



## Job Description

<b>Research Centre</b>	School of Chemical Sciences
<b>Post title</b>	Postdoctoral Researcher Surface Science
<b>Level on Framework</b>	Level 1
<b>Post duration</b>	27 months fixed term contract

### Dublin City University

Dublin City University (DCU) is a young, ambitious and vibrant university, with a mission 'to transform lives and societies through education, research, innovation and engagement'. Known as Ireland's 'University of Enterprise', DCU is a values-based institution, committed to the delivery of impact for the public good. DCU was named Sunday Times Irish University of the Year 2021.

DCU is based on three academic campuses in the Glasnevin-Drumcondra region of north Dublin. More than 18,000 students are enrolled across five faculties – Science and Health, DCU Business School, Computing and Engineering, Humanities and Social Sciences and DCU Institute of Education.

DCU is committed to excellence across all its activities. This is demonstrated by its world-class research initiatives, its cutting-edge approach to teaching and learning, its focus on delivering a transformative student experience, and its positive social and economic impact. The university continues to develop innovative programmes in collaboration with industry, such as the DCU Futures suite of degrees, which are designed to equip graduates with the skills and knowledge required in a rapidly evolving economy.

DCU's pursuit of excellence has led to its current ranking among the top 2% of universities globally. It is also one of the world's Top Young Universities (QS Top 100 Under 50, Times Higher Top 150 Under 100). In the Times Higher Education University Impact Rankings 2021, DCU ranked 23rd in the world for its approach to widening participation in higher education and its ongoing commitment to eradicating poverty, while it ranks 38th globally for its work in reducing inequality and 89th globally for gender equality.

The university is ranked 23rd in the world and first in Ireland for its graduate employment rate, according to the 2020 QS Graduate Employability Rankings. Over the past decade, DCU has been the leading Irish university in the area of technology transfer, as reflected by licensing of intellectual property.

As part of this role the researcher will be required to participate in the DCU Research Career Framework. 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 School of Chemical Sciences at Dublin City University invites applications for a postdoctoral researcher in surface science to work on a collaborative project on the development and testing of nano- and microstructured membranes. The position is available from October 2022, for 27 months (until the end of December 2024).

The project is in collaboration with researchers in University College Dublin School of Chemical and Bioprocess Engineering and is highly multidisciplinary in its nature.

### **Principal Duties and Responsibilities**

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

- Conduct a specified programme of research under the supervision and direction of the Principal Investigator, with a focus on electrospinning and surface chemistry, polymer embossing, membrane studies, and cell culture studies
- Engage in the dissemination of the results of the research in which he/she is engaged with the assistance of and under the supervision of the Principal Investigator
- Supervise and assist undergraduate and postgraduate students working in the Kelleher research group
- Train postgraduate students in bacterial cell culture techniques and analysis, including microscopy techniques
- Assist in the day-to-day management of the Kelleher research group, including assisting with tender processes, procurement, and equipment and lab management
- Engage in appropriate training and development opportunities as required by the Principal Investigator, the School or Research Centre, or the University
- Liaise with both internal and external stakeholders including academic partners/collaborators
- Carry out administrative work associated with the programme of research as necessary

### **Minimum Criteria**

Applicants should have a PhD in chemistry or materials science. Previous experience at post-doc level would be an advantage.

The ideal candidate will have experience in working in the area of polymer-based surface science and characterization using a range of microscopic and spectroscopic techniques, as well as extensive experience testing materials at the bio-interface, specifically with bacterial cell lines. Previous experience in working on projects connected to industrial applications will be an advantage.

In addition, it is desirable that the individual has experience in:

- Electrospinning and spin-coating
- Surface characterisation techniques like WCA, SEM, FTIR, AFM, XPS etc.

- Leadership in a post-doctoral position, including setting up and establishing new techniques in a lab
- Working independently and making decisions on the design and implementation of experiments
- A range of bacterial cell culture techniques and experimental design and an understanding of bacterial assay development
- Interpretation and analysis of bacteria/surface interactions
- Working on collaborative, multidisciplinary projects
- Knowledge in membrane technology would be an advantage
- Excellent team working and presentation skills
- Paper and report writing, time management and working to deadlines