

**TUS****Technological University of the Shannon:****Midlands Midwest**

Ollscoil Teicneolaíochta na Sionainne:

Lár Tíre Iarthar Láir

POSTGRADUATE RESEARCH OPPORTUNITY

Project Title:

Sustainable Recycling of Thermoset Insulation Foams for Circular Construction

Project Description:

This PhD project will develop innovative recycling pathways for legacy polyurethane (PU) and polyisocyanurate (PIR) insulation foams. These foams, widely used in construction, are traditionally difficult to recycle due to their thermoset structure and chemical additives. The research will apply advanced material characterisation, chemical depolymerisation techniques, and machine learning to recover valuable resources and support sustainable waste management strategies. This project is conducted in partnership with a leading international insulation manufacturer.

Type of Degree Offered:

Structured PhD

Duration of Project:

48 months

Annual Stipend:

€31,000 (plus full fees covered)

Start Date:

1st October 2025

Minimum Qualifications/Experience Required:

- Primary degree (2.1 or higher) in materials science, chemistry, polymer engineering, chemical engineering, or a related discipline
- Strong interest in sustainability and materials innovation
- Demonstrable interest or experience in business, entrepreneurship, or innovation (e.g. undergraduate business modules, internships, or leadership roles) is desirable
- Ability to work independently and collaboratively in both lab and industry environments
- For international candidates: IELTS 6.0 minimum (with no band below 6.0)

Project Lead Supervisor:

Dr Ian Major, Advanced Materials and Manufacturing Platform, PRISM Research Institute

Enquiries: ian.major@tus.ie

Closing Date:

Friday, 18th July 2025. Interviews will be scheduled soon afterward

Please submit your completed application to: pro@tus.ie

Please reference **Project Title** in all correspondence.

Download the TUS Scholarship application form here:

<https://tus.ie/rdi/research/office/funded-research/>