SEM (Inspect F50)

Many new features are available to help customize an Inspect F50 for particular characterization. New options, such as beam deceleration, bring low kV performance to a completely different level for a conventional FEG SEM. Nav-Cam color image navigation and new detectors provide even greater flexibility to the Inspect F50.

**Model**
FEI (Inspect F50)

**Specifications**
- Accelerating voltage: $< 30$ kV
- SEM resolution: $< 1.0$ nm
- 2.3 nm at 1 kV (BD mode + ICD)
- Magnification: 10 ~ 500,000 X

**Applications**
- ICD for secondary electrons in BD mode
- Electron beam current measurement
- EDS
- vCD (Low Voltage High Contrast Detector)

**In-column detector (ICD)**

Primary beam energy: 5 keV

ICD  SE Energy on detector ~ 4 keV

Landing energy: 1 keV

$HV = 5$ kV

(Bias energy 4 kV, landing energy 1 keV)

**Low voltage high contrast detector (vCD)**

Beam Deceleration (BD) mode bends the SE and BSE toward the beam axis changing the signal collection

- Effective for low kV BSE imaging ($< 3$ kV)
- Optimized for Beam Deceleration (BD) detection
- The vCD is available as a retractable detector on SEM stage systems

**Location**
L5145  Tel 02-958-5973

High and low kV backscattered electrons image on a metal sample

Combined vCD + beam deceleration imaging of toner particles