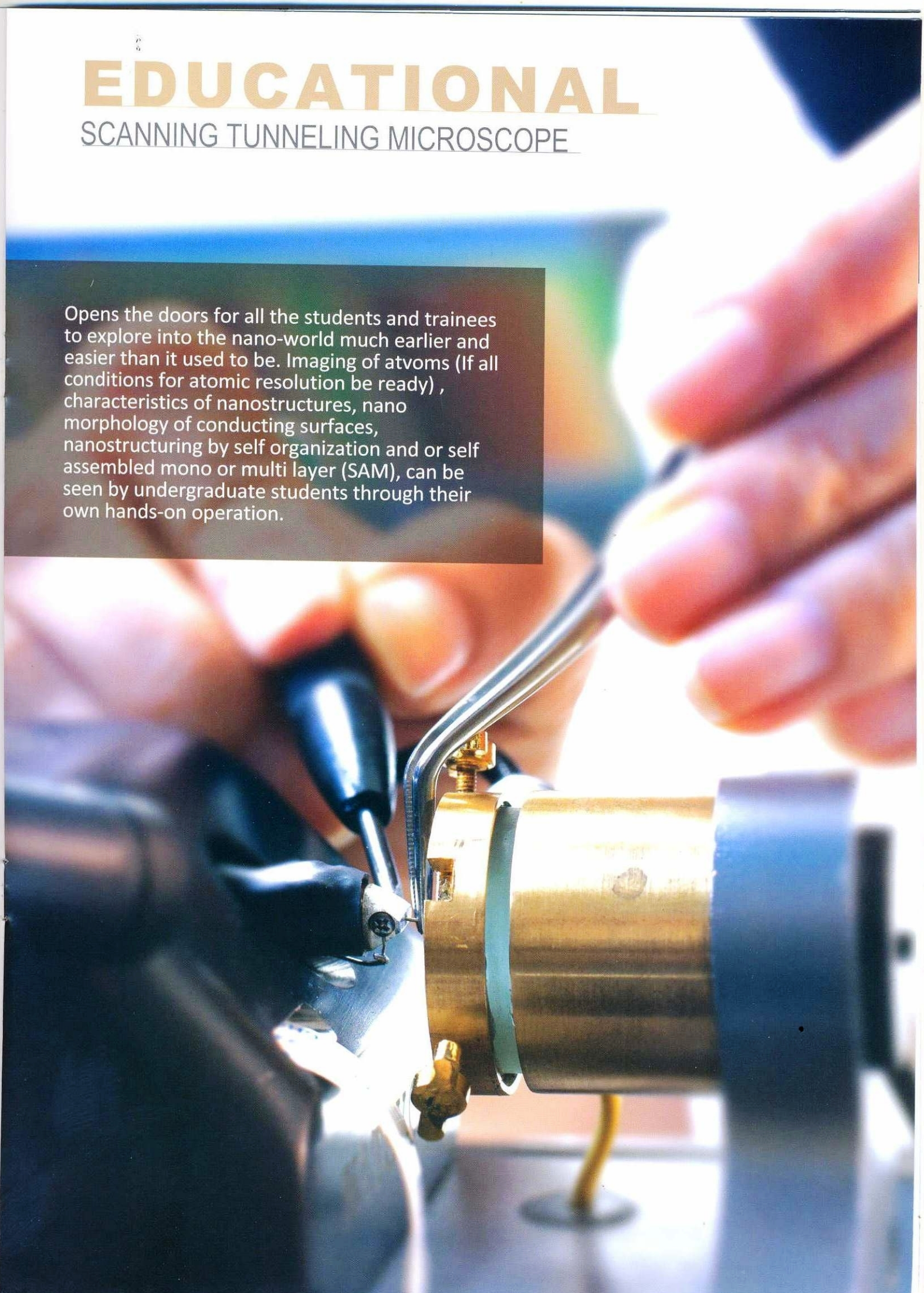
EDUCATIONAL

SCANNING TUNNELING MICROSCOPE



Opens the doors for all the students and trainees to explore into the nano-world much earlier and easier than it used to be. Imaging of atvoms (If all conditions for atomic resolution be ready) , characteristics of nanostructures, nano morphology of conducting surfaces, nanostructuring by self organization and or self assembled mono or multi layer (SAM), can be seen by undergraduate students through their own hands-on operation.

Education:
Fundamental Physics Experiment, Modern Physics Experiment and a variety of experiments in the fields of Material Sciences, and Chemistry also Quantum Mechanics, etc.

Training:
Ideal for training before operating a commercial STM.

Research:
For graduate / post-graduate students or small labs in the fields of Nanotechnology, Chemistry, Optoelectronics, Semiconductor, Solid-State Physics ,Surface Materials, and etc.

Applications

- Atomic-scale imaging of solid surfaces
- Catalysis research
- Surface imaging of conductive and semi-conductive surfaces
- Size measurement of obtained images
- Roughness determination
- Atom and nano- structure manipulation(applicable in other versions)
- And so many futures for analyses your sample surface in software

Advantages

- Expandable to suite user needs
- Designed for quick and reliable measurements by experts and novices alike
- Unique price/performance ratio for research and teaching
- Mechanical Stability
- Thermal drift balance
- Low Electronic noise
- Ergonomic Design
- Windows-Based Powerful Software
- Easy Maintenance

STM Software

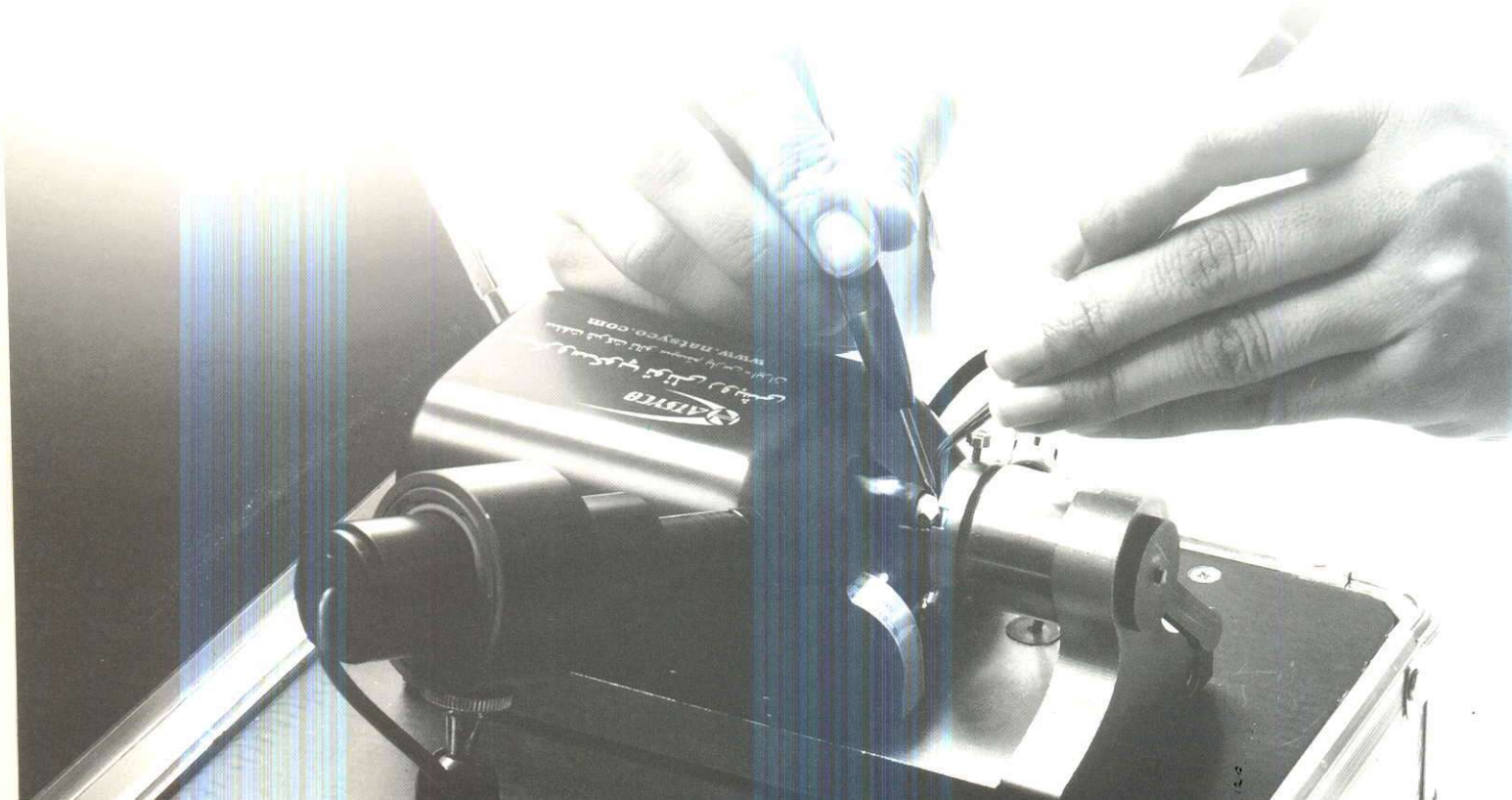
Various charts of the scan data online	2D view Image, Line graph,
Various charts of the image data offline	2D view,3D view, Line Profile, Color map
Noise reduction and feature enhancement	Data filtering in three levels
Lithography pattern	16 Color BMP and .dxf files
View all maximum scan range and change parameter very user friendly	
Data export	TXT,BMP,JPEG,GIF, ...
Automatic image transfer to offline processing software NAMA Analyzer	

Electronics

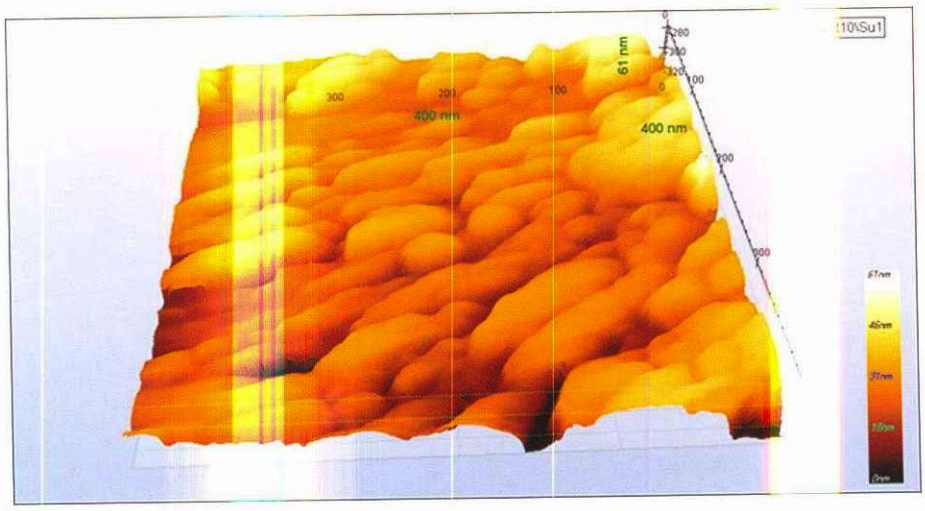
Electronics size	45*35*18 cm
Power supply	220 V~/ 50 Hz/ 1A
Computer Interface	16 bit Data Acquisition Hardware
Scan Speed	Up to 100 Line/s at 128 data point / line
Scan image rotation	0 - 360°

STM Measurment

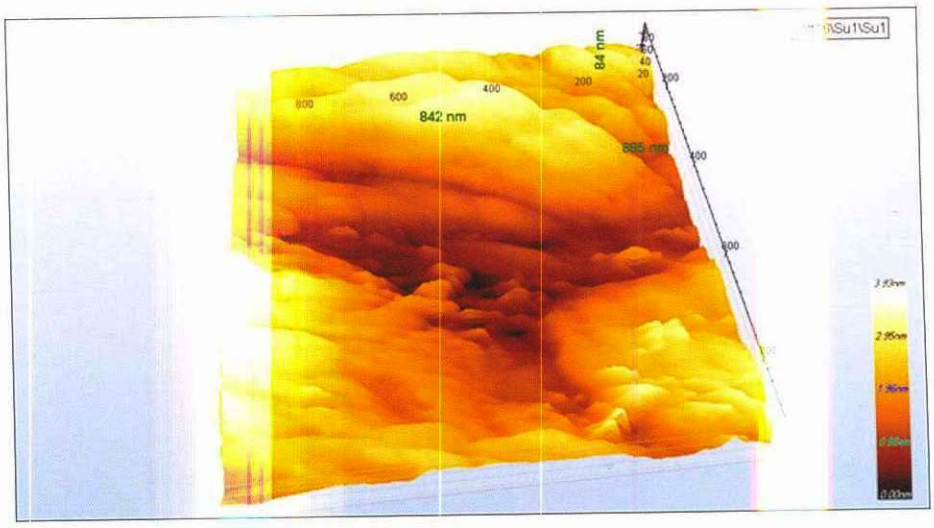
Maximum Scan range	1 µm (±500nm)
Maximum Z-range	1 µm (±500 nm)
Derive resolution Z	0.015 nm
Derive resolution XY	0.015nm
Current set point	0.02 -100 nA in 3 pA steps
Imaging modes	Constant current(Topography), Constant Height (Current)
Tip voltage	±10 V in 0.3 mV steps
Sample approach	Fully automatic and ,or manually (step by step by software control)
Sample size	Max 20 mm diameter



Results



Nano fiber image by NAMA-EDU-1



Gold coated surface image by NAMA-STM-EDU-1