

Masters Student

Thin film based smart thermoelectric generators (TEGs) for harvesting body heat to useful electrical energy



<http://www.kochevnik.ca/tag/thermoelectric-generator>

Job description

Thermoelectric (TE) technology is one of the simple technologies which can convert waste heat into useful electrical power without any moving part. Currently, the thermoelectric research group at LTI, conducts research on both experimental and theoretical aspects of TE materials and devices. As part of TE materials research, the group is engaged in studying the thermo-transport behaviours of inorganic and organic novel materials in order to engineer efficient TE materials by manipulating their transport parameters with different strategies. The prime objective of the research is to develop efficient printable/thin film TE materials and to fabricate high performing smart-TEGs for different applications.

In order to strengthen our team, we are looking for a scientific assistant who could contribute in our work, in particular with the task of detailed investigation of the newly developed printing inks with regard to electronic transport, thermoelectric properties and state densities. He will also investigate the dimensional dependency of thermoelectric effects of state-of-the-art TE materials.

Qualification

The prerequisite for joining the group is a final year Masters student in Materials Science, Chemistry and Physics or related disciplines. Very good knowledge of materials chemistry and physics, solid state physics and established measurement methods (XRD, SEM, UPS, IPS, GIWAXS) is helpful. Experience with the design and construction of measuring stations as well as the enjoyment of experimental work in the laboratory are desirable.

The KIT attaches great importance to the professional equality of women and men. We would therefore be particularly pleased to receive applications from women. Severely handicapped applicants will be given preferential consideration if they are suitably qualified.

Area of research

Thermoelectric

Type of work

Experimental

Field of studies

Any Masters related to Materials Science, Physics and Chemistry

Starting date

As soon as possible

Contact person

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