

Advertisement: Faraday Undergraduate Summer Experience

Forse Group, Department of Chemistry, University of Cambridge

Supercapacitors are high power energy storage devices that can be rapidly charged and discharged and have applications in heavy electric vehicles such as buses and trains. In the Forse group we are working on model electrode materials that can help us understand how supercapacitors work. In this remote summer project you will learn what supercapacitors are, how they store energy, and how we characterise their energy storage performance. You will analyse data to work out how much energy supercapacitors store, and in particular you will look at long-term charging-discharging data and you will explore how supercapacitors degrade with time. A further goal of this project is to develop a computer program that enables the rapid analysis of supercapacitor testing data. **Supervision will be via video calls and all work will be performed remotely.**

Learning aims:

- Learn how supercapacitors work and how they can be characterised electrochemically.
- Learn how to analyse electrochemistry data to obtain capacitance.
- Develop computer programs to process supercapacitor cycling data.
- Prepare an end of project poster. As part of The Faraday Institution's 2020 intern cohort you will enter an end-of-project poster competition – the winners of which will be invited to present their poster at the Faraday Institution Conference in November 2020.

Eligibility

Applicants must:

- Be registered full-time undergraduate student from a UK university.
- Undertake the internship within the years of their undergraduate study (i.e., not in final year).

There is no specific prerequisite knowledge/experience required for this project and we strongly encourage you to apply if you are interested. We are keen to see as many applications as possible from BAME students, women and diverse gender identities, and other underrepresented groups.

Funding

A salary of £9.30/hour across the UK or £10.75/hour in London will be provided. This will be determined by the working address of the appointee not the universities location. The internship is a full-time role for 8 weeks beginning in early July. The funding is provided by The Faraday Institution.

Applying

Please send your CV (max two pages) and a brief cover letter (max one page) to acf50@cam.ac.uk by June 10th. Applications from BAME students, women and diverse gender identities, and other underrepresented groups are particularly welcomed.

To view other projects see: <https://faraday.ac.uk/opportunities/summer-internships/>