Electronic Supplementary Material (ESI) for Materials Advances.

Gold nanobipyramids-based photothermal reagent with functions of targeting and activatable fluorescence labeling for a visual photothermal therapy

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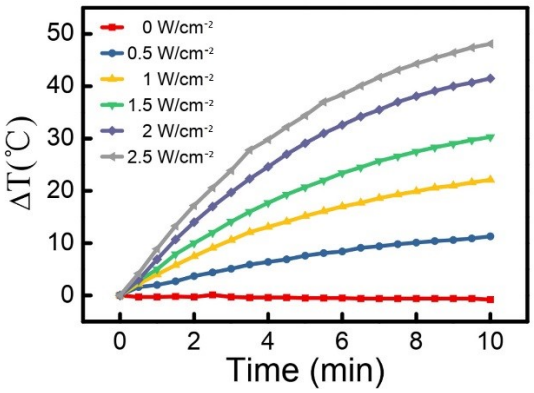

Fig.S1 Temperature dependences of aqueous solution containing the AuNBPs of 30 μg·mL^{-1} with the irradiation time of 808 nm lasers under different power density of laser irradiation

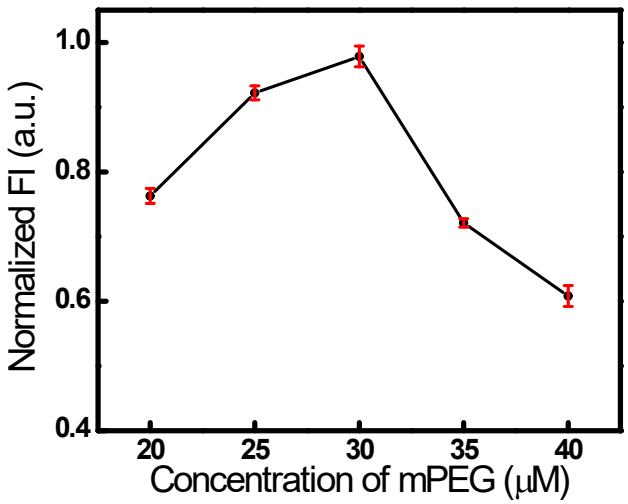

Fig.S2 The normalized fluorescence intensity of AuNBPs-mPEG/AA-TR (80 μg·mL^{-1}, 2mL) with different concentrations of the mPEG added in the reaction system (repeated for three times in parallel).

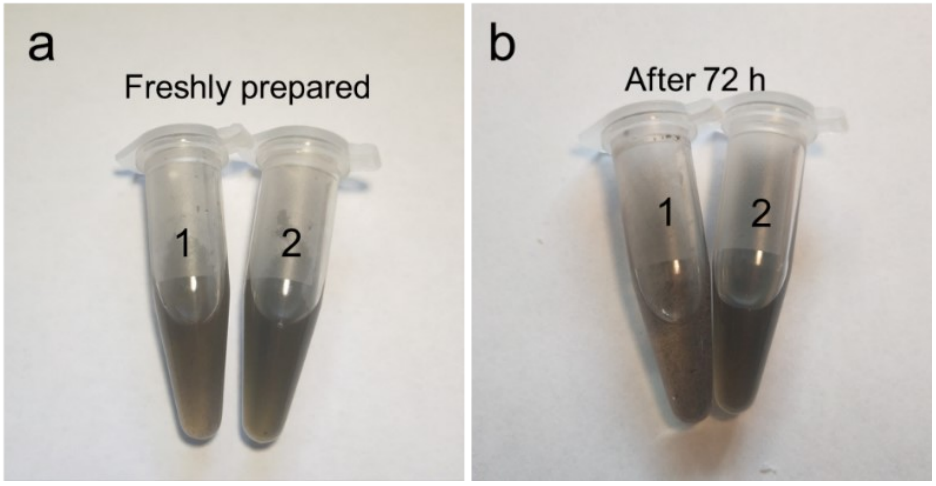

Fig.S3 The photographs of AuNBPs-AA-TR and AuNBPs-mPEG/AA-TR: a) freshly prepared, b) after standing for 48 h. (1, 2 represent AuNBPs-AA-TR and AuNBPs-mPEG/AA-TR respectively)

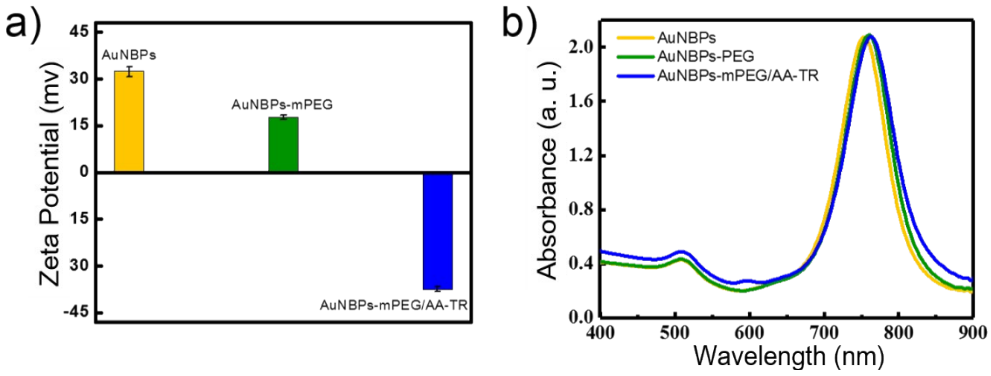

Fig.S4 a) The zeta potential and b) Ultraviolet-visible absorption spectra of the AuNBPs, AuNBPs-mPEG and AuNBPs-mPEG/AA-TR.

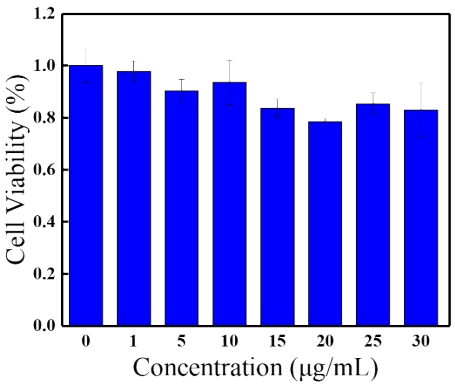

Fig.S5. The cytotoxicity of AuNBPs-mPEG/AA-TR to normal cell (L929)

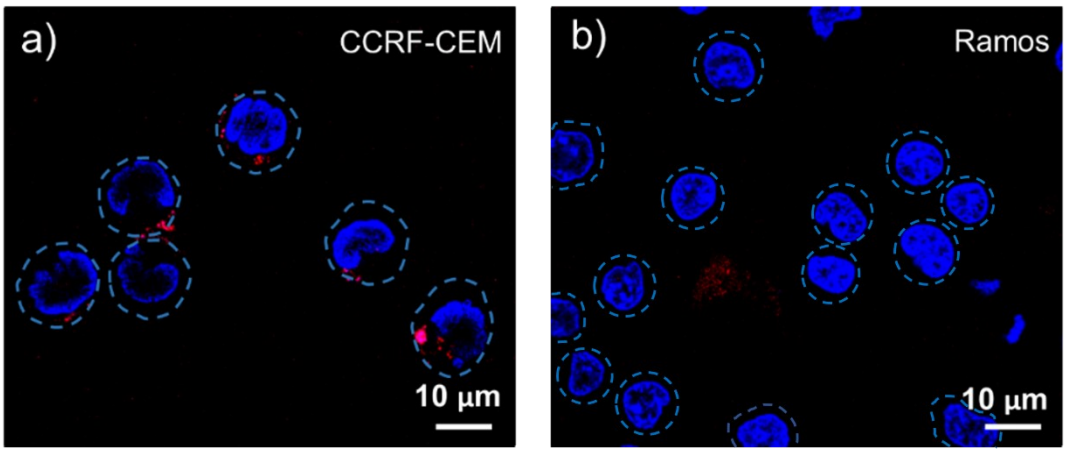

Fig.S6 Fluorescence images of a) CCRF-CEM cells and b) Ramos cells after incubated with AuNBPs-mPEG/AA-TR. The average fluorescence intensity of each cell in red channel in a) is 9.7 times than that in b).

Table S1 Names and sequences of the oligonucleotides used in this study.

Name	DNA Sequence (5'-3')
$AA_{(16T)}$-TR	5'-SH-CTAACCGTTTTTTTTTTTTTTTTATCTAACTGCTGCGCCG
	CCGGGAAAATACTGTACGGTTAGA-TR-3'
$AA_{(32T)}$-TR	5'-SH-CTAACCGTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTATCT
	AACTGCTGCGCCGCCGGGAAAATATGTACGGTTAGA-TR-3'
$AA_{(40T)}$-TR	5'-SH-CTAACCGTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT
	TTTATCTAACTGCTGCGCCGCCGGGAAAATATGTACGGTTAGA-TR-3'
Lib	5'-SH-ATCCAGAGTGACGCAGCANNNNNNNNNNNNNNNNNNNN
	NNNNNNNNNNNNNNNNNNNNNNTGGACACGGTGGCTTAGT-TR-3'

N represents A, T, C or G base, and TR represents Tex Red fluorophore.