

TEMography

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Bring the 3D microworld to life with stunning colors

TEMography

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TEMography, a pioneer software suite for electron tomography; SEM supporter for stage control, montage, and correlative light-electron microscopy observation; NBD Stadium for nanoscale strain mapping. TEMography.com offers a variety of application software adding the latest visually appealing power to your transmission and scanning electron microscopy work.

Electron Tomography Suite : TEMography	P4	■
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The World Loves TEMography

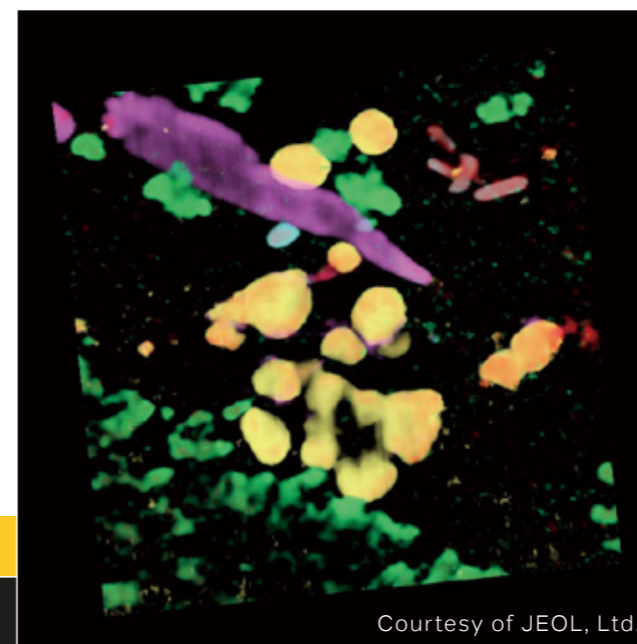
Reconstructing tilt-series images, Visualizing 3D volumes, Selecting a region of interest.

TEMography, a pioneer software suite for electron tomography, provides seamless workflow for your Electron Tomography work.

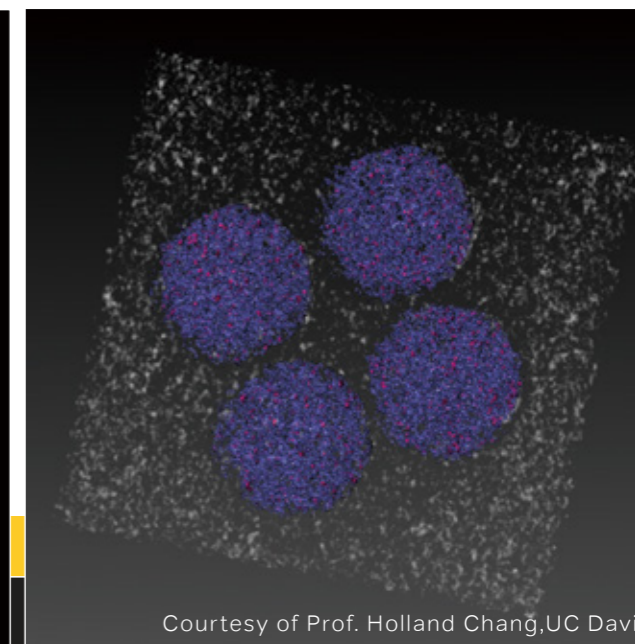
Over 400 users worldwide choose TEMography; we provide the best solutions and dependable user support.

Supports EDS-based 3D elemental analysis data

Supports 3D cryo-tomography data



Courtesy of JEOL, Ltd.

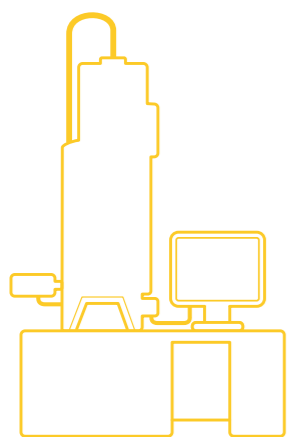


Courtesy of Prof. Holland Chang, UC Davis

Electron Tomography Suite

TEMography

Source data
(tilt-series image data)



User acquired TEM or STEM tilt-series image data. Optional automated acquisition software is available; contact us for details.

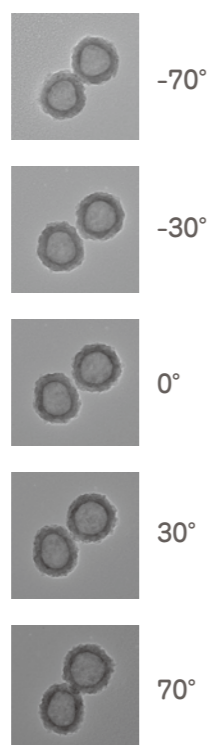
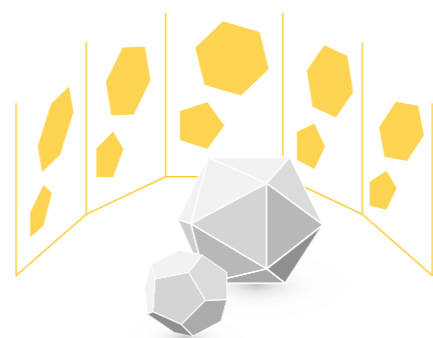


Image Alignment and 3D Reconstruction ;

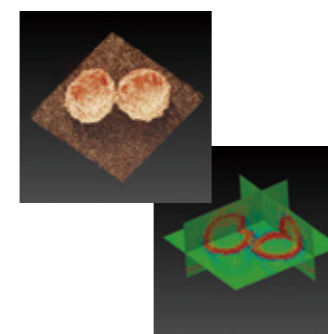
Composer



The Composer provides quick and intuitive three-dimension reconstruction for STEM tilt-series images. All popular computed tomography mathematical algorithms are included.

3D Volume Visualization ;

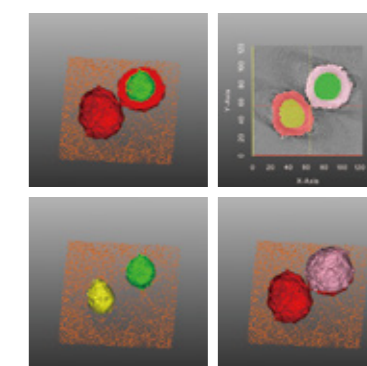
Visualizer-evo



The Visualizer-evo includes volume rendering, multi-slicing, isosurface plotting, volume segmentation, and movie maker tools with a variety of 3D volume representation and 3D measurement options (length, angle, etc.).

Region of Interest Extraction Software ;

Colorist



Courtesy of Seoul National University

Select and colorize multiple regions of interest to form 3D volume images with the intuitive user interface of the Colorist. SEM serial section data is also supported.

Supporting Your SEM Observation with Advanced Stage Control & Multi-functional Imaging/Analyses

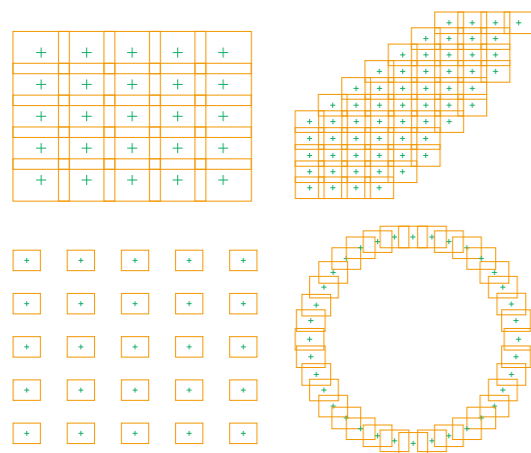
Make your routine analyses quicker and easier with the SEM Supporter! The SEM Supporter includes various analytical support features including correlative SEM montage - optical microscopy observation for rapid characterization. (Supported models: SEM Supporter is compatible with the currently available JEOL SEMs. Please contact us for details.)

SEM Support Software

SEM Supporter

Automated SEM Image Collection

Simply choose a pattern and the SEM Supporter performs high-throughput pattern imaging using the template you specified. Various imaging patterns are available as templates.



SEM Montage Imaging

SEM Supporter acquires and stitches SEM images from a user specified area to produce high-resolution large field of view images by aligning images and adjusting contrast. The process is fully automated, and can use a variety of detector types (SE, BSE, CL*, EDS*).

*Platform dependent, contact us for details.

Correlative Observations

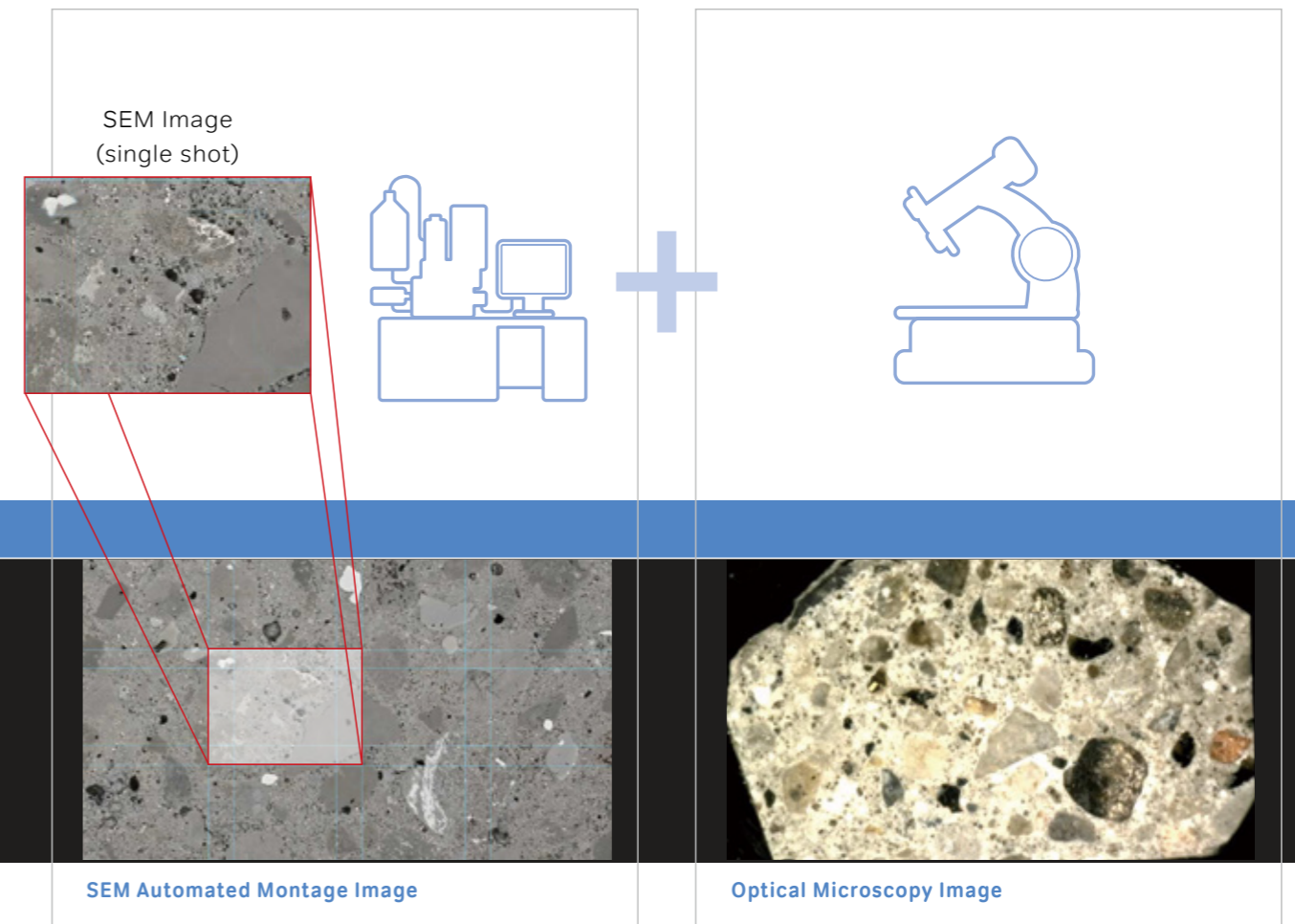
SEM Supporter drives the sample stage to navigate to the region of interest found by prior optical microscopy observation. The optical microscopy image can also be used to conduct correlative observation by overlaying with a montaged SEM image (right figure).

Automated Line Width Measurement (Optional)

SEM Supporter performs precise line width measurement from the image contrast. A macrobased batch line width measurement tool for multiple files is also available.

Particle Analysis Function (Optional)

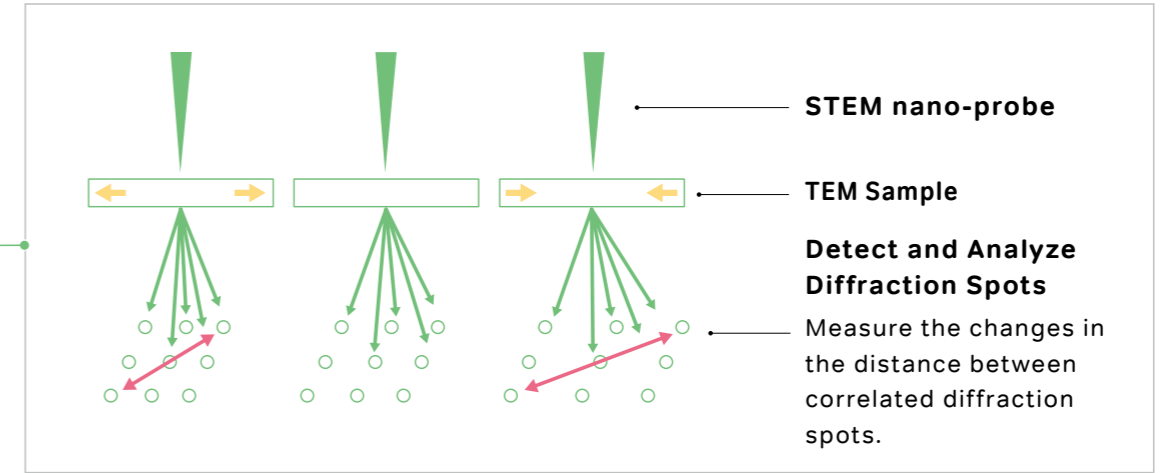
SEM Supporter performs particle size measurement and counts the number of particles in an observed area.



Simple operation creates an informative overlaid image from a montaged SEM image and an optical microscopy image.

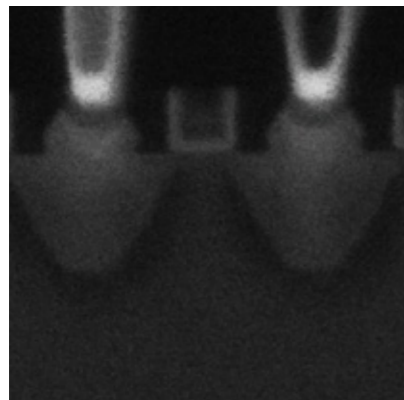
Grasp Nanoscale Strain Distribution Efficiently and Accurately

A unique strain analysis using your STEM dataset, NBD Stadium analyzes diffraction patterns in your STEM images to visualize nanoscale strain distribution with multitudinous output options. (Supported models: NBD Stadium is compatible with the currently available JEOL TEMs. Please contact us for details.)

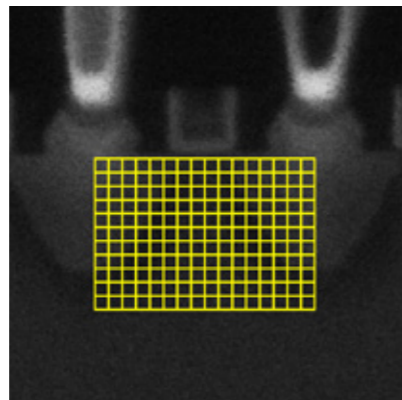


Strain Analysis Suite

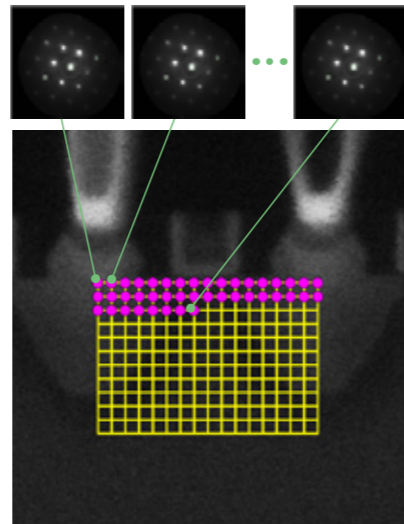
NBD Stadium



Acquire a STEM image.



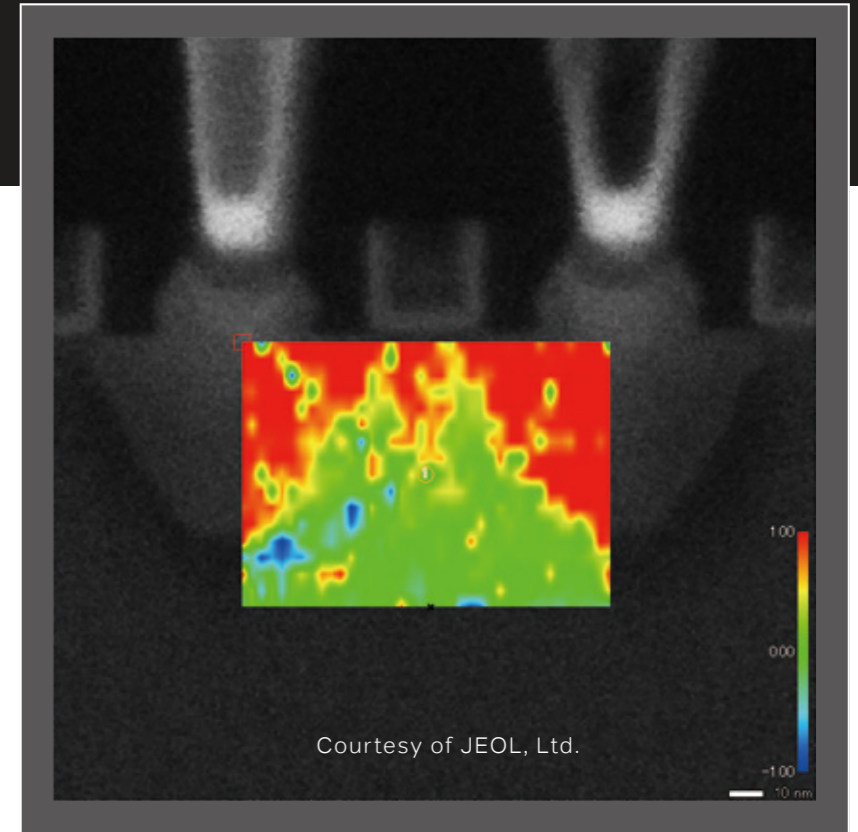
Specify the region of interest.



Record diffraction patterns from every grid point of the user specified grid (An optional STEM configuration may be required; contact us for details).



Pick a reference point and then measure the changes in the distance between correlated diffraction spots on each of recorded diffraction patterns.



Generate a 2D strain map

Anyone Can Take Skillful Images

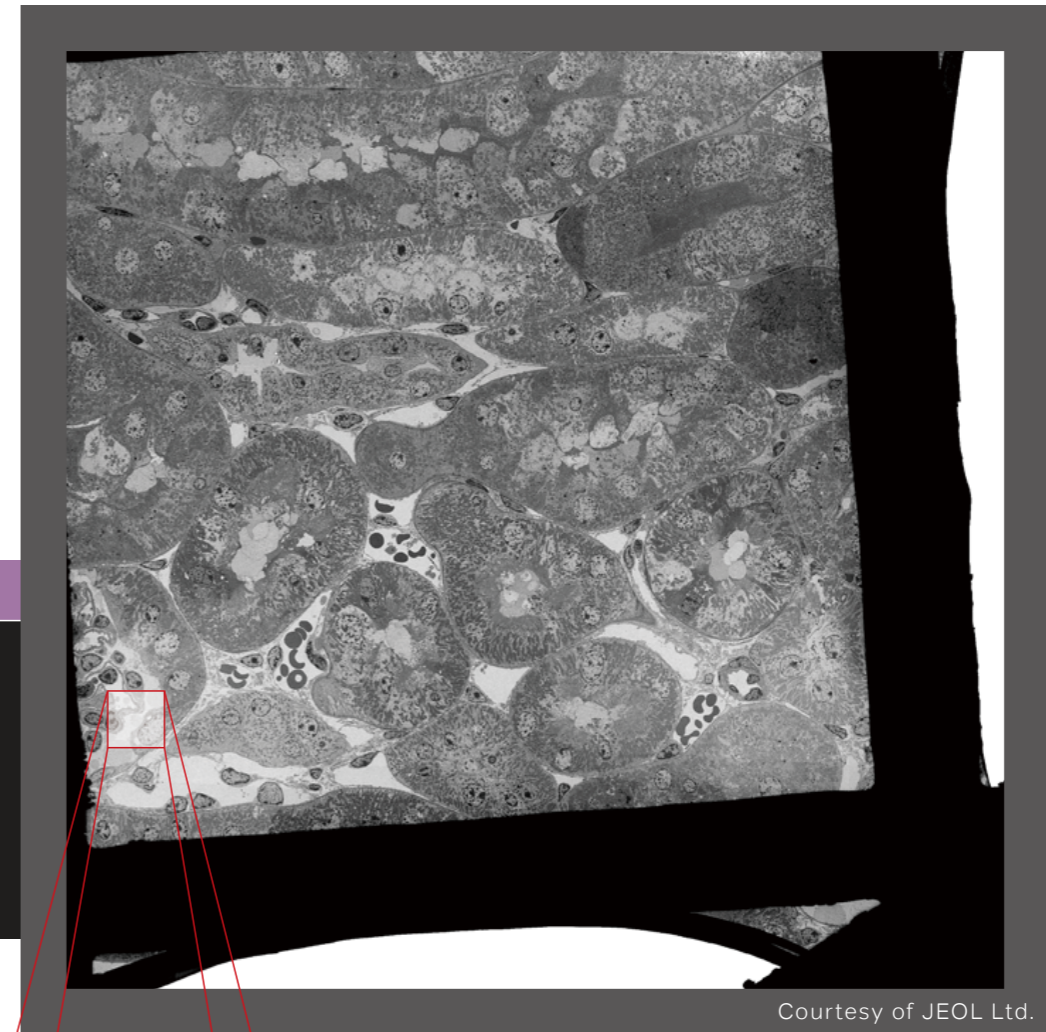
TEM Shot Meister and STEM Meister provide intuitive operational support for high-resolution, wide-field-of-view, low-dose microscopy. Including simple operation for painstaking jobs: drift-correction, panorama microscopy, and cryo-microscopy.

(Supported models: Shot Meister/STEM Meister is compatible with the currently available JEOL TEMs. Please contact us for details.)

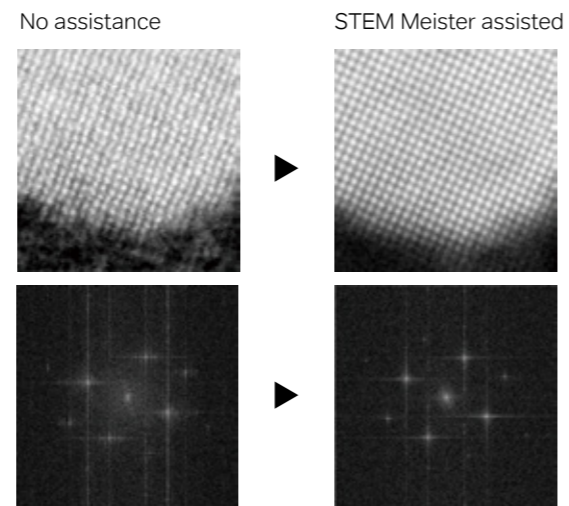
Imaging Assistant

Shot Meister STEM Meister

20K × 20K [pixels]



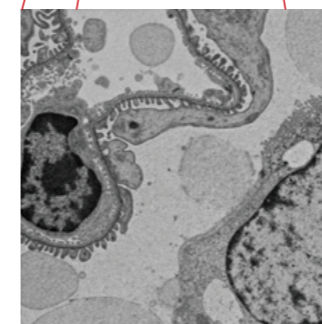
Courtesy of JEOL Ltd.



Courtesy of Institute for Materials Research, Tohoku University

Anti Drifting System (ADS) for High Resolution Imaging

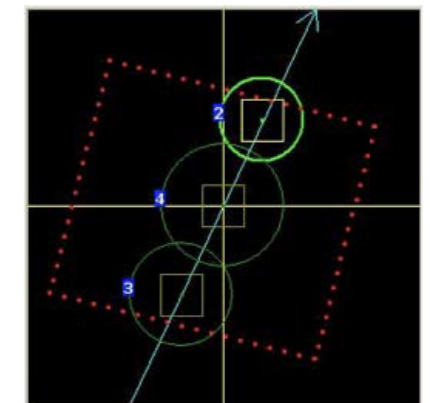
ADS mathematically reduces the harmful specimen's mechanical drift effect to improve high-resolution image quality.



1K × 1K [pixels]

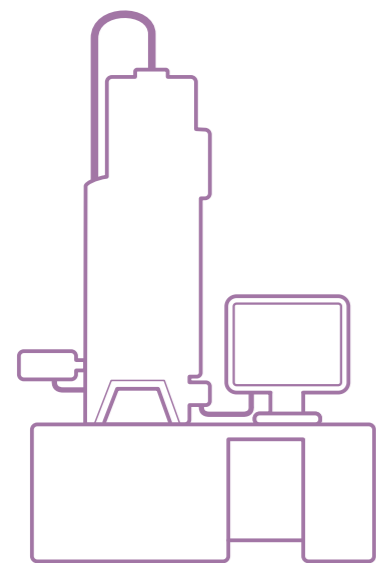
Wide-field Imaging Using Limitless Panorama (LLP)

LLP's advanced imaging algorithm provides no stitch, no brightness irregularity, and size-unlimited panorama imaging. LLP optimizes the specimen stage and the deflector coils controls and removes the size constraint of imaging area.



MFS Position Assistant for Low Dose Imaging

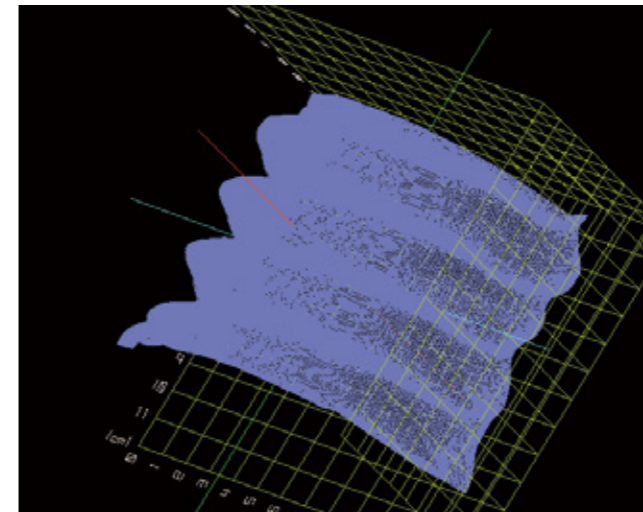
GUI based illumination area control supports intuitive and precise low dose imaging operation for all user levels (works only in the TEM mode).



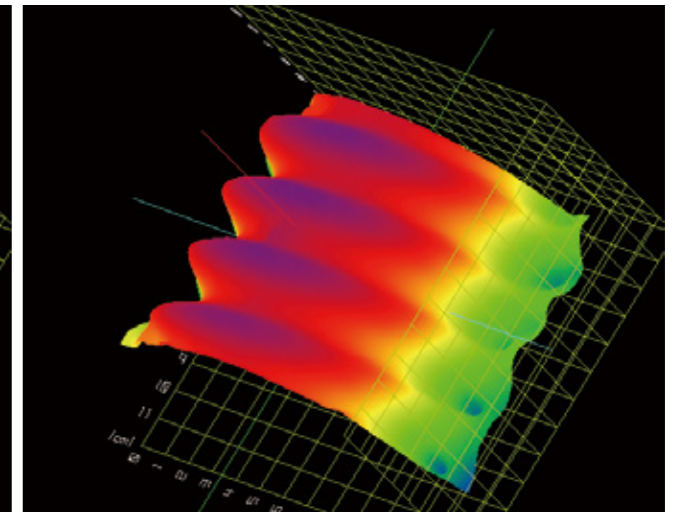
Perform 3D Analysis from One Pair of Stereo Images

3D-Sight Pro acquires the three dimensional geometry of the sample to create stunning 3D visualizations. In addition to providing 3D structures, 3D-Sight Pro offers quantitative assessments including cross-sectional morphology, length and area measurements, height-thresholding ROI, surface roughness, and more.

Wireframe Rendering

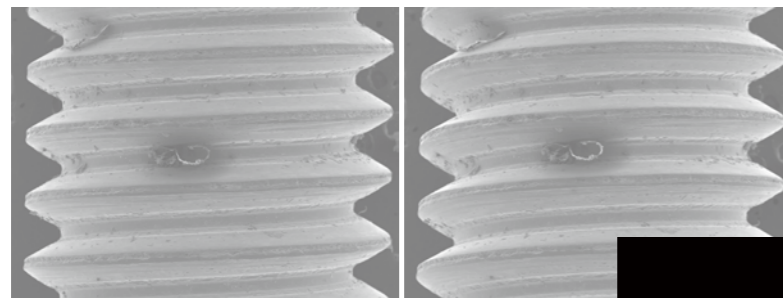


Texture Map Rendering (Colored by z-height)

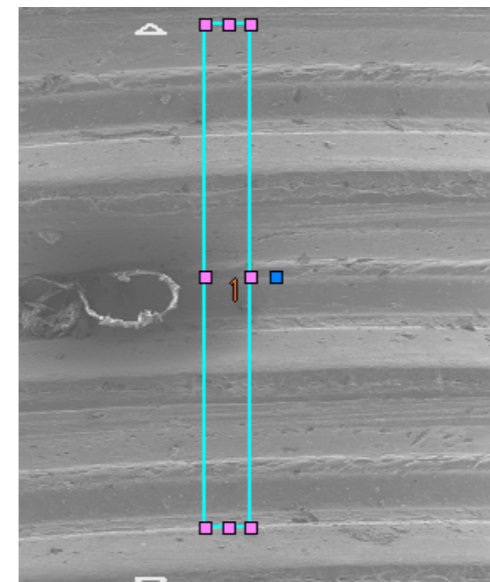
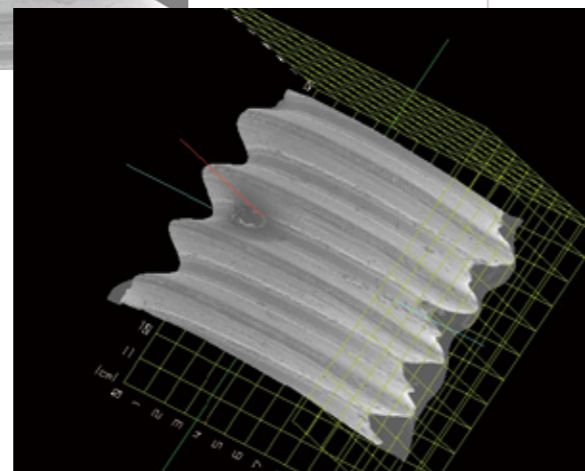


Three Dimensional Figuration Measurement Software for SEM

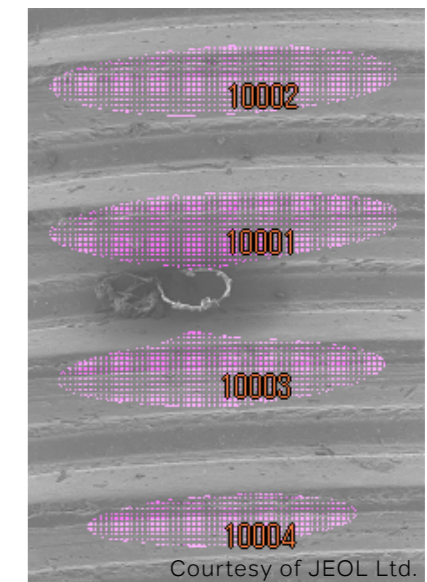
3D-Sight Pro



Just take two images (mainly secondary electron images) at different tilt angles by SEM. With those 2 images, 3D-Sight Pro enables a quick and easy reconstruction of the three dimensional surface and morphology.



Length and Area Measurement
3D-Sight Pro automatically measures the length and area by taking the surface profile into account.



Region of Interest (ROI) Extraction
Using the height as the threshold, the region of interest can be easily extracted.

■ TEMography.com Product Line-Up

Product Name	TEM	SEM	Universal	
Recorder	●			Fully automated tilt-series acquisition for electron tomography including TEM, STEM, EDS, and cryo-, and EDS
TEMography	●			All-in-one software suite for electron tomography
Shot Meister	●			Providing intuitive operational assistance for TEM imaging for all user levels
STEM Meister	●			Providing intuitive operational assistance for STEM imaging for all user levels
NBD Stadium	●			A complete nanoscale strain distribution analysis software suite with multitudinous output options
JEM Toolbox	●			Providing control functions to support user-based software development for TEM and its peripheral devices
Stack N Viz	●	●		All-in-one software suite for 3D reconstructing serial sectioning images (FIB Slice-and-View, array tomography, etc.)

Product Name	TEM	SEM	Universal	
SEM Supporter		●		Supporting SEM image acquisition and analysis with various analytical options
3D-Sight Pro		●		Providing a quick and easy assessment framework for three dimensional surface and morphology with a pair of stereo SEM images
Image Excite	●	●	●	Providing multiple measurement tools for industrial applications
Image Center	●	●	●	Providing a seamless image data management and sharing environment
MultiImageTool	●	●	●	Providing customizable image processing and analysis routines to fulfill customer's demands - no programming
Secure Image	●	●	●	Image encryption and tampering prevention system conformed to FDA Part11
Colorist	●	●	●	Intuitive and high throughput segregation and colorization tools