

Exciting PhD opportunity with the [Faraday Institution](#).

Looking for a battery related career that contributes to creating a sustainable future? Keen to join a dynamic community of pioneering battery researchers seeking to find solutions to support a fully electric future?

The Faraday Institution Cluster PhD researchers receive an enhanced stipend over and above the standard EPSRC offer. The total annual stipend is approximately £20,000 (plus London weighting) plus an additional training package worth £7,000. Recipients will have access to multiple networking opportunities, industry visits, mentorship, internships, as well as quality experiences that will further develop knowledge, skills, and aspirations. [Read more](#).

Take a look at the bespoke [training programme](#) on offer.

Project: Recycling of high power Li ion battery anodes

This 4 year PhD project is based in the School of Chemistry at the University of Birmingham. A current growth area in the field of Li ion batteries is the development of improved high power Li-ion cells, driven from the commercial side by a range of market needs. This project is aimed at developing new methodologies for the recycling of the metal oxide anode materials used in such batteries.

The project is multidisciplinary and will utilise a range of methods (e.g. X-ray and neutron diffraction, microscopy, elemental analysis) to evaluate the changes that have taken place in end of life metal oxide based anodes. This detailed information will help to identify the degradation pathways that have taken place in these materials under operation. It will then allow us to identify potential avenues to mitigate these under operation, and develop low cost, effective strategies to recycle these materials into new pristine anodes.

This PhD project will suit someone who has an enthusiasm and drive for research and is interested in electrochemistry, battery and energy storage technologies. Some electrochemical and/or structural characterisation experience would be useful but not essential as training and guidance in these techniques will be given.

Eligibility:

Applications are welcome from home and international students (although places for international students are limited. Please see [UKRI guidance](#) for more details). The candidate will have or expect at least a II(i) Undergraduate honours degree or Masters degree (or equivalent) in Chemistry or Materials Science. A background in electrochemistry or structure determination would be advantageous.

Application:

In order to apply for a Faraday Institution PhD position, you need to do both of the following:

1. Complete a Faraday Institution expression of interest form
<https://www.surveymonkey.co.uk/r/2K76M6V>

2. Informal inquiries may be made to Prof Peter Slater
(p.r.slater@bham.ac.uk)

Applications must be made through the university's on-line application system [<https://www.birmingham.ac.uk/postgraduate/courses/research/chemistry/chemistry-phd.aspx?OpenSection=HowToApply>], please provide a cover letter summarising your research interests and suitability for the position; the contact details of two people able to provide a letter of reference; and a full curriculum vitae. Please also send a copy of your full application to Prof Slater directly.

Diversity

The Faraday Institution is committed to creating a dynamic and diverse pool of talent for the fields of battery technology and energy storage.

The University of Birmingham is committed to creating and maintaining an inclusive learning and working environment where discrimination is not tolerated, where all members of the University can flourish and reach their full potential; where we engage with and learn from our community and where we affect positive change within the University, our city and wider society. We see this as integral to our mission and vision as a global university.