Editorial: Natural Fiber Reinforced Composites

In recent years, there has been growing interest in the development of new technologies that allow the use of products with a lower degree of environmental impact. Therefore, several researches are being carried out in the field of polymer composites in order to guarantee environmental preservation. The researches that stand out most are those related to the use of natural fibers.

There is a global trend to seek alternative natural resources in exchange for synthetic fibers. In this scenario, the natural vegetable fibers, such as fiber of the coconut husk is an excellent alternative to possess good mechanical and thermal properties. These fibers, as well as its low cost, are biodegradable and renewable.

Studies are being carried out to generate products that reduce environmental impact. Among these studies, the obtaining of polymeric composites reinforced with natural fibers has been highlighting.

Fibers from natural resources as reinforcement for polymeric matrixes have been studied for decades due to many gained advantages and environmental appeal when compared to inorganic fibers, such as glass and carbon fibers. The main advantages presented by these fibers are: abundance and therefore low cost, biodegradability, flammability, processing flexibility, low density, relatively high tensile and flexural modulus and non-toxicity.

As reinforcement of thermoplastic polymers, natural fibers provide an improvement in mechanical properties, the use of a lower amount of pure polymer and reduce the cost and the density of composite materials.

In the paper entitled Manufacturing and “Characterization of High Impact Polystyrene (HIPS) Reinforced with Treated Sugarcane Bagasse” they studied the alkali-treated and bleached sugarcane bagasse fibers were used as reinforcement in HIPS matrix in order to analyze the influence of the chemical treatment and the percentage of fibers on the mechanical, thermal and physical properties of composites.

In the paper entitled *“*Degradability of Epoxy/Sisal Fiber Composites by Simulated Soil” they studied this evaluated an epoxy/sisal composite via TGA (Thermogravimetric Analysis), DSC (Differential Scanning Calorimetry) and the mass variation evaluation before and after exposure in simulated soil for a period of 8 weeks.

In the paper entitled “Featuring High Impact Polystyrene Composites Strengthened With Green Coconut Fiber Developed for Automotive Industry Application” they study was made because its cost is lower than that of other thermoplastics. In addition, HIPS presents some advantages such as adequate hardness and easy processing. Besides, it can be processed at temperatures below cellulose’s degradation temperature.

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