Electronic Supplementary Material (ESI) for Analytical Methods.

Supporting information for

Label-free SERRS-basednanosensor for ultrasensitive detection of mercury ions in drinking water and wastewater effluent

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Figure S1. SEM and TEM image of Fe_3O_4@Ag magnetic beads

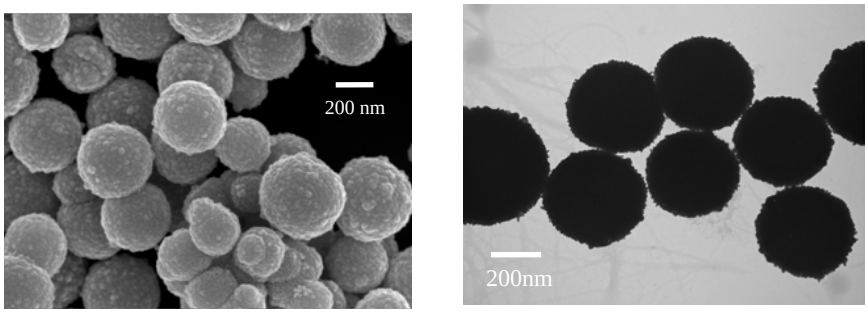


Figure S2 Magnetic hysteresis curves of Fe_3O_4,Fe_3O_4@ SiO_2-Au seed, and Fe_3O_4@ SiO_2@Ag at 300 K

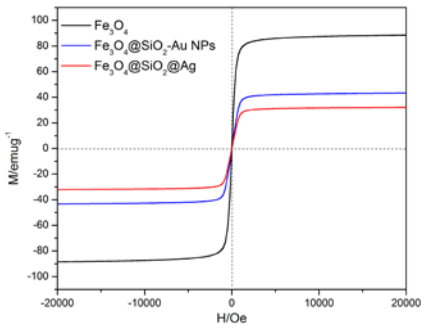


Figure S3. The effect of incubation time between MG and Fe_3O_4@Ag on the SERS intensity of MG.

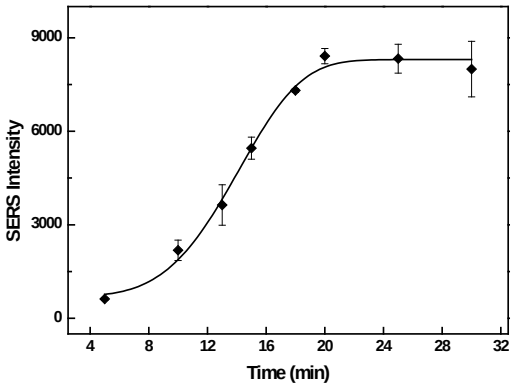


Figure S4. Effect of pH on the SERRS intensity of MG (10^{-5} mol/L).

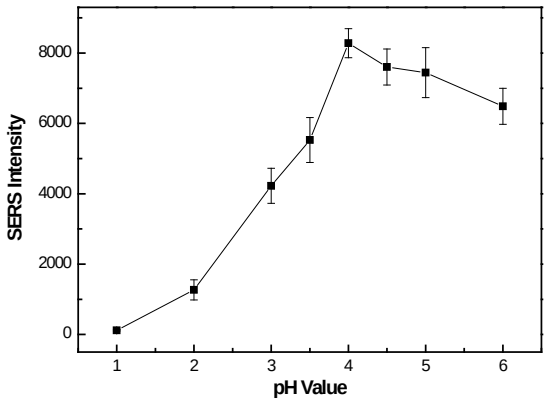
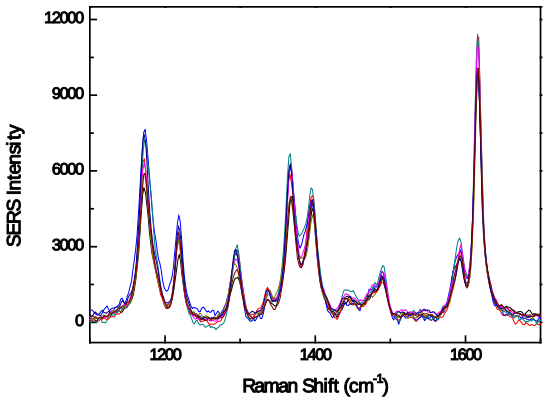
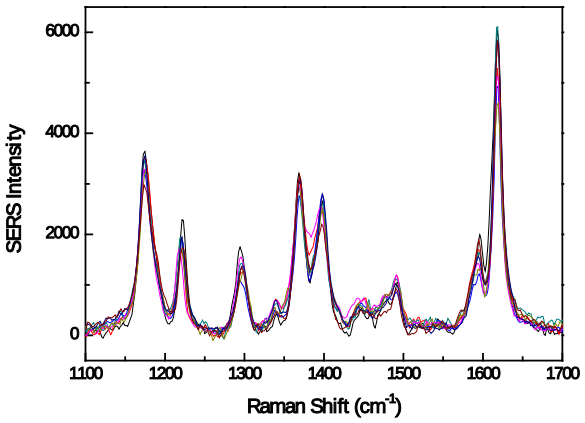


Figure S5. Replicate SERS spectra of MG system in the presence of Hg^{2+} with concentration of 10^{-8} mol/L(A) and 10^{-6} mol/L(B).



A



B