

Scanning Electron Microscopy

Scanning Electron Microscopy (SEM) is one of the most versatile instruments for the examination of the surface topography and composition of the sample. The surface images result from the interaction of a focused electron beam with atoms in the sample, which can achieve < 1 nm resolution. Signals generated during the interaction include secondary electrons (SE), back-scattered electrons (BSE), characteristic X-ray and cathodoluminescence, absorbed current, and transmitted electrons. SE is the most standard signal that SEM detects. It has low energies, which leads to a higher resolution. BSE occurs in deeper places within the sample and strongly relates to the atomic number. It is very often used for composition analysis along with characteristic X-ray spectra. Many SEM measurements are conducted when the sample stage is cooled down to cryogenic temperatures based on different sample properties.

Related Products:

The LT3 is the premier flow cryostat. With its matrix heat exchanger and coaxial shield flow transfer line, the LT3 is one of the most cryogen-efficient flow cryostats on the market. The LT3B's angstrom level vibrations make it the cryostat of choice for STM experiments.



LT3

- The backbone of low vibration cryogenic research
- Atomic resolution is achieved through a series of heat exchangers
- Coaxial shield flow transfer line ensures liquid at the tip

Cryostat Model	Type
LT3	Flow
LT3B	Flow