Special Issue

Recent Advances in Thermoelectric Materials for High Efficiency Energy Conversion and Refrigeration

Message from the Guest Editor

In the last few years, significant improvements in the performance of thermoelectric materials have been achieved through chemical doping, solid solution formation, and nanoengineering approaches. Furthermore, the feasibility of flexible, stretchable, and conformable thermoelectric harvesters has been demonstrated and has attracted the interest of a wide audience. However, the path for practical applications of thermoelectrics still appears long. This Special Issue of Materials is intended as an effort to bridge the gap between materials science and applications of thermoelectric materials. Many topics are welcome: New thermoelectric compounds; correlation between material structure and thermoelectric properties; bulk thermoelectric ceramics, oxides, and chalcogenides; bulk thermoelectric alloys and intermetallics; organic and polymeric thermoelectrics; thermoelectric thin films, multilayers, and nanocomposites; theory and modeling; thermal transport and thermal conductivity; applications and devices based on thermoelectric materials; standardization and metrology; and more.

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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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