



Thermoelectric Thin Films for Different Applications

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Message from the Guest Editors

Thermoelectric (TE) materials can realize the direct conversion of a temperature gradient into electrical energy or function as heat pumps, demonstrating their potential for wider application in different fields. Among the manufacturing processes, thin films have significant advantages over bulk TEs materials.

Research on thermoelectric thin films has rapidly evolved into topics such as novel manufacturing processes, structural design, flexible and portable thermoelectric devices, and more. Significant effort has been expended to search for new compounds with good performance, low cost, and sustainability.

The potential topics can be summarized as follows:

- Inorganic, organic, and hybrid inorganic–organic thermoelectric thin film;
- Multilayer device;
- Flexible devices
- Micro/nano-scale heat transfer;
- Computation to experiment;
- Thermophysical properties measurement.

Therefore, this Special Issue will focus on the recent advances and new trends in thermoelectric materials and thin films, ranging from material study to device development.

Manuscripts or reviews are all welcome.





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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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