

Supporting information

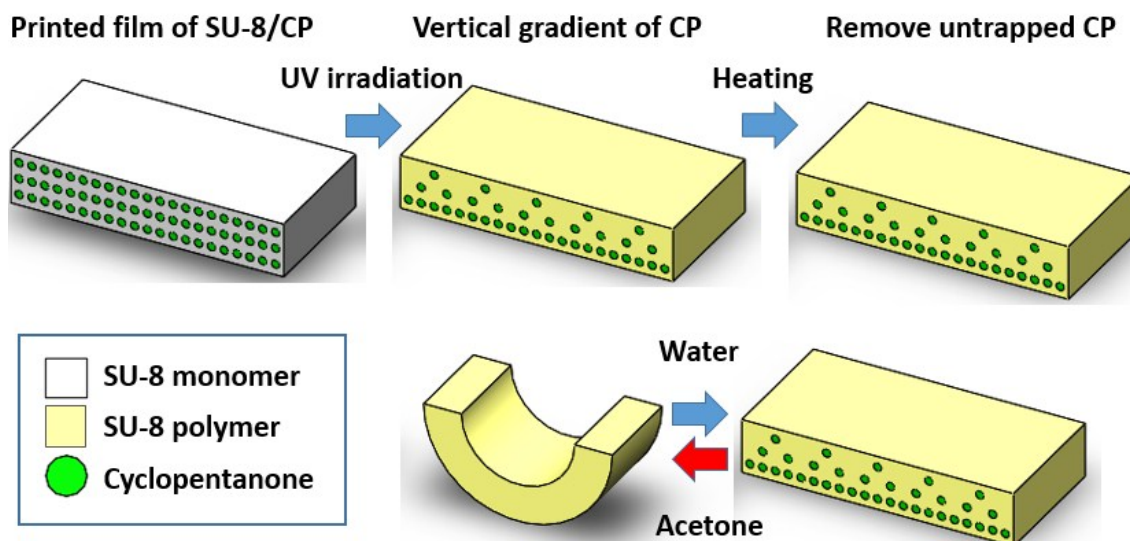


Figure S1. Schemes of fabrication process for programmable SU-8 gel film driven by a gradient concentration of swellable CP guest medium.

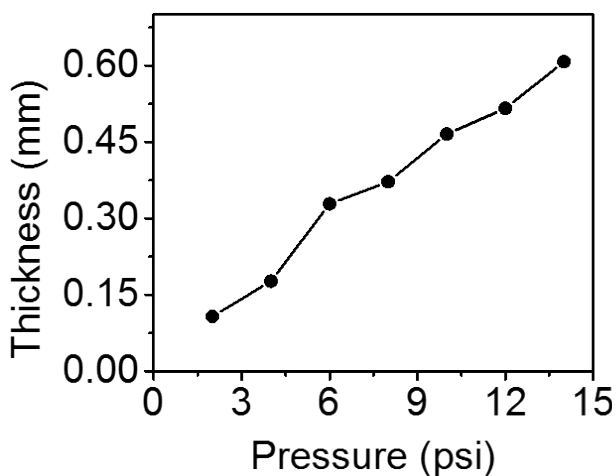


Figure S2. Effect of air pump pressure on the thickness (nozzle diameter: 300 μm)

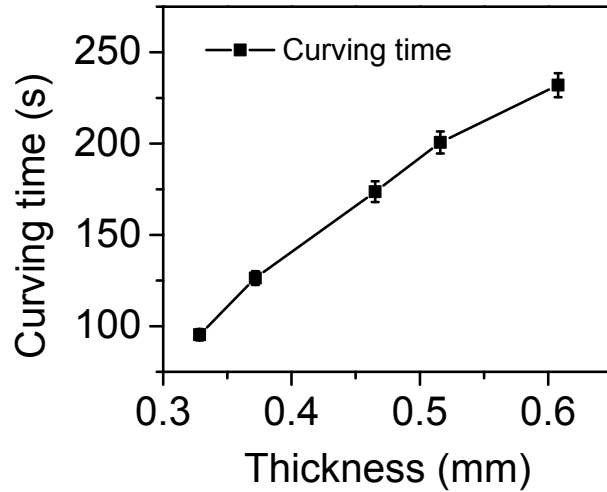


Figure S3. Relationship between the thickness and curving time.

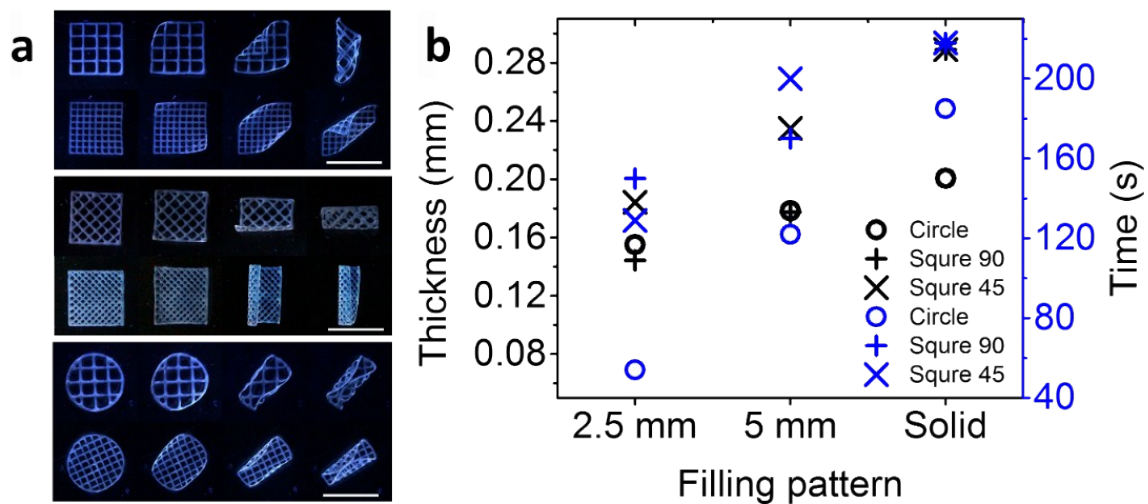


Figure S4. Orientation of designed pattern (a) 20 mm \times 20 mm square with 2.5 mm, 4 mm, 5 mm spacing filling pattern and 90 degree interlocked contour; 20 mm \times 20 mm square with 2.5 mm, 4 mm, 5 mm spacing filling pattern and 45 degrees interlocked contour; 20 mm diameter circle with different line segment, 2.5 mm, 5 mm and solid (scale bars: 20 mm). (b) Effect of thickness on response time for different filling patterns.