

## $^1\text{H}$ and $^{13}\text{C}$ NMR spectra for compounds

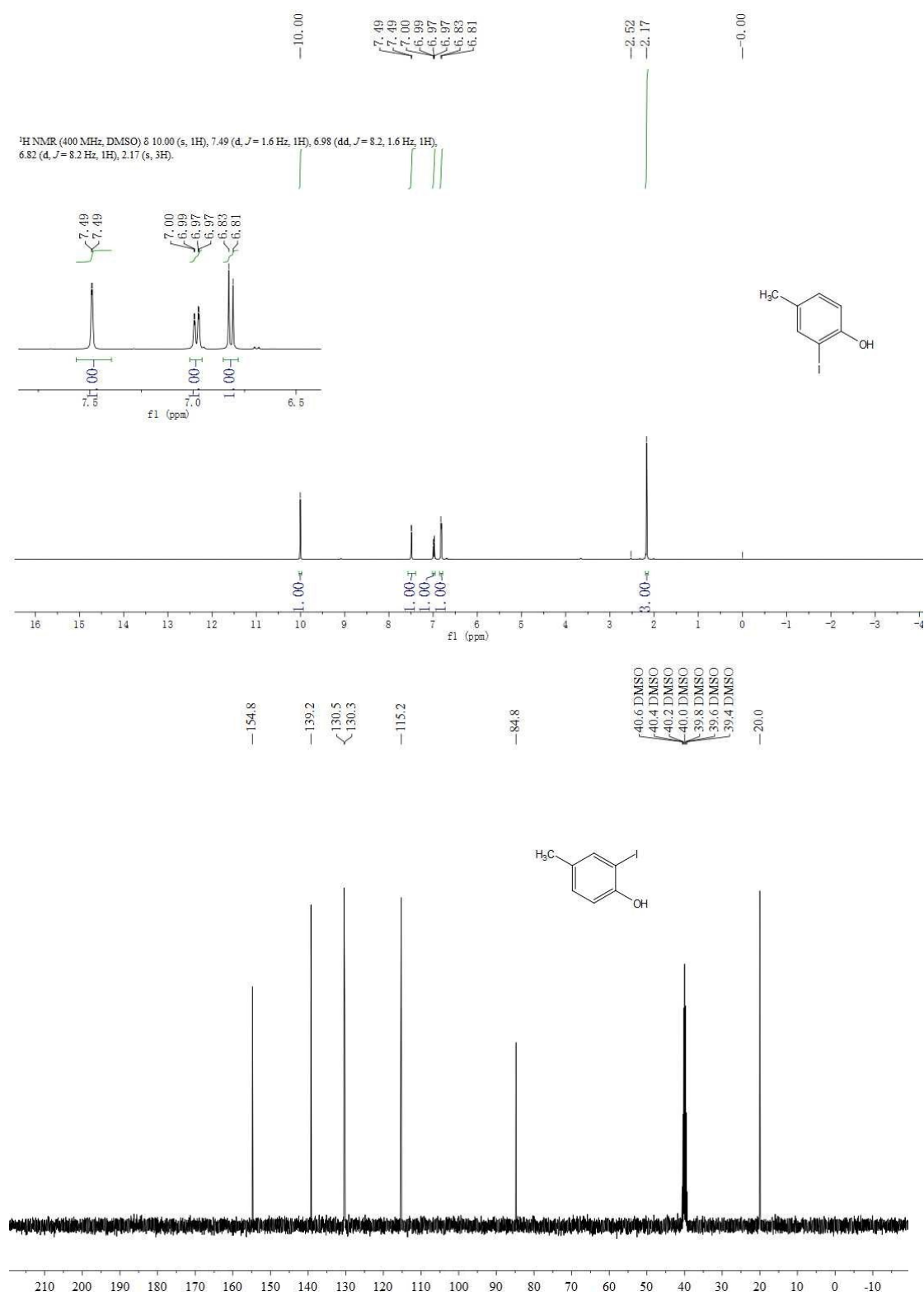
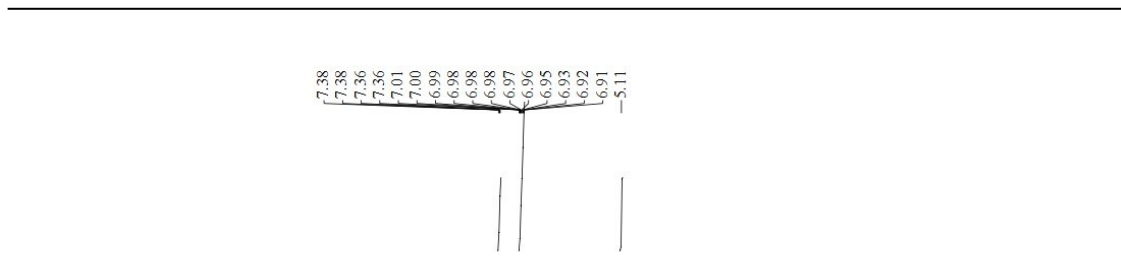


Fig. S1 NMR spectra of **1b**



$^1\text{H NMR}$  (400 MHz, Chloroform- $d_3$ )  $\delta$  7.37 (dd,  $J = 7.6, 2.8$  Hz, 1H), 7.01 – 6.91 (m, 2H), 5.11 (s, 1H).

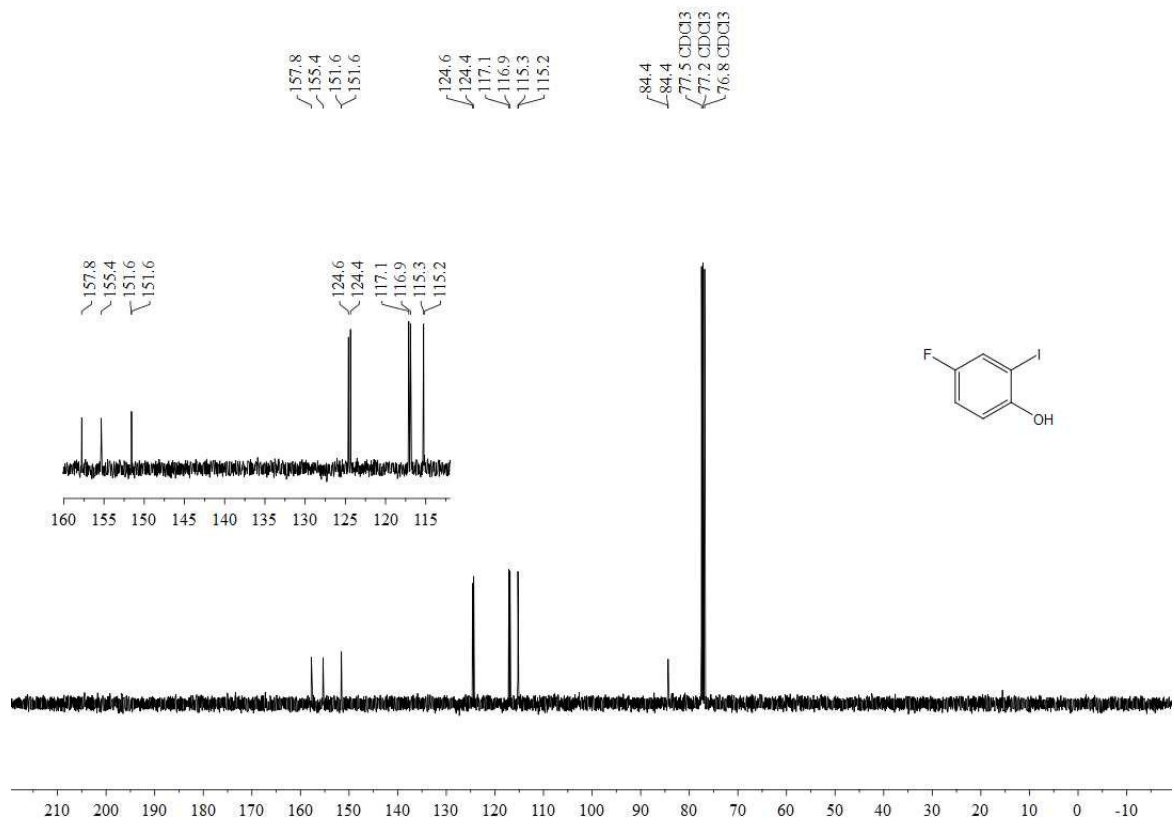
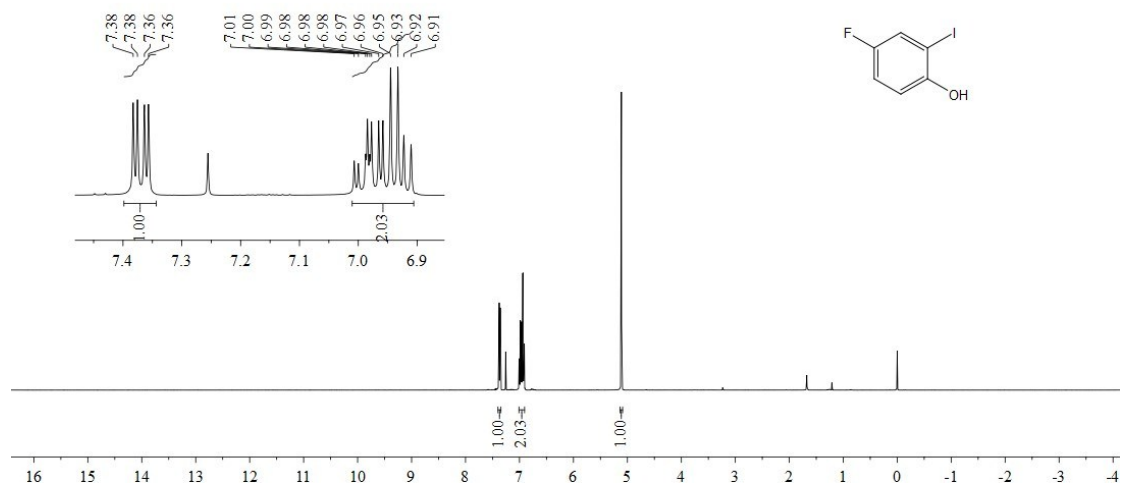


Fig. S2 NMR spectra of **1c**

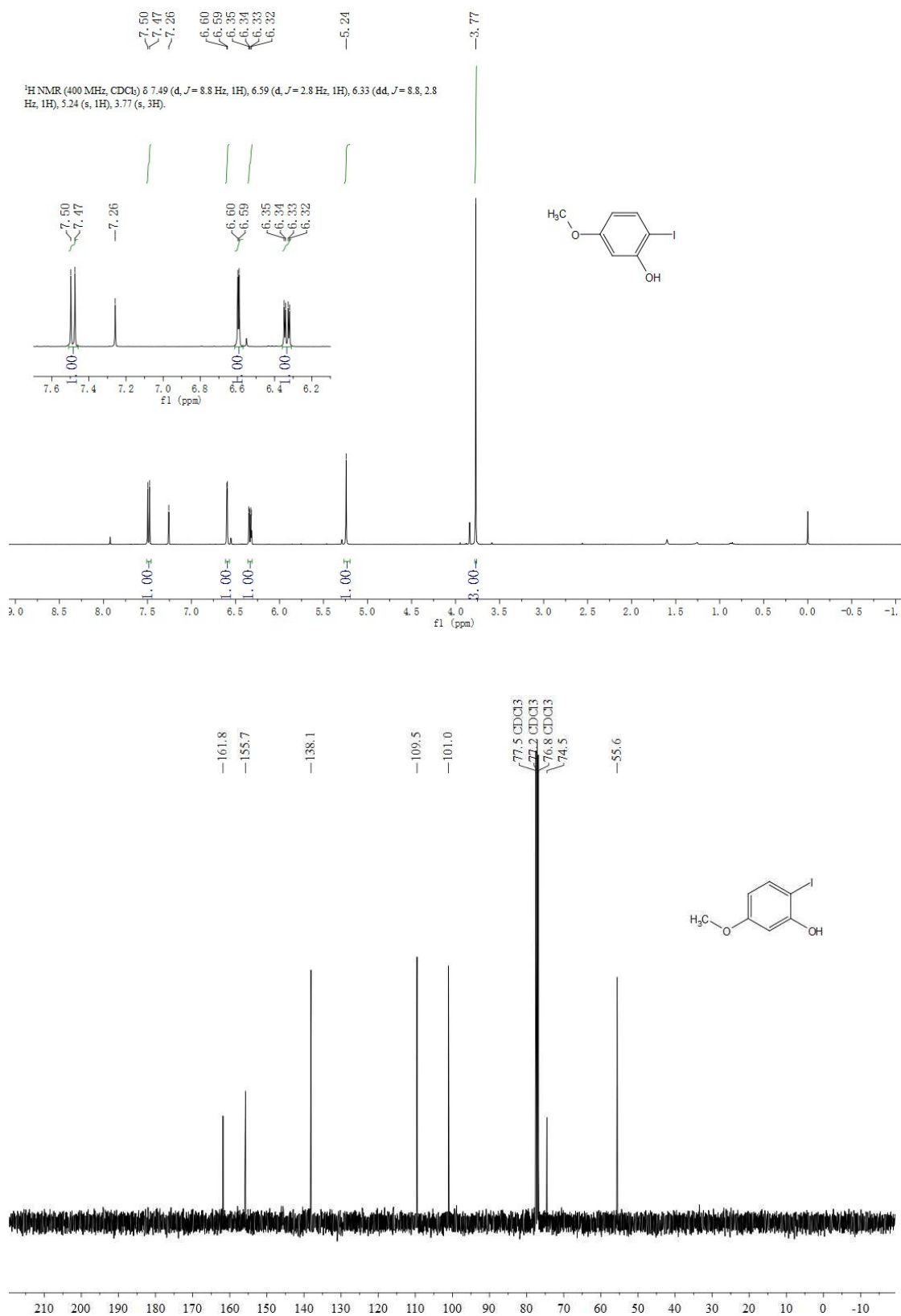


Fig. S3 NMR spectra of **1d**

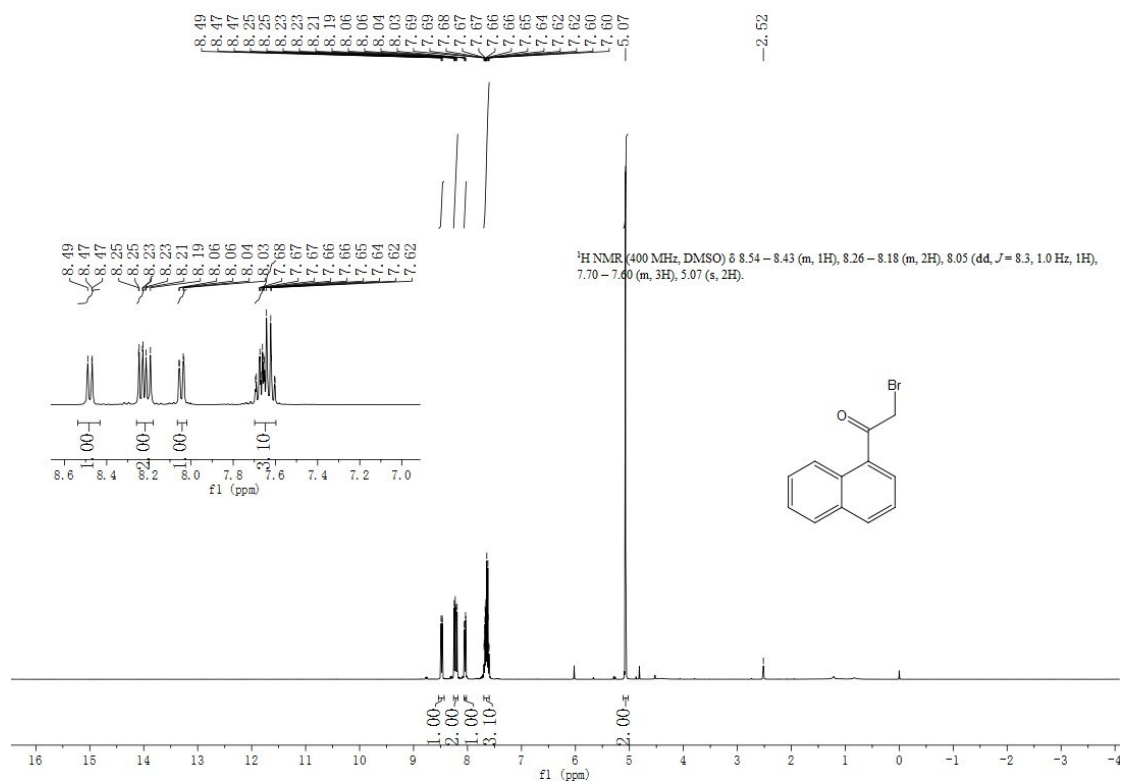


Fig. S4 NMR spectra of **2b**

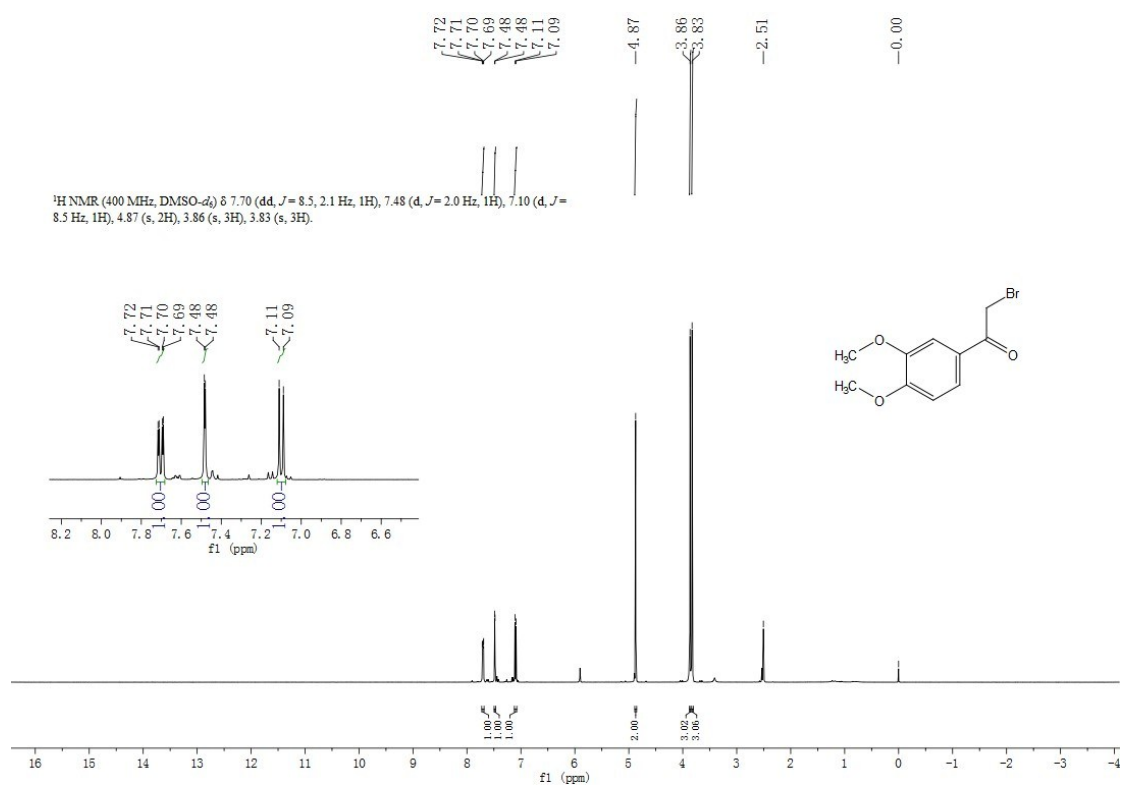


Fig. S5 NMR spectra of **2c**

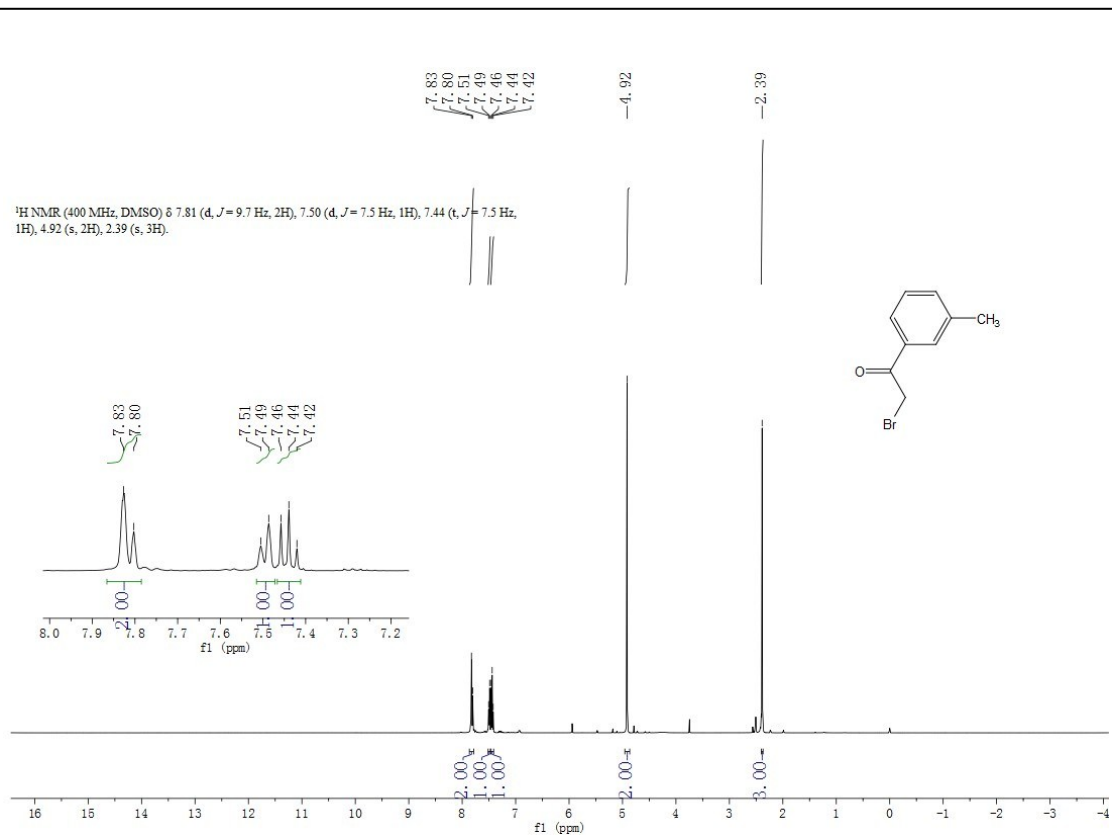


Fig. S6 NMR spectra of **2d**

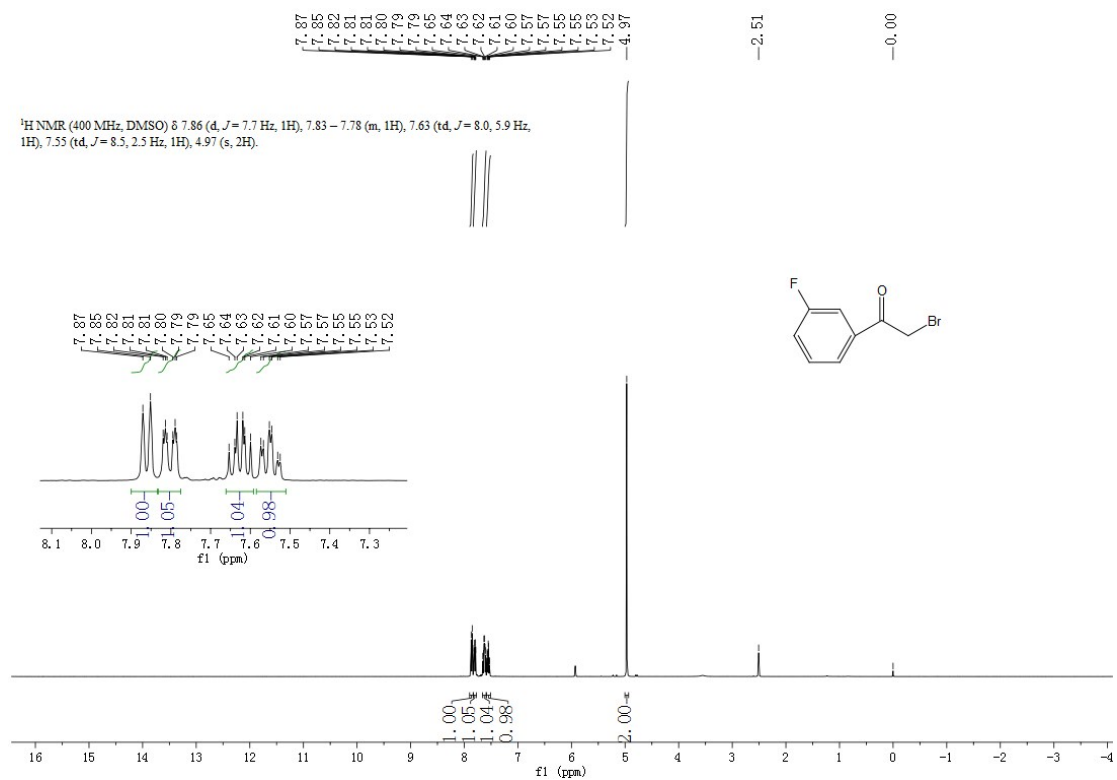


Fig. S7 NMR spectra of **2e**

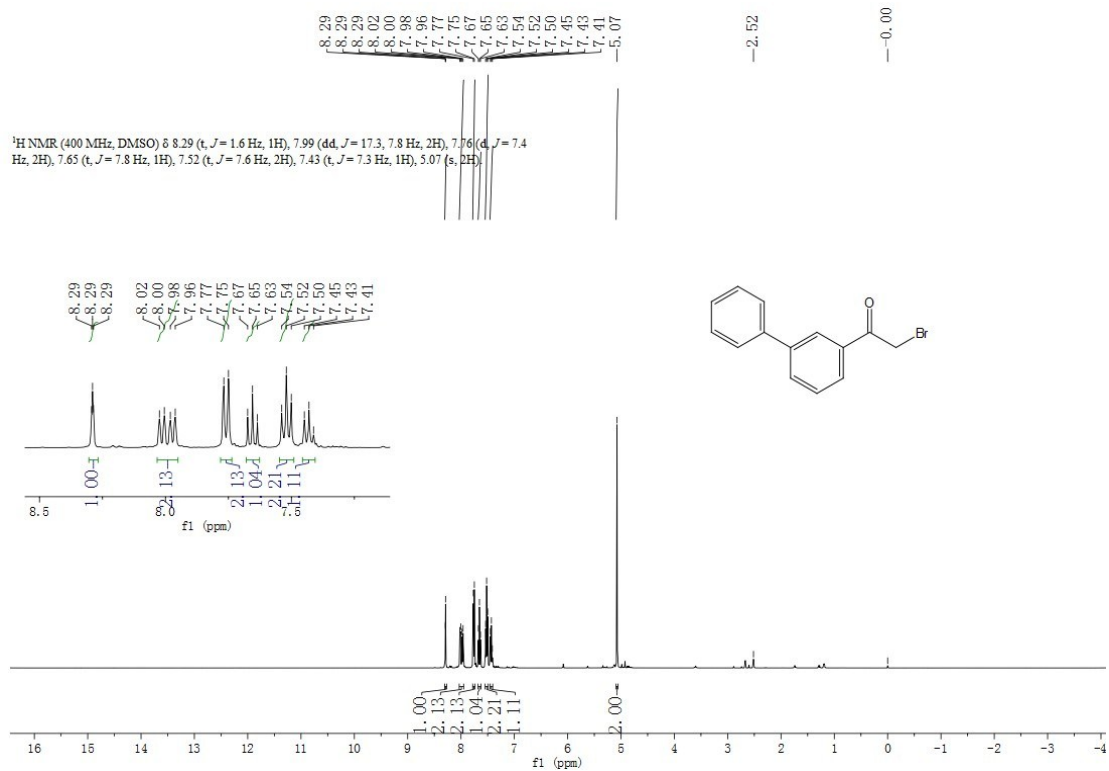


Fig. S8 NMR spectra of **2f**

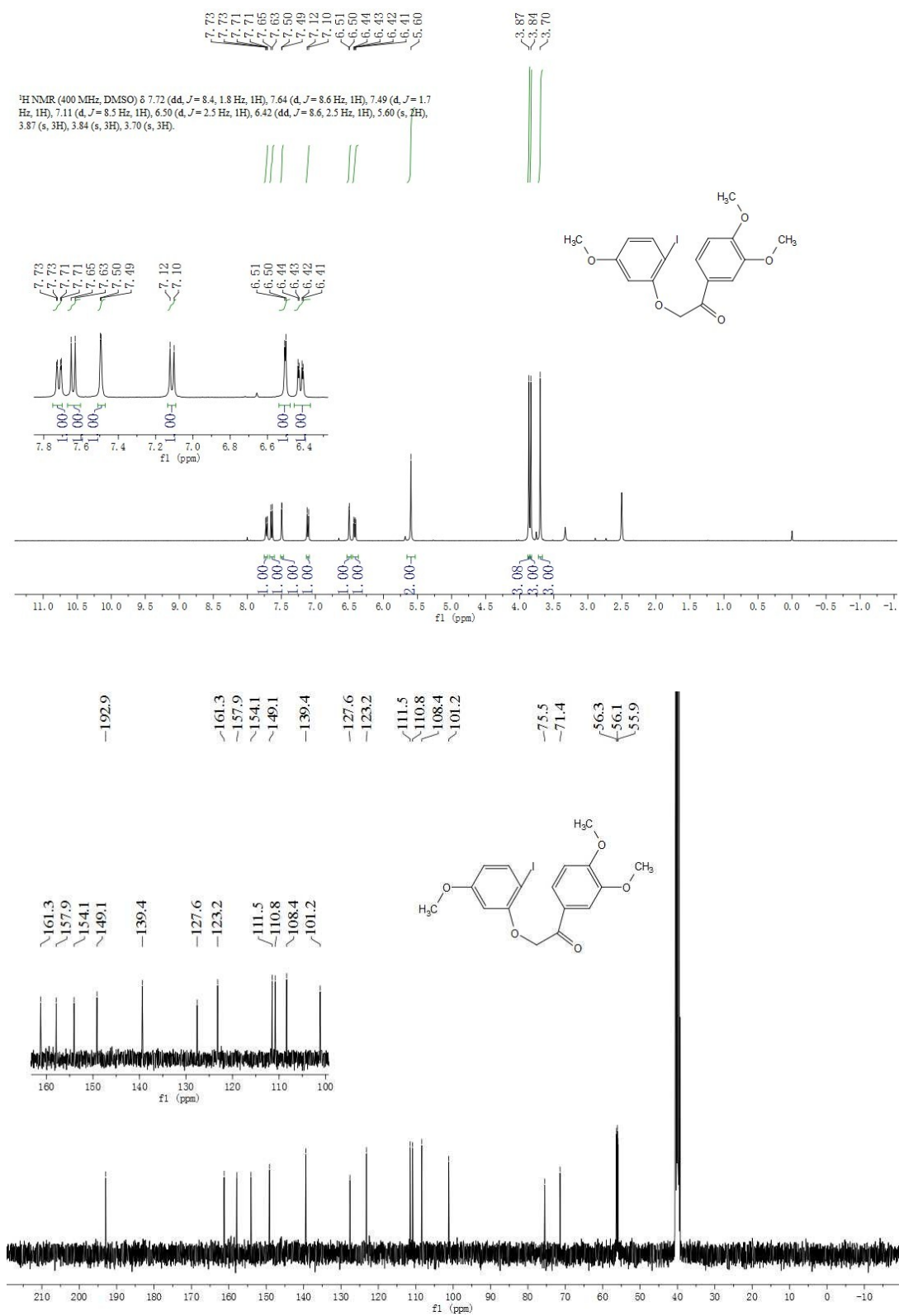


Fig. S9 NMR spectra of **3a**

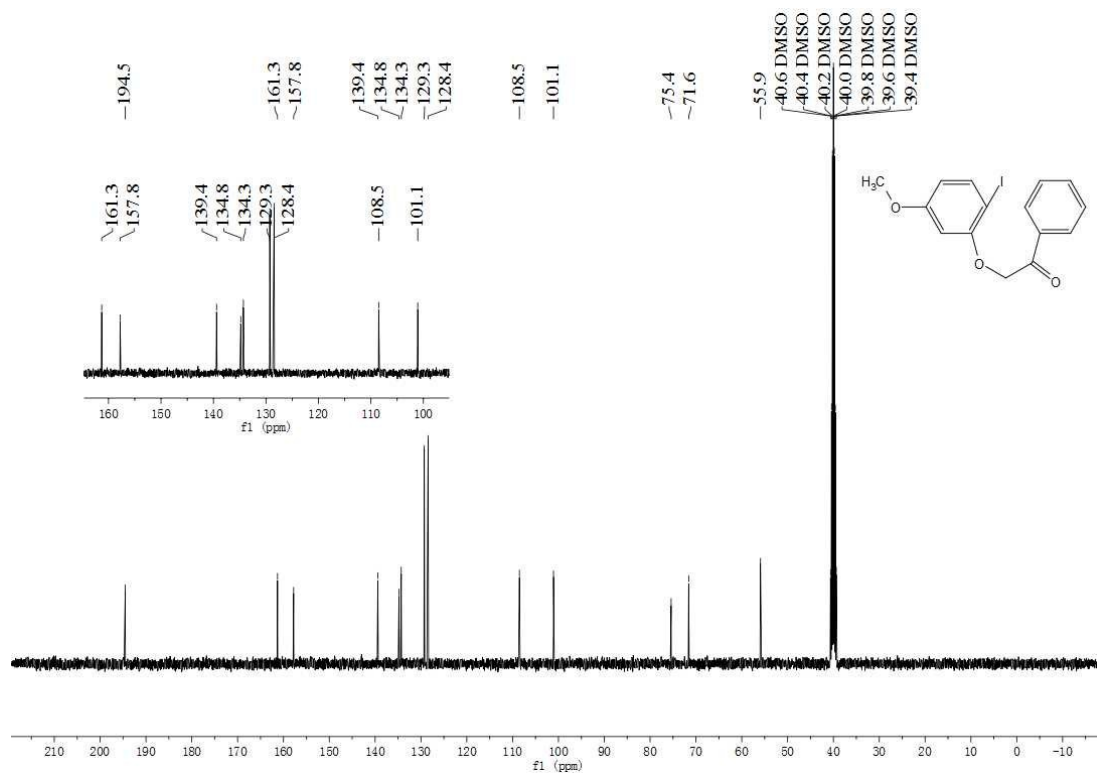
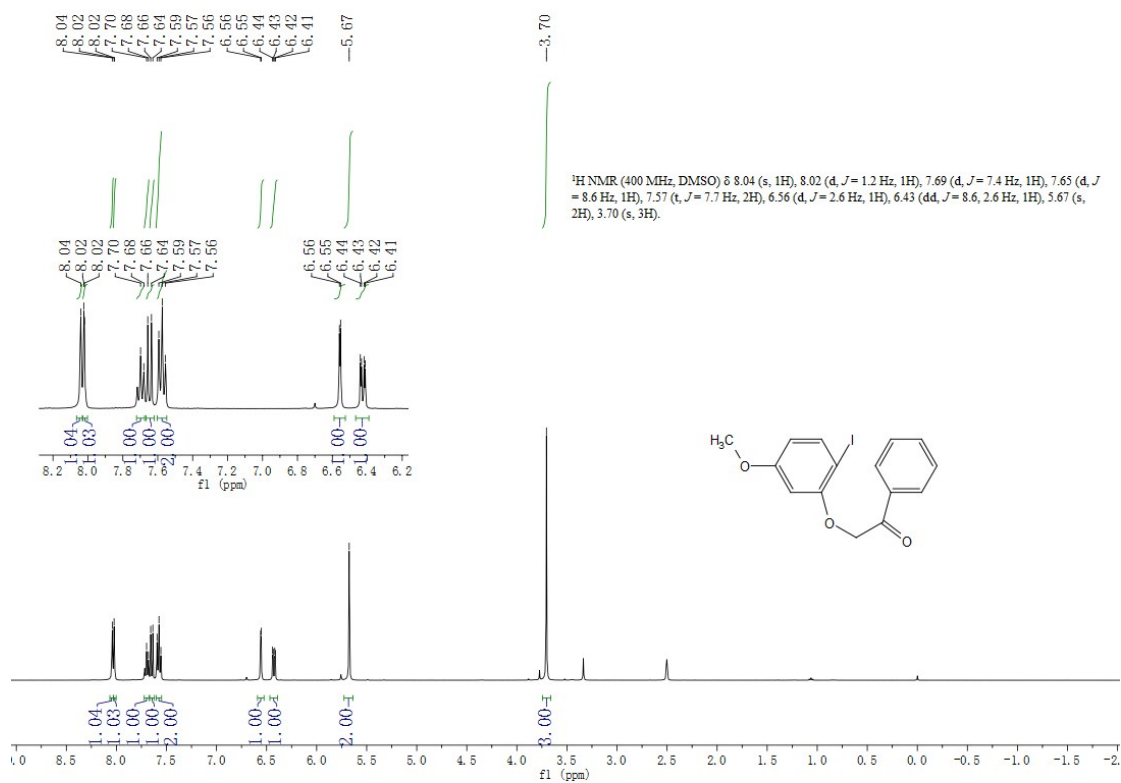


Fig. S10 NMR spectra of **3b**



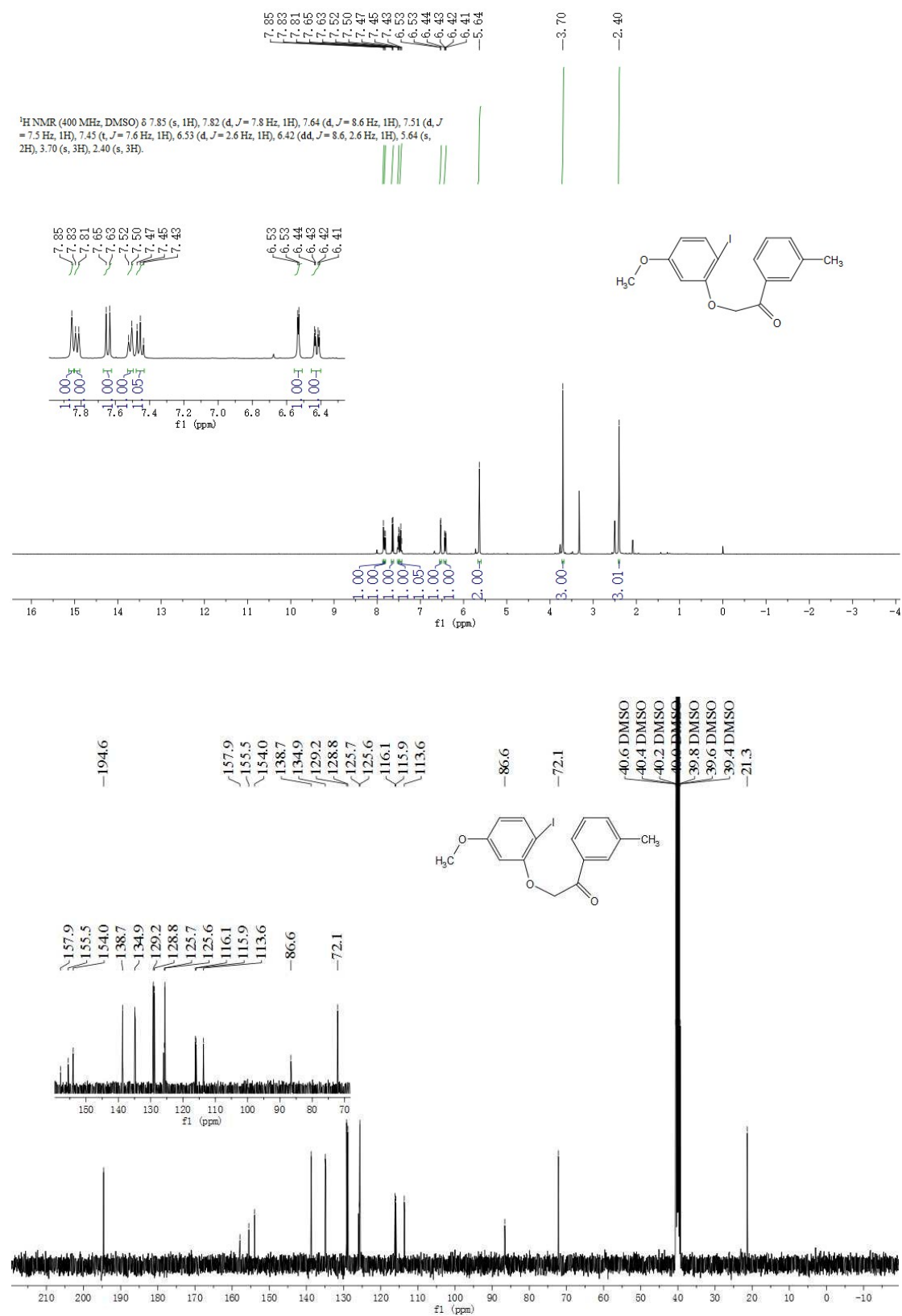


Fig. S11 NMR spectra of **3c**

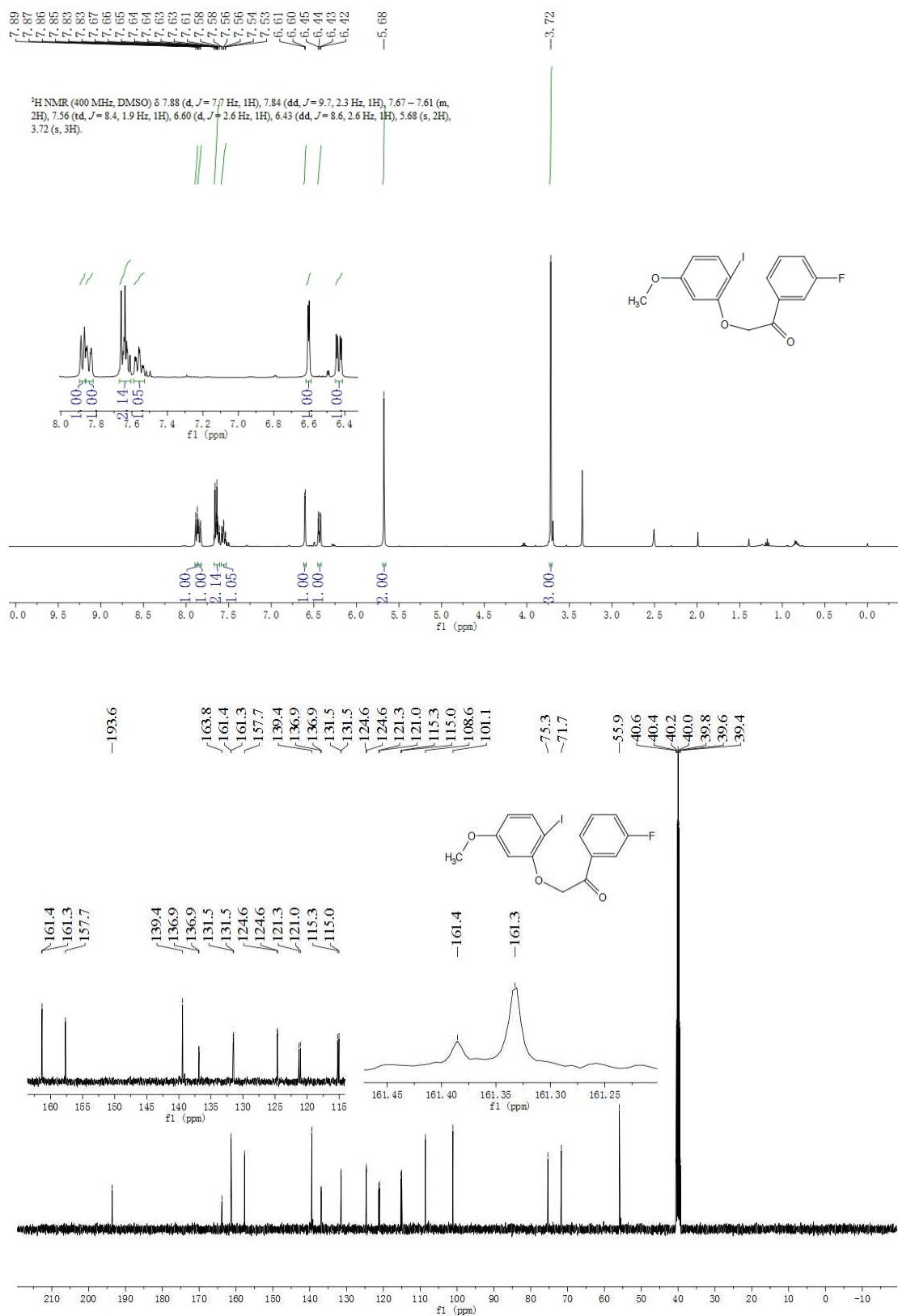


Fig. S12 NMR spectra of **3d**

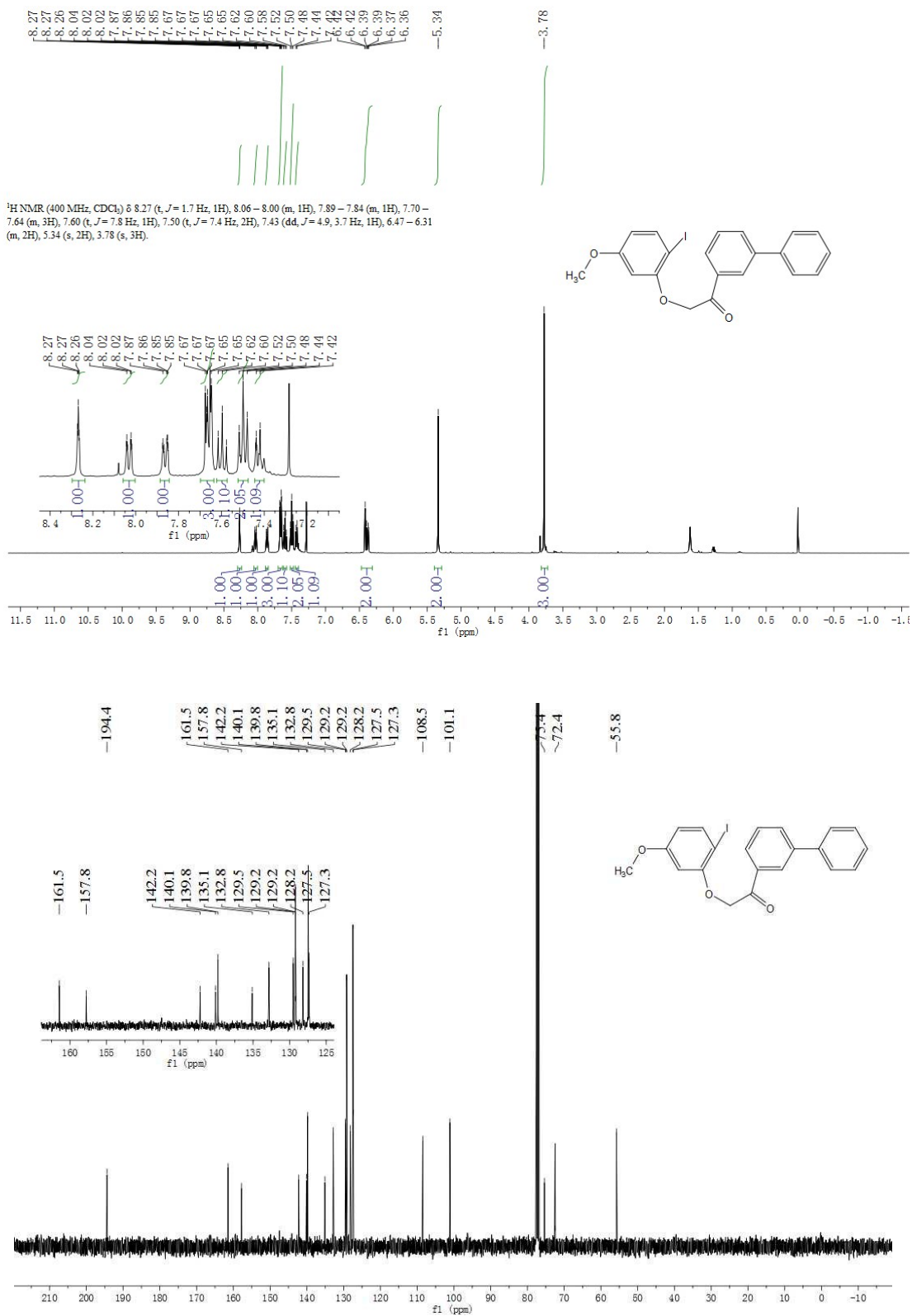


Fig. S13 NMR spectra of **3e**

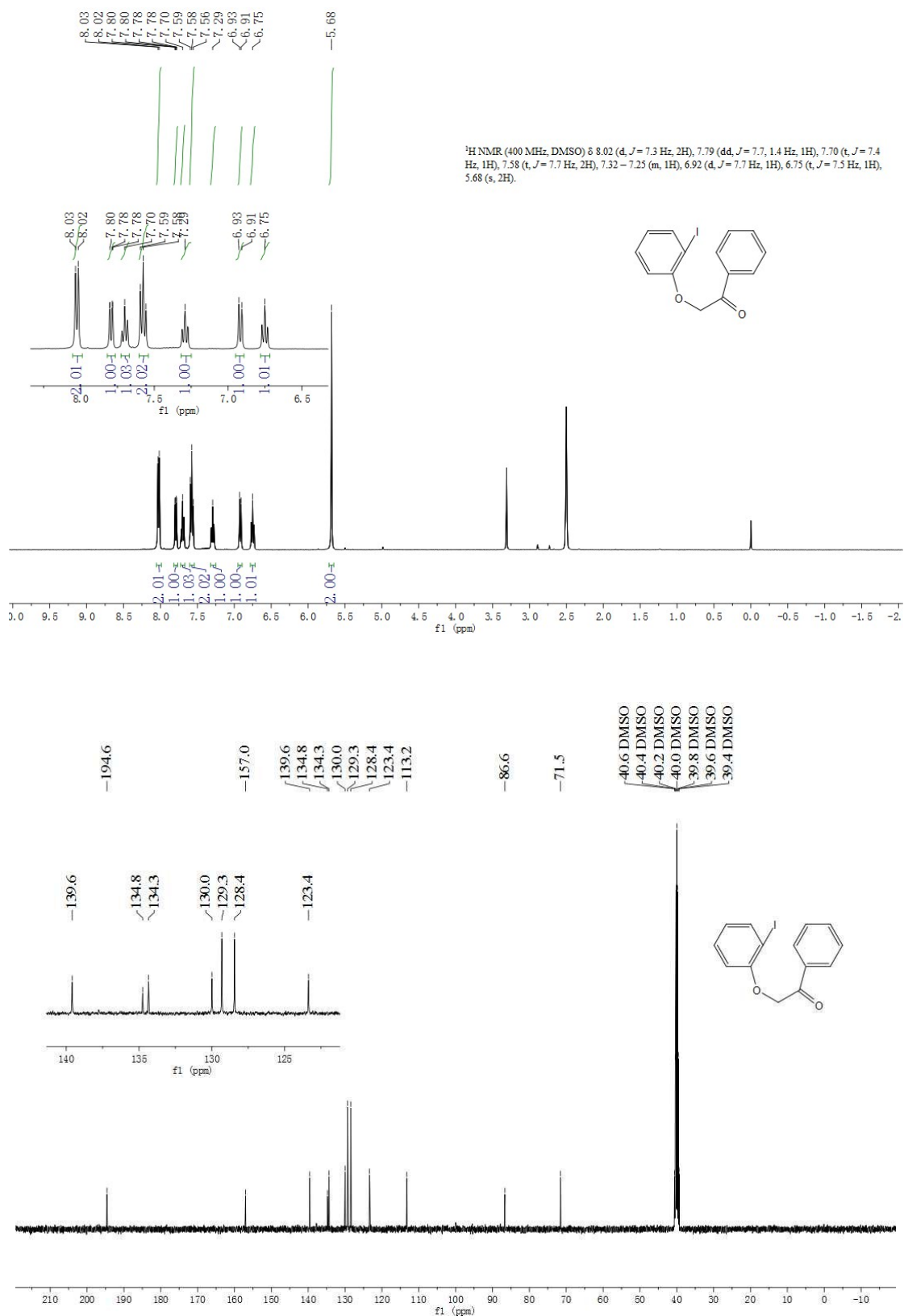


Fig. S14 NMR spectra of **3f**

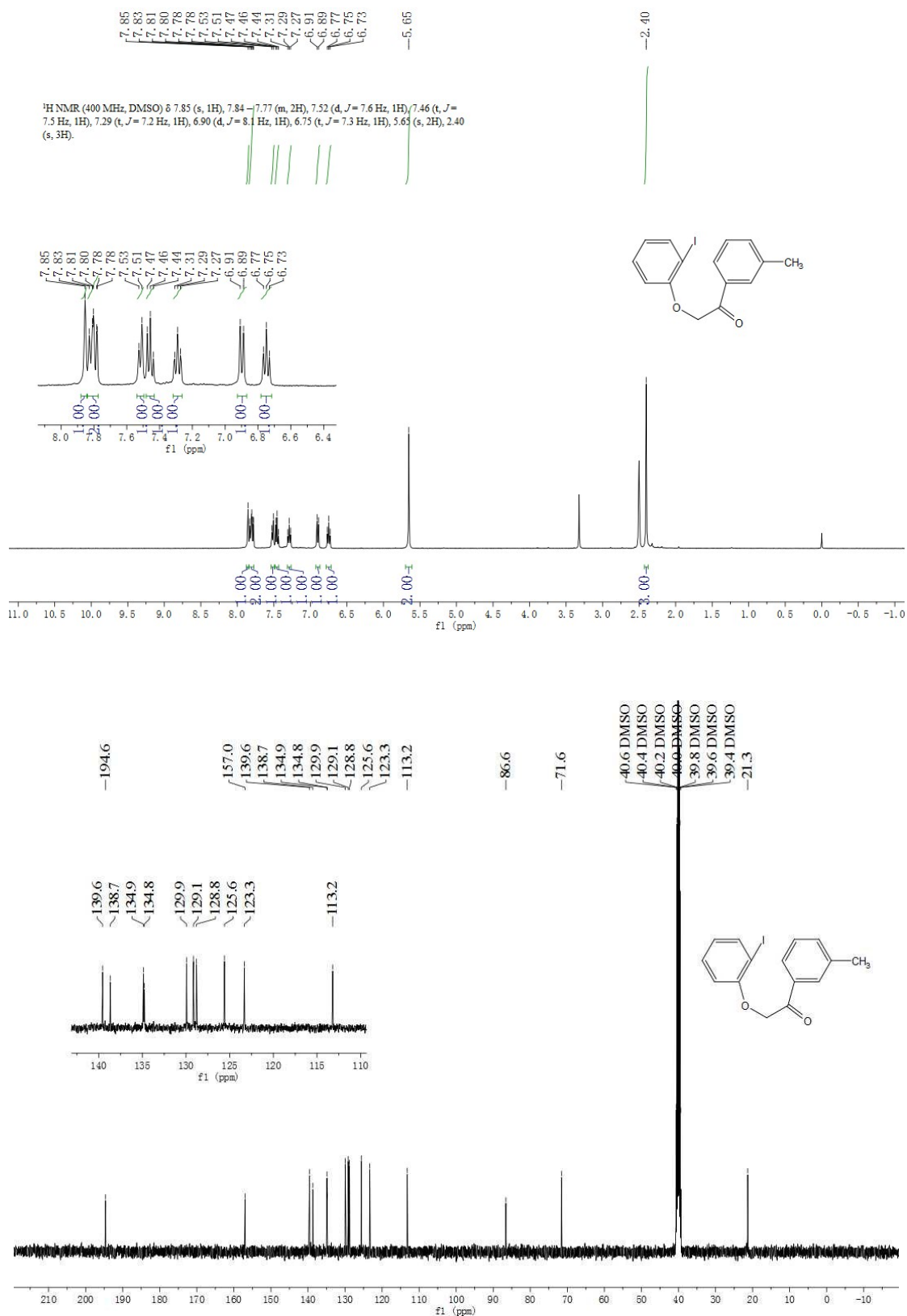


Fig. S15 NMR spectra of **3g**

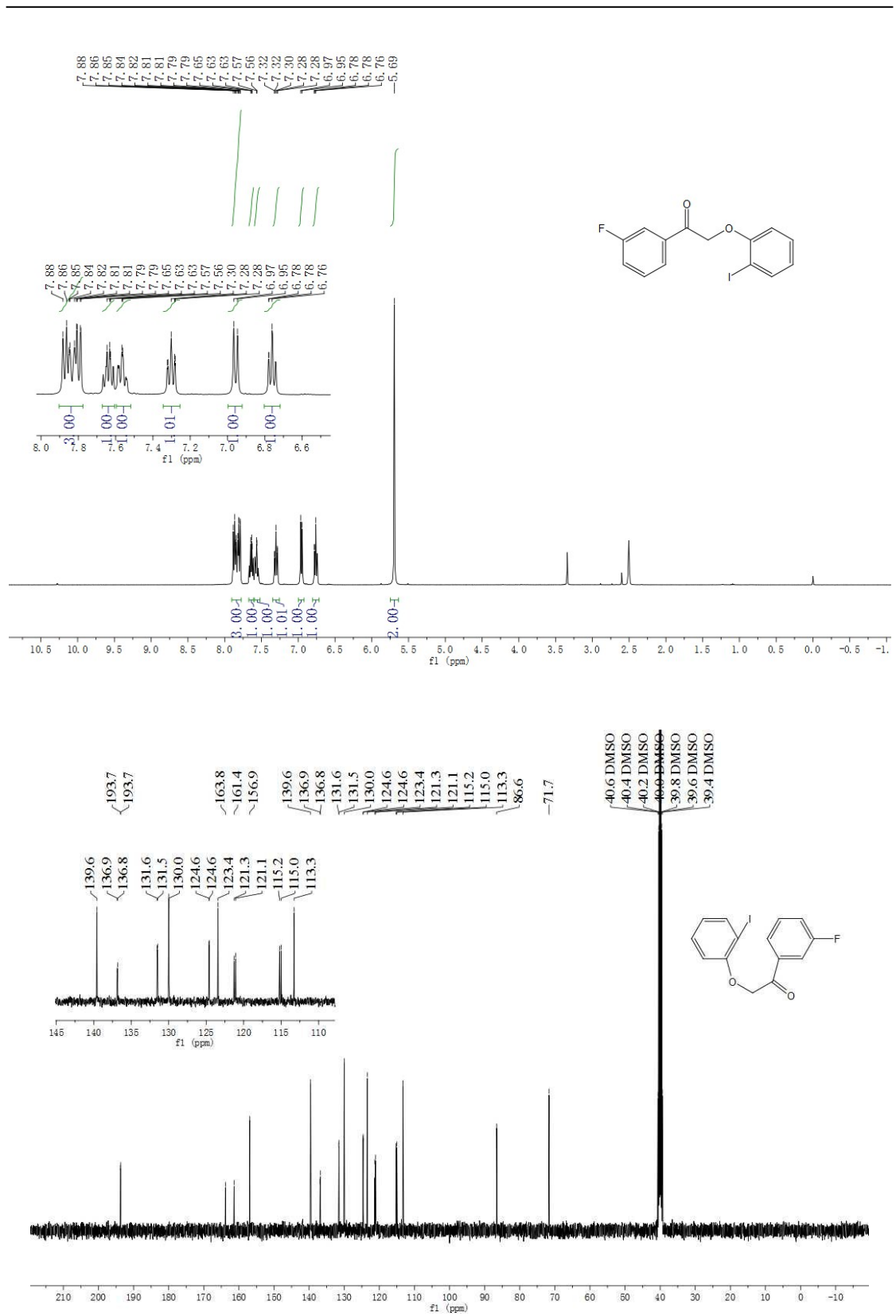


Fig. S16 NMR spectra of **3h**

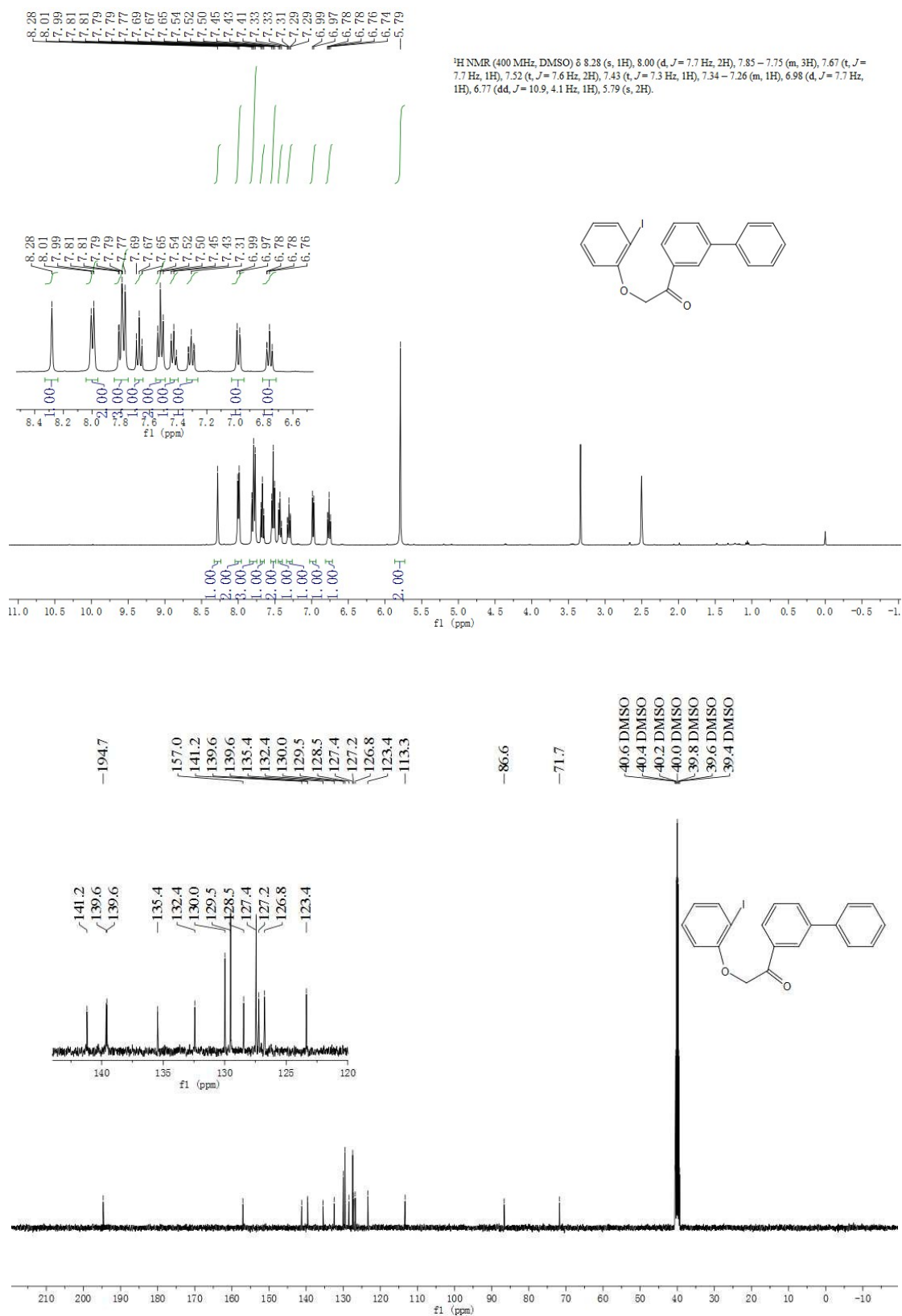


Fig. S17 NMR spectra of **3i**

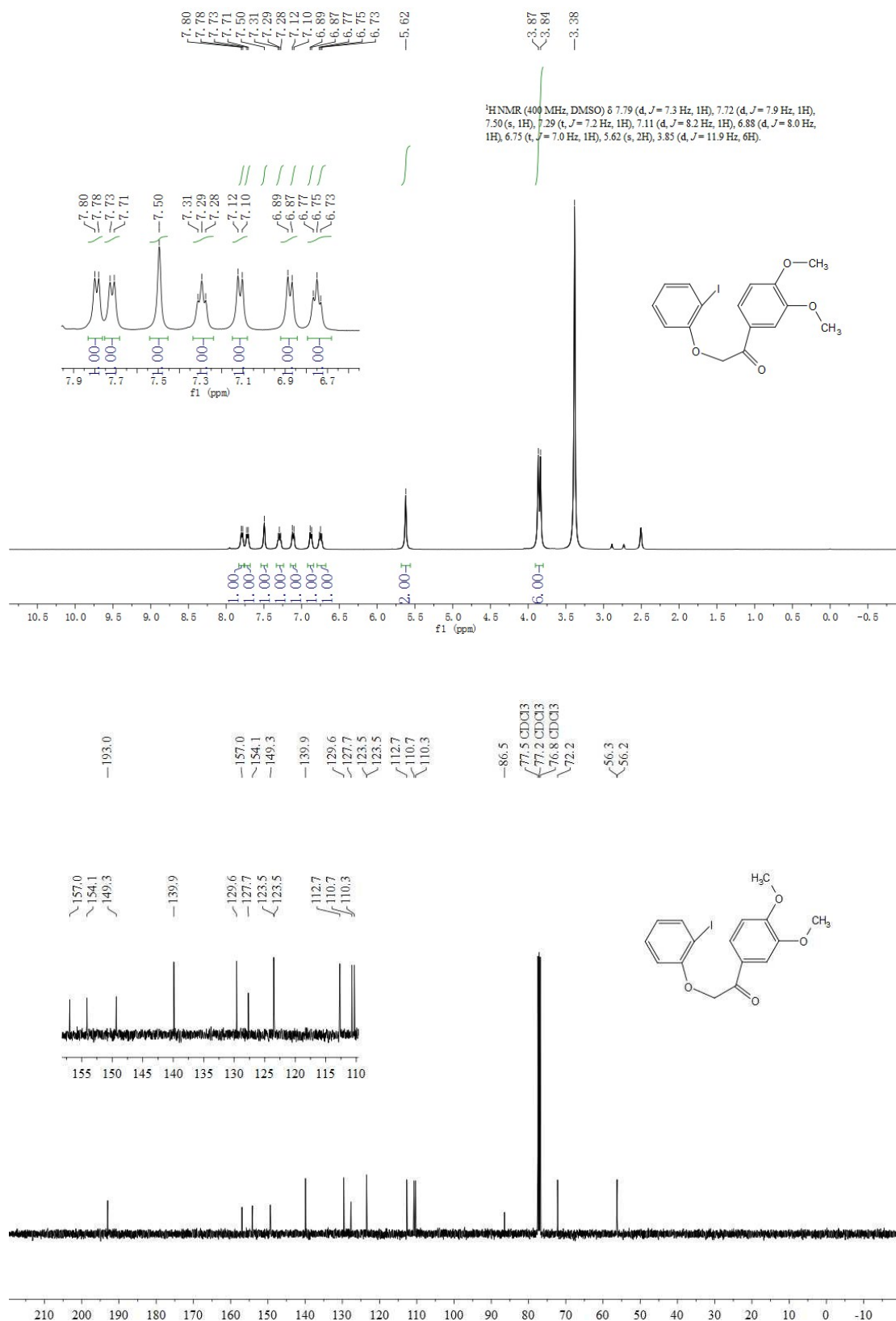


Fig. S18 NMR spectra of **3j**



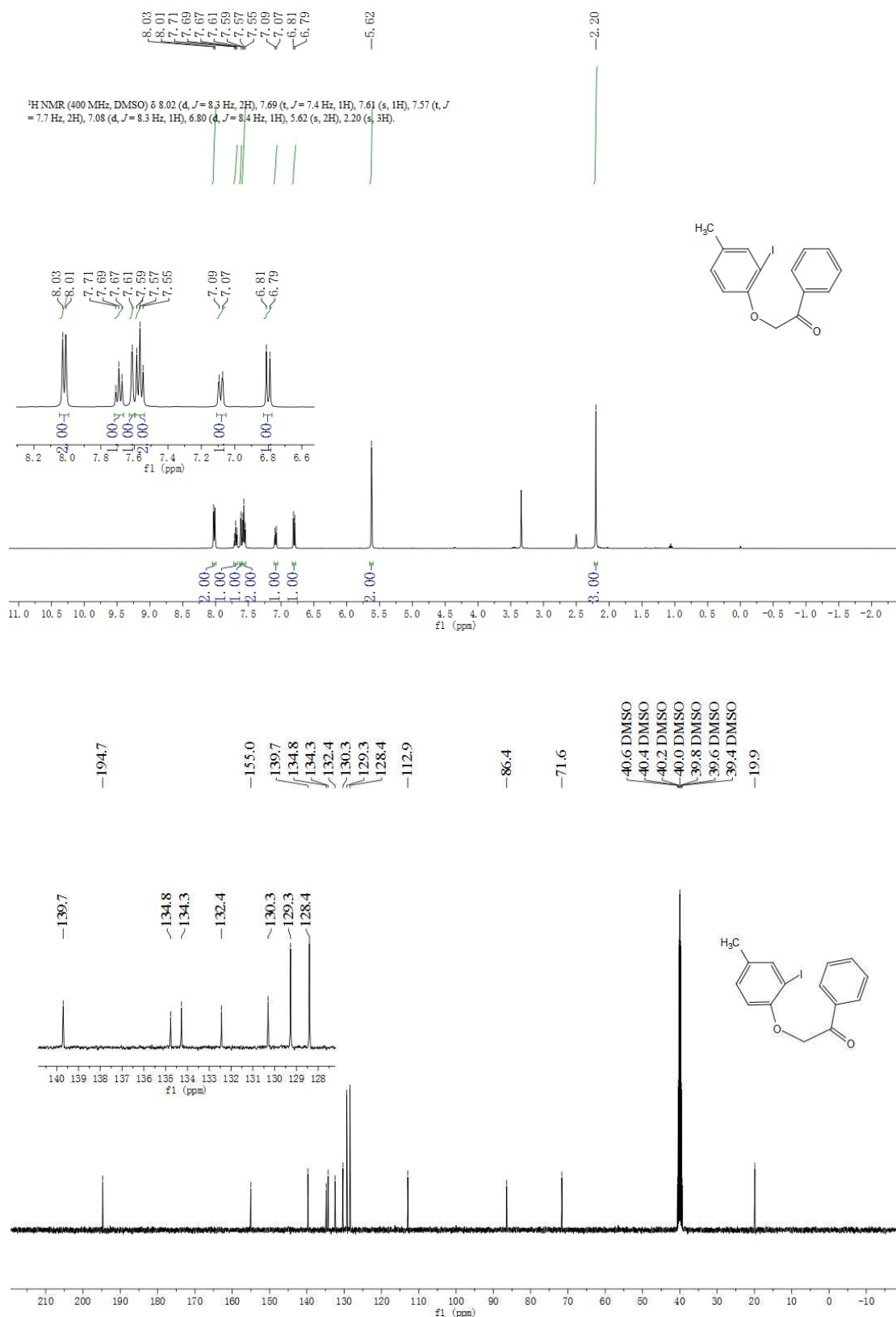


Fig. S19 NMR spectra of **3k**

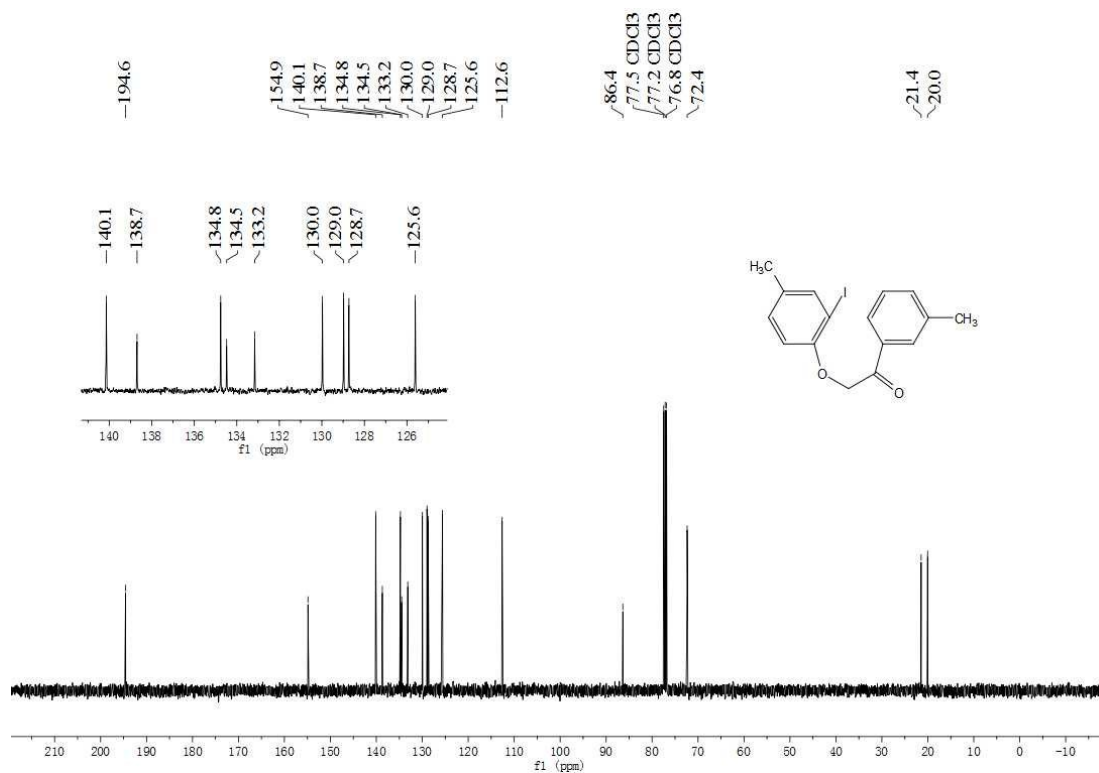
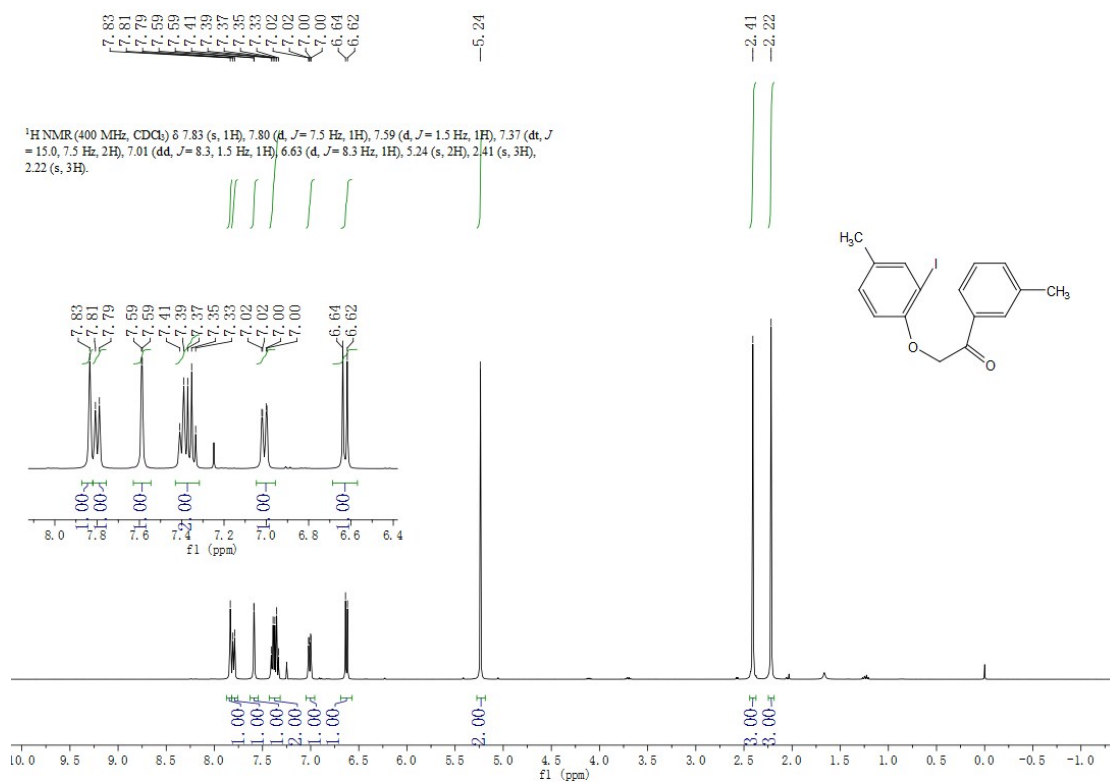


Fig. S20 NMR spectra of **31**

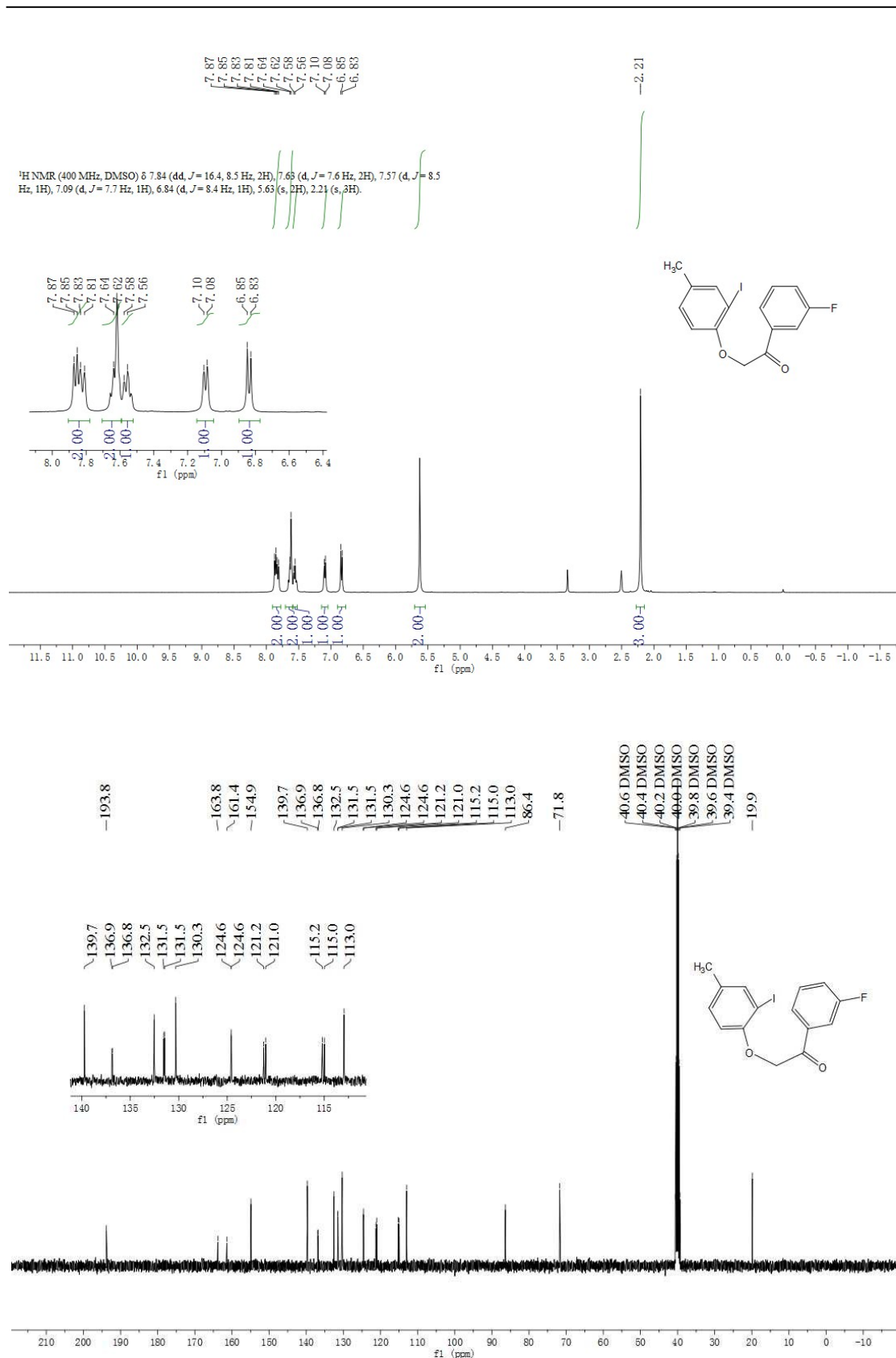


Fig. S21 NMR spectra of **3m**

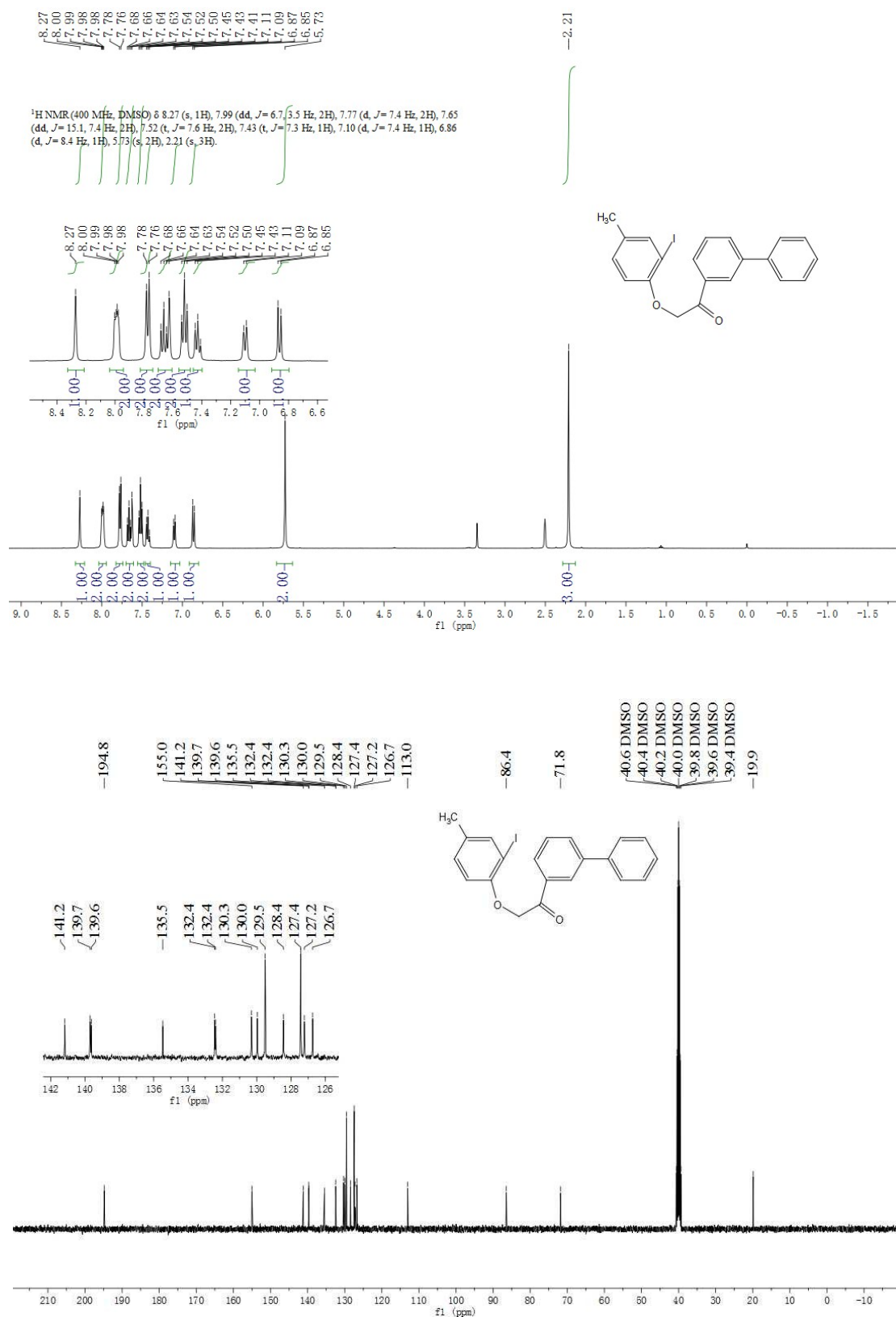


Fig. S22 NMR spectra of **3n**

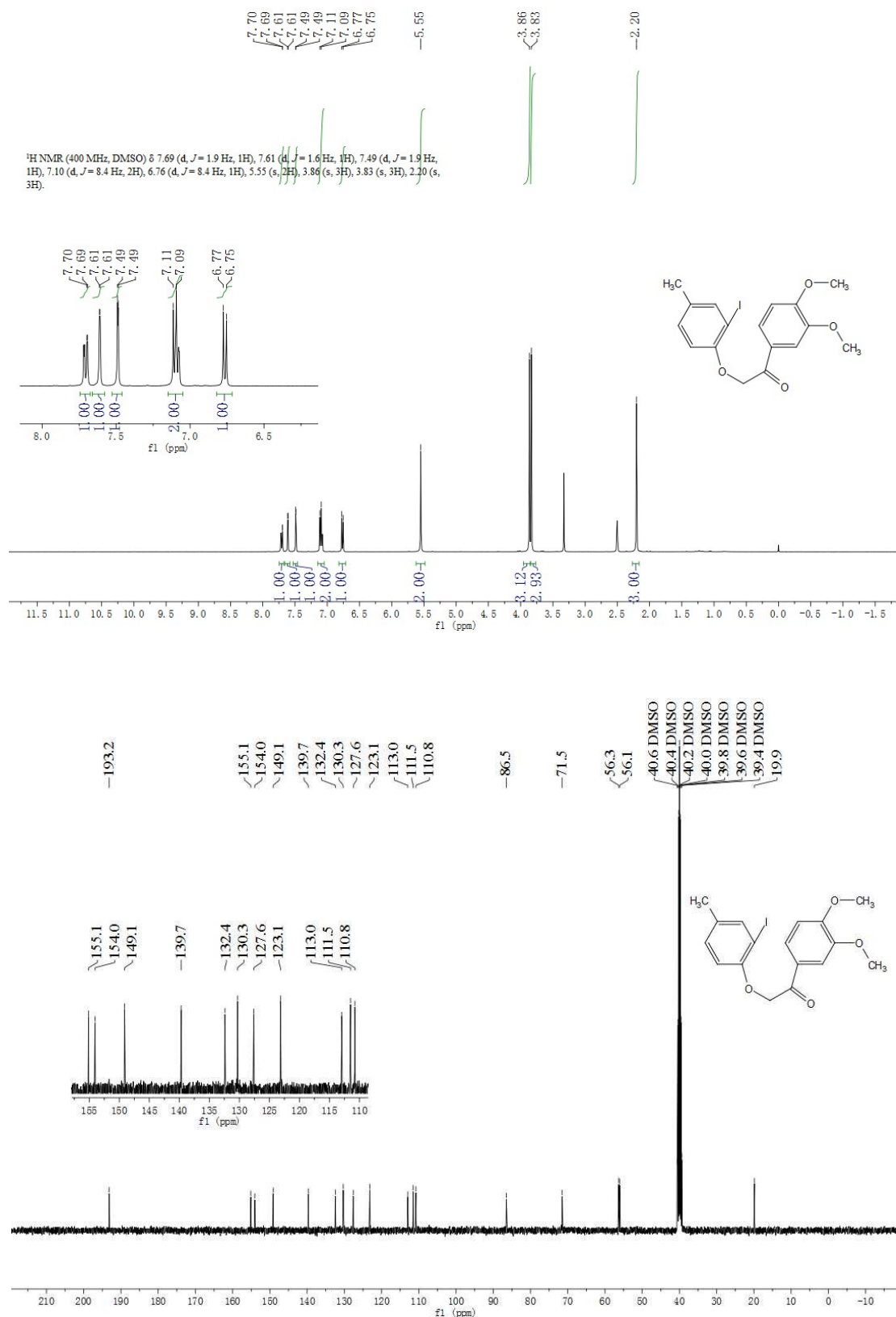


Fig. S23 NMR spectra of **30**

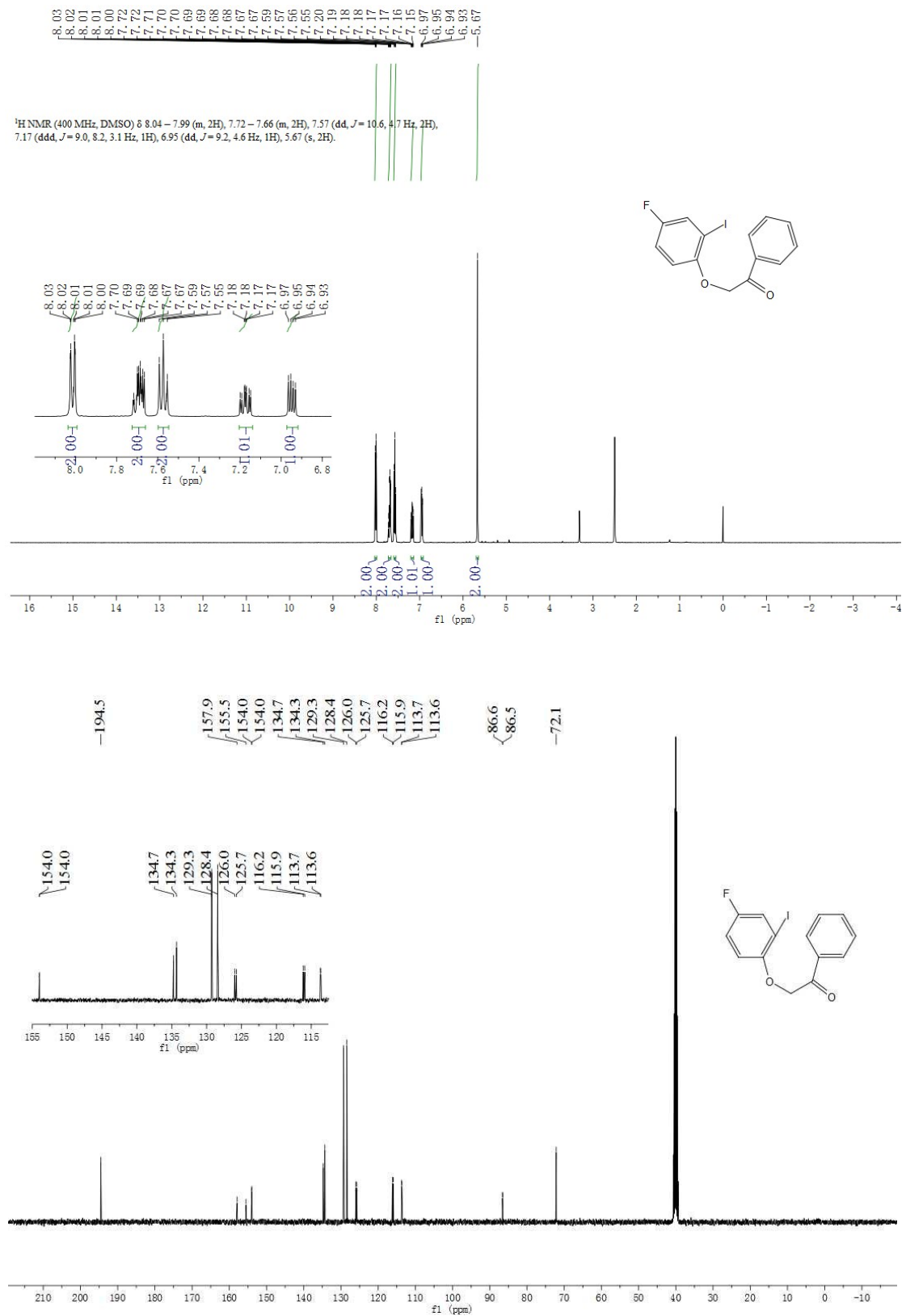


Fig. S24 NMR spectra of **3p**

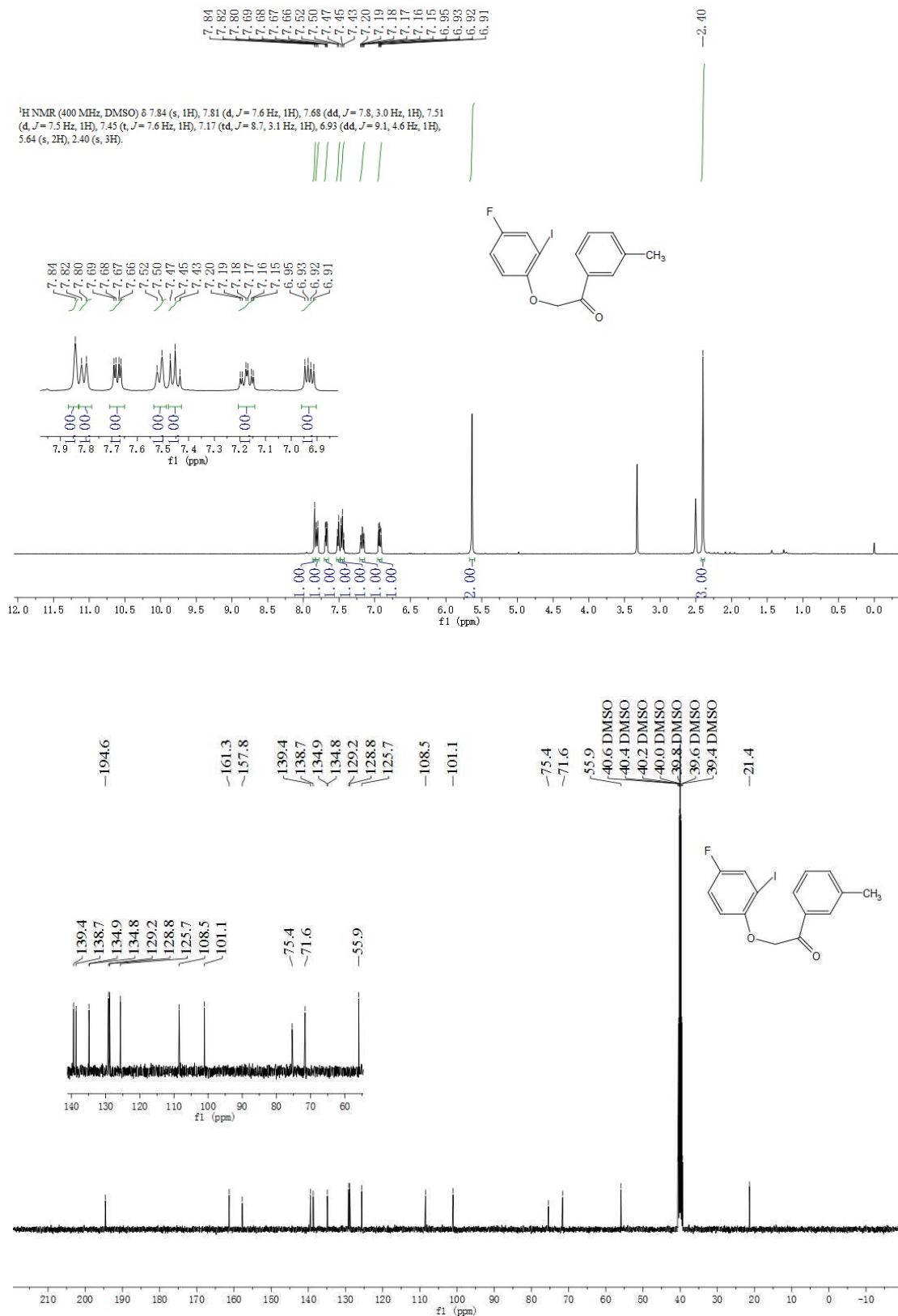


Fig. S25 NMR spectra of **3q**

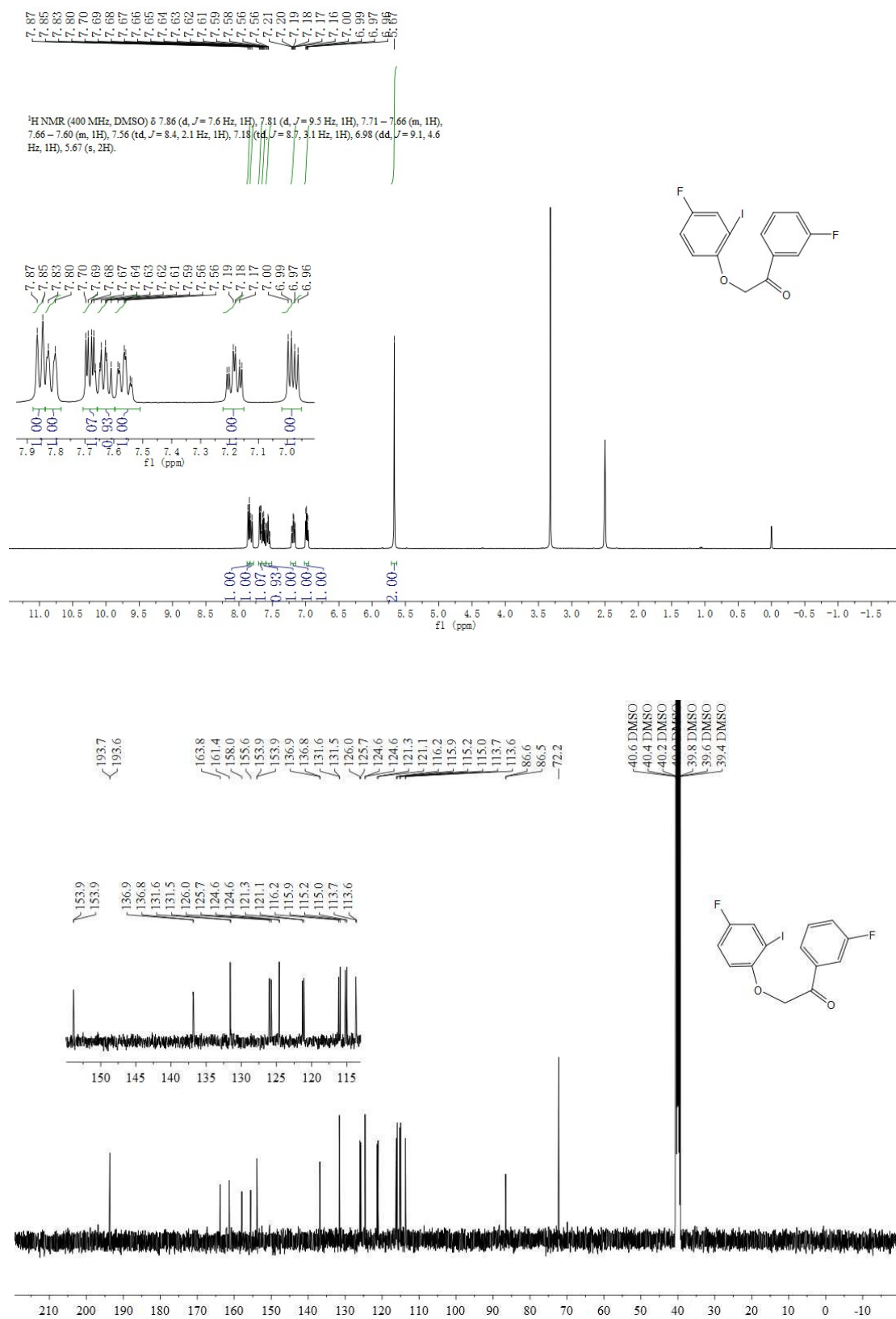


Fig. S26 NMR spectra of **3r**



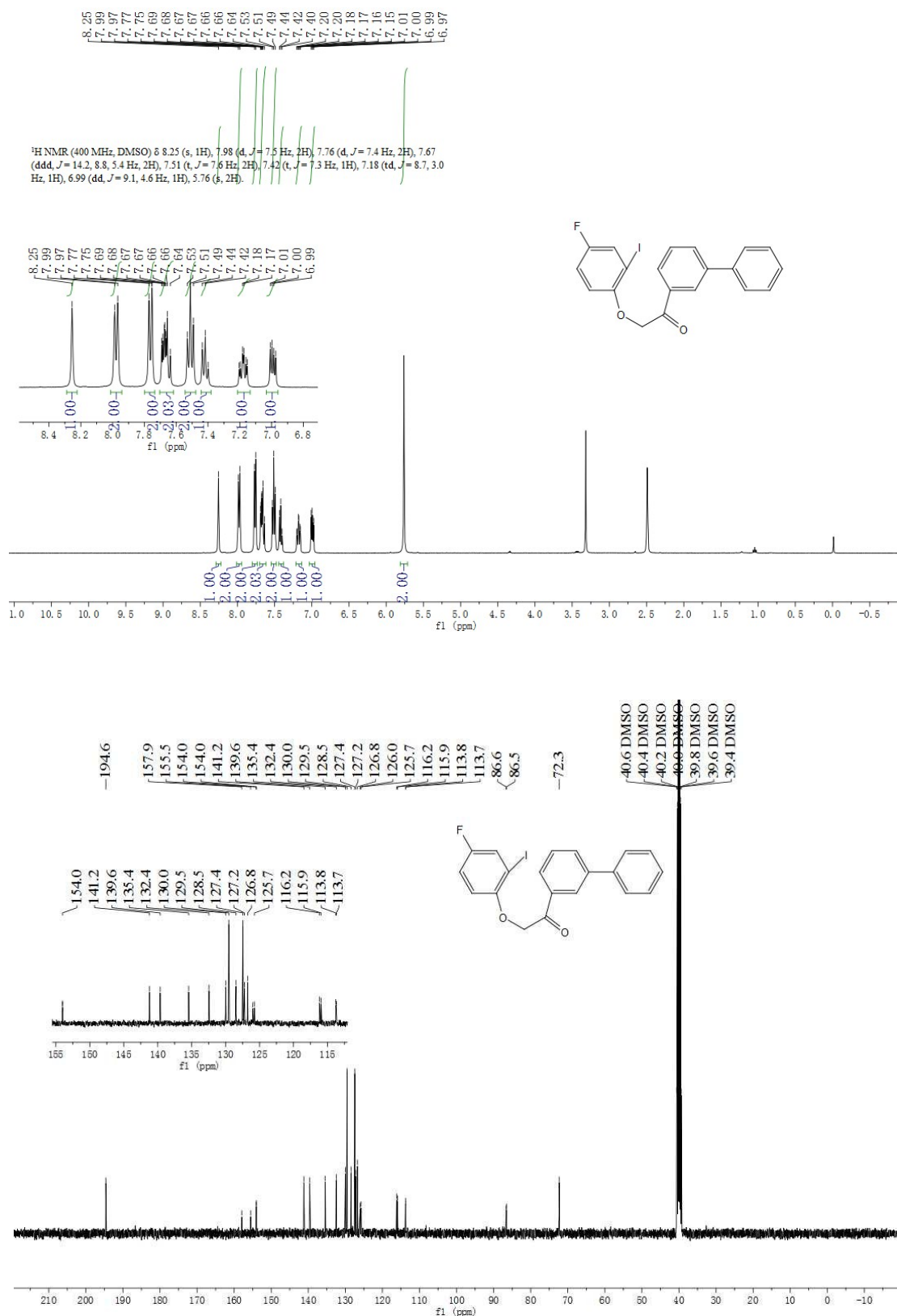


Fig. S27 NMR spectra of **3s**

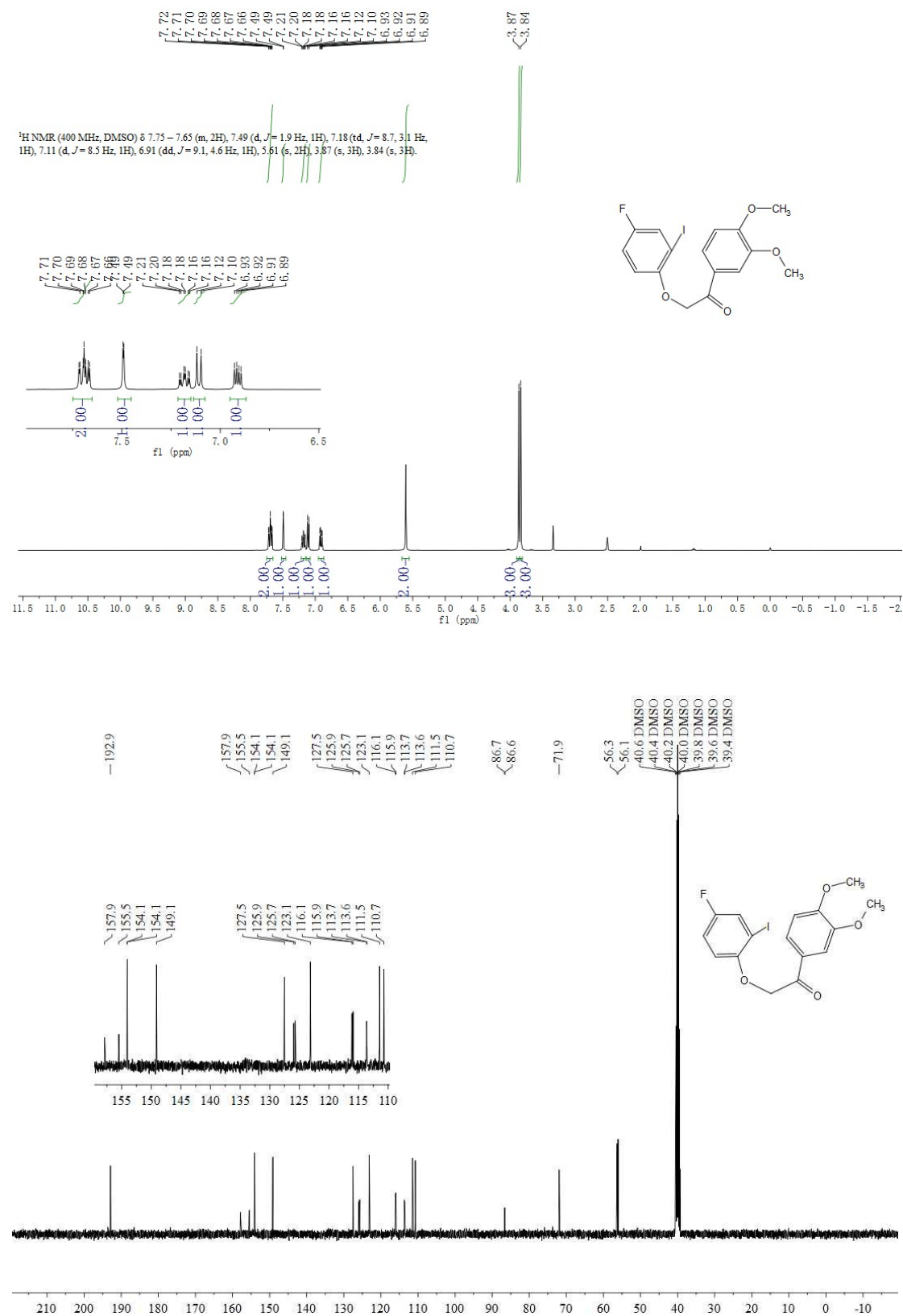


Fig. S28 NMR spectra of **3t**

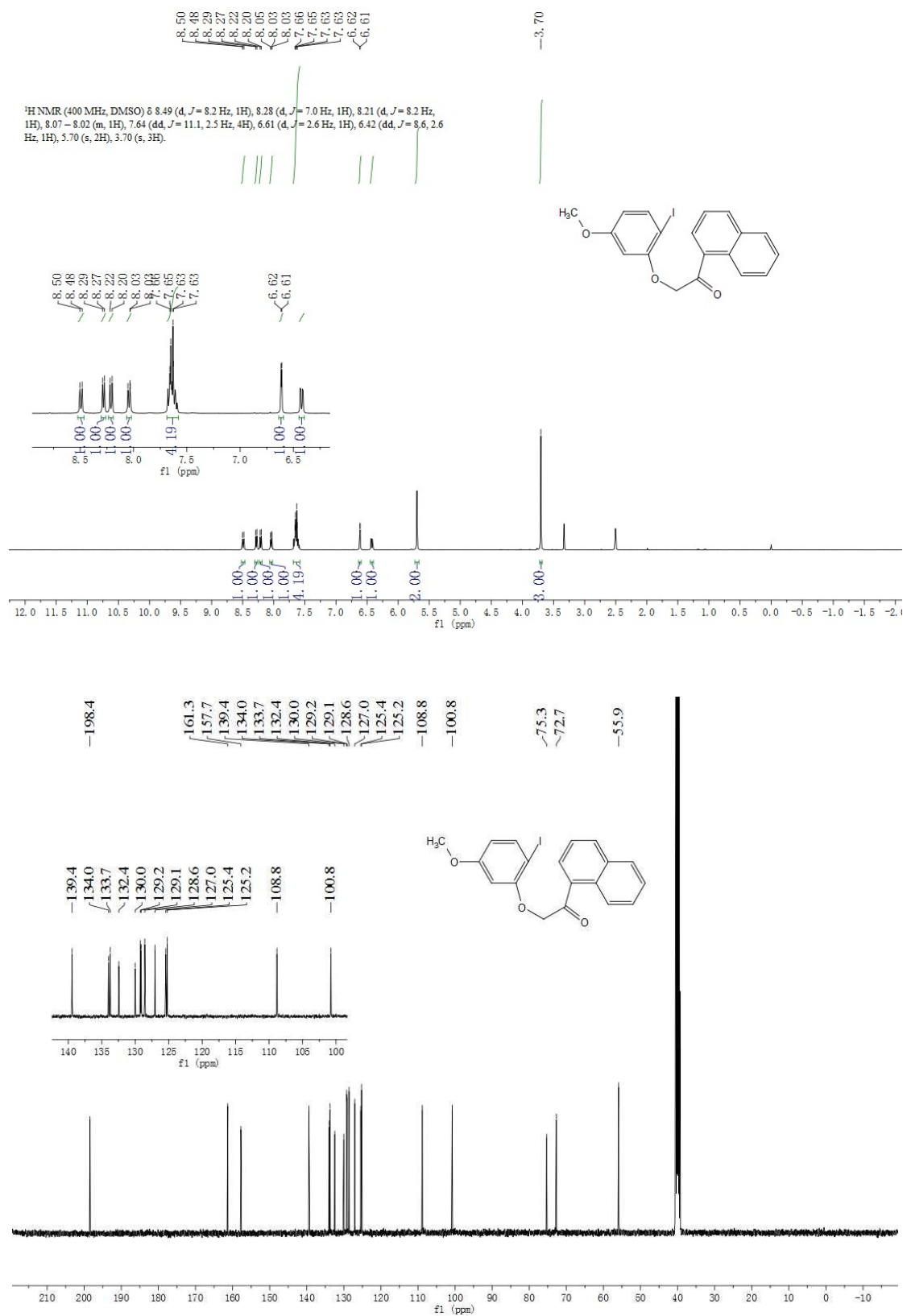


Fig. S29 NMR spectra of **3u**

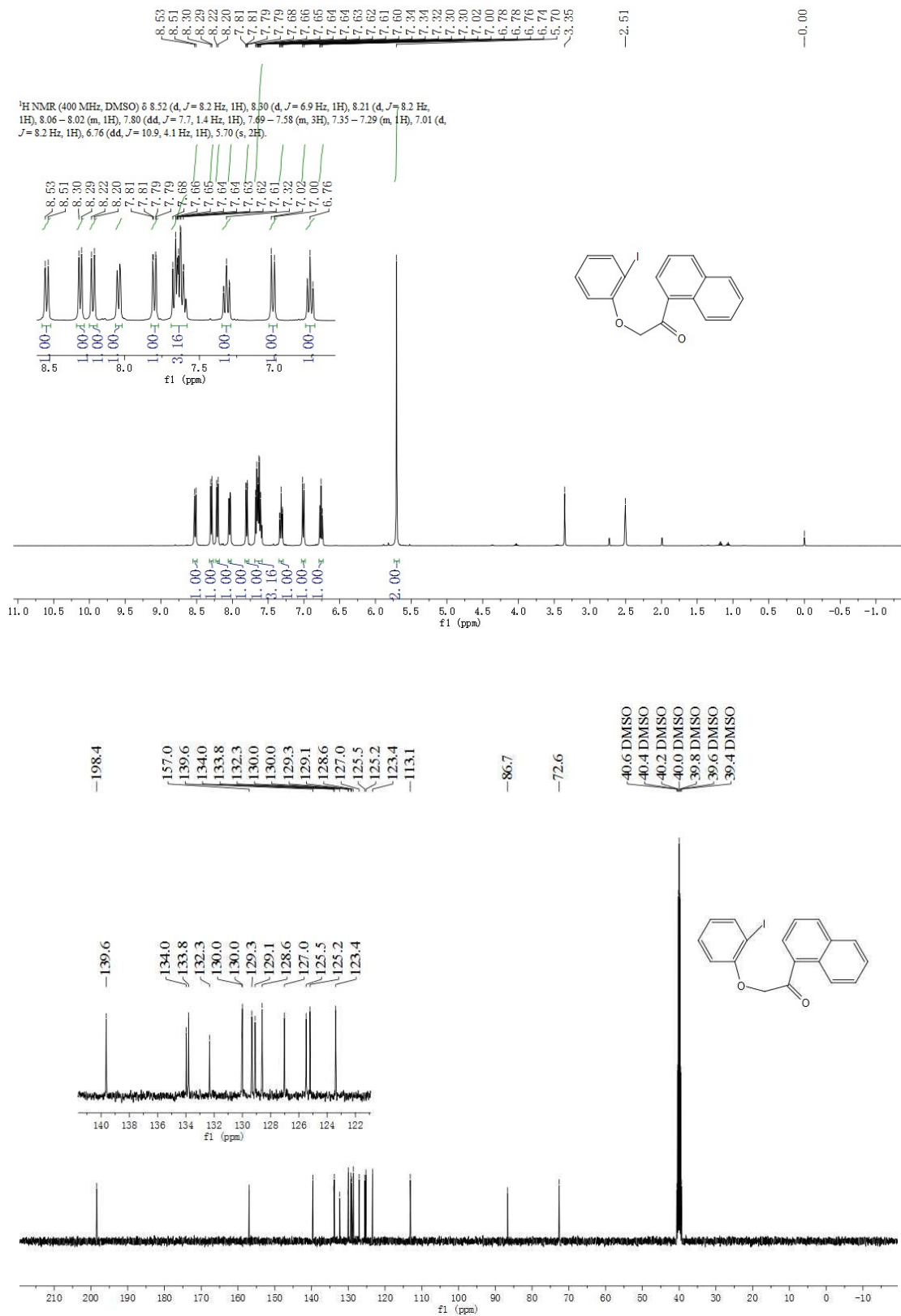


Fig. S30 NMR spectra of **3v**

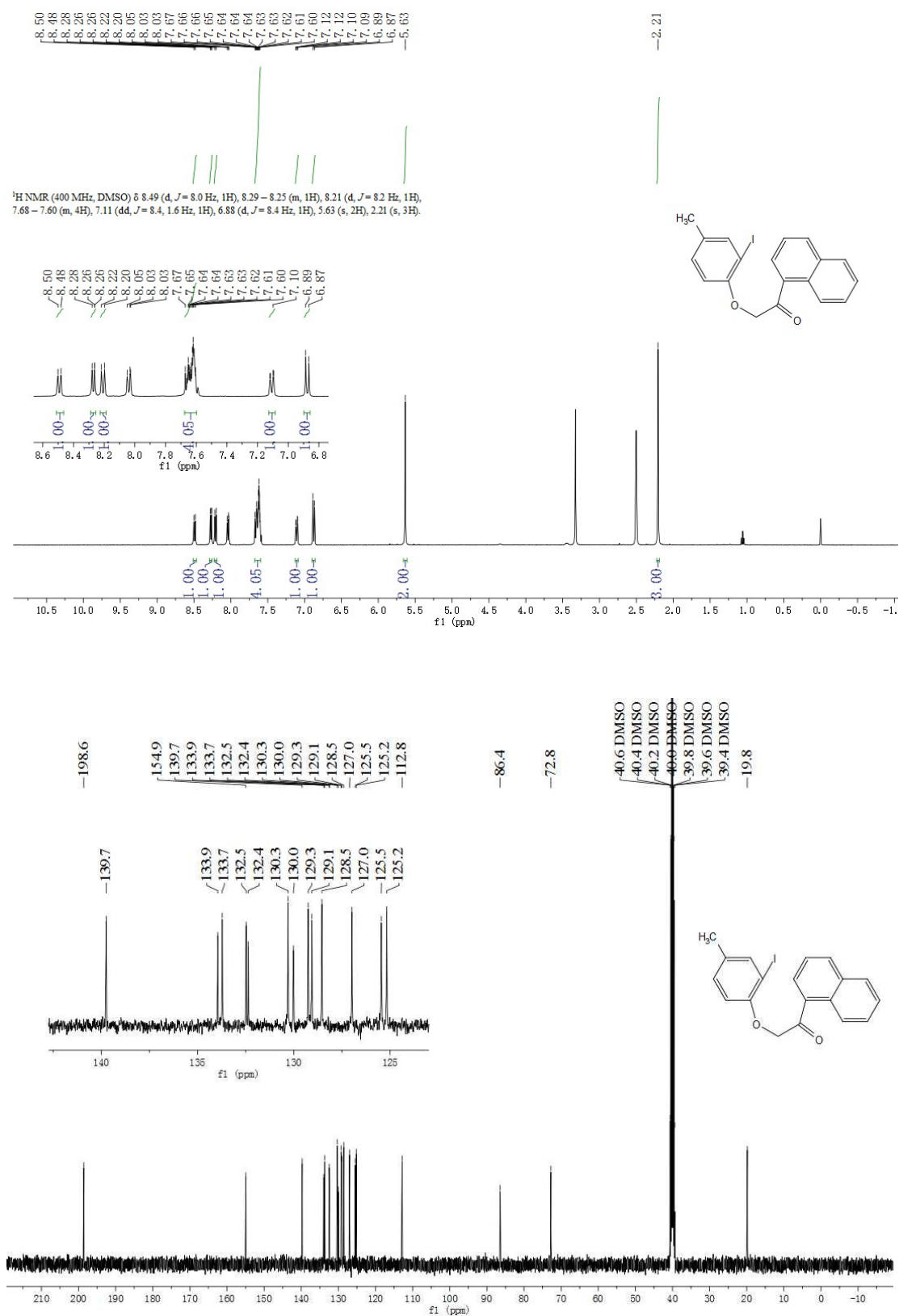


Fig. S31 NMR spectra of **3w**

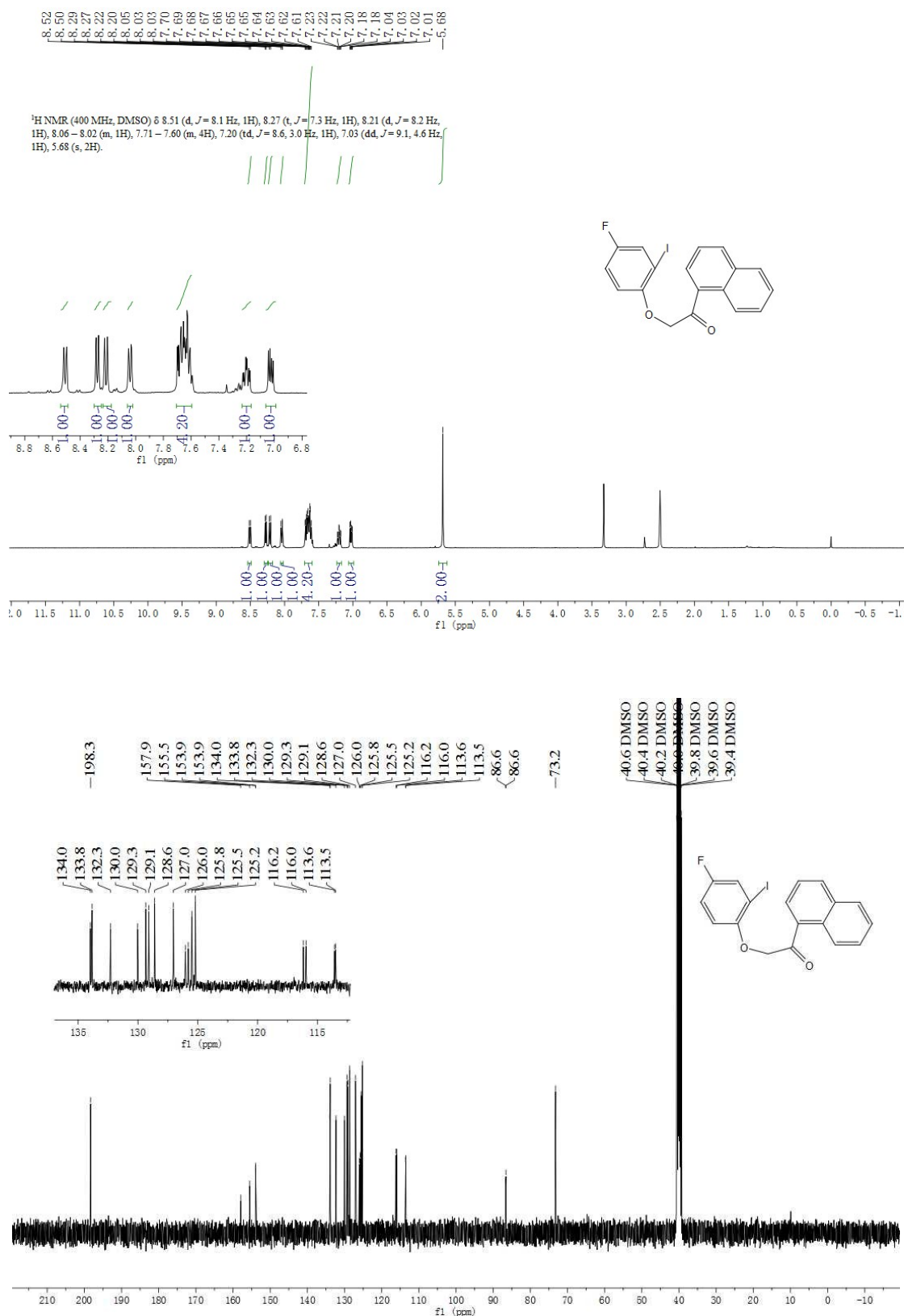


Fig. S32 NMR spectra of **3x**

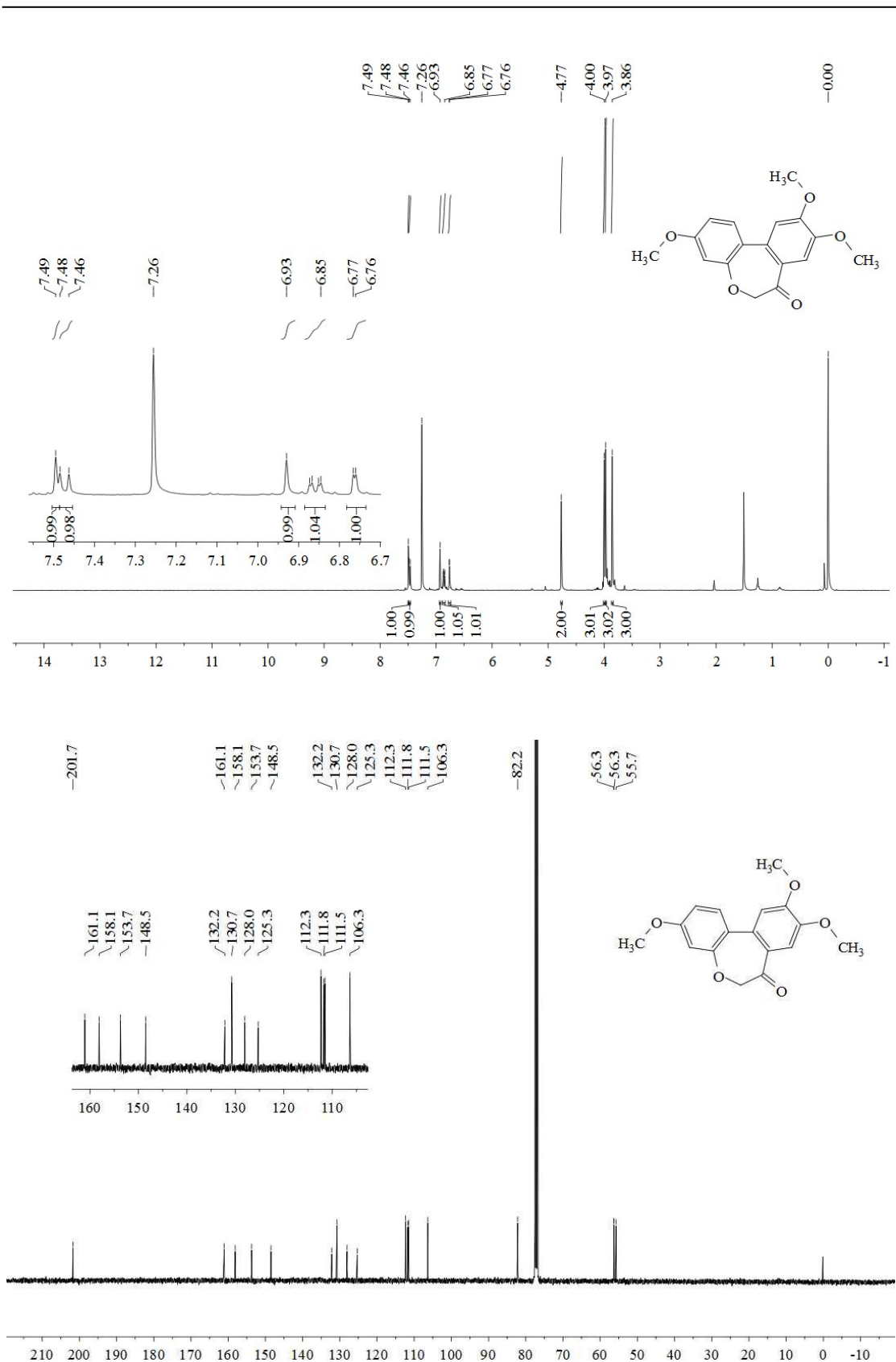


Fig. S33 NMR spectra of 4a

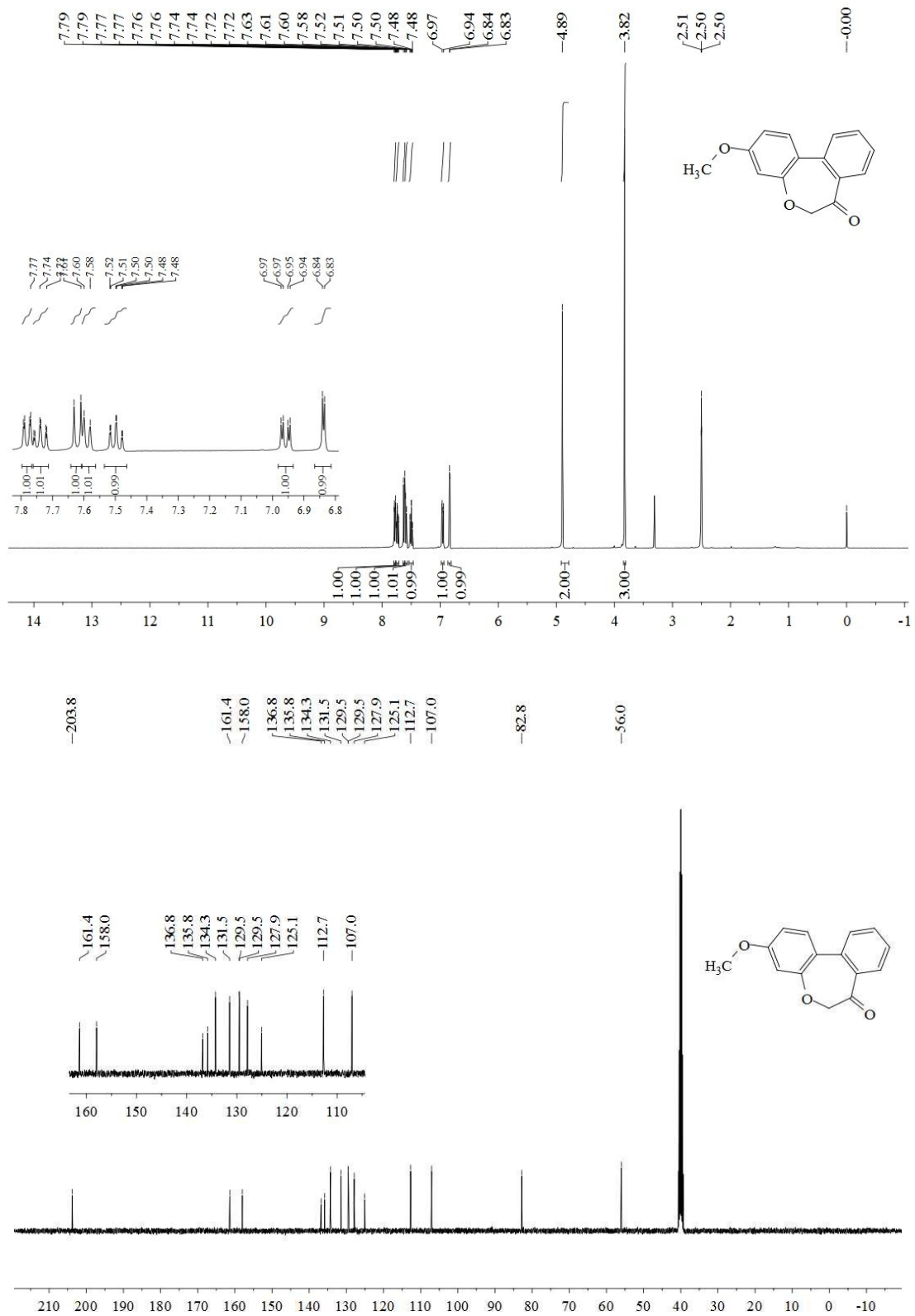


Fig. S34 NMR spectra of **4b**



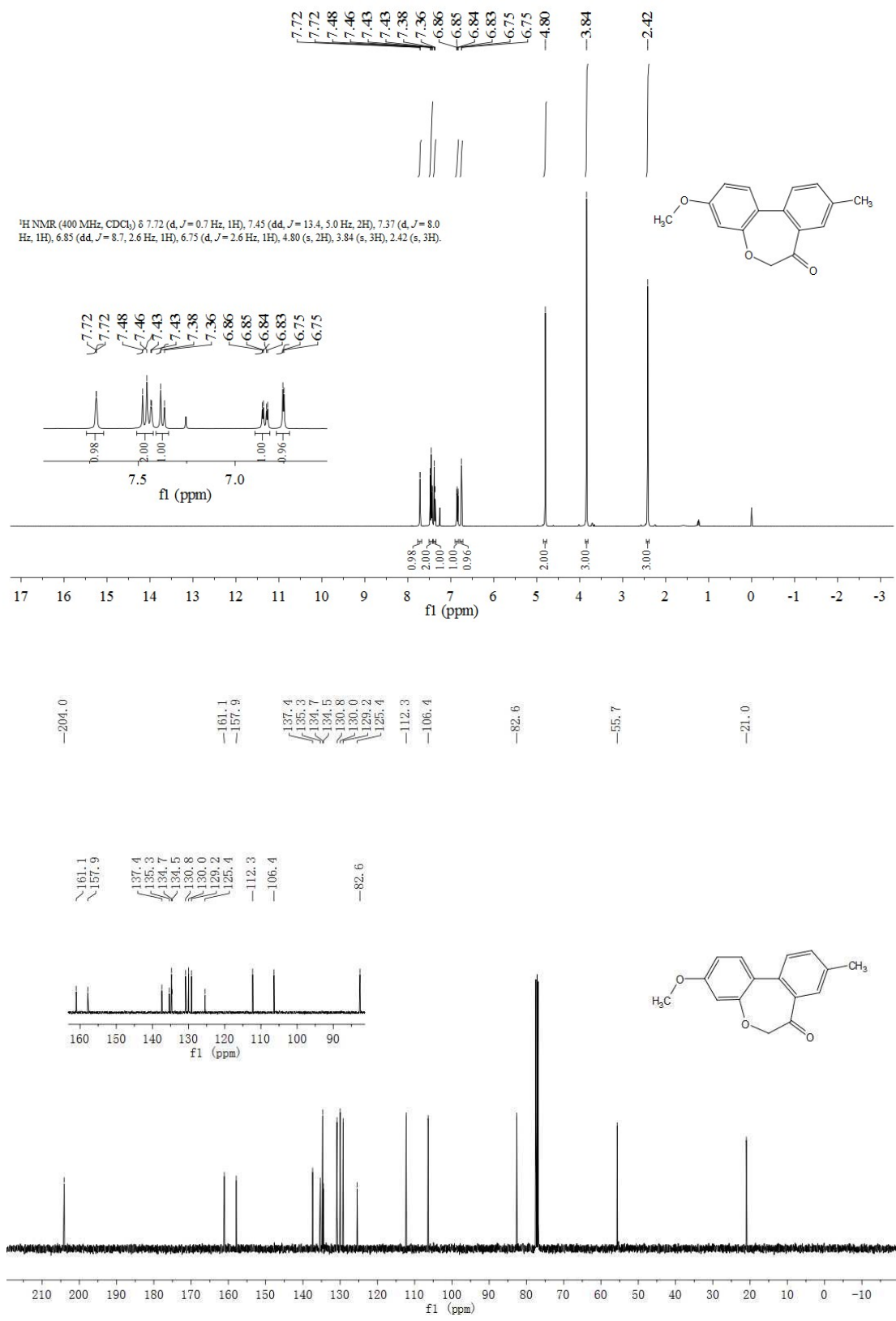


Fig. S35 NMR spectra of **4c**

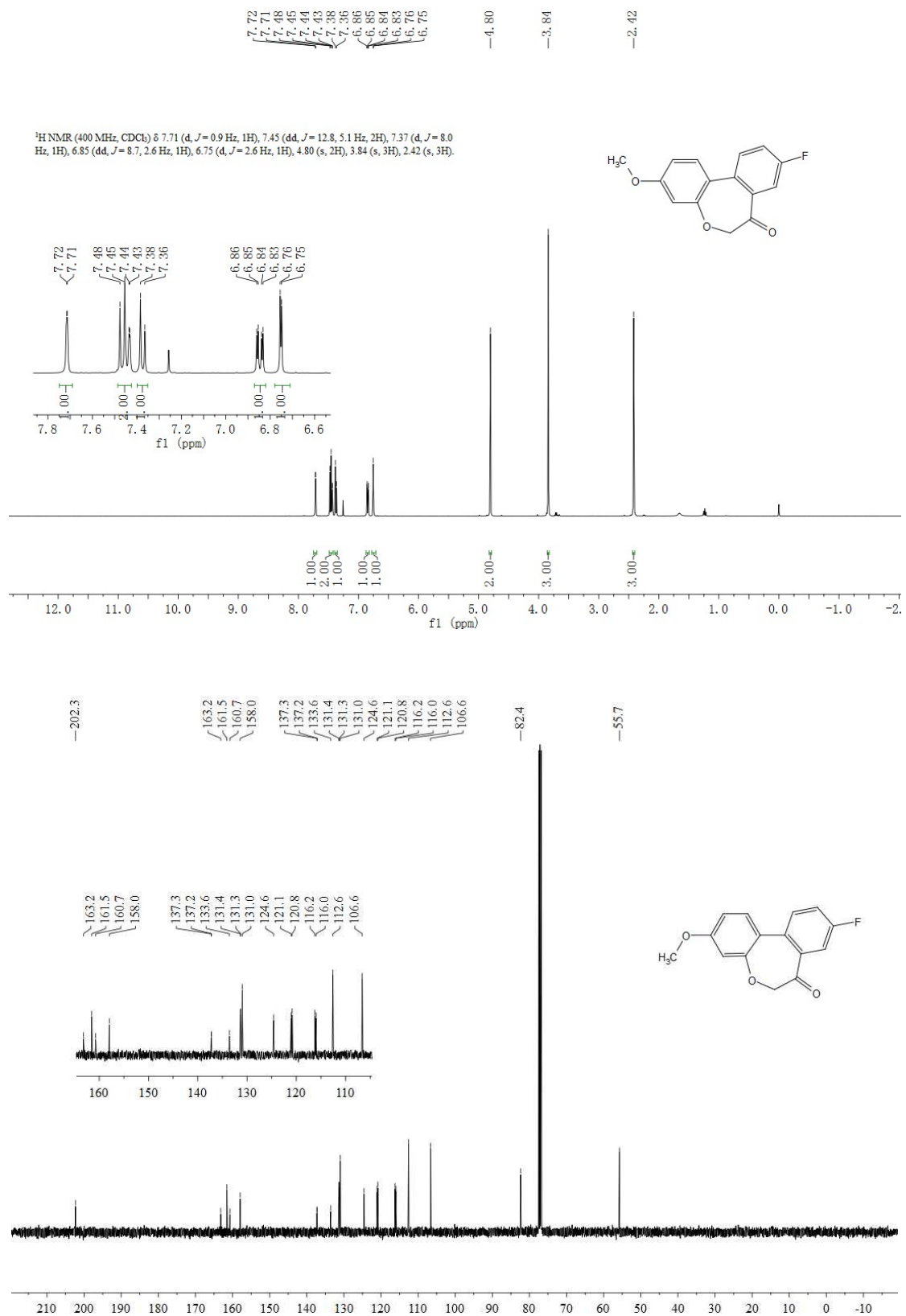


Fig. S36 NMR spectra of **4d**

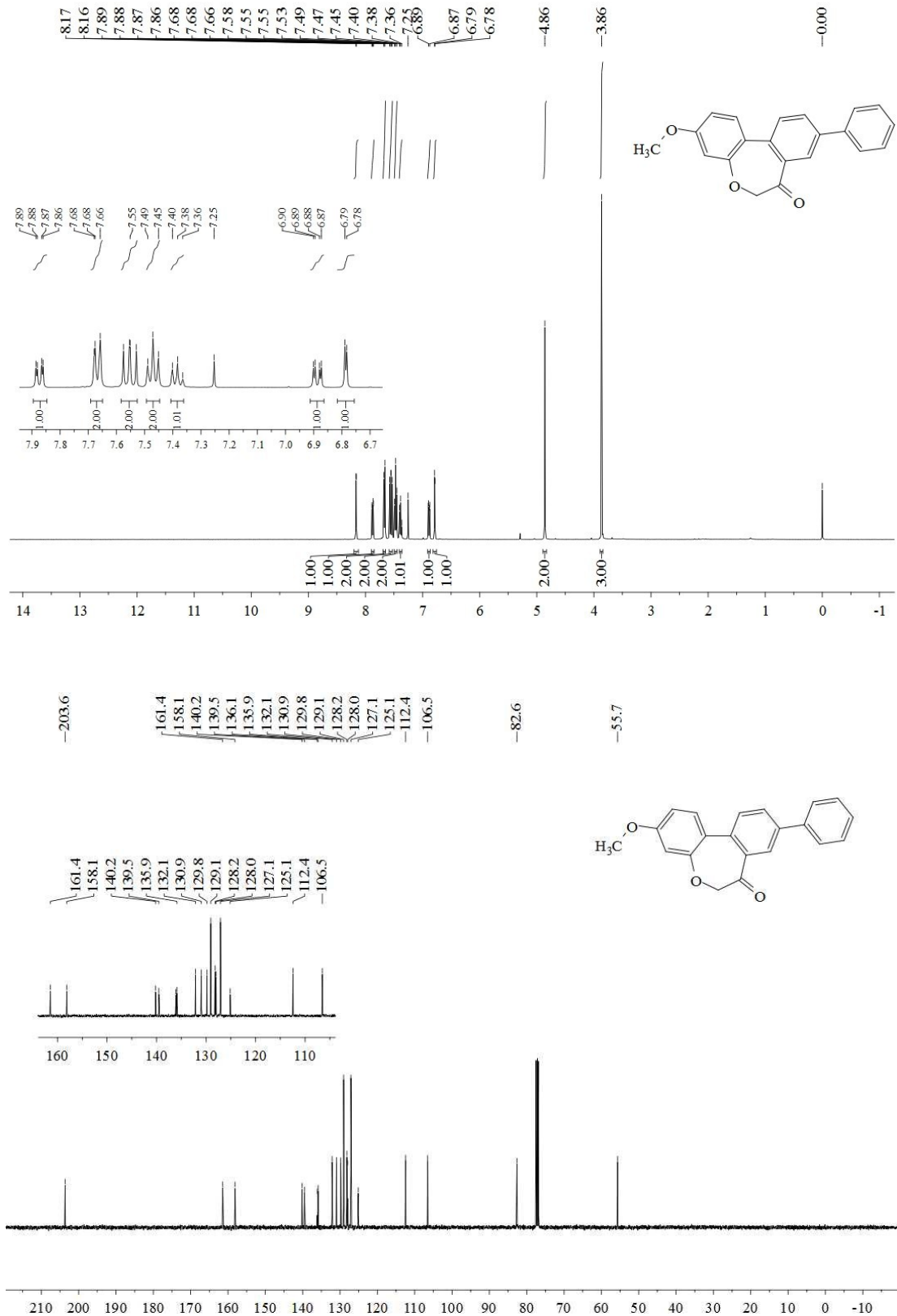


Fig. S37 NMR spectra of 4e

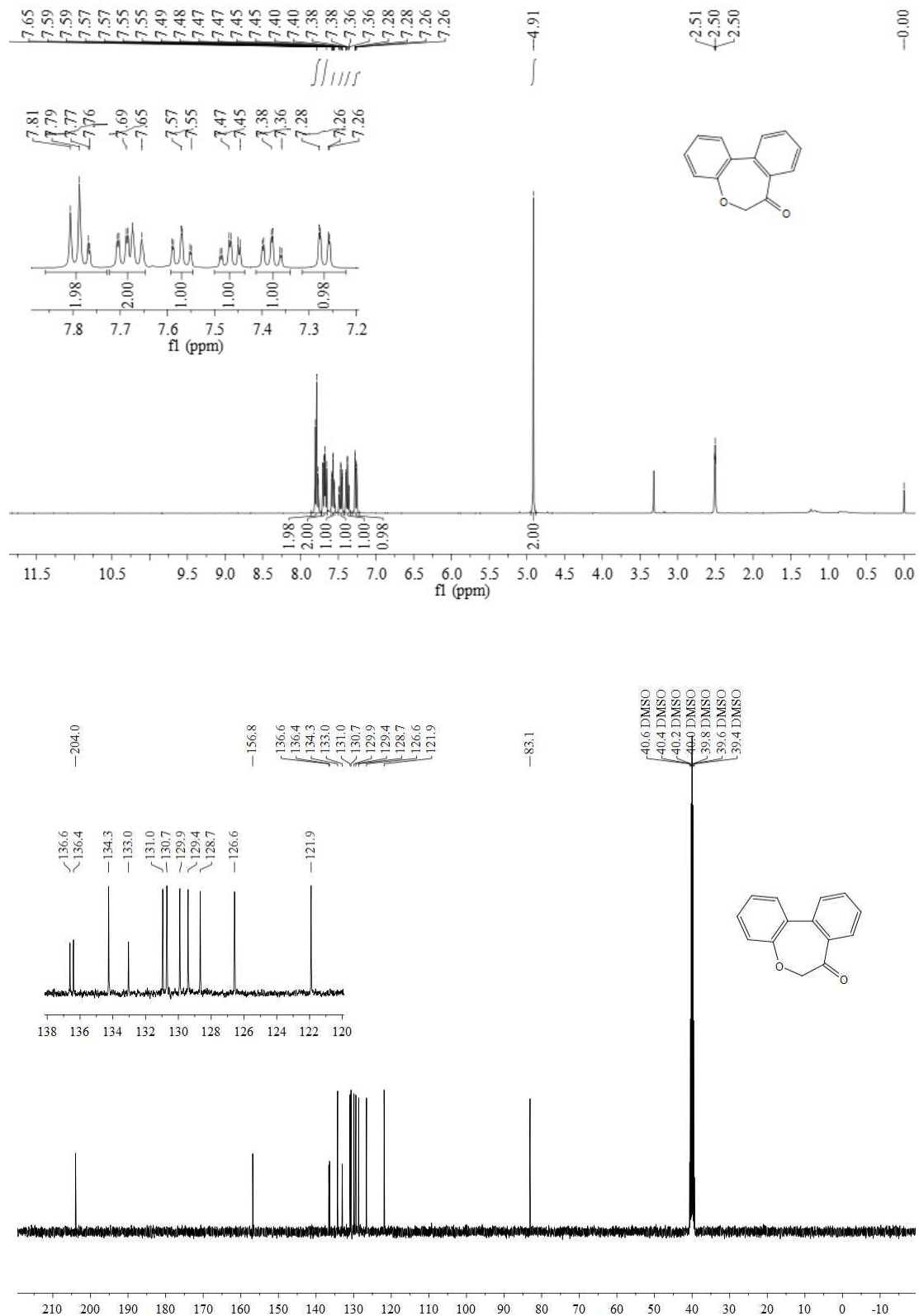


Fig. S38 NMR spectra of 4f

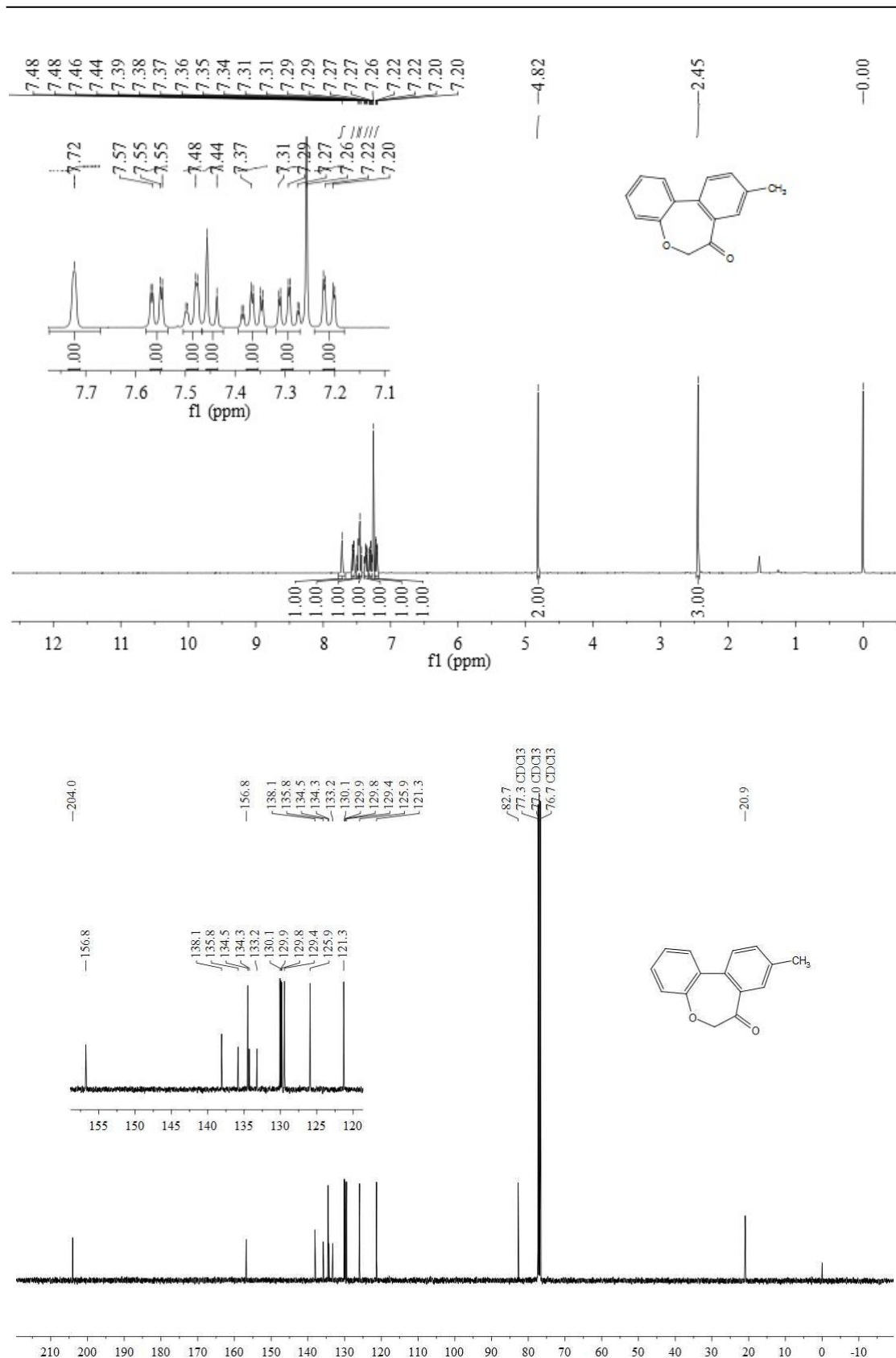


Fig. S39 NMR spectra of **4g**

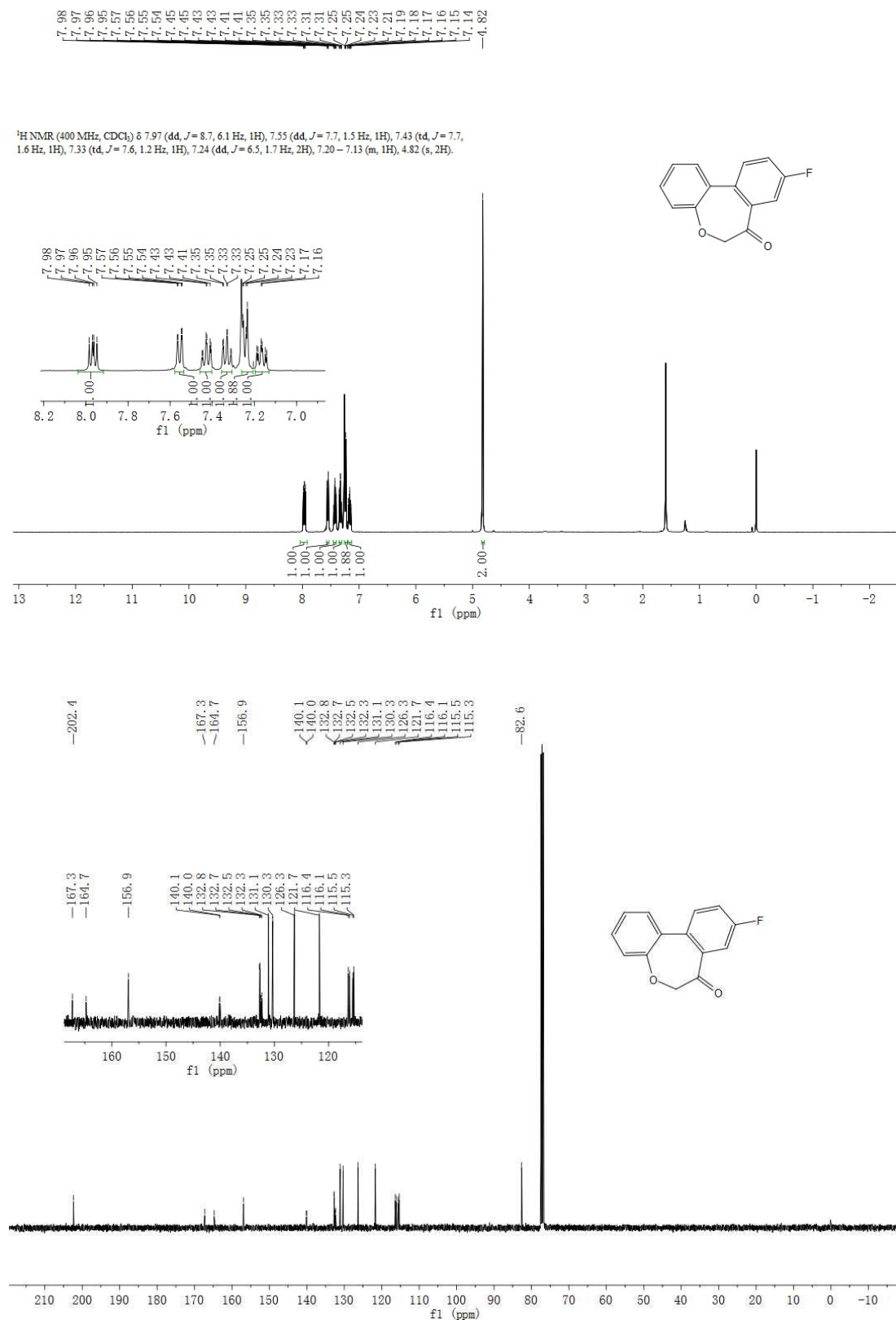


Fig. S40 NMR spectra of **4h**

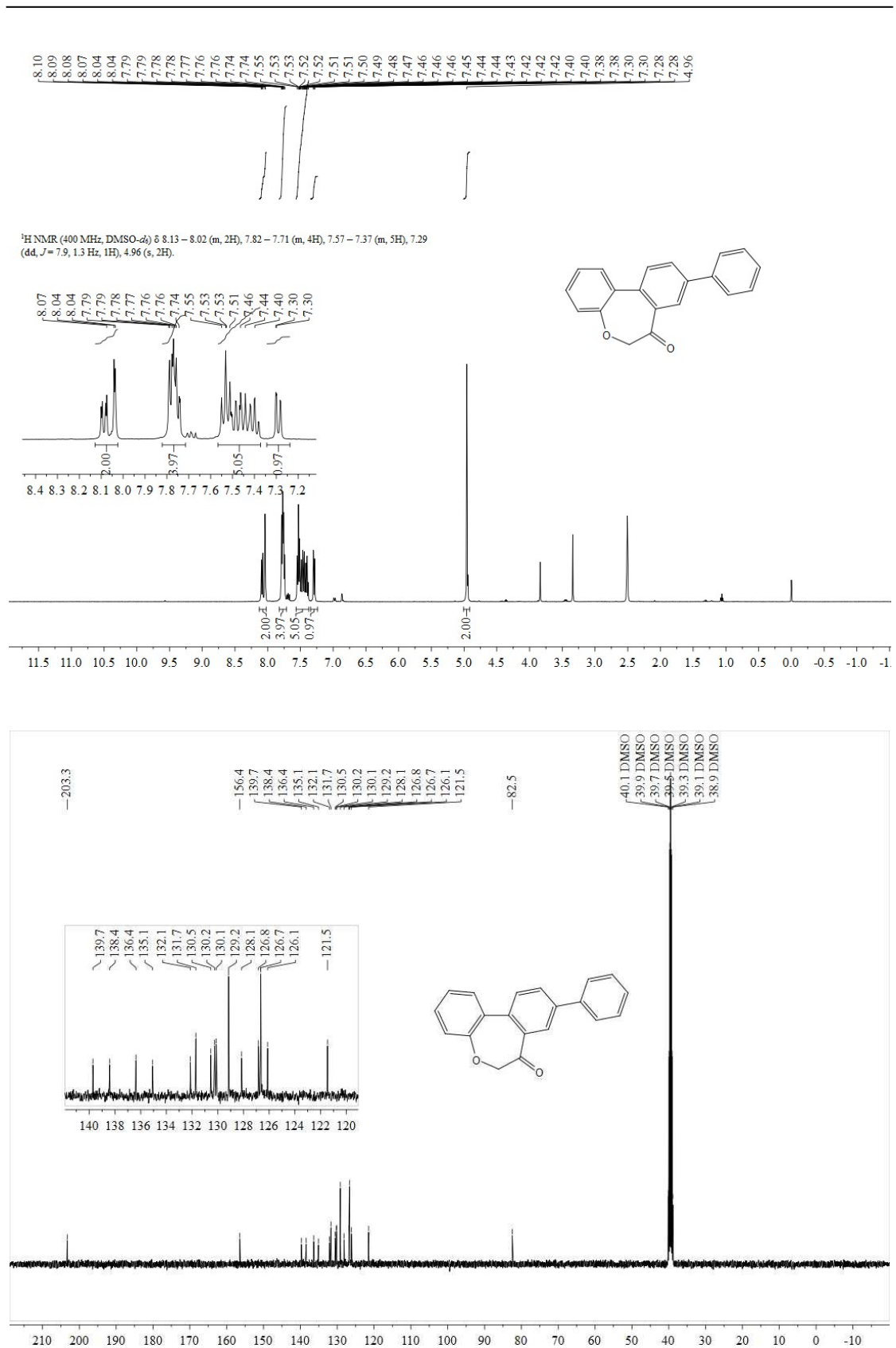


Fig. S41 NMR spectra of **4i**

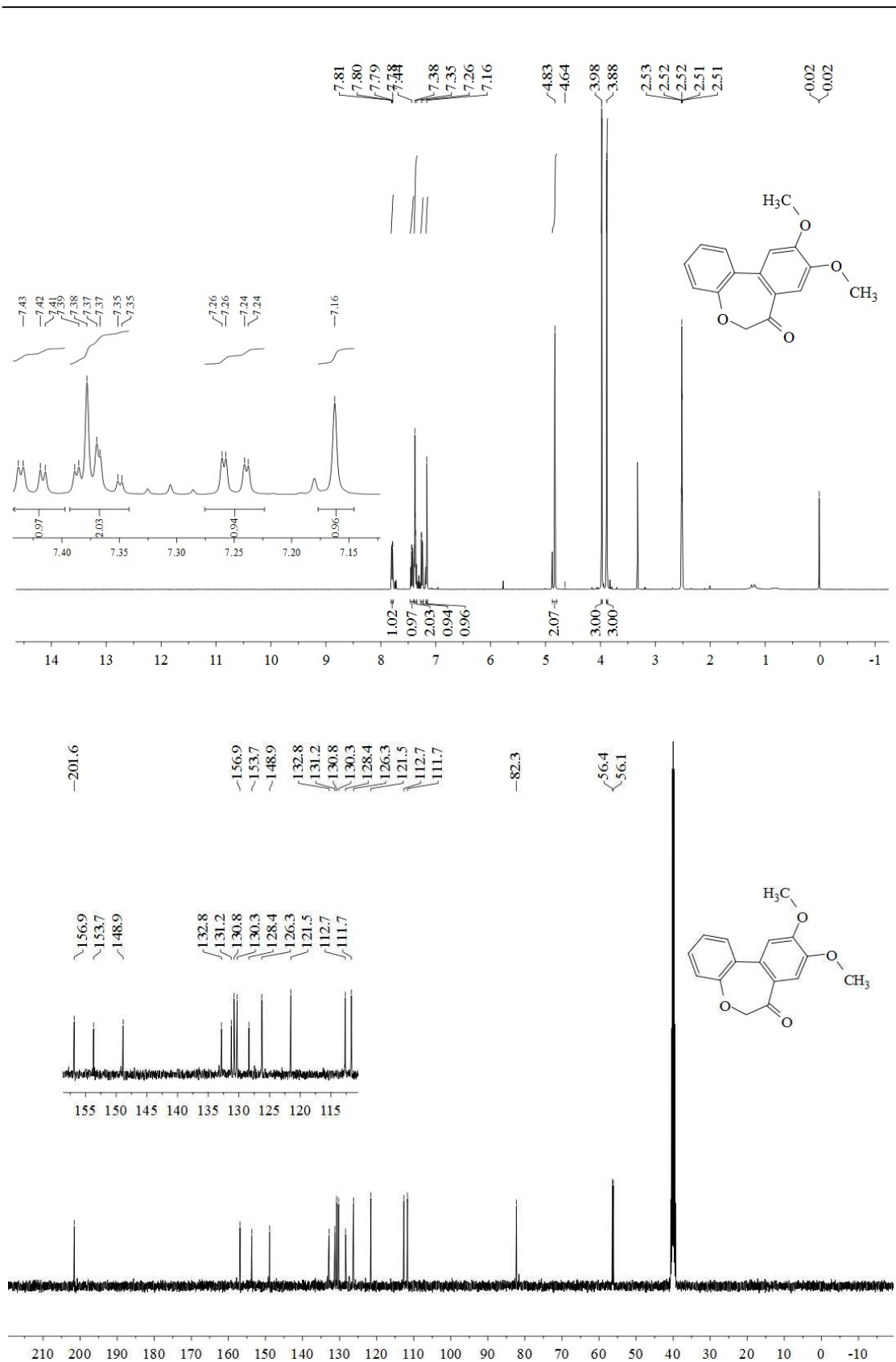


Fig. S42 NMR spectra of **4j**



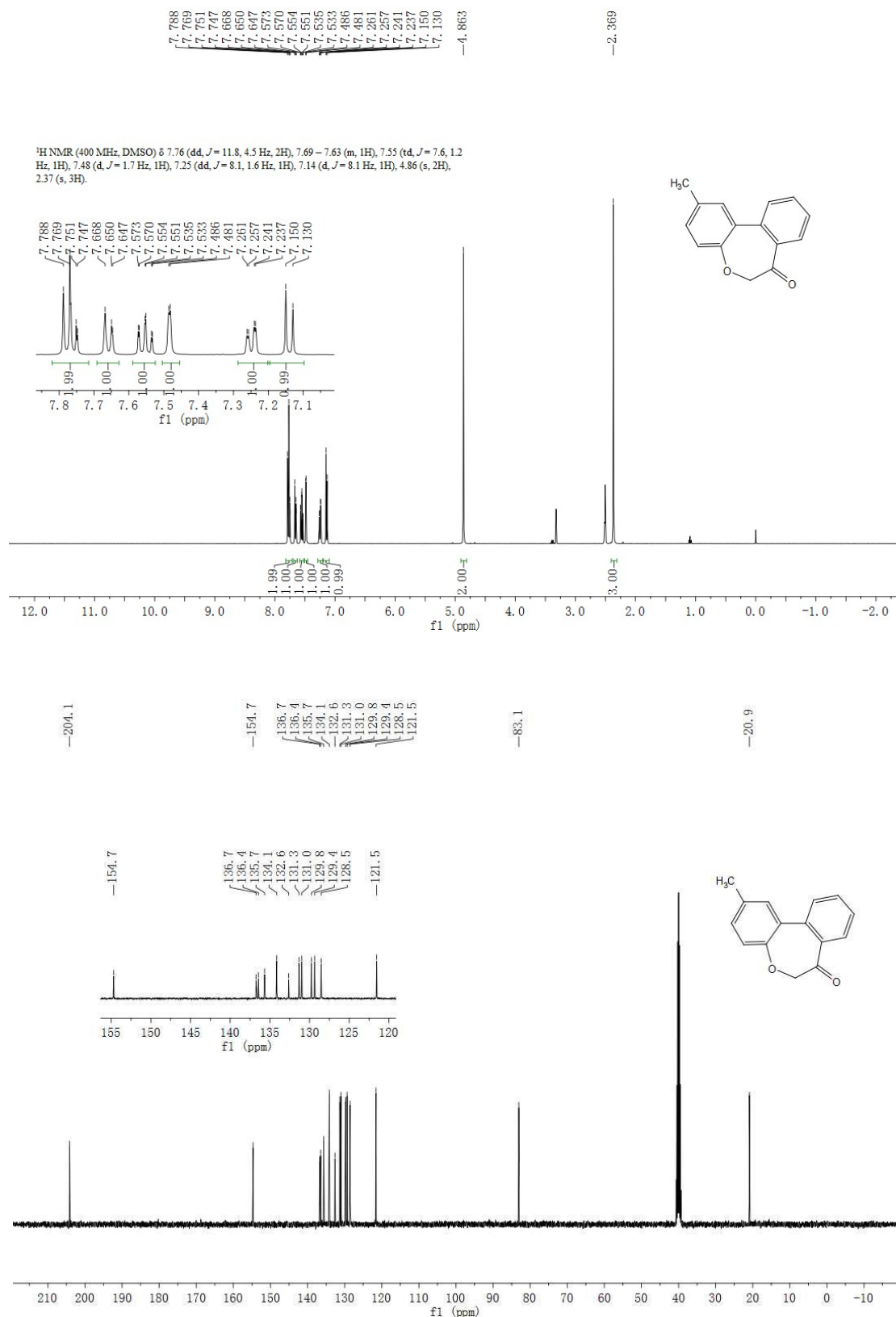


Fig. S43 NMR spectra of 4k

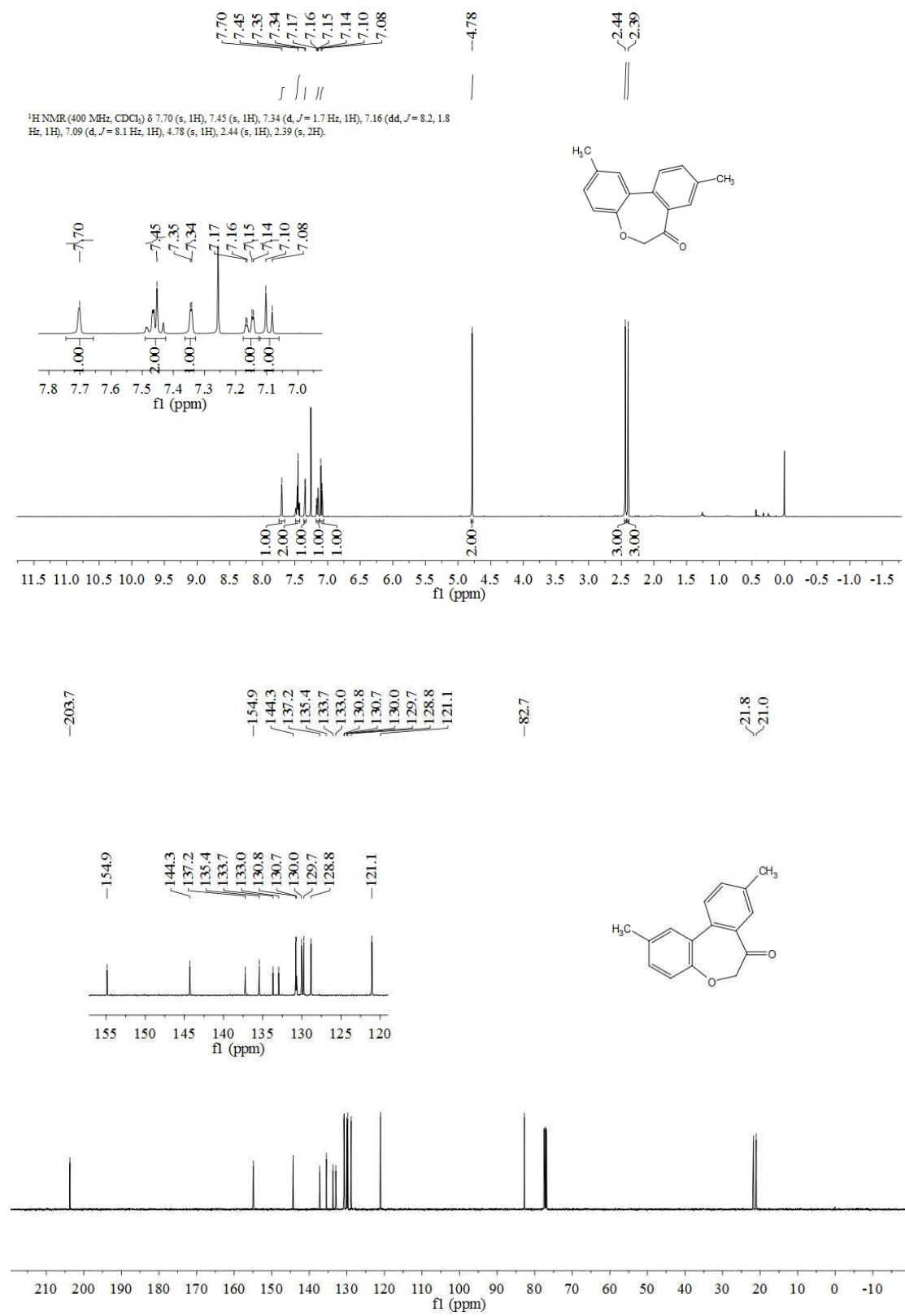


Fig. S44 NMR spectra of 41

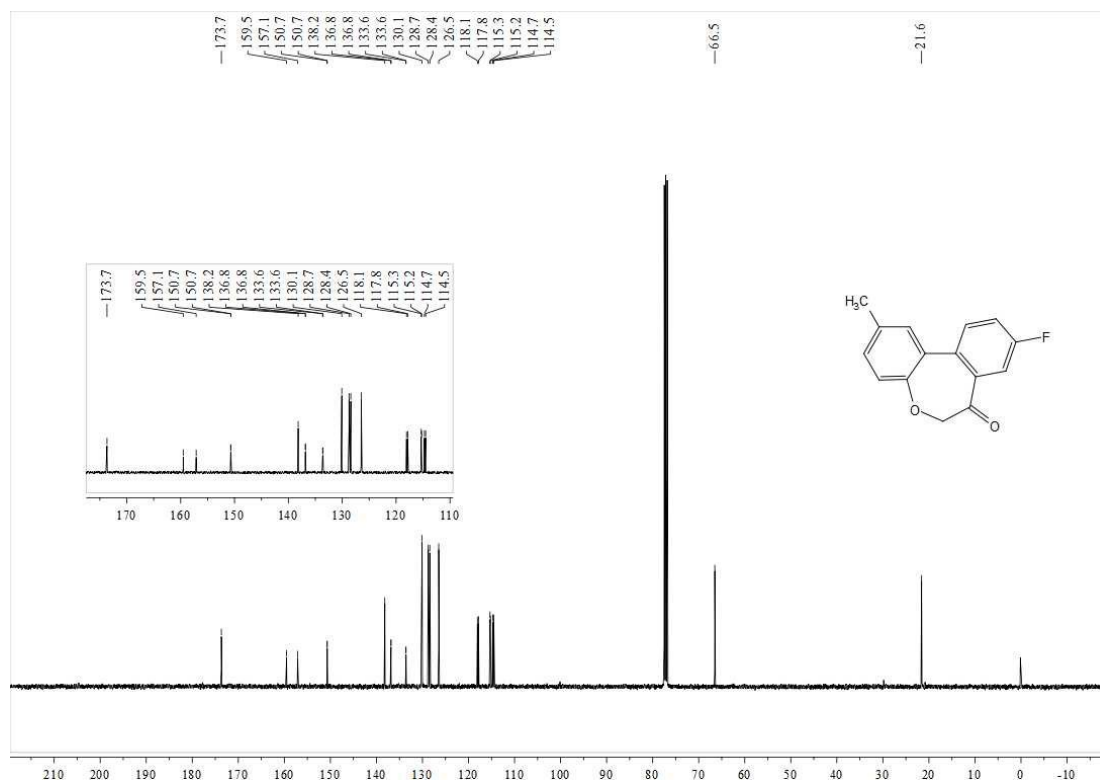
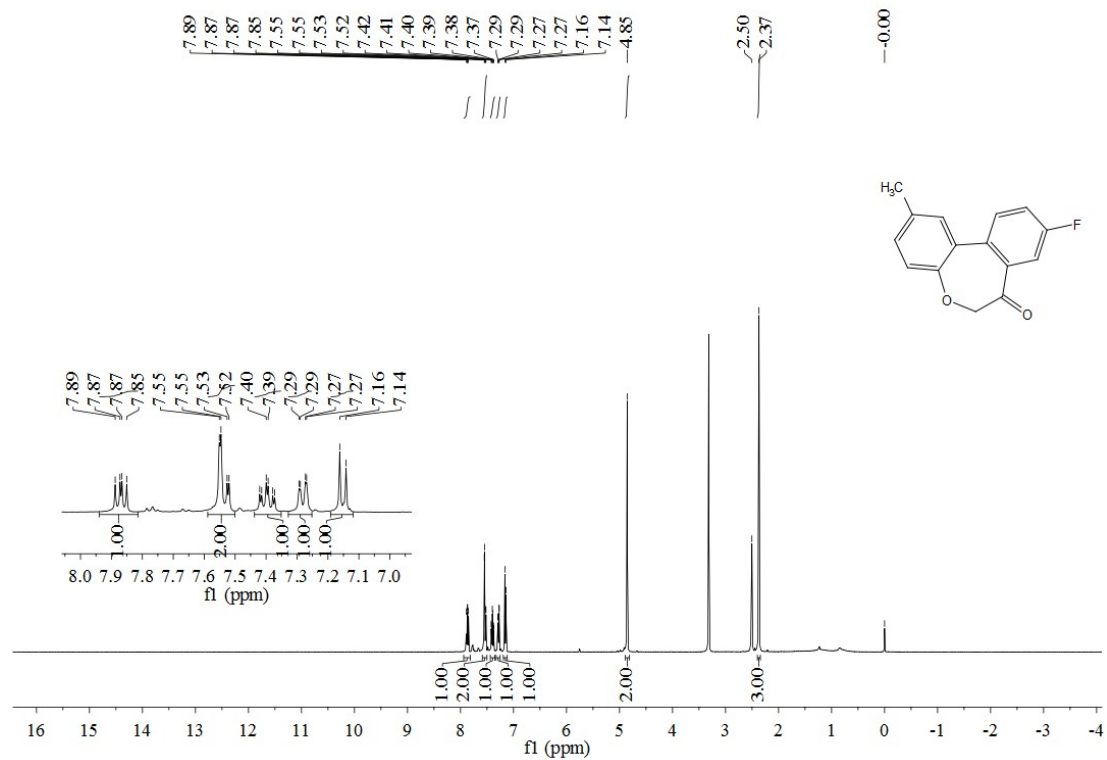


Fig. S45 NMR spectra of 4m

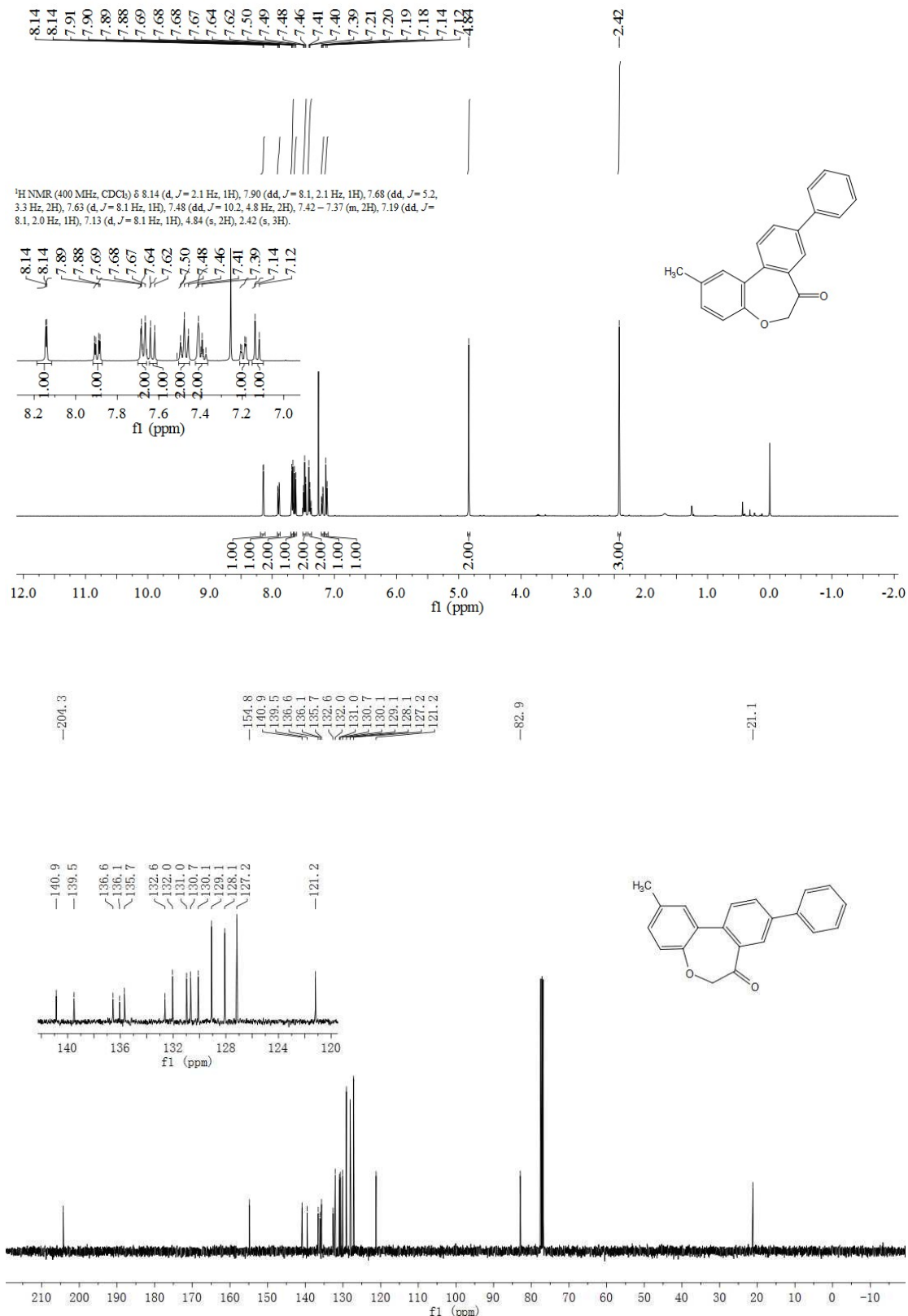


Fig. S46 NMR spectra of **4n**

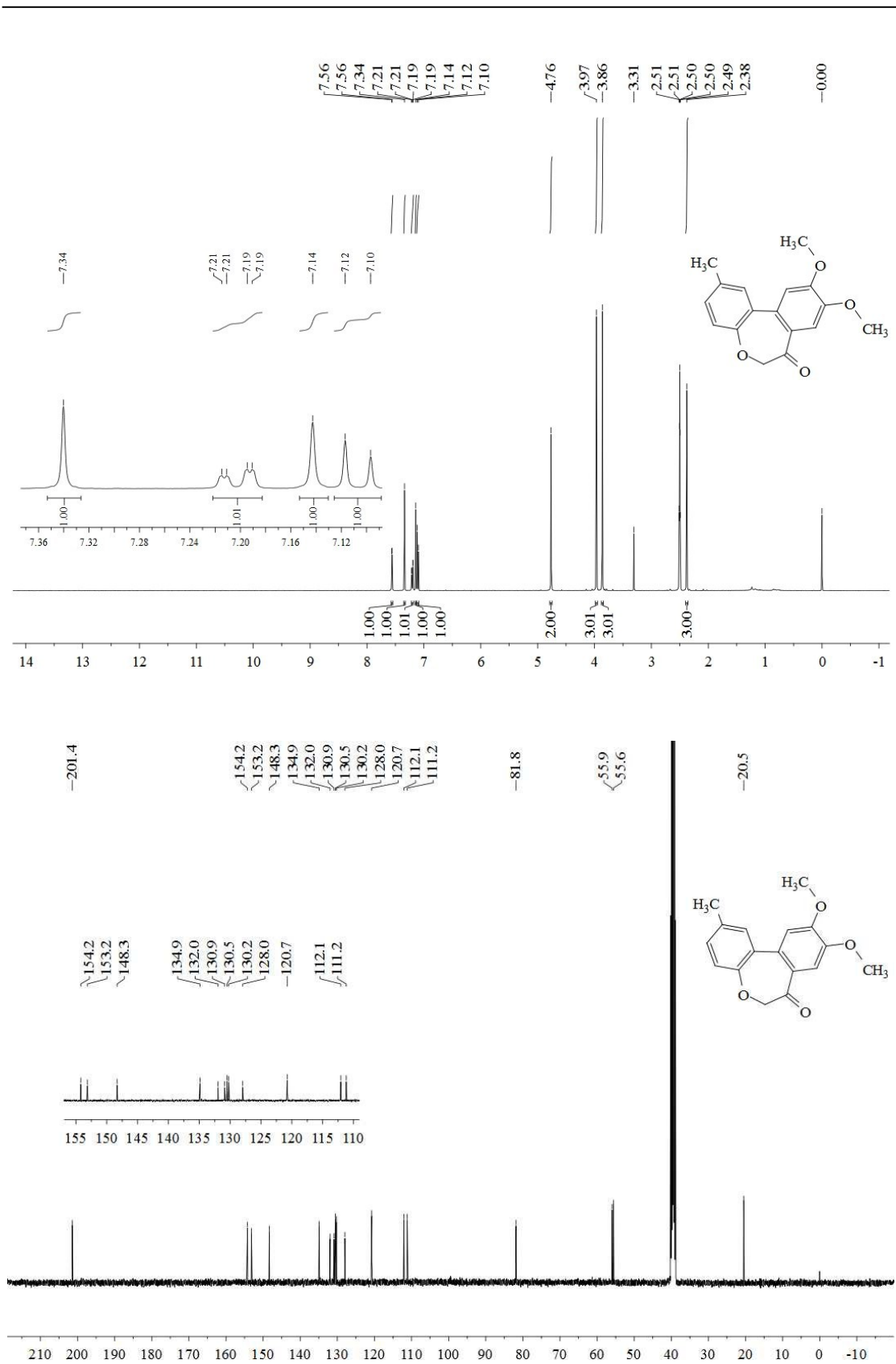


Fig. S47 NMR spectra of **40**

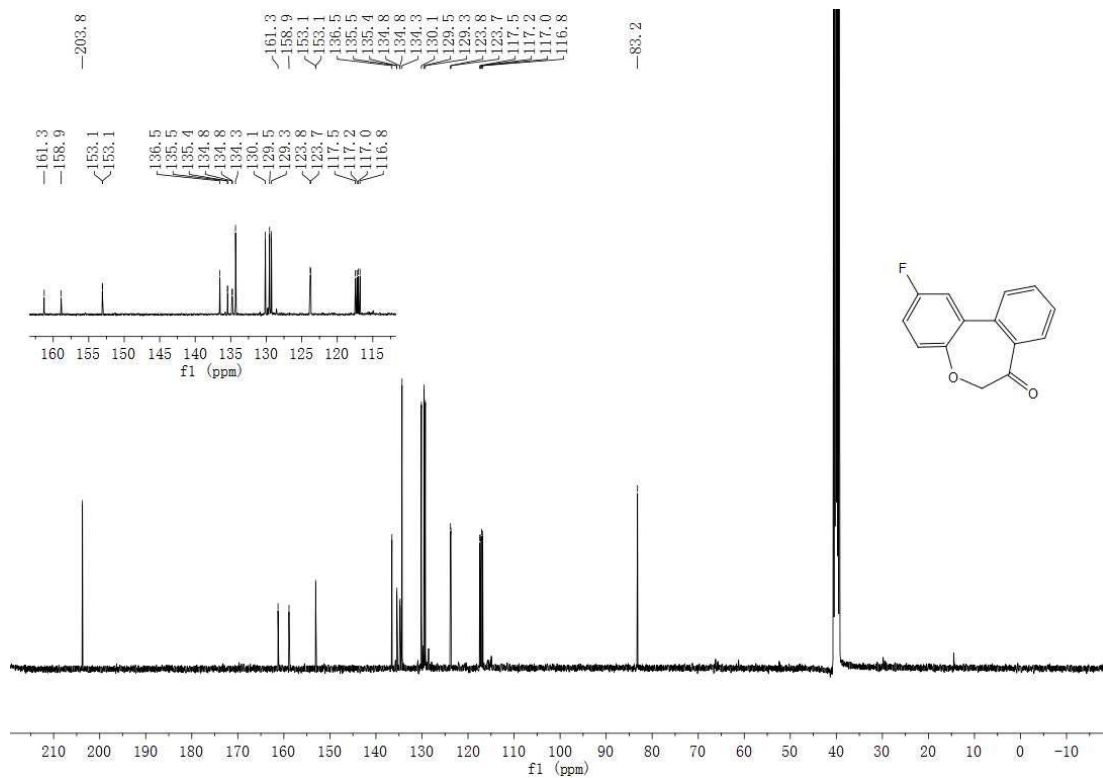
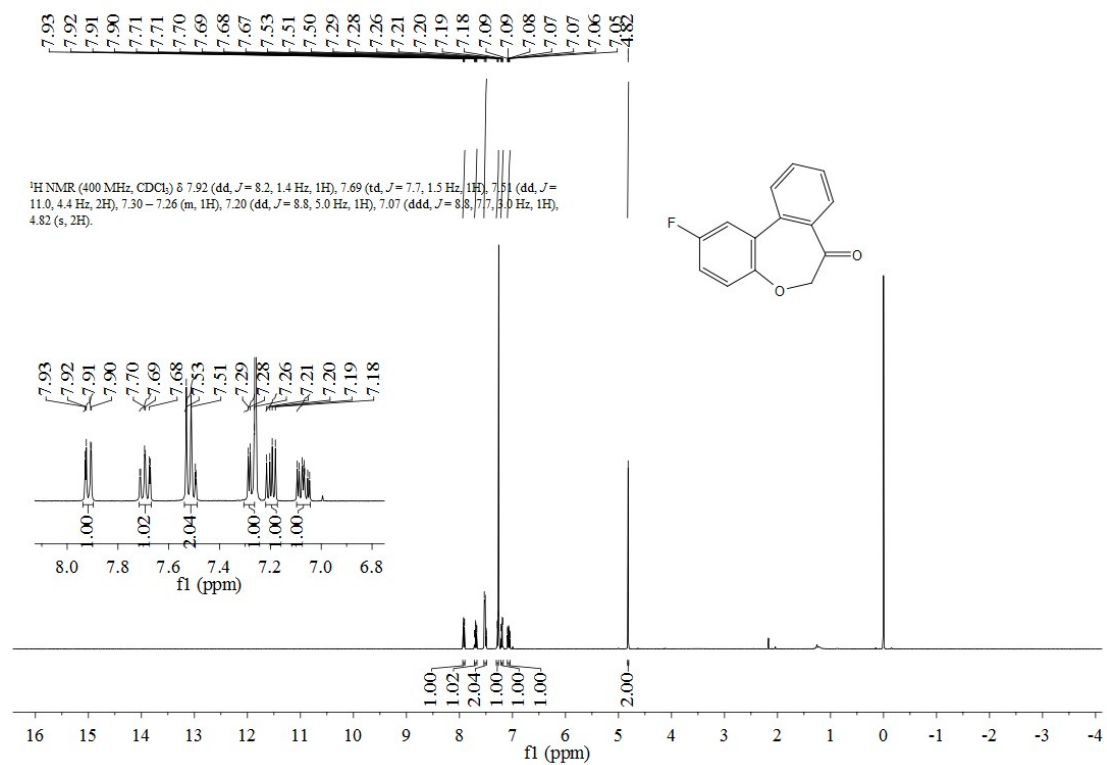


Fig. S48 NMR spectra of **4p**

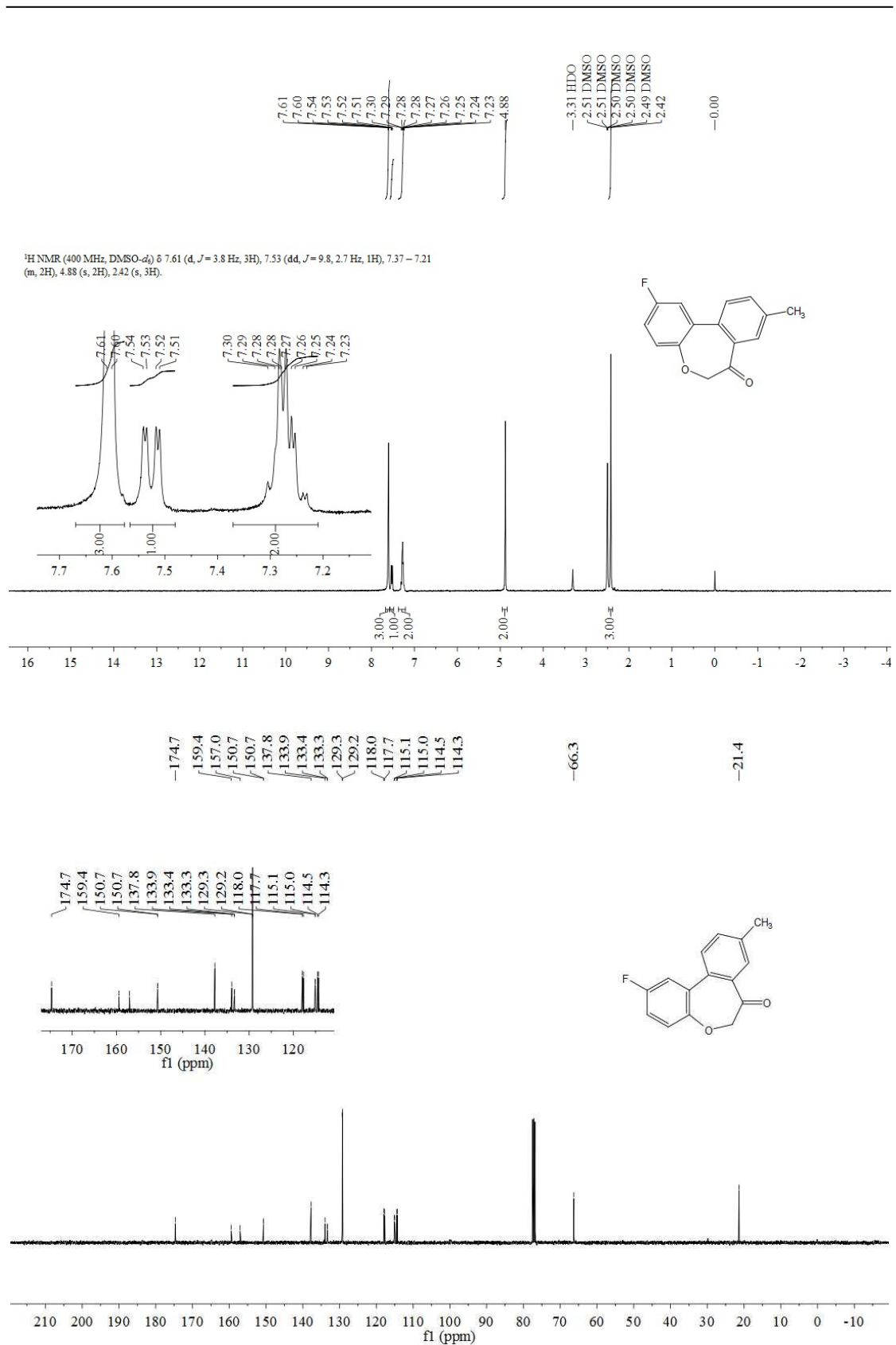


Fig. S49 NMR spectra of **4q**

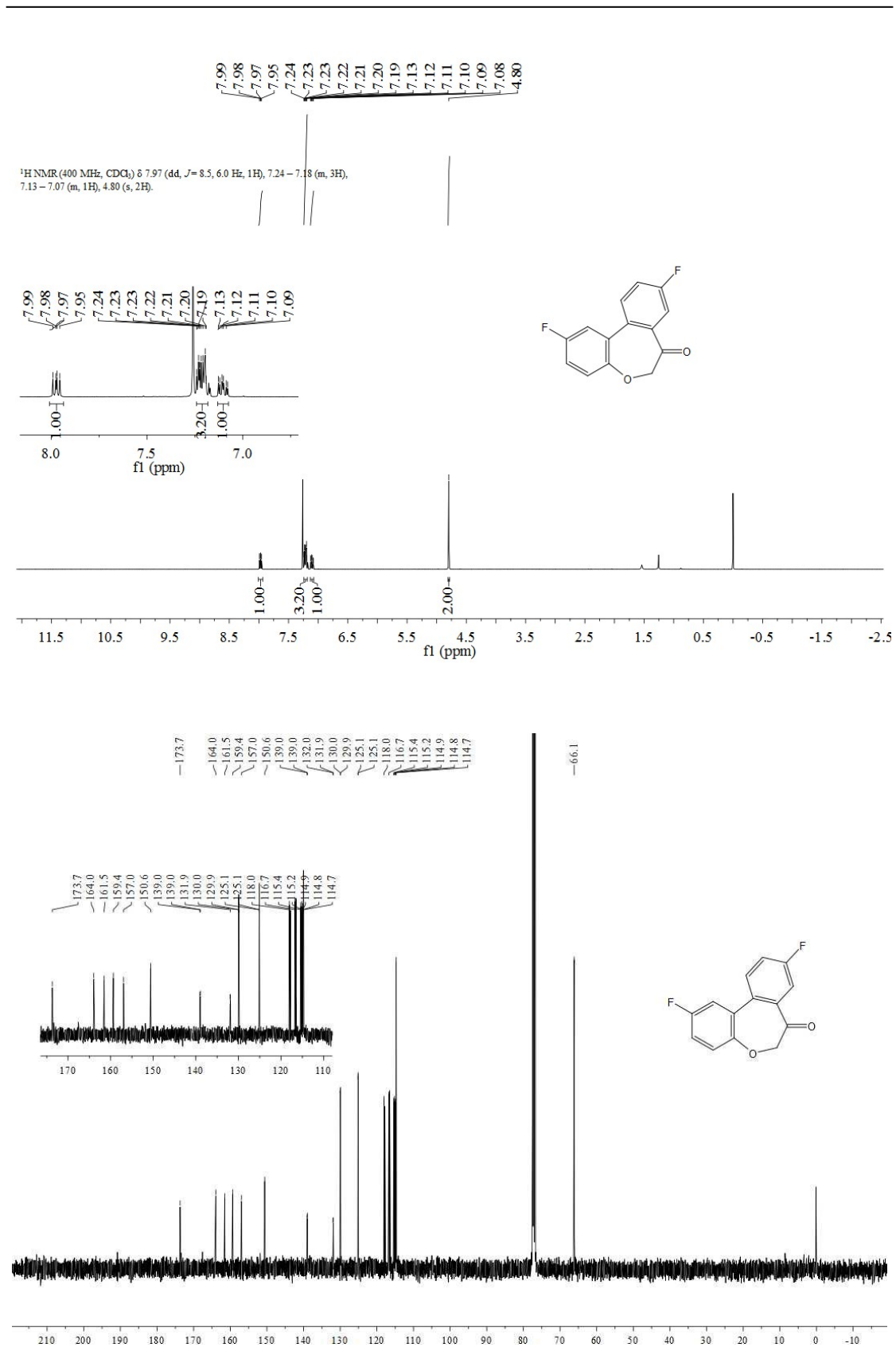


Fig. S50 NMR spectra of **4r**



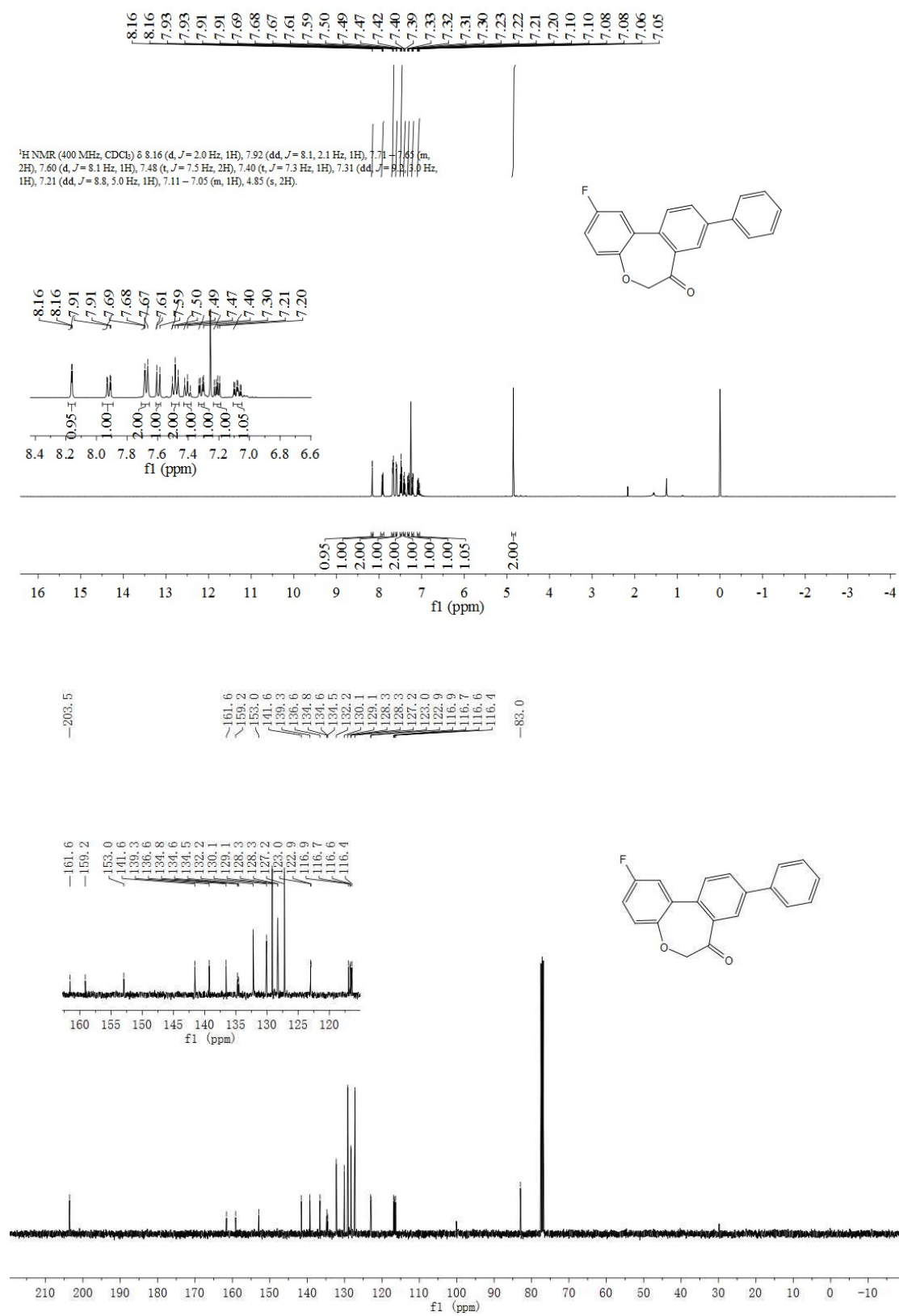


Fig. S51 NMR spectra of 4s

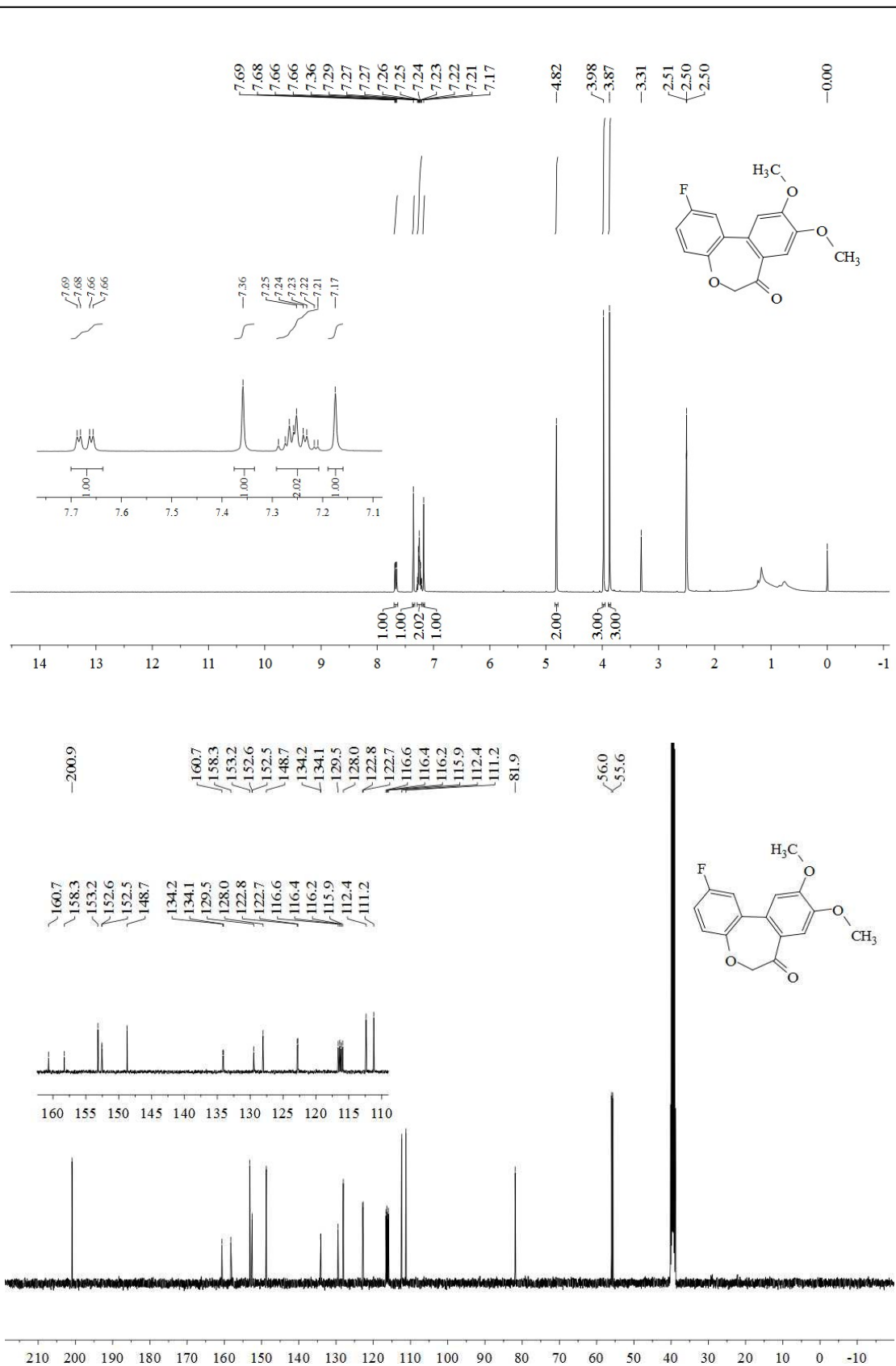


Fig. S52 NMR spectra of 4t

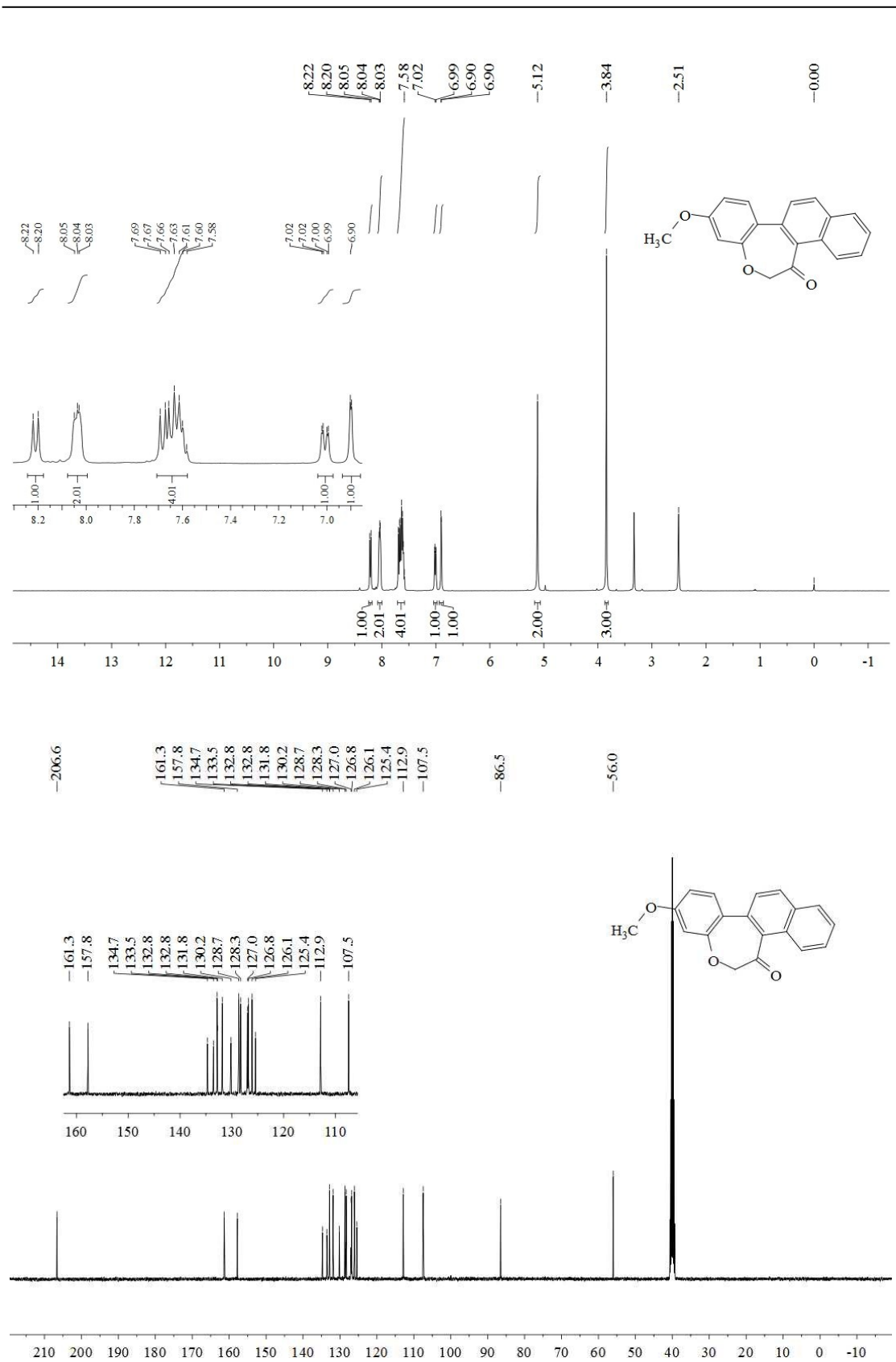


Fig. S53 NMR spectra of **4u**

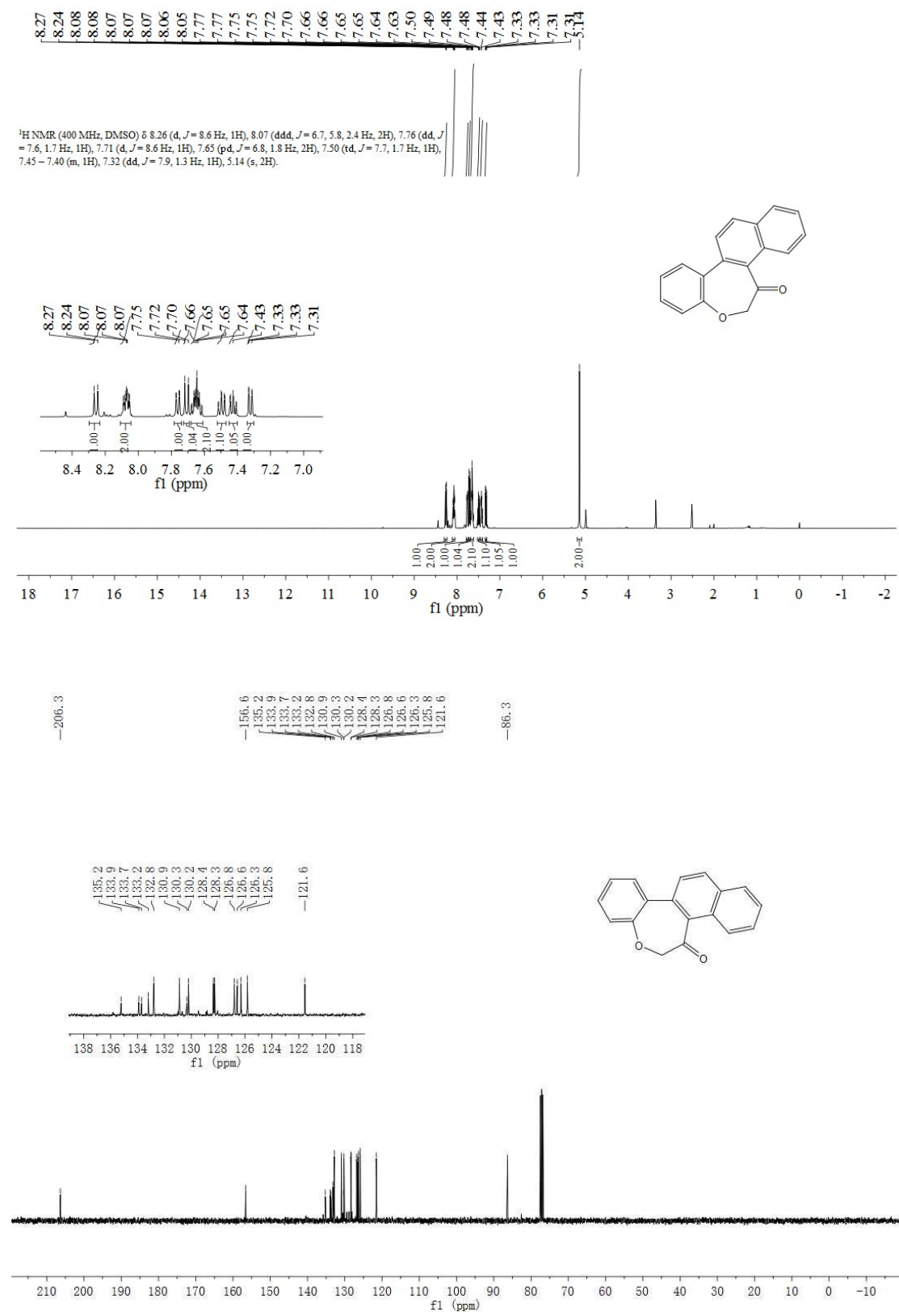


Fig. S54 NMR spectra of 4v

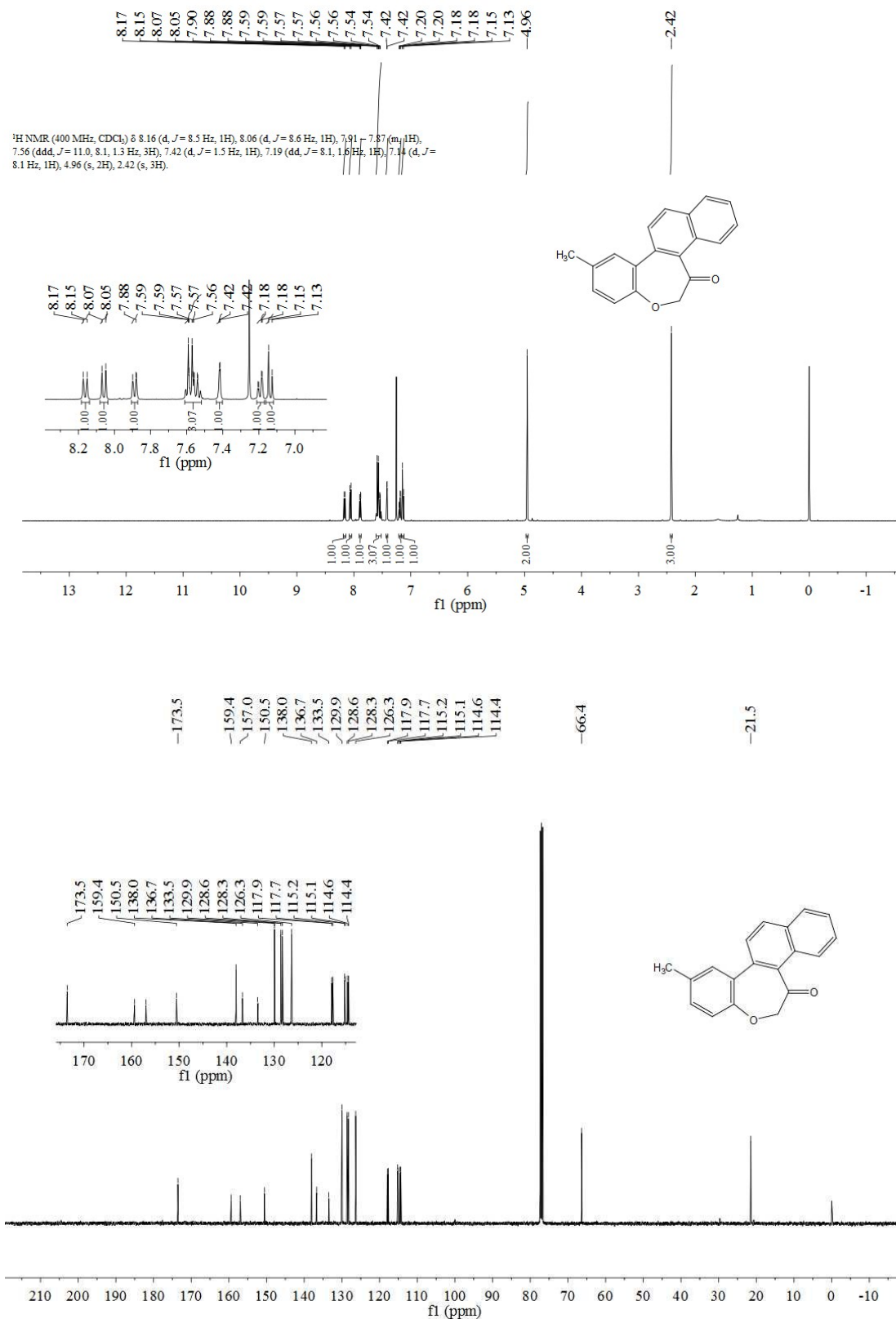


Fig. S55 NMR spectra of 4w

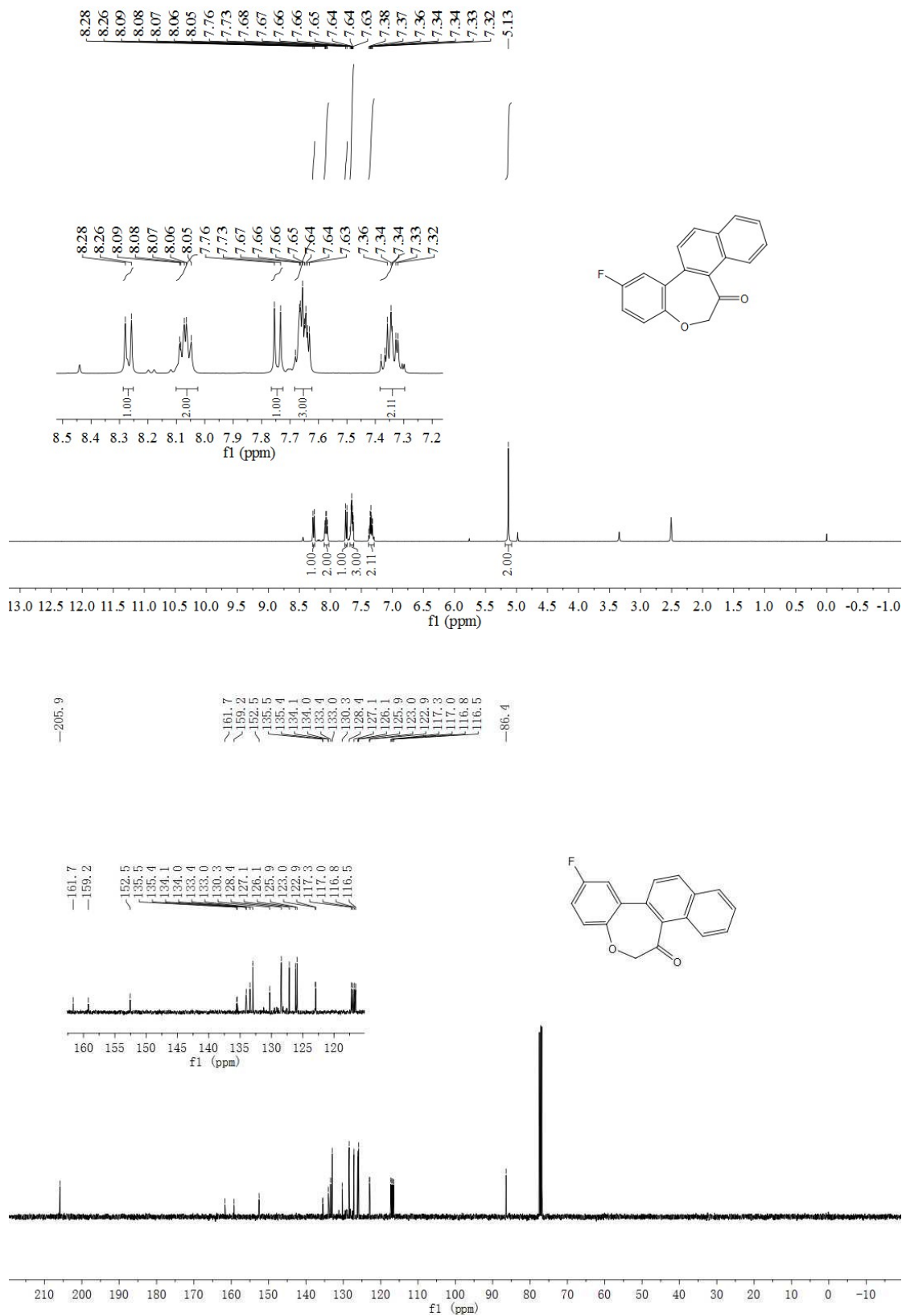


Fig. S56 NMR spectra of 4x

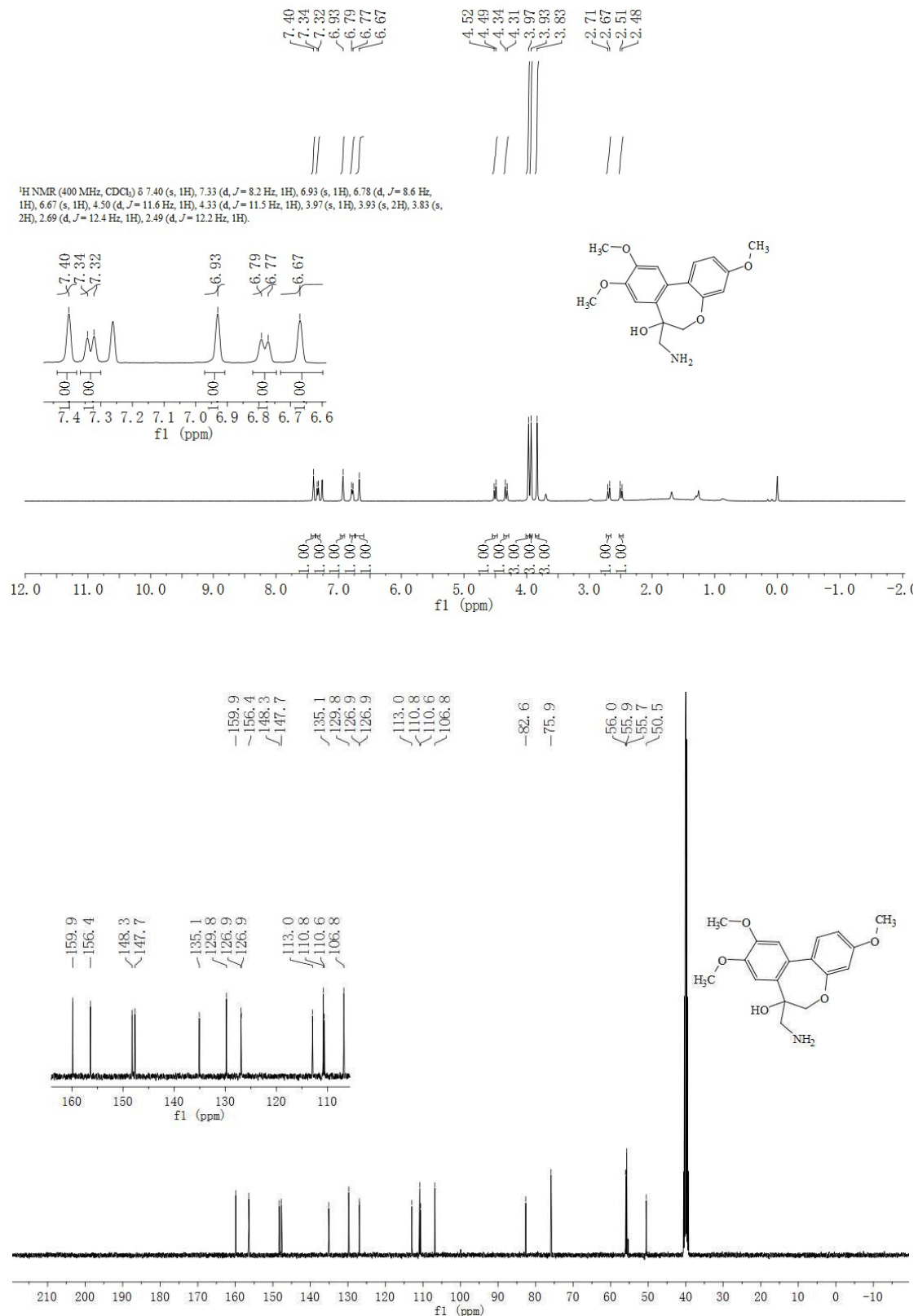


Fig. S57 NMR spectra of **6a**

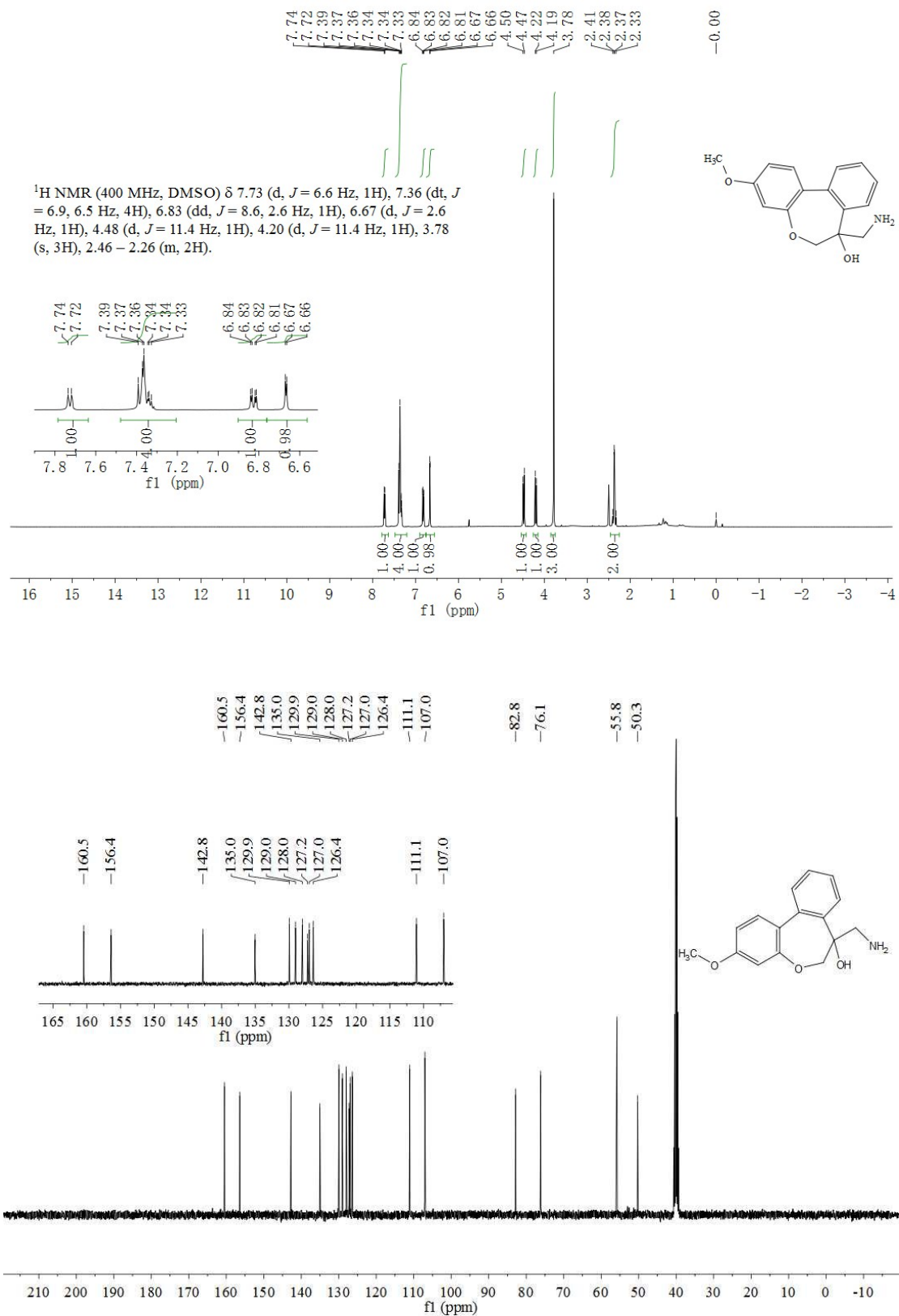


Fig. S58 NMR spectra of **6b**



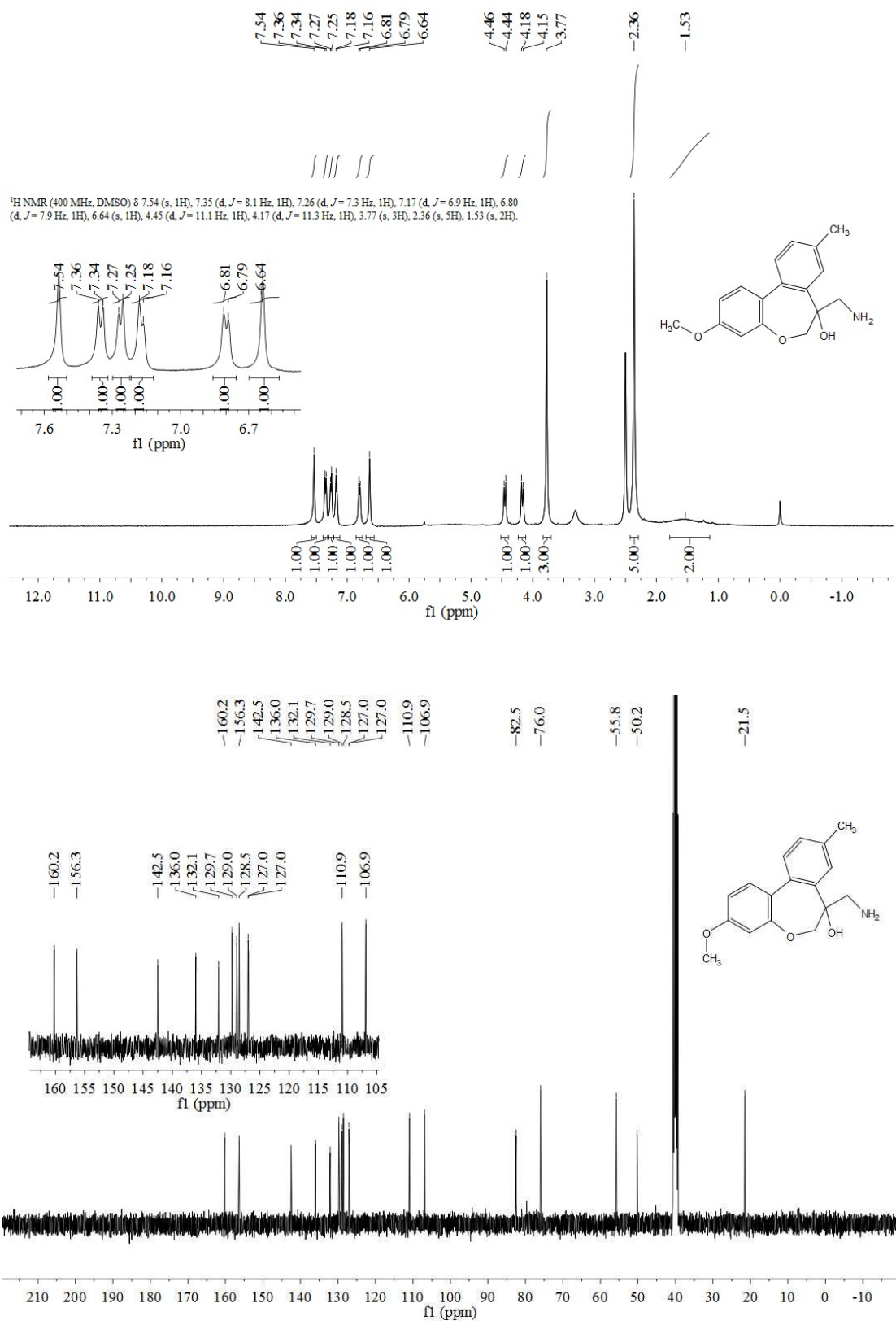


Fig. S59 NMR spectra of **6c**

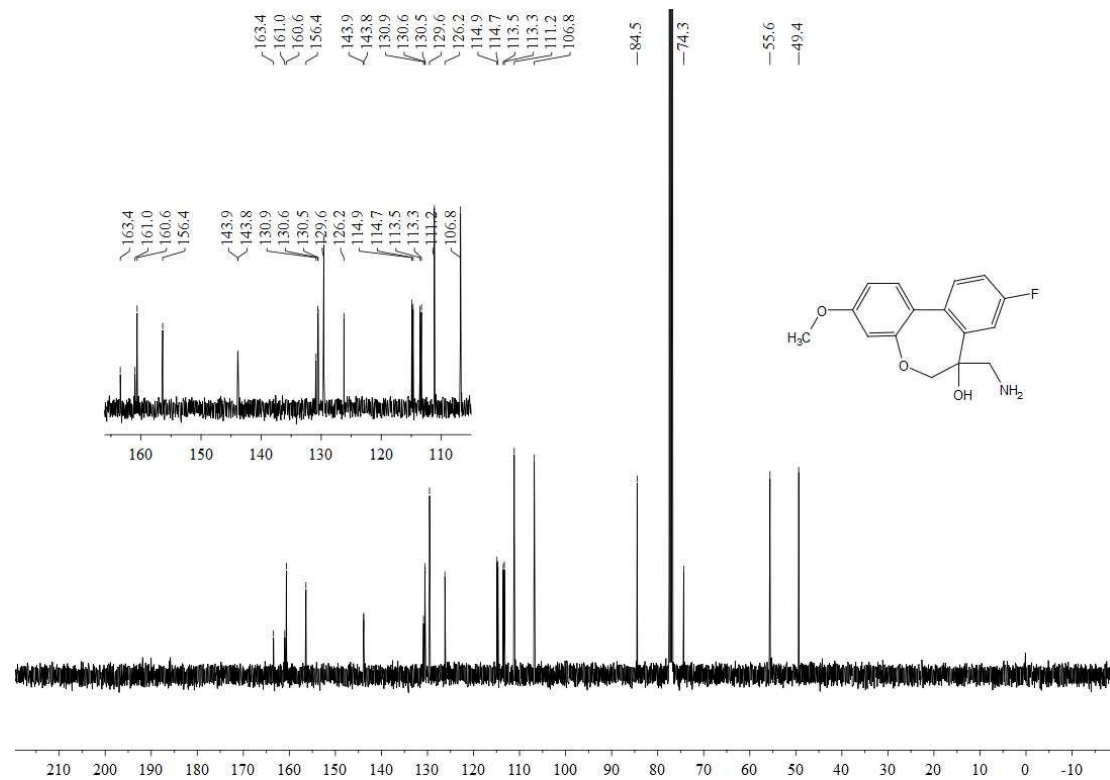
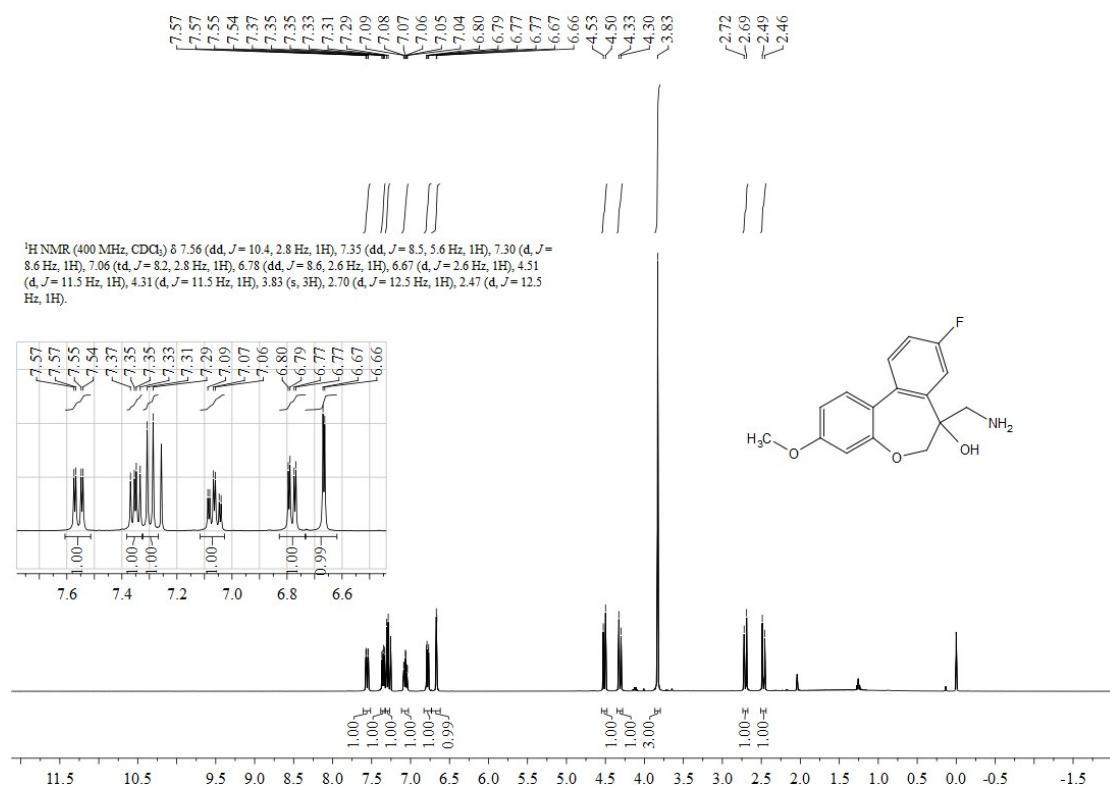


Fig. S60 NMR spectra of **6d**

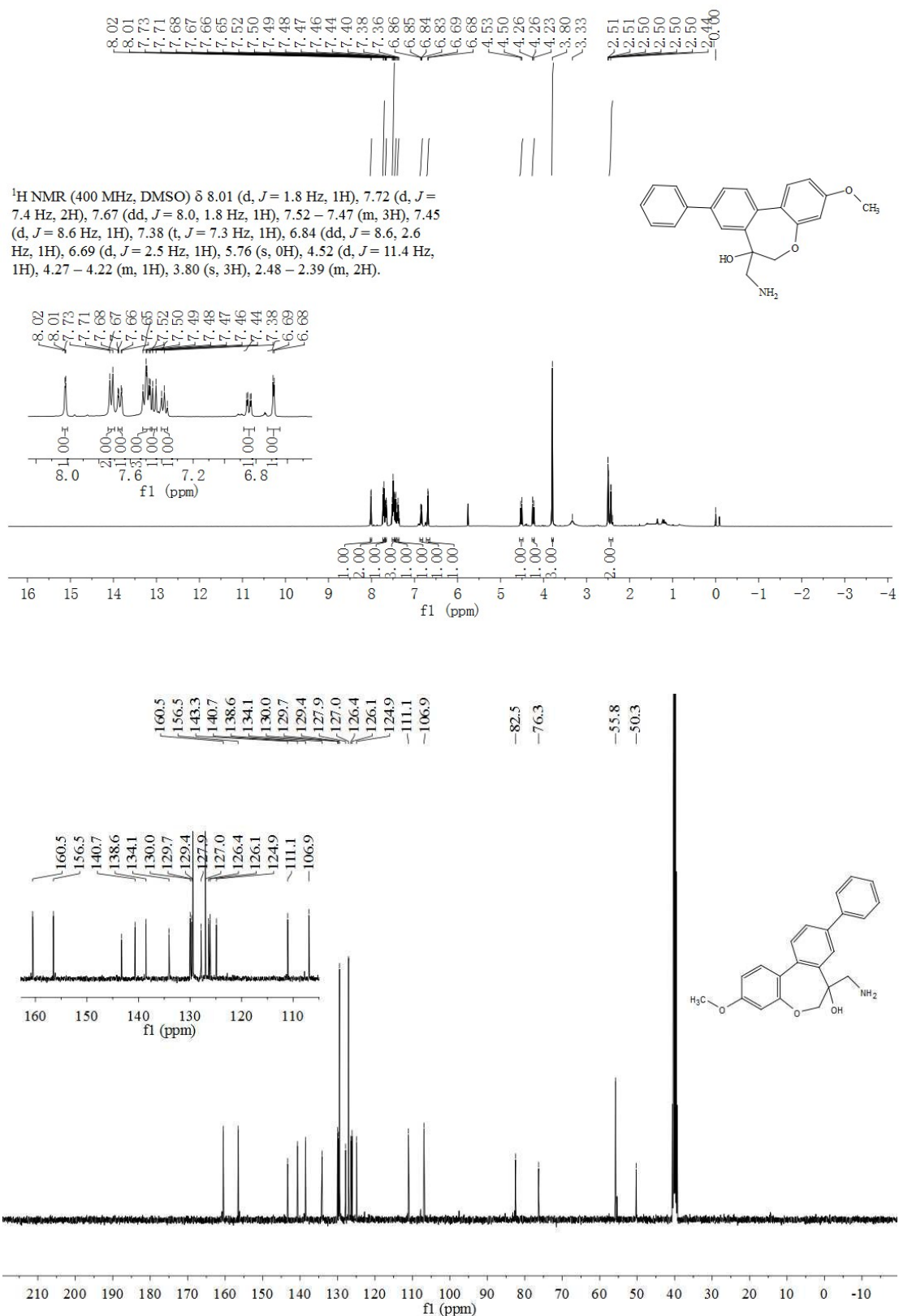


Fig. S61 NMR spectra of **6e**

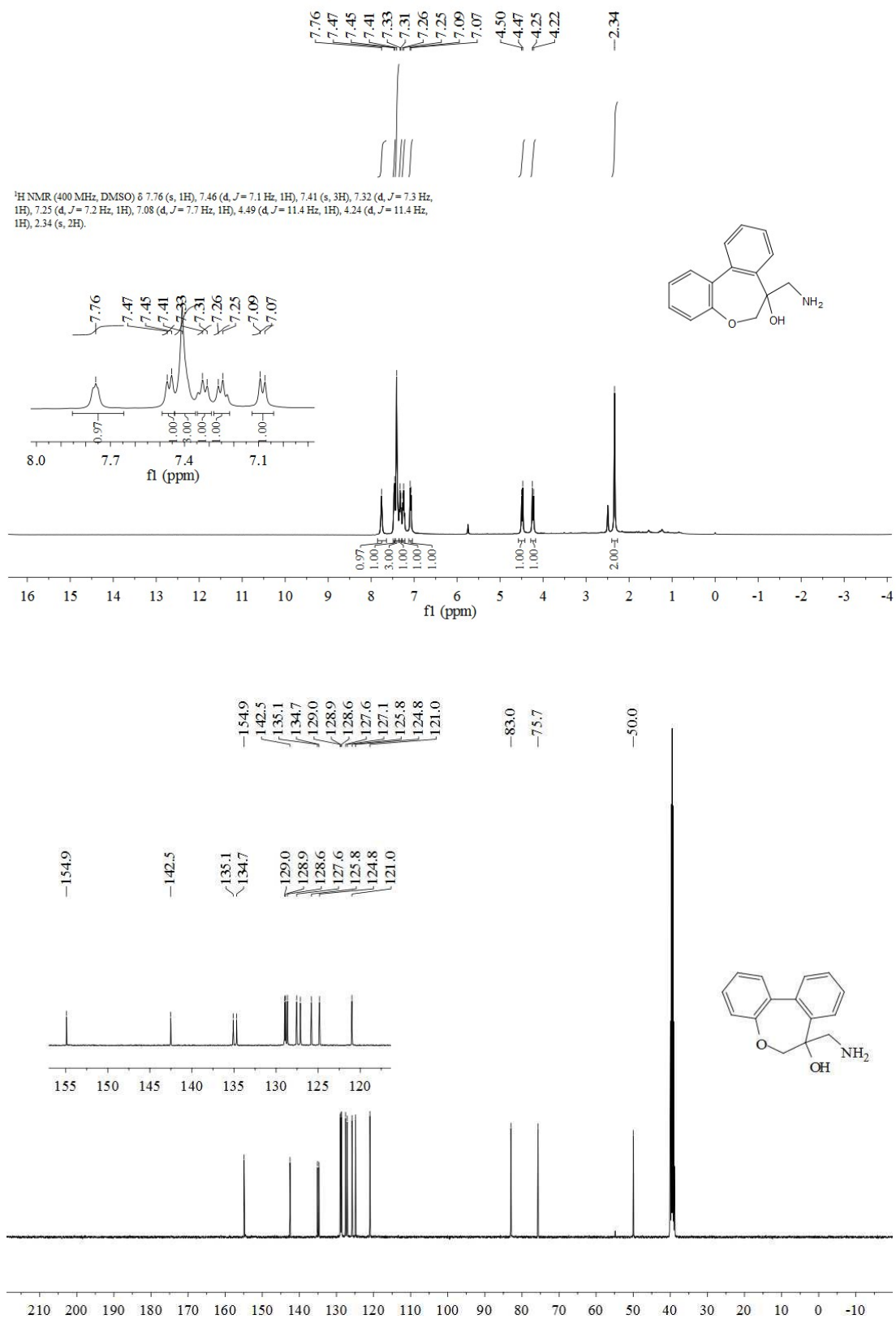


Fig. S62 NMR spectra of **6f**

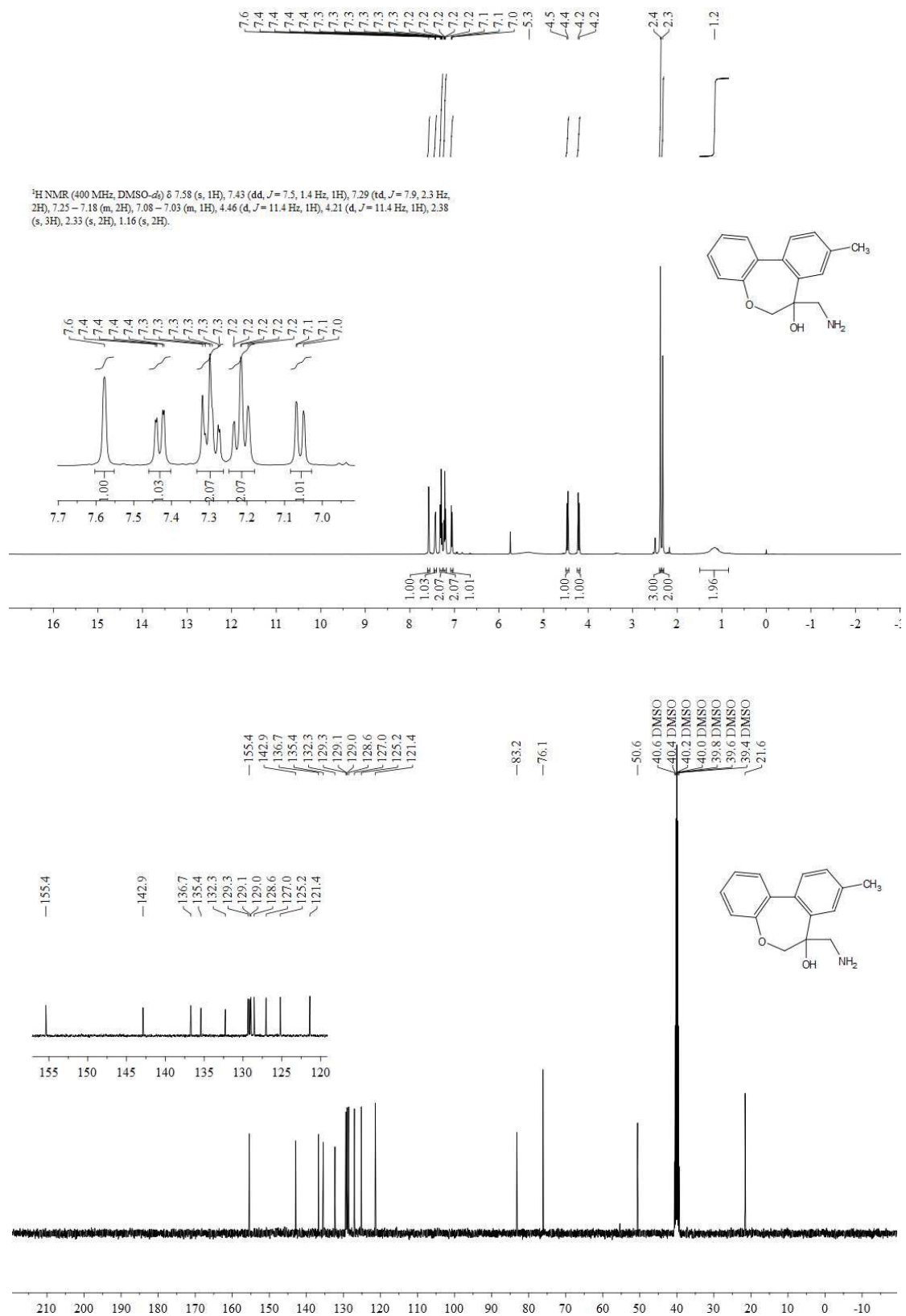


Fig. S63 NMR spectra of **6g**

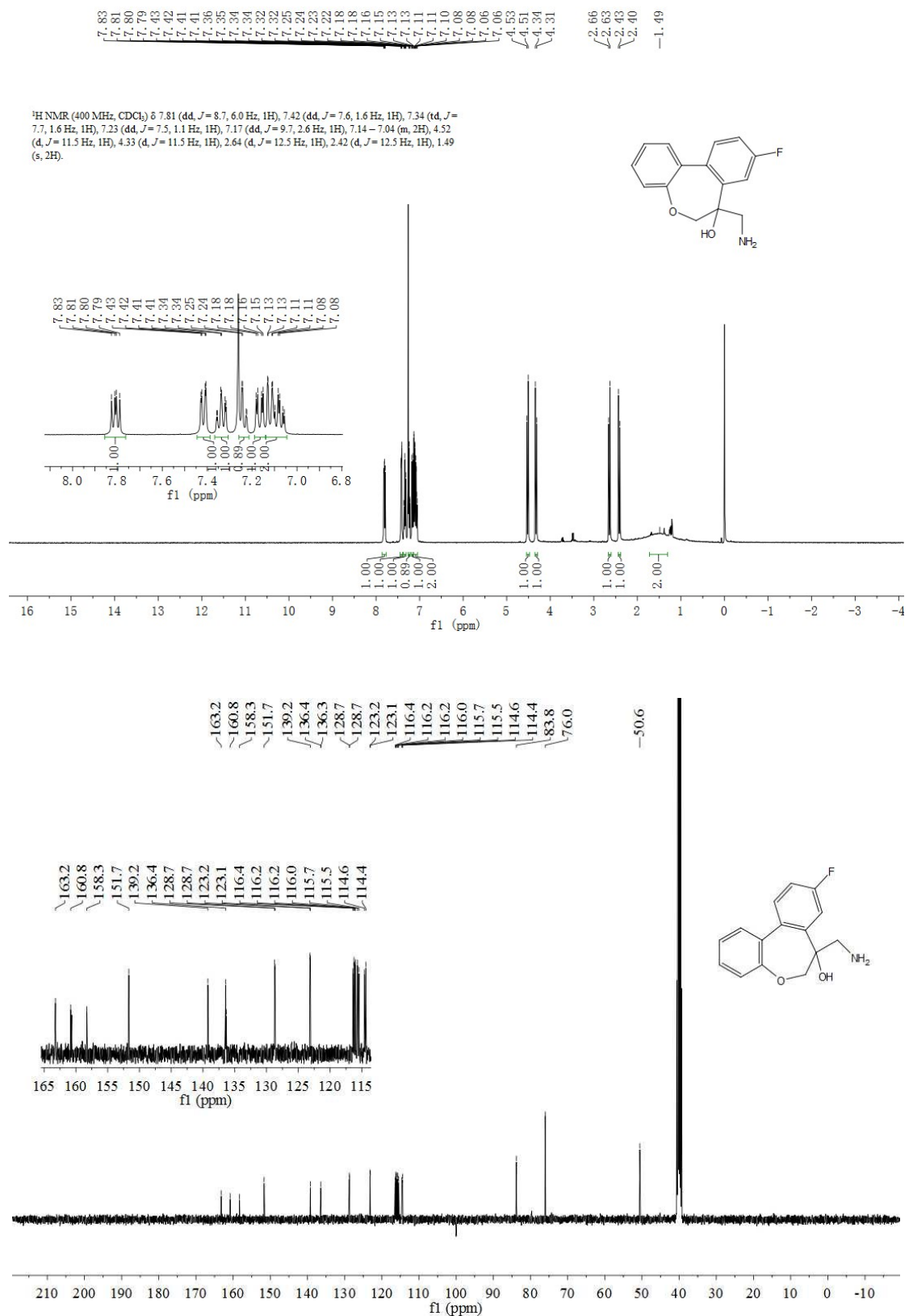


Fig. S64 NMR spectra of **6h**

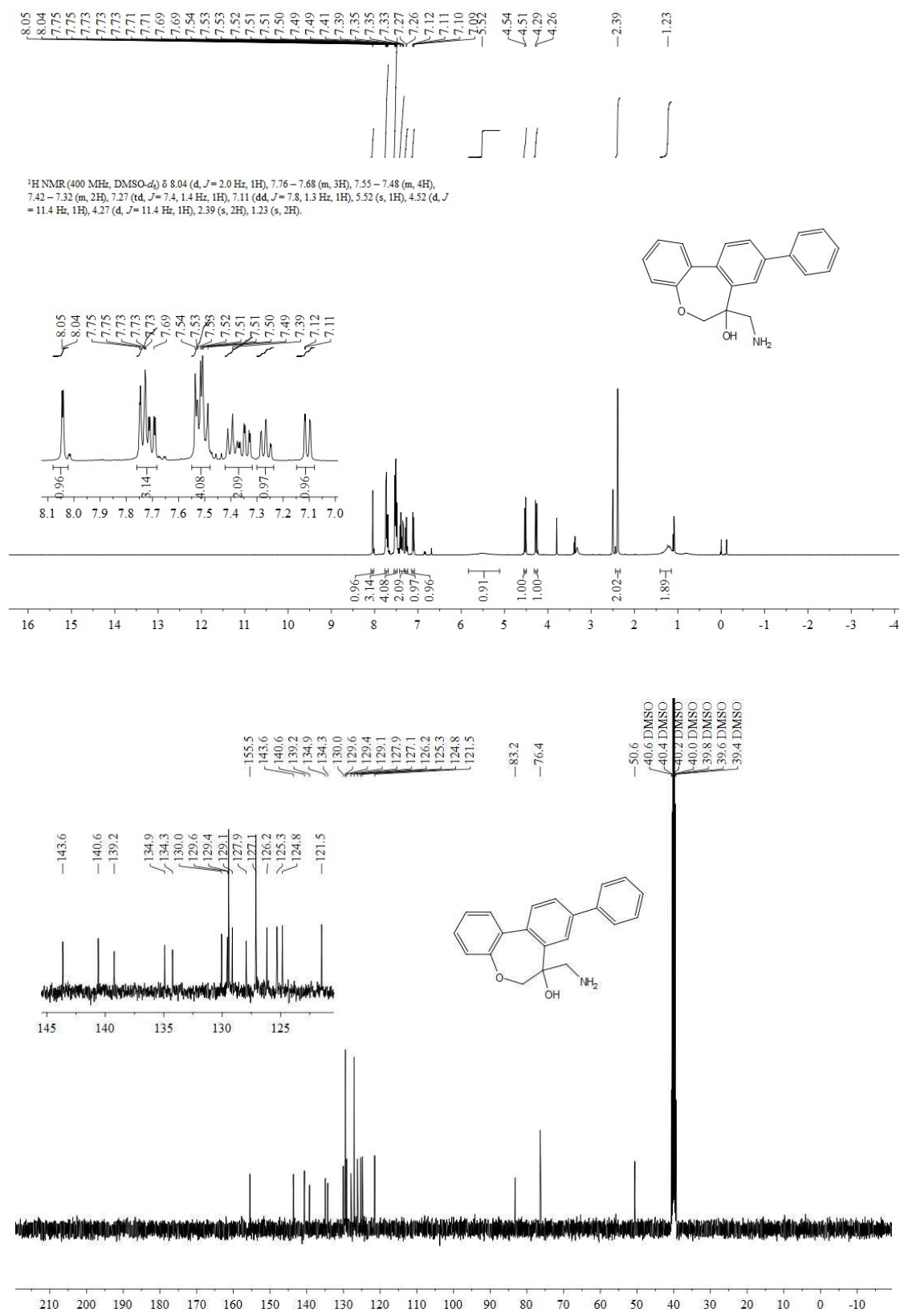


Fig. S65 NMR spectra of **6i**

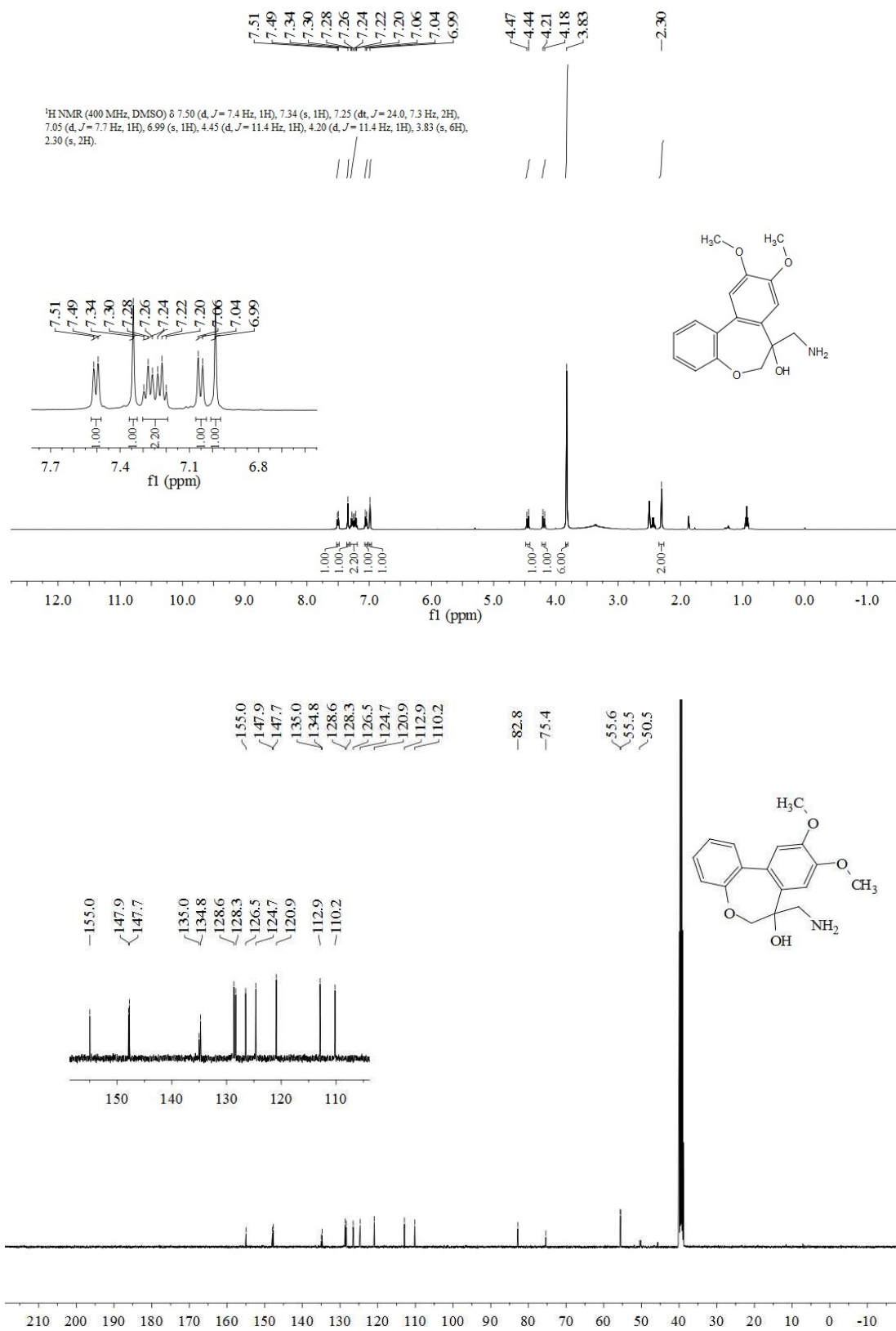


Fig. S66 NMR spectra of **6j**



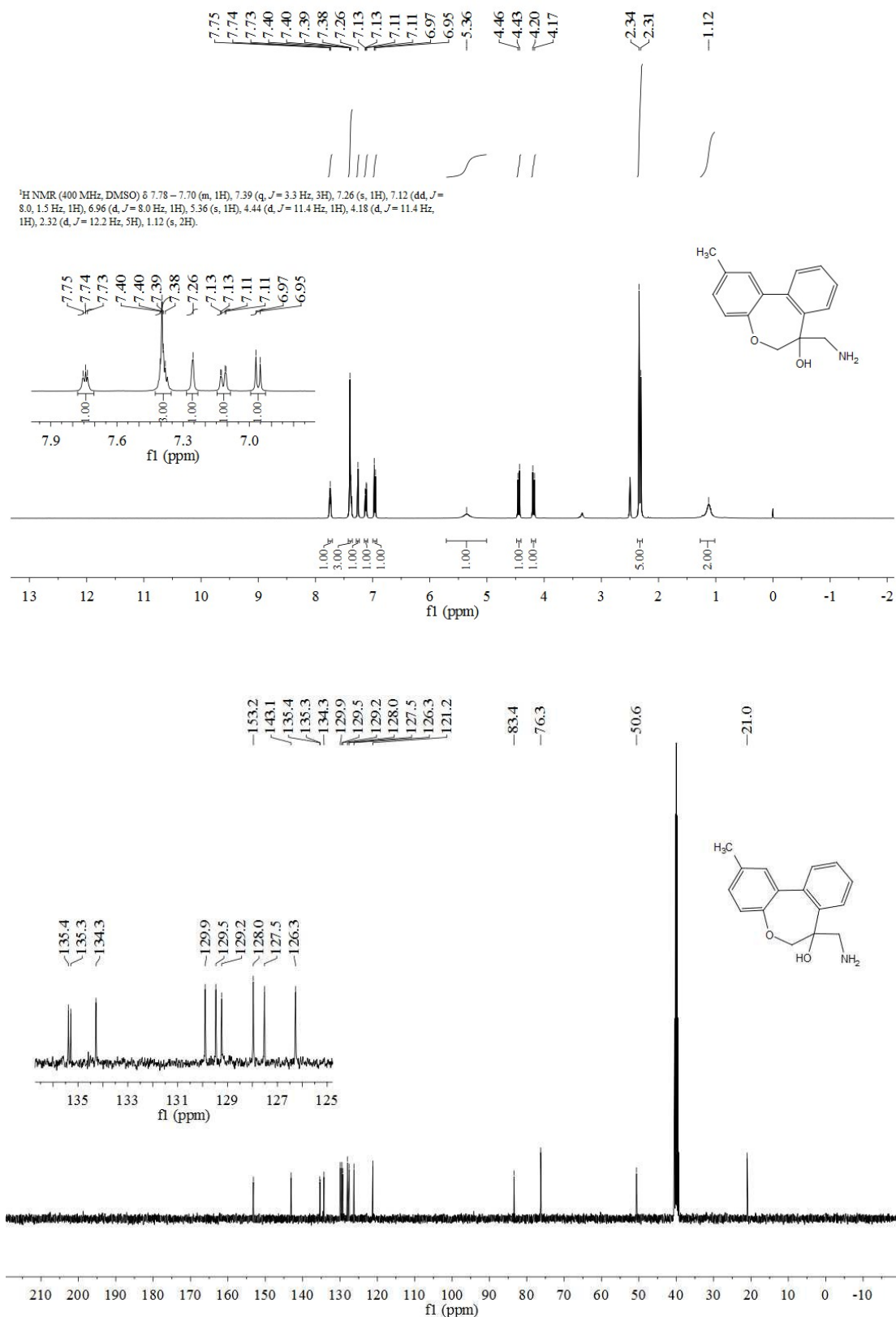


Fig. S67 NMR spectra of **6k**

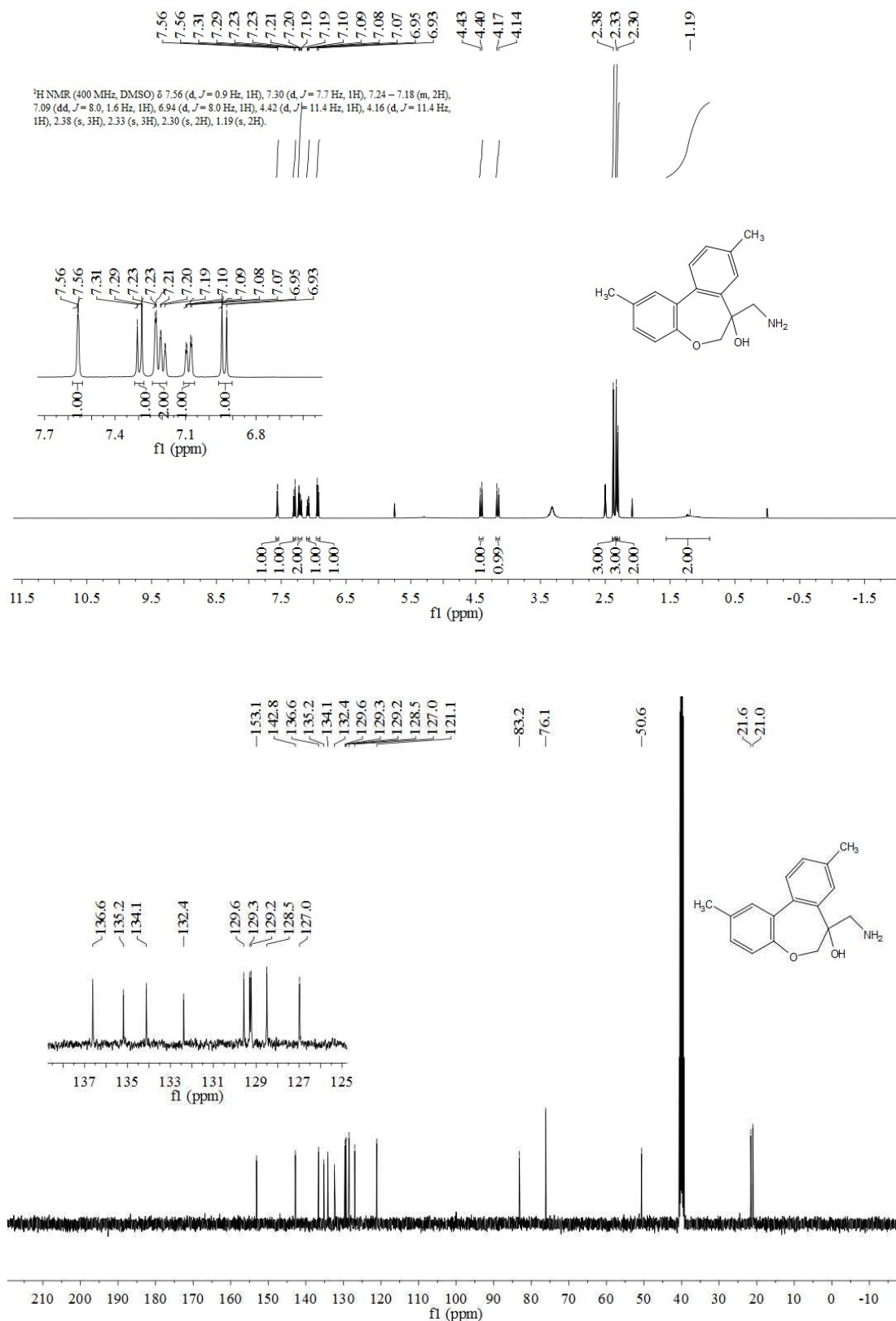


Fig. S68 NMR spectra of **61**

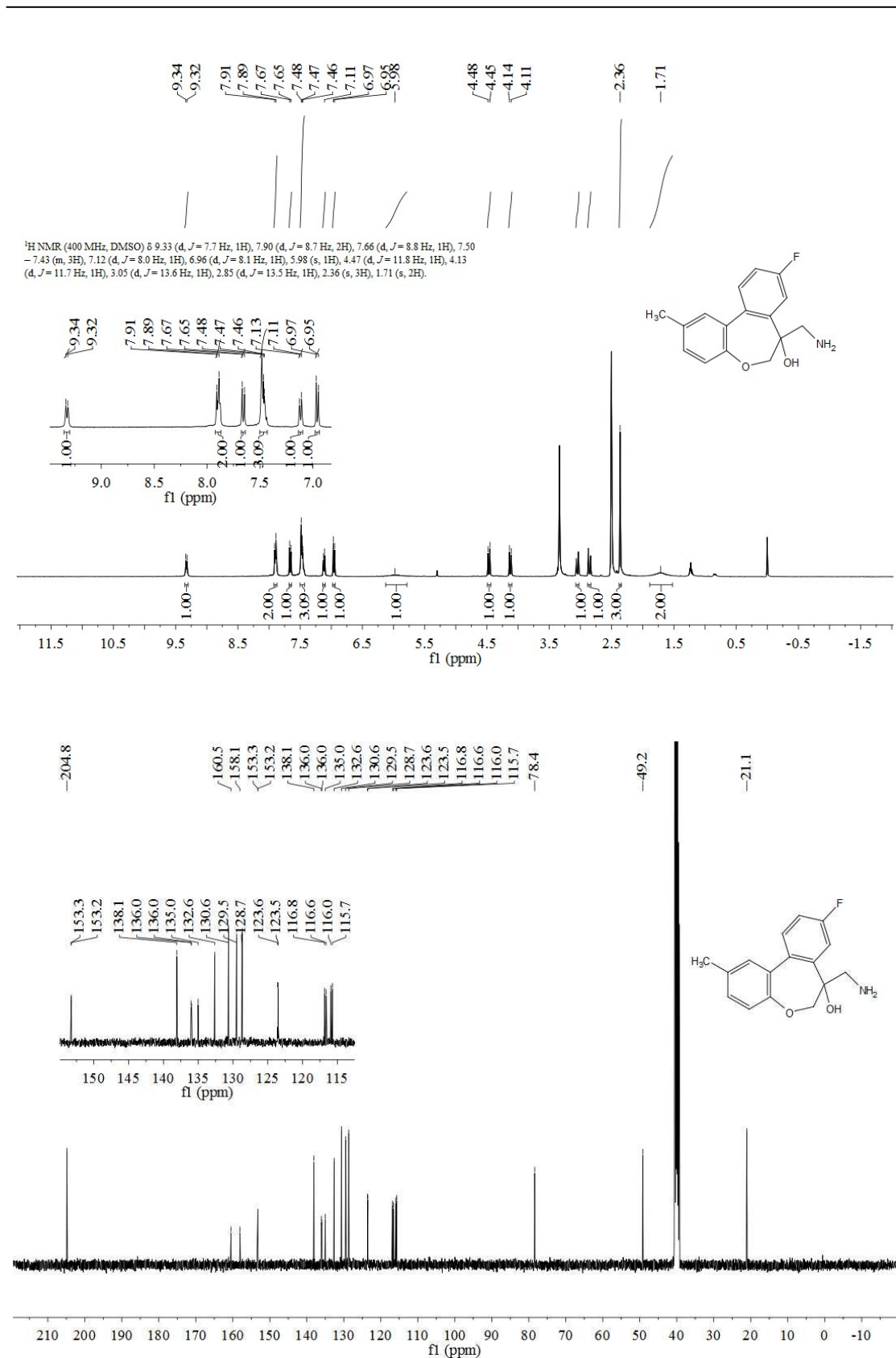


Fig. S69 NMR spectra of **6m**

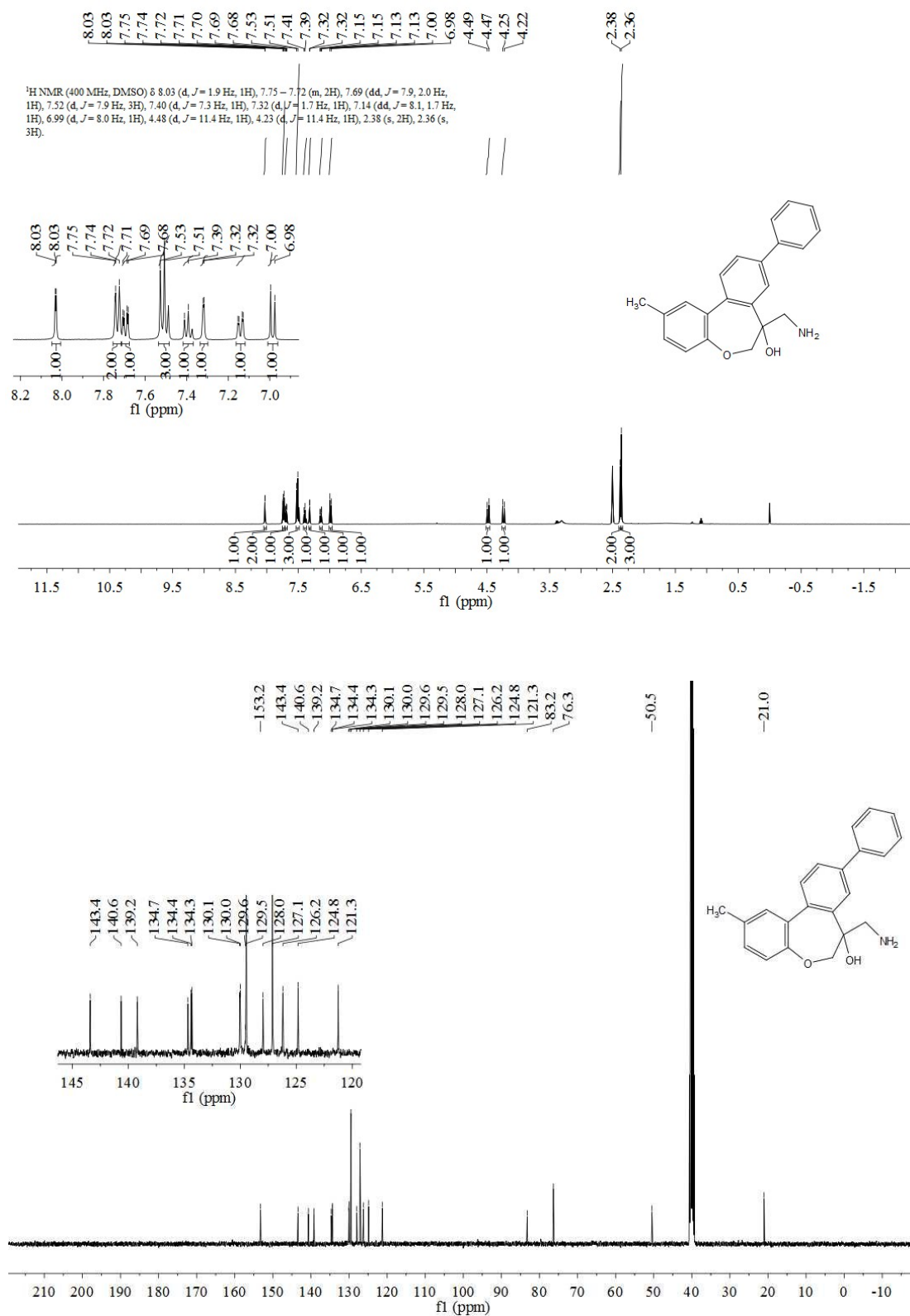


Fig. S70 NMR spectra of **6n**

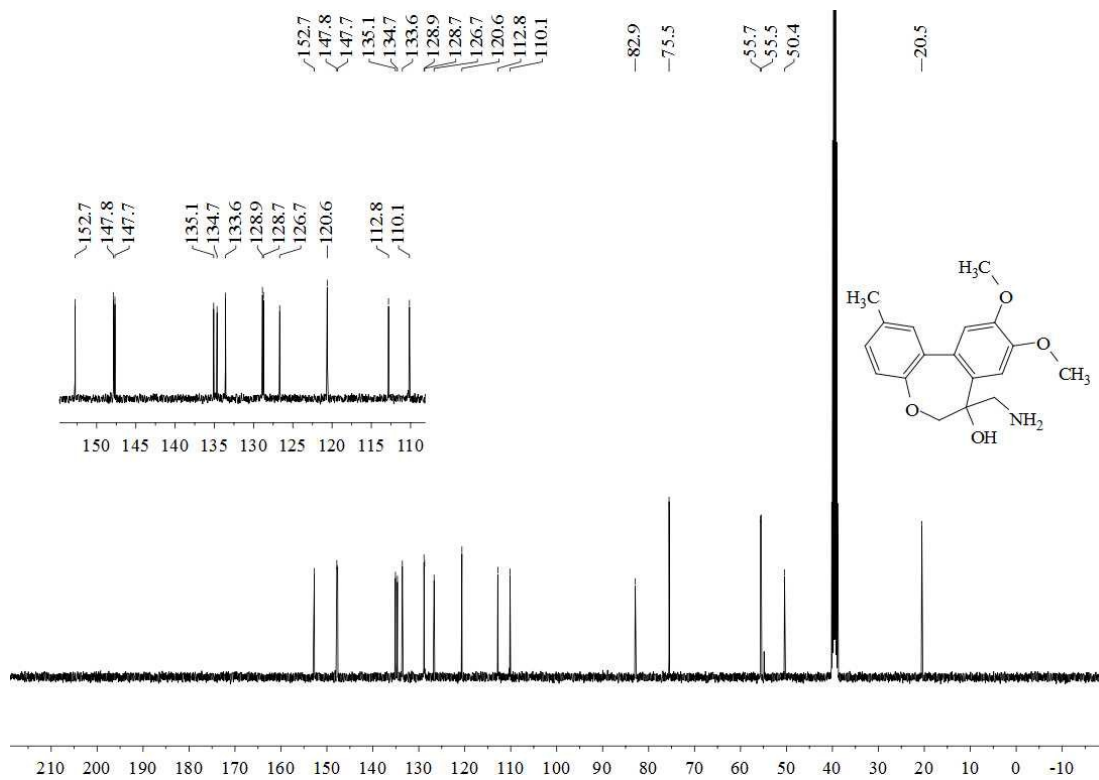
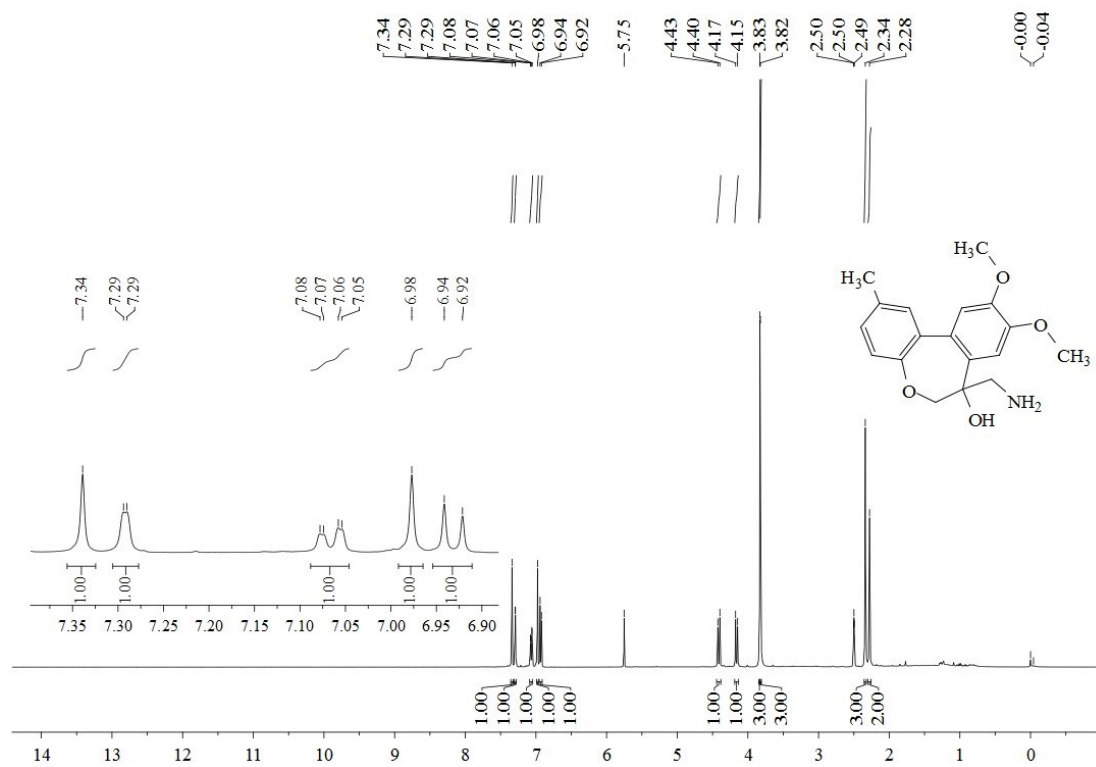


Fig. S71 NMR spectra of **60**

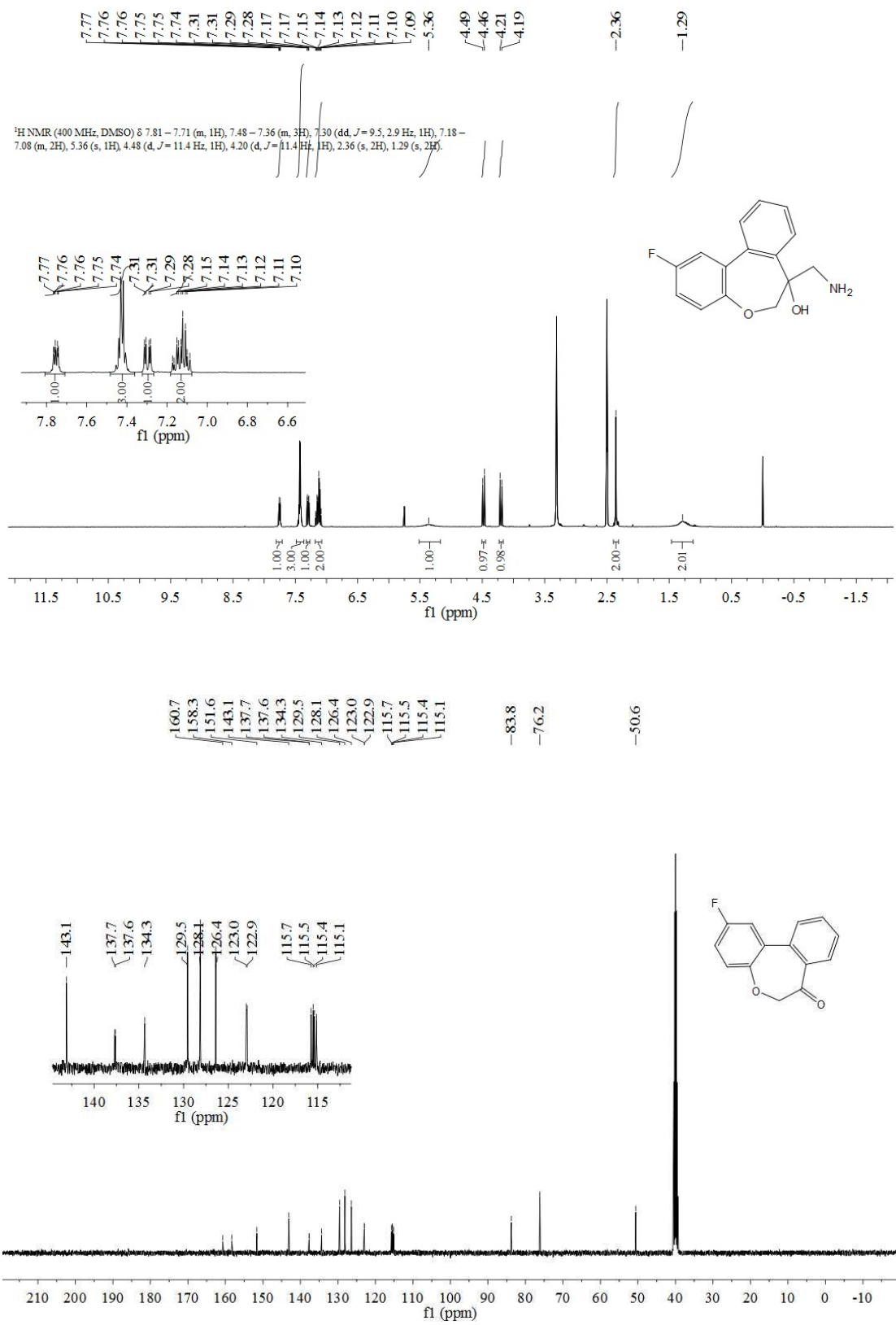


Fig. S72 NMR spectra of 6p

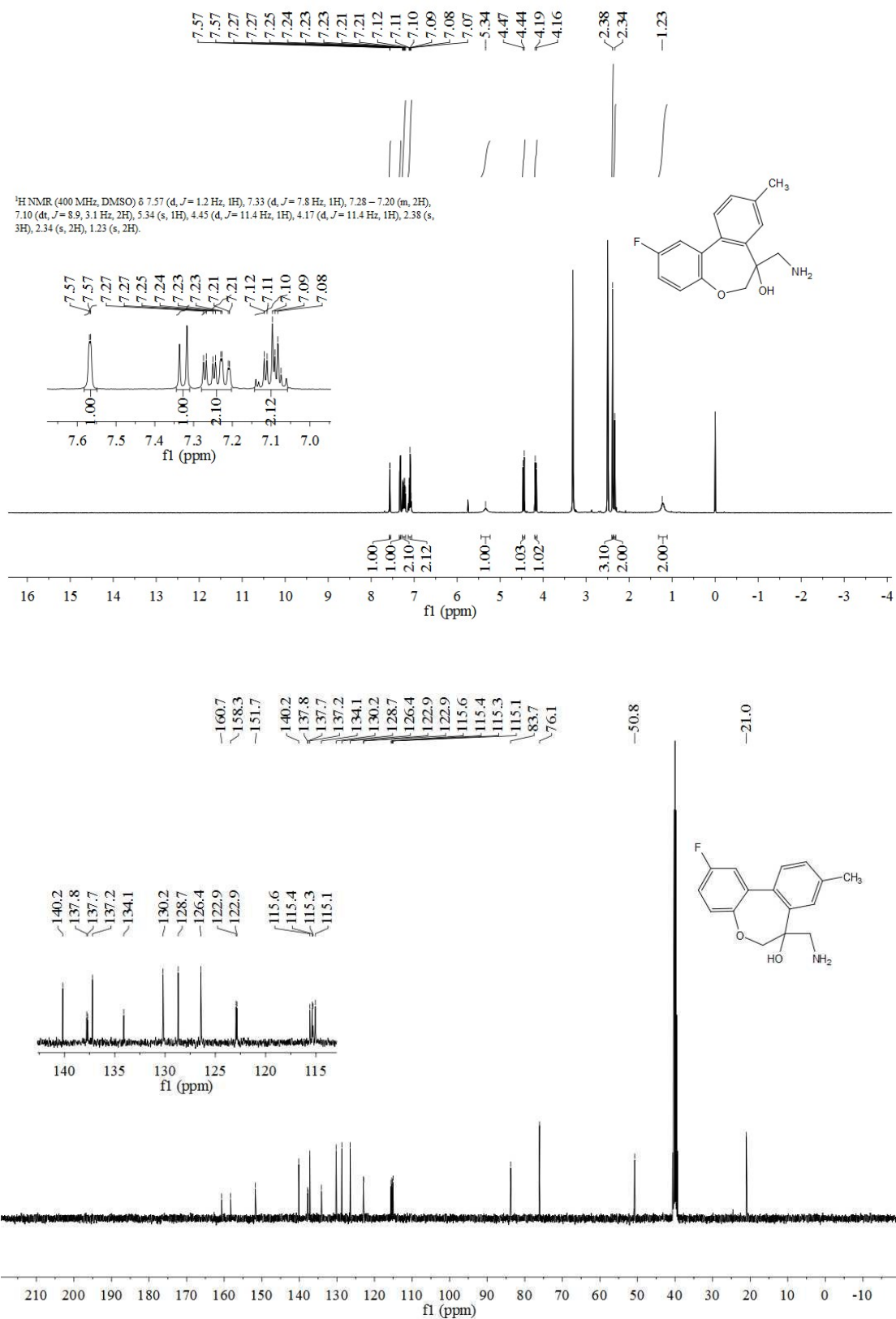


Fig. S73 NMR spectra of **6q**

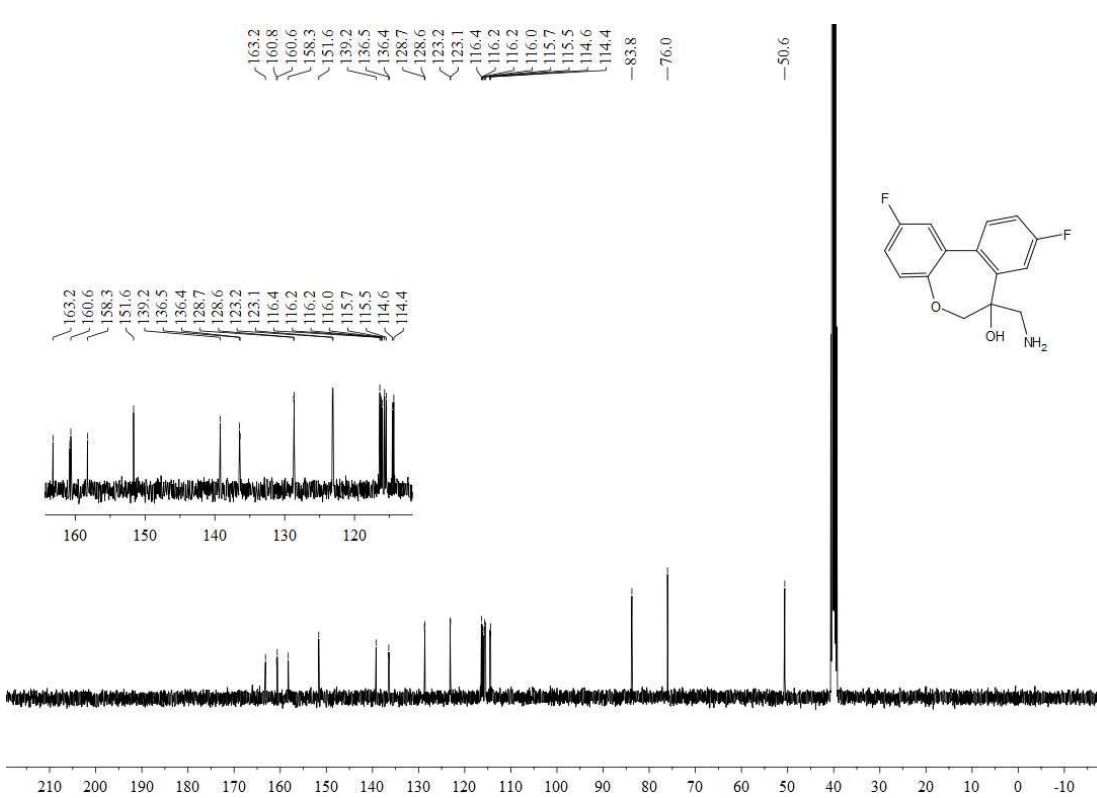
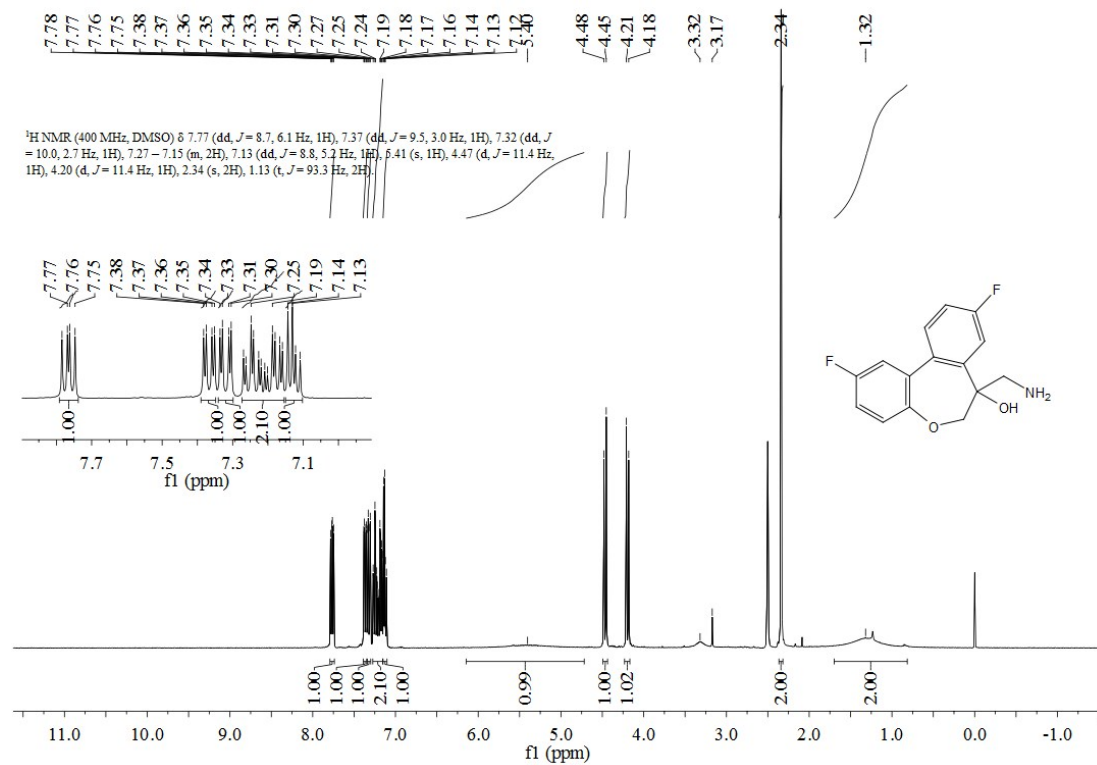


Fig. S74 NMR spectra of 6r



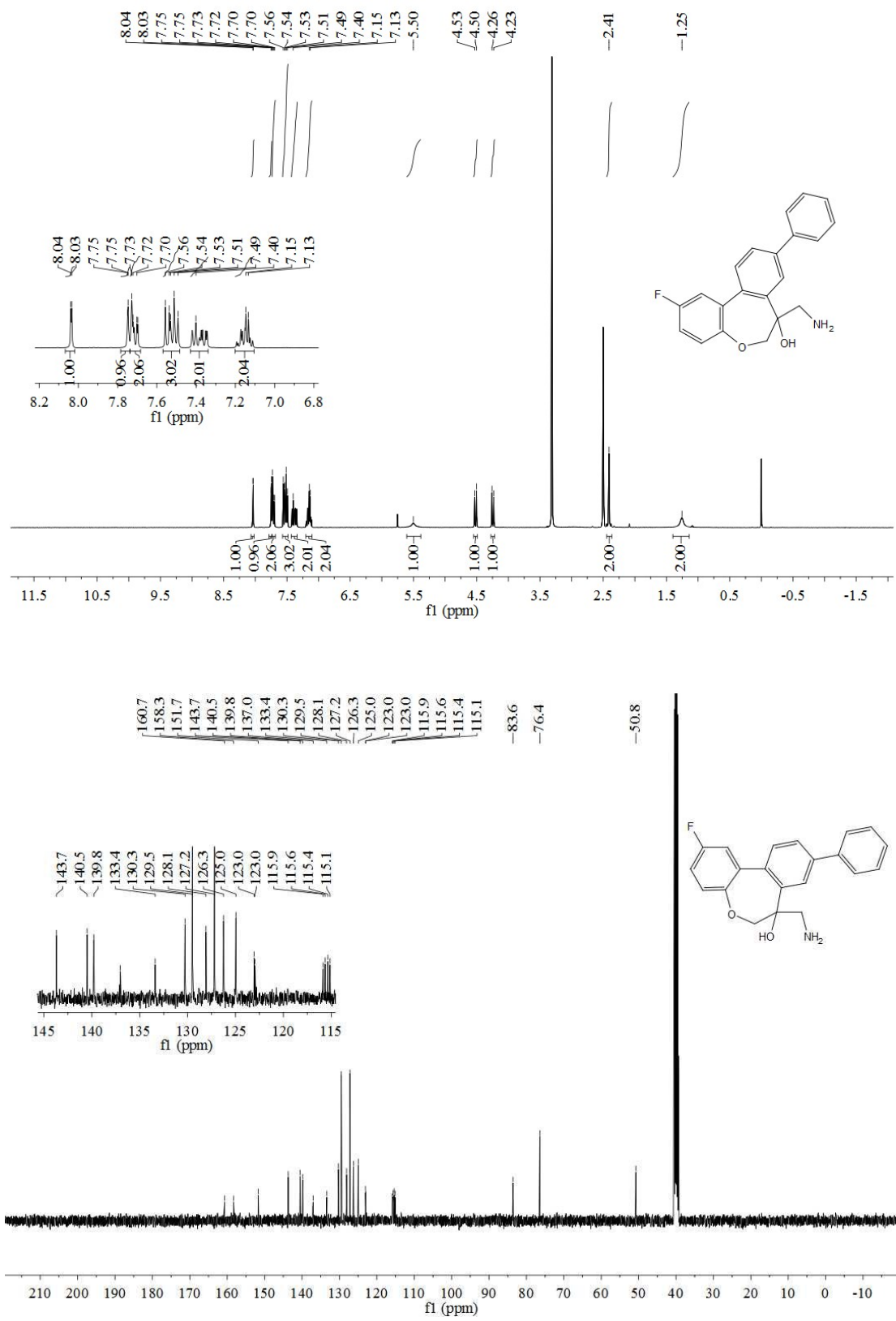


Fig. S75 NMR spectra of **6s**

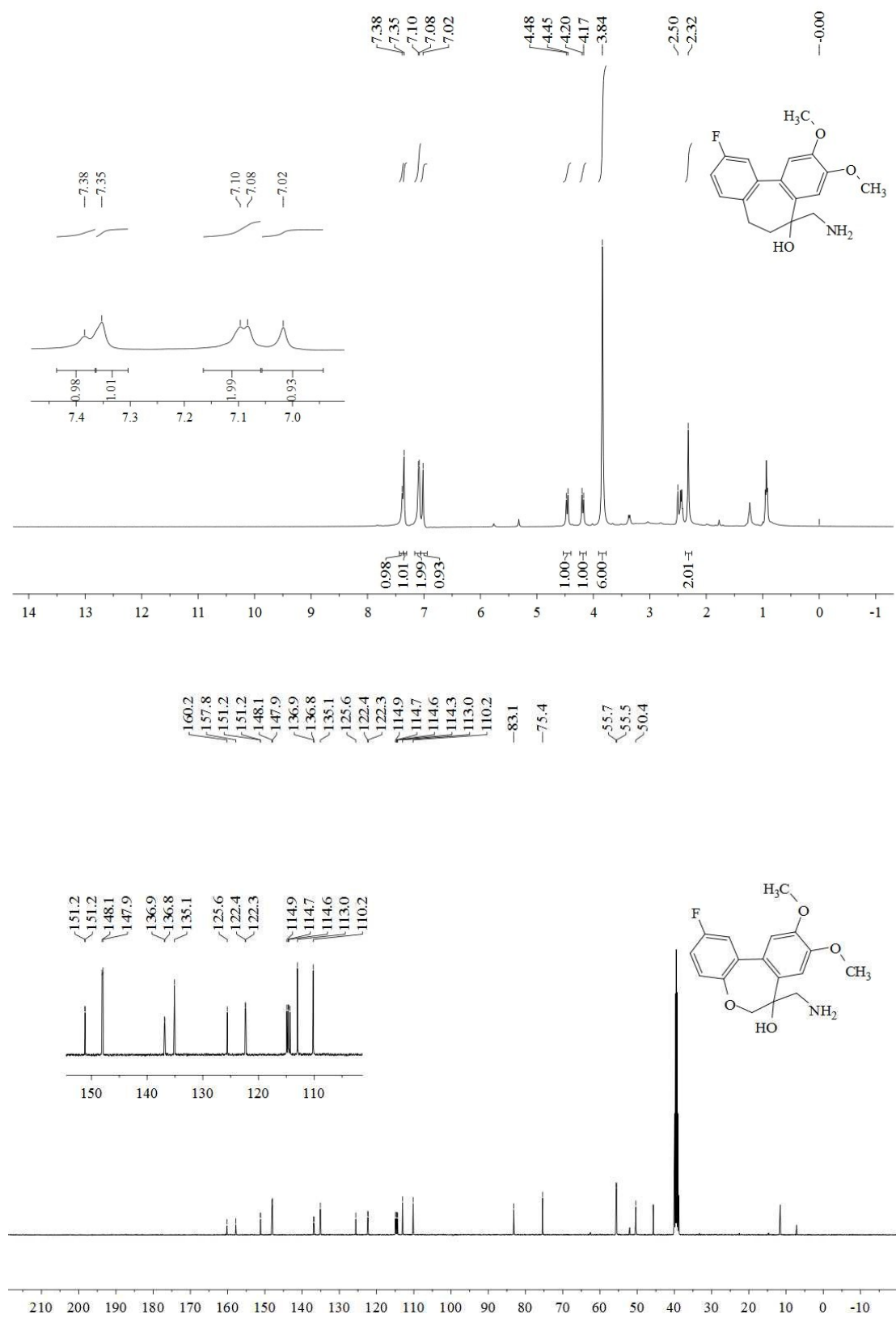


Fig. S76 NMR spectra of **6t**

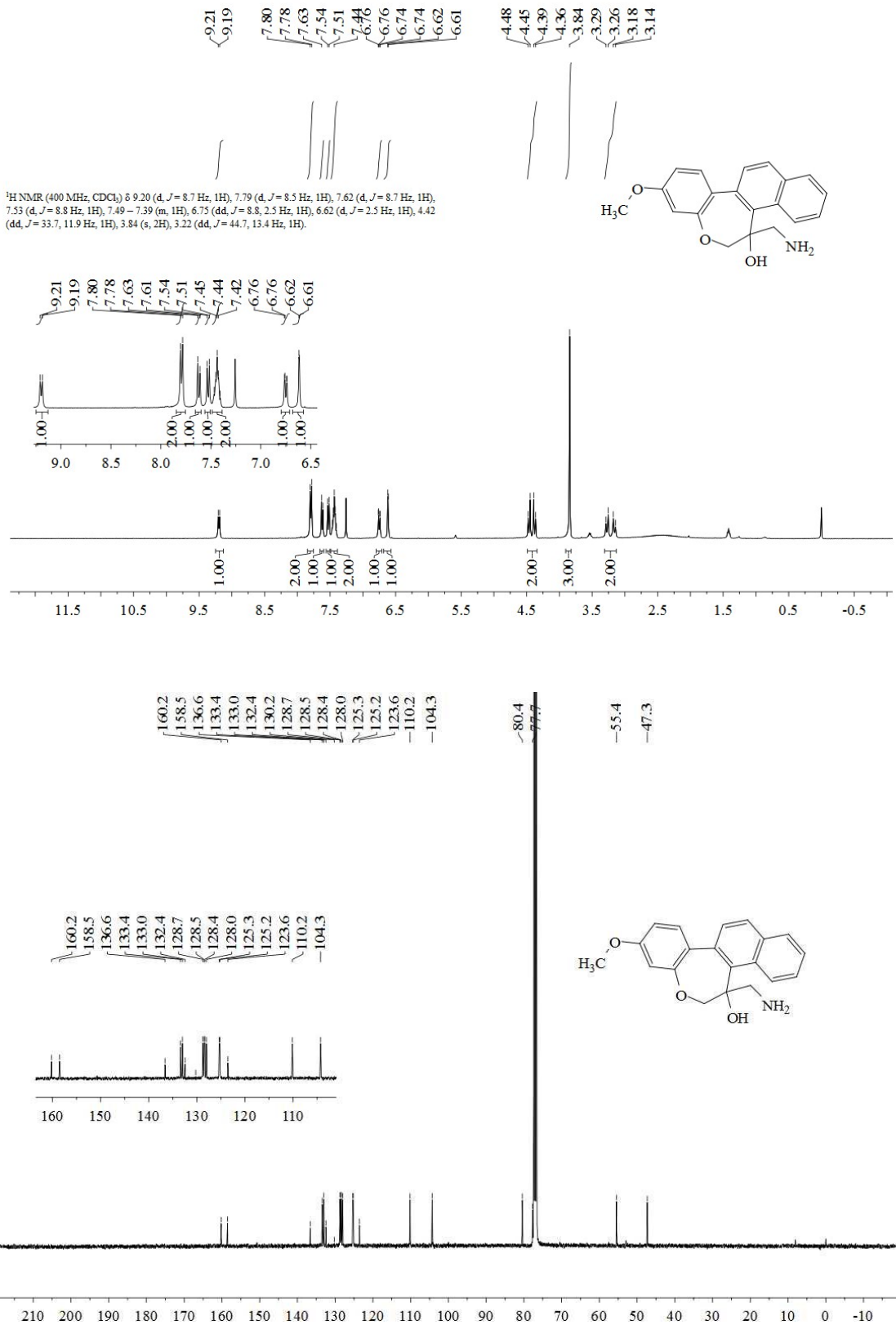


Fig. S77 NMR spectra of **6u**

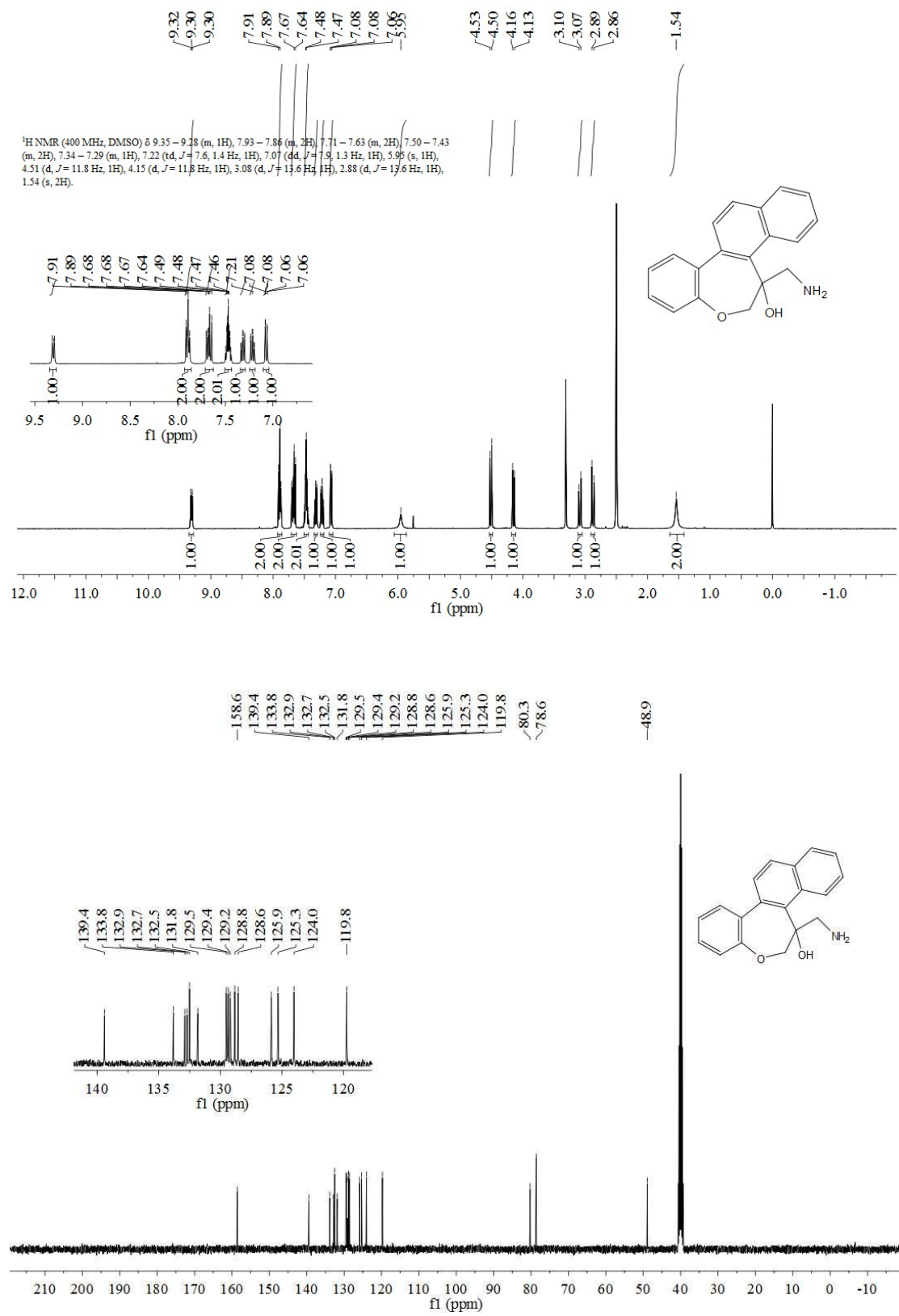


Fig. S78 NMR spectra of **6v**

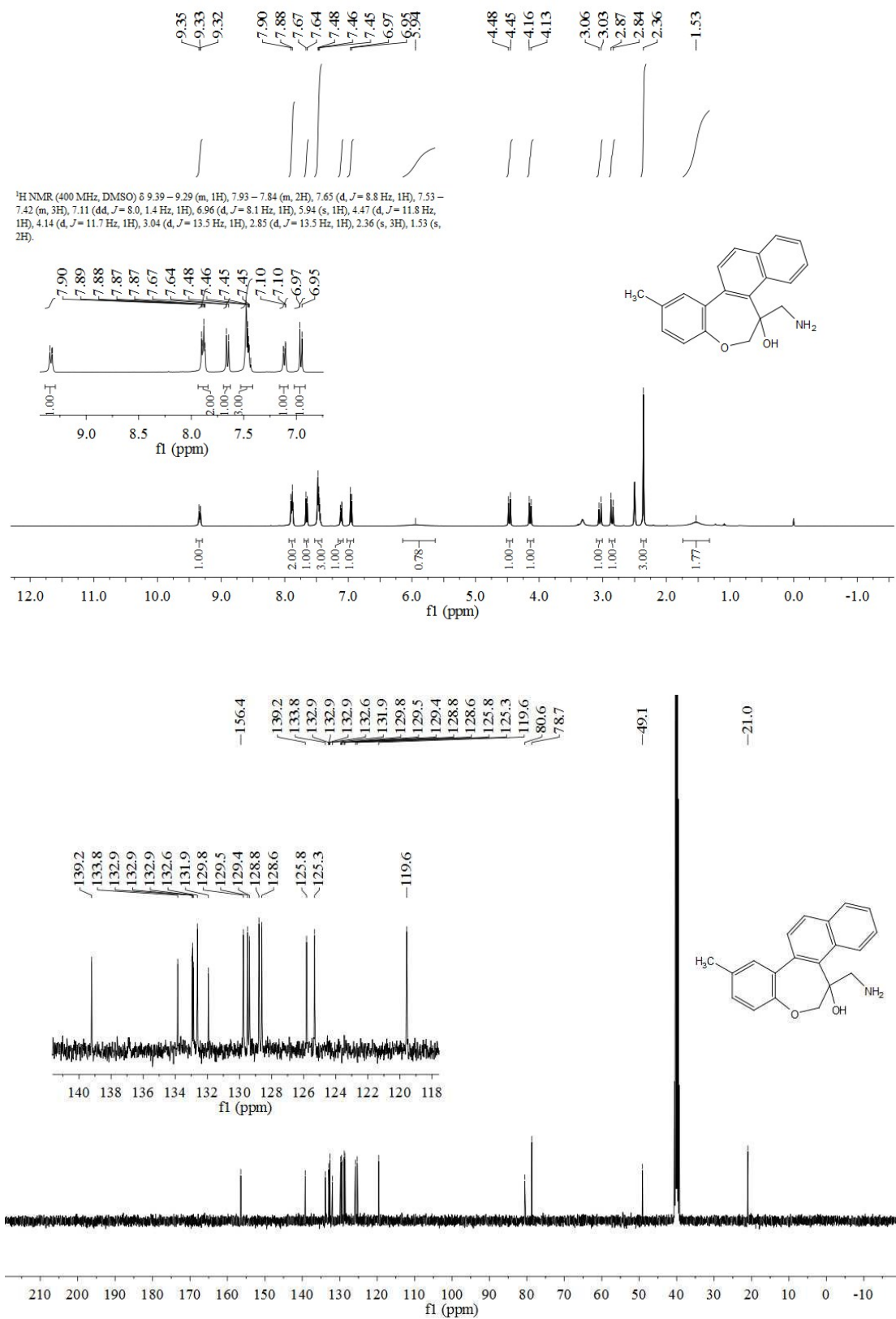


Fig. S79 NMR spectra of 6w

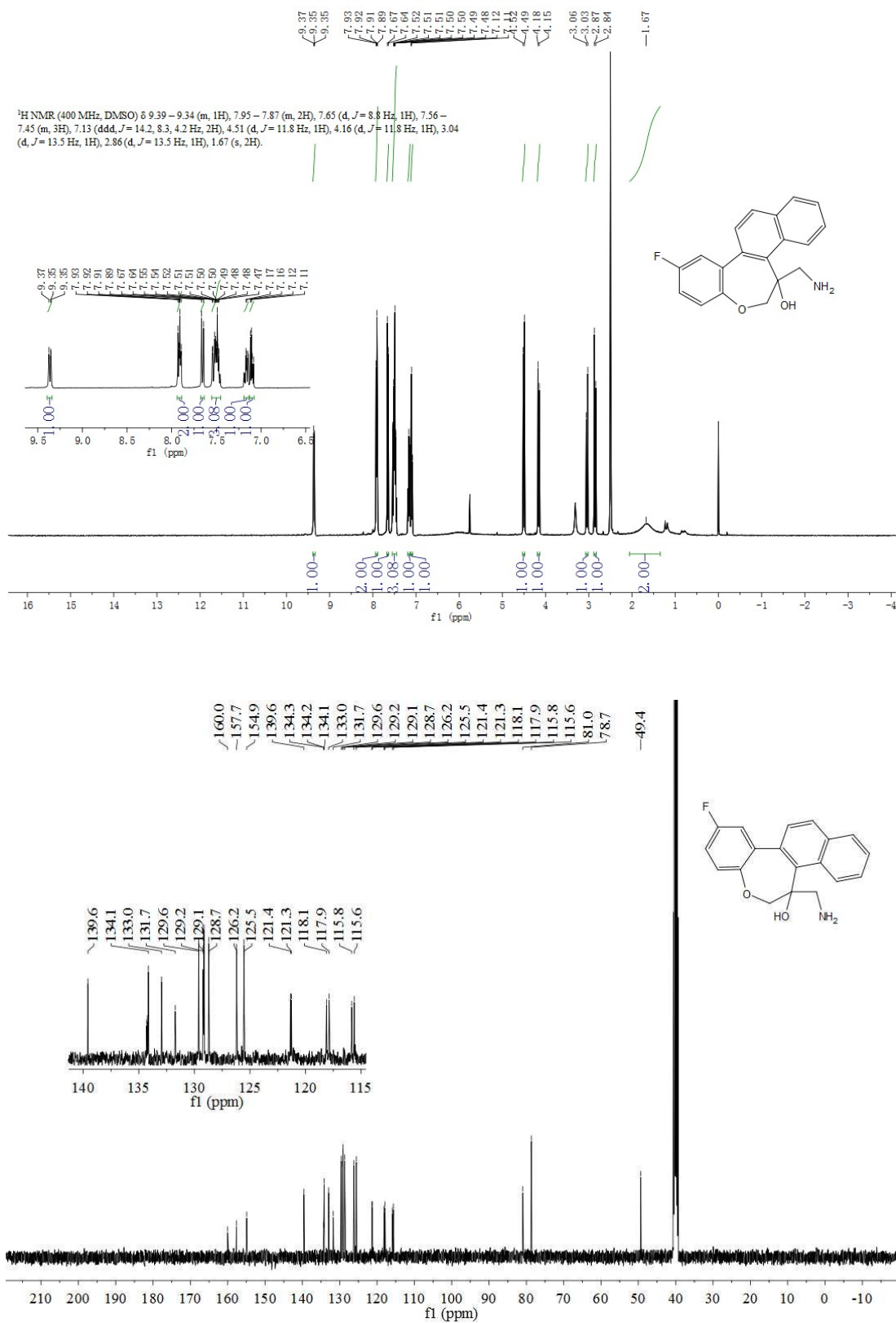


Fig. S80 NMR spectra of 6x

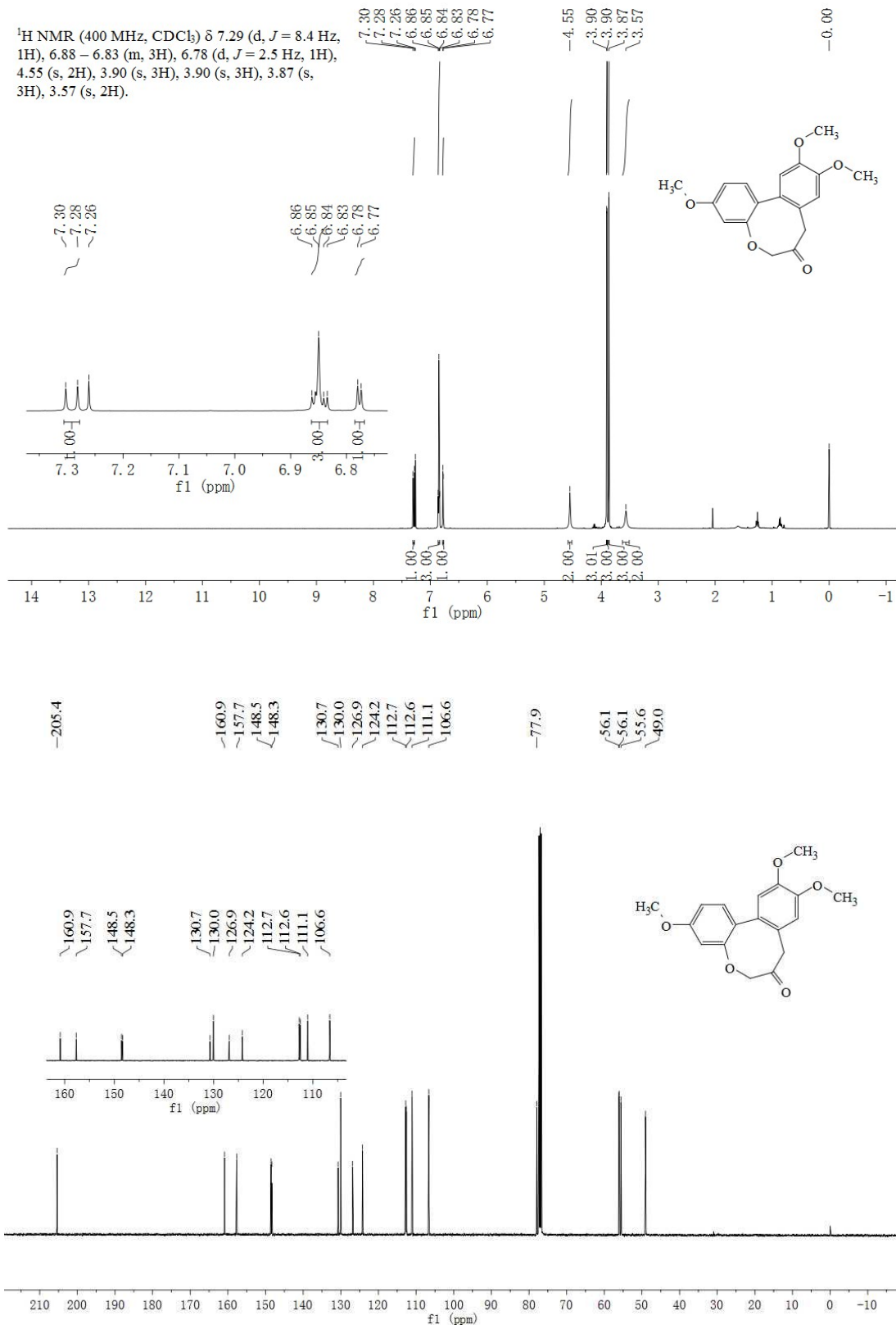


Fig. S81 NMR spectra of 7a

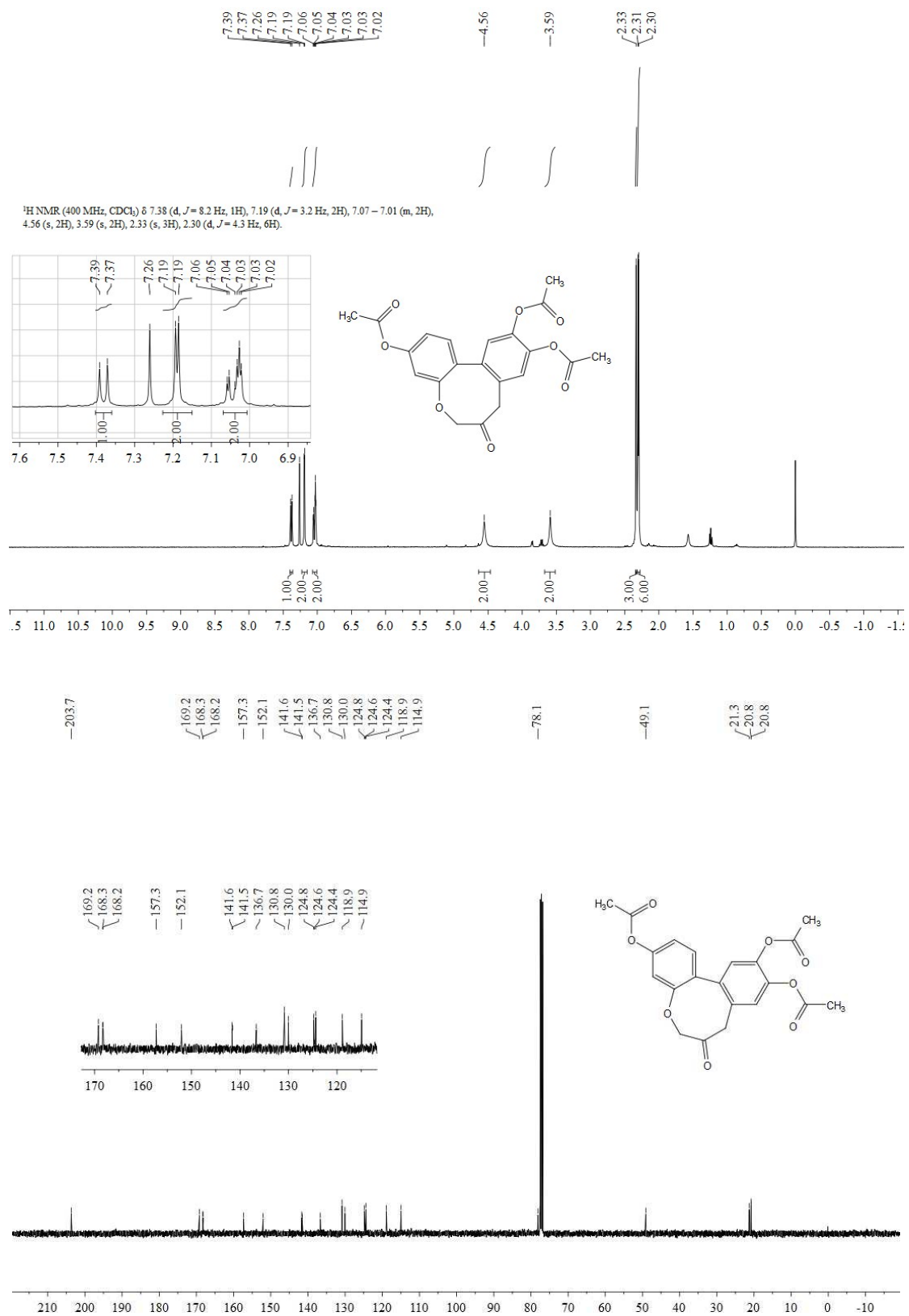


Fig. S82 NMR spectra of **7a<sub>1</sub>**



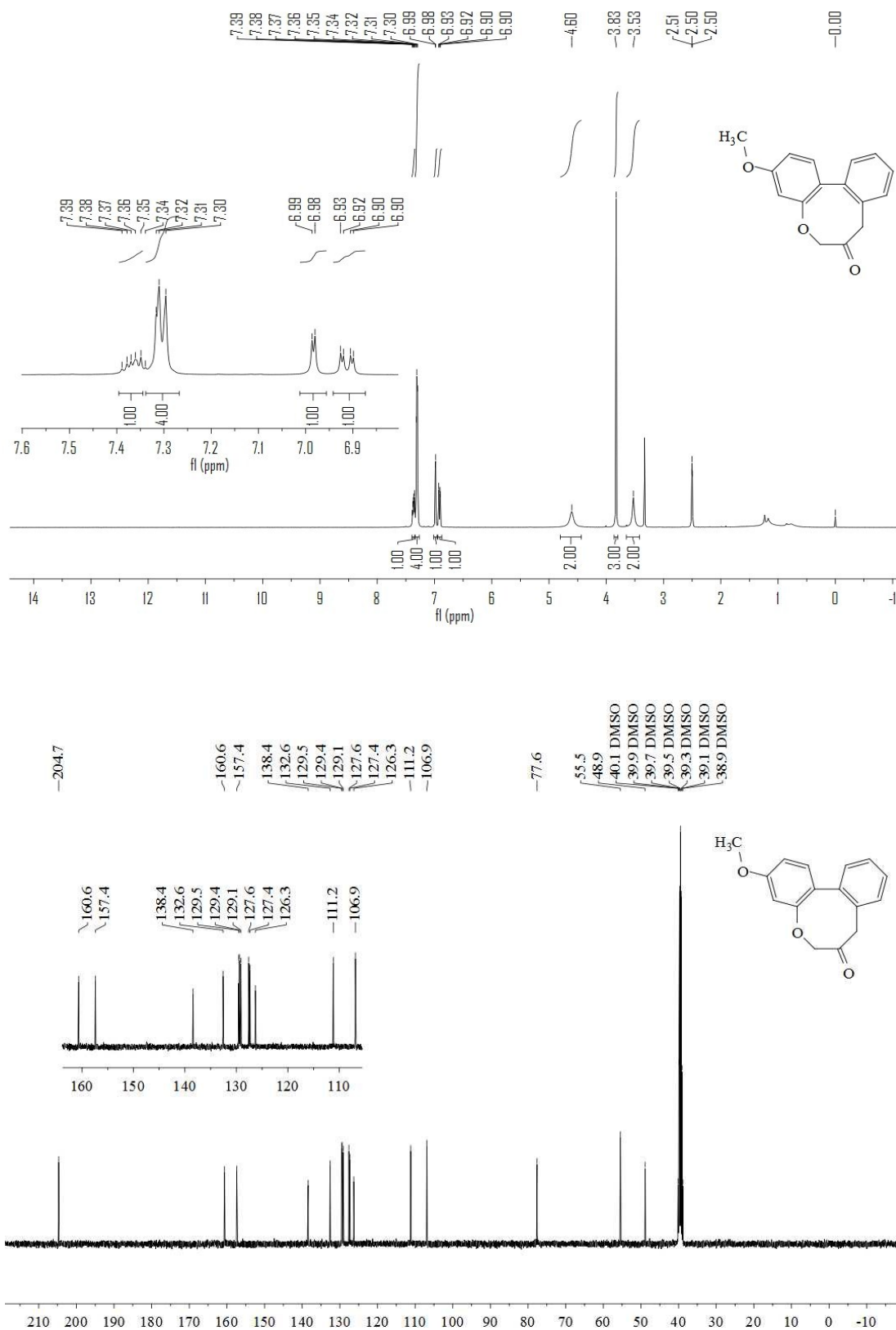


Fig. S83 NMR spectra of **7b**

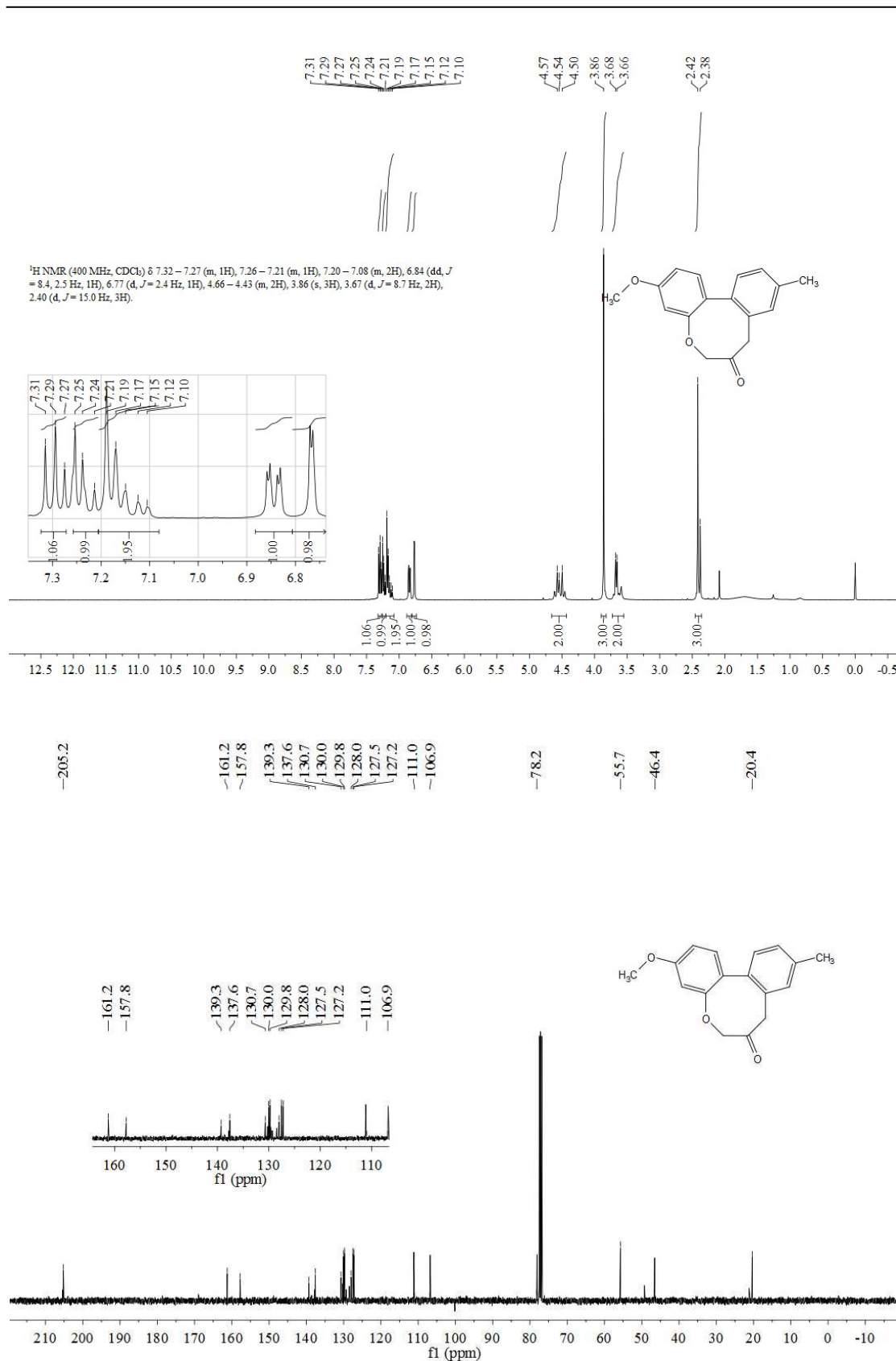


Fig. S84 NMR spectra of **7c**

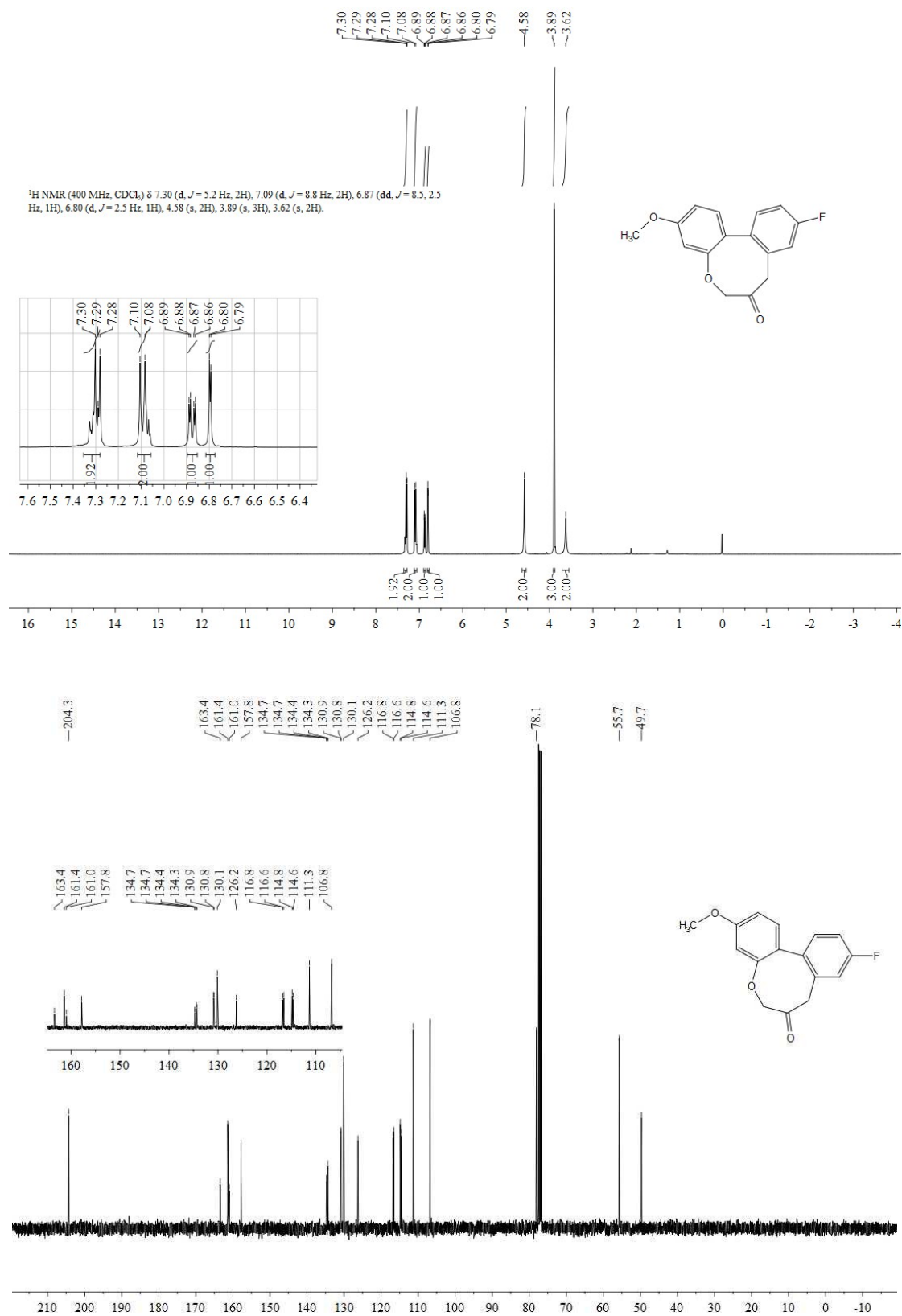


Fig. S85 NMR spectra of 7d

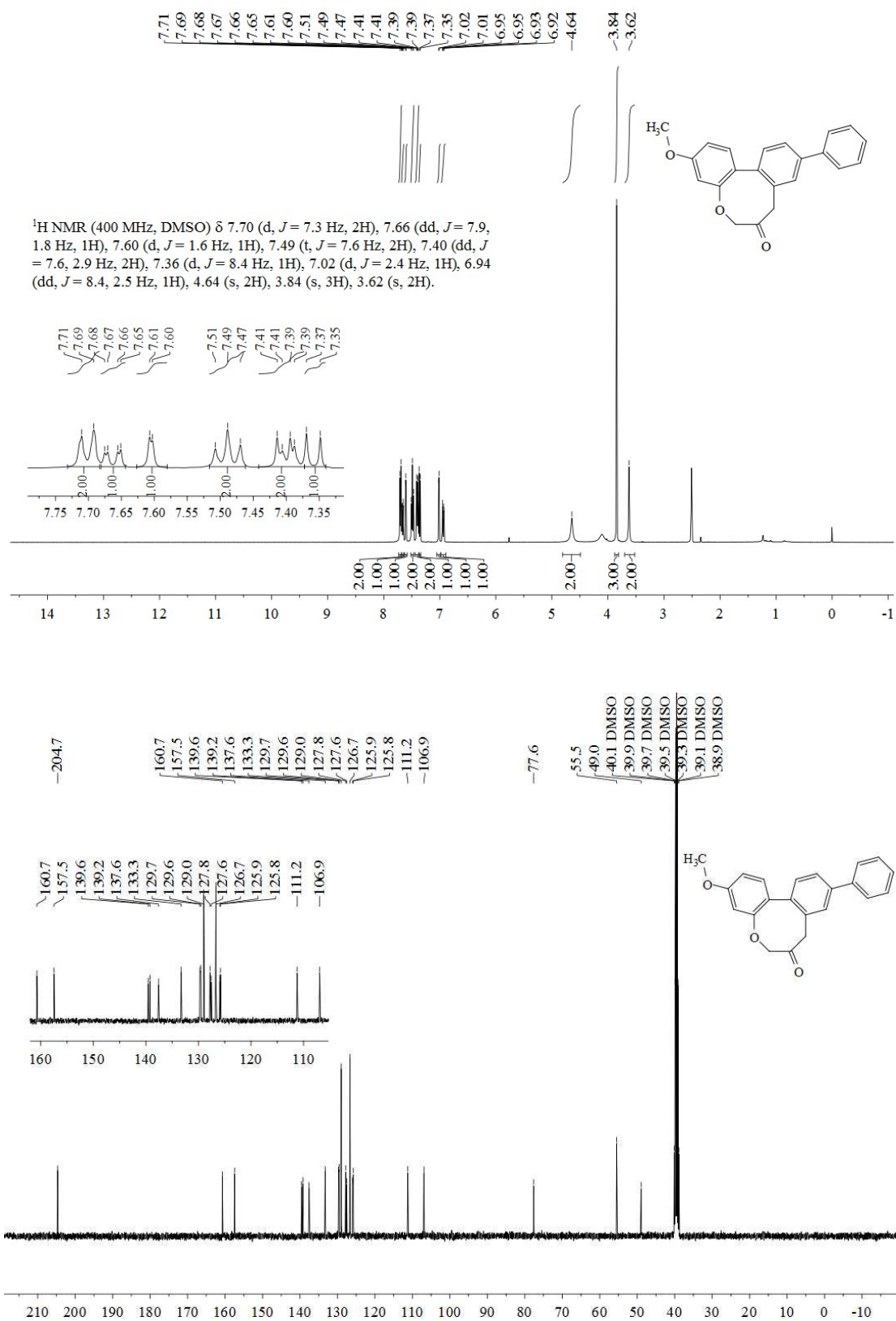


Fig. S86 NMR spectra of 7e

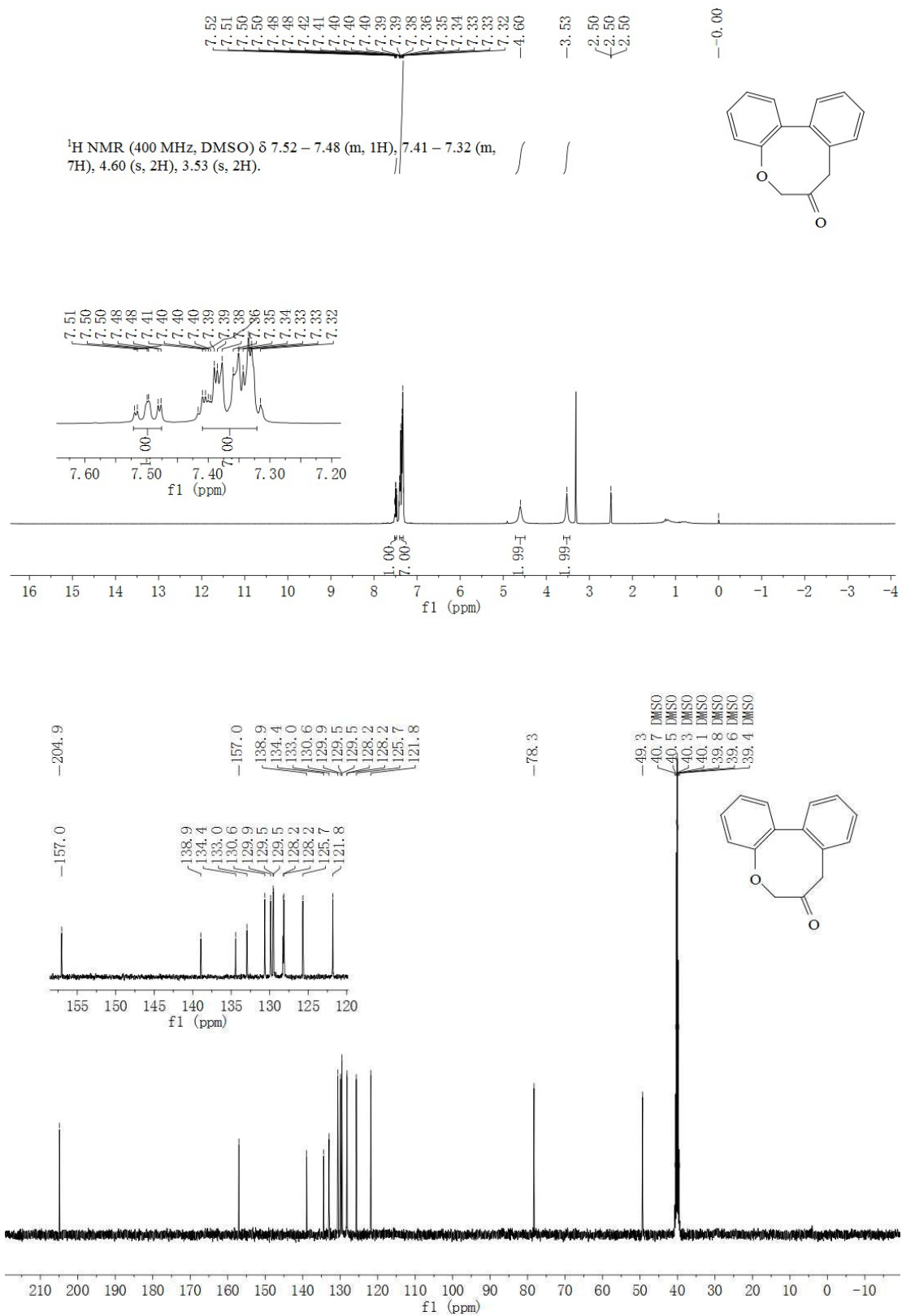


Fig. S87 NMR spectra of 7f

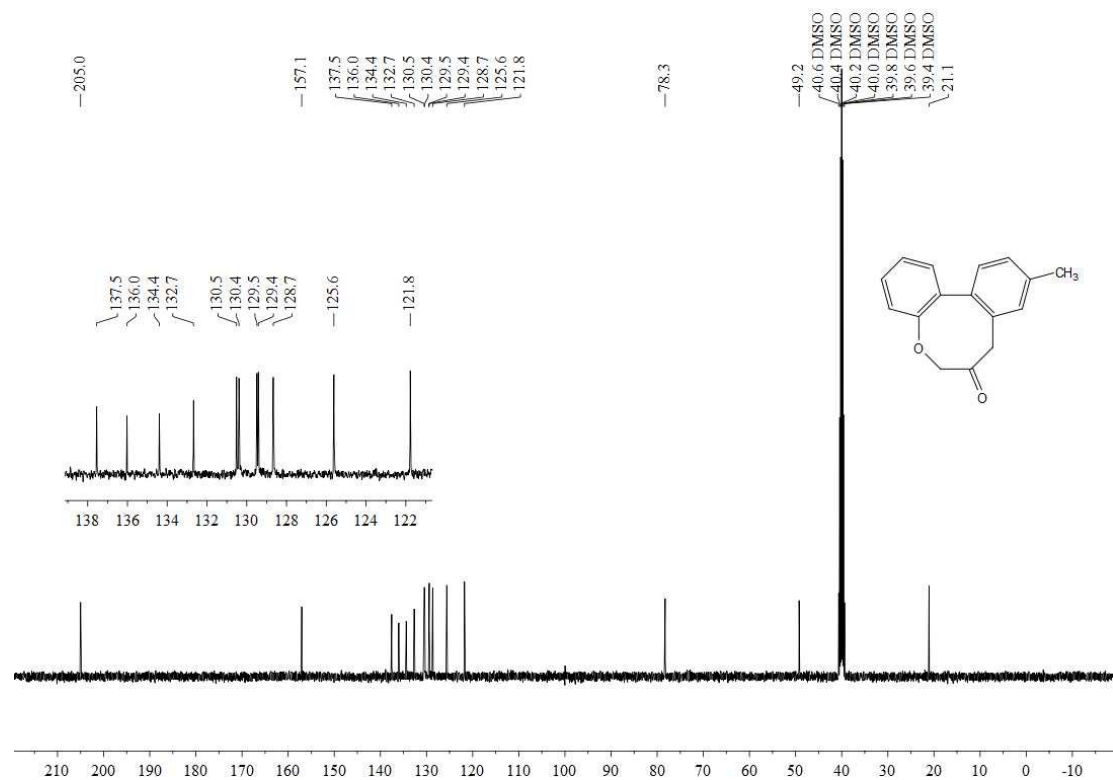
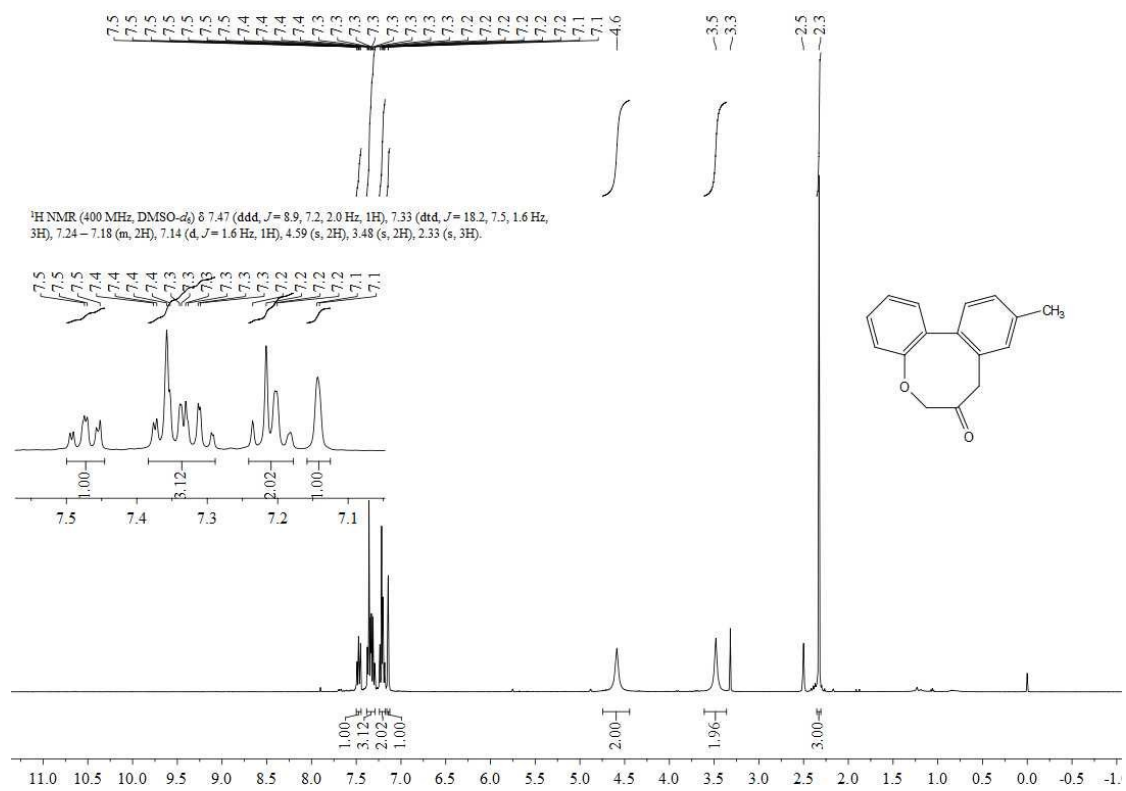


Fig. S88 NMR spectra of 7g

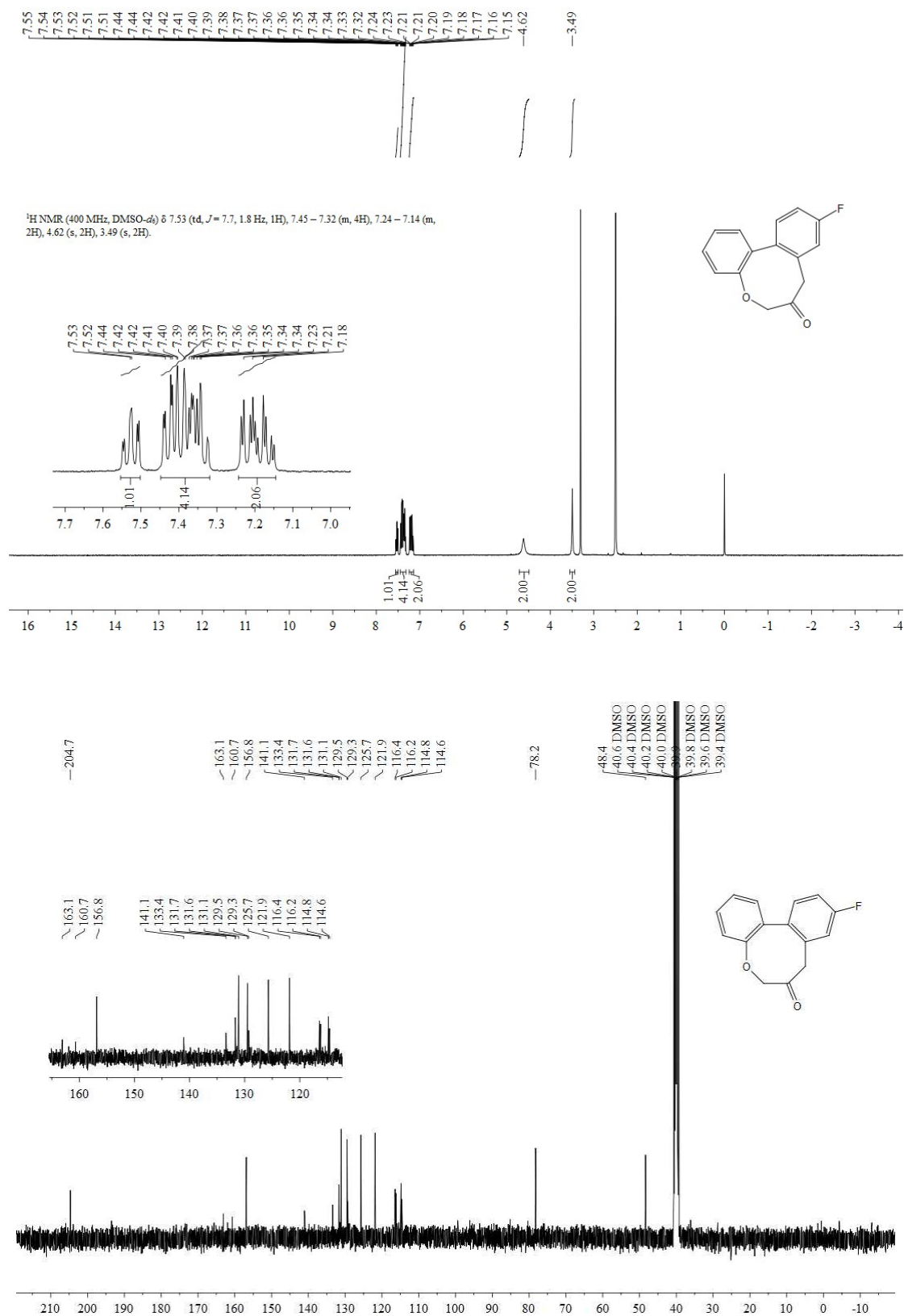


Fig. S89 NMR spectra of 7h

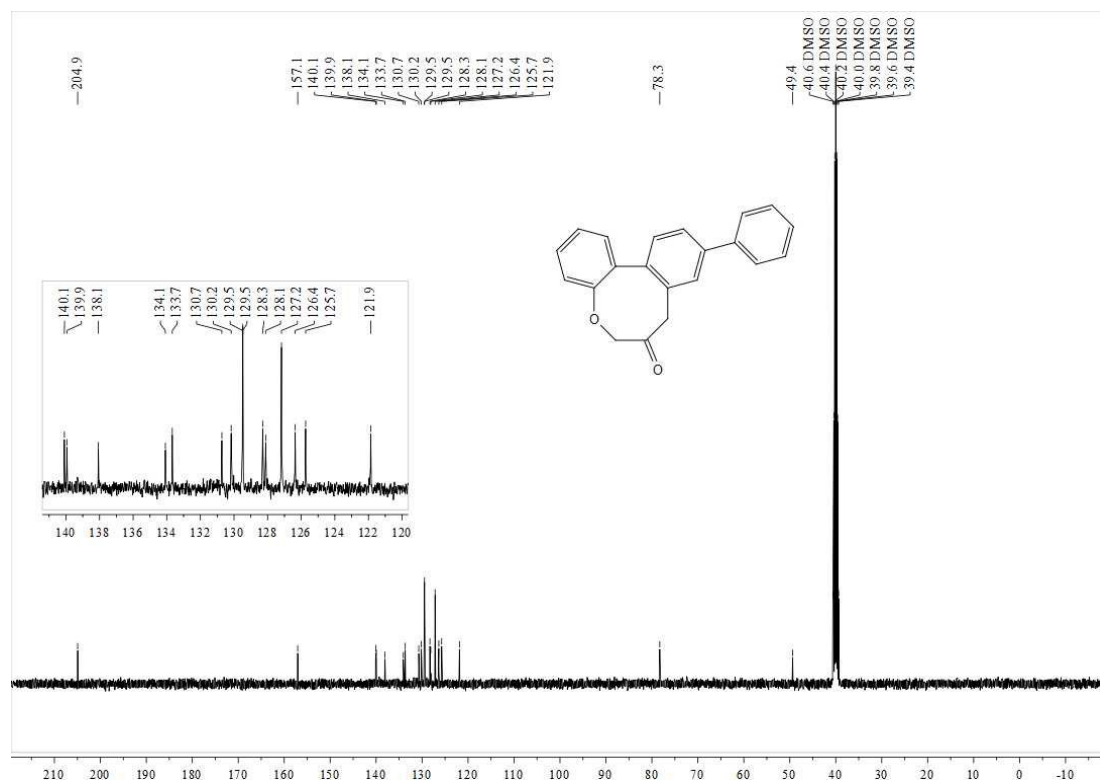
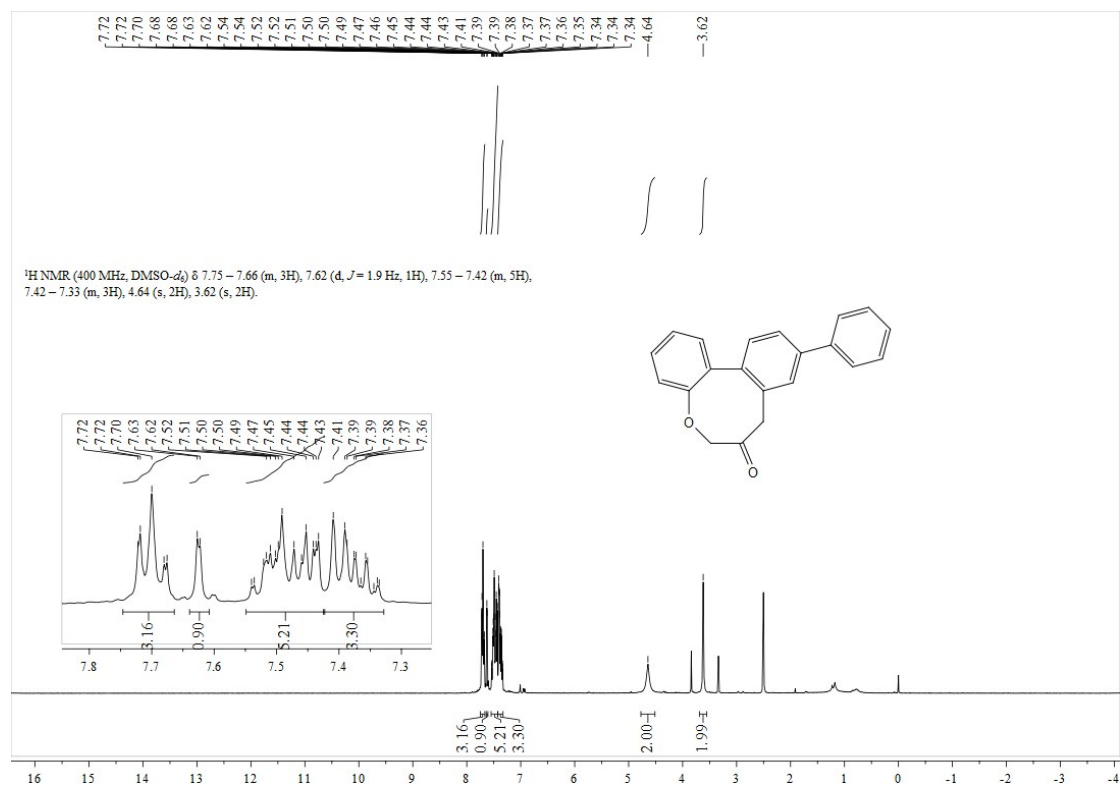


Fig. S90 NMR spectra of 7i



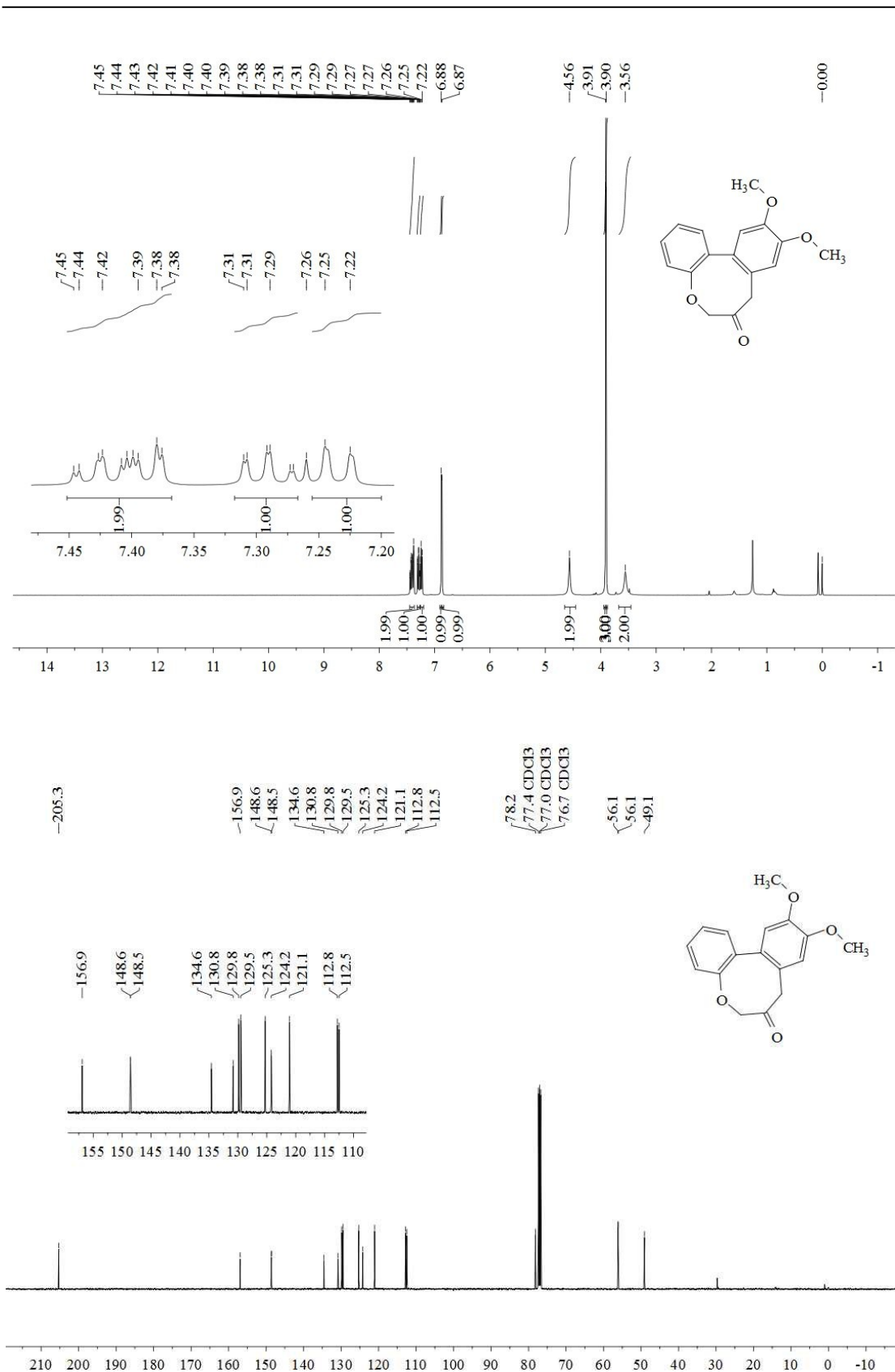


Fig. S91 NMR spectra of 7j

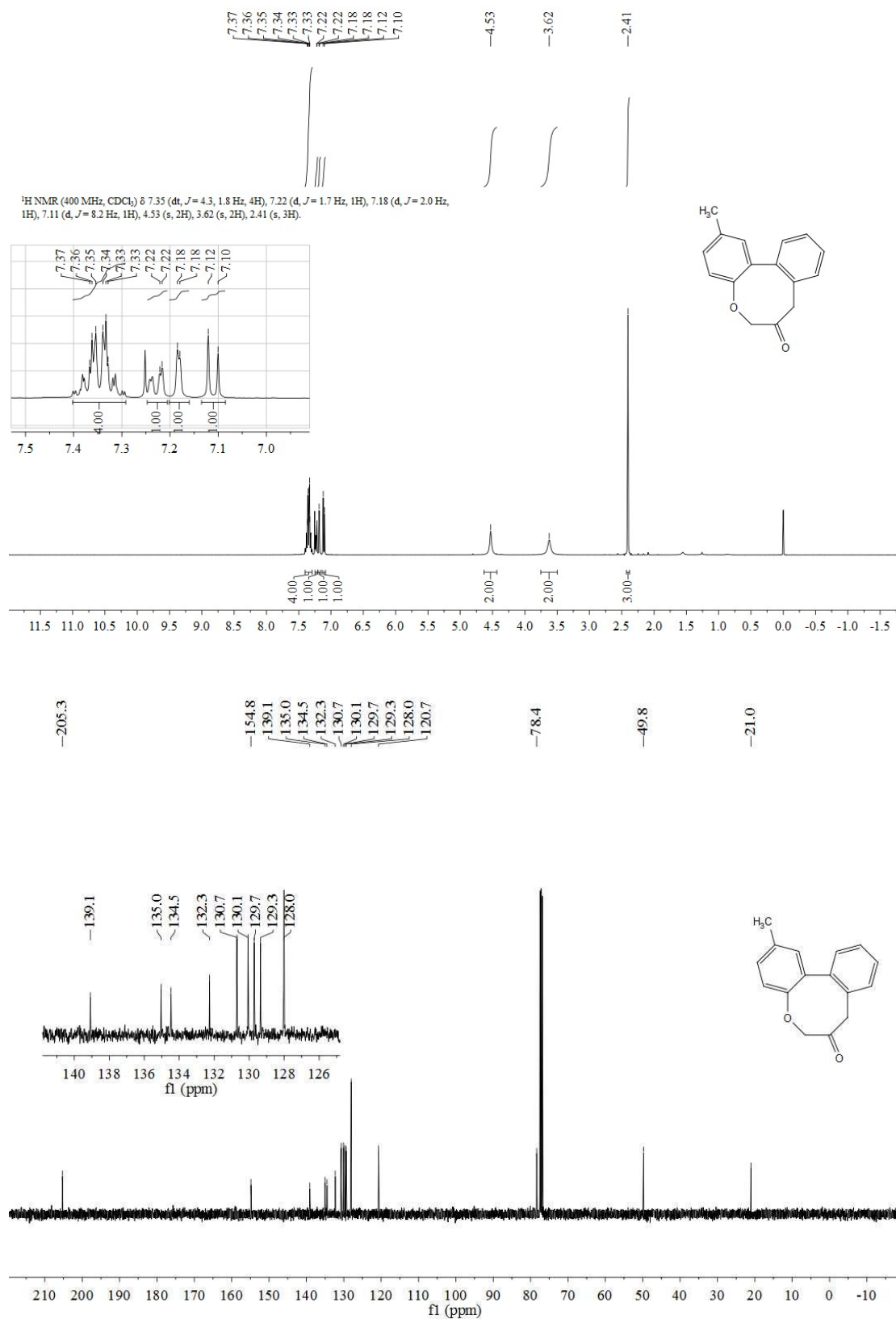


Fig. S92 NMR spectra of 7k

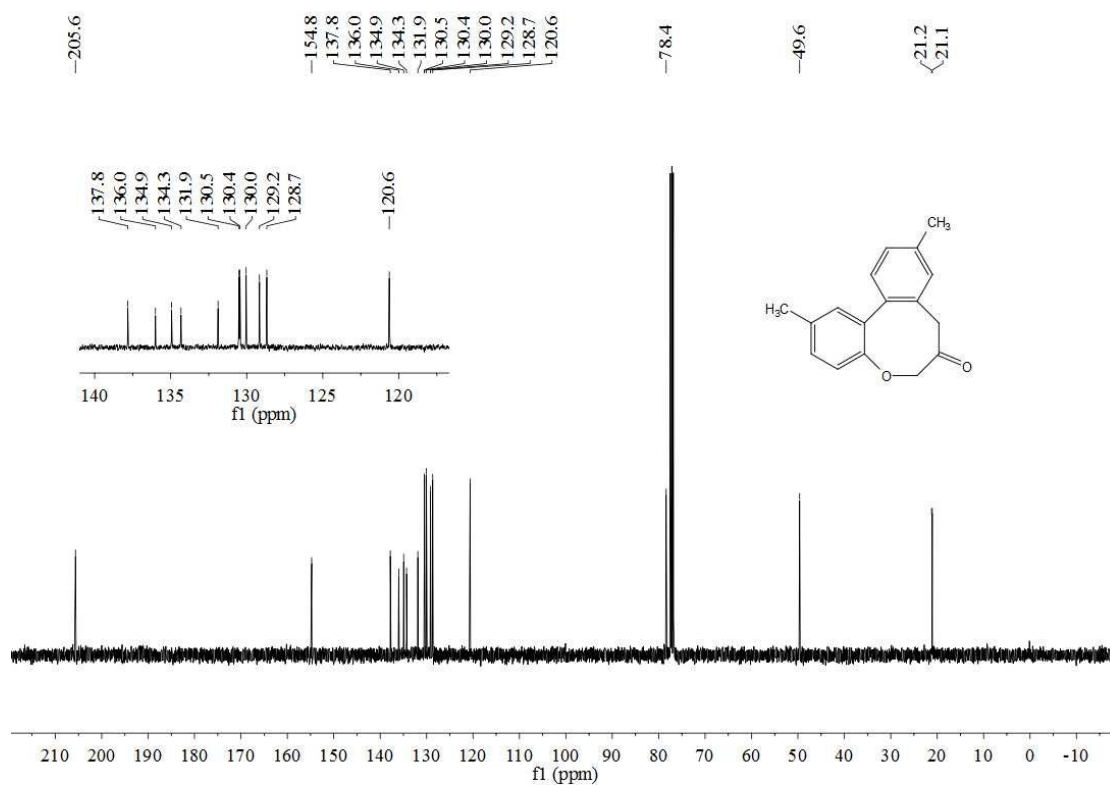
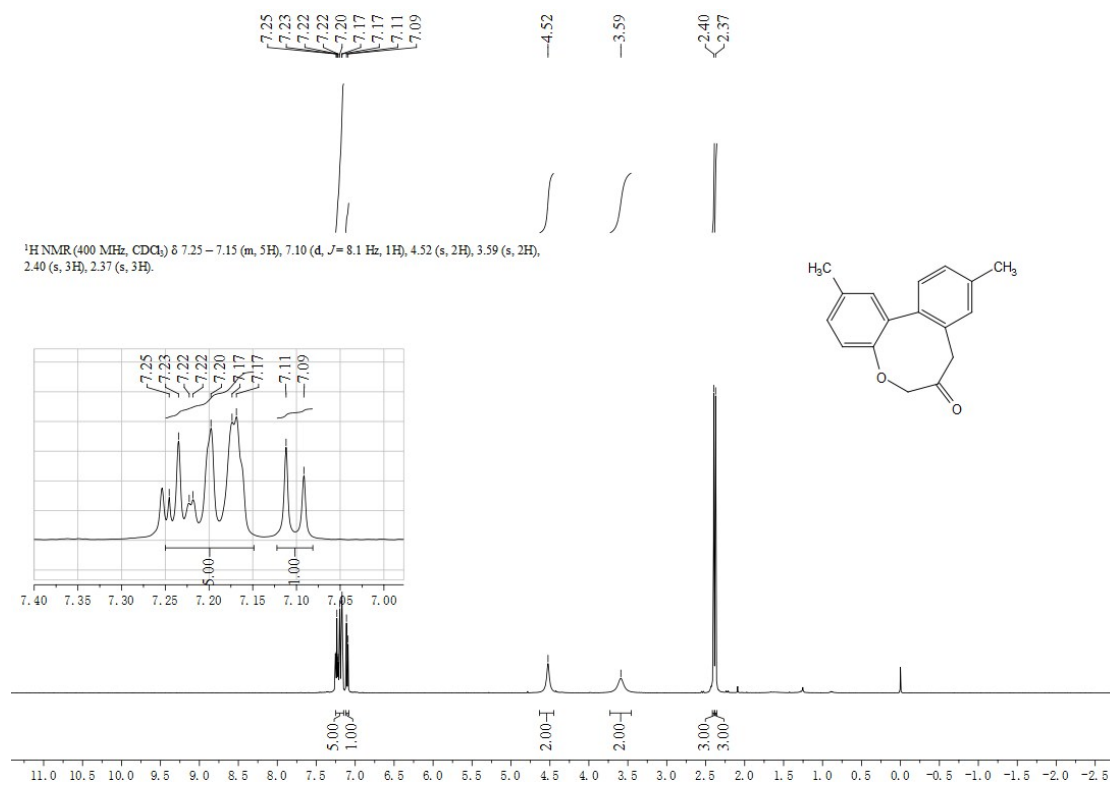


Fig. S93 NMR spectra of 71

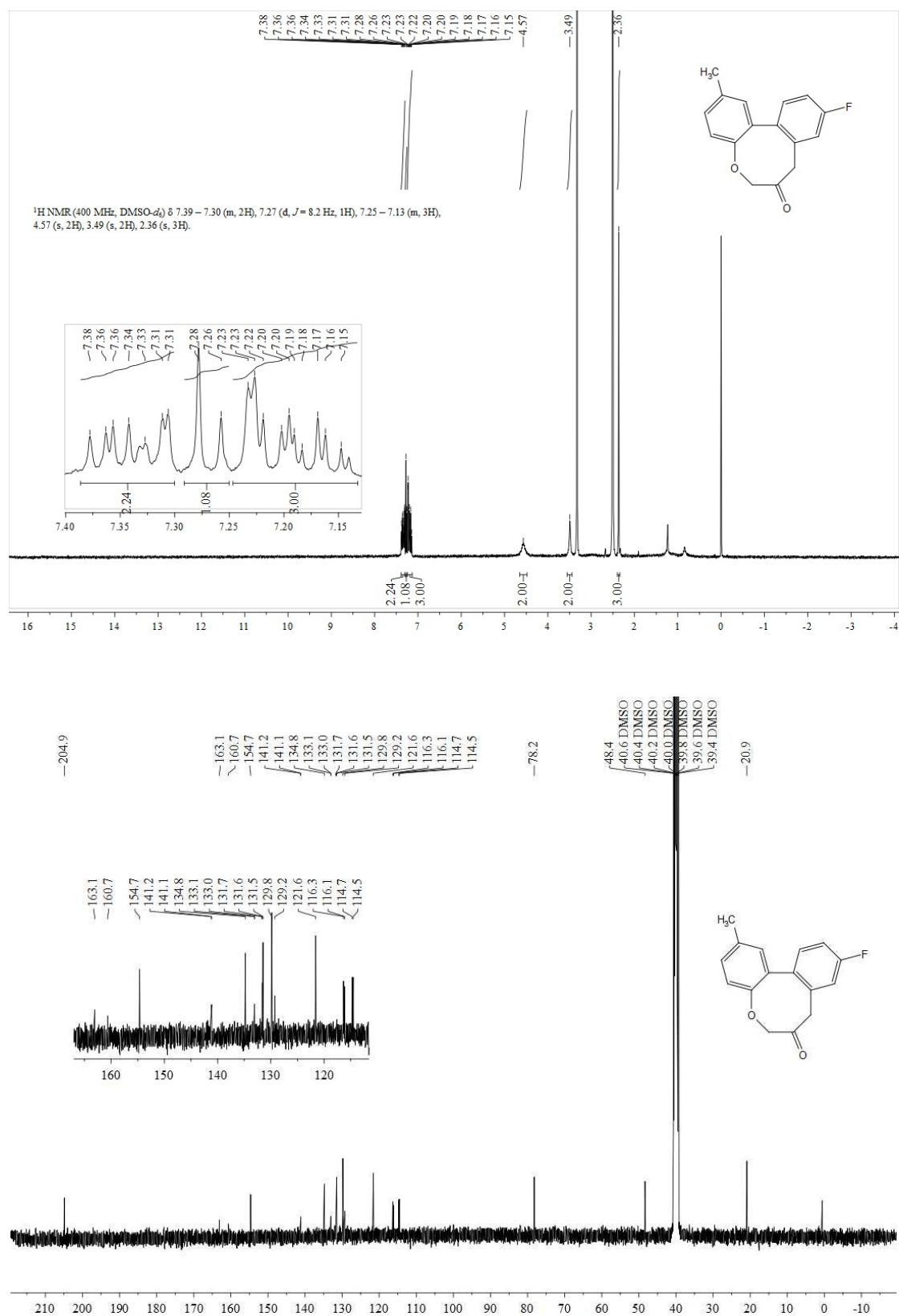


Fig. S94 NMR spectra of **7m**

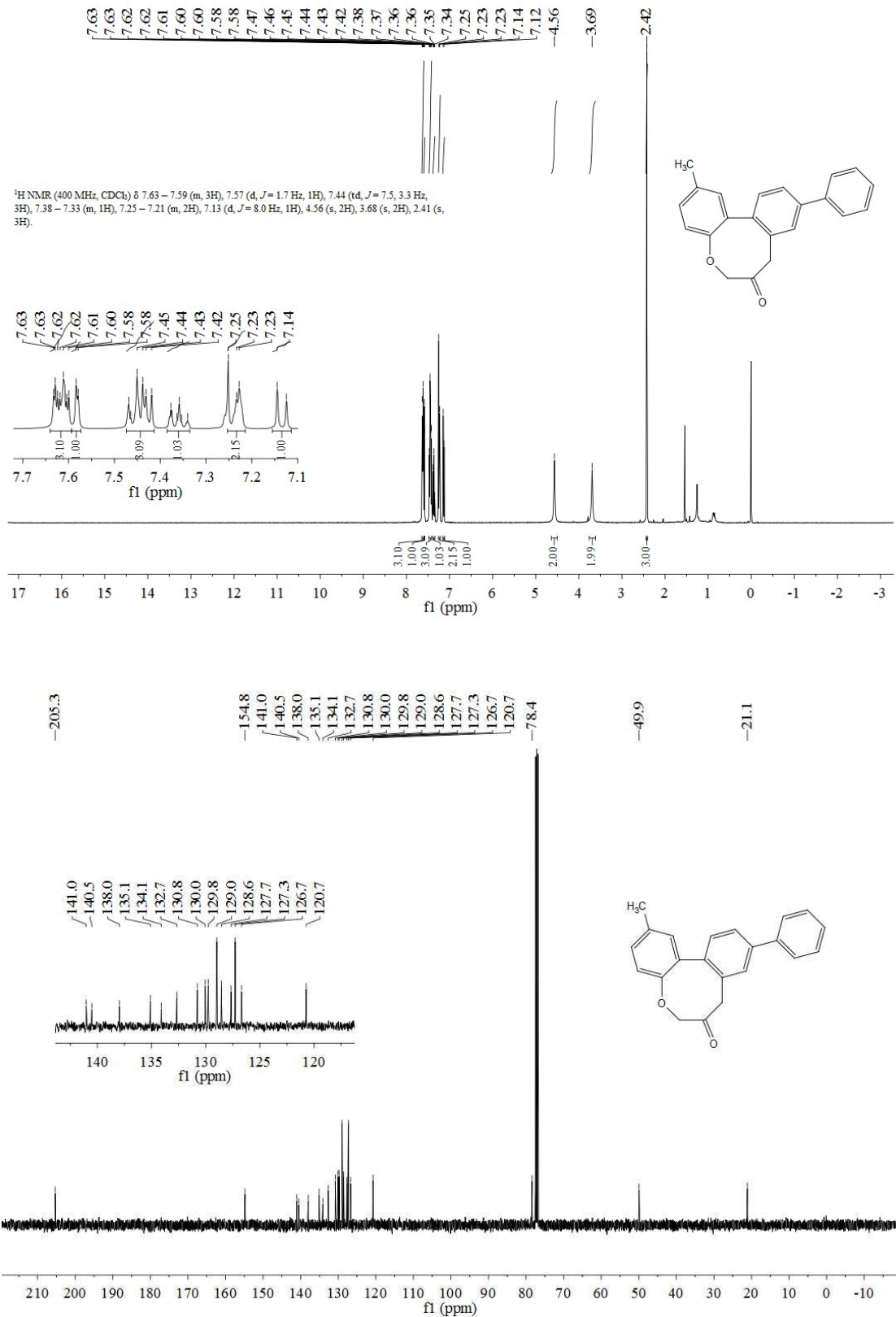


Fig. S95 NMR spectra of **7n**



Fig. S96 NMR spectra of **7o**

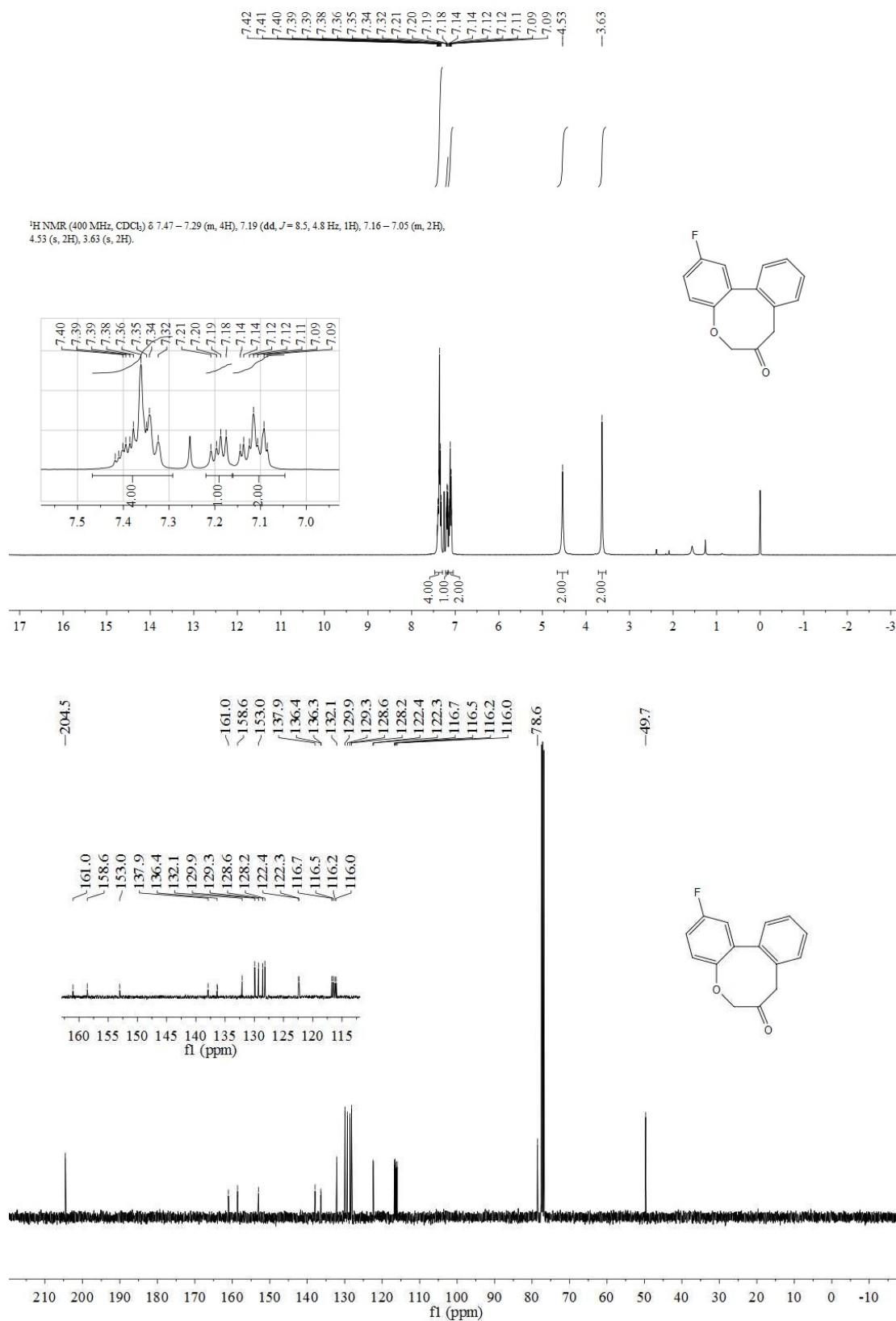


Fig. S97 NMR spectra of **7p**

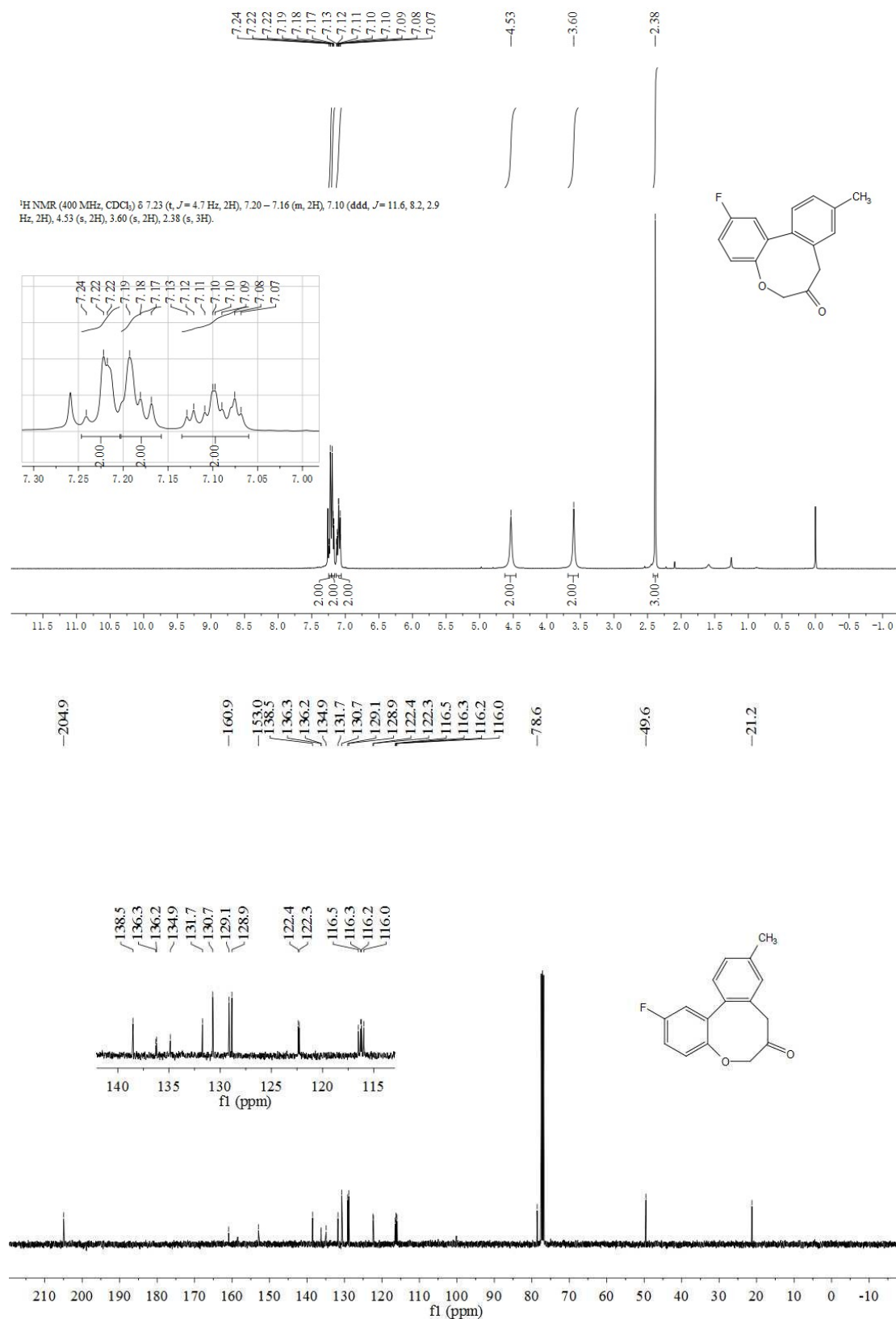


Fig. S98 NMR spectra of **7q**



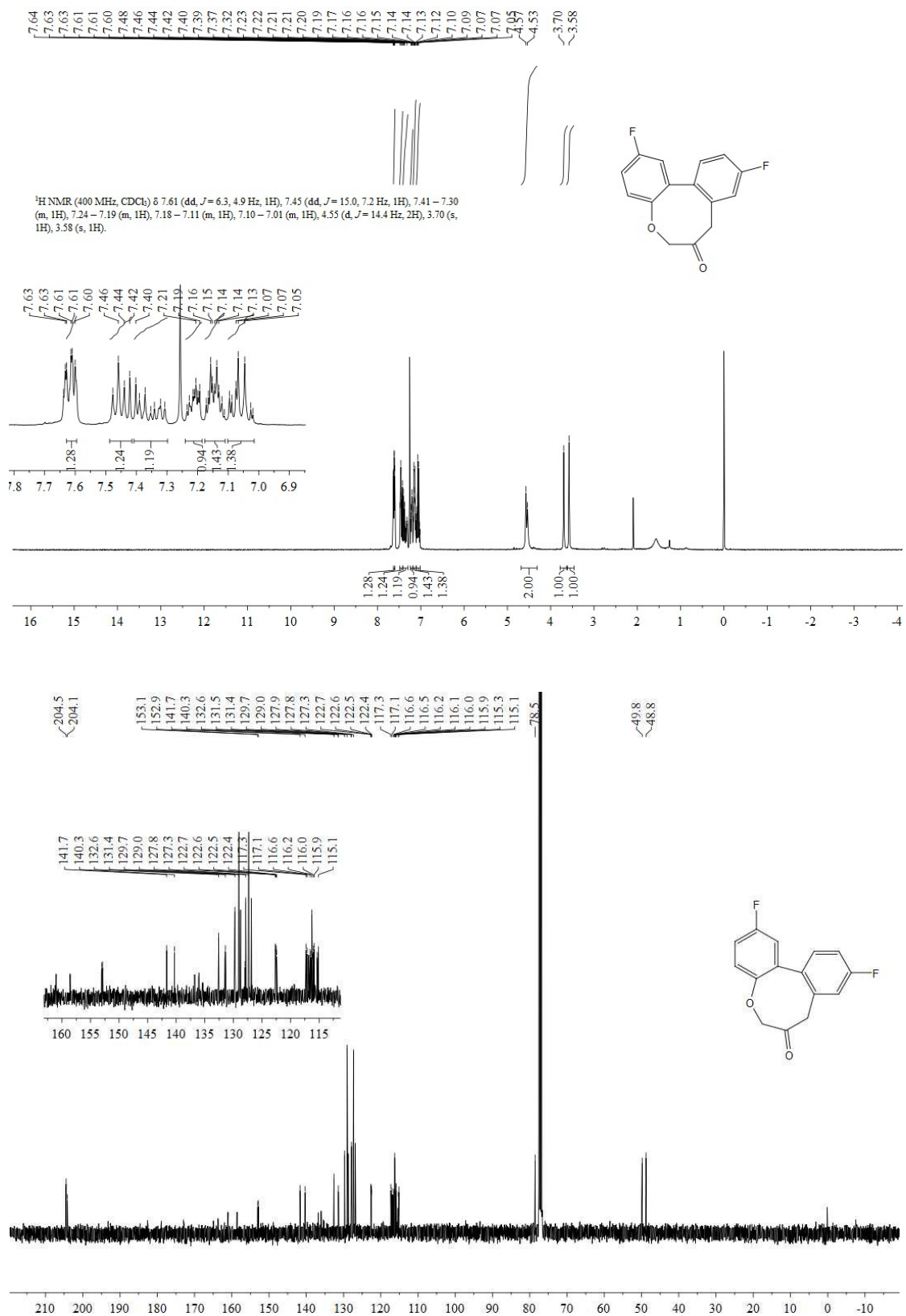


Fig. S99 NMR spectra of **7r**



Fig. S100 NMR spectra of 7s

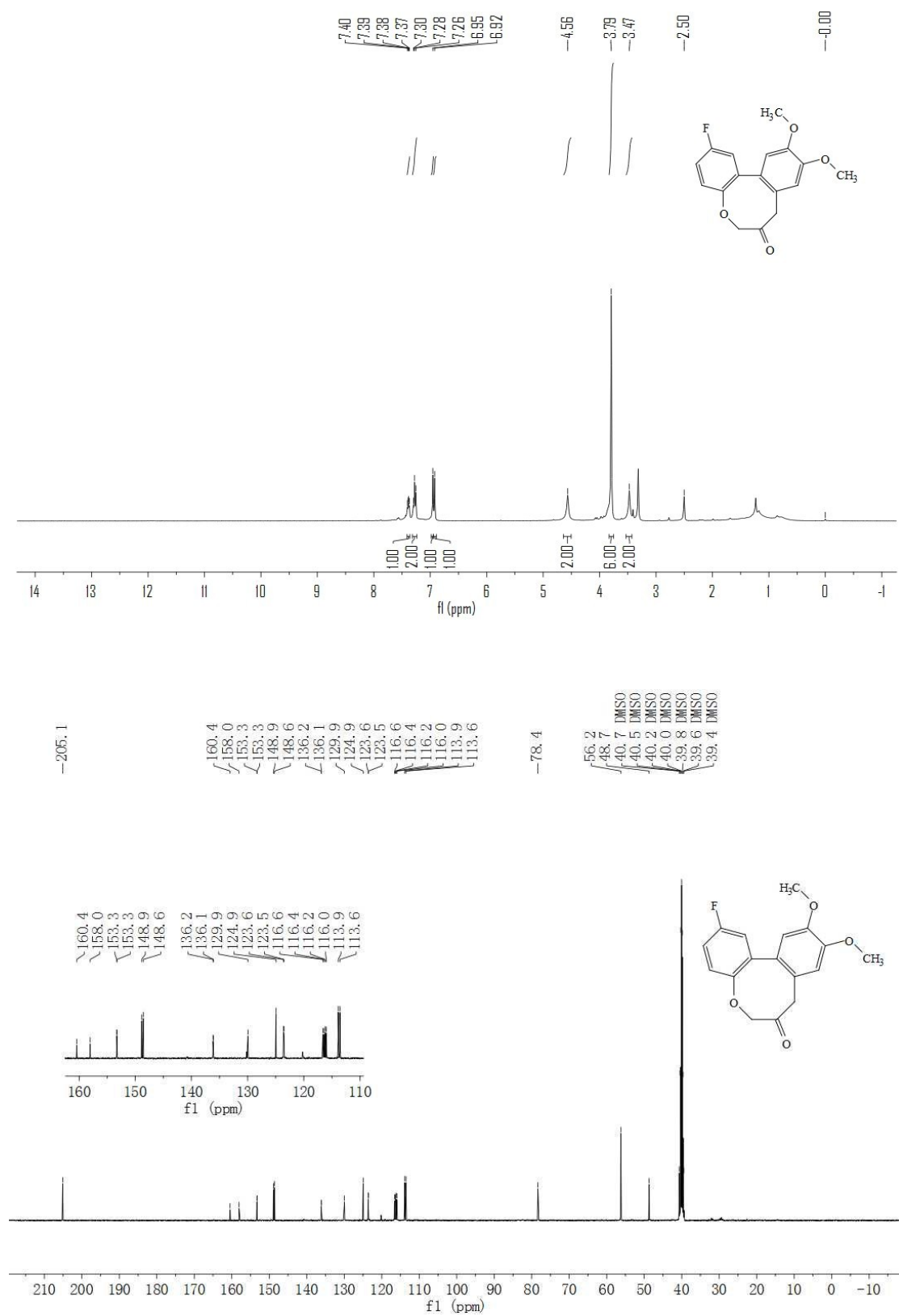


Fig. S101 NMR spectra of 7t

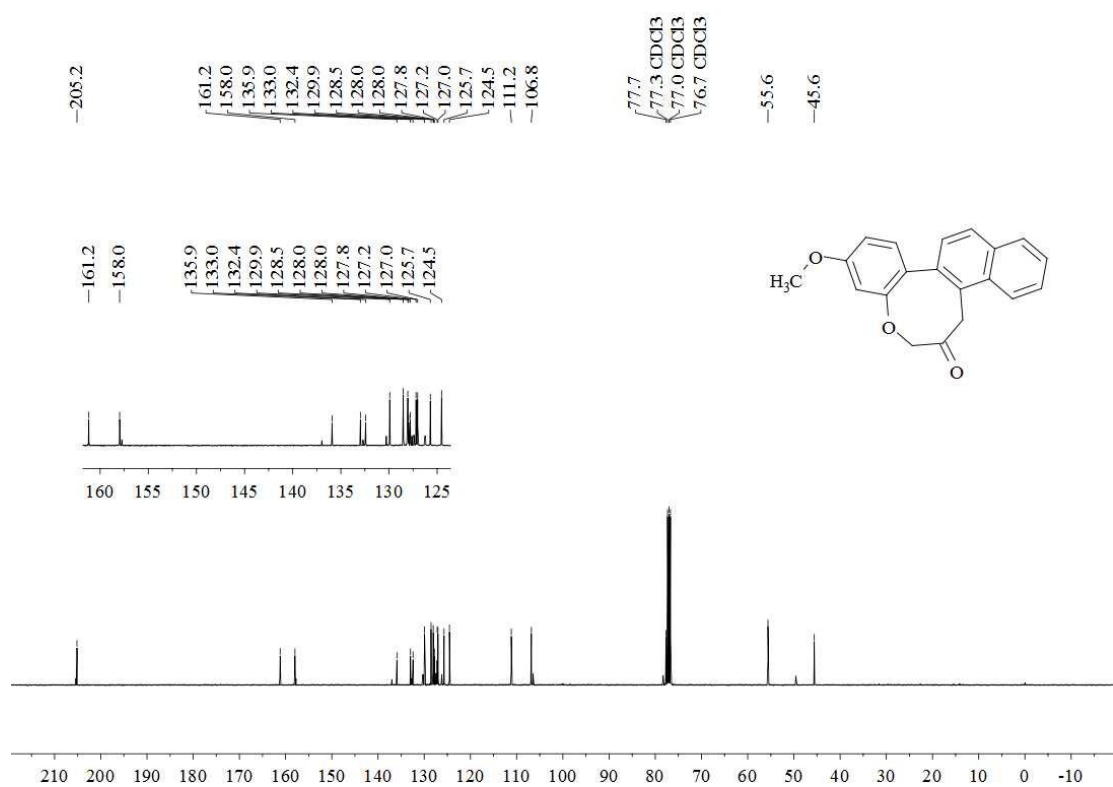
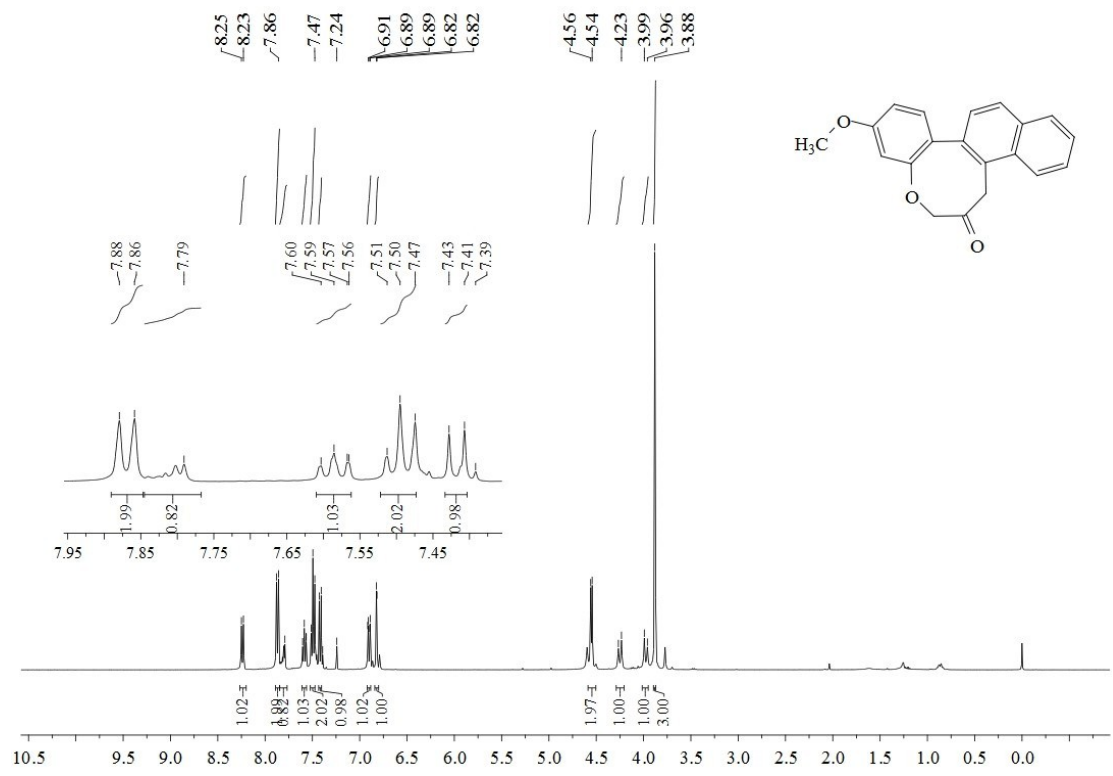


Fig. S102 NMR spectra of 7u

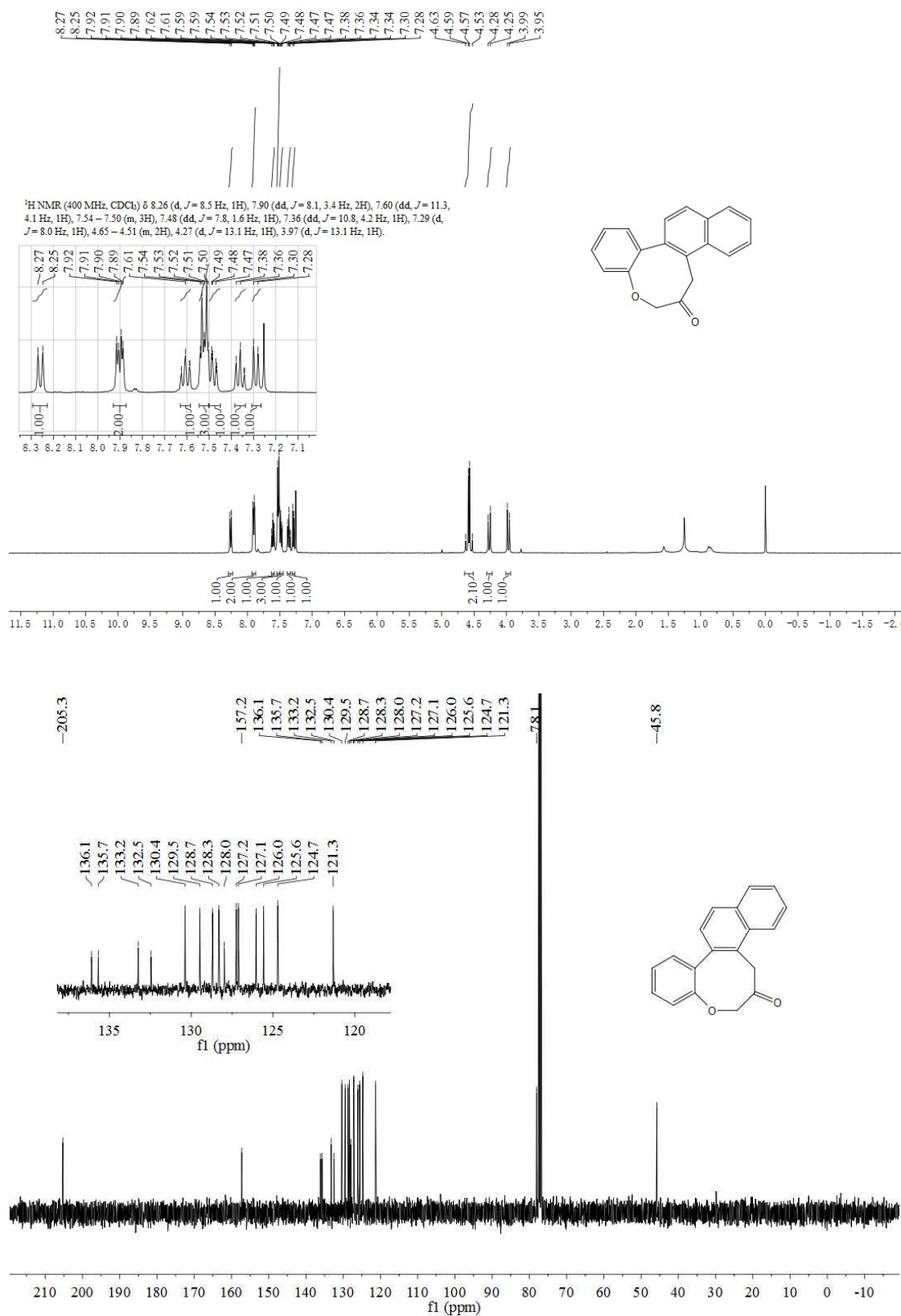


Fig. S103 NMR spectra of **7v**

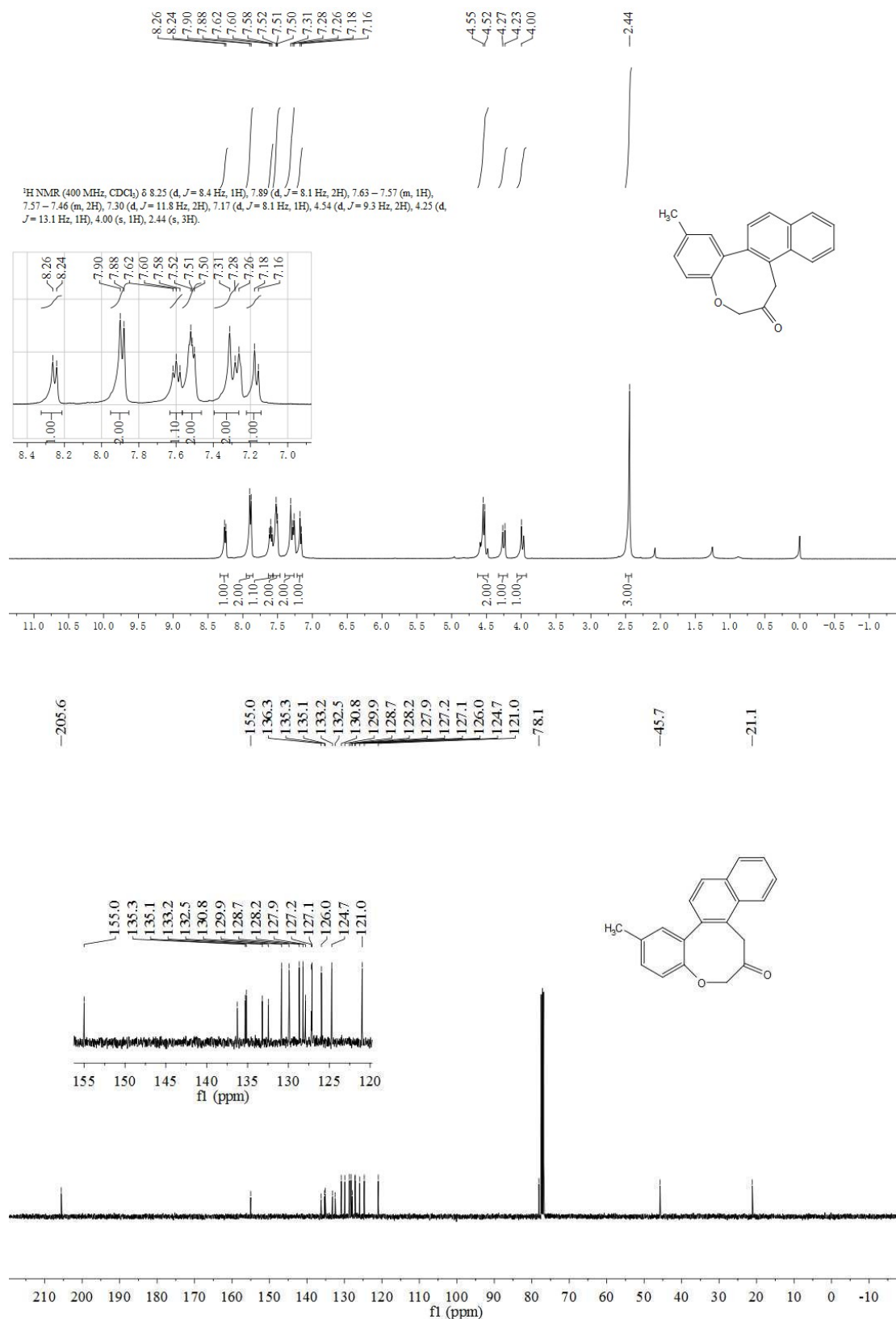


Fig. S104 NMR spectra of 7w

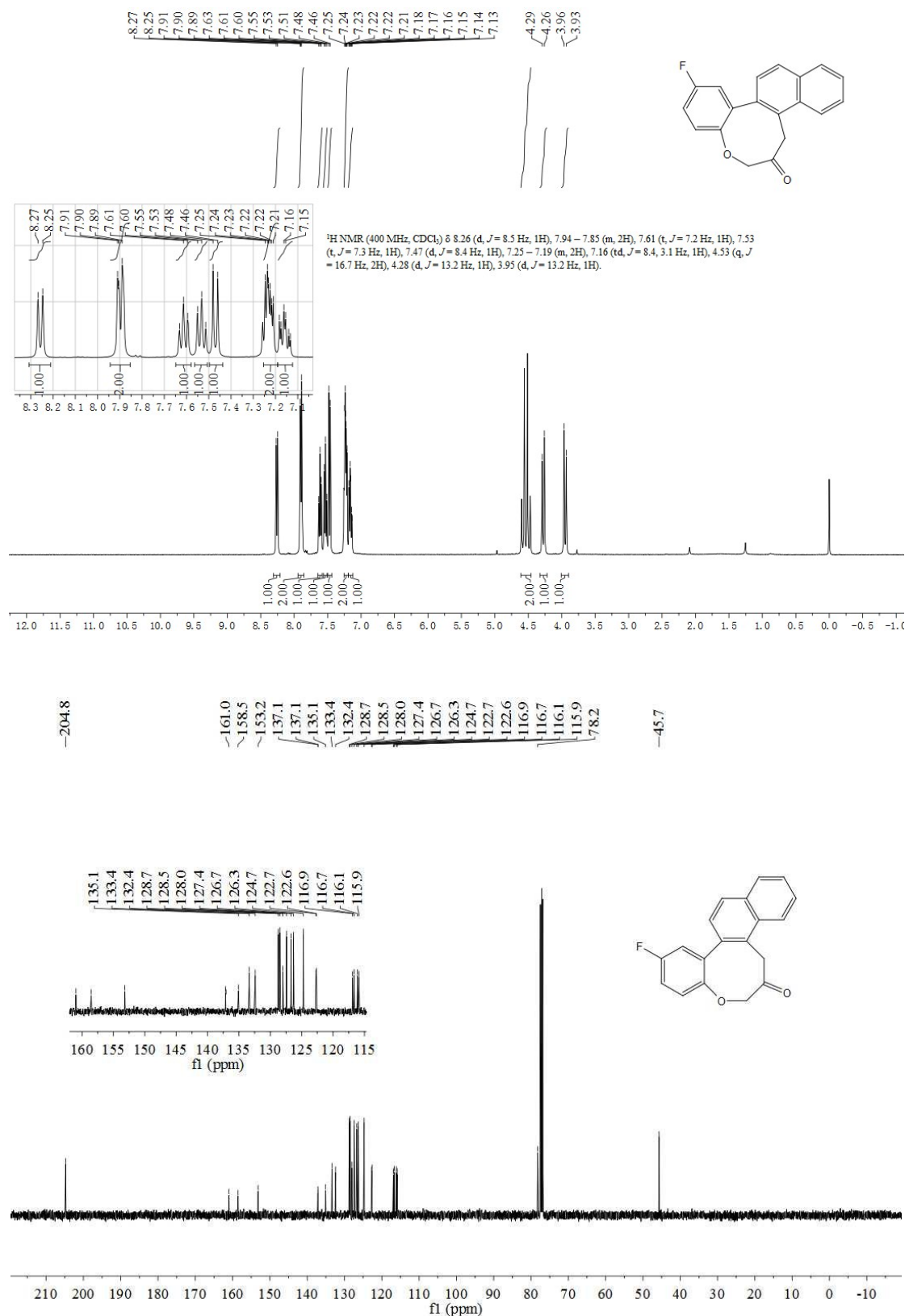


Fig. S105 NMR spectra of **7x**

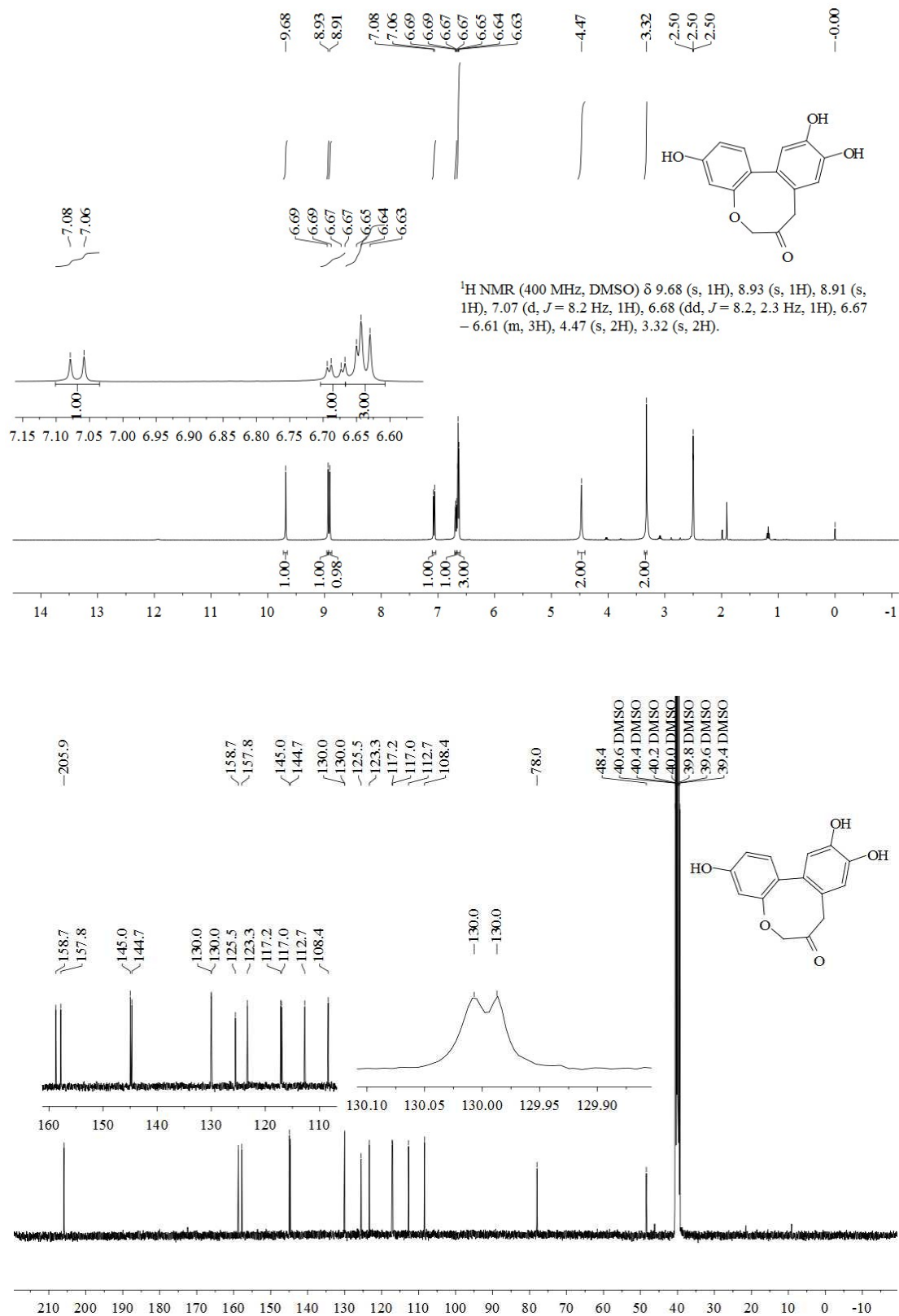


Fig. S106 NMR spectra of **Protosappanin A**