Supporting Information

Self-assembly nanoparticles based on supramolecular-organic frameworks and temoporfin for an enhanced photodynamic therapy *in vitro* and *in vivo*

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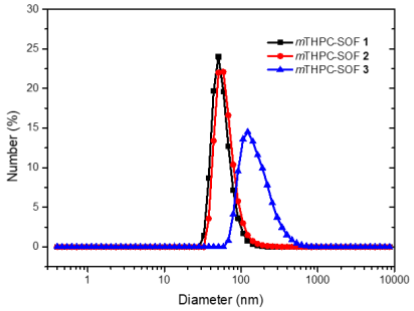

Figure S1. DLS profile of *m*THPC-SOF **1-3** ([*m*THPC] = [**T4-6**] = 0.1 mM) in water at 25 ºC. The solutions were left to stand for 24 hours before being measured.

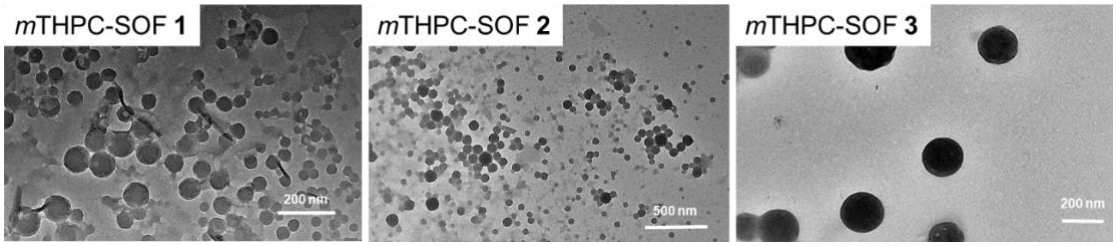

Figure S2. TEM images of *m*THPC-SOF **1-3** ([**T4-6**]:[*m*THPC] = 1:1).

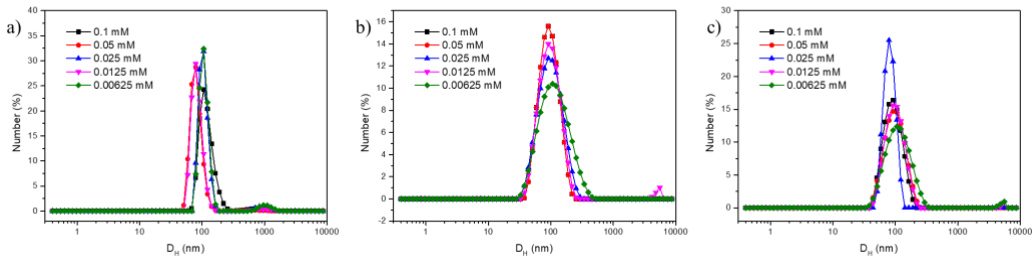

Figure S3. DLS profile of (a) *m*THPC-SOF **1** ([*m*THPC]:[**T4**] = 1:5) (b) *m*THPC-SOF **2** ([*m*THPC]:[**T5**] = 1:5) and (c) *m*THPC-SOF **3** ([*m*THPC]:[**T6**] = 1:5) in water with different concentration at 25 ºC. The solutions were left to stand for 24 hours before being measured.

Table S1. ζ of *m*THPC-SOF **1-3** ([**T4-6**] = 0.1, 0.05, 0.025, 0.0125, 0.00625 mM, [*m*THPC]:[**T4-6**] = 1:2) aqueous solutions were tested.

	***m*THPC-SOF 1**	***m*THPC-SOF 2**	***m*THPC-SOF 3**
0.1 mM	**31.5±0.9**	**33.8±3.0**	**32.5±0.2**
0.05 mM	**28.8±2.3**	**23.1±0.3**	**32.2±0.1**
0.025 mM	**14.3±1.1**	**13.7±1.2**	**19.3±2.1**
0.0125 mM	**17.1±0.2**	**16.2±1.5**	**23.4±2.2**
0.00625 mM	**15.5±0.8**	**14.7±1.3**	**23.4±1.7**

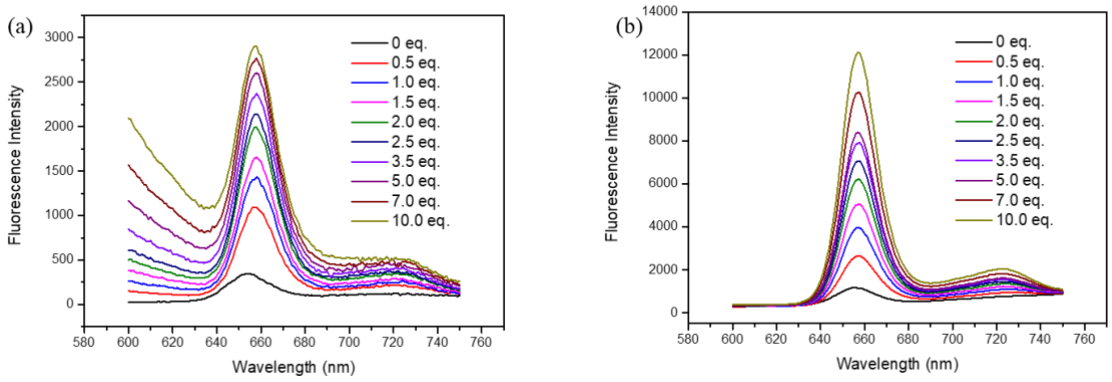

Figure S4. Fluorescence spectra of *m*THPC with increasing equivalent of (a) SOF **2** and (b) SOF **3** (λ_{ex} = 425 nm) in aqueous solution at 25 °C.

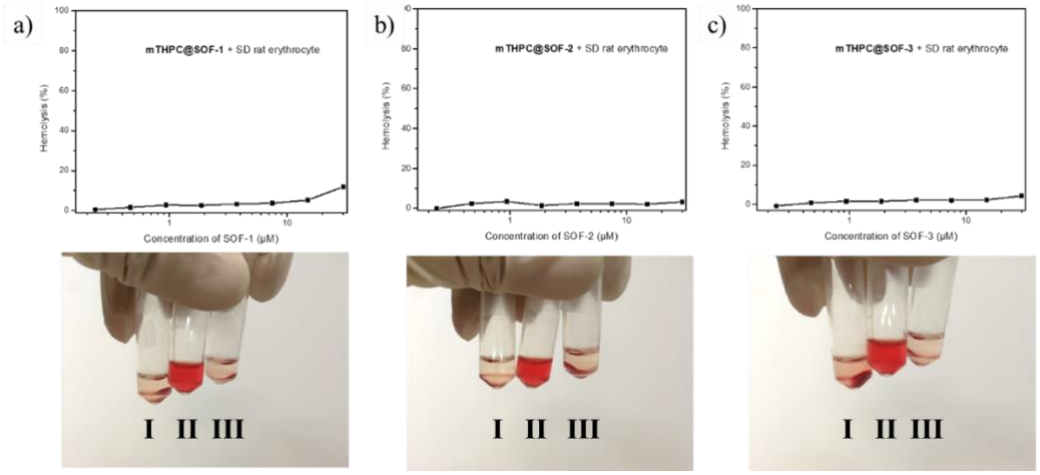

Figure S5. Hemolytic activity of SD rat erythrocyte treated with (a) *m*THPC-SOF **1** ([*m*THPC]:[**T4**] = 1:5), (d) *m*THPC-SOF **2** ([*m*THPC]:[**T5**] = 1:5) and (e) *m*THPC-SOF **3** ([*m*THPC]:[**T6**] = 1:5) at variable concentrations. Centrifuge tube I: Experimental group ([T6] = 30 μM, [mTHPC] = 6 μM). Centrifuge tube II: Positive group (deionized water). Centrifuge tube III: Negative group (normal saline).

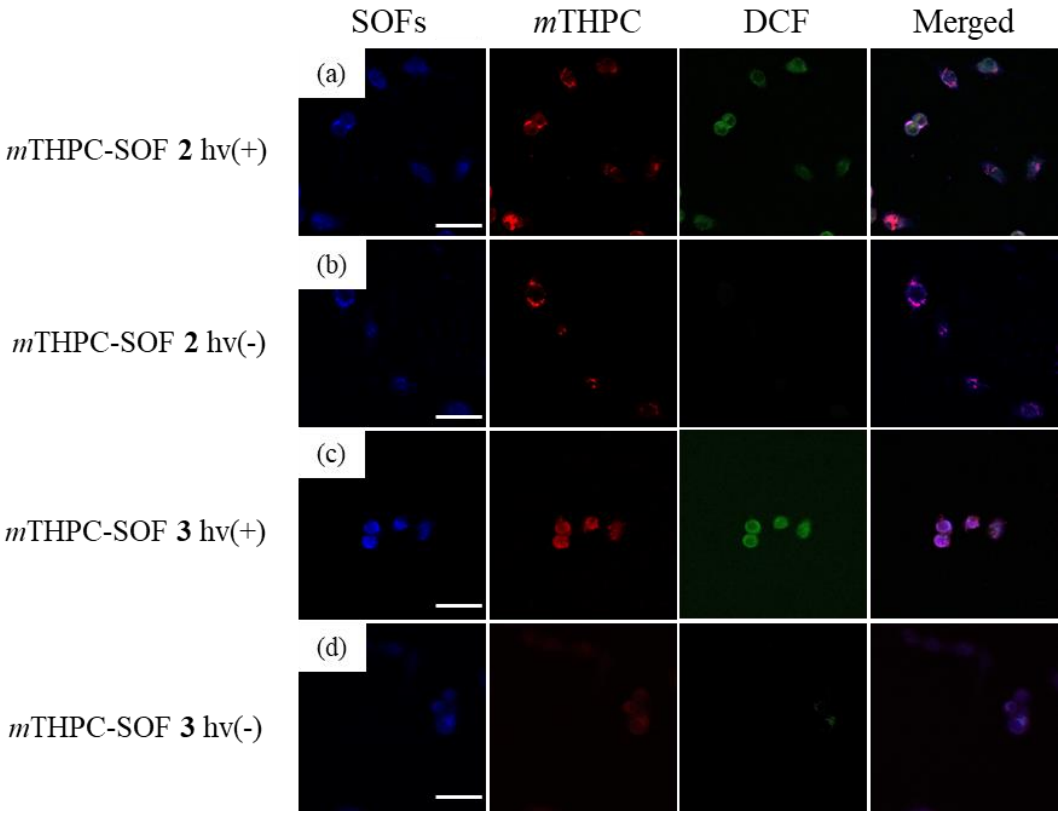

Figure S6. Confocal microscopic images of B16-F10 cells after treated with (a,b) *m*THPC-SOF **2** ([**T5**] = 50.0 μM, [*m*THPC] = 10.0 μg/mL), (c,d) *m*THPC-SOF **3** ([**T6**] = 50.0 μM, [*m*THPC] = 10.0 μg/mL) for 4 hours at 37 °C. For irradiation groups, cells were applied with 650 nm laser irradiation (0.2 W/cm^2, 1 min, 12 J). For dark groups, cells were incubated in dark. SOFs showed

blue fluorescence. *m*THPC showed red fluorescence. DCF showed green fluorescence, indicating singlet oxygen generation. Scale bar: 50 μm.

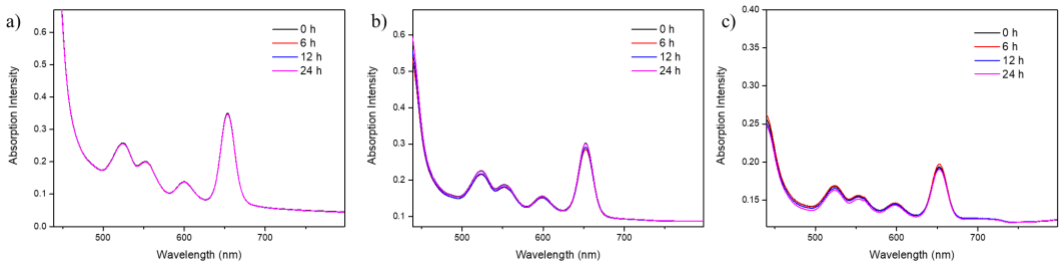

Figure S7. UV-Vis spectra of a) **mTHPC@SOF-1** ([mTHPC] = 20 μM, [**SOF-1**] = 0.1 mM) b) **mTHPC@SOF-2** ([mTHPC] = 20 μM, [**SOF-2**] = 0.1 mM) and c) **mTHPC@SOF-3** ([mTHPC] = 20 μM, [**SOF-3**] = 0.1 mM) after incubated in phosphate buffered saline for 0, 6, 12 and 24 hours.

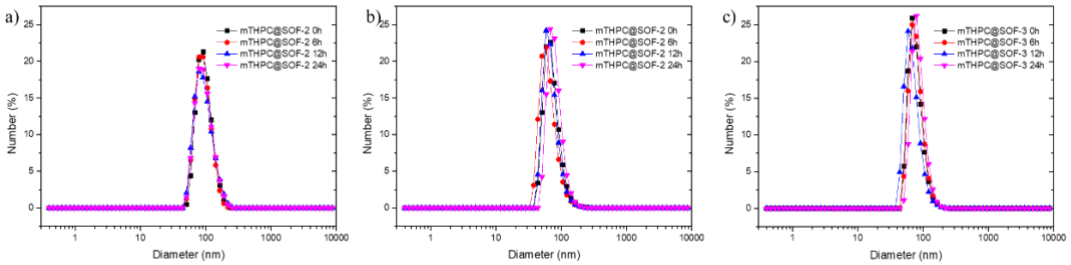

Figure S8. DLS profile of a) **mTHPC@SOF-1** ([mTHPC] = 20 μM, [**SOF-1**] = 0.1 mM) b) **mTHPC@SOF-2** ([mTHPC] = 20 μM, [**SOF-2**] = 0.1 mM) and c) **mTHPC@SOF-3** ([mTHPC] = 20 μM, [**SOF-3**] = 0.1 mM) after incubated in phosphate buffered saline for 0, 6, 12 and 24 hours.

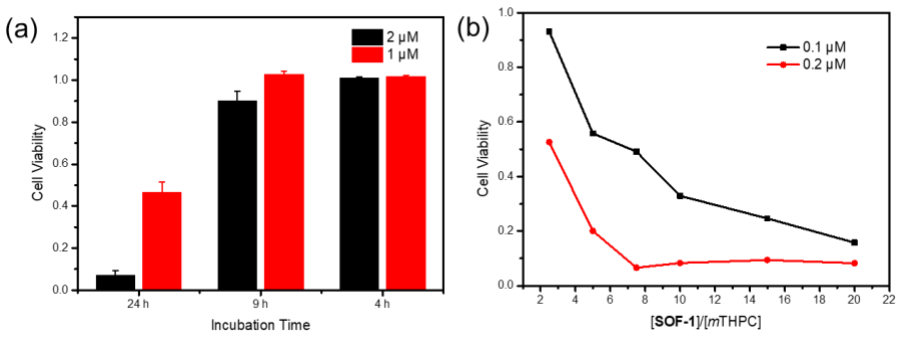

Figure S9. Viability after laser irradiation (650 nm, 2 min, 0.1 W/cm^2) of (a) B16-F10 cells treated with *m*THPC-SOF **1** ([*m*THPC]:[**T4**] = 1:5) at concentration of 2 μM and 1 μM separately, with different incubation time and (b) HeLa cells treated by different ratio of SOF **1** and *m*THPC.