NanoMagnetics Instruments

CryogenFree MFM/AFM in Cryogen Free Magnet System

CRYOGEN FREE MFM/AFM

- RIGID AFM DESIGN
- MAGNETIC FORCE MICROSCOPE
- ATOMIC FORCE MICROSCOPE
- SCANNING HALL PROBE MICROSCOPE
- EFM, PFM, SSRM, STM, ETC...

CRYOGEN FREE CRYOSTAT

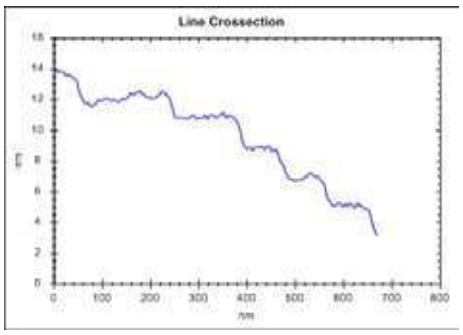
- VIBRATION-FREE DESIGN
- 100% DRY SYSTEM
- CLOSED-CYCLE
- 2.6K-300K
- UP TO 16 TESLA
- LOW OPERATING COSTS

System Specifications

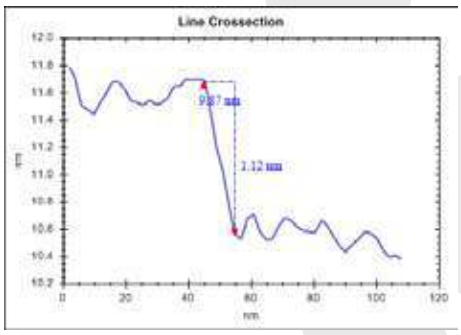
Imaging Modes	: MFM, Conductive AFM, EFM, STM, Contact/Semicontact/Non-Contact mode AFM using digital PLL		
Scan Size	: Large Area Scan Head	Standart Scan Head	Small Area Scan Head
	150 x 150 µm @ 300 K	52 x 52 µm @ 300K	8 x 8 µm @ 300 K
	36 x 36 µm @ 77 K	14 x 14 µm @ 77 K	3.5 x 3.5 µm @ 77 K
	18 x 18 µm @ 4.2 K	6 x 6 µm @ 4.2 K	1.5 x 1.5 µm @ 4.2 K
Z Range	: 7.0 µm @ 300 K	4.8 µm @ 300 K	2.4 µm @ 300 K
	1.8 µm @ 77 K	1.2 µm @ 77 K	0.6 µm @77K
	0.8 µm @ 4.2 K	0.5 µm @ 4.2 K	0.25 µm @ 4.2K
Head Dimensions	: 23.6 mm OD x 125 mm or 25.4 mm OD x 100 mm		
Sample Approach	: Stick-slip type; 10 mm Z, Ø3 mm XY range with 50 - 800 nm step size		
Fine Sample Positioning	: Capacitive encoder with 2 µm resolution		
Sample Size	:15 x 15 x 5 mm maximum		
Sample Holder	: 5 pins connections for experiments: One bias voltage, 4 spares		
Temperature Range	: 1K-300 K (Limited by the system)		
Magnetic Field	: >16 T		
Operation	: Vacuum or exchange gas environment		

Software upgrades are free for lifetime
Note: Specifications are subject to change without notice.

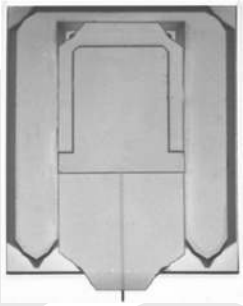
Cross-section of the single mica steps

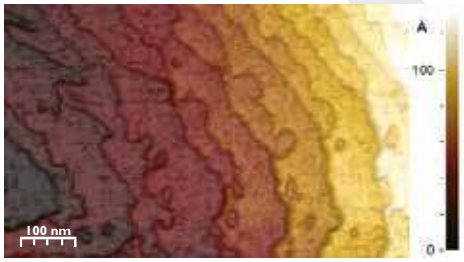


Cross-section of the double mica step



Alignment free cantilevers from NanoSensors®





LT-AFM Image of the etched mica surface