Special Issue

Advanced Thin Film Materials for Energy Conversion and Storage

Message from the Guest Editors

This Special Issue invites research that bridges the gap between current limitations and future possibilities for thin-film materials in energy applications. It will spotlight recent breakthroughs in the material discovery, fabrication processes, material stability, and integration techniques that facilitate higher efficiency and safer energy solutions. We encourage submissions that delve into, but are not limited to, the following topics:

- Synthesis of new TE thin-film materials, innovative fabrication methodologies and improvements in TE properties
- Discovery and theoretical modeling of low-dimensional TE materials, in-depth analyses of unique low-dimensional TE transport processes, simulations addressing the surface/interface challenges, new architectures for low-dimensional TE materials
- Addressing thin-film PVs' phase stability, improving absorber quality, enhancing interface properties with charge transport layers
- Strategies for increasing energy density and rate performance through thin-film solid-state electrolytes, with a focus on stability, uniformity, and concerning the interfaces between electrolytes and electrode

Guest Editors

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Deadline for manuscript submissions

closed (30 June 2024)

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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.
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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