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# Surface Coating in Advanced Energy Storage Devices

Guest Editors:

**Dr. Yifan Dong**
Faculty of Materials Science and Chemistry, China University of Geosciences, No. 388 Lumo Road, Wuhan, China

**Dr. Hao Shen**
School of Materials Science and Engineering, Xi'an Jiaotong University, 28 West Xianning Road, Xi'an 710049, Shaanxi, China

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## Message from the Guest Editors

Dear Colleagues,

Surface coating is a typical topic related to advanced **energy conversion and storage** in electrochemical methods. A new emerging tendency in recent research and development should be highlighted by introducing coating materials and theories to describe and develop new knowledge and technologies for advanced batteries. To introduce bands, a built-in-field is used to describe the **battery's electrochemical performance and device physics**; in particular, recent nanomaterials and their heterostructure have been developed as high ionic transport systems for novel batteries.

This Special Issue aims to cover the recent advances in designing nanostructured materials, and the functions of surfaces and heterostructures at various levels of materials and devices in relation to material properties and device performance. It also aims to cover semiconductor-based materials, nano-composite systems, and principles for electrochemical energy conversion and storage.

**Keywords:**

- nanomaterials
- surface coating
- energy storage devices

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## 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


## Message from the Editorial Board

Now more than ever, research is called for to produce technologies and improve knowledge 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 at the center of most contemporary research. Surface science and engineering play a key role in this regard. Refining surfaces and their modifications provides new materials, architectures and processes with a huge potential to aid most societal challenges. *Coatings* is a well-established, peer-reviewed, online journal that focuses on the dissemination of publications in the field of surface science and engineering. *Coatings* publishes original research articles that report cutting-edge results and review papers on the hottest topics.

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*Coatings* Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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