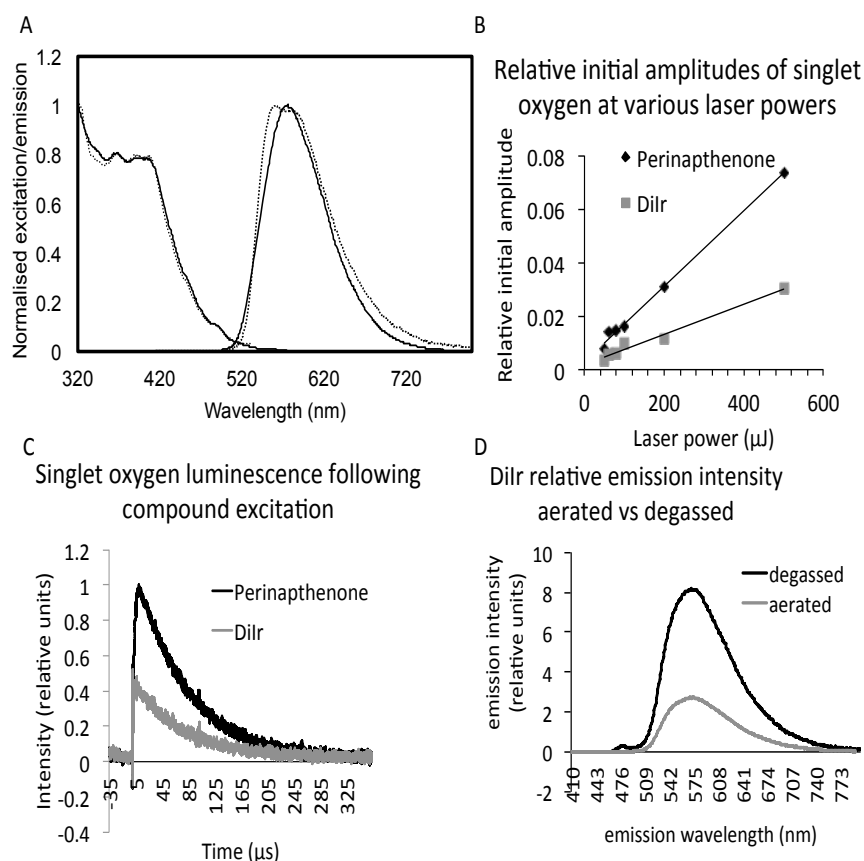
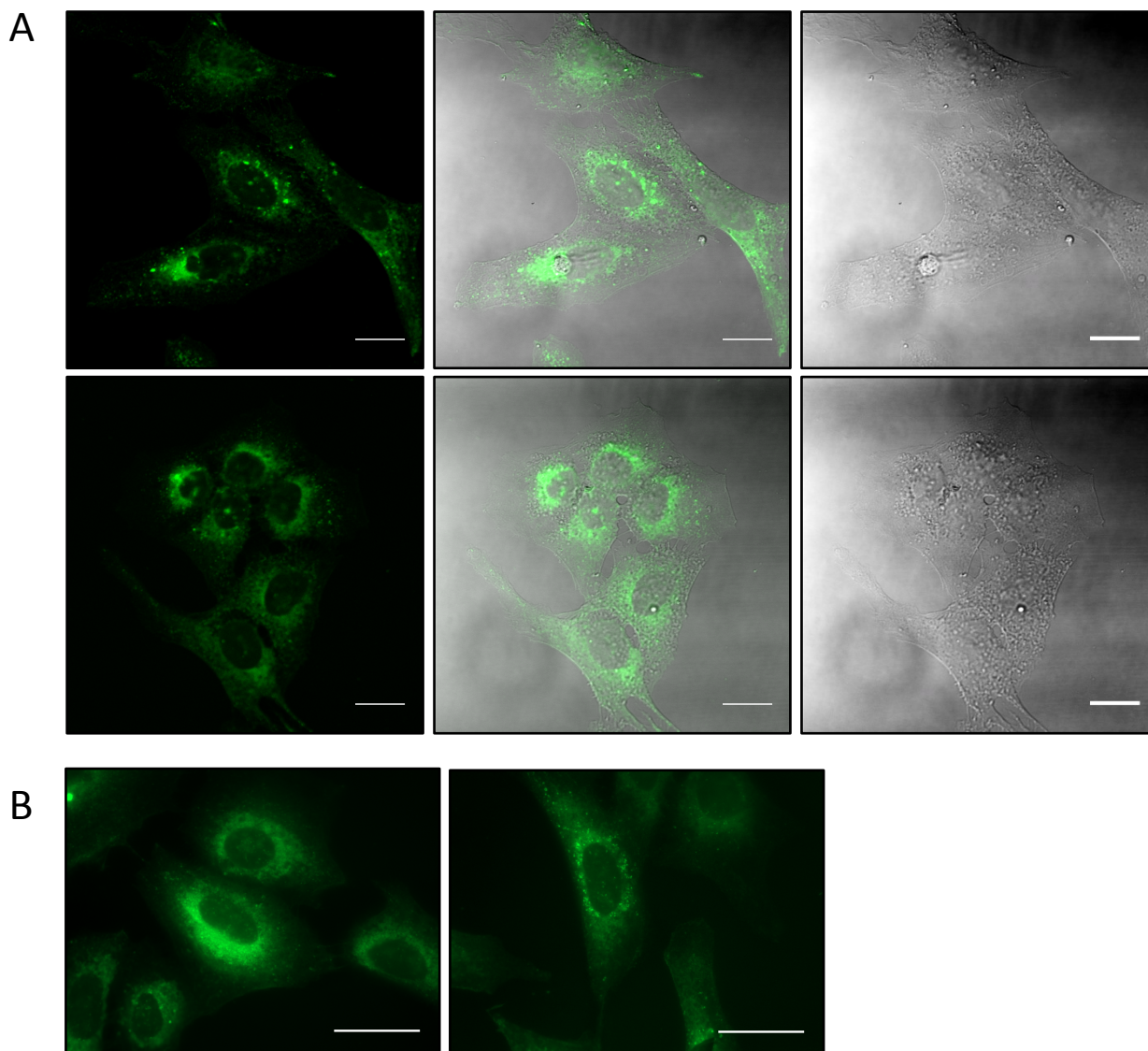


Electronic supplementary information

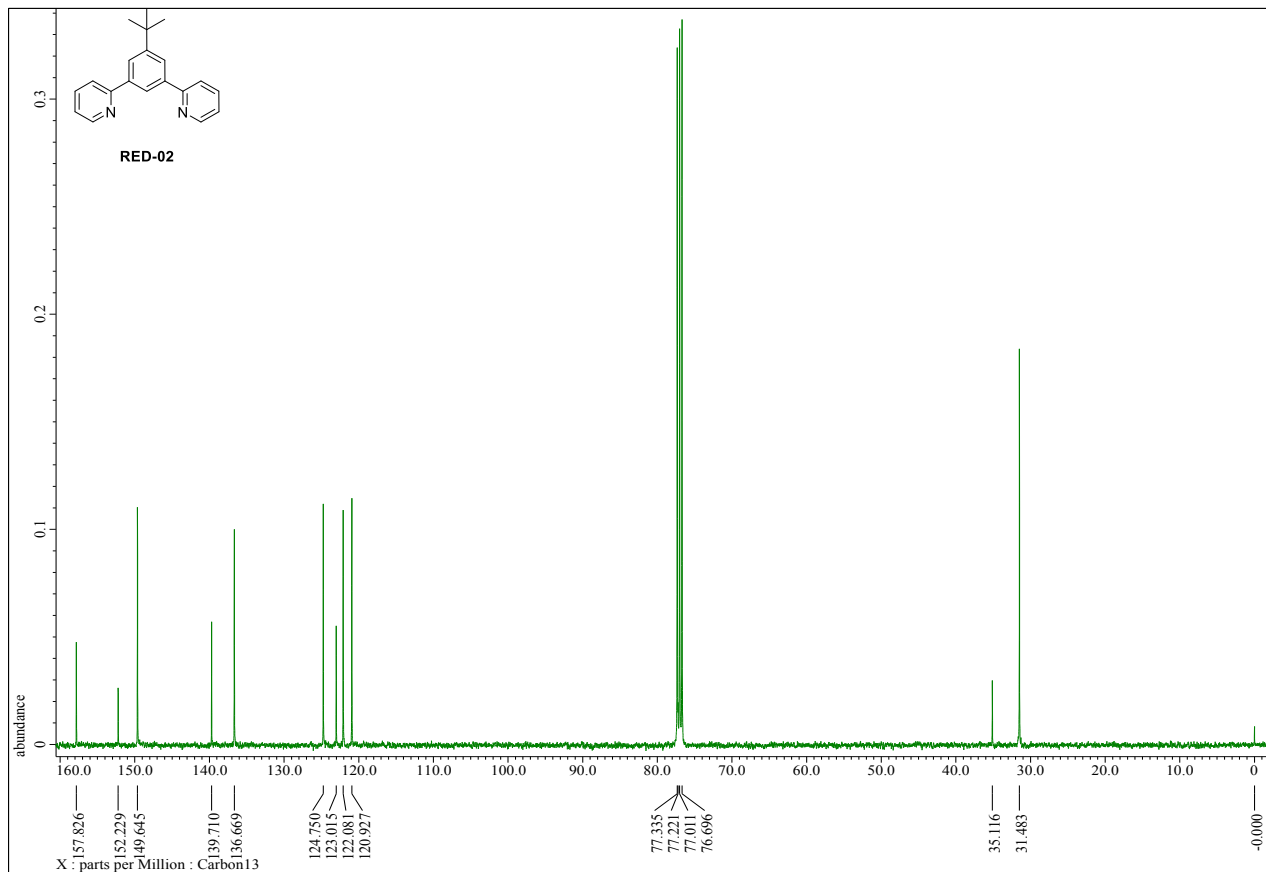
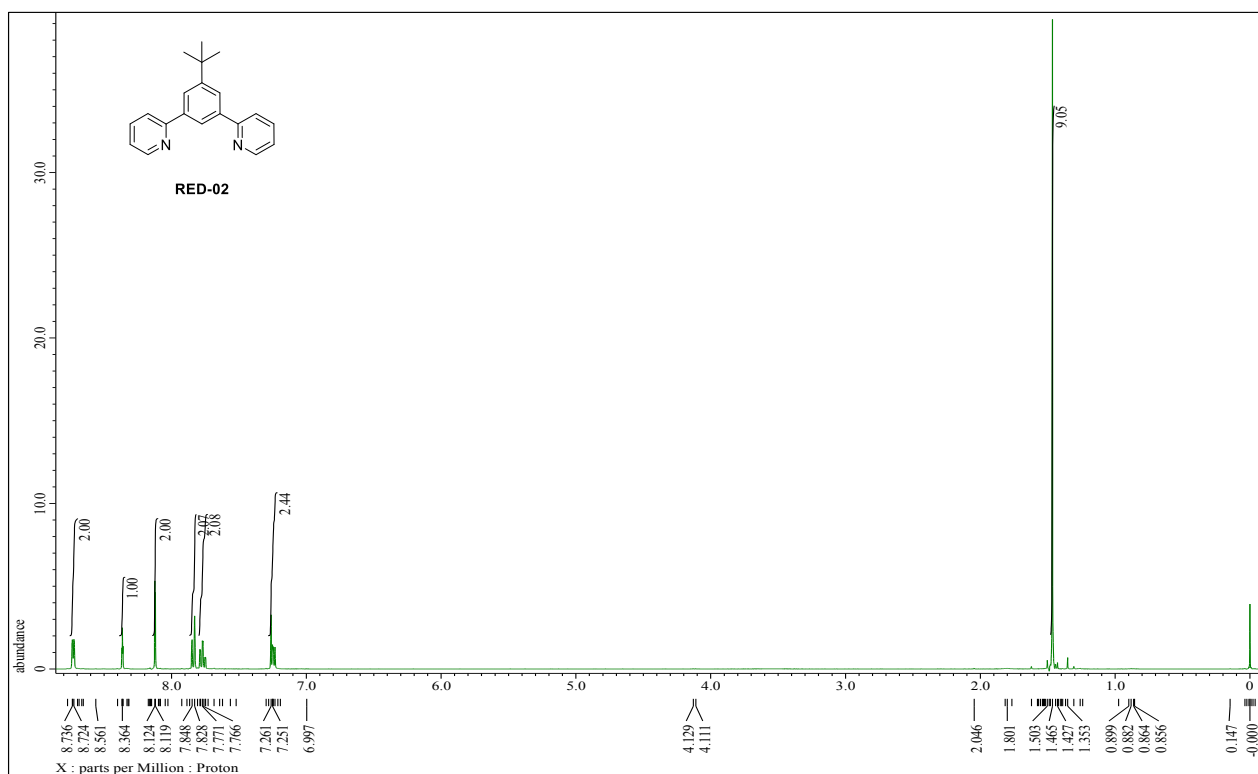
S1: A: Normalised UV/Vis and emission spectra for **Complex-1** in acetonitrile and water at ambient temperature in air equilibrated solvent. Normalised excitation $\lambda_{\text{reg}} = 600\text{nm}$) and emission spectra $\lambda_{\text{exc}} = 400\text{ nm}$ of **Complex-1** in aerated acetonitrile (dashed lines) and water (solid lines) solutions at room temperature. **B:** Relative initial amplitudes of singlet oxygen luminescence spectra recorded at various laser energy ($\lambda = 355\text{ nm}$) with Perinapthenone (standard) and **Complex 1** from which singlet oxygen yield of Dilr was determined. **C:** Singlet oxygen luminescence spectra as recorded following excitation of perinapthenone (standard) and **Complex 1** in acetonitrile at 355 nm. Luminescence spectra recorded at 1275 nm. **D:** Relative emission of **Complex 1** in aerated and degassed acetonitrile. Optical densities at excitation wavelength (400 nm) are equal.

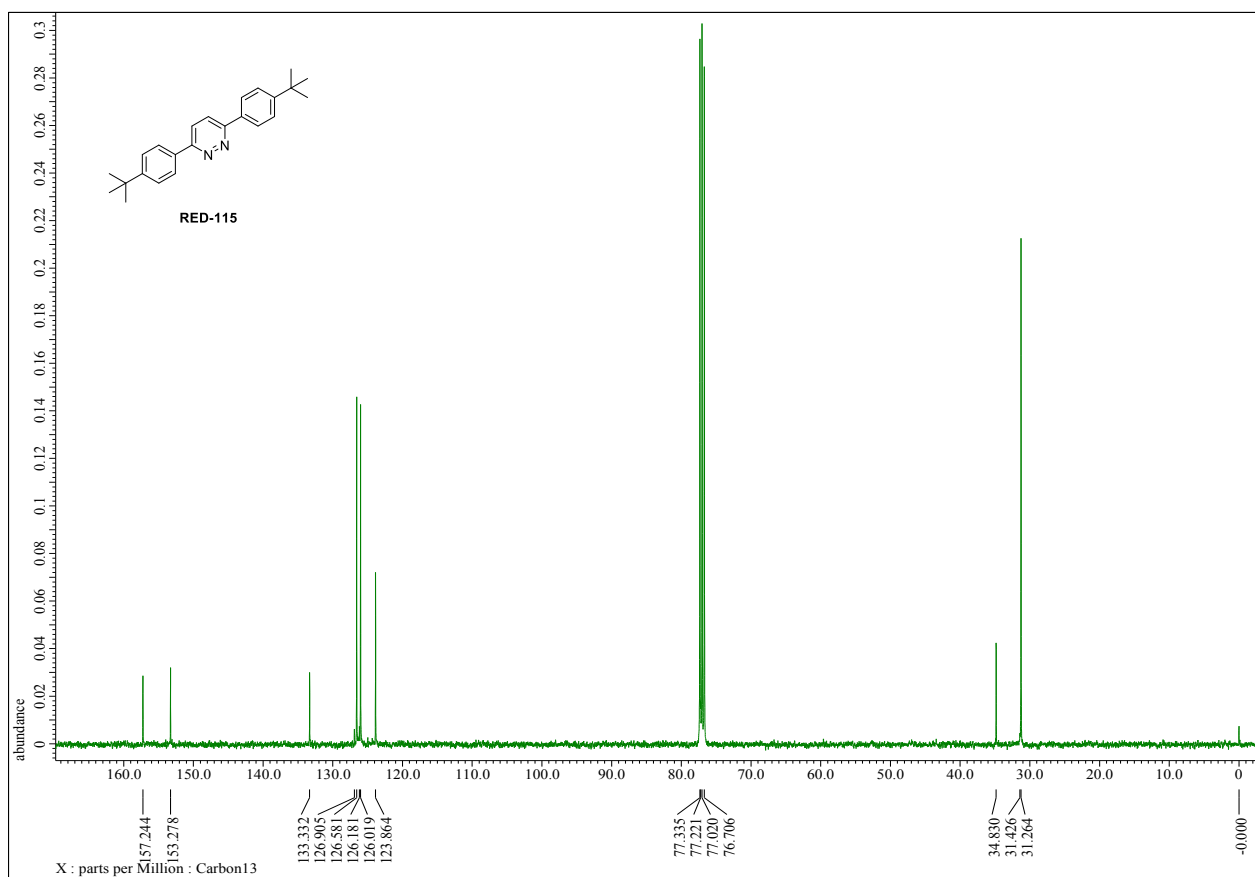
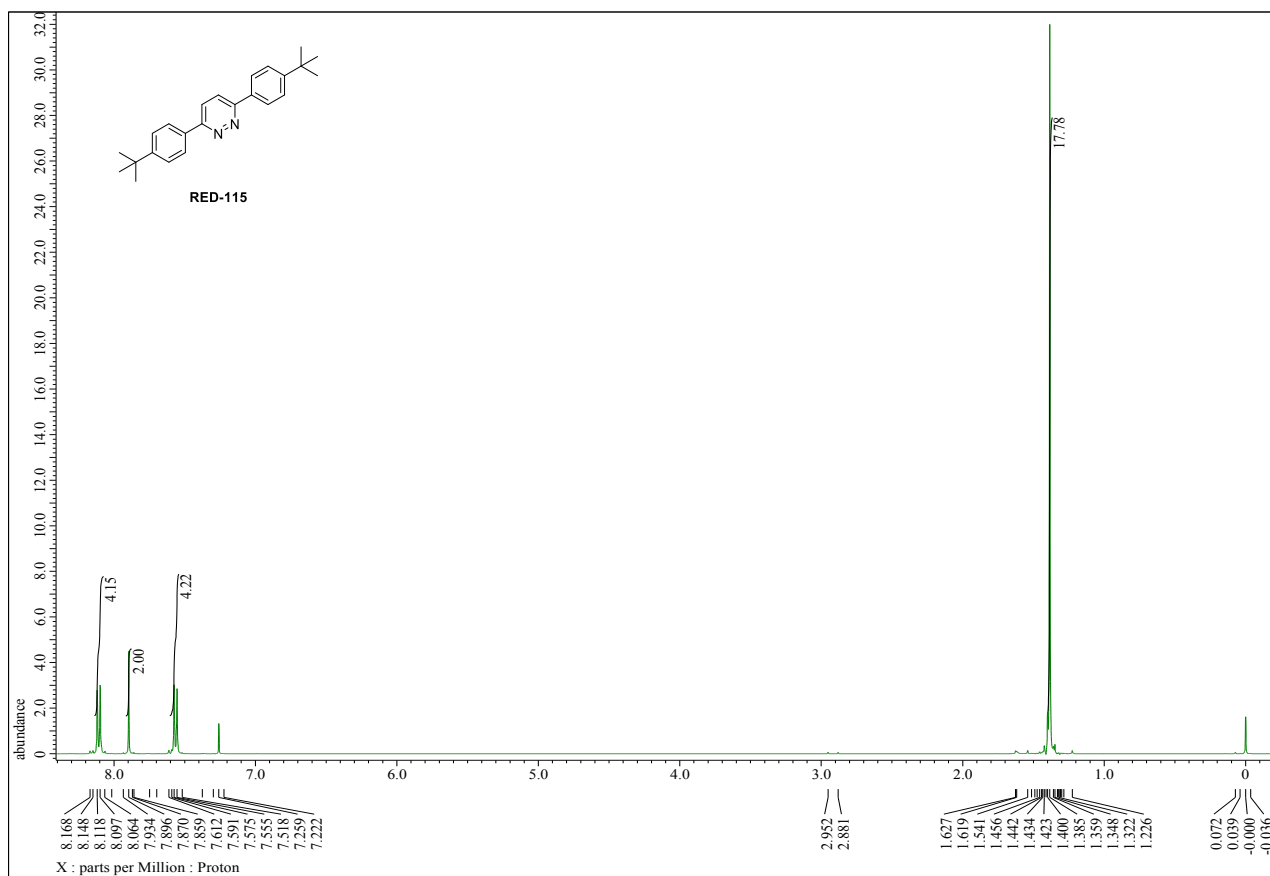


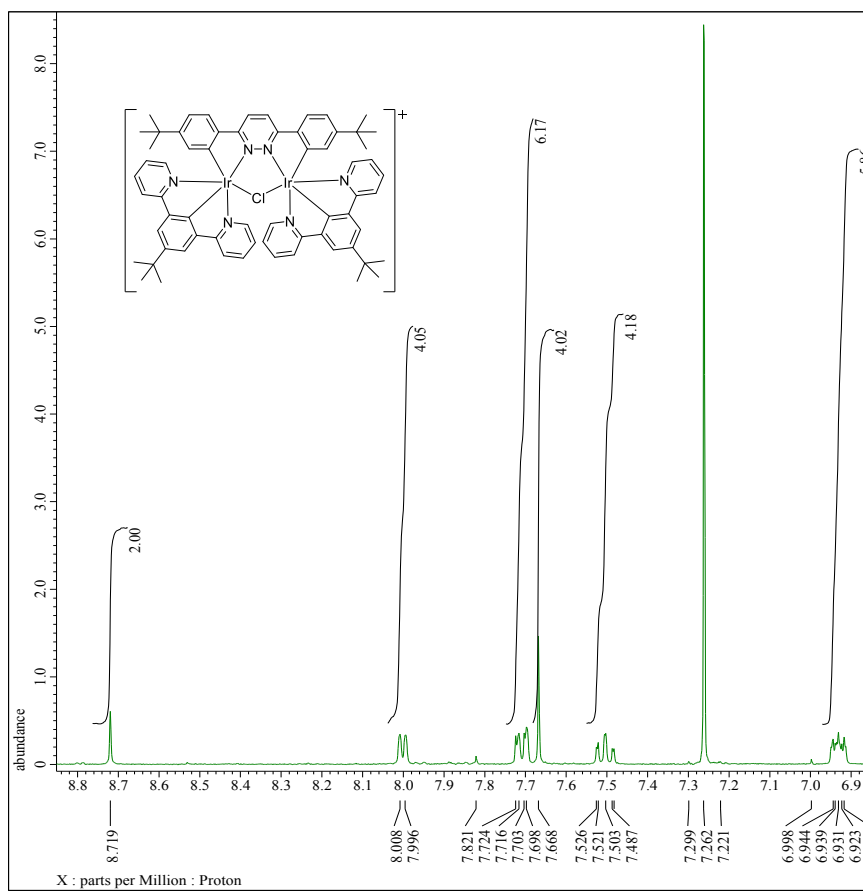
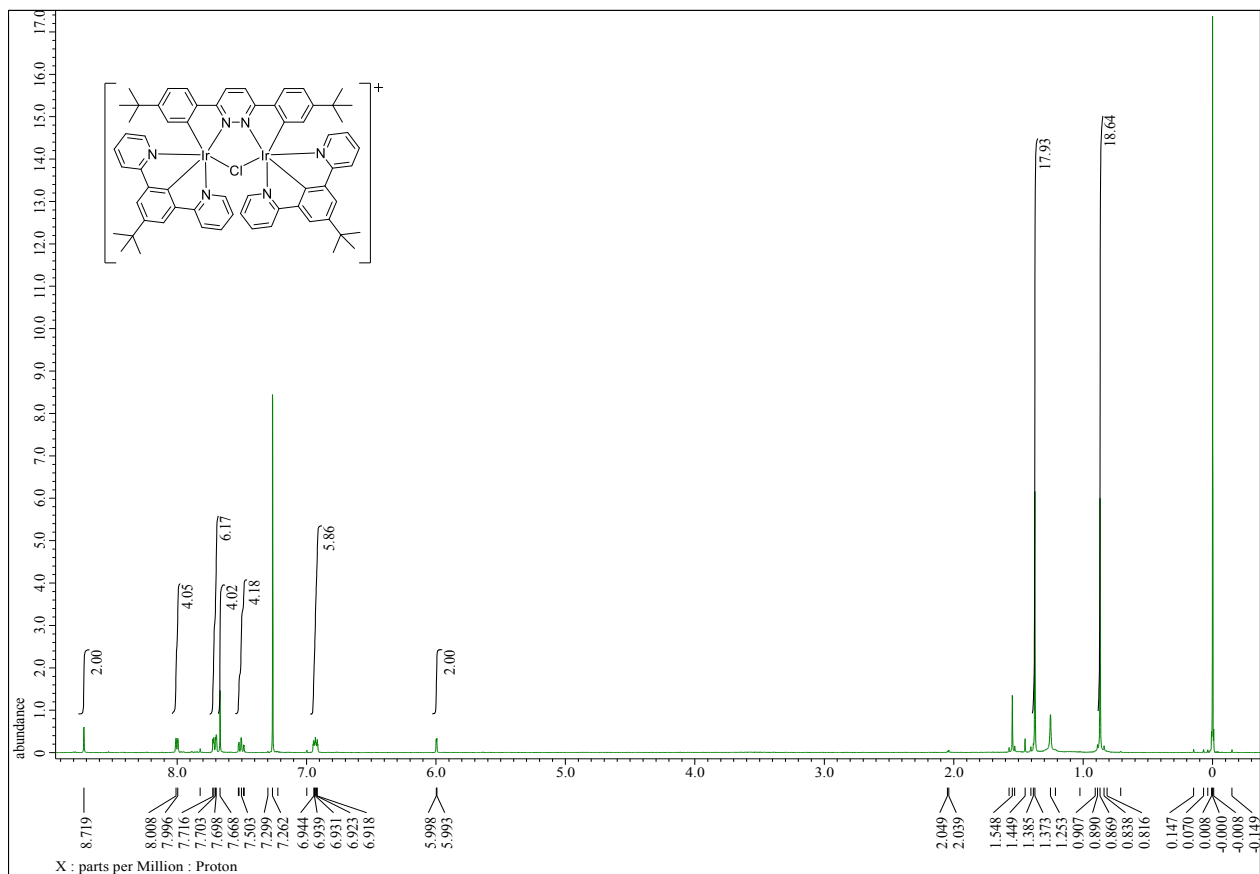
S2: Multiphoton images of **Complex-1** in U2OS cells, **A:** 20 μ M, and **B:** 5 μ M after 5 hours incubation, emission (left), brightfield (right) and overlay (centre). Excitation at 800 nm and emission 565-615 (green LUT chosen for clarity). Scale bars = 20 μ m

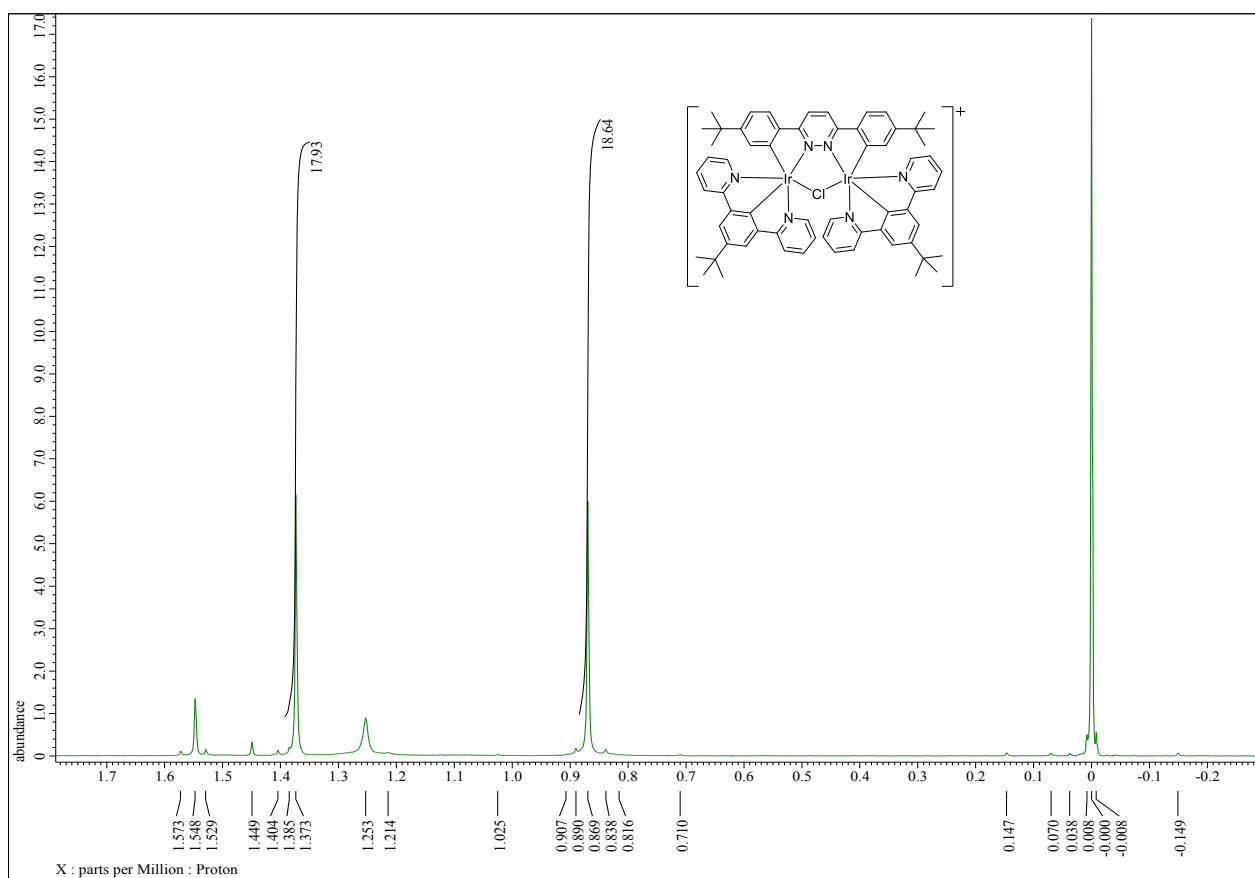
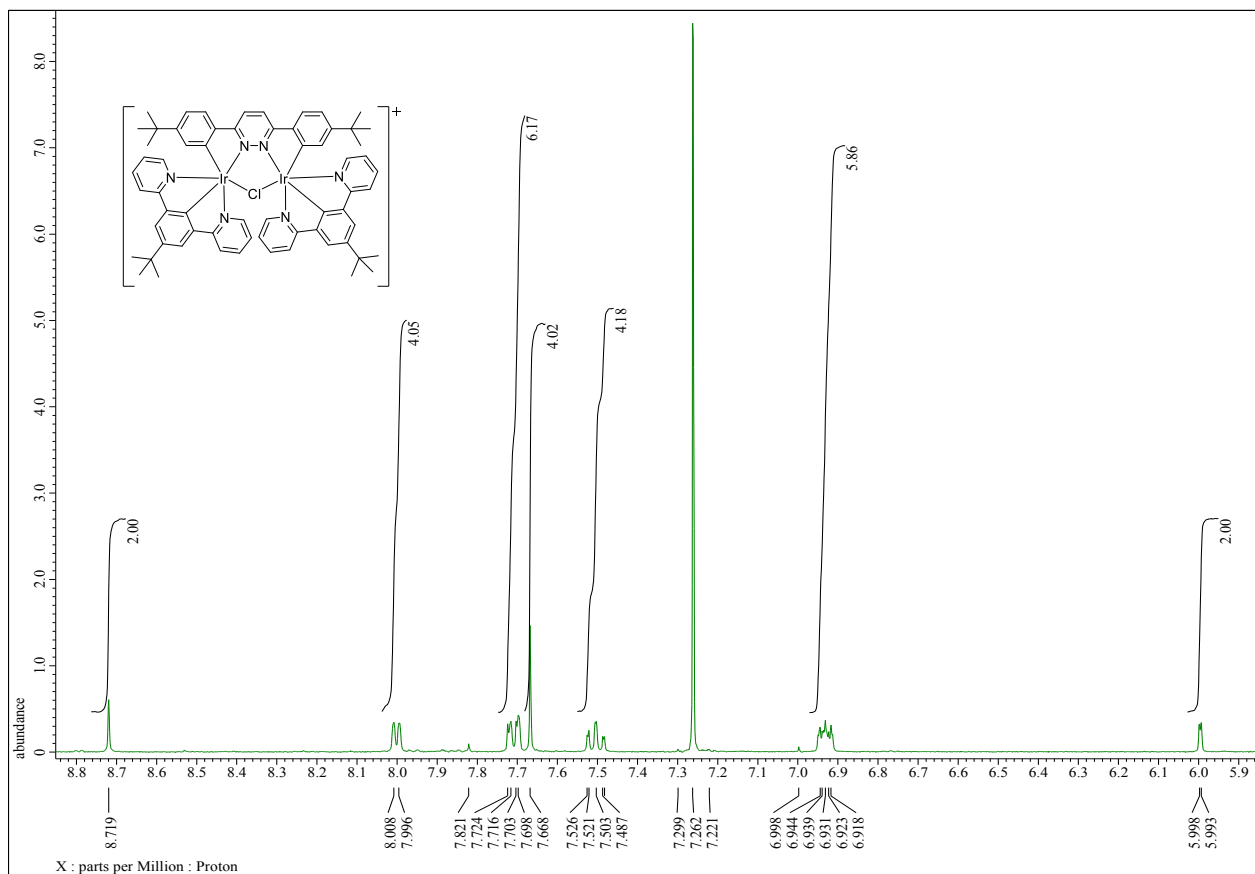


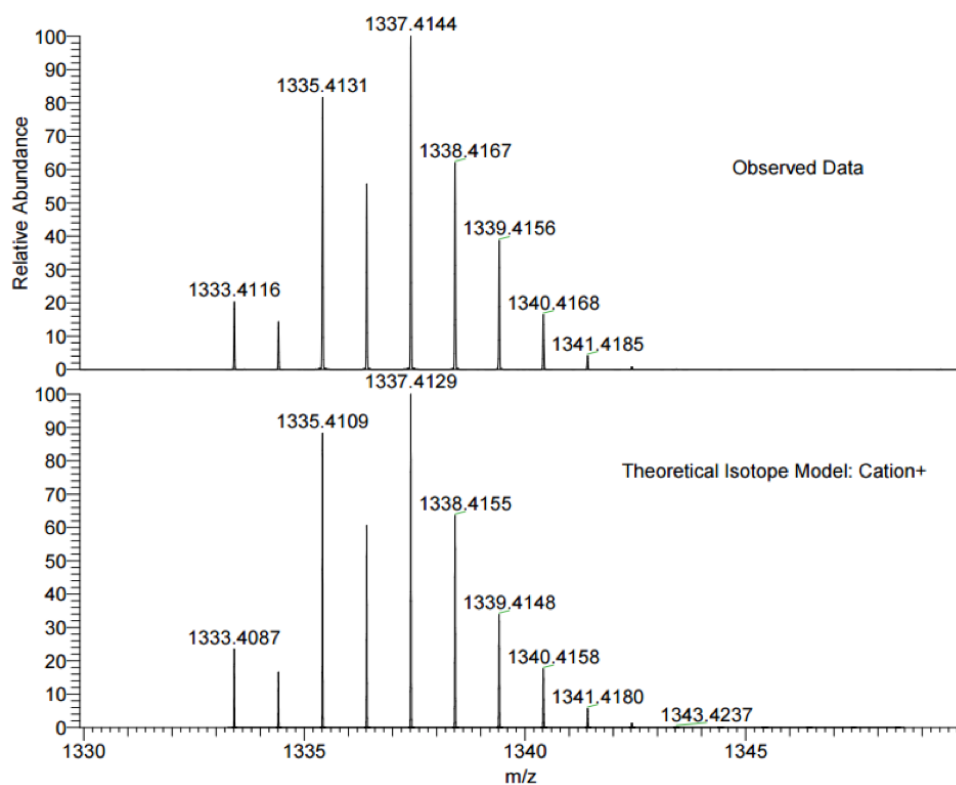
S3: Copies of NMR spectra for all compounds and HRMS for **1**.











NL:
1.57E8
NORKOZ_MBNYJ_C#20-26
RT: 0.34-0.50 AV: 7 T: FTMS
+ p NSI Full ms
[120.00-1935.00]

NL:
5.14E3
C₆₄ H₆₄ ClIr₂ N₆:
C₆₄ H₆₄ Cl₁ Ir₂ N₆
p (gss, s /p:40) Chrg 1
R: 100000 Res .Pwr . @FWHM

