



Recent Advances in Coatings and Materials for Novel Batteries

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Deadline for manuscript
submissions:

30 June 2025

Message from the Guest Editors

Dear Colleagues,

Recently, energy storage and usage via a rechargeable battery is one suitable method for improving efficiency and assisting in the fight against environmental pollution and the depletion of energy sources caused by the consumption of fossil fuels. Most batteries consists of a cathode, anode, electronic insulative separator, and electrolyte. The interface between the electrodes and electrolyte should both be thoroughly understood and controllable, allowing us to improve the performance of novel batteries. Therefore, the research for new formulations and experimental, theoretical, or modeling surface treatment and coatings activities aimed at enhancing the surface properties of novel batteries is an extremely hot topic, both at the scientific level and regarding industrial application.

In particular, the topics of interest include, but are not limited to, the following:

- Surface treatment and coating technology for novel batteries;
- Analytical techniques for the surface and interface of novel batteries;
- Research in the field of contact interaction calculations;
- Development of characterization methods.





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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.

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