



**Postdoctoral Researcher in Materials Science and Applications
School of Electronic Engineering / NCPST
Fixed Term Contract up to 7 Months**

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.

The School of Electronic Engineering

The DCU School of Electronic Engineering (Scoil na hInnealtóireachta Leictreonaí DCU) was established in the 1980s and continues to provide top level education to both undergraduate and postgraduate students. Recognised nationally and internationally for the outstanding quality of our courses, we focus on preparing students to pursue a broad range of careers in the Information and Communications Technology (ICT) sector in the areas of electronic, computer, and mechatronic engineering.

The Role

The project seeks a highly motivated postdoctoral researcher to undertake cutting edge research in the areas of thin films growth, characterization, surface engineering and sensor development. The successful candidate will work in a commercialization project to develop an engineered material based wearable sensor prototype for healthcare application. The project aims to develop the materials system, investigate the properties and fabricate a sensor prototype device and characterize it. During the course of the project, the candidate will liaise and support a multidisciplinary team of engineers and commercialization experts to make the device ready for customer trials.

Principle Duties and Responsibilities

Reporting to his/her Principal Investigator the Postdoctoral Researcher's duties and responsibilities of the position include, but are not restricted to, the following:

- Conduct a specified programme of research under the supervision and direction of the Principal Investigator
- 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
- Liaise with both internal and external stakeholders including industry and academic partners/collaborators
- Contribute to the engagement on intellectual property activities in partnership with the Office of Technology Transfer
- Engage in appropriate training and development opportunities as required by the Principal Investigator, the School or Research Centre, or the University
- Assist in identifying and developing future research and funding initiatives
- Supervise and assist undergraduate students working in this area with their research
- Carry out administrative work associated with the programme of research as necessary

Qualifications, Skills and Experience Required

Applicants should have a PhD in Material Science or Physics, with some experience at postdoctoral level would be an advantage.

The ideal candidate will have experience in working in the area of thin film deposition, surface engineering and characterization using a range of spectroscopic, optoelectronic and morphological techniques and knowledge in sensor fabrication and characterization. Previous experience in

commercialization projects or processes will be an advantage. In addition, it is desirable that the candidate has experience in:

- Thin film/nanomaterial growth and processing
- Physical vapour deposition and spin coating
- Surface Engineering
- Characterization techniques like XRD, SEM, I-V analysis, Absorption, Photoluminescence etc.
- Sensor fabrication/testing
- Knowledge in wearable sensors would be an advantage
- Interest to work with commercialization project
- Excellent team working, presentation and academic article writing
- Report writing, time management and working to deadlines

Mandatory Training

The post holder will be required to undertake the following mandatory compliance training: Orientation, Health and Safety and Intellectual Property and Data Protection training. Other training may need to be undertaken when required.

Dublin City University is an equal opportunities employer.

In line with the Employment Equality Acts 1998 – 2015, the University is committed to equality of treatment for all those who engage with its recruitment, selection and appointment processes.

The University's Athena SWAN Bronze Award signifies the University's commitment to promoting gender equality and addressing any gender pay gaps. Information on a range of university policies aimed at creating a supportive and flexible work environment are available in the [DCU Policy Starter Packs](#)