

Supporting Information

Effectiveness of organic solvents for recovering collapsed PDMS micropillar arrays

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Table S1. Values of surface tension and swelling ratio of various solvents¹⁻³

Solvents	Surface tension (mN/m)	PDMS Swelling Ratio
perfluorodecalin	15.4	1.00
dimethyl sulfoxide	43.7	1.00
ethanol	22.3	1.04
isopropanol	22.6	1.09
butyl acetate	25.8	1.22
benzene	28.9	1.28
cyclohexane	25.9	1.33
heptane	21.6	1.34
hexanes	20.3	1.35
pentane	18.7	1.44

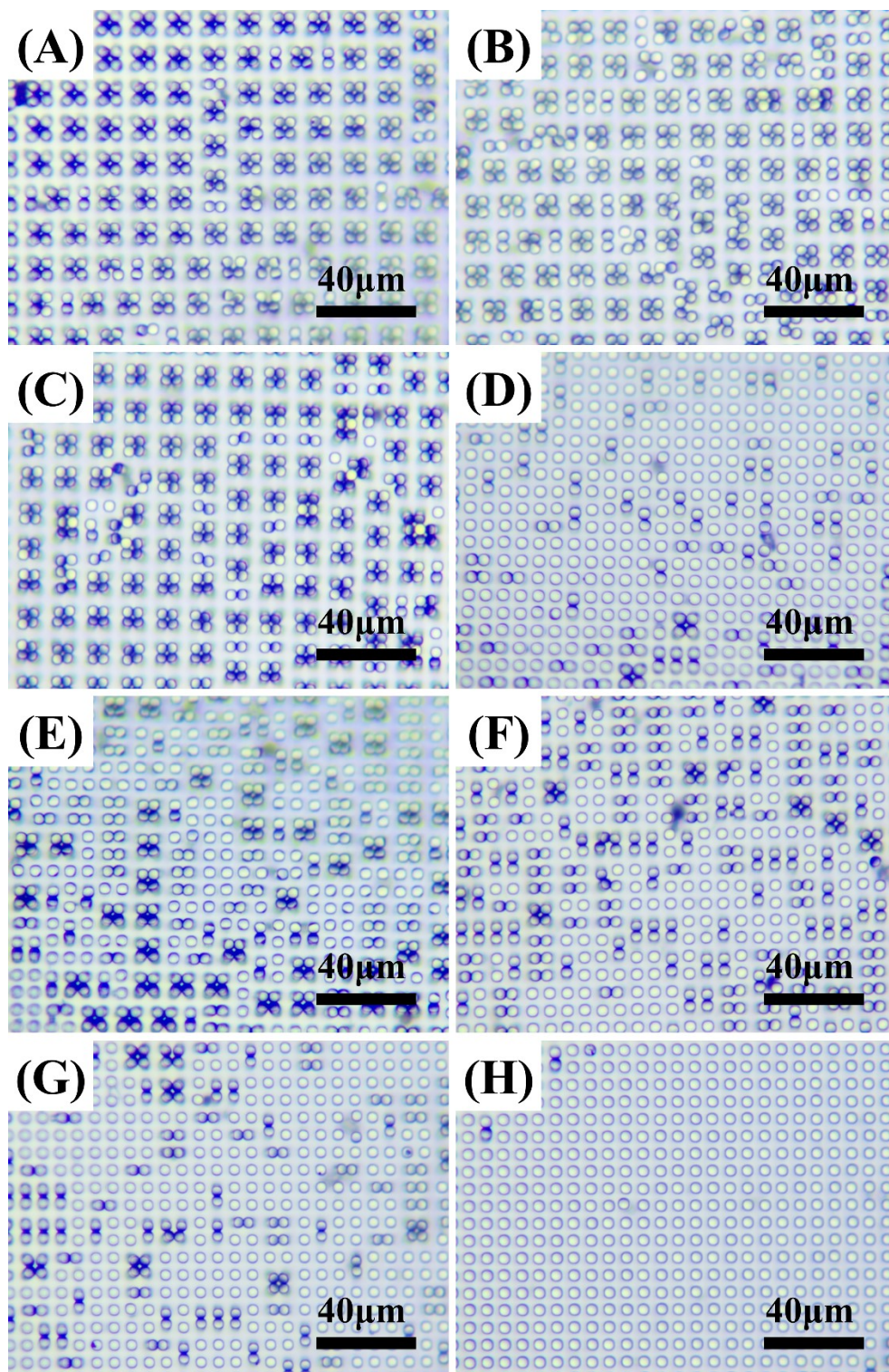


Figure S1. Optical images of PDMS micropillar arrays after washing and drying with different solvents. (A) perfluorodecalin, (B) dimethyl sulfoxide, (C) isopropanol, (D) butyl acetate, (E) benzene, (F) cyclohexane, (G) heptane, (H) pentane.

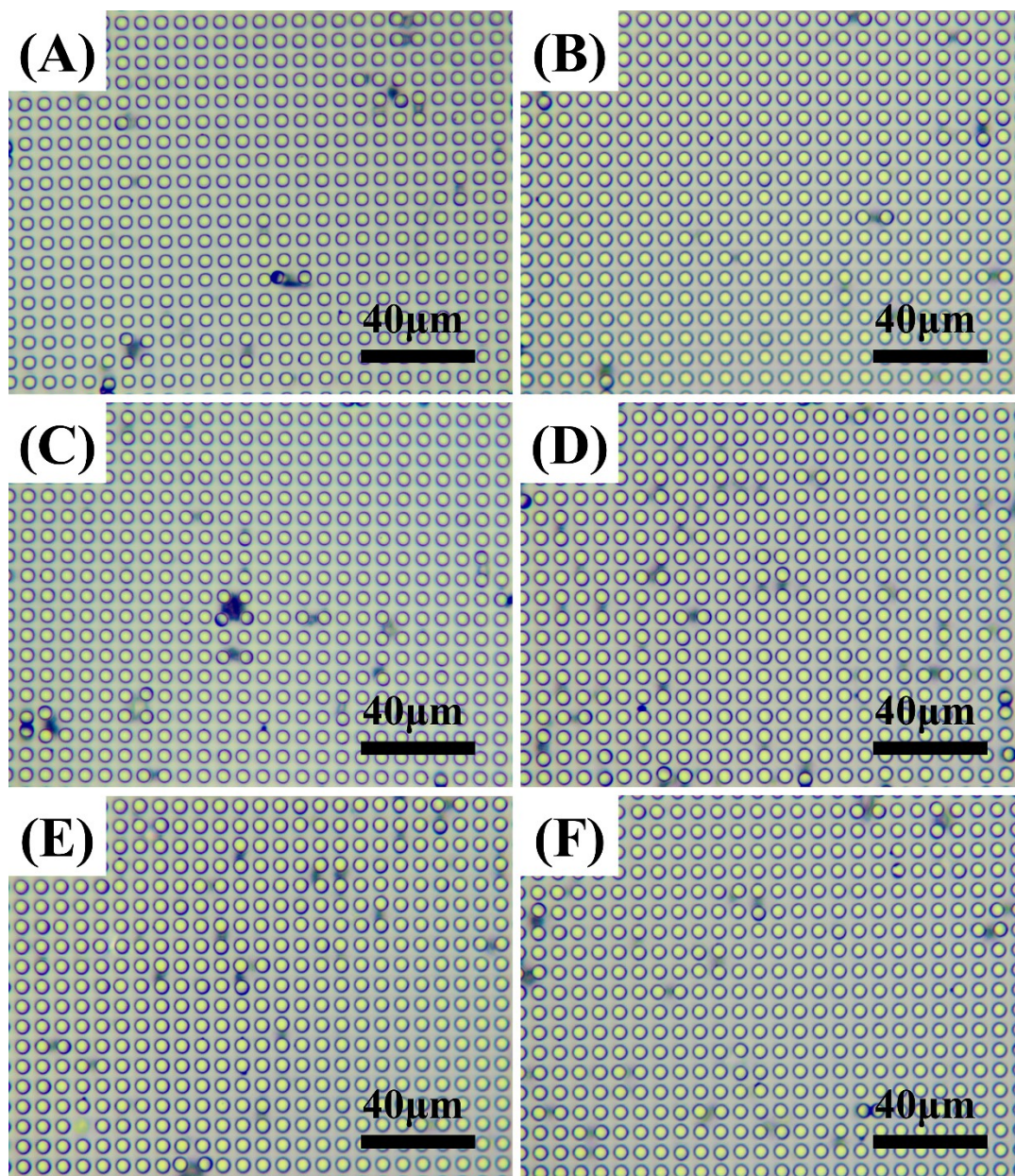


Figure S2. Optical images of PDMS micropillar arrays after washed and dried in hexanes. Before using hexanes, the micropillars were first washed and dried in (A) perfluorodecalin, (B) dimethyl sulfoxide, (C) isopropanol, (D) butyl acetate, (E) benzene, or (F) cyclohexane to induce possible micropillar collapsing. Notice that the grey/dark spots in the micrographs are contaminants due to exposure to air in lab for more than a month.

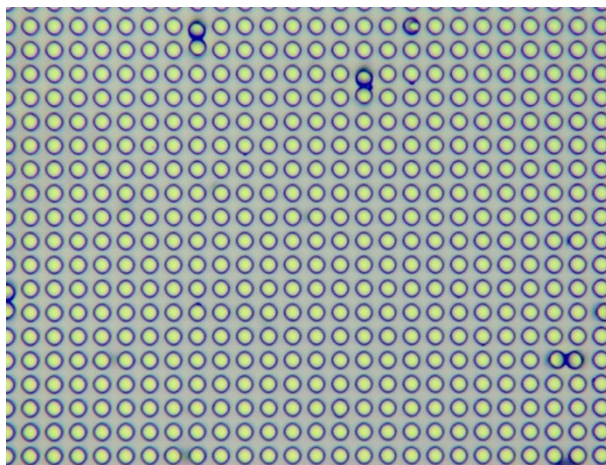


Figure S3. Optical images of PDMS micropillar arrays after washing and drying at 100°C with heptane.

References

- 1 ChemSpider, Royal Society of Chemistry 2023, <http://www.chemspider.com/>.
- 2 Y. Wang, J. Balowski, C. Phillips, R. Phillips, C. E. Sims and N. L. Allbritton, *Lab Chip*, 2011, **11**, 3089-3097.
- 3 J. N. Lee, C. Park and G. M. Whitesides, *Anal. Chem.*, 2003, **75**, 6544-6554.