

# PCL Microscopy Lab

## Principle

Mission

Understanding polymer morphology is key to understanding polymer properties and behavior. In the Microscopy Lab, we work with scientists and engineers to explain material properties as a function of physical characteristics. We provide critical analyses throughout the polymer life cycle—from nascent resin, raw materials, formulations and end-use customer parts. Our wide scope of capabilities allows us to partner in the development process at each of these stages and provide quality images and analysis to promote a better understanding of our materials.

Techniques

Microscopy

- Optical Microscopy with Polarized Light Microscopy
- Scanning Electron Microscopy (SEM)
- Transmission Electron Microscopy (TEM)

Image Analysis

- Fiber Length Distribution
- Black Specs

Elemental Analysis

- Energy Dispersive Spectroscopy (EDS)
- Laser-Induced Breakdown Spectroscopy (LIBS)

Surface Science

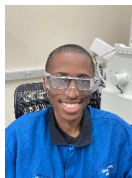
- Rugosity (Surface Roughness)
- Contact Angle with Surface Free Energy

Sample Preparation

- Hot Stage to 600 °C
- Ultramicrotome with Cryo Capability
- Cross sectioning with polisher and cryofracture
- Muffle Furnace for polymer ashing
- Band saw for resizing

Team

Microscopy Lab - E1106

| Contact                                                                                                                                                           | Ext          | Office  |
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