Special Issue

Controlled Growth of Nanomaterials for Low-Carbon Electrocatalysis and Photoelectroatalysis

Message from the Guest Editor

Catalysis plays a key role in enabling the transition to a sustainable and carbon-neutral economy. Success in sustainable and carbon-neutral catalysis relies on the development of efficient and robust catalysts, which can be directly grown in a controllable manner and easily integrated into photo- and electro-catalytic devices with eco-friendly and scalable methodologies. This Special Issue aims to cover the most recent progress and advances in directly grown nanomaterials for the modification and engineering of electrodes to boost the catalytic performance of electrocatalytic and photoelectrocatalytic devices. This includes, but is not limited to, the methods and relevant mechanisms for the growth/deposition of catalytic nanomaterials (e.g., electrodeposition, chemical bath deposition, spray coating), surface characterization techniques, electrocatalytic and photoelectrocatalytic applications (e.g., water splitting, CO2 reduction, and the reforming of organics), and fundamental studies on the mechanisms behind the efficient catalysis by catalytic nanomaterials.

Guest Editor

Dr. Chia-Yu Lin

Department of Chemical Engineering, National Cheng Kung University, Tainan City, Taiwan

Deadline for manuscript submissions

closed (10 December 2023)

Nanomaterials

an Open Access Journal by MDPI

Impact Factor 4.3
CiteScore 9.2
Indexed in PubMed

mdpi.com/si/166612

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

mdpi.com/journal/nanomaterials

MDPI

Nanomaterials

an Open Access Journal by MDPI

Impact Factor 4.3
CiteScore 9.2
Indexed in PubMed

mdpi.com/journal/nanomaterials

MDPI

About the Journal

Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal–organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access.

Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones
School of Geography, Earth and Environmental Science, University of Birmingham, Birmingham B15 2TT, UK

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, CAPlus / SciFinder, Inspec, and other databases.

Journal Rank:

JCR - Q2 (Physics, Applied) / CiteScore - Q1 (General Chemical Engineering)