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Electronic Supplementary Information (ESI)

Mesoporous Silica-coated Gold Nanorods Loaded with Tetrazolyl Phthalocyanine as NIR Light-activated Nano-switch for Synergistic Photothermal and Photodynamic Inactivation of Antibiotic-resistant *Escherichia coli*

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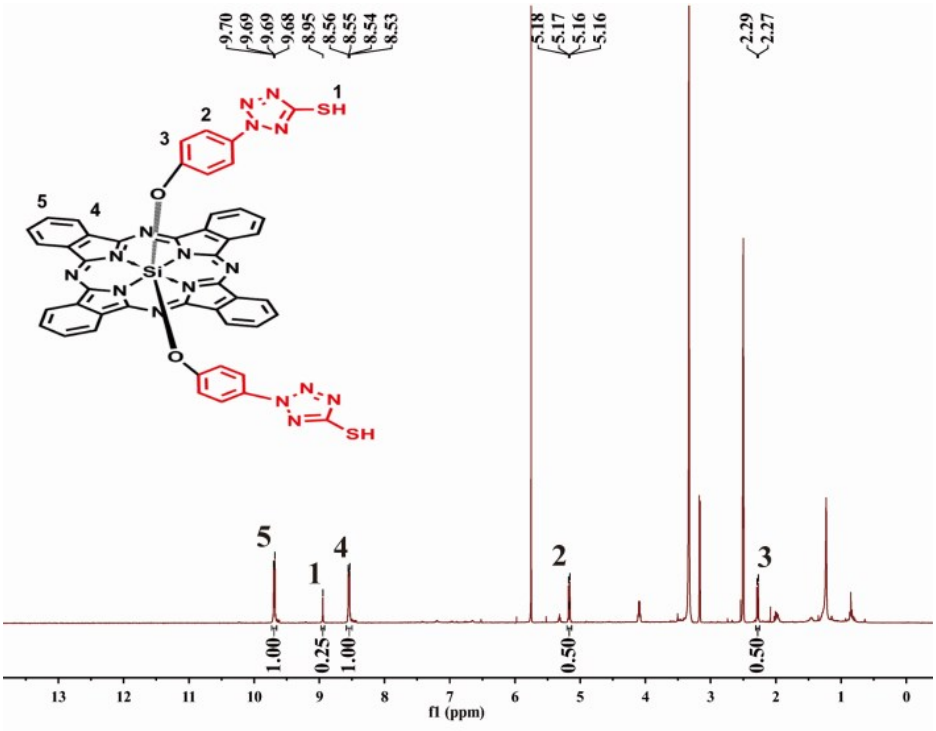

Fig. S1 ^{1}H NMR spectrum of Tet-SiPc (400 MHz, DMSO-d_6).

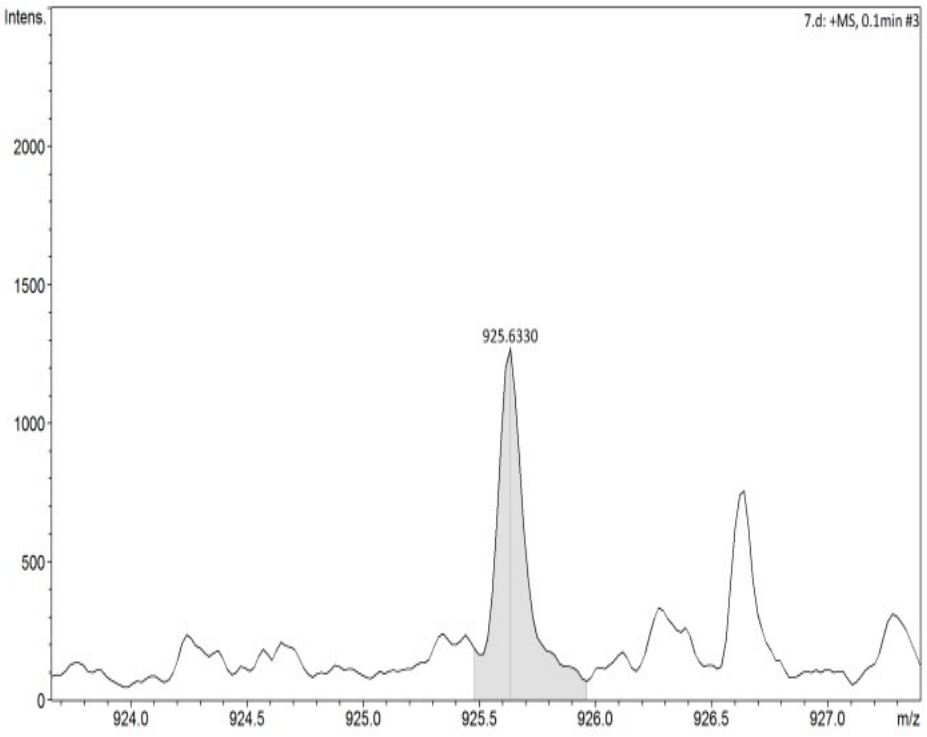

Fig. S2 ESI-MS spectrum of Tet-SiPc.

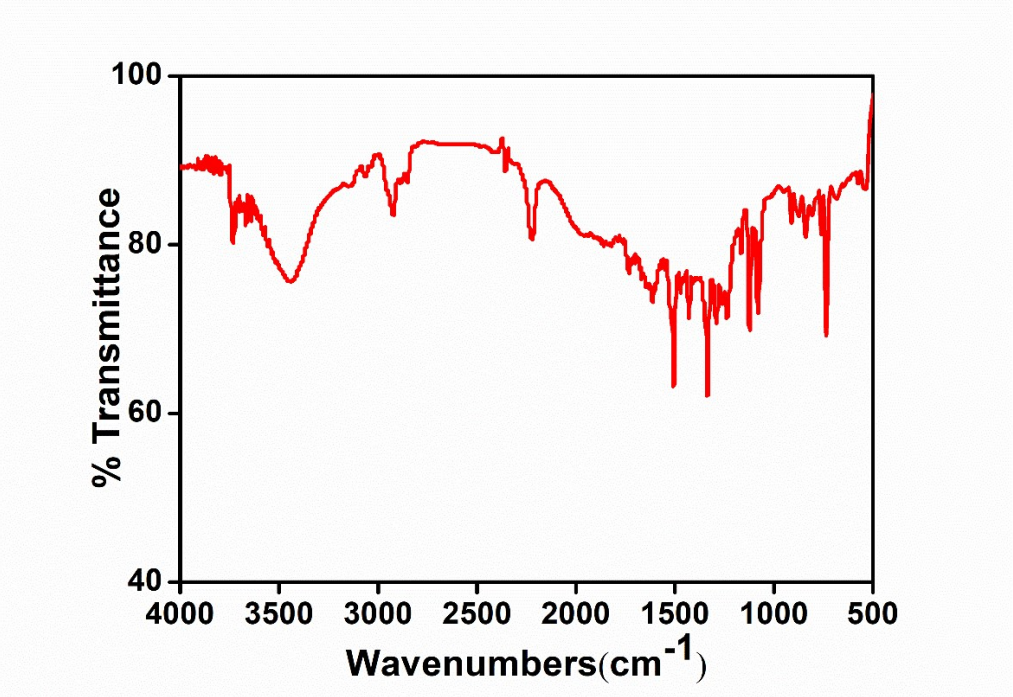

Fig. S3 FT-IR spectrum of Tet-SiPc.

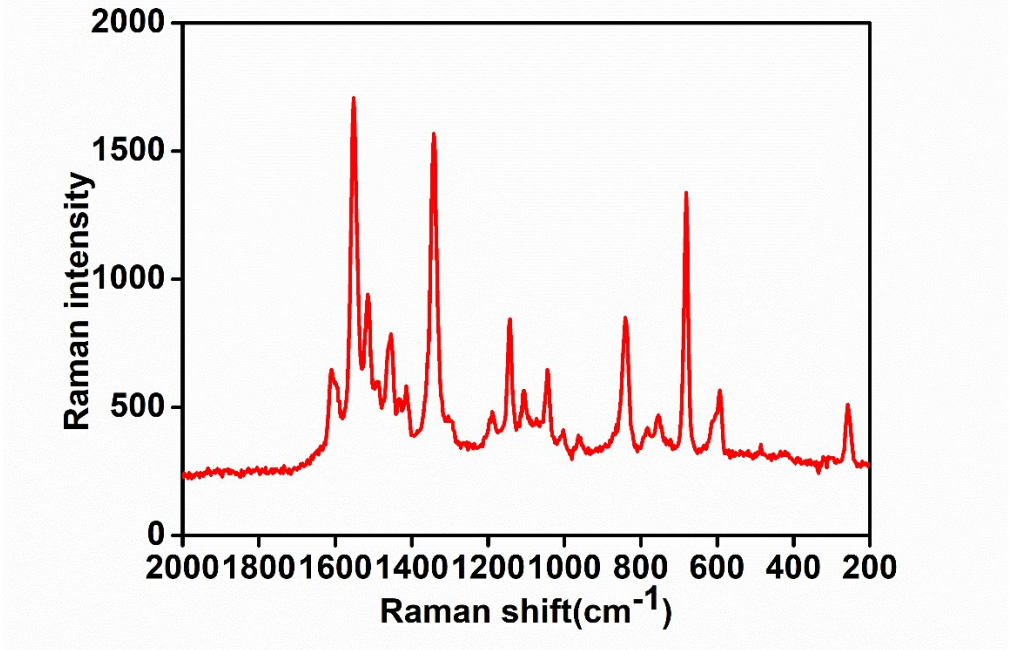

Fig. S4 Raman spectrum of Tet-SiPc.

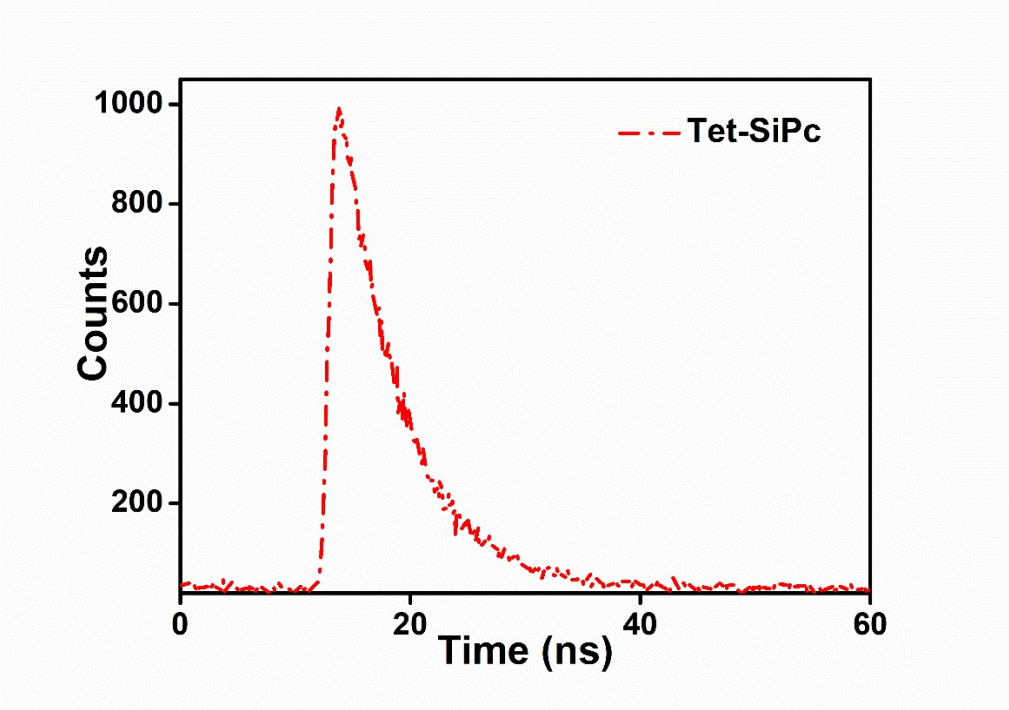

Fig. S5 Fluorescence decay curve of Tet-SiPc in DMSO (λ_{ex}=405 nm, $C_{Tet\text{-}SiPc}$=1×10^{-5} mol/L).

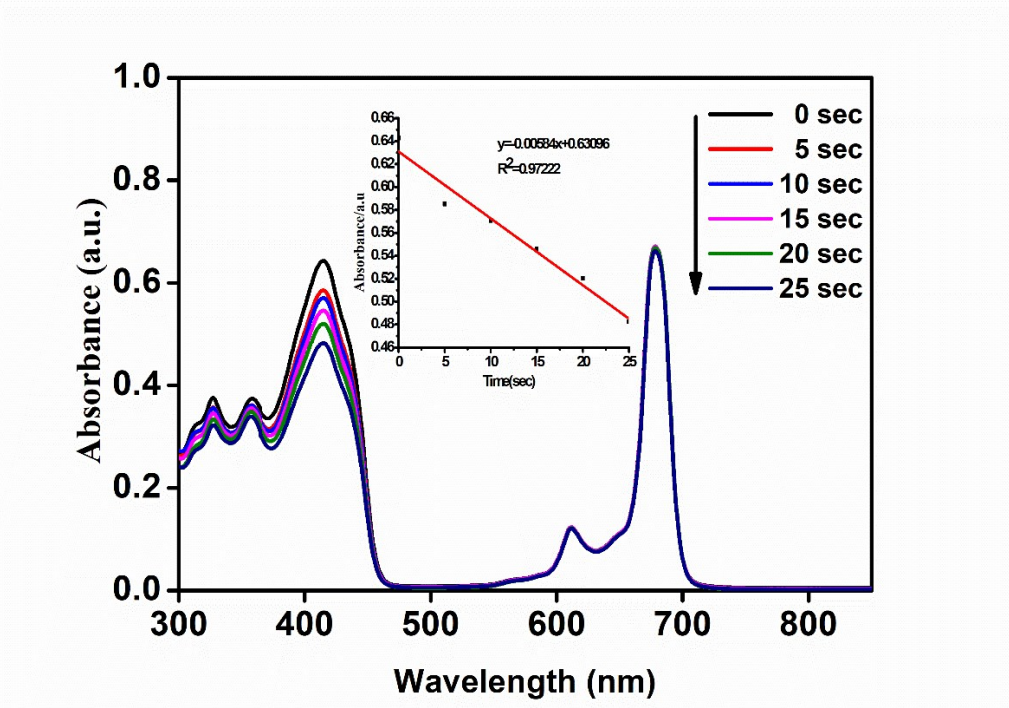

Fig. S6 Absorbance spectra of Tet-SiPc in DMSO using DPBF as a singlet oxygen quencher upon 670 nm laser irradiation for different duration ($C_{Tet\text{-}SiPc}$ =3×10^{-6} mol/L).

Table S1. Photophysical and photochemical properties of Tet-SiPc, AuNR, AuNR@SiO_2 and Tet-SiPc@AuNR@SiO_2.

Compounds	Solvent	λ_{Qmax}(nm)	Log ε	λ_{em} (nm)	τ_s/ns	Φ_Δ*	Φ_F*
Tet-SiPc	DMSO	683	4.73	677	5.23	0.355	0.0522
AuNR	H_2O	801	---	---	---	---	---
AuNR@SiO_2	H_2O	824	---	---	---	---	---
Tet-SiPc@AuNR@SiO_2	H_2O	845	---	---	---	---	---

*n-ZnPc in DMSO (Φ_Δ=0.67, $\Phi_{F(std)}$=0.20) was employed as the standard.

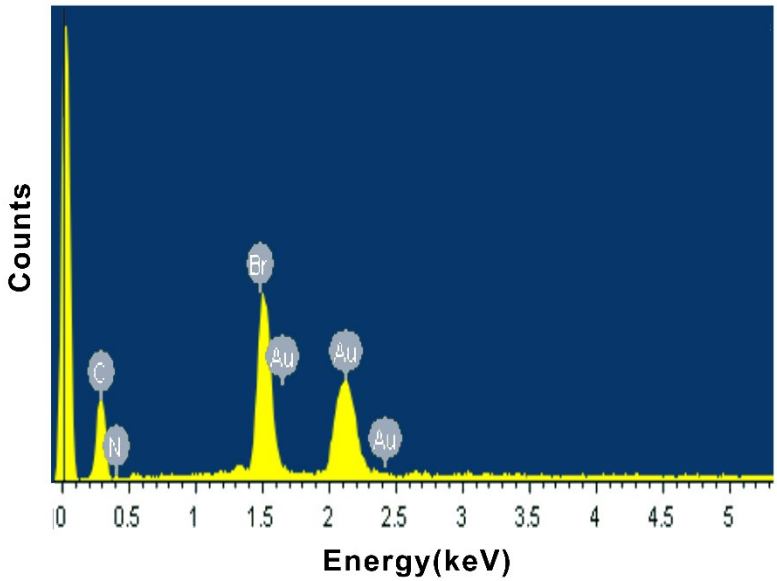

Fig. S7 EDX spectrum of AuNR. Elemental analysis was summarized in the following Table S2.

Table S2. EDX elemental analysis of AuNR.

Element	**C**	**N**	**Br**	**Au**
At %	91.19	1.58	5.82	1.41

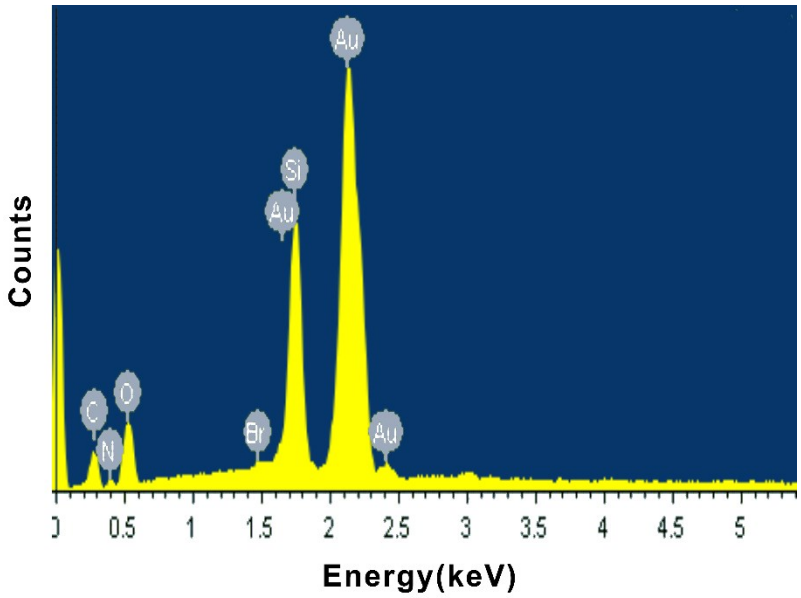

Fig. S8 EDX spectrum of AuNR@SiO_2. Elemental analysis was summarized in the following Table S3.

Table S3. EDX elemental analysis of AuNR@SiO_2.

Element	C	N	O	Si	Br	Au
At %	35.99	8.99	34.13	11.03	0.19	9.67

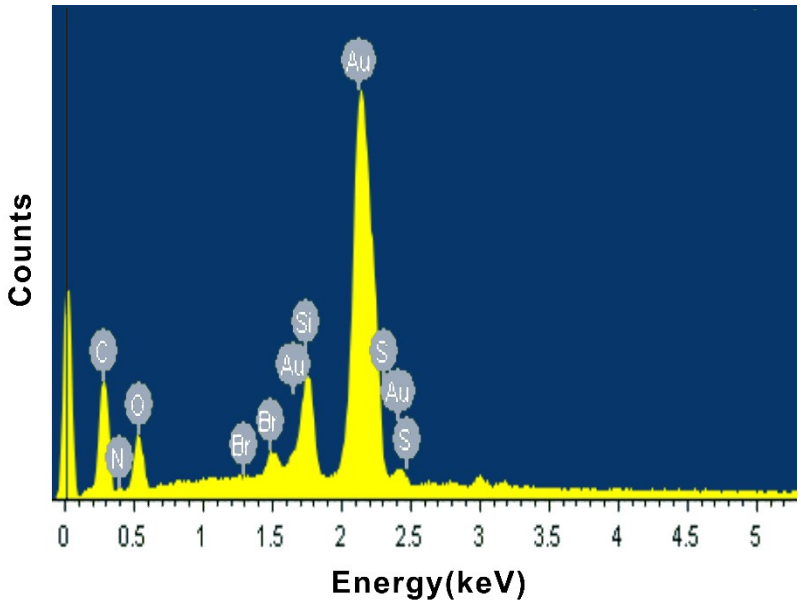

Fig. S9 EDX spectrum of Tet-SiPc@AuNR@SiO_2. Elemental analysis was summarized in the following Table S4.

Table S4. EDX elemental analysis of Tet-SiPc@AuNR@SiO_2.

Element	C	N	O	Si	S	Br	Au
At %	65.74	1.80	21.96	3.10	0.28	0.57	6.55

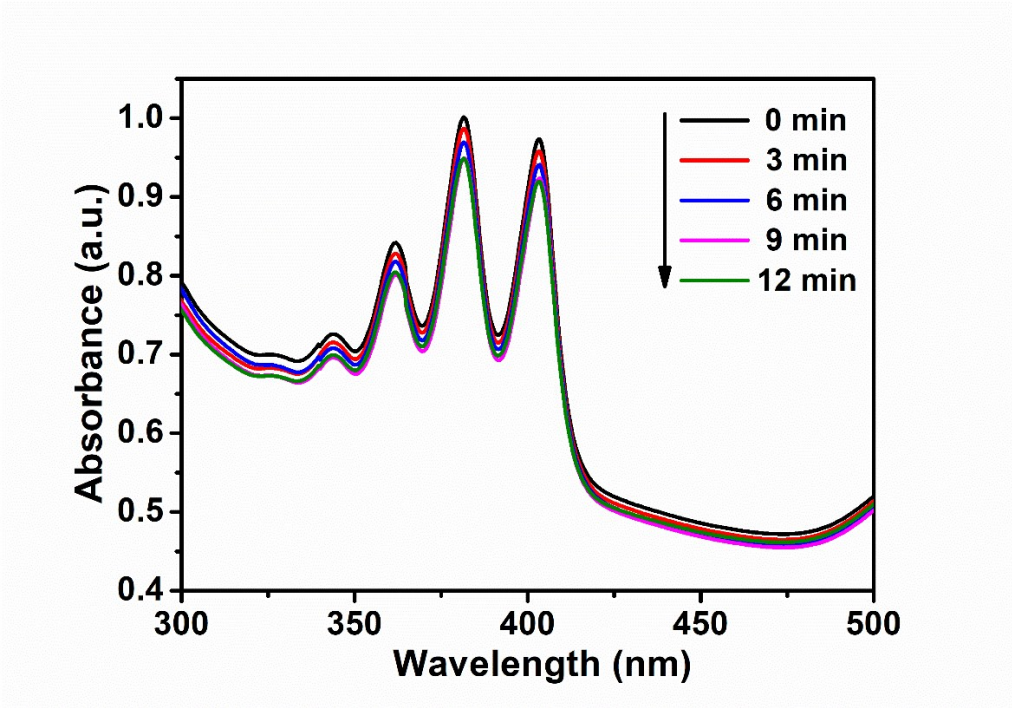

Fig. S10 Absorbance spectra of AuNR in water using ABDA as a singlet oxygen quencher upon 671 nm laser irradiation with a power density of 100 mW/cm^{-2} for different duration.

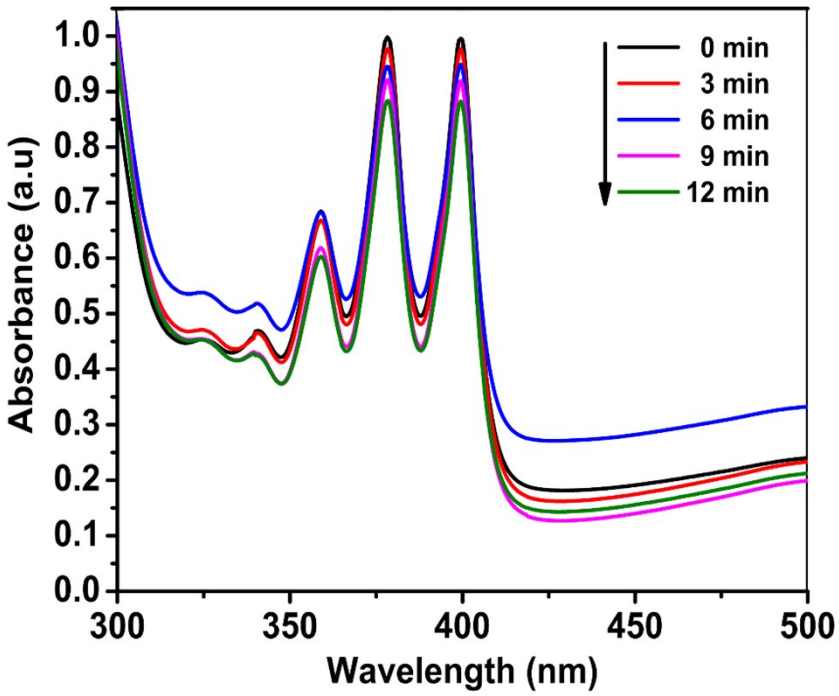

Fig. S11 Absorbance spectra of AuNR@SiO_2 in water using ABDA as a singlet oxygen quencher upon 671 nm laser irradiation with a power density of 100 mW/cm^{-2} for different duration.

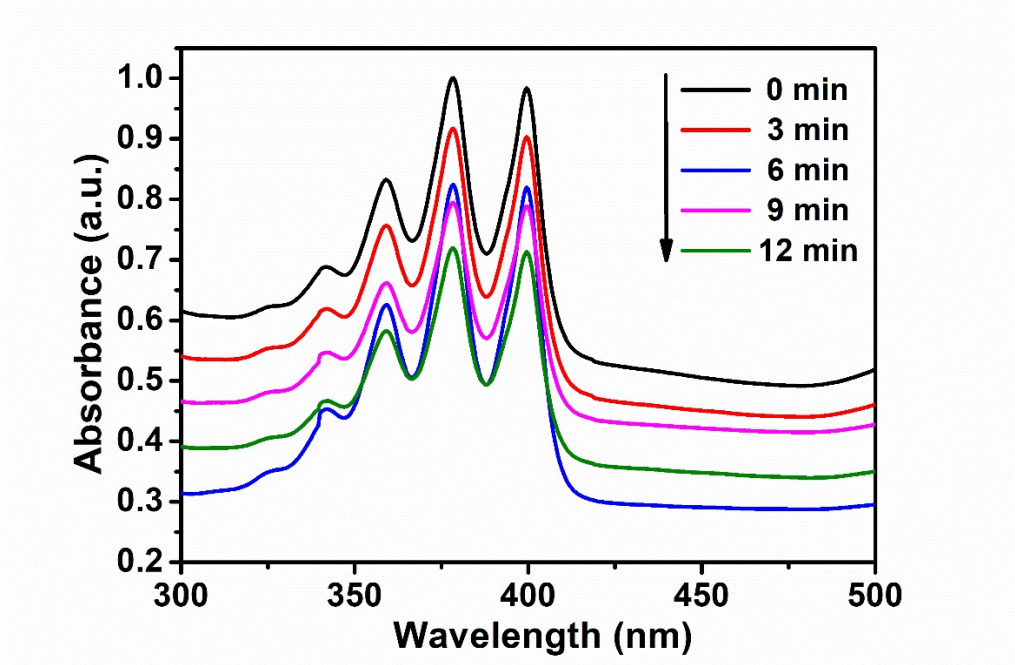

Fig. S12 Absorbance spectra of Tet-SiPc@AuNR@SiO_2 in water using ABDA as a singlet oxygen quencher upon 671 nm laser irradiation with a power density of 100 mW/cm^{-2} for different duration.