Special Issue

Advanced Hydrogen and Fuel Cell Technologies

Message from the Guest Editors

The Special Issue “Advanced Hydrogen and Fuel Cell Technologies” focuses on the latest developments and challenges across the hydrogen value chain. It aims to gather contributions that address critical aspects such as advanced hydrogen production materials, storage materials (e.g., metal hydrides, liquid organic hydrogen carriers, high-pressure and cryogenic systems), system-level optimization, and integration strategies for stationary and mobile applications.

Submissions are encouraged in the areas of numerical modeling and multiphysics simulation, including coupled electrochemical–thermal–fluidic analysis, as well as reduced-order models for real-time diagnostics and control, digital twin, etc. Research addressing water and thermal management, degradation prediction, and lifetime extension will be particularly welcomed.

The Special Issue also invites experimental and computational studies related to system reliability, safety, and standardization—key enablers of large-scale deployment.

Guest Editors

Dr. Lu Xing

Mechanical and Construction Engineering, Wynne Jones Building, University of Northumbria, Newcastle NE1 8ST, UK

Dr. Sumit Roy

Centre for E-Mobility and Clean Growth, Coventry University, Coventry CV1 2TL, UK

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

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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

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