

## Carbazole functionalized semiconducting compound as heavy atom free photosensitizer for phototherapy against lung cancer

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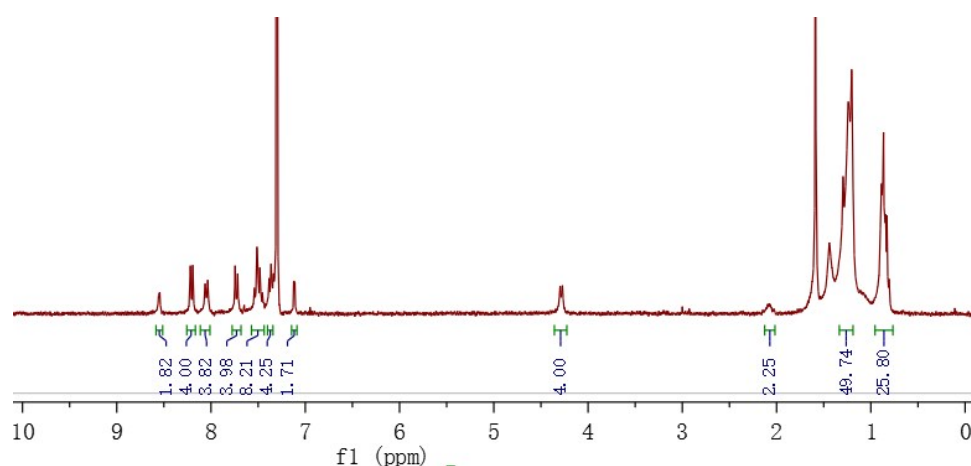


Fig. S1 <sup>1</sup>H NMR of DPPCz in CDCl<sub>3</sub>.

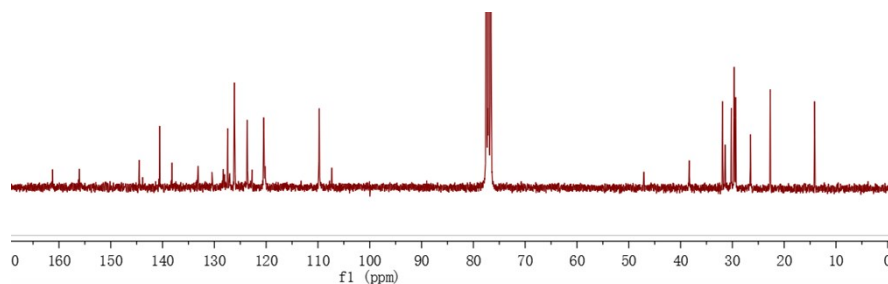


Fig. S2 <sup>13</sup>C NMR of DPPCz in CDCl<sub>3</sub>.

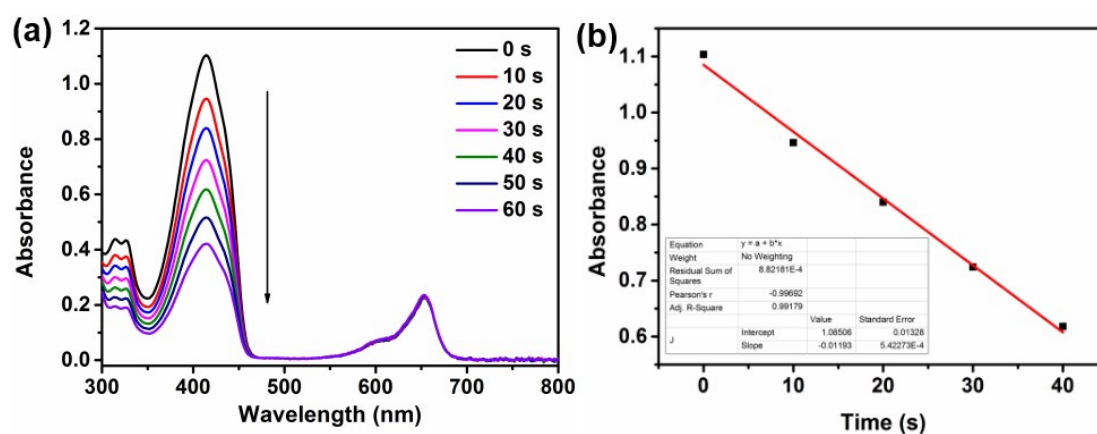


Fig. S3 (a) Degradation of DPBF in the presence of MB with irradiation; (b) Linear fitting of the absorbance of DPBF at 414 nm.

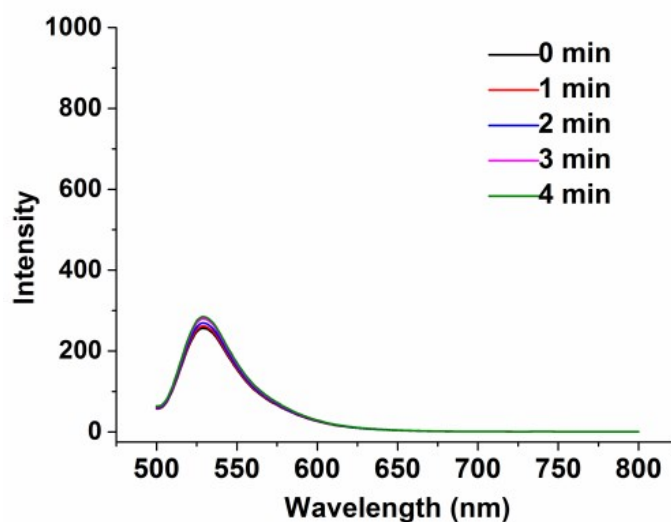


Fig. S4 Fluorescence intensity of SOSG in the absence of **DPPCz** NPs.

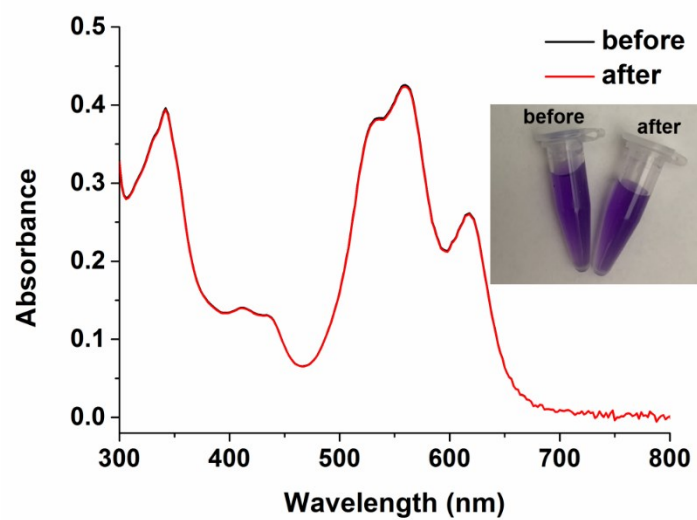


Fig. S5 Absorbance spectra of DPPCz NPs before and after irradiation.

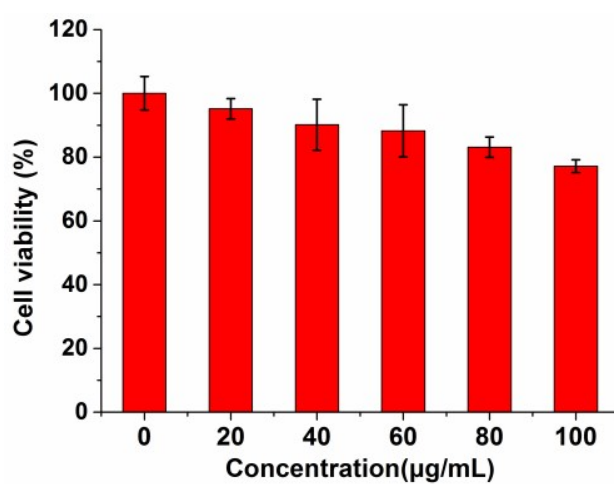


Fig. S6 Cell viability of A549 incubated with **DPPCz** NPs (0, 20, 40, 60, 80 and 100 µg/mL).

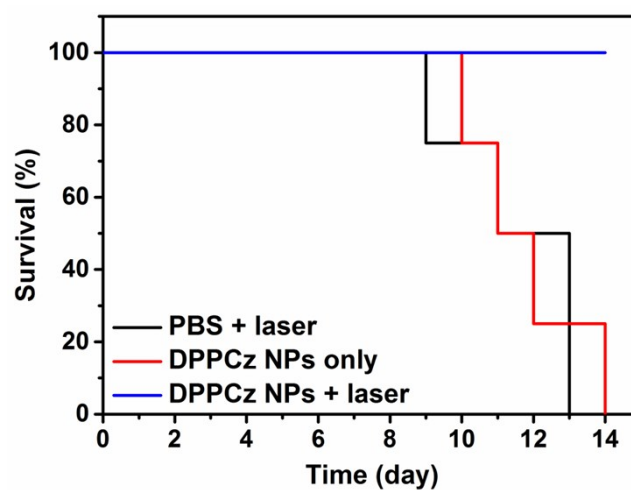


Fig. S7 Survival rate of the nude mice treated with PBS + laser, **DPPCz** NPs only and **DPPCz** NPs + laser.