

Special Issue

Advanced Materials for Hydrogen Purification and Storage

Message from the Guest Editors

We are pleased to announce a Special Issue in *Materials* entitled 'Advanced Materials for Hydrogen Purification and Storage', dedicated to showcasing breakthroughs in materials solutions for hydrogen processing. The Issue welcomes work on the design, synthesis, and application of membranes, porous sorbents, metal hydrides, intermetallic compounds, and high-entropy alloys with improved capacity, selectivity, and cycle-life performance. Submissions addressing the use of computational modeling, artificial intelligence, and machine learning approaches are strongly encouraged, especially those integrated with physics-informed models and high-throughput experimentation. We warmly invite submissions of original research articles, comprehensive reviews, and insightful perspectives that contribute to overcoming the pressing challenges of hydrogen purification and storage technologies. This Special Issue offers a unique opportunity for researchers across disciplines to share innovative solutions, foster interdisciplinary collaboration, and accelerate the translation of new materials from laboratory to real-world hydrogen use cases.

Guest Editors

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About the Journal

Message from the Editor-in-Chief

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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