

Tecnai with iCorr

Enabling correlative microscopy on the Tecnai TEM

FEI's iCorr™ technology consists of a fluorescence light microscope module and unique software that researchers use to conduct fast and accurate correlative microscopy experiments with transmission electron microscopy (TEM).

Researchers quickly pinpoint structures of interest on their sample using the fluorescence light microscopy mode and then navigate easily to these features in TEM mode. Then, they are able to automatically capture high resolution image data on the stored structures using the electron microscopy mode. iCorr's powerful software automatically correlates the results.

This combination of technology and automation streamlines experiments, allowing users to quickly capture data from two modalities without ever changing instruments. This integrated approach removes the challenges with conducting correlative microscopy experiments and opens up new dimensions for biological research.

KEY BENEFITS

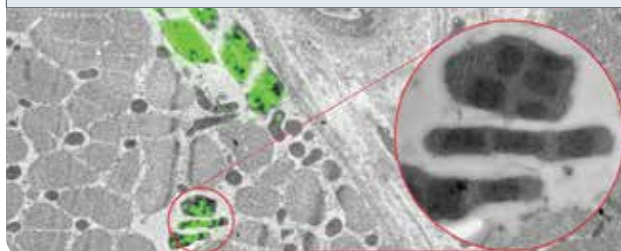
Simple workflow The integrated fluorescence and electron microscopes enable quick and easy operation of both modalities without sample transfer. Operators can easily capture correlative data sets in minutes.

Fast navigation Users can quickly navigate to regions of interest using the fluorescence overview image. Those regions can easily be selected with a click of a button and stored for automated high resolution analysis.

Increased throughput Time spent locating structures of interest is reduced from hours to minutes allowing researchers to analyze many areas of their sample quickly.

Significant time savings Image acquisition and correlation of fluorescence and electron microscopy data is automatically completed using iCorr's powerful software. Removing the need for manual image overlays.

Conserve sample quality In cryo experiments the fluorescence signal rather than the electron beam is used for navigation, reducing the negative effect of the beam on sample quality. Also, with iCorr, the sample is not transferred from one modality to the other, keeping sample contamination to a minimum.



↑ Watch a full demonstration at FEI.com/Tecnai_icorr

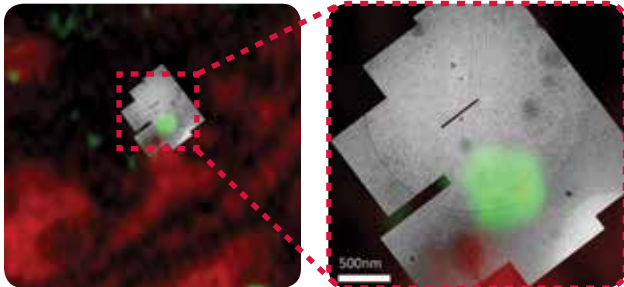


Correlated cryo experiments

FEI's Tecnai with iCorr is the only solution capable of conducting correlative microscopy experiments under cryo conditions. This simple workflow removes the need for sample transfer between instruments, eliminating ice contamination and ensuring high quality results and high yields.

Integrating iCorr on Tecnai platforms

The new iCorr technology is available on new Tecnai TEM platforms or can be easily added to existing Tecnai platforms as a simple upgrade—affording current owners the option to create a powerful integrated correlated light and electron microscopy (CLEM) solution for their biological research.



↑ Cryo data produced on Tecnai G2 F20 with iCorr in collaboration with Pascale Schellenberger, Kay Grünewald, OPIC, University of Oxford.

Technical specifications

FLUORESCENCE OPTICAL MODULE

Objective lens	15x/ 0.5 NA
Excitation	460 to 500 nm, peak at 470 nm
Emission	510 to 560 nm
Acquisition modes	Flourescence Reflection
Focus	Extended depth of focus

CCD

CCD camera	2448 pixels × 2050 lines, 12 bit
CCD pixel size	3.45 μm sq.
CCD Quantum Efficiency	0.4
Frame rate	> 10 fps (at full resolution)
Field of view	0.6 mm × 0.5 mm

ELECTRON MICROSCOPE

Tecnai performance	No compromise on TEM performance
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TECNAI PLATFORM COMPATIBILITY

Tecnai G ² Spirit BioTWIN and TWIN
Tecnai G ² 20 TWIN
Tecnai G ² F20 TWIN
Not EDX compatible
Not cryo box compatible

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Learn more at FEI.com



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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