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#### **SUPPLEMENTAL**



**Figure S1.** CellCrown inserts were used to secure PNIPAAm/PCL fibers. Squares of PNIPAAm/PCL fibers and parafilm were layered onto the CellCrown bottom (middle). A fully assembled CellCrown with PNIPAAm/PCL fibers (right).

# **TABLE S1**

PNIPAAm content	Total Polymer (wt/vol)	Solvent	Charge (kV)
0%	10%	HFP	4.5-6.5
25%	12%	1:3 m ethanol:chloroform	7.0-10.5
50%	12%	1:3 m ethanol:chloroform	8.5-9.5
75%	15%	1:3 m ethanol:chloroform	9.0-10.0
90%	18%	1:3 m ethanol:chloroform	13.0-15.0
100%	20%	methanol	11.0-11.5

 Table S1. Solution and electrospinning parameters for PNIPAAm/PCL fibers.

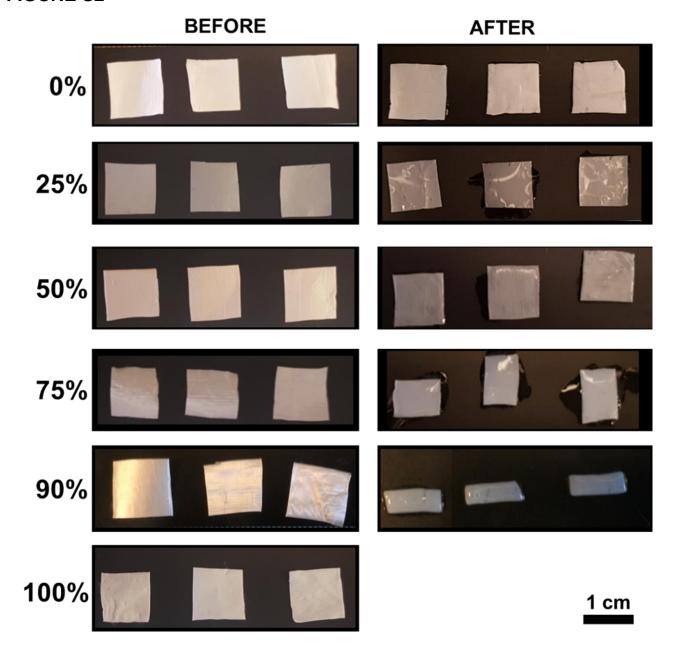
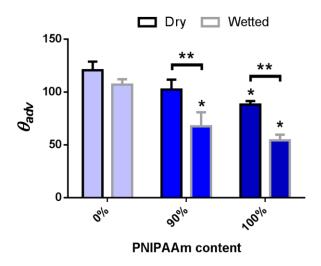
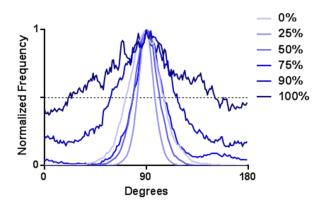


Figure S2. PNIPAAm/PCL fibers before and after PNIPAAm dissolution.



**Figure S3.** Advancing water contact angle of dry and wetted PNIPAAm/PCL fibers. \*p<0.05 compared to corresponding 0% PNIPAAm fiber contact angle; \*\*p< 0.05 between dry and wetted fibers.



**Figure S4.** Representative histograms of cell angles as measured from actin of cells seeded on PNIPAAm/PCL fibers. Histograms were normalized to the peak frequency. Dashed line indicates half max.