Special Issue

Advances in Material Chemistry for Sustainable Energy Storage: Innovations, Challenges, and Future Directions

Message from the Guest Editors

The global demand for clean, sustainable, and reliable energy sources has driven extensive research into energy storage technologies. Energy storage materials are essential for advancing energy technologies, promoting sustainability, and ensuring a reliable energy future. Their development and application are key to addressing some of the most urgent challenges related to energy. This Special Issue focuses on recent research and advancements in energy storage materials, addressing the challenges and breakthroughs necessary to ensure enhanced performance, efficiency, and sustainability. The scope of this Special Issue includes, but is not limited to, phase-change thermal energy storage materials, energy storage hydrogel materials, materials for the production of photocatalytic hydrogen, thermochemical heat storage materials, and electrochemical energy storage materials. Such advancements in material chemistry for energy storage could be transformative, offering more efficient, sustainable, and cost-effective solutions that support the global transition to renewable energy.

Guest Editors

Dr. Bofeng Shang
School of Physics, Zhengzhou University, Zhengzhou 450001, China

Dr. Peng Liu
School of Mechanical & Electrical Engineering, Wuhan Institute of Technology, Wuhan 430205, China

Deadline for manuscript submissions

31 December 2025

Molecules

an Open Access Journal by MDPI

Impact Factor 4.6
CiteScore 8.6
Indexed in PubMed

mdpi.com/si/229282

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

mdpi.com/journal/molecules

Molecules

an Open Access Journal by MDPI

Impact Factor 4.6
CiteScore 8.6
Indexed in PubMed

mdpi.com/journal/molecules

MDPI

About the Journal

Message from the Editor-in-Chief

As the premier open access journal dedicated to molecular chemistry, now in its 29th year of publication, the papers published in *Molecules* span from classical synthetic methodology to natural product isolation and characterization, as well as physicochemical studies and the applications of these molecules as pharmaceuticals, catalysts, and novel materials. Pushing the boundaries of the discipline, we invite papers on all major fields of molecular chemistry and multidisciplinary topics bridging chemistry with biology, physics, and materials science, as well as timely reviews and topical issues on cutting-edge fields in all of these areas.

Editor-in-Chief

Prof. Dr. Thomas J. Schmidt
Institute of Pharmaceutical Biology and Phytochemistry, University of Münster, Corrensstrasse 48, D-48149 Münster, Germany

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, MEDLINE, PMC, Reaxys, CaPlus / SciFinder, MarinLit, AGRIS, and other databases.

Journal Rank:

JCR - Q2 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Organic Chemistry)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.1 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).