



*materials*



an Open Access Journal by MDPI

## Advanced Nanotechnology for Sustainable Energy

Guest Editors:

**Prof. Dr. Rui Filipe dos Reis  
Marmont Lobo**

Department of Physics, CTS,  
Faculty of Science and  
Technology, NOVA University  
Lisbon, 2829-516 Caparica,  
Portugal

**Prof. Dr. César Augusto  
Correia de Sequeira**

Materials Electrochemistry  
Group, Instituto Superior  
Técnico, University of Lisbon,  
1049-001 Lisboa, Portugal

Deadline for manuscript  
submissions:

**20 November 2024**

### Message from the Guest Editors

Among the main advances in nanotechnology, those concerning the sustainability of our planet presently assume crucial importance, with great prominence for the methods of production and storage energy that are, in fact, able to assure a healthy way of living for humans.

Contributions from nanotechnology for improving the efficiency of energy generation, or to develop new methods of using and storing energy, can represent real breakthroughs for changing the conventional technologies currently used in these fields. Interesting processes that can benefit from nanotechnology achievements are being developed to produce more cost-effective energy. They are prone to include nanostructures for improving electricity generation, reducing power losses, hydrogen generation and storage, greenhouse gas conversion, energy harvesting, green synthetic fuels, radiation-to-steam conversion, plasma catalysis, among others; these are opportunities for the appearance of innovative devices developed by new synthetic routes to come into play, presenting novel properties.



[mdpi.com/si/163342](https://mdpi.com/si/163342)

# Special Issue



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, QC H3A 0C7, Canada

## 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.

## 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](http://www.mdpi.com)

[mdpi.com/journal/materials](http://mdpi.com/journal/materials)  
[materials@mdpi.com](mailto:materials@mdpi.com)  
[X@Materials\\_Mdpi](https://twitter.com/Materials_Mdpi)