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Design of Nanostructures for Energy and Environmental Applications

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Message from the Guest Editors

Dear Colleagues,

This Special Issue aims to report on recent advances in the application of various nanomaterials in energy and environmental applications. For the energy applications, the structure design of the energy devices is essential, including the deposition of electrodes and the process of electrolytes for batteries, the coating of friction materials for nanogenerators, and the dielectric layer for capacitors. For environmental applications, the design of nanostructures that are either recyclable or transient in circuit, or capable of serving as CO_2 reduction catalysts, is highly welcome.

The topics of particular interest include, but are not limited to:

- Synthesis, characterization and performance of 1D and 2D nanomaterials.
- High-performance photocatalysts for hydrogen production and CO_2 reduction.
- Structures and recycling processes for transient electronics.
- Design and sintering techniques of conductors for solar cells and capacitors.
- Processing of solid-state electrolytes for lithium batteries.
- Structure design and property measurement of nanogenerators.

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Message from the Editorial Board

Now more than ever, research is asked to deliver knowledge and technologies to solve the major challenges faced by our society. The development of new materials and devices for (without the ambition to be exhaustive) energy, health and food technology, together with the need for establishing processes that reduce the impact on critical resources and the environment, is indeed in the spotlight of most contemporary research. Surface science and engineering play a key role in this regard, with an incredible potential in delivering new and deep scientific understanding and technical solutions essential to solve most of the major societal challenges.

Coatings is a well-established, peerreviewed, online journal dedicated to the vibrant field of surface science and engineering. Coatings publishes original research articles that report cutting-edge results and review papers that make the point on the hottest research topics.

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