Candidate Information

Position:	Research Fellow
School/Department:	School of Chemistry and Chemical Engineering
Reference:	19/107771
Closing Date:	Wednesday 2 October 2019
Salary:	£33,797 to £40,322 per annum
Anticipated Interview Date:	Monday 14 October 2019
Duration:	Available until 30 August 2020

JOB PURPOSE:

This one-year post is funded by Invest Northern Ireland Proof of Concept fund in relation to valorisation of waste plastic, through upgrading the products of plastic pyrolysis to lubricant base oils. The candidate is expected to be an active member of the research group, actively contributing to planning and delivery of the project objectives, and mentoring junior members of the research group.

MAJOR DUTIES:

1. Develop Lewis acidic catalysts and test them in homogenous, liquid-phase oligomerisation reactions. To analyse the products using a broad range of techniques.
2. To ensure good working order of reactors and analytical equipment, carry out routine maintenance and calibrations as required.
3. Develop and plan an area of personal research and expertise, and/or undertake research under supervision within a specific research project or as a member of a research team.
4. Carry out analyses, critical evaluations, and interpretations using methodologies and other techniques appropriate to area of research.
5. Present regular progress reports on research to members of the research group or to external audiences to disseminate and publicise research findings.
6. Prepare, often in consultation with supervisor, material for publication in national and international journals and presentations at international conferences.
7. Assist grant holder in the preparation of funding proposals and applications to external bodies.
8. Carry out routine administrative tasks associated with the research project/s to ensure that project/s are completed on time and within budget. These might include organisation of project meetings and documentation, financial control, risk assessment of research activities.
9. Carry out occasional undergraduate supervision, demonstrating or lecturing duties within the post holder's area of expertise and under the direct guidance of a member of academic staff.
10. Read academic papers, journals and textbooks to keep abreast of developments in own specialism and related disciplines.

Planning and Organising:

1. Plan for specific aspects of research programmes. Timescales range from 1-6 months in advance and contribute to research group planning.
2. Plan for the use of research resources, laboratories and workshops where appropriate.
3. Plan own day-to day activity within framework of the agreed research programme.
4. Plan up to a year in advance to meet deadlines for journal publications and to prepare presentations and papers for conferences.
5. Coordinate and liaise with other members of the research group over work progress.

Resource Management Responsibilities:

1. Ensure research resources are used in an effective and efficient manner.
2. Provide guidance as required to support staff and any students who may be assisting with research.

Internal and External Relationships:

1. Liaise on a regular basis with colleagues and students.
2. Build internal contacts and participate in internal networks for the exchange of information and to form relationships for future collaboration.
3. Join external networks to share information and ideas.
4. Contribute to the School's outreach programme by establishing links with local community groups, industries etc.

ESSENTIAL CRITERIA:

1. Have or be about to obtain a relevant PhD in Chemistry or Chemical Engineering.
2. At least 3 years of relevant research experience.
3. Ability to carry out analyse, interpret and critically evaluate data, using a range of relevant techniques.
4. Ability to prepare journal papers.
5. Ability to supervise postgraduate students.
6. Ability to plan for specific aspects of research programmes at timescales of several weeks. Contribute to planning research group activities at a similar scale.
7. Ability to communicate complex information clearly.
8. Ability to build contacts and participate in internal and external networks, including industrial partners.
9. Demonstrable intellectual ability.
10. Ability to assess and organise resources.

DESIRABLE CRITERIA:

1. PhD degree and 1-2 years of PDRA or equivalent research experience.
2. Recent and relevant experience in at least one of the following: carbocationic processes, Lewis acid catalysis, catalysis involving ionic liquids, Main Group chemistry.
3. Publication record commensurate with the stage of career.
4. Ability to contribute to broader management and administrative processes.
5. Ability to contribute to the research team's outreach activities.