Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.

Electronic Supplementary Information

Multifunctional Phase-Change Hollow Mesoporous Prussian Blue Nanoparticles as a NIR Light Responsive Drug Co-Delivery System to Overcome Cancer Therapeutic Resistance

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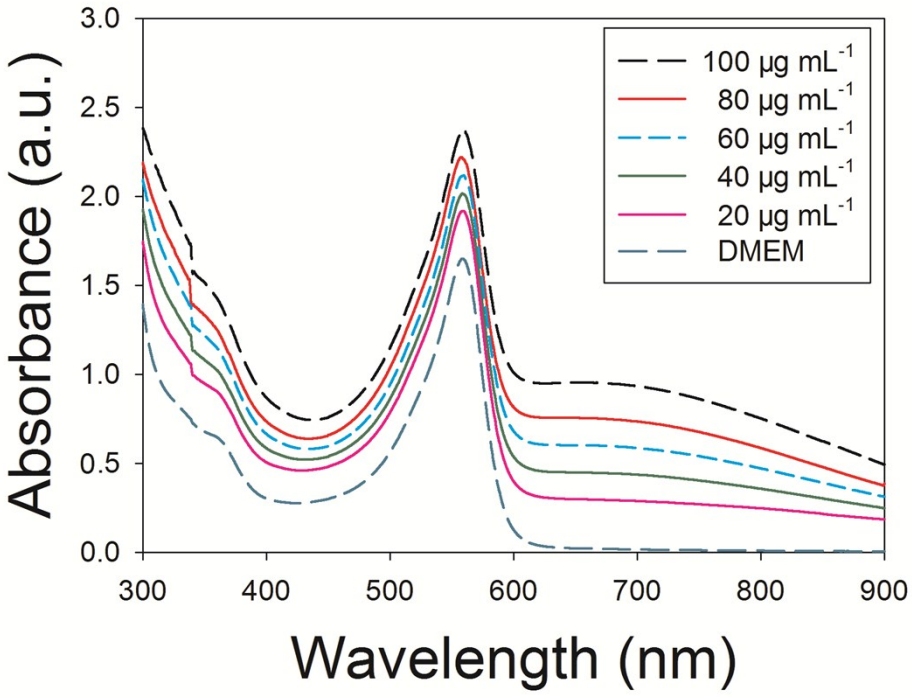

Fig. S1 UV-vis-NIR spectra of PCM@HMPBs dispersed in DMEM cell culture medium with a test background of DI water

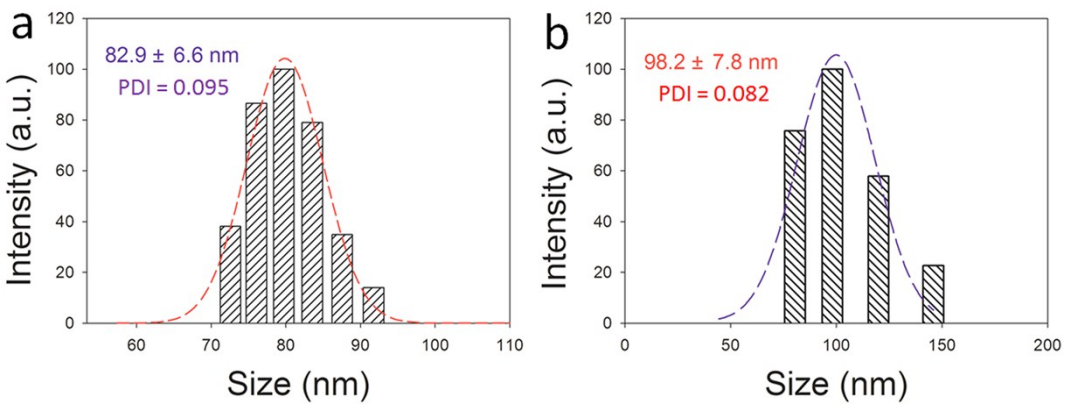

Fig. S2 Diameter distribution of a) HMPBs and b) PCM@HMPBs in DI Water from DLS test.

Table S1 Various drug loading amount of (PCM+drugs)@HMPBs system

Feeding amount of DOX:CPT (mg)	**DOX (μg/200 μg NPs)**	**CPT (μg/200 μg NPs)**
6:1.5	2. 63	0. 55
6:3	3. 30	1. 36
6:6	3. 31	2. 42
6:12	3. 10	3. 70
1.5:6	1. 15	2. 72
3:6	1. 48	3. 24
12:6	4. 42	3. 21

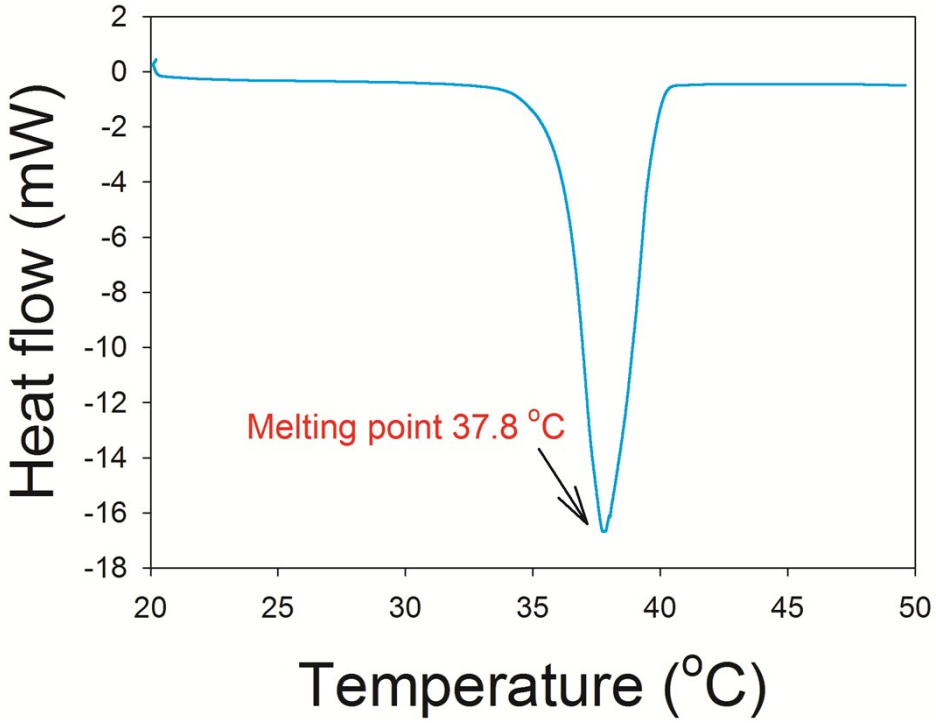

Fig. S3 DSC curve of received 1-tetradecanol.

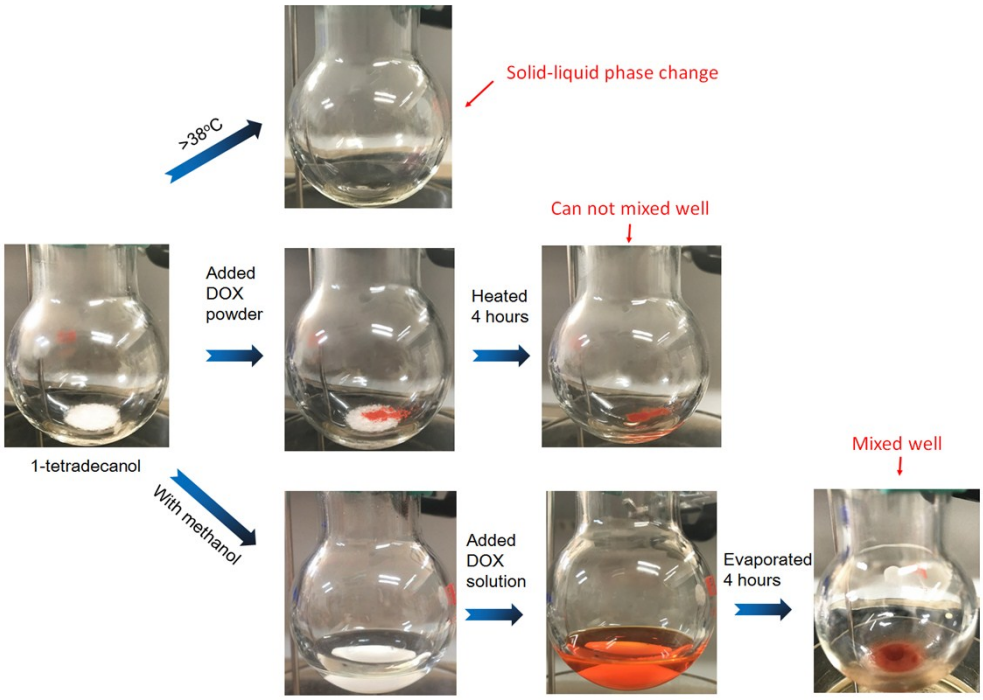

Fig. S4 Miscible property of 1-tetradecanol and hydrophilic DOX.

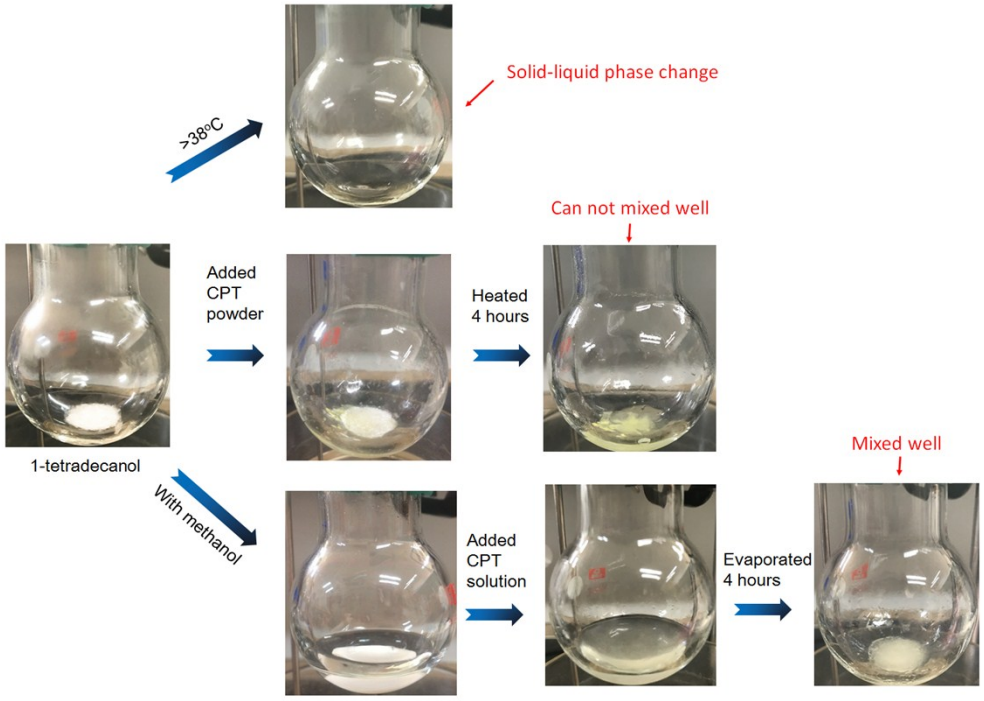

Fig. S5 Miscible property of 1-tetradecanol and hydrophobic CPT.

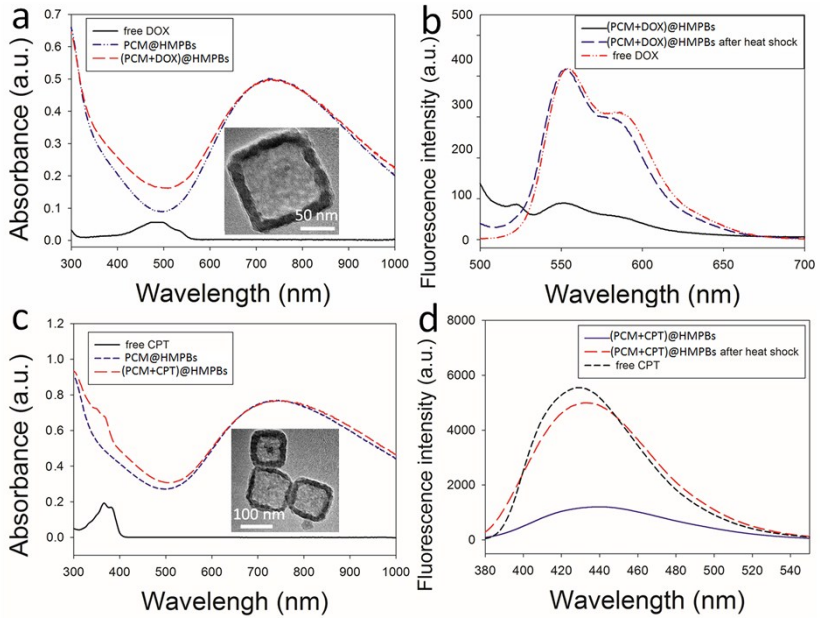

Fig. S6 a) UV-vis-NIR spectra of free DOX, PCM@HMPBs and (PCM+DOX)@HMPBs (inset: TEM image of (PCM+DOX)@HMPBs); b) fluorescent spectra of free DOX and (PCM+DOX)@HMPBs before and after methanol treatment; c) UV-vis-NIR spectra of free CPT, PCM@HMPBs and (PCM+CPT)@HMPBs (inset: TEM image of (PCM+CPT)@HMPBs); d) fluorescent spectra of free CPT and (PCM+CPT)@HMPBs before and after methanol treatment.

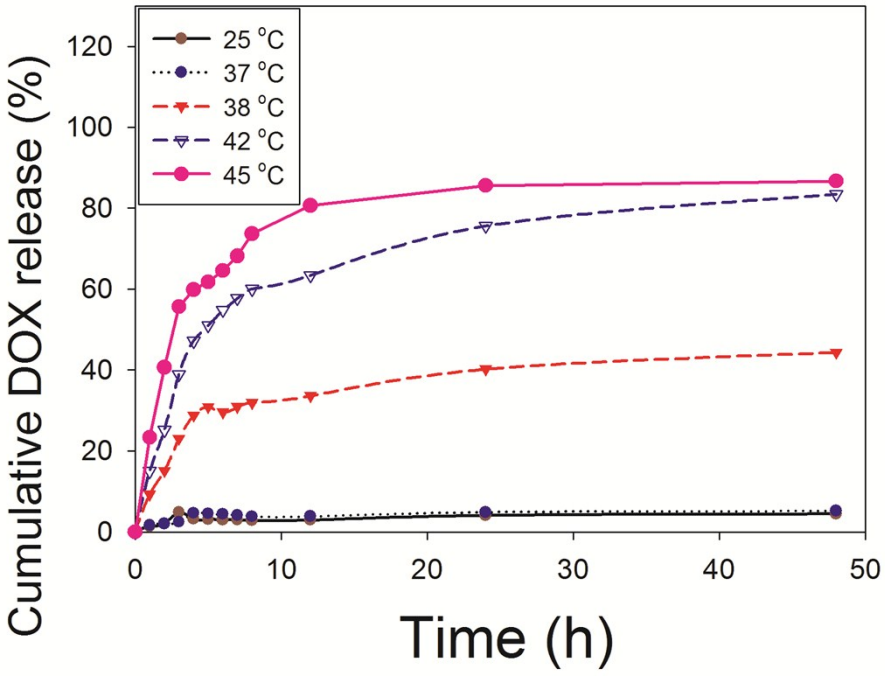

Fig. S7 Thermo-responsive release profiles of DOX from (PCM+DOX)@HMPBs at different temperatures.

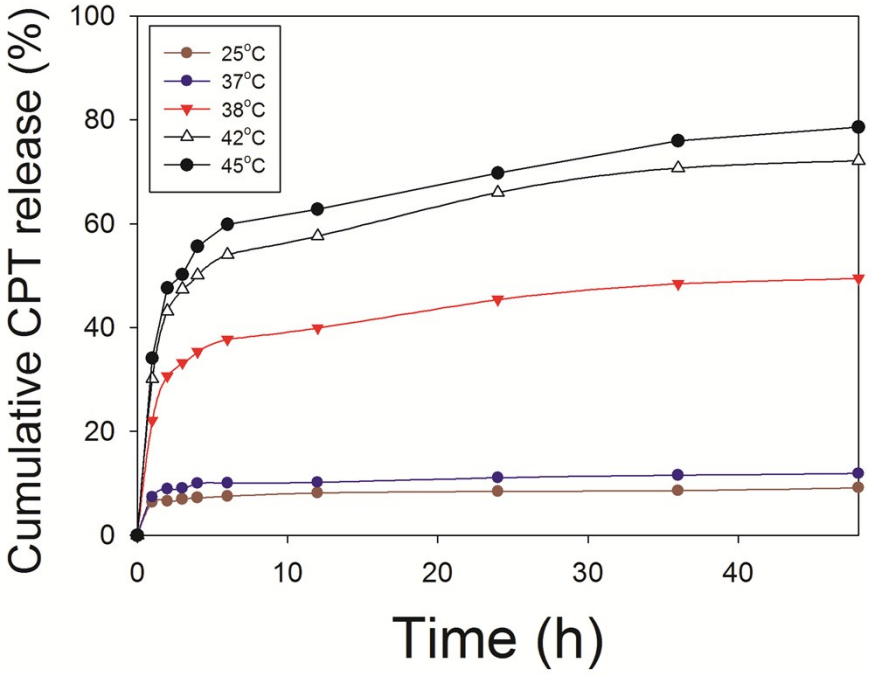

Fig. S8 Thermo-responsive release profiles of CPT from (PCM+CPT)@HMPBs at different temperatures.

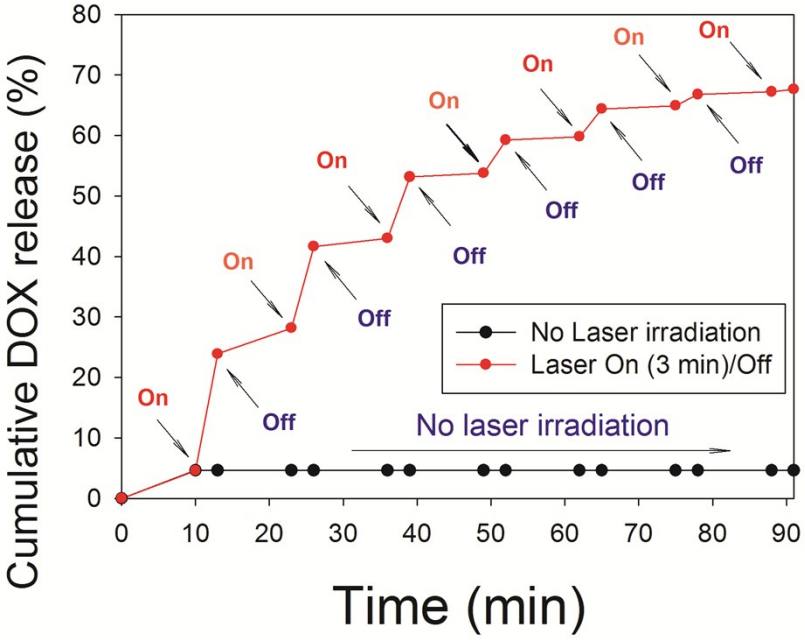

Fig. S9 The "on" and "off" switch of DOX release profiles of (PCM+DOX)@HMPBs under NIR light irradiation (808 nm, 2.0 W).

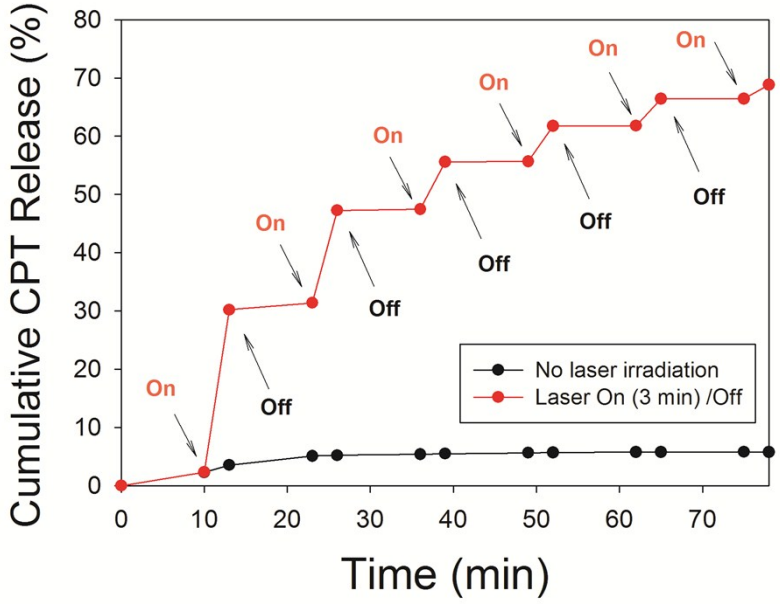

Fig. S10 The "on" and "off" switch of CPT release profiles of (PCM+CPT)@HMPBs under NIR light irradiation (808 nm, 2.0 W).

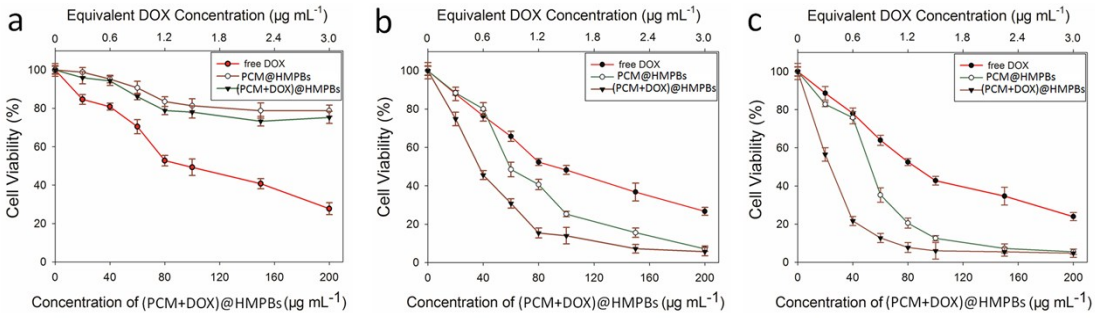

Fig. S11 Cell viability of HeLa cancer cells after treatment with (PCM+DOX)@HMPBs and NIR laser irradiation for various times: a) 0 min; b) 3 min and c) 5 min. PCM@HMPBs and free DOX were used as controls.

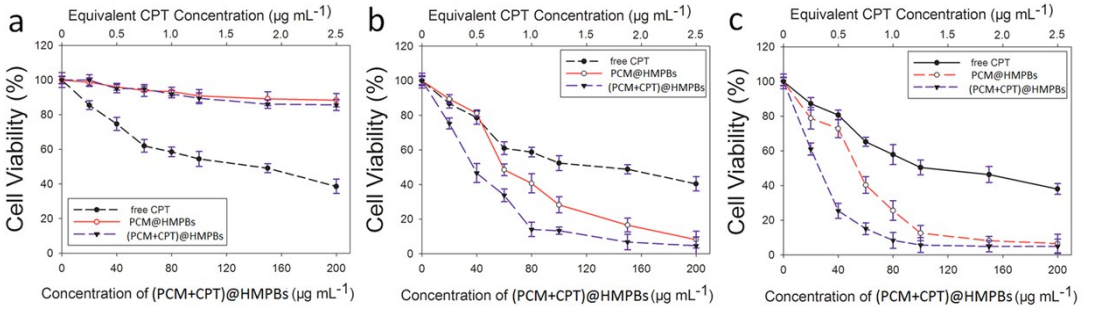

Fig. S12 Cell viability of HeLa cancer cells after treatment with (PCM+CPT)@HMPBs and NIR laser irradiation for various times: a) 0 min; b) 3 min and c) 5 min. PCM@HMPBs and free CPT were used as controls.