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Advances in Thin Films for Energy Conversion

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Deadline for manuscript submissions:
closed (28 February 2022)

Message from the Guest Editor

Dear Colleagues,

Thin films for energy conversion are of great important in renewable and carbon-free energy to overcome the problem of global warming. In this Special Issue, we would like to solicit manuscripts reporting recent progress in this area. There are many thin film coating techniques for thin film to convert natural energy into electricity—for example, photovoltaic cells which convert solar energy into light, thermoelectric thin film that converts the thermal gradient into electric power, thin film fuel cells which convert hydrogen or methane directly into electricity energy with high efficiency, and thin film ion batteries and supercapacitors that convert electrochemical energy for energy storage. Photocatalysts and electrocatalysts are also important thin films for CO2 reduction and hydrogen evolution reaction, and light-emitting diodes convert electricity into light efficiently. The subtopics to be covered within the issue include but are not limited to:

- thin film
- energy conversion
- photovoltaic
- photo(electro)catalyst
- thermoelectric
- batteries and supercapacitors
- light-emitting diodes

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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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