The Museum of Mosaic of Ravenna -- Chapter

10. Potential Application of Nano Zero Valent Iron In Environmental Protection -- Chapter 11. Development of New Composites made of Waste Materials for Wood Pallet Element.

Sommario/riassunto

This book presents recent advances in the development of biomaterials for industrial applications, and discusses the potential for substituting environmentally hazardous substances with environmentally friendly and degradable components. Focusing on both the material development and production technologies, it reviews different materials, as well as new production technologies and application areas. It also highlights the importance of incorporating organic materials into different composites to enable consumption of otherwise waste materials. Further it addresses biopolymers for the food industry, e.g. edible films and coatings in food production and biodegradable materials; the automotive industry; bio fuels, such as biodiesel based on organic constituents; and green composites in marine applications. Environmental protection aspects related to the protection of cultural heritage, and new nanoparticles, such as nano zerovalent iron, are also reviewed. Aimed at young researchers, professionals, chemical engineers and marine engineers, the book is the result of the joint efforts of different academic and research institutions participating in the WIMB Tempus project, 543898-TEMPUS-1-2013-1-ES-TEMPUS-JPHES, "Development of Sustainable Interrelations between Education, Research and Innovation at WBC Universities in Nanotechnologies and Advanced Materials where Innovation Means Business", co-funded by the European Union Tempus Program.