Special Issue

Application of Biomass Materials in the Fields of Electrochemistry and Thermochemistry

Message from the Guest Editor

At present, the energy system of the world is undergoing a technological change taking it toward a complementary multi-energy synergy between hydrogen and electricity, which is bringing with it great progress in terms of the electrification of energy and power equipment, the rise of the hydrogen economy, and new technologies utilizing renewable energy. As a kind of green carbon source with vast stocks, biomass has many advantages, such as environmental friendliness, a wide range of sources, and excellent performance, and is widely used in the preparation of new materials in the fields of electrochemistry and thermochemistry, showing huge application potential. Through biological and chemical methods, biomass can be prepared into porous/active carbon, carbon cloth, carbon paper, carbon felt, etc., and biomass-derived materials are widely used in lithium-ion batteries, leadacid batteries, supercapacitors, and proton exchange membrane fuel cells, including electrode materials, gas diffusion layers, current collectors, etc. I hearby invite you to submit manuscripts to this Special Issue-full papers, communications, and reviews are all welcome.

Guest Editor

Dr. Jingwei Chen

College of Mechanical and Vehicle Engineering, Hunan University, Changsha 410082, China

Deadline for manuscript submissions

20 October 2025



an Open Access Journal by MDPI

Impact Factor 3.2 CiteScore 6.4 Indexed in PubMed



mdpi.com/si/194112

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

mdpi.com/journal/ materials





an Open Access Journal by MDPI

Impact Factor 3.2 CiteScore 6.4 Indexed in PubMed





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

 Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
 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)