UNIVERSITY OF WARWICK

Job Description

Job title	Research Fellow
Department	Physics
Grade	6

Job purpose (a brief summary of the role)	The job role of a post-doctoral research fellow is to undertake research to support the work of the host group and department, and thus to develop and enhance its reputation nationally and internationally. You will work with group members and collaborators in the successful execution of the project, which entails studying electrochemical processes and interfaces using operando electrochemical liquid cell transmission electron microscopy, alongside appropriate supporting techniques. You will lead your own research into electrochemical interfaces, particularly in rechargeable aqueous batteries, as well as supporting other group members and collaborators as the subject matter expert on using the technique.
Duties and responsibilities	• Help establish a sound research base within the group and department to assist the development of research objectives and proposals for your own or joint research. • Conduct individual and collaborative research projects. • Propose new research directions appropriate to the overall aims of the project. • Present information on research progress and outcomes to the funding source. • Write up research work for publication. • Translate knowledge of advances in the subject area into research activity. • May contribute to preparing proposals and applications to external bodies, e.g. for funding and contractual purposes, to support a developing research agenda. • Communicate complex information (orally and in writing) and material of a specialist or highly technical nature. • Continually update your own knowledge and understanding of the field. • Ensure compliance with health and safety in all aspects of work. • Work within budget constraints. The duties and responsibilities outlined are not intended to be an exhaustive list but rather to provide guidance on the main aspects of the post. The post-holder will be required to be flexible in his or her duties.

Person Specification

The Person Specification focuses on the essential and desirable knowledge, skills, experience and qualifications required to undertake the role effectively. This is measured by (a) Application Form, (b) Test/Exercise, (c) Interview, (d) Presentation.

Essential Criterion No.	Essential Criterion Description	Measured by
E1	Hold, or be about to attain, a PhD or equivalent in a relevant scientific discipline (e.g. chemistry, materials science, physics).	A
E2	Proven ability in experimental research and evidence of quality research output as the lead researcher.	A & C
E3	A research profile commensurate with your career stage and with the demonstrated ability/potential to publish high-quality lead-author research output in high-ranking journals.	A & C
E4	Sufficient breadth and depth of specialist knowledge with in situ/operando transmission electron microscopy methods to conduct the proposed research programme.	A & C
E5	Sufficient breadth and depth of specialist knowledge of electrochemistry and electrochemically relevant materials to conduct the proposed research programme.	A & C
E6	Sufficient breadth and depth of specialist knowledge of one or more relevant electrochemical interface topics, such as electrode/electrolyte interfaces in (aqueous) rechargeable batteries, to conduct the proposed research programme.	A & C
E7	Ability and motivation to learn sophisticated new methods and techniques to support the execution of a research project.	A & C
E8	Ability to initiate, plan, implement and deliver programmes of your lead research work to defined deadlines.	A & C
E9	Willingness to support other group members and collaborators in their research projects by performing in situ transmission electron microscopy experiments.	A & C
E10	Ability to work effectively both independently and as part of a research team.	A & C
E11	Excellent interpersonal and communication skills.	C
E12	An understanding of equal opportunity issues as they may impact on areas of research content.	C

Desirable Criterion No.	Desirable Criterion Description	*Measured by*
D1	Demonstrated ability to contribute to securing funding in order to generate external funding to support research projects.	A & C
D2	Demonstrated familiarity with operando electrochemical liquid cell transmission electron microscopy.	A & C