

Materials List for:

Cardiac Muscle-cell Based Actuator and Self-stabilizing Biorobot - PART 1

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URL: <https://www.jove.com/video/55642>

DOI: [doi:10.3791/55642](https://doi.org/10.3791/55642)

Materials

Name	Company	Catalog Number	Comments
Polydimethylsiloxane (PDMS)	Dow Corning	184 sil elast kit 0.5kg	Sylgard 184
Nickel Powder	Sigma-Aldrich	266981-100G	
Phenolic microballoons	US Composites	BJO-0930	
Silicon wafers			4 inch diameter
PWM101 light-duty spinner			Spin- coater
Positive photoresist (S1808)	Dow Corning	DEM-10018197	
Hotplate			
Vacuum chamber			
M206 mechanical convection oven			Convection oven
Laser engraver	Universal Laser System	VLS2.30	Utilizes a 10 W, 10.6 μ m wavelength, CO ₂ Laser
Universal Laser Systems Application	Universal Laser System		Application for running the VLS 2.30
Matlab	MathWorks		Numerical analysis program
Scotch Tape	Scotch Brand		
Solid-glass beads	Sigma-Aldrich	Z265926-1EA	Soda-lime glass, diameter 3 mm
Scale	Mettler Toledo	EL303	
BD-20AC Laboratory Corona Treater	Electrotechnic Products	12051A	Corona Discharger
Ultrasonic Bath 1.9 L	Fisher Scientific	15-337-402	40 kHz industrial transducer
Fibronectin from bovine plasma	Sigma-Aldrich	F1141	
Dulbecco's Phosphate Buffer (PBS)	Sigma-Aldrich	D1408-100ML	
Dulbecco's Modified Eagle Medium (DMEM)	Hyclone Laboratories	16750-074	With 4500 mg/L glucose, 4.0 mM L-glutamine, and 110 mg/L sodium pyruvate.
Fetalclone III serum	Hyclone Industries, GE	16777-240	Fetal bovine serum
Penicillin-G sodium salt	Sigma-Aldrich	P3032	