

*Supporting Information for*

**Holographic fabrication of three-dimensional nanostructures for microfluidic passive mixing**

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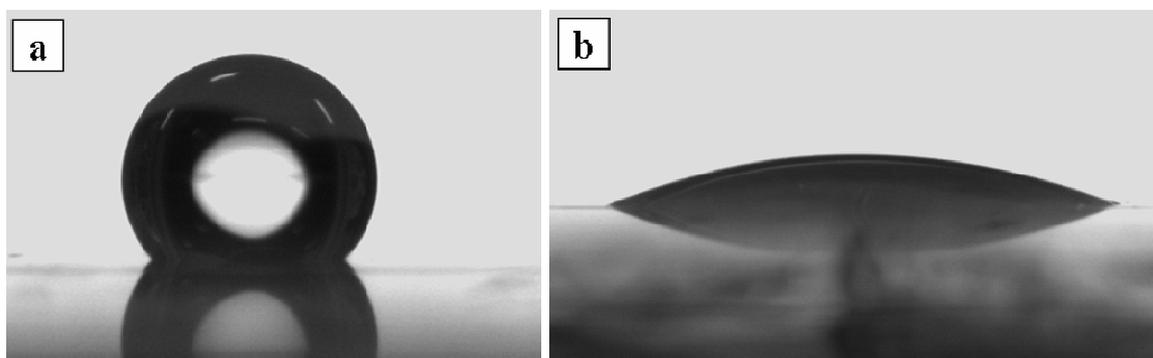
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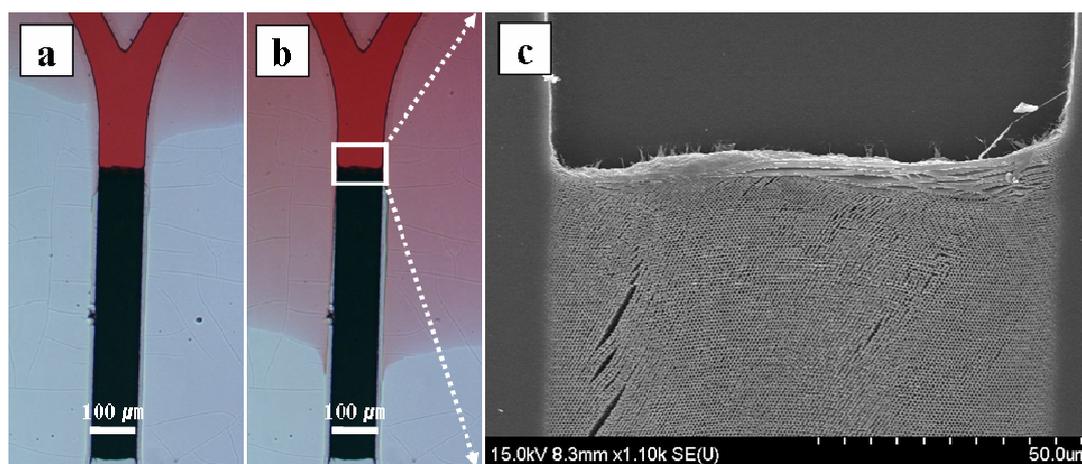
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**Fig. S1.** Profile of water droplets on the 3D holographic patterns (a) before and (b) after 0.2M H<sub>2</sub>SO<sub>4</sub> treatment for 30 mins. Contact angles were 114° and 25°, respectively.



**Fig. S2.** OM and SEM images of a 3D passive mixer flowing red coloring dye. (a) and (b) illustrate breaking microfluidic chip due to a locally lower void fraction of 3D structures at the entrance region of the mixer. (c) SEM image of a locally lower void fraction of 3D structures at the entrance region of the mixer without RIE.