

Demonstration of Scanning Electron Microscopy – X-ray Energy-Dispersive Spectrometry

Experiment

XEDS (X-ray energy-dispersive spectrometry) will be demonstrated demonstrated using an environmental scanning electron microscope [Philips ESEM XL30](#).

The specimen for this experiment will be the same multiphase material that served in the demonstration of SEM imaging. After explaining the principle of the XEDS detector and how the system is set up for microanalysis, the individual phases of the material that were recognized in the images of the previous laboratory will be analyzed for their composition. The measurements will include spot measurements under a variety of conditions as well as elemental mapping by rastering the beam over a rectangular array and recording an XEDS spectrum at each point.