CHOTEST

Scanning Electron Microscope

Micro-Scale Morphology Observation and Analysis

CEM3000A

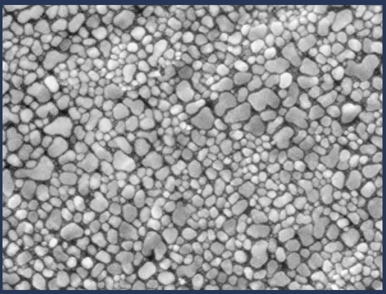
Features

- ## Desktop, compact size

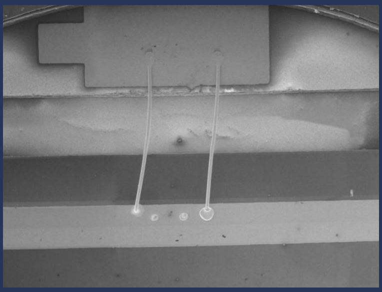
CEM3000 series desktop SEM is not constrained by site size, offering max spatial applicability. Users can place it conveniently on their desk and easily relocate it, enabling one machine to serve multiple locations.

- ## High Resolution

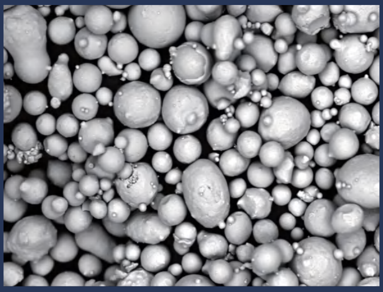
High resolution enables observation and analysis of extremely small features



High Resolution



Large Depth of Field



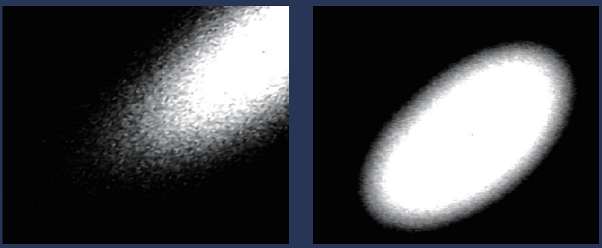
High Contrast

- ## Fast Pumping&Venting

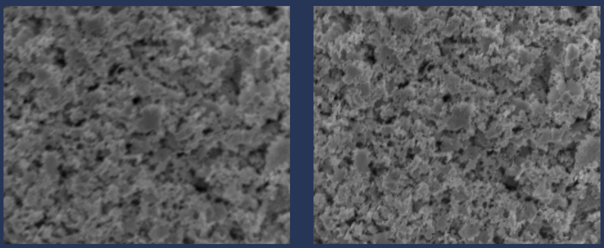
Featuring a unique vacuum system design, this series significantly reduces the waiting time during gas pumping and venting.

- ## Easy to Use

Automatic Beam Alignment / Auto Focus / Auto Stigmation. Using automatic adjustment function, enables rapid imaging and one-click image acquisition.



Automatically judges beam alignment status, and adjusts alignment coils for co-axial alignment.



Calculates image data to adjust objective lens coil value for focusing; adjusts stigmator coils to eliminate astigmatism.

Multiple Imaging Parameters

Offers various imaging parameters for user selection, meeting the adjustment needs of professional users.

High Vibration & Magnetic Interference Resistance

Utilizes our composite vibration damping method(patented technology) to elevate the vibration resistance of SEM to a new level.

Low Vacuum Mode(Optional)

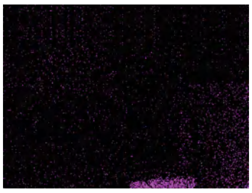
Ensures users to set the vacuum level inside the sample chamber for observation of different sample types.

Large Sample Chamber

CEM3000A has a large chamber comparable to a floor-standing SEM, while ensuring smaller external dimensions.

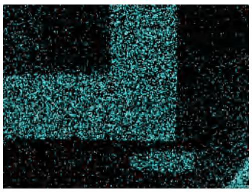
Multiple Probes, Powerful and Diverse Analysis Capabilities

Equipped with multiple probes, enabling various analysis methods.

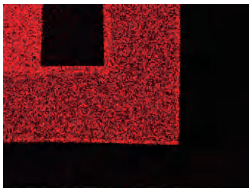


Al Kα1

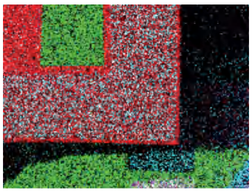
Au Mα1



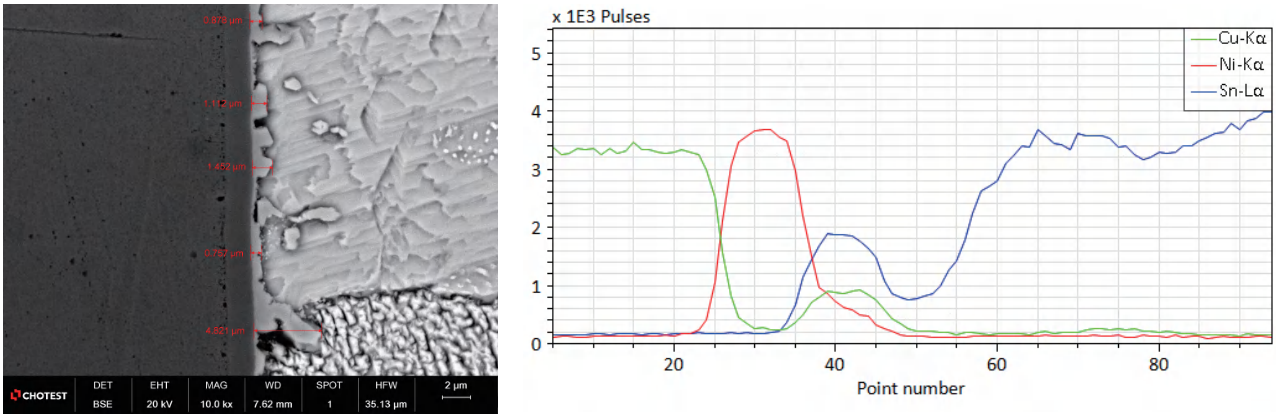
O Kα1



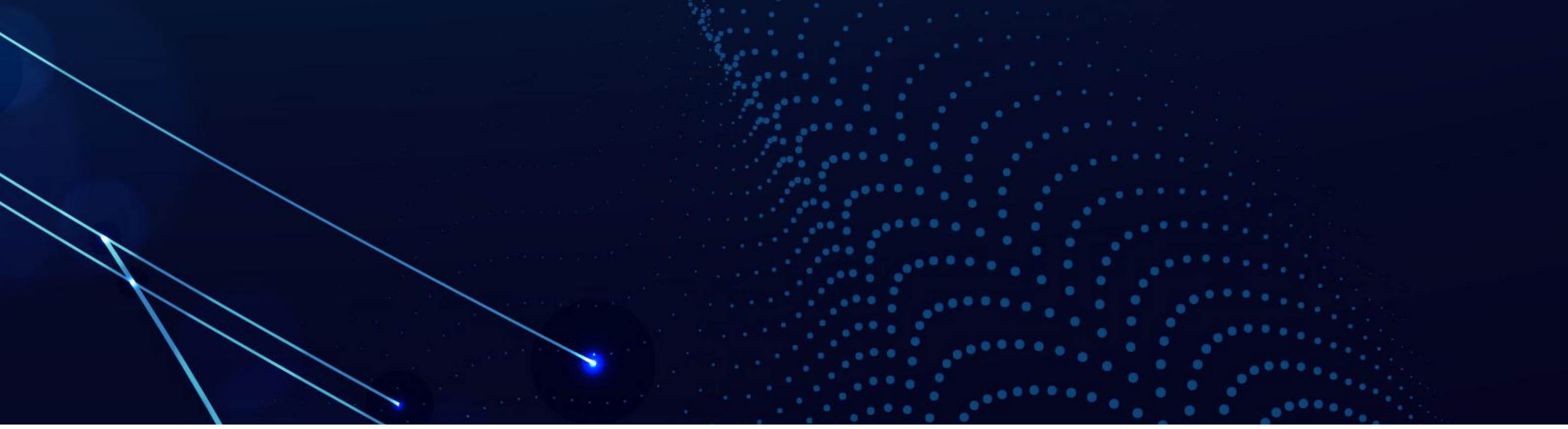
Si Kα1



Element Overlay Distribution Map

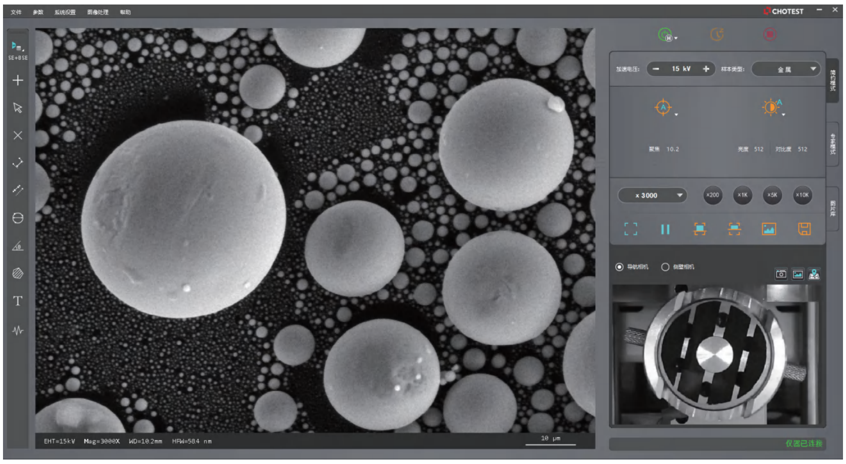


EDS line scan function(IMC layer analysis)

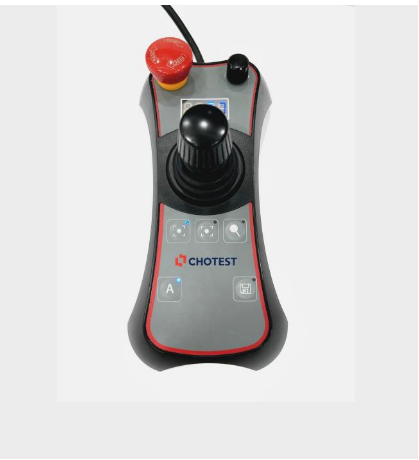


Convenient Operation Setup

SEM CEM3000 series software interface is concise with clear functional guidance, and the convenient joystick allows users to perform routine operations

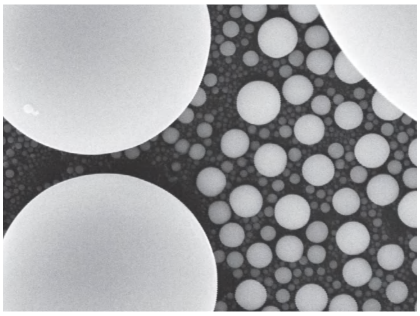


CEM3000 Series Software Interface

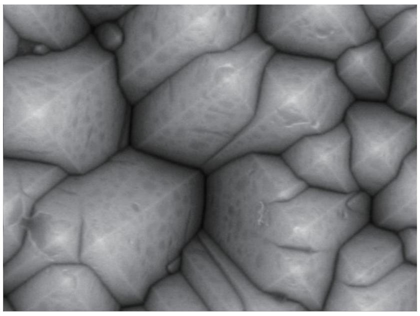


Joystick

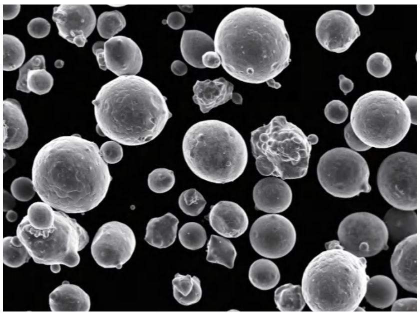
Application Examples



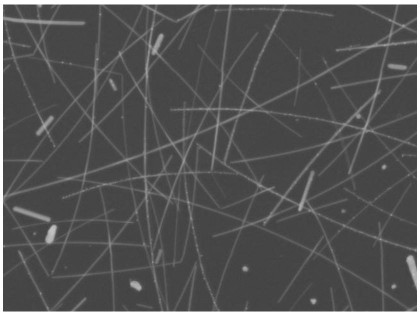
Standard Sample (Solder Ball Particles)



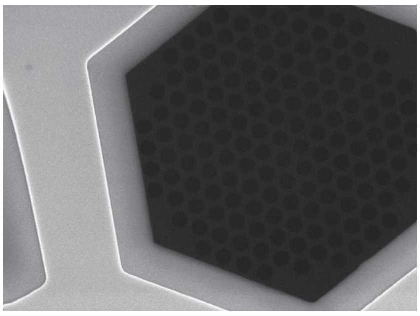
Photovoltaic Industry (Solar Panel)



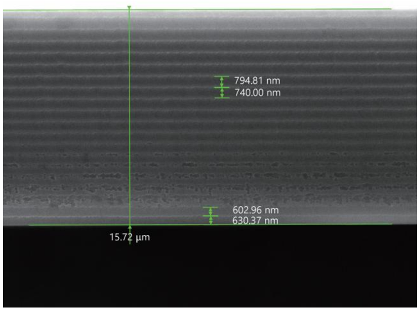
High-Entropy Alloy Powder



Nanomaterials (60nm diameter Ag wire)



Biomedical (Microfluidic Chip)



BOSCH Rocess Dry Etching TextuPre

Technical Specifications

Product Model		CEM3000A
Electron Gun	Filament	Tungsten Filament
	Resolution	Better than 4nm (SE), better than 8nm (BSE) @20kV
	Accelerating Voltage	1 ~ 20kV
Magnification		Electron Image: 40 ~ 300,000× (Large area stitching, optional)
Detectors	Secondary Electron (SE)	Standard
	Backscattered Electron (BSE)	Standard (4-quadrant high-resolution probe)
	Energy Dispersive Spectrometer (EDS)	Bruker or Oxford(Optional)
Automation Software		Standard: Auto alignment, Auto focus, Auto stigmation, One-click image enhancement
Vacuum System	Vacuum Level	High Vacuum: Better than 9×10^{-3}Pa Low Vacuum: 5 ~ 100 Pa (Optional)
	Pumping Time	High Vacuum Mode: < 180s Low Vacuum Mode: < 120s
	Sample Changeover Time:	Vacuum discharge < 30s Vacuum re-pumping < 100s
Object Table	Motorized Axes	X , Y , T
	Manual Axes	R , Z
	Travel Range	X: 50mm
		Y: 50mm
		R: 0°~360° (Manual rotation, E-beam rotation)
		T: -22.5°~ +22.5°
		Z: 45mm
	Max. Sample Size	70mm × 70mm (Horizontal) 45mm (Height)
In-Chamber Cameras	Navigation Camera(Top-View)	Standard high-resolution colorful camera
	Side-View Camera	Standard high-resolution IR camera
Operating System		Windows10 / 11(64bit)
Image Size		640×480, 1280×960, 2560×1920, 5120×3840, 10240×7680
Weight		120kg
Size(W×L×H)		400x670x730mm
Input		200-240VAC, 50/60Hz, 800W
Operating Environment		Working Temp.: 15°C~30°C, fluctuation < 1°C/15min Relative Humidity: <65% , no condensation

From **nanometer** to **hectometer**

we provide professional precision measurement solutions

CHOTEST

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WEBSITE

Issued:December, 2025