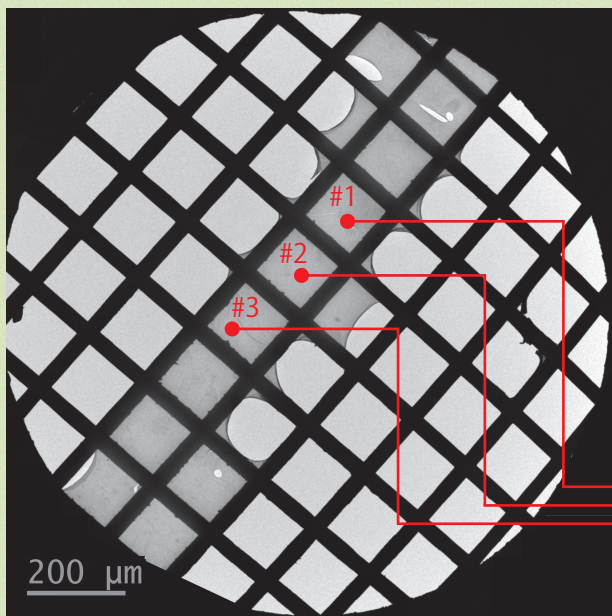# Auto Pilot

Auto Pilot streamlines sequential data collection in a Transmission Electron Microscope (TEM) by storing multiple sample stage locations along with imaging conditions, enabling automated analysis and imaging. Additionally, users can save customized recipes for routine workflows, enhancing automation for complex, time-intensive tasks like EDS tomography (which is an application that can be purchased separately).
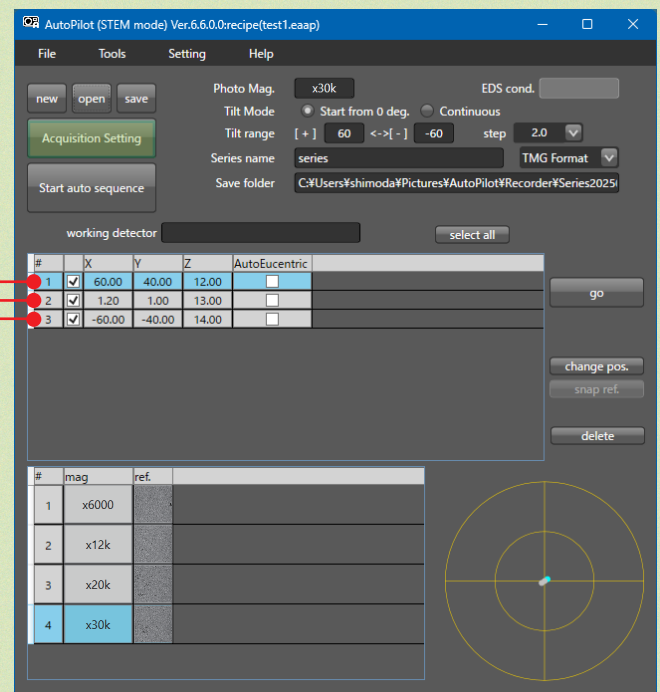
SIF offers the following : TEM Auto Pilot for TEM imaging
STEM Auto Pilot for STEM imaging

Once a location is designated the user simply clicks the Acquisition Setting button to register that specific stage location in the recipe.

At this time, in addition to the shooting conditions and stage position, images of the surrounding area at several reduced magnification levels are also automatically captured/recorded.

During image acquisition, the stage automatically moves to the location previously registered in the recipe. During stage location recall, if the image location is different and/or varies from the original saved image, Auto Pilot then references the original image in the recipe, performs a search of the area, and completely compensates using Automatic Position Correction to make sure that the region of interest is identical. Then, the magnification, irradiation conditions, etc. are set according to the recipe, and EDS and tomography data collection begins. Once data from one location is complete Auto Pilot will then move to the next location fully automating microscope imaging & analysis.

TEMography.com

STEM Auto Pilot works with the following software to perform automated imaging. (For EDS analysis, the analysis conditions are also registered in the recipe.)

● EDS Systems

・ Analysis Station (JEOL product)

・ AZtec (Oxford product)

・ Pathfinder / NSS (Thermo Fisher products)

● STEM tomography, EDS tomography

・ Recorder and STEM Option (our products)

STEM Auto Pilot

TEM Auto Pilot

TEM Auto Pilot works with the following software to perform automated imaging.

● TEM tomography

・ Recorder(our product)

Auto Pilot seamlessly integrates with Flashing Assistant (free standalone application from SIF), which detects low emission current values and automatically performs flashing for Cold FEG electron guns. This ensures stable imaging and analysis quality during extended periods of automatic acquisition.

Flashing Assistant

*Check TEMography.com for compatible devices.

Specifications

TEM Auto Pilot

TEM	JEOL
OS	Windows10(64bit), Windows11(64bit), Windows Server 2016, Windows Server 2019
CCD/CMOS Camera	JEOL, Gatan, TVIPS, EMSIS(without TOLARA)

STEM Auto Pilot

TEM	JEOL
OS	Windows10(64bit), Windows11(64bit)
Scan Controller	JEOL
EDS System	JEOL, Oxford, Thermo Fisher

Contact

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