Researcher - Thermoelectric Materials and Micro-devices

Contract: Full Time/Fixed Term

One postdoctoral position is available in the Advanced Energy Materials group (Advanced-Energy-Materials/) at the Tyndall National Institute under the supervision of Dr. Kafil M. Razeeb. This is a funded position for 1 year.

The aim of this project is to fabricate thin film thermoelectric materials by electroplating or other fab-compatible techniques. The research will include the development of novel nanostructured thin film based on chalcogenides, investigating the electronic, thermal and thermoelectric properties of the thin films. The goal is to increase the efficiency of the material by tuning its elemental composition and microstructure.

This is a highly collaborative project between the groups at Tyndall National Institute which is funded by European Commission under the Horizon 2020 ICT programme.

The successful applicant will work as part of a multidisciplinary research team, which has a focus in the development of thermoelectric materials and Micro-thermoelectric generator on Si platform.

Key Responsibilities:

The research/duties of this particular position will involve elements of the following:

- Review of state of the art (publications in journals, conferences and patents)
- Fabrication of nanostructured thermoelectric materials using different chemical techniques
- Electrical, thermal characterization and validation of fabricated materials
- Analysis and report the results to project meetings
- Disseminate the outcomes to peerreviewed academic publications and presentations at conferences of international standing.
- Participate in Education and Public Engagement activities.
- Partially supervise/assist postgraduate student/s.
- Ensure all activities are compliant with the Tyndall Quality Management system.
- Ensure all activities are compliant with the required Health and Safety standards.

Academic/Educational requirements:

- PhD in Materials Sciences/ Chemistry/ Physics or related discipline from an approved university. A strong background in Materials Chemistry or Electrochemistry is required.

Required Skills and experience:

- Experience in electrochemistry related fabrication techniques are essential
- Experience in thermoelectric materials and device fabrication techniques are required
- Electrical and thermal characterization techniques for materials and devices are desirable
- Experience in clean room fabrication techniques are beneficial
Appointment may be made on the IUA Scale for Post-Doctoral Researchers €37,873 - €45,041 pa. Salary placement on appointment will be in accordance with public sector pay policy.

Informal enquiries concerning these positions can be made to Dr. Kafil M. Razeeb (kafil.mahmood@tyndall.ie).

Application Instructions

Step 1 - Click here to download and complete the application form and indicate Job Reference KR-21.

Step 2 - Return the completed application form, together with your CV, motivation letter, and include list of publications, the names of two referees and any relevant publication to careers@tyndall.ie.

Handwritten forms will not be accepted.

Please note that Garda vetting and/or an international police clearance check may form part of the selection process.

The University, at its discretion, may undertake to make an additional appointment(s) from this competition following the conclusion of the process.

At this time, Tyndall National Institute does not require the assistance of recruitment agencies.

Tyndall National Institute at University College, Cork is an Equal Opportunities Employer