Special Issue

Electro-Thermal-Elastic Coupling of Thermoelectric Materials and Devices

Message from the Guest Editor

Thermoelectric materials possess the remarkable capability of directly converting heat into electrical energy and vice versa with the advantages of silent operation, high power density, and zero emissions. However, the widespread adoption of thermoelectric technology has been hindered by the low performance and poor reliability of thermoelectric devices. Therefore, it is essential to gain a comprehensive understanding of the electro-thermal-elastic coupling phenomena within thermoelectric materials and devices. The goal of this Special Issue, entitled "Electro-Thermal-Elastic Coupling of Thermoelectric Materials and Devices", is to report research on the output power, energy conversion efficiency, refrigerating coefficient of performance, and thermal stress of advanced thermoelectric materials and devices. Topics in this study may include (but are not limited to) the electro-thermal coupling of thermoelectric composites, the thermal stress of thermoelectric composites, conversion efficiency of thermoelectric generators, coefficient of performance of thermoelectric cooler, and related thermoelectric technology.

Guest Editor

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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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