**Exciting** [**Faraday Undergraduate Summer Experience (FUSE)**](https://www.faraday.ac.uk/fuse-2022/) **paid internship opportunities for summer 2022.**

Studying a STEM degree? Wondering what career to pursue? Interested in finding out more about the battery sector? Keen to spend time with a dynamic community of pioneering battery researchers seeking to find solutions to support a fully electric future?

The Faraday Institution is offering a total of 56 internships, for undergraduate students to spend 8 weeks working on battery related projects.

**Project title:** [Parametric studies via MD simulations to investigate the effect of electrolyte in lithium-sulphur batteries]

**Project description:**

[*Lithium-sulphur (Li-S) batteries suffer from the shuttling effect of soluble polysulphides. It has been reported that no polysulphide migration occurs in the case of solid electrolytes, however, lithium-ion diffusion is also inhibited in solid electrolytes. The project focusses on electrolyte salt LiTFSI in polymer gel electrolyte, consisting of star copolymer polyethylene oxide (PEO)-polystyrene (PS) in PEO oligomer matrix. Parametric studies will be carried out in this project, in the form of molecular dynamics (MD) simulations of the system to determine the diffusion coefficient of Li-ions and sulphides in the electrolyte system, where parameters to be changed will be the length and number of branches in the star copolymer and molecular weight of the PEO matrix.*]

**Supervisor:** [*Professor Constantina Lekakou*]

**University:** [*University of Surrey*]

**Location:** *remote or hybrid (if the student lives in the vicinity of the University of Surrey)*

**Start date:** The internship is a full-time role for 6-8 weeks during June – September 2022.

**Eligibility:**

• 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 or during a subsequent Masters’ programme).

• Not have been a FUSE intern in a previous year

**Funding:**

A salary of £9.90 / hour across the UK or £11.05 / hour in London will be provided. This will be

determined by the working address of the appointee, not the university's location. The funding is provided by the [Faraday Institution](https://www.faraday.ac.uk/).

**Additional activities:**

During the FUSE internship you will be able to attend Faraday Masterclasses and cohort

events which will focus on a variety of topics to further develop your understanding of career opportunities in battery sector. At the end of the programme, you will be invited to

to share a poster about your work and prizes will be awarded.

**Application: Deadline of applications is Friday 8 April 2022.**

In order to apply for a Faraday Undergraduate Summer Experience (FUSE) 2022 internship, you need to email you CV and your application cover letter to c.lekakou@surrey.ac.uk

**Diversity**

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