JanisULT

Engineering Supremacy at Ultra-Low Temperatures

ULTRA-LOW TEMPERATURE SYSTEMS FOR SPM

JanisULT Cryostats – for sub-Kelvin Scanning Probe Microscopy (SPM)

We have standard designs available for SPM, including Scanning Tunneling Microscopy (STM) and Atomic Force Microscopy (AFM), plus the capability of custom building any system to your specifications.

Dilution Refrigerators and Helium-3 Cryostats feature:

- Quiet, low vibration, low RF noise environments for atomic resolution
- Temperature Range: 9 mK to 1 K
- Solenoid magnets up to 17 T and Vector magnets up to 9-4 T or 9-2-2 T provide B/T up to 1700 T/K
- Fully bakeable UHV compatible systems: pressures to < 10-10 Torr
- High degree of customization, including wiring designed and optimized to meet the needs of each user
- Non-magnetic materials including electropolished stainless steel, gold plated copper, silver plated aluminum
- Low liquid helium consumption

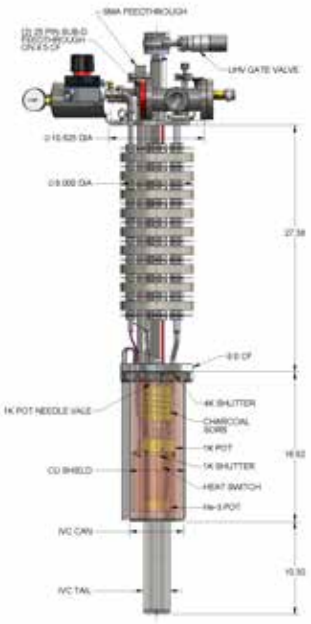
ULT SYSTEMS FOR SPM

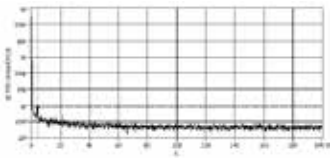
DILUTION REFRIGERATORS

- Top loading UHV STM/sample environment
- Cooling power: 50 – 500 µW @ 100 mK
- Base temperature: 10 – 35 mK
- 9-4 T or 9-2-2 T vector or up to 17 T solenoid magnets
- Integrated sample cleaver / mechanical heat switch / IR light shutter
- Up to 7 days continuous sample studies

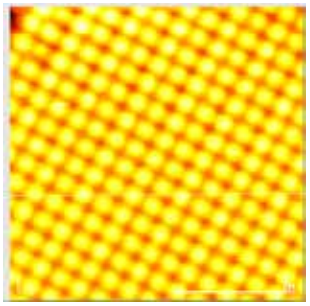
HELIUM-3 SYSTEMS

- Top loading UHV STM/sample environment
- 370 mK STM/sample base temperature
- 500 mK sample electron temperature per SC gap measurement
- > 100 hour holding time at base temperature
- < 1pm tip to sample vibration level
- 10 pA – 1 pA vibration noise

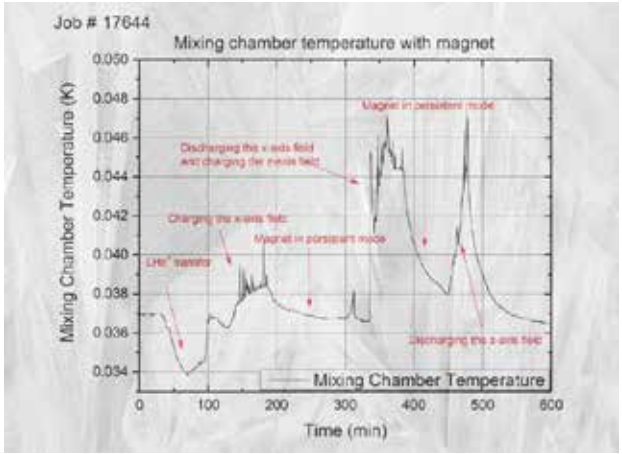


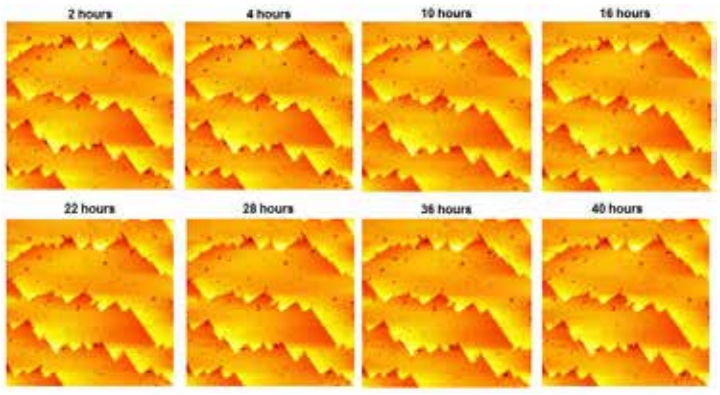


STM TOPO NOISE SPECTROSCOPY



SI(001) 0T, 470 mK (3HE POT 330 mK)
STM TOPOGRAPHIC IMAGE (+2.2V 400pA)





Visit **www.janult.com** or email **info@janult.com**

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