



Research Centre	Plasma Research Laboratory
Post title	Research Fellow in Transformative R&D in Plasma Technology
Level on Framework	Level 2
Post Duration	2.5 years

Research Career Framework

As part of this role the appointee will be expected to participate in the *DCU Research Career Framework*. The Framework is designed to attract and retain the best Postdoctoral researchers to DCU, provide significant professional development and give the best opportunities in terms of their wider career path. The Framework also aims to ensure that DCU remains a University of choice for top-class research and researchers in the future.

Dublin City University www.dcu.ie is a research-intensive, globally-engaged, dynamic institution that is distinguished both by the quality and impact of its graduates and by its focus on the translation of knowledge into societal and economic benefit. Through its mission to transform lives and societies through education, research and innovation, DCU acts as an agent of social, cultural and economic progress. DCU is Ireland's fastest growing university, and now hosts more than 17,000 students across its three academic campuses: DCU Glasnevin Campus, DCU St Patrick's Campus and DCU All Hallows campus.

Plasma Research Laboratory

The Plasma Research Laboratory has a history of development in Advanced Plasma Sources and the Engineering Systems to enable them. Based on some new developments in industry, a novel configuration of plasma source has been conceived, and partially demonstrated, which is enabling for select fields of application.

We are now seeking to hire a Research Fellow on a temporary contract of 30 months to research new developments of the PRL high-VHF, Multi-Tile plasma source and demonstrate the capabilities in the lab at DCU, then on a fully-commercial system at a partner site.

Duties and Responsibilities

Reporting to his/her Principal Investigator (PI) the Research Fellow will:

- Conduct a specified programme of research under the supervision and direction of the PI
- Assist the PI and research group in the design and development of the research programme
- Substantially contribute to the identification of external funding sources and assist in the writing of grant proposals
- Mentor, assist and supervise postgraduate research students and junior research staff as required.
- Assist the PI in the management / co-ordination of key aspects of the research programme (e.g. financial management, reporting, equipment management etc.)
- Engage in the dissemination of the results of the research in which he/she is engaged to the wider research community with the assistance and under the supervision of the PI

- Engage in appropriate training and development opportunities as required by the PI, the School or Research Centre, or the University
- Engage in teaching and teaching assistance as assigned by the Head of School under the direction of the PI
- Engage with internal and external stakeholders including academic and industry partners/collaborators as appropriate
- Carry out administrative work associated with the programme as necessary
- Engage with industrial partners with commercial interest to ascertain their needs for using the new technology
- Handle and control commercially sensitive information from the University side and from potential commercial partners.

Applicant Requirements

Essential:

- PhD (or equivalent industrial research experience) in Plasma-Physics, Engineering/Processing
- A minimum of 4 years' relevant postdoctoral research or equivalent at Level 1 of the Research Career Framework
- Well-developed qualitative and quantitative research skills with a publication track record
- Excellent written and oral proficiency in English
- Proven ability to manage an interdisciplinary team
- Excellent written and verbal communication skills
- Proven ability to prioritise workload and work to strict deadlines
- Proven ability to work in a diverse team
- Strong organisational and problem solving abilities.

Desirable:

It would be desirable if applicants had experience in the following:

- The design (CAD experience beneficial), build, and testing of *rf* plasma sources, in particular the matchbox and 'high-Q' sections of the Plasma Systems
- Plasma characterization with electrical probes, energy-resolved-mass-spectrometer, and OES;
- Plasma etching chemistry for Silicon, Dielectric, and Metal etch
- Surface characterization of isotropic and an-isotropic etching samples.

Candidates will be assessed on the following competencies:

Discipline knowledge and Research skills – Demonstrates the ability to design and implement part of a programme of research (for example by using critical thinking and the application of relevant research methodologies).

Understanding the Research Environment – Demonstrates a thorough understanding of the research environment both nationally and internationally and the ability to contribute substantially to grant applications.

Communicating Research – Demonstrates the ability to communicate their research effectively to the research community and wider society (for example by publishing their research in high quality peer reviewed journals) and the ability to teach and tutor students.

Management & Leadership skills - Successfully manages research projects including the management and supervision of postgraduates and/or junior research staff.

Mandatory Training

The post holder will be required to undertake the following mandatory compliance training: GDPR, Orientation, and Compliance. Other training may need to be undertaken when required.

Dublin City University is an equal opportunities employer and is committed to promoting gender equality reflected in its attainment of the Athena SWAN Bronze Award. Information on a range of university policies aimed at creating a supportive and flexible work environment is available at <https://www.dcu.ie/policies/policy-starter-packs.shtml>