

Materials List for:

Miniaturized Sample Preparation for Transmission Electron Microscopy

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Materials

Name	Company	Catalog Number	Comments
Liquid handling			
Microcapillary tip	New Objective	FS360-100-30-N-20	SilicaTips 30 µm tip ID, 100 µm ID , pk. 20
		FS360-150-30-N-20	SilicaTips 30 µm tip ID, 150 µm ID , pk. 20
Conductive sleeve	New Objective	CONGAS-1	Conductive Elastomer for HV contact, 12" long
Fused silica tubing	BGB-Analytik	TSP-150375	TSP Standard FS Tubing, 150 µm ID, 363 µm OD, 5 meter
PressFit Connector	BGB-Analytik	2525LD	Deact. PressFit Connector 0.25 to 0.25 mm ID, pk. 25
Syringe 10 µl	BGB-Analytik	HA-80001	Hamilton 1701 LT - Luer Tip (needle not included)
Syringe pump controller	Cetoni	A3921000093	neMESYS controller
Syringe pump dosing unit	Cetoni	A3921000095	neMESYS dosing unit
Temperature control			
Dew point sensor	Meltec	UFT75-AT	Humidity/Temperature sensor, dew point calculation, USB and embedded DLL
Temperature sensor	Sensorshop24.ch	LS7-PT1000-1.0-3L	Surface mountable temperature sensor Pt1000
Peltier controller	Cooltronic	TC2812	PID temperature controller for activation of Peltier driven systems with constant voltage output
Peltier element	Distrelec.ch	PE-127-14-15-S	40x40 mm
Water-cooling block	-	-	Water cooling block for 40x40 mm peltier element, copper base
Water pump	Digitec.ch	294877	XSPC X20 750 Dual 5.25 Bay Reservoir Pump Black V4
Water heat exchanger block	-	-	Water heat exchanger block with 2 fans to cool down circulating water
Small water coolers	PCHC.ch	223050	Alphacool MCX ram copper edition 2 pcs
Small peltier elements	Distrelec.ch	PE-031-10-15-S	Laird 15x15 mm 3.4 A 8.1 W 3.8 V 74 °C, 2 pcs
Mechanics			

Linear stage z-axis	Dyneos AG	M-404.2PD	High-load precision translational stage, 50 mm travel range, DC motor
Stage controller	Dyneos AG	C-863	Mercury Servo Controller
Microscope xy-axis stage	Prior Scientific	H117EIL5	Motorized stage for Zeiss Axiovert 200 inverted microscope
Small permanent magnets	Supermagnete	S-05-08-N	Rod magnet Ø 5 mm, height 8.47 mm, neodymium, N45, nickel-plated, pk. 10
Small electromagnet	Schramme	EG1025A02/110	Electromagnet 24V 220 N 150 N 2,5 W
Controller electromagnet	Conrad.ch	MST-1630.001 7	Electromagnet control PCB board
Solenoid hub	Distrelec.ch	HD8286-R-F-24V100%	Kuhnke Solenid Hub 30 mm 16 N 2 N 16 W
Mini tweezers	Electron Microscopy Sciences	0302-M5S-PS	Dumont Type 5 mini, super thin tips
Various optomechanical parts	Thorlabs	-	-
Various mechanical parts	Workshop Biozentrum, University Basel	-	Custom designed adapter plates, holders, etc. see attached CAD files
Optics			
Laser diode	Thorlabs	CPS780S	780 nm laser diode module 2.5 mW
Photo detector	Thorlabs	PDA100A-EC	Si Switchable Gain Detector, 320-1100 nm, 2.4 MHz BW, 100 mm ²
EM grids			
DURASIN FILM TEM	emsdiasum.com	DTF-03523	30 nm DuraSiN™ silicon nitride membranes for TEM, pack of 5
Quantifoil Cu 200 mesh R 2/1	Quantifoil Micro Tools GmbH		
Quantifoil Cu 200 mesh R 1.2/1.3	Quantifoil Micro Tools GmbH		
Buffers / Neg. stain			
PBS	Sigma	D8537 SIGMA	Dulbecco's Phosphate Buffered Saline
NanoVan 2%	nanoprobes.com		Negative stain vanadium based
NanoW 2%	nanoprobes.com		Negative stain tungsten based
Software			
openBEB			The openBEB 2 framework is available upon request, version 3 will be downloadable
CryoWriter control software (openBEB plugin)		Available upon request, extra fees for 3rd party driver software might apply.	