

Supplementary Materials



Figure S1. Opening angle. Images of the opening dimple angle (A) schematic, (B) replica taken from 10  $\mu\text{l}$  paraffin wax droplet, (C) replica taken from 50  $\mu\text{l}$  droplet.

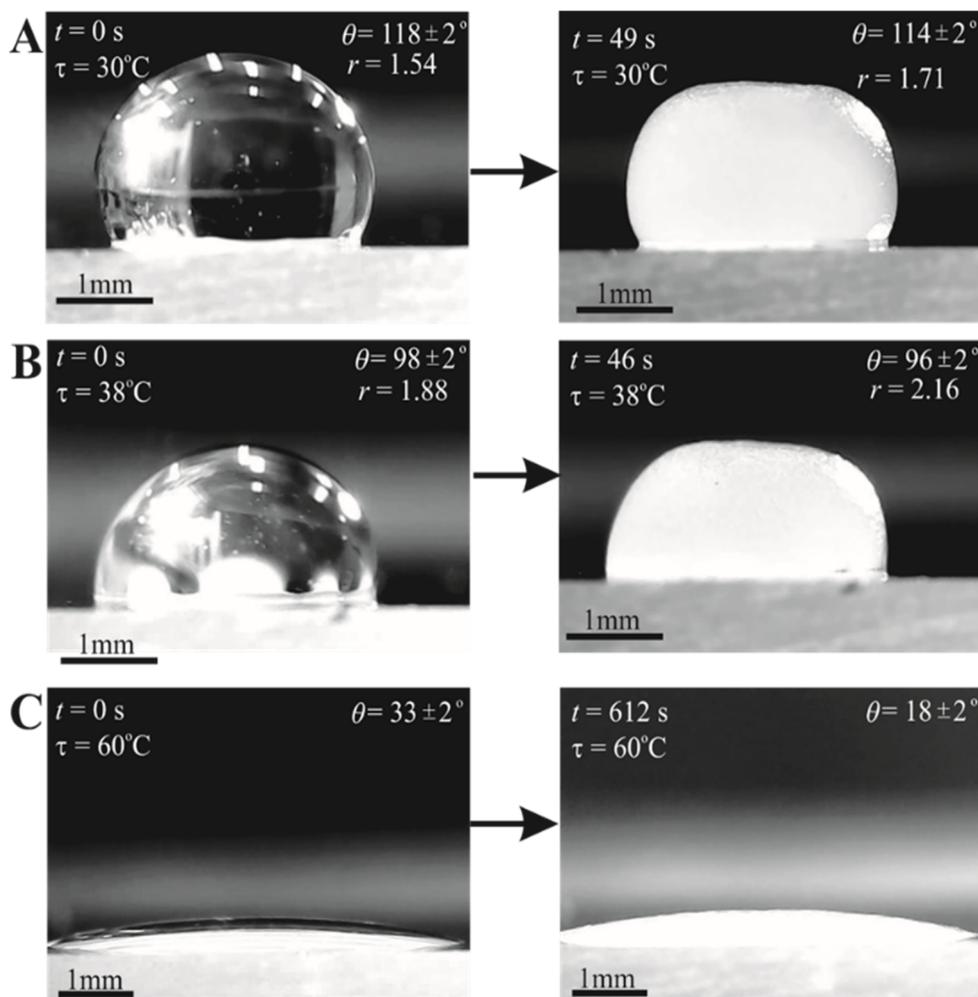
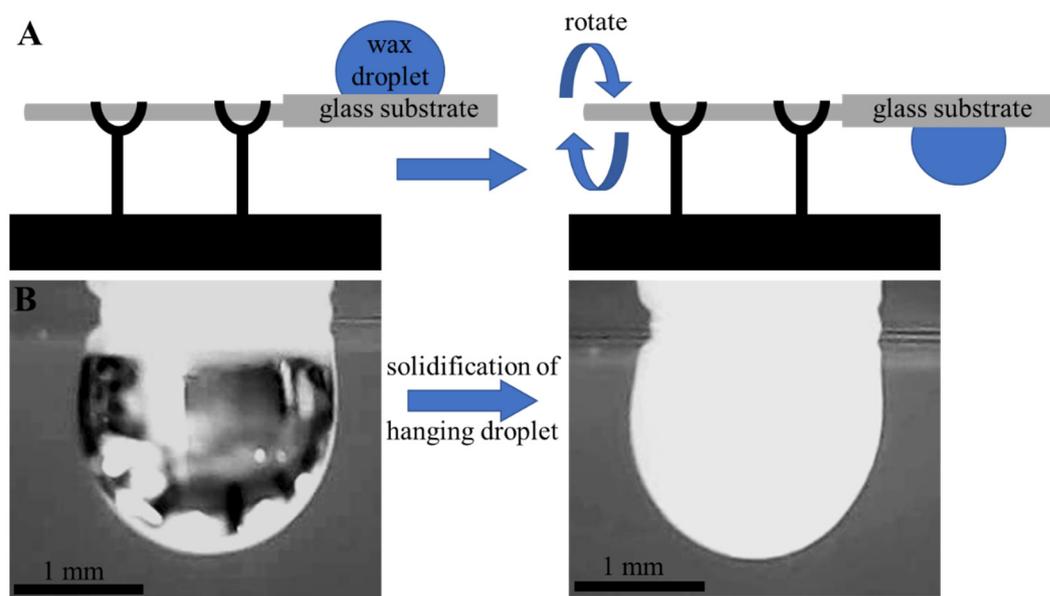
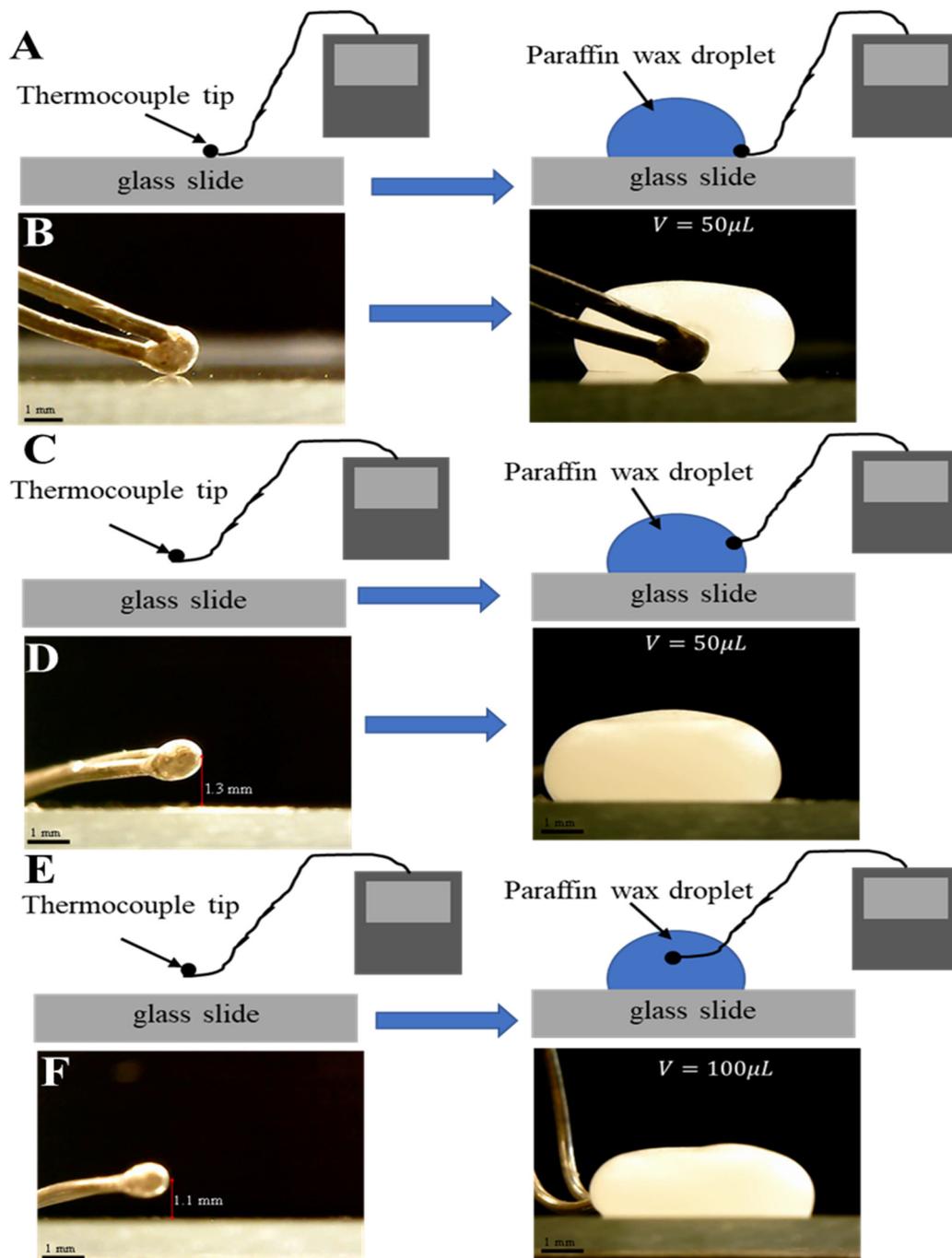


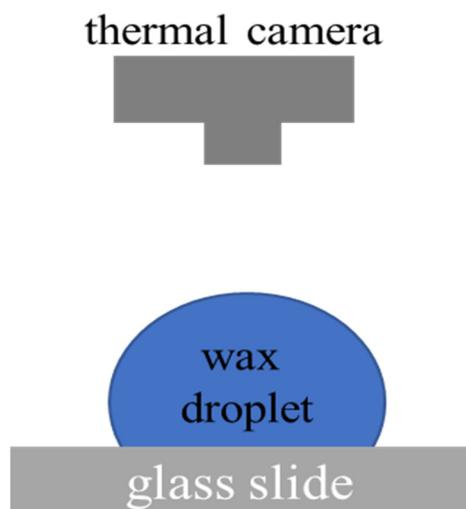
Figure S2. Effect of substrate temperature on molten wax wetting behavior. Images of 10  $\mu\text{l}$  paraffin wax droplets placed on a slide at different temperatures: (A) 30  $^{\circ}\text{C}$ , (B) 38  $^{\circ}\text{C}$ , (C) 60  $^{\circ}\text{C}$ .



**Figure S3.** Effect of gravity on droplet freezing. (A) Schematic representation of the experimental setup. (B) Images of a 10  $\mu\text{l}$  paraffin wax droplet before and after solidification hanging from a glass substrate at  $\tau_{\text{sub}}=22$  °C.



*Figure S4. Thermocouple measurements of the droplet surface temperature. Schematic (A) and image (B) represent the thermocouple tip placed at the three-phase contact line (air/glass/paraffin). Schematic (C) and image (D) represent the thermocouple tip at the air/paraffin interface. Schematic (E) and image (F) show that the thermocouple tip is surrounded by paraffin wax (near the center of the droplet).*



*Figure S5. Schematics of pyrometric temperature measurements.*

#### Supplementary Files

- **Video S1.** Side view of a deforming and solidifying 10  $\mu\text{l}$  paraffin wax droplet.
- **Video S2.** Side view of a deforming and solidifying 20  $\mu\text{l}$  paraffin wax droplet.
- **Video S3.** Side view of a deforming and solidifying 50  $\mu\text{l}$  paraffin wax droplet.
- **Video S4.** Side view of a deforming and solidifying 10  $\mu\text{l}$  paraffin wax droplet hanging upside down from a glass substrate.
- **Video S5.** Time variation of infrared image of the paraffin wax droplet. 50  $\mu\text{l}$  droplet, view from above, speed 7X.