Supplementary Information:

Preparation and characterization of a novel hybrid hydrogel shell for localized photodynamic therapy

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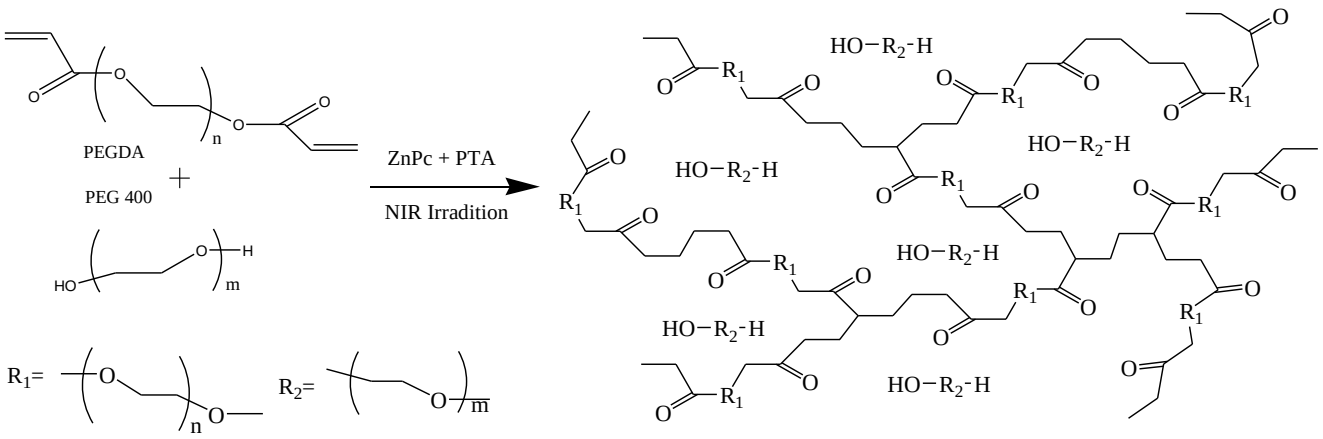

Fig. S1 Schematic diagram for the cross-linking reaction of precursor

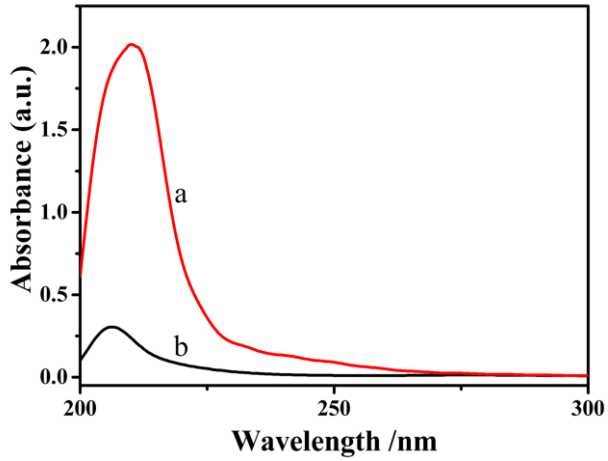

Fig. S2 UV-Vis absorption spectra of (a) precursor-1 and (b) ZnPc ethanol solution (5.77×10^{-4} mol/L), showing that the gelation kinetics using absorption peak at 209 nm due to C=C double bond as indexes is reasonable.

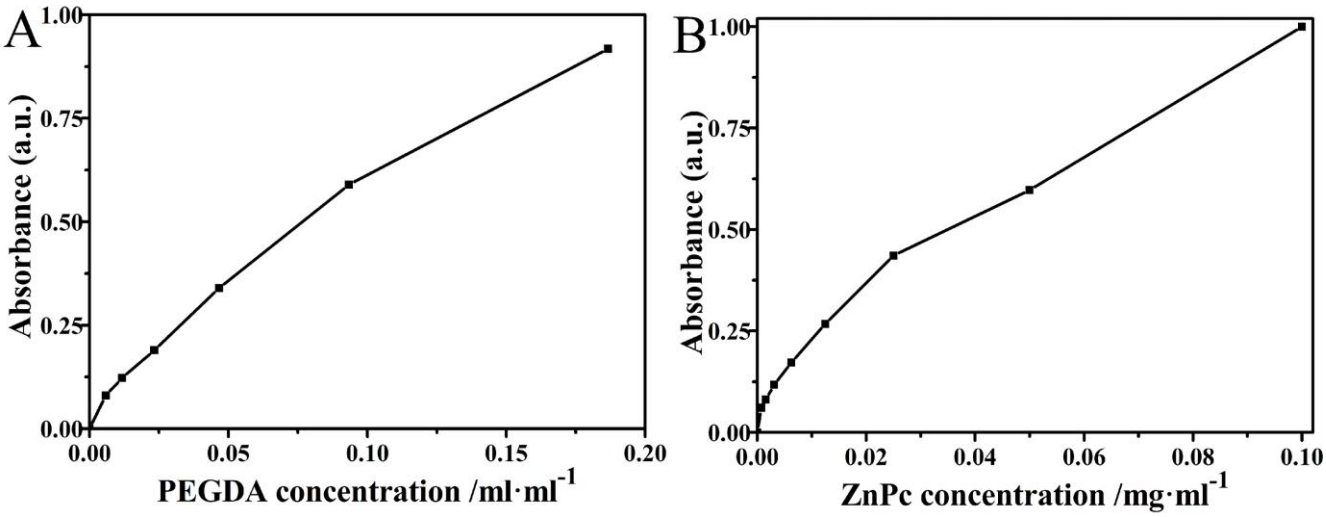

Fig. S3 Standard concentration-absorbency curve of (A) PEGDA in relation to π→π* transition at 209 nm corresponding to C=C double bonds and (B) ZnPc from Q absorption band at 666 nm corresponding to porphyrin ring.

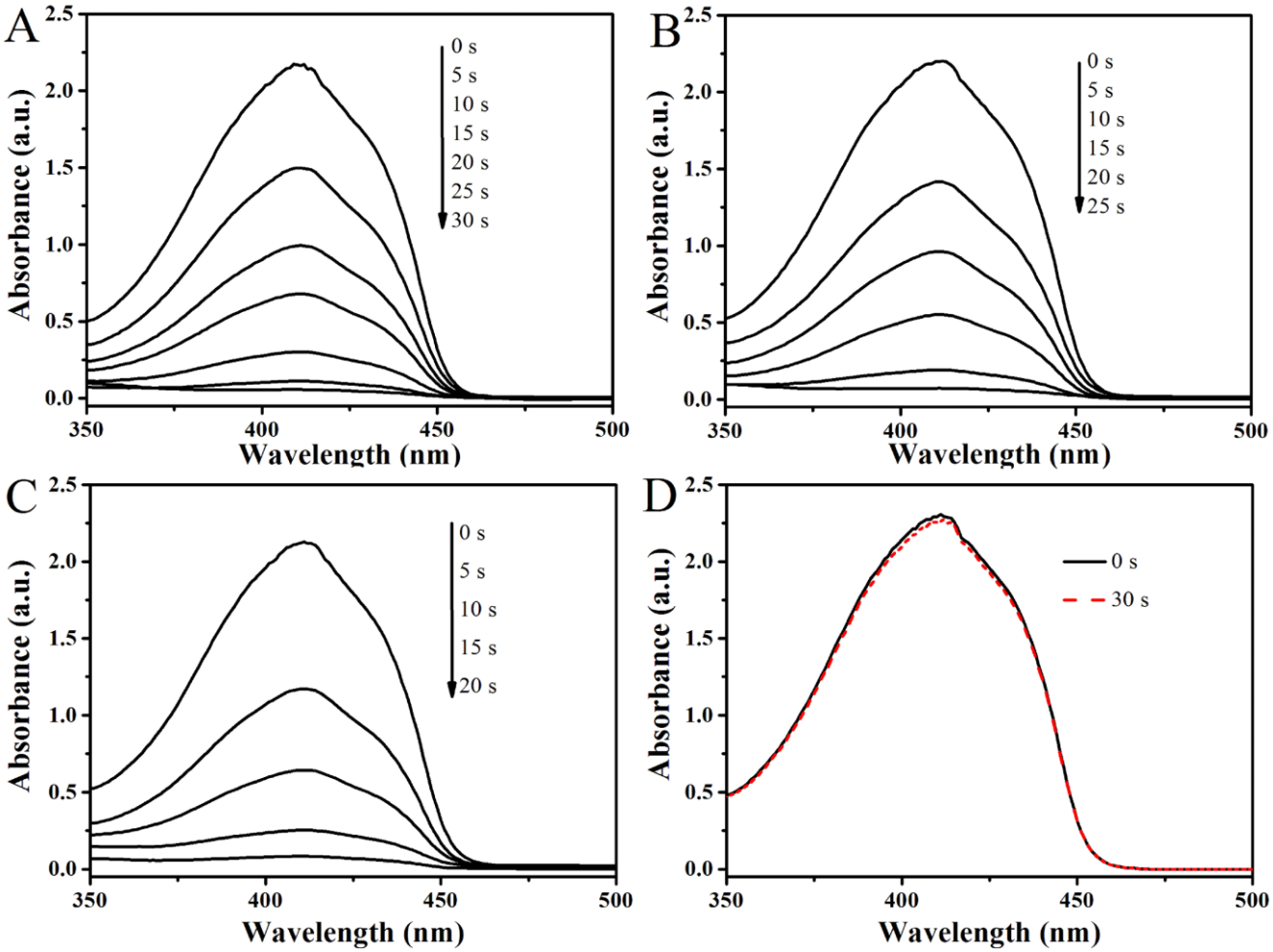

Fig. S4 Photobleaching of DPBF (9.0×10^{-5} mol/L) by generation of $^1O_2$ in the presence of precursor-1 containing different concentration of PTA: (A) 0.001 mol/L, (B) 0.01 mol/L and (C) 0.1 mol/L, and (D) containing no ZnPc under NIR irradiation.

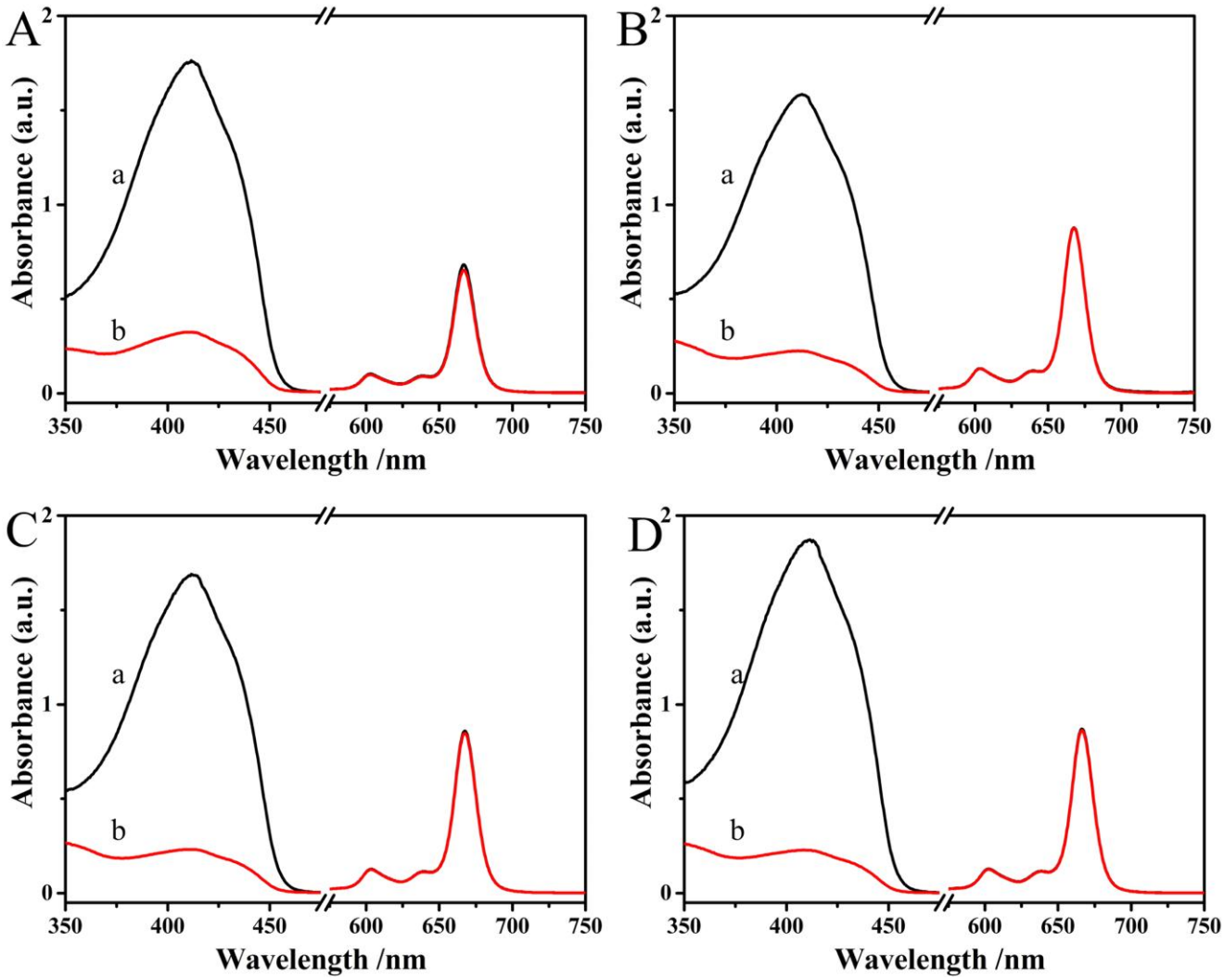

Fig. S5 UV-Vis absorption spectra for the determination of singlet oxygen quantum yield of (A) precursor-1, (B) precursor-2, (C) precursor-3 and (D) ZnPc in DMF, black line (a) and red line (b) represent before and after irradiation for 5 s, respectively.

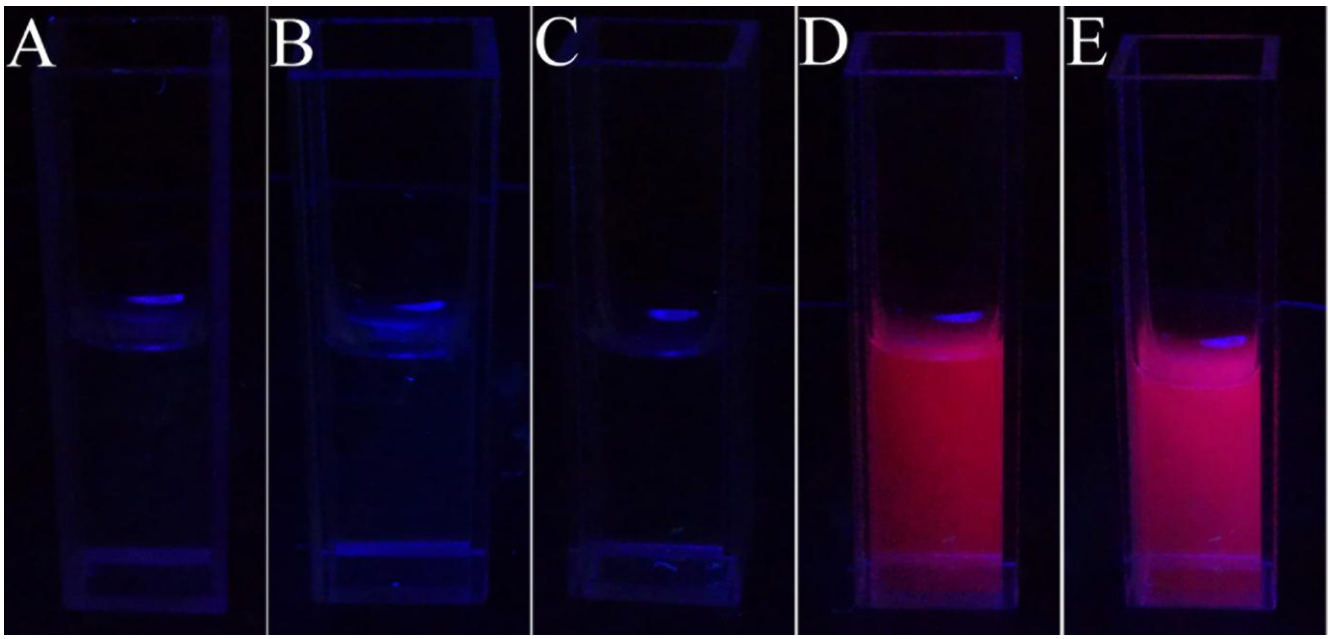

Fig. S6 Fluorescence images of (A) PEGDA, (B) PEG 400, (C) PTA, (D) ZnPc and (E) precursor-1.