BIOMATERIALS

Natural Fibers and Biocomposites: A Sustainable Solution

Natural fibers’ abundance, excellent properties, biodegradability, and low cost make this renewable resource a green alternative to synthetic fibers for composite material reinforcement. There has been an increase in research and industrial attention for using natural fibers since they can reduce the net CO2 footprint compared to traditional synthetic materials, given their carbon dioxide absorption while growing. Biocomposite materials with natural fibers are mainly developed with polymer matrices. The need to create sustainable solutions and, more critically, biodegradable or biocompatible has promoted applications in sports, transportation, armor, medicine, infrastructure, construction and building materials, and architecture. The purpose of this symposium is to promote the use of natural materials and their composites as a possible strategy to increase environmental sustainability, as well as to study materials fundamentals for new applications.

The main areas are shown below but are not limited to:
• Natural fibers, its properties, and fundamentals
• Surface modifications of natural fiber to improve properties
• Biocomposite materials and potential contributions to sustainability
• Durability, dynamic behavior, adhesion, impact response, mechanical, thermal, and other important properties related to the natural materials and their composites

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