



OPPORTUNITY

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Reference: 0830-26

Grade: 08

Salary: £41,064 per annum, depending on experience

Contract Type: Fixed Term (3 months)

Basis: Full time

Job description

Job Purpose:

For this role, the researcher will carry out laboratory-based pyrolysis investigations to convert hemp stalk biomass to liquid, solid and gaseous products, with the flexibility to optimise the solid (biochar) product. Tests will be carried with existing pyrolysis rigs at the Energy and Bioproducts Research Institute (EBRI). The role will involve also detailed analytical characterisation of feedstock and reaction products, and mass and energy balances calculations. The optimised data will be shared with industrial partners and used to develop a programme for the application of the biochar for hemp cultivation trials.

The post requires a motivated individual with the right skills, expertise, and aptitude with demonstrable experience in delivering projects within tight deadlines. Where necessary, additional training opportunities will be provided to enhance chances of delivery.

Main Duties/Responsibilities

- ▶ Develop actionable research objectives and taking a project leadership role including literature reviews, laboratory work and writing of reports and papers.
- ▶ Preprocessing of biomass and mixtures of biomass to make pellets suitable for pyrolysis rigs in EBRI
- ▶ Conduct laboratory pyrolysis experiments for conversion of biomass into useful products
- ▶ Maintain detailed and accurate records of research work.
- ▶ Acquire and interpret data from a range of applicable analytical techniques.
- ▶ Analyse and present data in both a clear and concise manner that is visually appealing.
- ▶ Work closely with staff within EBRI as well as external project partners.
- ▶ Present results at conferences and partner meetings, seminars and conferences.
- ▶ Prepare project reports and where applicable, peer-reviewed manuscripts for dissemination.
- ▶ Build and develop links with industry and the professions and to secure research funds from external sources.
- ▶ Supervise and manage research projects within the team and assisting in all aspects of research development within the team, including developing proposals for research programmes consistent with EBRI's research strategy and priorities.

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.

Qualifications

Applicants must have PhD in Chemical Engineering or a closely related field, with relevant experience in pyrolysis technologies applied to biomass and other organic feedstocks and biowastes for optimised biochar production. The applicant must possess expertise in detailed quantitative characterisation of biomass and biowaste (including hemp stalk, sewage sludge and farm manure) and all reaction products from the pyrolysis work, produce experimental data from the work in to prepare and present in technical reports to both internal and external project stakeholders. General experience within the field of energy crop production, and sewage sludge handling will also be advantageous.

Excellent oral and written communication skills and the ability to communicate ideas clearly and effectively with academic and industrial stakeholders are also required.

Person specification





	Essential	Method of assessment
Education and qualifications	A PhD in chemical engineering (or a closely related discipline such as chemistry, applied chemistry, industrial chemistry)	Application form
Experience	<p>Experience of initiating and conducting research up to doctoral level</p> <p>Research experience in pyrolysis, detailed analytical techniques (related to biomass/biosolids and reaction products (solids, gases and liquids).</p> <p>Experience in conducting experiments safely and successfully under pyrolysis conditions to produce solid, liquid and gaseous products.</p> <p>Experienced in writing up/contributing to the write up of research for high quality publications.</p> <p>Experienced in computing full material and energy balances from the pyrolysis of solid organic feedstocks.</p> <p>Experience of positive collaboration within and outside of candidate's immediate research team.</p> <p>Experience of supervising other personnel in a research team</p>	Application form and interview and presentation
Aptitude and skills	<p>Ability to interpret and present research data in both a clear and concise manner that is visually appealing, and based on the underpinning sciences</p> <p>Ability to prepare written communications to a high standard</p>	Application form, interview and presentation

	Essential	Method of assessment
	<p>Ability to develop and maintain a research programme and to prepare high-quality publishable materials from the research findings</p> <p>Ability to harness IT as a research tool for analyses of research data and for the safe storage and retrieval of research data</p> <p>A willingness to undertake further training as appropriate and to adopt new procedures as and when required.</p>	

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	Collaboration	Ambition	Inclusion	Integrity
We strive for excellence within ourselves and others, providing solutions to new and existing challenges.	We work best when we are collaborative, working together to contribute to the Aston community.	We strive together for improvement and innovation looking ahead to see the bigger picture.	We treat everyone in our community equally and how they would like to be treated.	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.

Contact information

Enquiries about the vacancy:

Name: Professor Jude Onwudili
Job Title: Professor of Chemical Engineering
Tel: 0121 204 4703
Email: j.onwudili@aston.ac.uk

Enquiries about the application process, shortlisting or interviews:

Recruitment Team via 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: 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**.

Please see UKVI guidance for further information on eligibility, knowledge of English requirements and approved test centres <https://www.gov.uk/skilled-worker-visa> You can also find further information on our candidate immigration [web 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 our candidate immigration [web page](#) for further details.

Before you start and Right to Work

Right to Work Check

All employees must complete a Right to Work check before they commence work at Aston. HR will contact you during the onboarding process to arrange your check.

Cost of Living - Estate and Letting Agents

There are numerous Estate and Letting Agents that can help you find suitable accommodation. Useful websites for support and guidance

<https://www.gov.uk/government/publications/how-to-rent/how-to-rent-the-checklist-for-renting-in-england> and <https://www.citizensadvice.org.uk/housing/>

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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