

Special Issue

Advances in Electrocatalysts: Synthesis and Applications

Message from the Guest Editor

As climate change continues to challenge our lives, reducing carbon emissions to net-zero by the middle of this century became a global agreement for the sustainable development of human society. Unfortunately, present-day energy and industries heavily rely on fossil fuels and feedstocks, averaging about 60% of the world's annual carbon emissions per year. Carbon-neutral energy and industries are therefore paramount for limiting the global temperature rise to well below 2° Celcius. Electrocatalysis features great potential in terms of carbon-neutral fuel and chemical syntheses and high-energy-density storage of intermittent renewables. The design of electrocatalysts typically plays a key role in determining reaction activity and product selectivity. As a guest editor of *Materials*, I am pleased to announce that a new Special Issue is kicked off. The Special Issue welcomes original submissions in the form of reviews and articles. The topics include but are not limited to: computational electrocatalysis; electrocatalyst synthesis; water electrolysis; CO₂ electroreduction; NH₃ electrosynthesis; fuel cell catalysts; design of electrocatalytic reactors.

Guest Editor

Prof. Dr. Yuhang Wang

Institute of Functional Nano & Soft Materials, Soochow University,
Suzhou, China

Deadline for manuscript submissions

closed (10 August 2023)



Materials

an Open Access Journal
by MDPI

Impact Factor 3.7
CiteScore 7.0
Indexed in PubMed



mdpi.com/si/91208

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 3.7
CiteScore 7.0
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.

Editors-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

Prof. Dr. Yuguang Ma

State Key Laboratory of Luminescent Materials and Devices, South China University of Technology, Guangzhou 510640, China

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 (Materials Science, Multidisciplinary) / CiteScore - Q1 (Condensed Matter Physics)