



# NEXTRODE

Exciting [Faraday Undergraduate Summer Experience \(FUSE\)](#) paid internship opportunities for summer 2023.

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

**Project title:** Towards Solvent Free Battery Manufacturing

**Project description:**

Dry battery manufacturing methods are an excellent alternative to conventional wet slurry casting as it alleviates safety and cost concerns associated with NMP solvent. Powder spreading using Additive Manufacturing (PSAM) is a dry technique that can be used to replace the conventional wet process.

This project will examine the flow properties as a function of particle-particle surface energy and particle size distribution in cathode active materials coated with conductive carbon produced using mechanofusion. The surface energy will be investigated using powder rheometry and particle size distributions. Results will feed into a newly developed particle spreading model which will be used to predict electrode quality during dry processing.

**Supervisor:** Dr Rachel Smith

**University:** The University of Sheffield

**Location:** The University of Sheffield, Dept of Chemical & Biological Engineering, Sir Robert Hadfield Building - This intern is required to attend the lab in Person

**Start date:** The internship is a full-time role for 8 weeks. We are fairly flexible with our start and end dates, but are anticipating dates around 24th July - 15th September 2023.

**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 £10.90/ hour across the UK or £11.95 / 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 the 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:**

In order to apply for a Faraday Undergraduate Summer Experience (FUSE) 2023 internship, you need to apply by completing the short questions on this [form](#) before the 24th April, 2023. We will be in contact with those who are shortlisted to conduct a short interview.

**Diversity**

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

[Equality, Diversity and Inclusion Policy for students | Study at Sheffield | The University of Sheffield](#)