Opto Edu A62.4505 All-in-One Microscope with 50×50um XY Scan Range 0.2nm XY Scan Resolution and 5um Z Scan Range

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: OPTO-EDU
- Certification: CE, Rohs
- Model Number: A62.4505
- 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,T/T,Western Union
- Supply Ability: 5000 pcs/ Month

Product Specification

- Work Mode: "Contact Mode Tapping Mode 【Optional】 Friction Mode Phase Mode Magnetic Mode Electrostatic Mode"
- Current Spectrum Curve: "RMS-Z Curve F-Z Force Curve"
- XY Scan Range: 50×50um
- XY Scan Resolution: 0.2nm
- Z Scan Range: 5um
- Y Scan Resolution: 0.05nm
- Scan Speed: 0.6Hz~30Hz
- Scan Angle: 0~360°
- Sample Size: "Φ≤90mm H≤20mm"
- Optical Syestem: "Eyepiece 10x Infinity Plan LWD APO 5x10x20x50x 5.0M Digital Camera 10"" LCD Monitor, With Measuring LED Kohler Illumination Coaxial Coarse & Fine Focusing"
- Output: USB2.0/3.0
- Software: Win XP/7/8/10

Product Description

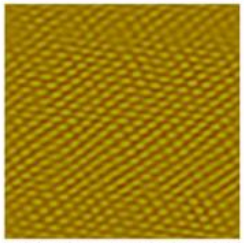
Opto Edu A62.4505 Scanning Optical Microscope All In One

Optical + Atomic Force Microscope, All-in-One

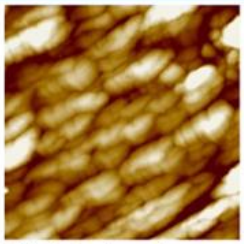
Product Details

- Integrated design of optical metallographic microscope and atomic force microscope with powerful functions
- Combines optical microscope and atomic force microscope imaging functions that can work simultaneously without interference
- Features both optical 2D measurement and atomic force microscope 3D measurement capabilities
- Laser detection head and sample scanning stage are integrated for stable structure and strong anti-interference
- Precision probe positioning device with easy laser spot alignment adjustment
- Single-axis drive sample automatically approaches the probe vertically for perpendicular needle tip positioning
- Motor-controlled pressurized piezoelectric ceramic automatic detection protects both probe and sample
- Ultra-high magnification optical positioning system for precise probe and sample scanning area positioning
- Integrated scanner nonlinear correction user editor

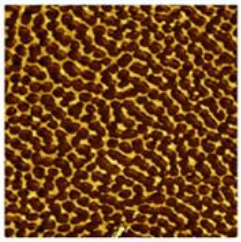
Application Case



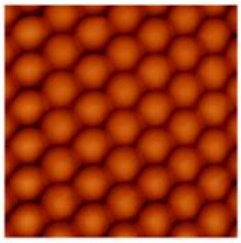
High-order graphite/scanning range 5nm×5nm



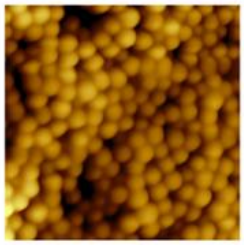
Gold clusters/scanning range 0.5μm×0.5μm



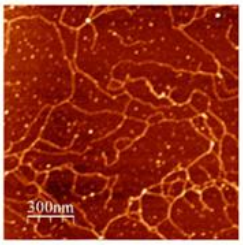
Polysaccharide 10x10um



Polystyrene ball 10x10um

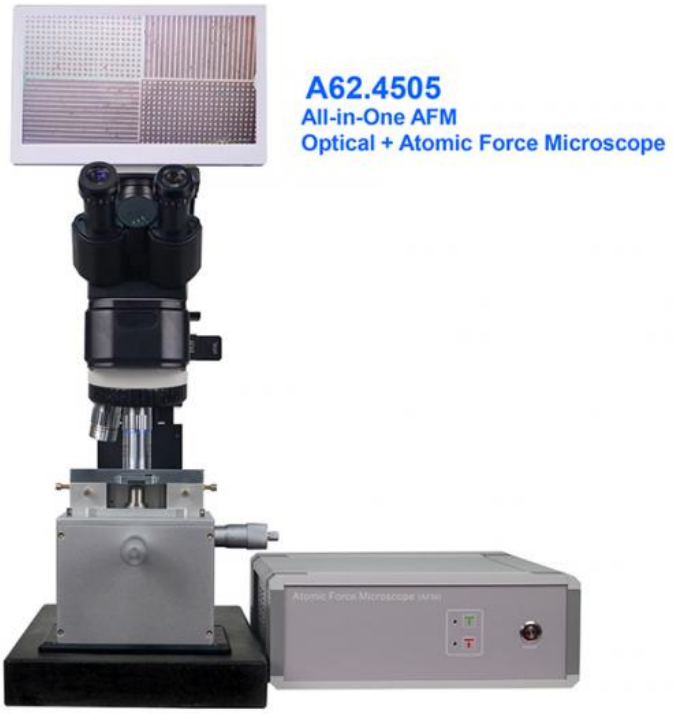


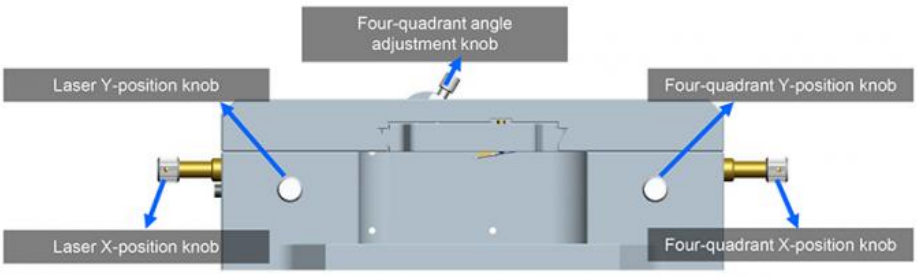
Polystyrene ball 5x5um



Polysaccharide 1.5x1.5um

Product Details



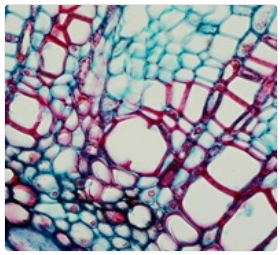
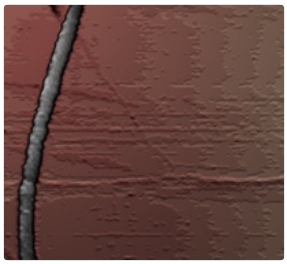


Specifications

Specification	A62.4500	A622.4501	A62.4503	A62.4505
Work Mode	Tapping Mode 【Optional】 Contact Mode Friction Mode Phase Mode Magnetic Mode Electrostatic Mode	Contact Mode Tapping Mode 【Optional】 Friction Mode Phase Mode Magnetic Mode Electrostatic Mode	Contact Mode Tapping Mode 【Optional】 Friction Mode Phase Mode Magnetic Mode Electrostatic Mode	Contact Mode Tapping Mode 【Optional】 Friction Mode Phase Mode Magnetic Mode Electrostatic Mode Current Spectrum Curve
Output	RMS-Z Curve 【Optional】 F-Z Force Curve	RMS-Z Curve F-Z Force Curve	RMS-Z Curve F-Z Force Curve	RMS-Z Curve F-Z Force Curve
XY Scan Range	20×20um	20×20um	50×50um	50×50um

XY Scan Resolution	0.2nm	0.2nm	0.2nm	0.2nm
Z Scan Range	2.5um	2.5um	5um	5um
Y Scan Resolution	0.05nm	0.05nm	0.05nm	0.05nm
Scan Speed	0.6Hz~30Hz	0.6Hz~30Hz	0.6Hz~30Hz	0.6Hz~30Hz
Scan Angle	0~360°	0~360°	0~360°	0~360°
Sample Size	Φ≤90mm H≤20mm	Φ≤90mm H≤20mm	Φ≤90mm H≤20mm	Φ≤90mm H≤20mm
XY Stage Moving	15×15mm	15×15mm	25×25um	25×25um
Shock-Absorbing Design	Spring Suspension	Spring Suspension Metal Shielding Box	Spring Suspension Metal Shielding Box	-
Optical System	4x Objective Resolution 2.5um	4x Objective Resolution 2.5um	4x Objective Resolution 2.5um	Eyepiece 10x Infinity Plan LWD APO 5x10x20x50x 5.0M Digital Camera 10" LCD Monitor, With Measuring LED Kohler Illumination Coaxial Coarse & Fine Focusing
Output	USB2.0/3.0	USB2.0/3.0	USB2.0/3.0	USB2.0/3.0
Software	Win XP/7/8/10	Win XP/7/8/10	Win XP/7/8/10	Win XP/7/8/10

Microscope Comparison

Microscope	Optical Microscope	Electron Microscope	Scanning Probe Microscope
Max Resolution (um)	0.18	0.00011	0.00008
Remark	Oil immersion 1500x	Imaging diamond carbon atoms	Imaging high-order graphitic carbon atoms
Image			

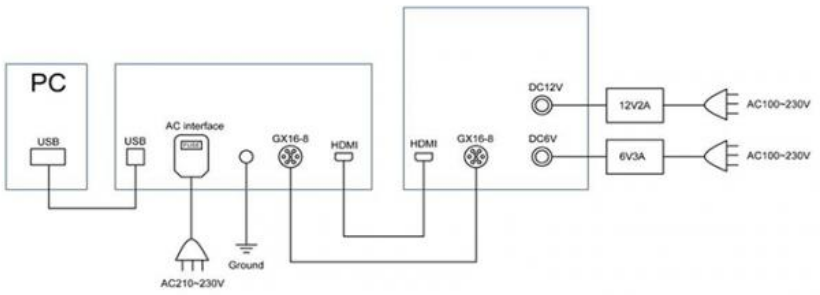
Probe-Sample Interaction

Force	Measure Signal	Information
Electrostatic Force	Phase	charge distribution
Tunnel Current	Current	Shape, Conductivity
Magnetic Force	Phase	Magnetic Structure

Technical Specifications Comparison

	Resolution	Working Condition	Working Temperature	Damage to Sample	Inspection Depth
SPM	Atom Level 0.1nm	Normal, Liquid, Vacuum	Room or Low Temperature	None	1~2 Atom Level
SEM	6-10nm	High Vacuum	Room Temperature	Small	10mm @10x 1um @10000x
FIM	Atom Level 0.1nm	Super High Vacuum	30~80K	Damage	Atom Thickness

System Diaphragm



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