Supplementary Information

Enhanced drug retention by anthracene crosslinked nanocomposites for multimodal imaging-guided phototherapy

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Supporting Figures

Scheme S1. Synthetic route of An-SS-NH₂.

Figure S1. $^1$H NMR spectrum of Boc-SS-NH₂ in CDCl₃.

Figure S2. $^1$H NMR spectrum of An-SS-Boc in CDCl₃.
Figure S3. $^1$H NMR spectrum of An-SS-NH$_2$ in CDCl$_3$.

Figure S4. FT-IR spectra of mPEG-RAFT macro-CTA (A), mPEG-b-PSMA (B) and mPEG-b-P(SMA(-TEMPO))-SS-An (C).
**Figure S5.** The absorbance value of polymeric nanocomposites PPTIU with different time of UV cross-linking.

**Figure S6.** The particle size in phosphate buffered saline with 48 h incubation by DLS.

**Figure S7.** Effect of thermal response (45°C or 60°C) on UV-Vis spectra of PPT polymer.
Figure S8. After 24 h incubation, the photograph of PPTIU with or without near-infrared irradiation.

Figure S9. The quantitative ROS production by H2DCFDA fluorescence of Figure 6C.
**Figure S10.** The cell viability of A) LO2, B) HEK293T, C) HepG2 cell was analyzed for treatment with PPT polymer or UCNP.

**Figure S11.** The main organs and tumor were collected after 48 h administration of PPTIU, and then subjected to fluorescence imaging.
Figure S12. The body weight of nude mice with different treatments.