

Supplementary Materials: The Assembly of DNA Amphiphiles at Liquid Crystal-Aqueous Interface

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1. Characterization of DNA-Lipids

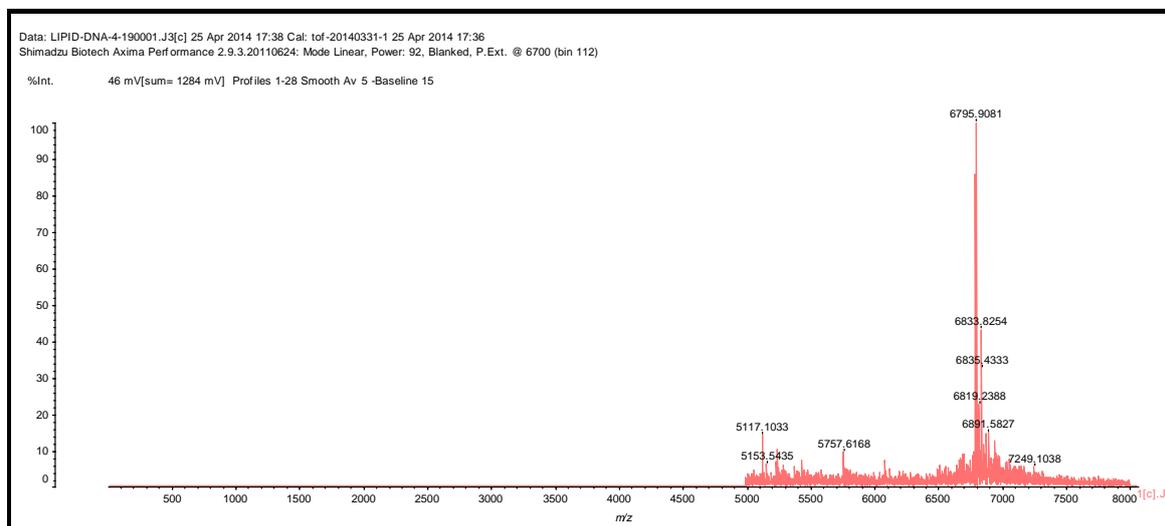


Figure S1. MALDI-TOF Spectra of DNA-lipids.



Figure S2. Polyacrylamide gel electrophoresis of DNA-lipids and DNA strands. (A) DNA-lipids T₁; (B) c-DNA T₁; (C) DNA strands T₁; (D) random strands T₂.

2. Optical Images (Crossed Polars) of 5CB Contacted with Pure DNA-Lipids at Various Concentrations

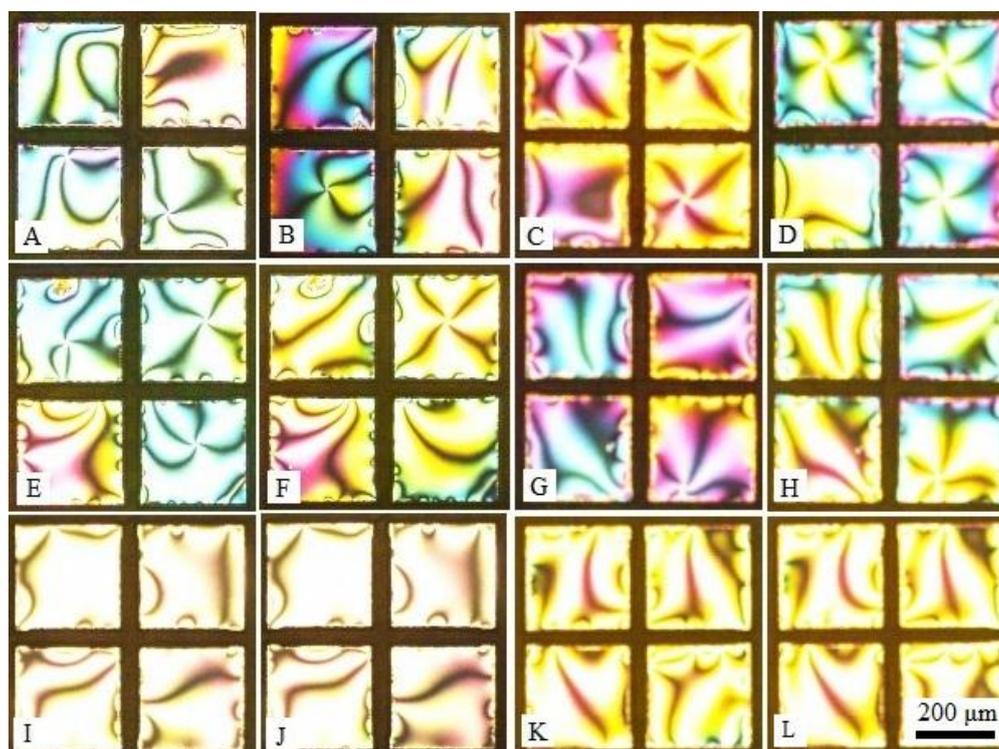


Figure S3. Optical images (transmission through crossed polars) of 5CB before (A,C,E,G,I,K) and after (B,D,F,H,J,L) exposure to aqueous (PBS) dispersions of a stated amount of DNA-lipids for 1 hour. The concentration of DNA-lipids: (A,B) 100 μM ; (C,D) 50 μM ; (E,F) 25 μM ; (G,H) 10 μM ; (I,J) 5 μM ; (K,L) 2 μM .

3. Optical Images (Crossed Polars) of 5CB Contacted with a Mixture of DNA and L-DLPC

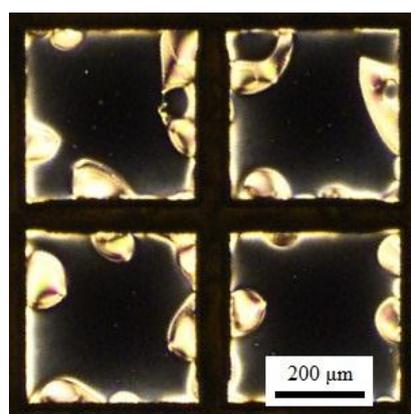


Figure S4. Optical images of 5CB exposure to aqueous dispersions of mixture 20 μM DNA and 5 μM L-DLPC for 1 h.

4. Optical Images (Crossed Polars) of 5CB Contacted with a Mixture of DNA-Lipids and L-DLPC at Various Ratios

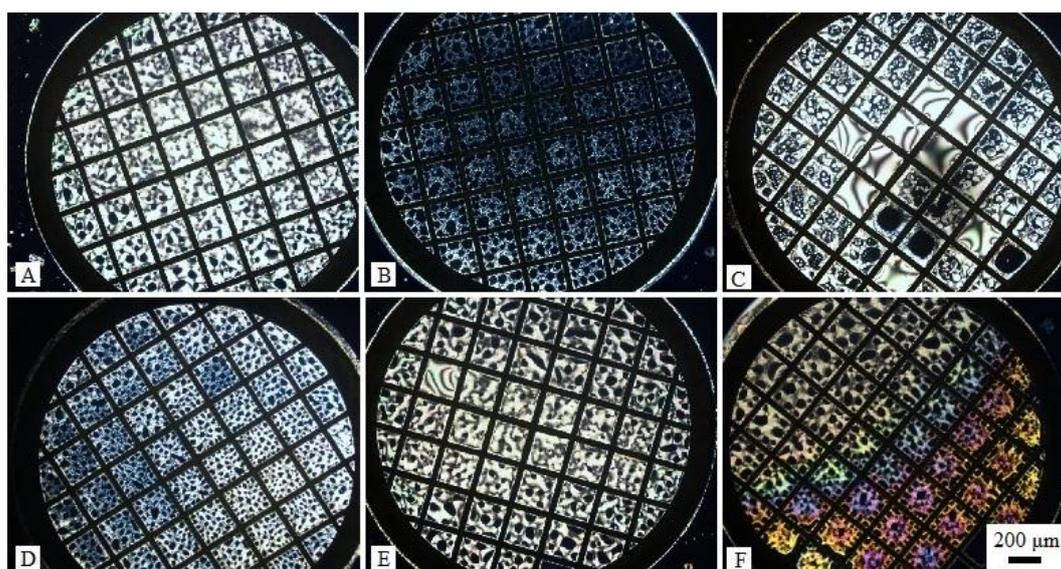


Figure S5. (A) Optical images (crossed polars) of 5CB exposure to 10 μM mixture DNA-lipids and L-DLPC for 1 h. The concentration of DNA-lipids/L-DLPC: (A) 7.5/2.5; (B) 7/3; (C) 6.5/3.5; (D) 6/4; (E) 5.5/4.5; (F) 5/5.

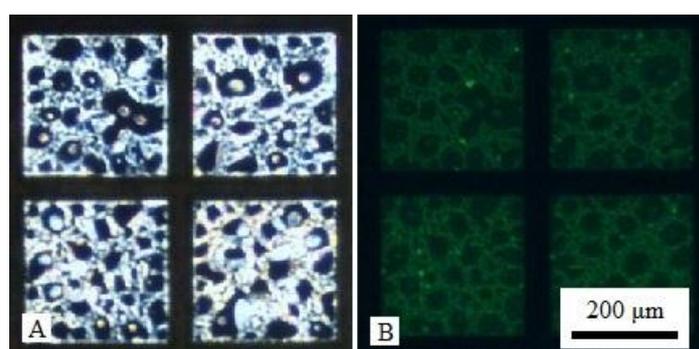
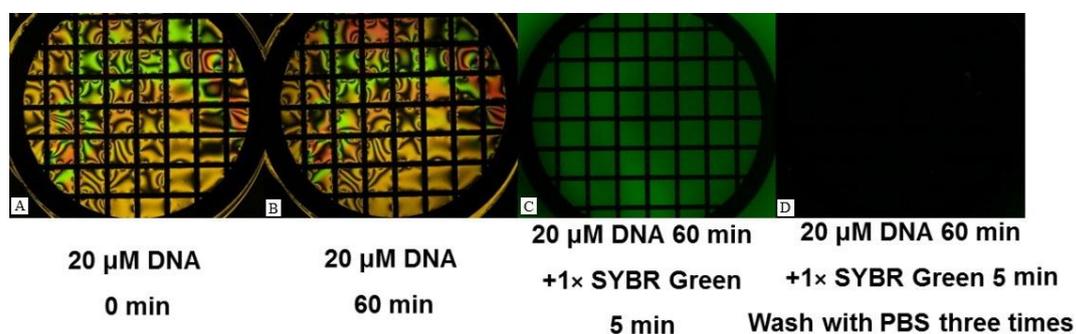


Figure S6. (A) Optical images (crossed polars) and (B) corresponding fluorescence micrographs of 5CB exposure to mixture 6 μM DNA-lipids and 4 μM L-DLPC for 1 h then introduction of 1 \times SYBR Green.

5. Optical Images (Crossed Polars) and Corresponding Green Fluorescence Images of 5CB Contacted with Pure DNA



DNA:GGG TTA GGG TTA GGG TTA TG

Figure S7. Optical images (transmission through crossed polars) of 5CB before (A) and after (B) exposure to aqueous (PBS) dispersions of 20 μM DNA for 1 h; (C) Fluorescent images of 5CB exposure to aqueous dispersions of 20 μM DNA for 1 h and dyed by SYBR Green 5 min, followed by washing with PBS buffer for three times (D).

6. Synthesis of DNA-Lipids

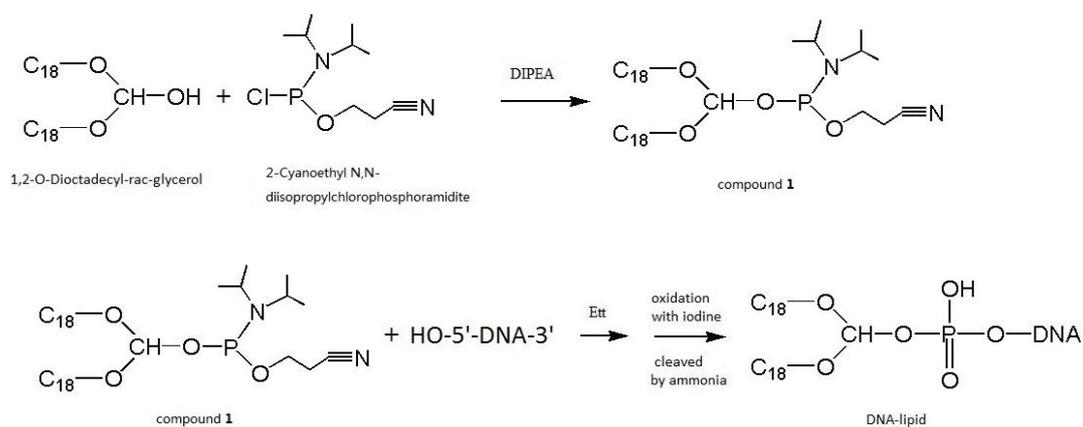


Figure S8. The schematic illustration of DNA-lipids synthesis.



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