Special Issue

Surface Engineering of Solid-State Electrochemical Systems for Energy Conversion and Storage

Message from the Guest Editors

The quest for high-performance solid-state devices for energy conversion and storage calls for the engineering of their surface properties. This Special Issue foresees scientific contributions on the nano- and micro-scale of material properties, focusing on the surface engineering of solid-state electrochemical systems. This Special Issue also aims at elucidating the microstructure–performance correlation of energy conversion systems, focusing on the understanding of the role of surfaces and interfaces. The following topics will be addressed:

- Electrochemistry at surfaces and interfaces;
- Design optimization of electrode–electrolyte interface for solid-state electrochemical devices;
- Physical-based and electrochemical modelling;
- Surface and interface modification by energy deposition techniques;
- Infiltration and exsolution techniques for the decoration of scaffold walls;
- Surface and interface engineering by phase inversion and freeze casting methods;
- Surface science applied to energy harvesting, conversion and storage systems;
- Experimental methods for the characterization of surfaces of electrochemical interest.

Guest Editors

Dr. Luca Vattuone
DIFI, Università degli Studi di Genova, Via Dodecaneso 33, Genova, Italy

Dr. Davide Cademartori
DICCA, Università degli Studi di Genova, Via all'Opera Pia 15, 16145 Genova, Italy

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Coatings
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
coatings@mdpi.com

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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.

Editors-in-Chief

Prof. Dr. Wei Pan
State Key Laboratory of New Ceramics and Fine Processing, School of Materials Science & Engineering, Tsinghua University, Beijing 100084, China

Dr. Emerson Coy
NanoBioMedical Centre, Adam Mickiewicz University in Poznań, ul. Wszechnicy Piastowskiej 3, 61-614 Poznań, Poland

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