



CEFID

CEOS ENERGY FILTERING AND IMAGING DEVICE

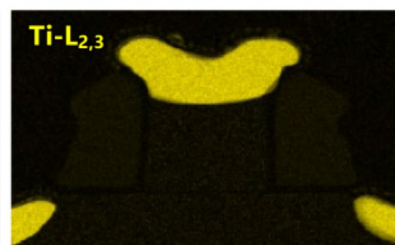
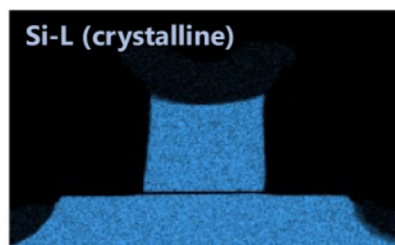
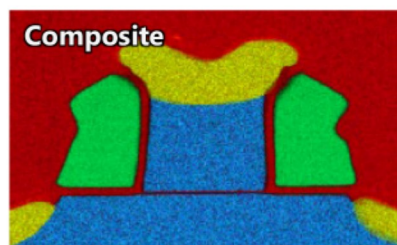
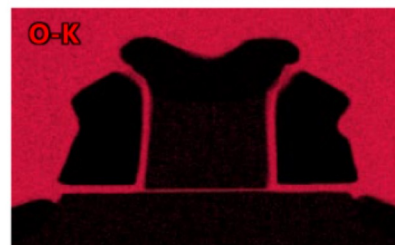
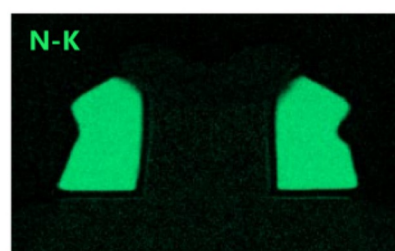
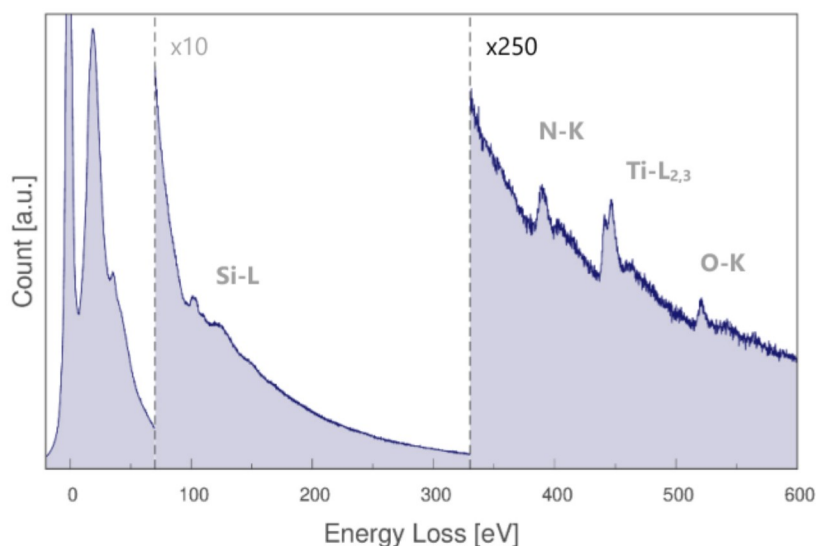
The new CEFID – CEOS Energy Filtering and Imaging Device impresses by its remarkably low non-isochromaticity (NI), as well as its long-term stability and reliable reproducibility of optical alignments after switching between different modes of operation. The CEFID platform provides extendable interfaces for detector systems, control and scripting software, advanced user alignments, and data formats, making this post-column filter more flexible and extendable even for customized experimental setups.



FEATURES

- Excellent energy resolution: Monochromated instrument can be compatible as standard
- Long-term stability: Stability of ZLP position ~ 1 eV/8h
- Fast and robust auto alignment, accurately reproducible
- Flexible dispersion range (8 eV \sim 4096 eV with 4k x4k camera)
- Variable spectrum height on the detector plane.

APPLICATION 1 [STEM-EELS Mapping]



STEM EELS mapping for semiconductor material. The elemental maps for Nitrogen, Oxygen, Titanium, and Silicon (crystalline) are calculated and shown as color images.*

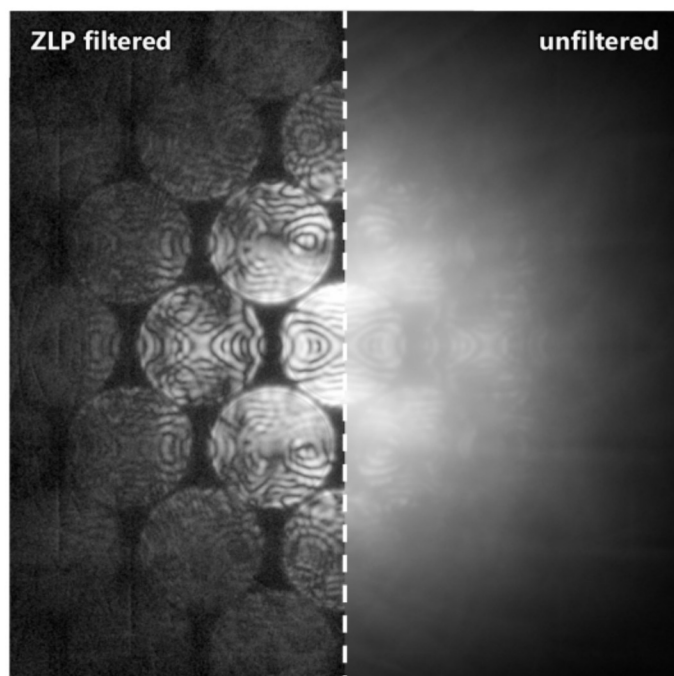
SPECIFICATIONS

	Specifications
High voltage	30kV – 300kV
Energy resolution*	< 20 meV @200kV < 75 meV @200kV (dwell time < 100 s)
Energy range**	4096 eV @200kV (1,000 meV/ch) 512 eV @30kV (125 meV/ch)
Dispersion at slit plane	5.2 $\mu\text{m}/\text{eV}$ @200kV
Acquisition mode	EF-TEM, TEM-EELS, STEM-EELS, EF-4D STEM, ωq -EELS
TEM Models	JEM-F200 JEM-ARM200F (NEOARM) JEM-ARM300F/300F2 Other systems on request.

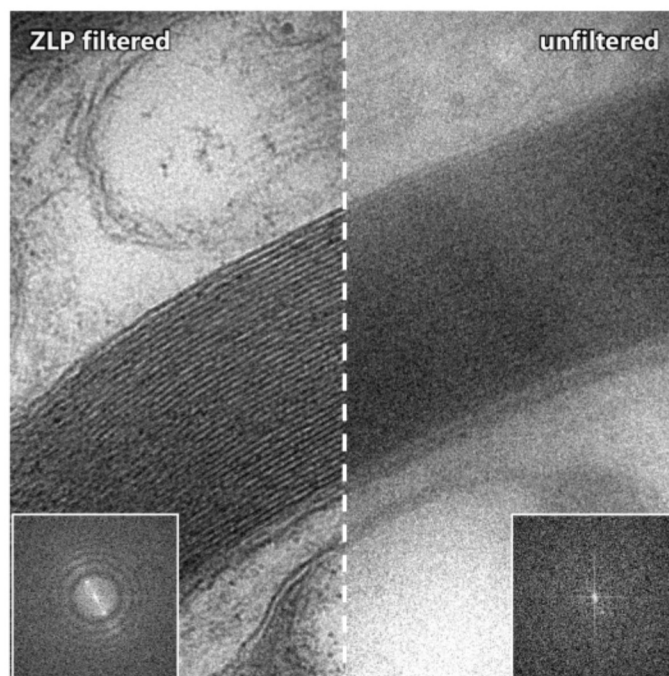
* Contribution from filter, magnetic cancelling system ON.

** Using camera with 4k pixels along the dispersion direction.

APPLICATION 2 [Zero-loss Filtered Imaging]



Zero-loss filtered (left) and unfiltered (right) CBED pattern of Si [110] thick crystal (200kV). The width of energy selection slit is set at 2.0 eV.*



Zero-loss filtered (left) and unfiltered (right) TEM image of unstained biological sample (myelin, thickness ~ 300nm, 80kV). The width of energy selection slit is set at 5.0 eV.*

CONTACT

Do you have any questions about the product or the application and extension for your e-beam system?
Please contact us at info@ceos-gmbh.de