Special Issue

Next-Generation Sustainable Materials for Green Manufacturing and Circular Economy

Message from the Guest Editors

Research, development, and evaluation of novel ecological and sustainable materials are essential to tackle climate change, mitigate environmental pollution, and foster a circular economy. This Special Issue focuses on sustainable ecological materials, showcasing cutting-edge research and technologies that underpin the transition to a circular low-carbon economy. Key topics include the design of innovative low-carbon materials, sustainable material processing and recycling environmental impact assessment of material systems, carbon capture, utilization and storage (CCUS) technologies, life cycle assessment (LCA) frameworks. We welcome submissions that present original, evidence-based strategies aimed at reducing the ecological footprint of materials through approaches such as advanced manufacturing, high-efficiency recycling, eco-functional material innovations, and the integration of sustainability principles in material design and application.

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Message from the Editorial Board

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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