



an Open Access Journal by MDPI

Application of Biomass Materials in the Fields of Electrochemistry and Thermochemistry

Guest Editor:

Dr. Jingwei Chen

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

Deadline for manuscript submissions: **20 October 2025**



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, lead–acid 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.





mdpi.com/si/194112





an Open Access Journal by MDPI

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

Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The iournal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites. advanced materials characterization, porous materials, manufacturing processes and svstems. 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 - Q2 (Metallurgy and Metallurgical Engineering) / CiteScore - Q1 (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