

# Postdoctoral Research Associate on ceramic membranes



**OPPORTUNITY**

Where change gets real.



**Reference: 0134-25**

**Grade: 8**

**Salary: £38,249 to £40,497, per annum, depending on experience**

**Contract Type: Fixed Term (Up to 24 months)**

**Basis: Full Time**

## Job description

### Job Purpose:

To contribute to, develop and lead research activities of the School either independently or as part of a team, through professional practice and expertise. In addition, to exploit external links with regional, UK and international bodies such as government agencies, schools, colleges, professional bodies, business and industry as appropriate to the subject discipline and School and/or University strategy.

### Main Duties/Responsibilities:

The Postdoctoral Research Associate (PDRA) will lead the development and optimization of ceramic hollow fibre membranes for bio-separation, applying expertise in material processing with diverse organic and inorganic materials, phase-inversion techniques, and membrane fabrication. They will conduct advanced characterization to assess membrane structure and properties and perform separation performance tests to evaluate permeability, selectivity, and fouling resistance. Managing multiple research tasks, the PDRA will engage with academic (University of Bath, Carma Hub) and industry stakeholders, ensuring effective collaboration and project progress. They will actively contribute to knowledge dissemination through national and international conferences, journal publications, and industry engagement while supporting PhD/MSc students in related research areas. Strong communication and project management skills are essential, along with a commitment to health, safety, and research integrity within the laboratory environment.

### Research

- ▶ To develop research objectives, projects and proposals for personal/joint research programmes consistent with the priorities and strategy of the School, with the assistance of a mentor if required.
- ▶ To write up and publish the outcomes of research in good quality publications.
- ▶ To present papers, posters, reports at seminars, conferences etc.
- ▶ To collaborate in research initiatives with colleagues in and beyond the School as appropriate.
- ▶ To identify sources of funding, develop and submit funding applications, securing external research funding.
- ▶ Where appropriate to School/University strategy and subject discipline, to participate in and develop external networks.
- ▶ To supervise and manage research projects
- ▶ To supervise PhD and other postgraduate students to completion.
- ▶ To coach junior colleagues in research.

### External engagement

- ▶ To represent the interests of the subject and School via activities to raise the regional, national and international profile, particularly with the professions, schools and businesses.
- ▶ To forge relationships with the professional bodies and other bodies representing relevant professional interests.

### **Additional responsibilities**

- ▶ Engage in continuous personal and professional development in line with the demands of the role, including undertaking relevant training and development activities.
- ▶ Ensure and promote the personal health, safety and wellbeing of staff and students.
- ▶ Carry out duties in a way which promotes fairness in all matters and which engenders trust.
- ▶ Promote equality of opportunity and support diversity and inclusion as well as working to support the University's environmental sustainability agenda and practices.

## Person specification

	Essential	Method of assessment
<b>Education and qualifications</b>	<p>A good first degree in in Chemical Engineering, Environment Engineering, Materials Science, or a related discipline.</p> <p>A PhD (or near to completion) in Chemical Engineering, Environment Engineering, Materials Science, or a related discipline.</p>	Application form
<b>Experience</b>	<p>Research experience in materials processing, membrane science, or separation technologies etc.</p> <p>Practical experience in ceramic and polymeric material processing for membrane applications.</p> <p>Hands-on expertise in phase-inversion techniques for membrane fabrication and material processing.</p> <p>Familiarity with membrane characterization methods.</p> <p>Conducting separation performance tests, including permeability, selectivity, and fouling resistance analysis.</p> <p>Ability to manage multiple research tasks within a structured timeline.</p>	Application form and interview
<b>Aptitude and skills</b>	<p>Strong problem-solving skills, applying scientific principles to experimental work.</p> <p>Excellent data analysis skills, including statistical interpretation of experimental results.</p> <p>Ability to work both independently and as part of a team in a research environment.</p>	Application form and interview

	Essential	Method of assessment
	<p>Strong written and verbal communication skills, with experience in research dissemination.</p> <p>Ability to engage with academic and industry stakeholders to support project goals.</p> <p>Commitment to laboratory safety, ethical research practices, and data integrity.</p>	


	Desirable	Method of assessment
<b>Experience</b>	<p>Experience in scaling up advanced membrane or materials technologies.</p> <p>Previous involvement in multidisciplinary research projects, demonstrating collaboration across scientific fields.</p> <p>Prior involvement in industry collaborations, technology transfer, or applied research projects related to filtration.</p> <p>Experience in supervising or mentoring junior researchers.</p> <p>A track record of grant writing or contributing to/developing research proposals.</p> <p>Prior involvement in leading research dissemination events such as workshops, seminars, or industry engagements.</p>	Application form and interview
<b>Aptitude and Skills</b>	<p>Strong project management skills, ensuring timely progress and efficient research coordination.</p> <p>Ability to write and publish high-impact research papers and technical reports.</p>	Application form and interview

	Desirable	Method of assessment
	International research exposure or participation in collaborative projects with global research groups.	

## University values

All staff are expected to demonstrate/promote the University's values and expectations, which are an integral part of our strategy and underpin the culture of the University. In addition, our leaders are expected to be accountable, help to execute strategic visions of the University and share and set clear expectations that inspire those around them.

Values + Behaviours



### Innovation

We strive for excellence within ourselves and others, providing solutions to new and existing challenges.



### Collaboration

We work best when we are collaborative, working together to contribute to the Aston community.



### Ambition

We strive together for improvement and innovation looking ahead to see the bigger picture.



### Inclusion

We treat everyone in our community equally and how they would like to be treated.



### Integrity

We are open, honest and fair. We take ownership of the way we work and how we treat each other.

## How to apply

You can apply for this role online via our website <https://www2.aston.ac.uk/staff-public/hr/jobs>.

Applications should be submitted by 23.59 on the advertised closing date.

All applicants must complete an application form, along with your CV.

Any CV sent direct to the Recruitment Team and Recruiting Manager will not be accepted.

If you require a manual application form, then please contact the Recruitment Team via [recruitment@aston.ac.uk](mailto:recruitment@aston.ac.uk).

## Contact information

### Enquiries about the vacancy:

Name: Zhentao Wu

Job Title: Senior Lecturer in Chemical Engineering

Email: [z.wu7@aston.ac.uk](mailto:z.wu7@aston.ac.uk)

### Enquiries about the application process, shortlisting or interviews:

Recruitment Team via [recruitment@aston.ac.uk](mailto:recruitment@aston.ac.uk) or 0121 204 4500.



## Additional information

Visit our website <https://www2.aston.ac.uk/staff-public/hr> for full details of our salary scales and benefits Aston University staff enjoy.

**Salary scales:** <https://www2.aston.ac.uk/staff-public/hr/payroll-and-pensions/salary-scales/index>

**Benefits:** [Benefits and Rewards | Aston University](#)

**Working in Birmingham:** <https://www2.aston.ac.uk/birmingham>

**Employment of Ex-Offenders:** Under the Rehabilitation of Offenders Act 1974, a person with a criminal record is not required to disclose any spent convictions unless the positions they applying for is listed an exception under the act.

**Eligibility to work in the UK:** You should ensure that you meet the eligibility requirements, including meeting the [English language standards](#). If you do not meet the eligibility criteria, any application for a work visa would be unsuccessful. Please see UKVI guidance for further information on eligibility, knowledge of English requirements and approved test centres <https://www.gov.uk/tier-2-general>

With the end of free movement for EU/EEA/Swiss nationals from 1 January 2021, the UK's new immigration system applies to all non-UK/Irish nationals who require a visa.

Where an individual is subject to UK immigration control, they will require a visa to work in the UK.

The following individuals do not need a visa for the UK, but do still have to prove their right to work before employment can commence:

- **British Citizens or Irish Nationals**
- **EU/EEA/Swiss nationals with Settled or Pre-settled status under the EU Settlement Scheme**
- **Non-EEA nationals with Indefinite Leave to Remain/Settlement in the UK**

The main routes available for those who need a visa to work in the UK are **Skilled Worker**, **Global Talent** and the **Graduate Route**.

You can find further information about each of these visa routes on our candidate immigration page.

If you will conduct research in your role, you may need to apply for and obtain ATAS clearance before Aston can issue a Certificate of Sponsorship for your visa application. Please see below for further details.

### **Academic Technology Approval Scheme (ATAS):**

If you will conduct research in your role and you apply for a Skilled Worker or Temporary



Worker GAE visa, you may need to apply for and obtain ATAS clearance before Aston can issue a Certificate of Sponsorship for your visa application.

This process can take at least 6 weeks to process, and Aston will consider this when confirming your expected start date. Processing times will increase between April and September and can longer to complete.

There is no fast-track option available. ATAS certificates will be processed in order of receipt.

You can find more information about ATAS on our candidate immigration page.

## **Before you start and Right to Work**

### 90-day entry vignette

If you have applied for your visa outside of the UK, you will receive a vignette in your passport which is usually valid for 90 days. Please make sure to travel to the UK within the 'valid from' and 'valid to' dates on this visa. If you entered the UK before or after these dates, you would not 'activate' the visa and you would need to leave and re-enter the country.

You will also receive a decision letter confirming details about your immigration permission and where to collect your Biometric Residence Permit.

### Cost of Living - Estate and Letting Agents

There are numerous Estate and Letting Agents in and around Birmingham that can help you find suitable accommodation. The Midland Landlord Accreditation Scheme provides a list of professional agencies and landlords who have applied with them for accreditation. Whilst accreditation is not a guarantee of quality, it provides some reassurance about the standard of the service they provide.

You can also use property search websites such as Rightmove or Zoopla.

## **Equal Opportunities**

Aston University promotes equality and diversity in all aspects of its work. We aim to ensure, through our admissions policies for students, and our staff recruitment and selection processes that we encourage applications from all groups represented in the wider community at a local, national and international level.

The University will endeavour not to discriminate unfairly or illegally, directly or indirectly, against student or potential students, staff or potential staff. This commitment applies to all functions of the University and to any stage of an individual's career.

An Equal Opportunities Monitoring Form is included within the application form. Data you provide on the Equal Opportunities Monitoring Form will be included in a general database, for statistical monitoring purposes, enabling the University to monitor the effectiveness of its Policy, Codes of Practice and Guidelines on Equal Opportunities in Employment. Individuals will not be identified by name.

**Data Protection**

Your personal data will be processed in compliance with the Data Protection Act 2018 and the General Data Protection Regulation ((EU) 2016/679) ("GDPR"). The University's Data Protection Policy and Privacy Notices, including the Job Applicant Privacy Notice can be found at <https://www2.aston.ac.uk/data-protection>. Your application will only be used to inform the selection process, unless you are successful, in which case it will form the basis of your personal record with the University which will be stored in manual and/or electronic files. Information in statistical form on present and former employees is given to appropriate outside bodies.

Full details of our terms and conditions of service and associated policies and procedures are available online at <https://www2.aston.ac.uk/staff-public/hr/policies>

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