

UHV Low Temperature Scanning Probe Microscope System **USM-1200**

**The bestselling UHV low temperature SPM series.
Guaranteed outstanding stability owing to improved
cryogenic performance**

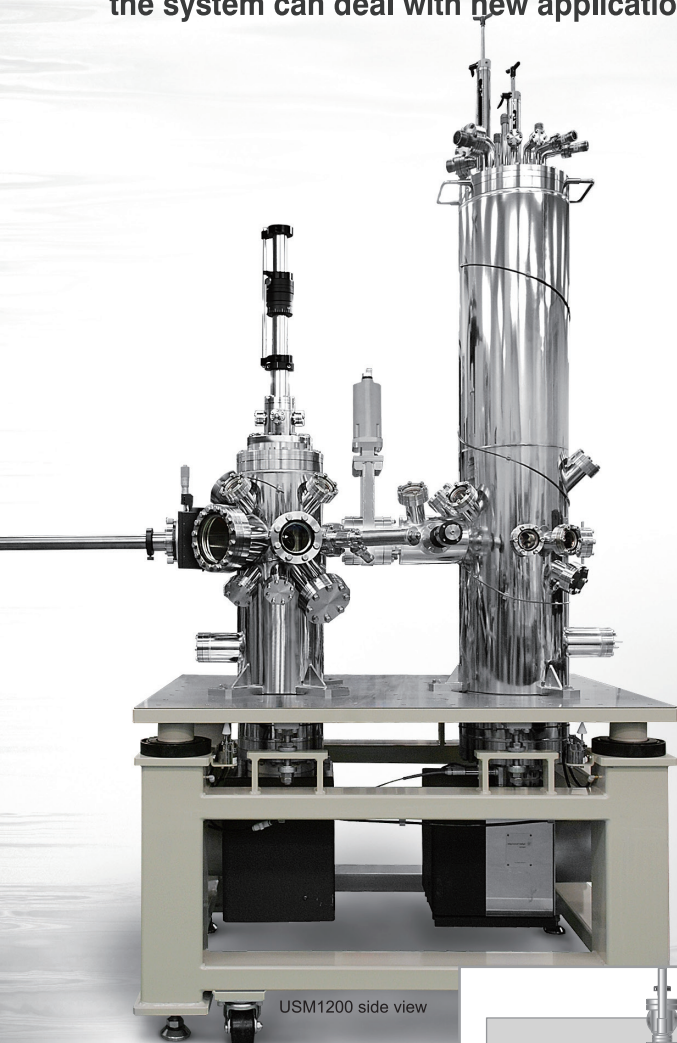
The USM1200 provides the capabilities of sample pretreatment and tip cleaning in UHV condition and allows you to perform STM, AFM atomic resolution measurements at cryogenic condition. New sort of SPM probes and accessories are available on this microscope so that the system can deal with new application range that is expanding in late years.

Features

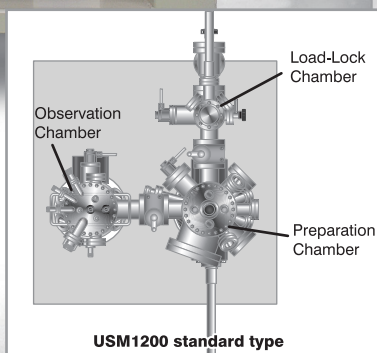
- STM and AFM measurement at cryogenic condition
- Easy operation
- High stability and superior cryogenic performance
- Adaptability for luminescence measurement and optical access to the tunneling junction owing to the piezo lens stage
- Two expansion ports allow to perform in-situ vapor deposition and adsorption at low temperature.

Application

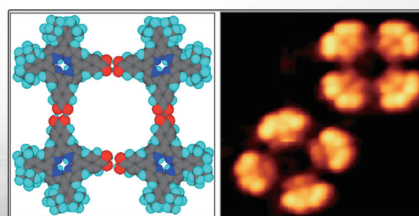
- Low temperature STM/STS,IETS measurement
- Light-Modulated STM, AFM
- High resolution low temperature STM-induced luminescence
- TERS (Tip Enhanced Raman Spectroscopy)
- In-situ atom, molecule deposition and adsorption



USM1200 side view



USM1200 standard type



STM Molecular structure and Topographic Image of COOH-Porphyrin tetramer
Temperature: 63K
Field of View: 11nm x 11nm
Dr. YOKOYAMA
in Yokohama city Univ.

Specifications of SPM head

Maximum scan range (X x Y x Z)	4 x 4 x 0.4 nm (Scan area is reduced to 1/4 at low temperature)
Resolution	Atomic resolution
Temperature range	Down to 10K
Vacuum range	
Observation and preparation chamber	1.3×10^{-9} Pa
Load-lock chamber	1.3×10^{-6} Pa
Control system	RHK SPM100 R9 system
Option	Tuning-fork NC-AFM