

Supporting information

Anisotropic Bi-layer Hydrogel Actuator with pH-Responsive Color-Changing and Photothermal-Responsive Shape-Changing Bi-Functional Synergy

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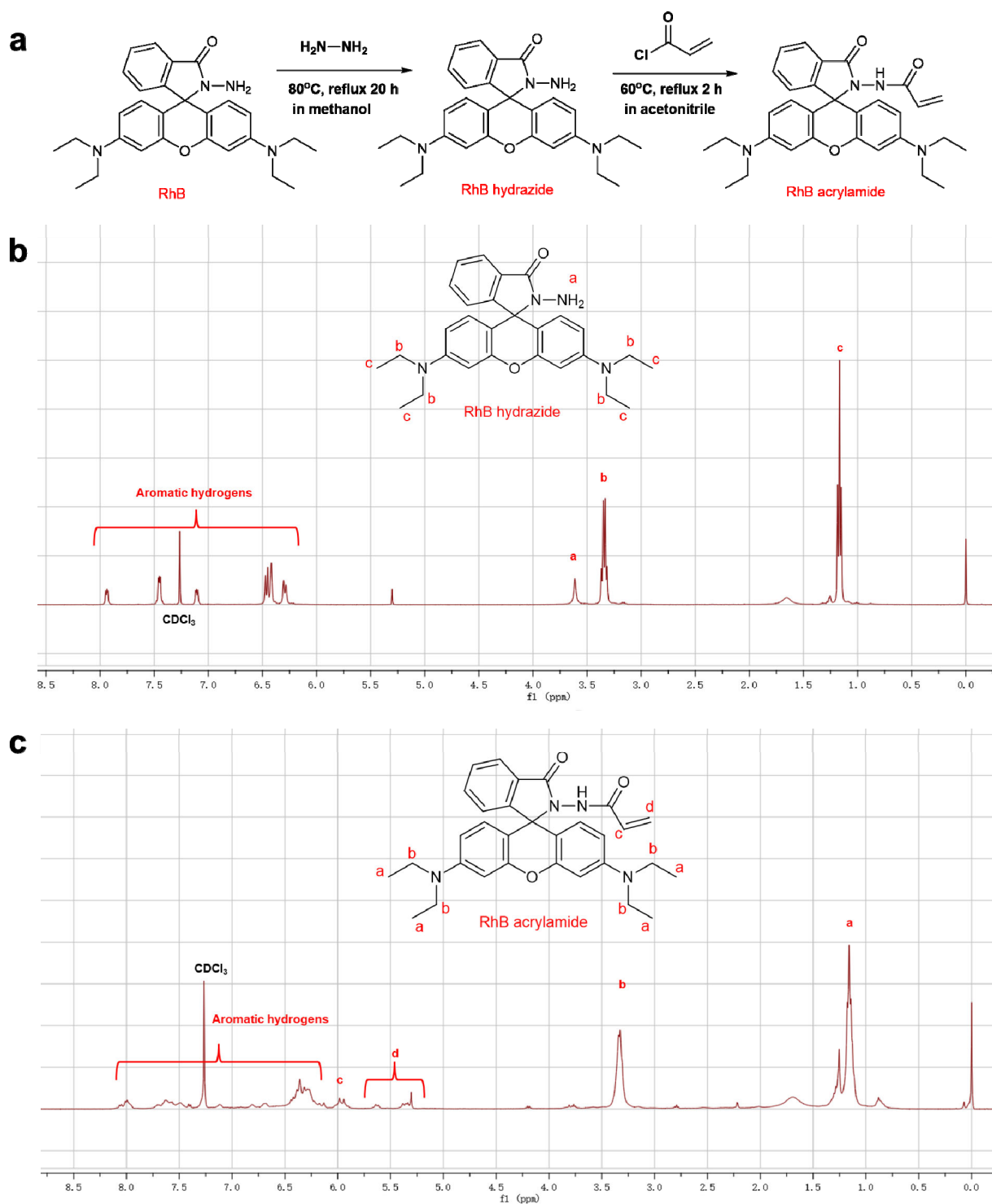
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Supporting Figures



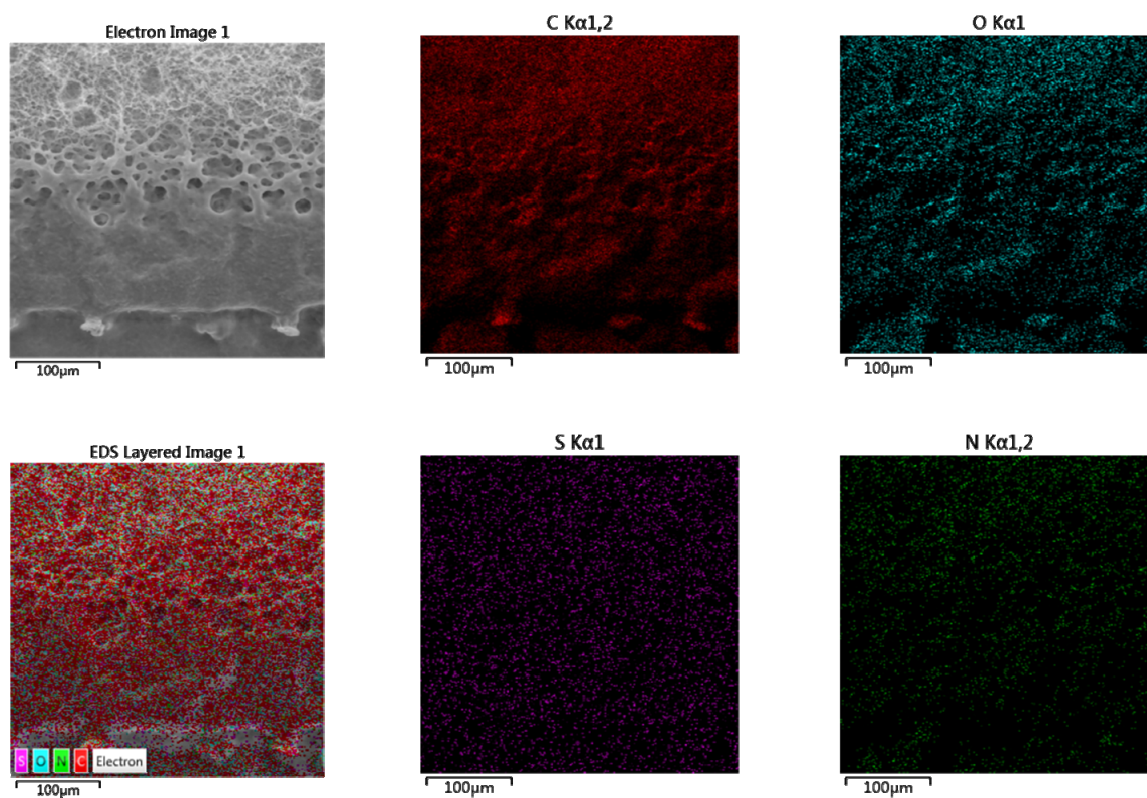


Figure S2. The EDS-mapping of bi-layer hydrogel.

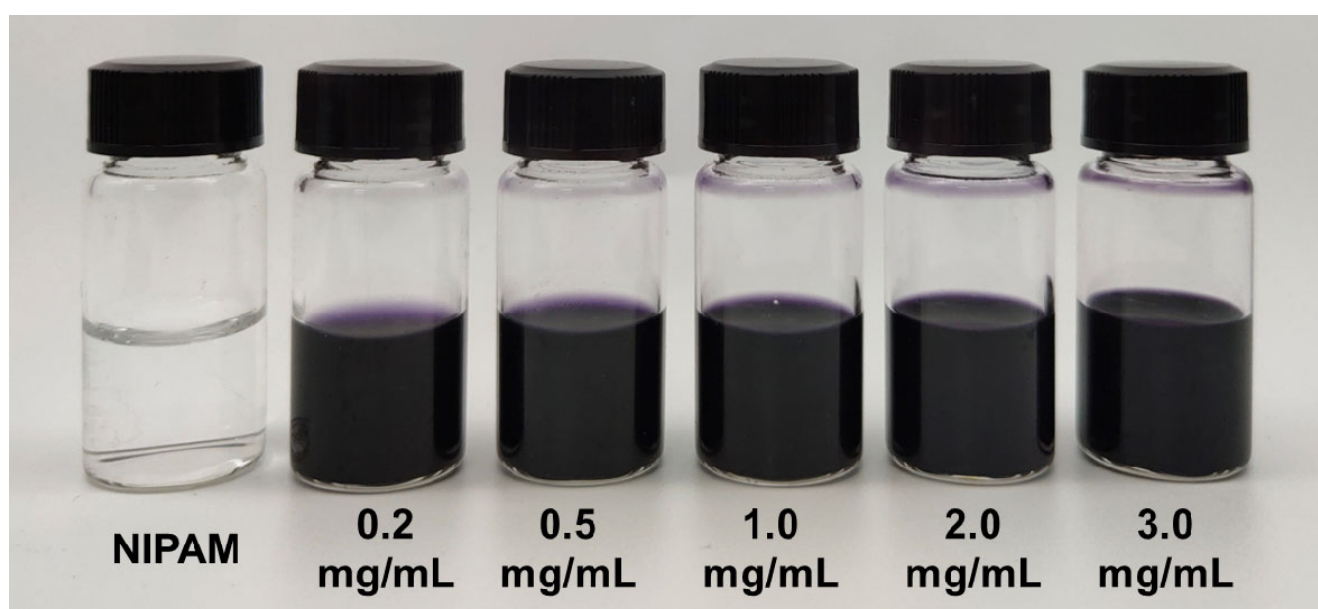


Figure S3. Different concentrations of melanin and blank control group.

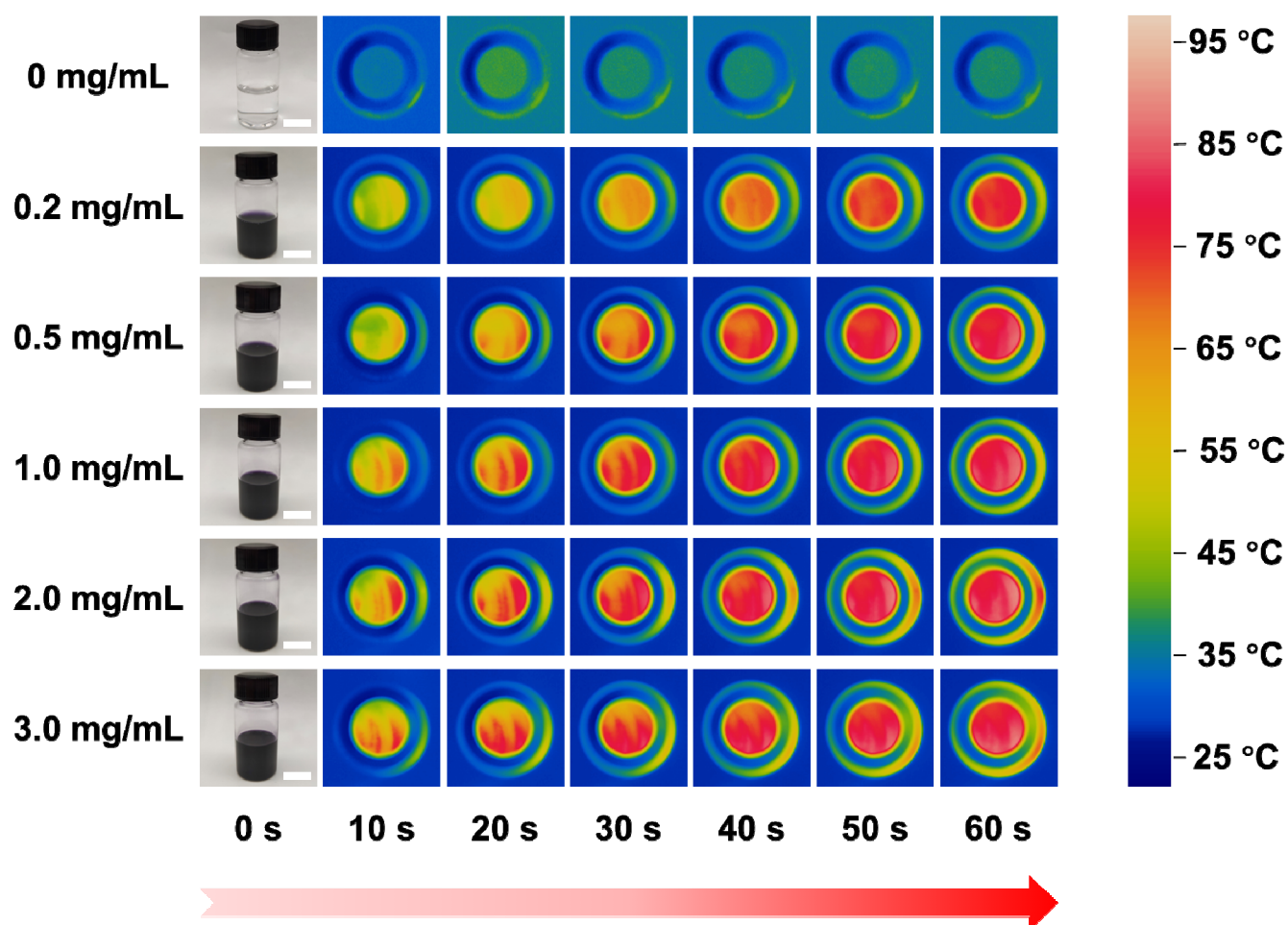


Figure S4. Thermal images of different concentrations of melanin.

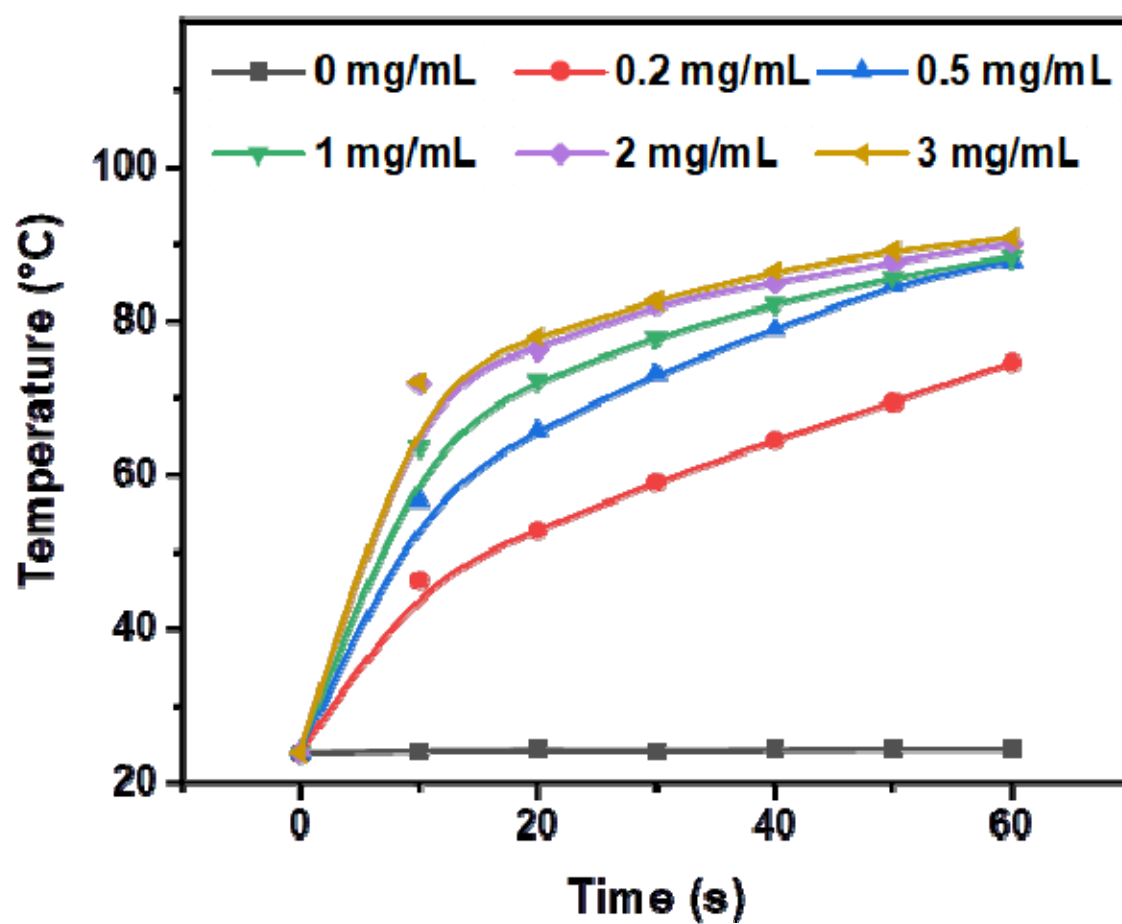


Figure S5. Curves of different concentrations of melanin over time.

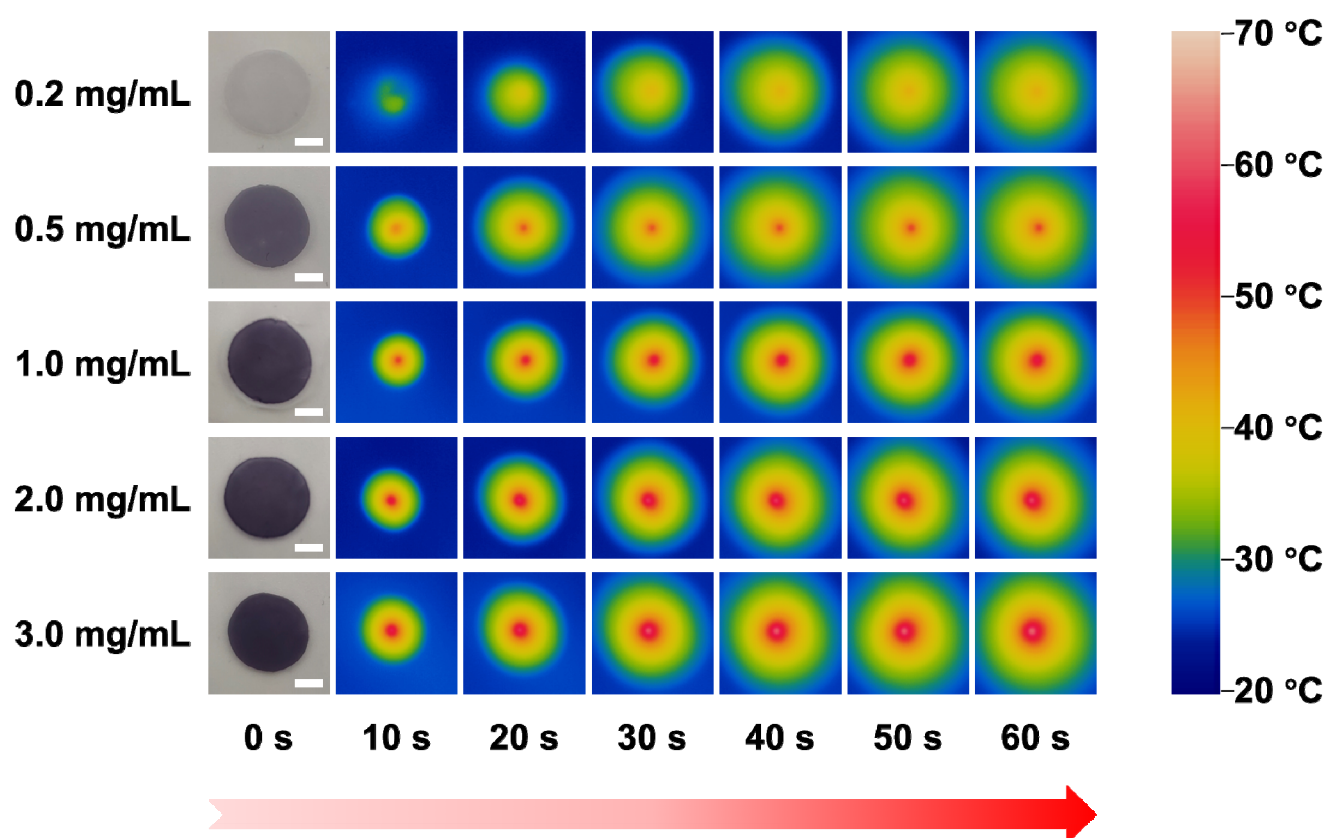


Figure S6. Temperature rise curve of MPH under different near infrared light intensities.

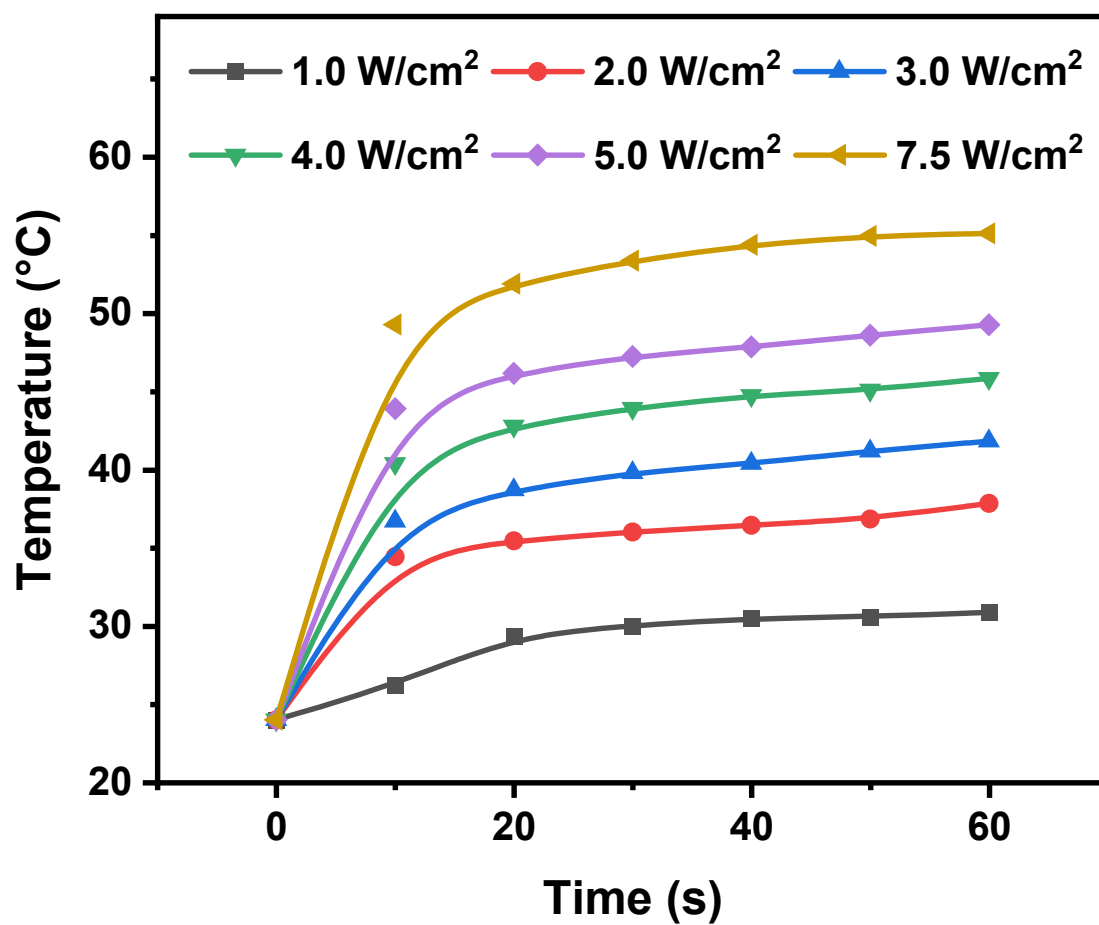


Figure S7. Thermal imaging of MPH under different near infrared light intensities.

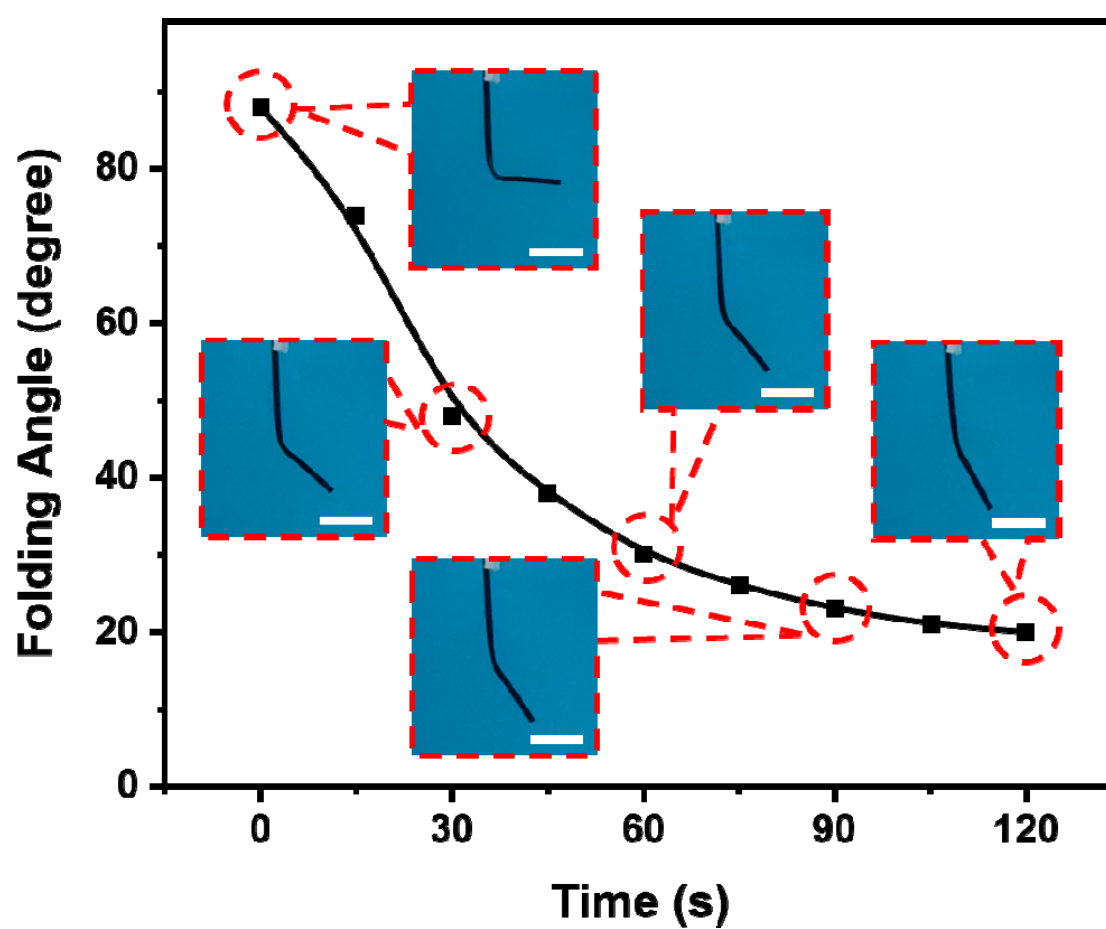


Figure S8. Folding recovery process.

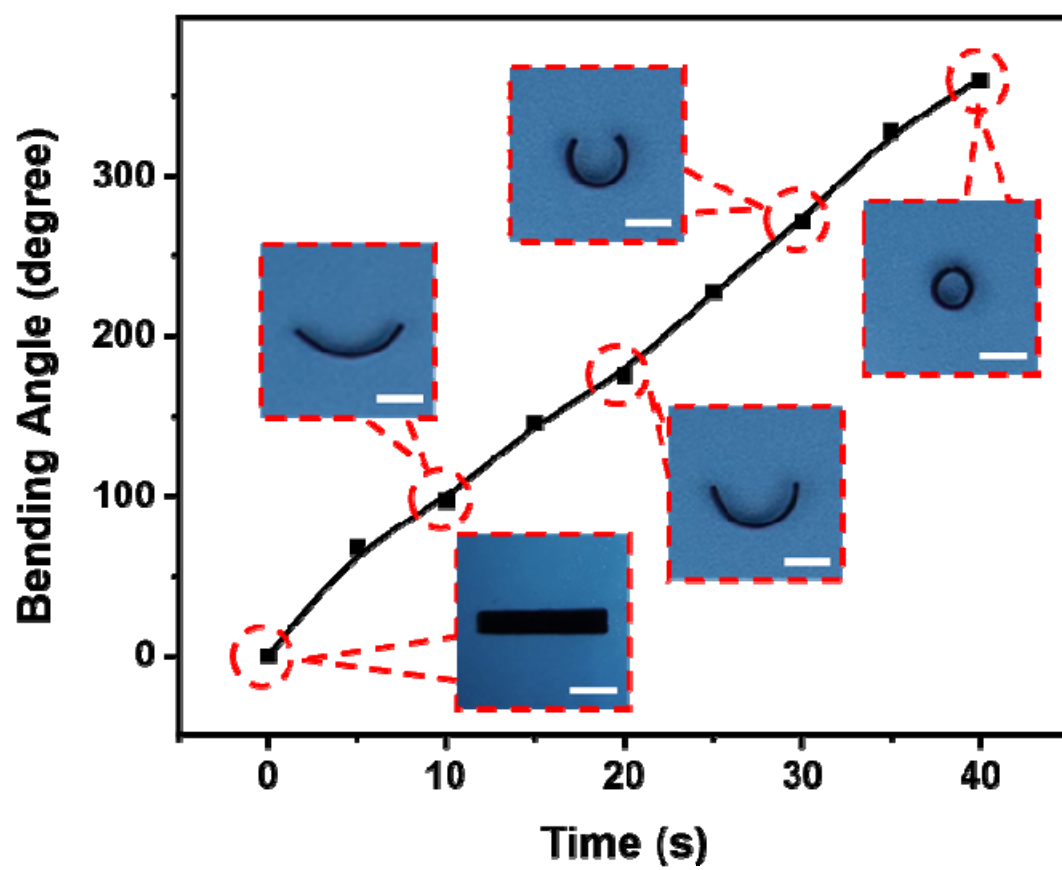


Figure S9. Deformation in water at 40°C.

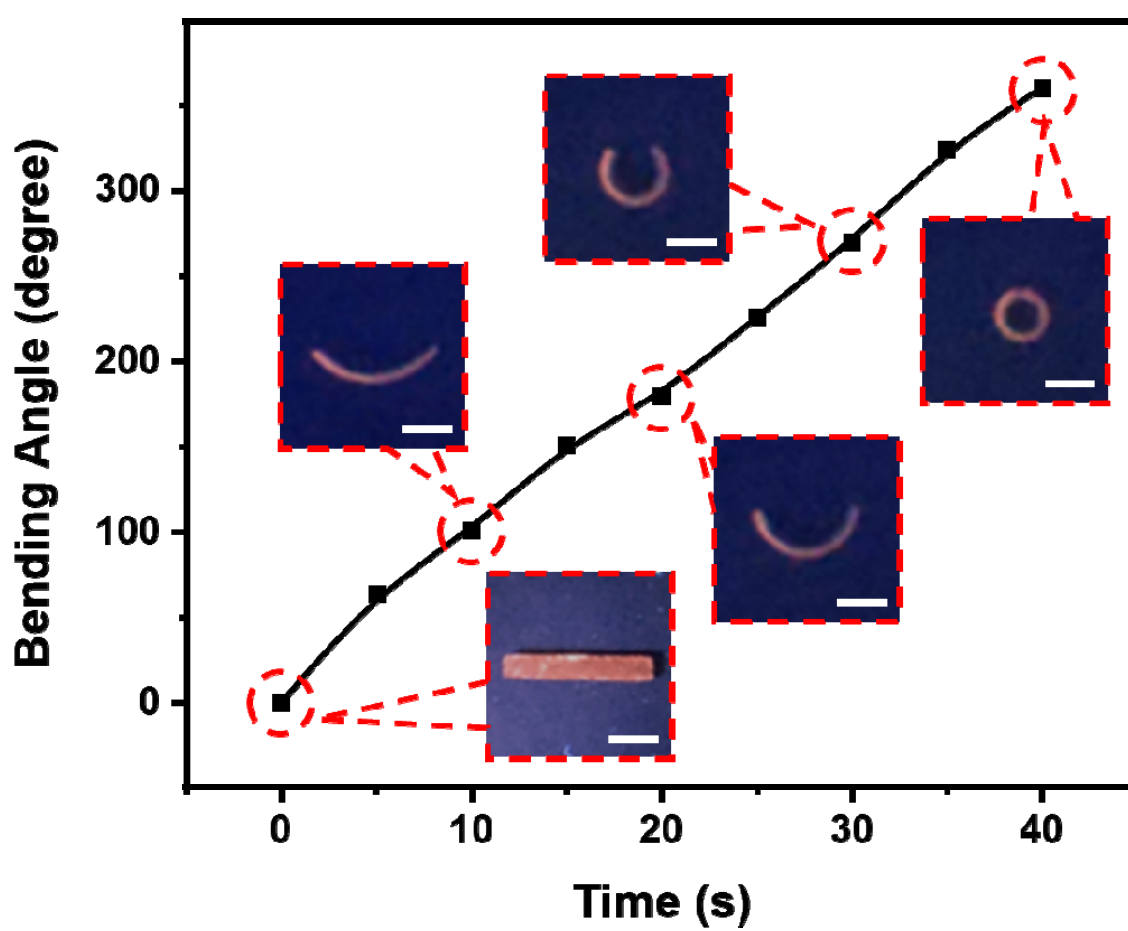


Figure S10. In the dark, deformation in water at 40°C.

Supporting Movies

Movie S1. The fluorescent color-changing kinetics of the RFH layer.

Movie S2. The tracing process of the biomimetic gripper in the dark.

Movie S3. The tracing process of the biomimetic “starfish” in the dark.

Movie S4. The synchronous shape-changing and color-changing process.