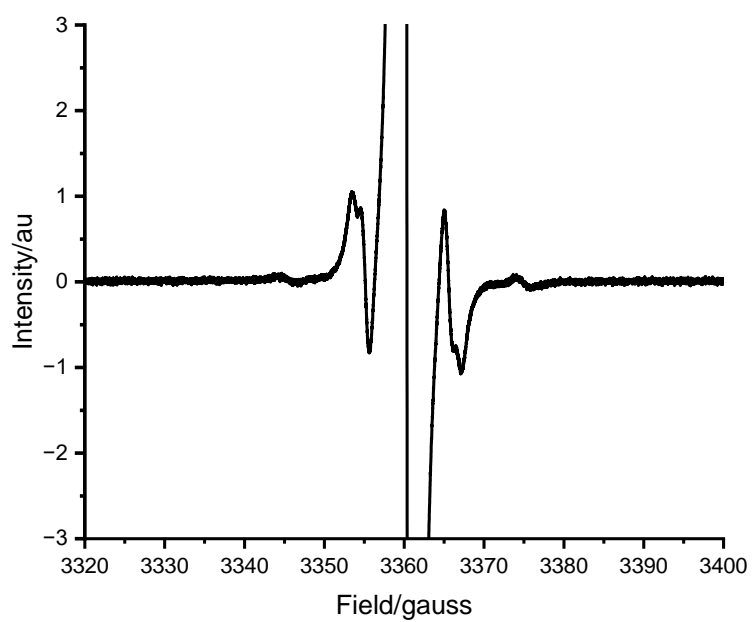


EPR Spectra

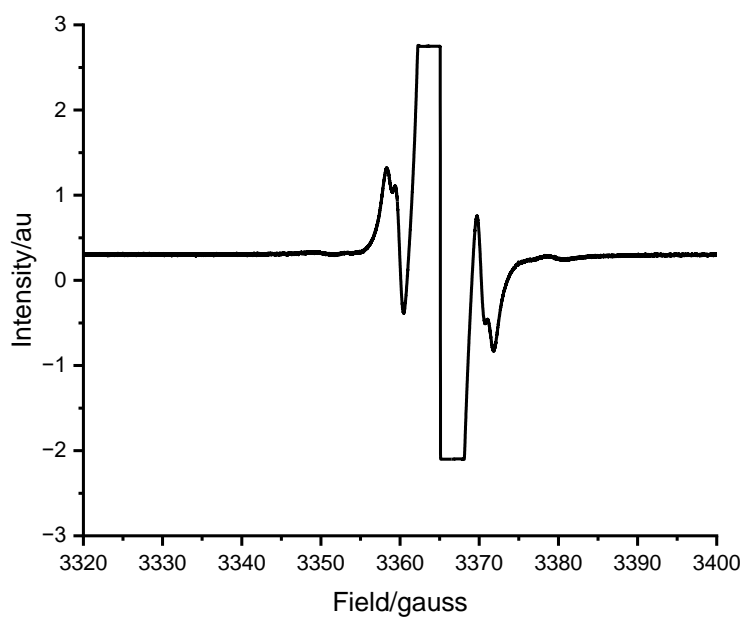
EPR spectra were obtained through the EPSRC National EPR Facility at the University of Manchester. A Bruker EMX Micro spectrometer, equipped with a Bruker 4122SHQ resonator was used. Sample cooling and temperature control was achieved using a Bruker ER4141VT liquid nitrogen boil-off accessory. Samples were measured in non-saturating conditions with typical measurement parameters, Microwave Power 2 mW, Modulation Amplitude 0.1 G. Reported g values were corrected using a Bruker Strong Pitch calibration standard measured at the same field sweep rate. Dilute solutions of the radicals in CH₂Cl₂ were employed and the degree of dilution and the temperature adjusted to maximise the resolution of the natural abundance ¹³C satellites. Generally a temperature of 200K was found to be satisfactory. For radicals **2**, **8a** and **8b** great care was taken to protect the solutions from exposure to the light. Spectra were fitted and the relevant parameters extracted using Easyspin-5.2.35.

	g-value	a_{αH}	a_{ipso}	a_{ortho}
2 , Parent radical ^[a]	2.0028	84	36.3	33
2 , literature values ^{[2] [b]}	2.0028	84	36.6	30.1
8a , F-1 ^[a, c]	2.0029	84.4	-	-
8b , F-2 ^[a, d]	2.0030	85	-	-
7a , HxO-1 ^[a]	2.0030	83.5	-	-
7b , HxO-2 ^[a]	2.0030	84	36.7	33

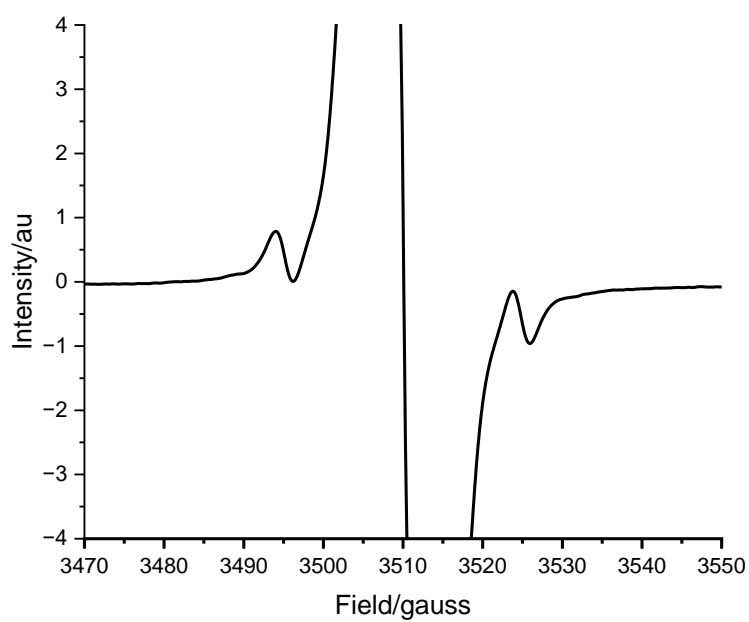
^[a] CH₂Cl₂ solution 200 K. ^[b] CFCl₃ solution 163 K. ^[c] Contained ca. 20% **2**. ^[d] Contained ca. 5% **8a**.



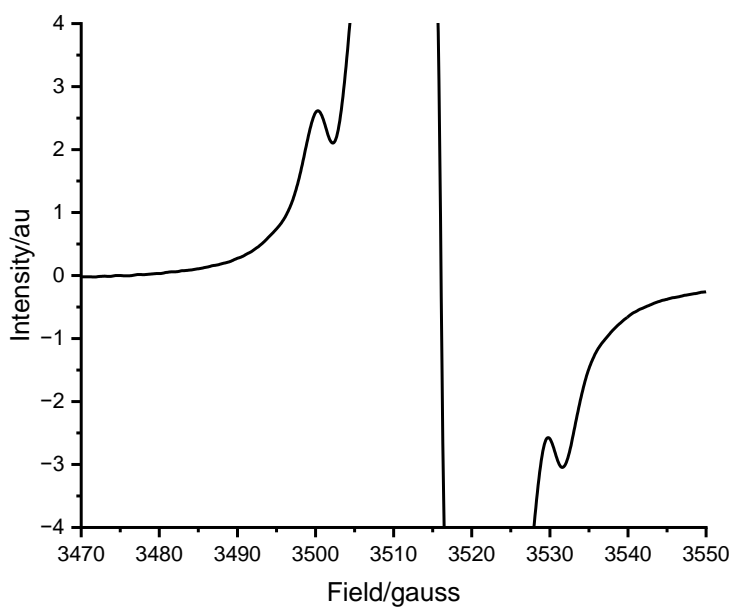
Parent Radical **2** showing the ^{13}C satellites, 9.439760 GHz, 200K, 0.2modAmp.



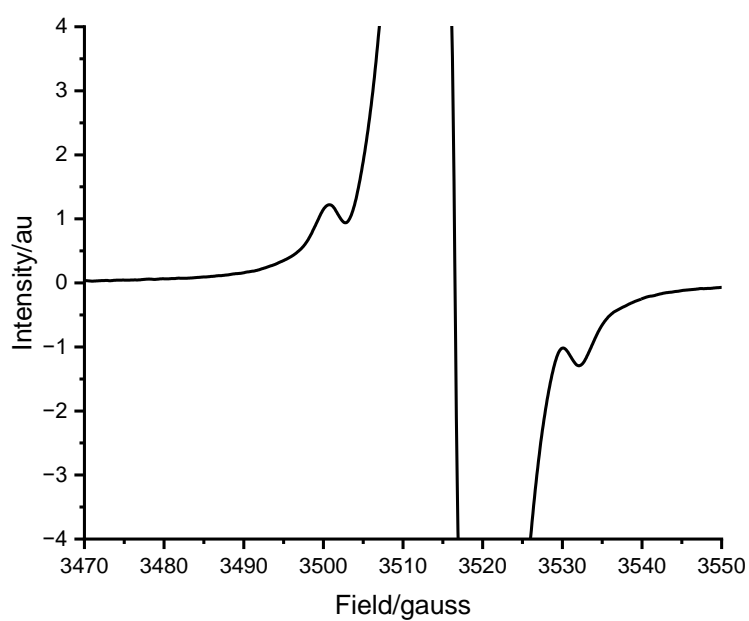
(HxO)₂ Radical **7a** showing the ^{13}C satellites, 9.453835 GHz, 200K, 0.2modAmp.



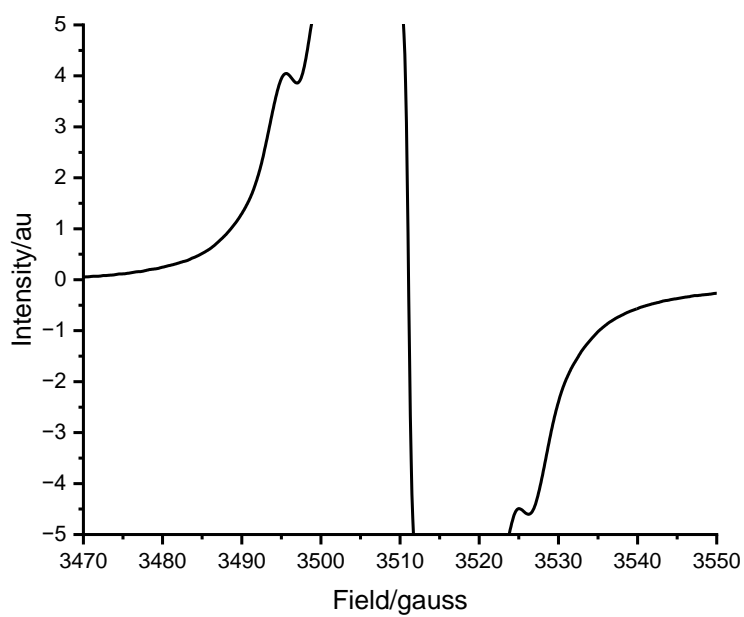
Parent Radical **2** enhanced gain, showing the α -carbon ^{13}C satellites, 9.860305 GHz.



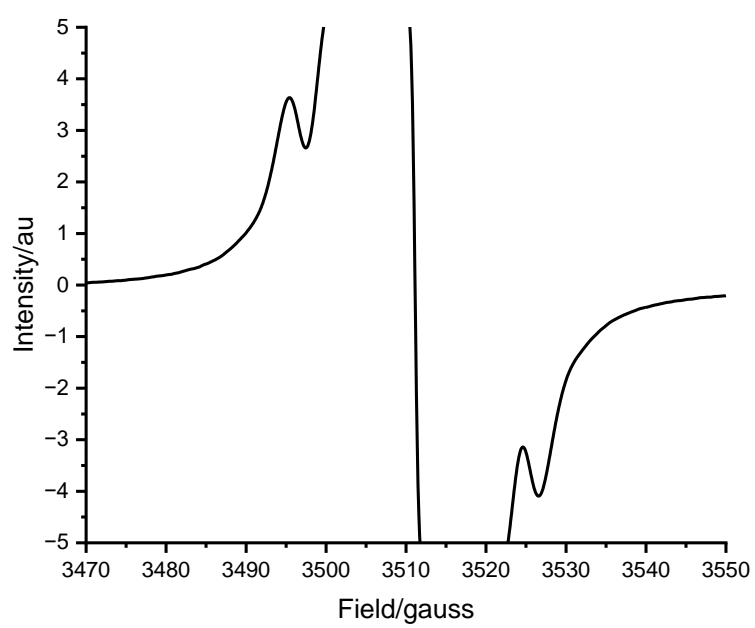
F₁ Radical **8a** enhanced gain, showing the α -carbon ^{13}C satellites, 9.877490 GHz.



F₂ Radical **8b** enhanced gain, showing the α -carbon ¹³C satellites, 9.879077 GHz.



(HxO)₁ Radical **7a** enhanced gain, showing the α -carbon ¹³C satellites, 9.863459 GHz.



(HxO)₂ Radical **7b** enhanced gain, showing the α -carbon ¹³C satellites, 9.864073 GHz.