

The present book describes the structure, performance and applications of biopolymers. It contains thirteen chapters: Chapter One describes the general introduction of biopolymers, while Chapter Two deals with environmental perspectives that biopolymers are involved in. Chapter Three deals with the surface nanostructuring of biopolymers for tissue engineering. Chapter Four describes the nanomaterials as an emerging opportunity for purifying drinking water. Chapter Five is based on the microalgal engineering of biopolymers, while Chapter Six contains information on the lignocellulosic biomass used to obtain polyhydroxybutyrate as a biopolymer under. Chapter Seven mainly discusses chitosan as a biomedical material (properties and applications), and Chapter Eight introduces details about gum ghatti (*Anogeissus latifolia*), a proteinaceous edible biopolymer and its multifaceted biological applications. Chapter Nine describes the recent advances in biopolymers for innovative food packaging, while Chapter Ten discusses the potential production of polyhydroxybutyrate from renewable feedstocks. Chapter Eleven contains information about biopolymer stabilization of fly ash and coal mine overburden for erosion resistance, whereas Chapter Twelve describes in detail the structure, features and applications of biopolymers. Finally, Chapter Thirteen summarizes the recent trends concerning biopolymers.

The current book will be highly beneficial to researchers working in the area of biopolymers, polymer chemistry, materials science, engineering, drug delivery, medicine, waste management, environmental science and waste water research. This book also covers information concerning natural biopolymers, biotechnology, biocomposites and bioplastics for a variety of environmental applications. The potential researchers working in the area will benefit from the fundamental concepts, advanced approaches and applications. The book also provides a platform for all researchers to carry out biopolymer research mainly towards its structure, performance and application, and also covers fundamental background information in the area. The book also covers recent advancements in the area as well as prospects about the future research and development of biopolymers.



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