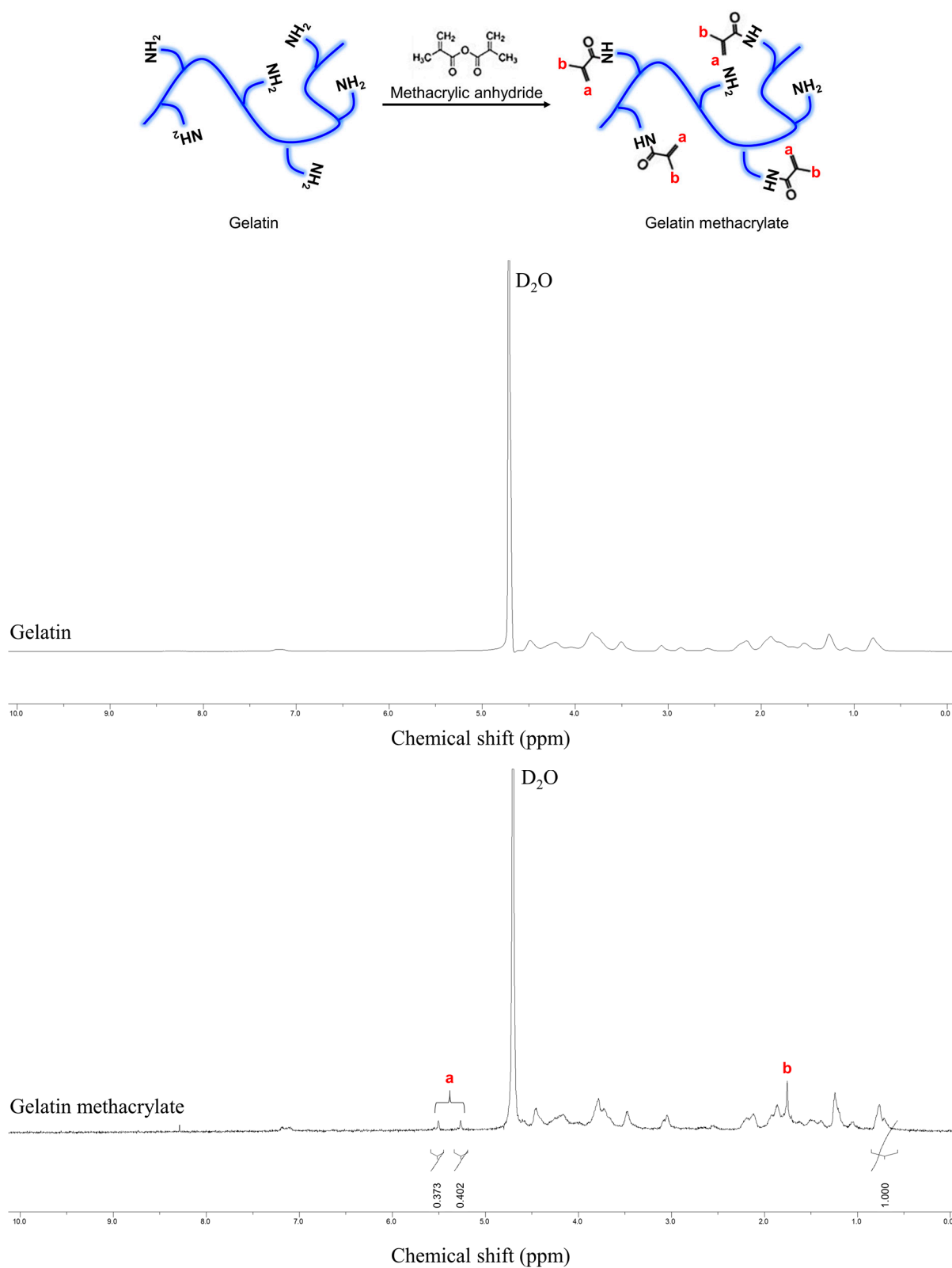
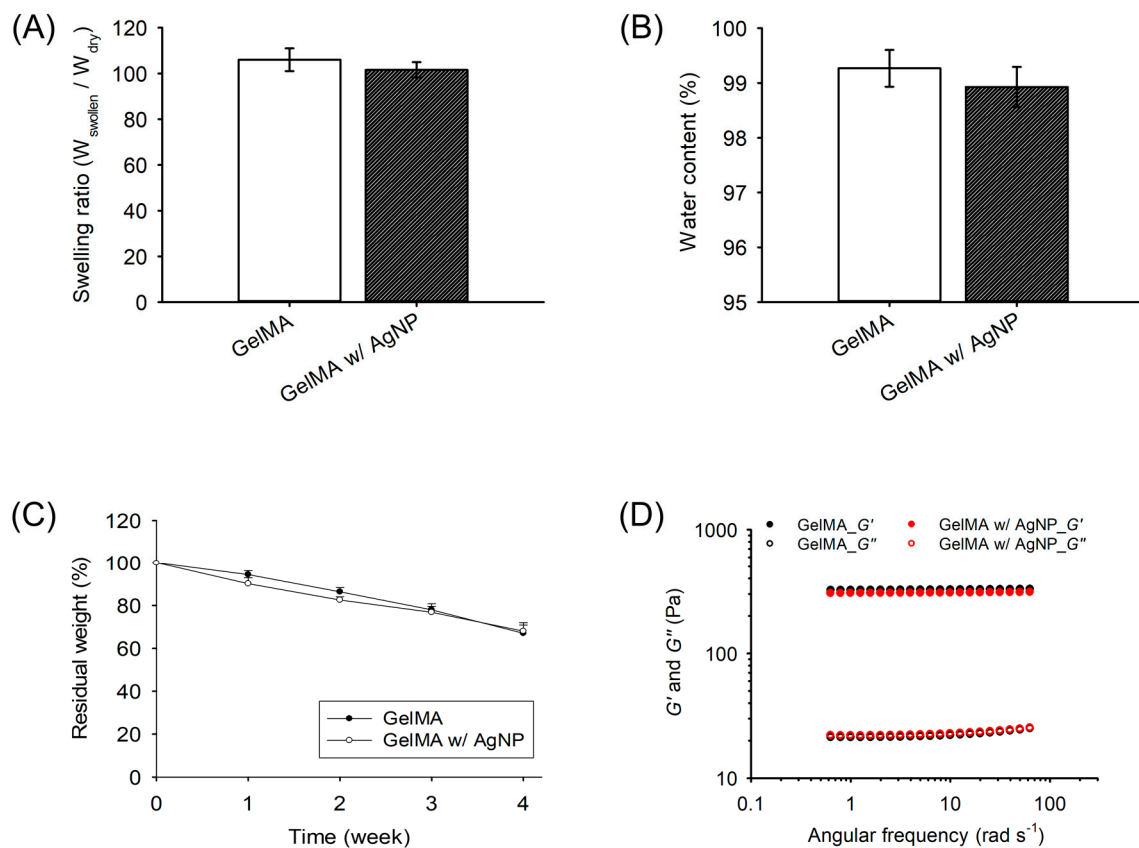


**Figure S1.**  $^1\text{H}$ -NMR spectra of guanidylated chitosan. The letter "a" indicates the proton of guanidine-conjugated chitosan.



**Figure S2.** <sup>1</sup>H-NMR spectra of gelatin and gelatin methacrylate (GelMA). The letter "a" and "b" indicate the protons of gelatin methacrylate.



**Figure S3.** (A) Swelling ratios of GelMA and GelMA with AgNPs. (B) Water content of GelMA and GelMA with AgNPs. (C) Residual weight of GelMA and GelMA with AgNPs in PBS at  $37^\circ\text{C}$  for 4 weeks. Error bars indicate standard deviation ( $n = 3$ ). (D) Strain-dependent ( $\omega = 10 \text{ rad s}^{-1}$ ,  $25^\circ\text{C}$ ) rheology of GelMA and GelMA with AgNPs. The concentration of AgNPs is  $30 \text{ mg L}^{-1}$ .