

## Supporting Information

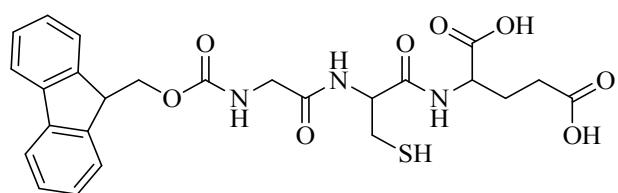
### **Chitosan gel incorporated peptide modified AuNPs for sustained drug delivery with smart pH responsiveness**

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Jingcheng Hao

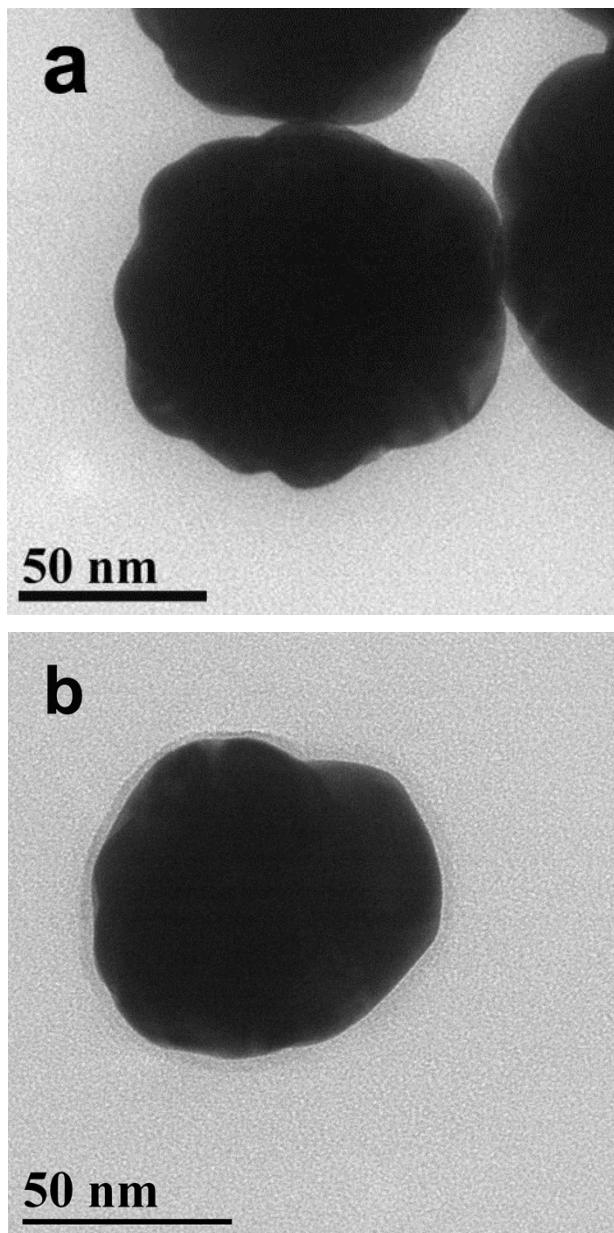
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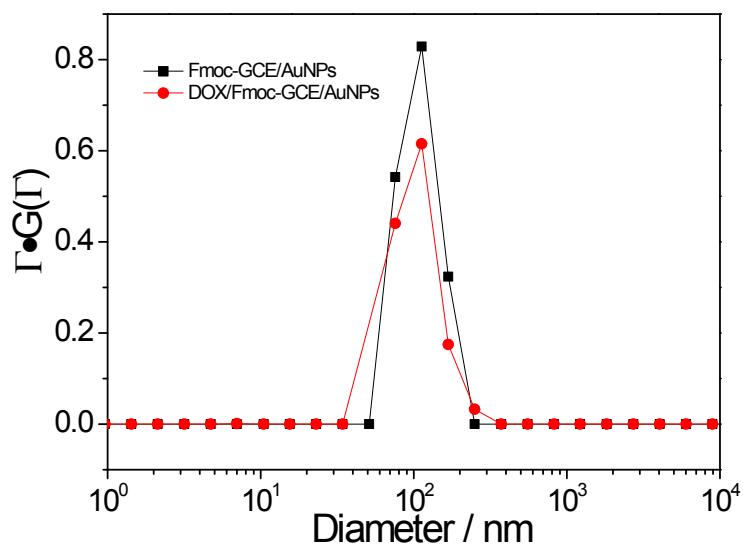
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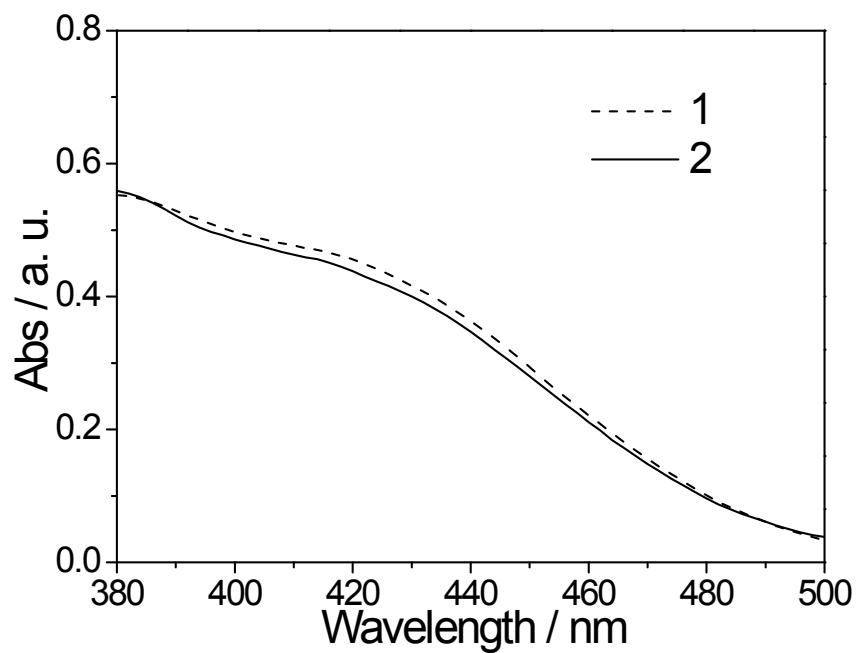
**Fig. S1** Chemical structure of Fmoc-GCE.



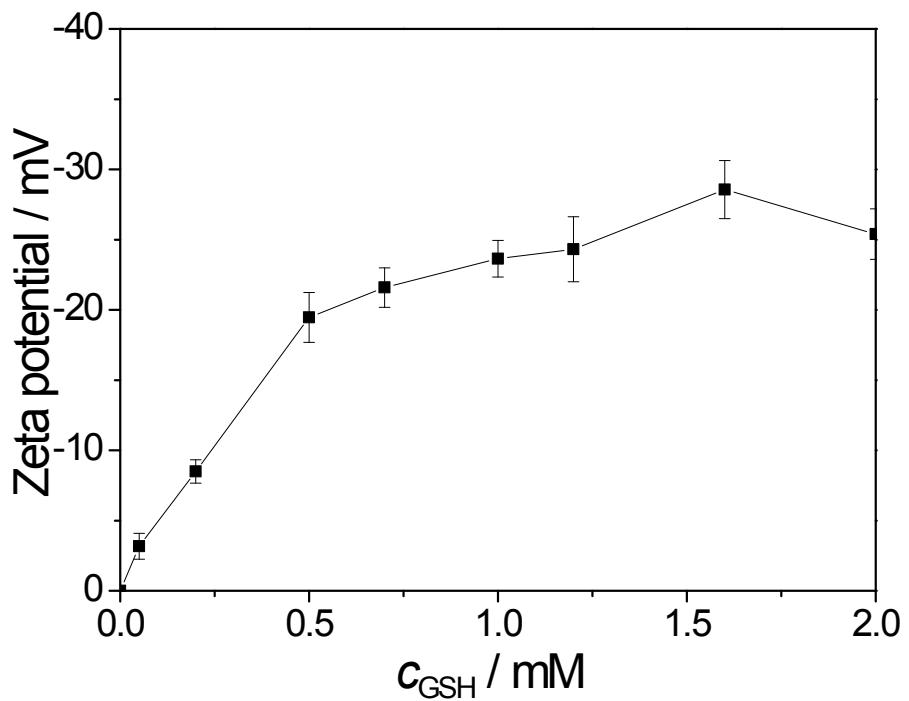
**Fig. S2** TEM images of (a) naked AuNPs and (b) DOX/Fmoc-GCE/AuNPs.



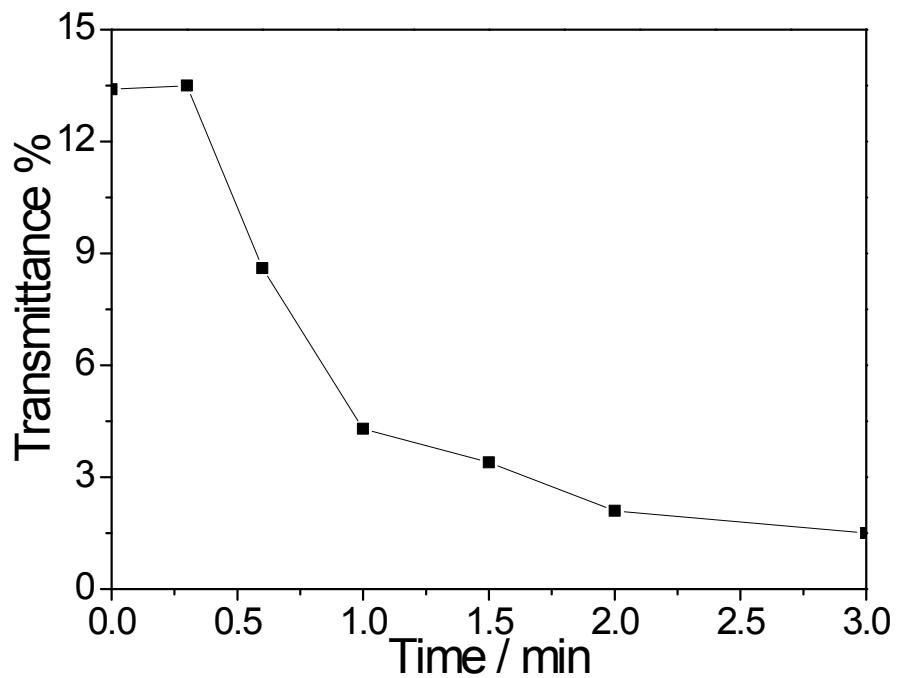
**Fig. S3** DLS plots of Fmoc-GCE/AuNPs and DOX/ Fmoc-GCE/AuNPs complexes.



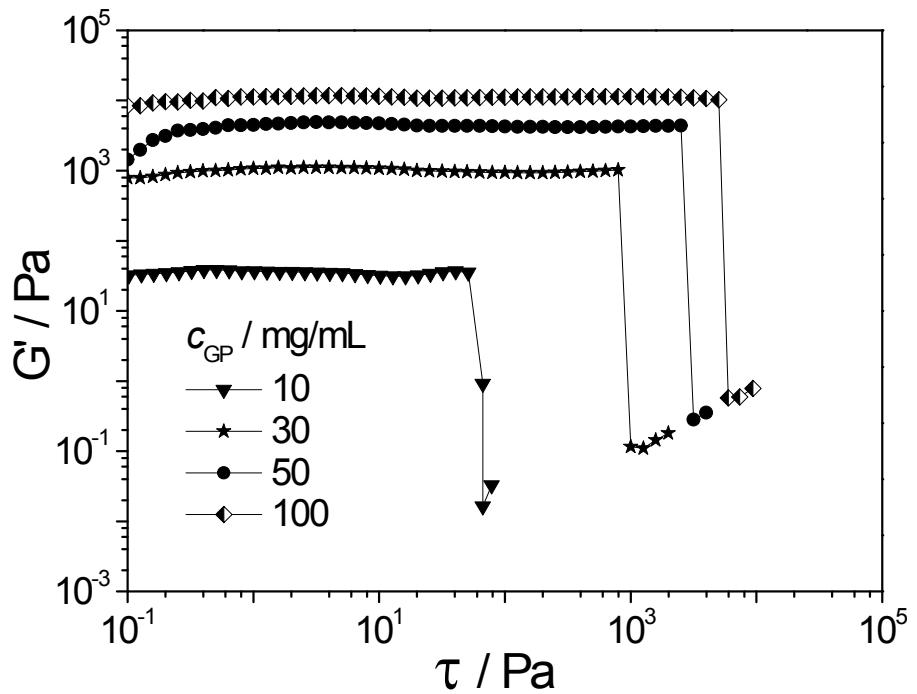
**Fig. S4** UV-Vis spectra of GSH stocking solution (curve 1) and the remaining supernatant of GSH after being treated with AuNPs (curve 2).



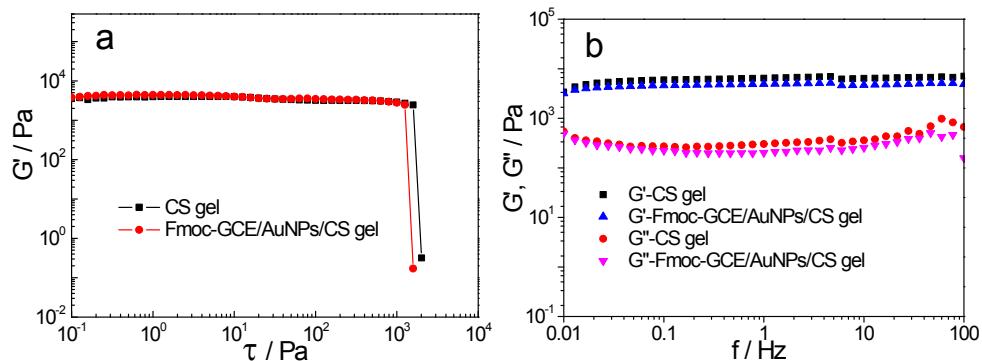
**Fig. S5** Zeta potential of AuNPs modified with different concentrations of GSH.



**Fig. S6** Transmittance curve of CS solution during gelation process ( $c_{\text{CS}} = 25 \text{ mg/mL}$ ,  $c_{\text{GP}} = 50 \text{ mg/mL}$ ).



**Fig. S7** (a) Stress sweep results of the chitosan hydrogels formed with different concentration of GP ( $c_{CS} = 20$  mg/mL).



**Fig. S8** Stress sweep (a) and frequency sweep (b) results of the CS gels with and without incorporation of Fmoc-GCE/AuNPs complex.