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

Guest Editor:

#### Dr. Vladimir Oleshko

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Deadline for manuscript submissions: closed (30 November 2021)

#### Message from the Guest Editor

Emerging technologies for clean energy conversion and storage and sustainable environmental catalysis are paramount for modern civilization a The high-energydensity metal, metal-ion, metal-sulfur, metal-air, and metal-CO2 batteries, fuel cells, photo- and electrocatalysts for hydrogen generation by water-splitting, and CO2 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.

**Special**sue



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# **Editor-in-Chief**

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

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

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