



Research Centre	Plasma Research Laboratory, School of Physical Sciences
Post title	Postdoctoral Researcher
Level on Framework	Level 1
Post duration	18 months

Research Career Framework

As part of this role the researcher will be required to participate in the DCU Research Career Framework <http://www.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.

Background & Role

The Plasma Research Laboratory (PRL) located in the School of Physical Sciences and associated with the NCPST at Dublin City University. The PRL is an Engineering-Physics group developing plasma source technology and new sub-systems and diagnostics to implement, diagnose, and control the plasma systems. The PRL is now looking to recruit a suitable candidate for a Postdoctoral Researcher position.

The development and application of plasma-science is inherently multi-disciplinary and as such there are many applicable skill-sets, some of which the candidates will bring to the group, and some of which will be developed as part of the research program.

The research program consists of developments both in experimental and computer-modeling, and application to PECVD of inorganic layers (Si, SiO, SiN, Al₂O₃, etc.).

The group is strongly engaged with international partners and a considerable amount of international travel is anticipated.

The post holder will participate in the development of the PRL's multi-tile, large-area, VHF plasma-source.

Principle Duties and Responsibilities

Reporting to his/her Principal Investigator the Postdoctoral Researcher will:

- Conduct a specified programme of research into characterization, optimization, and hardware-development of multi-tile plasma sources and their application to PECVD under the supervision and direction of the Principal Investigator
- Assist in identifying and developing future research and funding initiatives
- Engage in the dissemination of the results of the research in which he/she is engaged with the support of and under the supervision of the Principal Investigator
- Supervise and assist undergraduate students working in this area with their research
- Engage in appropriate training and development opportunities as required by the Principal Investigator, the School or Research Centre, or the University.
- Engage in teaching and teaching support as assigned by the Head of School under the direction of the Principal Investigator
- Liaise with both internal and external stakeholders including industry and academic partners/collaborators
- Carry out administrative work associated with the programme of research as necessary

Experience & Qualifications

Applicants should have a PhD in a relevant discipline. In addition, it is desirable that the candidate has experience in;

- the design and building of rf-matching systems in application to plasma sources
- VHF matching systems and plasma diagnostics for VHF rf-systems and VHF plasma-diagnostics
- ion-mass-spectrometry of plasmas
- designing electronic circuits, multi-layer circuit boards for mixed rf / digital electronics
- plasma diagnostics such as OES, LIF, langmuir probes, etc.
- computer skills such as LabView, Unix, html / XML and materials characterization such as laser-interferometry, Raman, XRD, STM, Dek-Tak

Candidates will be assessed on the following competencies:

- **Discipline knowledge and Research skills** – Demonstrates knowledge of a research discipline and the ability to conduct a specific programme of research within that discipline.
- **Understanding the Research Environment** – Demonstrates an awareness of the research environment (for example funding bodies) and the ability to contribute to grant applications.
- **Communicating Research** – Demonstrates the ability to communicate their research with their peers and the wider research community (for example presenting at conferences and publishing research in relevant journals) and the potential to teach and tutor students.
- **Managing & Leadership skills** - Demonstrates the potential to manage a research projects including the supervision of undergraduate students.

Salary: €37,750 - €46,255 (*subject to experience & qualifications*)

Closing date: 25th November 2014

Informal enquiries to:

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Application forms are available from:

Human Resources Department, Dublin City University, Dublin 9. Tel: +353 1 700 5149;

Fax: +353 1 700 5500 Email: Insert hr.applications@dcu.ie

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