

One-step Fabrication of Hot-Water Repellent Surfaces

Supplimentary Material

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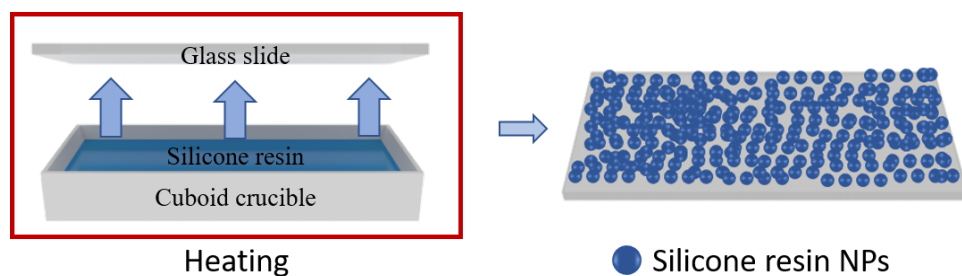


Figure S1. Schematic showing the surface fabrication process.



Figure S2. Image of muffle furnace with a temperature sensor.

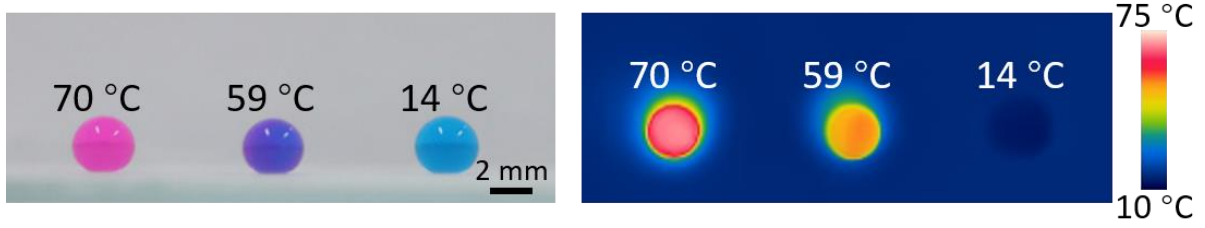


Figure S6. Optical and infrared images of high temperature droplets on the surface fabricated at $T_d = 390\text{ }^{\circ}\text{C}$ (The droplets are stained with food coloring for differentiation, and the background temperature is $18\text{ }^{\circ}\text{C}$).

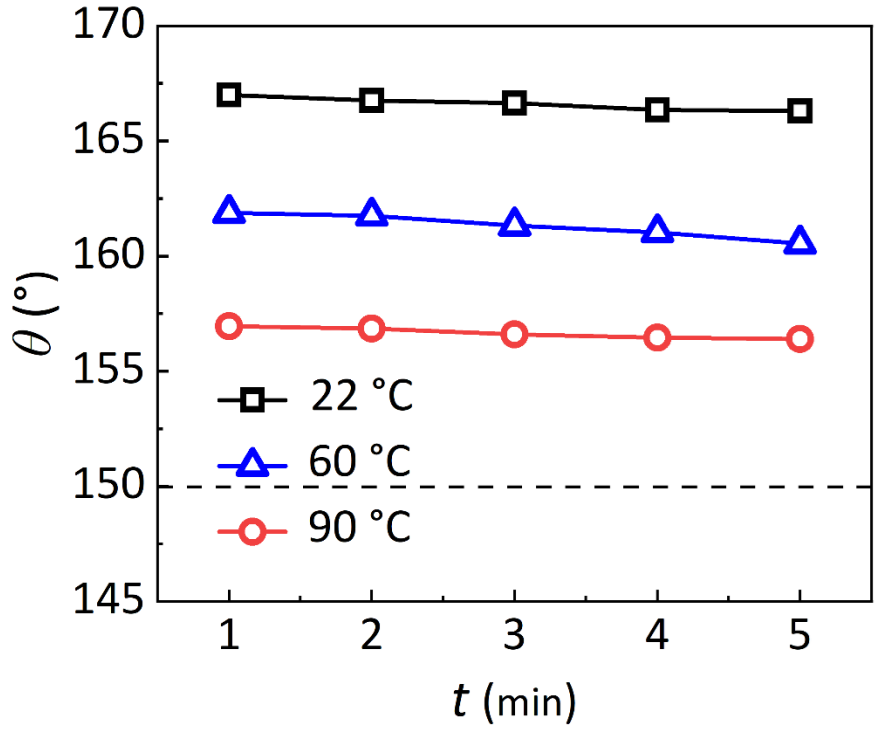


Figure S7. The change of contact angle with the increase of time during the natural cooling of high-temperature droplets.

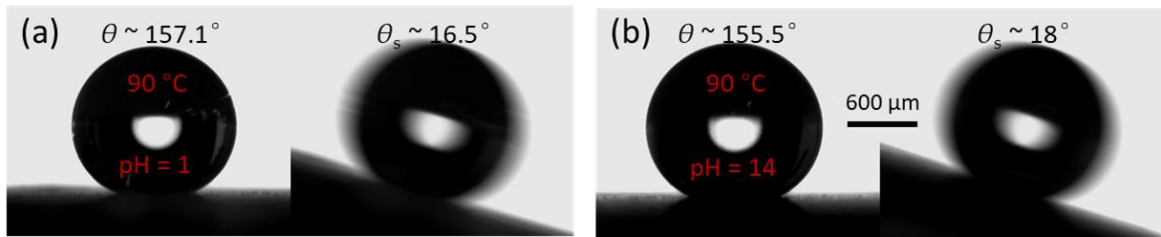


Figure S8. The θ and θ_s of hot acid and hot base on the HWRS: (a) acid, (b) base.

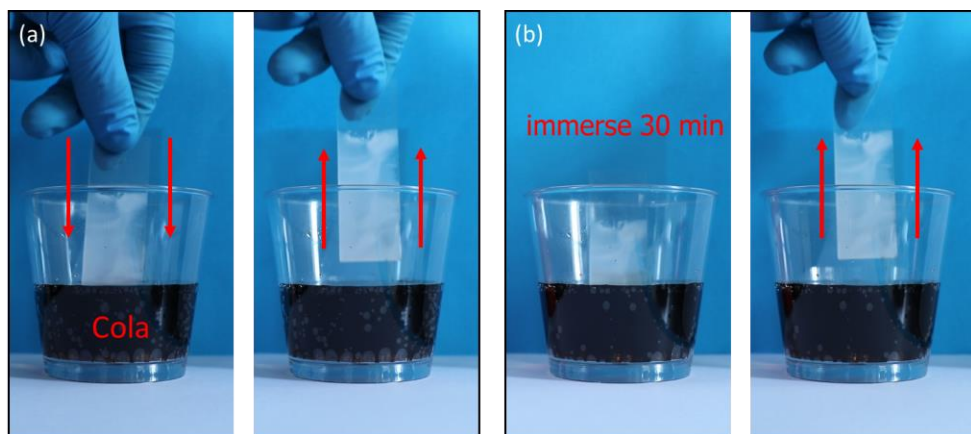


Figure S9. The antifouling test of HWRS: (a) immersed in cola and take out; (b) immersed in cola for 30 min and take out.

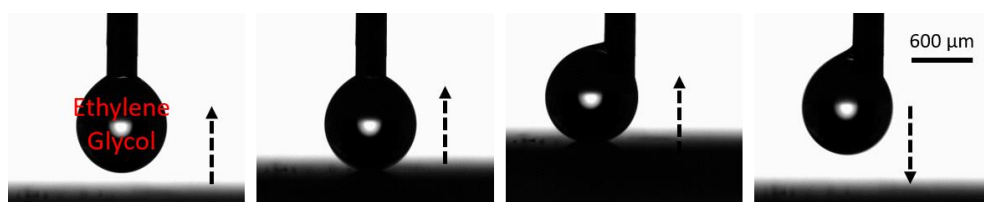


Figure S10. Low adhesion between HWRS and ethylene glycol droplet.

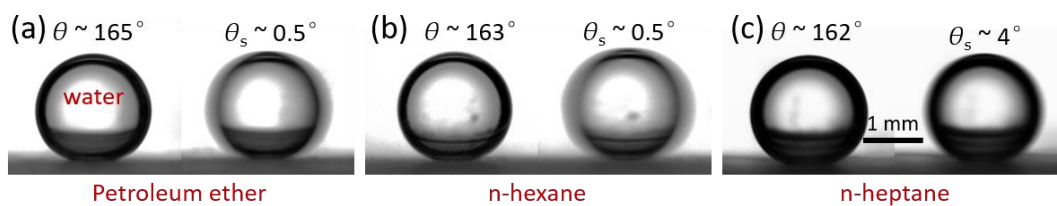


Figure S11. The θ and θ_s of water on the HWRS immersed in oil: (a) petroleum ether, (b) n-hexane, and (c) n-heptane.

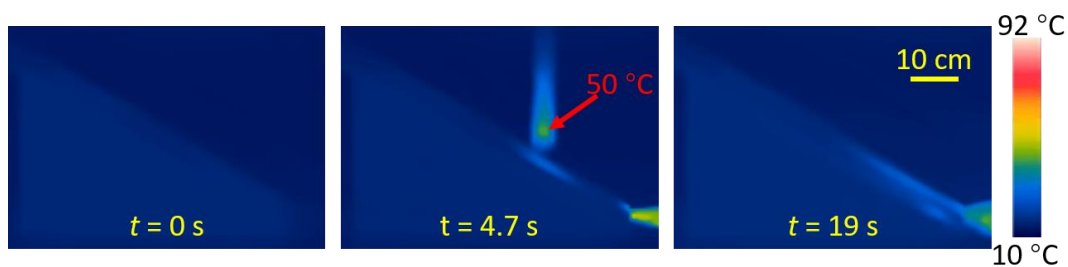


Figure S12. Sequential images showing the self-cleaning property of the HWRS by an infrared camera.

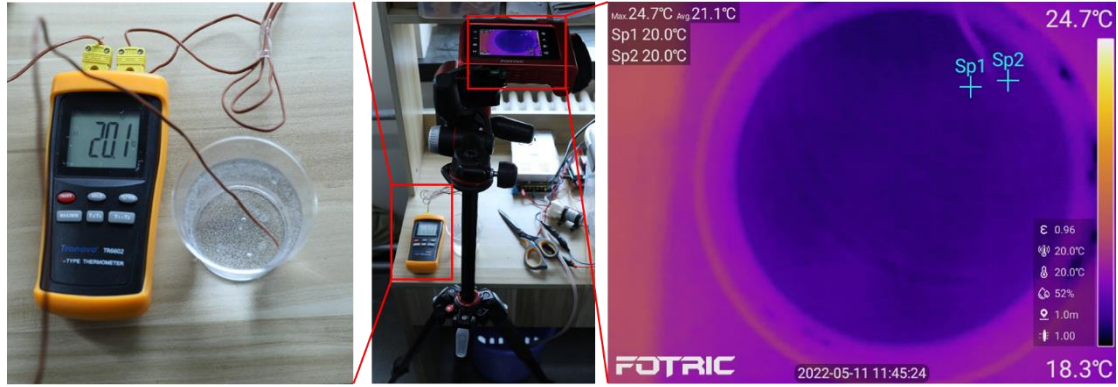


Figure S13. The calibration of the infrared camera: Firstly, the liquid temperature was measured by k-type thermocouples, and then the infrared camera was adjusted to make the temperature in the thermal imaging consistent with the measured temperature. .