

Electronic Supplementary Information

Complex shape deformations of homogeneous poly(*N*-isopropylacrylamide)/graphene oxide hydrogels actuated by local NIR irradiation

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Supporting Figures

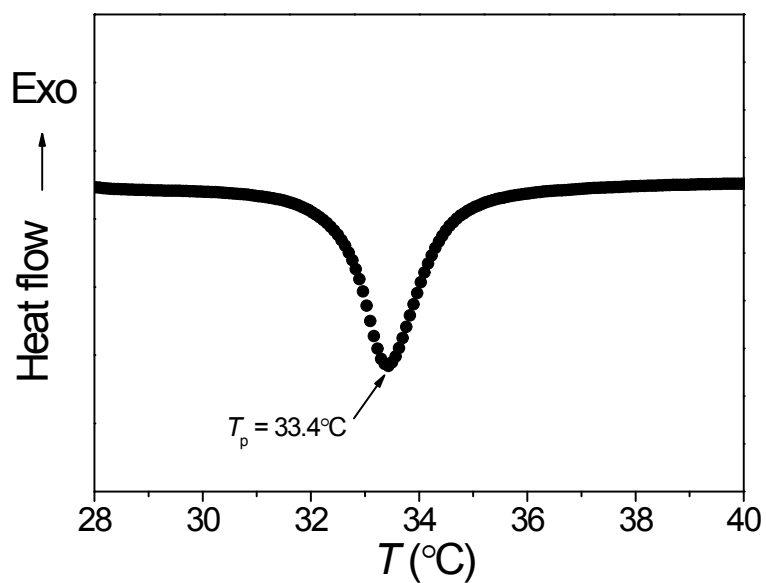


Fig. S1 DSC thermogram of a PNIPAM/GO hydrogel.

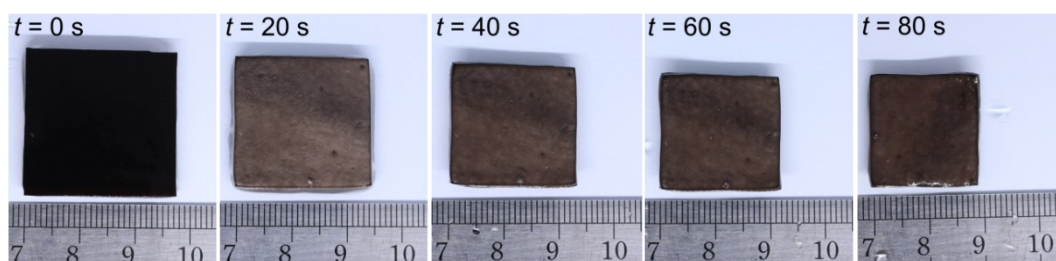


Fig. S2 Isotropic shrinkage of a homogeneous hydrogel in 45 $^{\circ}\text{C}$ water.

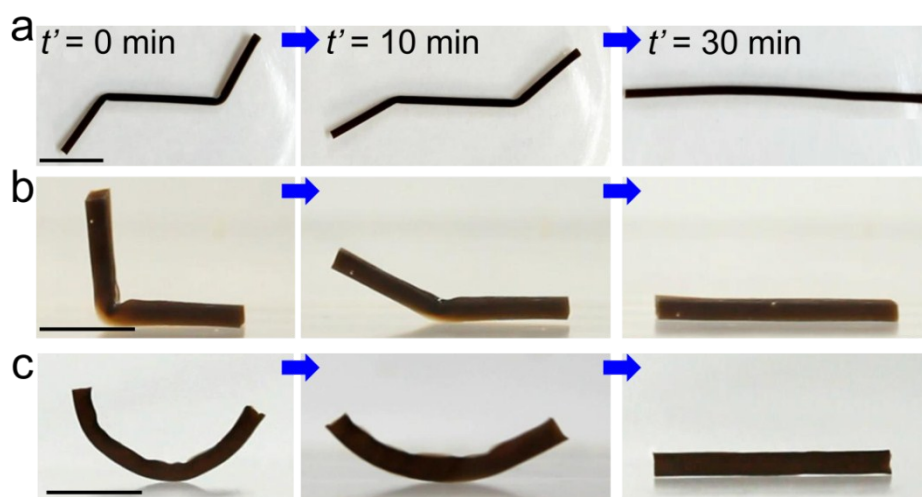


Fig. S3 Shape recovery of deformed hydrogel samples in water after turning off NIR laser. Scale

bar is 1 cm.

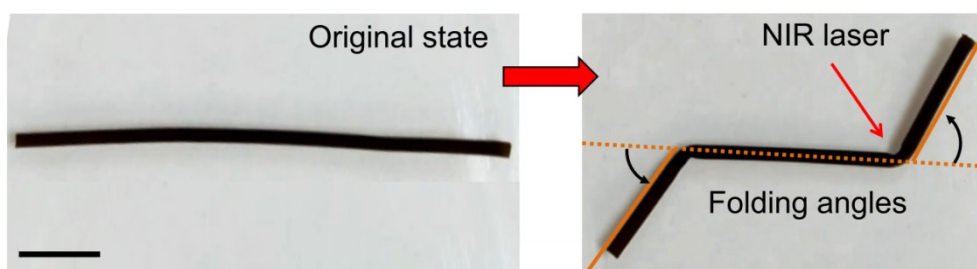


Fig. S4 Definition of the folding angle. The black arrows indicate the folding angles. Scale bar is 1 cm.

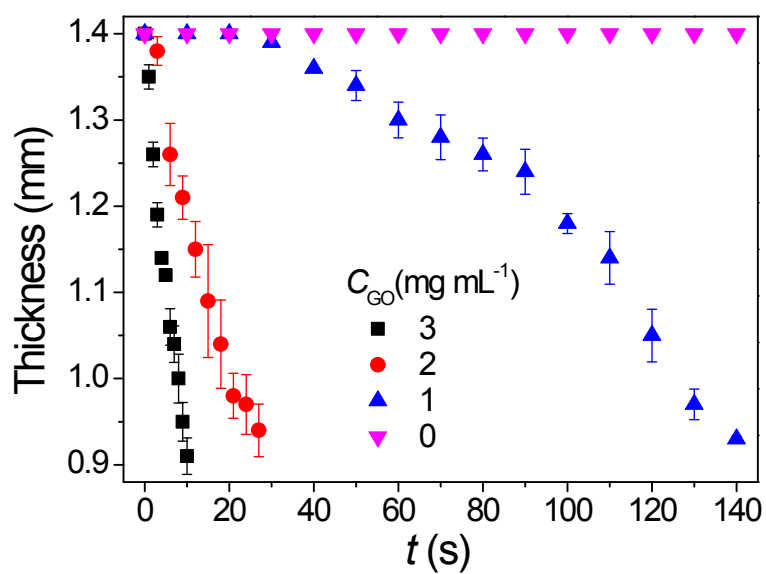


Fig. S5 Change of the thickness of the hydrogels with different C_{GO} under NIR irradiation. All experiments were conducted in triplicate and the errors bars represent standard deviations.

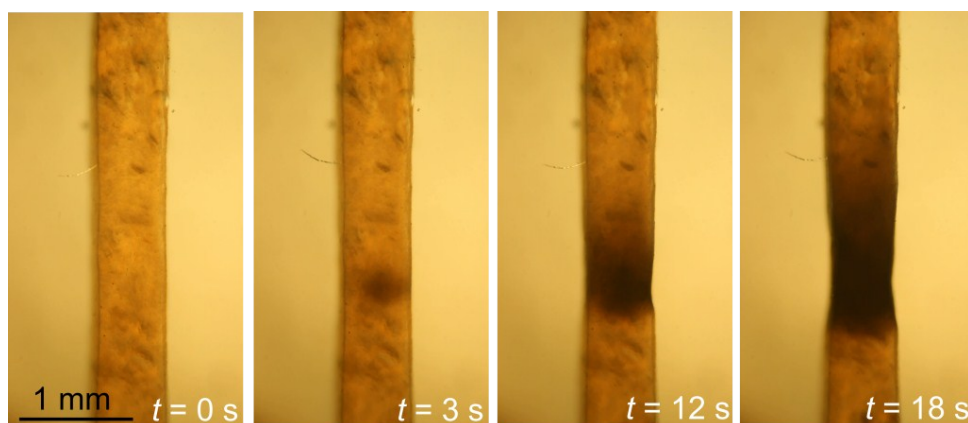


Fig. S6 Shrinkage of a hydrogel strip with a thickness of 0.6 mm under NIR irradiation observed with a microscope.

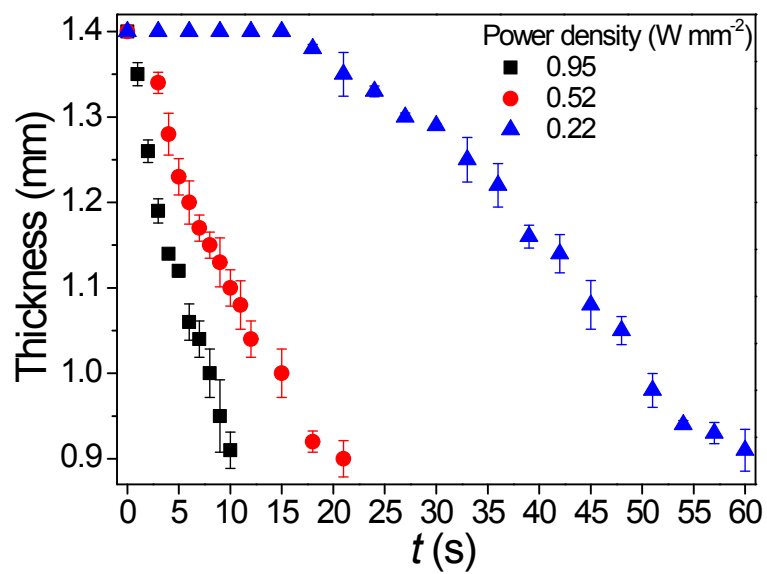


Fig. S7 Change of the thickness of the hydrogels under NIR irradiation with different power densities. All experiments were conducted in triplicate and the errors bars represent standard deviations.

Supporting Movies

Movie S1. The deformation of a PNIPAM/GO hydrogel a thickness of 1.4 mm observed with a microscope.

Movie S2. The folding and bending deformations of hydrogel samples.

Movie S3. The deformation of a hydrogel with a thickness of 0.6 mm observed with a microscope.

Movie S4. The body movements of a human-shaped hydrogel.

Movie S5. The closing of the leaves of a mimosa-shaped hydrogel.