

Description of Additional Supplementary Files

File name: Supplementary Movie 1

Description: A 5- μ L water drop on PAA-based DNR hydrogel. The play speed is 20 $\times$.

File name: Supplementary Movie 2

Description: A 5- μ L water drop on PAA hydrogel prepared by silicone oil-coated mold. The play speed is 20 $\times$.

File name: Supplementary Movie 3

Description: MD simulation visualizations of a single PAA chain diffusing on the silicone chain-grafted mold surface with 0%/50%/100% silicone chains restrained.

File name: Supplementary Movie 4

Description: Tough bioadhesion of PAA-based DNR hydrogel on a wet porcine heart.

File name: Supplementary Movie 5

Description: Adhesion of PAA-based conventional hydrogel on a wet porcine heart.