

Au₂₅ clusters functionalized metal-organic nanostructures for magnet targeted photodynamic/photothermal therapy triggered by a single 808 nm near-infrared light

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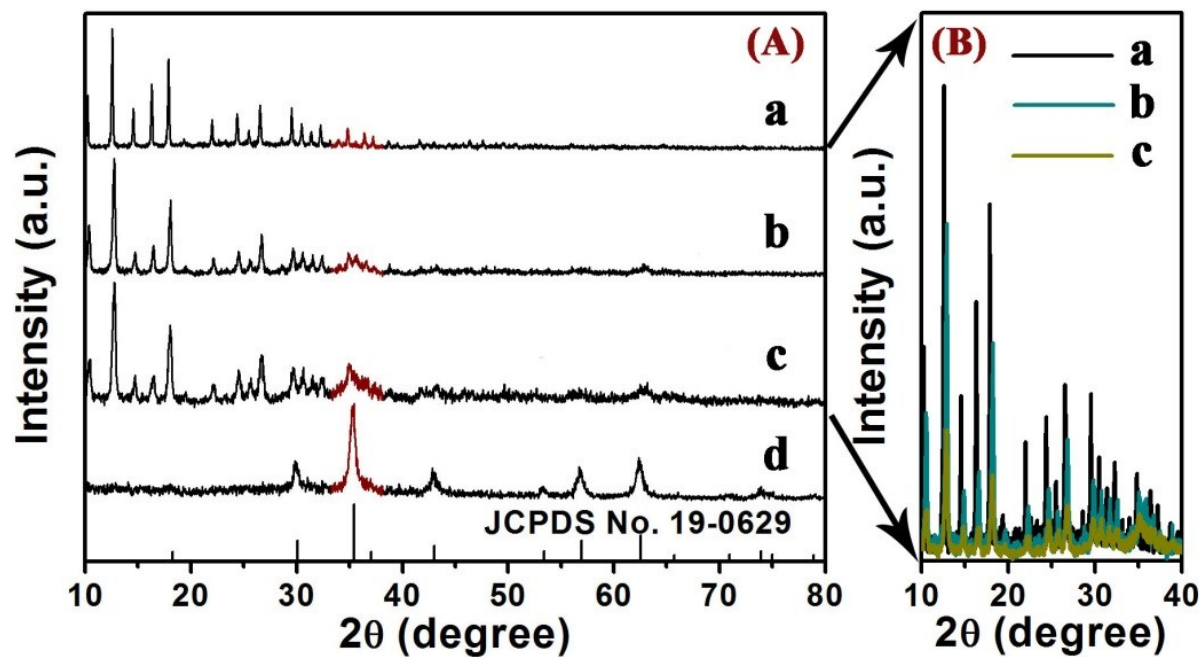


Fig. S1 (A) XRD patterns of a) ZIF-8, b) Fe₃O₄/ZIF-8, c) Fe₃O₄/ZIF-8-Au₂₅, and d) Fe₃O₄. (B) The corresponding XRD patterns in 2θ range from 10° to 40°.

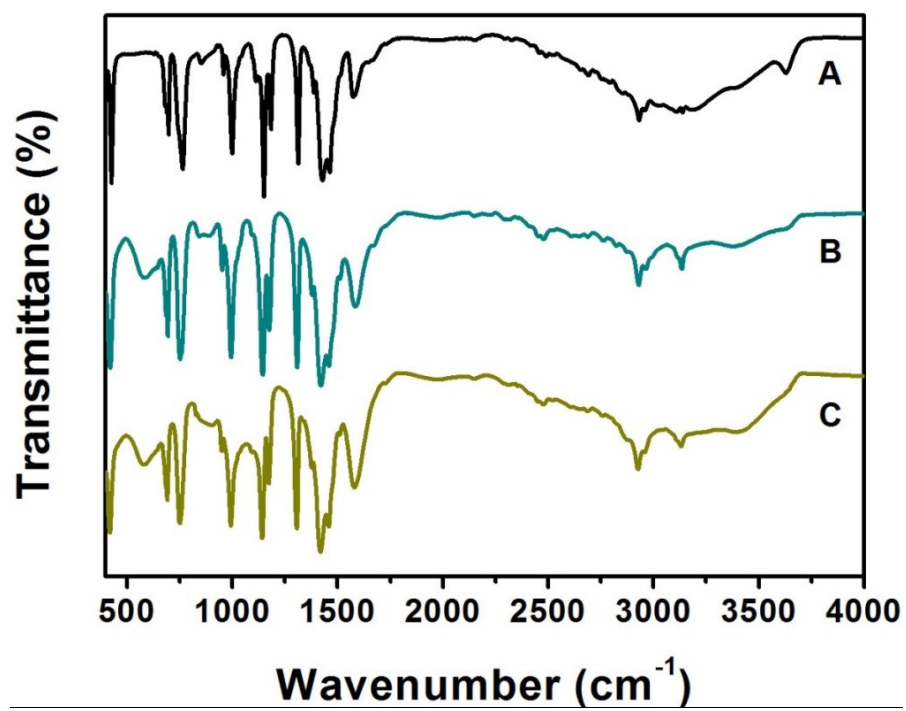


Fig. S2 FT-IR spectra of (A) ZIF-8, (B) $\text{Fe}_3\text{O}_4/\text{ZIF-8}$, and (C) $\text{Fe}_3\text{O}_4/\text{ZIF-8-Au}_{25}$.

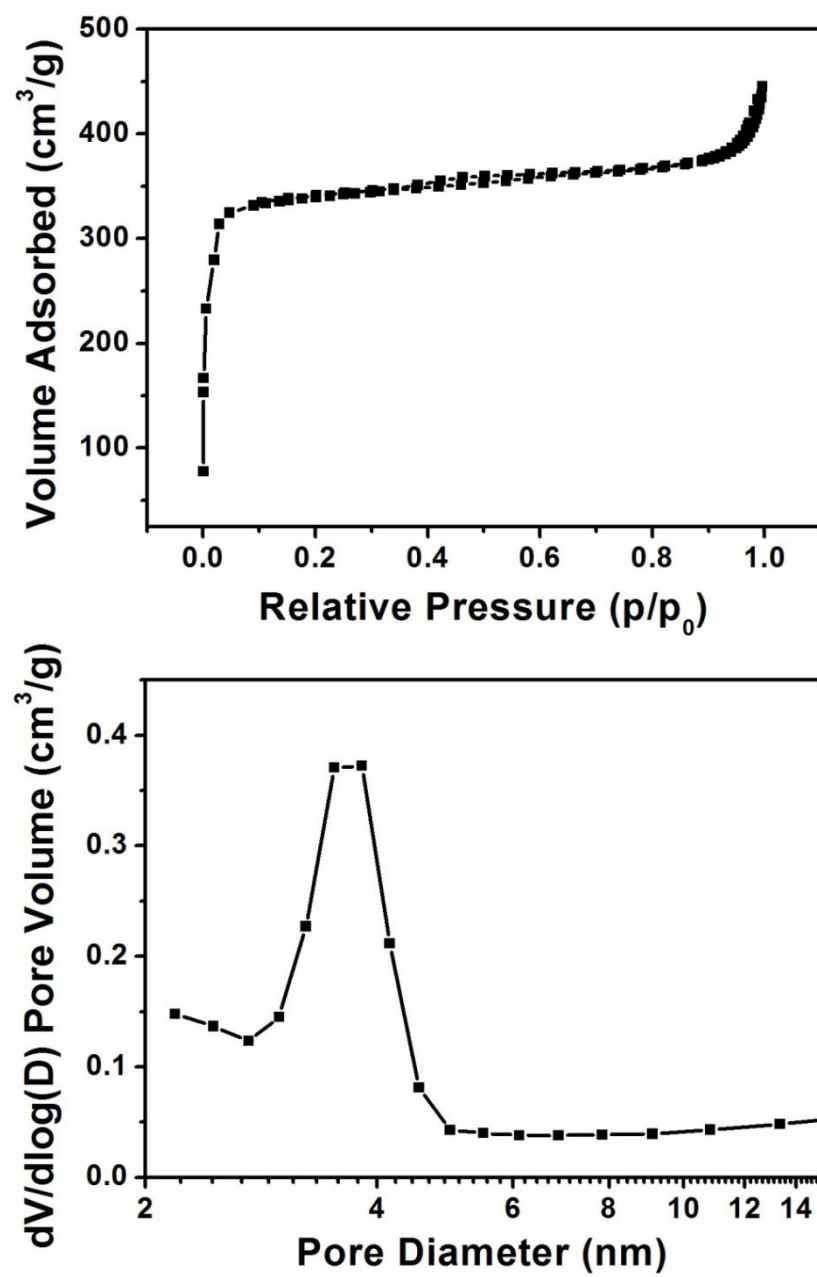


Fig. S3 N_2 adsorption/desorption isotherm and the pore size distribution of $Fe_3O_4/ZIF-8-Au_{25}$.

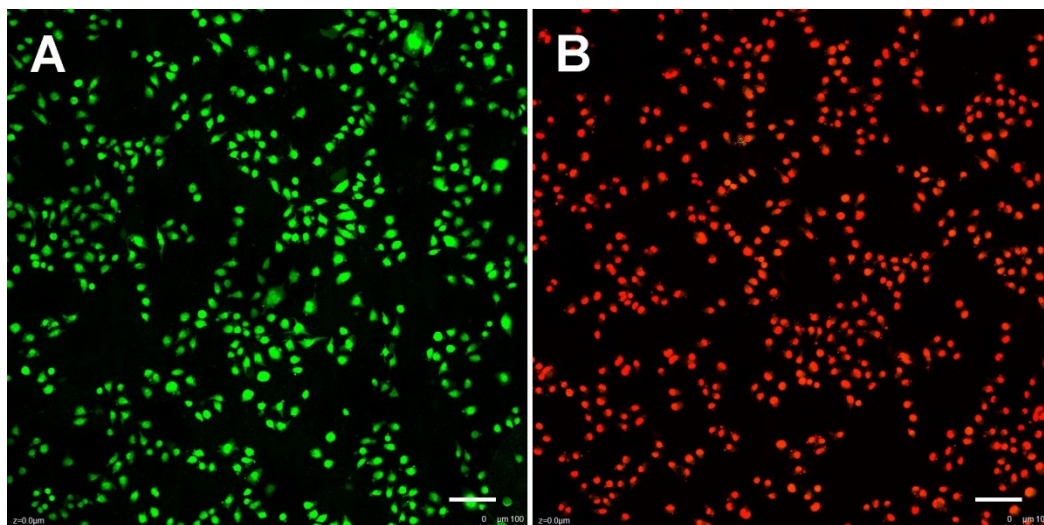


Fig. S4 CLSM image of HeLa cells incubated (A) with culture, (B) with $\text{Fe}_3\text{O}_4/\text{ZIF-8-Au}_{25}$ under NIR irradiation. All the cells were marked with calcein AM and PI. Scale bars for all images are 100 μm .

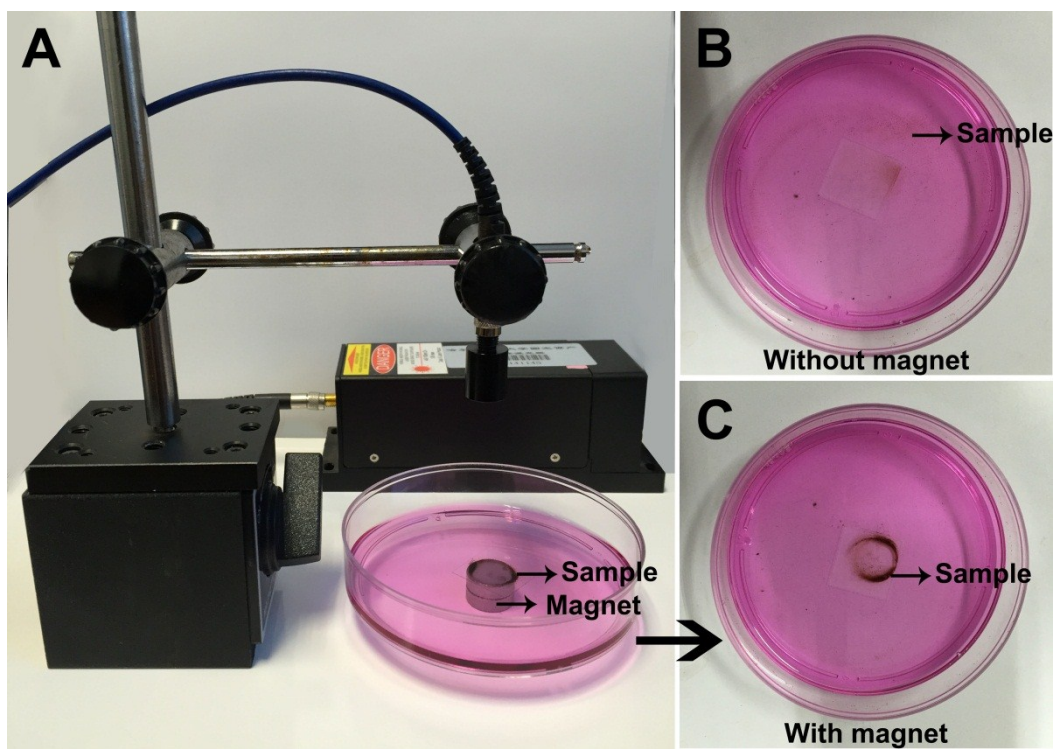


Fig. S5 A digital photograph showing the experimental set-up to the cells after magnetic targeted uptake assay. The magnet was placed close to the cell culture dish and the materials were adsorbed to the surrounding of magnet.

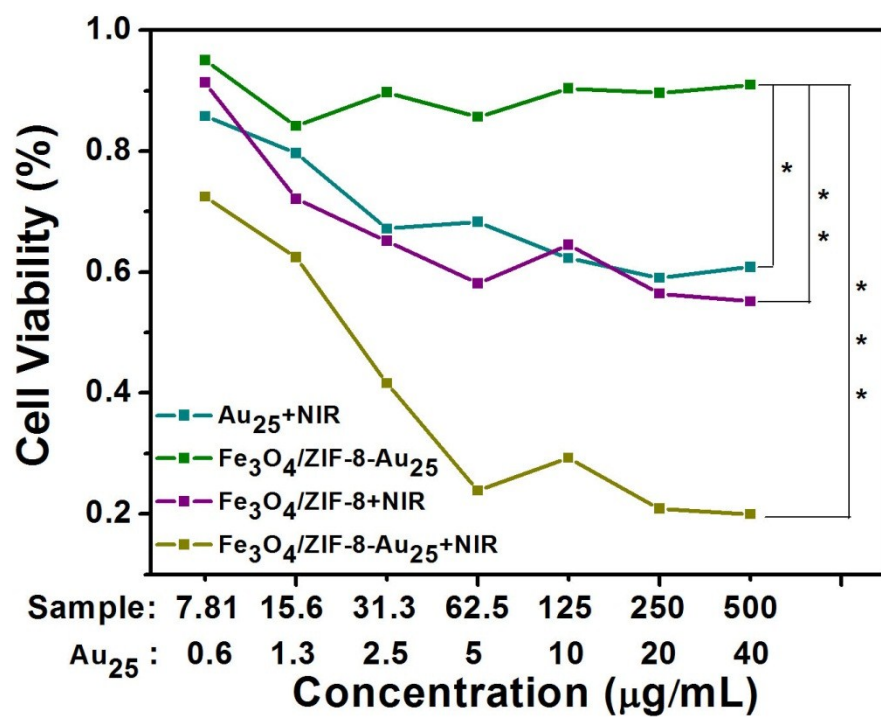


Fig. S6 *In vitro* Hepal-6 cell viabilities incubated with Au_{25} , $Fe_3O_4/ZIF-8-Au_{25}$, $Fe_3O_4/ZIF-8$ at various concentrations with and without 808 nm laser NIR.

Table S1. Blood biochemistry and hematology data of female KM mice at 20 days

Project	Name	Control Group	Treatment Group	Ref.	units
	ALT	52	43	30.7 ± 31.3	U/L
	AST	164	180	148.6 ± 73.2	U/L
	ALP	137	161	144.9 ± 34.5	U/L
	A/G	0.46	0.48	0.48 ± 0.02	
	BUN	8.7	9.9	9.2 ± 1.2	mmol/L
	WBC	5.9	8.7	6.8 ± 1.5	$10^9/L$
	RBC	8.9	9.1	9.6 ± 1.1	$10^{12}/L$
	HGB	143	152	147.3 ± 9.6	g/L
	PLT	431	569	564.9 ± 146.2	$10^9/L$
	HCT	43.89	44.51	44.2 ± 3.4	%
	MCV	49.4	48.4	45.9 ± 2.3	fL
	MCH	15.0	14.8	15.3 ± 0.9	pg
	MCHC	323	326	334.3 ± 17.3	g/L

Notice: the data in the table is average calculated by five mice each group.