This volume incorporates 13 contributions from renowned experts from the relevant research fields that are related biodegradable and biobased polymers and their environmental and biomedical applications.

Specifically, the book highlights:

- Developments in polyhydroxyalkanoates applications in agriculture, biodegradable packaging material and biomedical field like drug delivery systems, implants, tissue engineering and scaffolds

- The synthesis and elaboration of cellulose microfibrils from sisal fibres for high performance engineering applications in various sectors such as the automotive and aerospace industries, or for building and construction

- The different classes and chemical modifications of tannins

- Electro-activity and applications of Jatropha latex and seed

- The synthesis, properties and applications of poly(lactic acid)

- The synthesis, processing and properties of poly(butylene succinate), its copolymers, composites and nanocomposites
• The different routes for preparation polymers from vegetable oil and the effects of reinforcement and nano-reinforcement on the physical properties of such biobased polymers

• The different types of modified drug delivery systems together with the concept of the drug delivery matrix for controlled release of drugs and for antitumor drugs

• The use of nanocellulose as sustainable adsorbents for the removal of water pollutants mainly heavy metal ions, organic molecules, dyes, oil and CO2

• The main extraction techniques, structure, properties and different chemical modifications of lignins

• Proteins and nucleic acids based biopolymers

• The role of tamarind seed polysaccharide-based multiple-unit systems in sustained drug release

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