Electronic supplementary information (ESI)

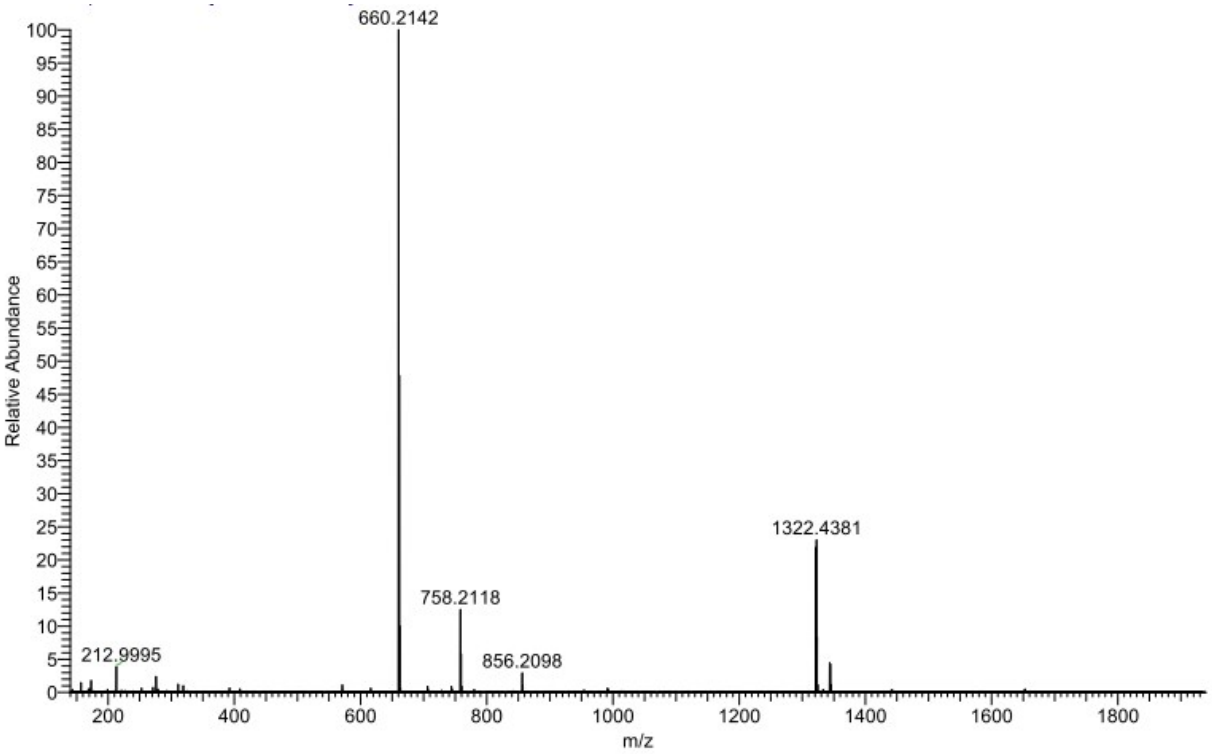


Figure S1. ESI-MS (*m/z*)(MeOH/MeOH + DEA): calcd. for **2** $C_{42}H_{26}N_7O_2$: 661.2142 found $(M-H)^-$: 660.2153.

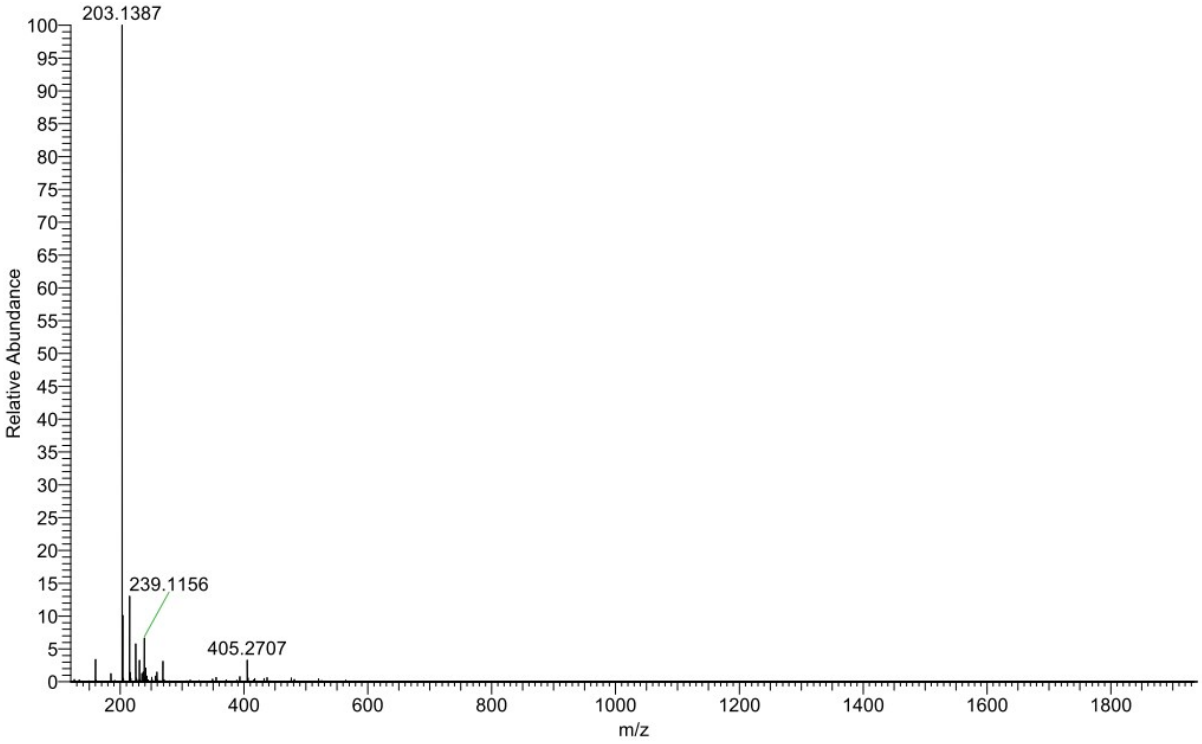


Figure S2. ESI-MS (m/z) (MeOH + NH_4OAc): calcd. for **3** ($C_9H_{19}N_2O_3$): 202.1387; found $(MH)^+$: 203.1387

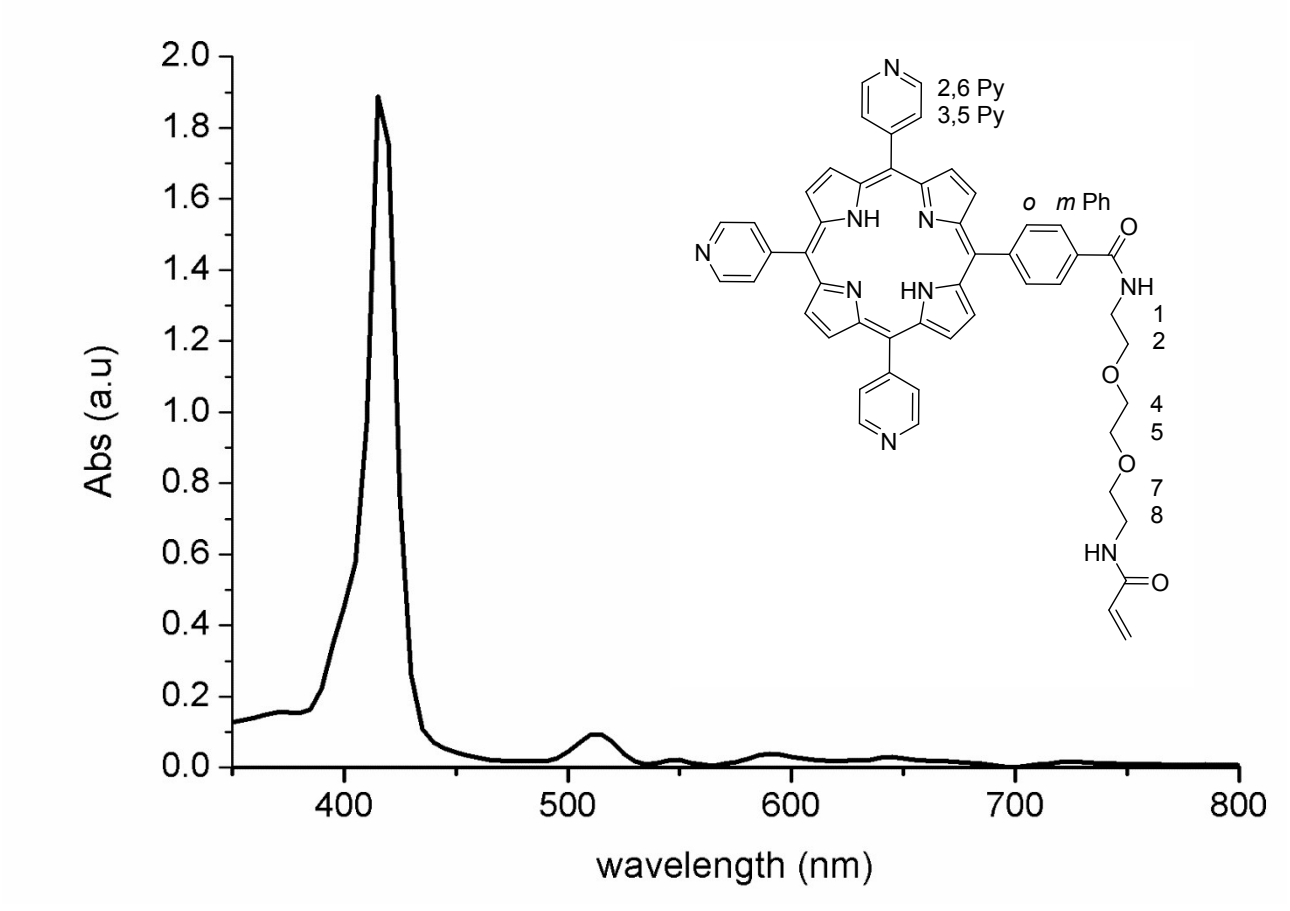


Figure S3. Absorption spectra of **4** in CH_2Cl_2.

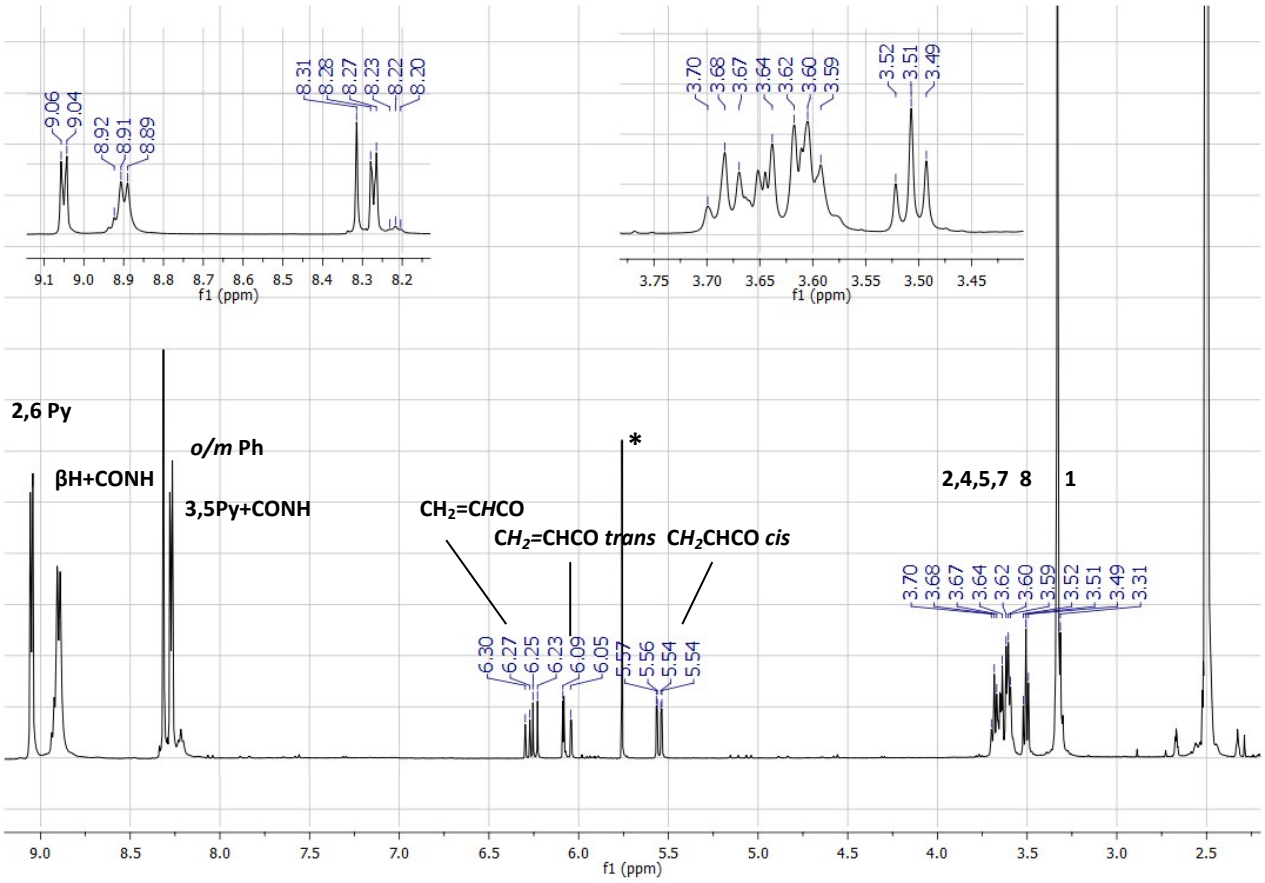


Figure S4. ^{1}H NMR spectrum of **4** in DMSO-d_6 *=impurity (CH_2Cl_2)

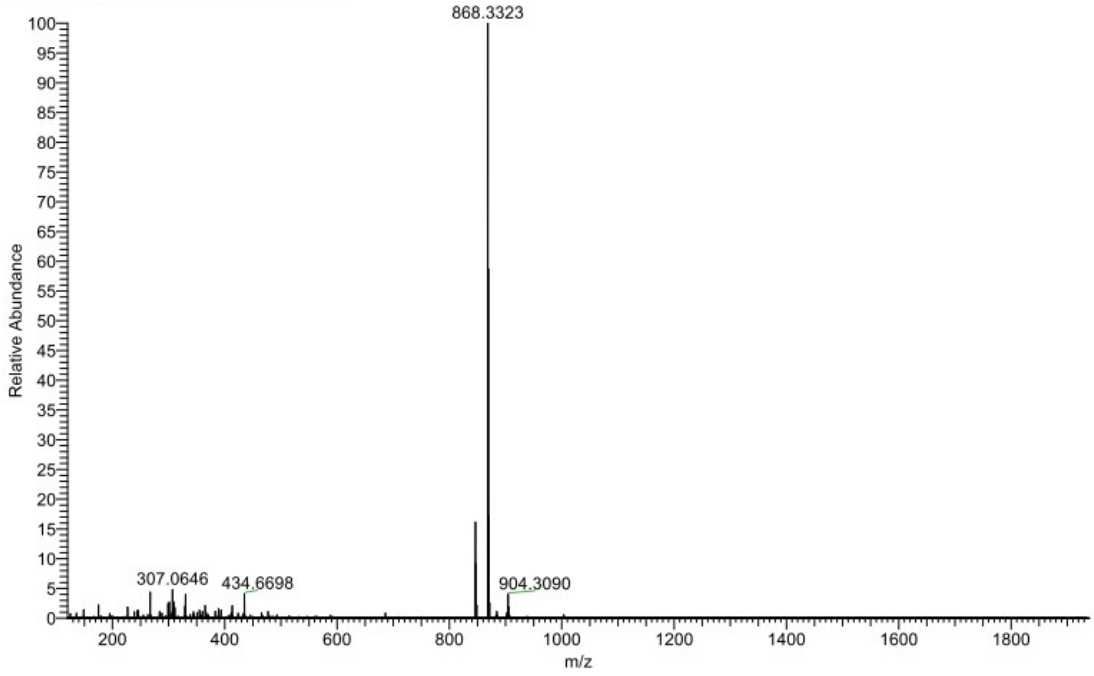


Figure S5. ESI-MS (m/z) (MeOH + NH_4OAc): calcd. for **4** ($C_{51}H_{43}N_9O_4$): 845.34; found (M+ Na^+) 868.3330.

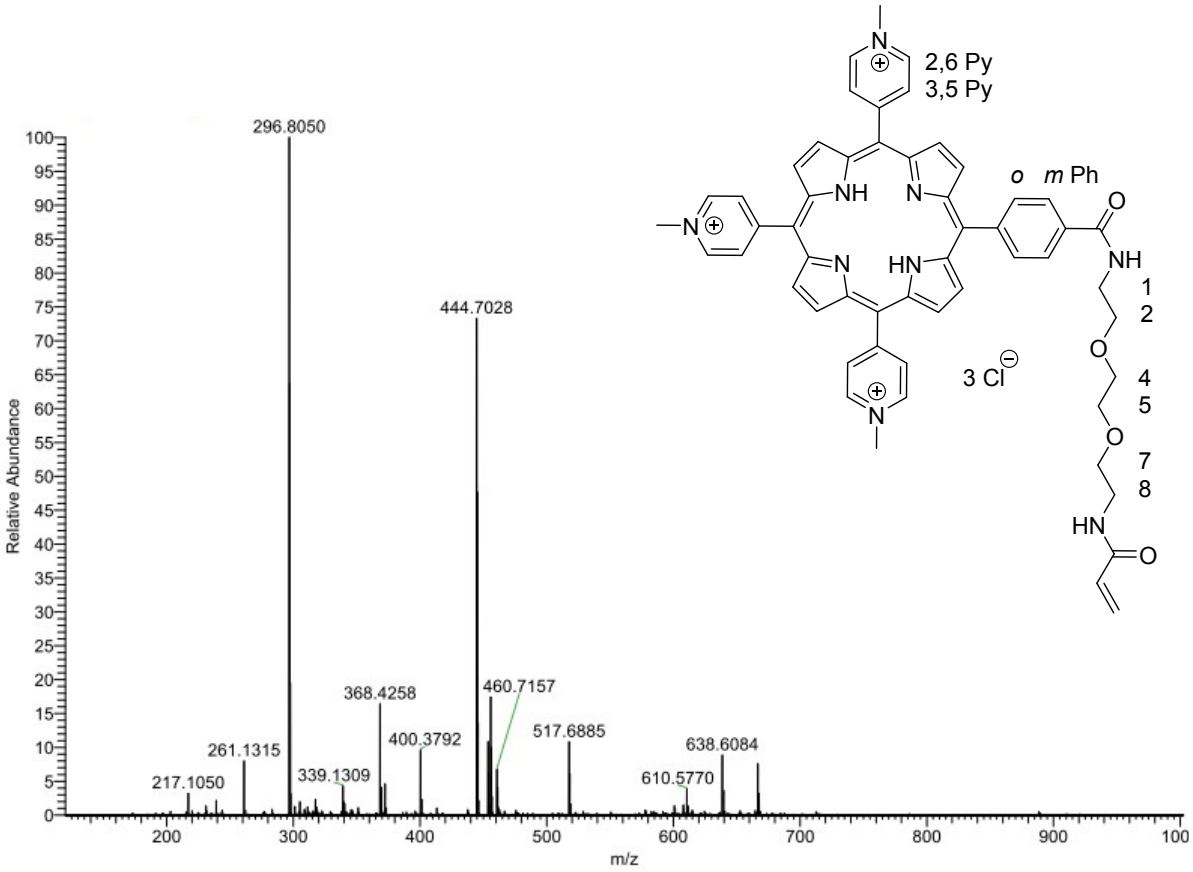


Figure S6. ESI-MS (m/z) (MeOH + NH_4OAc): calcd. for **5** ($C_{54}H_{52}N_9O_4Cl_3$): 296.8050 (z=3); found $(M - 3Cl)^{3+}$ 296.8042.

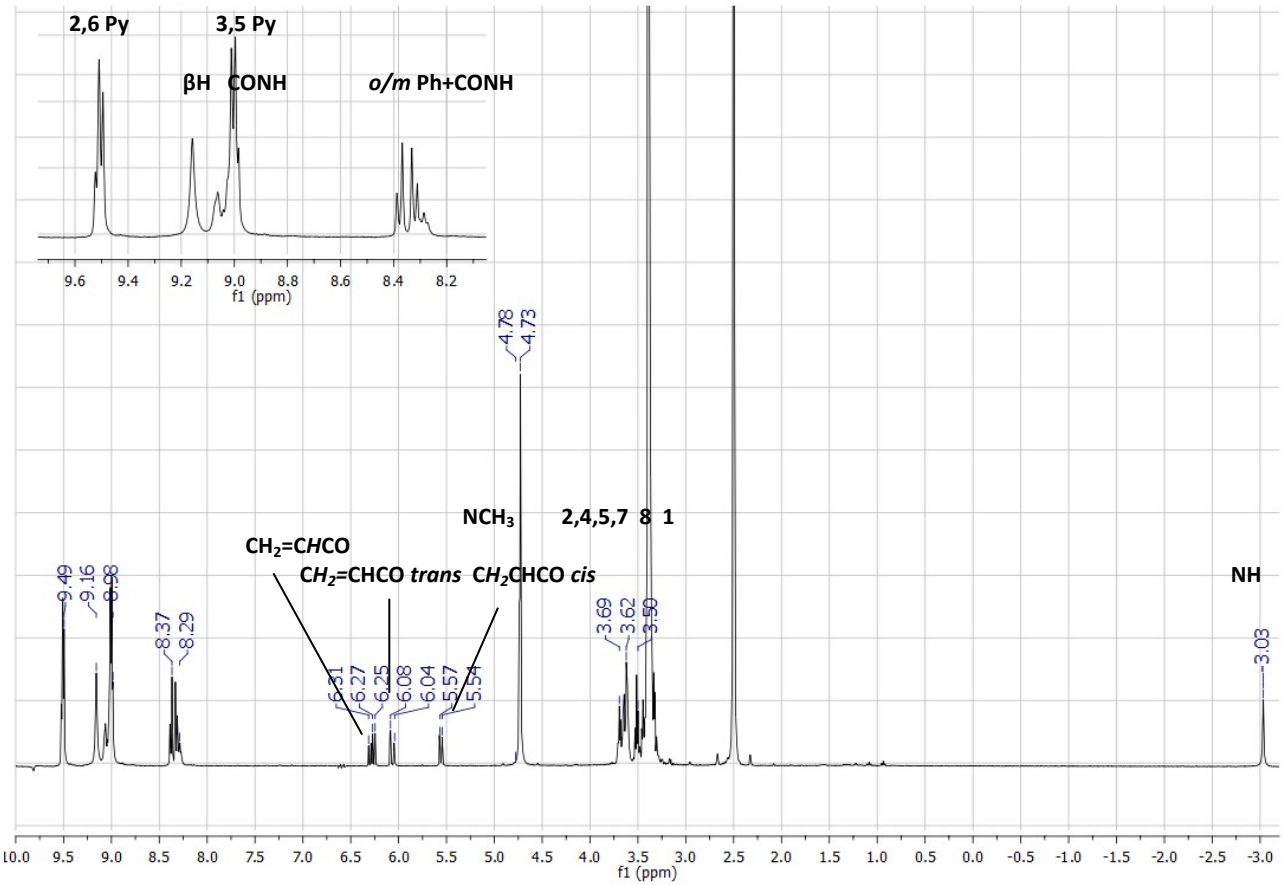


Figure S7. ^{1}H NMR spectrum of of **5** in DMSO-d_6

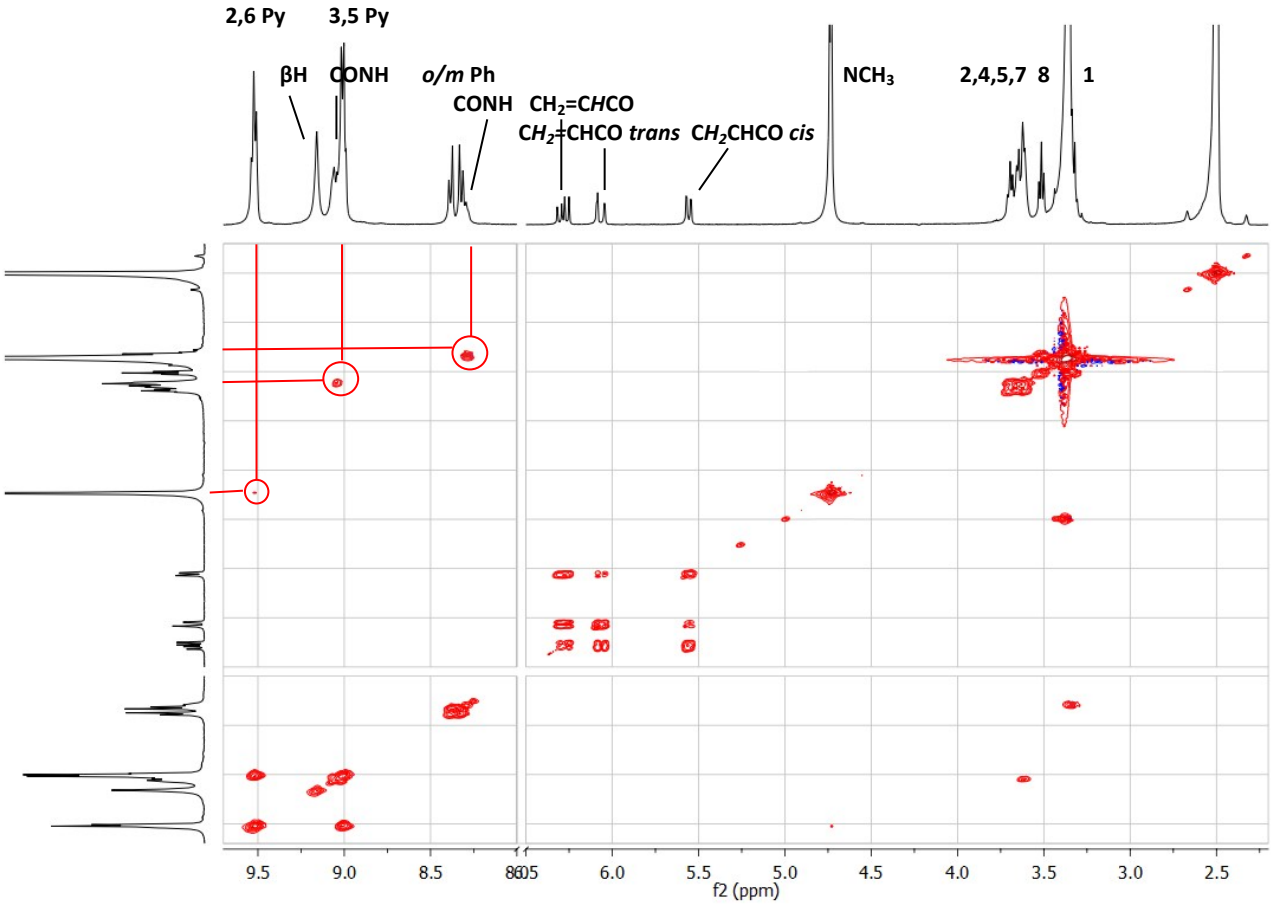


Figure S8. H-H COSY of **5** in DMSO-d_6

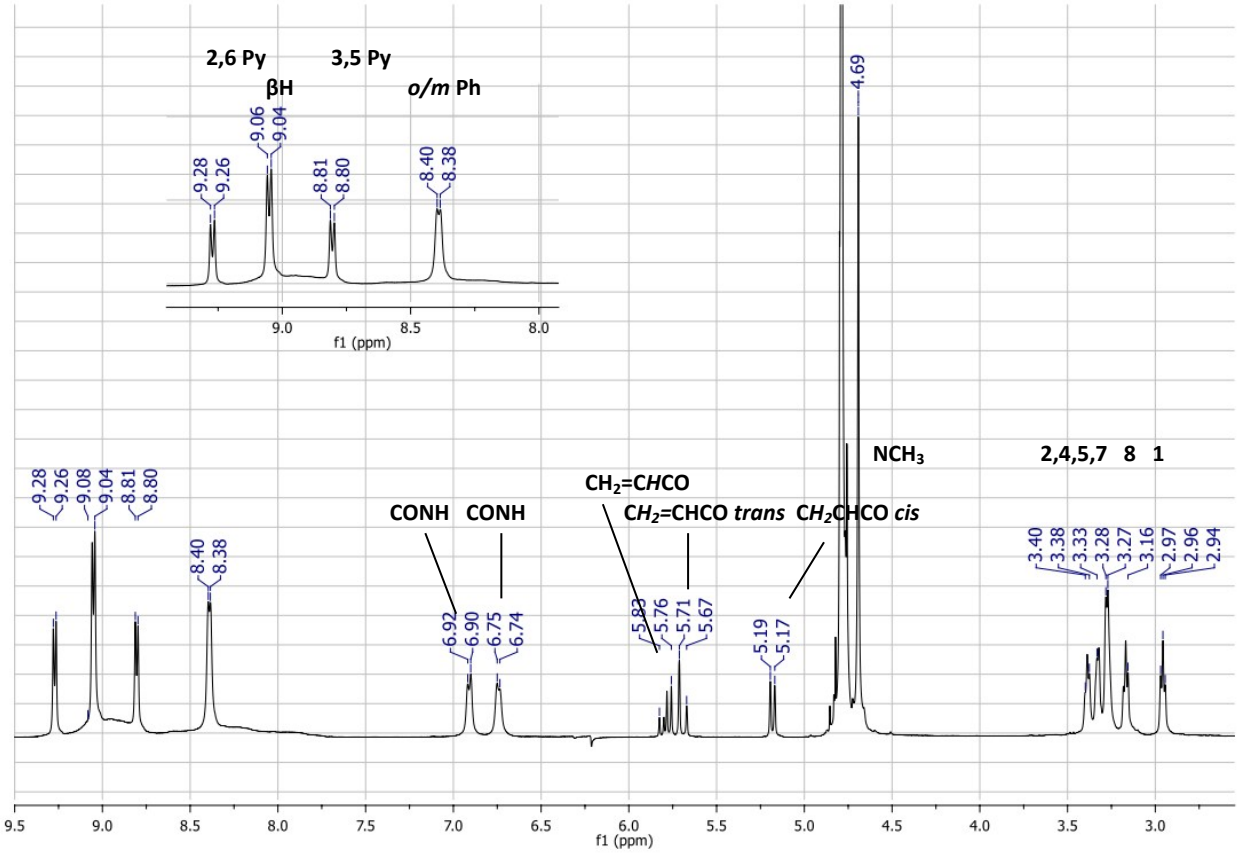


Figure S9. ^{1}H NMR spectrum of **5** in D_2O

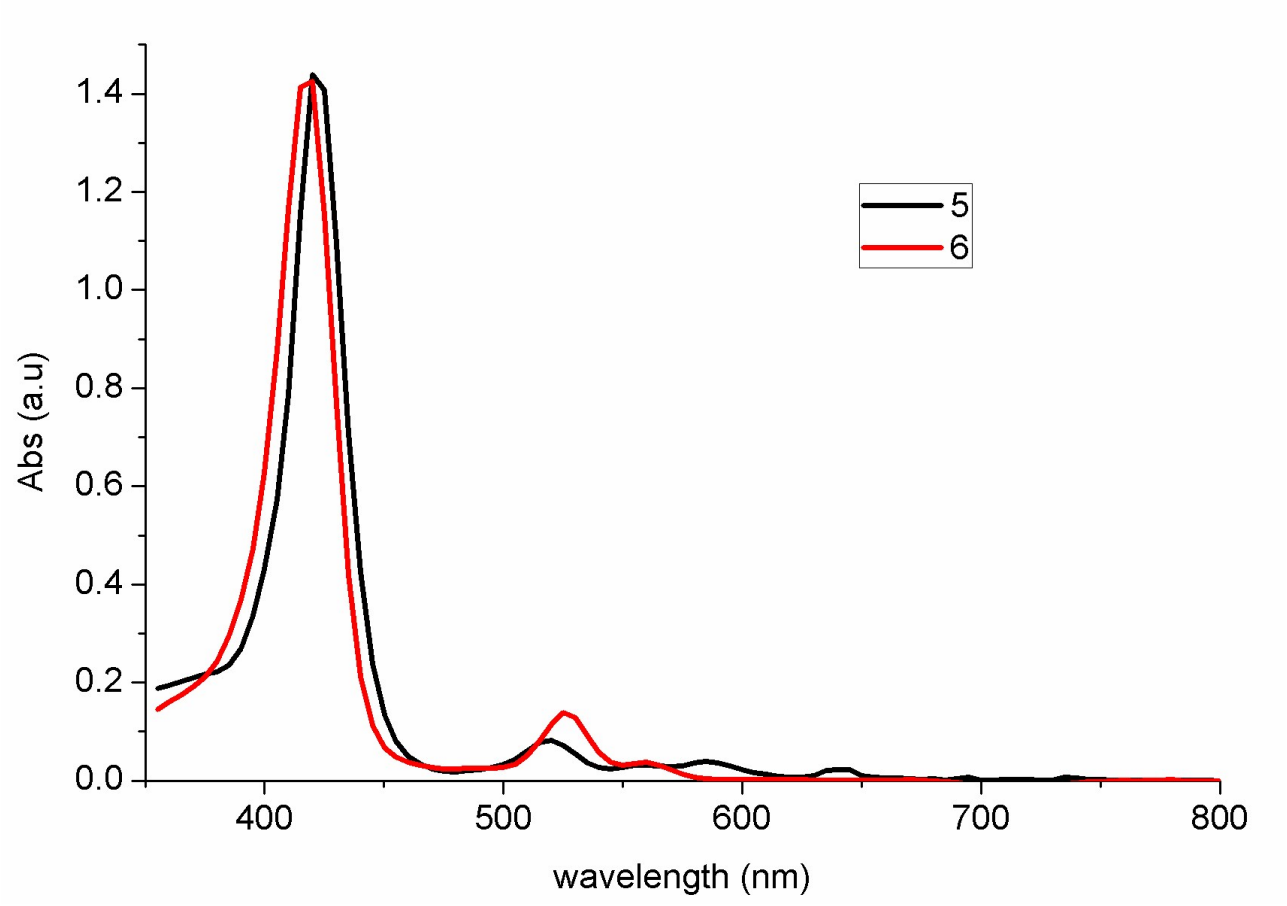


Figure S10 (a). Absorption spectra of **5** and **6** in PBS (pH=6.0).

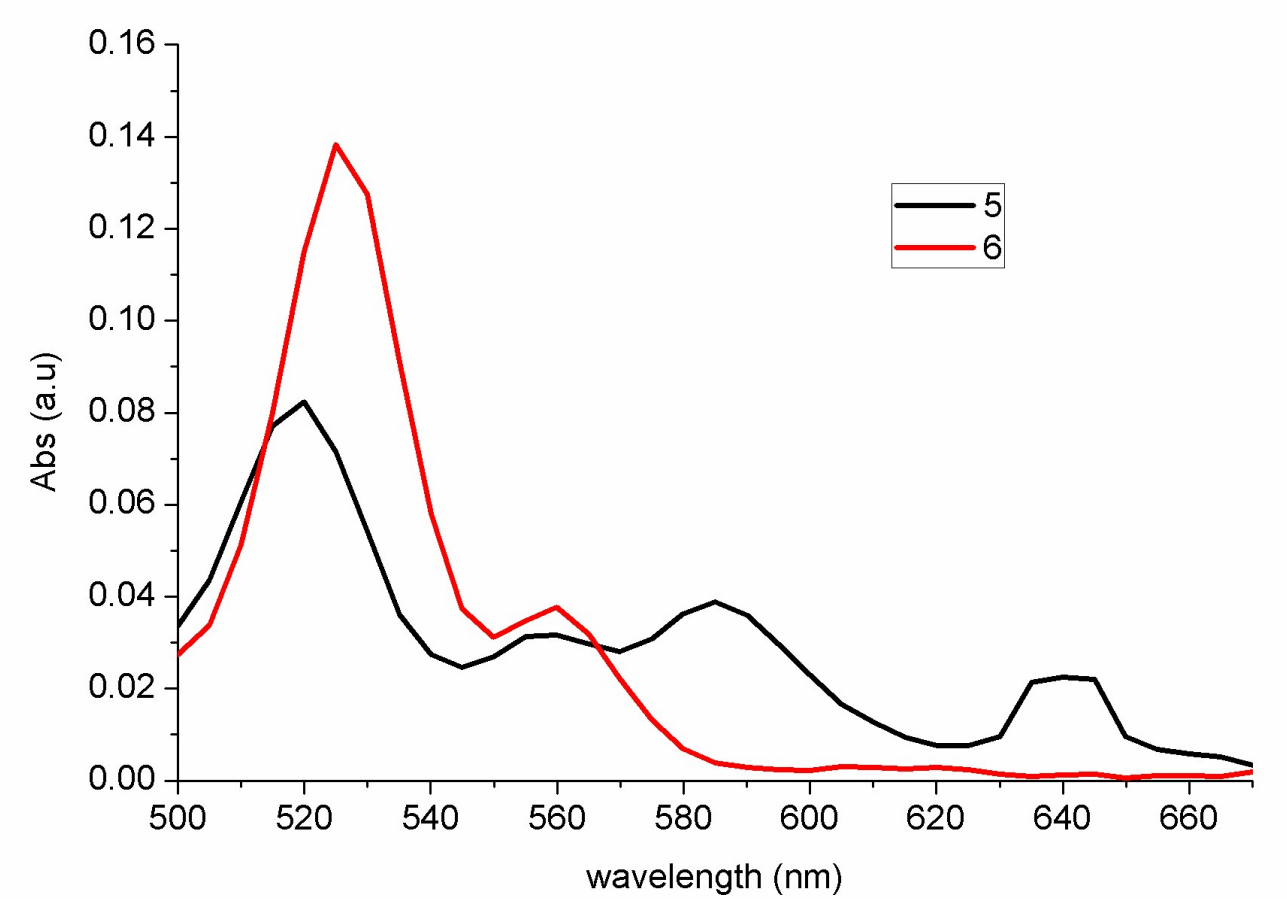
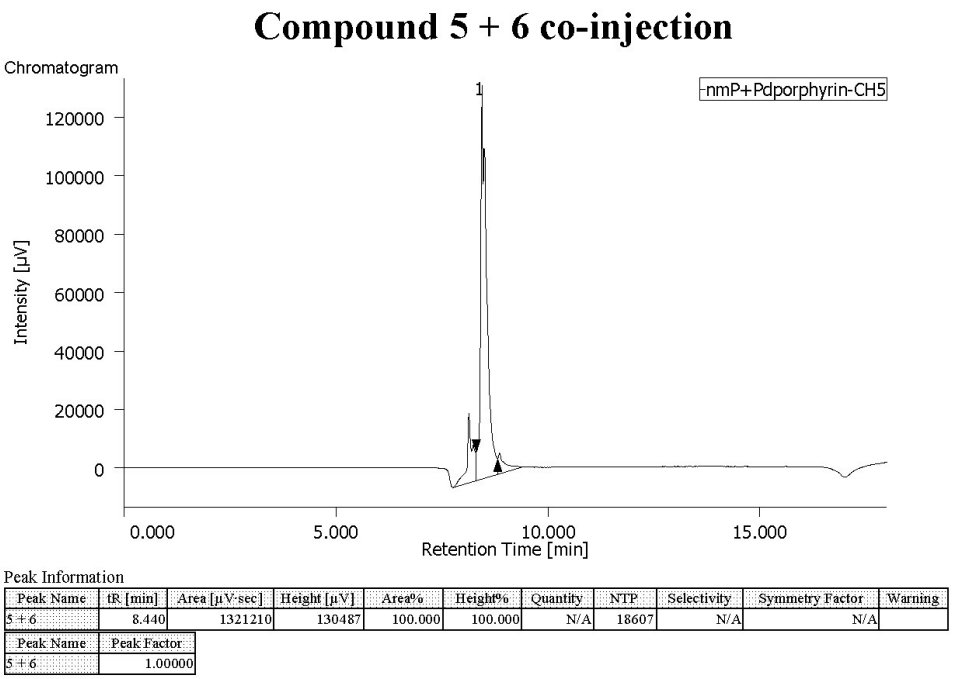


Figure S10 (b). Wavelength range 500-660 nm, absorption spectra of **5** and **6** in PBS (pH=6.0).



Peak Information

Peak Name	tR [min]	Area [µV·sec]	Height [µV]	Area%	Height%	Quantity	NTP	Selectivity	Symmetry Factor	Warning
5 + 6	8.440	1321210	130487	100.000	100.000	N/A	18607	N/A	N/A	

Peak Name	Peak Factor
5 + 6	1.00000

Figure S11. HPLC trace of the water soluble porphyrin **5** and **6** conjected for qualitative comparison. Gradient: see Material and Methods.

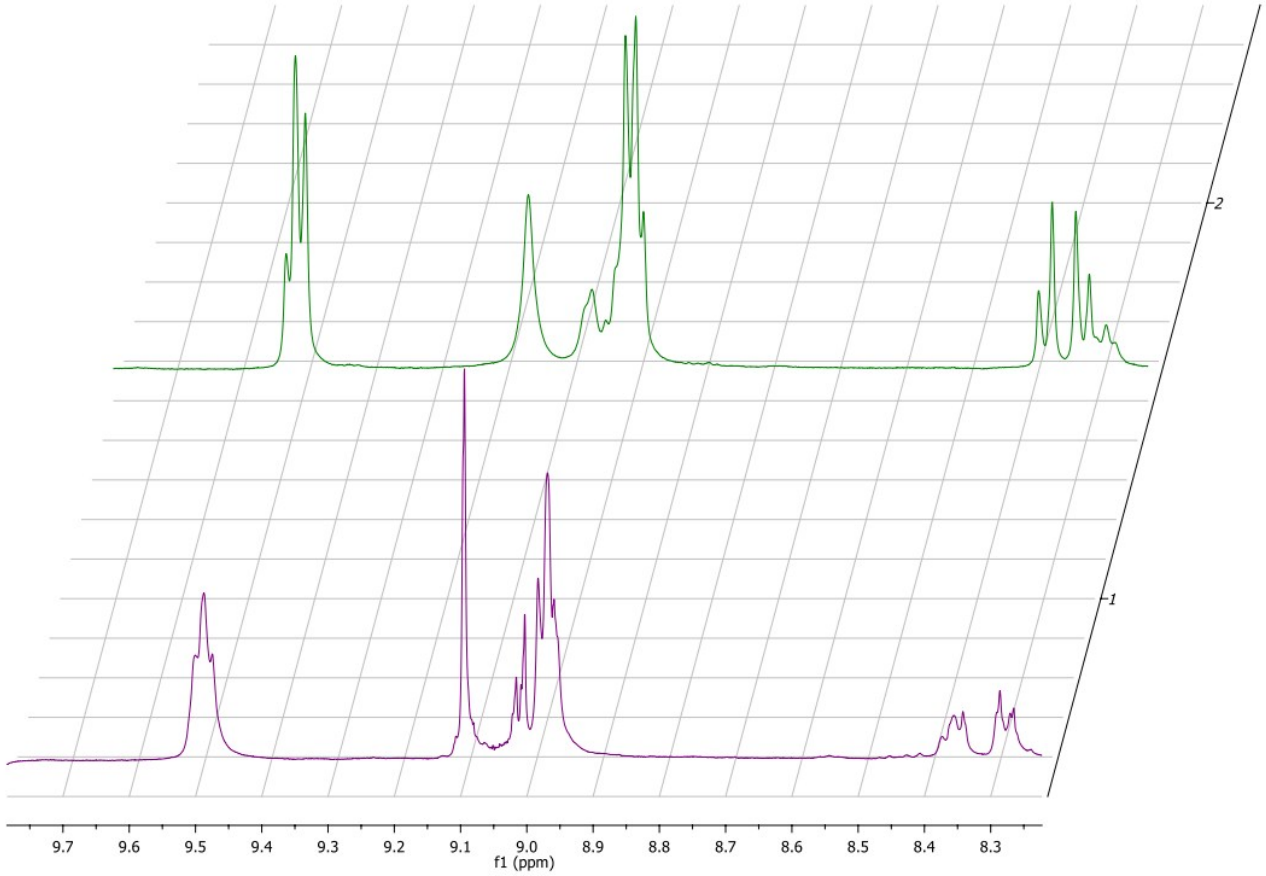


Figure S12. Superimposition of ^{1}H NMR spectrum of **6** in DMSO-d_6 (bottom) and ^{1}H NMR spectrum of **5** in DMSO-d_6(up).

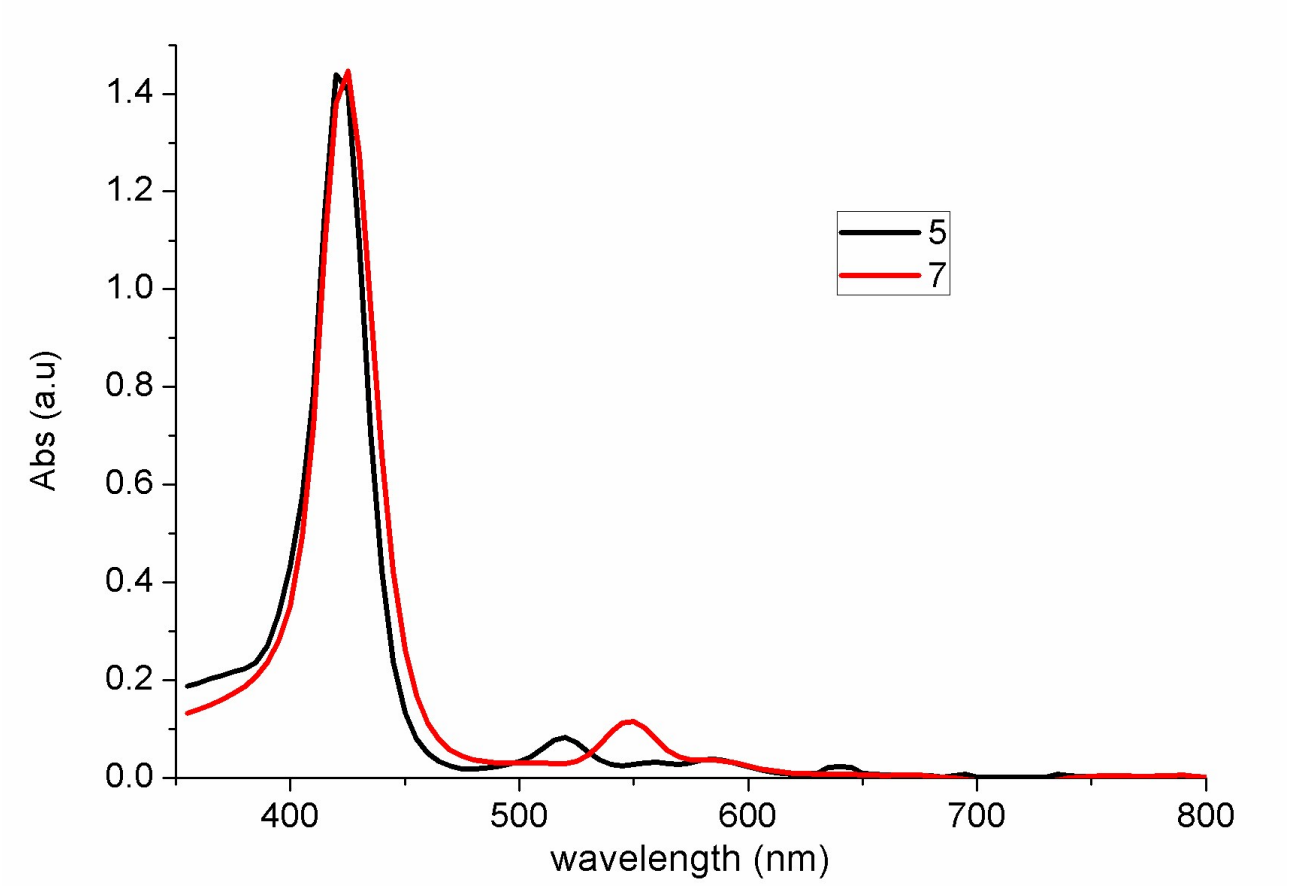


Figure S13 (a). Absorption spectra of **5** and **7** in PBS.

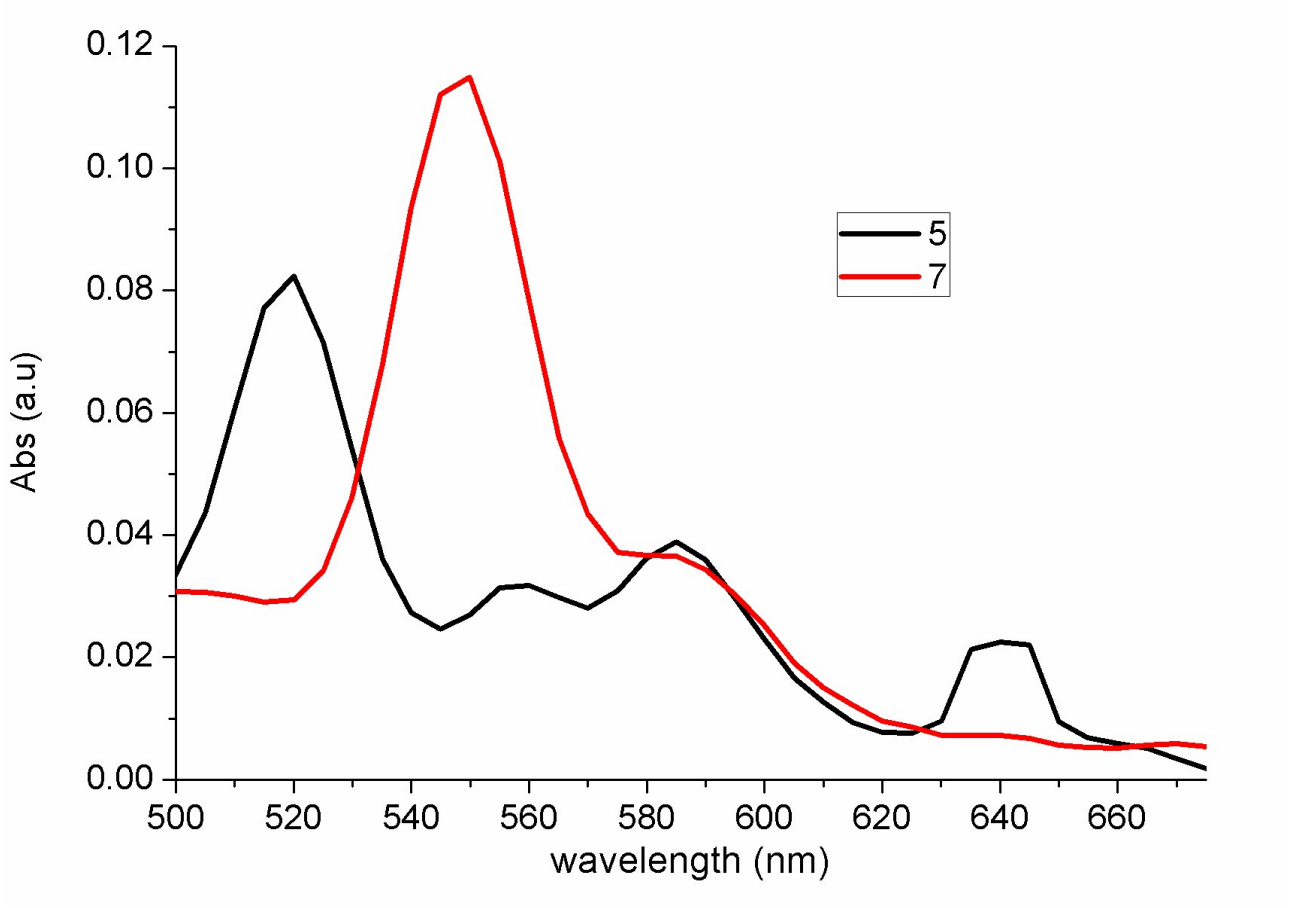


Figure S13 (b). Wavelength range 500-660 nm, absorption spectra of **5** and **7** in PBS.

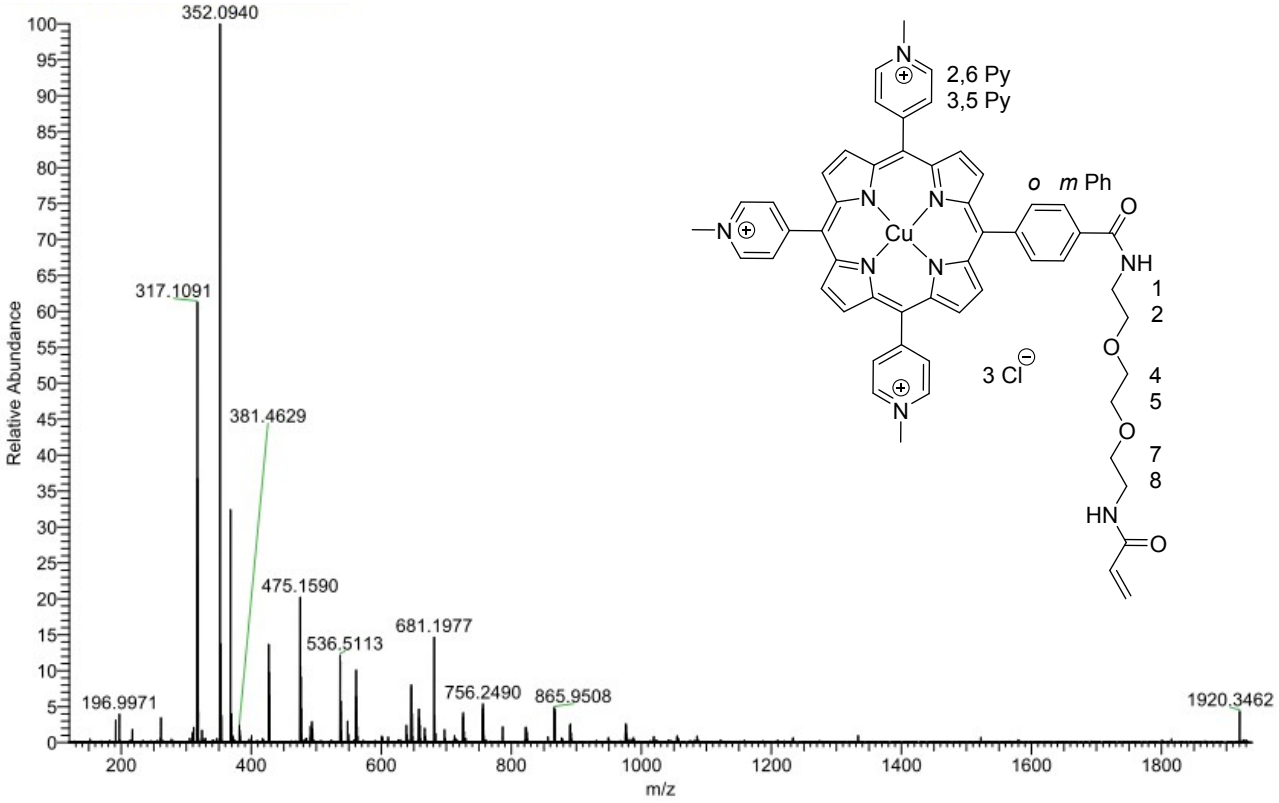


Figure S14. ESI-MS (m/z) (MeOH + NH_4OAc),: calcd. for **7** ($C_{54}H_{52}N_9O_4Cl_3$): 317.1091 (z=3); found $(M - 3Cl)^{3+}$ 317.1088.

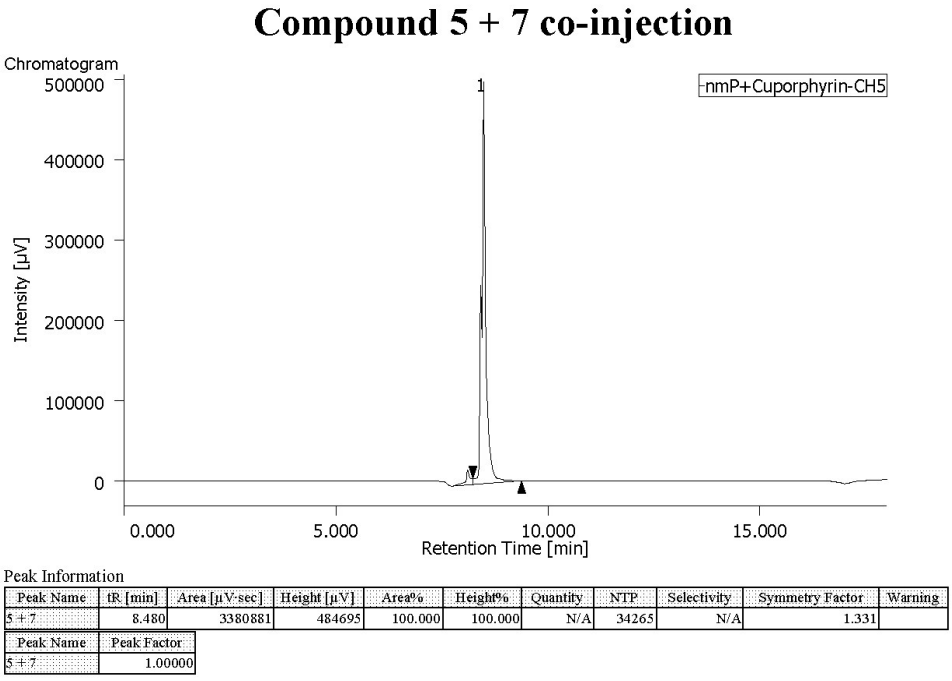


Figure S15. HPLC trace of the water soluble porphyrin **5** and **7** conjected for qualitative comparison. Gradient: see Material and Methods.

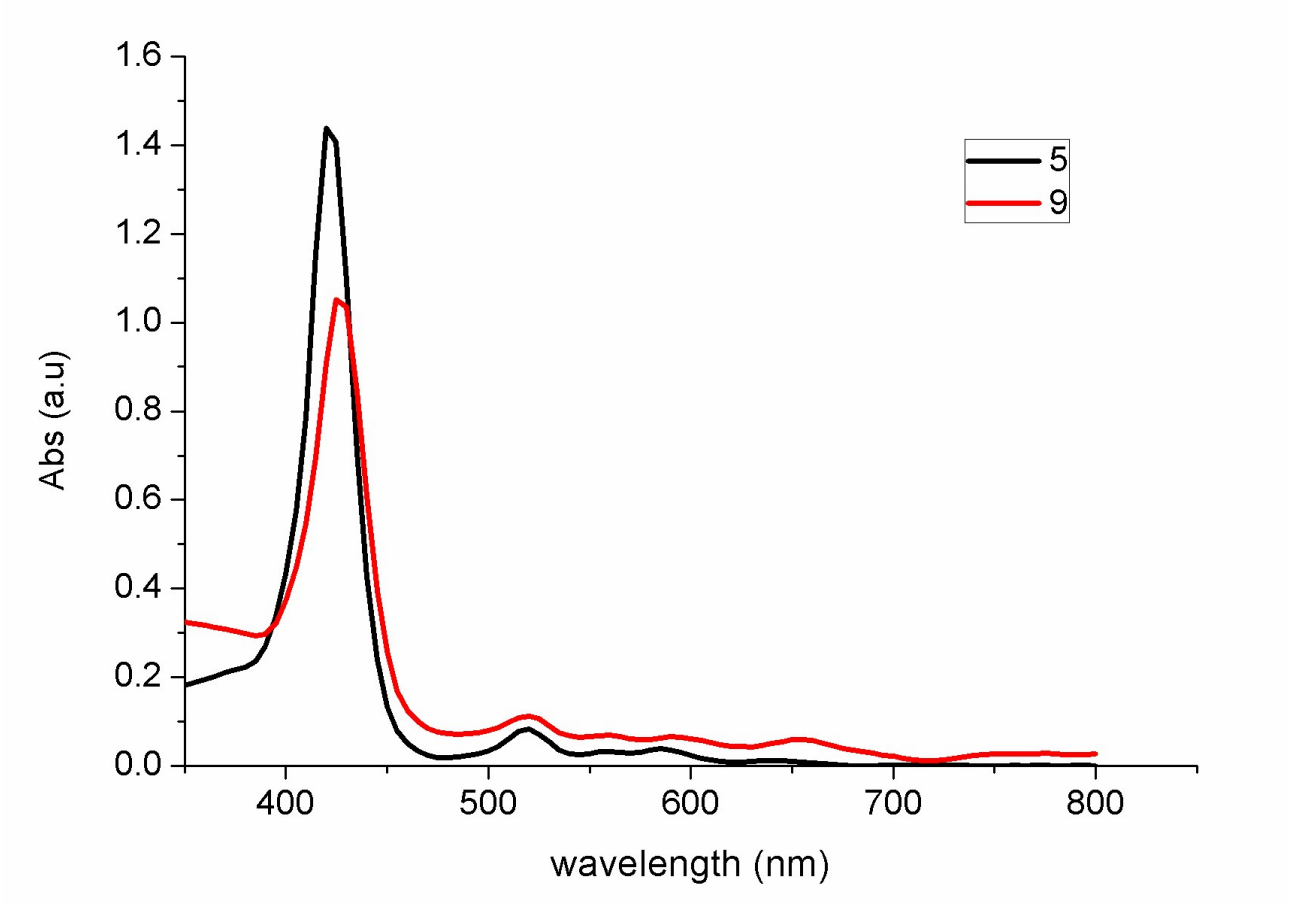
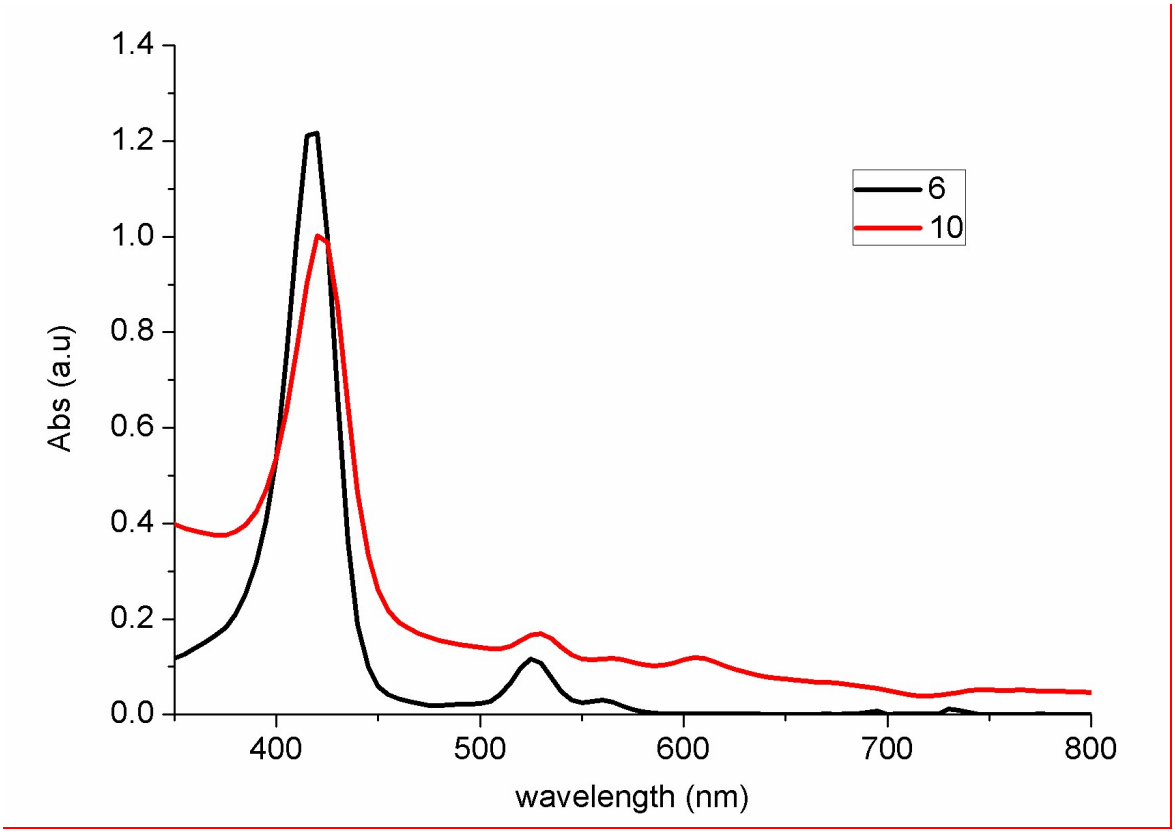


Figure S16. Absorption spectra of **5** and **9**.



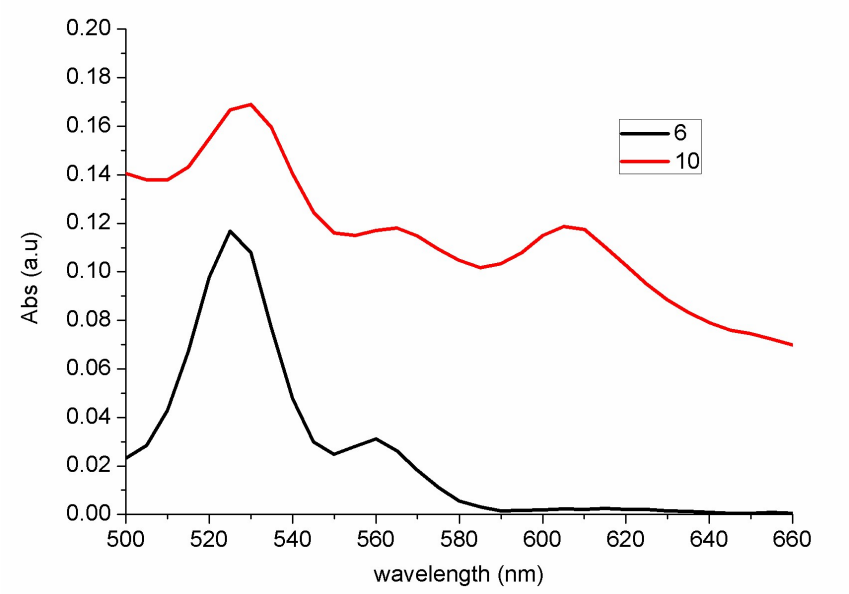


Figure S17. Absorption spectra of **6** and **10.**

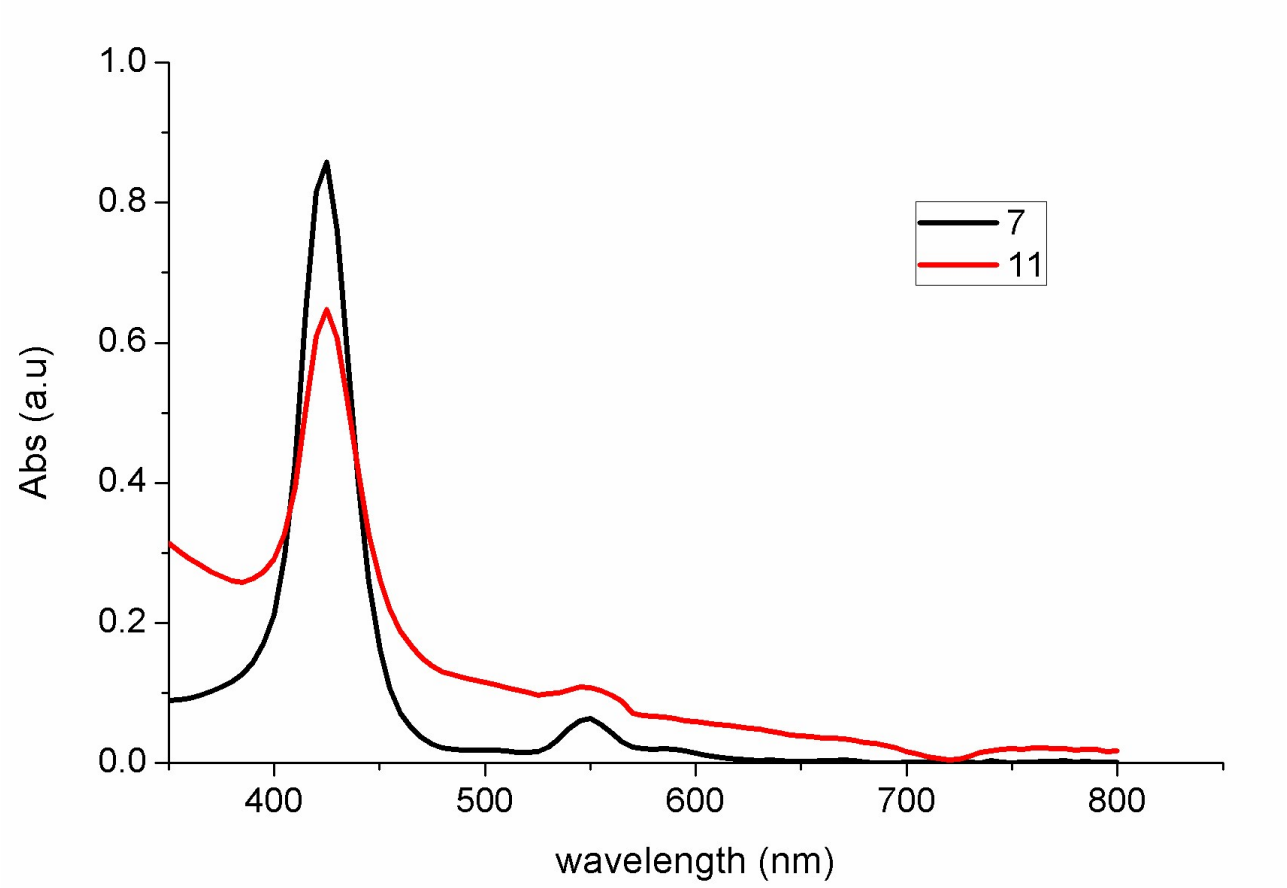


Figure S18. Absorption spectra of **7** and **11**.

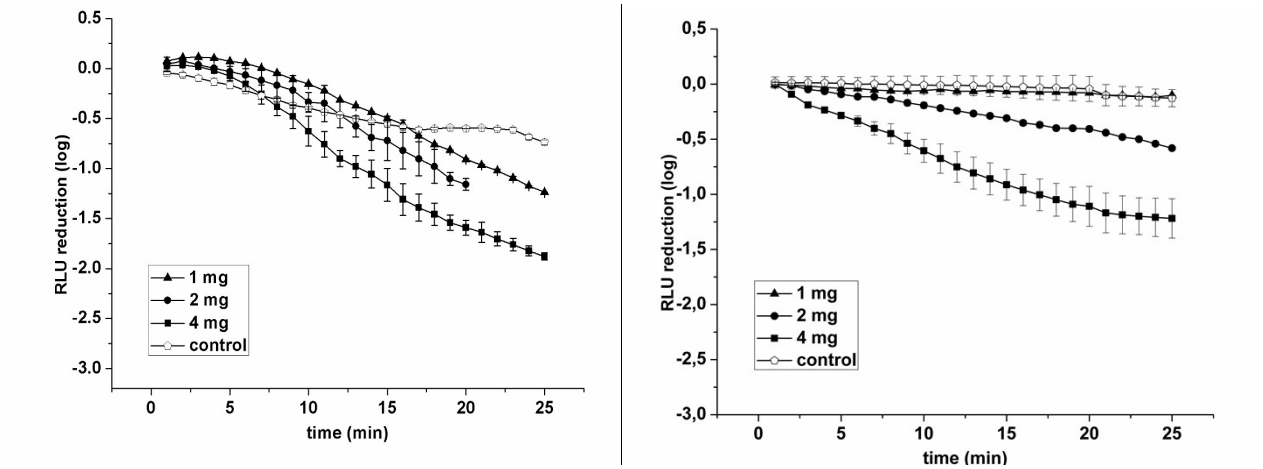


Figure S19. Kill curves obtained for the 1 mg/cm^3, 2 mg/cm^3 and 4 mg/cm^3 photoantimicrobial hydrogel previously cut in 4 squares against *E. coli* under light illumination (a) for 25 min (fluence rate of 14.5 mW/cm^{-2} and a total light dose 21.8 J/cm^2) and in the dark (b). Dark and light experiments were done with the cell suspensions of 2×10^6 CFU ml^{-1}. The optical fiber was placed 6 cm from the plates. Values represent the mean of two separate experiments.

The filled triangles correspond to the killing curve obtained adding 1 mg/cm^3 to the *E. coli* suspension while the filled circles correspond to the killing curve obtained adding 2 mg/cm^3 to the *E. coli* suspension. The filled squares corresponds to the killing curve obtained adding 4 mg/cm^3 hydrogel to the *E. coli* suspension.

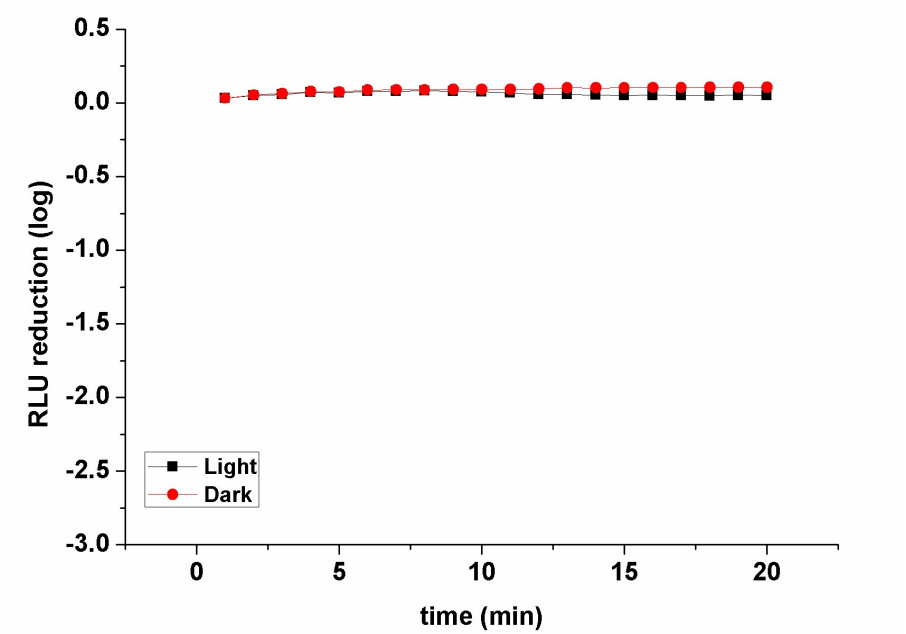


Figure S20. Control experiment on an *E. coli* suspension irradiated and in the dark indicated that light doses alone up to 21.8 J cm^2.