

Supporting Information

Table S1 The equation of standard curve of HCPT (by HPLC) and Ce6 (by fluorescence spectroscopy).

(A)

Drug of release	Regression equation	R ²	Liner range (μg/mL)
HCPT	y=1.302x-0.032	0.9993	0.01-10
Ce6	y=0.000376x+0.014322	0.9997	0.01-3

(B)

Drug of uptake	Regression equation	R ²	Liner range (μg/mL)
HCPT	y=499697x+11325	0.9994	0.005-10

Notes: (A) for drug release; (B) for cell uptake.

Abbreviations: HCPT, 10-hydroxycamptothecine; Ce6, Chlorin e6.

Table S2 Storage results of HCPT/Ce6 NRs prepared via different drug/ molar ratio of HCPT to Ce6 at 4°C for 14 days.

Time(days)	drug/ molar ratio	D _h (nm)	PDI	ZP (mV)
0	4:1	166.5±1.5	0.181±0.003	-28.9±1.4
	3:1	162.5±3.4	0.182±0.008	-29.4±0.4
	2:1	170.2±2.7	0.196±0.010	-23.8±0.4
	1:1	179.4±1.7	0.200±0.017	-23.8±1.3
1	4:1	189.9±4.0	0.202±0.056	-27.5±0.5
	3:1	181.7±1.5	0.218±0.014	-27.0±0.5
	2:1	199.9±3.2	0.225±0.006	-22.6±2.3
	1:1	220.4±2.8	0.264±0.061	-23.7±1.2
3	4:1	175.2±5.9	0.190±0.048	-25.8±0.5
	3:1	178.4±2.1	0.191±0.003	-26.9±1.1
	2:1	210.4±3.8	0.227±0.040	-24.8±0.6
	1:1	252.5±2.8	0.249±0.031	-24.6±1.0
5	4:1	173.8±0.9	0.185±0.036	-28.6±0.4
	3:1	169.3±6.0	0.199±0.010	-27.7±1.0
	2:1	192.2±1.2	0.217±0.040	-24.7±1.3
	1:1	227.3±5.8	0.273±0.017	-23.8±1.7
7	4:1	175.8±0.7	0.218±0.042	-27.8±0.5
	3:1	173.3±2.1	0.211±0.006	-27.2±1.0
	2:1	194.4±2.6	0.244±0.019	-25.4±3.1
	1:1	211.6±1.4	0.219±0.046	-24.1±0.7
14	4:1	178.6±1.9	0.184±0.004	-24.5±0.7
	3:1	170.1±1.6	0.185±0.008	-24.5±0.6
	2:1	190.4±0.2	0.193±0.018	-22.4±0.8
	1:1	249.1±7.9	0.204±0.029	-21.1±1.7

Notes: All results are presented as mean ± SD (n=3).

Abbreviations: HCPT, 10-hydroxycamptothecine; Ce6, Chlorin e6; HCPT/Ce6 NRs, HCPT/Ce6 nanorods; D_h, a mean hydrodynamic diameter; ZP, zeta potential.

Table S3 The IC₅₀ values for different drug formulations on 4T1 cells after 48 h.

drug/formulations	IC ₅₀ (μg/mL)
NRs+L	0.41
HCPT Inj.	6.35
Ce6 Inj.+L	2.71

Abbreviations: HCPT, 10-hydroxycamptothecine; Ce6, Chlorin e6; HCPT Inj., HCPT Injection; Ce6 Inj.+L; Ce6 Injection+Laser; NRs+L, HCPT/Ce6 nanorods+Laser. IC₅₀, half maximal inhibitory concentration.

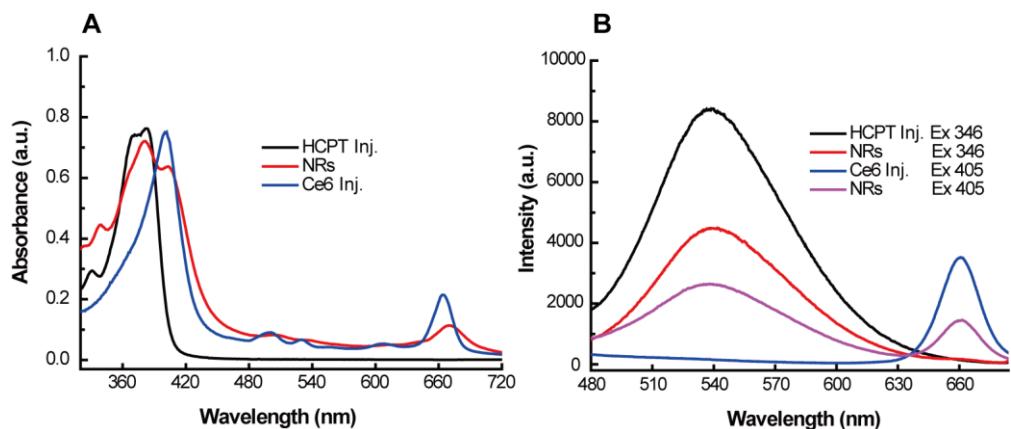


Figure S1 (A) The UV-vis absorption spectra and (B) the fluorescence spectra of HCPT injection, Ce6 injection and NRs.

Abbreviations: UV-vis, ultraviolet visible; HCPT, 10-hydroxycamptothecine; Ce6, Chlorin e6; HCPT Inj., HCPT Injection; Ce6 Inj., Ce6 Injection; NRs, HCPT/Ce6 nanorods.

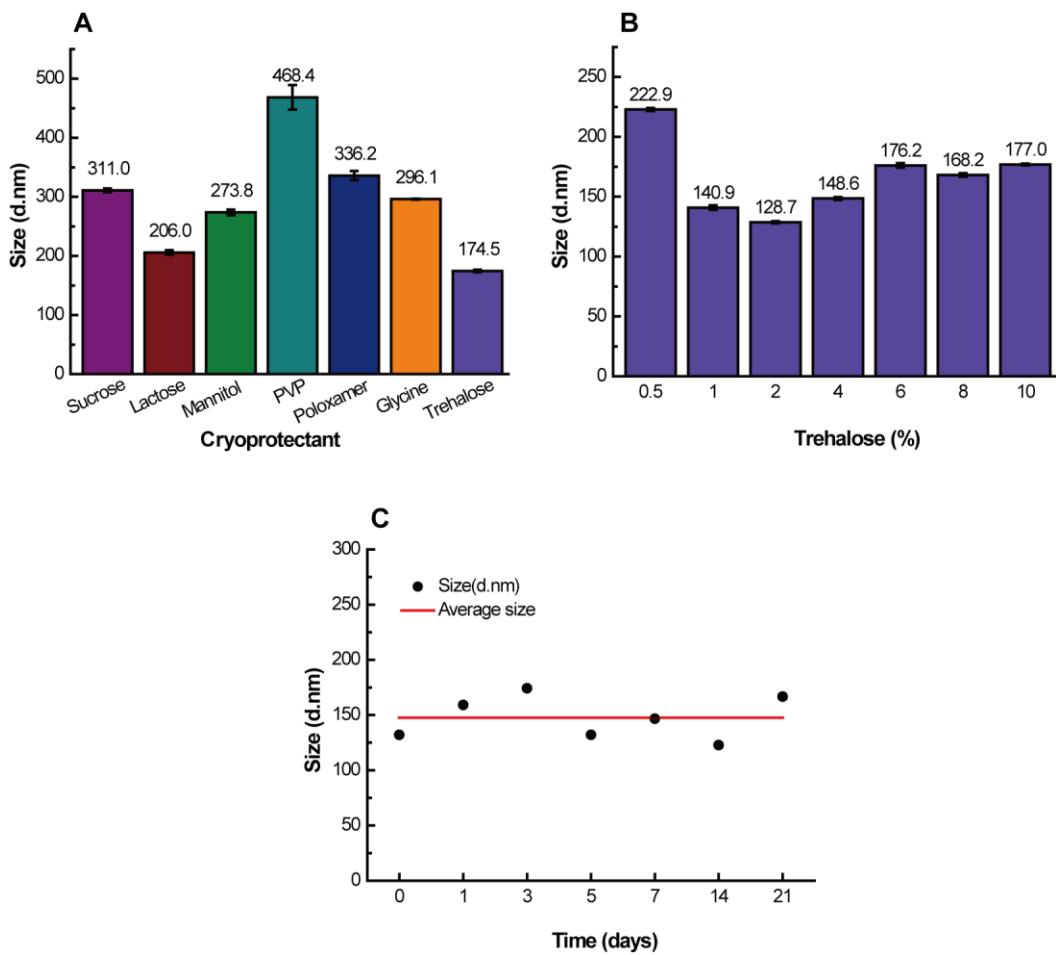


Figure S2 Mean diameter of lyophilized HCPT/Ce6 NRs after re-dissolving.

Notes: (A) with different cryoprotectants in proportion 1%, (B) with trehalose in various proportion, (C) with trehalose in proportion 2% during storage for 21days.

Abbreviations: PVP, Polyvinyl Pyrrolidone.

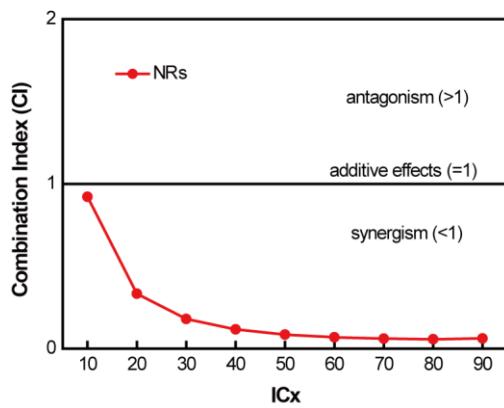


Figure S3 Combination index (CI) of HCPT/Ce6 NRs against 4T1 cells.

Abbreviations: HCPT, 10-hydroxycamptothecine; Ce6, Chlorin e6; NRs, HCPT/Ce6 nanorods.

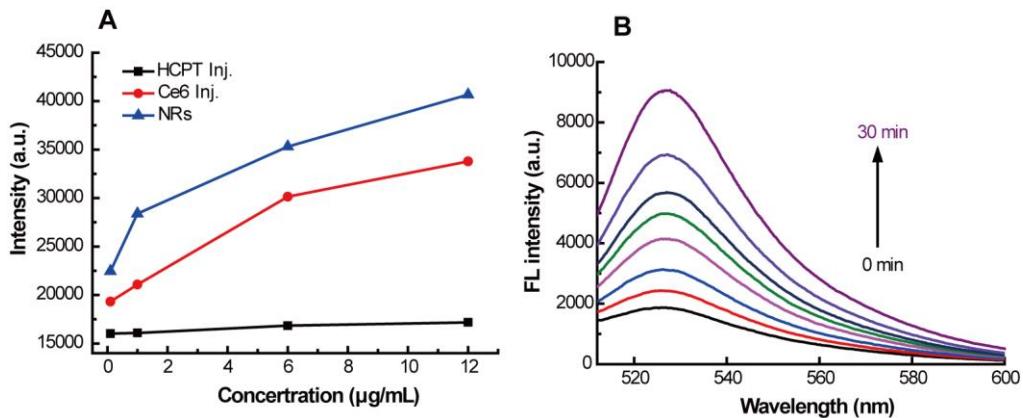


Figure S4 (A) Profiles variation of DCF ($E_x=480\text{nm}$, $E_m=530\text{ nm}$) via a synergy H1 BioTek detector measuring the ROS levels in 4T1 cells after incubation for 4 h and exposure to 660 nm laser (5 mW) for 2 min. (B) Fluorescence emission spectra of SOSG solution in the presence of HCPT/Ce6 NRs with the increase of laser irradiation time.

Abbreviations: FL, fluorescent; HCPT, 10-hydroxycamptothecine; Ce6, Chlorin e6; HCPT Inj., HCPT Injection; Ce6 Inj., Ce6 Injection; NRs, HCPT/Ce6 nanorods.

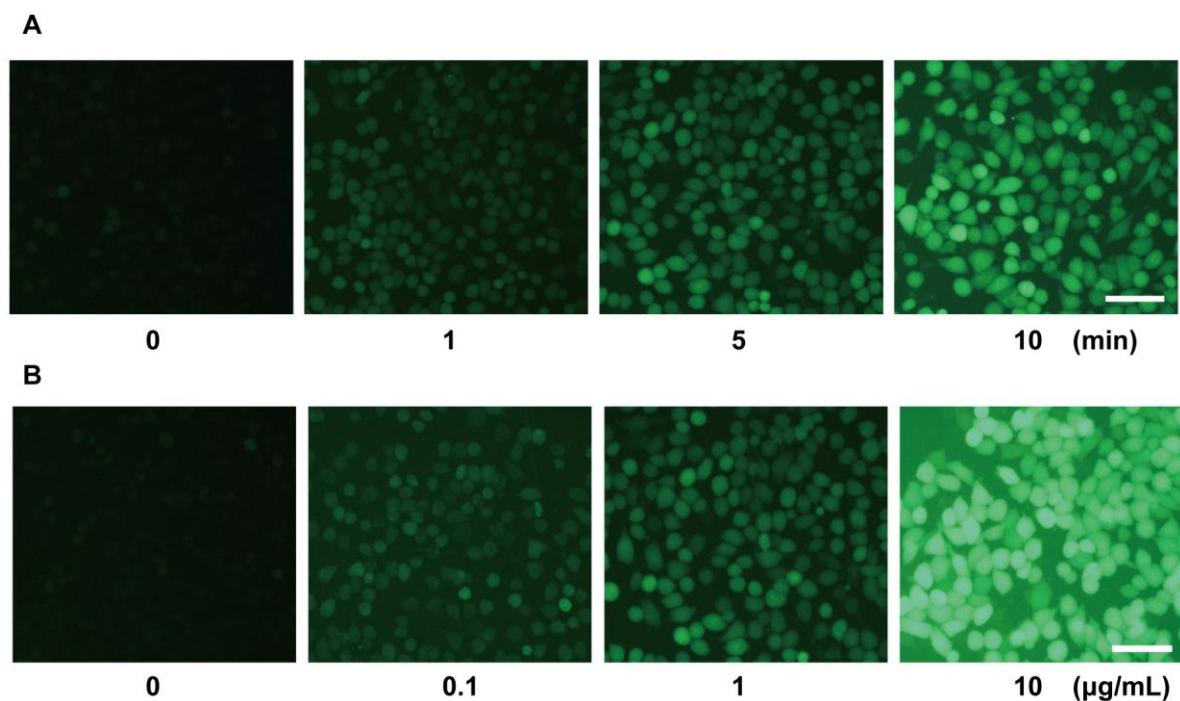


Figure S5 Fluorescence images of ROS for 4T1 cells incubated with HCPT/Ce6 NRs.

Notes: (A) at NRs 1 $\mu\text{g/mL}$ against the different laser irradiation time and (B) at NRs against the different concentrations with the laser irradiation (660 nm laser, 5 mW, 5 min).

Abbreviations: min, minute.