

## Special Issue

# Recent Innovations in Nanostructured Coatings for Sustainable Energy Applications

### Message from the Guest Editor

The Special Issue will incorporate a wide range of research areas: advanced materials, coatings, and thin films optimized for sustainable energy technologies. We invite researchers to submit their work, highlighting new advanced coating materials including thin films, quantum dots, and surface coatings designed to increase performance in a variety of systems. The thematic content includes self-healing coatings, anti-corrosion, thermal coatings, and graphene coatings, focusing on their applications in important energy-related devices such as lithium-ion batteries, solar cells, and thermoelectric devices. We will focus on the complex molecular structures and interactions in advanced materials. We welcome theoretical, modeling, and experimental contributions, including studies on thin electrode coatings for batteries and electrochemical cells, spectroscopic techniques investigating vibrational modes and electronic excitations. Asymmetry's effect on intermolecular interactions and catalytic performance is of particular interest. Researchers are encouraged to submit their work on molecular asymmetry's impact on reactivity, selectivity, and catalytic efficiency.

### Guest Editor

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### Deadline for manuscript submissions

30 September 2025



## Coatings

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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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