Jeol JEM 2100-*Plus* 200kV

Transmission Electron Microscope equipped with a cryo-pole piece, fast and sensitive TVIPS XF-416 4kx4k camera and side-entry cryo holder Gatan 626

Applications

- Transmission electron microscopy (TEM) at room temperature
- Advanced sample mapping
- Electron tomography (ET)
- Diffraction at cryo and room temperature
- Cryo-electron microscopy
- SerialEM software for automated image acquisition, montage mapping, tomography in ambient and cryo conditions

Microscope

Software	TEM Center, EM Menu 5, SerialEM
Electron source	Single crystal LaB_6 cathode with a current range of at least 4pA to 40nA
Acceleration voltage	80kV - 200kV
Magnification range	50x – 1.000.000x
Camera	**Bottom Mount High-sensitivity CMOS Camera:** TVIPS TemCam–XF416 4k x 4k (4096 x 4096 pxl) Signal/noise ratio 15:1 (200 kV) Frame rate up to 24 f/s Physical pixel size 15.5 um Field of view 63.5 um
Resolution at 200kV	Point resolution 0.27 nm
Resolution at 200kV	Line resolution 0.14 nm
Goniometer tilt	From 70° to - 70°
Holders	Single tilt holder (1 grid) Specimen quartet holder (4 grids) High-tilt holder (1 grid) Cryo-holder Gatan 626
Others	Minimal Dose System (MDS) Anti-contamination device (ACD)

Specifications JEM 2100-*Plus*

Based on JEOL manufacturer specifications (https://www.jeol.co.jp/en/products/detail/JEM-2100.html)

Configuration	Cryo pole piece
Resolution (nm)	
Point	0.27
Lattice	0.14
Acc. Voltage	80, 120, 200 kV
Minimum step	50 V
Stability	
Acc. Voltage	2 x 10-6 /min
OL Current	1 x 10-6 /min
Optical paremeters for objective lenses	
Focal Length	2.8 mm
Spherical aber.coeff.	2.0 mm
Chromatic aber.coeff.	2.1 mm
Minimum focal step	2.0 nm
Magnification	
MAG mode	x 1,200 to 1,000,000
LOW MAG mode	x 50 to 6,000
Camera length	
SA DIFF (mm)	100 to 2,500

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