

Supplementary Information

4,4,5,5,5-Pentafluoro-1-(9H-fluoren-2-yl)-1,3-pentanedione Complex of Eu^{3+} with 4,5-bis(diphenylphosphino)-9,9-dimethylxanthene oxide as a promising light-conversion molecular device

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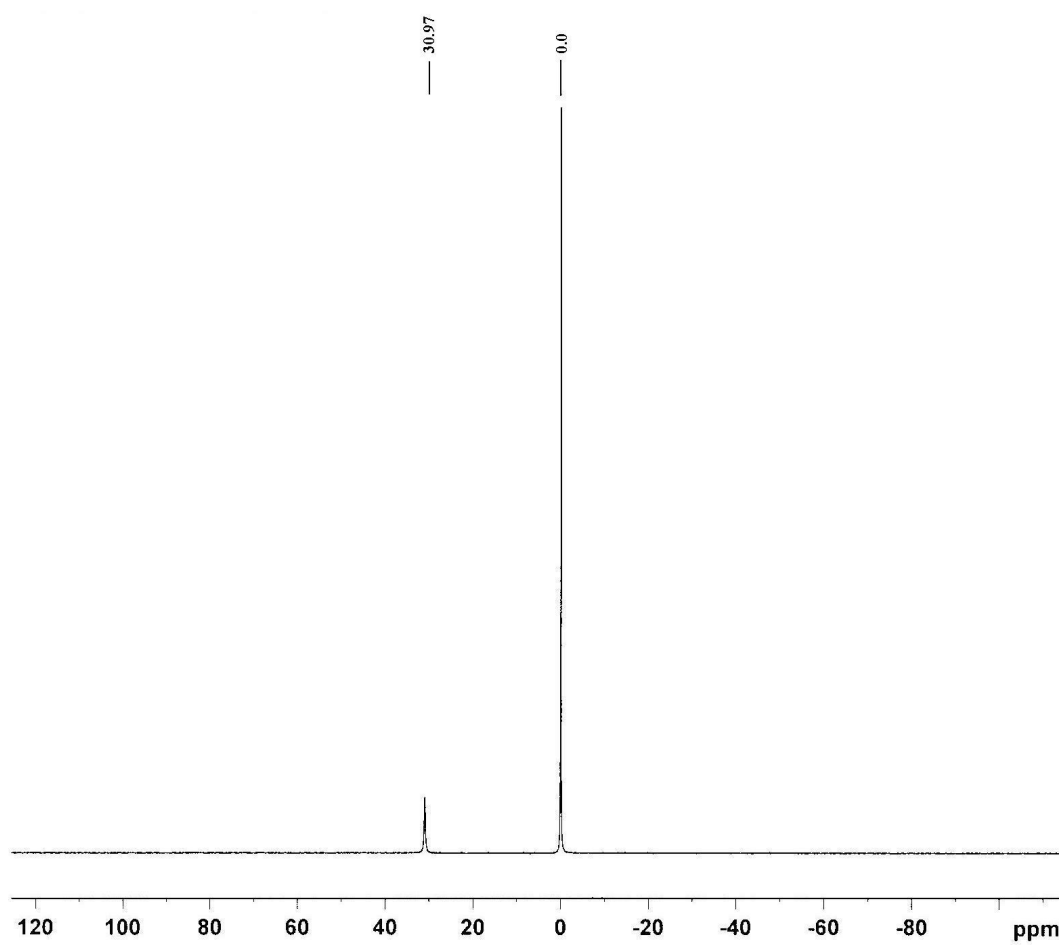


Fig. S1 ^{31}P NMR spectrum of DDXPO.

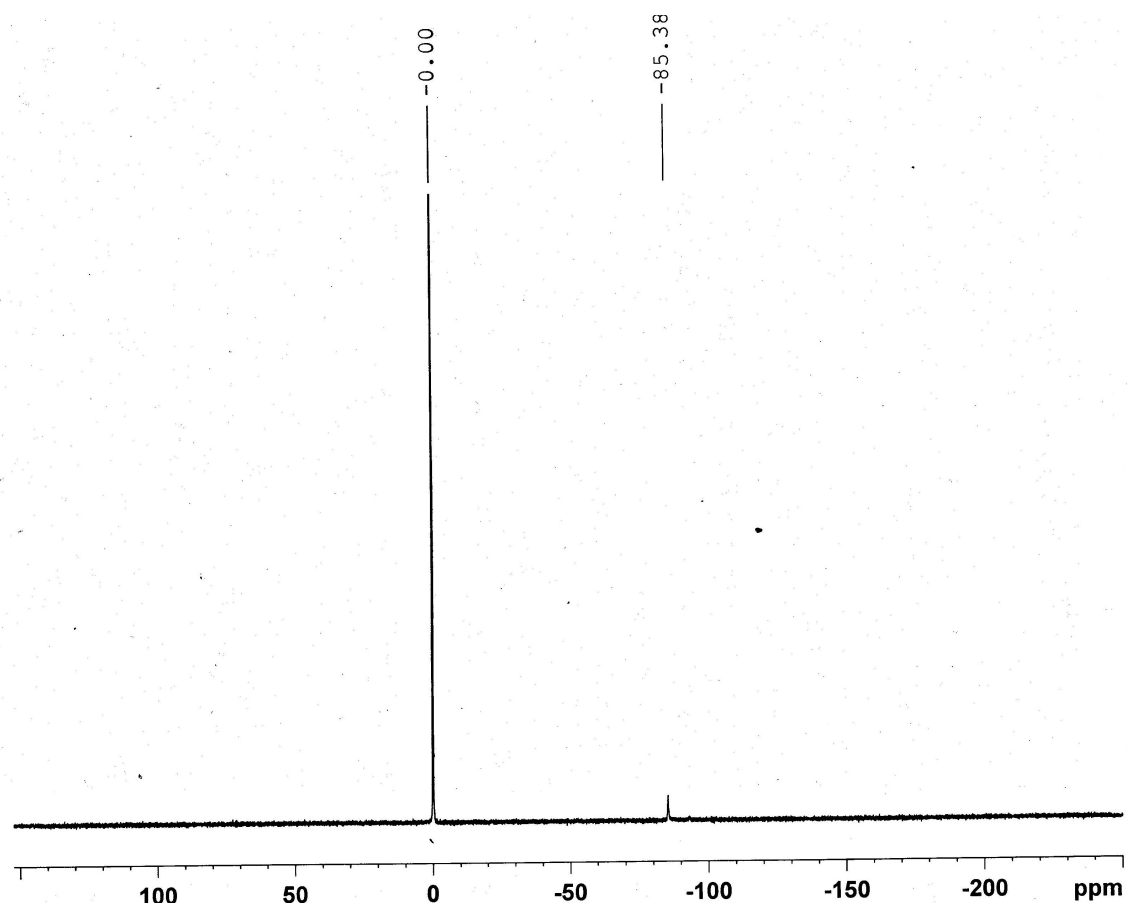


Fig. S2 ^{31}P NMR spectrum of Complex 2.

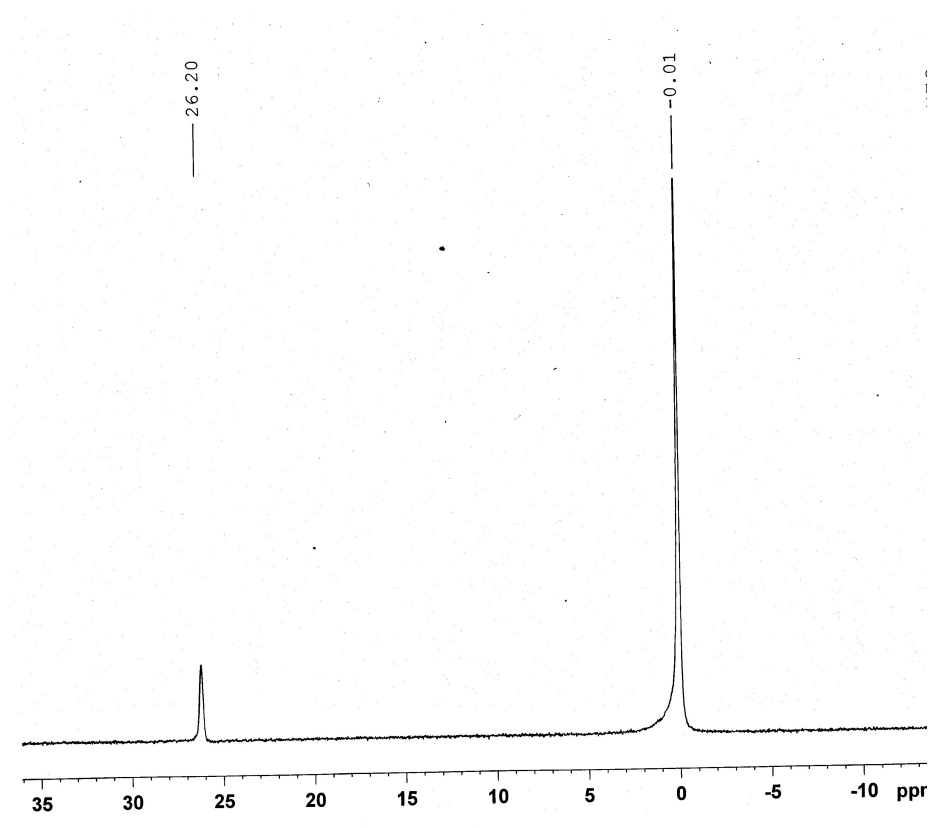


Fig. S3 ^{31}P NMR spectrum of DPEPO.

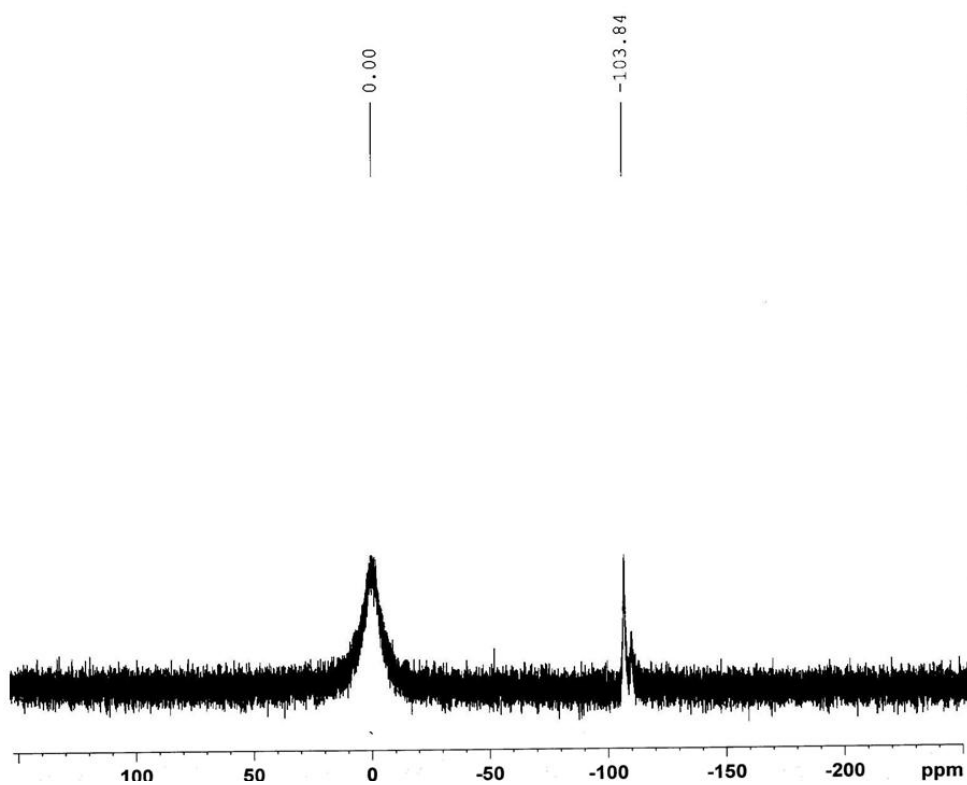


Fig. S4 ^{31}P NMR spectrum of Complex 3.

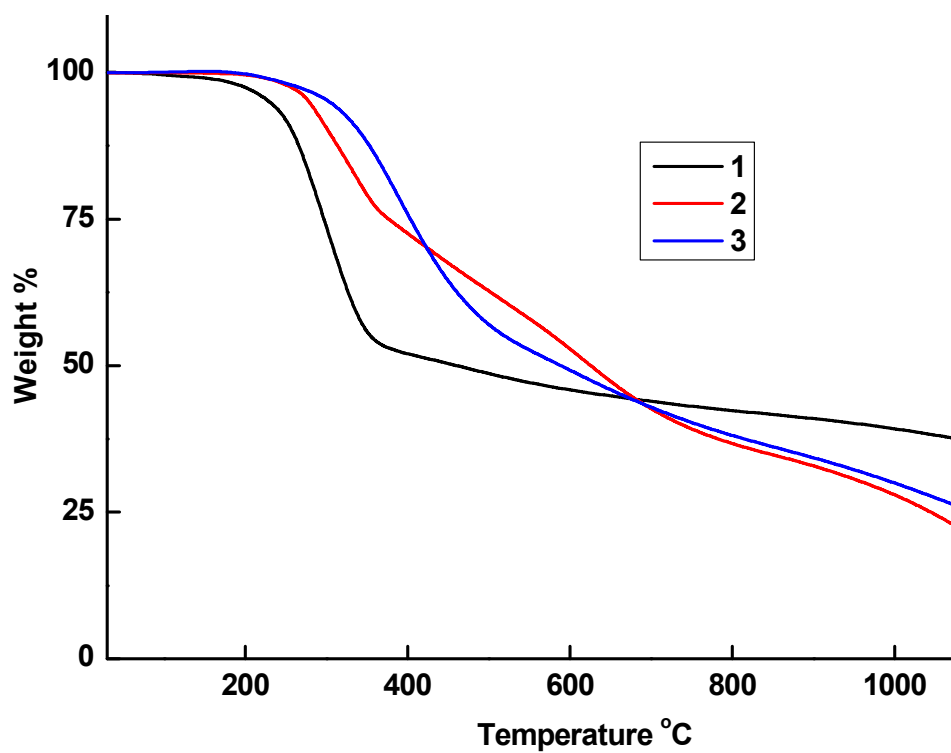


Fig. S5. Thermo gravimetric curve for complexes 1-3.

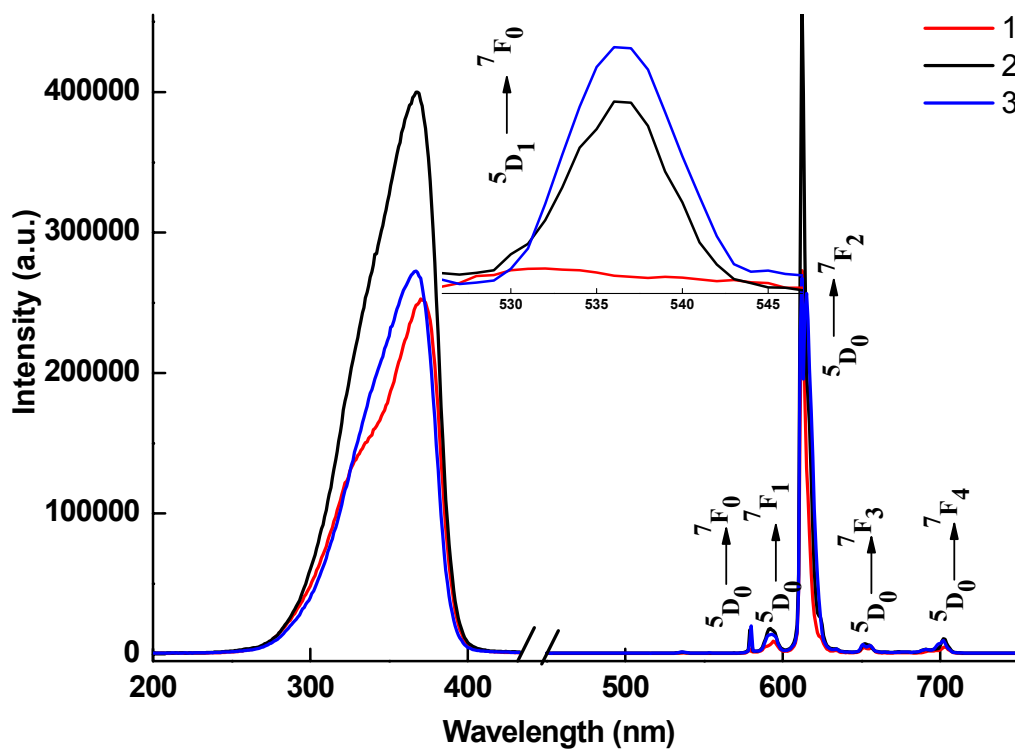


Fig. S6 Excitation and emission spectra for complexes **1** (λ_{ex} 371 nm), **2** (λ_{ex} 366 nm) and **3** (λ_{ex} 367 nm) at 298 K, emission monitored around 612 nm at 2×10^{-5} M in CH_3CN .

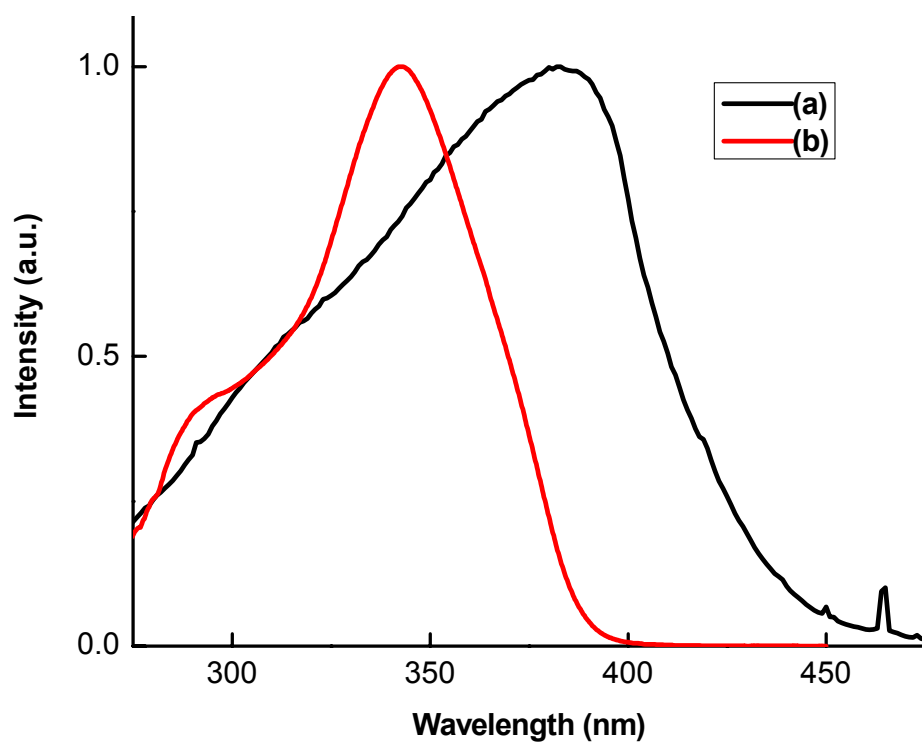


Fig. S7 (a) Solid state excitation spectrum and (b) UV-vis absorption spectrum in CH₃-CN ($c = 2 \times 10^{-5}$ M) of complex **2**.

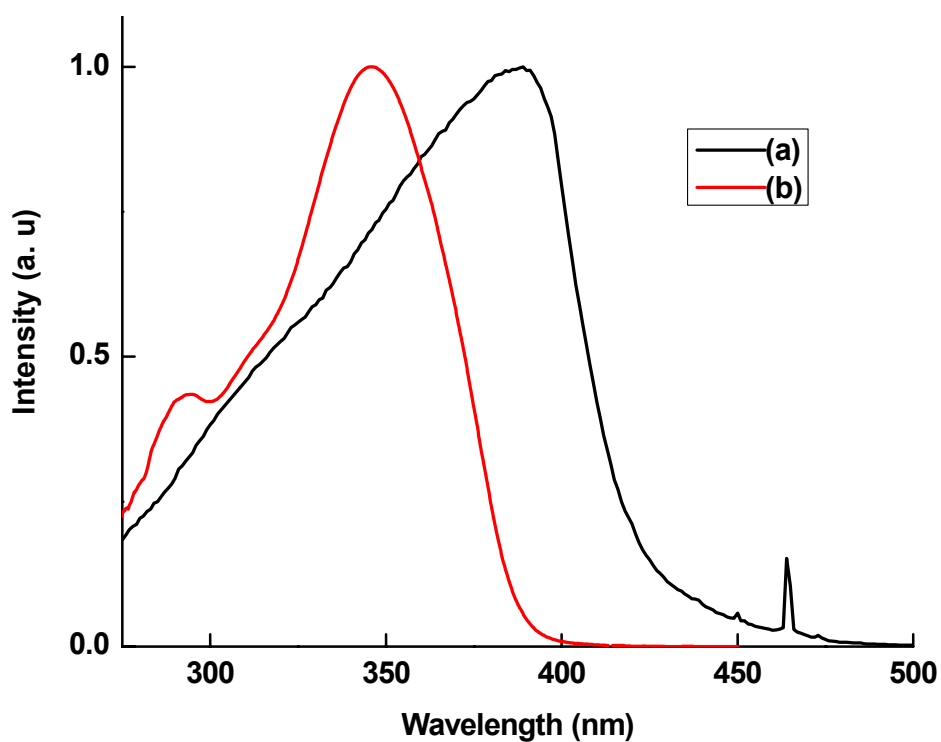


Fig. S8 (a) Solid state excitation spectrum and (b) UV-vis absorption spectrum in CH₃-CN ($c = 2 \times 10^{-5}$ M) of complex **3**.

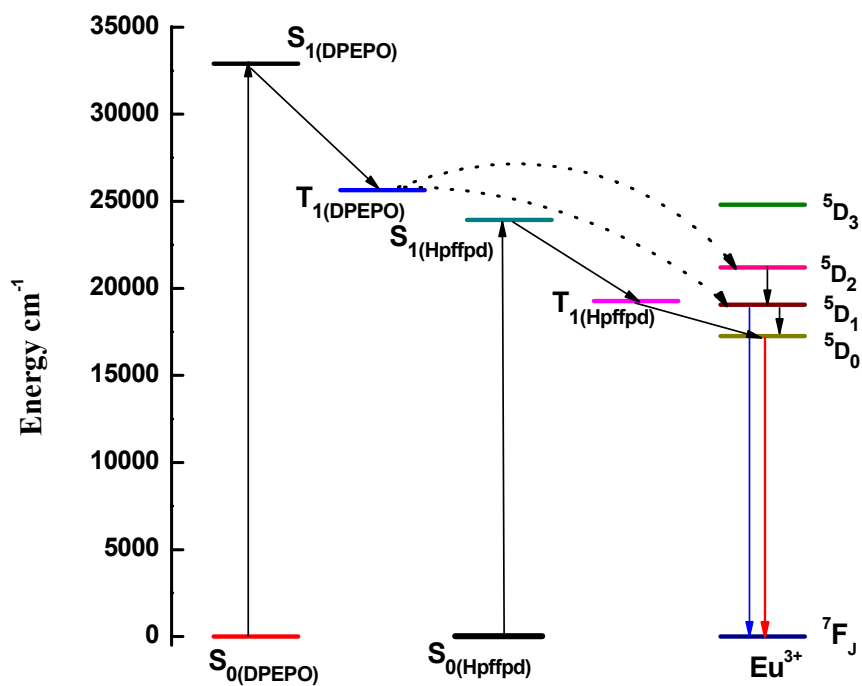


Fig. S9 Schematic energy level diagram and energy transfer processes for complex 3. S_1 represents the first excited singlet state and T_1 represents the first excited triplet state.

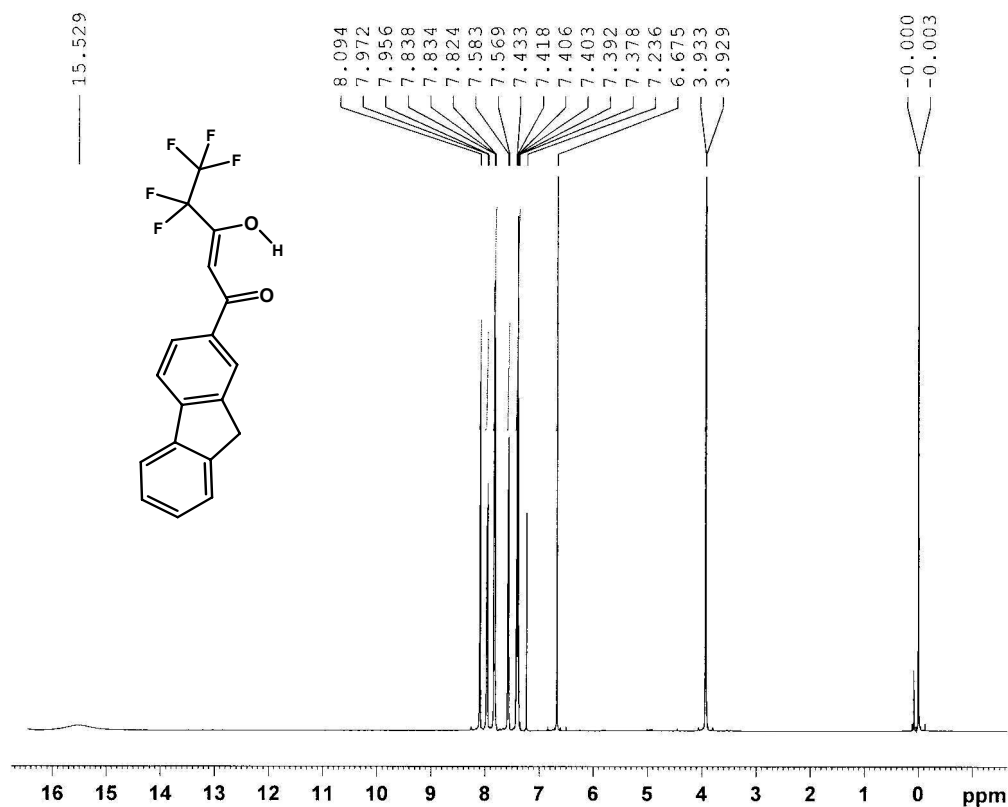


Fig. S10 ¹H NMR spectrum of Hpffpd ($\delta = 7.23$; CDCl₃).

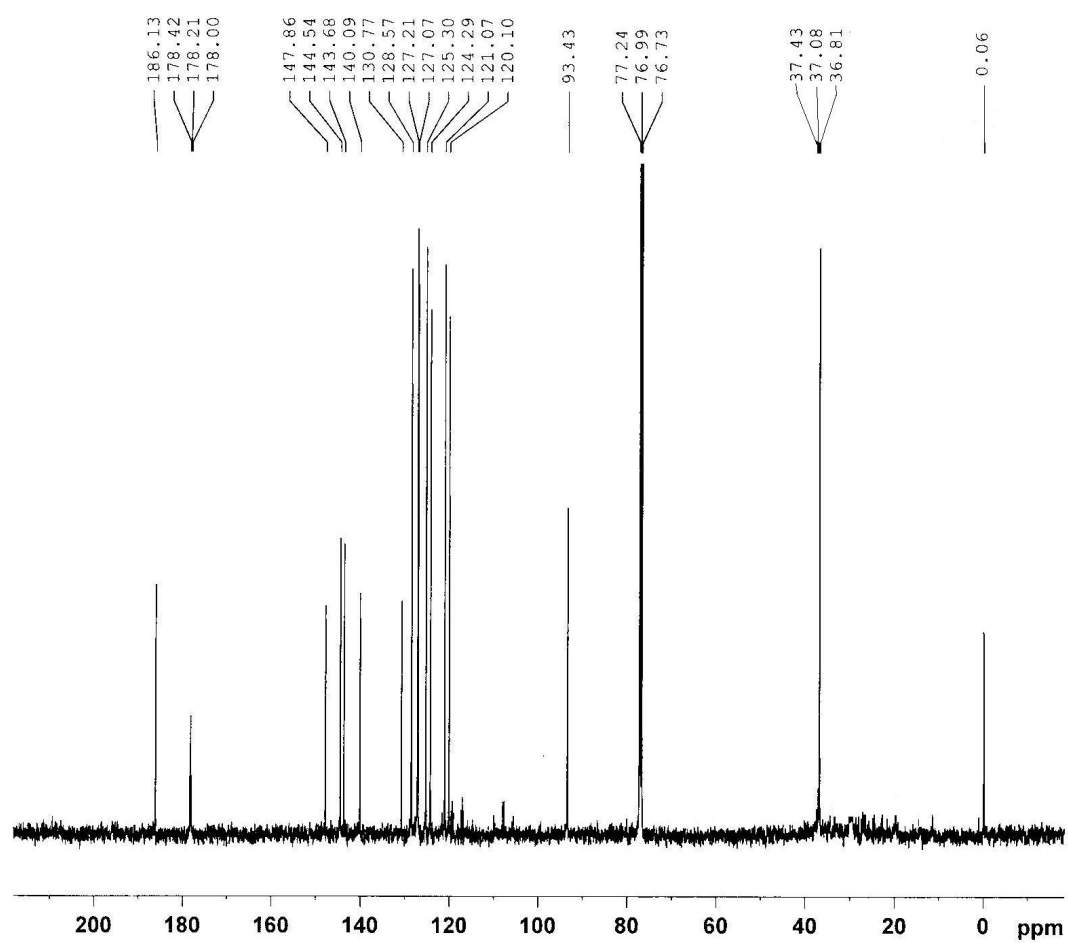


Fig. S11 ¹³C NMR spectrum of Hpffpd (δ = 77.24-76.73; CDCl₃).

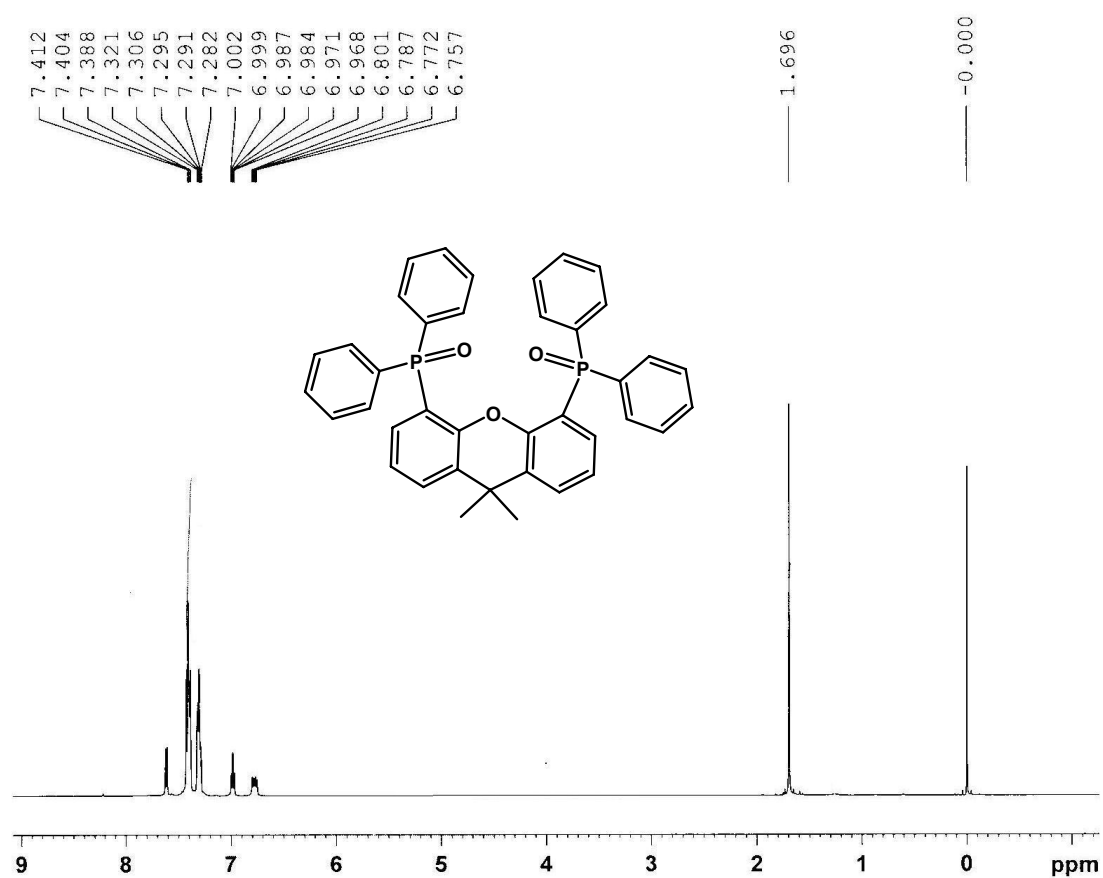


Fig. S12 ^1H NMR spectrum of DDXPO.