

Special Issue on  
**Decision-Making Models and Advanced Optimization Techniques for Sustainable Manufacturing**

# CALL FOR PAPERS

In recent years, the global emphasis on sustainability and environmental responsibility has driven significant research and innovation in the fields of materials science and manufacturing. This Special Issue aims to contribute to the ongoing efforts toward sustainability by focusing on the applications of decision-making models and advanced optimization techniques in the context of sustainable materials and manufacturing practices.

This Special Issue aims to provide a platform for researchers, academicians, and practitioners to disseminate their cutting-edge research and advancements in the field of sustainable materials and manufacturing, specifically focusing on decision-making models and advanced optimization techniques. This Special Issue will cover a wide range of topics within the domain of sustainable materials and manufacturing, with a specific emphasis on the integration of decision-making models and advanced optimization techniques. It further seeks to showcase innovative approaches that address the challenges of sustainable practices in materials selection, manufacturing processes, and supply chain management.

This Special Issue encourages authors to submit original research and review articles on methodologies and practical applications addressing this topic.

Potential topics include but are not limited to the following:

- ▶ Smart materials and their role in sustainable manufacturing
- ▶ Sustainability assessment frameworks for advanced materials
- ▶ Nanotechnology for sustainable materials and manufacturing
- ▶ Optimization of material usage through digital design and simulation
- ▶ Sustainable manufacturing processes for large-scale production
- ▶ Hybrid optimization algorithms in materials design and processing
- ▶ Biodegradable and bio-based materials for eco-friendly products
- ▶ Smart factories and Industry 4.0 for sustainable production
- ▶ Carbon footprint reduction in the materials and manufacturing sector
- ▶ Sustainable materials and manufacturing for the automotive industry
- ▶ Sustainable design and manufacturing of lightweight composites
- ▶ Green coatings and surface treatments for sustainable materials
- ▶ Sustainable practices in additive manufacturing (3D printing)
- ▶ Sustainable biomaterials for medical and healthcare applications
- ▶ Life cycle optimization for sustainable product development
- ▶ Sustainable materials and manufacturing in the aerospace industry
- ▶ Multi-objective optimization for minimizing environmental impact and cost

Authors can submit their manuscripts through the Manuscript Tracking System at <https://review.wiley.com/submit?specialIssue=206556>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

**Lead Editor**

Din Bandhu , Manipal Institute of Technology, Bengaluru, India  
*din.bandhu@manipal.edu*

**Guest Editors**

Kuldeep K. Saxena, Lovely Professional University, Phagwara, India  
*kuldeep.29429@lpu.co.in*

Alok Bhadauria , Manipal Institute of Technology, Bengaluru, India  
*alok.bhadauria@manipal.edu*

Mehmet Şükrü Adin, Batman University, Batman, Turkey  
*mehmetsukru.adin@batman.edu.tr*

**Submission Deadline**

Friday, 28 June 2024

**Publication Date**

November 2024