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Supplementary Data

Gold Aggregates- and Quantum Dots- Embedded Nanospheres: Switchable Dual-mode Image Probes for Living Cells

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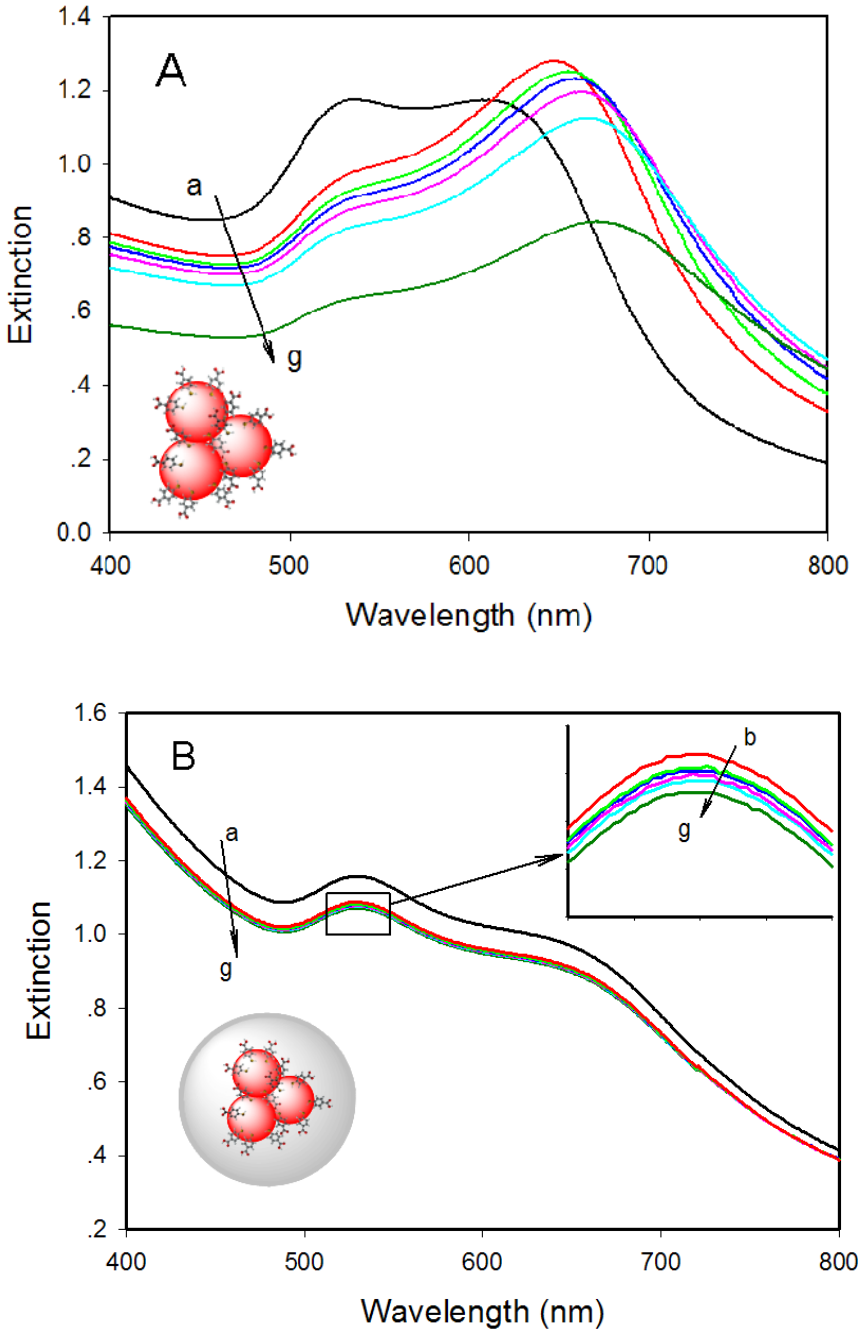
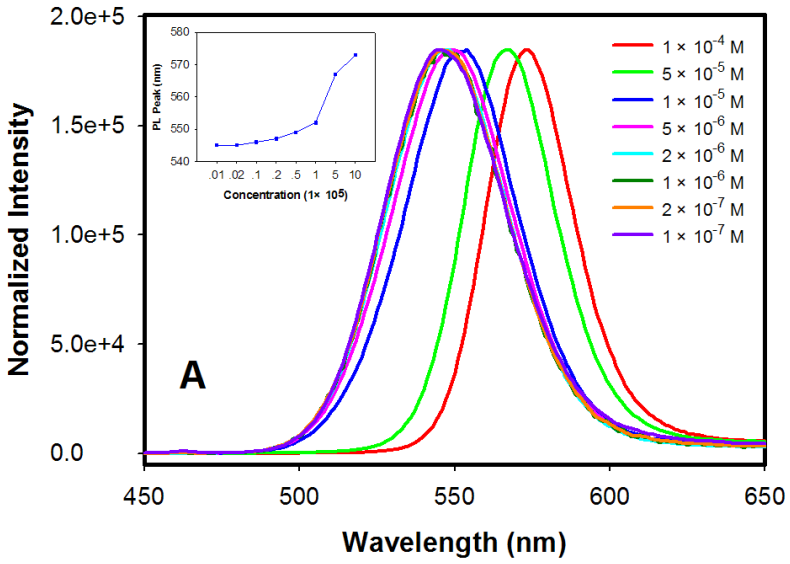
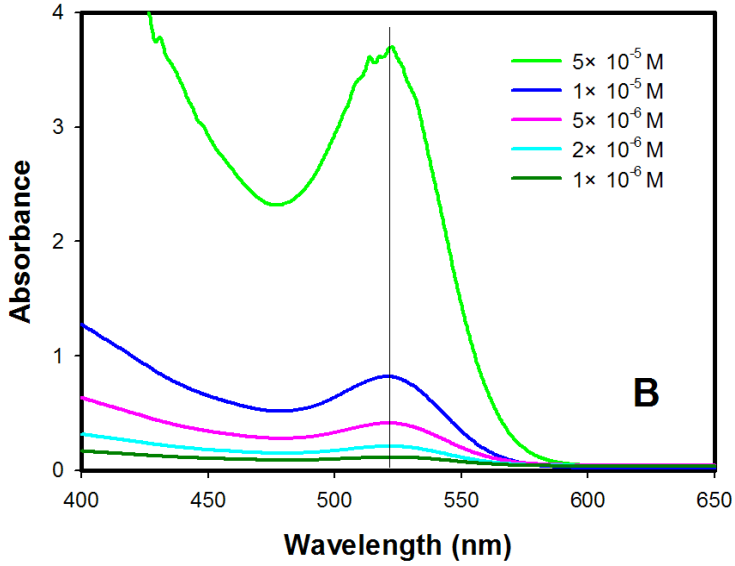


Figure S1. Variation of extinction spectra of uncoated (A) and silica coated (B) 4MBA-tagged Au aggregates upon adding NaCl solution (200 μL, 0.5 M) at different times: (a) before NaCl being added; (b) 30 s after NaCl being added; (c) 5 min after NaCl being added; (d) 10 min after NaCl being added, (e) 20 min after NaCl being added, (f) 1 h after NaCl being added, (g) 2 h after NaCl being added.





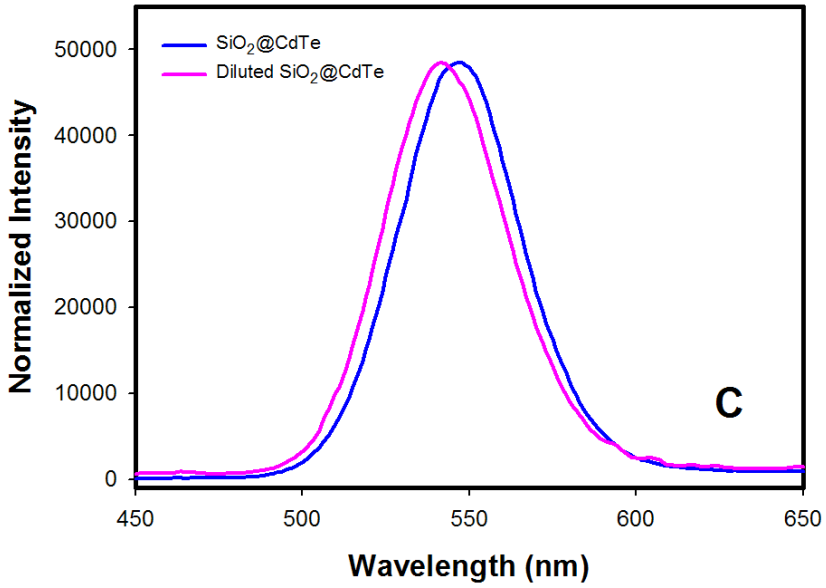


Figure S2 (A) PL spectra of the aqueous solution of CdTe with concentration being increased from 1×10^{-7} M to 1×10^{-4} M. The inset shows PL peaks versus the concentration of CdTe solution, which is 545 nm, 545 nm, 546 nm, 547 nm, 549 nm, 552 nm, 567 nm, and 573 nm, corresponding to the concentration of 1×10^{-7} M, 2×10^{-7} M, 1×10^{-6} M, 2×10^{-6} M, 5×10^{-6} M, 1×10^{-5} M, 5×10^{-5} M and 1×10^{-4} M, in that order. The FWHM of PL spectrum narrows from 46 nm to 33 nm with the increased concentration. (B) Absorption spectra of the aqueous solution of CdTe with concentration varying from 1×10^{-6} M to 5×10^{-5} M. The absorbance peak is 520 nm in all cases. (C) PL spectra of SiO_2@CdTe nanopaticles in aqueous solution before and after being diluted. The PL peak blue shifted from 547 nm to 541 nm after the solution being diluted 2 times.

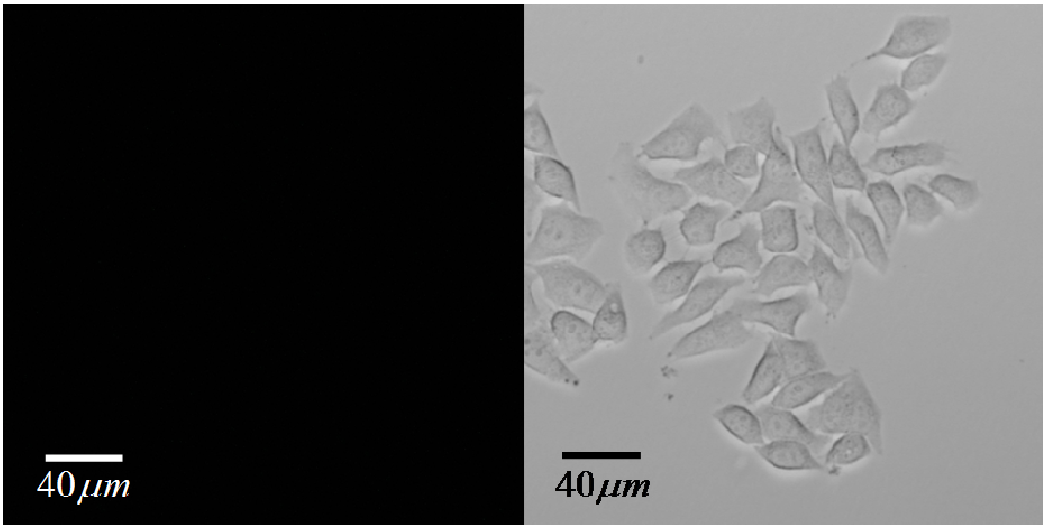


Figure S3. Fluorescent image (left) and bright light image (right) of living Hela cells without the incubation of any nanoparticles.