

VT UHV 4-probe SPM

USM1400-4P

This system is developed for local conductance measurement and 4 probe SPM operations in nano to micrometer scale range in UHV and Low temperature conditions.

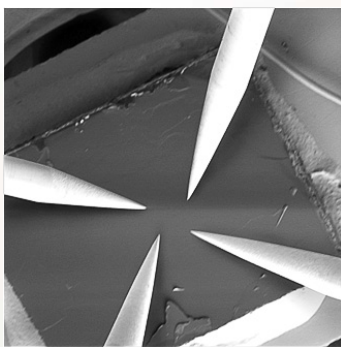
Each probe stage can be used independently for STM/AFM imaging and spectroscopy. Observing the electron microscope (SEM), each probe can approach to specific position of the sample surface.

Features

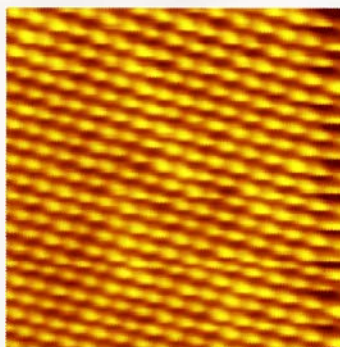
- Sample holder and probe holders can be exchanged in UHV.
- Variable temperature from 2.5K to 80K using liquid helium, and 80K to RT using liquid nitrogen
- Sample stage can be adjustable by 3mm in XY direction.
- Each probe can be adjustable 3mm travel in XY direction. Each probe position can be adjustable mm distance in XYZ direction by computer controlled piezo stages.
- STM or AFM probes can be set on any probe stages.
- All 4 probe stages can be scanned in atomic resolution.

Application

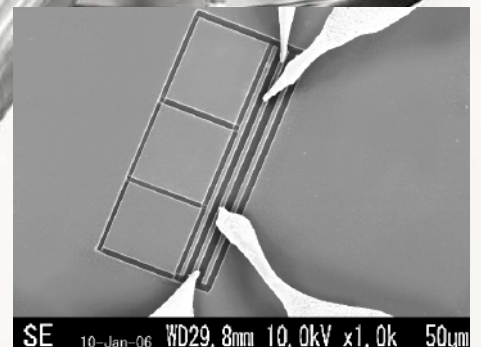
- 4 point conductivity measurement of thin film, nano wire, and etc.
- Measurement of local property of the devices
- Local potentiometry of nano structure
- STM/AFM imaging by each probe
- Further applications of SEM analysis
- Optical or electron beam excited conductivity measurement



4 point measurement



STM image on HOPG at 6.5K



Resistance of micro structure

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