1. Record Nr. UNINA9910865239603321 Autore Hatakeyama Tatsuko Titolo Biomass with Culture and Geography / / by Tatsuko Hatakeyama, Hyoe Hatakeyama Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2024 Pubbl/distr/stampa **ISBN** 981-9703-68-9 Edizione [1st ed. 2024.] 1 online resource (256 pages) Descrizione fisica Altri autori (Persone) HatakeyamaHyoe Disciplina 610.28 Soggetti Biomedical engineering Renewable energy sources **Biopolymers Biomaterials** Biotechnology Biomedical Engineering and Bioengineering Renewable Energy Chemical Bioengineering Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia 1. Introduction -- 2. Bamboo and Wood -- 3. Silk and Wool -- 4. Rice. Nota di contenuto Wheat, and Sugar -- 5. Tea and Coffee -- 6. Cellulose, Lignin, and Chitin -- 7. Polysaccharides -- 8. Miscellaneous. Sommario/riassunto This book introduces biomass which is utilized all over the world based on geographical, cultural, and historical background. It covers 18 major biomass types and several specific plants categorized into 3 groups based on their usage. The present and historical background of representative materials from biomass, such as cellulose, lignin, chitin, sugar, molasses, amylose, and other interesting natural biopolymers, such as hyaluronan, gum Arabic, and others are introduced. Furthermore, characteristic features of representative and influential plants, such as rice, eucalyptus, and oil palm are described together with historical episodes. Although physicochemical characteristic properties of each material and plant have been published over many

decades, scarcely a comprehensive introduction on biomass together with Asian, European, and Latin American cultural backgrounds. In this

book, biomass familiar to everybody's life is introduced based on scientific and cultural viewpoints. It guides readers to gain background knowledge of targeting biomass to be developed as industrial resources. In addition to students, scientists, and lecturers, the book will be useful for industrial engineers, both specialists in polymer science and technology and materials experts.