

## Special Issue

# Electrochemical Materials and Devices for Energy Conversion and Storage—2nd Edition

### Message from the Guest Editor

Electrochemical energy conversion and storage technologies have garnered significant attention due to their remarkable properties, including high energy and power densities, excellent cyclability, and superior efficiency. However, these technologies face critical challenges related to cost, sustainability, safety, and performance. To overcome these limitations, researchers have developed innovative electrochemical nanomaterials with advanced structural and functional properties.

This Special Issue aims to highlight recent progress in electrochemical materials and devices for energy conversion and storage. Topics of interest include, but are not limited to, the following:

- 1) Precise synthesis and design methods for electrochemical energy materials;
- 2) Theoretical calculations for electrocatalysts and electrode materials;
- 3) Advanced electrolytes and membranes for electrochemical energy conversion and storage devices;
- 4) Advanced electrocatalysts for fuel cells;
- 5) Advanced materials for supercapacitors;
- 6) Review articles summarizing the current state of the art in the field of electrochemical energy conversion and storage.

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### Guest Editor

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### Deadline for manuscript submissions

20 October 2026



## Materials

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### Message from the Editorial Board

*Materials* (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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