**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:** Debondable adhesives for improved pack disassembly

**Project description:**

Following on from last year’s successful FUSE internship where a comprehensive review was carried out into types of debondable adhesives, this project will test some of the strategies proposed last year and make novel, debondable adhesives. It will initially use standard epoxy and urethane adhesives supplied by our industrial collaborator (Structural Adhesives Ltd) with a variety of additives aimed to aid on-demand debonding. The tests will start with sections of standard cell casings and measure the adhesive strength with and without additives. Various stimuli (microwave, thermal, chemical and light) will be used to bring about debonding and the kinetics will be determined with the aim of bringing about separation in approximately 1 min. A successful material will be tested using dummy cells. The intern will have the opportunity to visit the industrial collaborator and see how a potential material could be formulated.

**Supervisor:** Prof Andy Abbott

**University:** University of Leicester

**Location:** *in-person*

**Start date:** The internship is a full-time role for 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/). *[Please amend if university has an agreed rate across all its internship programmes that is being matched – see grant letter for more details]*

**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:**

In order to apply for a Faraday Undergraduate Summer Experience (FUSE) 2022 internship, you need to send your CV toProf Andy Abbott (apa1@le.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.

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**Project title:** New pack and cell designs to simplify battery recycling

**Project description:**

Structural adhesives are commonly used for the construction of battery modules and packs and these are a significant barrier to disassembly and recycling. This project will investigate novel controlled release materials and novel fastenings which could be used to create an on-demand separation of cells to simplify material segregation. The project will review current designs and types of controlled release materials and mechanisms. The student will design novel methods for connecting cells and modules so that they can easily be robotically disassembled. The project will create prototypes using 3D printing where possible or design them using CAD software. Where possible the forces required to achieve controlled release will be measured and this will help with the design of robotic disassembly protocols.

**Supervisor:** Prof Andy Abbott

**University:** University of Leicester

**Location:** *in-person*

**Start date:** The internship is a full-time role for 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:**

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