



LVEM5

Benchtop Electron Microscope

New!

LVEM5 - AFM Tip Holder

The LVEM5 electron microscope can be used in combination with the optional **AFM tip holder** to image most AFM tips. This is a rapid technique for obtaining detailed information on the quality and design of your AFM tips.

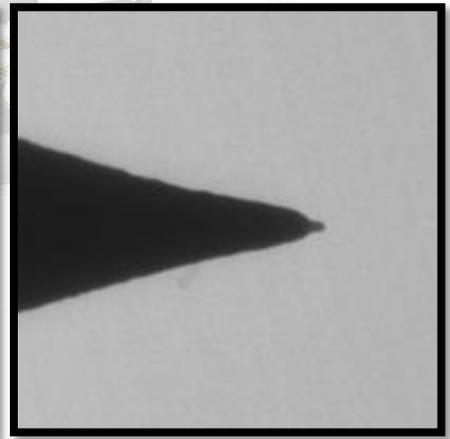
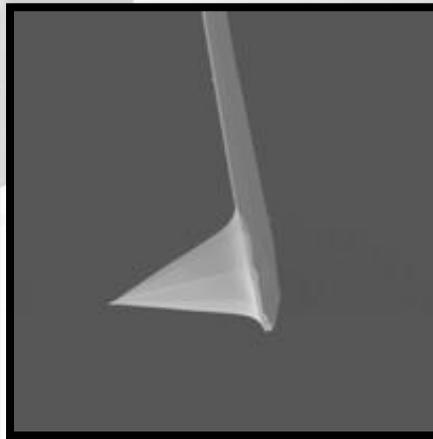
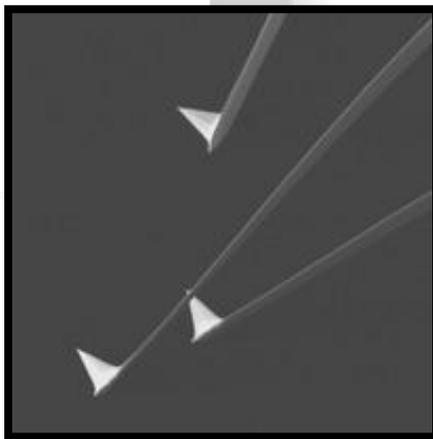


Atomic Force Microscopy (AFM) relies on a cantilever with a sharp tip (probe) that is used to scan the surface of a sample. AFM tips generally have a radius of curvature of around a few nanometers.

When the tip approaches the sample surface, forces between the tip and the sample lead to a deflection of the cantilever. The nature of the AFM probe determines the forces that will be measured, as well as the microscope's final sensitivity. Therefore probe quality is a primary concern.

Tip shape and sharpness can easily be **measured in both TEM and SEM modes**. This versatility, paired with rapid sample exchange, is a strong advantage for quality assurance inspection associated with the production of AFM probes.

Custom AFM tips, such as chemically and biologically coated AFM tips, or AFM tips with particle attachments, such as nanoparticles or ligands, can be effortlessly imaged. Additionally, the low voltage imaging provided by the LVEM5 allows for significantly higher contrast of any soft materials (polymers, biologic materials) used to functionalize AFM tips.



Delong America
LVEM5 Benchtop TEM
TEM · SEM · STEM · ED

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Specialized Sample Holders



New!

LVEM5 - Tilt Holder

The LVEM5 transmission electron microscope mode can be used in combination with the optional tilt holder to perform **Electron Tomography**. This is a technique for obtaining detailed 3D structures from 2D images. In the process, a beam of electrons is passed through the sample at incremental degrees of rotation around the center of the target sample. This information is collected and used to assemble a three dimensional image of the target.

Additionally, the LVEM5 scanning electron microscope mode can be used in combination with the optional tilt holder to perform **photogrammetry**. This technique involves extraction of 3D geometry information from 2D images taken from a sample held at different angles relative to the BSE detector.

The Tilt Holder for the LVEM5 allows analysis of various sample types from different points of view, thus enabling reconstruction of a 3D image of the sample.

Key Specifications

- $\pm 22.5^\circ$ of tilt
- Compatible with TEM, SEM and STEM modes

