

Special Issue

Advances in Flexible Organic Thermoelectrics

Message from the Guest Editor

Most inorganics perform best at high temperatures (>500 K), whereas most of the waste heat conversion has temperatures below 400 K. By contrast, organic thermoelectric materials with low cost, easy solution processability, and mechanical flexibility are more suitable for harvesting low-grade heat in a low temperature range (300–400 K). Furthermore, the very low intrinsic thermal conductivity of organic materials provides an effective strategy to improve TE performance. Many research groups have put tremendous effort into creating high-performance organic materials for low-temperature TE applications via controlling chemical doping, polymeric chain conformation, and compounding with carbon nanofillers. These organic TE materials are now becoming competitive with traditional inorganic counterparts. This Special Issue of *Materials* aims to cover the most recent advances in “flexible organic thermoelectric materials”, concerning not only the performance metrics of organic-based composites but also reports of their preparation and characterization of thermoelectric nanogenerators for producing high-performance next-generation devices.

Guest Editor

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About the Journal

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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