

Supplementary Materials

Controlled Assembly of Lipid Molecules via Regulating Transient Spatial Confinement

**Yuqi Huang ¹, Umit Celik ¹, Ziqian Xu ¹, Daniel Speer ², Dario Ossola ³, Roland Faller ^{4,5},
Atul N. Parikh ⁶ and Gang-Yu Liu ^{1,*}**

¹ Department of Chemistry, University of California, Davis, CA 95616, USA;
yqhuang@ucdavis.edu (Y.H.); zqnxu@ucdavis.edu (Z.X.)

² Chemistry Graduate Group, University of California, Davis, CA 95616, USA;
djspeer@ucdavis.edu

³ Cytosurge AG, 8152 Glattbrugg, Switzerland; dario.ossola@cytosurge.com

⁴ Department of Chemical Engineering, University of California, Davis, CA 95616,
USA; roland.faller@ttu.edu

⁵ Department of Chemical Engineering, Texas Tech University, Lubbock, TX 79409,
USA

⁶ Department of Biomedical Engineering, University of California, Davis, CA 95616,
USA;
anparikh@ucdavis.edu

* Correspondence: gyliu@ucdavis.edu

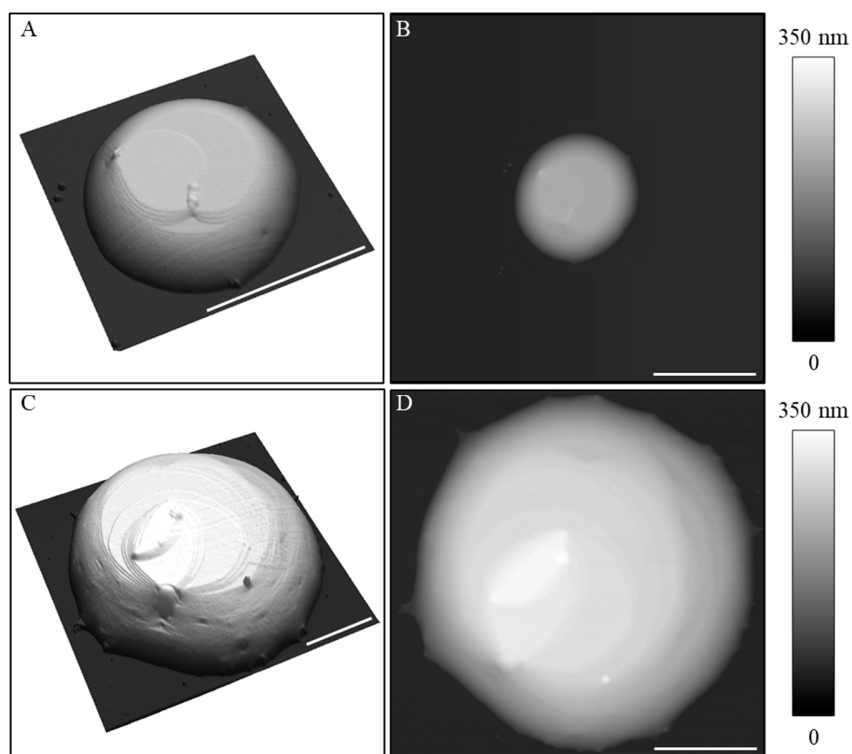


Figure S1. An AFM topographic image displayed in (A) 3D and (B) 2D, respectively, for a POPC disk printed under $p = 300$ mbar and $t = 10$ ms. An AFM topographic image displayed in (C) 3D and (D) 2D, respectively, for a POPC disk printed under $p = 300$ mbar and $t = 500$ ms. Lateral scale bar = $2\ \mu\text{m}$.

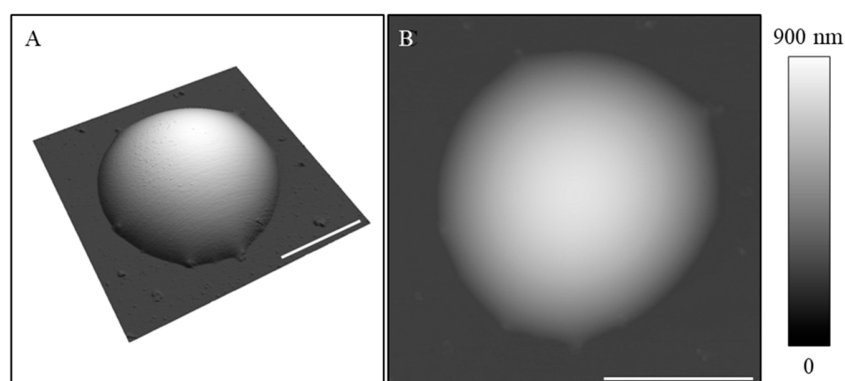


Figure S2. An AFM topographic image displayed in (A) 3D and (B) 2D, respectively, for a POPC spherical cap on an OTS/glass, printed using a mixed solvent (ethanol:glycerol = 99:1 (v/v)), and $p = 300$ mbar, $t = 500$ ms. Lateral scale bar = $2\ \mu\text{m}$.

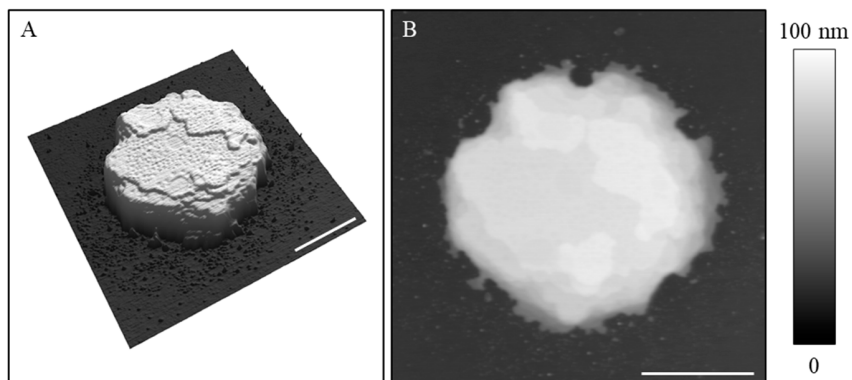


Figure S3. An AFM topographic image displayed in (A) 3D and (B) 2D, respectively, for a POPC disk printed on an OTS/glass using a mixed solvent of [ethanol:glycerol = 9:1 (v/v)], $p = 10$ mbar, and $t = 2$ ms. Lateral scale bar = $4\ \mu\text{m}$.

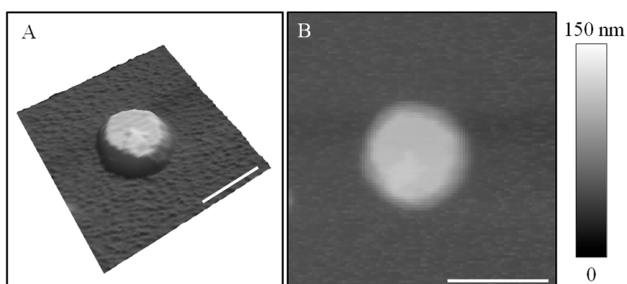


Figure S4. An AFM topographic image displayed in (A) 3D display and (B) 2D, respectively, for a POPC disks on an OTS/glass using a mixed solvent of [ethanol:glycerol = 9:1 (v/v)], $p = 10$ mbar, $t = 10$ ms. Lateral scale bar = $2\ \mu\text{m}$.