

Figure S1. A The XRD pattern of  $\text{AgNO}_3$ . B. The XRD pattern of SAH, GAH and GASH.

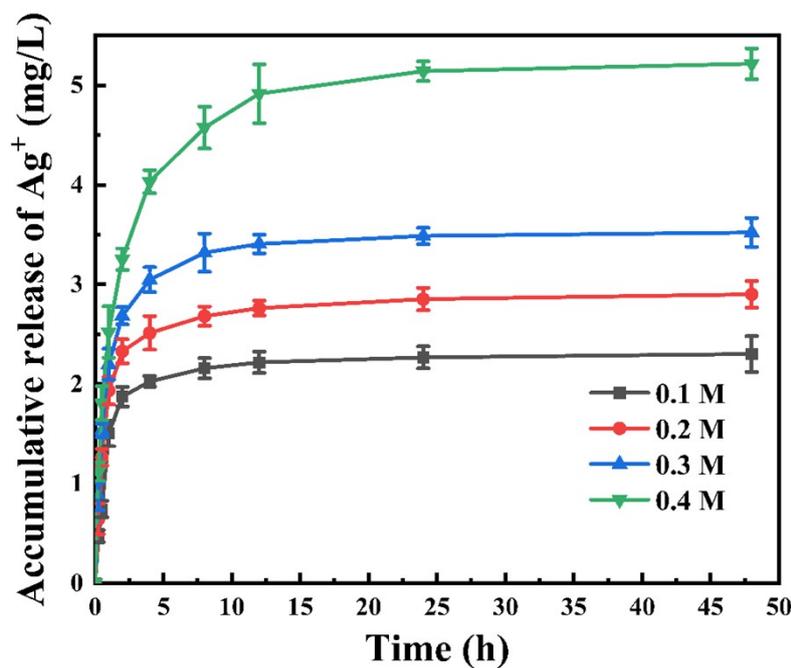
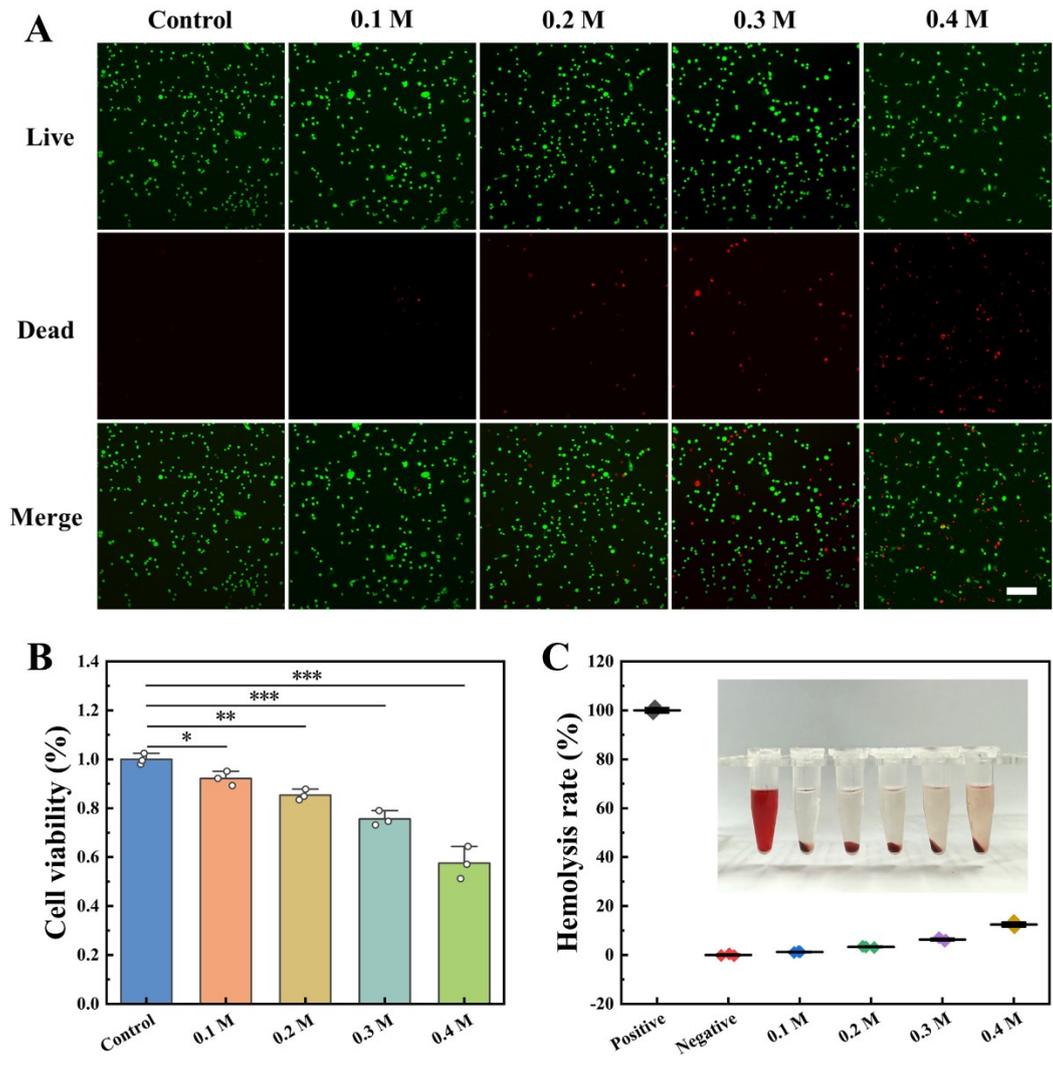


Figure S2. The release concentration of  $\text{Ag}^+$  from hydrogels containing different  $\text{Ag}^+$  concentrations as a function of time.



**Figure S3.** A. Fluorescence images of live/dead staining of L929 cells treated with different hydrogels (Scale bar = 200  $\mu$ m). B. CCK-8 cytotoxicity assay of L929 cells treated with different hydrogels. \* $P < 0.05$ , \*\* $P < 0.01$ , \*\*\* $P < 0.001$  ( $n = 3$ ). C. Hemolysis tests of different hydrogels.