

Glutathione Responsive Pyrrolopyrrolidone Nanotheranostic Agent for Turn-on Fluorescence Imaging Guided Photothermal/Photodynamic Cancer Therapy

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For DPPBPh, ^1H NMR (CDCl_3 , 400 MHz): δ (ppm) 9.00-8.96 (2H, d), 7.93-7.86 (4H, d), 7.85-7.81 (4H, d), 7.80-7.74 (4H, d), 7.63-7.57 (4H, m), 7.55-7.48 (4H, m), 4.16-4.03 (4H, d), 1.47-1.26 (16H, m), 0.96-0.85 (12H, m). ^{13}C NMR (75 MHz, CDCl_3): δ 161.89, 136.68, 132.76, 130.89, 129.75, 128.61, 125.95, 46.06, 39.31, 30.31, 29.67, 28.57, 23.55, 23.01, 14.03, 10.58. MS (ESI): calcd. m/z = 980.39; found m/z = 980.78.

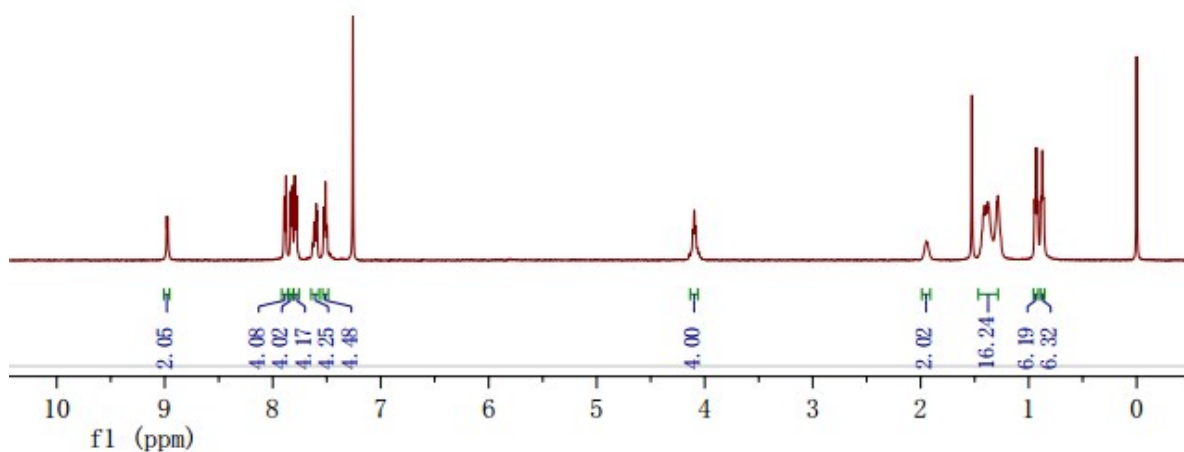


Figure S2. ^1H NMR of DPPBPh in CDCl_3

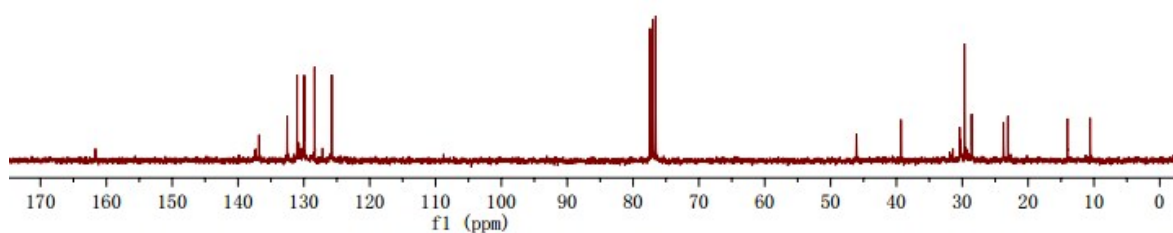


Figure S3. ^{13}C NMR of DPPBPh in CDCl_3

For DPPTPh, ^1H NMR (CDCl_3 , 400 MHz): δ (ppm) 9.00-8.96 (2H, d), 7.93-7.86 (6H, d), 7.85-7.81 (6H, d), 7.80-7.74 (6H, d), 7.63-7.57 (6H, m), 7.55-7.48 (6H, t), 4.11-4.07 (4H, d), 1.97-1.92 (2H, s), 1.47-1.32 (16H, m), 0.94-0.85 (12H, m). ^{13}C NMR (75 MHz, CDCl_3) δ 161.73, 147.98, 139.33, 136.79, 132.54, 131.03, 129.93, 128.16, 125.74, 46.23, 38.98, 30.24, 28.38, 23.75, 23.07, 14.03, 10.46. MS (ESI): calcd. m/z = 1082.46; found m/z = 1081.95.

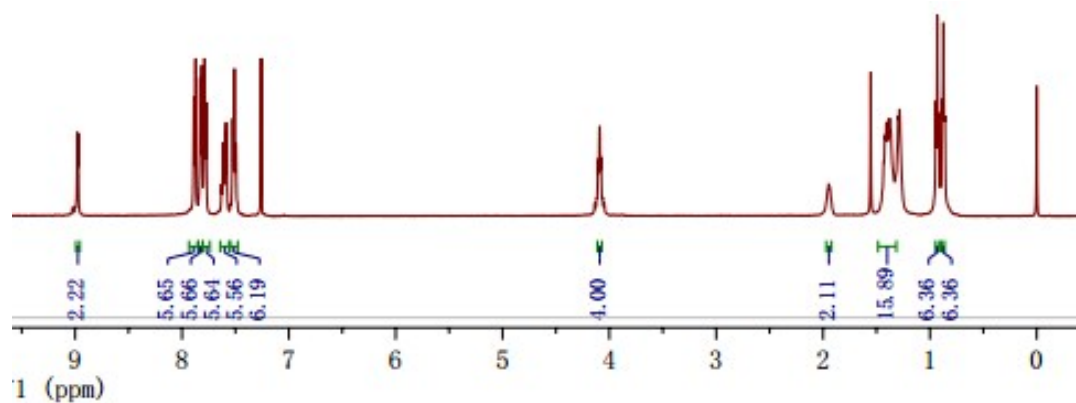


Figure S4. ^1H NMR of DPPTPh in CDCl_3

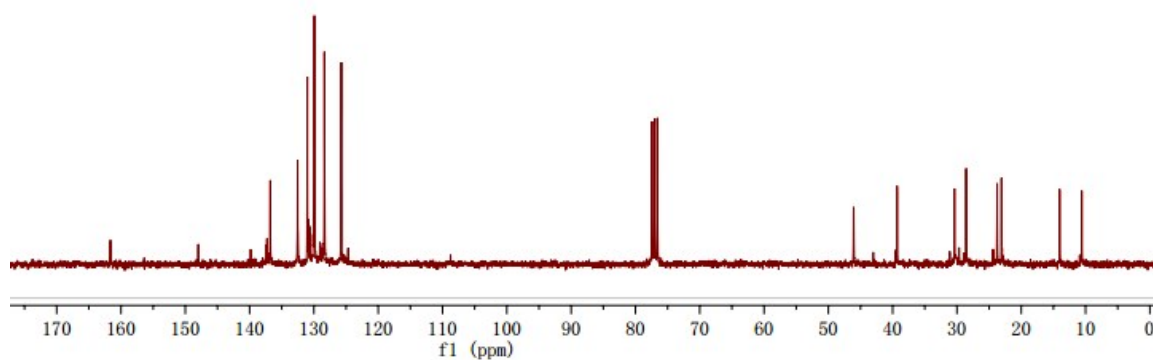


Figure S5. ^{13}C NMR of DPPTPh in CDCl_3

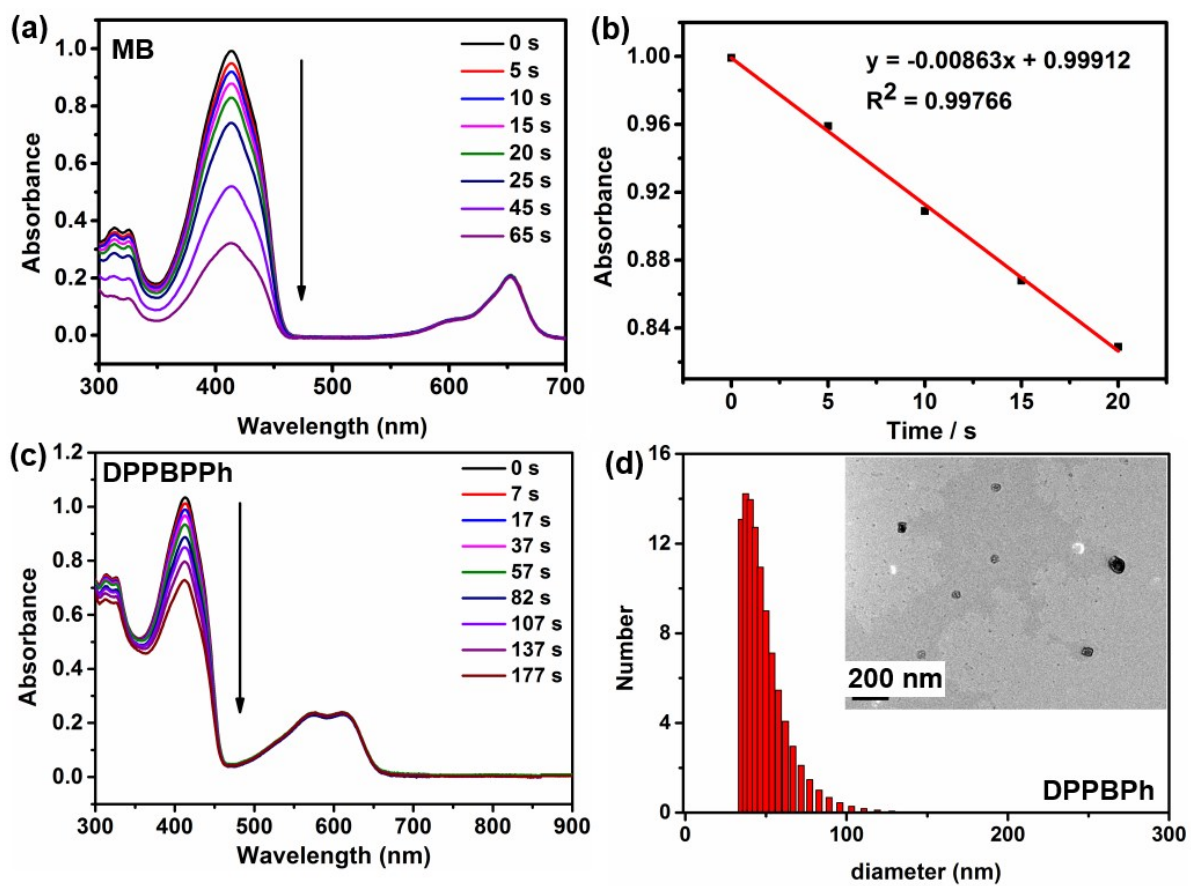


Figure S6. (a) Degradation of DPBF in the presence of MB in DCM with irradiation. (b) Linear fitting of the degradation of DPBF. (c) Degradation of DPBF in the presence of DPPBPh in DCM with irradiation. (d) DLS and TEM of DPPBPh NPs in water.

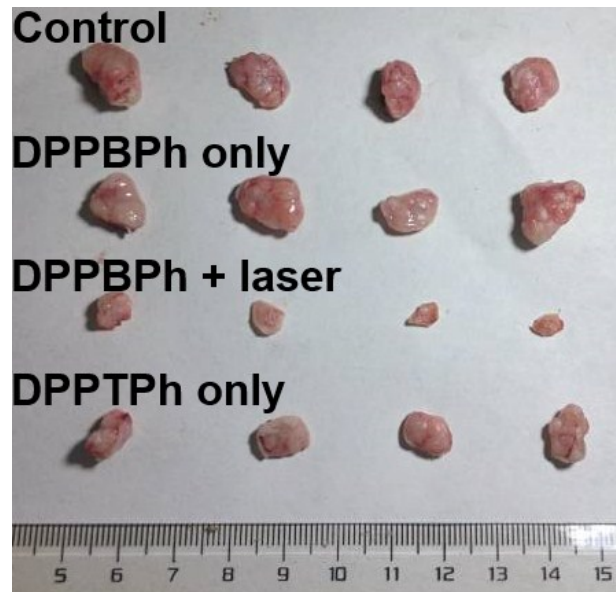


Figure S7. Pictures of tumors from mice in the control, DPPBPh, DPPBPh+laser, DPPTPh and DPPTPh+laser groups.