



Future Trends in Thermoelectric Performance and Applications of Materials

Guest Editor:

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Message from the Guest Editor

Exactly 200 years ago, in 1821, Thomas J. Seebeck discovered the Seebeck effect, which opened a new door to generating electricity by scavenging waste heat, providing a promising carbon-neutral solution to the energy and environmental crisis. With the development of rigorous theory, sophisticated material synthesis techniques, and advanced characterization methods, in the past two centuries, and especially in the last three decades, thermoelectric materials have witnessed prominent improvement. Many new compounds have been discovered, motivated by the novel concept of “phonon glass electron crystal” and unconventional chemical bonding mechanisms. It is high time to collect some high-quality research work or reviews to highlight the cutting-edge development of thermoelectric materials and to discuss the future applications.

We welcome all kinds of research on thermoelectrics, including the discovery of new thermoelectric materials by high-throughput screening, optimization of thermoelectric properties by energy band and defects engineering, advanced characterization of microstructures in thermoelectrics, and design and fabrication of thermoelectric devices.





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Message from the Editor-in-Chief

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