

Materials List for:

# Prescribed 3-D Direct Writing of Suspended Micron/Sub-micron Scale Fiber Structures via a Robotic Dispensing System

Hanwen Yuan<sup>1</sup>, Scott D. Cambron<sup>1</sup>, Robert S. Keynton<sup>1</sup>

<sup>1</sup>Bioengineering Department, University of Louisville

Correspondence to: Robert S. Keynton at [robert.keynton@louisville.edu](mailto:robert.keynton@louisville.edu)

URL: <https://www.jove.com/video/52834>

DOI: [doi:10.3791/52834](https://doi.org/10.3791/52834)

## Materials

Name	Company	Catalog Number	Comments
ROBOT DR2203N 3 AXES 200MM X 200MM	Nordson EFD	7023145	3-Axis Robot
CONTROLLER 7100, DISPENSE VALVE	Nordson EFD	7015340	Valve Controller
MICRODOT VALVE	Nordson EFD	7021233	Microdot Valve
ROBOT ACC FIXTURE PLATE 200MM	Nordson EFD	7028276	Fixture Platen
ROBOT ACC DRN / DSRN POINTS SOFTWARE	Nordson EFD	7023144	JR-C Software
ROBOT MOUNT VALVE UNIVERSAL	Nordson EFD	7028273	Microdot Valve Mount
15 PSI BARREL PRESS. REGULATOR	Nordson EFD	7020585	Barrel Regulator
KIT O BRL/PIST 5CC CL/WH 40	Nordson EFD	7012096	5CC Barrels with Pistons
ADAPTER ASM O 5CC BL	Nordson EFD	7012054	Pneumatic Barrel Adapter
TIP 30GA .006X.25 LAVNDR 50PC	Nordson EFD	7018424	30 gauge Needle Tip (0.250" length)
Electric Baseboard Heater (500 W, 30" length)	Cadet	2F500	Heater
Temperature Controller with Timer	Control Company	130726596	Temperature Controller
eScope USB Microscope	OiTez	DP-M02	200X USB Microscope
Poly(methyl methacrylate)	Aldrich	182265-500G	PMMA Powder
Chlorobenzene	Sigma Aldrich	284513	Solvent to dissolve PMMA