

## Material Characterization

- Infrared Spectroscopy(FTIR): **chemical nature identification** of the materials
- Infrared Spectroscopy with **FTIR microscope**: chemical nature identification
- Differential Scanning Calorimetry (DCS): **identification of thermal effects in the materials** like melting, crystallization, phase transitions (Tg and solid-solid) and chemical reactions
- **Oxidation Time Induction** (OIT) in the polymeric materials by means of DSC
- **Thermo-gravimetric compositional analysis**: content of volatile matters(moisture, solvents, etc.),polymer content, charger content, ash and filler content
- Possibility to investigate on the **chemical nature** of the not degradation products by mean of interfaced **FTIR spectrophotometer**
- **Humidity content** of the polymeric materials by means of automatic Karl Fischer Titration
- Materials and parts analysis under **Scanning Electron Microscope** (SEM)
- Materials and parts analysis under **Optical Microscope**
- Determination of the **carbon black content**
- Determination of the **carbon black dispersion**
- Short and long term **water absorption in polymers**
- Determination of the percentage of **humidity content in polyamide materials**
- **Mass of volume unit measure** by means of MSV
- **Identification of hazardous substance** in plastics (**RoHS**)
- **Gas-cromatografy** analysis
- **Micro-Raman** spectroscopy
- **Welding and/or marking operations** on the thermoplastic polymers