Supplementary Information

$CuCo_2S_4$ Nanocrystals as A Nanoplatform for Photothermal Therapy of Arterial Inflammation

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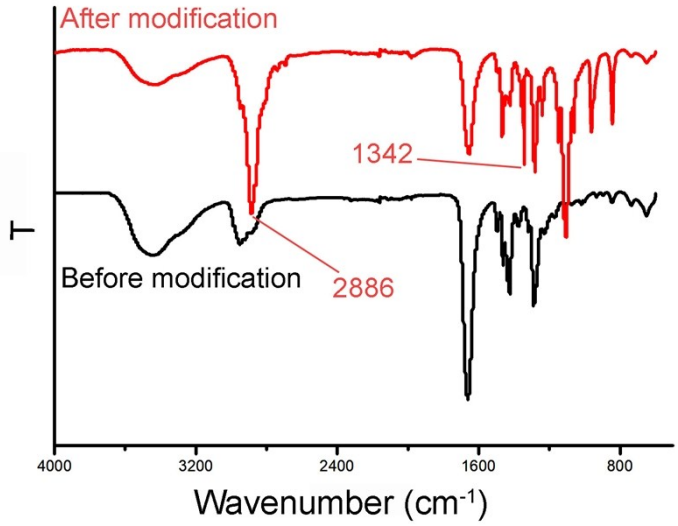

Figure S1. FTIR spectra of $CuCo_2S_4$ NCs before and after modification. The peaks around 2886 and 1342 cm^{-1} verified the existence of the $–CH_2O–$ groups of PEG-NH_2.

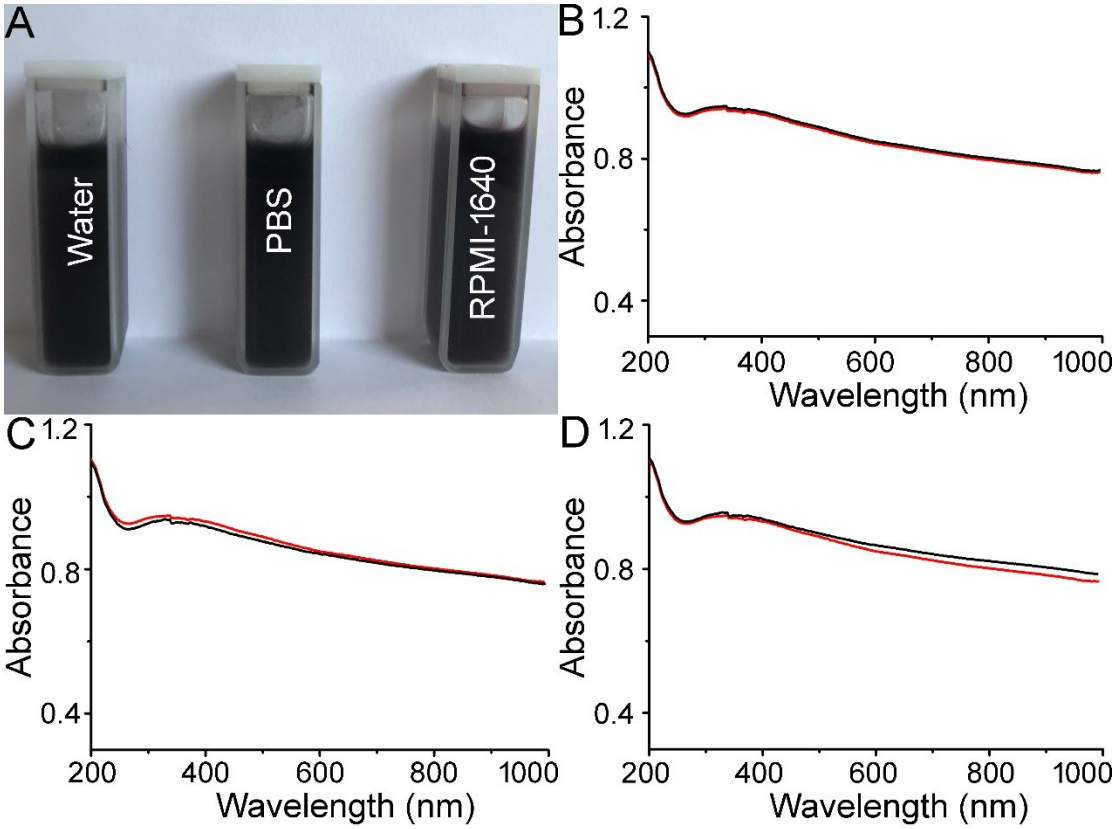

Figure S2. (A) A digital camera picture of the $CuCo_2S_4$ NCs dispersed in water, PBS, and RPMI-1640 culture medium for a week, showing the good dispersion of nanosheets. UV-vis spectra of the freshly prepared (black line) $CuCo_2S_4$ NCs and the $CuCo_2S_4$ NCs stocked (red line) in (B) water, (C) PBS, and (D) RPMI-1640 culture medium under ambient conditions for a week.

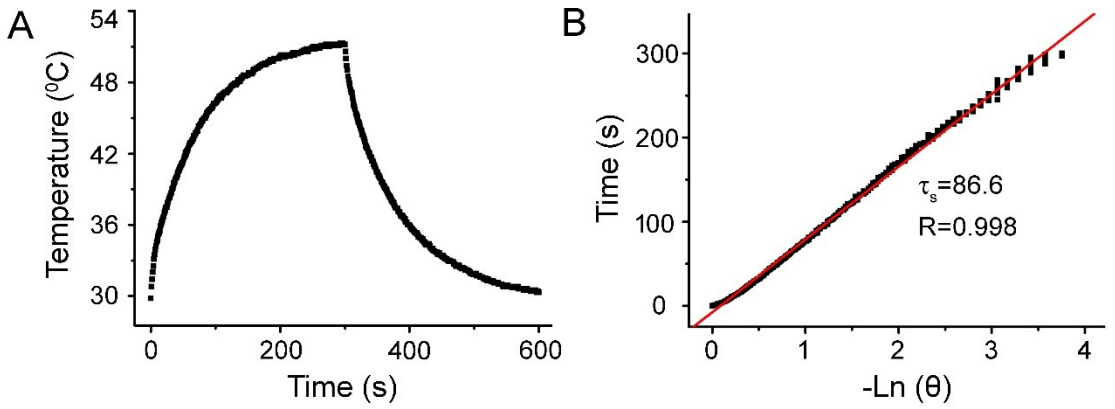

Figure S3. (A) Photothermal effect of lager $CuCo_2S_4$ NCs upon being irradiated for 300 s (808 nm, 180 mW) and shutting off the laser. (B) Time constant for heat

transfer from the system is determined to be τ_s =86.6 s by applying the linear time data from the cooling period of panel (A) versus negative natural logarithm of driving force temperature.

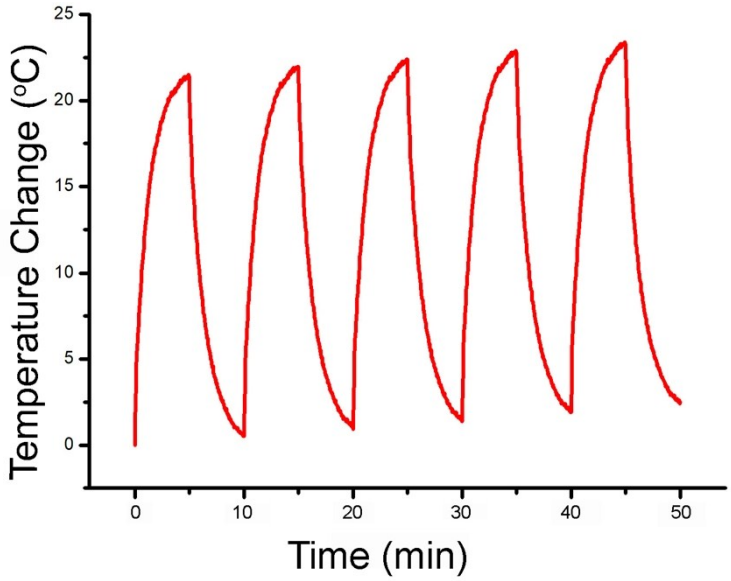

Figure S4. Temperature elevation of $CuCo_2S_4$ NCs over five laser on/off cycles of NIR laser irradiation.

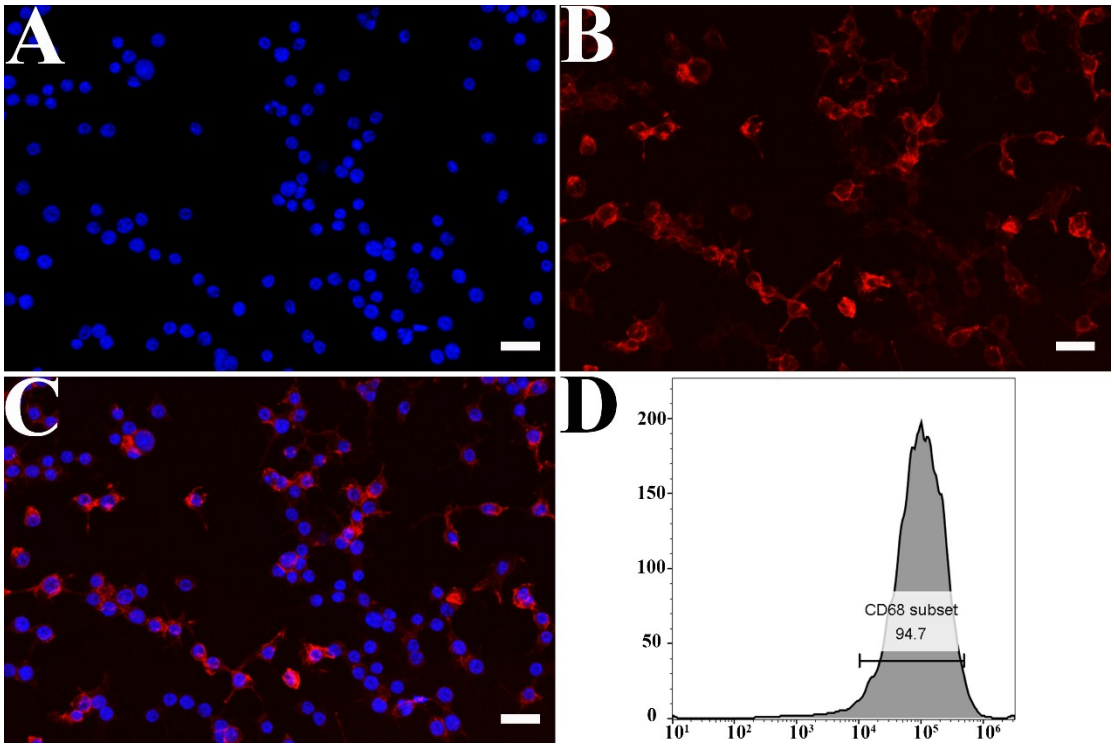

Figure S5. Immunofluorescence and flow cytometry identification of Raw264.7 macrophages. (A) DAPI, (B) CD68, and (C) Merge. (D) Flow cytometry, demonstrating that the purity of macrophages was 94.7%. Scale bar = 25 μm.

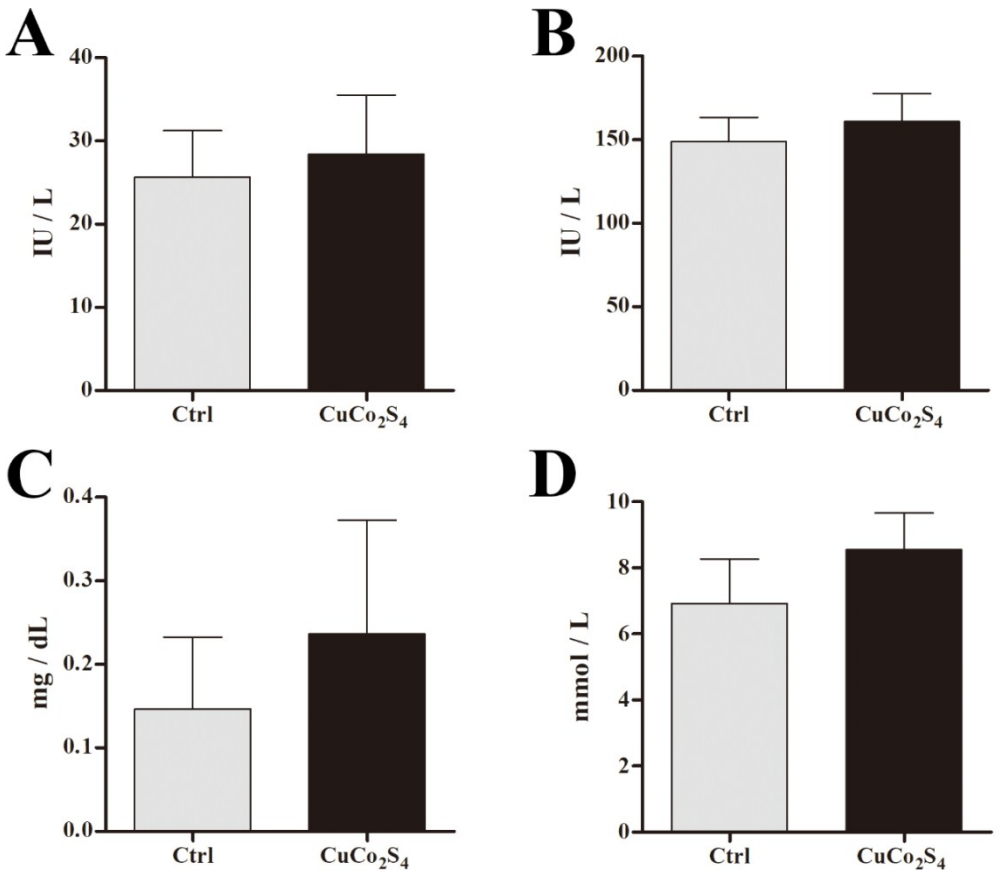

Figure S6. Hepatorenal function analysis. (A) ALT, (B) AST, (C) T-Bil and (D) BUN. No significant differences were detected between the $CuCo_2S_4$ NCs group and control group.