



Research Centre National Centre for Plasma Science & Technology (NCPST)

Post title Post-Doctoral Researcher Level 1
PPSAD: Plasma Processes for Selective Area Deposition – materials characterisation

Post duration Fixed Term Contract up to 48 months

Research Career Framework

As part of this role the researcher will be required to participate in the DCU Research Career Framework <http://dcu.ie/hr/ResearchersFramework/index.shtml>. This framework is designed to provide significant professional development opportunities to researchers and offer the best opportunities in terms of a wider career path.

DCU has a strong track record in attracting both Irish and European Union research funding under Horizon 2020 (and all previous Framework Programmes), Marie Curie Actions and Erasmus. We offer a dynamic and internationally-focused environment in which to advance your academic career.

Background & Role

PPSAD: Plasma Processes for Selective Area Deposition is an AMBER SFI Funded Industry-Led Research Project. The overall goal of this project is to develop a novel process for selective area deposition for use in the semiconductor manufacturing industry. Selective area deposition is seen as a 'grand-challenge' in integrated circuit (IC) manufacture as it allows development of features on a substrate surface without the need for lithographic steps.

The project includes both materials characterisation and plasma physics/engineering elements and the present role is a technical researcher role comprising both research and equipment commissioning and development aspects specifically around in-situ surface and interface characterisation methods.

Principle Duties and Responsibilities

Reporting to the DCU Head of the PPSAD project, the Researcher will

- Execute particular technical and research projects that may be agreed from time to time with the DCU Head of the PPSAD project, including (but not limited to) research and equipment commissioning and development aspects specifically around in-situ surface and interface characterisation methods
- Disseminate the outcomes of the research in which he/she is engaged including publishing in high quality peer reviewed journals of international standing, presentation at relevant conferences etc., with appropriate regard to IP considerations
- Liaise with other participants in the project, including both academic and industrial partners
- Assist with the supervision of doctoral and other students working in the general area of in-situ surface and interface characterisation methods
- Liaise with the DCU Science and Technology Enhancement Platform (STEP) on matters of technical and financial reporting of PPSAD activities
- Contribute to broader outreach and engagement activities relevant to the research, such as organising technical meetings, outreach to schools and other interested parties, *etc.*
- Contribute to the teaching activities of the School of Physical Sciences, in ways to be agreed with the Head of the School.
- Engage in appropriate training and development opportunities as required by the DCU Head of the PPSAD project, the School, Faculty, or the University.

Minimum Criteria

Applicants should have a PhD in a discipline relevant to surface and interface characterisation methods. A broad knowledge of surface and interface characterisation methods and vacuum technologies is essential.

Discipline Knowledge & Research skills – Demonstrates the ability to design and/or implement a substantial programme of research including initiating and leading new research programmes (for example by using critical judgement and an understanding of new research methodologies)

Equipment commissioning and development – Demonstrates the ability to design, commission and further develop surface and interface characterisation experimental set-ups and techniques, utilising surface science and vacuum technologies, for novel in-situ analyses

Understanding the Research Environment – Demonstrates a thorough understanding of the research environment both nationally and internationally, the ability to assist in securing research funding and where relevant the ability to apply for intellectual property rights and/or patents for their research

Communicating Research – Demonstrates excellence in communicating their research

nationally and internationally (for example by publishing in high quality peer reviewed journals of international standing, presentation at conference and through interaction with industrial partners)

Managing & Leadership skills – Demonstrates the potential to successfully lead and manage a research programme including the management and supervision of a small research team and the financial management of the present research programme.

Salary: €36,488 - €47,255

Closing date: 21st July 2017

Informal enquiries to:

Professor Enda McGlynn,

School of Physical Sciences and National Centre for Plasma Science & Technology,

DCU, Dublin 9, Ireland.

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Phone: +353 (0)1 700 5387

Please do not send applications to this email address, instead apply as described below.

Application Procedure

Application forms are available from the DCU Current Vacancies (open Competitions) website at <http://www.dcu.ie/vacancies/current.shtml> and also from the Human Resources Department, Dublin City University, Dublin 9. Tel: [+353 \(0\) 1 7005149](tel:+35317005149).

Applications should be submitted by email to hr.applications@dcu.ie or by Fax: [+353 \(0\)1 7005500](tel:+35317005500) or by post to the Human Resources Department, Dublin City University, Dublin 9. Human Resources Department, Dublin City University, Dublin 9. Tel: +353 1 700 5149; Fax: +353 1 700 5500 Email: Insert hr.applications@dcu.ie

Please clearly state the role that you are applying for in your application Job Ref #602 - Post-Doctoral Researcher Level 1 PPSAD: Plasma Processes for Selective Area Deposition – materials characterisation

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