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pH-Responsive Au@Pd Bimetallic Core-Shell Nanorods for Enhanced Synergistic Targeted Photothermal-Augmented Nanocatalytic Therapy in the Second Near-Infrared Window

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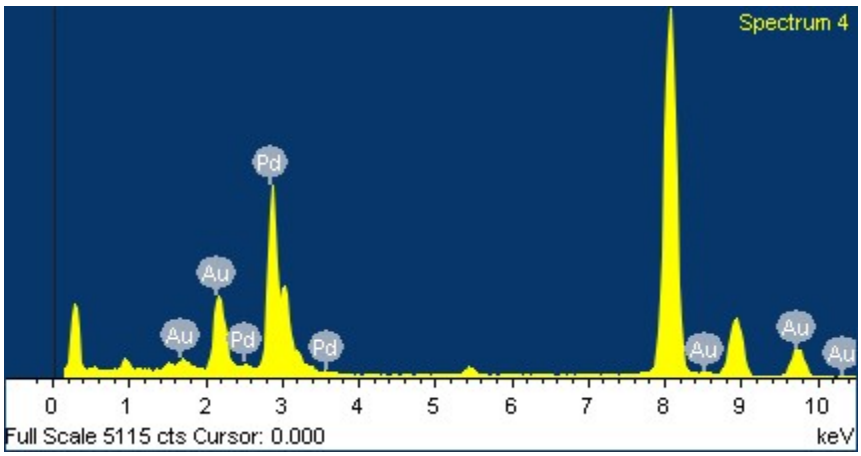

Element	Weight%	Atomic%
Pd L	69.40	80.76
Au L	30.60	19.24
Totals	100.00	

Fig. S1. EDS spectrum of Au@Pd HNRs.

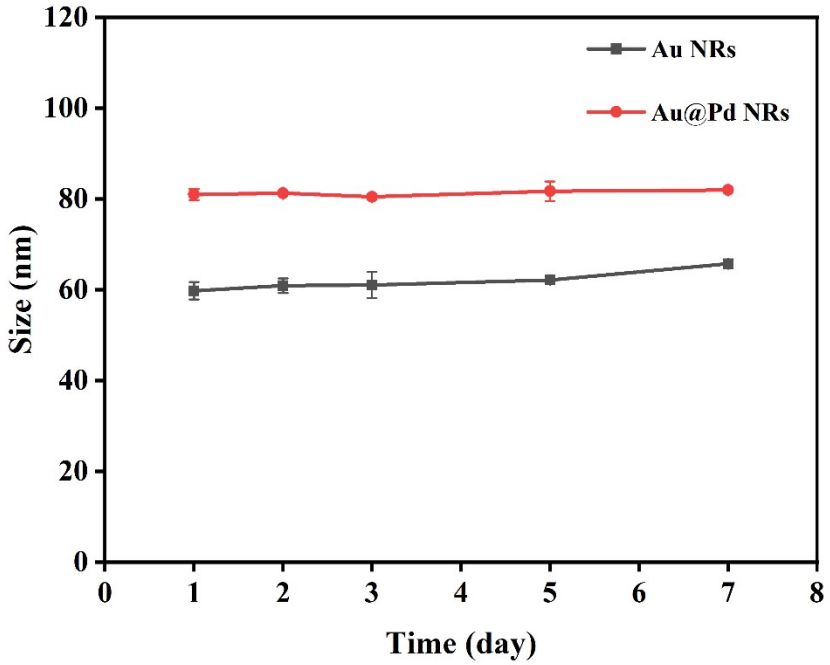

Fig. S2 Average hydrodynamic dimensions of AuNRs and Au@PdNRs during long-term storage

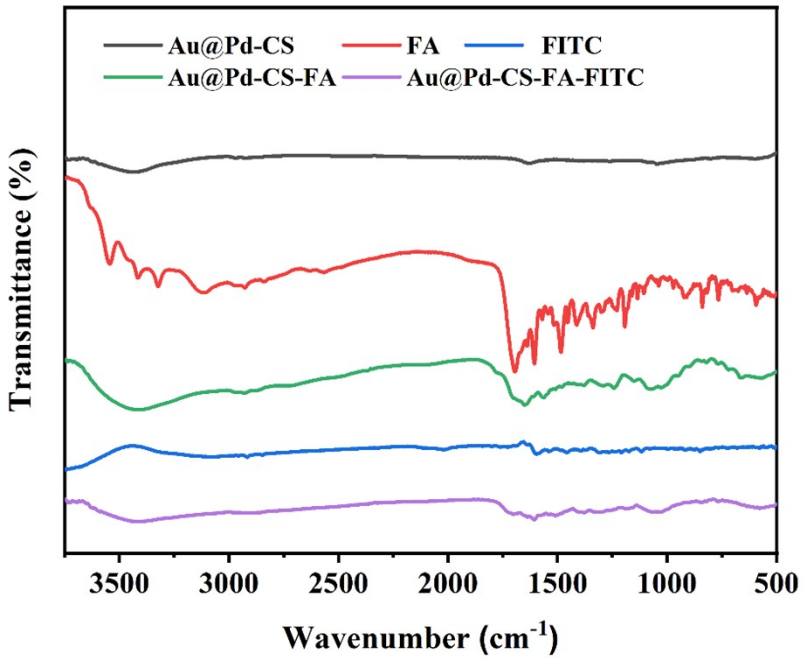

Fig. S3. FTIR spectra of the Au@Pd-CS, FA, FITC, Au@Pd-CS-FA, and Au@Pd-CS-FA-FITC

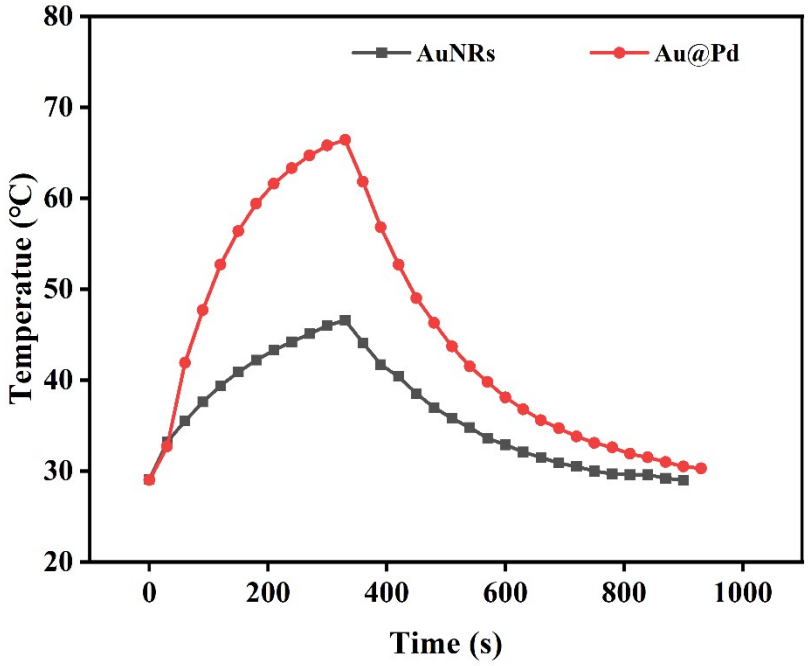

Fig. S4. Au NRs and Au@Pd of the same Au-based concentrations (18.75 μg mL^{-1})., a single cycle diagram irradiated by 1064 nm (1.0 W cm^{-2}) laser for five minutes.

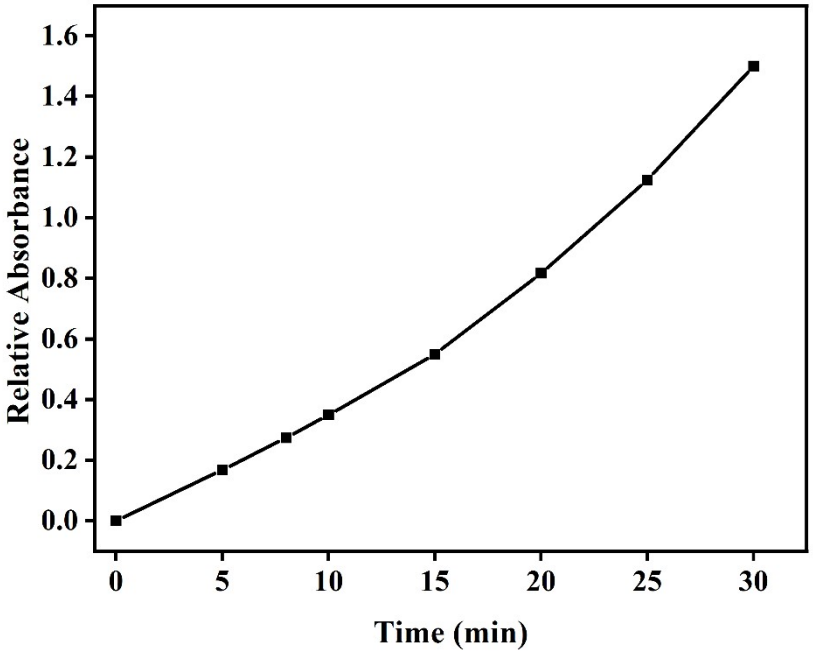

Fig. S5. Time-dependent absorbance at 652 nm of TMB–H_2O_2 reaction system catalyzed by Au@Pd.

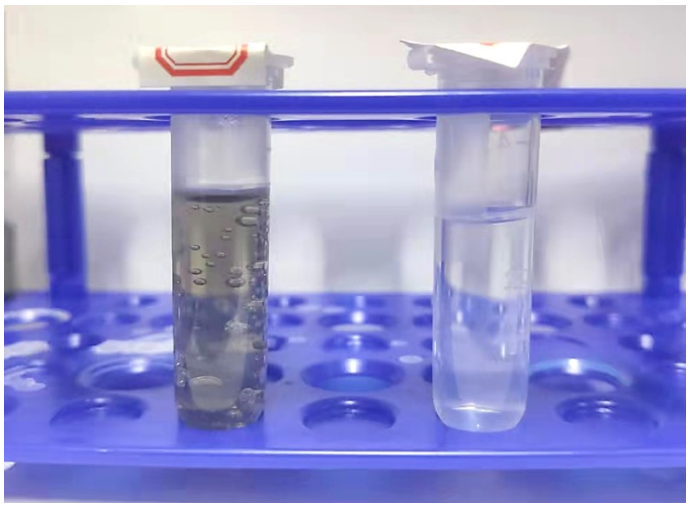

Fig. S6. The image of with or without Au@Pd-CS-FA in H_2O_2. Parameters: [H_2O_2]: 3%, [Au@Pd-CS-FA]: 40 μg mL^{-1}, [Temperature]: 37 ºC, [Time]: 20 min.

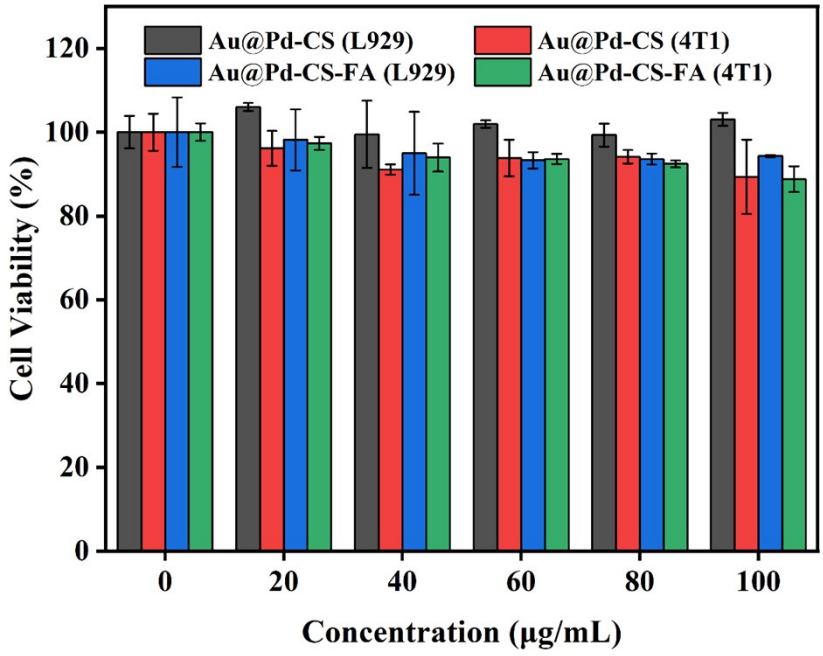

Fig. S7. L929 and 4T1 cells viability incubated with Au@Pd-CS or Au@Pd-CS-FA for 24 h at different concentrations.

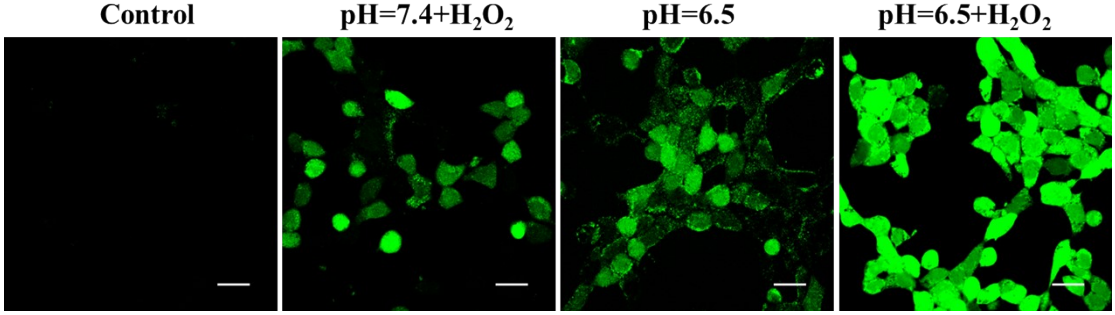

Fig. S8. CLSM images of 4T1 cells stained by DCFH-DA to indicate nanoparticle-induced ROS generation. Scale bar: 25 μm

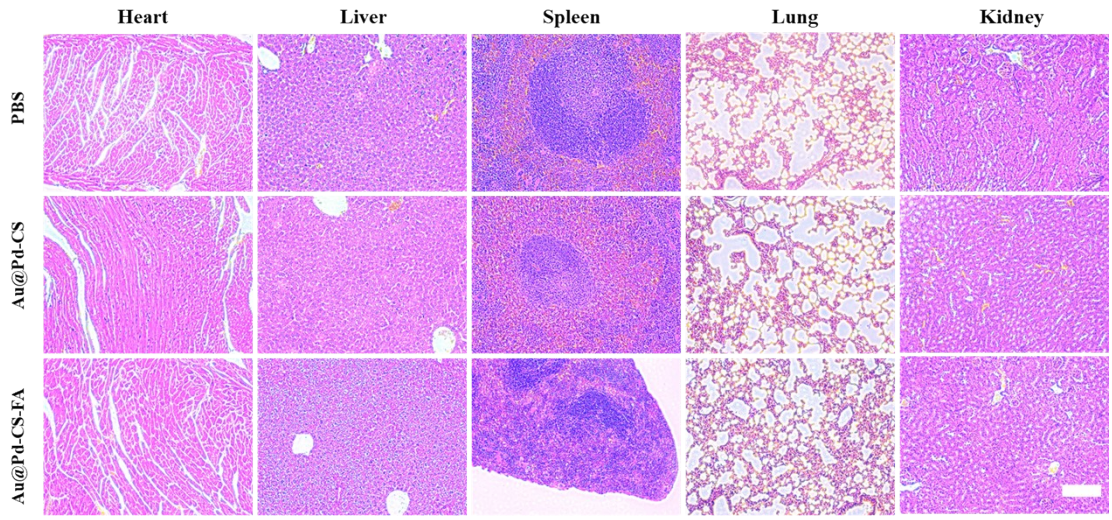

Fig. S9. H&E staining images of major organs (heart, liver, spleen, lung, and kidney) of healthy nude mice 3 weeks after the tail vein were in vivo injected intravenously with PBS, Au@Pd-CS, and Au@Pd-CS-FA, respectively. Scale bar: 200 μm.

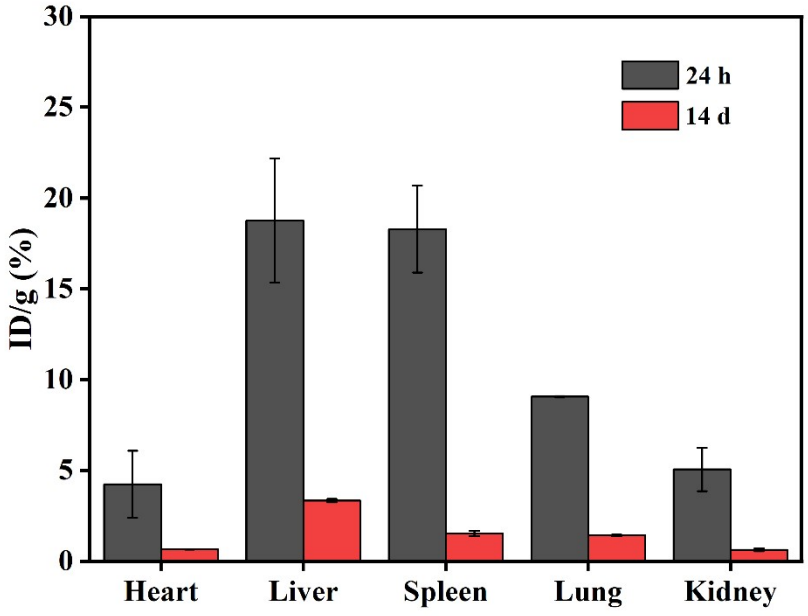

Fig. S10 Biodistribution of Au@Pd-CS-FA HNRs in different organs of 4T1 tumor-

bearing nude mice at different time points

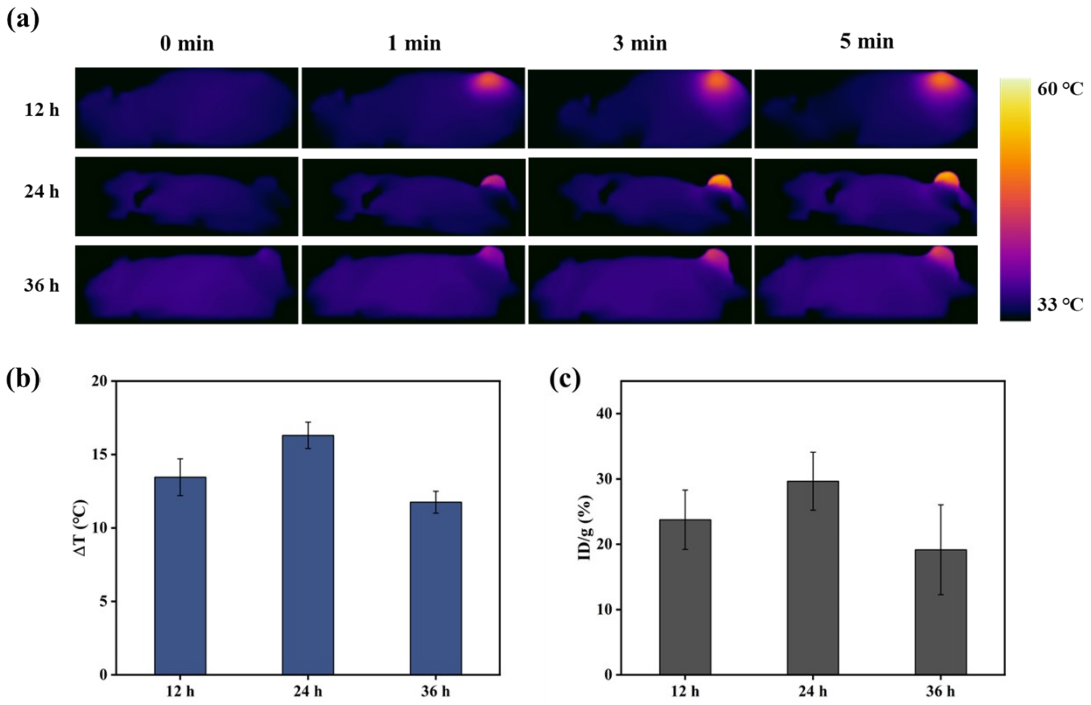

Fig. S11 (a) Photothermal images, (b) temperature changes and (c) HNRs content of tumors injected with Au@Pd-CS-FA at different times (12 hours, 24 hours and 36 hours).

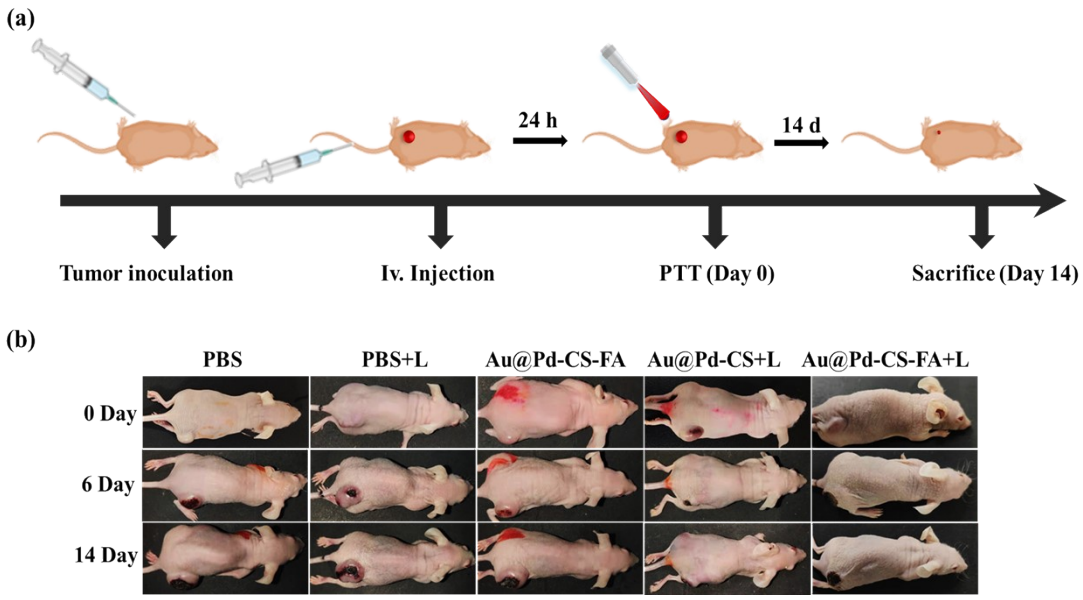

Fig. S12. (a) Schematic illustration of tumor treatment in vivo (b) representative digital images of the mice under different treatments on different days