







an Open Access Journal by MDPI

# Nanomaterials as Photocatalysts: Synthesis, Characterization, and Applications

Guest Editors:

### Prof. Dr. Maraísa Goncalves

Science and Technology Institute, Federal University of São Paulo, São José dos Campos 12231-280, SP, Brazil

# Prof. Dr. Raquel Aparecida Domingues

Science and Technology Institute, Federal University of São Paulo, São José dos Campos 12231-280, SP, Brazil

Deadline for manuscript submissions:

10 May 2025

# **Message from the Guest Editors**

Dear Colleagues,

This Special Issue delves into the intriguing field of nanomaterials as photocatalysts, focusing on their synthesis, characterization, and diverse applications. Nanomaterials, with their unique optical, electronic, and structural properties, are emerging as promising candidates for photocatalysis, which uses light energy to drive chemical reactions. This Special Issue highlights innovative synthesis methods to enhance photocatalytic efficiency and stability, alongside advanced characterization techniques that provide insights into their structural, electronic, and surface properties. It examines applications ranging from environmental pollutant remediation to hydrogen production and carbon dioxide conversion. By showcasing cutting-edge research in nanomaterials for photocatalysis, this Special Issue aims to deepen the understanding of fundamental principles and practical challenges, paving the way for novel solutions to global energy and environmental issues.

It is my pleasure to invite you to submit a manuscript for this Special Issue. Full papers, communications, and reviews are all welcome.













an Open Access Journal by MDPI

## **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, OC H3A 0C7, Canada

# **Message from the Editor-in-Chief**

Materials (ISSN 1996-1944) was launched in 2008. The iournal covers twenty-five comprehensive biomaterials, energy materials, advanced composites. advanced materials characterization, porous materials, manufacturing processes and svstems. 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.

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

#### **Contact Us**

Materials Editorial Office MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 www.mdpi.com mdpi.com/journal/materials materials@mdpi.com X@Materials\_Mdpi