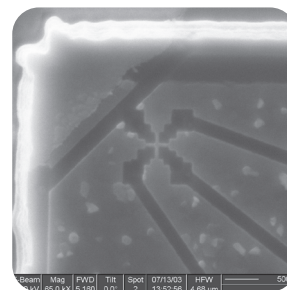


LT-SHPM

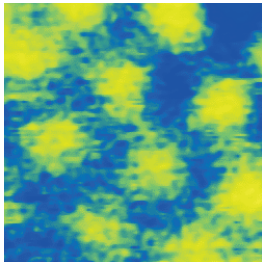
Low Temperature-Scanning Hall Probe Microscope at Nanometer Scale

- Non-invasive & quantitative
- Wide temperature range 10mK-400K
- Magnetic Field Noise Level: $10\mu\text{T}/\sqrt{\text{Hz}}$ @ 300K, $100\text{nT}/\sqrt{\text{Hz}}$ @ 77K, $10\text{nT}/\sqrt{\text{Hz}}$ @ 4K
- Compatible with PPMS®, other cryostat and DRs
- STM or AFM tracking
- Localised B-H curves
- Room Temperature version available

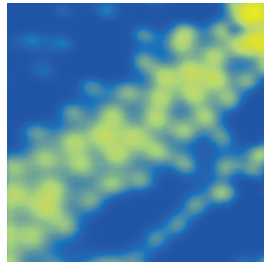


50 nm Hall Sensor

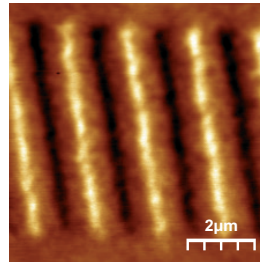




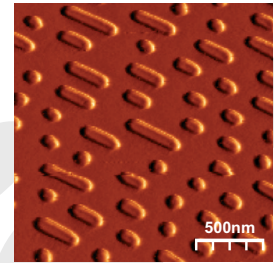
Abrikosov Vortex Lattice BSCCO
Single Crystal @30 Gauss @77K



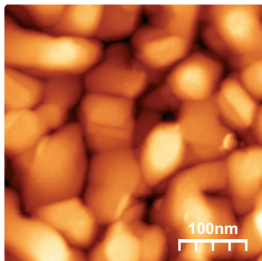
Abrikosov Vortices in BSCCO
Single Crystal @77K



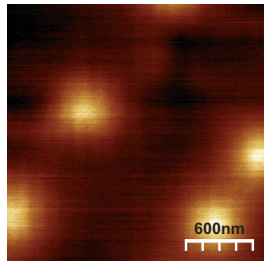
MFM Image of Hard Disk, 77 K



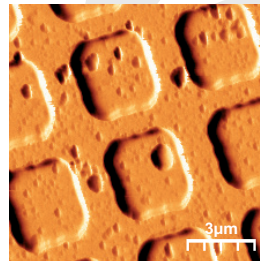
AFM Image of
DVD SURFACE, 4.2 K



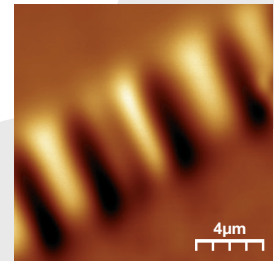
STM Image of Gold on Mica, 77 K



Vortices in BSCCO, 77 K



AFM (Phase) Image of Calibration
Grating, 4.2 K



SHPM Image of
NIST Calibration Sample, 77 K

System Specifications

Imaging Modes: SHPM, STM, AFM, MFM, EFM, SNOM

Temperature	Ultra Large Area Scan Head	Large Area Scan Head	Standart Scan Head
300K	: 200x200x7.2 μm	150x150x7 μm	52x52x4.8 μm
77K	: 50x50x4.8 μm	36x36x1.8 μm	14x14x1.2 μm
4.2K	: 30x30x2.4 μm	18x18x0.8 μm	6x6x0.5 μm

Sample Approach : Stick-slip type; 10mm Z, $\varnothing$ 3mm XY range with 50 - 800nm step size

Sample Size : 15 x 15 x 5mm maximum

Temperature Range : 10mK - 400K for LT-SHPM (limited by the cryostat)

Magnetic Field : up to 20T

Compatibility : LT-SHPM can be customised to fit in to PPMS[®], Cryogen free magnet systems, dilution refrigerators or He3 systems.

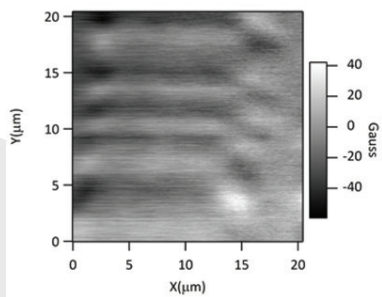
*Suitable cryostats are also available

**Software upgrades are free for lifetime

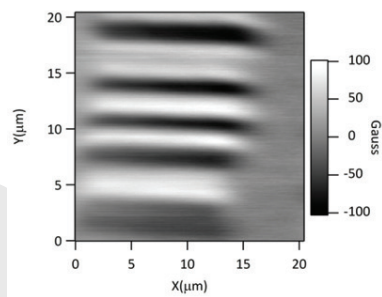
*** Specifications are subject to change without notice.

3D -SHPM OPTION

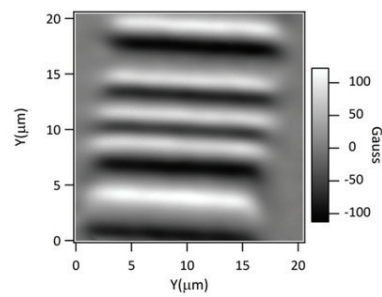
- A Unique Quantitative and Non-invasive Instrument to image 3D Surface Magnetic Fields at Nanometer Scale Measurement of 3 components of Magnetic Field on the surface of a hard disk sample using 3D-SHPM at 77K



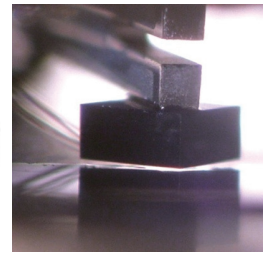
B_x



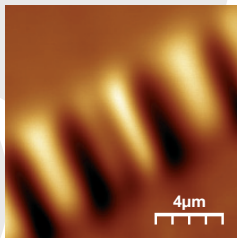
B_y



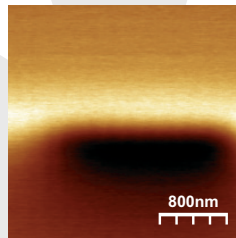
B_z



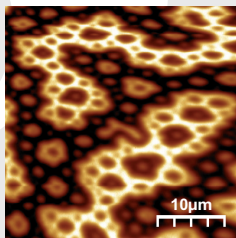
AFM guided Hall sensor on sample



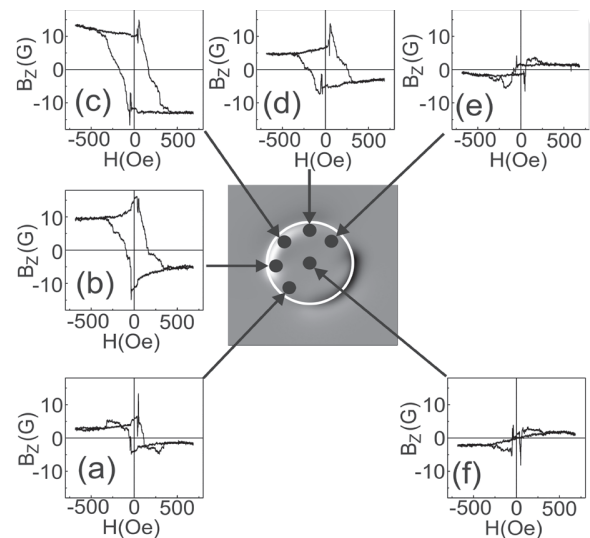
SHPM Image of NIST Calibration Sample



SHPM Image of Tape Head



SHPM Image of NdFeB Demagnetised Magnet



Experimental $B_z(H)$ hysteresis loops measured above the indicated positions on the Fe disk