Special Issue

Application of Biomass-Derived Nanomaterials in Batteries and Supercapacitors

Message from the Guest Editors

Biomass resources are renewable resources that can be sustainably utilized under reasonable protection and utilization. This has important social value and practical significance for the high-value development and application of biomass resources in the field of green energy storage. Therefore, how to use biomass and its derivatives to design and construct high-performance, green, and sustainable energy storage materials is the key to expanding the application of high-value-added biomass resources. This issue aims to provide some valuable new ideas and practical methods for the design, preparation, and application of new structured, high-performance, green, and sustainable biomass-based composite electrodes materials and focuses on the recent advances in the development or application of novel biomass composite electrode for high-performance flexible energy storage devices such as supercapacitors and batteries. In this Special Issue, original research articles and reviews are welcome. Research areas may include (but are not limited to) the above-mentioned themes.

Guest Editors

Prof. Dr. Chuanyin Xiong

Shaanxi Provincial Key Laboratory of Papermaking Technology and Specialty Paper Development, College of Bioresources Chemical and Materials Engineering, Shaanxi University of Science and Technology, Xi'an 710021, China

Dr. Haiwei Wu

Shaanxi Provincial Key Laboratory of Papermaking Technology and Specialty Paper Development, College of Bioresources Chemical and Materials Engineering, Shaanxi University of Science and Technology, Xi'an 710021, China

Deadline for manuscript submissions

closed (30 May 2025)

Nanomaterials

an Open Access Journal by MDPI

Impact Factor 4.3
CiteScore 9.2
Indexed in PubMed

mdpi.com/si/217458

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

mdpi.com/journal/nanomaterials

Nanomaterials

an Open Access Journal by MDPI

Impact Factor 4.3
CiteScore 9.2
Indexed in PubMed

mdpi.com/journal/nanomaterials

MDPI

About the Journal

Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal–organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access.

Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones
School of Geography, Earth and Environmental Science, University of Birmingham, Birmingham B15 2TT, UK

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, CAPlus / SciFinder, Inspec, and other databases.

Journal Rank:

JCR - Q2 (Physics, Applied) / CiteScore - Q1 (General Chemical Engineering)