

New Table Top and Laboratory Devices for SEM-EDX-Analysis



EM-30 **N**



CX-200 **Plus**



Coxem is a young, innovative manufacturer of high-resolution SEM-EDX compact devices from Korea. The devices convince with an **outstanding resolution**, an extensive selection of accessory equipment and above all with an **attractive price**.

- No service contract necessary!
- Simple filament exchange by user!
- Free application support!

RJL *Micro* & Analytic

Sales, Support and Technical
Service in Germany

Specifications

General

- Classic tungsten filament
- Variable high voltage 1-30 kV, 1kV steps
- Imaging: SE and BE detector
- variable aperture 30 μm , 50 μm , 100 μm , 200 μm
- STEM module for scanning transmission microscopy
- Image size up to 5120 x 3840 pixels
- EDX detector (Oxford, Bruker)
- EBSD detector (Bruker)
- Anti-vibration platform (passive)
- Low vacuum mode

COXEM

EM-30 N



- 5 nm resolution
- Magnification up to 150.000x
- Sample stage (3-axis motorized)
 - 35 x 35 mm (XY) x 45 mm (Z manual)
 - Tilt 0° to 45°
 - 360° beam rotation
- Largest sample \varnothing 70 mm, height 45 mm
- optional with CeB₆ filament

COXEM

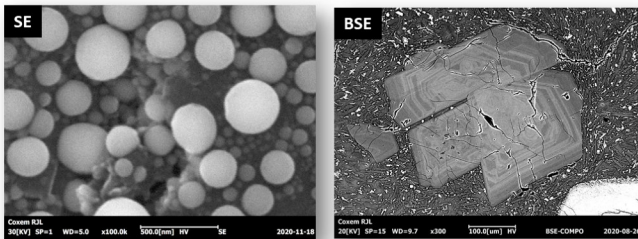
CX-200 Plus



- 3 nm resolution
- Magnification up to 300.000x
- Sample stage (5-axis motorized)
 - 60 x 60 x 55 mm (XYZ)
 - Tilt -20° to 90°
 - 360° rotation
- Largest sample \varnothing 160 mm, height 55 mm
- 10 ports for multiple detectors

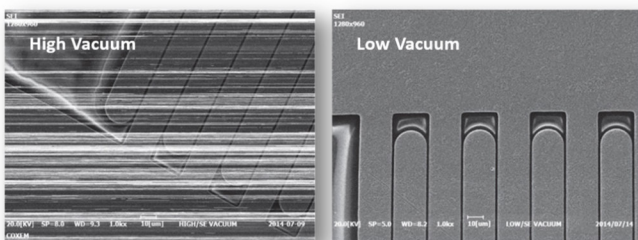
Technology

Highest Resolution and Contrast



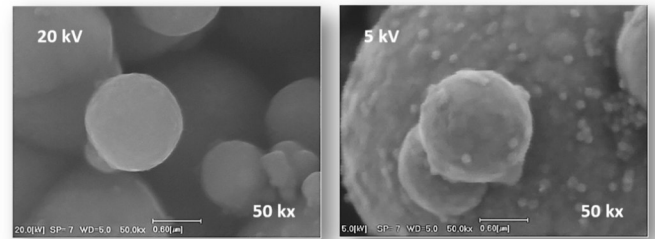
The newly developed electron optics of the Coxem compact devices achieve pin-sharp images at 100.000x magnification (left) and visualize the finest material contrast $Z < 0.1$ (right).

Low Vacuum



Residual air molecules in low vacuum allow insulating samples to be discharged and microscopically examined (1-100 Pa).

Variable High Voltage



Even the finest surface structures can be visualized using a low acceleration voltage (1-30 kV in 1kV steps).

Electron Source

Beam generation selectively via:



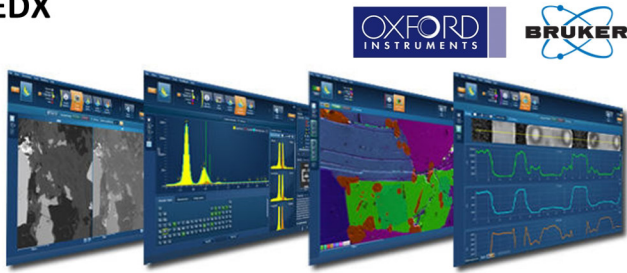
Tungsten Filament

- widely used
- technically mature
- cheap
- simple exchange by the user

CeB₆ Filament

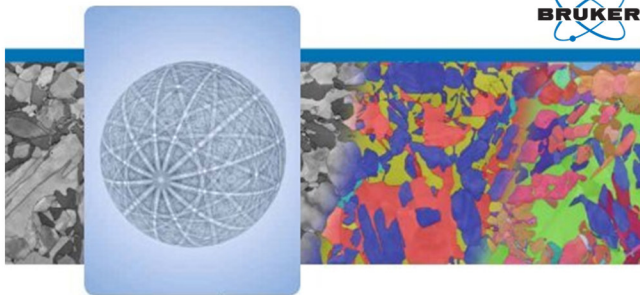
- longer life time
- higher beam intensity
- expensive
- service required for exchange

EDX



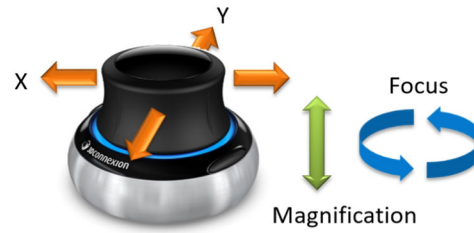
X-Ray element spectrometer, thermoelectrically cooled silicon drift detector (SSD), acquisition of mappings, point and line spectra etc.

EBSD



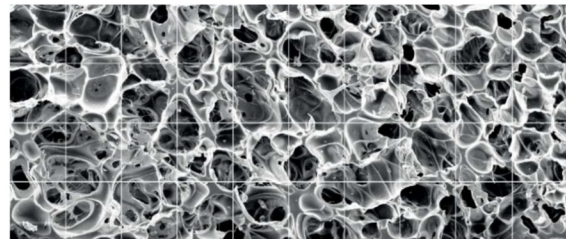
Electron backscatter diffraction for crystallographic texture analysis, available in combination with EDX

Intuitive Control



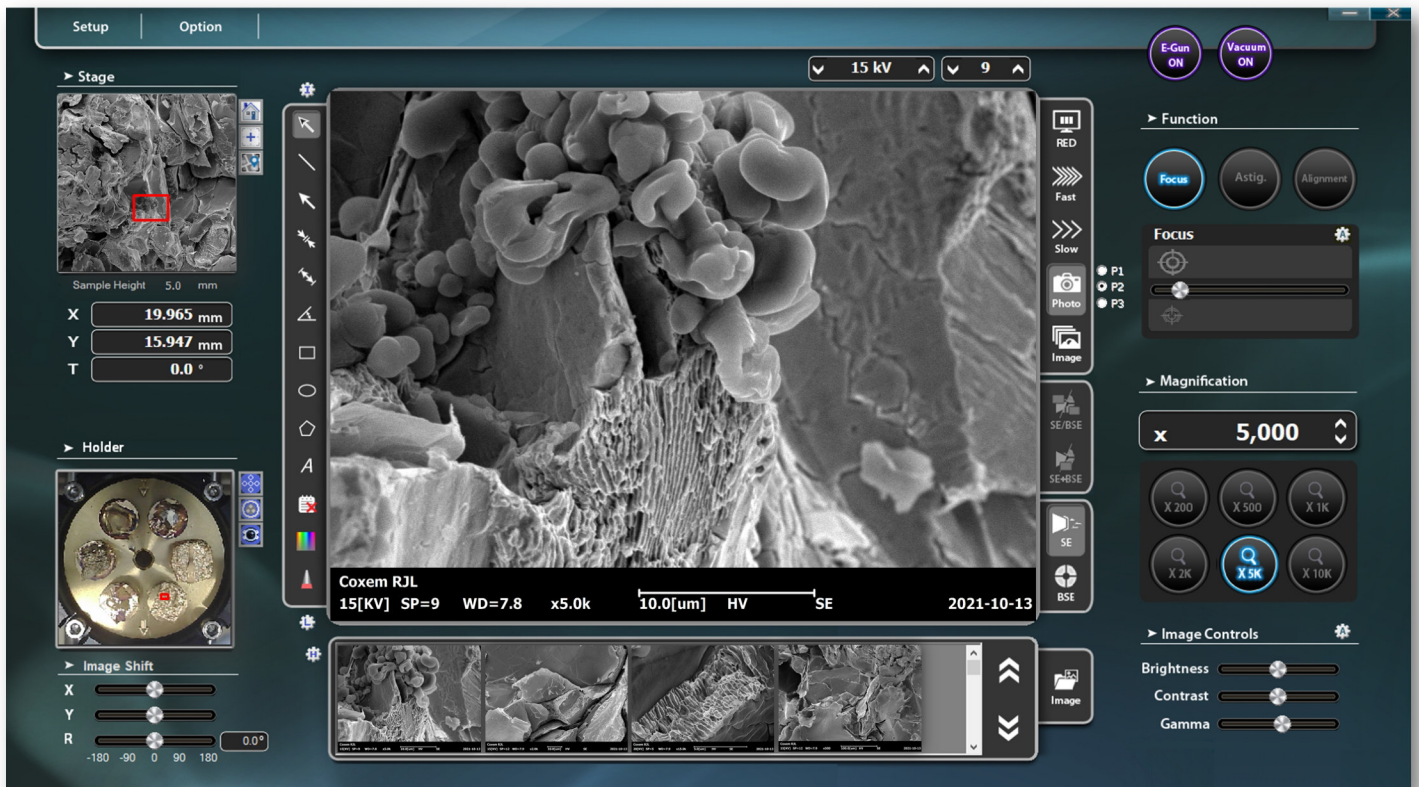
Magnification, focus and XY-navigation can be operated using a 3D multifunction joystick

Panorama



Imaging of large sample areas by means of high-resolution mosaics

Software



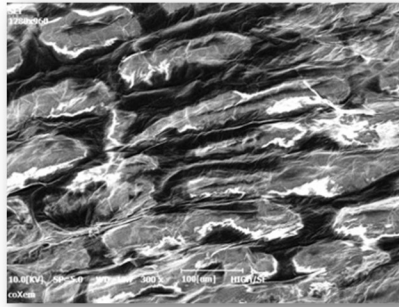
- Clear and easy-to-use control software
- Navigation simply via double click (live image, CCD camera, MiniMap)
- Automatic functions for focus, brightness, contrast, filament

Accessory Equipment for Coxem SEM-EDX Compact Devices

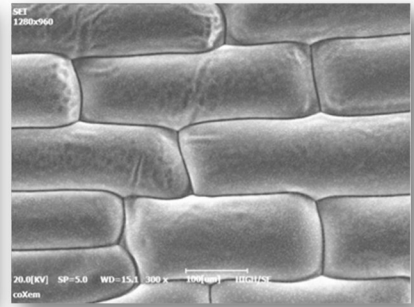
In-situ Sample Cooling



Peltier sample cooling down to $-25\text{ }^{\circ}\text{C}$ for microscopic imaging of biological and liquid preparations in vacuum



Onion cells without cooling



Onion cells with cooling

Cross-Section-Polisher



Preparation tool for high-precision cross-sections

Conductive Coating



Sputter for Au, Pt and other targets, variable ionization current 0-9 mA

Further Equipment

- Anti-vibration platform (active)
- Polishing machine
- Micro test tensile and bending module
- Precision saw

Worldwide Customer Base



RJL Micro & Analytic GmbH
Im Entenfang 11
76689 Karlsdorf-Neuthard
Germany

www.rjl-microanalytic.de
zentrale@rjl-microanalytic.de
Tel: +49-7251-36790-0
Fax: +49-7251-36790-79

RJL *Micro* & Analytic
Sales, Support and Technical
Service in Germany