



## Centre for Sustainable and Circular Technologies; University of Bath

Project Title:	Chemical Recycling of Mixed Plastic Feedstocks
Lead Supervisor and co- supervisors:	Prof Matthew Davidson, Prof Matthew Jones
Industrial Partner:	Abbott

## Project Summary

This project will be co-supervised by Professors Matthew Davidson and Matthew Jones and is co-funded by Abbott, a global healthcare company who create life-changing technology such as the Freestyle Libre glucose monitoring system. The project will address the potential for chemical recycling of mixed plastics contained within disposable devices as a sustainable end-of-life option. Using recent work in the Jones Group on homogeneous depolymerisation catalysts as a starting point, the project will first optimise single feedstock chemical recycling processes for relevant polymers and then aim to develop new chemical processes for recycling of mixed feedstocks. The project will include aspects of inert-atmosphere chemical and polymer synthesis, materials and molecular characterisation, kinetics, structural analysis and catalyst design and development.

The successful candidate will have a background in chemical sciences and an interest in sustainable synthesis, catalysis and polymer science. They will work jointly within the Davidson and Jones Research Groups in the Centre for Sustainable and Circular Technologies at Bath. They will also work closely with the industrial partner throughout the studentship, including the opportunity for site visits and internships as the project progresses.

## Sustainability issues addressed

Plastics have played a pivotal role in society over the last 100 years. However, there are growing environmental concerns which has stimulated considerable research into end-of-life options for plastics. In this work we will focus on recycling of several key commodity plastics to their monomers for reuse.

## Eligibility criteria and selection process

Application:

Formal applications should be made via the University of Bath's online application form for a PhD in Chemistry Please ensure that you state the full project title and lead supervisor name on the application form.

http://www.bath.ac.uk/guides/how-to-apply-for-doctoral-study/

Funding Eligibility:





This studentship is for 3.5 years' duration and includes Home tuition fees, a stipend (£16,062 per annum, 2022/23 rate) and a budget for research expenses and training.

Information may be found on our <u>fee status guidance webpage</u>, on the <u>GOV.UK website</u> and on the <u>UKCISA</u> website.