Special Issue

Thermoelectric Materials for Energy Conversion

Message from the Guest Editor

Thermoelectrics can enable direct energy conversion between heat and electricity, based on thermoelectric effects, which has been considered as a green and sustainable solution to the global energy dilemma. Energy conversion efficiency of thermoelectrics is weighed by the dimensionless figure of merit, ZT = S2□T/□, where S, □, □ and T are, respectively, the Seebeck coefficient, electrical conductivity, thermal conductivity (including electronic component □e and lattice component □l), and the working temperature. Thus far, significant progress has been achieved in enhancing ZT via increasing powder factor (S2□) (by band convergence, reversible phase transition, quantum confinement) and/or reducing □ (by nanostructuring, hierarchical architecturing, matrix with nano-precipitate). This Special Issue will focuses on recent advances in thermoelectric sector on a wide range of topics from material design to applications in energy conversions, including:

- Thermoelectric materials
- Thermoelectric refrigeration
- Thermoelectric power generation
- Thermoelectric water generation
- New type therm

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About the Journal

Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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