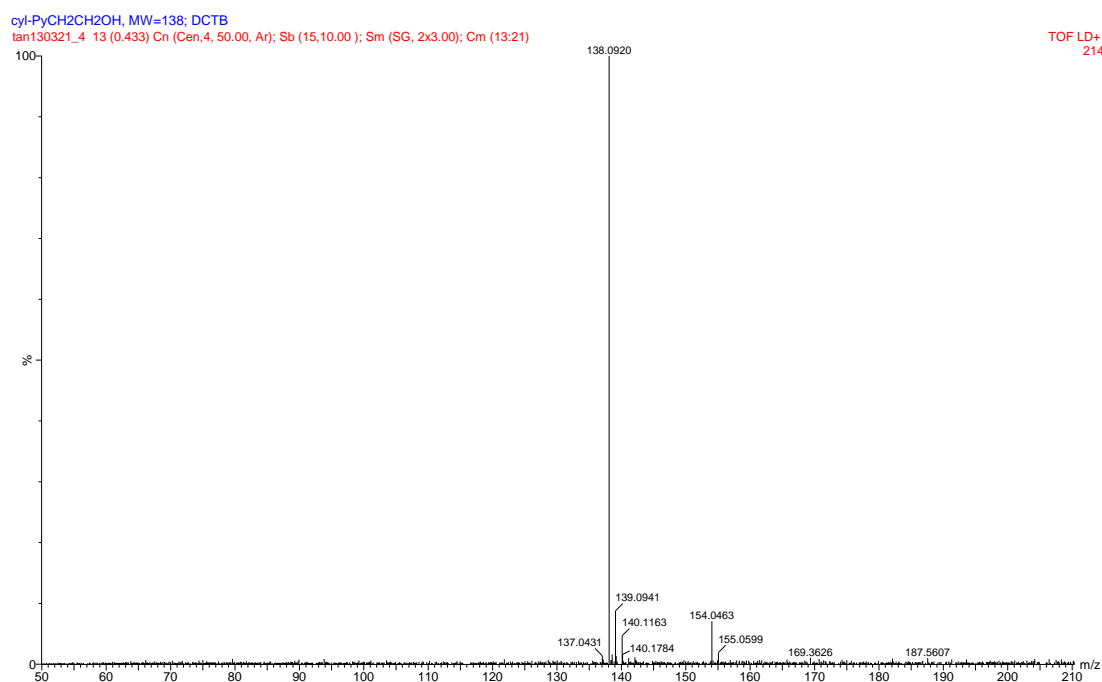
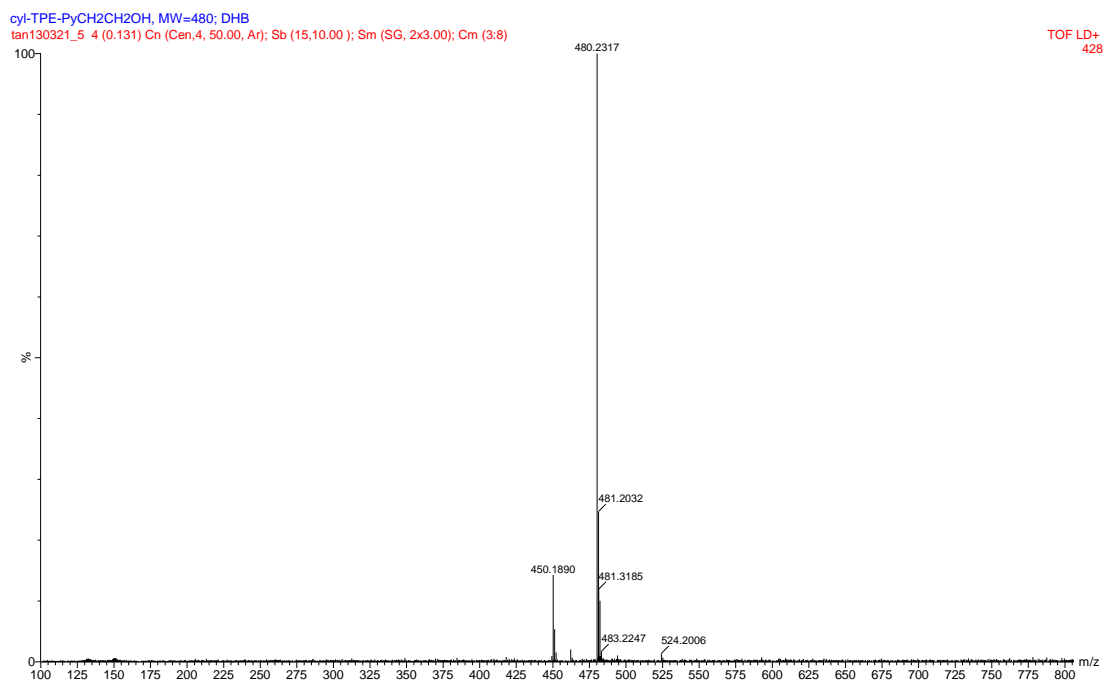


# Supplementary Materials: Multiple Light-activated Photodynamic Therapy of Tetraphenylethylene Derivative with AIE Characteristics for Hepatocellular Carcinoma *via* Dual-organelles Targeting

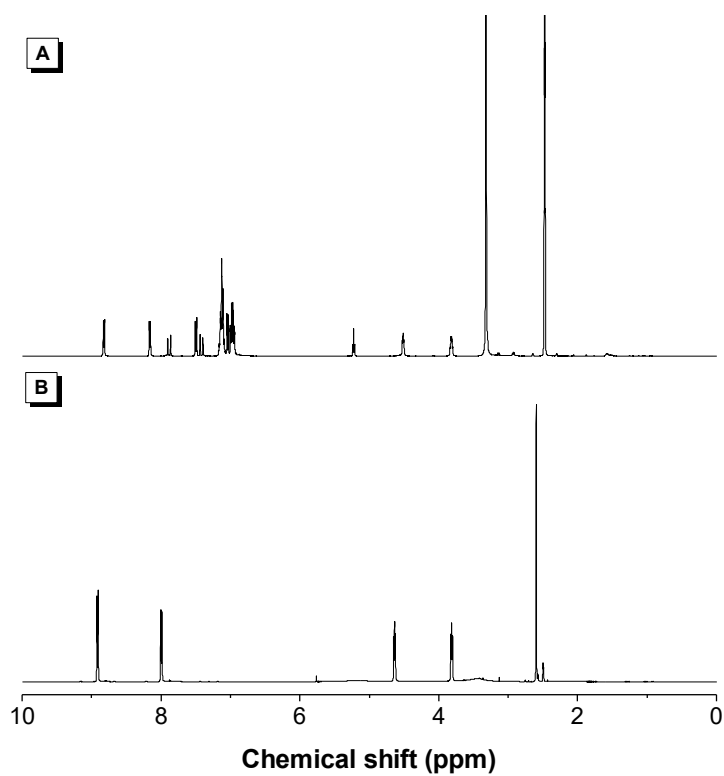
Chuxing Chai, Tao Zhou, Jianfang Zhu, Yong Tang, Jun Xiong, Xiaobo Min, Qi Qin, Min Li, Na Zhao, Chidan Wan



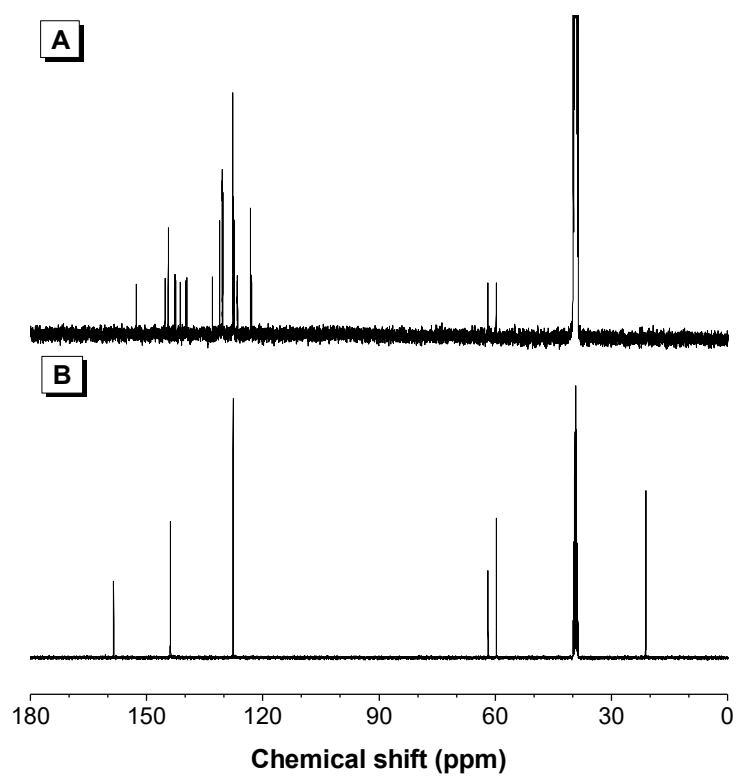
**Figure S1.** HRMS spectra of molecular **1**.



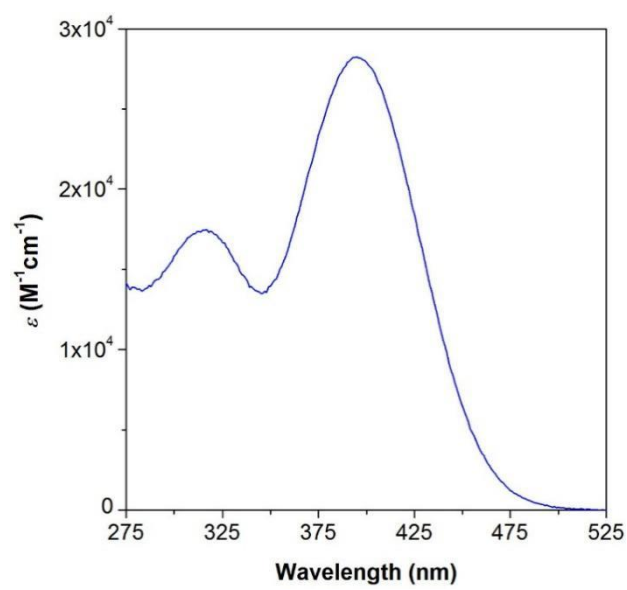
**Figure S2.** HRMS spectra of TPE-Py-OH.



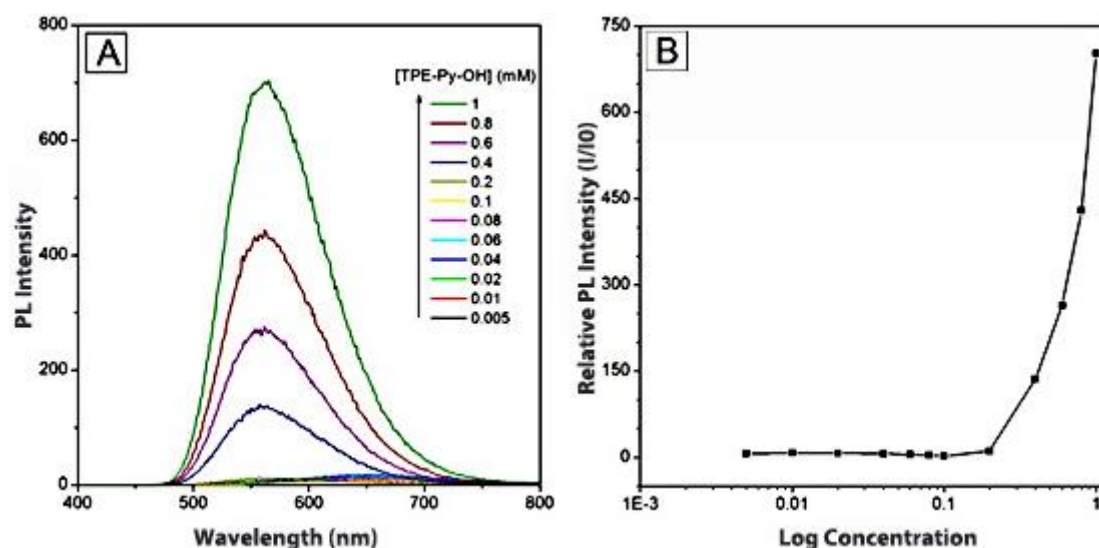
**Figure S3.**  $^1\text{H}$  NMR spectra of (A) TPE-Py-OH and (B) molecular **1** in  $\text{DMSO-}d_6$ .



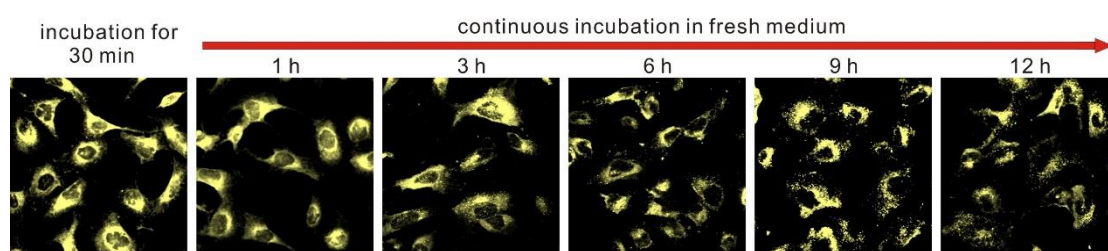
**Figure S4.**  $^{13}\text{C}$  NMR spectra of (A) TPE-Py-OH and (B) molecular 1 in  $\text{DMSO-}d_6$ .



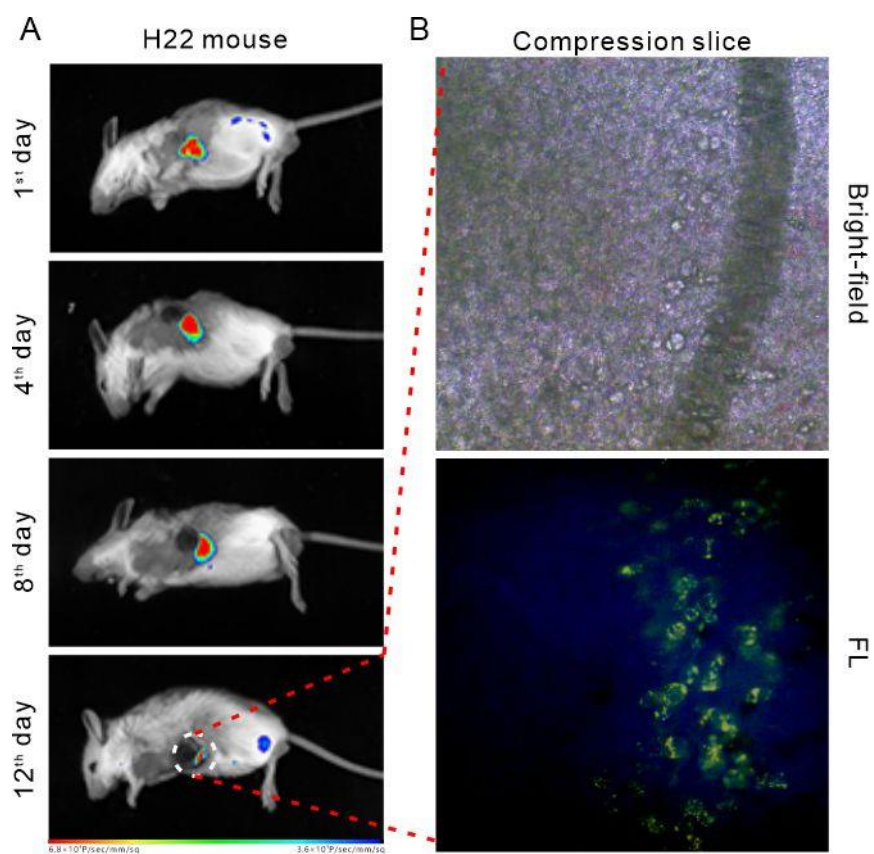
**Figure S5.** UV spectra of TPE-Py-OH at the concentration of 10  $\mu\text{M}$  in DMSO.



**Figure S6.** (A) PL spectra of TPE-Py-OH in H<sub>2</sub>O/DMSO mixtures (*v/v* 90%) with different concentrations. Excitation wavelength: 405 nm. (B) Plot of PL intensity versus the concentrations of TPE-Py-OH. Inset: photograph of TPE-Py-OH with various concentrations taken under 365 nm UV irradiation.



**Figure S7.** The dynamic monitoring of the distribution of TPE-Py-OH in living cells. The HepG2 cells were incubated with 5  $\mu$ M TPE-Py-OH for 30 min and then replaced with fresh medium.



**Figure S8.** (A) The distribution of TPE-Py-OH in vivo after intratumoral injection over times. (B) imaging of compression slice of H22 tumor at 12<sup>th</sup> day after TPE-Py-OH administration.