



## OPTO-EDU A63.7002 Tungsten Filament Scanning Electron Microscope SE BSE 200000x 6nm@18KV(SE)

### Our Product Introduction

#### Basic Information

- Place of Origin: China
- Brand Name: CNOEC, OPTO-EDU
- Certification: CE, Rohs
- Model Number: A63.7002
- Minimum Order Quantity: 1 pc
- Price: FOB \$1~1000, Depend on Order Quantity
- Packaging Details: Carton Packing, For Export Transportation
- Delivery Time: 5~20 Days
- Payment Terms: T/T, West Union, Paypal
- Supply Ability: 5000 pcs/ Month

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#### Product Specification

- Resolution: 6nm@18KV
- Magnification: 200000x
- Electron Gun: Tungsten
- Voltage: 3-18KV
- Detector: BSE+SE
- Navigation CCD: CCD

for more products please visit us on [cnoec.com](http://cnoec.com)

## Product Description

Magnification 200000x Resolution 6nm@18KV(SE) With Detector SE+BSE+CCD, Optional EDS,  
Standard 2 Axis Motorized Stage, Moving X 40mm, Y30mm, Max Specimen  $\Phi 50 \times H35$ mm  
Built-in Condenser No Need Manual Adjust Aperture (LaB6 Optional)  
High Vacuum System With Mechanical Rotary Pump To Get Vacuum In 90s  
One Key Auto Focus, Auto Brightness & Contrast Adjust, No Need Shock Absorbing Table



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## A63.7002

### Tungsten Filament Scanning Electron Microscope, SE+BSE, 200000x, 6nm@18KV(SE)



## A63.7002 Specification

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Outstanding performance, high-speed imaging, diverse signals ZEM18 desktop scanning electron microscope signal acquisition bandwidth up to 10M, fast scanning speed, video mode real-time observation of samples, no ghosting, dragging, do not miss every detail. compatible with a variety of ZEP.TOOLS in-situ functional sample stage.

### Main Specification:

1. Acceleration voltage: 3-18kV, continuously adjustable.
2. Electron gun type: pre-aligned tungsten filament, life time 100 hours, easy to replace by user, highly integrated two-stage gun lens, no need to manually adjust the diaphragm of the objective lens.
3. Magnification  $\geq 200000\times$
4. Resolution:  $\leq 6\text{nm}@18\text{KV}$
5. Detector: secondary electron detector (SE), quadruple backscatter detector (BSE),
6. Stage: 2 Axis XY motorized stage, moving 40x30mm (40x40mm optional)
7. Maximum sample size: 80x42x40mm
8. Sample change and high vacuum pumping time  $\leq 90\text{s}$ .
9. High vacuum system: built-in turbo molecular pump, external mechanical pump, the vacuum in sample chamber  $\geq 1\times 10^{-1}\text{Pa}$ , fully automatic control;
10. Video mode  $\geq 512\times 512$  pixels, no need for small window scanning.
11. Quick scan mode: imaging time  $\leq 3\text{s}$ ,  $512\times 512$  pixels.
12. Slow scan mode: imaging time  $\leq 40\text{s}$ ,  $2048\times 2048$  pixels.
13. Image File: BMP, TIFF, JPEG, PNG.
14. One-key automatic adjustment of brightness and contrast, auto-focus, large image stitching
15. Navigation function: optical camera navigation and cabin camera.
16. Image measurement function: distance, angle, etc.
17. Including computer & software, mouse control.
18. Optional:
  - Tungsten filament (20pcs/box)
  - EDS
  - Low vacuum (1-100Pa)
  - Z Axis, T Axis Module
  - Deceleration Mode, 1-10KV, can observe non-conductor or poor conductivity samples without gold spraying, only for BSE mode
  - In-Situ stage from original factory, heating, cooling, stretch, etc.
19. Microscope size: 283\*553\*505mm, mechanical pump size 340\*160\*140mm

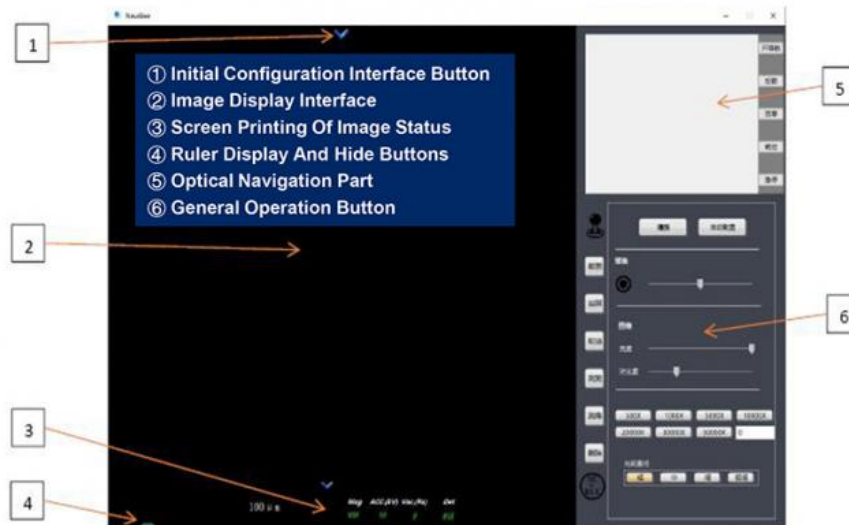
### A63.7002 Specification

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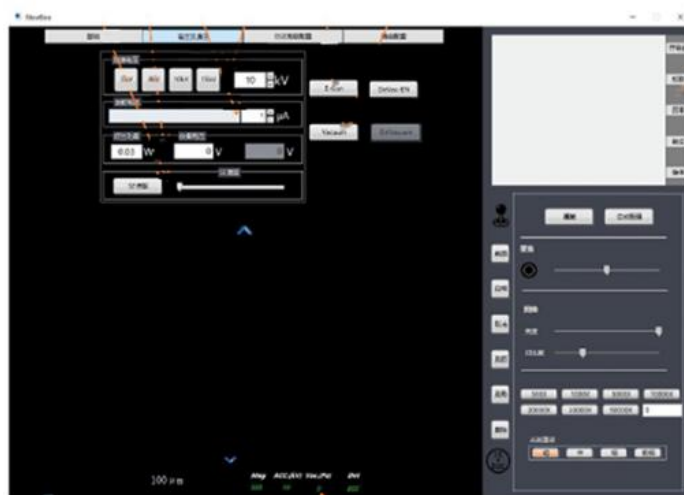


Model	A63.7001	A63.7002	A63.7003	A63.7004	A63.7005
Resolution	10nm@15KV	6nm@18KV	4nm@20KV	3nm@20KV	2.5nm@15KV
Magnification	150000x	200000x	360000x	360000x	1000000x
Electron Gun	Tungsten	Tungsten	Tungsten	LaB6	Schottky FEG
Voltage	5/10/15KV	3-18KV	3-20KV	3-20KV	1-15KV
Detector	BSE+SE	BSE+SE	BSE+SE	BSE+SE	BSE+SE
Navigation CCD	CCD	CCD	CCD+Cabin Camera	CCD+Cabin Camera	CCD+Cabin Camera
Vacuum Time	90s	90s	30s	90s	180s
Vacuum System	Mechanical Pump Molecular Pump	Mechanical Pump Molecular Pump	Mechanical Pump Molecular Pump	Mechanical Pump Molecular Pump Ion Pump	Mechanical Pump Molecular Pump Ion Pump x2
Vacuum	High Vacuum 1x10-1Pa	High Vacuum 1x10-1Pa	High Vacuum 1x10-1Pa	High Vacuum 5x10-4Pa	High Vacuum 5x10-4Pa
Stage	XY Stage, 40x30/40x40mm	XY Stage, 40x30/40x40mm	XY Stage, 60x55mm	XY Stage, 60x55mm	XY Stage, 60x55mm
Stage Precision	-	Position Precise 5um			
Working Distance	5-35mm	5-35mm	5-73.4mm	5-73.4mm	5-73.4mm
Max Specimen	80x42x40mm	80x42x40mm	100x78x68.5mm	100x78x68.5mm	100x78x68.5mm
Optional	Tungsten Filament 20 pcs/box			Lab6 Filament	Field Emission Lamp
	EDS Oxford AZtecOne with XploreCompact 30				
	-	Low Vacuum 1-100Pa		Low Vacuum 1-30Pa	
	-	Z Axis Module	3 Axis Stage, X 60mm, Y 50mm, Z 25mm		
	-	T Axis Module	3 Axis Stage, X 60mm, Y 50mm, T ±20°		
	-	-	5 Axis Stage, X 90mm, Y 50mm, Z 25mm, T ±20°, R 360°		
	-	-	Shock-absorbing Platform, For 3 Axis, 5 Axis Stage		
	-	Deceleration Mode 1-10KV To Watch Non-conduct Samples, Only For BSE			
	-	In-Situ Stage From Original Factory, Heating, Cooling, Stretch, etc.			
		UPS			

## ► Software Interface



## ► Stake Out, Evacuate And Turn On High Pressure.



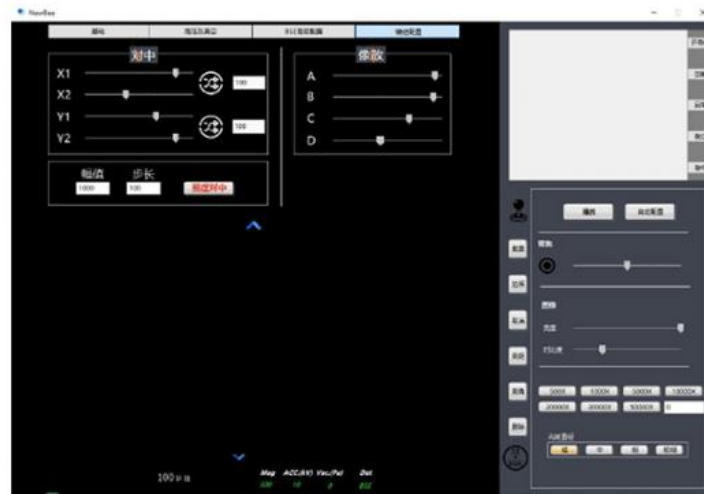
## ► Image Display Configuration And Adjustment



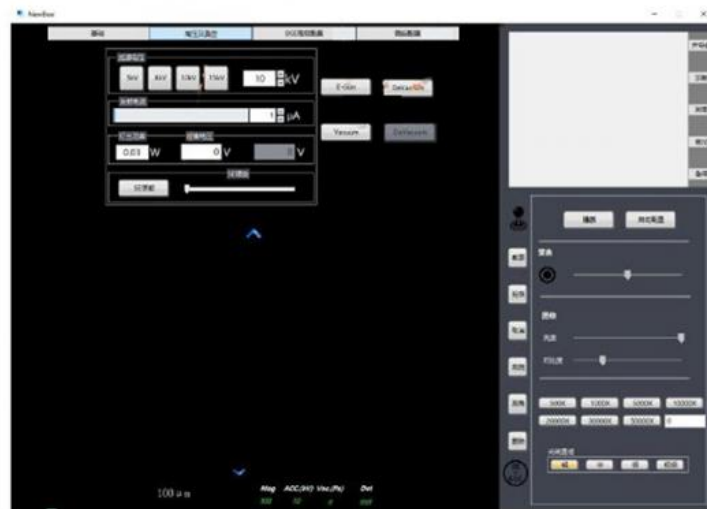
## ► BSE Advanced Configuration



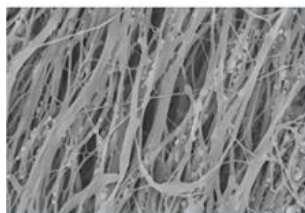
## ► Lens configuration



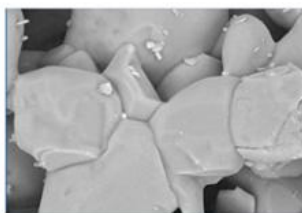
## ► Turn Off The High Pressure, Vent The Vacuum.



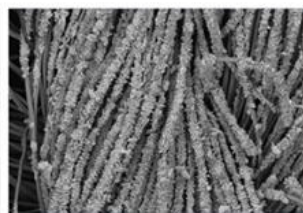




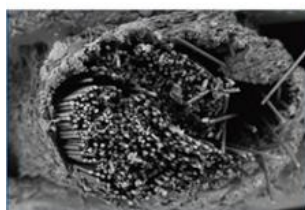
Research And Teaching



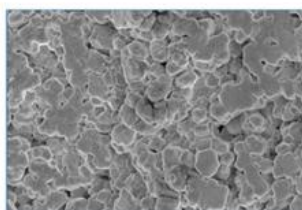
Functional Inorganic Materials



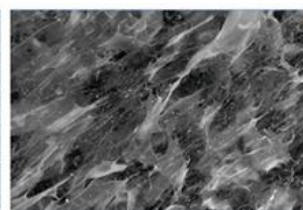
Functional Nanomaterials



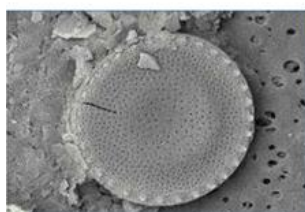
Tubular Nanomaterials



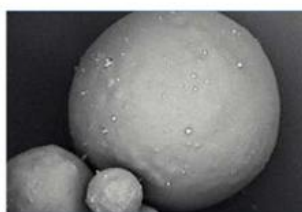
Aluminum Nitride



Hydrogel



Diatom



Powdered Medicine Material



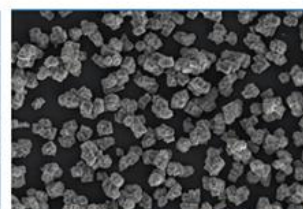
Anode Materials For Lithium Battery



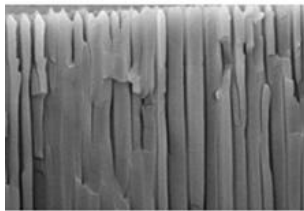
Industrial Monitoring



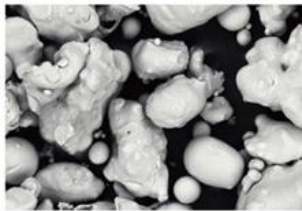
Fiber Testing



Particle Detection



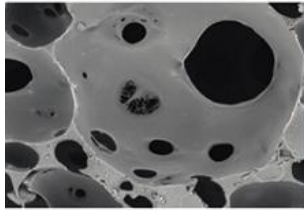
Aluminum Oxide Film Testing



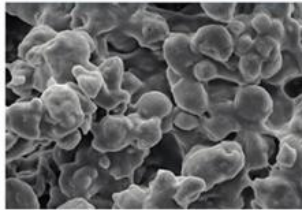
Metal Material



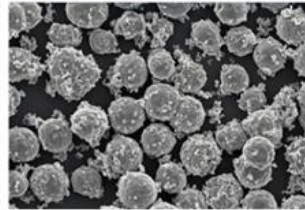
Resistance Detection



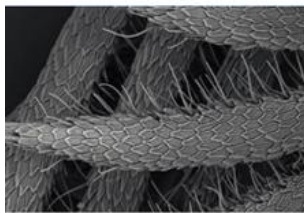
Chemical Material



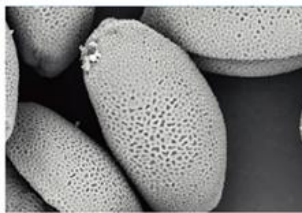
Drug Testing



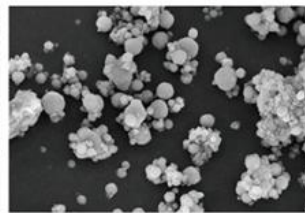
Ternary Lithium Battery



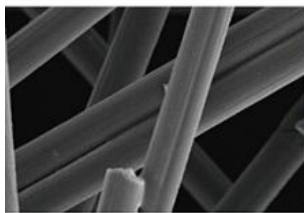
Life Sciences



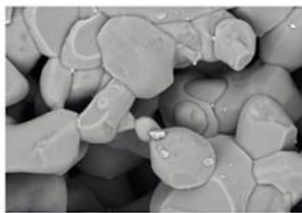
Plant Testing



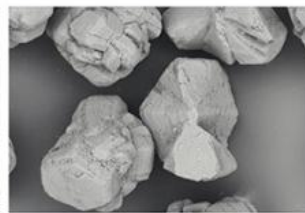
Chemical Testing



Fiber Testing



Functional Inorganic Materials



Industrial Inspection



## ► In Situ Expansion Product Accessories



Tec Cold Table

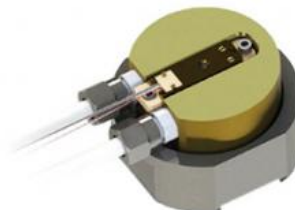


Sem Stretching Stage



Sem Heated Sample Stage

## ► Other Customized In-situ Products

SEM Nano  
Probe StageSEM Atmosphere  
Heating systemSEM Nano Force  
Measurement System(High temperature)  
in situ SEM cell station

## ► AZtecOne with XploreCompact 30 for TTM

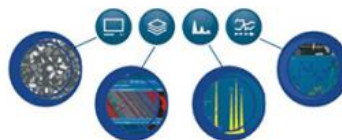
**System Conventional EDS Analysis**

The system provides qualitative and quantitative analysis of different materials, analyzing elements ranging from B(5) to cf (98). In addition to individual point scans of the sample surface, powerful line scans and elemental spectral scans are also available. Combined with a customized detector, analysis and reporting can be done in seconds.

Effective Crystal Area	30mm <sup>2</sup>	Resolution (Of A Photo)	Mn Ka <129eV @50,000cps
Elemental Detection Range	B (5) to cf (98)	Maximum Input Count Rate	>1,000,000 cps

### Highly User-Friendly Software

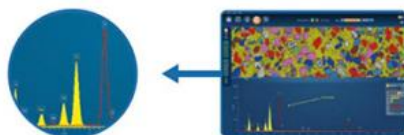
The software interface has simple navigation steps to guide the user through the analysis quickly and easily.



### Comparison Of Real-Time Spectra

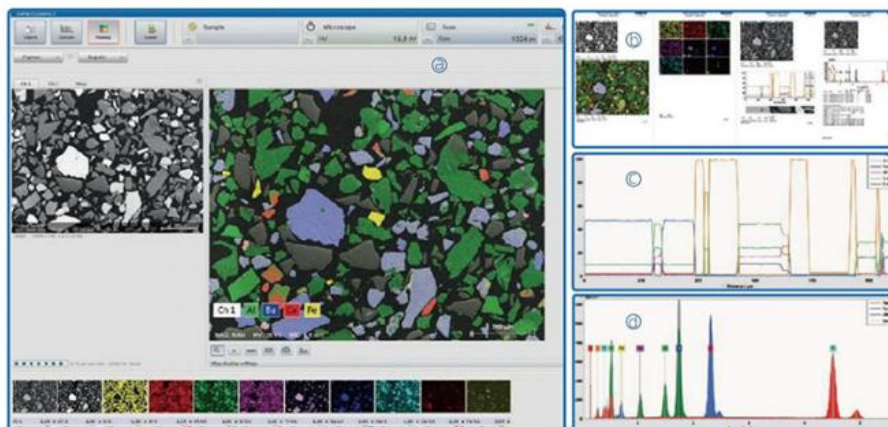
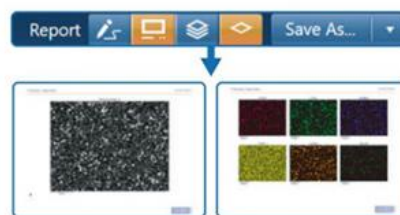
Real-time display of results saves analysis time

- No need to wait until collection is complete, quantitative results are displayed instantly
- Comparison with previous spectra is possible even during the acquisition process



### Reporting

Intelligent report template selector generates reports in seconds



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