

Supplementary file

Table S1. Diameters of printed filaments with different concentrations of PCA₂ +CNCs^a

Concentration	2.2 wt% CNC	4.4 wt% CNC	8.8 wt% CNC
15 wt% PCA ₂	Collapsed	0.635±0.057 mm ^b	0.509±0.023 mm
20 wt% PCA ₂	0.863±0.085 mm	0.463±0.020 mm	Jammed

^aThe bore diameter of nozzle was 0.41 mm;

^bThe number of parallel filaments: $n=5$.

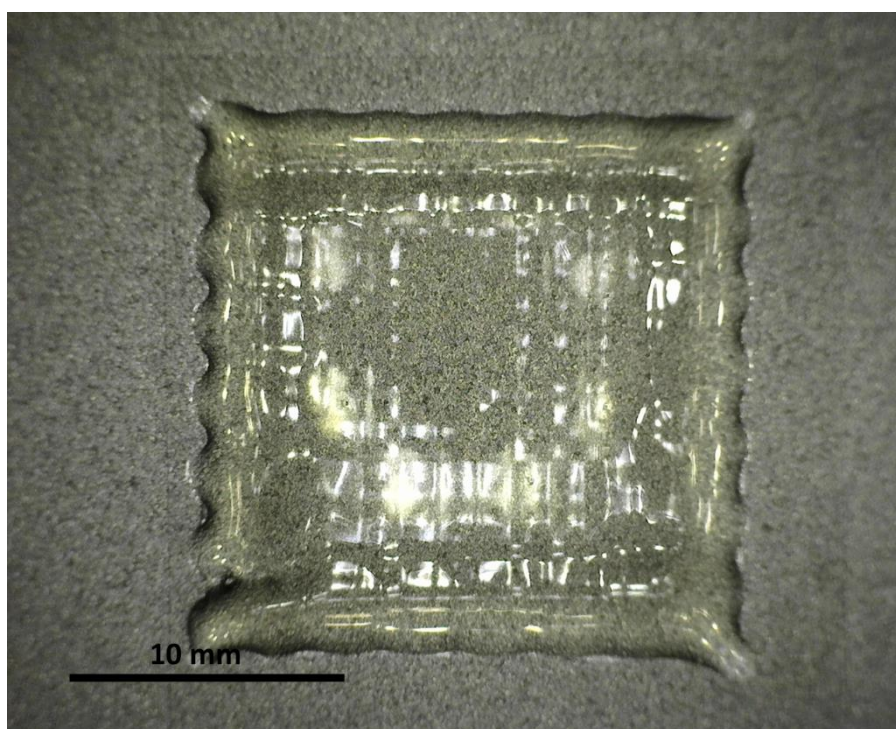


Figure S1. The optical microscopic image of PCA₂ without CNCs printed object after 20 min of printing.

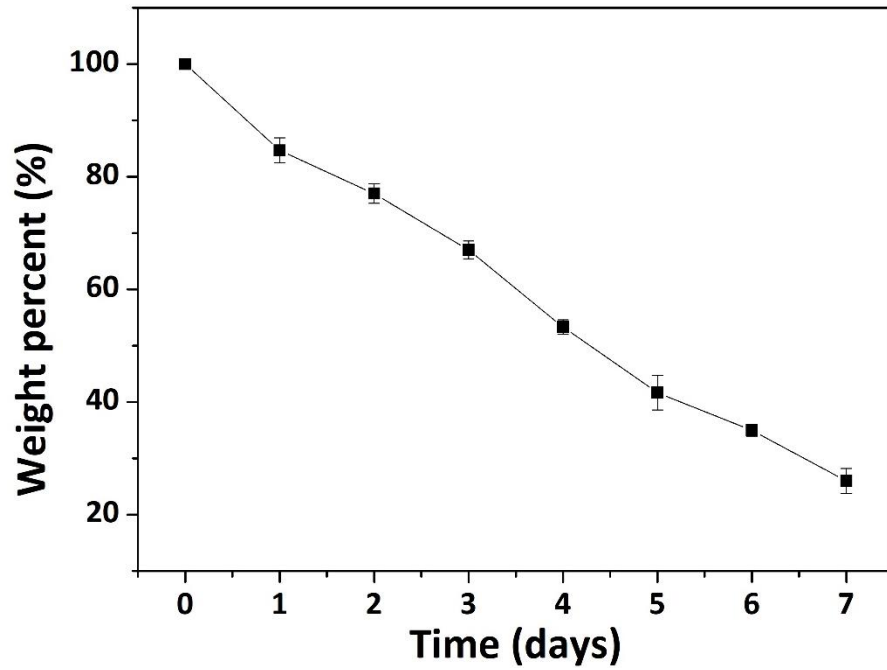


Figure S2. Degradation profiles of PCA₂ hydrogel at 37°C in PBS containing 0.1 mg lipase. *n*=3.

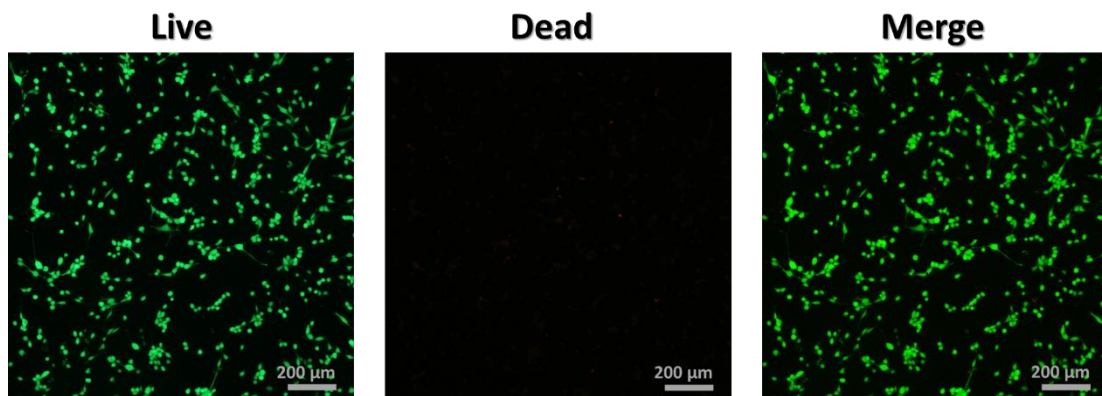


Figure S3. Fluorescent microscopic images of fibroblasts cultured with 20 wt% PCA₂+4.4 wt% CNC hydrogel with medium for 12 h.