Special Issue

Surface Engineering and Coating Strategies for High-Performance Energy Storage and Conversion

Message from the Guest Editors

The rapid global shift toward electrification, large-scale integration of renewable energy, and the decarbonization of industrial sectors has substantially increased the demand for advanced energy storage and conversion technologies. Surface degradation, interfacial instability, corrosion, dendritic growth, etc., remain key factors that compromise the performance, efficiency, and lifetime of energy storage and conversion systems. This Special Issue aims to present and disseminate the advances related to coating technology and surface engineering for energy storage and conversion systems. We will consider contributions addressing batteries, supercapacitors, electrolyzers, and fuel cells, etc. Topics of interest for publication include, but are not limited to, the following:

- **Experimental and theoretical advances** in multifunctional surface engineering and coating technology strategies for enhanced energy storage and conversion performance.
- **Advanced surface treatment and coating techniques** for electrode fabrication, including roll coating, spray coating, thermal spraying, laser processing, plasma treatments, chemical vapor deposition, electroplating, and spin coating.

Guest Editors

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About the Journal

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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