Special Issue

Surface Science in Electrochemical Energy Storage

Message from the Guest Editors

Surface science plays a critical role in the development of advanced electrochemical energy storage systems, such as batteries and supercapacitors. The performance, efficiency, and lifespan of these devices are strongly influenced by the properties and behaviors of the electrode surfaces. Surface interactions, such as adsorption, electron transfer, and ion diffusion, are essential in determining the overall performance of energy storage materials. Furthermore, surface modifications and engineering techniques, including coating, doping, and nanostructuring, are employed to enhance charge storage capacity, reduce degradation, and improve cycle life. This Special Issue aims to delve into recent advancements in surface science, focusing on how surface properties influence the electrochemical behavior of materials and the optimization of energy storage devices. By understanding the intricate relationship between surface structure and electrochemical performance, researchers aim to design more efficient and durable energy storage solutions that meet the demands of modern energy systems.

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About the Journal

Message from the Editor-in-Chief

Surfaces and interfaces are ubiquitous, and their relevance in Chemistry, Physics, Catalysis, Materials Science & Engineering, Nanoscience, Biology and Nanomedicine is nowadays well acknowledged. Similarly, surfaces cannot be neglected when targeting applications in many strategic fields, such as sensors, energy conversion and storage, environmental and food science, and medical devices.
Surfaces is a new Open Access journal that will provide rapid publication of scholarly articles on studies related to surfaces and interfaces. Its mission is to publish cutting edge articles and conference proceedings and organizing special issues to highlight outstanding research on specific topics, encouraging the application of a rigorous Surface Science-based approach to many complex interesting phenomena and breaking boundaries among different disciplines.

Editor-in-Chief

Prof. Dr. Gaetano Granozzi
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