

Special Issue

New Trends in Thermoelectric Materials and Thin Films

Message from the Guest Editors

In the context of accelerated energy demand and the need to reduce greenhouse gas emissions, efficient utilization of clean and renewable energy has attracted extensive interest in the last two decades.

Thermoelectric power generation (TEG) is capable of directly converting waste heat into electricity and could play a vital role in energy harvesting. Thermoelectric devices show unique advantages of having no moving parts or pollutants, being lightweight, and having high reliability and simplicity. Recently, the Internet of Things (IoT) has experienced explosive growth and has the potential to transform all aspects of modern life. Since the power consumption of a single IoT node is very small, thermoelectric thin film could be an intuitive and efficient candidate for powering IoT nodes via energy harvesting from body heat, waste heat, or unutilized heat and may shape the power that supplies electronics.

Material scientists, chemists, and physicists are also attempting some new strategies to enrich this interesting field. Therefore, this Special Issue focuses on the recent advances and new trends in thermoelectric materials and thin films, from material study to device development.

Guest Editors

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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