

Electronic Supplementary Information

A Novel Anti-algae Nanocomposite Hydrogel Based on Thiol/ Acetyl Thioester Groups Chelating with Silver Nanoparticles

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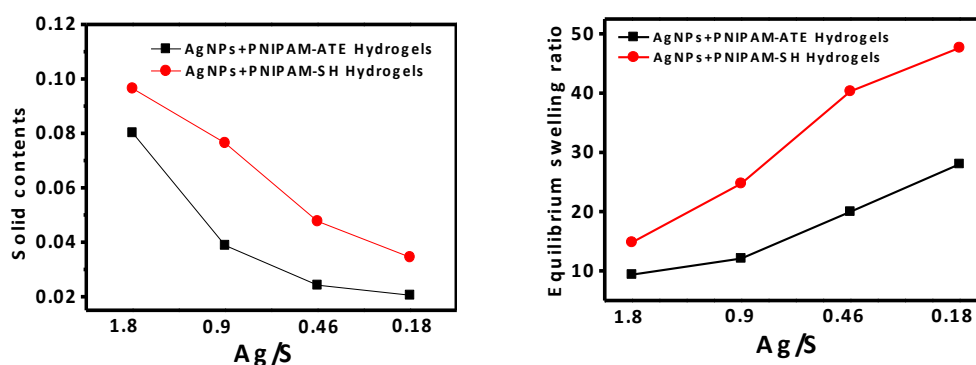


Fig.S1 a) Solid contents in the hydrogel systems versus the ratio of Ag/S, b) Equilibrium swelling ratio of the hydrogels versus the ratio of Ag/S

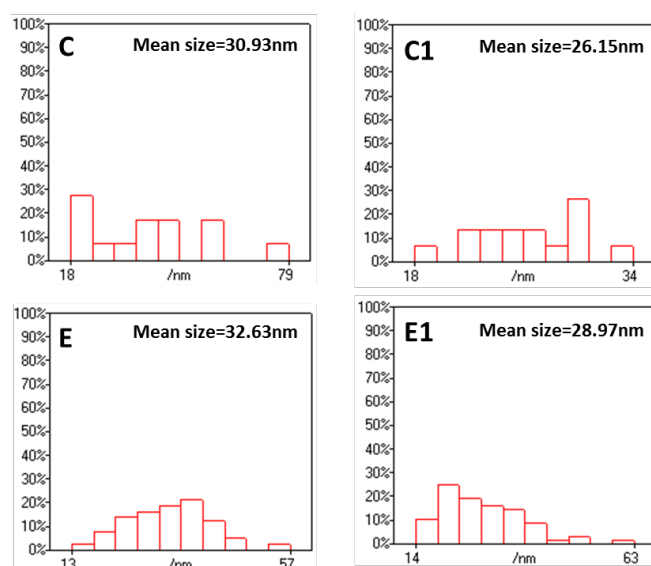


Fig.S2 The statistical analysis results of AgNPs size in hydrogels

Ag release assess

In order to study the inhibition role of sulfur-containing groups to Ag release, the Ag release of the hydrogel experiments were done. Two same discs (diameter=10.0 mm, thickness=2.0 mm) were immersed in 10.0 mL deionized water and vibrated in thermostatic water bath oscillators at 25 °C. At intervals, 2.0 mL solution was extracted and added into 2.0 mL deionized water in the vial. 0.5 mL concentrated nitric acid were added into the extracted samples and digested at 80 °C for 4 hours. The volume of the above mixed solution was increased to 5.0 mL. The concentration of silver ions in solution was measure by ICP-OES.

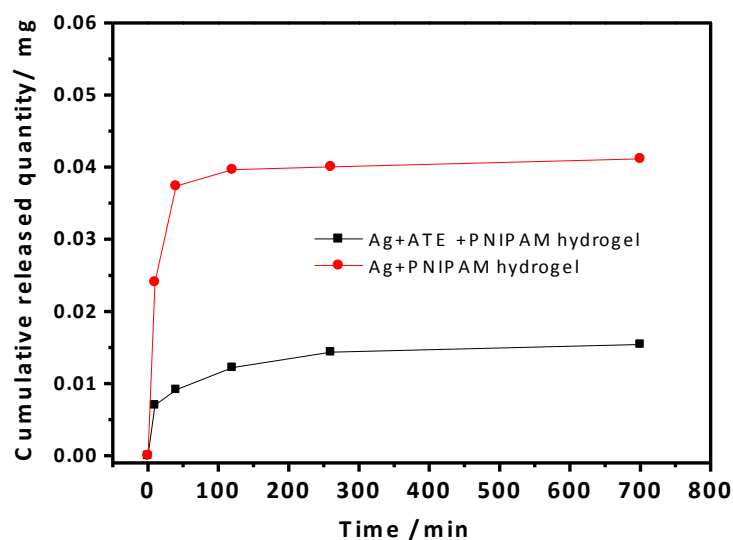


Fig.S3 The cumulative weight of released silver elements versus time plots