Special Issue

Recent Advances in Nanocomposite Materials for Photocatalytic and Electrocatalytic Hydrogen Production

Message from the Guest Editors

This Special Issue focuses on the development of efficient materials through the separation and migration of charge carriers for enhanced hydrogen production. The development of nanocomposite materials is fascinating and has attracted a deeper interest in photo(electro)catalytic H2 production by using renewable sources, including water and solar energy. The development of various types of nanomaterials, viz., 0D quantum dots, 1D nanotubes, nanorods, 2D nanosheets, and 3D porous materials (MOFs, ZIFs) is emerging as a solution to the current energy demands. Hence, many researchers and scientists worldwide have mainly focused on developing nanocomposite materials for energy applications, especially H2 generation. Recently, significant improvements in exciton separation resulting in enhanced photocatalytic efficiency were recorded through various strategies such as the Z-scheme, S-scheme, heterojunction, Schottky barrier, etc. We invite authors to submit original communications, articles, and reviews on advanced nanocomposite materials for H2 generation applications.

Guest Editors

Dr. Muthukonda Venkatakrishnan Shankar
Department of Materials Science & Nanotechnology, Yogi Vemana University, Kadapa-516 005, Andhra Pradesh, India

Dr. Lakshmana Reddy Nagappagari
Surface and Interface Engineered Materials (SIEM), Department of Materials Engineering, KU Leuven, Leuven, Belgium

Deadline for manuscript submissions

closed (20 October 2023)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/125440

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

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

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)