

Supplementary Information

**Gold nanorod-seeded synthesis of Au@Ag/Au
nanospheres with broad and intense near-infrared
absorption for photothermal cancer therapy**

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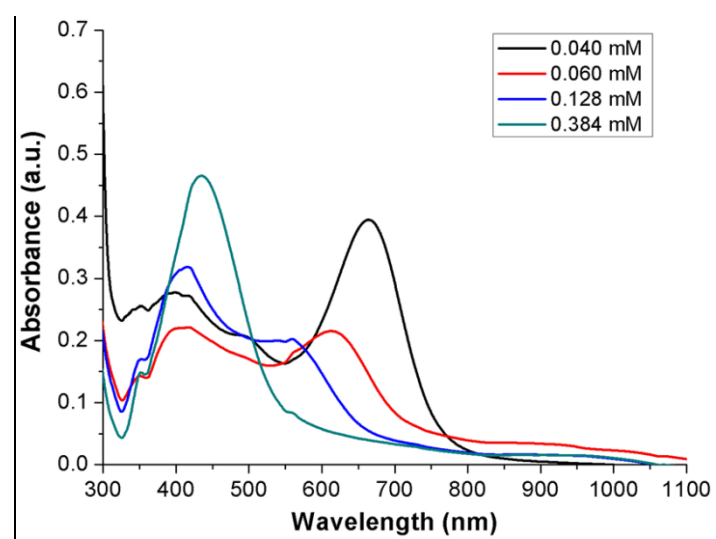


Fig. S1 UV-vis absorption spectra of Au@Ag NPs prepared using different concentrations of AgNO₃.

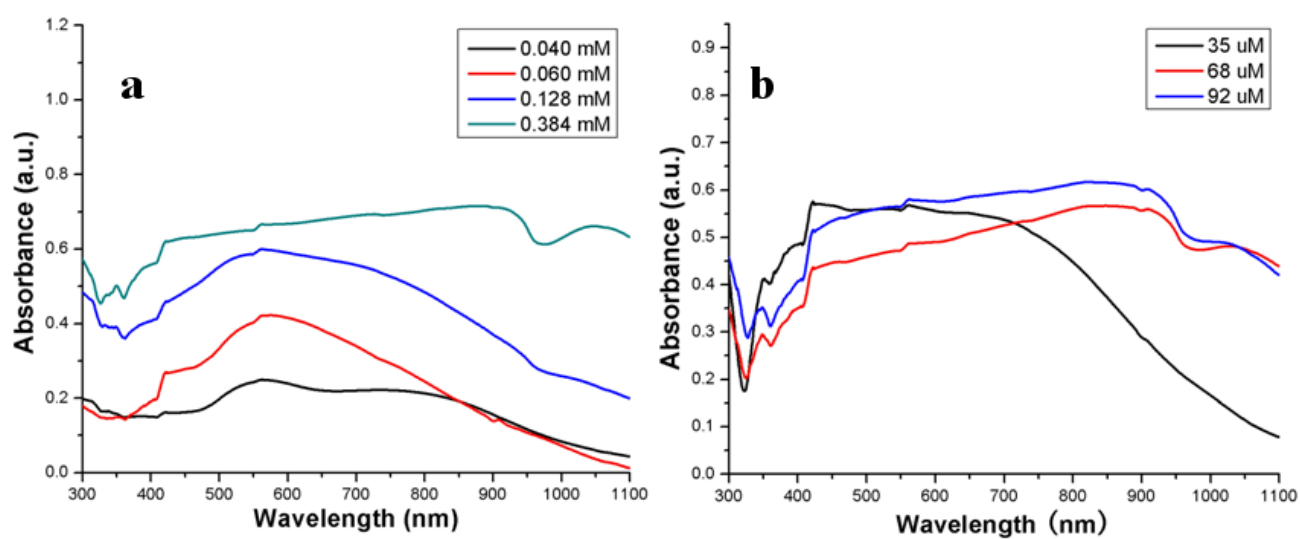


Fig. S2 UV-vis absorption spectra of Au@Ag/Au NPs. a) NPs prepared through the reaction of Au NRs with different concentrations of AgNO_3 in the growth solution and then reacting with 68 μM HAuCl_4 ; b) NPs prepared through the reaction of Au NRs with 0.384 mM AgNO_3 in the growth solution and then reacting with different concentrations of HAuCl_4 .

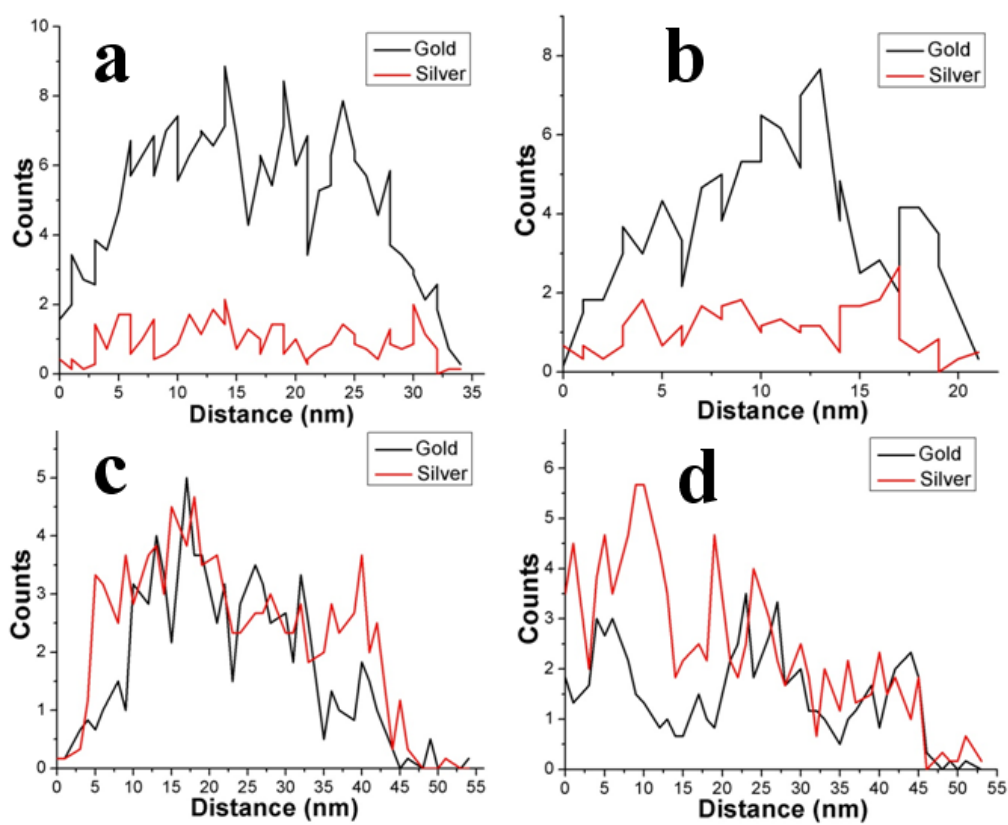


Fig. S3 Cross-sectional compositional profiles of (a, c) line 1 and (b, d) line 2 in (a, b) Fig. 2b and (c, d) Fig. 2f, respectively.

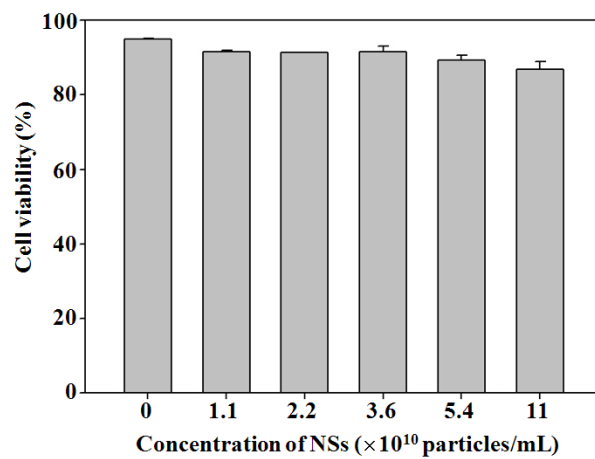


Fig. S4 Viability tests of A549 cells treated by different concentrations of Au@Ag/Au NSs using a PI-based dead cell staining method.

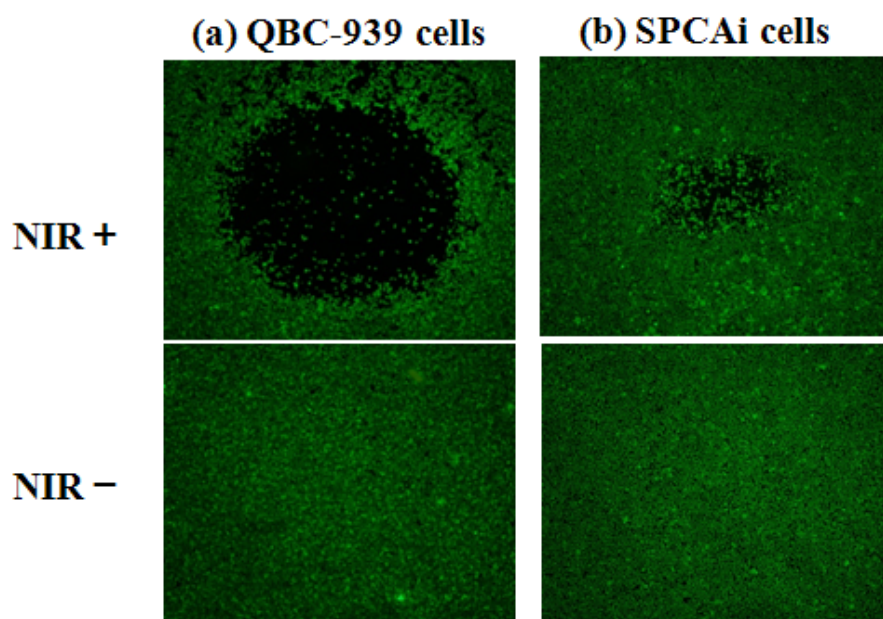


Fig. S5 Different cancer cells were firstly incubated with Au@Ag/Au NSs (2.2×10^{10} particles/mL) for 6 h and then treated by NIR irradiation for 5 min using a 980 nm laser at 26.5 mW. The cell viability was assessed using the calcein-AM live cell staining method and the green fluorescence indicates living cells.