

**Exiting [Faraday Undergraduate Summer Experience \(FUSE\)](#) paid internship opportunities for summer 2026.**

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 internships for undergraduate students to spend 8 weeks working on battery related projects.

**Project title:** Free Software Functionalities Integration for Lithium-Ion Batteries Degradation Analysis

**Project description:**

This project addresses the challenge of lithium-ion battery power degradation using Python-based analysis of Electrochemical Impedance Spectroscopy (EIS) data. While commercial software often lacks flexibility, this work aims to create an interoperable toolset for large-scale data treatment. You will focus on validating data and decoupling complex resistance processes to gain high-level insights into battery kinetics.

**You will:**

- Develop a Python workflow to adapt raw Biologic cycler EIS data for filtered, advanced analysis.
- Use free software packages to apply Kramers-Kronig (KK) filters to validate data and use Distribution of Relaxation Times (DRT) to isolate internal resistance processes.
- Use free software packages to fit validated data to Equivalent Circuit Models (EQCM) to characterize specific degradation mechanisms.
- Integrate processed results into the in-house developed PyProBE analysis platform.

**Desirable skills and experience:**

- Have an interest in lithium-ion batteries, how they work and degrade.
- Be comfortable using Python (or Matlab) for data processing and automation.
- Have an interest in learning how to use open-source electrochemical tools (e.g., PyDRTTools, Zview) and in searching other ones if convenient.
- Demonstrate a logical approach to organizing and moving data between different software environments.

**Supervisors:** [Dr Monica Marinescu](#) (Associate Professor), [Dr Matheus Leal de Souza](#) (Postdoctoral researcher) and Dr Mohammed Asheruddin Nazeeruddin (Postdoctoral researcher).

**University:** Imperial College London

**Location:** In person, South Kensington Campus

**Duration:** This internship is full-time for 8 weeks during June – 28<sup>th</sup> August 2026

**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 up to £11.44/hour across the UK or up to £13.15/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](#).

**Additional activities:**

During the FUSE internship you will be able to attend Faraday Institution 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 share a poster about your work and prizes will be awarded.

**Application:**

To apply for this Faraday Undergraduate Summer Experience (FUSE) 2026 internship, you need to complete the following form:



**Applications will close on April 26th and interviews will be held until 4th May.**

*Please also complete this [survey](#) so the Faraday Institution can keep you informed about future Faraday opportunities, including other FUSE internships that may need additional support with recruitment.*

**Diversity:**

The Faraday Institution is committed to creating a dynamic and diverse pool of talent for the fields of battery technology and energy storage. Tackling the global challenges of the future, such as climate change, will require a truly diverse, creative approach. For Imperial to be at the forefront of this effort, we will need to draw upon the talents of staff and students who come here from all backgrounds and from all over the world.

You can read Imperial College's full Equality, Diversity and Inclusion strategy [here](#).