



Opto Edu A61.4510 Scanning Tunneling Electron Microscope Constant Height Current Mode

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: OPTO-EDU
- Certification: CE, Rohs
- Model Number: A61.4510
- Minimum Order Quantity: 1pc
- Price: FOB \$1~1000, Depend on Order Quantity
- Packaging Details: Carton Packing, For Export Transportation
- Delivery Time: 5~20 Days
- Payment Terms: L/C, Western Union, T/T, MoneyGram
- Supply Ability: 5000 pcs/ Month



Product Specification

- Work Mode: "Constant Height Mode Constant Current Mode"
- Current Spectrum Curve: "I-V Curve Current-Distance Curve"
- XY Scan Range: 5×5μm
- XY Scan Resolution: 0.05nm
- Z Scan Range: 1μm
- Y Scan Resolution: 0.01nm
- Scan Speed: 0.1Hz~62Hz
- Scan Angle: 0~360°
- Sample Size: "Φ≤68mm H≤20mm "
- XY Stage Moving: 15×15mm
- Shock-Absorbing Design: Spring Suspension
- Optical System: 1~500x Continuous Zoom
- Output: USB2.0/3.0
- Software: Win XP/7/8/10

Product Description

Scanning Tunneling Microscope

Miniaturized and detachable design, very easy to carry and classroom teaching

The detection head and the sample scanning stage are integrated, the structure is very stable, and the anti-interference is strong

The intelligent needle feeding method of motor-controlled pressurized piezoelectric ceramic automatic detection protects the probe and the sample

Side CCD observation system, real-time observation of probe needle insertion status and positioning of probe sample scanning area

Spring suspension shockproof method, simple and practical, good shockproof effect



A61.4510

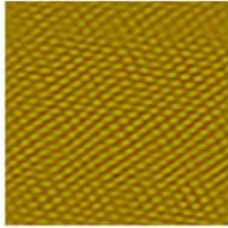
Scanning Tunneling Microscope (STM)



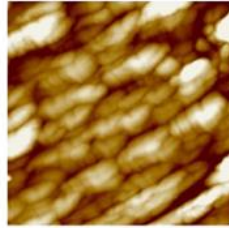
Product Details

- ◆ Miniaturized and detachable design, very easy to carry and classroom teaching
- ◆ The detection head and the sample scanning stage are integrated, the structure is very stable, and the anti-interference is strong
- ◆ The single-axis drive sample automatically approaches the probe vertically, so that the needle tip is perpendicular to the sample scan
- ◆ The intelligent needle feeding method of motor-controlled pressurized piezoelectric ceramic automatic detection protects the probe and the sample
- ◆ Side CCD observation system, real-time observation of the probe needle insertion state and positioning of the probe sample scanning area
- ◆ Spring suspension shockproof method, simple and practical, good shockproof effect
- ◆ Integrated scanner nonlinear correction user editor, nanometer characterization and measurement accuracy better than 98%

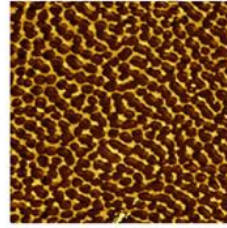
Application Case



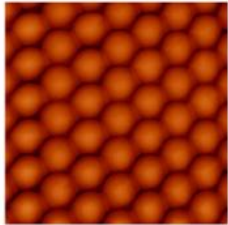
High-order graphite/scanning range $5\text{nm} \times 5\text{nm}$



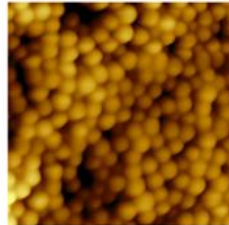
Gold clusters/scanning range $0.5\mu\text{m} \times 0.5\mu\text{m}$



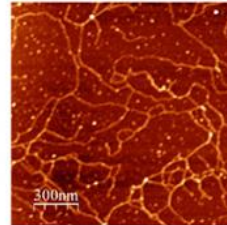
Polysaccharide $10 \times 10\mu\text{m}$



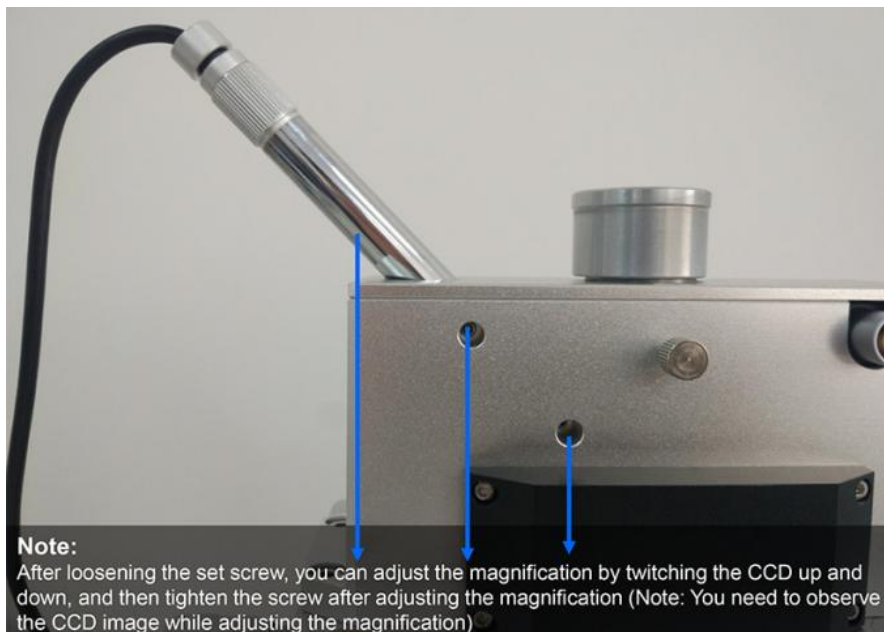
Polystyrene ball $10 \times 10\mu\text{m}$

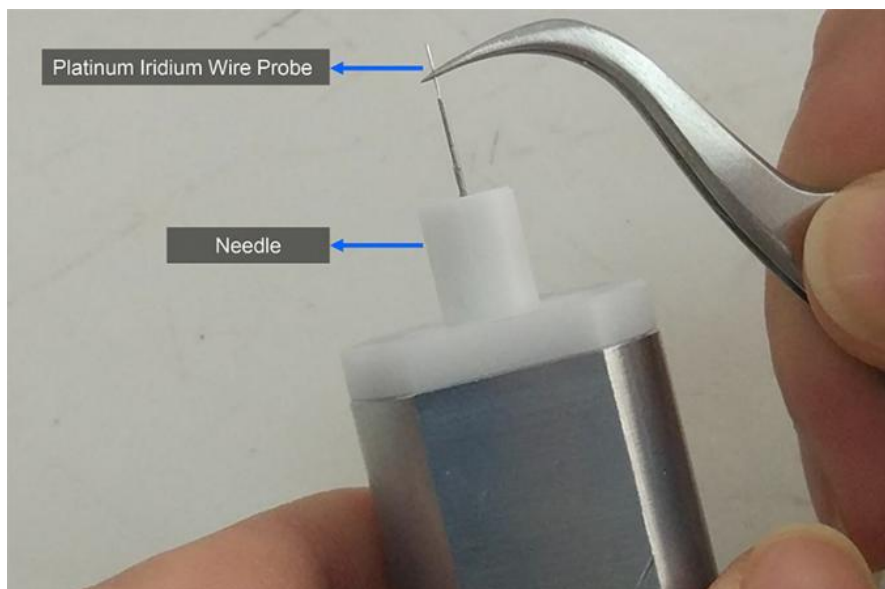


Polystyrene ball $5 \times 5\mu\text{m}$

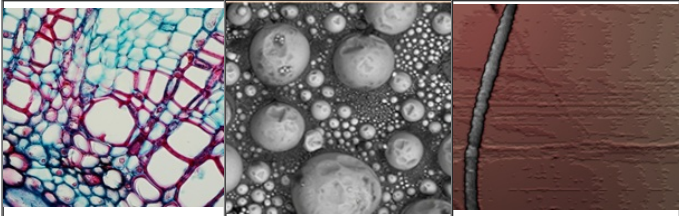


Polysaccharide $1.5 \times 1.5\mu\text{m}$





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Current Spectrum Curve	I-V Curve Current-Distance Curve		
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Z Scan Range	1μm		
Y Scan Resolution	0.01nm		
Scan Speed	0.1Hz~62Hz		
Scan Angle	0~360°		
Sample Size	Φ≤68mm H≤20mm		
XY Stage Moving	15×15mm		
Shock-Absorbing Design	Spring Suspension		
Optical System	1~500x Continuous Zoom		
Output	USB2.0/3.0		
Software	Win XP/7/8/10		
Microscope	Optical Microscope	Electron Microscope	Scanning Probe Microscope
Max Resolution (μm)	0.18	0.00011	0.00008
	Oil immersion 1500x	Imaging diamond carbon atoms	Imaging high-order graphitic carbon atoms

Remark					
Probe-Sample Interaction		Measure Signal		Information	
Force		Electrostatic Force		Shape	
Tunnel Current		Current		Shape, Conductivity	
Magnetic Force		Phase		Magnetic Structure	
Electrostatic Force		Phase		charge distribution	
	Resolution	Working Condition	Working Temperature	Damge to Sample	Inspection Depth
SPM	Atom Level 0.1nm	Normal, Liquid, Vacuum	Room or Low Temperature	None	1~2 Atom Level
TEM	Point 0.3~0.5nm Lattice 0.1~0.2nm	High Vaccum	Room Temperature	Small	Usually <100nm
SEM	6-10nm	High Vaccum	Room Temperature	Small	10mm @10x 1um @10000x
FIM	Atom Level 0.1nm	Super High Vaccum	30~80K	Damge	Atom Thickness



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