

Supporting Information

A novel process to prepare thin silica shell on the PDDA-stabilized spherical Au nanoparticles assisted by UV light irradiation

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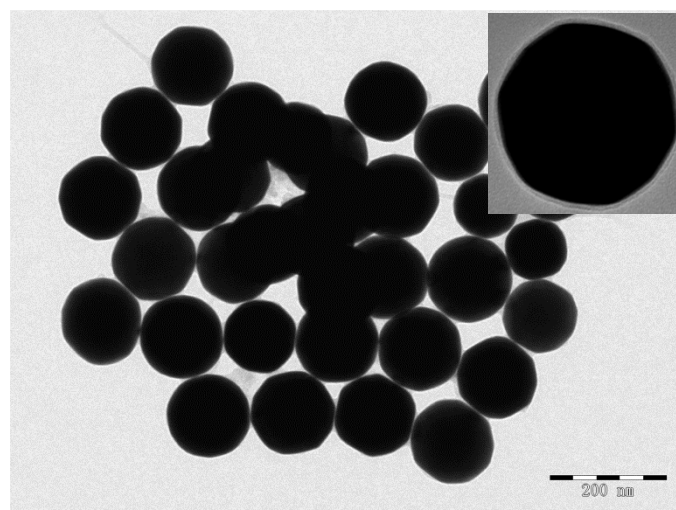


Figure S1. TEM image of core-shell nanoparticles obtained by UV light irradiated PDDA stabilized Au NPs and subsequent the polymerization reaction of silica under the PH=10, 0.2 vol% in 1.2 mL 2-propanol.

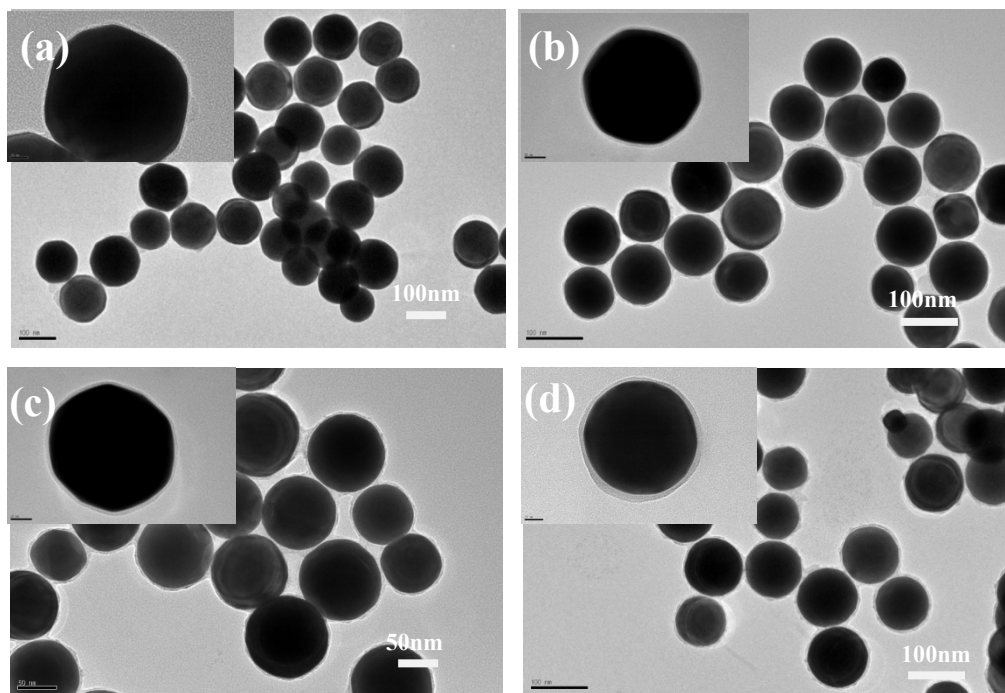


Figure S2. TEM images of Au@SiO₂ core-shell particles with different shell thicknesses under the PH=10, (a) 2 nm with 0.1 vol% in 1.2 mL 2-propanol, (b) 4 nm with 0.2 vol% in 1.2 mL 2-propanol, (c) 5 nm with 0.3 vol% in 1.2 mL 2-propanol, (d) 8 nm with 0.4 vol% in 1.2 mL 2-propanol.

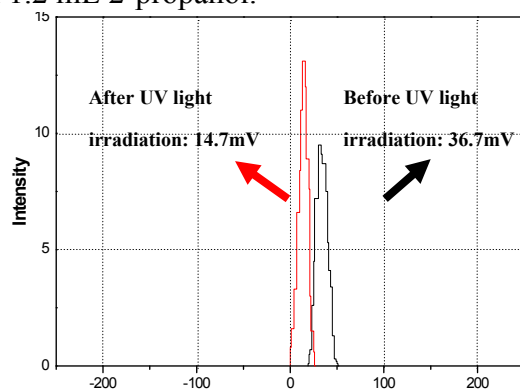


Figure S3. Black line is Zeta potential of pure PDDA-stabilized Au NPs, the red line is Zeta potential of Au NPs which were treated by ultraviolet light.

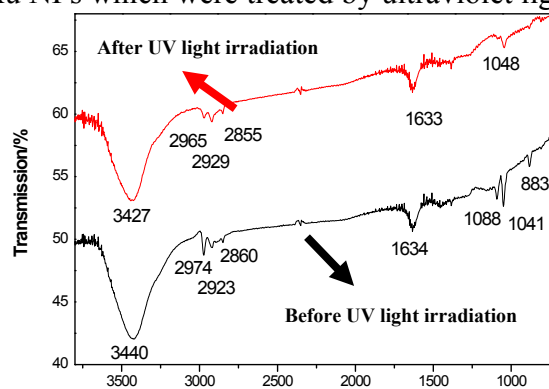


Figure S4. IR Spectrum of the PDDA-stabilized Au NPs, black line is PDDA-stabilized Au NPs without ultraviolet light treatment and red line is PDDA-stabilized

Au NPs after treated by UV light irradiation