Record Nr. UNINA9910983321103321 Autore Jawaid Mohammad Titolo Rice Husk Biomass: Processing, Properties and Applications / / edited by Mohammad Jawaid, Brajendra Parmar Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2025 Pubbl/distr/stampa 9789819610822 **ISBN** 9819610826 Edizione [1st ed. 2025.] Descrizione fisica 1 online resource (451 pages) Collana Sustainable Materials and Technology, , 2731-0434 Altri autori (Persone) ParmarBrajendra Disciplina 620.19 Soggetti Biomaterials Biotechnology Biochemical engineering Plant Materials Chemical Bioengineering Bioprocess Engineering Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Introduction -- Processing of Rice husk -- Physical and Chemical Nota di contenuto properties of Rice Husk -- Rice Husk, Rice Husk Ash, and Their Applications -- Extraction and Properties of Silica from rice husk --Potential applications of rice husk derivatives as useful adsorptive material -- Rice husk as an efficient adsorbent for phosphate removal -- Rice Husk for the Production of Multifunctional Liquid Smoke --Nanocellulose Produced from Rice Husk -- Effects of Rice Husk and Rice Husk Charcoal on Soil Physicochemical Properties -- Rice husk combustion and ash recycling -- Rice Husk Ash Brick Using Neutron Radiography Technique -- Rice Husk as Reinforcement in Wood Plastic Composites -- Flowable Fill Concrete from Rice husk ash -- Rice-huskbased materials for 3D printers -- Nanoporous materials from Rice husk and rice husk ash for adsorptive biomedical applications -- Rice husk-based composite film -- Rice husk-based Biocomposites --Particleboard from Rice husk -- Sustainable thermal insulation

biocomposites from rice husk.

This book covers the processing, properties, and application of rice

Sommario/riassunto

husk, also widely known as rice hull, which is an available agricultural waste in numerous rice-producing countries. These by-products are generated in significant quantities and must be treated and disposed of properly. Rice husk is an abundantly available waste material in all riceproducing countries. Approximately 120 million tons of rice husk is available each year after it has been removed from the whole rice paddy and is composed of 15% carbon, 18% ash, and 67% volatile matter. This book covers in-depth about processing and properties of rice husk and different by-products such as silica, rice husk ash, and nano fillers. This book also deals with various applications of rice husk in adsorbent, construction and building materials, composites, and nanocomposites. The book is a comprehensive reference resource for graduate students, early career researchers, scientists as well technologists working in the field of forestry, natural resources, material, and polymer sciences from concepts, fabrication, properties. and applications.