Supplementary material

Highly Sensitive Magnetic-SERS Dual-Function Silica Nanoprobes for Effective On-Site Organic Chemical Detection

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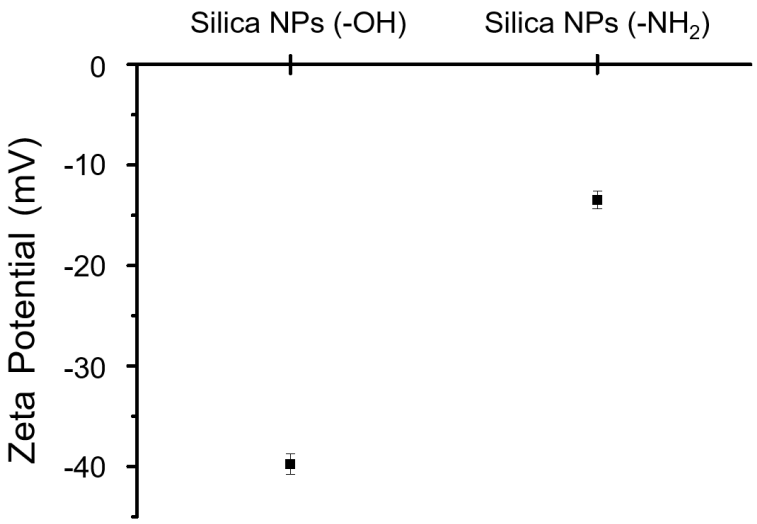

Figure S1. The zeta potential values of silica NPs and amine-functionalized silica NPs.

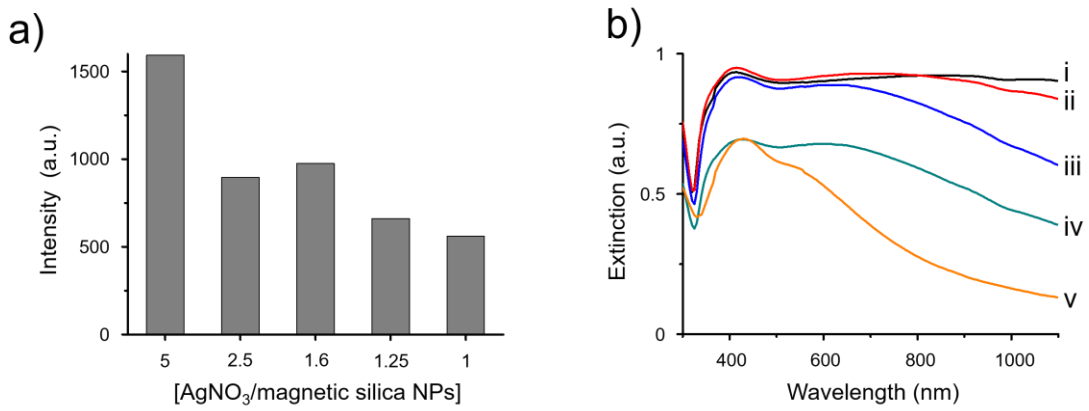

Figure S2. (a) SERS intensity of M-AgNSs treated with different weight ratio of $AgNO_3$ to core silica NPs [$AgNO_3$/Silica NP] during Ag^+ ion reduction process. The SERS intensities of NPs were analyzed at 1075 cm^{-1} peak from the spectra, which were obtained using a portable Raman system with a 785 nm laser at a power of 60 mW for 1 s. (b) UV-Vis absorption spectrum of M-AgNSs treated with different weight ratio of [$AgNO_3$/silica NP] i) 5, ii) 2.5, iii) 1.6, iv) 1.25 and v) 1 during Ag^+ ion reduction process.

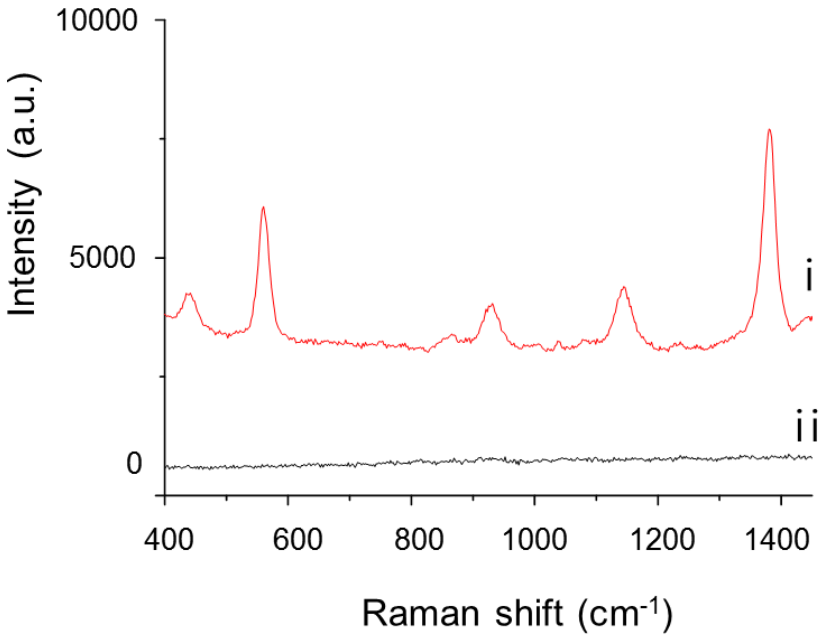

Figure S3. SERS spectra of i) thiram-treated M AgNSs and ii) non-treated M AgNSs after being accumulated by using a magnet. The concentration of thiram was 10 μM. The spectra were obtained using a portable Raman system (785 nm laser; 60 mW of power for 5 s).