

Special Issue

Hydrogen Energy and Space Propulsion: Materials, Performances, and Matching

Message from the Guest Editors

Hydrogen energy and space propulsion are highly researched in the current scientific fields and the ordinaries. Materials play dominant roles in the development of hydrogen energy and space propulsion, such as the materials of feedstock influences the production efficiency of hydrogen gas, the materials of membranes dominate the dynamic properties of hydrogen fuel cells, the materials of propellants determine the exothermic performances of space propellers, and the spraying materials of hydrogen fuel cells and propellers affect the comprehensive performances. Therefore, studying materials, especially the effects and matching of materials to performances, is significant to the developments of hydrogen energy and space propulsion. This Special Issue is aimed at providing selected contributions on advances in the materials, performances, and matching of hydrogen energy and space propulsion with regard to further development. Potential topics include but are not limited to:

- Materials of Hydrogen Polymer Electrolyte Membrane Fuel Cells;
- Materials of Space Propellants;
- Materials of Hydrogen Combustion Engines;
- Materials of Feedstock to Hydrogen Production;

Guest Editors

Dr. Zuoyu Sun

Hydrogen Energy and Space Propulsion Laboratory (HESPL), School of Mechanical, Electronic and Control Engineering, Beijing Jiaotong University, Beijing 100044, China

Dr. Jing Zhao

Key Laboratory of Superlight Materials and Surface Technology of Ministry of Education, College of Materials Science and Chemical Engineering, Harbin Engineering University, Harbin 150001, China

Deadline for manuscript submissions

closed (20 September 2023)



Materials

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



mdpi.com/si/110168

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

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





Materials

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



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



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.

Editor-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

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), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) /
CiteScore - Q1 (Condensed Matter Physics)