Supplementary Information for

Intramolecular Triplet-Triplet Energy Transfer Enhanced Triplet-Triplet Annihilation Upconversion with a Multichromophore Platinum(II) Terpyridyl Acetylide Complex

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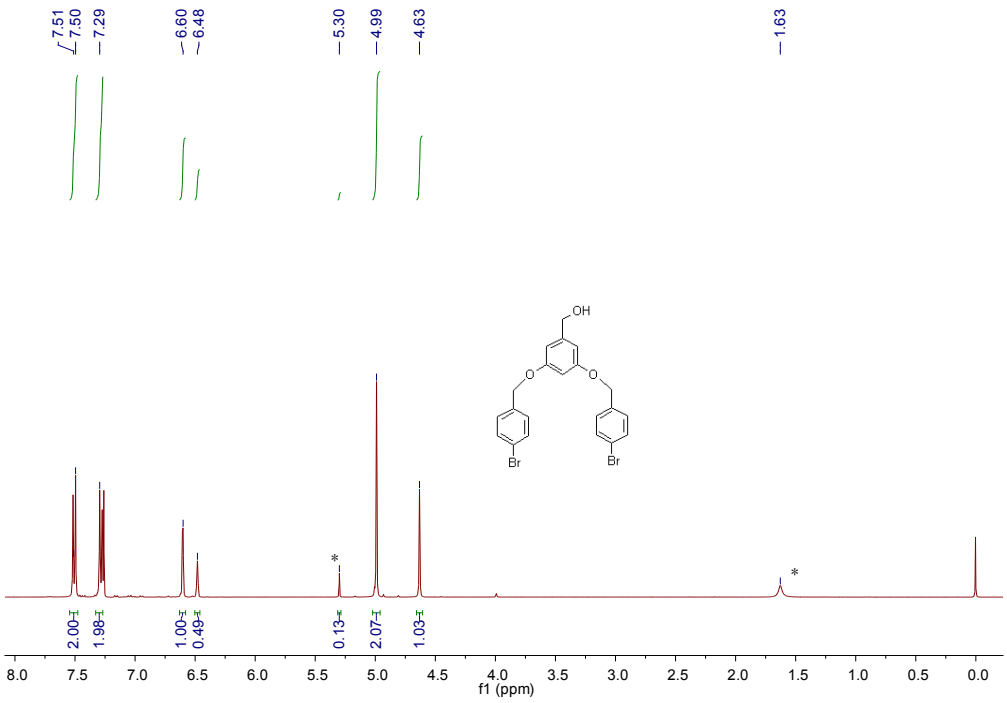


Figure S1. ^{1}H NMR spectrum of compound **1** ($CDCl_3$, 400 MHz).

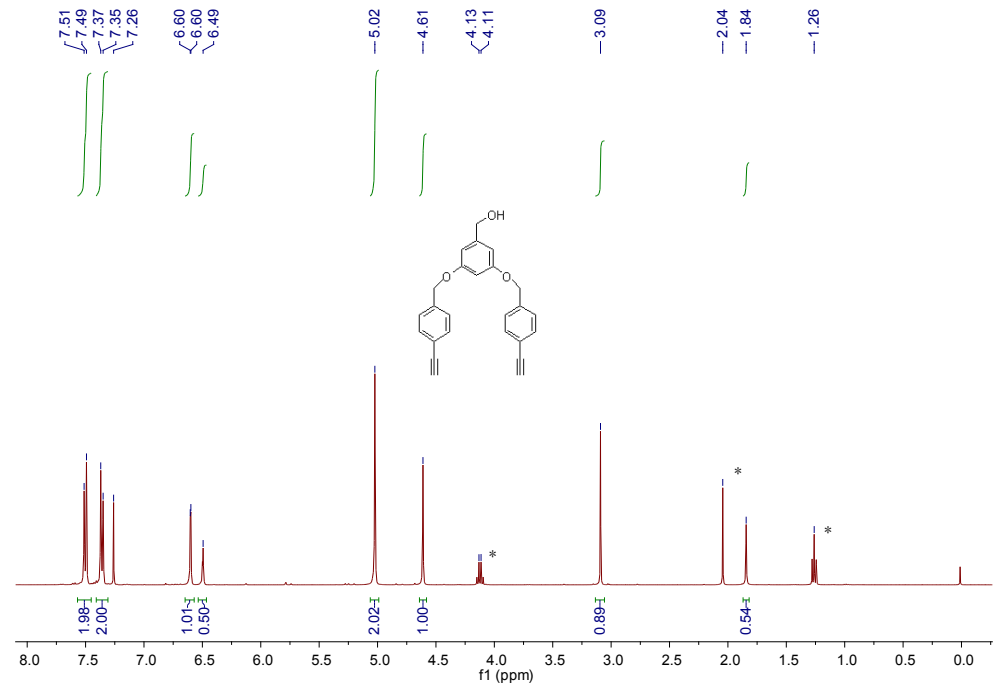


Figure S2. ^{1}H NMR spectrum of compound **2** ($CDCl_3$, 400 MHz).

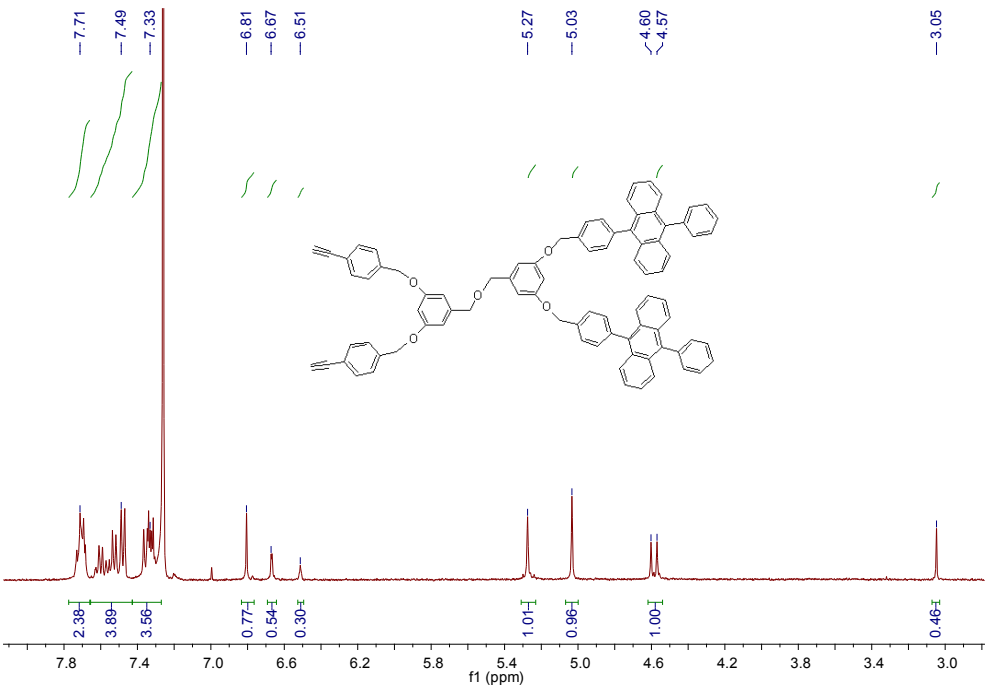


Figure S3. ^{1}H NMR spectrum of compound **3** (DMSO-d_6, 400 MHz).

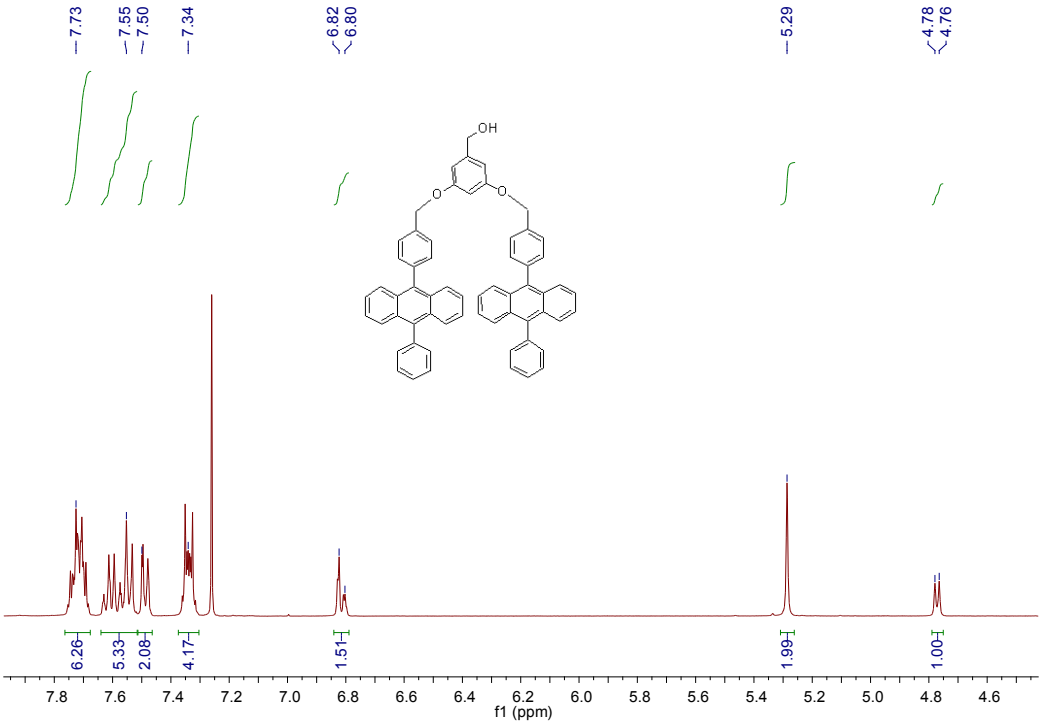


Figure S4. ^{1}H NMR spectrum of DPA-OH ($CDCl_3$, 400 MHz).

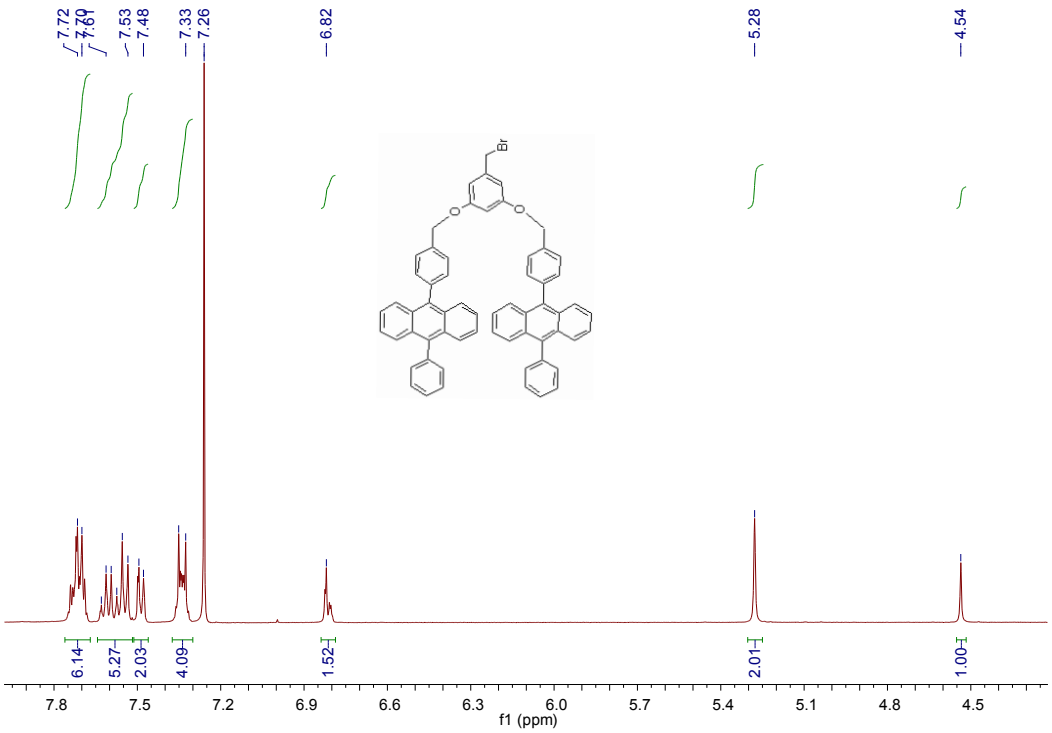


Figure S5. ^{1}H NMR spectrum of DPA-Br ($CDCl_3$, 400 MHz).

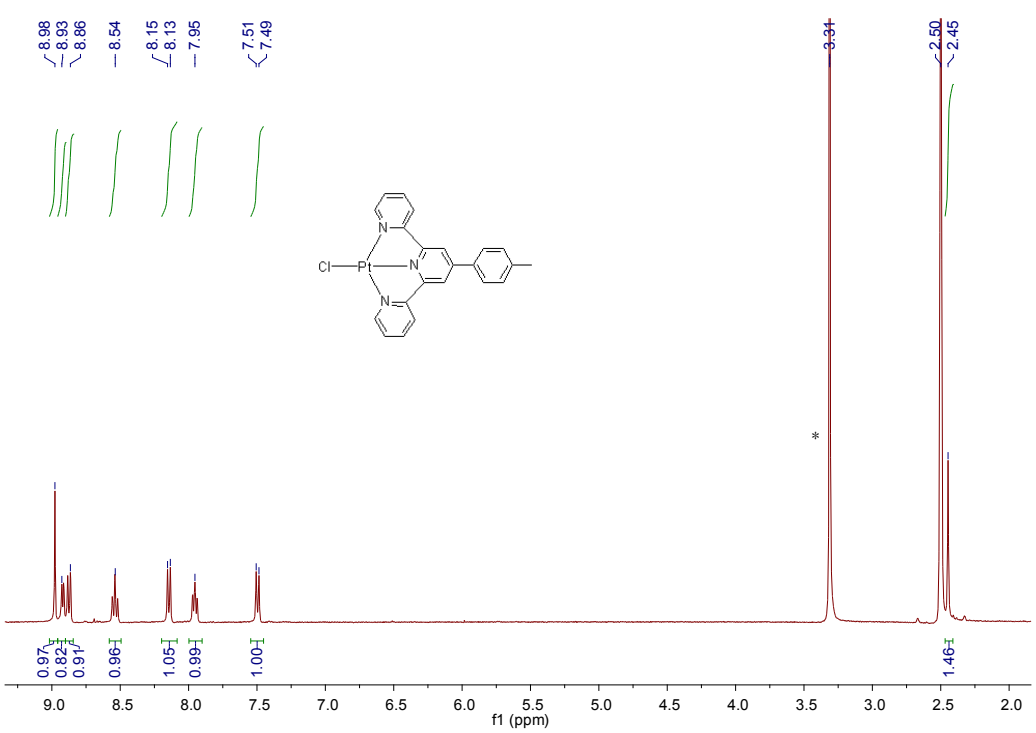


Figure S6. ^{1}H NMR spectrum of compound **4** (DMSO-d_6, 400 MHz).

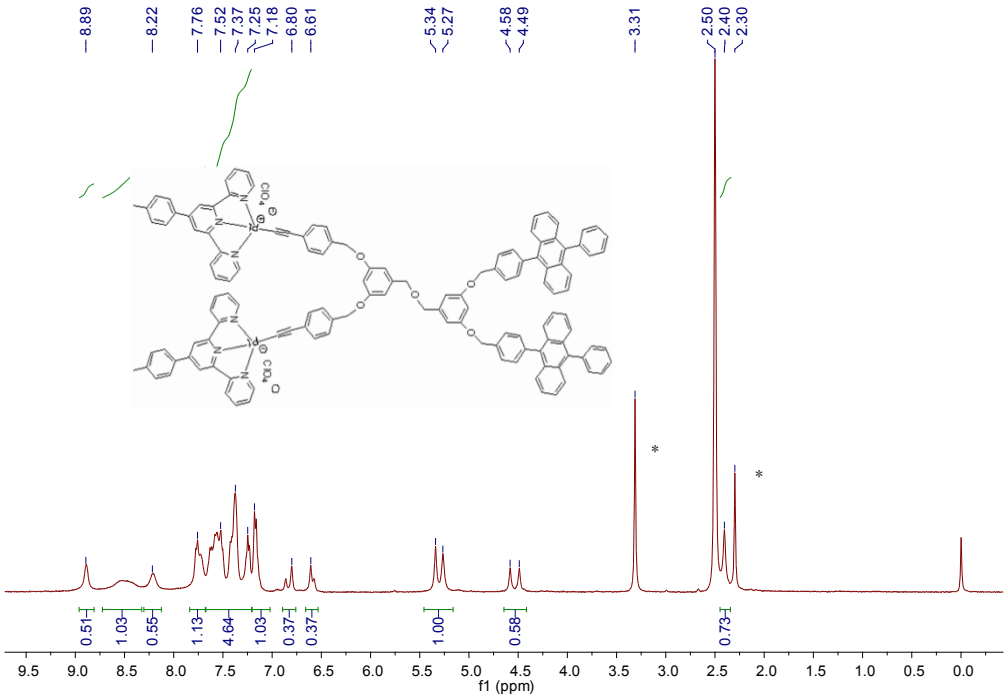


Figure S7. ^{1}H NMR spectrum of Pt-DPA (DMSO-d_6, 400 MHz).

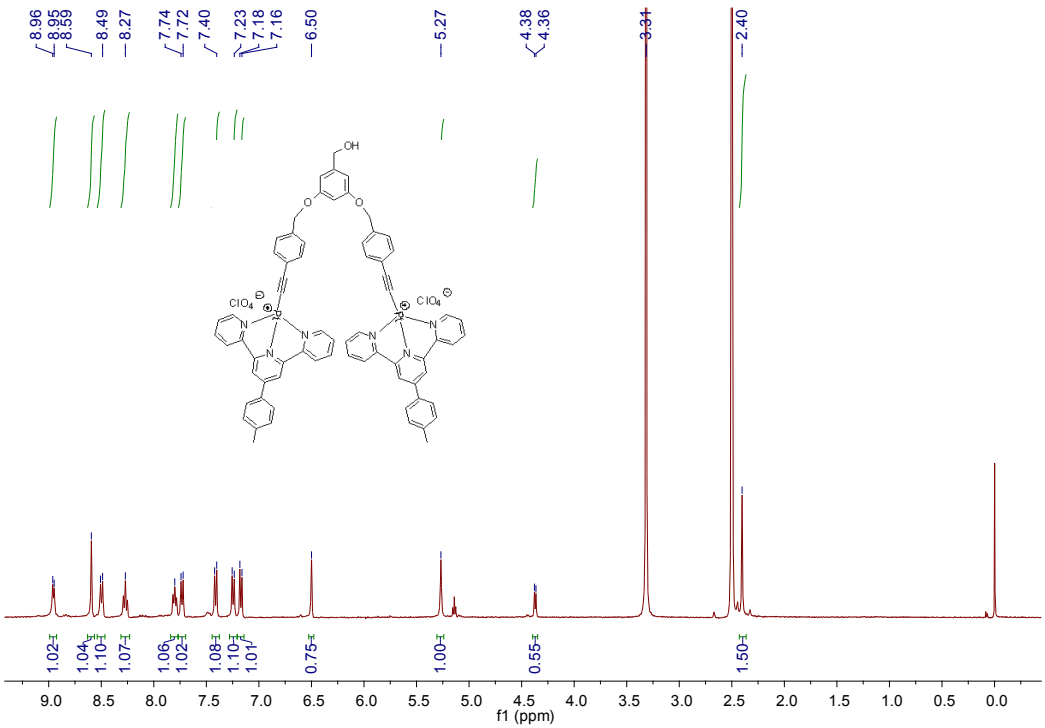


Figure S8. ^{1}H NMR spectrum of Pt-M (DMSO-d_6, 400 MHz).

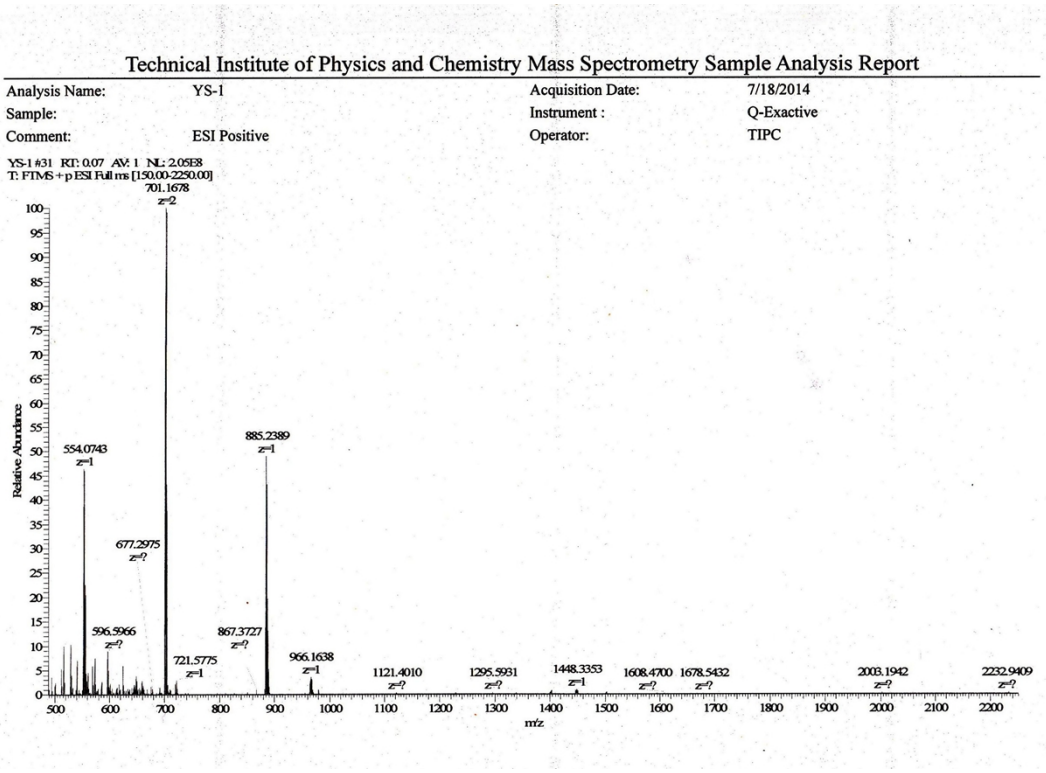


Figure S9. HR-ESI-MS spectrum of Pt-M.

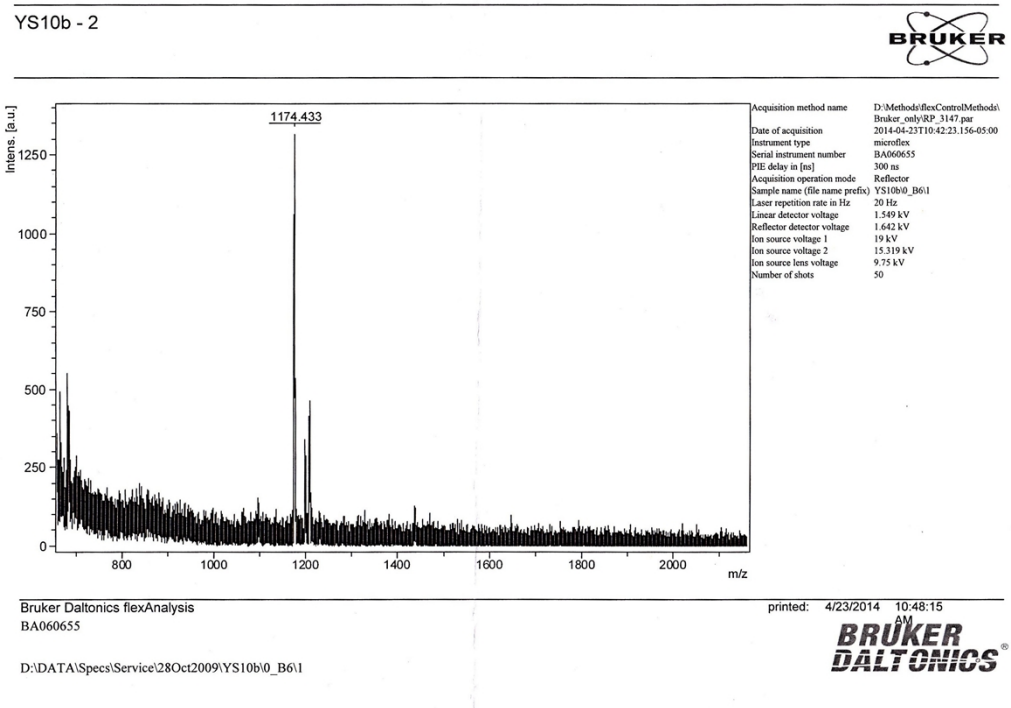


Figure S10. MALDI-TOF MS spectrum of compound **3**.

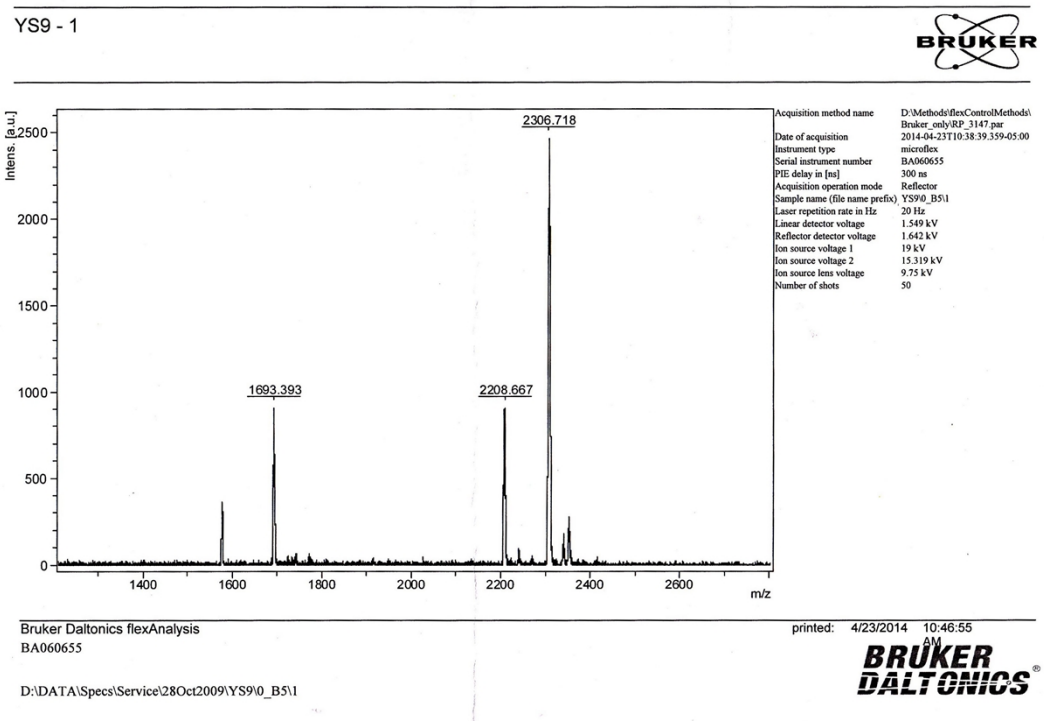


Figure S11. MALDI-TOF MS spectrum of Pt-DPA.

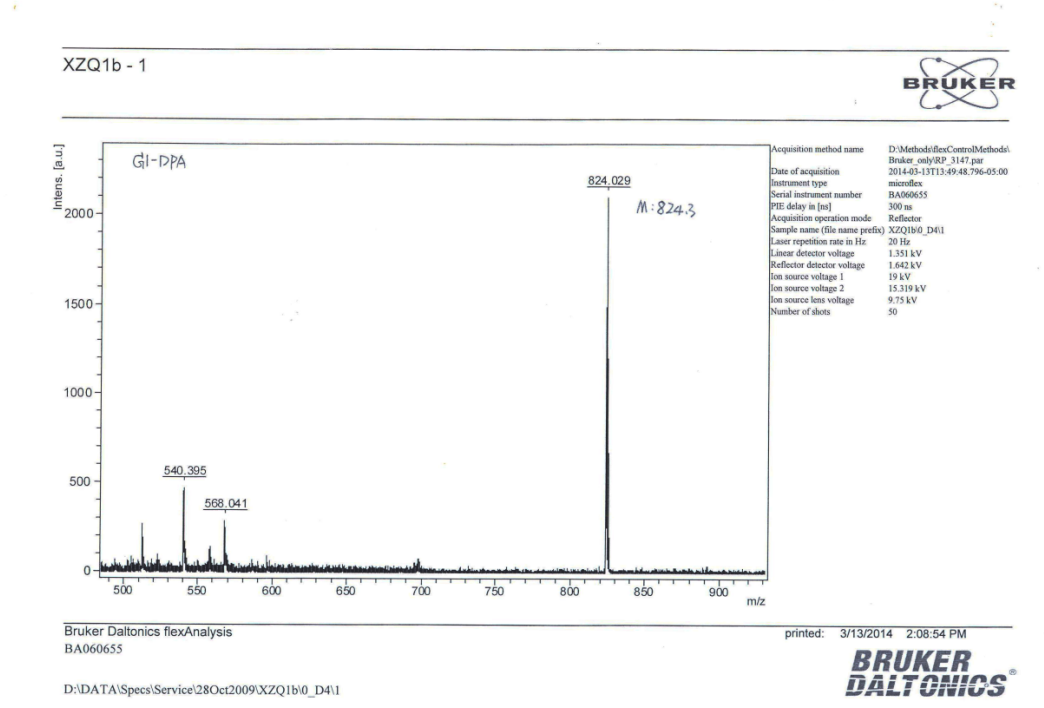
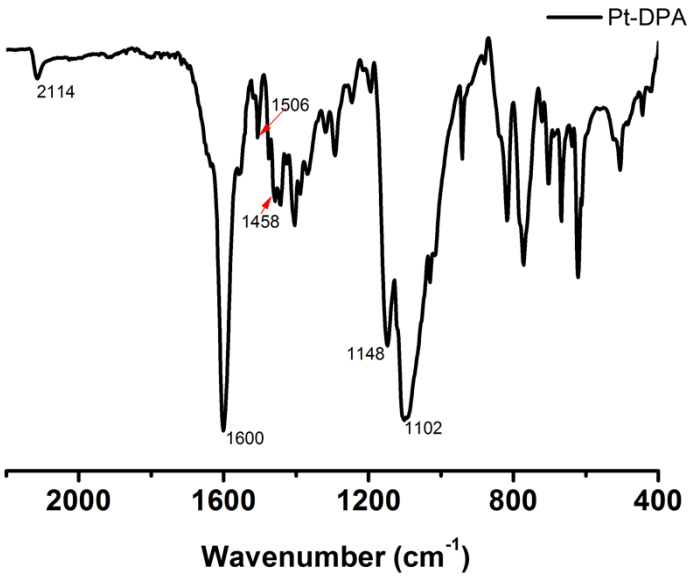
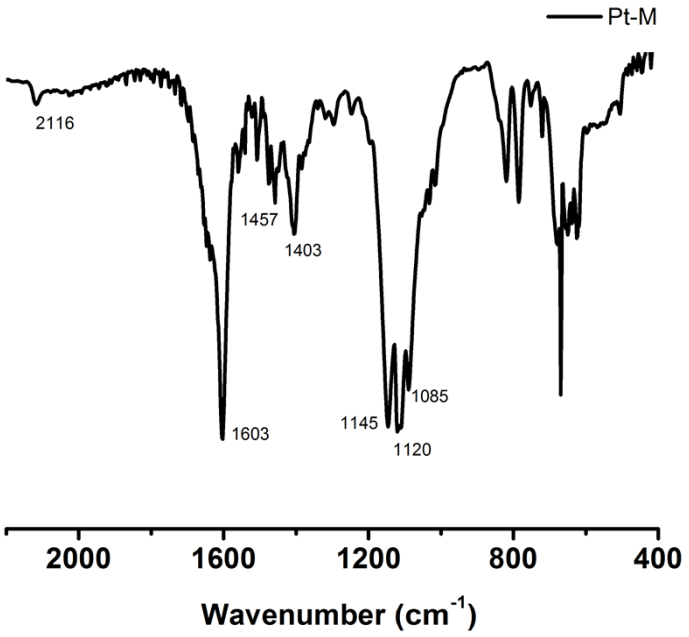


Figure S12. MALDI-TOF MS spectrum of DPA-OH.


Pt-DPA
2114
1506
1458
1148
1600
1102
2000
1600
1200
800
400
Wavenumber (cm-1)


Pt-M
2116
1457
1403
1603
1145
1085
1120
2000
1600
1200
800
400
Wavenumber (cm-1)

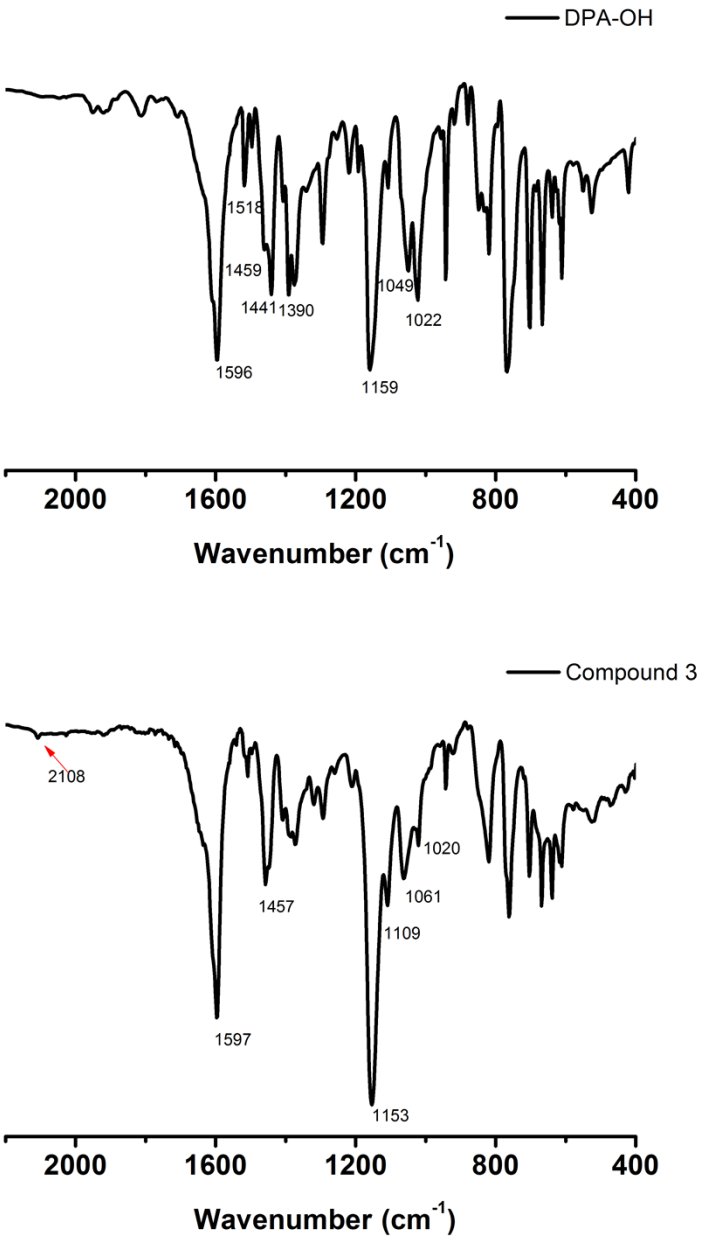


Figure S13. FT-IR spectra of Pt-DPA, Pt-M, DPA-OH and compound **3**.

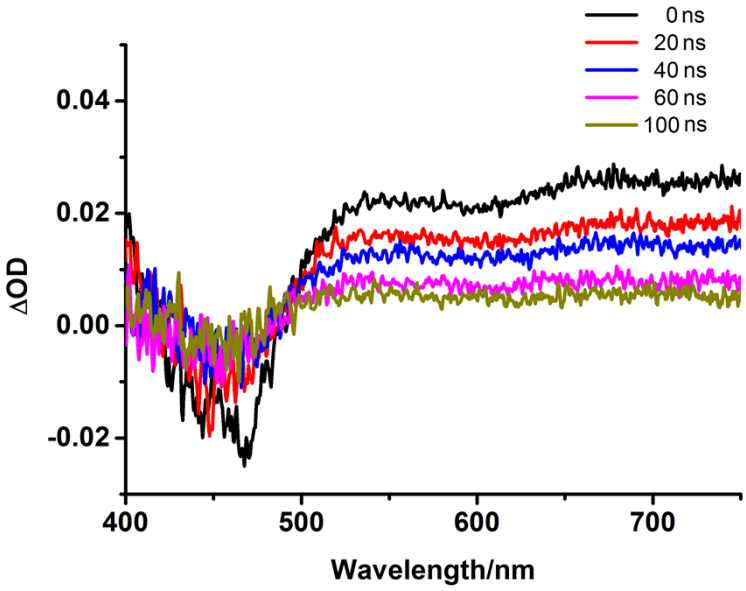


Figure S14 Nanosecond time-resolved transient difference absorption spectra of Pt-M (1×10^{-4} M) after pulsed excitation (λ_{ex} = 470 nm) in deaerated DMF.

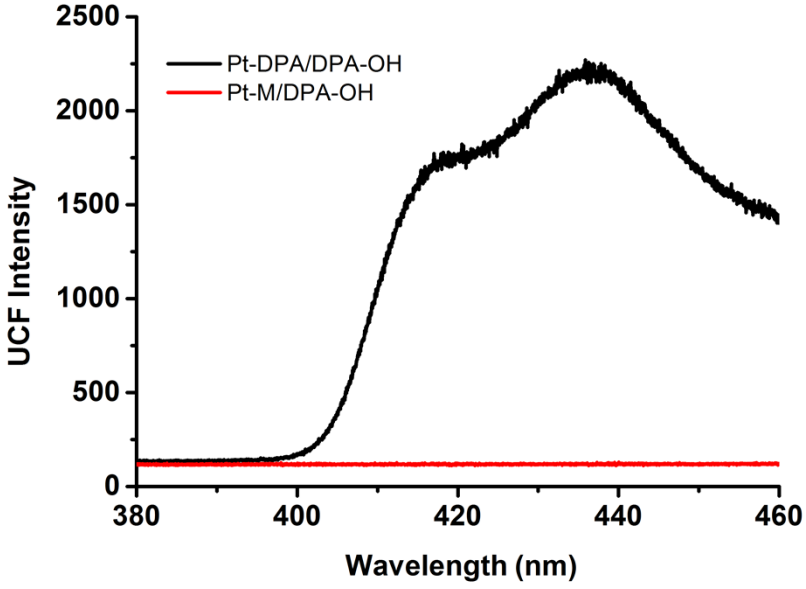


Figure S15. Upconversion emission spectrum of Pt-DPA/DPA-OH (1×10^{-5} M/1×10^{-4} M) and comparation with Pt-M/DPA-OH (1×10^{-5} M/1.1×10^{-4} M) when selective excitation of Pt terpyridyl chromophore with a 473 nm laser (power = 9.54 mW).

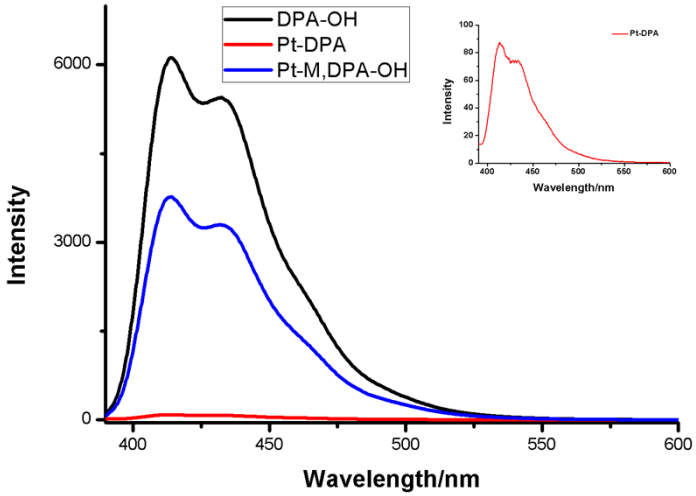


Figure S16. Emission spectra of DPA-OH (1×10^{-5} M), Pt-DPA (1×10^{-5} M) (inset) and Pt-M/DPA-OH (1×10^{-5} M/1×10^{-5} M) in DMF, $\lambda_{ex} = 350$ nm.