

Microscópio de Força Atômica – AFM

Modelo Dimension ICON com ScanAsyst

Aplicações Típicas

- Mapeamento de Materiais
 - propriedades nanomecânicas
 - topografia
- Nanomanipulação
 - manipulação e litografia na escala nanométrica e molecular
- Caracterização Elétrica



Especificações

- X-Y scan range: 90 μ m x 90 μ m typical, 85 μ m minimum
- Z range: 10 μ m typical in imaging and force curve modes, 9.5 μ m minimum
- Vertical noise floor: <30 μ m RMS in appropriate environment typical imaging bandwidth (up to 625Hz)
- X-Y position noise (closed-loop): \leq 0.15nm RMS typical imaging bandwidth (up to 625Hz)
- X-Y position noise (open-loop) : \leq 0.10nm RMS typical imaging bandwidth (up to 625Hz)
- Z sensor noise level (closed-loop) : 35 μ m RMS typical imaging bandwidth (up to 625Hz); 50 μ m RMS, force curve bandwidth (0.1Hz to 5kHz)
- Sample size/holder : 210mm vacuum chuck for samples, \leq 210mm diameter, \leq 15mm thick
- Motorized position stage (X-Y axis): 180mm x 150mm inspectable area; 2 μ m repeatability, unidirectional; 3 μ m repeatability, bidirectional
- Controller: NanoScope V
- Workstation: Integrates all controllers and provides ergonomic design with immediate physical and visual access
- Vibration isolation: Integrated, pneumatic
- AFM modes: Standard: ScanAsyst, PeakForce Tapping, TappingMode (air), Contact Mode, Lateral Force Microscopy, PhaseImaging, Lift Mode, MFM, Force Spectroscopy, Force Volume, EFM, Surface Potential, Piezoresponse Microscopy, Force Spectroscopy; Optional: PeakForce QNM, HarmoniX, Nanoindentation, Nanomanipulation, Nanolithography, Force Modulation (air/fluid), TappingMode (fluid), Torsional Resonance Mode, Dark Lift, STM, SCM, C-AFM, SSRM, PeakForce TUNA, TUNA, TR-TUNA, VITA