

Title: “Development of polymer composite systems with enhanced dynamic properties at elevated temperatures.”

Description: “Polymer composites play a crucial role in automotive and aerospace industries, which often offer enhanced mechanical, thermal, electrical and gas barrier properties particularly at elevated temperatures when compared to the neat polymer. The primary objective of this project is to develop a particulate/lamellar/laminar composite system with enhanced dynamic properties. The student will learn the design of experiment, operation of state-of-the-art compounder, injection and compression molding, dynamic mechanical analyzer, scanning electron microscopy, pull-off adhesion tests and differential scanning calorimetry during the period of this project to develop the required skillset for manufacturing and analysis of composite systems in their future academic or industrial positions”.

Duration: 2 to 3 terms starting in May 2023

Qualifications: experience in polymers processing, polymer composites, hybrids system, polymer characterization.