Candidate Information

Position: Research Fellow
School/Department: Chemistry and Chemical Engineering
Reference: 23/110869
Closing Date: Monday 8 May 2023
Salary: £36,333 per annum
Anticipated Interview Date: Monday 22 May 2023
Duration: Fixed term until 31 October 2024

JOB PURPOSE:

The postholder will be an integral part of the Bioenergy Research Group in the Centre for Advanced Sustainable Energy (CASE) based in the School of Chemistry and Chemical Engineering at Queen's University Belfast. The role involves being an active member of a research team assisting in the development of approaches to valorise agricultural waste streams (gaseous, solid, and liquid) linking these into a wider circular ecosystem connecting agriculture and industry to enable decarbonisation. This post will involve experimental and modelling based research including developing techno-economic models of a circular economy system. The post holder will be responsible for working closely with industrial partners to coordinate activities and support the creation of a business case for future investment.

MAJOR DUTIES:

1. Develop and execute research deliverables in accordance with the CASE research project with emphasis on investigating the use of agricultural waste streams for use as energy sources and raw materials for industry.
2. Develop models and carry out analyses, critical evaluations, and interpretations using methodologies and other techniques appropriate to the areas of research developed.
3. Present regular progress reports on research to members of the research team and industrial project partners to disseminate and consult on research findings.
4. Prepare, in consultation with the project supervisors and other relevant people, material for publication in esteemed national and international journals and presentations at international conferences.
5. Carry out routine administrative tasks associated with the research project to ensure that deliverables are completed on time and within budget. These might include organisation of project meetings and documentation, financial control and risk assessment of research activities.
6. Read academic papers, journal and textbooks to keep abreast of developments in own specialism and related disciplines.
7. Travel to meetings and conferences in the UK, Ireland and elsewhere in the world deemed necessary to undertake the research and associated project work.

ESSENTIAL CRITERIA:

1. Normally have or be about to obtain a relevant PhD in Chemistry/Chemical Engineering or related area.
   (NB 'About to obtain' is normally defined as within 3 months of application date)
2. At least 3 years relevant research experience to include:
   • Undertaking research aimed at developing new routes to valorise waste streams from agriculture.
   • Developing techno-economic models to understand the real-world feasibility of valorisation routes.
   • Development of decarbonisation strategies.
   • Integrating research outcomes into a wider framework to establish a sustainable circular economy model.
   • Delivering analyses, critical evaluations, and interpretations of experimental data.
   • Working effectively as part of a research team including with industrial partners in the development and promotion of the research activities.
3. Strong publication record commensurate with stage of career.
4. Demonstration of experience of working with industry to create industrially relevant outcomes.

5. Ability to contribute to broader management and administrative processes.
6. Contribute to the School's outreach programme by links with industry, community groups etc.
7. Practical problem-solving skills, independence of thought and initiative.
8. Ability to assess and organise resources.
9. Ability to communicate complex information in English effectively in oral and written format.
10. Ability to build relationships to develop internal and external networks.
11. Commitment to continuous professional development.
12. Ability to undertake frequent travel to industrial project partners and associated locations.

DESIRABLE CRITERIA:

1. Practical knowledge of Northern Ireland's Agricultural and Industrial landscape.