

SCIENCE OF ADVANCED MATERIALS

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A Special Issue on Advanced Thermoelectric Materials and Devices

CALL FOR PAPERS

Growing public awareness in renewable energy sources and environmentally-friendly cooling and refrigeration triggered by the prospects of climate change, and eventual fossil fuel depletion has revived interest in thermoelectric materials and technology. In recent years, significant progress has been made on new synthetic and processing approaches to high performance materials, novel characterization methods, theoretical studies and innovative device-design and fabrication for improve and efficient solid state refrigeration and conversion of waste heat from power plants, automobiles and solar thermal energy into useable electrical energy. This special issue of Science of Advanced Materials (SAMs) is focused on recent advances in thermoelectric energy conversion and cooling including material discovery; thermal, electrical and mechanical properties of new materials; and device design, fabrication and testing.

Contributions as original research papers, communications, and comprehensive reviews to this special issue are invited in the following research topics:

- Synthetic strategies for new thermoelectric materials and compounds
- Processing of bulk and thin-film nanostructured materials
- High performance bulk nanostructured thermoelectric materials
- Superlattice and nanostructured materials
- Theoretical studies of transport properties
- Thermal and electrical property measurements and novel measurement techniques
- Mechanical properties of thermoelectric materials
- Emerging technologies for thermoelectric energy conversion
- Thermoelectric device design, fabrication and performance testing
- Heat transfer in nanostructured materials
- Novel heat sink design for thermoelectric devices
- New thermal management techniques in a thermoelectric device
- New materials and bonding techniques for thermoelectric device fabrication
- Novel applications of thermoelectric generators
- Applications and new directions in thermoelectric energy conversion
- Thermoelectric materials and devices for solar energy harvesting

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MANUSCRIPT SUBMISSION

Manuscripts must be prepared according to the Journal's guidelines, available at <http://www.aspbs.com/sam>. Submit your cover letter and manuscript in MS Word or PDF format directly to the Guest Editor or one to the Guest Co-Editors assigned to the subject related to the manuscript topic.

All submissions to this special issue will be subjected to a strict peer review process to ensure that only high quality articles are published. Please indicate in your cover letter that the submitted paper has not been published previously and is not currently submitted for review to any other journal and will not be submitted elsewhere before a final decision is made by this journal.

Please notify the Guest Editors well in advance for your kind intension for submitting a research paper.

KEY DATES:

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