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Italiadomani
PIANO NAZIONALE
DI RIPRESA E RESILIENZA



Presentazione del TEM-EDS Hitachi HT7800

Prof. Gobbi



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COSMOB
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Versatilità

Potenza

Semplicità di utilizzo

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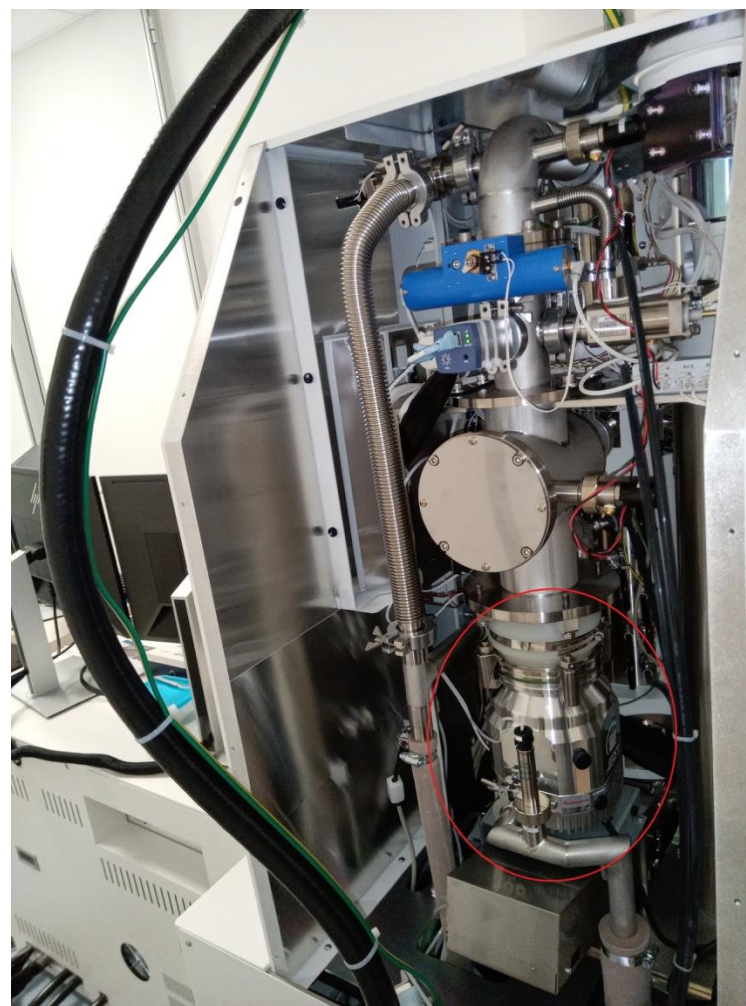
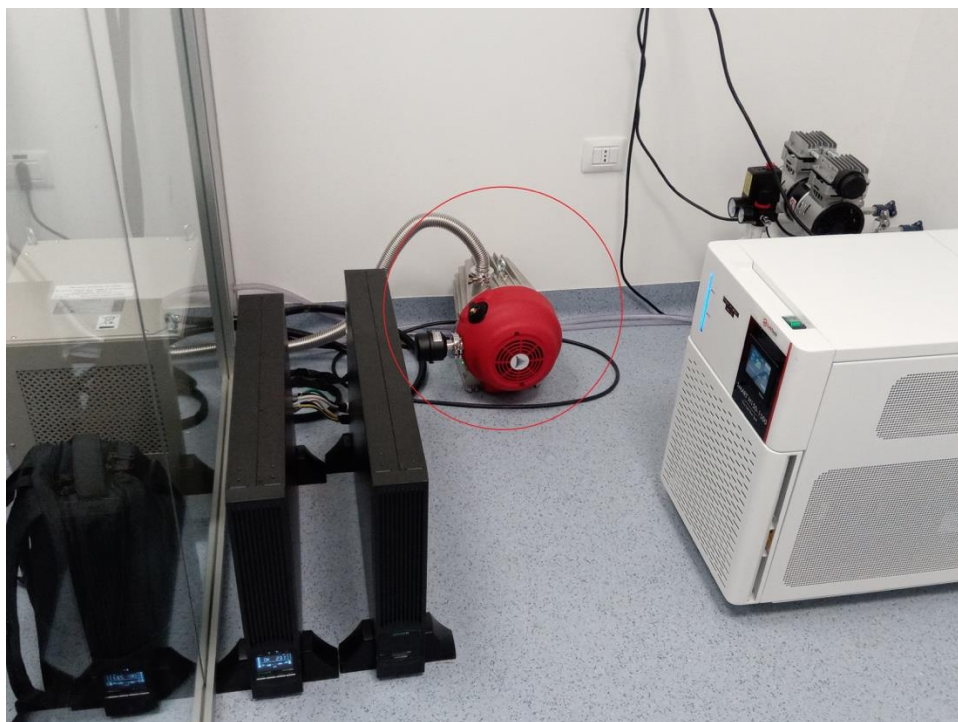
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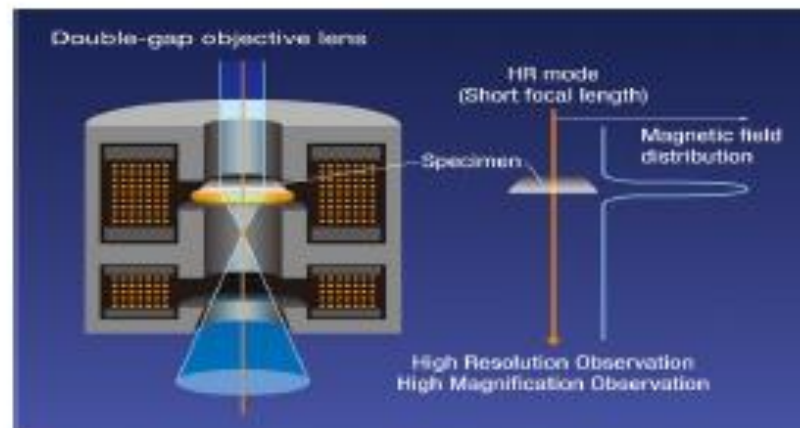


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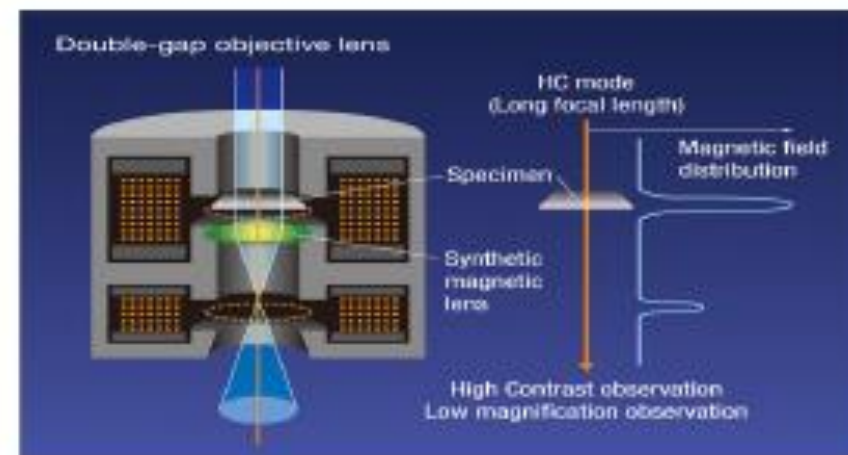


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HR-mode



HC-mode

Resolution @120kV:

0.20 nm Lattice Resolution

0.36 nm Point Resolution

Accelerating Voltage:

20 - 120 kV

(variable in 0.1 kV-steps)

Magnification:

HC-Zoom Mode: 200 - 200.000

HR-Zoom Mode: 4.000 - 600.000

Low-Mag Mode: 50 - 1000

Beam diameter on the sample:

HC-Mode: 0.5 - 2 μm

HR-Mode: 0.5 - 1 μm



sample stage with integrated 3D tilt tomography Function and -software

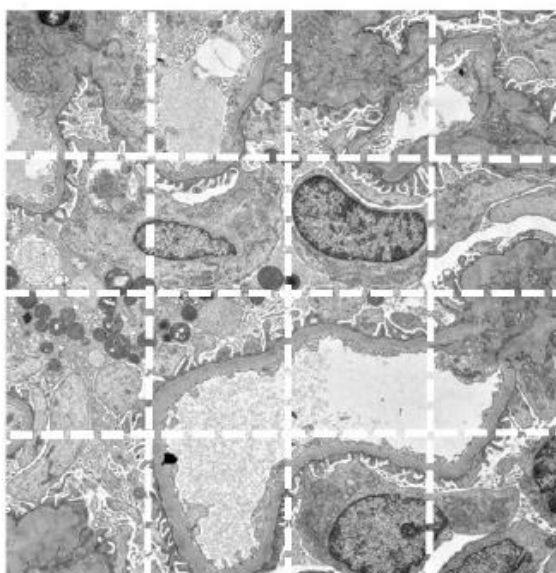
Storage of up to 100 sample positions, which can be
automatically started again

Tomography recording system for tilting $\pm 70^\circ$

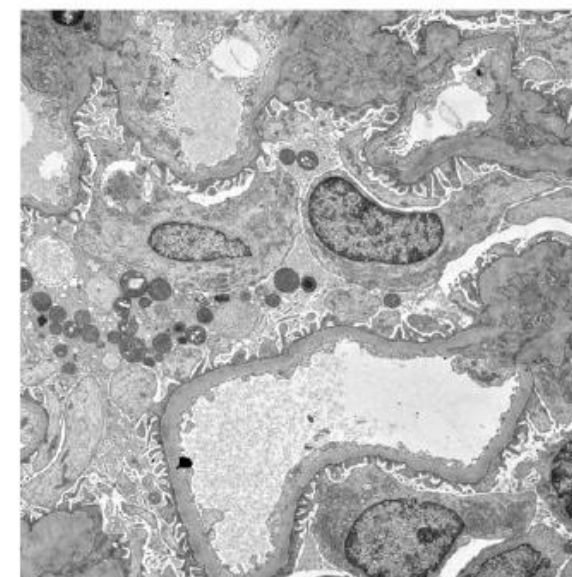
Hitachi EMIP-3D reconstruction software



Integrated as Standard: “Auto Multiple Frame Capture System”



Result:



Extension “Area Capture System”

- automatic recording of up to 999 pictures
- freely adjustable from 1 x 1 to 33 x 33
- On-the-fly stitching of up to 100 images into one Overview image
- Automated joining of saved images in the EMIP-Ex software (Panoramic View)



Energy Dispersive X- ray Spectrometer QUANTAX STEM Performance with XFlash®7T

LN₂-free high-resolution, high-speed SD Detector

XFlash® 7T-60 light element detector

- Energy resolution ≤ 129 eV at MnK α
- 60 mm² active area
- SLEW detector window, detection from Beryllium (4) to Americium (95)
- Motorized high speed, high precision detector retraction system including auto-retract for detector protection
- Welded bellows for UHV
- Vibration-free, maintenance-free, Peltier cooled, low power consumption and lowest heat dissipation

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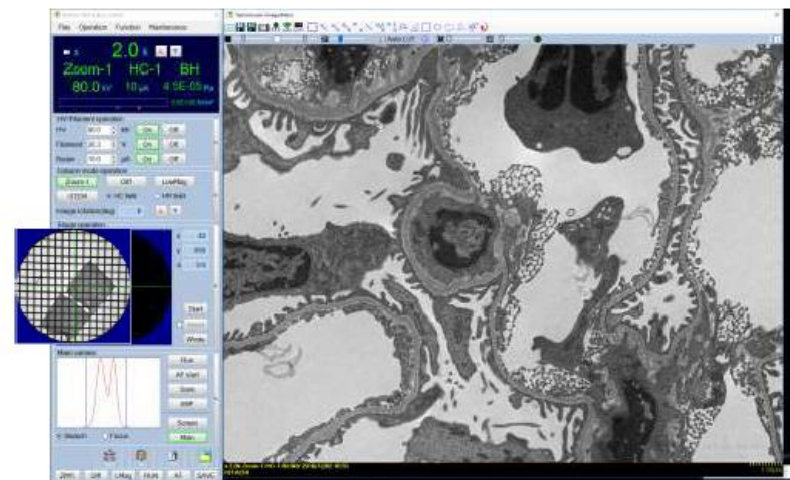


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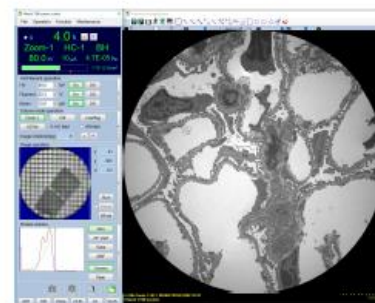
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NEW improved operating software with simplified menu navigation and new standard functions (AMF, API, Whole View, click & move, ...)

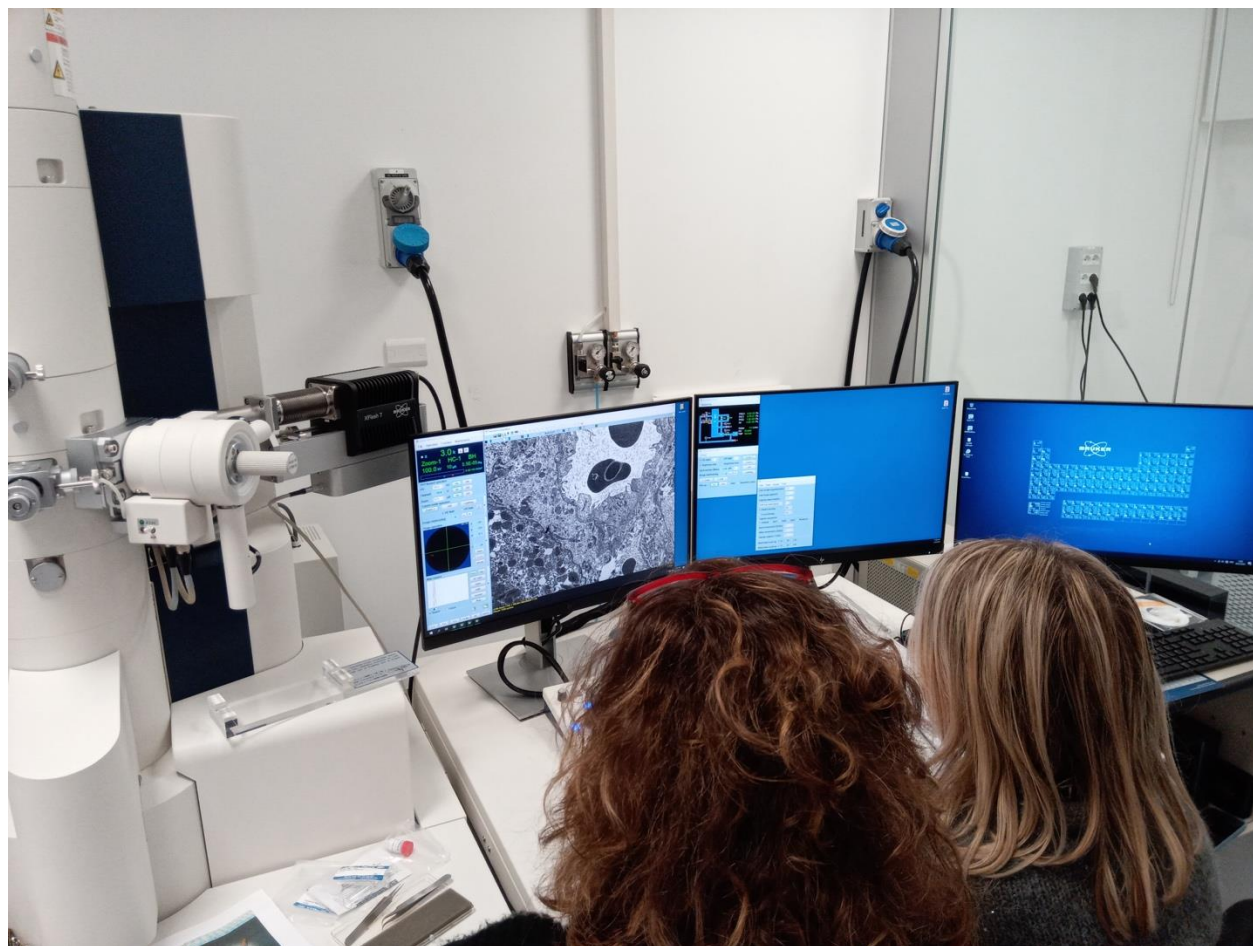
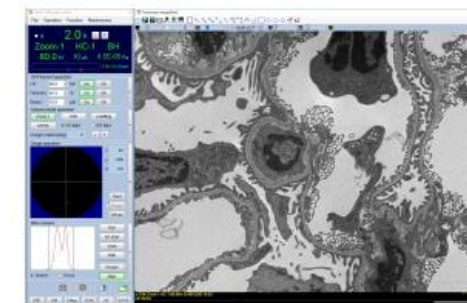


NEW High Speed CMOS Screen Camera for faster and less noise images. Improved exchange between Screen and integrated Main camera by 1-mouse click.

Screen Camera



Main Camera



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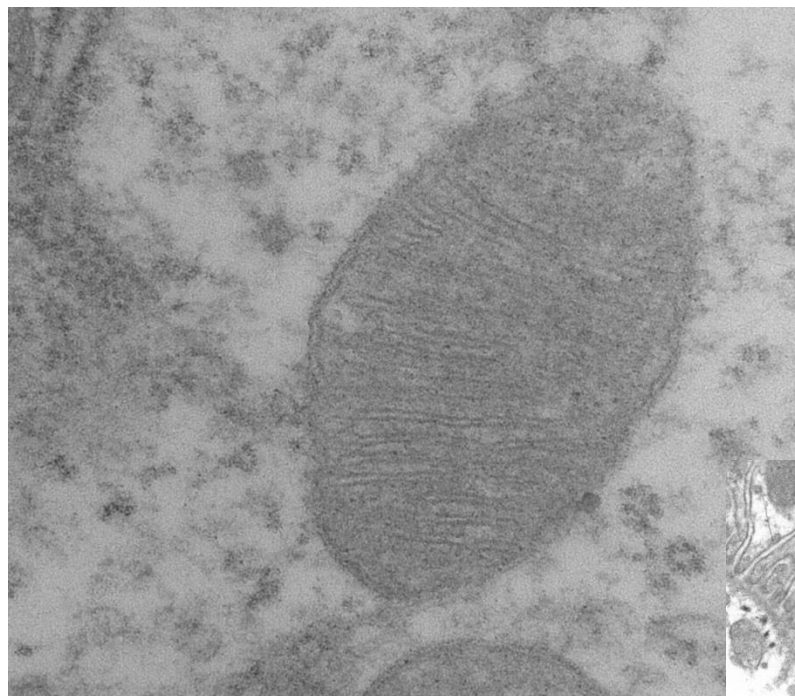
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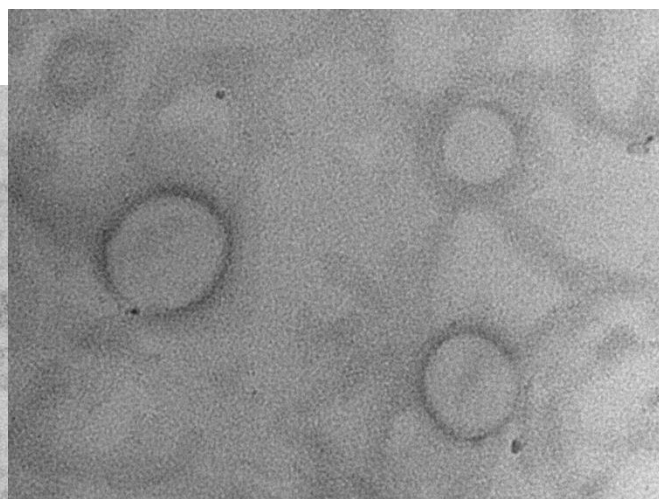


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Image date=2024/02/29 15:34:36
Image number=0040
Calibration=1.35nm/pixel at x10.0k
Magnification=x40.0k
Lens mode=Zoom-1 HC-1
Camera name=RC16

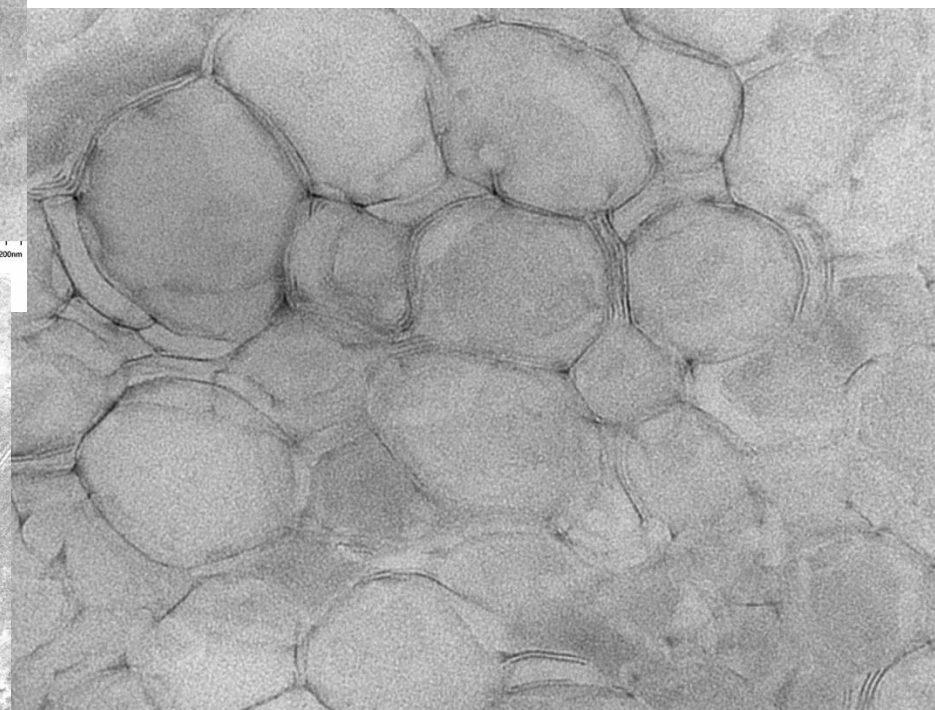
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Camera size=4608x3456pixel



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Image date=2024/03/01 11:08:19
Image number=0041
Spot number=3
Image rotation angle=0°



x12.0k Zoom=1 HC-1 100.0kV 2024/02/29 10:25
Hitachi TEM system



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Image date=2024/03/01 10:43:29
Image number=0050
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Magnification=x70.0k
Lens mode=Zoom-1 HC-1

Spot number=3
Image rotation angle=0°
Acc. voltage=100.0kV
Emission=10µA
Stage X=110 Y=68 Tilt=0.0 Azim=0.0

200nm