Electronic Supplementary Material (ESI) for RSC Advances

Supporting information

Tailored Silica Coated Ag Nanoparticles for Non Invasive Surface Enhanced Spectroscopy of Biomolecular Targets

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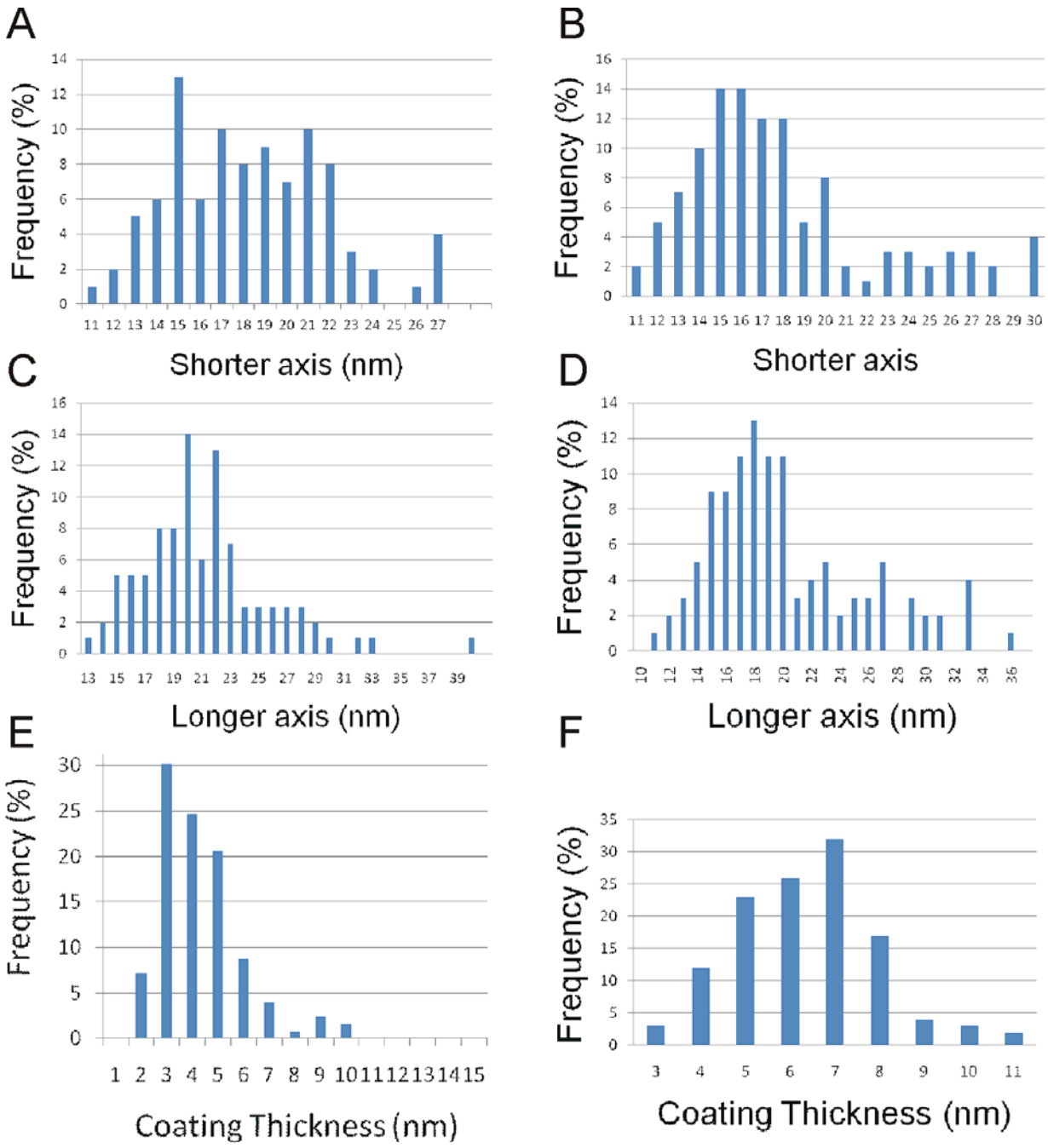

Figure S1: Size distribution of $Ag_{413}@SiO_2$ NPs with lower (A,C, E) and higher (B,D, F) SiO_2 thickness. Distribution of the shorter diameter (A, B), longer diameter (C,D) and SiO_2 coating thickness (E,F).

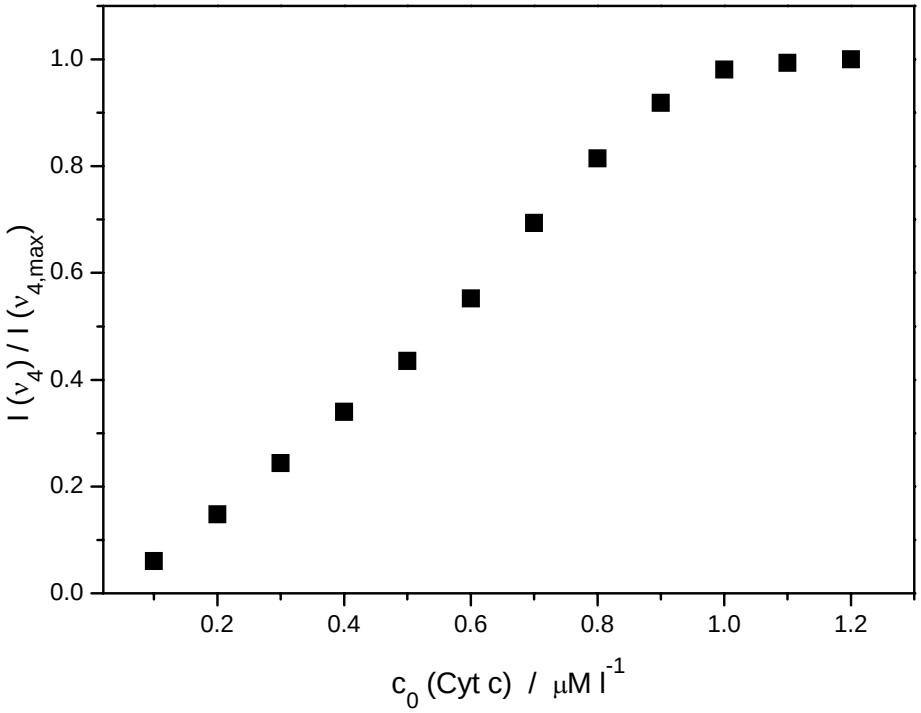

Figure S2: SERR intensity as a function of Cyt *c* solution concentration. The determination procedure of Γ_{max} = 1.2 μM was done according to ref .[7].

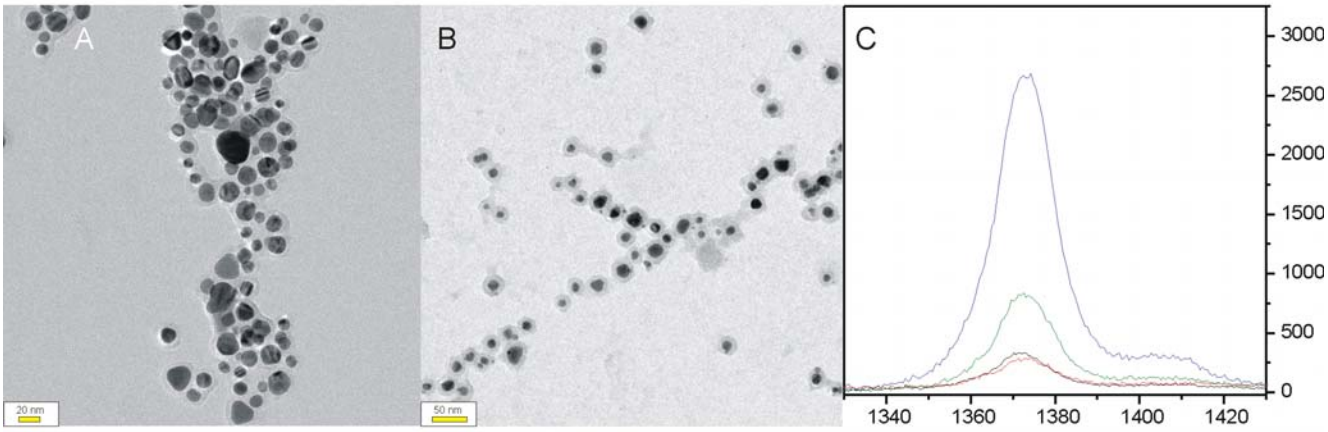

Figure S3: TEM pictures of $Ag_{413}@SiO_2$ NPs with different silica thickness (A) *d*(SiO_2) = 6±2 nm, (B) *d*(SiO_2) =15 nm. The particle coating was achieved under the following conditions: (A) 2.5 mL and (B) 4 ml of 2 % sodium silicate solution at pH 11. (C) ν_4 region of the corresponding Cyt *c* RR (black) and SERR spectra: (blue: *d*(SiO_2) = 4 nm, green: *d*(SiO_2) = 6 nm, red: *d*(SiO_2) = 15 nm). The SERR spectra were recorded 10 min after adding the NPs. Experimental conditions: Laser power 1 mW, Accumulation time 10 sec, Cyt c concentration c_0 = 20 μM.