



Thesis Projects (MIE498 H/Y) 2018–2019

Title/Topic:

Synthesis and characterization of Polymer-based aerogels

Description:

- (i) Synthesis of polymeric precursor for aerogel production – The successful candidate will design and develop novel polymeric precursors such as polyether-based, PS-based, TPU-based, and PA-based for aerogel production. This includes, material development, polymerization optimization, and testing both chemical and physical properties. **Having the experience of inorganic/organic chemistry and polymerization techniques is a must point.** The materials need to be optimized for higher performance under various **practical** environmental conditions.
- (ii) Development of Polymer-based aerogels – The successful candidates will explore density, porosity, surface area, pore size, pore shape, light transmittance, mechanical, and thermal characterization methods for characterization of aerogels towards flexible film production.

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