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

Supporting Information

NIR Light-Activated Dual-Modality Cancer Therapy Mediated by Photochemical Internalization of Porous Nanocarriers with Tethered Lipid Bilayer

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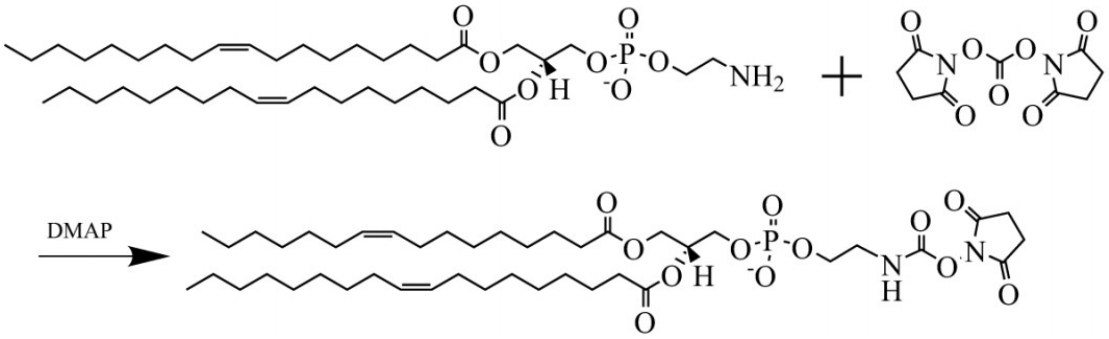
A



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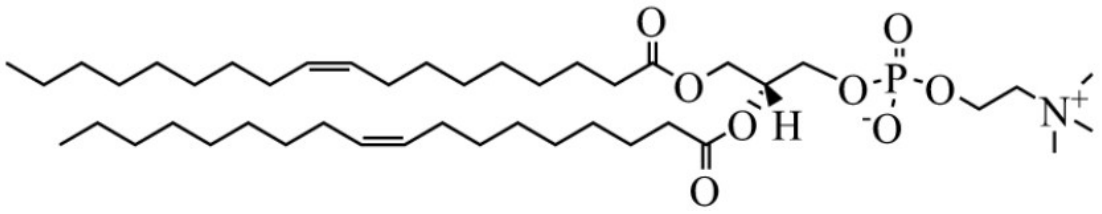

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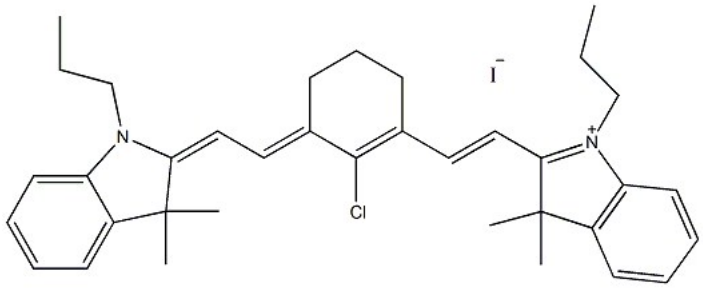


Scheme S1 (A) Reaction for synthesizing NHS activated DOPE lipid by conjugation between DOPE and coupling agent DSC. Molecular structures of DOPC (B) and IR-780 iodide (C).

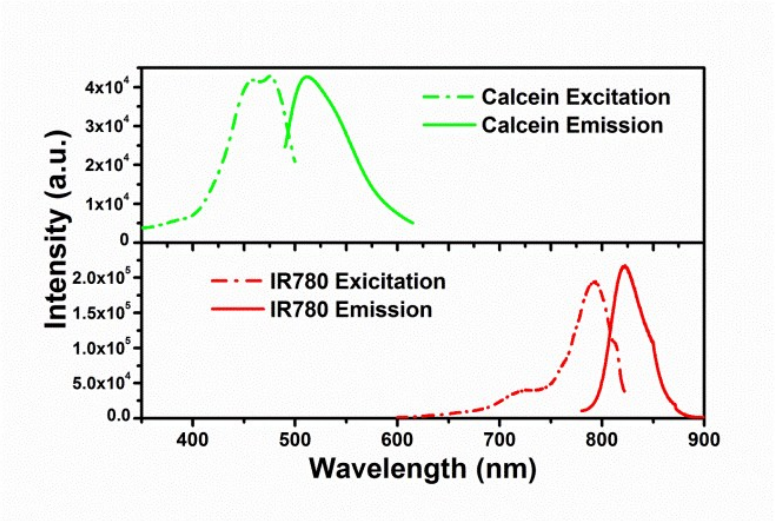
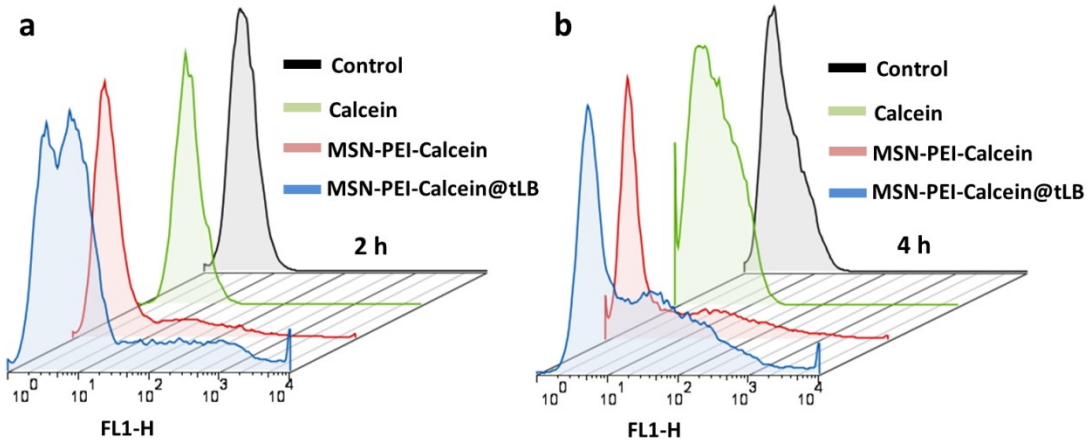


Fig. S1 Excitation and emission spectra of MSN-PEI-calcein@tLB-IR780.

A



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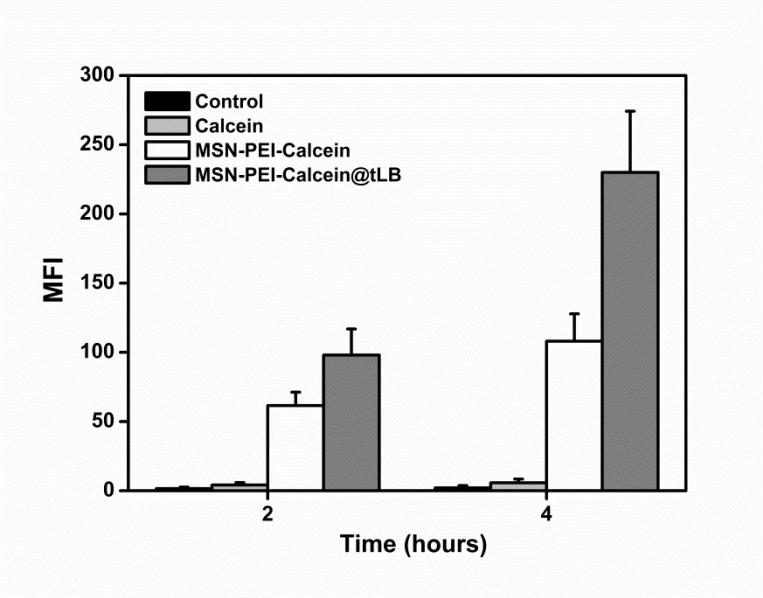

Fig. S2 (A) Representative FACS analysis image show the calcein-positive percentage of MCF-7 cells treated with free calcein, MSN-PEI-calcein and MSN-PEI-calcein@tLB for 2 and 4 h, respectively, where MCF-7 cells without treatment act as control. **(B)** Quantitative mean fluorescence intensity (MFI) analysis after cells with different treatments for 2 and 4 h.

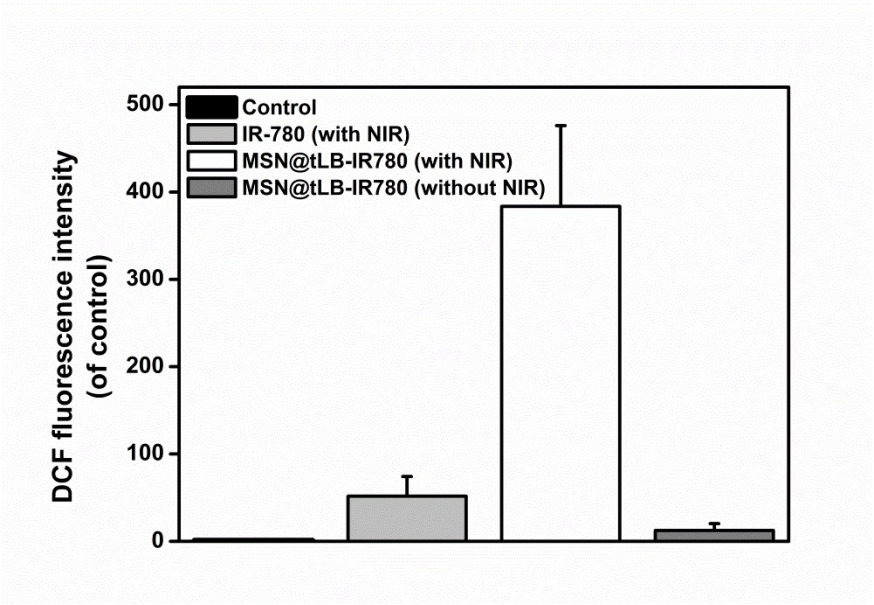

Fig. S3 Detection of ROS production. Relative DCF fluorescence intensity after cells treated with free IR-780 (with irradiation), MSN@tLB-IR780 (with or without irradiation) compare to control group. The control group was performed that cells without any treatment. Irradiation condition: the cells were exposed to 808 nm laser (1.2 W/cm^2) for 10 min.

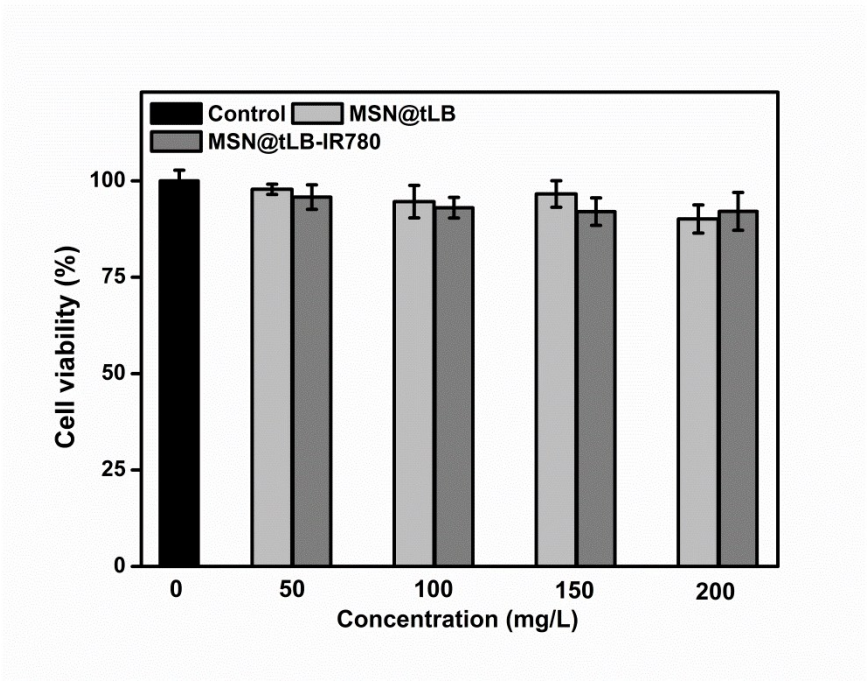

Fig. S4 Cytotoxicity of formulations with different concentrations on MCF-7 cells in dark.