

Key Benefits

- Automates workflow support from light to electron microscopy
- Offers tremendous automation in imaging and alignment tasks
- Allows quick chemical fixation directly from a live cell imaging experiment
- Provides high-speed, confocal live cell imaging for advanced light microscopy experiments
- Entails full imaging support for vitrified samples under cryogenic conditions

FEI CorrSight™

Workflow Solutions for More Efficient Correlative Light and Electron Microscopy (CLEM)

When scientists use more than one modality to image the same sample, they gather valuable comparative information from different scales and contrasts. Toward this end, light and electron microscopy complement each other perfectly. The former (especially fluorescence microscopy) allows specific labeling and observation of dynamic events in living cells. The latter offers critical high-resolution structural information, but it only works on fixed and processed samples. As FEI's mission is to advance biological research, it was essential to bring these two modalities together.

Capture Comprehensive Data from Multiple Modalities

Correlative Light and Electron Microscopy (CLEM) enables the best of both modalities, extracting a more complete set of information; however, moving from one modality to the other entails extensive sample preparation. Therefore, one major challenge of any correlative experiment is determining an efficient workflow from one modality to the next to ensure high experiment throughput and excellent data quality. FEI's developments for biological specimens bridge these two worlds with a portfolio of smooth, efficient workflow solutions for light to electron microscopy.

Design a Flexible Platform for Correlative Workflows

FEI's CorrSight provides a suite of products that optimize the major steps within the correlative workflow. To meet specific imaging needs, users can configure a fully automated correlative imaging system by choosing from FEI's innovative portfolio of light microscopy modules. Further, integrated MAPS software manages the entire workflow from light to electron microscopy, thereby ensuring automatic alignment of instruments and images.

Experience the Benefits of an Immobile Sample Stage

At the core of FEI's CorrSight concept is a truly static sample stage. This allows uncompromised compatibility with different sample environments and peripherals in correlative experiments as well as optimal support for a multitude of applications. A high-end fluorescence microscope is moved precisely to scan the complete sample, allowing for high-speed image acquisition and a broad choice of applications, including the following:

- Live cell imaging of dynamic events in intact cells or organisms with environmental control
- Direct chemical fixation with automated microfluidics
- Vitrified sample imaging with automated liquid nitrogen supply

Choose from Various Modules

For sophisticated experiments, FEI's CorrSight can be complemented by numerous modules.

- Structured illumination - removes out-of-focus blur and increases contrast in thicker samples
- Andromeda spinning disk - offers fast optical sectioning in high-speed, living specimen imaging
- Flexible point-scanning solutions - conduct optical manipulation (photoactivation, bleaching or local uncaging)

Optimize Workflow Automation with FEI

In all variants, FEI's CorrSight offers a high degree of workflow automation and seamless integration between different imaging platforms.

- Bring advanced light microscopy and electron microscopy closer together
- Conduct timely correlative experiments
- Reduce time to data
- Boost data quantity and quality
- Enjoy easier correlative experiments

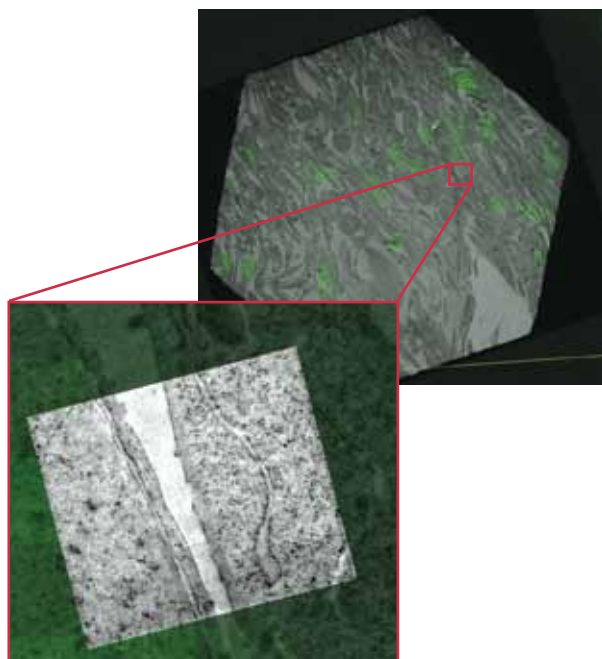


Figure 1: Low magnification overlay of light- and electron microscopy images (above) and the high resolution electron microscopy image of the region of interest (below) resulting from the FEI correlative workflow using the CorrSight, a Nova NanoSEM™ in STEM mode and MAPS. The images show mouse myoblasts transfected with a protein labeled with AlexaFluor® 488 and ProtA 19 nm gold.



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TÜV Certification for design, manufacture, installation and support of focused ion- and electron-beam microscopes for the Electronics, Life Sciences, Materials Science and Natural Resources markets.

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