Optical Microscopy

Principle

Sample surface can be analyzed using reflection mode, while the structure of materials can be studied using transmitted light (samples must be few microns thick).

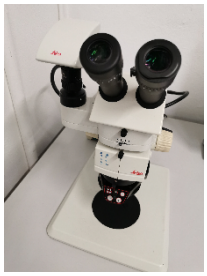
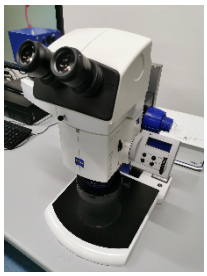
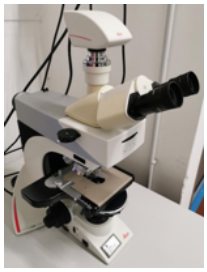
A large variety of contrast modes exist to highlight different aspects of material structures, depending on the information needed.

Samples can be either solids or liquids.

Capabilities

- Fractography
- Dispersion in polymer blends
- Powders, crystal morphologies
- Thickness measurements of multilayered materials, concentricity

Assets

	Asset	Details
	**Stereo Microscope Leica M60**	Observation of surface at low magnifications (x6-x40) in reflection, with integrated annular light and digital camera.
	**Zeiss Discovery V12**	Observation of surface at low magnifications (x6-x40) in reflection, with integrated annular light and digital camera.
	**Optical Microscope Leica DM2700M**	Observation of samples at higher magnifications (x25-x500, limit of resolution 0,5 µm) in reflection or transmission, and digital camera.
	Photo bench	Realizing quality pictures of large parts at low magnification, in repeatable conditions of lighting and exposition. Bench and camera support (Kaizer), a reflex camera (Nikon) piloted a software (controlmynikon).

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