Special Issue

Decarbonization and Sustainability in Polymer Composites

Message from the Guest Editors

Polymer composites, with their ubiquitous properties, have been widely used in various industries (e.g., aerospace, automobile, infrastructure, marine, wind energy, etc.). The constituents in these composites have mainly focused on carbon and glass fibers, as well as epoxy and thermoplastic matrices. However, the issue of their waste and detrimental environmental impact has become increasingly challenging. In this context, the purpose of this Special Issue is to present recent progress in the research and review of decarbonized and sustainable composites and technologies, with the following scopes:

- Polymer composites with alternative reinforcement (e.g., natural fibers, polymer fibers, etc.);
- Polymer composites with alternative matrices (e.g., Vitrimer, bio-based materials, CO2-derived materials, etc.);
- Polymer composites with other sustainable constituents (e.g., wood, waste material, etc.);
- Recycling and repurposing waste plastics and composites;
- Material life cycle, waste management, and carbon footprint analysis of sustainable composites and fabrication methods;
- ML/AI-assisted design towards decarbonization and sustainability;
- Other relevant areas.

Guest Editors

Dr. Yao Qiao

Dr. Daniel R. Merkel

Dr. Wenbin Kuang

Deadline for manuscript submissions

closed (31 December 2024)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/185425

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

mdpi.com/journal/materials

Materials

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/journal/
materials

About the Journal

Message from the Editor-in-Chief

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.

Editor-in-Chief

Prof. Dr. Maryam Tabrizian
1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Author Benefits

Open Access:

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

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) / CiteScore - Q1 (Condensed Matter Physics)

MDPI