

Light-Responsive Polymeric Micellar Nanoparticles with Enhanced Formulation Stability

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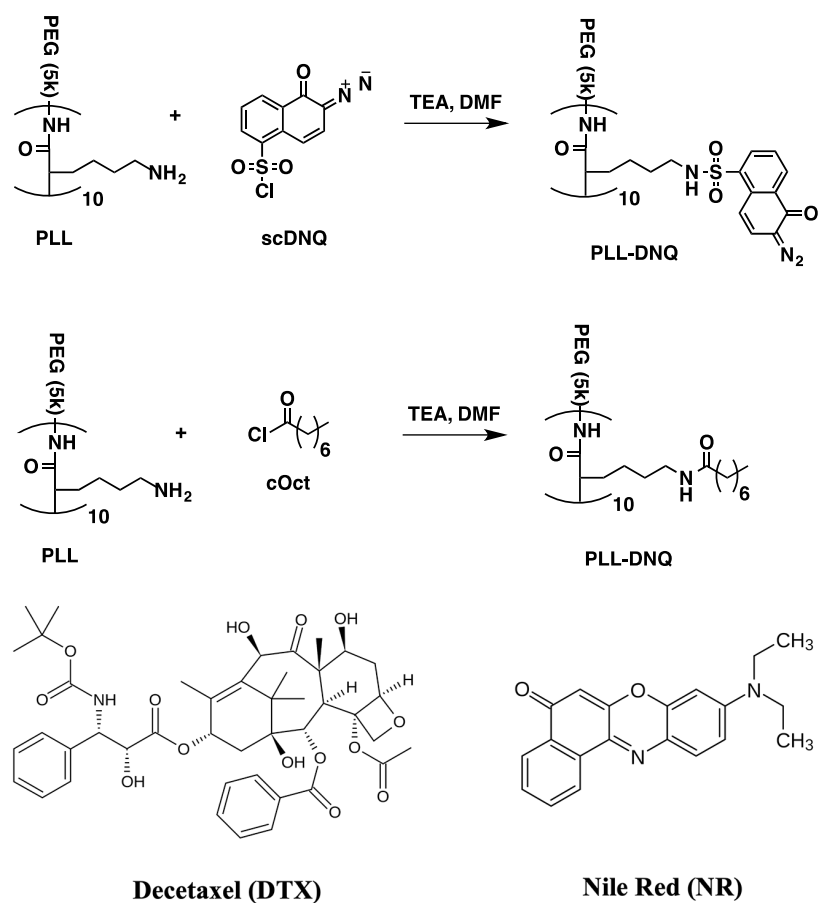


Figure S1. Synthesis of PEG-PLL-DNQ and PEG-PLL-Oct, and the chemical structures of DTX and NR.

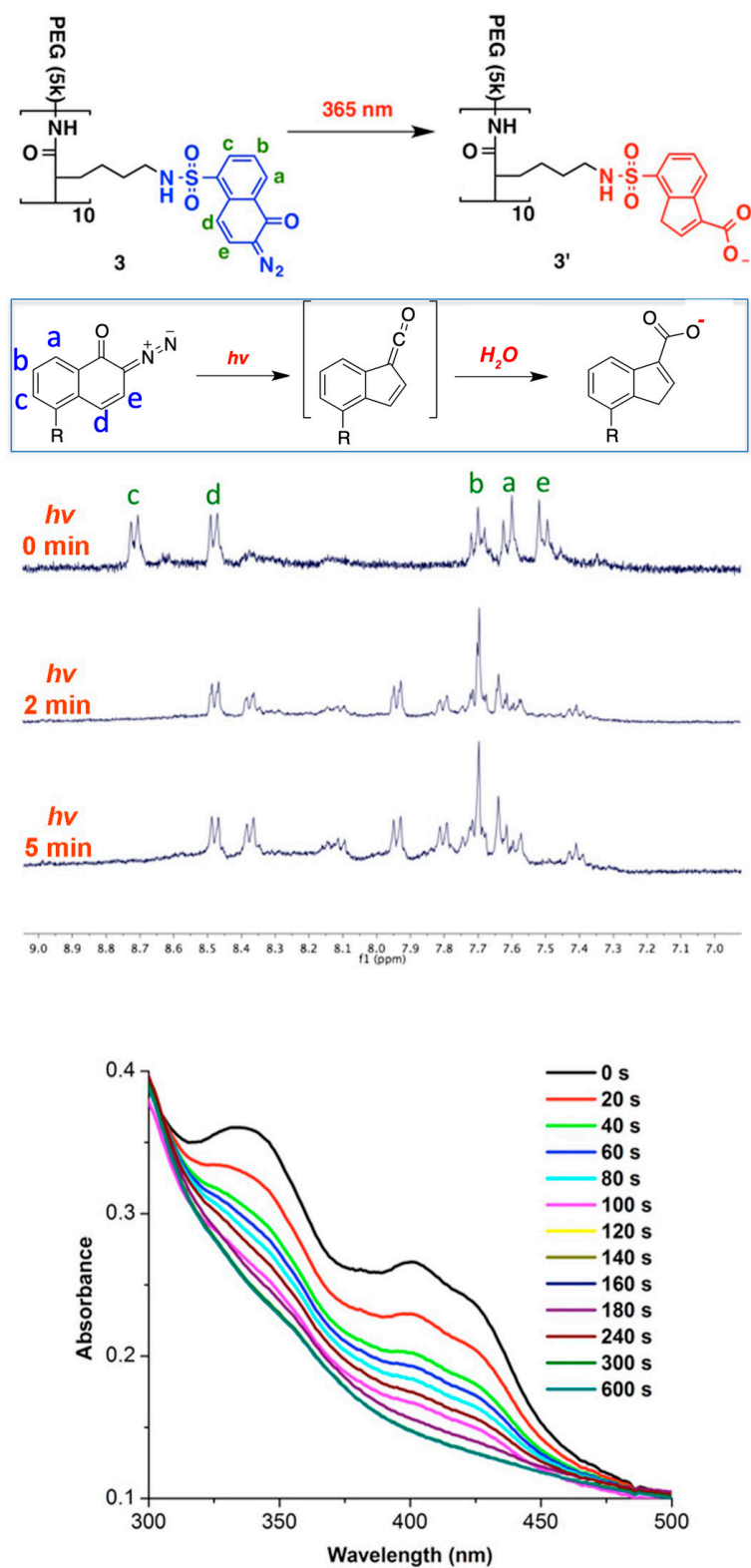


Figure S2. Wolff Rearrangement of PEG-PLL-DNQ upon UV light irradiation (365 nm, 50 mW/cm²) (¹H NMR & UV/Vis Spectroscopy).

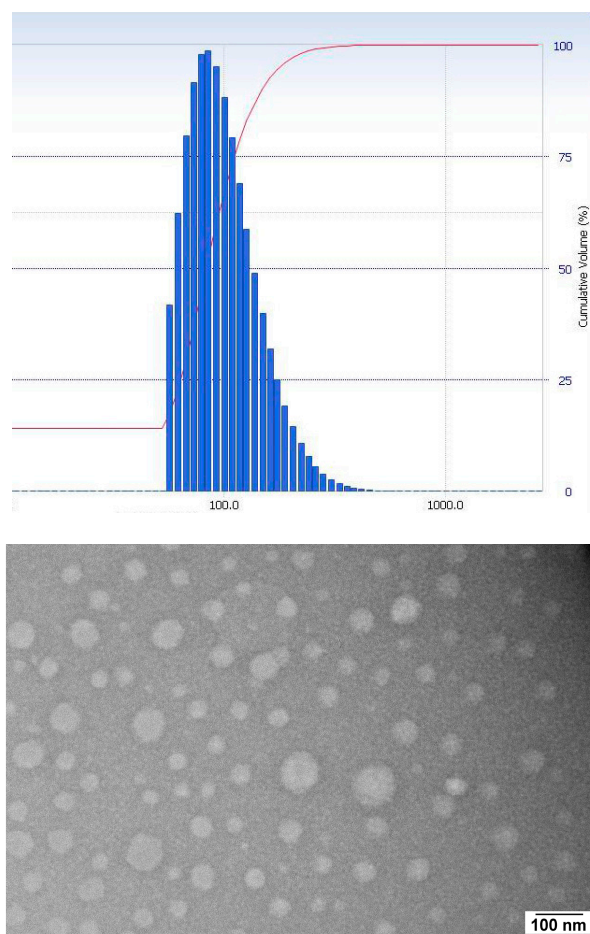


Figure S3. DLS size distribution and TEM image of DTX-NP_{oct}.

Table S1. Measurement of Drug Loading Efficiency (LE) and Capacity (LC).

Theoretical LD %	Actual LD % DTX-NP_{DNQ}	LD efficiency % DTX-NP_{DNQ}	Actual LD % DTX-NP_{Oct}	LD efficiency % DTX-NP_{Oct}
5	4.72 ± 0.07	94.4	4.43 ± 0.06	88.6
10	8.61 ± 0.16	86.1	7.91 ± 0.13	79.1
15	13.54 ± 0.27	90.3	8.73 ± 0.3	58.2
20	14.42 ± 0.49	72.1	9.20 ± 0.35	46.0

Determined by HPLC. Abbreviations: LD: loading. Data are mean ± SD (N = 4).

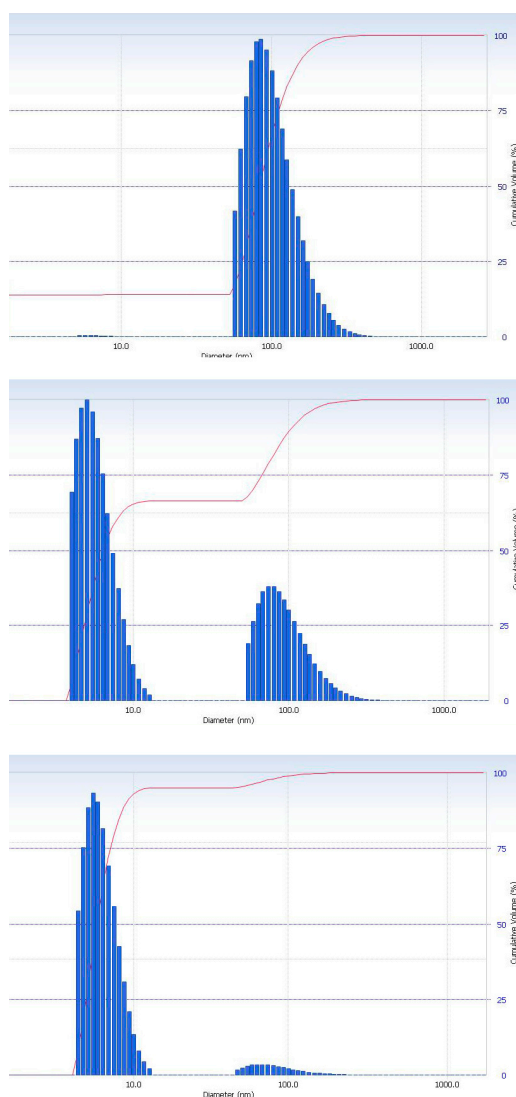


Figure S4. DLS measurement of size change of NR-NP_{Oct} in BSA solution (0, 12, and 48 h).

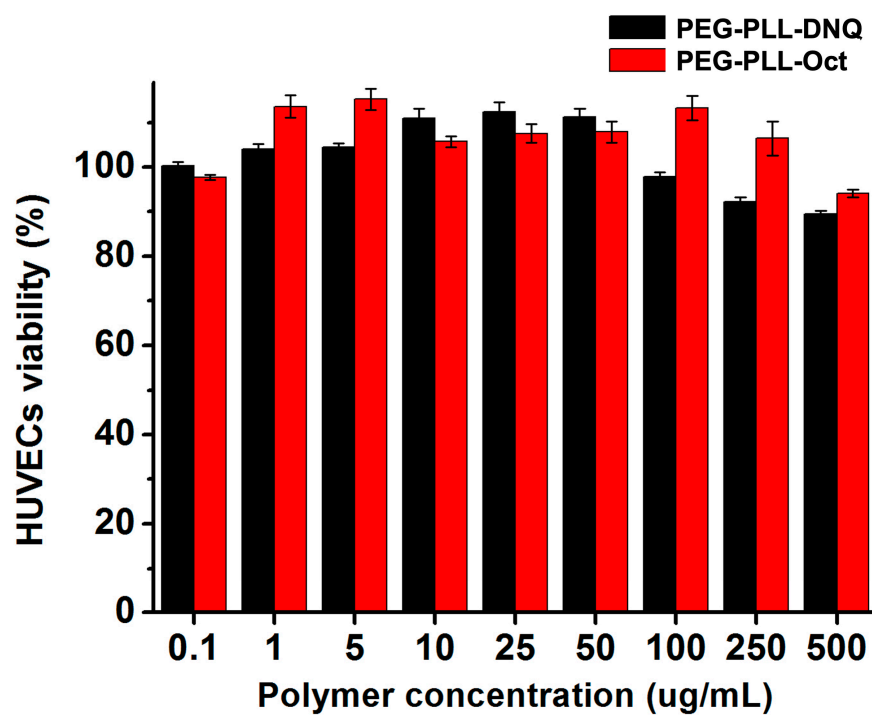


Figure S5. HUVECs Viability of Polymers (PEG-PLL-DNQ & PEG-PLL-Oct).