Electronic Supplementary Information

Rational Design of a Comprehensive Cancer Therapy Platform Using Temperature-Sensitive Polymer Grafted Hollow Gold Nanospheres: Simultaneous Chemo / Photothermal / Photodynamic Therapy Triggered by a 650 nm Laser with Enhanced Anti-Tumor Efficacy

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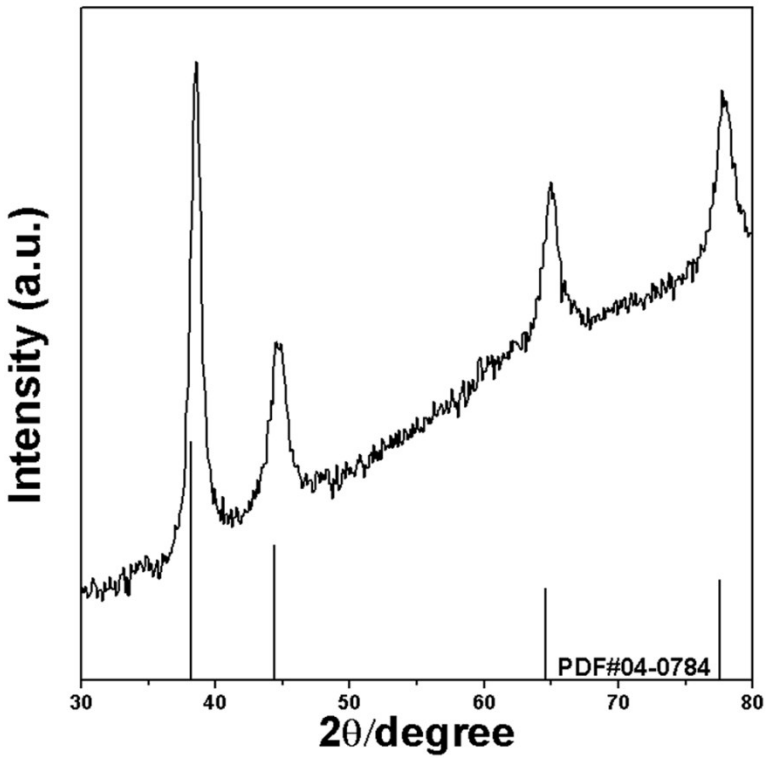

Fig. S1. Wide-angle XRD patterns of as-made HAuNs and the standard JCPDS card 04-0784 of Au.

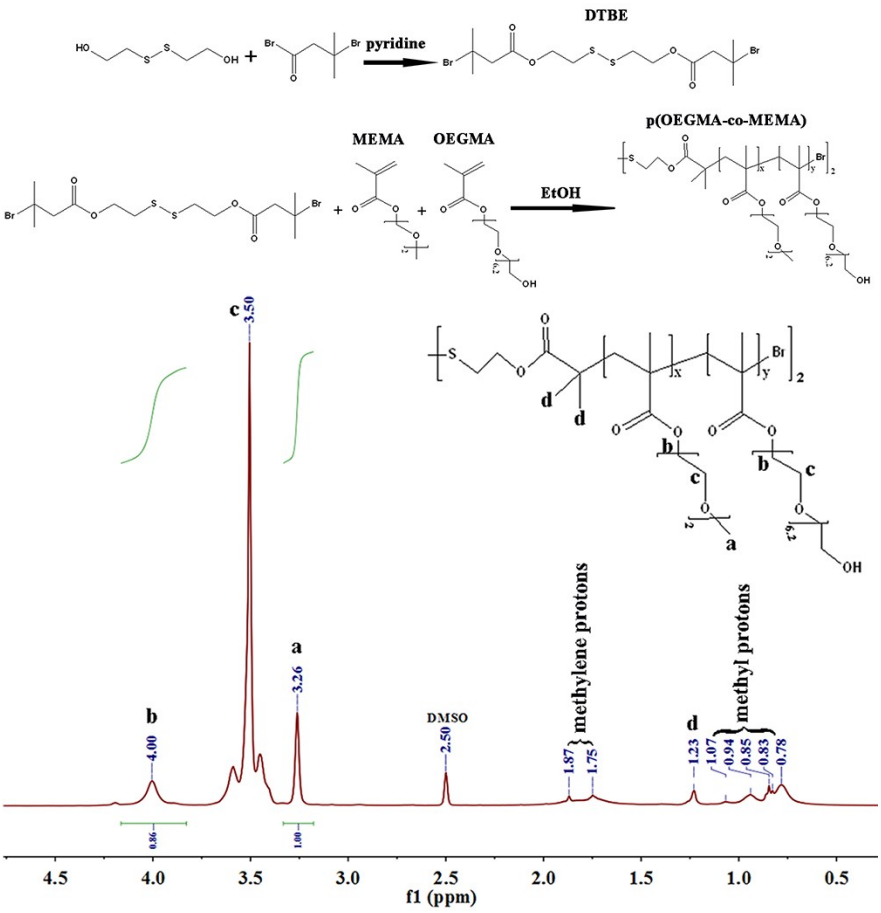

Fig. S2. The chemical reacting equations and ^{1}H-NMR spectra of temperature-sensitive polymer p(OEGMA-co-MEMA).

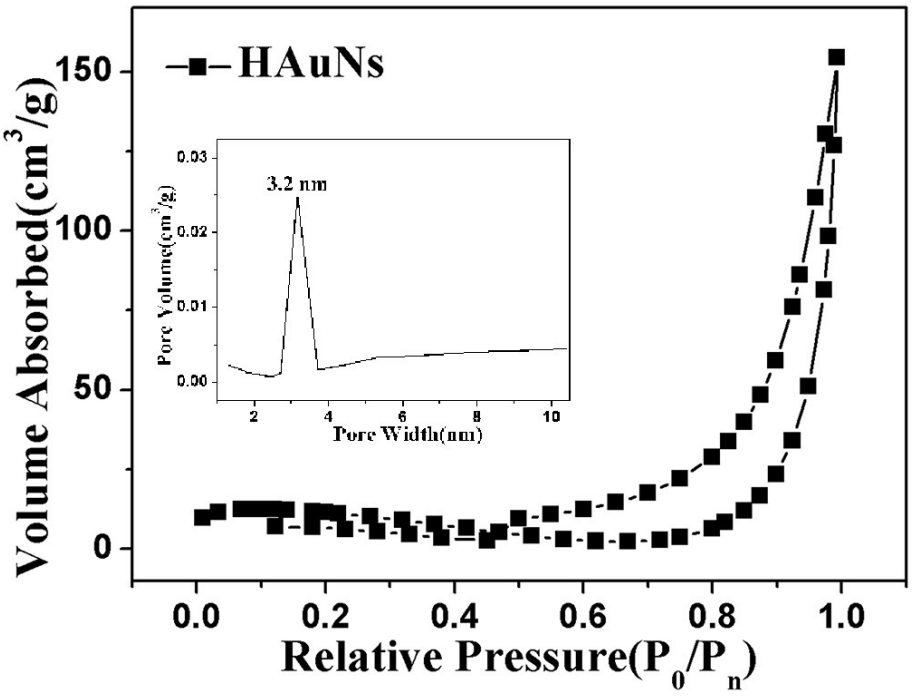

Fig. S3 N_2 absorption/desorption isotherm and pore width (insert) of the HAuNs.

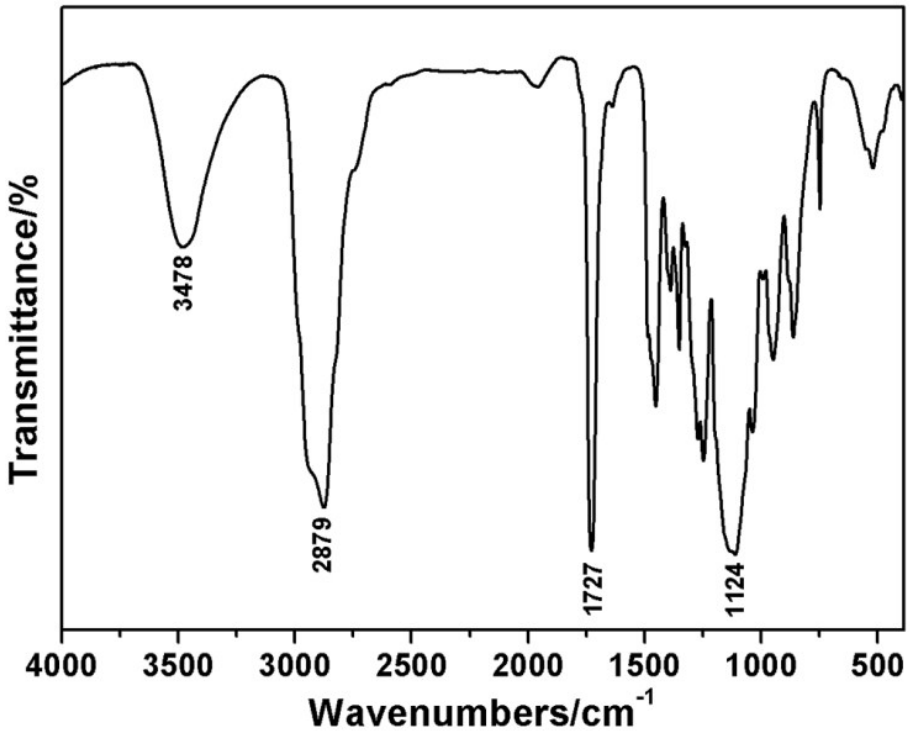

Fig. S4 FT-IR spectra of temperature-sensitive polymer p(OEGMA-co-MEMA).

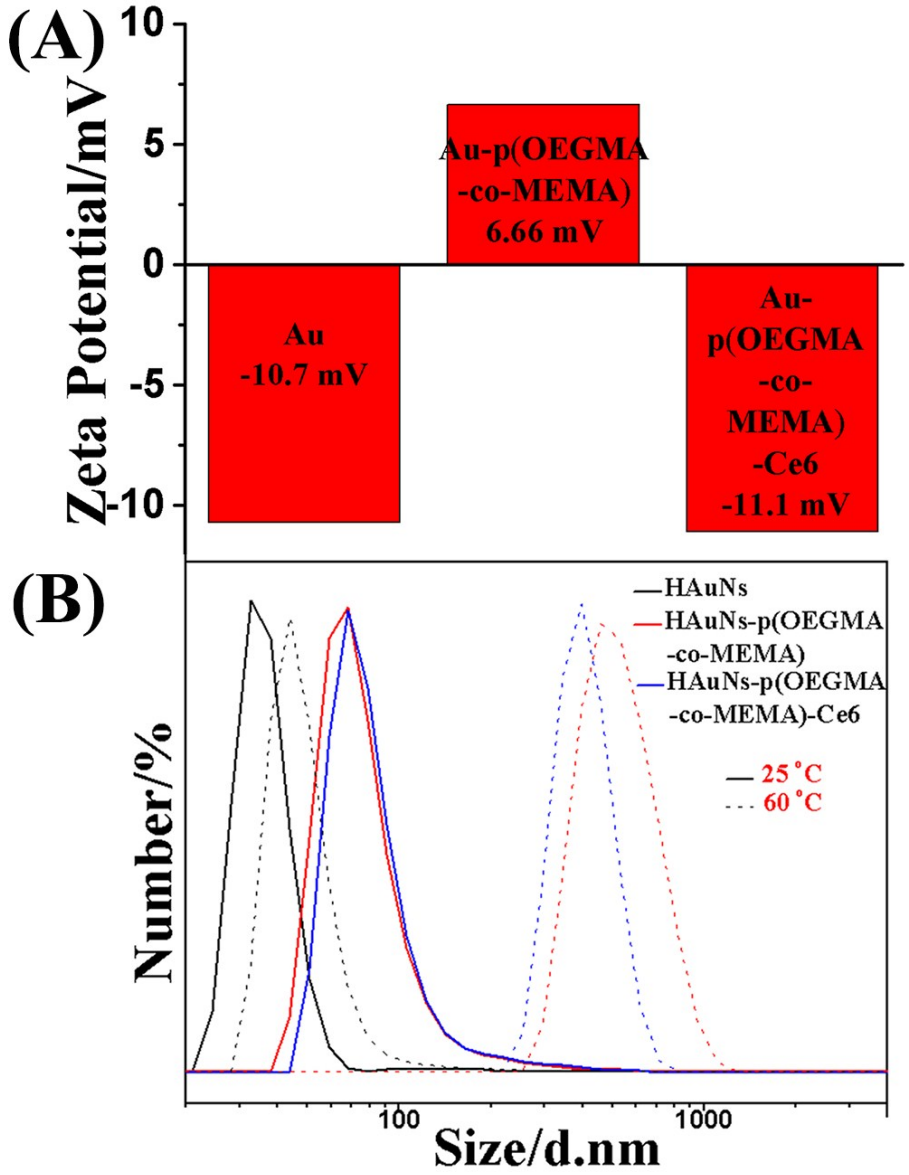

Fig. S5 The zeta potential and hydrodynamic diameter of HAuNS, HAuNSs-p(OEOMA-co-MEMA) and HAuNSs-p(OEOMA-co-MEMA)-Ce6 nanocomposite at different temperature.

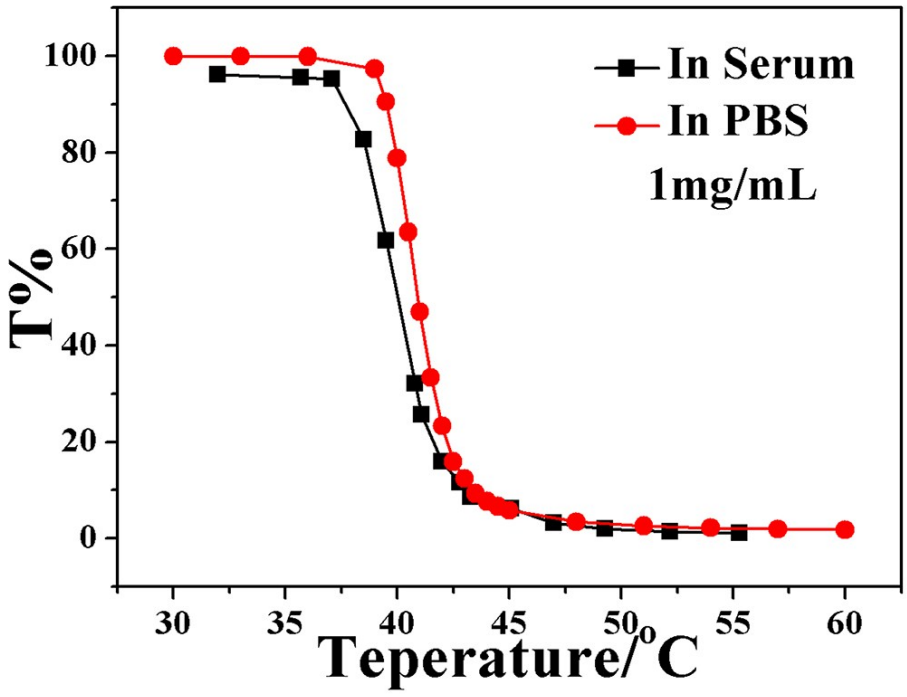

Fig. S6 The curve of light transmittance of p(OEGMA-co-MEMA) in PBS solution and seurm with different temperature.

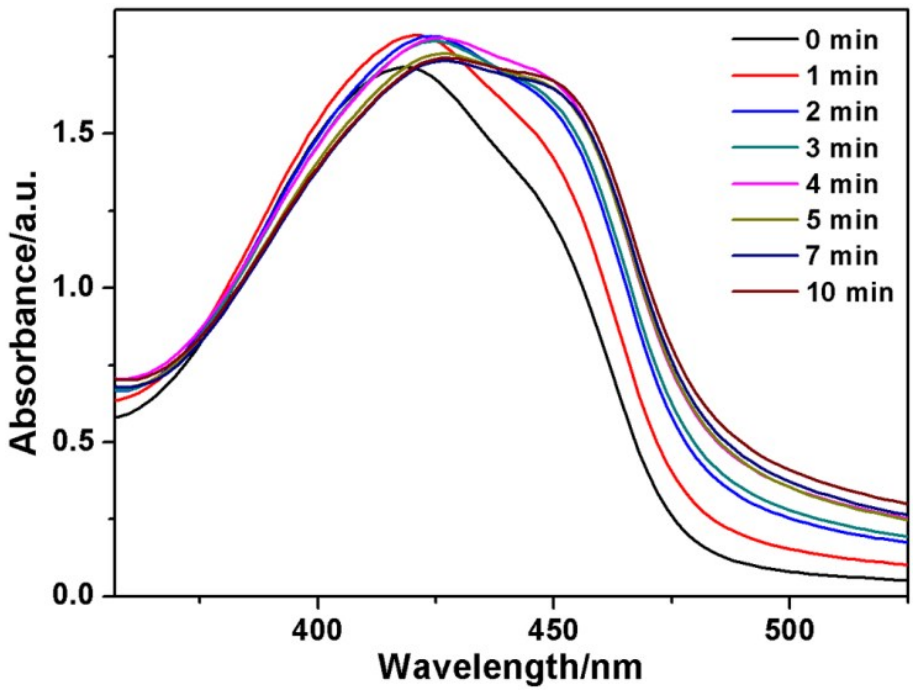

Fig. S7 Absorbance changes of DPBF treated with 650 nm laser irradiation for different times.

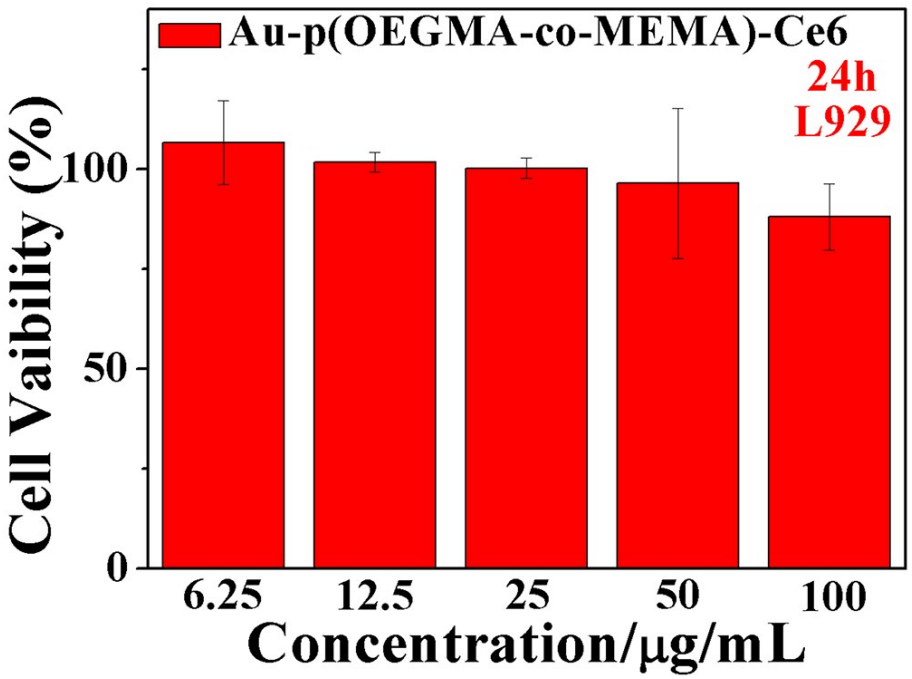

Fig. S8 *In vitro* L929 cells' relative viabilities after incubation for 24 h with HAuNs-p(OEGOMA-co-MEMA)-Ce6-DOX nanocomposites at different concentrations at 37 oC and pH=7.4. The nanocomposites concentrations were 62.5, 125, 250, 500, 1000 μg/mL, respectively. Error bars indicate standard deviations, N = 4.

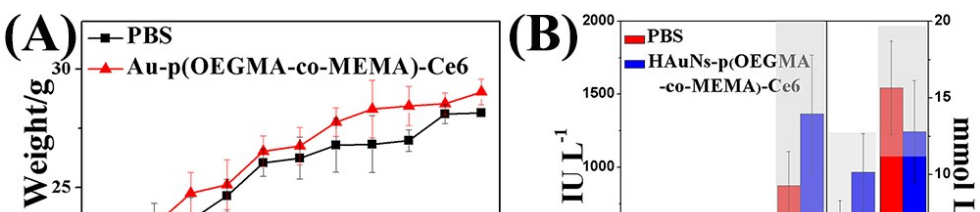

Fig. S9 *In vivo* change in body weight (A) achieved from normal mice after twice intravenously injection with PBS and HAuNs-p(OEGMA-co-MEMA)-Ce6 nanocomposites at day 1 and 7. Blood analysis data for mice (B) and hematoxylin and eosin (H&E) stained images of major organs of mice (C) 21 days after two doses intravenously injection with PBS and HAuNs-p(OEGMA-co-MEMA)-Ce6 nanocomposites. And the gray area is the normal range**.**

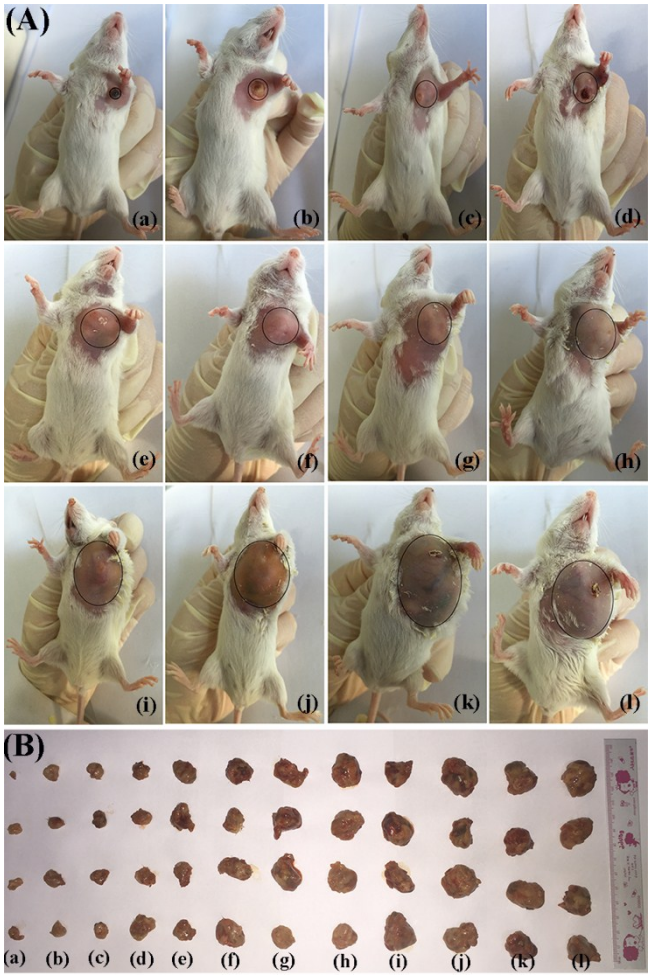

Fig. S10 Photographs of mice bearing tumor (A) and excised tumors from euthanized representative mice (B) (the photographs a-l are the groups HAuNs-p(OEOMA-co-MEMA)-Ce6-DOX (a), HAuNs-p(OEOMA-co-MEMA)-Ce6 (b), HAuNs-p(OEGMA-co-MEMA)-DOX (c), free DOX (d), HAuNs-p(OEGMA-co-MEMA) (e), free Ce6 (f) and blank group (l) with laser irradiation and HAuNs-p(OEGMA-co-MEMA)-Ce6-DOX (g), HAuNs-p(OEGMA-co-MEMA)-DOX (h), HAuNs-p(OEGMA-co-MEMA)-Ce6 (i), HAuNs-p(OEGMA-co-MEMA) (j), free Ce6 (k) without laser irradiation).

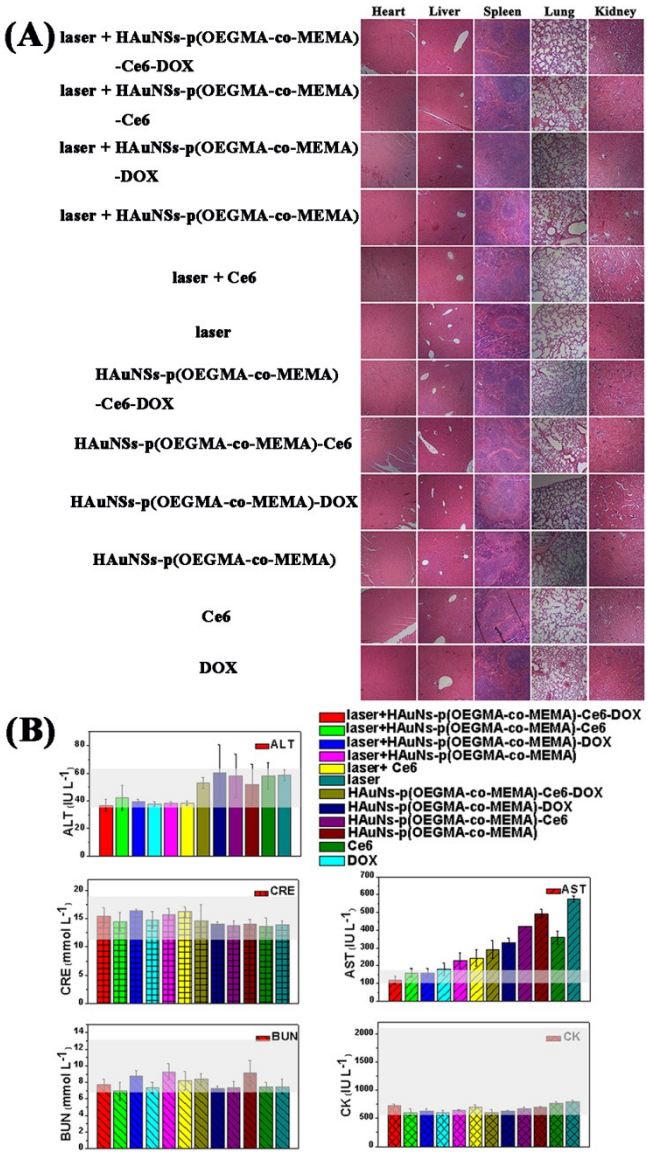

Fig. S11 Hematoxylin and eosin (H&E) stained images of major organs of mice 13 days after two doses injection in situ (A) and blood analysis data for mice (B) treated with HAuNs-p(OEGMA-co-MEMA)-Ce6-DOX, HAuNs-p(OEGMA-co-MEMA)-Ce6, HAuNs-p(OEGMA-co-MEMA)-DOX, HAuNs-p(OEGMA-co-MEMA), free Ce6, free DOX with and without laser irradiation. And the gray area is the normal range.