Candidate Information

Position:	Research Fellow
School/Department:	School of Chemistry and Chemical Engineering
Reference:	19/107558
Closing Date:	Tuesday 16 July 2019
Salary:	£33,199 - £39,610 per annum (potential to progress to £43,266 per annum through sustained exceptional contribution)
Anticipated Interview Date:	25/07/19
Duration:	2 years

JOB PURPOSE:

This 24-month post is funded by the EPSRC EP/R026645/1 UK Catalysis Hub Water-Energy Nexus Work Package 4: Catalytic transformations in and with water. The candidate is expected to be an active member of the research project assisting in the planning, implementation and delivery of the research project and research activity so that the overall research objectives are met. In addition they will be expected to take an active role in the UK Catalysis Hub promoting the research theme and catalysis research in the UK.

MAJOR DUTIES:

1. 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.
2. Design, develop and refine experimental apparatus, field research or experiments in order to obtain reliable data.
3. Carry out analyses, critical evaluations, and interpretations using methodologies and other techniques appropriate to area of research.
4. Present regular progress reports on research to members of the research group or to external audiences to disseminate and publicise research findings.
5. Prepare, often in consultation with supervisor, material for publication in national and international journals and presentations at international conferences.
6. Assist grant holder in the preparation of funding proposals and applications to external bodies.
7. 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.
8. 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.
9. 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 PhD in the area of transition metal organometallic, homogeneous catalysis or bio-inorganic chemistry.
2. Minimum 2:1 bachelors level degree (or equivalent) in chemistry, chemical biology or a closely related subject.
3. At least three years research experience relevant to performing catalytic reactions in water using organometallic complexes and/or artificial metalloenzymes.
4. Publication record commensurate with career.
5. Experience performing catalytic reactions and quantifying the products obtained.
6. Experience collecting and interpretation analytic techniques that can be used to quantify catalytic reactions including NMR and GC.
7. At least one year of research experience handling air sensitive compounds.
8. Ability to contribute to broader management and administrative processes.
9. Ability to contribute to the research team's outreach activities.
10. Ability to coordinate the research group's activities in the UK Catalysis Hub and act as a bridge between other researchers in related and complementary fields.
11. Able to collaborate nationally and internationally in order to benefit from expertise and equipment..
12. Sufficient breadth and depth of specialist knowledge in the discipline of research methods and techniques to work at the cutting edge of catalysis in water.
13. Ability to communicate complex information clearly.
14. Ability to build contacts and participate in internal and external networks, particularly in international groups.
15. Demonstrable intellectual ability.
16. Ability to assess and organise resources.
17. Enthusiasm for chemocatalysis and biocatalysis.
18. Ability to adapt skills to new challenges and research areas.
19. Keen interest in Green Chemistry and the drive to increase sustainability.
20. Organisation, writing, time-management, safety and leadership skills.
21. Working as part of a team, with a leadership role in the laboratory.
22. This 2 year post is funded by the EPSRC Catalysis Hub. It is a condition of the funding that the PDRA start before September 1st 2019. The successful candidate must have submitted their PhD thesis before starting the post.

DESIRABLE CRITERIA:

1. Masters (or equivalent) level degree in chemistry with the equivalent of a 1st or upper 2nd class mark.
2. Experience writing peer reviewed literature manuscripts as a major contributor, preferably first author (or equivalent).
3. Experience performing reactions under pressure and with flammable and/or toxic gases.
4. Experience carrying out catalytic reactions in water and quantifying products obtained.
5. Experience synthesising and/or purifying biomolecules and studying the interaction of biomolecules with transition metals.
6. Previous experience with artificial metalloenzymes or related systems.
7. Hands on experience of using materials to support homogeneous catalysts, or immobilise biocatalysts.