

Nano Avalok STM

Explore the fascination of Quantum world....

STM-600

CMTI in collaboration with i2n Technologies has developed a portable Scanning Tunneling Microscope, capable of imaging sample at atomic resolution. The technology primarily address the need of academic institutions, R&D labs and Industries, with relatively affordable STM setup that could be utilized in nanotechnology research.

The compact portable system which potentially acquires the surface topography with quick, reliable and repeatable measurements.

Features

Easy to use

Atomic resolution

Portable and compact

Quick exchange of tip and sample

In-built vibration & acoustic enclosure



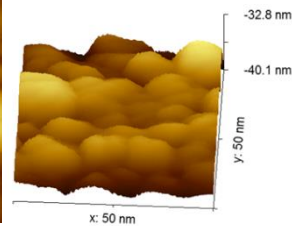
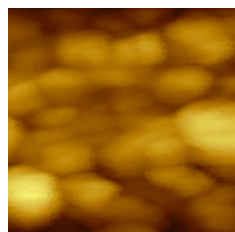
Technical Specification

Piezo Tube Scanner	Range: XY – 600 nm, Z – 200 nm Resolution XY – 0.01 nm, Z – 0.003 nm
Tip/Sample Coarse Movement	Tip Coarse positioning: Y (Vertical) direction Range: 13 mm, Resolution of 10µm Sample Coarse Positioning (X&Z direction) Range: 13 mm, Resolution of 0.5µm in X & 22nm Z (Motorised)
Electronics	Tunnelling Current preamp: Gain: 100 mV/Na, Noise: 0.02 nArms Sample Bias: ± 10 V
Software	GUI (Graphical User Interface) based user friendly software
Vibration isolation	Above 6 Hz, isolation efficiency above 80%
Acoustic isolation	Noise attenuation above 20 dBA

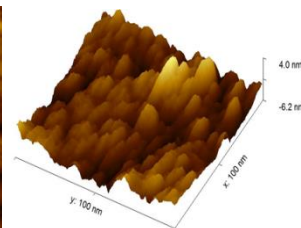
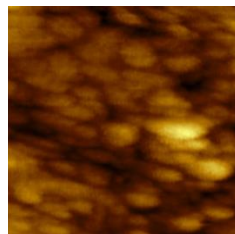
Applications

- Surface morphology studies
- Molecular bonding studies
- Spectroscopy studies
(I-V Characteristics)
- Collective electron behaviour studies
- Nano metric scale manipulation

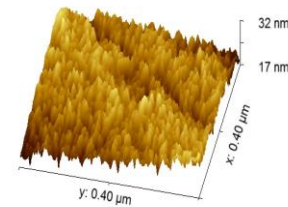
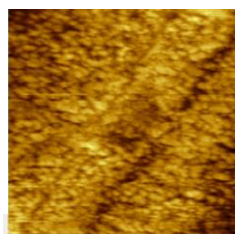
STM Gallery



2D and 3D
Topography of Gold
sputtered sample
(50X50nm)



2D and 3D
Topography of Gold
sputtered sample
(100X100nm)



2D and 3D
Topography of Gold
sputtered sample
(400X400nm)

For Details Contact

Centre Head– SMPM

Ph: (O) 91-80-22188243

Mob: +91-9449842680

Email: prakashv.cmti@nic.in

Centre for Smart Mfg., Precision Machine
tools & aggregates (C-SMPM)

Central Manufacturing Technology Institute

Tumkur Road, Bangalore-560022, India

www.cmti-india.net

