

Materials List for:

Fabrication of High Contact-Density, Flat-Interface Nerve Electrodes for Recording and Stimulation Applications

Yazan M. Dweiri^{1,3}, Matthew A. Stone², Dustin J. Tyler¹, Grant A. McCallum¹, Dominique M. Durand¹

¹Neural Engineering Center, Case Western Reserve University

²Advanced Platform Technology Center, U.S. Department of Veterans Affairs

³Jordan University of Science and Technology

Correspondence to: Dominique M. Durand at DXD6@CASE.EDU

URL: <https://www.jove.com/video/54388>

DOI: [doi:10.3791/54388](https://doi.org/10.3791/54388)

Materials

Name	Company	Catalog Number	Comments
Platinum-Iridium foil	Alfa Aesar	41802	90% Platinum Iridium
DFT wires	Fort Wayne Metals	35N LT-DFT-28%Ag	
Lead connector	Omnetics Connector Corporation	MCS-27-SS	
Silicone sheet	Speciality Silicon Fabricator	0.005" x 12" x 12" Silicone Sheet	High durometer, vulcanized
Polyether ether ketone (PEEK) sheet	Peek-Optima	0.005 sheet LT3 grade	
polyester stabelizing mesh	Surgicalmesh	PETKM2002	
Silicon tubing (0.04" I.D. 0.085" O.D.)	Silcon Medical/NewAge Industries.	2810458	
Outer shielding layer	Alfa Aesar, A Johnson Matthey	MFCD00003436 (11391)	Gold foil, 0.004" thick
Transparency sheet	APOLLO	APOCG7060	
Ultrasonic bath cleaner	Terra Universal	2603-00A-220	
Isotemp standard lab oven	Fisher Scientific	13247637G	
Optical microscope	Fisher Scientific	15-000-101	
Tweezers	Technik	18049USA (2A-SA)	
Surgical blade handles	Aspen Surgical Products	371031	
Base frame	McMaster-Carr	9785K411	
Support beam	McMaster-Carr	9524K359	
Two parts silicone	Nusil	MED 4765	
Soldering Flux	SRA Soldering Products	FLS71	
Tape	3M Healthcare	1535-0 (SKUMMM15350H)	Paper, hypoallergenic surgical tape
Spot welding machine	Unitek	125 Power Supply with 101F Welding Head	
Laser cutting platform	Universal Laser Systems	PLS6.150D	150 watts laser