

Role: Visiting Research Fellowship (WMG)

Project: Optimisation of phosphate-based cylindrical cell manufacture

As a Visiting Research Fellow, you will join the team led by Professor Louis Piper in WMG at the University of Warwick to work on a collaborative research project.

Job Purpose

This proposed collaboration will undertake the manufacturing of LFP\Graphite full cylindrical cells at the University of Warwick. Smaller scale cell manufacture (coin, EL-cell) will first be undertaken to optimise parameters such as slurry formulation and coat weight, after which WMG's pilot line facility will be utilised to produce 21700 cells. The performance of these cells will be assessed via electrochemical testing and benchmarked against similar commercially available cells. Capacity loss will be diagnosed via advanced electrochemical methods, X-ray computed tomography and neutron analysis.

Duties and Responsibilities

As part of the FCDO VRF position awarded, you will:

- Contribute to a collaborative research project on the scale-up of LFP coatings for the manufacture of cylindrical cells.
- Perform experiments in lab and battery scale up facilities within WMG, working collaboratively with scale up team.
- Translate knowledge of advances in the subject area into research activity.
- Write up research work for presentation/publication.
- Present information on research progress and outcomes to bodies supervising research, e.g. steering groups.
- Communicate complex information (orally and in writing) and material of a specialist or highly technical nature.
- Ensure compliance with health and safety in all aspects of work.
- Work within budget constraints

Knowledge, Skills and Qualifications

- Good honours degree and possession of a PhD or equivalent doctoral qualification in relevant discipline. Applicants with postdoctoral or equivalent status at the time of application are preferred. In exceptional cases, well-qualified individuals in the final stages of their PhD studies may be considered.
- Knowledge of electrode manufacture (slurry mixing/coating) and battery cell assembly
- Knowledge of electrochemical and material characterisation
- Good effective communication (oral and written English) skills, presentation and training skills
- Sufficient breadth or depth of specialist knowledge in the discipline and of research methods and techniques to work within established research programmes
- Good interpersonal skills
- Ability and willingness to work as a member of a team and contribute positively to a collegial team environment and to be able to work independently
- Ability to initiate, plan organise, implement and deliver programmes of work to tight deadlines