

Materials List for:

# Hybrid Microdrive System with Recoverable Opto-Silicon Probe and Tetrode for Dual-Site High Density Recording in Freely Moving Mice

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URL: <https://www.jove.com/video/60028>

DOI: [doi:10.3791/60028](https://doi.org/10.3791/60028)

## Materials

Name	Company	Catalog Number	Comments
#00-90 screw	J.I. Morris	#00-90-1/8	EIB screws
#0-80 nut	Small Parts	B00DGB7CT2	brass nut for holding fiber ferrule holder
#0-80 screw	Small Parts	B000FMZ57G	brass machine screw for probe connector mount, fiber ferrule holder, and shielding cone
22 Ga polyetheretherketone tubes	Small Parts	SLPT-22-24	for attaching to the shuttle, 0.025 inches inner diameter
23 Ga stainless tubing	Small Parts	HTX-23R	for tetrode
23 Ga stainless wire	Small Parts	HTX-23R-24-10	for L-shape/support wire
26 Ga stainless wire	Small Parts	GWX-0200	for guide-posts
30 Ga stainless wire	Small Parts	HTX-30R	for tetrode
3-D CAD software package	Dassault Systèmes	SolidWorks 2003	
3D printer	FormLab	Form2	
5.5mil polyimide insulating tubes	HPC Medical	72113900001-012	
aluminum foil tape	Tyco	Tyco Adhesives 617022 Aluminum Foil Tape	for the alternative shielding cone
conductive paste	YSHIELD	HSF54	for shielding cone
customized screws for silicon-probe microdrive	AMT	UNM1.25-HalfMoon	half-moon stainless screw, 1.5 mm diameter, 300 µm thread pitch
customized screws for tetrode microdrive	AMT	Yamamoto_0000-160_9mm	slotted stainless screw, 0.5 mm diameter, 160 µm thread pitch, custom-made to order for our design
dental acrylic	Stoelting	51459	
dental model resin	FormLab	RS-F2-DMBE-02	
Dremel rotary tool	Dremel	model 800	a grinder
drill bit	Fine Science Tool	19007-05	
electric interface board	Neuralynx	EIB-36-Narrow	
epoxy	Devcon	GLU-735.90	5 minutes epoxy
eye ointment	Dechra	Puralube Ophthalmic Ointment	to prevent mice eyes from drying during surgery
fiber polishing sheet	Thorlabs	LFG5P	for polishing the optical fiber
fine tweezers	Protech International	15-368	for loading/recovering the silicon probe
gold pins	Neuralynx	EIB Pins Small	
ground wire	A-M Systems	781500	0.010 inch bare silver wire

headstage preamp	Neuralynx	HS-36	
impedance meter	BAK electronics	Model IMP-2	1 kHz testing frequency
mineral oil	ZONA	36-105	for lubricating screws and wires
optical fiber	Doric	MFC_200/260-0.22_50mm_ZF1.25(G)_FLT	
Recording system	Neuralynx	Digital Lynx 4SX	
ruby fiber scribe	Thorlabs	S90R	for cleaving the optical fiber
silicon grease	Fine Science Tool	29051-45	
silicon probe	Neuronexus	A1x32-Edge-5mm-20-177	Fig. 3, 4A, 4B, 5
silicon probe	Neuronexus	A1x32-6mm-50-177	Fig. 4C
silicon probe washing solution	Alcon	AL10078844	contact lens cleaner
silicone lubber	Smooth-On	Dragon Skin 10 FAST	for preparation of microdrive mold
silver paint	GC electronic	22-023	silver print II coating, used for ground wires
skull screw	Otto Frei	2647-10AC	0.8 mm diameter, 0.200 mm thread pitch
standard surgical scissors	ROBOZ	RS-5880	
stereotaxic apparatus	Kopf	Model 942	
super glue	Loctite	LOC230992	for applying to guide-posts
surgical tweezers	ROBOZ	RS-5135	
Tetrode Twister	Jun Yamamoto	TT-01	
tetrode wires	Sandvik	PX000004	