

Post Graduate Research Position: Microfluidic platforms incorporating stimulus-responsive materials

The National Centre for Sensor Research (NCSR) is a world renowned, large-scale, multidisciplinary research facility focused on the science and applications of chemical sensors and biosensors (<http://www.ncsr.ie>). This state-of-the-art facility situated on the campus of Dublin City University comprises custom-designed laboratories, a range of specialist support units and equipment, and dedicated technical and administrative staff. The NCSR hosts over 250 researchers, and several large-scale research initiatives including the Biomedical Diagnostics Institute (www.bdi.ie), the Irish Separation Science Cluster (www.separationscience.ie) and members of CLARITY, the Centre for Sensor Web Technologies (<http://www.clarity-centre.org/>).

Within the Marie Curie Initial Training Network ATWARM, we are offering a PhD position for a period of 3 years to research on advanced technologies for water resource management. The successful candidate will be based with in the Adaptive Sensors Group, DCU (www.dcu.ie/chemistry/asg/), which is part of the SFI funded CLARITY CSET (www.clarity-centre.org/).

JOB DESCRIPTION

This project will address the development of widely distributed chemo/bio-sensor networks for environmental monitoring and the need for advances in the price-performance index of analytical platforms, their reliability and analytical characteristics. The early stage development of new biomimetic materials to generate and control liquid flow within microfluidic manifolds will be integrated with existing low power, compact, non-contact optical (LED based) and impedance measurement detectors. Initial targets will be nitrate, ammonia and metal ions, used in parallel with general contamination indicators that are currently under development.

Project objectives include:

- Synthesis and characterisation of innovative biomimetic materials capable of actuation under photonic or electrochemical stimulation
- Integration of biomimetic materials with detector devices
- Demonstration of materials operational in a functioning analytical platform.

QUALIFICATIONS

To be considered applicants must have a first class or upper second class BSc in the field of Chemistry. Research expertise or a degree in the related disciplines of materials (organic) synthetic chemistry or analytical chemistry would be accepted.

SKILLS REQUIRED

Analytical and interdisciplinary thinking, good team player but self-motivated and capable of delivering high quality outputs

FURTHER INFORMATION

For further information please see <http://ec.europa.eu/euraxess>, enter ATWARM in the search field and scroll to: [**PhD Position in the field of Materials Science.**](#)

Candidates expressing an interest in this position should email Patricia McCrory (p.mccrory@qub.ac.uk) at Queen's University Belfast (ATWARM coordinator) and provide a CV.

According to Marie Curie mobility rules, Irish nationals need not apply.

Dublin City University is an equal opportunities employer