

Internal Webinar

Scanning electron microscope beyond imaging

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Scanning Electron Microscope (SEM) is an instrument that scans a sample with an electron beam to produce a magnified image for **analysis**. From SEM, we can get surface morphology, size distribution of particles.

There are different types of electron emission sources and we have Field Emission Gun Source (FEG). One can achieve a high Resolution imaging with this source. There are different detectors to capture different signals from the sample surface.

In this talk I am going to present the data which can be obtained from the available facilities.

As mentioned above, with the detectors available, one can get the surface morphology, cross section view and thickness, particle size distribution, Presence and composition of elements present in the given sample.

There is a 1000class clean room with photolithography instrument, and other sample preparing instruments.

There is also an E-beam blanker for Lithography (EBL) from XENOS attachment in FESEM. It is used to make devices on the substrates.

Both the photolithography and EBL are used to make devices but differs in resolution. Here, I am going to discuss the general procedure of device preparation.

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