



<b>Unit</b>	Plasma Research Laboratory, School of Physical Sciences
<b>Post title</b>	Research Assistant / Process Eng.
<b>Post duration</b>	Up to 2 Years

### **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 suitable candidates for a Process Engineer to Research specific applications of the PRL core technology. .

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, Al<sub>2</sub>O<sub>3</sub>, 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, specifically focusing on the the application and characterization of PECVD grown thin-films.

A significant amount of time will be at partner-site Sungkyunkwan University in Suwon, South Korea. The host laboratory is the world-renowned Plasma Nano Processing Laboratory (<http://spl.skku.ac.kr/>) with host support in the PNPL laboratoy of Prof. Yeom as well as the SAINT nano-technology research center, world famous for fundamental and applied graphene physics. The host site has Plasma and Thin-film spectroscopy, XPS, TEM, FTIR, STM, Raman, etc. diantostic systems. Substantial cross-program support between the PNPL and the PRL is enchouraged and supported. Living expenses during South Korea visits will be paid.

### **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

### **Minimum Criteria**

Applicants should have a BS in a relevant discipline with relevant research experience, or MS/PhD in relevant field. In addition, it is desirable that the candidate has experience in:

- operation of plasma systems and specifically PECVD of inorganic layers
- thin-film characterization
- surface-science techniques such as Raman, XRD, STM, SEM, TEM, XPS
- computer skills such as LabView, Unix, html / XML

**Salary:** € 21,850 to €26,873 (*subject to experience & qualifications*)

**Closing date:** 2 December, 2014

### **Application Procedure**

#### **Informal enquiries to:**

Dr. Bert Ellingboe, School of Physical Science, DCU

E-mail: [bert.ellingboe@dcu.ie](mailto:bert.ellingboe@dcu.ie)

Phone: +353 (0)1 7005314

#### **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](mailto:hr.applications@dcu.ie)

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