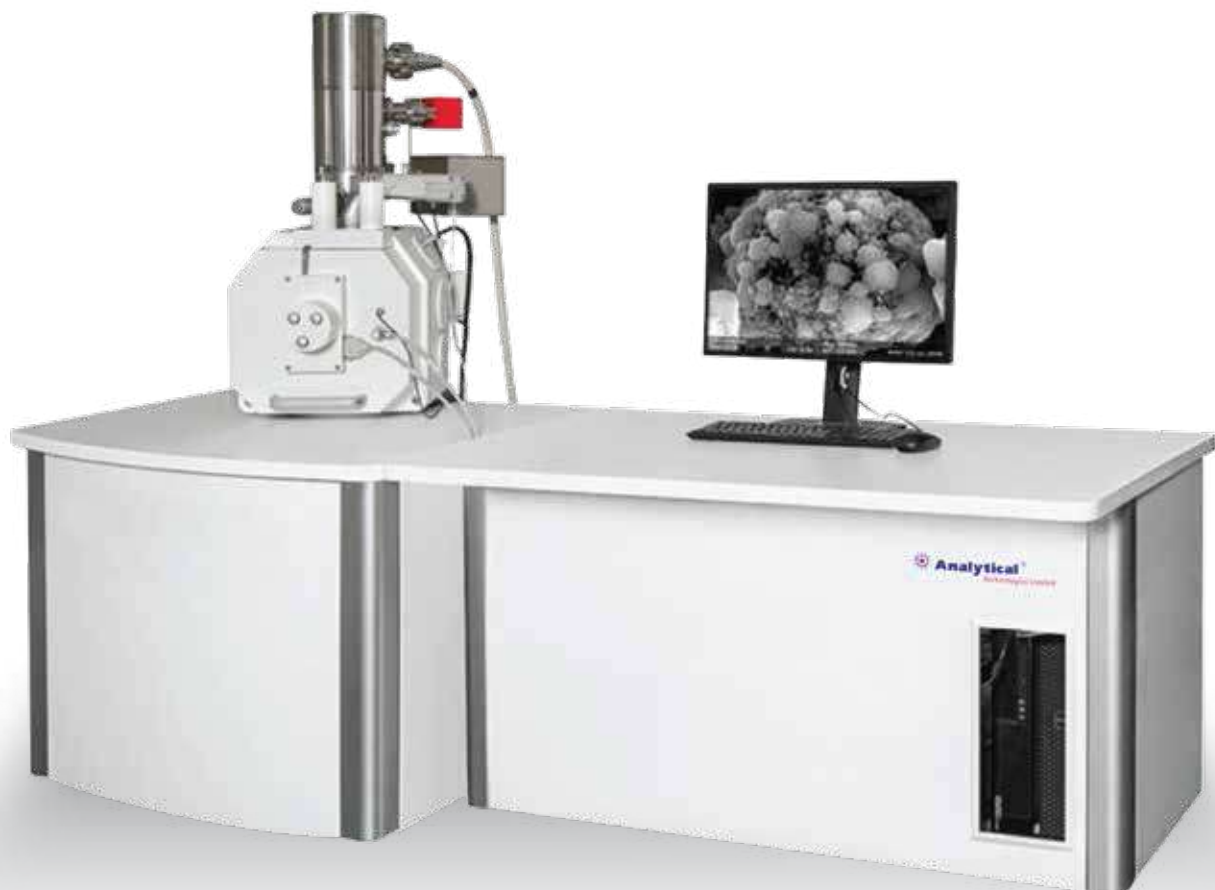


SEM - 3062

Scanning Electron Microscope ECO



EPCC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

Analytical Technologies Limited

An ISO 9001 Certified Company

www.analyticalgroup.net

- The SEM are magnification continuously adjustable, widely working distance, extended depth of field and easy to observe rough specimen, with these features, combine with STM/AFM to help with the location issue in STM/AFM.
- SEM in charge of area selection, and then move the probe to the corresponding area for detailed imaging. The system can realize direct specimen observation from macroscopic to microcosmic, millimeter to nanometer and roughen surface to smooth surface.

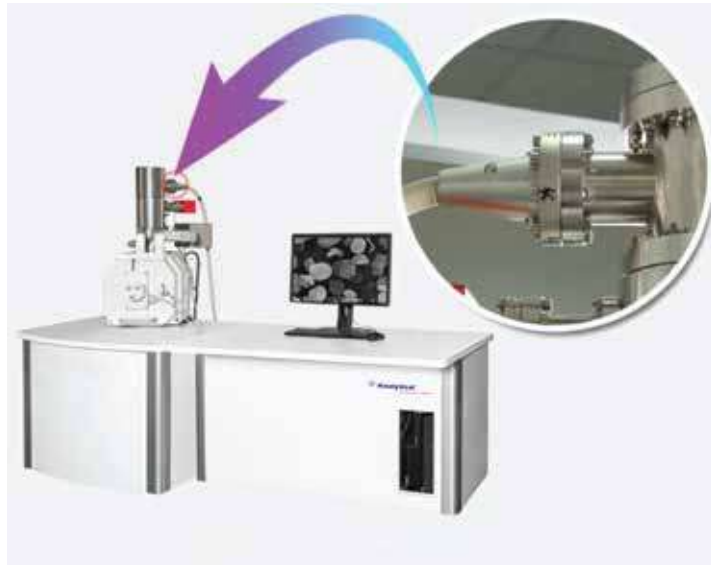
►► Specifications:

Resolution :	1nm@30KV(SE);3nm@1KV(SE); 2.5nm@30KV(BSE)
Magnification :	15x~800000x
Electron Gun :	Emission Electron Gun
Electron Beam Current :	10pA~0.3μA
Accelerating Voltage :	0~30KV
Lens System :	Three-level Electromagnetic Lens (Tapered Lens)
Objective Aperture :	Molybdenum Aperture Adjustable Outside Vacuum System
Vacuum System :	Ion Pump, Turbo Molecular Pump, Rotation Pump, Getter Pump
Detector :	High Vacuum Secondary Electron Detector (With Detector Protection) Semiconductor Four Segmentation Back Scattering Detector
Specimen Stage :	Five Axes Eucentric Motorized Stage
Travel Range :	X 0~150mm
	Y 0~150mm
	Z 0~60mm
	R 360°
	T -5°~75°
Max Specimen Diameter :	320mm
Modification :	EBL;STM;AFM;Heating Stage;Cryo Stage;Tensile Stage;Micro-nano Manipulator;SEM+Coating Machine;SEM+Laser Etc.
Accessories :	CCD,X-Ray Detector(EDS),EBSD,CL,WDS,Coating Machine Etc.

►► SOFTWARE INTRODUCTION :

- SEM - 3062 support five windows synchronous, four channel (SE+BSE) with CCD window.
- Auto Function: focus, bright/contrast, astigmatism auto remove, electron beam centering, auto high voltage, auto filament, electron gun auto correction, fault detection, optional 3D scanning etc.
- Image Resolution : 16384*16384 pixels.
- Image Format : BMP, GIF, TIF, JPG, MNG, ICO, CUR, TGA, PCX, JP2, JPC, PGX, RAS, PNM, SKA, SEM.

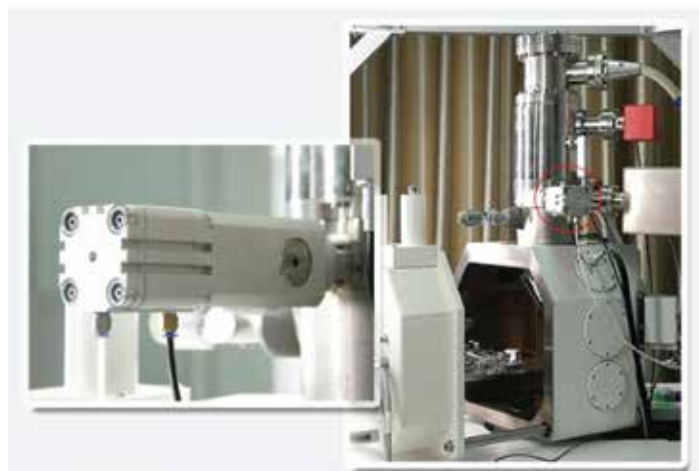
►► **PRODUCT DISPLAY:**



Emission Electron Gun



Vacuum System: ion Pump



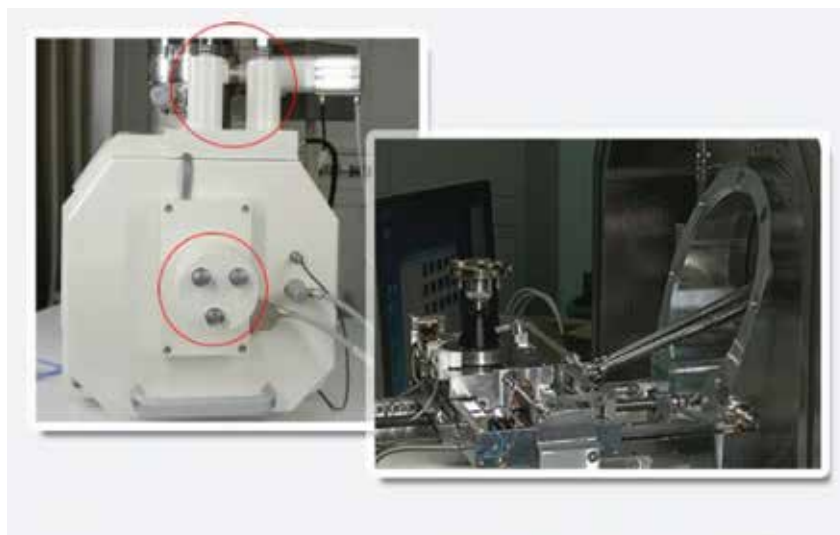
The Isolating Valve Ensures That The Upper Vacuum Is Not Affected When The Sample Room Is Opened



The Aperture Plate Has Three Nano-sized Holes Through Which Light Passes



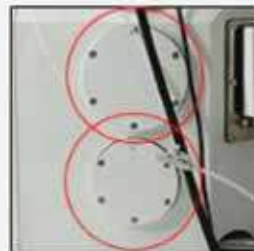
The Sample To Be Observed Need To Put In The sample Room



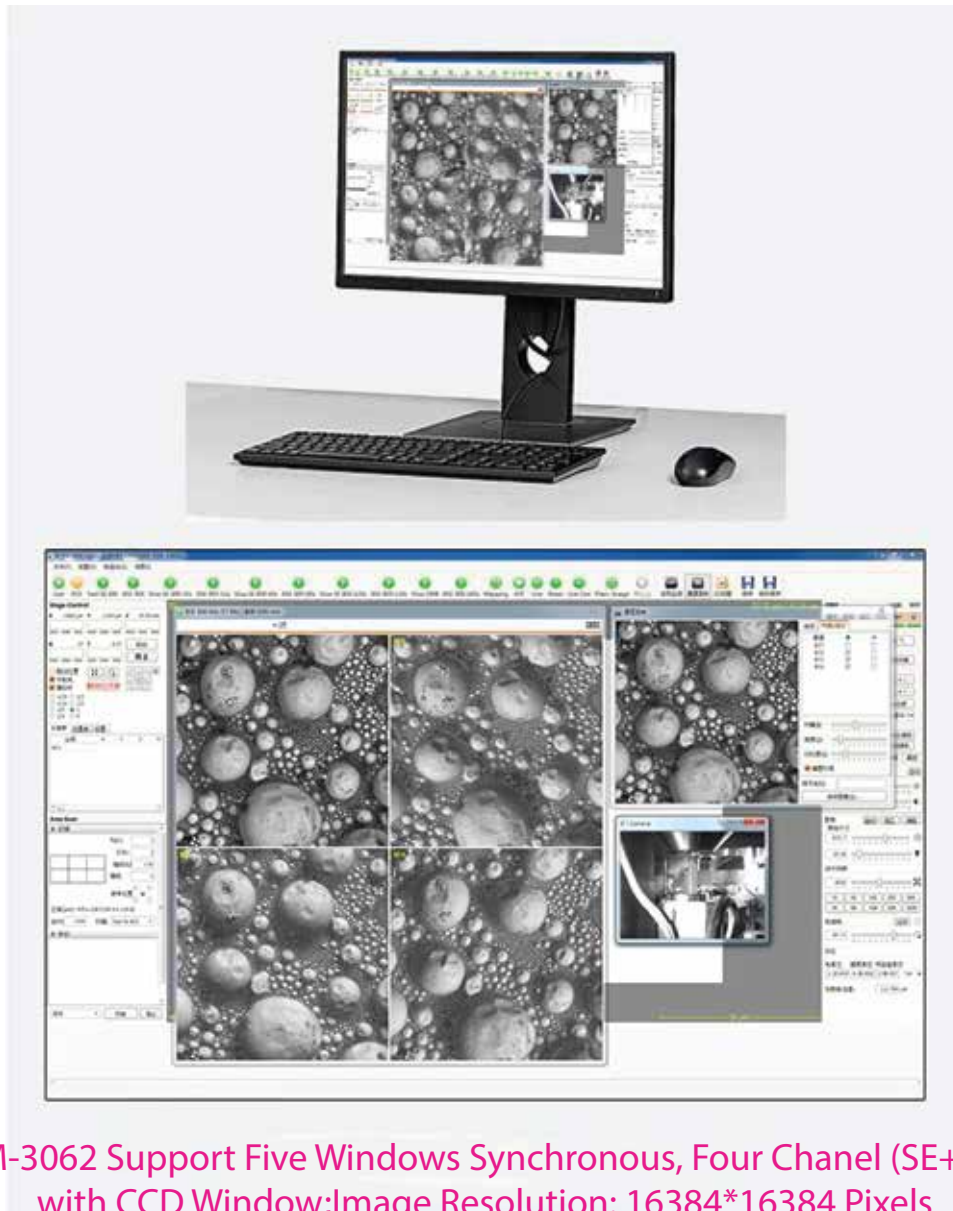
Five Axes Eucentric Motorized Stage, X/Y/Z/R/T Motorized Control (Large)



High Vacuum Secondary Electron Detector



Optional Accessory Connection Interface



►► OPTIONAL ACCESSORIES:



◆ BSE Detector

Semiconductor Four Segment Back Scattering Detector;
Available In Ingredients A+B, Morphology Into A-B:
Available sample Observe Without Sputtering Gold;
Available In Observe Impurity And Distribution From
Grayscale Map Directly.

◆ EDS (X Ray Detector)

Silicon Nitride (Si₃N₄) Window To Optimize Low Energy
 X-ray Transmission For Light Element Analysis;
 Excellent Resolution And Their Advanced Low-noise
 Electronics Provide Outstanding Throughput Performance;
 The Small Footprint Offers Flexibility To Ensure Ideal
 Geometry And Aata Collection Conditions;
 The Detectors Contain A 30mm² Chip.



◆ EBSD (Electron Beam Backscattered Diffraction)

user could analysis crystal orientation, crystal phase and
 micro texture of materials and related materials
 performance,etc.
 automatic optimization of EBSD camera settings
 during the data collection, do interactive real-time analysis
 to obtain maximum information
 all the data were branded with time tag, which can be
 viewed at any time
 high resolution 1392 x 1040 x 12
 Scanning and index speed: 198 points / sec, with Ni as the
 standard, under the condition of 2~5nA, it can ensure the
 index rate ≥99%;
 works well under the condition of low beam current and
 low voltage of 5kV at 100pA
 orientation measuring accuracy: Better than 0.1 degrees
 Using triplex index system: no need rely on single band
 definition , easy indexing of poor pattern quality
 dedicated database: EBSD special database obtained by
 electron diffraction: >400 phase structure
 Index ability: it can automatically index all crystal materials
 of 7 crystal systems.
 The advanced options include calculating elastic stiffness
 (Elastic Stiffness), Taylor (Taylor) factor, Schmidt (Schmid)
 factor and so on.



◆ Coating Machine

Glass Protecting Shell: 250mm: 340mm High;
 Glass Processing Chamber: 88mm; 140mm High, 88mm; 57mm High;
 Specimen Stage Size: 40mm (max);
 Vacuum System:molecula Pump And Mechanical Pump;
 Vacuum Detection: Pirani Gage;
 Vacuum:better Than 2 X 10⁻³ Pa;
 Vacuum Protection:20 Pa With Microscale Inflation Valve;
 Specimen Movement: Plane Rotation tilt Precession.





◆ Ion Sputtering Coater

Glass Processing Chamber: 100mm; 130mm High;
 Specimen Stage Size: 40mm(Hold 6 Specimen Cups);
 Golden Target Size: 58mm*0.12mm(thickness);
 Vacuum Detection: Pirani Gage;
 Vacuum Protection:20 Pa With Microscale Inflation Valve;
 Medium Gas:argon Or Air With Argon Gas Special Air Inlet
 And Gas Regulating In Microscale.

◆ Argon Ion Sputtering Coater

The Sample Was Plated With Carbon And Gold Under
 High Vacuum,
 Rotatable Sample Table, Uniform Coating, Particle Size
 About 3-5nm;
 No Selection Of Target Material, No Damage To Samples;
 The Functions Of Ion Cleaning And Ion Thinning Can Be
 Realized.



◆ Critical Point Dryer

Inner Diameter: 82mm, Inner Length: 82mm
 Pressure Range:0-2000psi;
 Temperature Range:0°-50° C (32°-122° F)

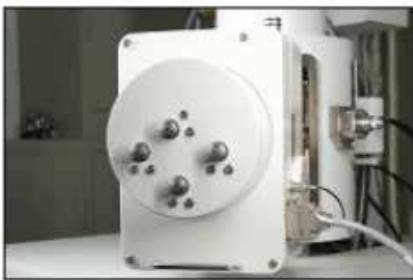
◆ Electron Beam Lithography

Based On Scanning Electron Microscope, A Novel
 Nano-exposure System Was Developed
 The Modification Has Kept All The Sem Functions For
 Making Nanoscale Line Width Image;
 The Modified Ebi System Widely Applied Into
 Microelectronic Devices, Optoelectronic Devices, Quantum
 Devices, Microelectronics System R&D.



◆ Uninterrupted Power Supply

Input Voltage: 380v/220v
 Input Voltage Range: 120v 275v (176v — 275v Fully Loaded Operation)
 Output Voltage/output Distortion:
 220v/230v/240v $\pm 1\%$, thdu $< 2\%$
 Output Frequency Range: 40hz~70hz, 50hz/60hz (self-adaption)
 Efficiency: $> 93.5\%$ (on-line Mode); 98% (eco Mode)
 Overload Capacity:
 105%~125%: 10 Mins
 125%~150%: 30s
 $> 150\%$: 500ms
 Parallel Operation: max Three Instruments (optional)
 Battery Voltage: 192v (216v; 240v Option)
 Charge Current: 4a, 8a Upgradable
 Display: Led Screen
 Communication Interface: rs232 Standard, Usd Extendable
 Software : winpower
 Operating Environment: 0 ~ 40°C
 Noise: ≤ 50 db
 Size: 212 X 420 X 500 (mm)
 Weight: 16.9kg



◆ Five Axes Eucentric Motorized Stage, XIY/ZIT/R Motorized Control (Small)

X: 0~80mm
 Y: 0~50mm
 Z: 0~30mm
 R: 3600
 T: -5°~70°

◆ Five Axes Stage, X/Y Motorized Control (Large)

X: 0~80mm
 Y: 0~60mm
 Z: 0~50mm
 R: 3600
 T: -5°~90°



◆ **Five Axes Stage, XIY Motorized Control (Small)**

X: 0~50mm
 Y: 0~50mm
 Z: 0~25mm
 R: 3600
 T: -5°~90°

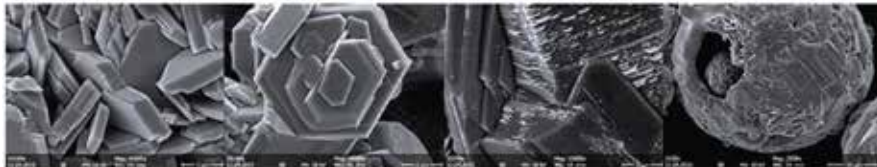


◆ **Motorize Control Panel**

Motorize Control Panel, Intergrated Computer Mouse To
 Control Magnification, Brightness, Contrast, Focus,
 Working Stage Moving Easily.

►► **APPLICATION AND CASE:**

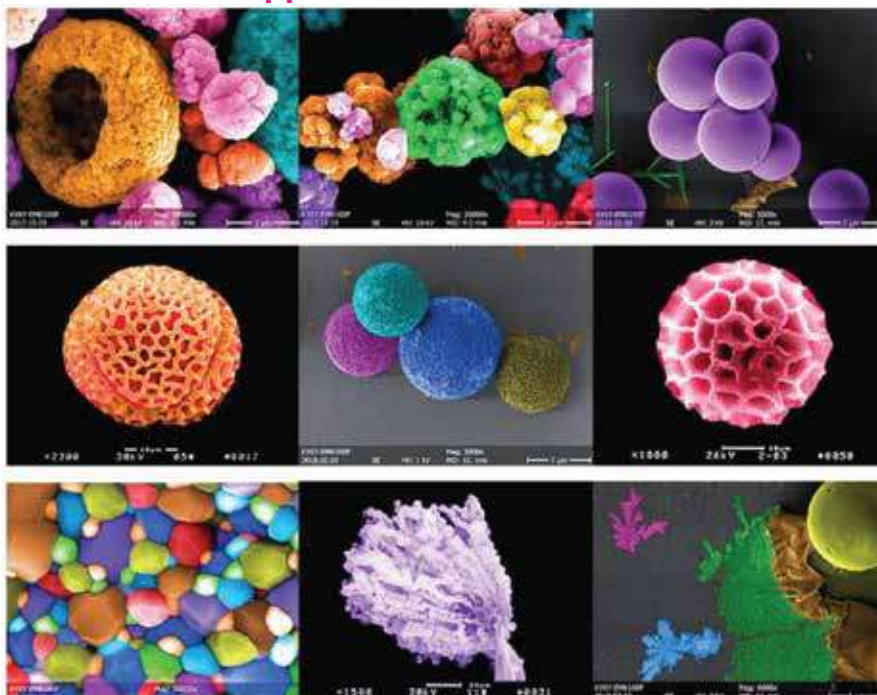
◆ **Ceramic material**



◆ **Flora And Fauna, Microorganism**



◆ **Pseudo Color Appreciation**



HPLC Servicing, Validation, Trainings and Preventive Maintenance :

HPLC Servicing :HPLC Servicing : We have team of service engineers who can attend to any make of HPLC promptly @the most affordable cost.

Trainings :We also take up preventive Maintenance to reduce downtime of HPLC's Trainings.

AMC's/CMC :AMC's/CMC :We offer user training both in-House and at customer sites on HPLC principles, operations, trouble-shooting.

Validations :Validations :We have protocols for carrying out periodic Validations as per GLP/GMP/USFDA norms.

Instruments :Instruments :We offer instruments/Renting Services Modules like pumps,detector etc. on Rent.



About Analytical Technologies

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Our Products & Technologies



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Spectro 2080+
Double Beam



Infra FTIR



Optima Gas
Chromatograph
3007



Optima Gas
Chromatograph
2979 Plus



Flash
Chromatograph



Atomic Absorption
Spectrophotometer



Liquid Particle
Counter



Optical Emission
Spectrophotometer



DSC/TGA



Semi Auto Bio
Chemistry Analyzer



HEMA 2062
Hematology
Analyzer



Micro Plate
Reader/Washer



URINOVA 2800
Urine Analyzer



Total Organic
Carbon 3800



Fully Automated
CLIA



NOVA-2100
Chemistry Analyzer



PCR/Gradient PCR/
RTPCR



TOC
Analyzer



Laser Particle
Size Analyzer



Ion Chromatograph



Water purification
system

Regulatory compliances



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