

## Supporting Information

### **Poly (N-Isopropylacrylamide)-co-(Acrylic Acid) Microgel/Ag Nanoparticle Hybrids for the Colorimetric Sensing of H<sub>2</sub>O<sub>2</sub>**

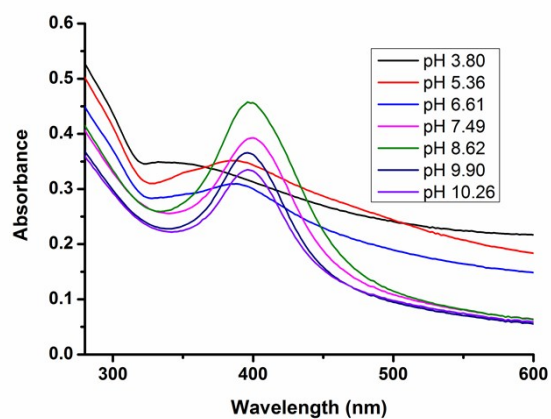
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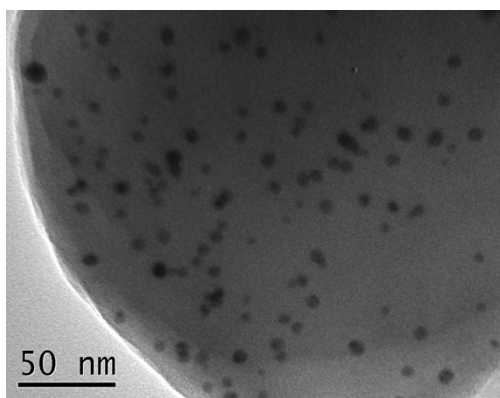
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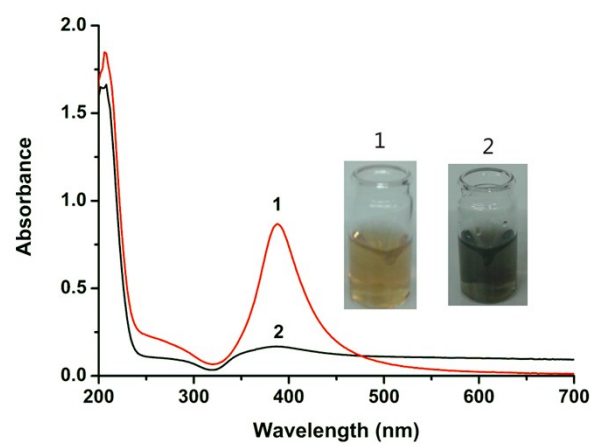
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**Figure S1.** The effect of Ag NP synthesis solution pH on the optical properties of the resultant pNIPAm-co-AAc/Ag NP hybrid microgels. As can be seen, the optimal synthesis pH was 8.62.



**Figure S2.** TEM image of Ag NPs in the hybrid microgels. The microgel network contained Ag NPs with diameters of  $\sim 5$  nm.



**Figure S3.** UV-Vis absorption spectra of the Ag NPs prepared without adding pNIPAm-co-AAc microgels. 1. Fresh Ag NPs, 2. Ag NPs stored after 5 minutes.