



Advanced and Bio-Based Materials

Guest Editors:

Prof. Dr. Paulo J. Bártolo

Dr. Cian Vyas

Dr. Miriam Ribul

Prof. Dr. Prasad Potluri

Deadline for manuscript
submissions:

closed (31 August 2024)

Message from the Guest Editors

Dear Colleagues,

Advances in materials and manufacturing techniques are enabling the development of a new generation of high-performance textile-based products for a range of industries, from apparel to aerospace. Key enabling technologies are additive manufacturing and the use of robotics in weaving, fibre placement, and knitting, which allow free-form and bespoke multi-material structures to be fabricated, unhindered by the limitations of traditional approaches. This may potentially allow the fabrication of complex multi-functional textile-based structures in a single product, transforming design and manufacturing processes. Furthermore, this also opens up new application areas in smart, responsive, and adaptive textiles that can communicate with users and transform using a specific stimulus.

This Special Issue aims to highlight and collect the most recent developments and trends in the field of advanced 3D textiles. This includes novel manufacturing processes (e.g., 3D printing, robotics, and weaving), advanced materials (e.g., nanocomposites, multi-functional, bioactive, electroactive, sustainable, adaptive and responsive), and new application areas.





an Open Access Journal by MDPI

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

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.

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

Contact Us

Materials Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/materials
materials@mdpi.com
[X@Materials_Mdpi](https://twitter.com/Materials_Mdpi)