

Preface

Agricultural biomass is abundant worldwide and it can be considered as alternative source of renewable and sustainable materials which can be used as potential materials for different applications. Despite this enormous production of agricultural biomass, only a small fraction of the total biomass is utilized for different applications. Industry must be prepared to take advantage of the situation and utilize the available biomass in the best possible manner. Agricultural biomass such as natural fibres has been successfully investigated as a great potential to be used as a renewable and sustainable materials for the production of composite materials. Natural fibres offer excellent specific properties and have potential as outstanding reinforcing fillers in the matrix and can be used as an alternative material for biocomposites, hybrid composites and pulp and paper industries. Natural fibre based polymer composites made of jute, oil palm, flex, hemp, kenaf have a low market cost, are attractive with respect to global sustainability and find increasing commercial use in different applications. Agricultural biomass based composites find applications in a number of fields viz., automotive industry and construction industry such as for panels, frames, ceilings and partition boards, structural applications, aerospace, sports, recreation equipment, boats, office products, machinery, etc. Future research on agricultural biomass natural fibre-based composites is not only limited to its automotive applications but it also requires to explore its application in aircraft components, construction industry, rural housing and biomedical applications. In this book we will cover chemical, physical, mechanical, thermal, electrical, flame retardancy and biodegradability properties of agricultural biomass based composite materials and its different potential applications.

We wish to express our gratitude to all the contributors from all over the world for readily accepting our invitations for not only shearing their knowledge but also for admirably integrating their proficiency on scattered information from diverse fields in composing the chapters and enduring editorial suggestions to finally produce this venture that will hope be a success. We greatly appreciate their commitment.

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