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Advance Coatings on Solid Oxide Fuel Cells

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Message from the Guest Editors

Dear Colleagues,

Solid oxide fuel cells (SOFCs) produce efficient and clean electricity from a variety of fuels. Good modularization, better fuel efficiency, less toxic products, all-solid-state structure, and high-temperature operation grant them a wide variety of applications in energy conversion technology.

However, problems such as high temperatures and high manufacturing costs are still great challenges for the further development of SOFCs. In this case, high-performance coatings are introduced to support the fabrication of SOFCs. Present this Special Issue to share the new discoveries and developments in the technologies of coatings and their use in solid oxide fuel cells.

Topics of interest for this Special Issue include, but are not limited to:

- High-conductivity electrolyte materials and electrolytic materials;
- Interface structure control, and numerical analysis of SOFCs;
- Surface protection and coatings for electrodes via protective ceramic coatings or high-temperature corrosion coatings;
- Advanced coating technology: electrophoretic deposition; vapor deposition; thermal spray, cold spray, plasma spray, etc.

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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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