Record Nr. UNINA9910141294903321 Polysaccharide building blocks [[electronic resource]]: a sustainable **Titolo** approach to renewable materials / / edited by Youssef Habibi, Lucian A. Lucia Hoboken, N.J., : John Wiley & Sons, Inc., 2012 Pubbl/distr/stampa **ISBN** 1-280-58919-1 9786613619020 1-118-22947-9 1-118-22948-7 1-118-22945-2 Descrizione fisica 1 online resource (431 p.) Classificazione TEC021000 Altri autori (Persone) **HabibiYoussef** LuciaLucian A Disciplina 572/.566 Soggetti Polysaccharides Carbohydrates Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. POLYSACCHARIDE BUILDING BLOCKS: A Sustainable Approach to the Nota di contenuto Development of Renewable Biomaterials; CONTENTS; Foreword; Preface; Contributors; 1 Recent Advances in Cellulose Chemistry; 2 Cellulosic Aerogels; 3 Nanocelluloses: Emerging Building Blocks for Renewable Materials; 4 Interactions of Chitosan with Metals for Water Purification; 5 Recent Developments in Chitin and Chitosan Bio-Based Materials Used for Food Preservation: 6 Chitin and Chitosan as Biomaterial Building Blocks: 7 Chitosan Derivatives for Bioadhesive/Hemostatic Applications: Chemical and Biological Aspects 8 Chitin Nanofibers as Building Blocks for Advanced Materials9 Electrical Conductivity and Polysaccharides; 10 Polysaccharide-Based Porous Materials; 11 Starch-Based Bionanocomposites: Processing and Properties: 12 Starch-Based Sustainable Materials: 13 The Potential of Xylans as Biomaterial Resources: 14 Micro- and Nanoparticles from

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## Sommario/riassunto

This book is an archival reference for the evolving field of biomaterials and their applications in society, focusing on their composition, properties, characterization, chemistry and applications in bioenergy, chemicals, and novel materials and biomaterials. It has broad appeal due to the recent heightened awareness around bioenergy and biomass as potential replacements for petroleum feedstocks. The book is divided into three parts: cellulose-based biomaterials, chitin and chitosan biomaterials, and hemicelluloses and other polysaccharides. Each chapter addresses a separate biomaterial, di