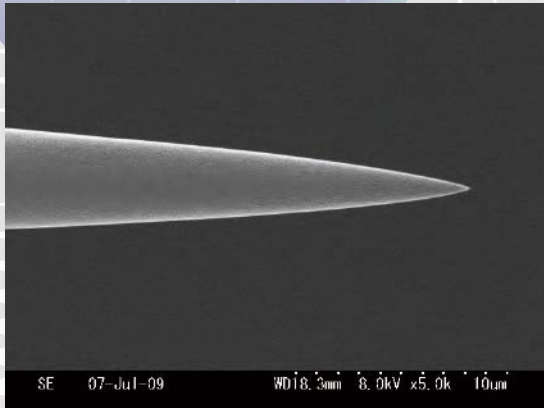


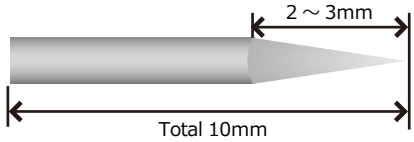
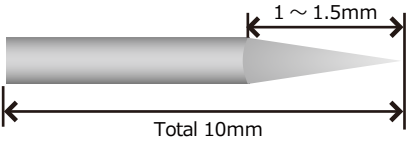
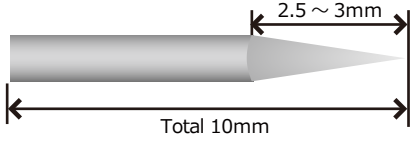
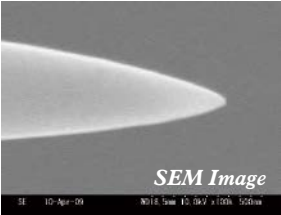
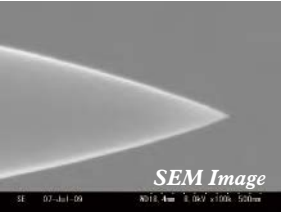
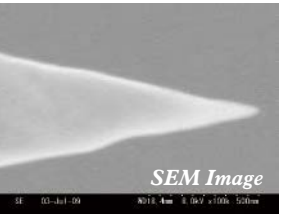
High-Performance STM Probes



SEM image of tip of nickel probe

The stability of STM measurements is greatly influenced by the quality of the probe. Namely, good STM measurement results often cannot be obtained due to variances in the probe tip diameter, contamination of the probe surface, or cleaning process errors.

UNISOKU has successfully developed nickel and platinumiridium STM probes using an electropolishing method that is able to solve these problems by yielding fine tip diameters with minimal contamination. Our metal probes allow you to experience a higher level of stability than was possible in the past. Our conventional tungsten probes are also still available.

Tungsten Probes Type: P-100WS	Ni Probes Type: P-100Ni (S)	Platiniridium Probes Type: P-100PtIr (S)
Shape: Cone Wire Rod: Polycrystalline tungsten 0.25mm dia. Curavant Radius of a Tip: <35nm	Shape: Cone Wire Rod: Polycrystalline Ni 0.25mm dia. Curavant Radius of a Tip: <25nm	Shape: Cone Wire Rod: Polycrystalline Platiniridium 0.5mm dia. Curavant Radius of a Tip: <20nm Grind Process: Electro-polishing after mechanical grind
		
		

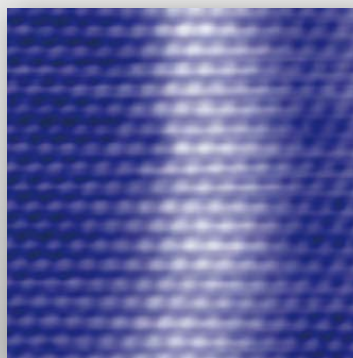
● Enables Reliable STM Measurement Without Requiring Troublesome Probe Treatment

UNISOKU has confirmed that atomic images can be reliably obtained, without the need for high-temperature heat treatment, when observing HOPG in air and gold in an ultra-high vacuum.

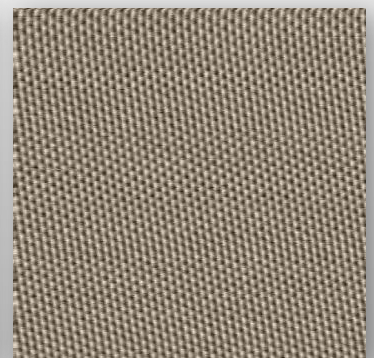
*2: Applies only to nickel and platiniridium probes. However, when observing active surfaces, heating is recommended for degassing.

*Noble metal (Au, Ag) coating for nickel probes are being developed. Contact UNISOKU for details.

*Due to the detrimental accumulation of carbon that accompanies SEM observation, inspected probes should not be used for STM observations.



Example STM image of Au(111) with nickel probe



Example STM image of HOPG with nickel probe