

Electronic Supporting Information

A Mitochondria-targeted Iridium (III) Complex-Based Sensor for endogenous GSH Detection in living Cells

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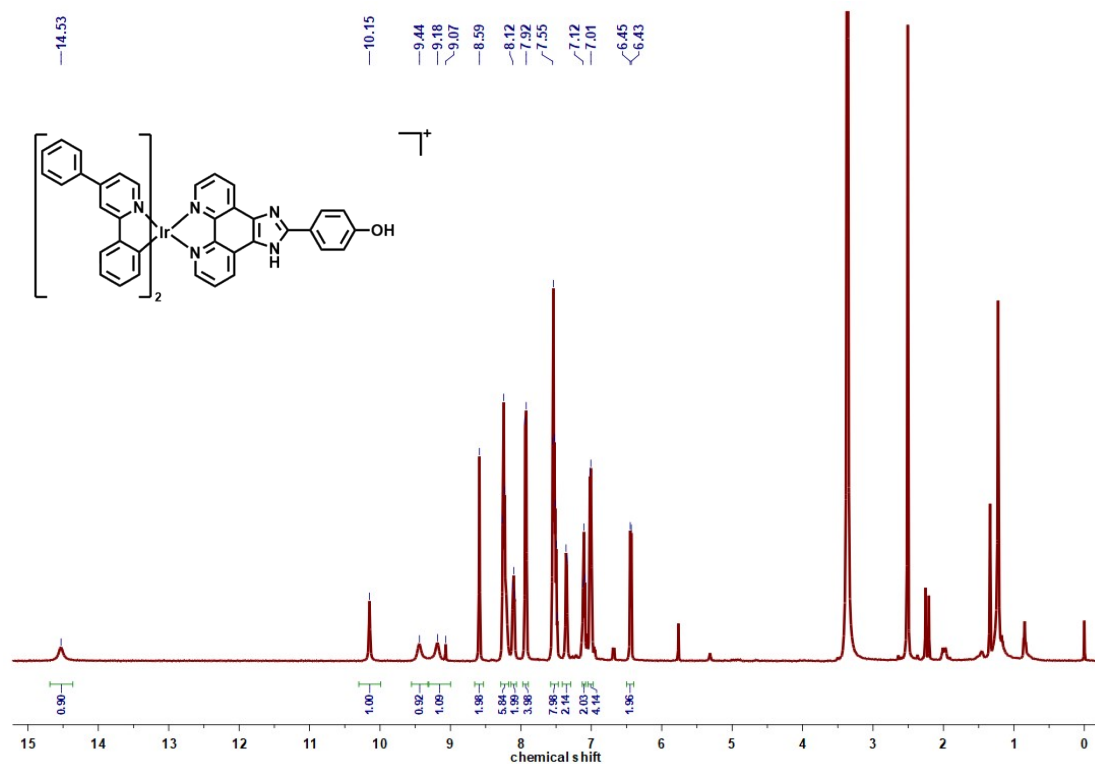


Fig. S1. ¹H NMR spectrum of Ir-OH (DMSO-*d*₆).

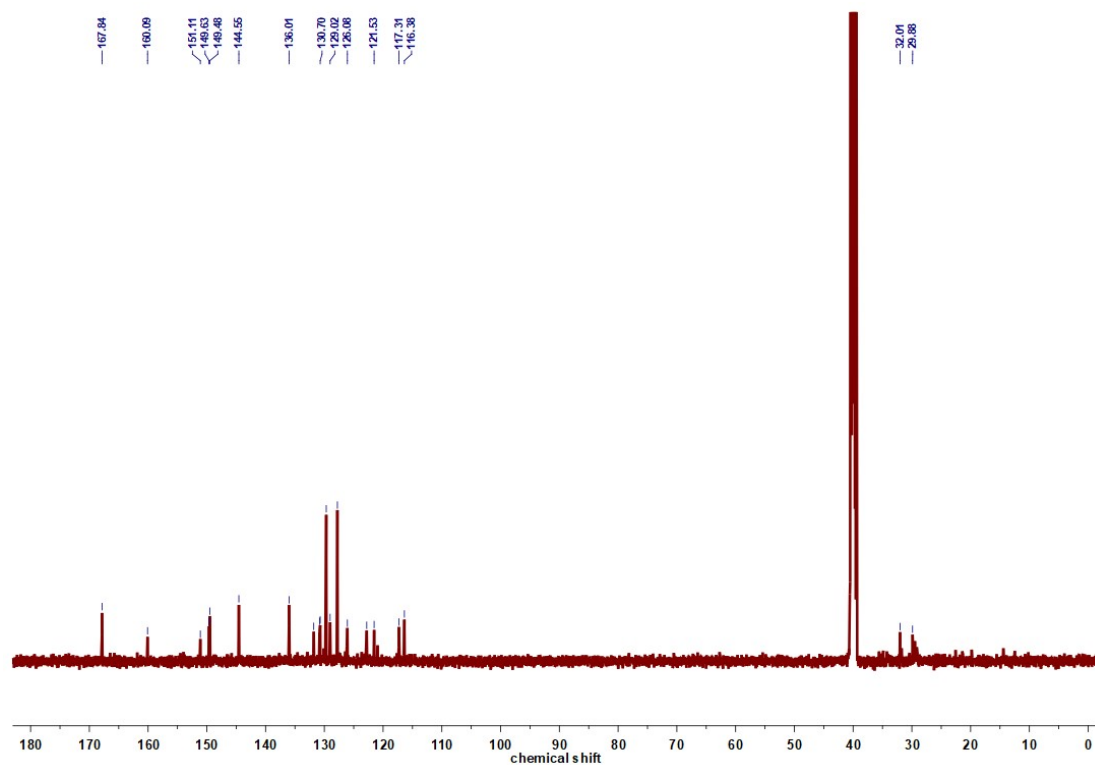


Fig. S2. ¹³C NMR spectrum of Ir-OH (DMSO-*d*₆).

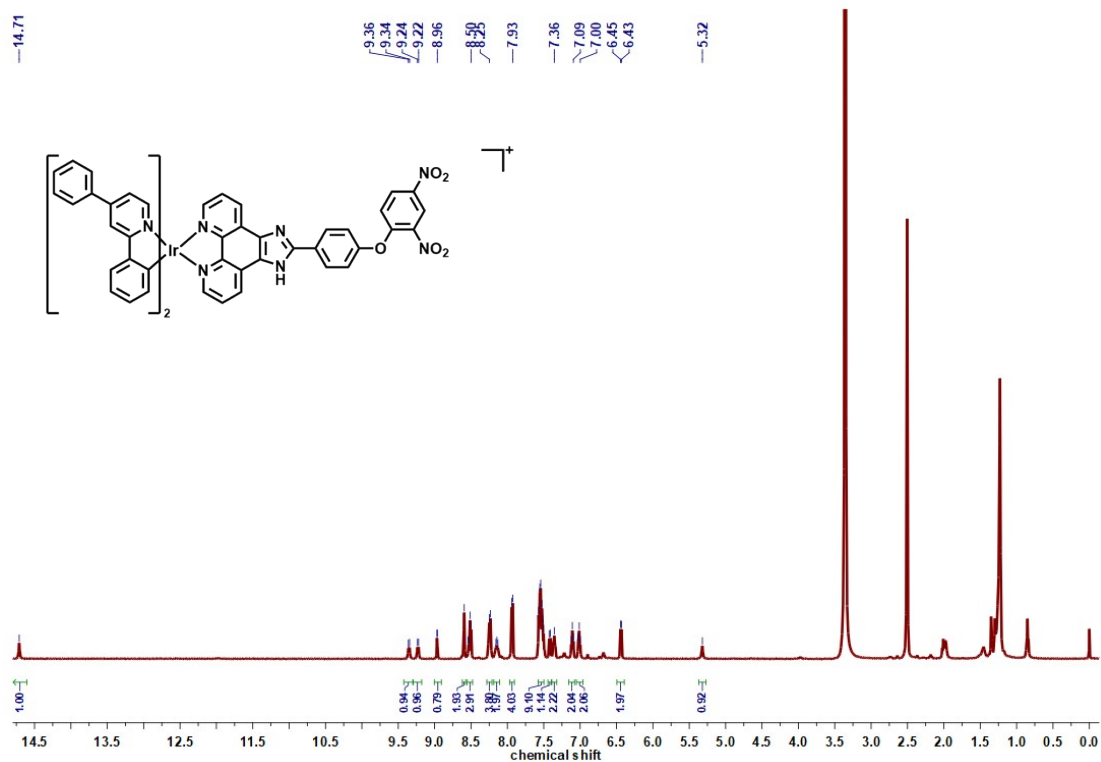


Fig. S3. ^1H NMR spectrum of Ir-DNFB (DMSO- d_6).

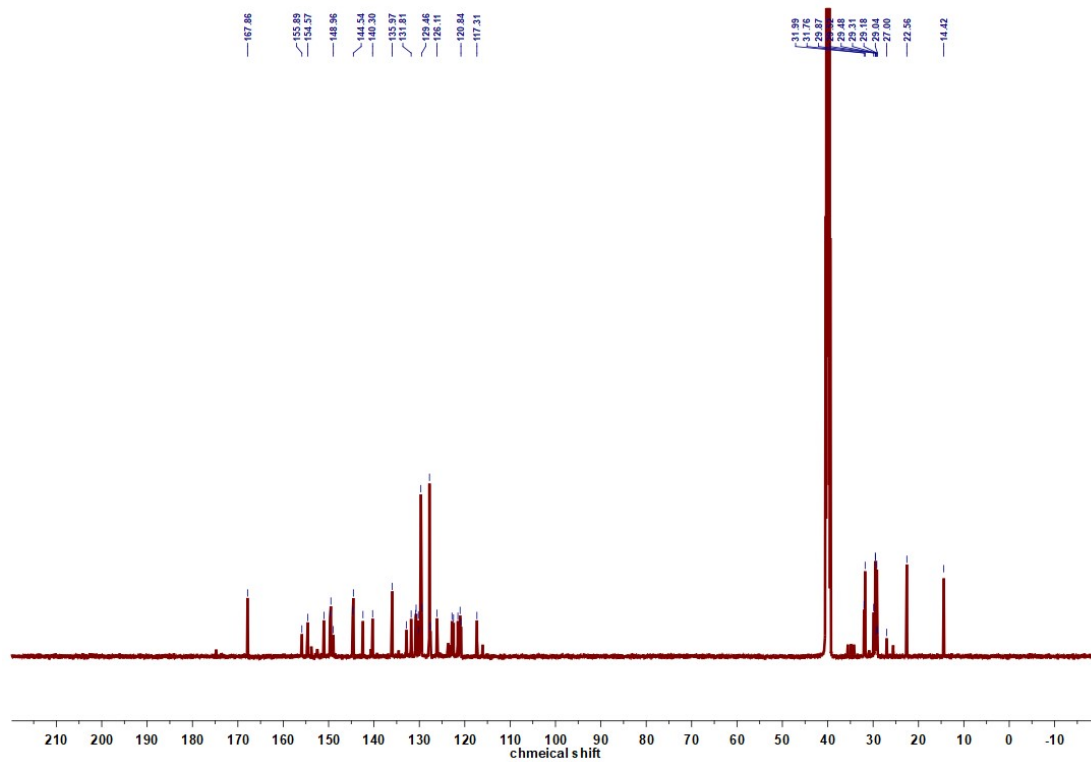


Fig. S4. ^{13}C NMR spectrum of Ir-DNFB (DMSO- d_6).

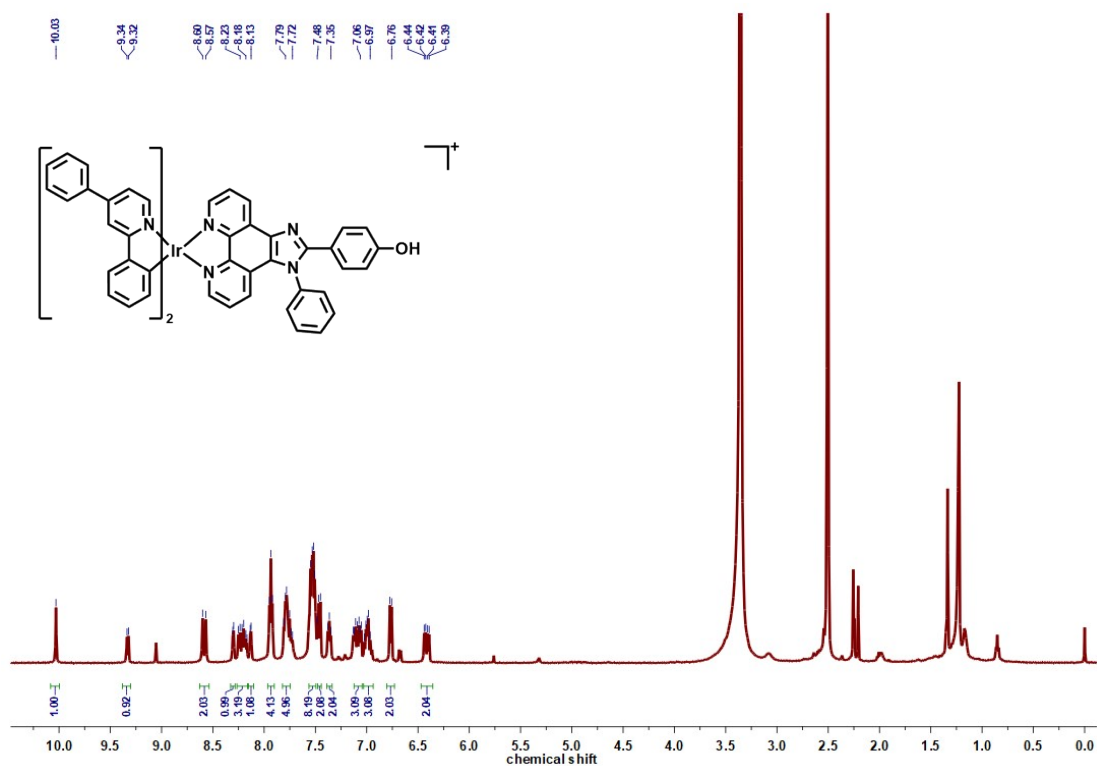


Fig. S5. ^1H NMR spectrum of Ir-B-OH (DMSO- d_6).

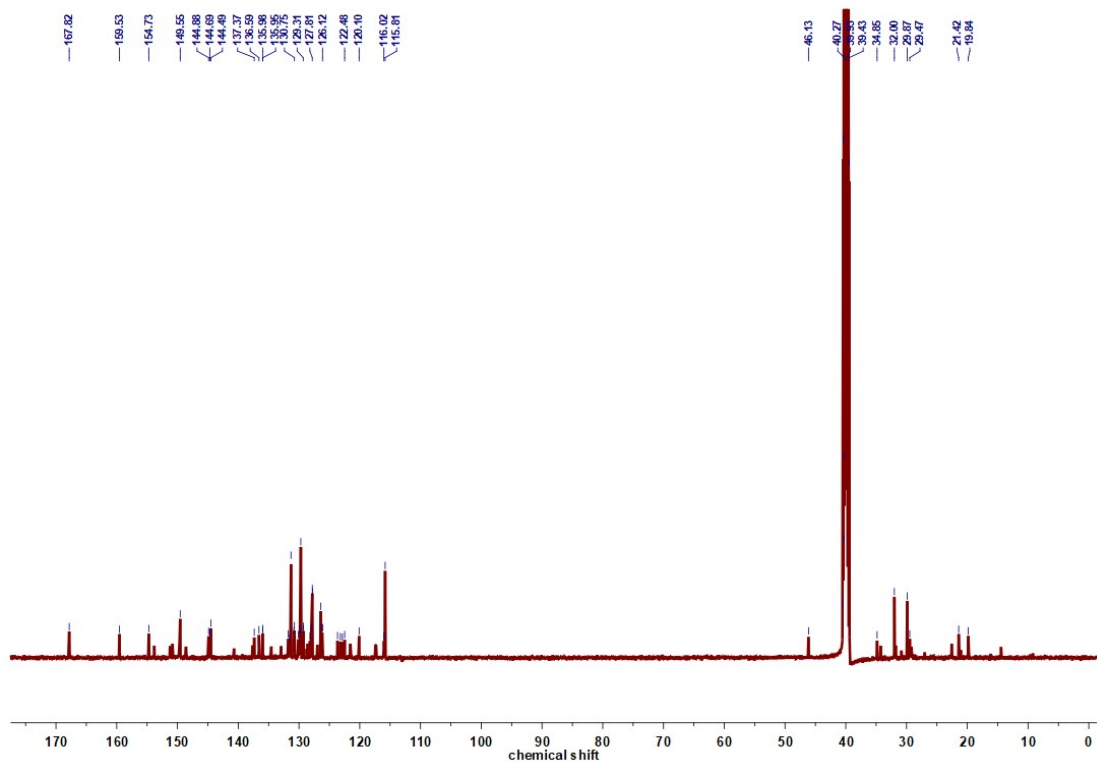


Fig. S6. ^{13}C NMR spectrum of Ir-B-OH (DMSO- d_6).

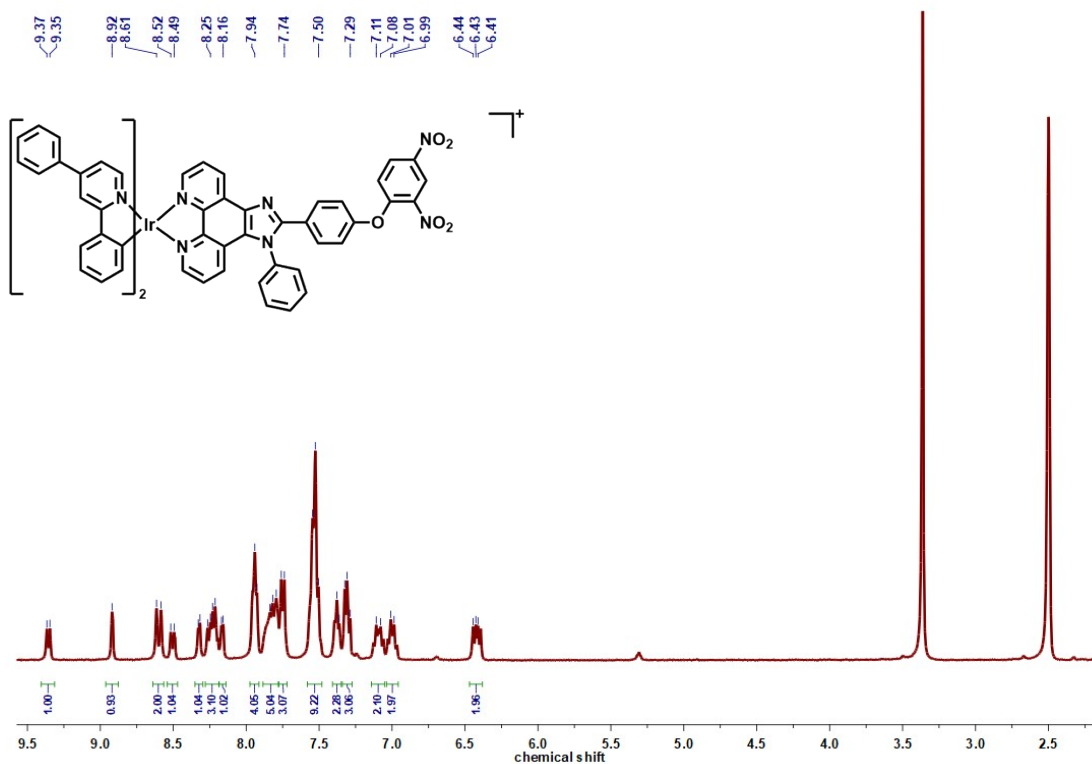


Fig. S7. ^1H NMR spectrum of Ir-B (DMSO- d_6).

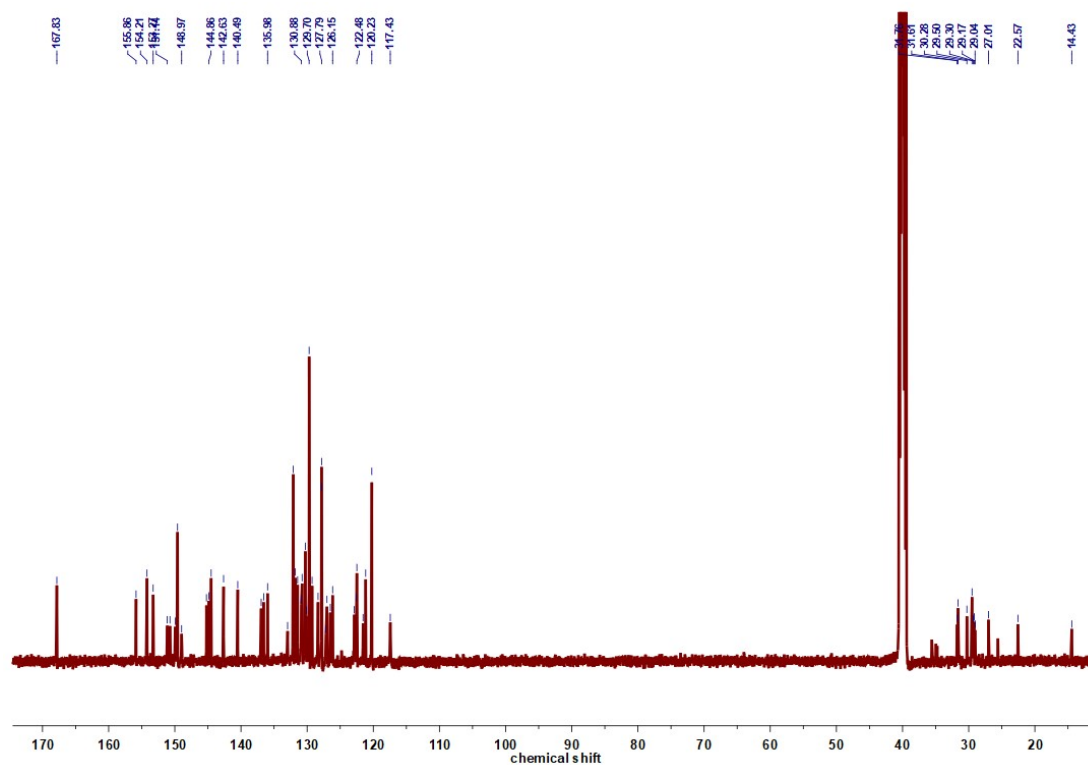


Fig. S8. ^{13}C NMR spectrum of Ir-B (DMSO- d_6).

7 #13 RT: 0.18 AV: 1 NL: 2.11E7
T: FTMS + p ESI Full ms [100.0000-1500.0000]

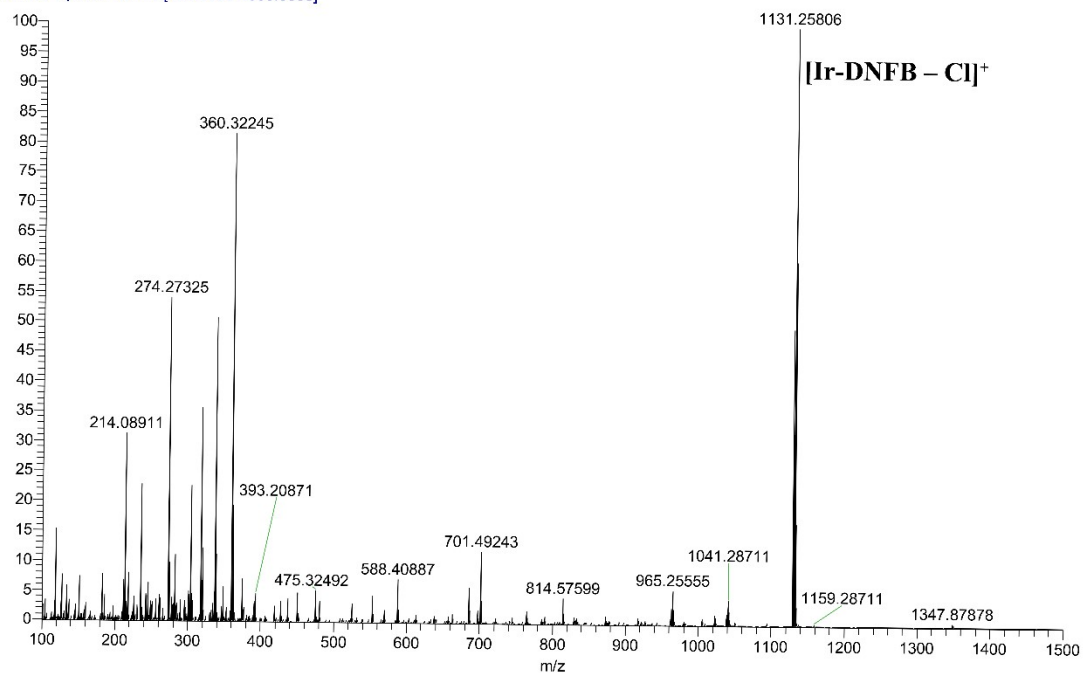


Fig. S9. Mass spectrum (MS) of the Ir-DNFB.

7 #13 RT: 0.18 AV: 1 NL: 1.21E7
T: FTMS + p ESI Full ms [100.0000-1500.0000]

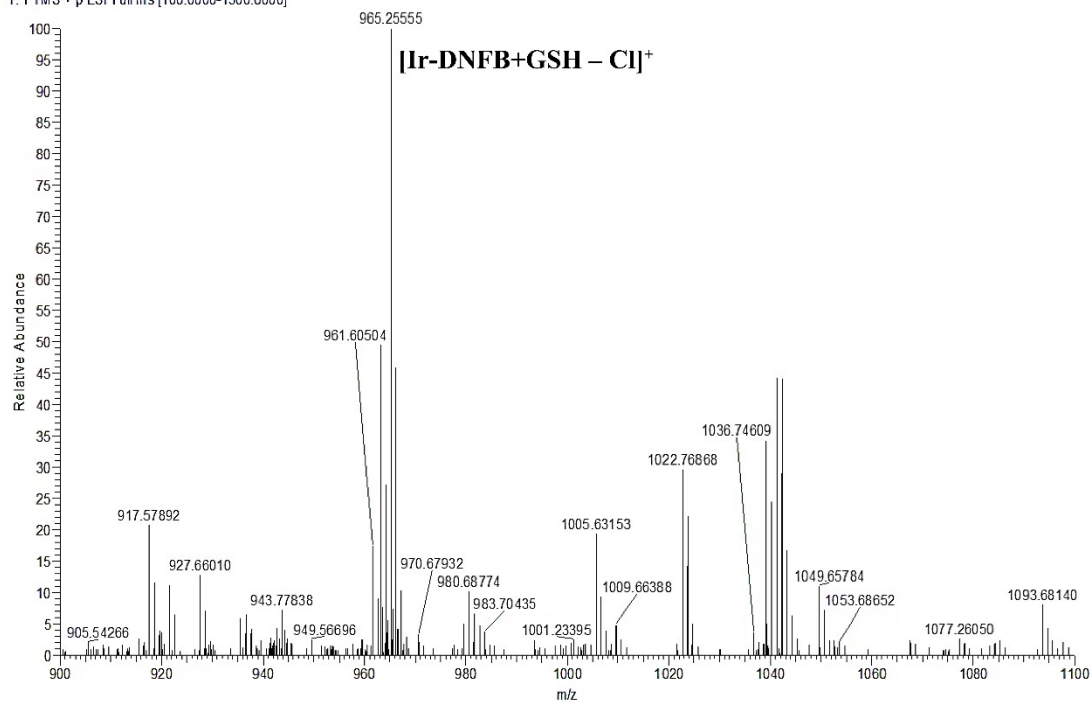


Fig. S10. Mass spectrum (MS) of the Ir-DNFB+GSH.

6 #13 RT: 0.18 AV: 1 NL: 2.19E9
T: FTMS + p ESI Full ms [100.0000-1500.0000]

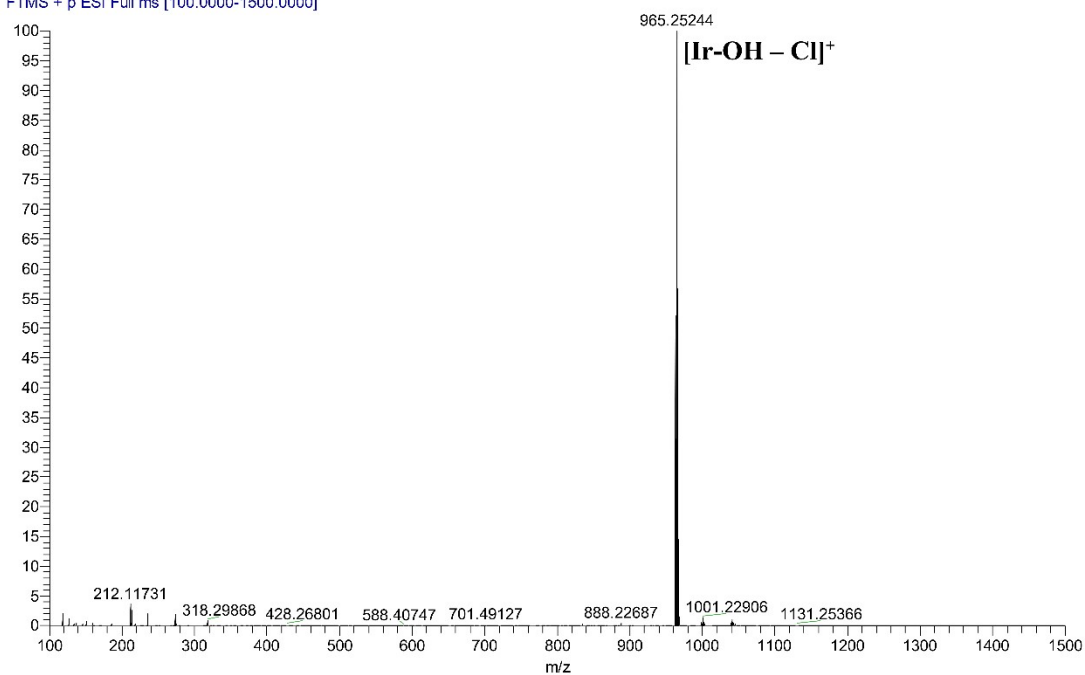


Fig. S11. Mass spectrum (MS) of the Ir-OH.

4 #13 RT: 0.17 AV: 1 NL: 2.86E9
T: FTMS + p ESI Full ms [100.0000-1500.0000]

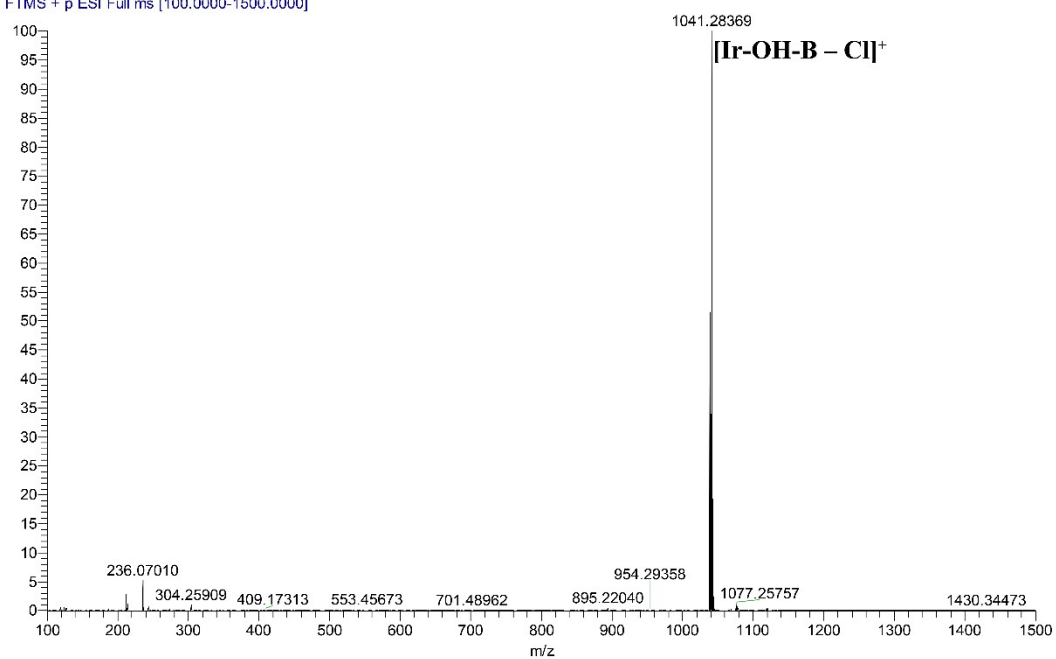


Fig. S12. Mass spectrum (MS) of the Ir-OH-B.

2211303974 #11 RT: 0.16 AV: 1 NL: 2.22E8
T: FTMS + p ESI Full ms [100.0000-1500.0000]

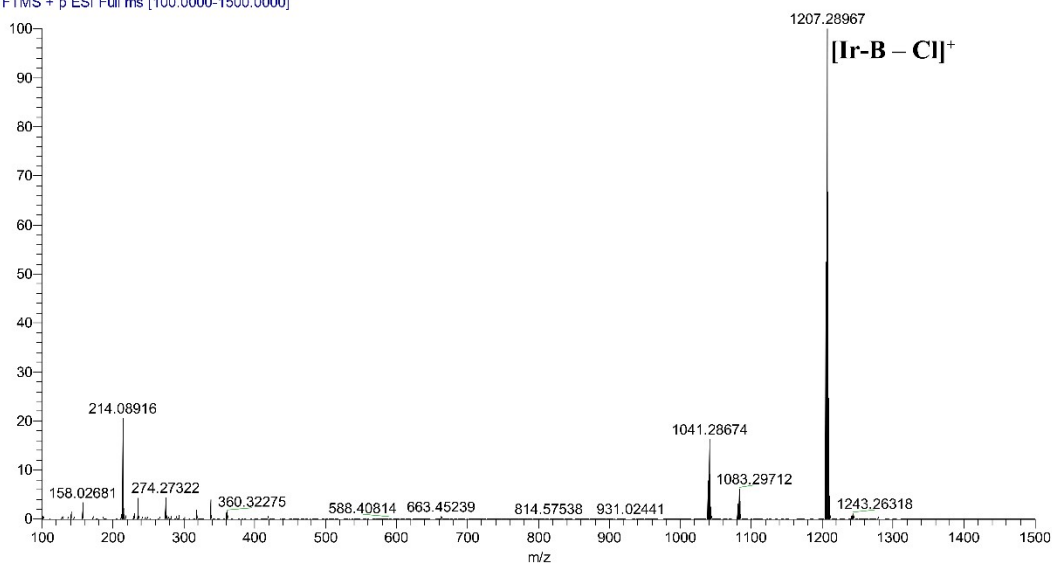


Fig. S13. Mass spectrum (MS) of the Ir-B.

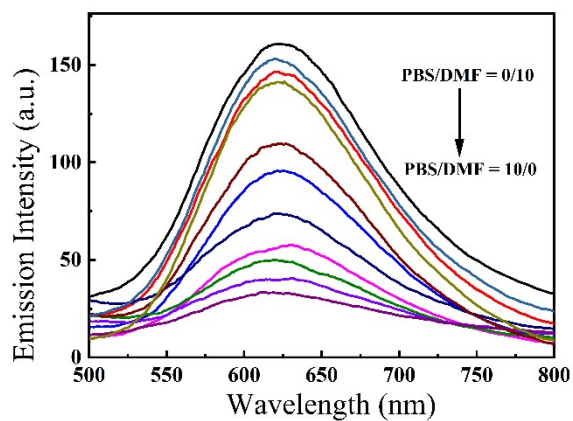


Fig. S14. The emission spectra of Ir-DNFB probe (10 μM) with the addition of GSH (100 μM) in different ratio of DMF versus PBS buffer.

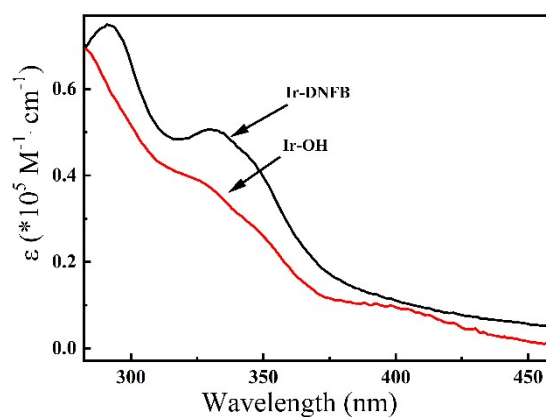


Fig. S15. The UV-Vis absorption spectra of Ir DNFB (10 μM) and Ir OH (10 μM).

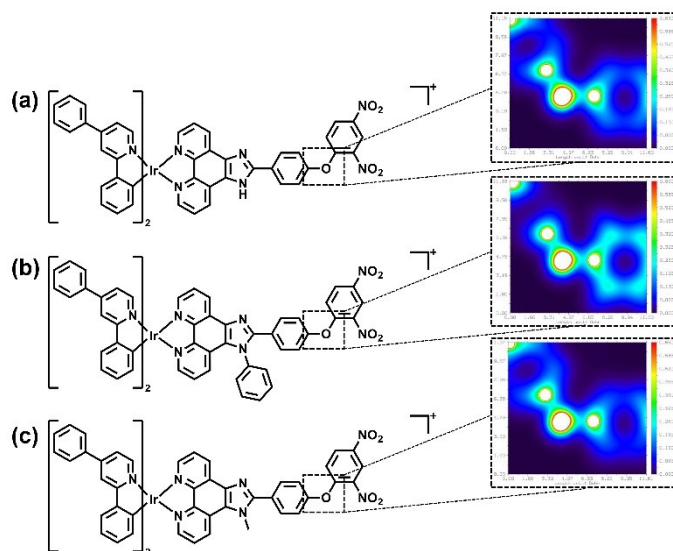


Fig. S16. Density functional theory (DFT) calculated the electron density of Ir-DNFB (a), Ir-B (b) and Ir-Me (c).

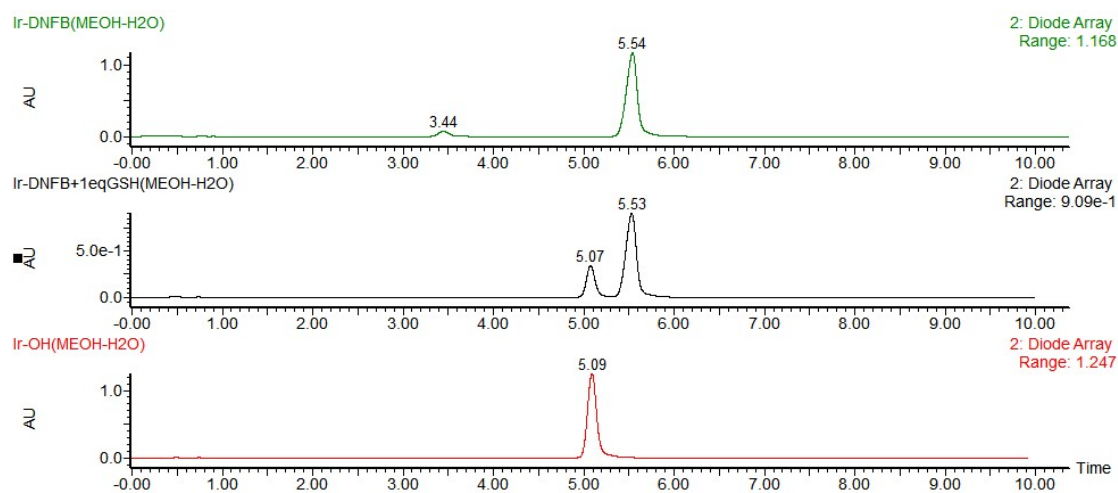


Fig. S17. The HPLC chromatograms of Ir-DNFB, Ir-DNFB + GSH and Ir-OH. 10 % MeOH/H₂O to 100 %

MeOH, at 1 mL min⁻¹ flow rate.

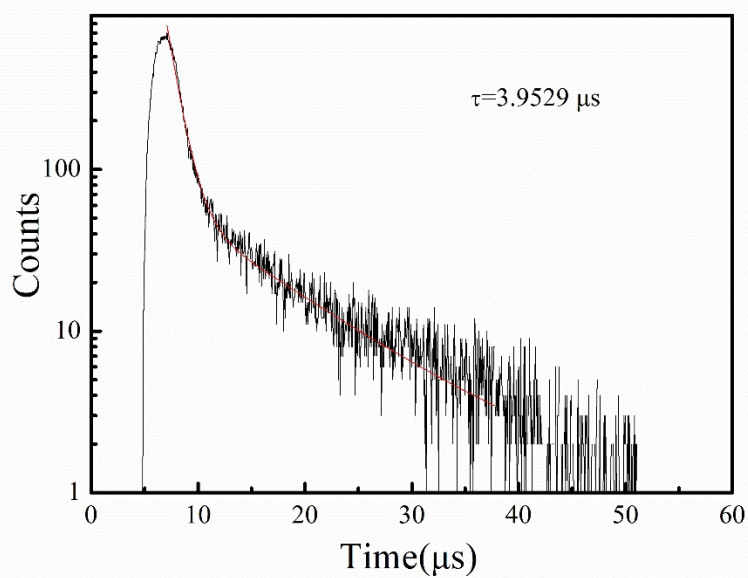


Fig. S18. Solution phosphorescence lifetime of Ir-DNFB.

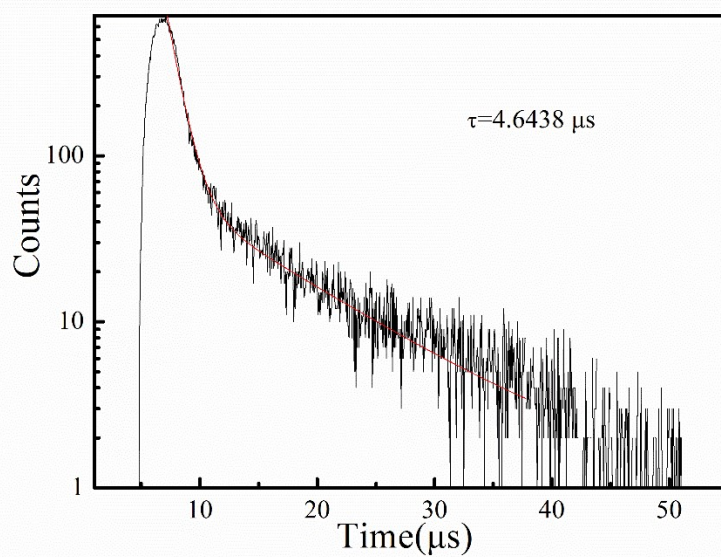


Fig. S19. Solution phosphorescence lifetime of Ir-DNFB+GSH.

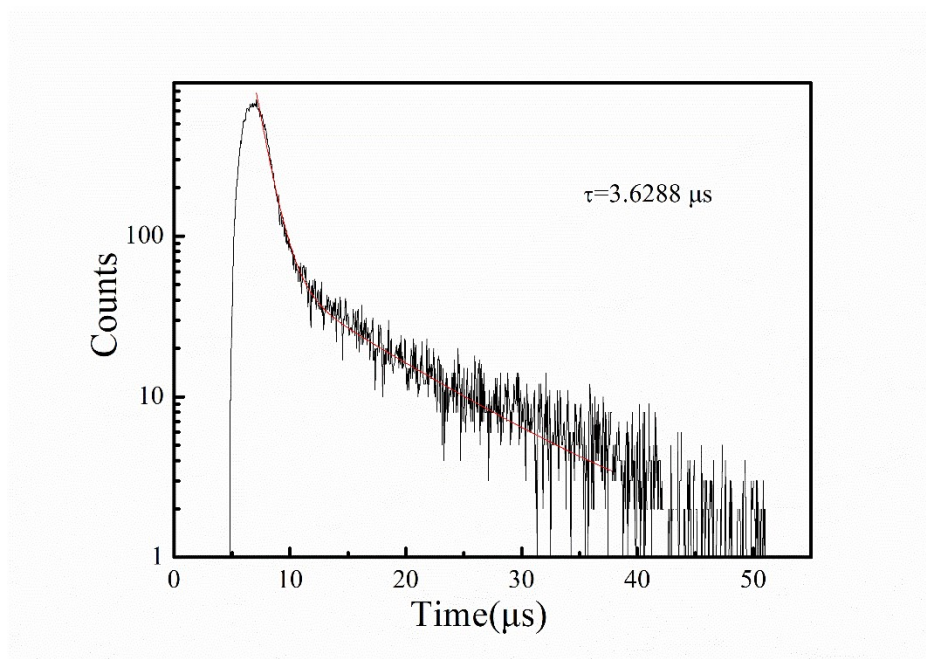


Fig. S20. Solid phosphorescence lifetime of Ir-OH.