Materials List for:

Probing C_{84}-embedded Si Substrate Using Scanning Probe Microscopy and Molecular Dynamics

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Materials

Name	Company	Catalog Number	Comments
Silicon wafer			Si(111). Type/Dopant: P/Boron; Resistivity: 0.05-0.1 Ohm·cm
Carbon, C_{84}	Legend Star		C_{84} powder, 98%
Hydrochloric acid	Sigma-Aldrich	84422	RCA, 37%
Ammonium	Choneye Pure Chemical		RCA, 25%
Hydrogen peroxide	Choneye Pure Chemical		RCA, 35%
Nitrogen	Ni Ni Air		high-pressure bottle, 95%
Tungsten	Nilaco	461327	wire, diameter 0.3 mm, tip
Sodium hydroxide	UCW	85765	etching Tungsten wire for tip
Acetone	Marcon Fine Chemicals	99920	suitable for liquid chromatography and UV-spectrophotometry
Methanol	Marcon Fine Chemicals	64837	suitable for liquid chromatography and UV-spectrophotometry
UHV-SPM	JEOL Ltd	JSPM-4500A	Ultrahigh Vacuum Scanning Tunneling Microscope and Ultrahigh Vacuum Atomic Force Microscope
Power supply	Keithley	237	High-Voltage Source-Measure Unit
SQUID	Quantum desigh	MPMS-7	Magnetic field strength: ±7.0 Tesla, Temperature range: 2–400 K, Magnetic-dipole range: 5×10^{-7} – 300 emu
ALPS	National Center for High-performance Computing, Taiwan		Advanced Large-scale Parallel Supercluster, 177Tflops; 25,600 CPU cores; 73,728 GB RAM; 1,074 TB storage