1. Record Nr. UNINA9910557797503321

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| Titolo | Natural Fibre Biocomposites |
| Pubbl/distr/stampa | Basel, Switzerland, : MDPI - Multidisciplinary Digital Publishing Institute, 2020 |
| Descrizione fisica | 1 online resource (114 p.) |
| Soggetti | Research and information: general |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Sommario/riassunto | In recent years, there has been significant progress in biomass research as bio-based products are beneficial to the environment, energy-saving, and cost-saving if they are processed properly. The book collects the most state-of-the-art works related to the natural fiber composites in a Special Issue entitled "Natural Fiber Biocomposites". These works address all the issues related the manufacturing of natural fiber composite products, from (1) raw materials, such as wood, flax fiber, and cellulose nanofiber; to the (2) raw material treatments, such as furfuryl alcohol pretreatment, ultrasonic vibration treatment (UVT), and extraction method for the resins; to the (3) process of the composites fabrication, such as thermo-hygro-mechanical densification; and to the (4) performance of the composites, including mechanical, moisture absorption, opacity, thermal, and biodegradability. Discussions on the adhesives/resins used in the natural fiber composites fabrication, such as dried distiller's grains and solubles (DDGS), pennycress (Thlaspi arvense L.) press cakes (PPC), and lesquerella [Lesquerella fendleri (A. Gary) S. Watson] press cake (LPC), starch, and polylactic acid (PLA), are also part of the book. It is believed the technical information presented in this book will contribute to the development of the bio-based composites. |