Electronic Supplementary Information

## **Ferrocene-Functionalized Carbon Nanoparticles**

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**Figure S1**. XPS surveys of the C1s and Fe2p electrons in ferrocenyl-functionalized carbon nanoparticles. In the right panel, the red curve is the smoothed profile of the experimental data (black curve).

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**Figure S2**. Square wave voltammograms of FcCH<sub>2</sub>-CNP nanoparticles acquired (top) in the dark or (bottom) under UV photoirradiation (370 nm) at a gold electrode in 0.1 M tetrabutylammonium perchlorate (TBAP) in DMSO. Electrode surface area 2.63 mm<sup>2</sup>, particle concentration 3 mg/mL, increment of potential 4 mV, amplitude 25 mV and frequency 15 Hz. Solid curves are the experimental data and dashed lines represent the deconvolution of the voltammetric features.



## $\lambda$ (nm)

**Figure S3.** Near-infrared (NIR) spectra of FcCH<sub>2</sub>-CNPs with the addition of varied amounts of NOBF<sub>4</sub> in DMSO. The starting solution of the carbon nanoparticles was 2 mL at a concentration of 0.1 mM, and the concentration of the NOBF<sub>4</sub> solution was 5 mM. Totally 800  $\mu$ L NOBF<sub>4</sub> was added to the solution at an increment of 25  $\mu$ L. Inset shows the variation of the absorbances at 1965 nm, 1896 nm, and 1436 nm with the amounts of NOBF<sub>4</sub> added.



**Figure S4**. UV-vis spectra of Fc-CNPs with the addition of varied amount of NOBF<sub>4</sub>. The solutions were the same as those in Figure 5.