



CBE 9982 M.Eng Research Project

Project title: Polymer carbon nanocomposites
Starting date: January 2023
Supervisor(s): Paul Charpentier and Lauren Briens Contact info: pcharpen@uwo.ca lbriens@uwo.ca
Brief description: There is a demand in many industries for lightweight recyclable components with enhanced thermal and fire retardancy properties. Polymers can be enhanced with carbon to create nanocomposite foams to help meet these emerging needs.
Objectives: 1) To synthesize biochar through pyrolysis to create a sustainable carbon source for the nanocomposites; (2) To determine a reliable procedure for effectively incorporating carbon into polystyrene; (3) To measure the properties of the polymer-carbon nanocomposites (thermal conductivity, fire retardancy, acoustics).
Required knowledge: Chemical engineering. Knowledge of polymer chemistry would be an asset.

If interested, please contact the supervisor of the project directly for an interview.