Special Issue

Sustainability in the Manufacturing of Composite Material

Message from the Guest Editors

Dear Colleague,

Composite materials, which combine two or more distinct components to create materials with superior properties, have revolutionized industries from aerospace to construction. However, their manufacturing processes present significant sustainability challenges that researchers and manufacturers are actively addressing.

Traditional composite manufacturing often relies on energy-intensive processes and petroleum-based resins that create substantial environmental footprints. Thermoset composites, while durable, present end-of-life recycling difficulties as they cannot be easily remelted or reformed.

Manufacturing innovations are important for sustainability. End-of-life considerations have gained prominence, with designs now incorporating recyclability. Thermoplastic composites, which can be remelted, offer advantages over thermosets. Mechanical, thermal, and chemical recycling methods are being refined to recover valuable components from composite waste. The transition to sustainable composite manufacturing requires balancing environmental benefits against performance requirements and economic feasibility.

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I encourage you to contribute a research or comprehensive review article for consideration for publication in *Sustainability*, an international Open Access journal which provides an advanced forum for research findings in areas related to sustainability and sustainable development. *Sustainability* publishes original research articles, review articles and communications. I am confident you will find the journal contributes to enhancing understanding of sustainability and fostering initiatives and applications of sustainability-based measures and activities.

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