

Materials List for:

Hand Controlled Manipulation of Single Molecules via a Scanning Probe Microscope with a 3D Virtual Reality Interface

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Materials

Name	Company	Catalog Number	Comments
LN ₂			caution: cryogenic liquid
LHe			caution: cryogenic liquid
PTCDA			caution: irritating substance
Knudsen cell (K-cell)			custom
ErLEED	Specs		used with power supply ErLEED 1,000 A
combiEnt LT NC-AFM/STM	Createc		
qPlus sensor	Createc		TFS
preamplifier	Createc		amplifier for tuning fork signal fixed to LN ₂ shield (stage 1)
Low-Noise Voltage Preamplifier	Standford Research System	SR560	external amplifier for tuning fork signal (stage 2)
Variable Gain Low Noise Current Amplifier	Femto	DLPCA-200	amplifier for tunneling current
Bonita	Vicon	B10, SN: MXBN-0B10-3658	MCS IR camera
Apex Interaction Device	Vicon	SN: AP0062	MCS trackable object (TO)
MX Calibration Wand	Vicon		MCS calibration object
Tracker	Vicon		MCS software
BS series voltage supply	stahl-electronics	BS 1-4	RVS
summing amplifier			custom, gain 1, based on operational amplifier TL072
Oculus Rift Development Kit 2	Oculus VR		HMD
TipControl			custom-written software
VRinterface			custom-written software