

## Special Issue

# Design, Engineering, and Characterization of Multifunctional Nanomaterials and Interface Structures for Energy and Environmental Applications

### Message from the Guest Editor

Emerging technologies for clean energy conversion and storage and sustainable environmental catalysis are paramount for modern civilization. The high-energy-density metal, metal-ion, metal-sulfur, metal-air, and metal-CO<sub>2</sub> batteries, fuel cells, photo- and electro-catalysts for hydrogen generation by water-splitting, and CO<sub>2</sub> catalytic conversion are currently under intensive investigation. Complex and often hierarchical structures, interfacial phenomena, and phase transformations that govern the operation of various energy conversion and storage devices and catalytic systems require detailed, down to the atomic level, structural and compositional characterization that can be directly related to their performance and functional properties.

This Special Issue will cover recent research results describing innovative designs, diverse engineering, and characterization aspects of multifunctional nanostructured materials and interfacial structures for future energy conversion, storage, and sustainable environmental catalysis.

### Guest Editor

Dr. Vladimir Oleshko

National Institute of Standards and Technology (NIST), Gaithersburg, MD 20899, USA

### Deadline for manuscript submissions

closed (30 November 2021)



## Applied Sciences

an Open Access Journal  
by MDPI

Impact Factor 2.5  
CiteScore 5.5



[mdpi.com/si/79538](https://mdpi.com/si/79538)

*Applied Sciences*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[appls-ci@mdpi.com](mailto:appls-ci@mdpi.com)

[mdpi.com/journal/  
appls-ci](https://mdpi.com/journal/appls-ci)





# Applied Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.5  
CiteScore 5.5



[mdpi.com/journal/  
applsci](https://mdpi.com/journal/applsci)



## About the Journal

### Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

---

### Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo  
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32,  
20133 Milano, Italy

---

### 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), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

#### Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering )