

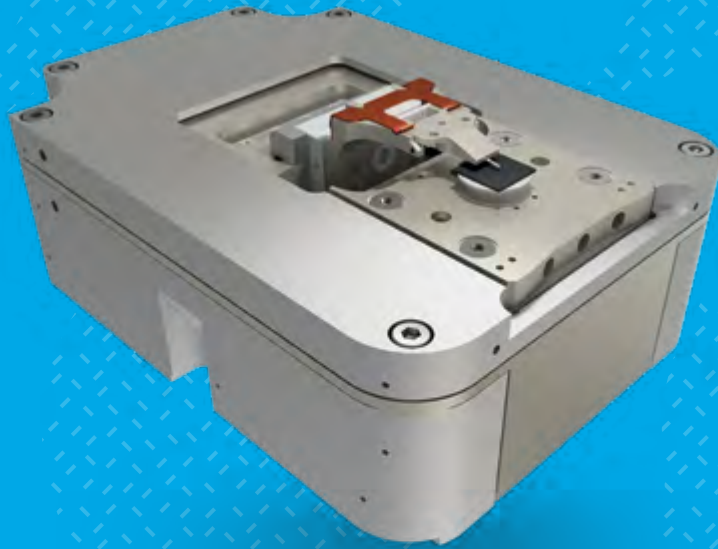


NenoVision

LiteScope™

Scanning Probe Microscope designed for easy integration into the Electron Microscopes

- 3D visualization of the surface structure
- Complex surface characterization – Topography, Roughness, Magnetic properties, Conductivity, Electrical properties etc.
- Precise SPM tip navigation into the area of the interest by the SEM
- User-friendly operation, easy integration to SEM
- Wide range of SPM imaging modes



Explore Variety of Applications



The result of anisotropic wet etching of silicon through line-grid mask, CPEM



Textured PIN diode on glass substrate – solar cell, CPEM

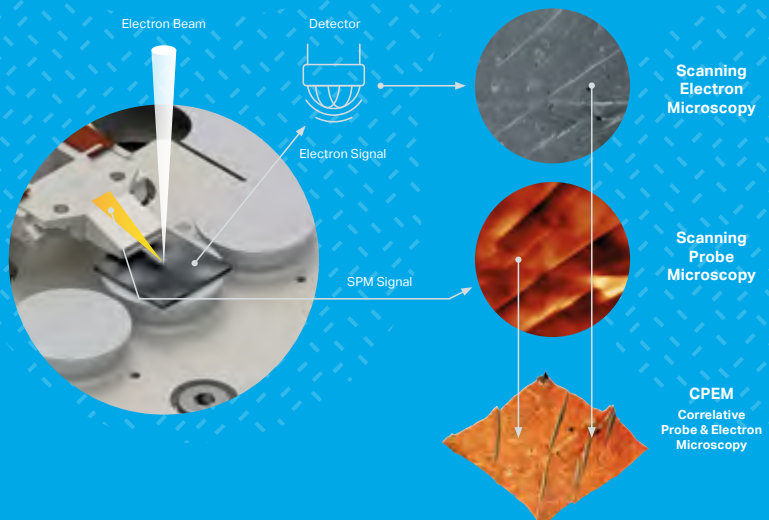


Etched aluminum



Cast-iron

Explore brand new Correlative Probe and Electron Microscopy technique





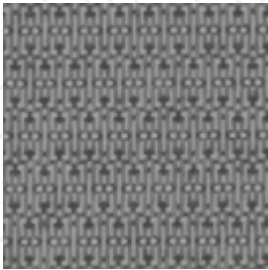
Failure Analysis of Integrated Circuits by SPM/FIB/SEM - Delayering

Correlative Probe and Electron Microscopy (CPEM) is a novel technique combining Scanning Electron Microscopy (SEM) and Scanning Probe Microscopy (SPM). The target layer within integrated circuit could be analyzed by both, SEM and SPM in the same place, at the same time and in the same coordination system. CPEM image contains the surface topography information together with typical SEM details.

Integration of SPM/FIB/SEM techniques significantly simplify delayering process used for failure analysis, quality control and R&D of integrated circuits.

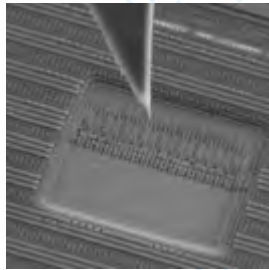
Our solution enables

Quality control of planarity after delayering



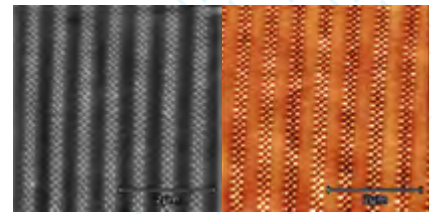
SEM image of transistor contact layer.

Precise SPM tip navigation



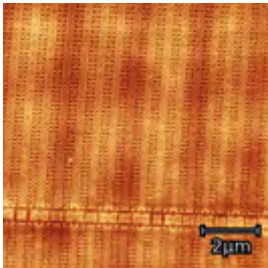
SPM tip approaching transistor contact layer.

Correlative imaging, surface characterization



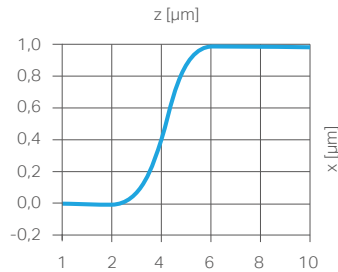
SEM, SPM (AFM) and CPEM images of via layer. RMS roughness 3.3 nm.

Determination of surface roughness



SPM (AFM) image of transistor contact layer. RMS roughness 2.5 nm.

Depth profiling



■ Depth profile

3D layer by layer reconstruction

