

# Enhanced Electromagnetic Coupling in the Walnut-Shaped Nanostructure Array

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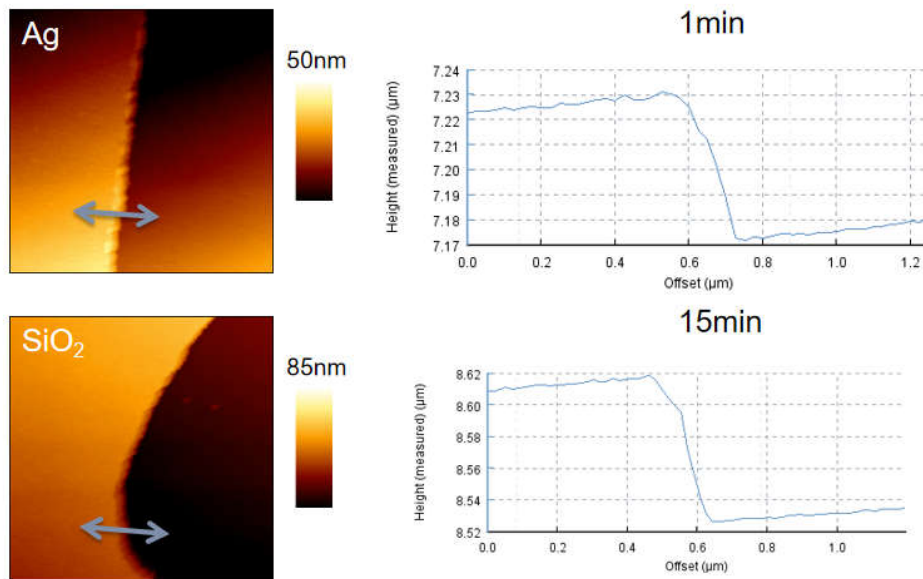
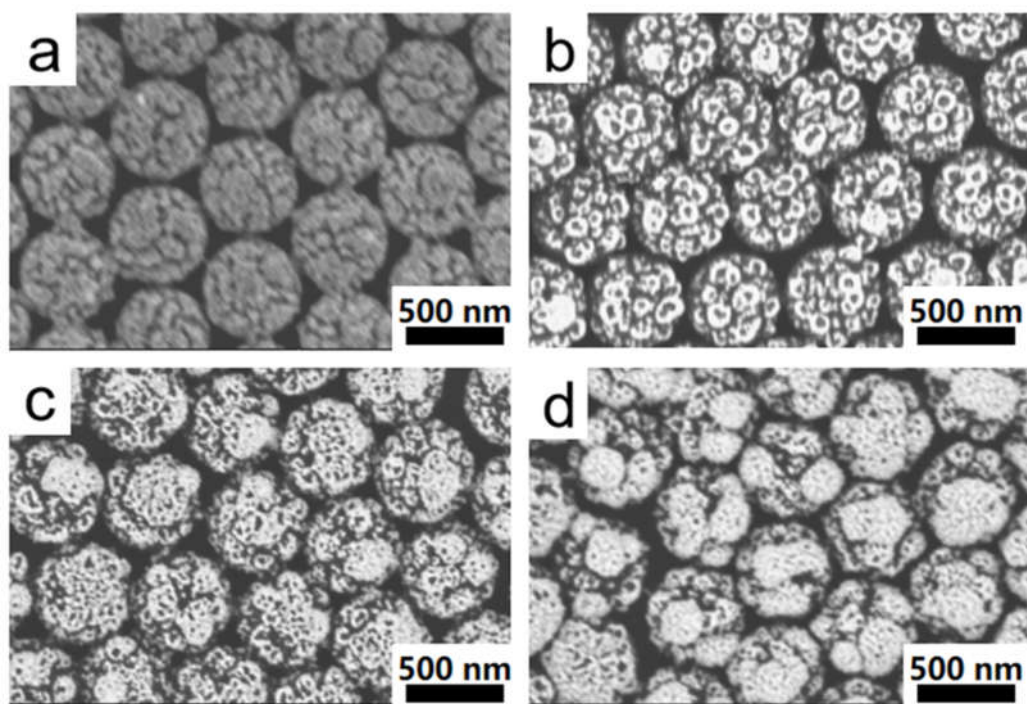
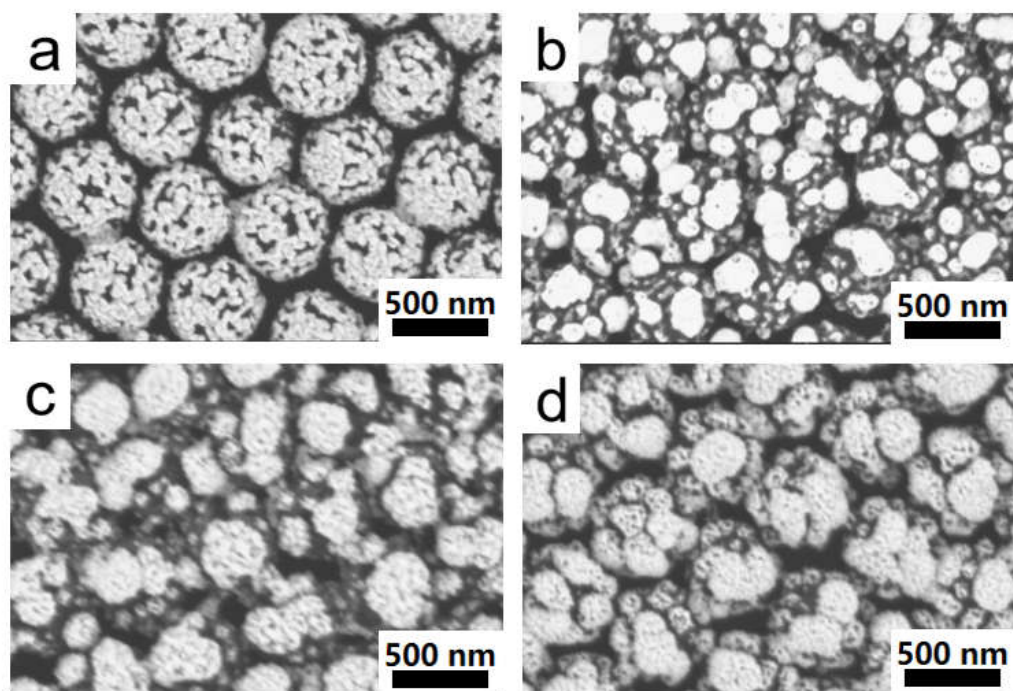


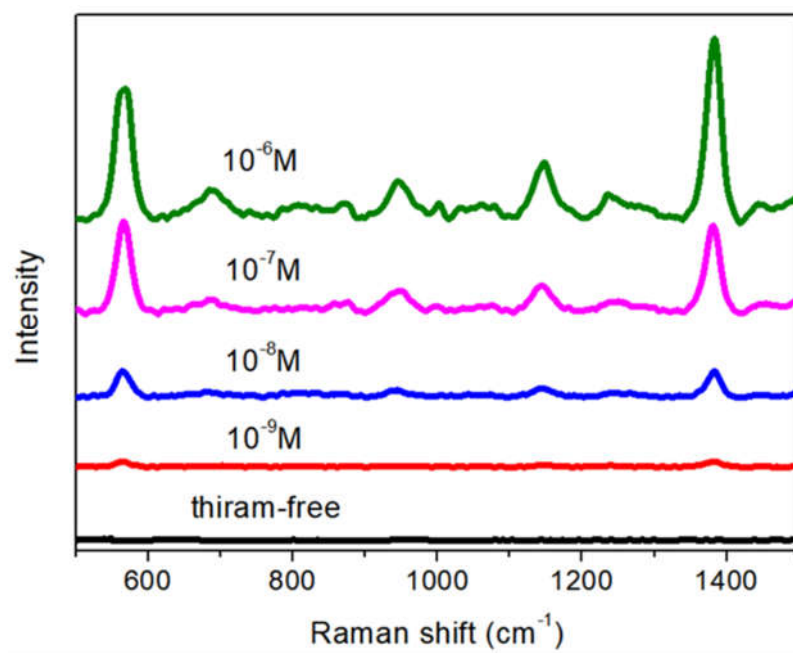
Figure S1. AFM of the Ag film and SiO<sub>2</sub> film.



**Figure S2.** SEM of the nanostructure with the Ag-SiO<sub>2</sub> nanoparticle film (20nm) after etching for (a) 0 s, (b) 30 s, (c) 60 s, (d) 90 s.



**Figure S3.** SEM of the nanostructure with the Ag-SiO<sub>2</sub> nanoparticle film (30nm) after etching for (a) 0 s, (b) 30 s, (c) 60 s, (d) 90 s.



**Figure S4.** SERS spectra for thiram detection with different concentrations and thiram-free solution.