

## Supplementary Data

### Langmuir-Blodgett Transfer from the Oil-Water Interface

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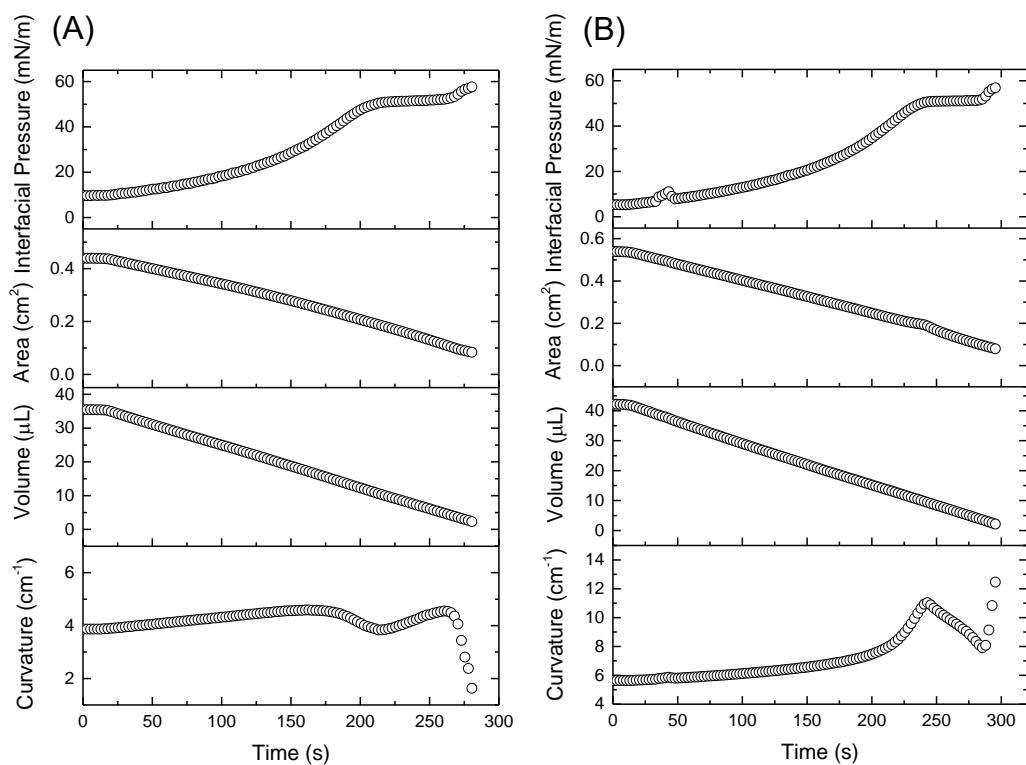
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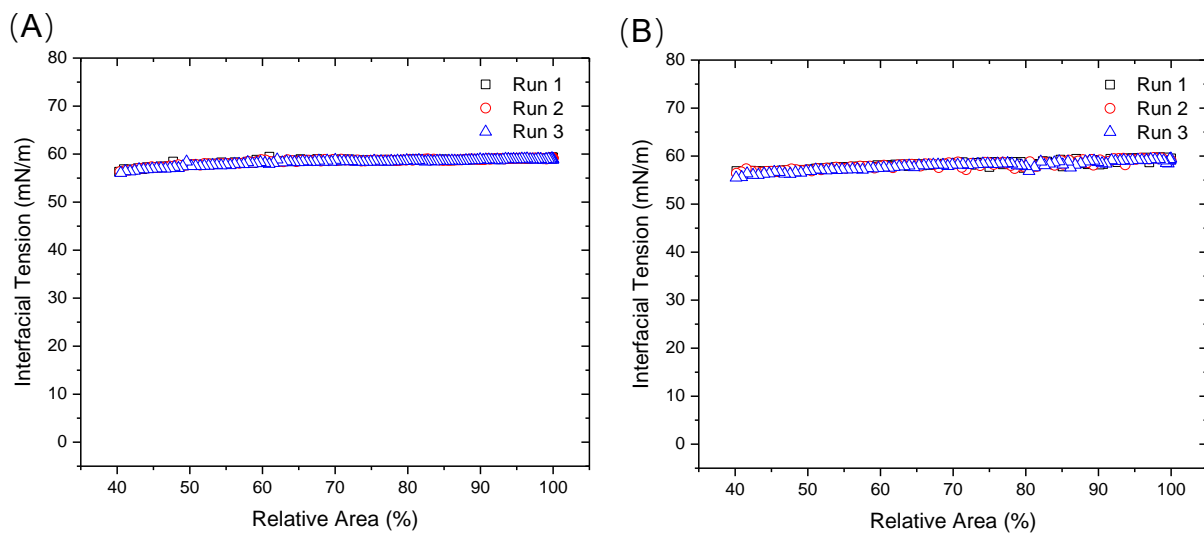
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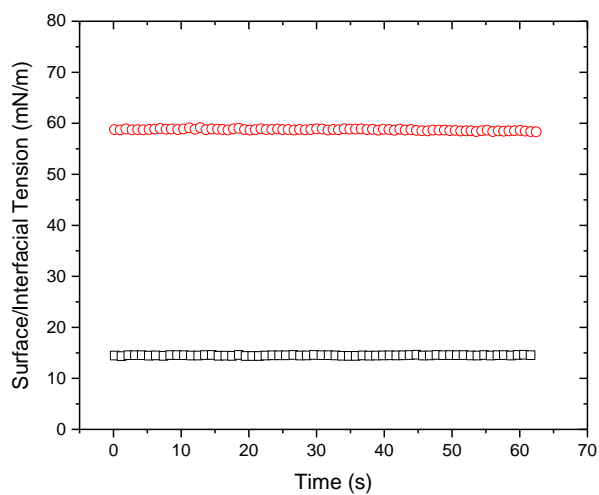
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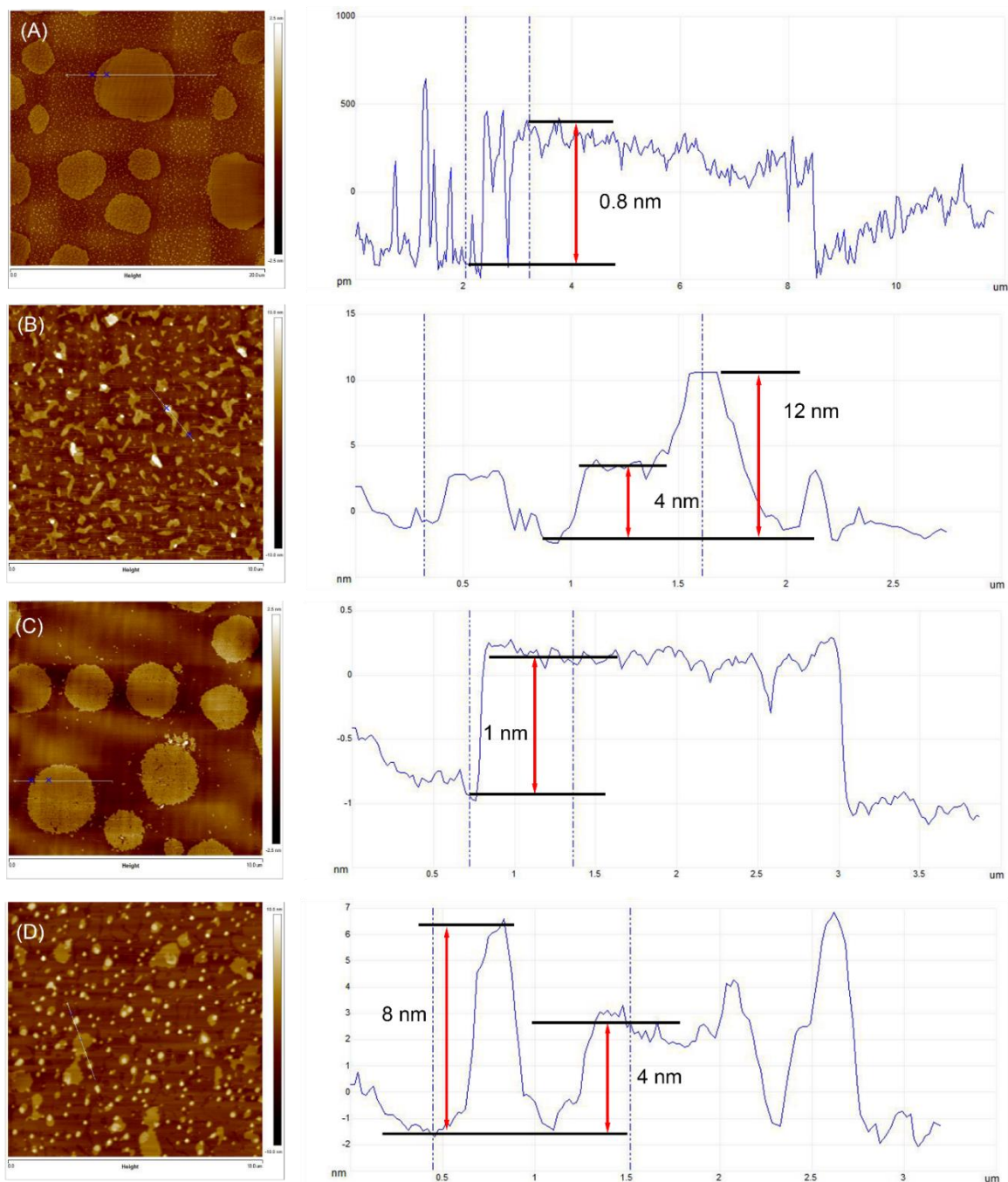
**Fig. S1.** Typical results of interfacial pressure – interfacial area – droplet volume - curvature at the droplet apex vs. time for the compression of Infasurf film at the oil-water interface with **(A)** oil-in-water (sessile drop) and **(B)** water-in-oil (pendant bubble) configurations. All experiments were conducted at room temperature.



**Fig. S2.** Negative control: variations of the interfacial tension while gradually reducing the surface area of the perfluorooctane-water interface, without a spread Infasurf film. **(A)** Oil-in-water (sessile drop) configuration. **(B)** Water-in-oil (pendant bubble) configuration. All experiments were conducted at room temperature and repeated three times to demonstrate reproducibility.



**Fig. S3.** The surface tension of perfluorooctane (black square), and the interfacial tension of perfluorooctane-water interface (red circle). Determined with CDS at room temperature.



**Fig. S4.** AFM topographic images and height analysis of Infasurf films LB transferred from the air-water surface at surface pressures of **(A)** 30 and **(B)** 60 mN/m, and from the oil-water interface at interfacial pressures of **(C)** 30 and **(D)** 53 mN/m, respectively.

### **Supplementary Video Clips**

**Movie S1.** Quasi-static compression of an Infasurf monolayer spread at the oil-water interface, and recording of the corresponding compression isotherm at room temperature, using the oil-in-water (sessile drop) configuration of the CDS.

**Movie S2.** Langmuir-Blodgett (LB) transfer of the Infasurf monolayer from the oil-water interface, using the water-in-oil (pendant bubble) configuration of the CDS.