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

NIR triggered release of DOX from sophorolipids coated mesoporous carbon nanoparticle with phase change 1-tetradecanol to treat MCF-7/ADR cell

Supplementary Info:

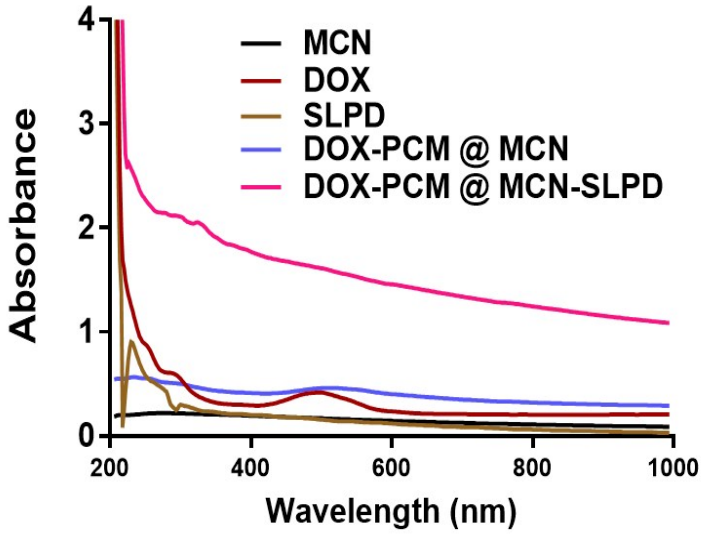

Fig S1. UV-Vis-NIR spectra of DOX, SLPD, MCN, DOX-PCM@MCN, DOX-PCM@MCNs-SLPD

Table. S1. Zeta potentials of DOX-PCM@MCN-SLPD before and after NIR irradiation

Sample	Zeta potential mV
DOX-PCM@MCN-SLPD (before NIR irradiation)	-10.2 ± 1.5
DOX-PCM@MCN-SLPD (after NIR irradiation)	-25.5 ± 0.5

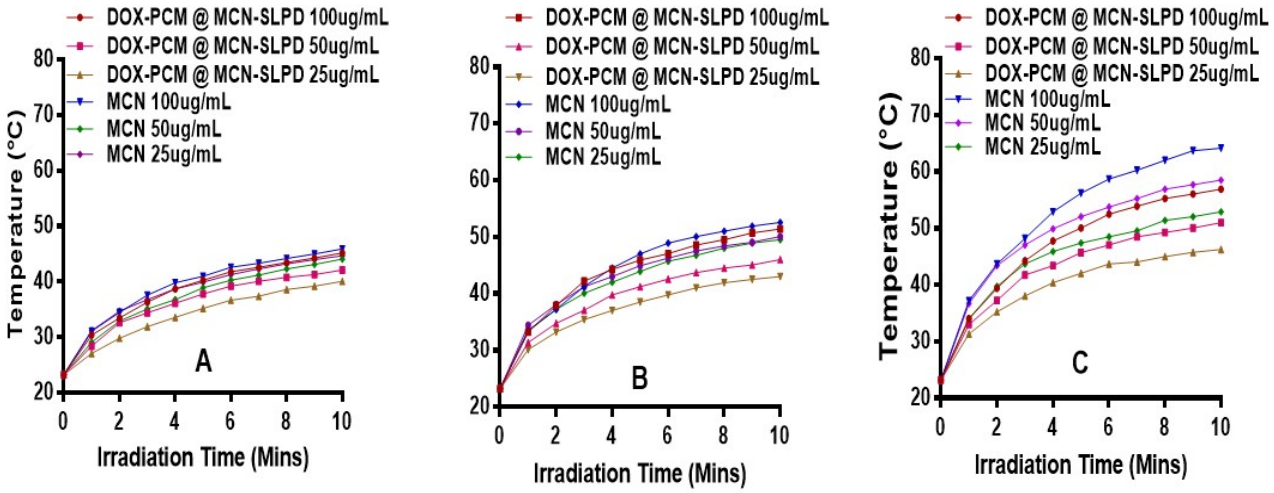

Fig S2. The temperature variation curve of different concentration (100 ug/mL **A**, 50 ug/mL **B**, 25 ug/mL **C**) of MCN and DOX-PCM@MCNs-SLPDs at different intensity under NIR irradiation (808 nm wavelength), the initial temperature was 23℃ and the irradiation time was 10 min, the temperature was recorded every 1 minute.

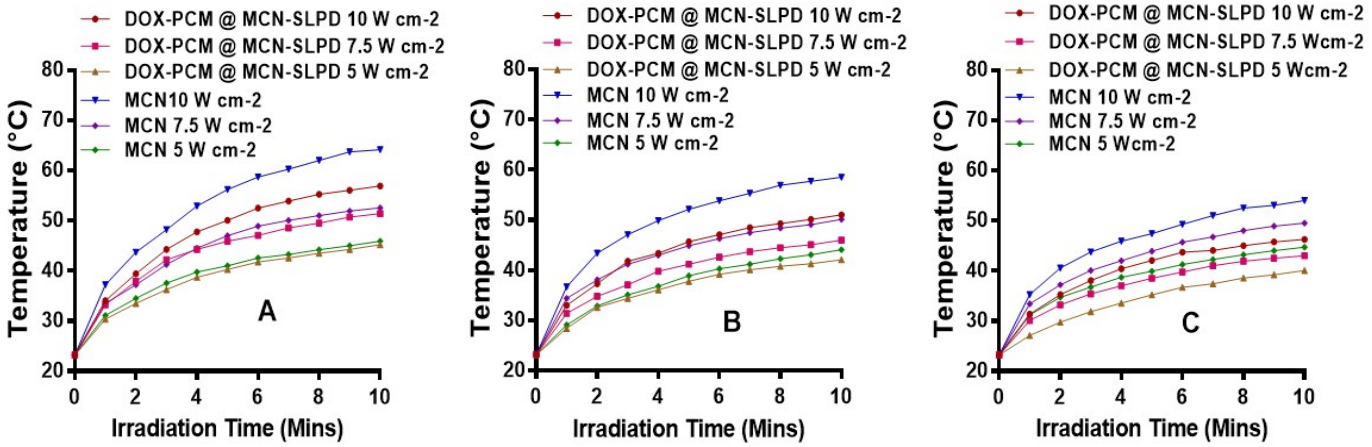

Fig S3. The temperature variation curve of different concentration of MCN and DOX-PCM@MCNs-SLPDs at different intensity 5 w/cm^2 (A), 7.5 w/cm^2 (B), 10 w/cm^2 (C) under NIR irradiation (808 nm wavelength), the initial temperature was 23℃ and the irradiation time was 10 min, the temperature was recorded every 1 minute.

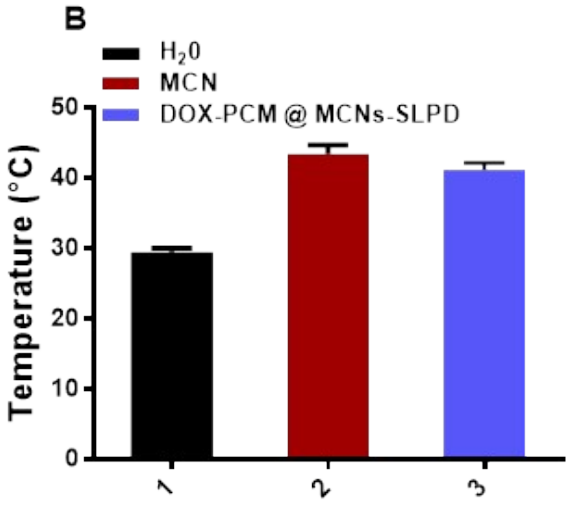

Fig.S4. The temperature difference measurement of MCN and DOX-PCM@MCN-SLPD

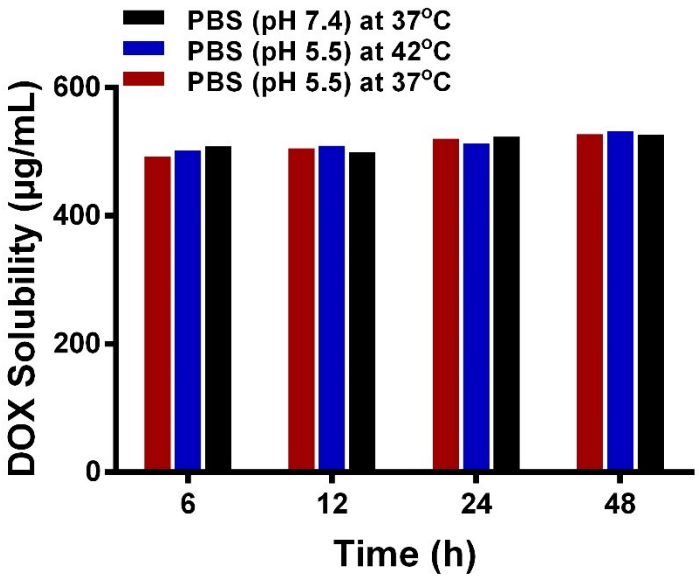

Fig.S5. Evaluation of DOX solubility at different temperature and different time.

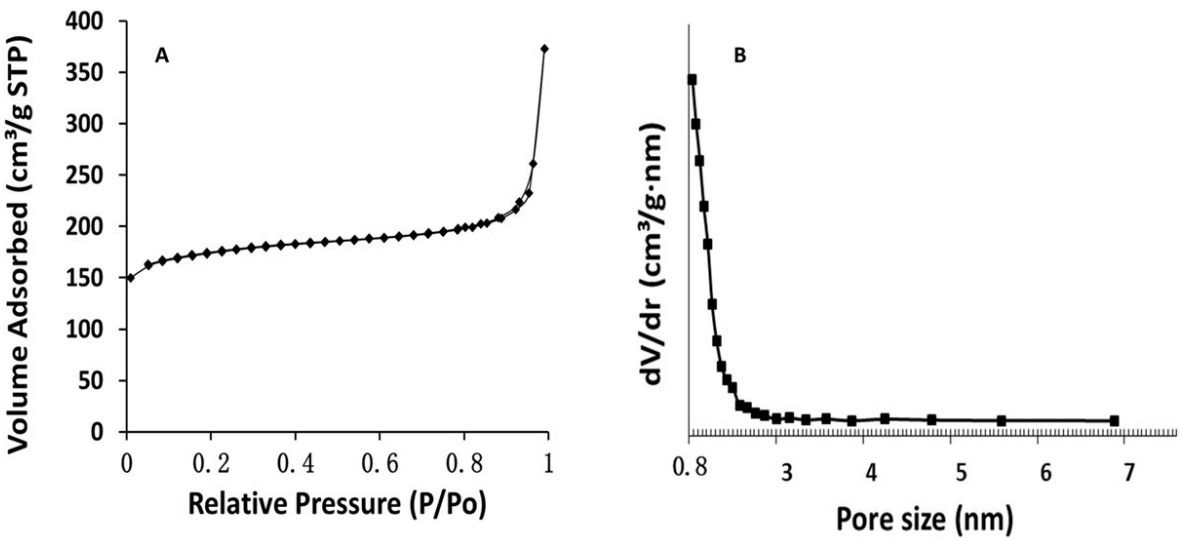

Fig. S6. (A) N2 adsorption desorption isotherm of MCNs. (BET surface area of 541.62 m^2 g^{-1}, a total pore volume of 0.34 cm^3 g^{-1}). (**B**) Pore size distribution curve of MCN (An average pore size recorded was 2.5 nm)