Researcher (Photovoltaics)

JJ-01 Researcher (Photovoltaics)

Contract: Full Time/Fixed Term (2 years)

Tyndall National Institute at University College, Cork invites applications for a position as postdoctoral researcher in photonic devices. The successful candidate will join the Photonics Centre at Tyndall to work within the Irish Photonic Integration Centre (IPIC) on the development of photonic devices based on GaAs materials for exciting new applications in optical power conversion. The researcher will be involved in all aspects of the design, development, fabrication, integration, characterisation and application of the devices. A key focus of the research will be the integration of III-V active devices onto novel substrates and silicon ASICs using one of the leading emerging technologies for large scale photonic-electronic integration, namely Micro-Transfer Printing (MTP).

The project is in collaboration with industry. The project is part-funded by Science Foundation Ireland.

Key Responsibilities

- Develop III-V semiconductor device design (simulation), realisation of the devices (growth, fabrication), characterisation and integration using transfer printing.The performance of the devices before and after transfer will be measured and evaluated.
- Development specific clean room process flows to realise fabrication the devices.
- Analysis and reporting of the results including the preparation of project deliverables, publications and the delivery of prototypes, as well as providing direct technical support to other group members using their knowledge and outputs.
- Disseminate the outcomes of the research to the group, including peerreviewed academic publications and presentations at Tyndall and at conferences of international standing.
- Contribute to the engagement on intellectual property activities in partnership with the Office of Technology Transfer.
- Participate in Education and Public Engagement activities, as required.
- Ensure all activities are compliant with the Tyndall Quality Management system.
- Ensure all activities are compliant with the required Health and Safety standards.
- Carry out any additional duties as may reasonably be required within the general scope and level of the post.

Essential Criteria

- The successful candidate must have a PhD in physics, electrical engineering, material science or a related field or demonstrated equivalent experience.
- The person must have a comprehensive understanding of semiconductor device physics as appropriate for advanced photonic devices.
- The candidate should have experience in modelling and measurements of photonic semiconductor devices.
- The person should be familiar with the fabrication of semiconductor devices in a clean room environment.
- The candidate must show initiative, teamwork with excellent writing and communication

skills.

Desirable Criteria

- Relevant experience in the design, fabrication and characterisation of photovoltaic devices and Light Emitting Diodes (LEDs).

Appointment may be made on the Postdoctoral Researcher Scale €37,873 - €45,041. Salary placement on appointment will be in accordance with public sector pay policy.

For further information and informal enquiries please contact John Justice at john.justice@tyndall.ie

Application Instructions

Step 1 - Click here to download and complete the Application form and indicate the Job Reference JJ-01

Step 2 – Return the completed Application form, together with your CV and motivation letter to careers@tyndall.ie.

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.

Please note that an appointment to posts advertised will be dependent on University approval, together with the terms of the employment control framework for the higher education sector.

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.