Nano-Micro Letters

Supporting Information for

Crushed Gold Shell Nanoparticles Labeled with Radioactive Iodine as a Theranostic Nanoplatform for Macrophage-Mediated Photothermal Therapy

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Supplementary Figures

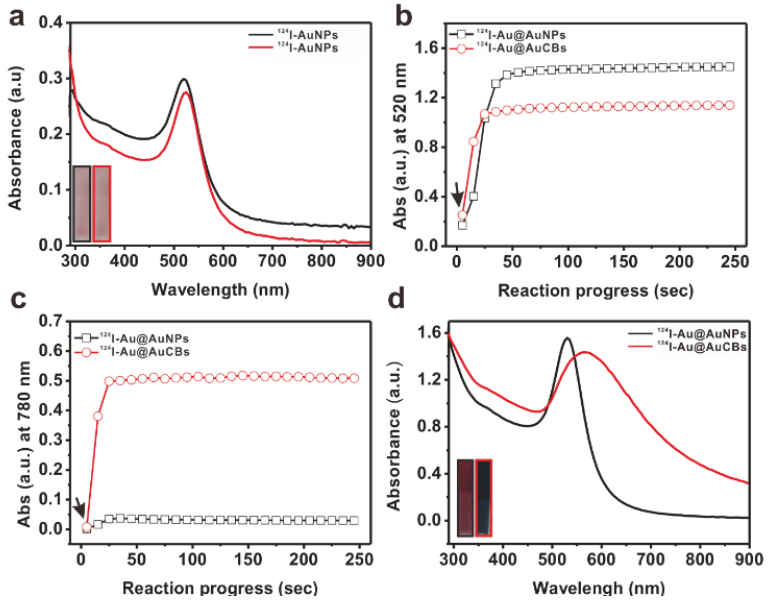

Fig. S1 Characterization of ^{124}I-Au@AuNPs and ^{124}I-Au@AuCBs. a Normalized absorption spectrum of ^{124}I-AuNPs before Au shell formation. **b, c** The reaction rate of Au-shell coverage on ^{124}I-Au@AuNPs at 520 and 600 nm. **d** Normalized absorption spectra of ^{124}I-Au@AuNPs and ^{124}I-Au@AuCBs

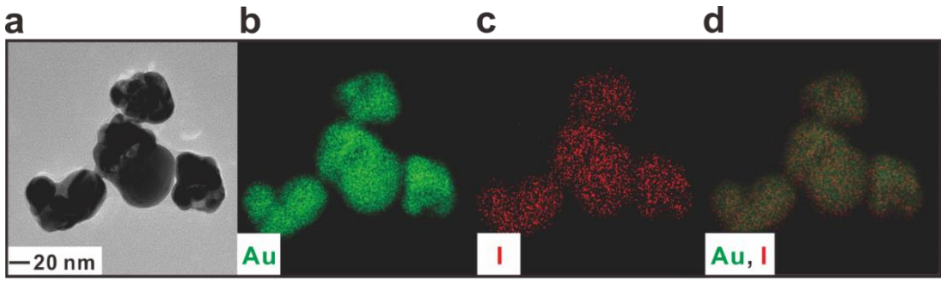

Fig. S2 a TEM micrograph of ^{124}I-Au@AuCBs and energy dispersive X-ray-based elemental mapping of **b** Au and **c** I. A merged image is also shown **d**.

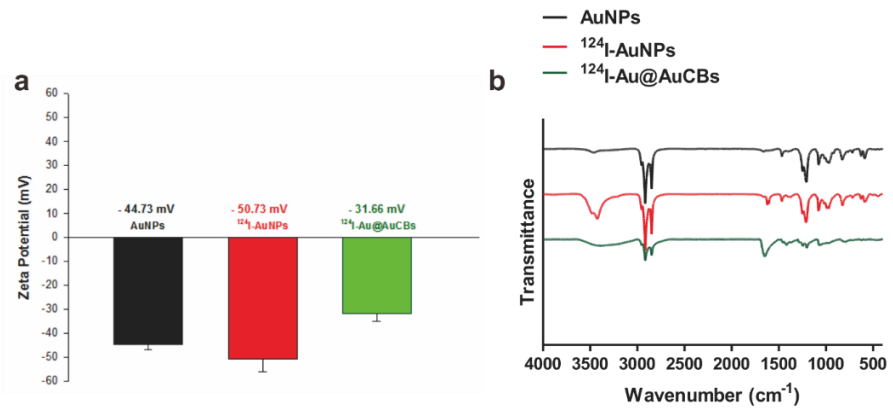

Fig. S3 a Zeta-potentials, **b** FT-IR of AuNPs, ^{124}I-AuNPs, and ^{124}I-Au@AuCBs

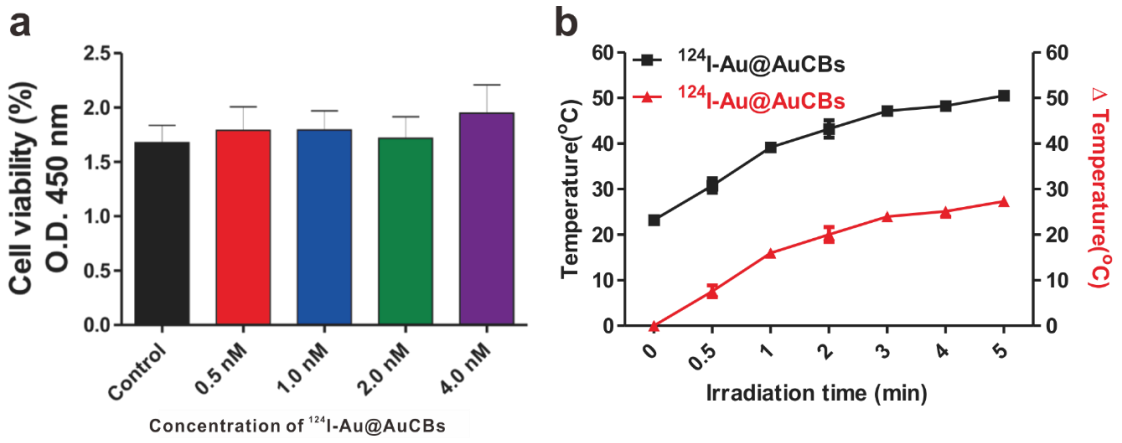

Fig. S4 Toxicity of ^{124}I-Au@AuCBs in colon cancer CT26/cells. a Cells were seeded in 96-well plates and treated with ^{124}I-Au@AuCBs for 24 h. Cell proliferation was analyzed using the Cell Counting Kit-8 (CCK-8) assay. **b** Curves showing changes in the temperature (Δ) of the ^{124}I-Au@AuCBs upon irradiation of the colon cancer CT26 cells with an NIR laser for 5 min

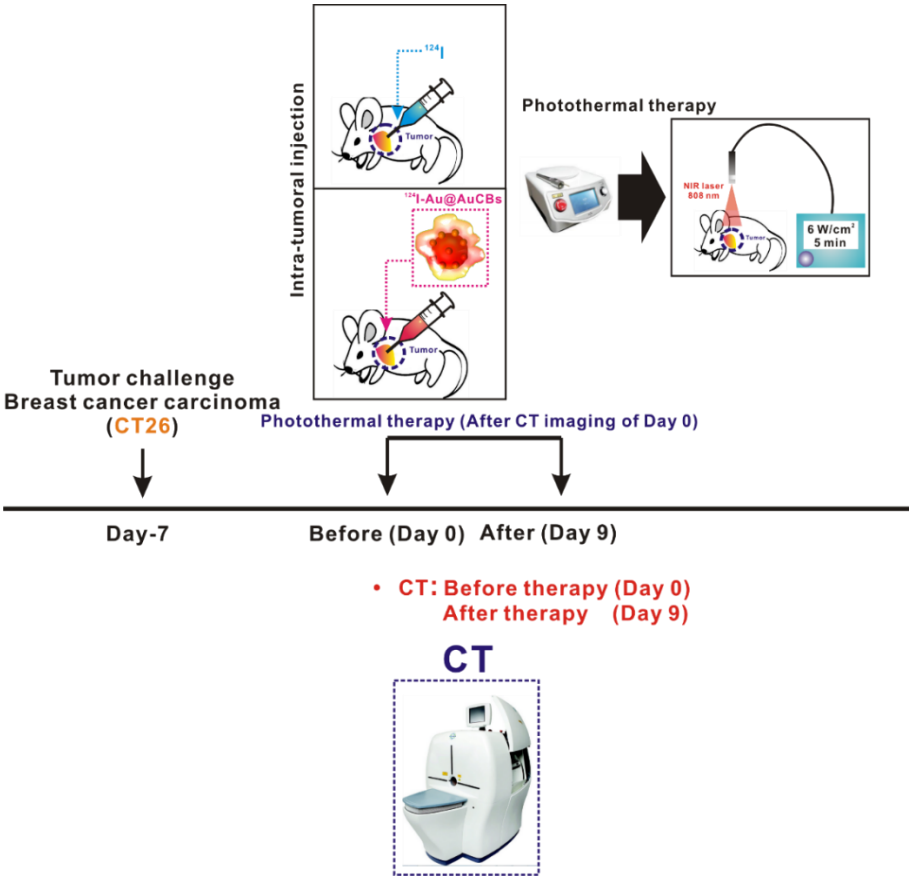

Fig. S5 Schematic representations of the protocol for *in vivo* photothermal therapy using ^{124}I-Au@AuCBs for CT26 tumor-bearing mice. CT26 tumor-bearing mice received free ^{124}I and ^{124}I-Au@AuCBs via intratumoral injection. Before and after therapy, changes in tumor volume were monitored post-photothermal therapy via positron emission tomography/computed tomography at indicated time points. *In vivo* experiments were performed in duplicate (n=7 mice per group)