Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C.

Supporting Information

Stamp Recyclable Contact Printing of Liquid Drop Matrix on Various Surfaces

Shuguang Wang,[a,b] Kai Zhang,[a] Minghong Wu,[a] Jianmei Chen,[c] Lin Jiang,[c] Liqiang Li,[b*] Lifeng Chi,[c*] Wenchong Wang[a*]

[a.] *Institute of Nanochemistry and Nanobiology, School of Environmental and Chemical Engineering, Shanghai University, Shanghai 200444, China.*

[b.] *Advanced Nano-materials Division, Suzhou Institute of Nano-Tech and Nano-Bionics (SINANO), Chinese Academy of Sciences (CAS). Suzhou 215123, China.*

[c.] *Institute of Functional Nano and Soft Materials (FUNSOM), Soochow University Suzhou 215123, China.*

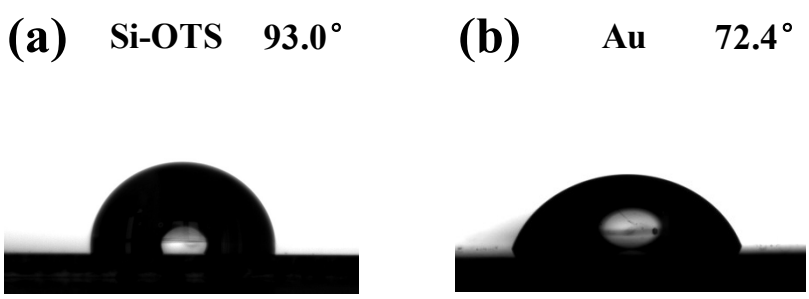

Figure S1 Contact angles of glycerol on a) OTS modified Si and b) Au.

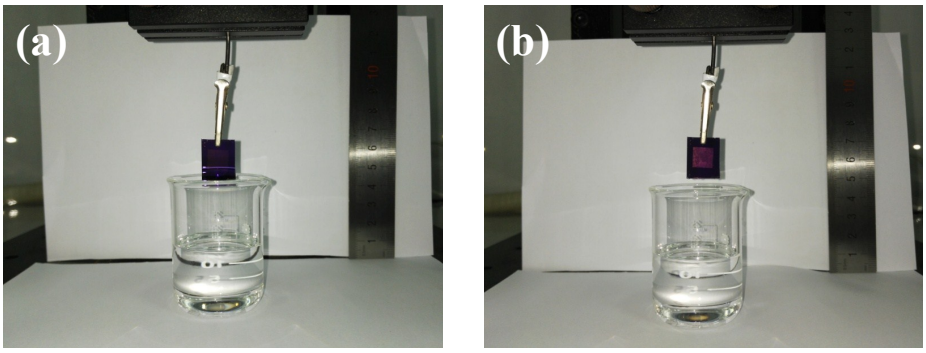

Figure S2. Experimental setup photograph (a) before and (b) after glycerol liquid droplet formation.

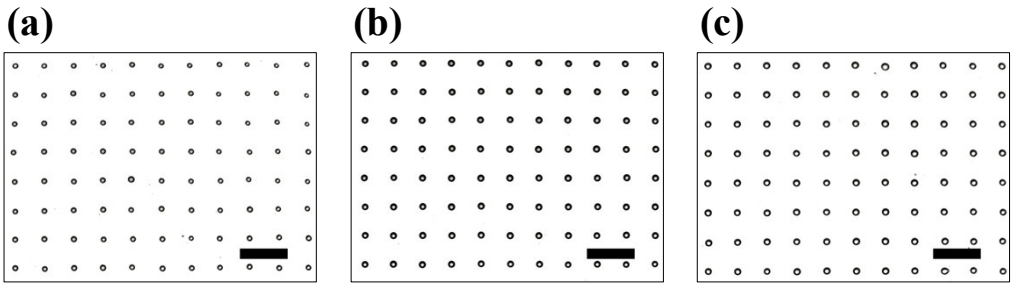

Figure S3.Optical microscopy images of glycerol liquid arrays on Si substrate at printing force of (a) 3N, (b) 7N and (c) 12N, respectively. Scale bars: 100 μm.

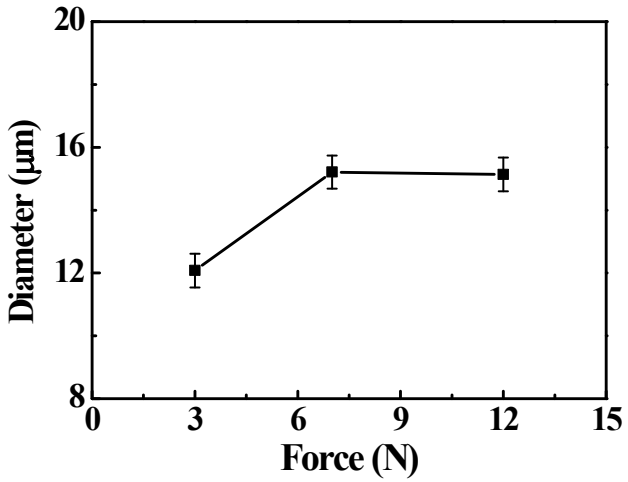

Figure S4. Relationship of the printed glycerol droplet diameter with printing force.

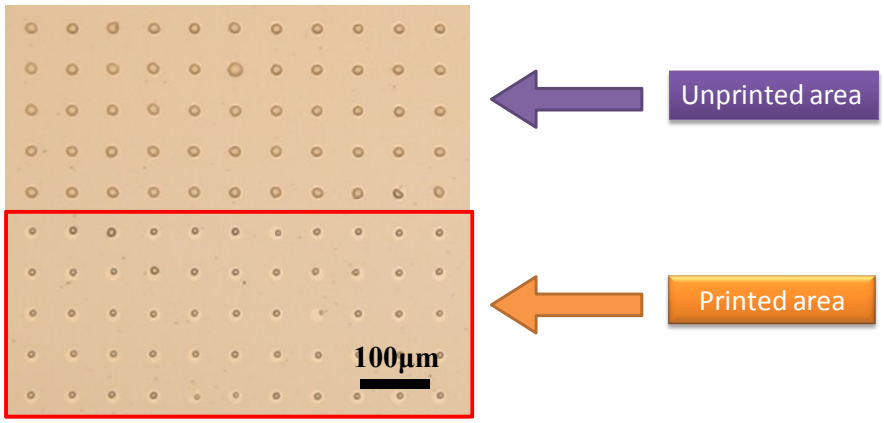

Figure S5. Optical microscopy images of partially printed stamp.

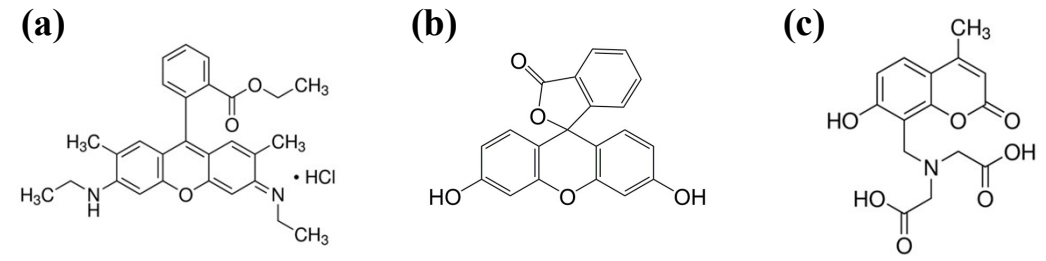

Figure S6. Chemical structures of (a) rhodamine 6G, (b) fluorescein and (c) calcein blue.

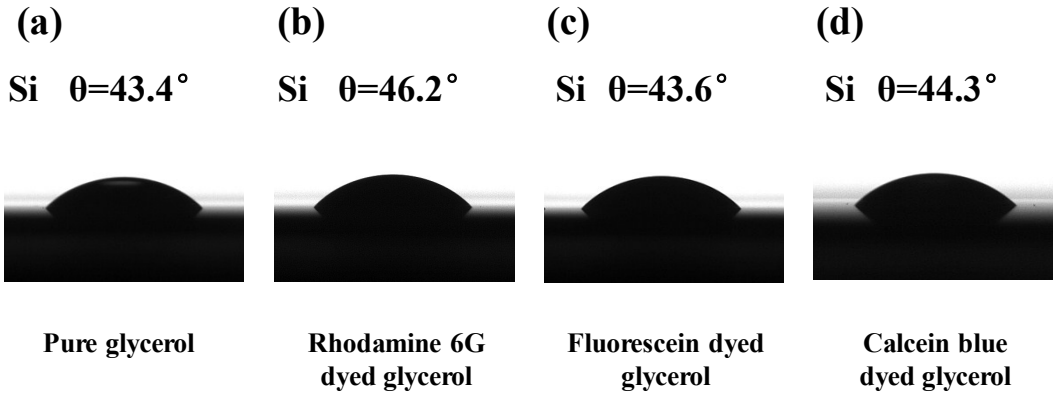

Figure S7. Contact angles of (a) pure, (b) rhodamine 6G, (c) fluorescein and (d) calcein blue dyed glycerol on Si wafers.

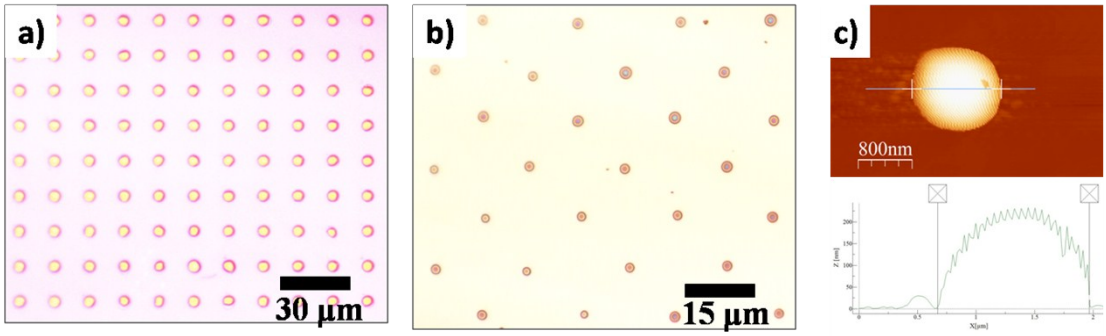

Figure S8. Optical microscopy images of glycerol liquid arrays a) on stamp with 5 µm Au dots and b) transferred to Si, c) AFM image of single droplet on Si and the corresponding line profile.

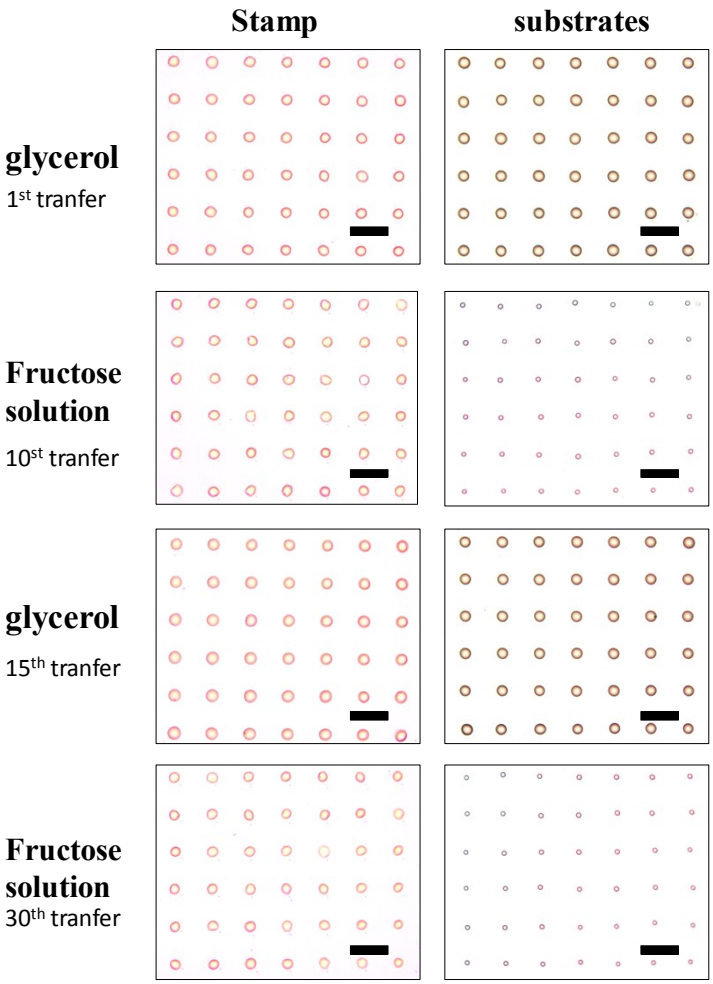

Figure S9. Optical microscopy images of glycerol liquid and D-(−)-fructose aqueous solution (50wt%) arrays on stamp and Si substrates after transfer printing for 1st, 10th, 15th and 30th time. Scale bars: 60 μm.

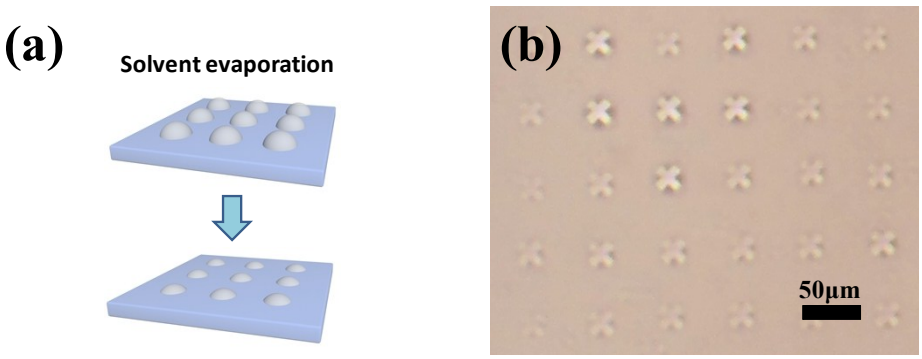

Figure S10. a) Scheme of the microlens imaging b) Optical microscope image of a white light passing through a cross-shaped mask and D-(−)-Fructose microlens array on PET substrate after evaporation of water.