

Injection Foam Molding of Polymer Nanocomposites

Faculty advisor: Prof. Chul Park

Injection Moulding of polymers is one of the most interesting production methods which is capable to produce polymeric parts with complicated geometries. Nowadays, mechanical properties of polymers have been improved by adding nano particles; for instance, nano-clay, nano-crystalline cellulose, carbon nano-tube. Moreover, by the advent of microcellular polymers, so many defects of the final thermoplastic products such as warpage and sink marks have been disappeared. In addition, this method has decreased the amount of consuming materials significantly. This project focuses on the production of microcellular nanocomposites by injection moulding methods with higher cell density, higher expansion ratio, uniform cell distribution, and smaller cell size.

Supervisor: Prof. Park park@mie.utoronto.ca