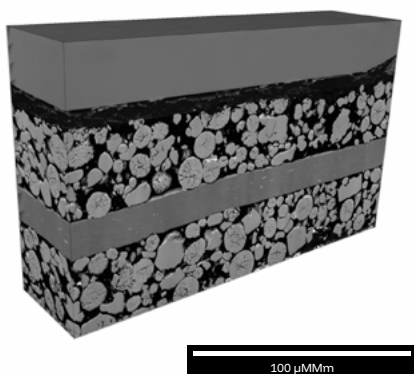


Tescan Essence™

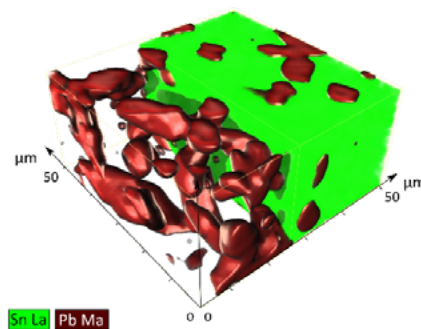
FIB-SEM Tomography

Automated high-resolution serial sectioning, imaging and data collection made easy

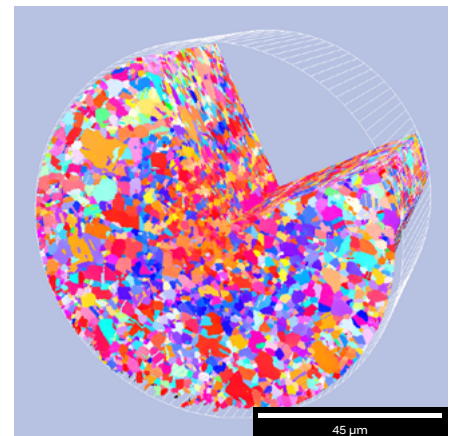
The FIB-SEM Tomography is an optional software module for the acquisition of high-resolution 3D data using serial-sectioning techniques.



↑ FIB-SEM tomography of a Li-ion battery, 200×50×100 μm @ 100 nm voxel resolution



↑ 3D EDS elemental analysis of a solder microstructure



↑ 3D EBSD analysis of a cold-drawn, 90 μm diameter Copper wire

Key Benefits

Obtain high quality data with ease using the step-by-step guided workflows to set-up acquisition parameters

Execute tomography jobs with greater efficiency using the familiar, intuitive control interface with full integration within the FIB-SEM control software

Save time by using automated volume preparation routines for unattended sample processing

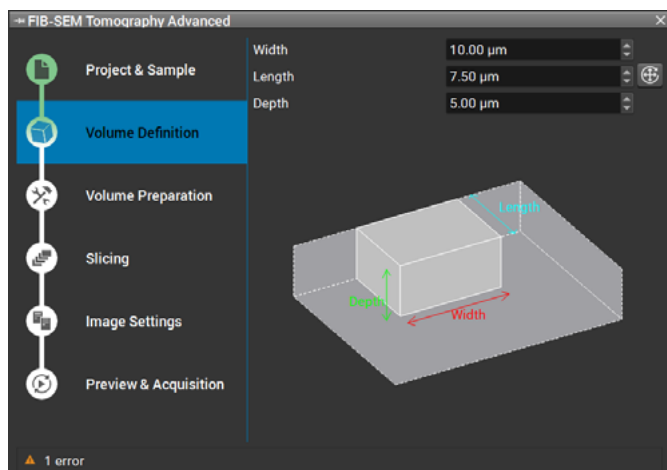
Acquire large datasets reliably with the support of automatic adjustments procedures that assure system stability

Acquire multi-scale and multi-modal 3D data with up to 8 imaging detectors extended by 3D EDS and 3D EBSD microanalysis

Achieve tomographic results faster using Plasma FIB-SEM with the added support for Tescan's Rocking Stage in the tomography workflow for high performance milling

Applications

- Materials structure analysis and defect inspection
- Structural biology in life sciences
- Failure analysis in semiconductor industry



FIB-SEM Tomography Packages

| Feature list | FIB-SEM Tomography (Basic) | FIB-SEM Tomography Advanced |
|---|----------------------------|-----------------------------|
| Multiple imaging detectors | | |
| Mixing detector channels | | |
| Multiple ROI imaging | | |
| Multi-scale acquisition (every n-th slice) | | |
| Multiple dataset conditions ² | | |
| Automatic ROI preparation | | |
| Automatic drift correction | | |
| Autofocus ² | | |
| Automatic detector shutter control | | |
| Automatic Ga source heating | | |
| External acquisition triggering (3D EDS, 3D EBSD) ¹ | | |
| 3D visualization software included ² | | |
| Rocking stage support ^{2,3} | | |
| One-click data review in Tescan 3D Volume Analysis ^{2,4} | | |

¹ Requires API addon on 3rd party (not included), ² valid since 12/2020, ³ requires Rocking Stage to be installed,

⁴ Requires Tescan 3D Volume Analysis on FIB-SEM PC

Requirements

Tescan FIB-SEM systems from AMBER/S8000 or SOLARIS/S9000 series GIS recommended (for protection layer deposition)

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