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 ^{o}C • Ultramicrotome with Cryo Capability • Cross sectioning with polisher and cryofracture • Muffle Furnace for polymer ashing • Band saw for resizing
Team	**Microscopy Lab - E1106**

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