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.

Guest Editors

Dr. Thywill Cephas Dzogbewu

Mechanical and Mechatronic Engineering, Central University of Technology, Bloemfontein 9301, Free State, South Africa

Prof. Dr. Deon De Beer

Centre for Rapid Prototyping and Manufacturing, Central University of Technology, Bloemfontein 9301, Free State, South Africa

Deadline for manuscript submissions

31 May 2026



Sustainability

an Open Access Journal by MDPI

Impact Factor 3.3 CiteScore 7.7



mdpi.com/si/235802

Sustainability Editorial Office MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 sustainability@mdpi.com

mdpi.com/journal/ sustainability





Sustainability

an Open Access Journal by MDPI

Impact Factor 3.3 CiteScore 7.7



About the Journal

Message from the Editor-in-Chief

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. The journal publishes original research articles, reviews, conference proceedings (peer reviewed full 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.

Editor-in-Chief

Prof. Dr. Steve W. Lyon

School of Environment and Natural Resources, Ohio State University, Columbus, OH 43210, USA

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE and SSCI (Web of Science), GEOBASE, GeoRef, Inspec, RePEc, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Environmental Studies) / CiteScore - Q1 (Geography, Planning and Development)

