UK Entrepreneurial University of the Year 2013/14
UK University of the Year 2012/13

University of Strathclyde Glasgow

Research Associate in Physical Chemistry

Department	Pure and Applied Chemistry (www.strath.ac.uk/chemistry/)		
Faculty	Faculty of Science (www.strath.ac.uk/science/)		
Staff Category	Research	Reference No	53786
Reports To	Head of Department through Principal Investigator	Grade:	7
Salary Range:	£31076 salary restricted due to grant funding	Contract Type:	Fixed Term (31/01/2018)
FTE:	1 (35 hours/week)	Closing Date	Tuesday, 3 January 2017

Job Advert

Applications are invited for post-doctoral level positions funded by CENSIS to work within the Department of Pure and Applied Chemistry. This position will study enzyme based sensors for substance detection in a multidisciplinary manner. The overall objective is to develop a wearable sensor with a view to commercialisation. This will involve examining environmental factors that may impact on sensor behaviour as well as nullifying them where possible towards producing a commercially realistic production.

The Research Associate will undertake a research in association with Buddi Ltd. Specifically this will cover establishing reliable and robust sample preparation and analysis within biological matrices and engagement with external contractors in order to develop modified electrodes examining the issues surrounding scale-up manufacture. The Research Associate will be required to establish this research portfolio and plan research proposals for future knowledge exchange activities, with assistance from senior colleagues as required; to engage where required in relevant teaching, professional and knowledge exchange activities; and input to administrative activities.

To be considered for this role, you will be educated to a minimum PhD level in a Chemistry discipline, or have equivalent experience. You will have demonstrable experience in the application of electrochemistry in diagnostics and analytical methodologies; knowledge of the design and implementation of enzyme based electrochemical sensors and/or applications of conducting polymers; laboratory based experimental measurement skills as applied to electrochemical sensors and/or conducting polymers; knowledge of signal processing techniques as applied to electrochemical analysis; and excellent communication and presentation skills, with the ability to interact with a range of stakeholders including the industrial collaborator.

Buddi is a leader in remote monitoring of health and wellbeing in the elderly and infirm and seeks to extend its range of services. There are a large number of applications for wearable sensors. However durability, sensitivity and cost have always provided barriers to their market acceptance. The goal of proposed project is to draw conclusions on the potential for low cost sensors. To this end we examine aspects of wearable sensors that can be improved so as to extend their use into Buddi's market.

Job Description

Brief Outline of Job:

To undertake a research project funded by the CENSIS programme in association with Buddi Ltd. Specifically this will cover establishing reliable and robust sample preparation and analysis within biological matrices and engagement with external contractors in order to develop modified electrodes examining the issues surrounding scale-up manufacture, under the general guidance of Dr L Dennany. The project aims to examine enzyme bases electrochemical sensors for substance detection with a view to commercialisation of a wearable product. This involves examining environmental factors that will affect sensor behaviour and nullifying them as well as looking towards potential commercially realistic production techniques. The candidate will be required to establish this research portfolio and plan research proposals for future knowledge exchange activities, with assistance from senior colleagues as required; to engage where required in relevant teaching, professional and knowledge exchange activities; and input to administrative activities.

Main Activities/Responsibilities:

1.	As part of a wider research group or programme, develop research objectives and proposals for own or joint research and play a lead role in relation to a specific project/s or part of a broader project, with guidance from senior colleagues as required
2.	Provide robust and reproducible enzyme sample preparation and modification onto electrode surfaces for diagnostics
3.	Engage with external contractors
4.	Plan and manage own workload, with guidance from colleagues as required.
5.	Conduct individual and/or collaborative research, including determining appropriate research methods and contributing to the development of new research methods
6.	Identify sources of funding and contribute to the securing of funds for research, including drafting grant proposals and planning for future proposals
7.	Write up research work for publication, individually or in collaboration with colleagues, and disseminate results as appropriate to the discipline by, for example, peer reviewed journal publications and presentation at conferences
8.	Join external networks to share information and ideas, inform the development of research objectives and to identify potential sources of funding
9.	Collaborate with colleagues on the development of knowledge exchange activities by, for example, participating in initiatives which establish research links with industry and influence public policy and the professions
10.	Contribute in a developing capacity to Department/School, Faculty and/or University administrative and management functions and committees

Person Specification

Educational and/or Professional Qualifications
(E=Essential, i.e. a candidate must meet all essential criteria to be considered for selection, D=Desirable)

E1 Good honours degree and PhD (or equivalent professional experience) in Analytical Science, Physical Chemistry (Electrochemistry) or appropriate related discipline

E2 Sufficient breadth or depth of knowledge in the electrochemistry to contribute to research programmes and to the development of research activities

Experience

E3 Specific experience of conducting polymers related to analytical detection (e.g. as evidence by scientific publications or company papers)

D1 Experience of relevant student supervision and teaching activities

D2 Evidence of project work that bridges the academic and industrial spheres

Job Related Skills and Achievements

E4 Knowledge of electrochemical accessories

E5 Developing ability to conduct individual research work, to disseminate results and to prepare research proposals
D3 Experience of knowledge exchange related activities
Personal Attributes
E6 Excellent interpersonal and communication skills, with the ability to listen, engage and persuade, and to present complex information in an accessible way to a range of audiences
D4 Membership of relevant Chartered/professional bodies (including Higher Education Academy)
D5 Ability to plan and organise own workload effectively
D6 Project Management qualifications and experience (e.g. PRINCE 2)
D7 Ability to work within a team environment

Application Procedure

Applicants are required to complete an application form including the name of three referees who will be contacted before interview without further permission, unless you indicate that you would prefer otherwise. Applicants should also submit a Curriculum Vitae and a covering letter detailing the knowledge, skills and experience you think make you the right candidate for the job. Applicants should also complete the Equal Opportunities Monitoring Form.

Other Information

Further information on the application process and working at Strathclyde can be found on our website (http://www.strath.ac.uk/hr/workforus).

Informal enquiries about the post can be directed to Dr Lynn Dennany, Lecturer (lynn.dennany@strath.ac.uk / 01415484322).

Pre-employment health screening

An offer of appointment will be subject to a medical assessment by Occupational Health. An individual who accepts an offer of employment must complete a confidential medical questionnaire and forward it to the Occupational Health Nurse within 5 days of receipt. If further information is required the individual may be contacted by the OHN or a Medical Advisor and a personal appointment with the individual may be arranged. An unconditional contract of employment will not be issued until Human Resources receives confirmation that applicant is fit to undertake the duties of the post.

Probation

Where applicable, the successful applicant will be required to serve a 9 month probationary period.

Pension

The successful applicant will be eligible to join the Universities' Superannuation Scheme. Further information regarding this scheme is available from Payroll and Pensions.

Relocation

Where applicable, the University offers a relocation package to support new employees who meet the eligibility criteria. The relocation package is offered as a contribution towards costs incurred, and is designed to be flexible, allowing staff to use the financial support available in the way that will be most helpful to them. Further details are outlined in the Relocation Policy.

Interview

Formal interviews for this post will be held on Friday, 13 January 2017.

Equality and Diversity

We value diversity and welcome applications from all sections of the community.

The University currently holds a Bronze Athena SWAN award, recognising our commitment to advancing women's careers in science, technology, engineering, maths and medicine (STEMM) employment in academia.