

Candidate Information

Position:	Research Fellow - Thermal Management of Li-ion Batteries
School/Department:	Chemistry and Chemical Engineering
Reference:	20/108337
Closing Date:	Monday 28 September 2020
Salary:	£33,797 per annum
Anticipated Interview Date:	Thursday 8 October 2020
Duration:	Available for 5 months or until 31 March 2021 (whichever is soonest)

JOB PURPOSE:

This 5-month post is funded by Innovate UK in relation to thermal management of Li-ion batteries. The key task is to record the temperature, materials changes etc. when a battery-based caging system is heated. The small system will be provided by an industry partner. Phase change materials are used to hold batteries to enhance thermal management. Therefore, some research (literature review based) could be added to this.

The candidate is expected to be an active member of the research project assisting in the implementation of research project and the planning and delivery of the research activity in the area of batteries based energy storage so that the overall research objectives of the project are met.

MAJOR DUTIES:

1. 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 1-5 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 an Engineering discipline such as Chemical, Mechanical, Electrical etc.
2. At least 3 years relevant research experience.
3. Publication record commensurate with career.
4. Ability to contribute to broader management and administrative processes.
5. Contribute to the research team's activities.
6. Sufficient breadth and depth of specialist knowledge in the discipline and of research methods and techniques to work within established research programmes.
7. Ability to communicate complex information clearly.
8. Ability to build contacts and participate in internal and external networks.
9. Demonstrable intellectual ability.
10. Ability to assess and organise resources.

DESIRABLE CRITERIA:

1. Have published more than 3 first-author journal papers.
2. Demonstrable experience in the research of thermal management techniques.
3. Demonstrable knowledge of Li-ion batteries.
4. Demonstrable knowledge of Phase change material (PCM).
5. Have obtained awards of poster and /or oral presentation.