

Supplementary Information

Biocompatible metallosurfactant-based nano-colloids loaded Rose Bengal with excellent singlet oxygen-induced phototoxicity efficiency against cancer cells

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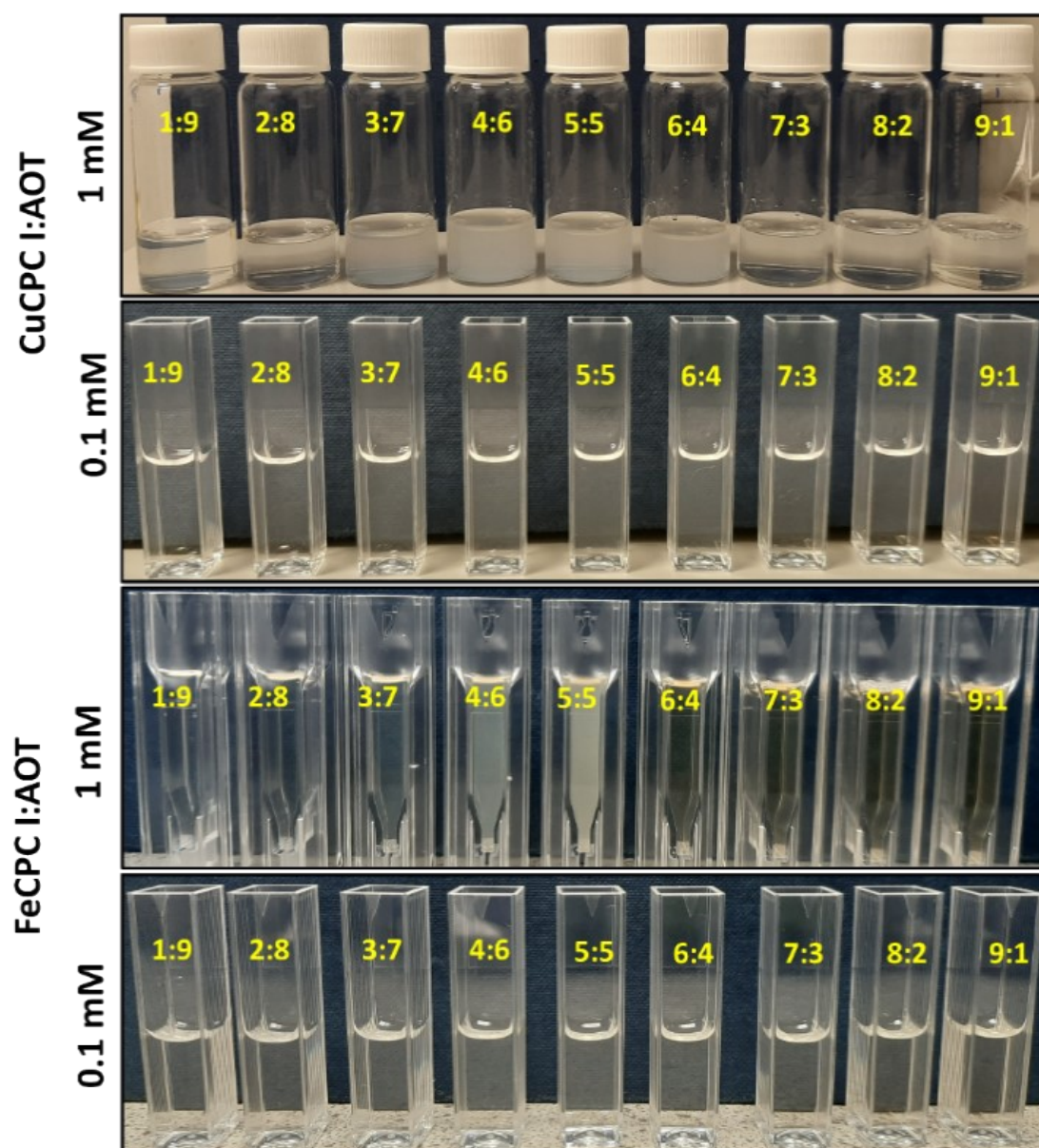


Fig. S1. Picture of the prepared fractions of CuCPC I:AOT and FeCPC I:AOT MCVs at 1 and 0.1 mM total concentrations calculated by DLS

Table S1. PDI values of the CuCPC I:AOT and FeCPC I:AOT fractions at 1 mM and 0.1 mM total concentration

Fractions	CuCPC I:AOT		FeCPC I:AOT	
	1 mM	0.1 mM	1 mM	0.1 mM
1:9	0.109	0.078	0.165	0.156
2:8	0.731	0.084	0.120	0.175
3:7	0.155	0.074	0.098	0.122
4:6	0.242	0.072	0.152	0.284
5:5	0.224	0.124	0.246	0.199
6:4	0.258	0.112	0.510	0.140
7:3	0.553	0.137	0.288	0.225
8:2	0.446	0.165	0.280	0.327
9:1	0.321	0.284	0.282	0.349

Table S2. Stability of the selected samples of CuCPC I:AOT and FeCPC I:AOT fractions till 1 month estimated by DLS

Time	CuCPC I:AOT				FeCPC I:AOT			
	(3:7)		(7:3)		(3:7)		(7:3)	
	size (nm)	PDI	size (nm)	PDI	size (nm)	PDI	size (nm)	PDI
Fresh sample	122.30	0.07	125.50	0.11	267.13	0.39	134.60	0.19
1st Week	236.60	0.45	235.00	0.58	234.83	0.43	276.60	0.31
2nd Week	314.10	0.47	232.20	0.53	270.46	0.43	467.26	0.38
1 month	309.10	0.15	135.10	0.53	287.23	0.33	331.30	0.43

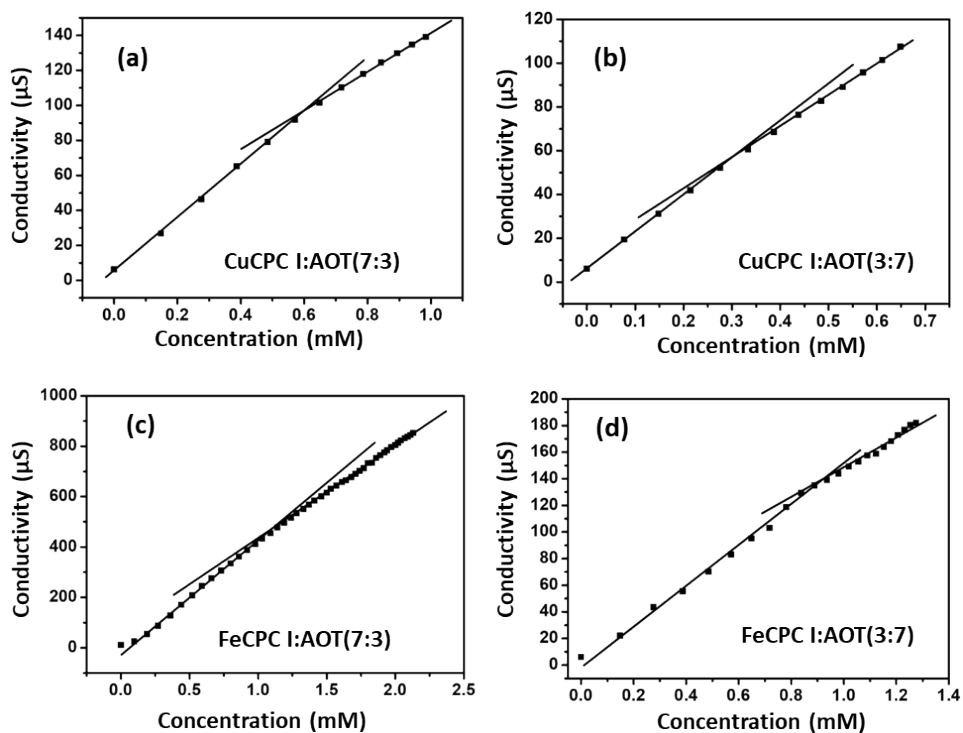


Figure S2. Concentration vs Conductivity graphs of (a) CuCPC I:AOT(7:3), (b) CuCPC I:AOT(3:7) fractions; (c) FeCPC I:AOT(7:3) and (d) FeCPC I:AOT(3:7) fractions.

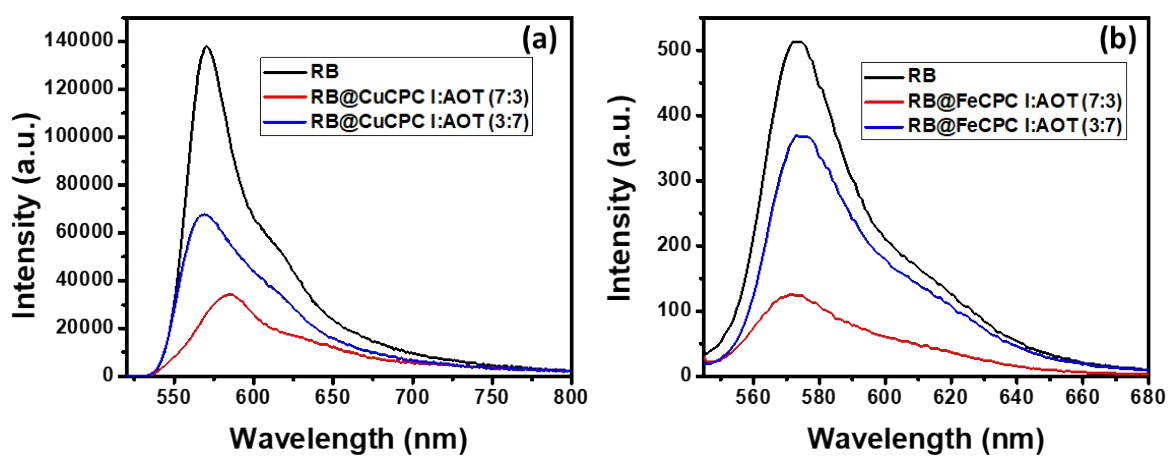


Figure S3. RB fluorescence intensity change in presence of (a) CuCPC I:AOT 7:3 and 3:7 fractions; (b) FeCPC I:AOT 7:3 and 3:7 fractions.

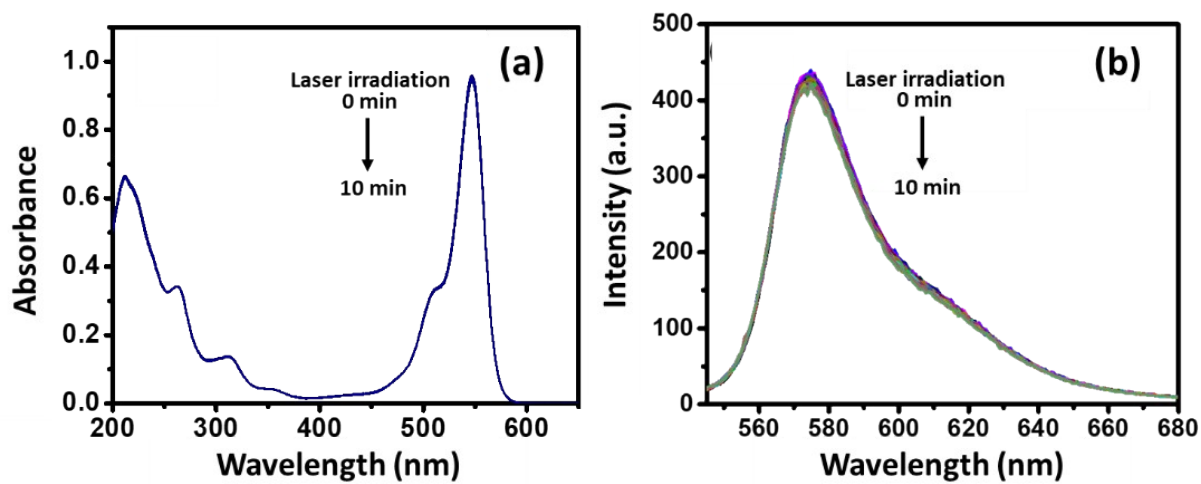


Figure S4. Effect of laser light on RB **(a)** UV-visible absorption spectra and **(b)** fluorescence emission spectra (before and after 10 min laser irradiation).

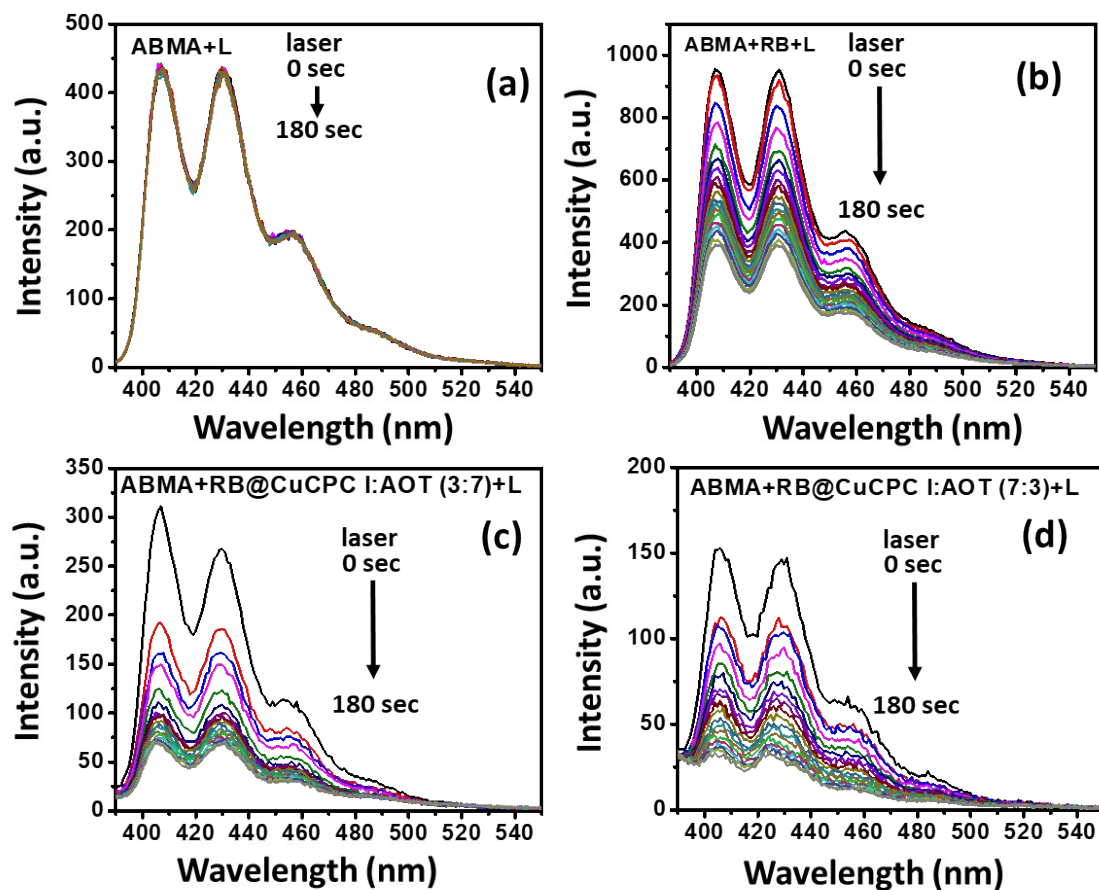


Figure S5. ABMA fluorescence emission intensity variation with (a) only laser light (L), (b) RB+L, (c) RB@CuCPC I:AOT(3:7)+L, (d) RB@CuCPC I:AOT(7:3)+L,

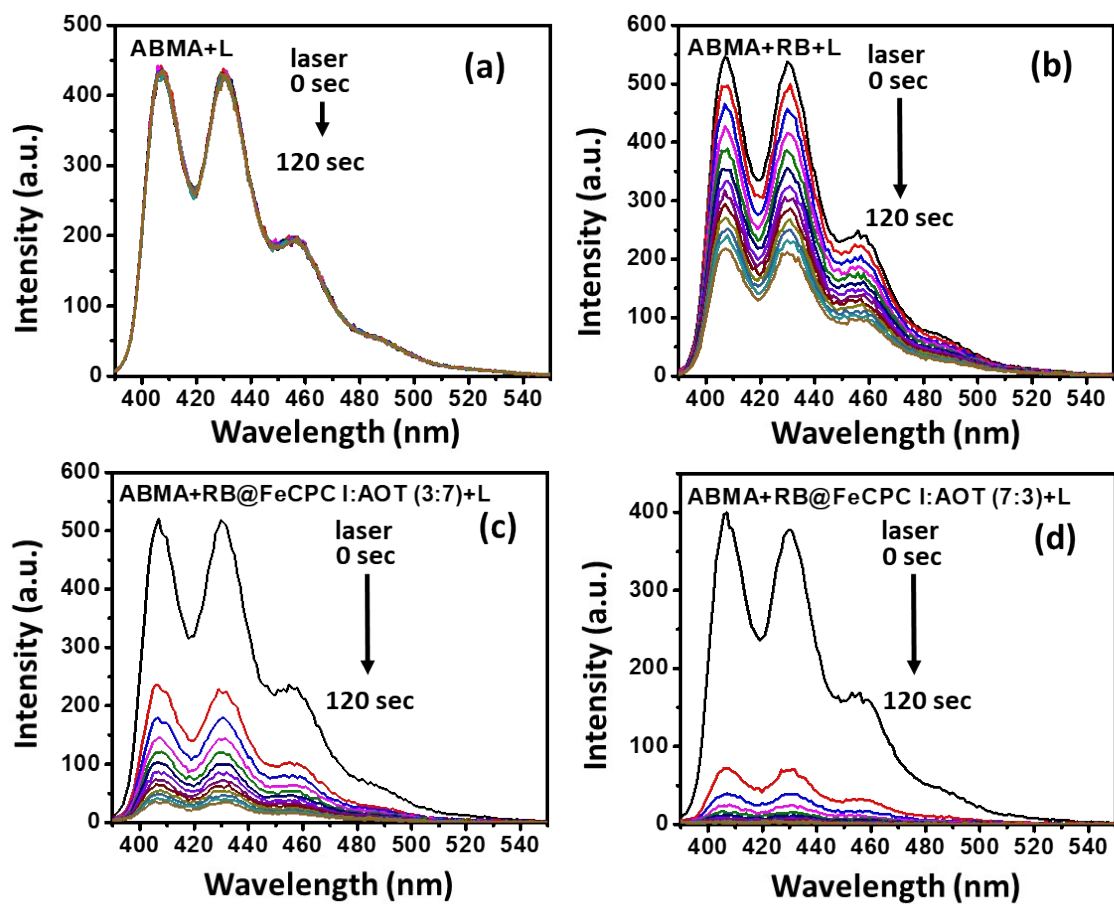


Figure S6. ABMA fluorescence emission intensity variation with (a) only L, (b) RB+L, (c) RB@FeCPC I:AOT(3:7)+L, (d) RB@FeCPC I:AOT(7:3)+L,

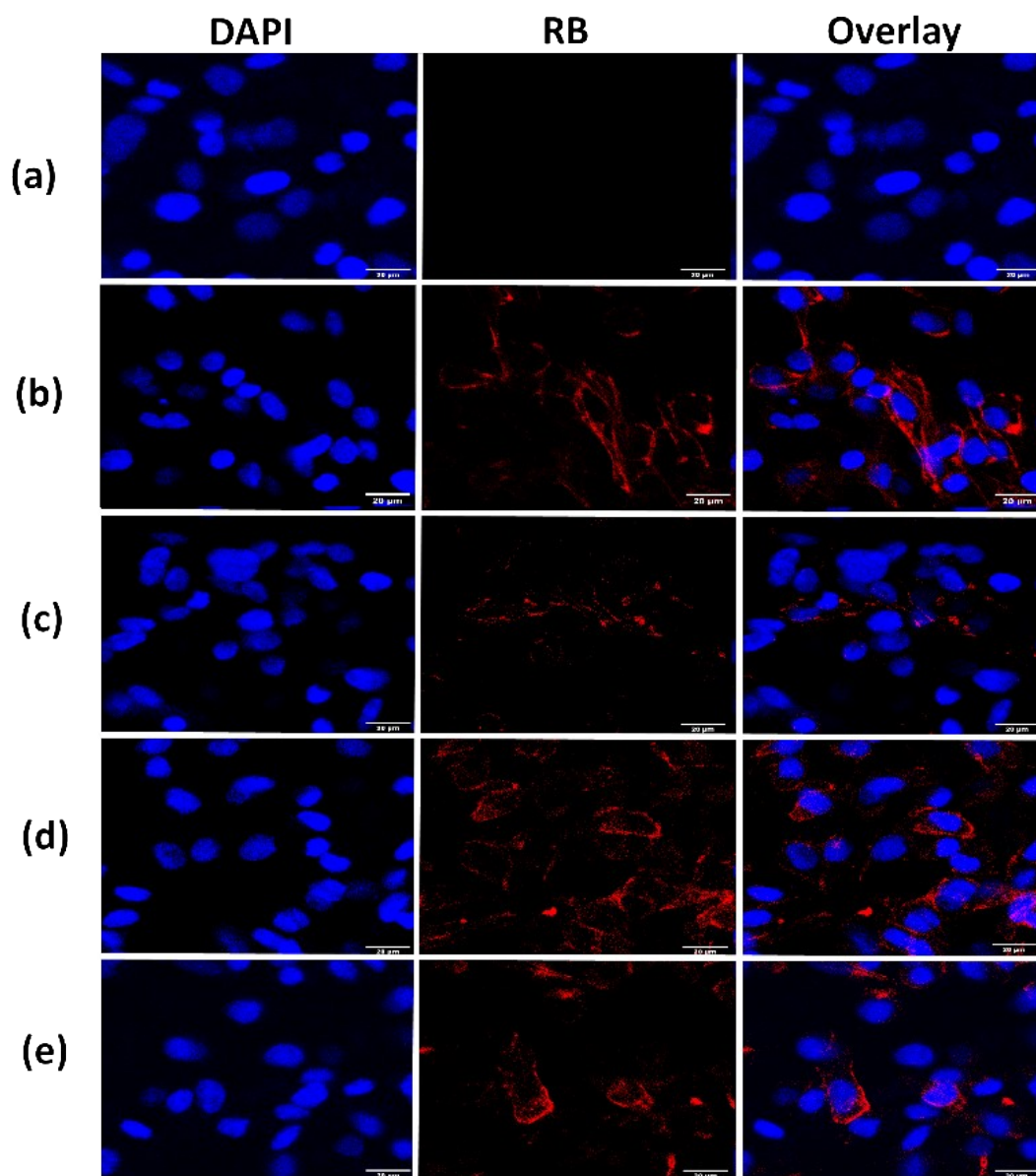


Figure S7. Confocal microscope images of U-251 cells cellular uptake study (a) control (where no RB present), (b) RB@CuCPC I:AOT(7:3), (c) RB@CuCPC I:AOT(3:7), (d) RB@FeCPC I:AOT(7:3) and (e) RB@FeCPC I:AOT(3:7) after 48 h incubation. DAPI(Blue) was used to stain nuclei (scale bar 20 μm)