CY-319 Materials Characterization and Analytical Techniques

Electron Microscopy: Scanning Electron Microscopy (SEM) and Transmission Electron Microscopy (TEM), Auger Electron Microscopy for high-resolution imaging and analysis.

X-ray Diffraction (XRD): Understanding crystal structures and phase identification in materials.

Spectroscopic Methods: In depth understanding of spectroscopic techniques like Raman Spectroscopy, energy dispersive x-ray spectroscopy, and x-ray photoelectron spectroscopy.

Thermal Analysis: Exploring Differential Scanning Calorimetry (DSC), differential thermal analysis (DTA) and Thermogravimetric Analysis (TGA) to study thermal properties.

Atomic Force Microscopy: Microscopy at the level will be studied through Atomic force microscopy commonly known as AFM.

Polarimetry: Principles of Polarization, Polarimeters and Instrumentation, Applications of Polarimetry