Supplementary Information:

Morphology Dependent Photosensitization and Formation of Singlet Oxygen ($^1\Delta_g$) by Gold and Silver Nanoparticles and its Application in Cancer Treatment

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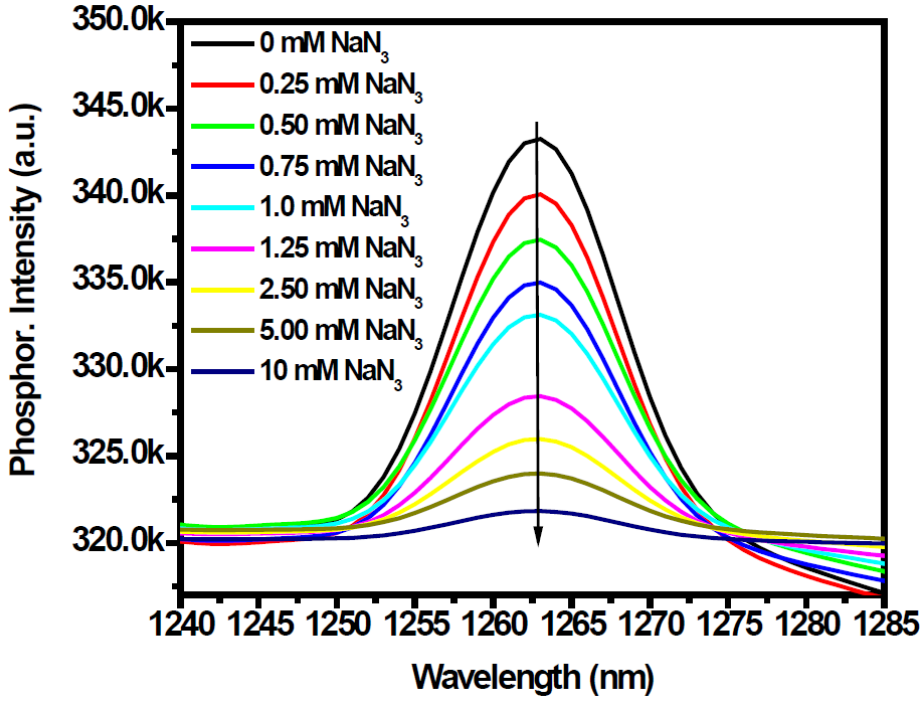

Figure S1 Quenching of singlet O_2 phosphorescence by different concentrations of sodium azide. Singlet O_2 was formed via sensitization of penta-twinned Au NRs (L/D=3.4, λ_{ex}= 885 nm). The residual fraction of unquenched singlet O_2 phosphorescence is of ~6.5%.

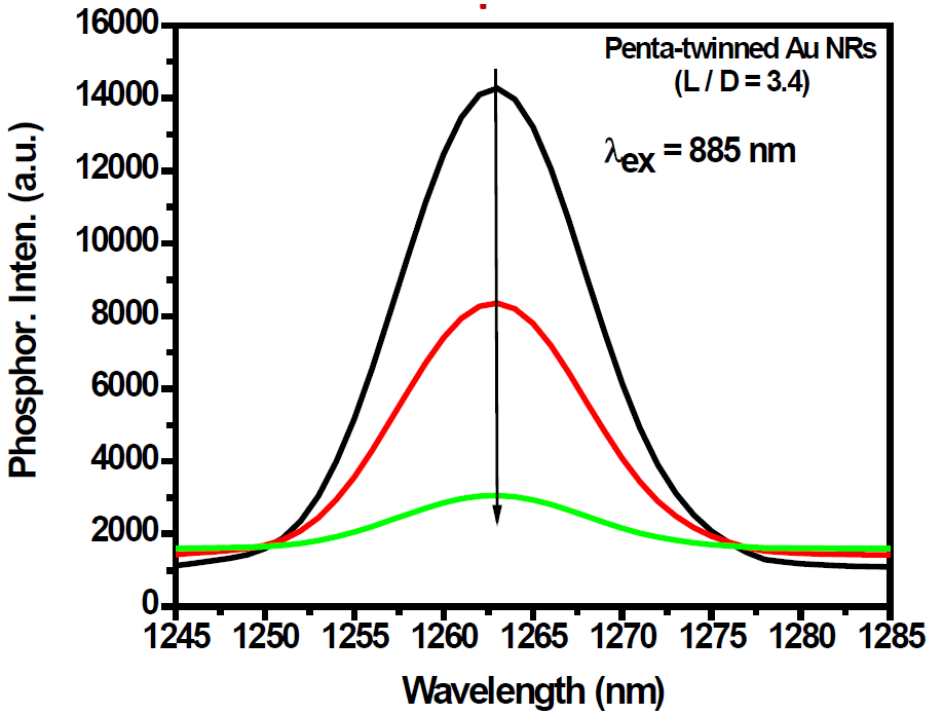

Figure S2 Quenching of singlet O_2 phosphorescence emission after purging argon into the solution for 5 and 10 minutes. Singlet O_2 was formed via sensitization of penta-twinned Au NRs (L/D=3.4, λ_{ex}= 885 nm).

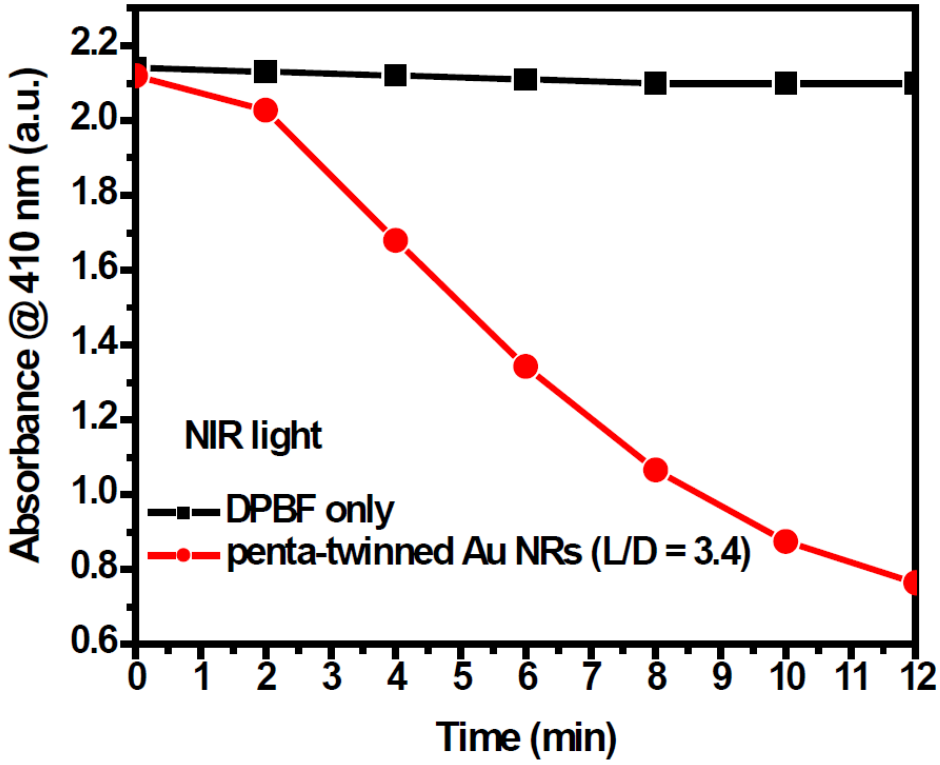

Figure S3 Time course absorption of DPBF containing solutions of penta-twinned Au NRs (L/D = 3.4) under the photoirradiation of NIR light for 12 min. 300 W halogen lamp equipped with a band pass filter of 750 -1380 nm to cut off the UV and visible lights. The light intensity measured at 850 – 950 nm wavelength range was ~ 300 mW / cm^2.

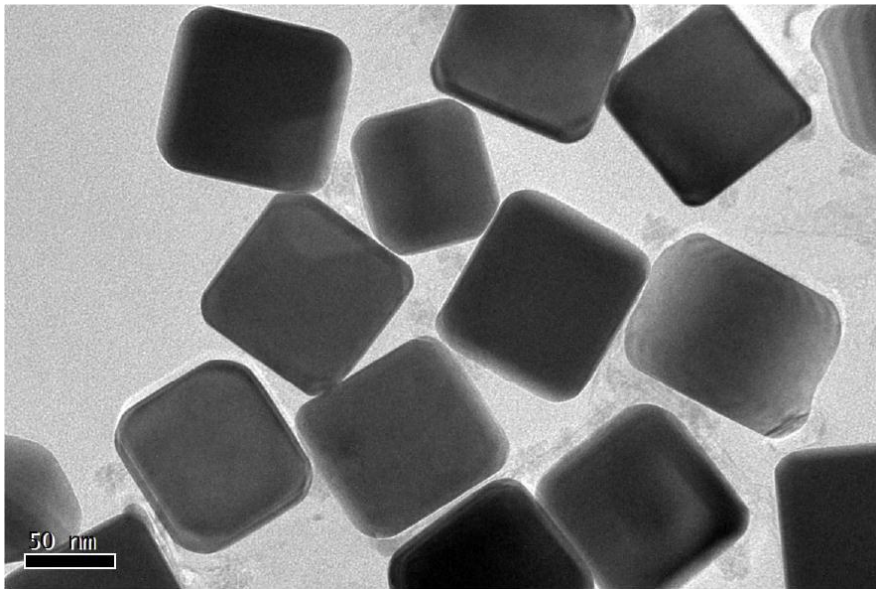

Figure S4 TEM image of obtuse Ag nanocubes.

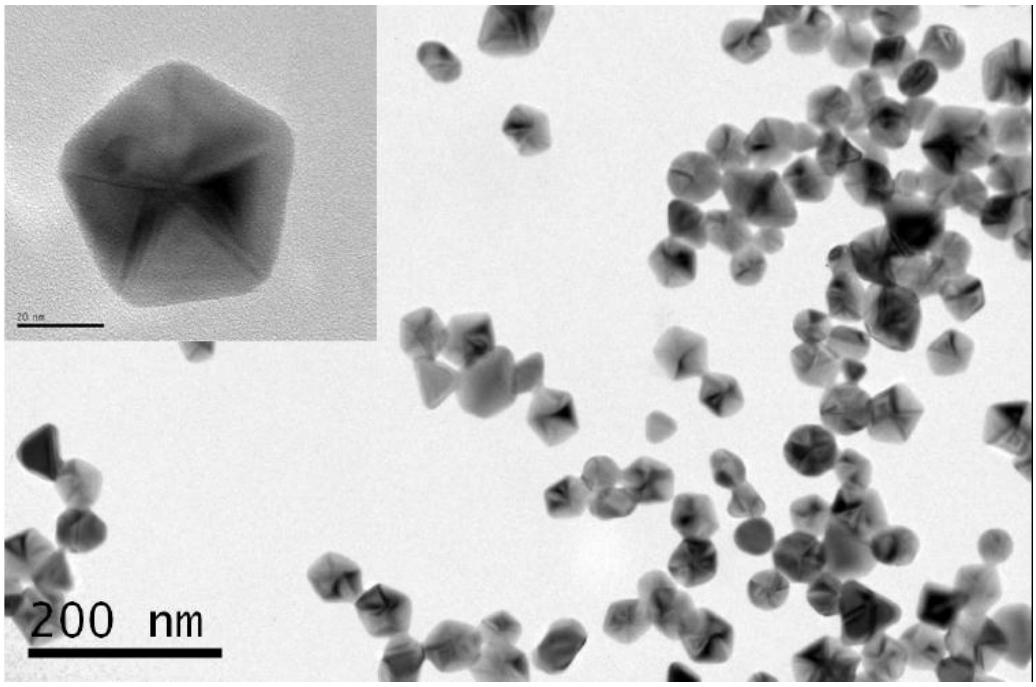

Figure S5 TEM image of penta-twinned Ag decahedrons.

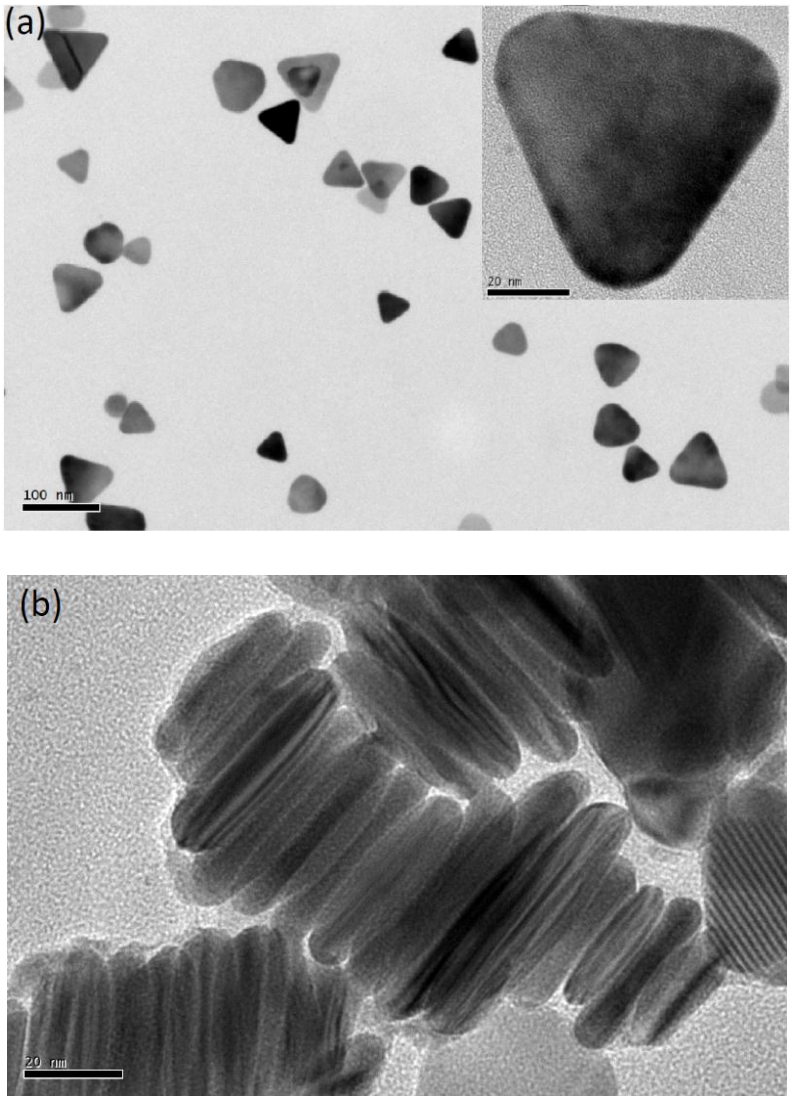

Figure S6 TEM images of Ag triangular plates: (a) front view, and (b) side view.

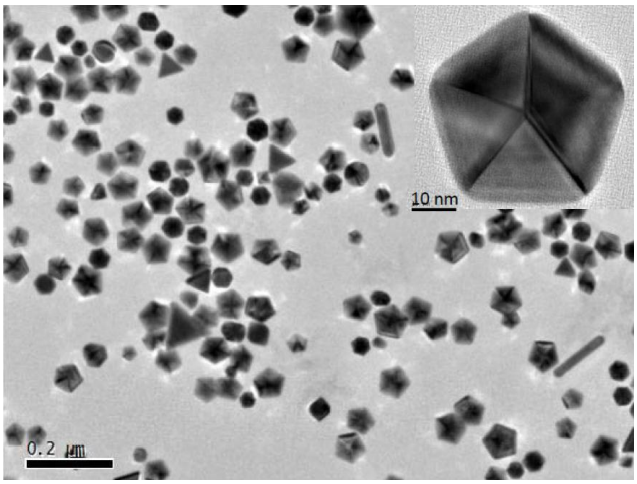

Figure S7 TEM images of penta-twinned Au decahedrons.

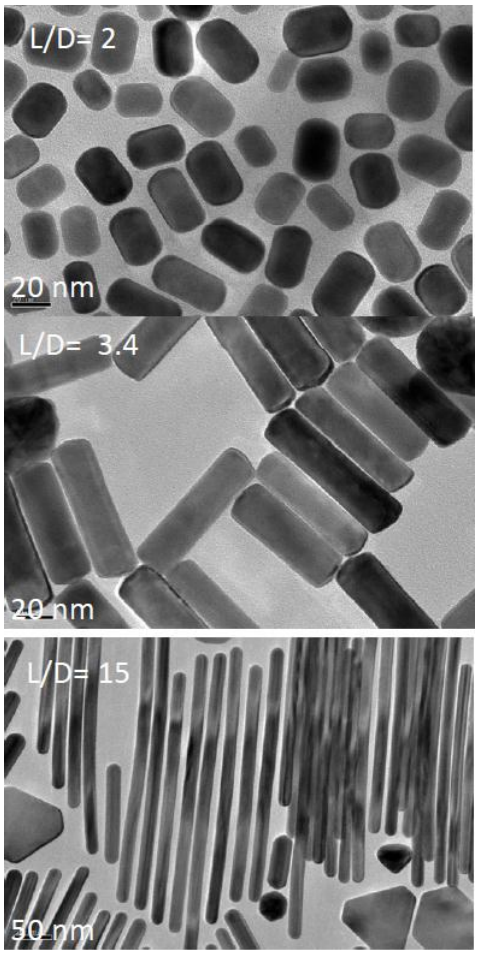

Figure S8 TEM images of penta-twinned Au NRs with different aspect ratios (L/D) as labeled in the figure.

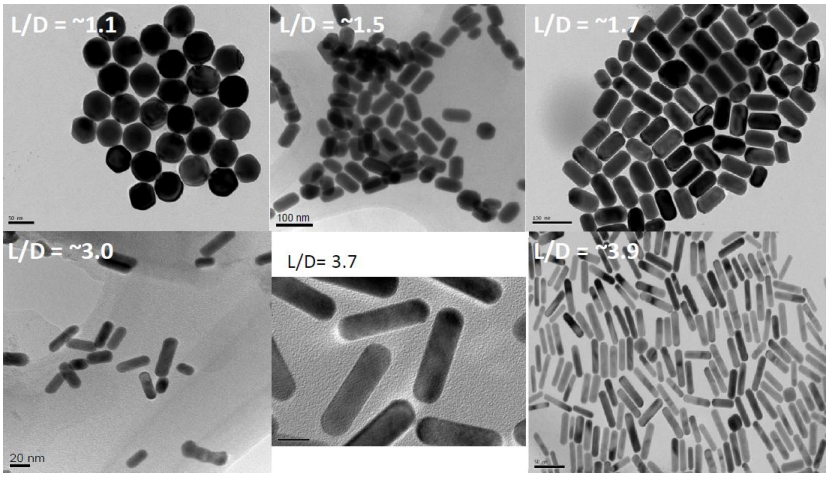

Figure S9 TEM images of single crystalline Au NRs with different aspect ratios (L/D) as labeled in the figure.

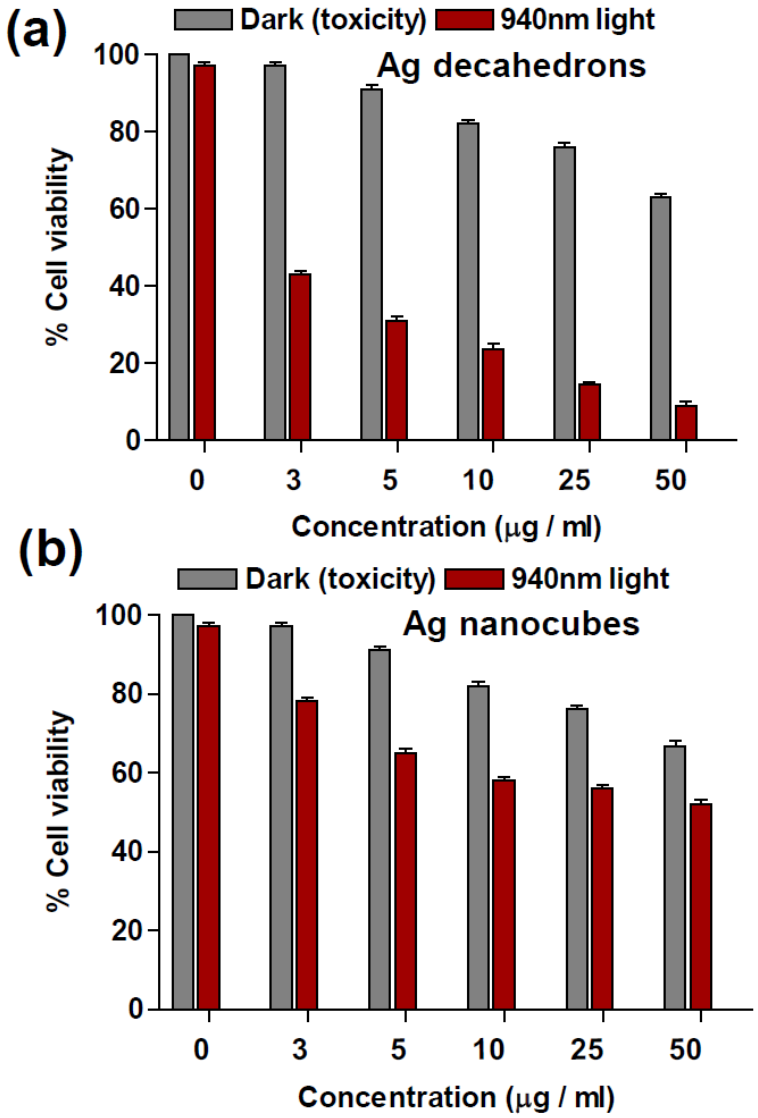

Figure S10 HeLa cell viabilities under dark and photoirradiation conditions as a function of different concentrations of (a) Ag decahedrons and (b) Ag nanocubes respectively.