

Special Issue

Two-Dimensional Materials as Electrocatalysts for Energy and Environmental Applications

Message from the Guest Editors

This Special Issue will highlight the latest advances in the design, synthesis, and application of 2D materials—such as graphene, transition metal dichalcogenides (TMDs), MXenes, and metal–organic frameworks (MOFs)—in electrocatalytic processes. Topics of interest include, but are not limited to, the roles of 2D materials in key reactions like the hydrogen evolution reaction (HER), oxygen evolution reaction (OER), oxygen reduction reaction (ORR), and carbon dioxide reduction reaction (CO₂RR), all of which are vital to sustainable energy conversion and environmental remediation technologies. This Special Issue will also address current challenges related to improving the catalytic activity, stability, and scalability of 2D materials. Particular emphasis will be placed on strategies such as heteroatom doping, defect engineering, and hybridization with other nanomaterials to enhance electrocatalytic performance. We look forward to receiving and sharing your innovative research studies.

Guest Editors

Dr. Dušan Mladenović

Faculty of Physical Chemistry, University of Belgrade, 11158 Belgrade, Serbia

Prof. Dr. Biljana Šljukić

Center of Physics and Engineering of Advanced Materials, Laboratory for Physics of Materials and Emerging Technologies, Chemical Engineering Department, Instituto Superior Técnico, Universidade de Lisboa, 1049-001 Lisbon, Portugal

Deadline for manuscript submissions

27 February 2026



Processes

an Open Access Journal
by MDPI

Impact Factor 2.8
CiteScore 5.5



mdpi.com/si/249682

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

mdpi.com/journal/

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





Processes

an Open Access Journal
by MDPI

Impact Factor 2.8
CiteScore 5.5



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