

Research Associate

Department	Chemical and Process Engineering (www.strath.ac.uk/engineering/chemicalprocessengineering/)		
Faculty	Faculty of Engineering (www.strath.ac.uk/engineering/)		
Staff Category	Research	Reference No	573375
Reports To	The Head of Department	Grade:	7
Salary Range:	£36,024 - £44,263	Contract Type:	Fixed Term (18 months)
FTE:	1 (35 hours/week)	Closing Date	Monday, 25 March 2024

Job Advert

The Department of Chemical and Process Engineering (CPE) within the Faculty of Engineering is seeking to recruit a Research Associate to carry out the experimental work for the project “REFINE: From solar energy to fuel: A holistic artificial photosynthesis platform for the production of viable solar fuels”, funded through EU Horizon (<https://cordis.europa.eu/project/id/101122323>). The project aims to develop a hybrid platform system of artificial photosynthesis for the circular and sustainable production of butanol, a green platform chemical and advanced biofuel, from solar energy, water and waste CO₂. This is realised via three integrated units: Unit 1, a photovoltaic unit converting sunlight to electricity, Unit 2 - electrolyser that uses novel catalysts based on earth-abundant materials to split water into hydrogen and oxygen with high efficiency and stability; and Unit 3, a bioreactor that uses bioengineered bacteria to selectively convert hydrogen and CO₂ into butanol with high productivity and tolerance.

The postholder will be responsible for the development of the (electro)catalyst for Unit 2, the electrolyser (anode, oxygen evolution), which will convert water to hydrogen. The postholder will work closely with the principle investigator, two co-investigators and one PhD student, as well as with the relevant EU consortium members.

As a Research Associate, under the general guidance of a research leader, you will develop research objectives, play a lead role in relation to a specific project/s or part of a broader project, conduct individual and/or collaborative research, contribute to the development of new research methods, and contribute to the securing of funds for research, including drafting grant proposals. You will write up research work for publication, individually or in collaboration with colleagues, and disseminate the results via peer reviewed journal publications and presentation at conferences. You will join external networks to share information and ideas, inform the development of research objectives. You will collaborate with colleagues to ensure that research advances inform departmental teaching effort and you will 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. You will supervise student projects, provide advice to students and contribute to teaching as required by, for example, running tutorials and supervising practical work. You will contribute in a developing capacity to Department/School, Faculty and/or University administrative and management functions and committees and engage in continuous professional development.

To be considered for the role, you will be educated to a minimum of PhD level in an appropriate discipline, or have significant relevant experience in addition to a relevant degree. You will have sufficient breadth or depth of knowledge in electrochemistry and electrochemical measurements, materials design, preparation, and characterisation techniques, and preferably catalytic processes and measurements. You should also demonstrate a developing ability to conduct individual research work, to disseminate results and to prepare research proposals. You will have an ability to plan and organise your own workload effectively

and an ability to work within a team environment. You will have 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.

Whilst not essential for the role, applications are welcomed from candidates with: relevant work experience, membership of relevant Chartered/professional bodies, and/or experience of knowledge exchange related activities.

Job Description

Brief Outline of Job:

To undertake a specific research project/s under the general guidance of a research leader; to establish a personal research portfolio and plan research proposals, 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 joint research and play a lead role in relation to a specific project/s or part of a broader project, with guidance from the line manager as required.
2.	Plan and manage own workload, with guidance from line manager as required.
3.	Conduct individual and/or collaborative research, including determining appropriate research methods and contributing to the development of new research methods.
4.	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.
5.	Join external networks to share information and ideas, inform the development of research objectives and to identify potential sources of funding.
6.	Collaborate with colleagues to ensure that research advances inform departmental teaching effort.
7.	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.
8.	Co-supervise student projects, provide advice to students and contribute to teaching as required by, for example, running tutorials and supervising practical work.
9.	Contribute in a developing capacity to Department/School, Faculty and/or University administrative and management functions and committees.
10.	Engage in continuous professional development.

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 an appropriate discipline i.e. materials/chemical/electrochemical engineering, chemistry

Experience

E2 Sufficient breadth or depth of knowledge in the relevant discipline/s to contribute to research programmes and to the development of research activities

D1 Some relevant work experience

D2 Experience of relevant student supervision and teaching activities

D3 Experience of knowledge exchange related activities

Job Related Skills and Achievements

E3 Developing ability to conduct individual research work, to disseminate results and to prepare research proposals

E4 Ability to plan and organise own workload effectively

E5 Ability to work within a team environment

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

Application Procedure

Applicants are required to complete an application form including the name of three referees who will be contacted 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 Dragos Neagu, Lecturer (dragos.neagu@strath.ac.uk).

Conditions of Employment

Conditions of employment relating to the Research staff category can be found at: [Conditions of Employment](#).

Rewards and Benefits

Our staff have access to a wide range of outstanding benefits that include financial rewards, family friendly and wellbeing benefits and career development opportunities, details of which can be found [here](#).

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.

Interviews

Formal interviews for this post will be held on a date to be confirmed.

Equality and Diversity

The University of Strathclyde is a socially progressive institution that strives to ensure equality of opportunity and celebrates the diversity of its student and staff community. Strathclyde is people-oriented and collaborative, offering a supportive and flexible working culture with a deep commitment to our equality, diversity and inclusion charters, initiatives, groups and networks.

We strongly encourage applications from Black, Asian and minority ethnicity, women, LGBT+, and disabled candidates and candidates from lower socio-economic groups and care-experienced backgrounds.

University Values

The University's Values capture what we're all about: who we are, what we believe in and what we stand for. [Our Values](#) have been derived from how we act and how we expect to be treated as part of Strathclyde.

