

Special Issue

Emerging Materials for Energy Applications

Message from the Guest Editors

Renewable electricity generation is expected to become a cornerstone of our future sustainable, climate-neutral energy system, and could become the 'primary fuel of the future', serving most of our needs. Designs based on improved photonic and/or advanced concepts can help approach the efficiency limit by eliminating losses from incomplete absorption or nonradiative recombination, playing a crucial role in the next generation of PV technology. The exciting research opportunities and challenges in photonic design and innovative advanced materials could accelerate the massive integration of photovoltaics.

This Special Issue is devoted to the most recent results focused on:

- Recent developments in photonic materials in the fields of applications such as photonics-integrated layers, organic photonics and, especially, photovoltaics.
- New absorbers, alternative transparent electrodes based on advanced materials with innovative architectures and their applications in the development of next-generation PV devices.

Guest Editors

Prof. Dr. Fernando B. Naranjo

Photonics Engineering Group (GRIFO), Electronics Department, EPS, University of Alcalá, Alcalá de Henares, Spain

Dr. Susana Fernández

Energy Department, Center for Energy, Environmental and Technological Research (CIEMAT), 28040 Madrid, Spain

Deadline for manuscript submissions

closed (20 December 2022)



Materials

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



mdpi.com/si/104449

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 Editorial Board

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