Special Issue

Advanced Coatings for Enhanced Electrochemical Catalysis and Energy Storage Technologies

Message from the Guest Editor

The shift to sustainable energy increases the demand for advanced storage and conversion systems. Electrochemical catalysis is key, driving processes like water splitting and CO2 reduction for clean fuels and efficient energy storage. Meanwhile, evolving energy storage technologies, like batteries and supercapacitors, are benefiting from high-performance materials that improve energy density, efficiency, and lifespan.

The scope of this Special Issue covers a range of topics related to coatings in electrochemical catalysis and energy storage materials such as those listed below:
Novel catalysts for electrochemical reactions, such as water splitting and CO2;
Advanced energy storage materials, including batteries, supercapacitors, and hydrogen storage systems;
Surface modification techniques that enhance catalyst performance through improved stability and reactivity;
Advanced coatings for key components in electrochemical catalysis and energy storage system, like bipolar plates, gas diffusion layers, current collectors, etc.;
Fundamental understanding of electrochemical processes and mechanisms.

Guest Editor

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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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