Special Issue

Exploring Sustainable and Scalable Materials for Energy Storage and Harvesting Applications

Message from the Guest Editors

The growing demand for renewable energy solutions has driven research into advanced materials that enable efficient energy harvesting, storage, and conversion. This Special Issue invites research articles on novel materials for energy harvesting (e.g., solar cells, piezoelectric/triboelectric nanogenerators, thermoelectrics) and storage (e.g., sustainable batteries, supercapacitors, phase-change thermal systems). Contributions should address material design, performance optimization, and integration into eco-friendly technologies.

This Special Issue seeks studies employing advanced characterization techniques such as electrochemical impedance spectroscopy (EIS), cyclic voltammetry (CV), SEM, and XRD to elucidate structural, conduction, and stability properties under varied operational conditions. This issue aims to advance the development of high-performance energy systems through innovative materials and analytical methodologies. Theoretical, experimental, and computational studies are welcome.

Guest Editors

Dr. Rehab Ramadan

1. Facultad de Ciencias, Universidad Autónoma de Madrid, 28048 Madrid, Spain
2. Faculty of Science, Department of Physics, Minia University, Minia 61519, Egypt

Dr. Mahmoud Hamdy Elshorbagy

1. Facultad de Óptica y Optometría, Universidad Complutense de Madrid, Madrid, Spain
2. Physics Departement, Faculty of Science, Minia University, Minia, Egypt

Deadline for manuscript submissions

30 April 2026

Processes

an Open Access Journal by MDPI

Impact Factor 2.8
CiteScore 5.5

mdpi.com/si/249797

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

mdpi.com/journal/processes

Processes

an Open Access Journal by MDPI

Impact Factor 2.8
CiteScore 5.5

mdpi.com/journal/processes

About the Journal

Message from the Editor-in-Chief

You are invited to contribute either a research article or a comprehensive review for consideration and publication in *Processes* (ISSN 2227-9717). *Processes* is published in open access format – research articles, reviews, and other content are released on the internet immediately after acceptance. The scientific community and the general public have unlimited, free access to the content. As an open access journal, *Processes* is supported by the authors and their institutes through the payment of article processing charges (APCs) for accepted papers. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

Prof. Dr. Giancarlo Cravotto
Department of Drug Science and Technology, University of Turin, Via P. Giuria 9, 10125 Turin, 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, Inspec, AGRIS, and other databases.

Journal Rank:

CiteScore - Q2 (Chemical Engineering (miscellaneous))

MDPI