

Special Issue

Innovative Electro/Photocatalysts for Energy Conversion: Graphene and g-C₃N₄-Based Materials

Message from the Guest Editor

This Special Issue explores the various applications of these composite materials, including water splitting, CO₂ reduction, and organic pollutant degradation. In water splitting, the graphene/g-C₃N₄ composites demonstrate efficient hydrogen production, offering a clean and sustainable fuel source. In CO₂ reduction, these materials convert CO₂ into valuable chemicals and fuels, addressing both energy and environmental challenges. The articles in this Special Issue will highlight the synthesis, characterization, and performance evaluation of graphene- and g-C₃N₄-based electro/photocatalysts. They will also discuss the underlying mechanisms driving enhanced catalytic activity and potential strategies for further improvement. Overall, this Special Issue provides a comprehensive overview of the current state of research in this exciting field, paving the way for future innovations in sustainable energy conversion technologies.

Guest Editor

Dr. Tahir Muhmood

INL—International Iberian Nanotechnology Laboratory, Avenida Mestre
José Veiga S/N, 4715-330 Braga, Portugal

Deadline for manuscript submissions

5 September 2025



Energies

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 7.3



mdpi.com/si/233617

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

[mdpi.com/journal/
energies](https://mdpi.com/journal/energies)





Energies

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 7.3



[mdpi.com/journal/
energies](https://mdpi.com/journal/energies)



About the Journal

Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

Editor-in-Chief

Prof. Dr. Enrico Sciubba

Department of Mechanical and Industrial Engineering, University
Niccolò Cusano, 00166 Roma, Italy

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), Ei Compendex, RePEc, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

CiteScore - Q1 (Control and Optimization)