

The SEMs you can meet



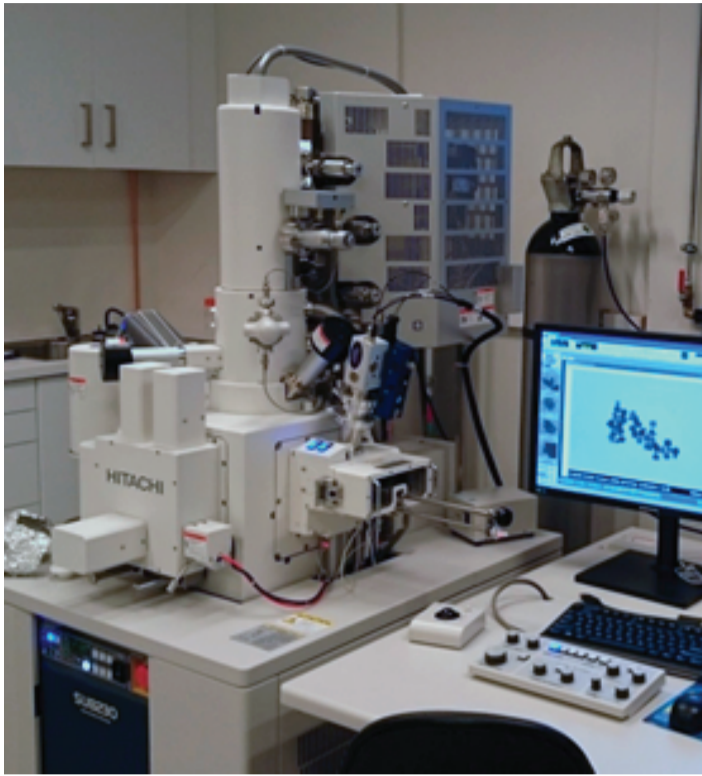
FEI Quanta 200 FEG-ESEM

The SEMs you can meet



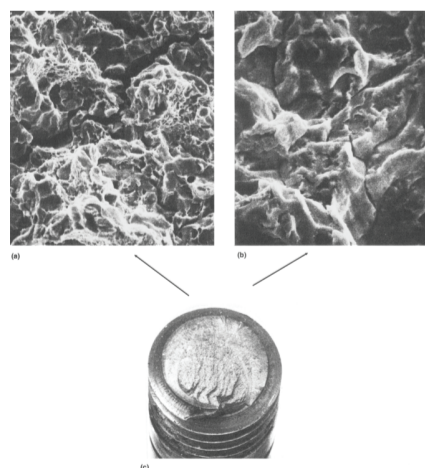
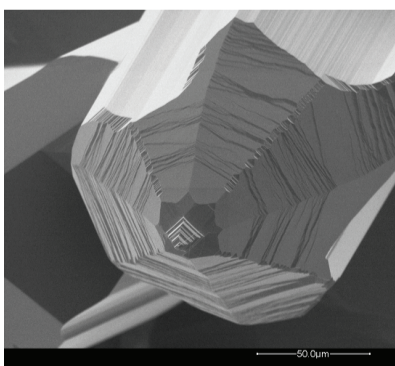
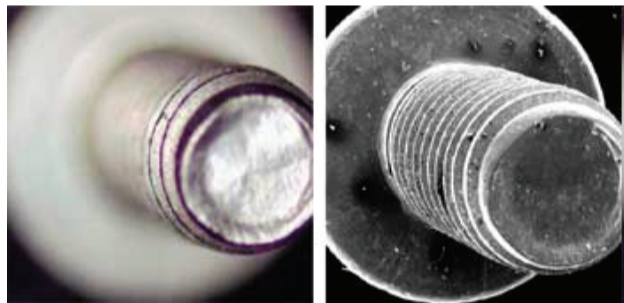
HITACHI TM-3000

The SEMs you can meet

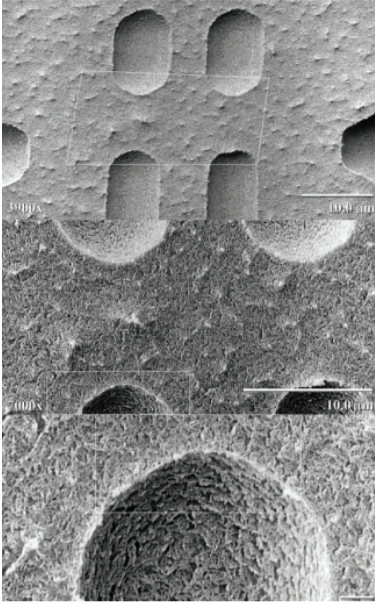
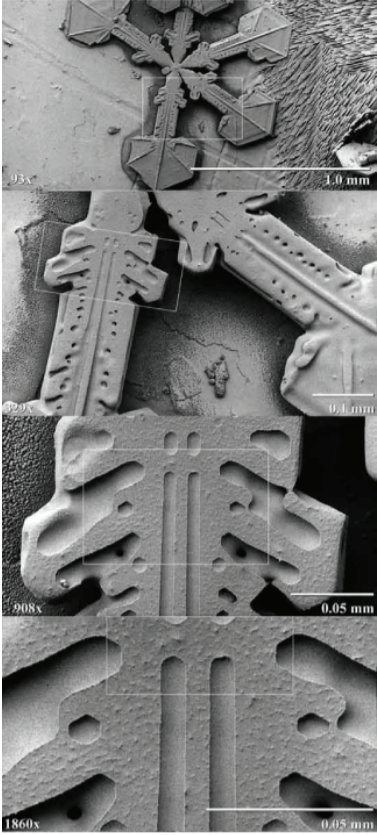


HITACHI SU8230

Secondary electrons SE

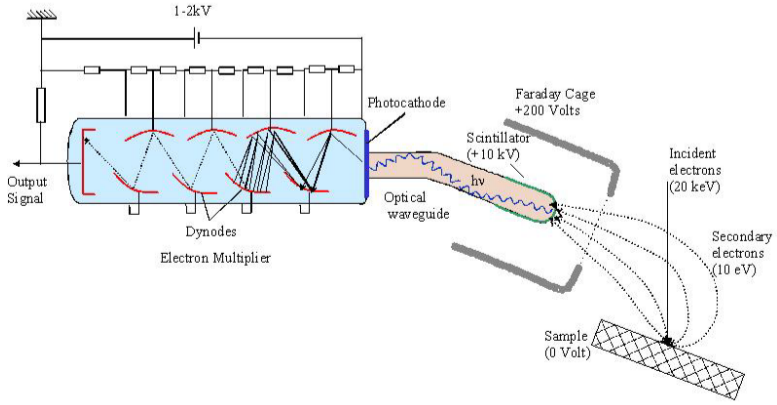
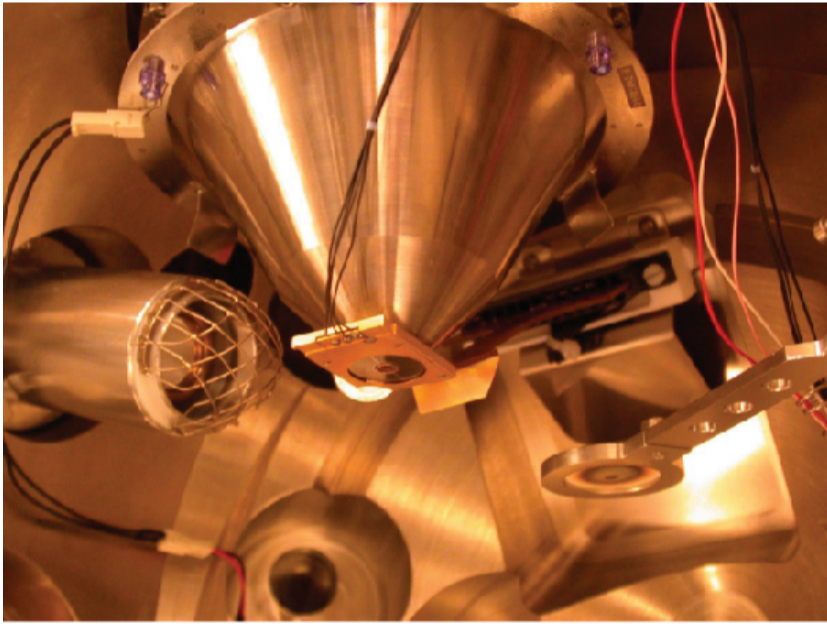


**Secondary electrons
SE**



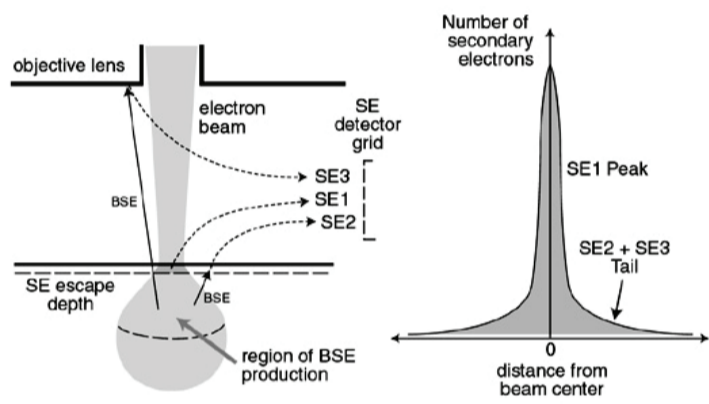
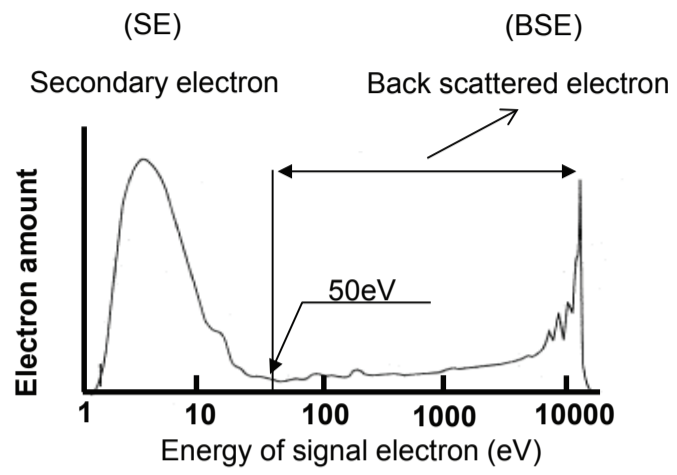
Magnification
Resolution

**Secondary electrons
SE**



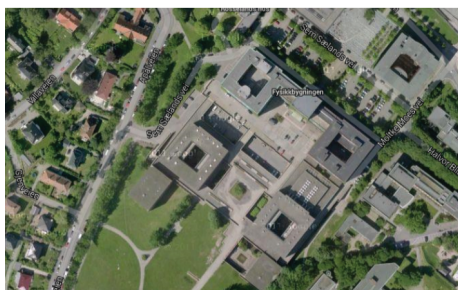
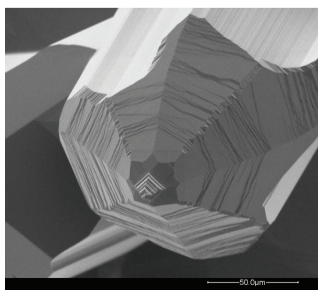
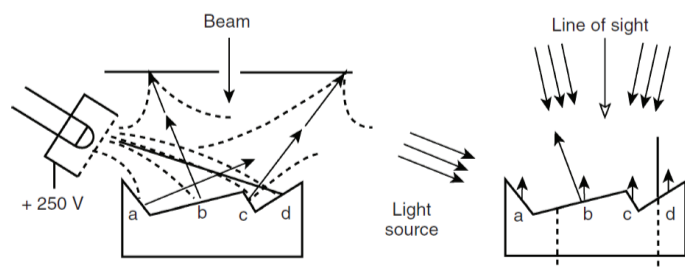
Everhart-Thornley detector

Secondary electrons SE

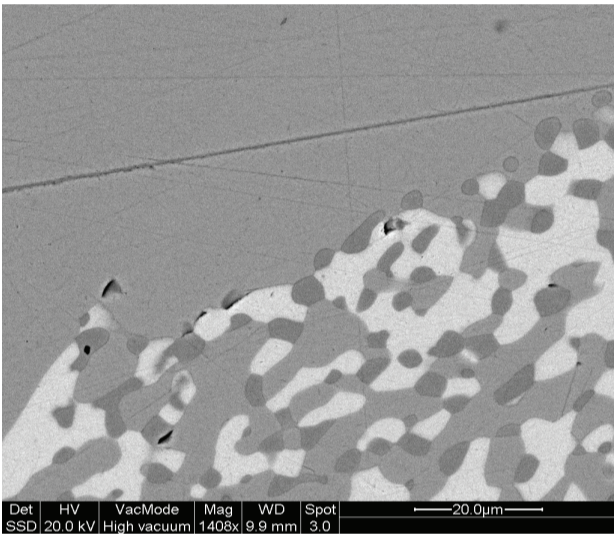
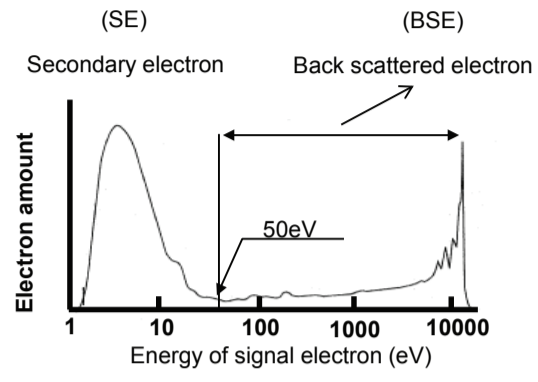


MENA3100, V-17
OBK

Secondary electrons SE



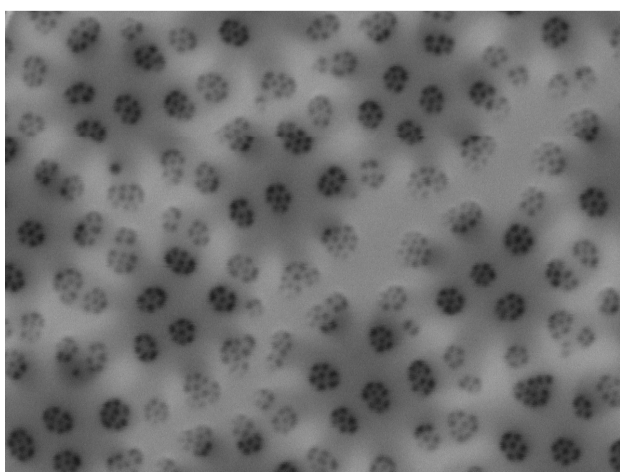
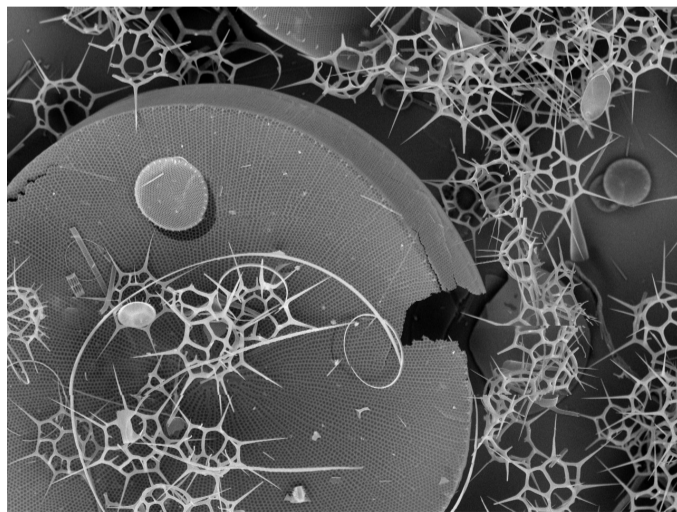
Backscattered electrons BE



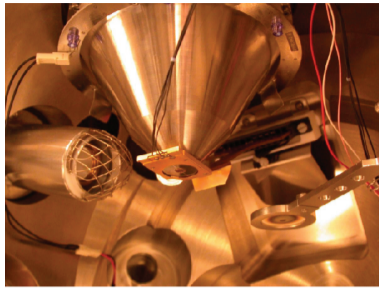
MENA3100, V-17
OBK



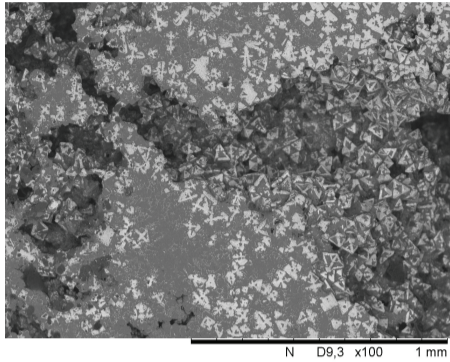
Backscattered electrons BE



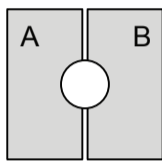
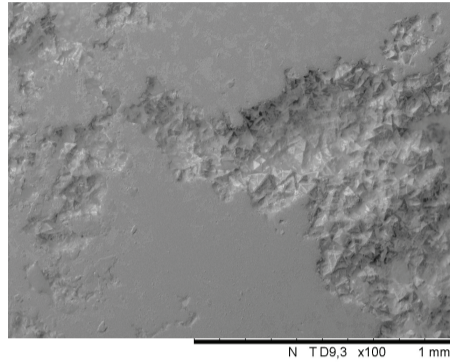
Backscattered electrons BE



“Compo”



“Topo”



Compo A + B Topo A – B

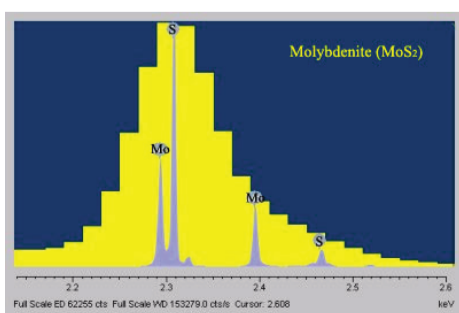
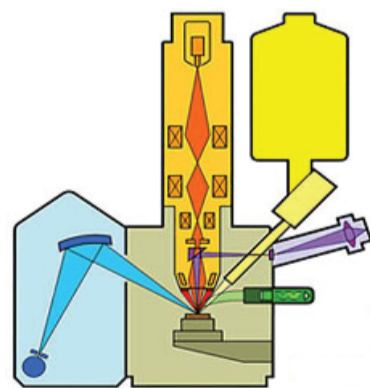
X-ray spectroscopy Energy-dispersive spectroscopy EDS

Chapter 6:

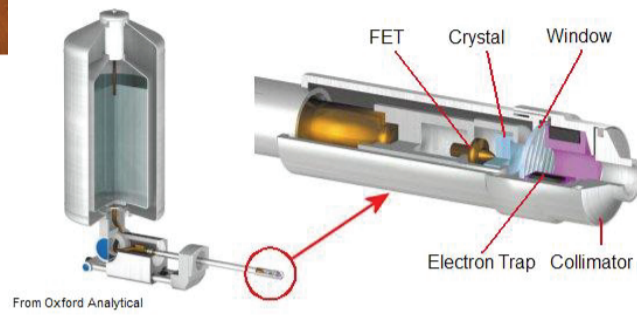
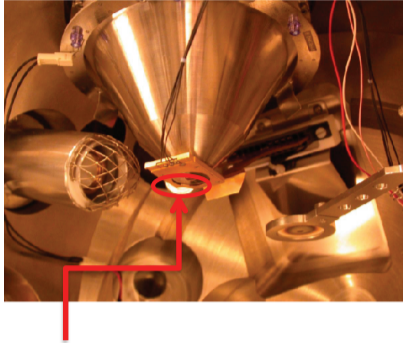
XRF is not in the curriculum, but the text is written so that it is difficult to define sections that can be excluded. Paragraphs that only treat XRF can be skipped.

But:

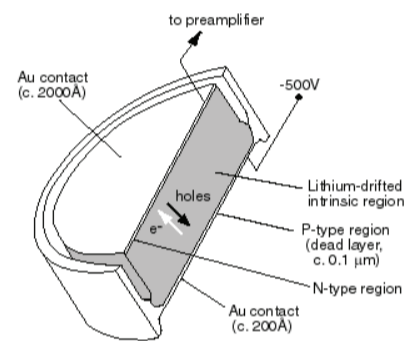
Wavelength-dispersive spectroscopy WDS



X-ray spectroscopy Energy-dispersive spectroscopy EDS



Si(Li) detectors



An electron-hole pair is created for every 3.76 eV of incoming X radiation

The energy of a Ni K α X-ray photon is 7,471 keV

Will produce a current of 1 966 electrons

