

# Scanning Electron Microscope / Electron Probe Micro-analysis

KUmicro hosts a Zeiss EVO50 variable pressure SEM with Oxford Instruments energy and wavelength dispersive spectrometers for micro-analysis and element mapping, a Gatan Instruments cathodoluminescence spectrometer and a Gatan Instruments cryo-transfer unit with cold stage.

A Scanning Electron Microscope uses an electron beam rather than visible light to image a sample in 3 dimensions.

Collection of low energy secondary electrons allows high resolution 3 dimensional imaging at magnifications of up to 500,000

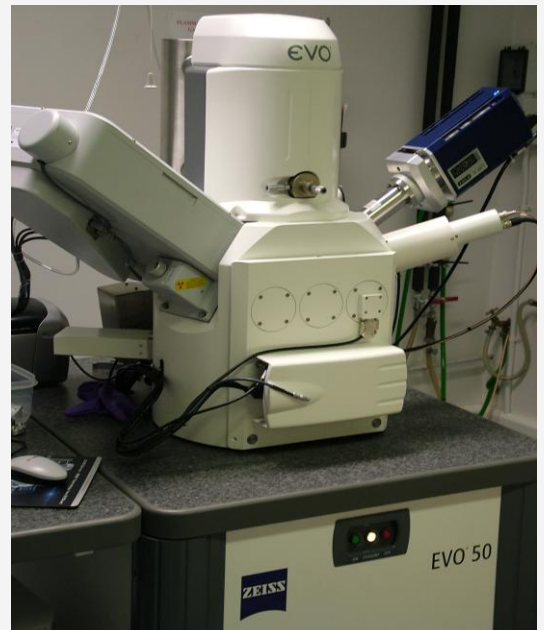
Collection of higher energy back-scattered electrons enables variations in mean atomic number to be mapped providing data on structure and phase distributions

Energy (EDS) and Wavelength (WDS) Dispersive micro-probe analysis provides quantitative, non-destructive chemical analysis of areas as small as 1 micron diameter and can be used to provide multi-element maps

The cryo-transfer unit with cold stage permits rapid imaging of biological samples with minimal sample preparation

Applications include:

- Scanning Electron Microscope
- Characterisation and analysis of geological samples and gems
- Characterisation and analysis of forensic samples
- Imaging and analysis of biological material



Kingston University  
Penrhyn Road  
Kingston upon Thames  
Surrey  
KT1 2EE  
United Kingdom