



Renewable Resources for Functional Polymers and Biomaterials: Polysaccharides, Proteins and Polyesters

By -

Royal Society of Chemistry. Hardcover. Book Condition: New. Hardcover. 456 pages. Dimensions: 9.3in. x 6.4in. x 1.3in. This book details polysaccharides and other important biomacromolecules covering their source, production, structures, properties, and current and potential application in the fields of biotechnology and medicine. It includes a systematic discussion on the general strategies of isolation, separation and characterization of polysaccharides and proteins. Subsequent chapters are devoted to polysaccharides obtained from various sources, including botanical, algal, animal and microbial. In the area of botanical polysaccharides, separate chapters are devoted to the sources, structure, properties and medical applications of cellulose and its derivatives, starch and its derivatives, pectins, and exudate gums, notably gum arabic. Another chapter discusses the potential of hemicelluloses (xylans and xylan derivatives) as a new source of functional biopolymers for biomedical and industrial applications. The algal polysaccharide, alginate, has significant application in food, pharmaceuticals and the medical field, all of which are reviewed in a separate chapter. Polysaccharides of animal origin are included with separate chapters on the sources, production, biocompatibility, biodegradability and biomedical applications of chitin (chitosan) and hyaluronan. With the increasing knowledge and applications of genetic engineering there is also an introduction in the book to nucleic acid polymers...

Reviews

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