# LT UHV SPM

## **USM1200**

### The Bestselling UHV low temperature SPM Series Guaranteed Outstanding Stability Owing to Improved Cryogenic Performance

USM1200 provides the capabilities of sample pretreatment and tip cleaning in UHV condition and allows you to perform STM, AFM atomic resolution measurement 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 will 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



STM Molecular structure and Topographic Image of COOH-Porphyrin tetramer Temperature: 63K Field of View: 11nm x 11nm Dr/VGKOYAMA in Yokohama University

Specifications of SPM Head	
Maximum Scan Range	$4 \times 4 \times 0.4 \mu m$ (1/4 at low temperature)
Resolution	Atomic resolution
Temperature Range	Down to 10K
Vacuum Range	
Observation/preparation chamber: 3.0x 10 <sup>-8</sup> Pa; Load-lock chamber: 1.3 x 10 <sup>-5</sup> Pa	
Control System	
Nanonis <sup>™</sup> SPM control system	
Option	
AFM Function	Tuning-fork NC-AFM

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