

# **Nanoparticles of Merocyanine-Paclitaxel Conjugates for Photothermal Induced Chemotherapy**

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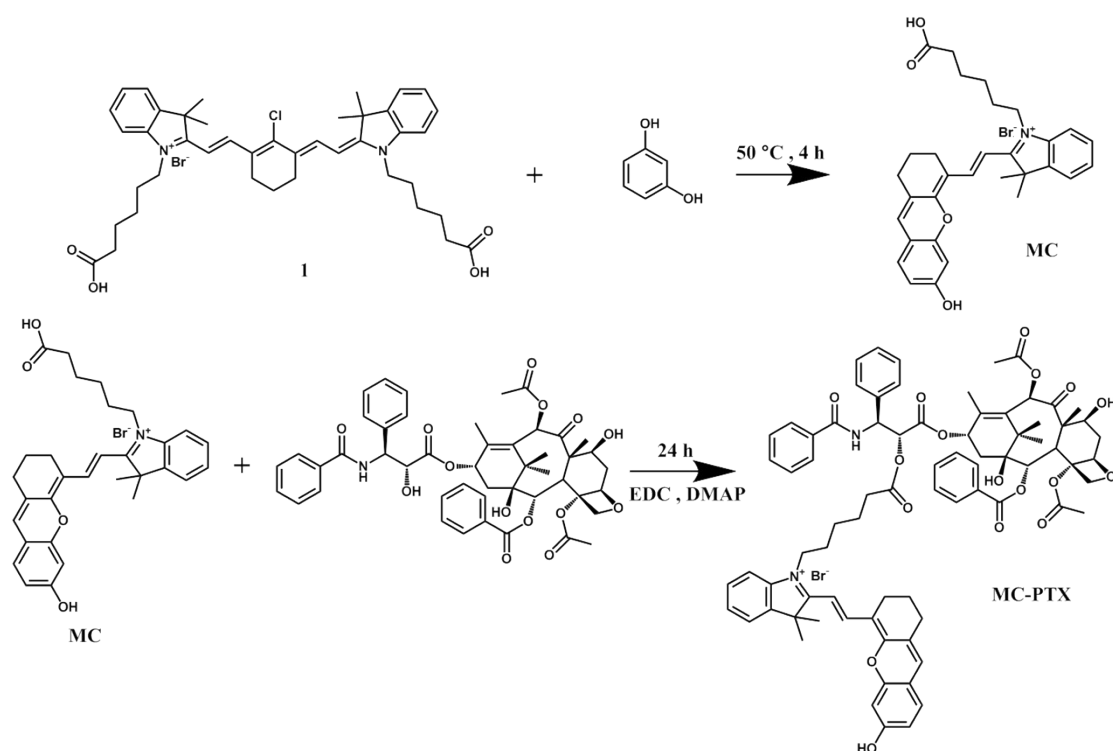
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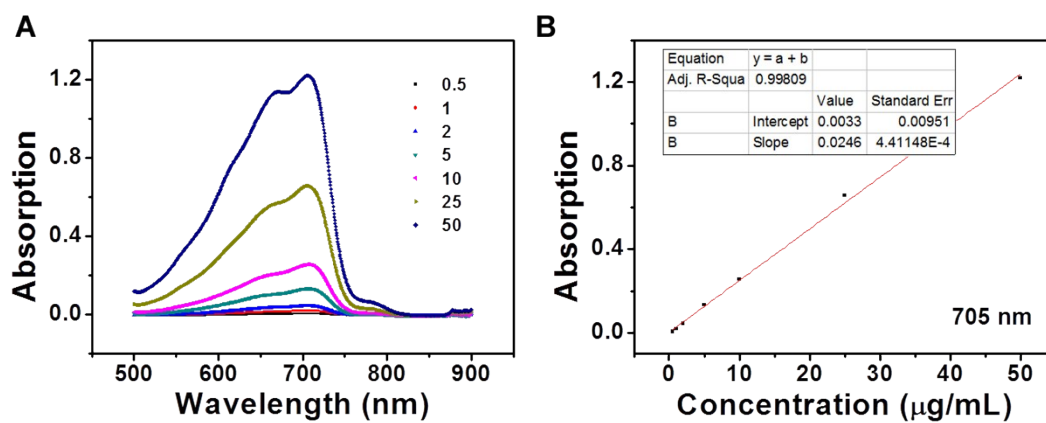
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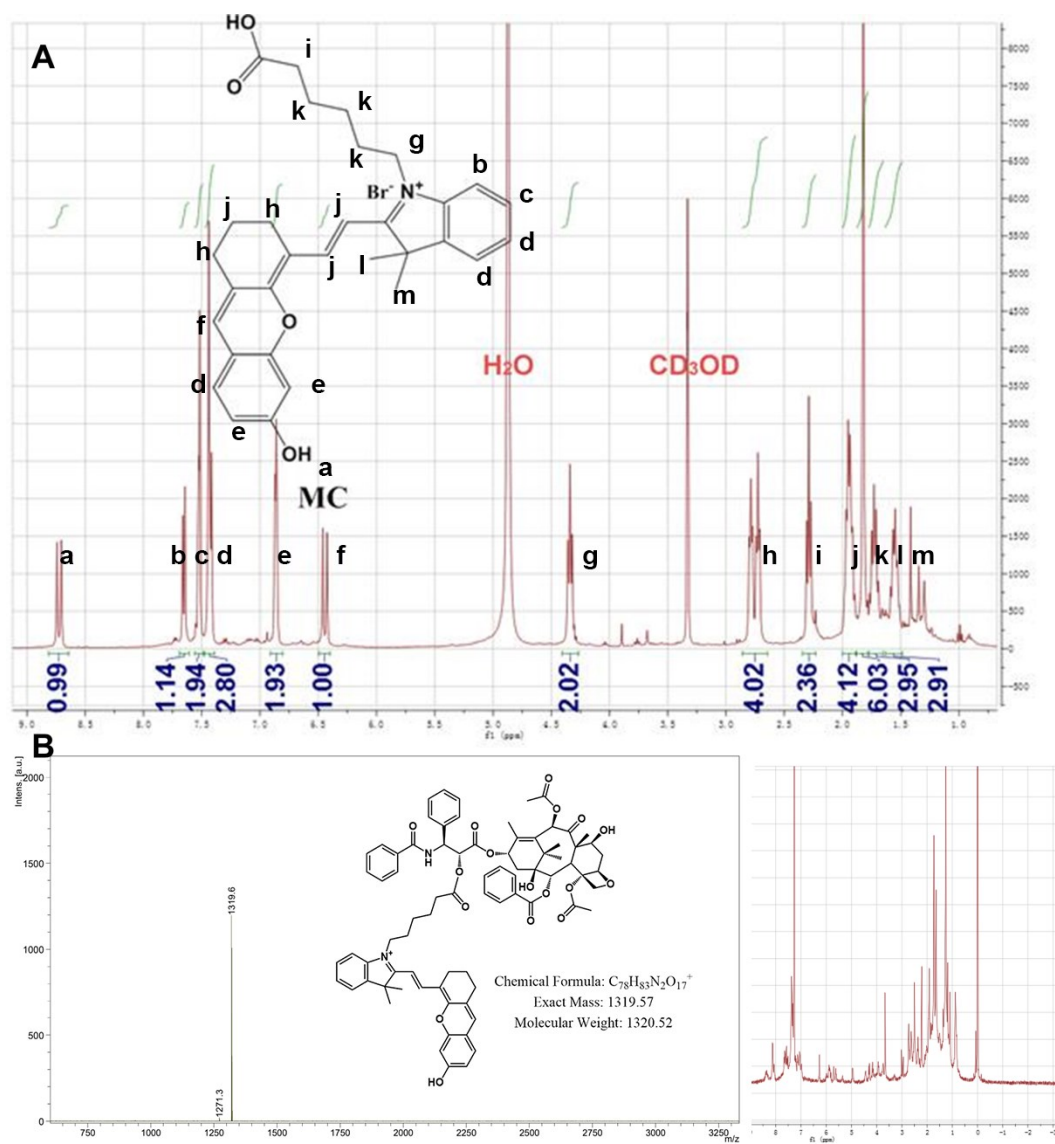
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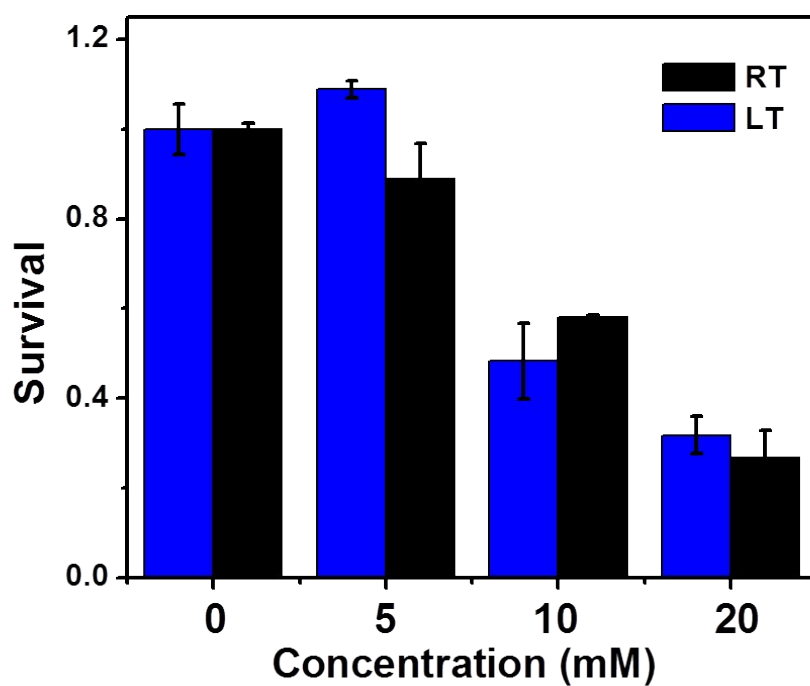
**Figure S1.** The synthesis process of MC-PTX.



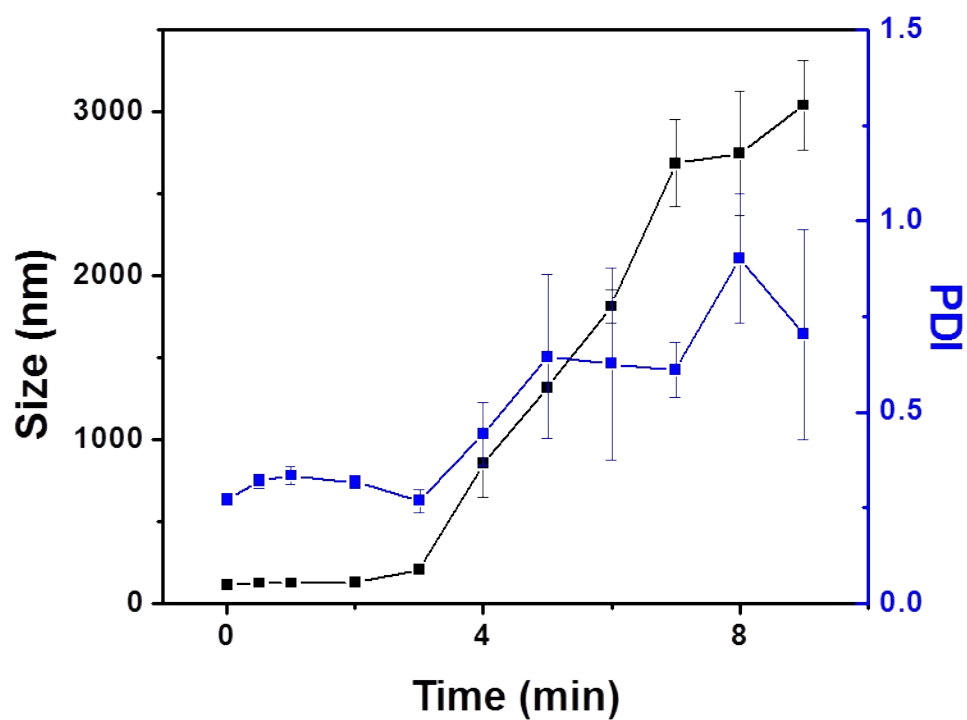
**Figure S2.** A) Ultraviolet-Visible Spectrum of MC-PTX of different concentration (DMF/H<sub>2</sub>O=9/1). B) Fitting curve of absorbance value in A at 705 nm.



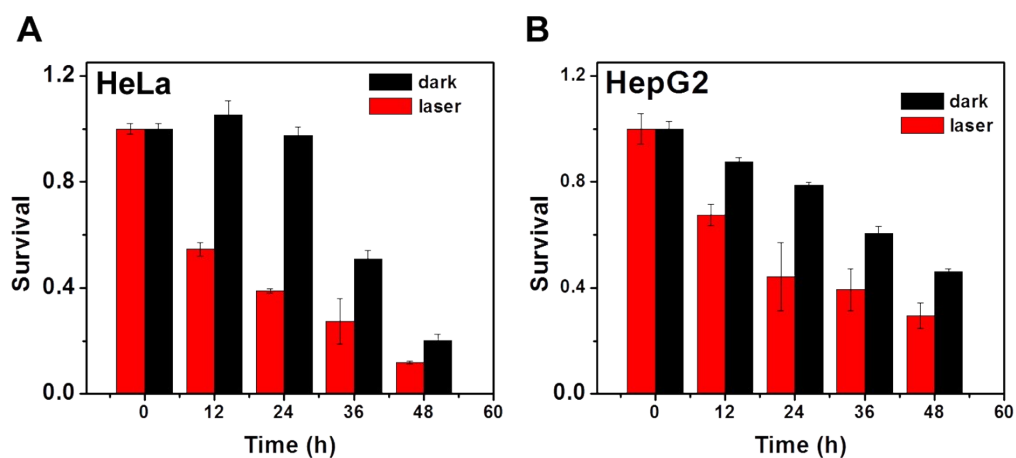
**Figure S3.** A) <sup>1</sup>H-NMR result of MC. B) <sup>1</sup>H-NMR and MODI-TOF results of MC-PTX.



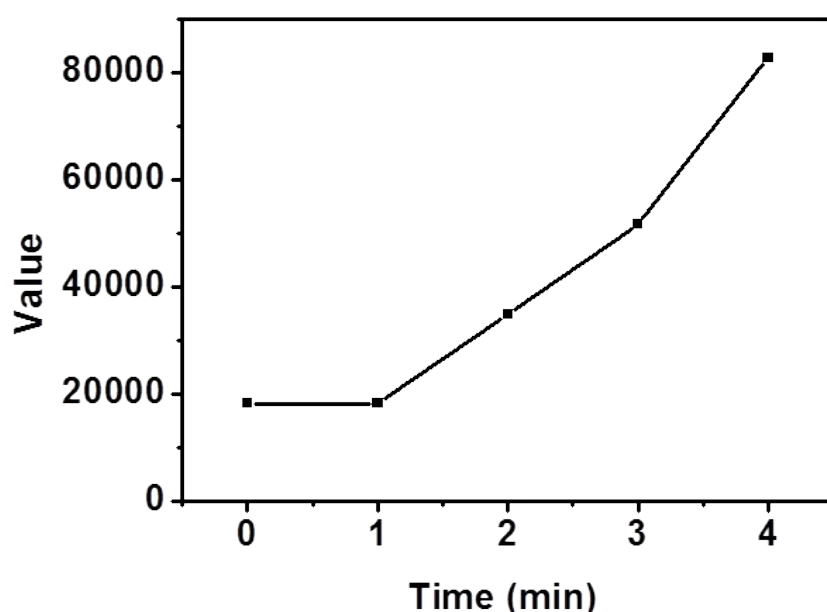
**Figure S4.** MTT results of HeLa cells treated with MC-PTX NPs after irradiated with 638 nm ( $0.8 \text{ W/cm}^2$ ) for 5 min. The blue cubes refer to groups bathed in ice water mixture during irradiated, while black groups were in room temperature.



**Figure S5.** DLS result of MC-PTX NPs after irradiated for different times.

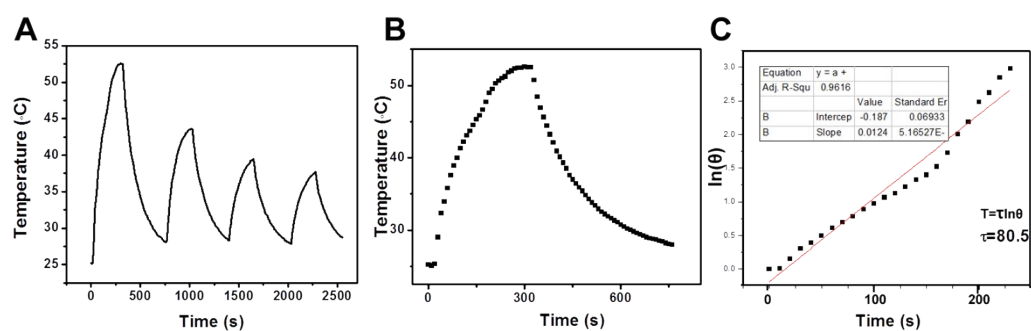


**Figure S6.** MTT result of MC-PTX NPs of different endocytosis time in HeLa and HepG2 cells. All groups were treated with MC-PTX NPs (18  $\mu$ M). The laser groups (red) were irradiated with 638 nm (0.8 W/cm<sup>2</sup>) for 5 min.



**Figure S7.** High performance liquid chromatography result. In this study, water was A phase and methanol-acetonitrile (v:v=1:1) mixture was B phase. The released

paclitaxel derivative's peak time was at 6.3 min with A/B=9/1.



**Figure S8.** A) Photostability of MC-PTX NPs irradiated with a laser of 638 nm at 0.8 W·cm<sup>-2</sup> (300 s for each cycle). B) Photothermal effect of MC-PTX NPs at first cycle. C) Calculation of photothermal conversion efficiency.