

Special Issue

Bio-Based Natural Fiber Composite Materials

Message from the Guest Editors

We are welcoming any papers related to (but not limit to) the following subjects:

- Fiber retting: Technologies to convert biomass and agricultural bast into the fibers, including the mechanical retting, bacterial retting, chemical retting, and other techniques.
- Natural fiber characterizations: The physical and mechanical properties of different natural fibers including wood, kenaf, hemp, cotton, wheat straw, bamboo, sisal, flex, and others.
- Fiber treatments: (1) To enhance the interfacial bonding of the fibers and the performance of the resulting composites; (2) to functionalize the fibers for functional composite products.
- Bio-based resin, including, tannin, protein, soy, and other plant-based adhesives
- Bioproducts manufacturing: For both structural and non-structural natural fiber composites.
- Physical and mechanical properties, including decay resistant, biodegradability, mechanical performance, and physical performance (thermal, sound, and others) of the natural fiber composites.
- Bioproducts applications for automobile, building, transportation, aerospace, and others.
- Biomass to carbon conversion processes, biocarbon activation, as well as their applications

Guest Editors

Prof. Dr. Sheldon Shi

Mechanical Engineering Department, University of North Texas,
Denton, TX 76203, USA

Dr. Xuan Wang

Mechanical Engineering Department, University of North Texas,
Denton, TX 76203, USA

Deadline for manuscript submissions

20 August 2025



Materials

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



mdpi.com/si/204579

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

[mdpi.com/journal/
materials](https://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](https://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)