

Supplementary Materials: Nanoparticles of *N*-Vinylpyrrolidone Amphiphilic Copolymers and Pheophorbide a as Promising Photosensitizers for Photodynamic Therapy: Design, Properties and In Vitro Phototoxic Activity

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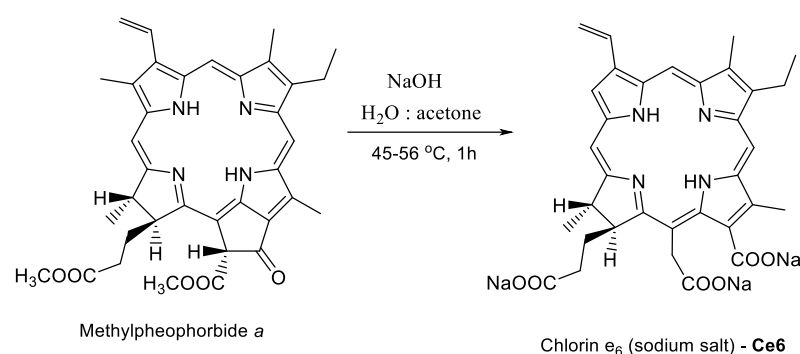


Figure S1. Synthesis of the chlorin *e*₆ water-soluble salt (Ce6) according to the method described in ref. [25,26] from the article.

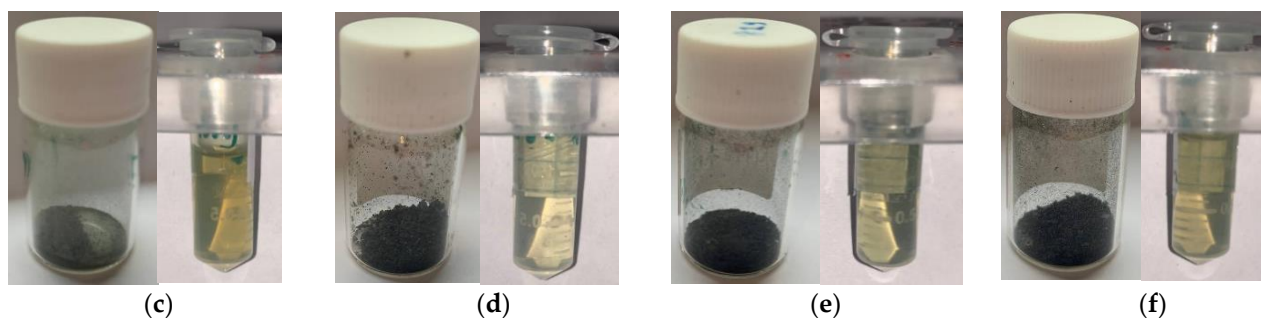
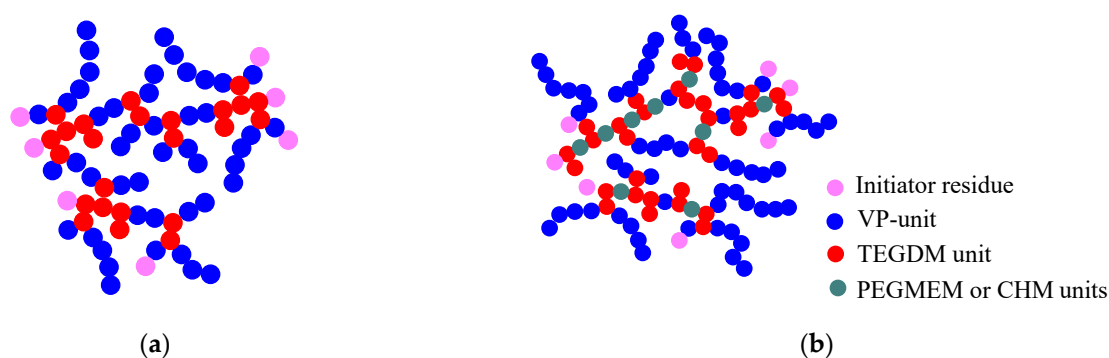
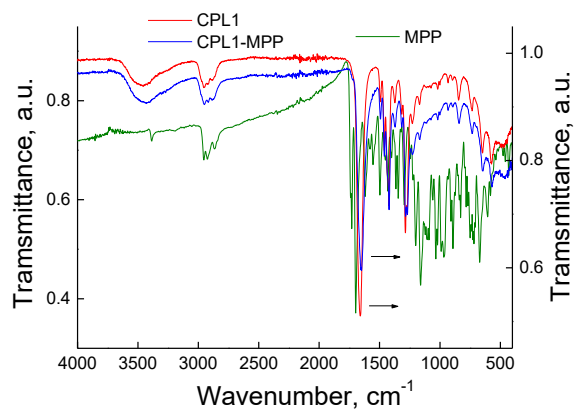
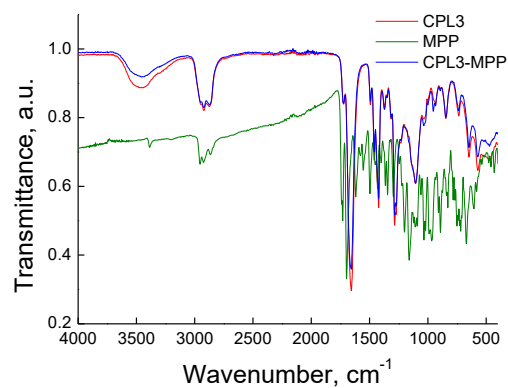


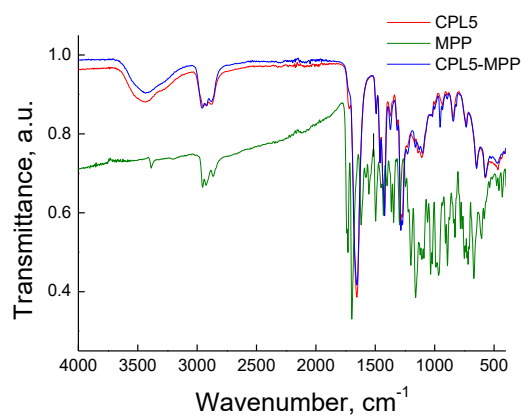
Figure S2. Topological structures of VP-TEGDM (CPL1) (a) and VP-PEGMEM-TEGDM (CPL3 or CPL5) and VP-CHM-TEGDM (CPL12) (b) copolymers. Photos of dry powders and water solutions (50 μM) of obtained nanoparticles: CPL1+MPP (c), CPL3+MPP (d), CPL5+MPP (e), CPL12+MPP (f).



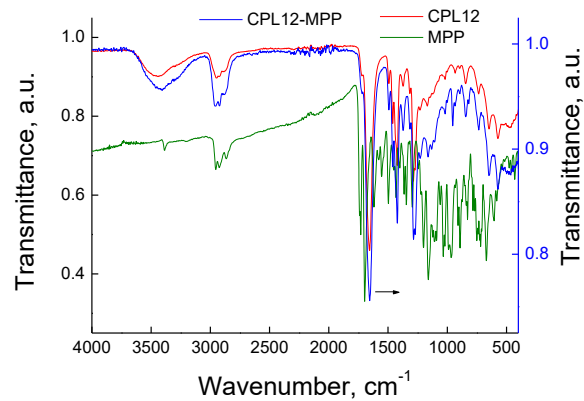
(a)



(b)



(c)



(d)

Figure S3. FTIR spectra of CPL1-CPL12, MFF and their copolymer compositions.

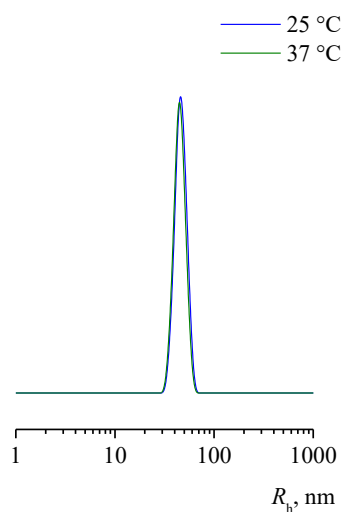


Figure S4. The intensity distribution of light scattering over the size of scattering centers of CPL12 in water solution. [CPL12] = 0.62 mg/mL.

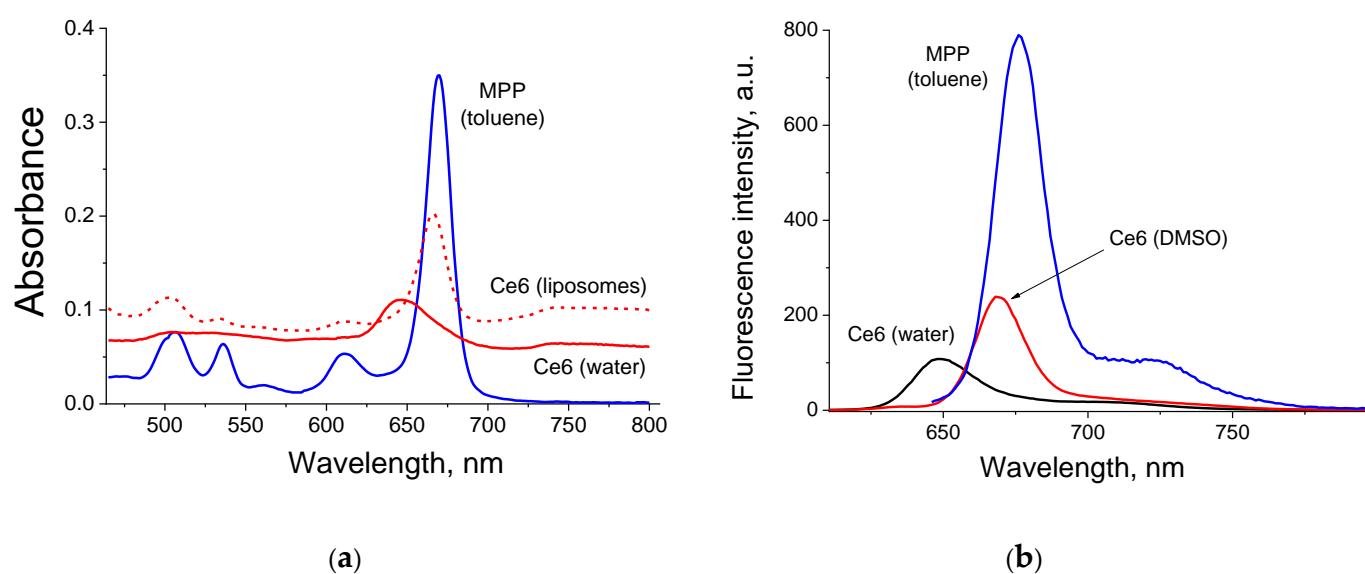


Figure S5. Absorbance (a) and fluorescence (b) spectra of native MPP (2 μ M), reference PS Ce6 (2 μ M) in water solution, solution of lecithin liposomes and DMSO. For all fluorescence spectra λ_{ex} = 420 nm.

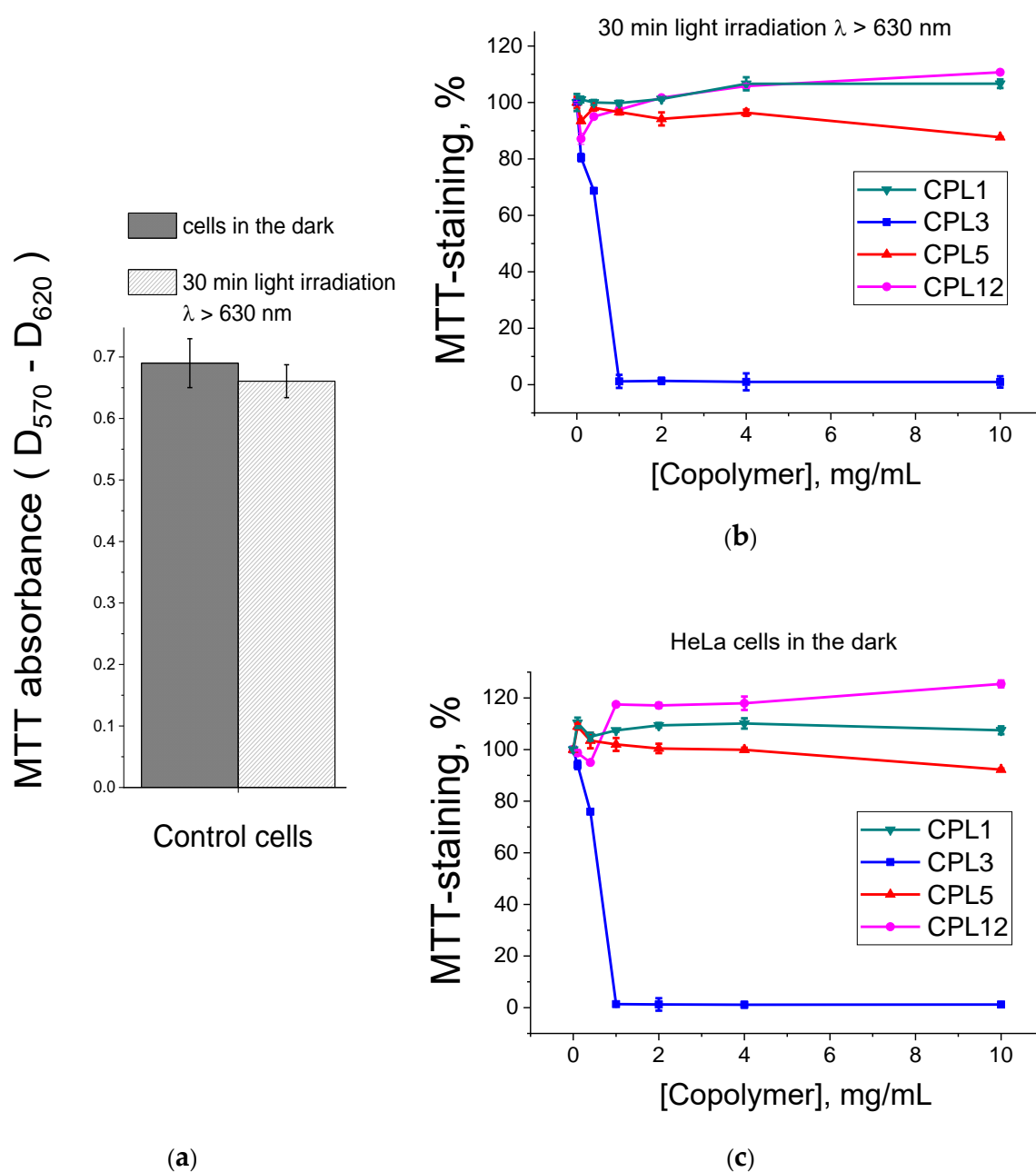


Figure S6. Phototoxicity of negative control (cells without PS, **a**), water solutions of native copolymers after 30 min light irradiation (**b**) and kept in the dark (**c**) tested in HeLa cells.

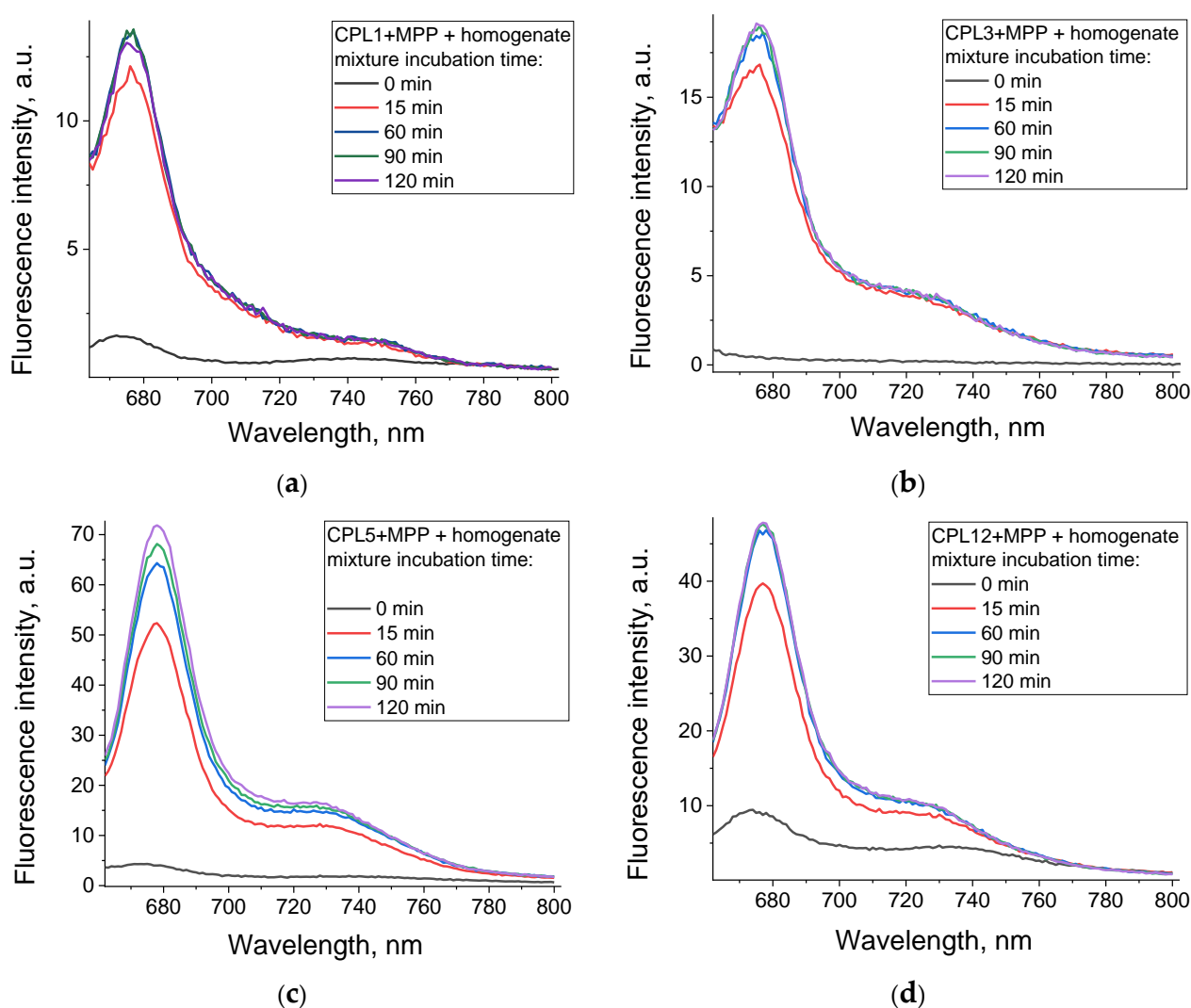


Figure S7. Fluorescence spectra of an aqueous solution of CPL1+MPP (a), CPL3+MPP (b), CPL5+MPP (c), CPL12+MPP (d) with the addition an aqueous solution of mouse brain subcellular homogenate (protein concentration 0.01 mg/mL) immediately after addition of NPs (0 min) and after certain incubation time (displayed in the legend) at room temperature. For all fluorescence spectra $\lambda_{\text{ex}} = 640$ nm.