

SUPPLEMENTARY MATERIAL

Design and synthesis of C-ring quinoxaline-substituted sinomenine 1,2,3-triazole derivatives *via* click reactions

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¹H NMR, ¹³C NMR and FT-IR of all compounds and some representative HRMS.

Typical ¹³C data (6f) assignment for compounds containing C-F bonds

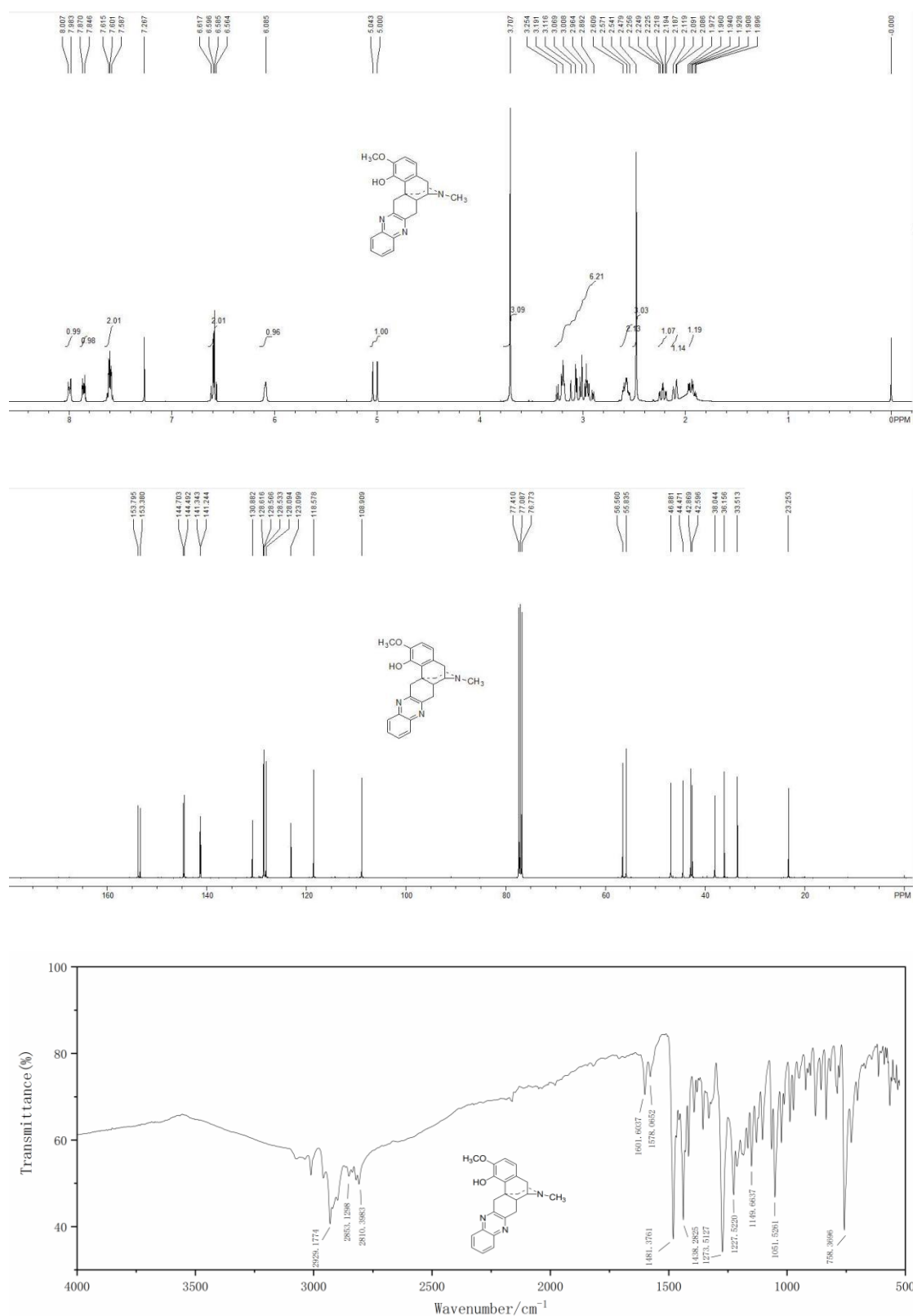


Figure S1 NMR and FT-IR spectra of 3

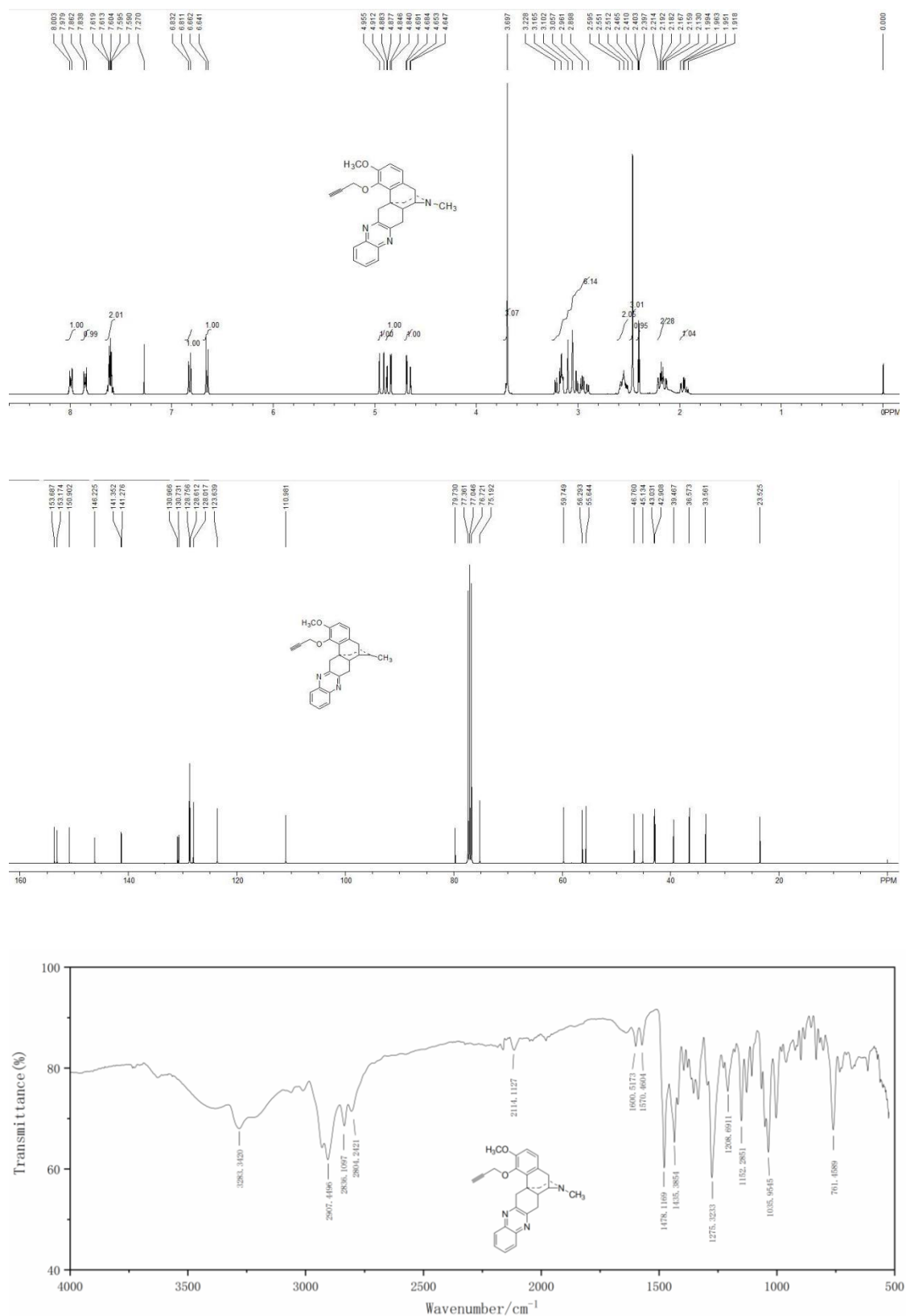


Figure S2 NMR and FT-IR spectra of 4

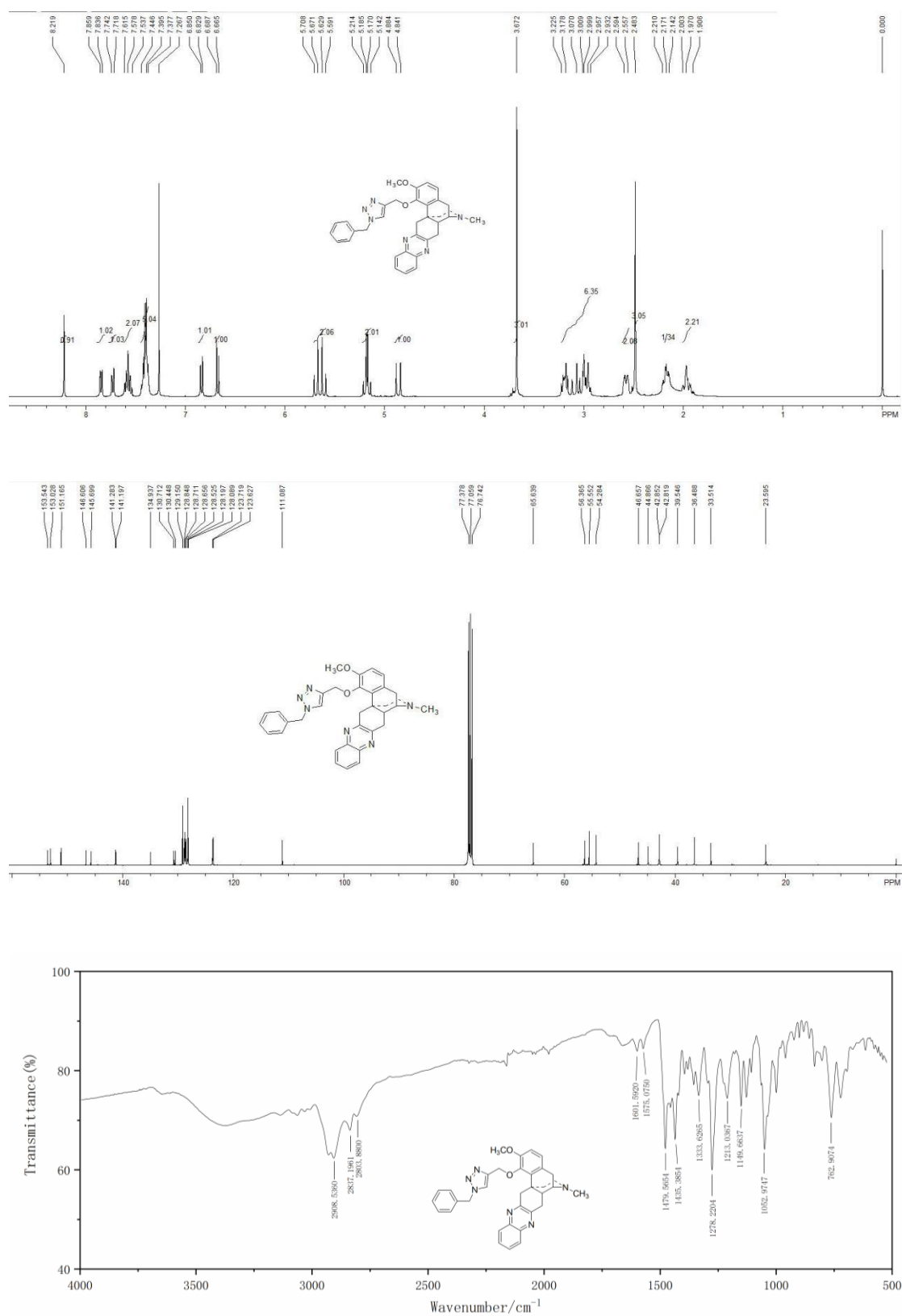


Figure S3 NMR and FT-IR spectra of 6a

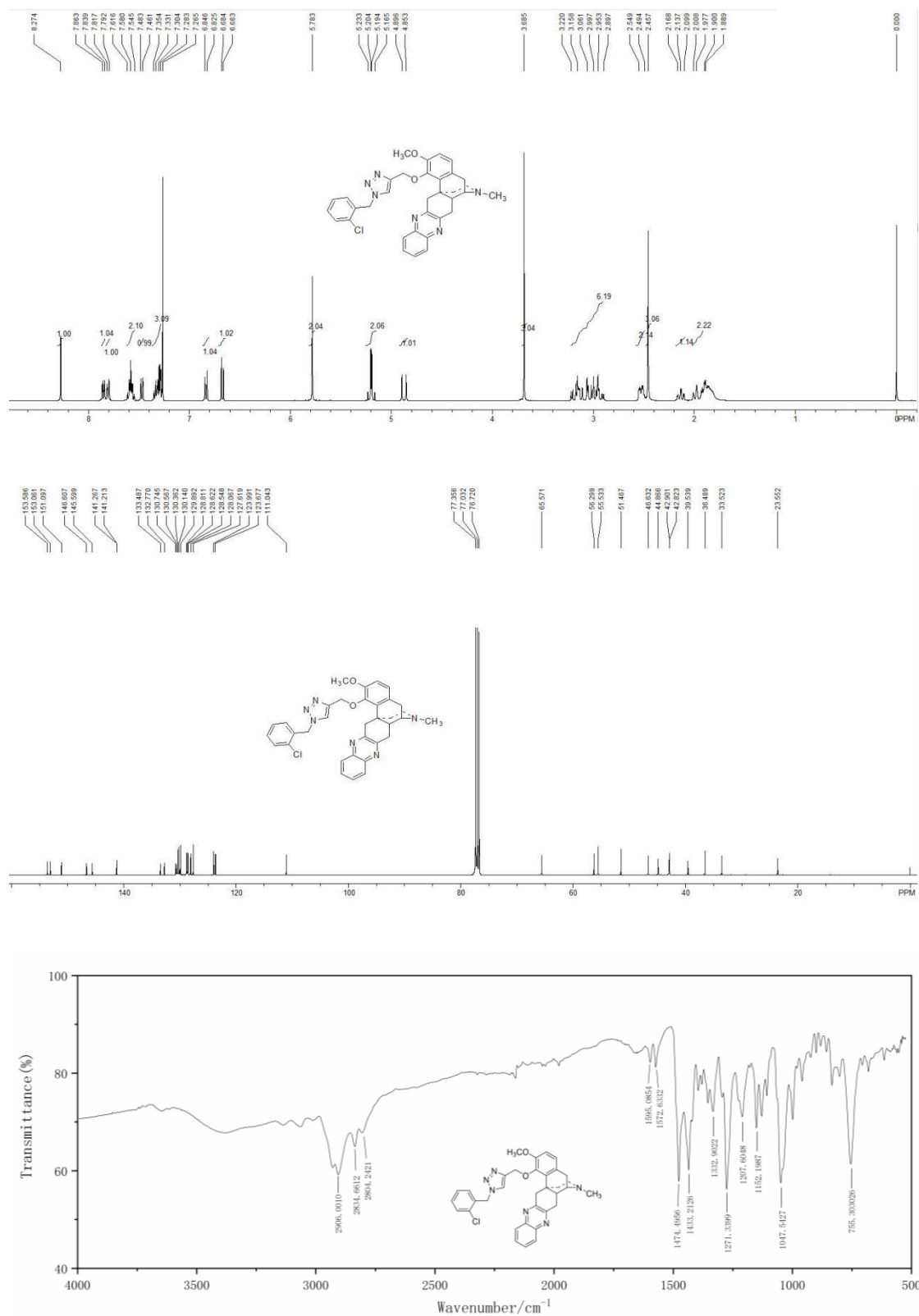


Figure S4 NMR and FT-IR spectra of **6b**

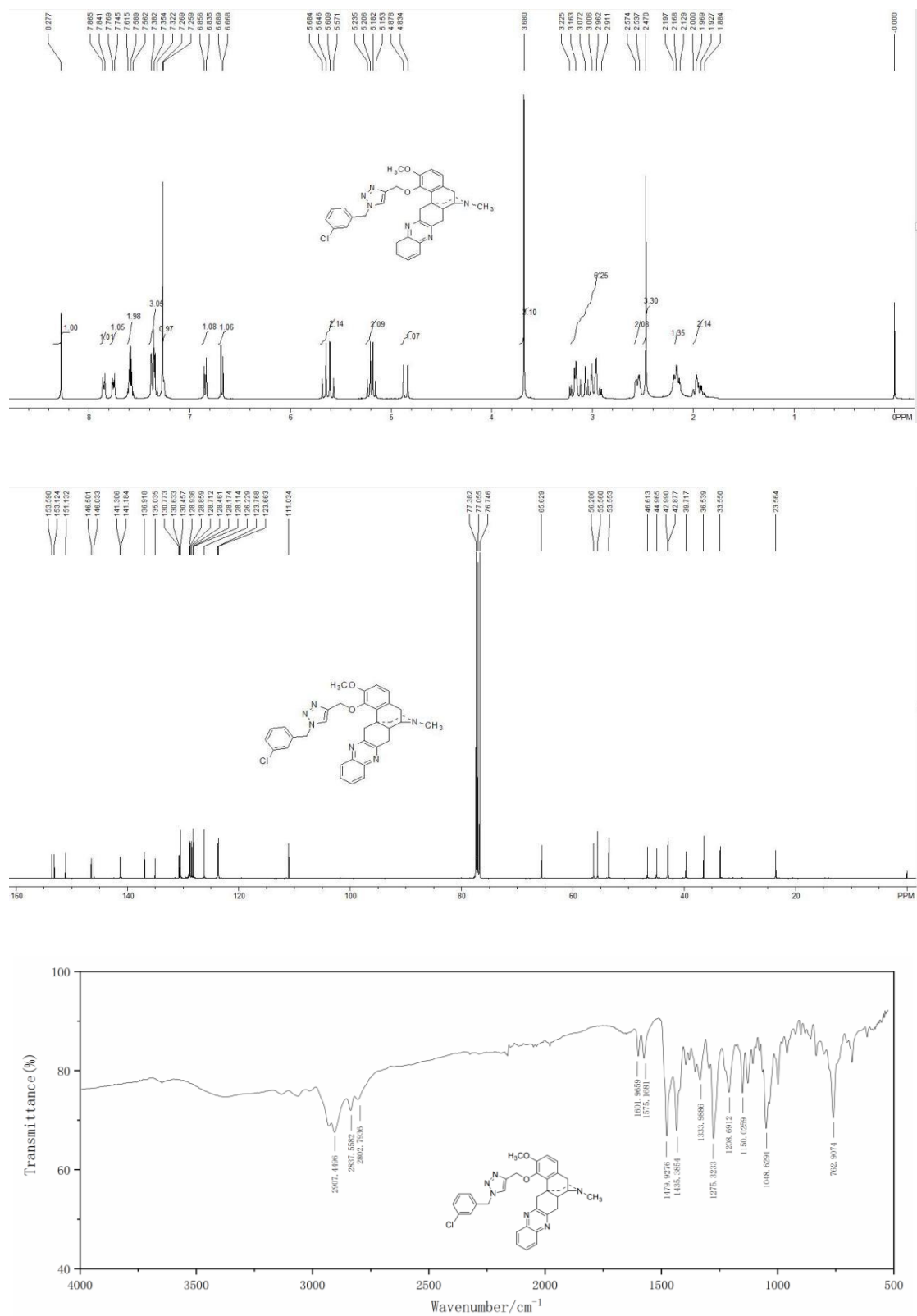


Figure S5 NMR and FT-IR spectra of 6c

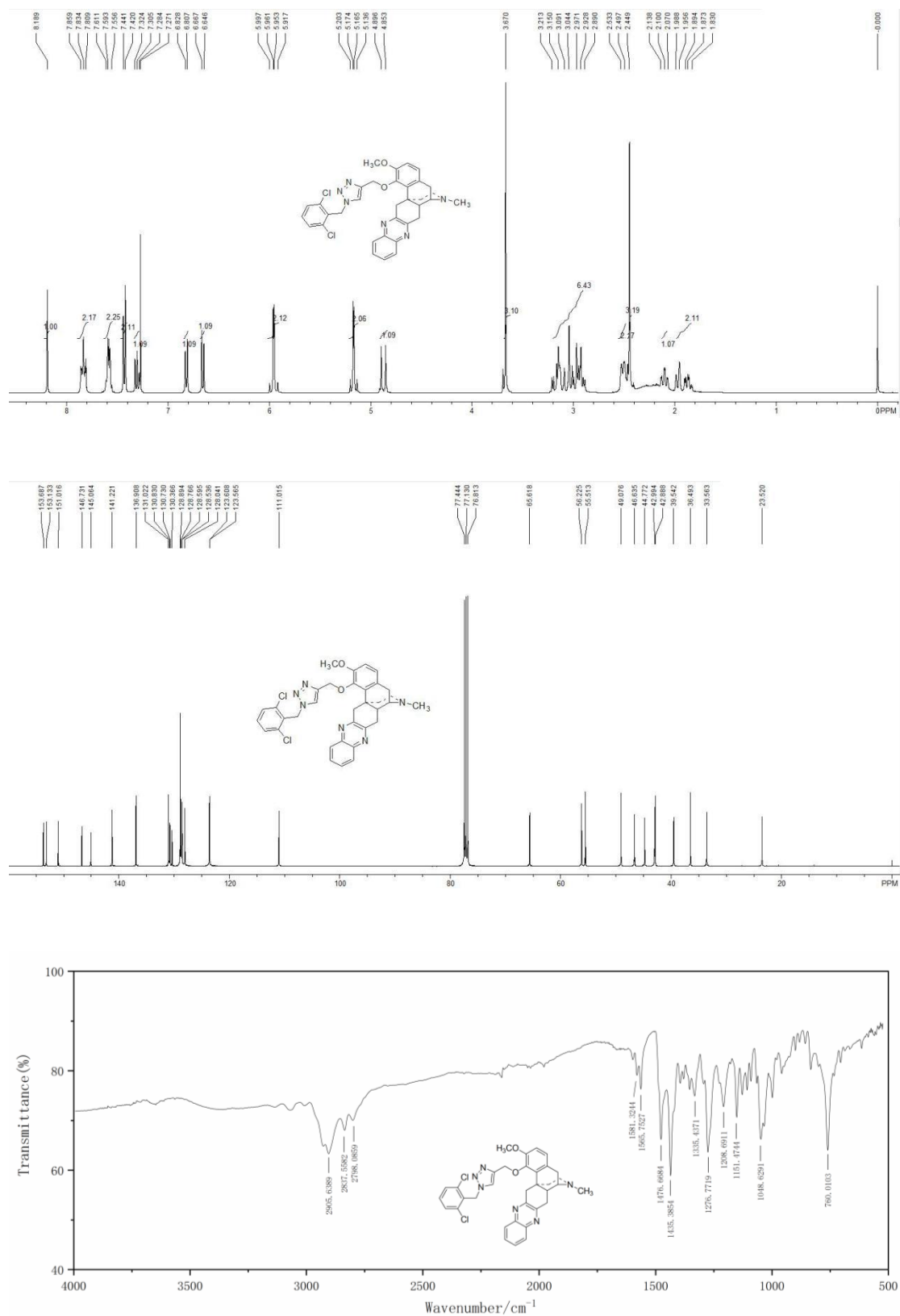


Figure S6 NMR and FT-IR spectra of **6d**

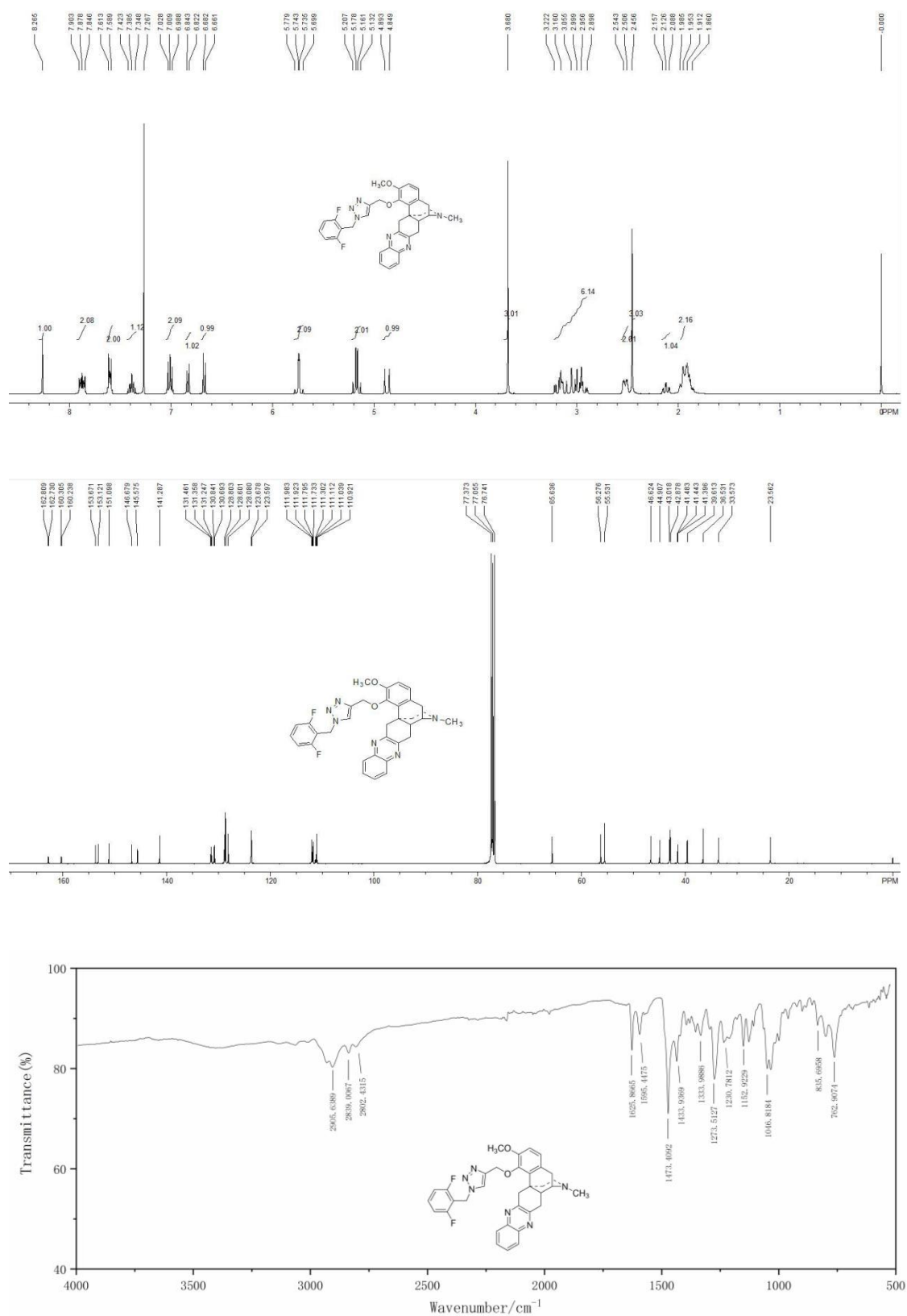


Figure S8 NMR and FT-IR spectra of **6f**

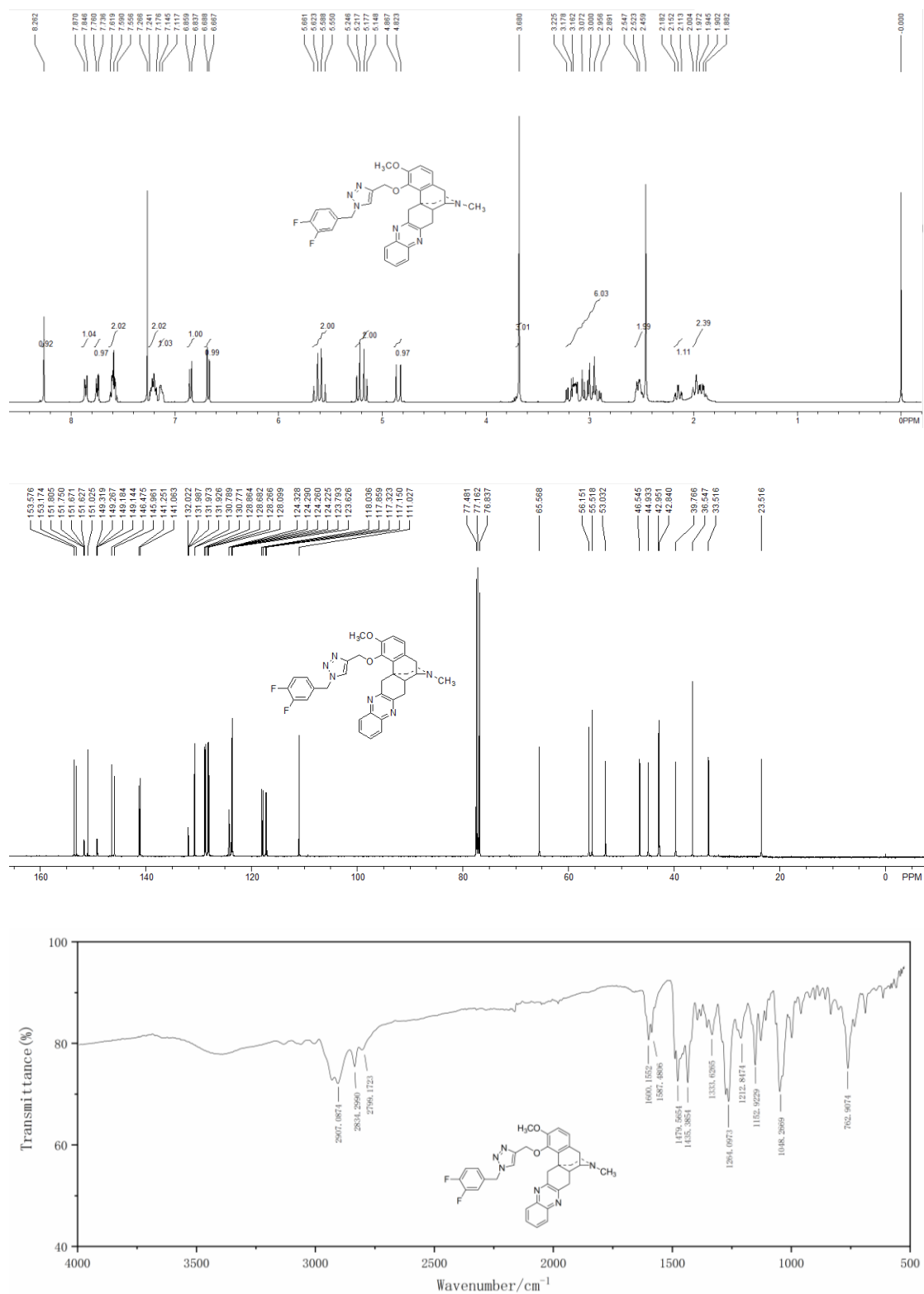


Figure S10 NMR and FT-IR spectra of 6h

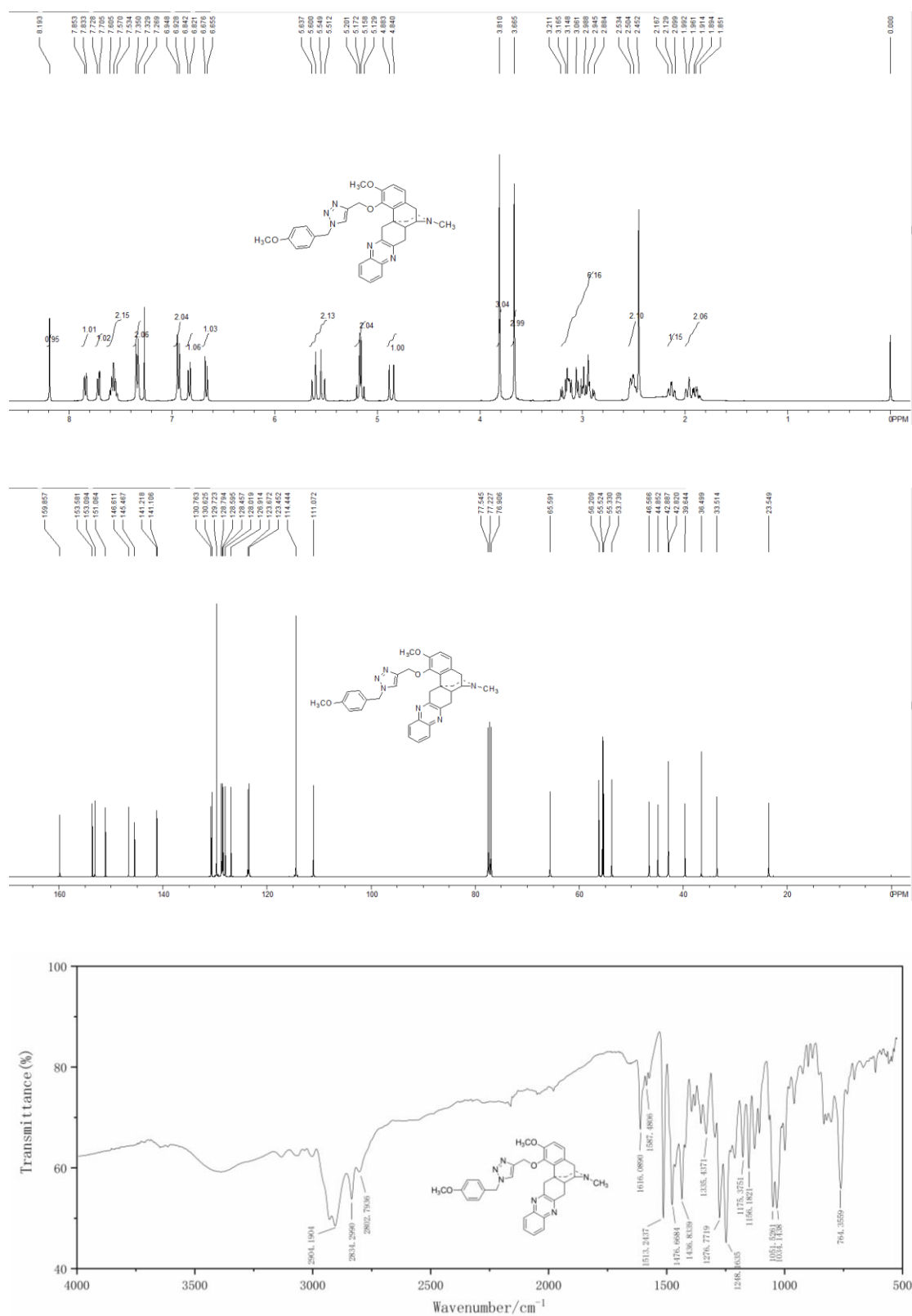


Figure S12 NMR and FT-IR spectra of 6j

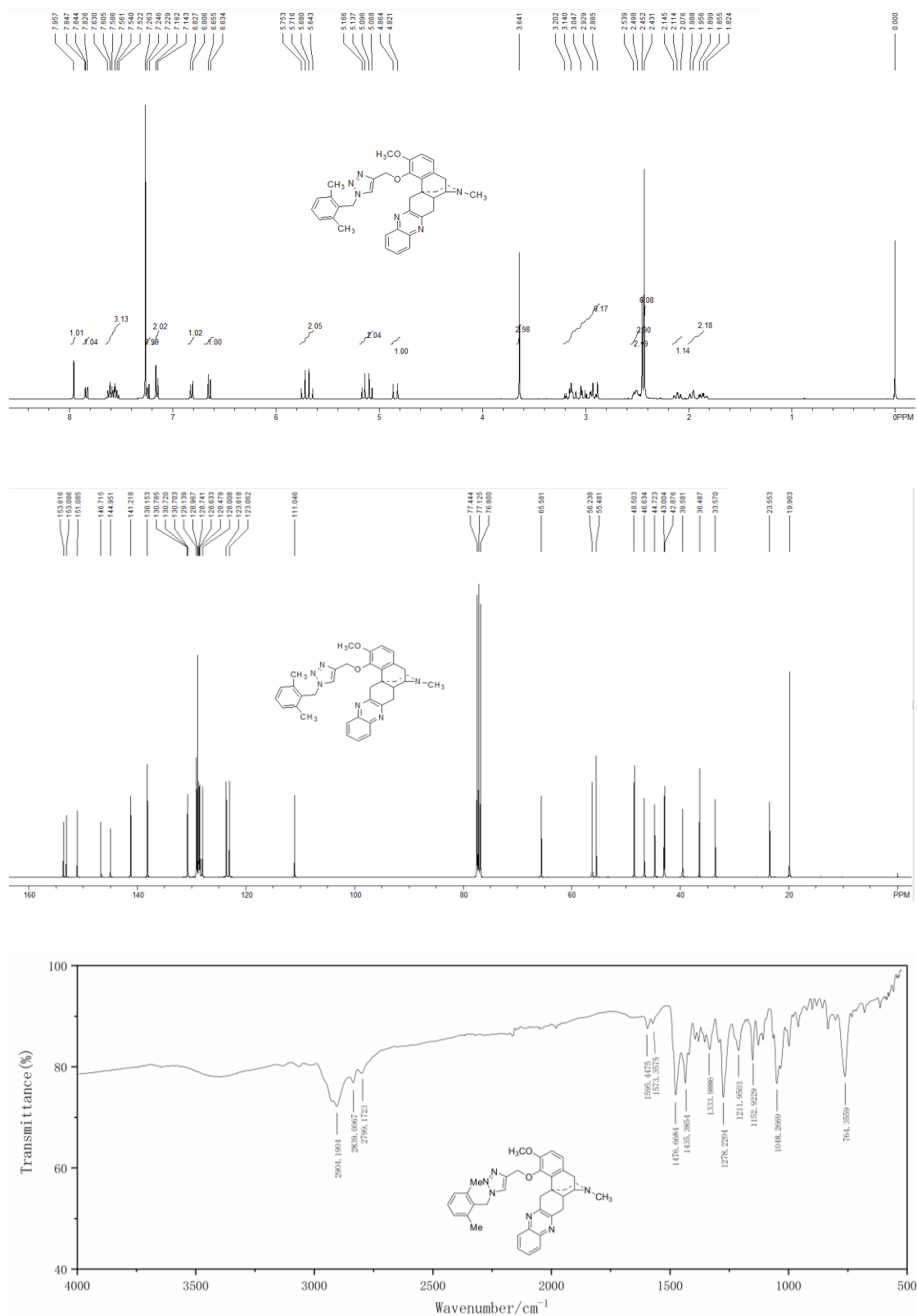


Figure S13 NMR and FT-IR spectra of 6k

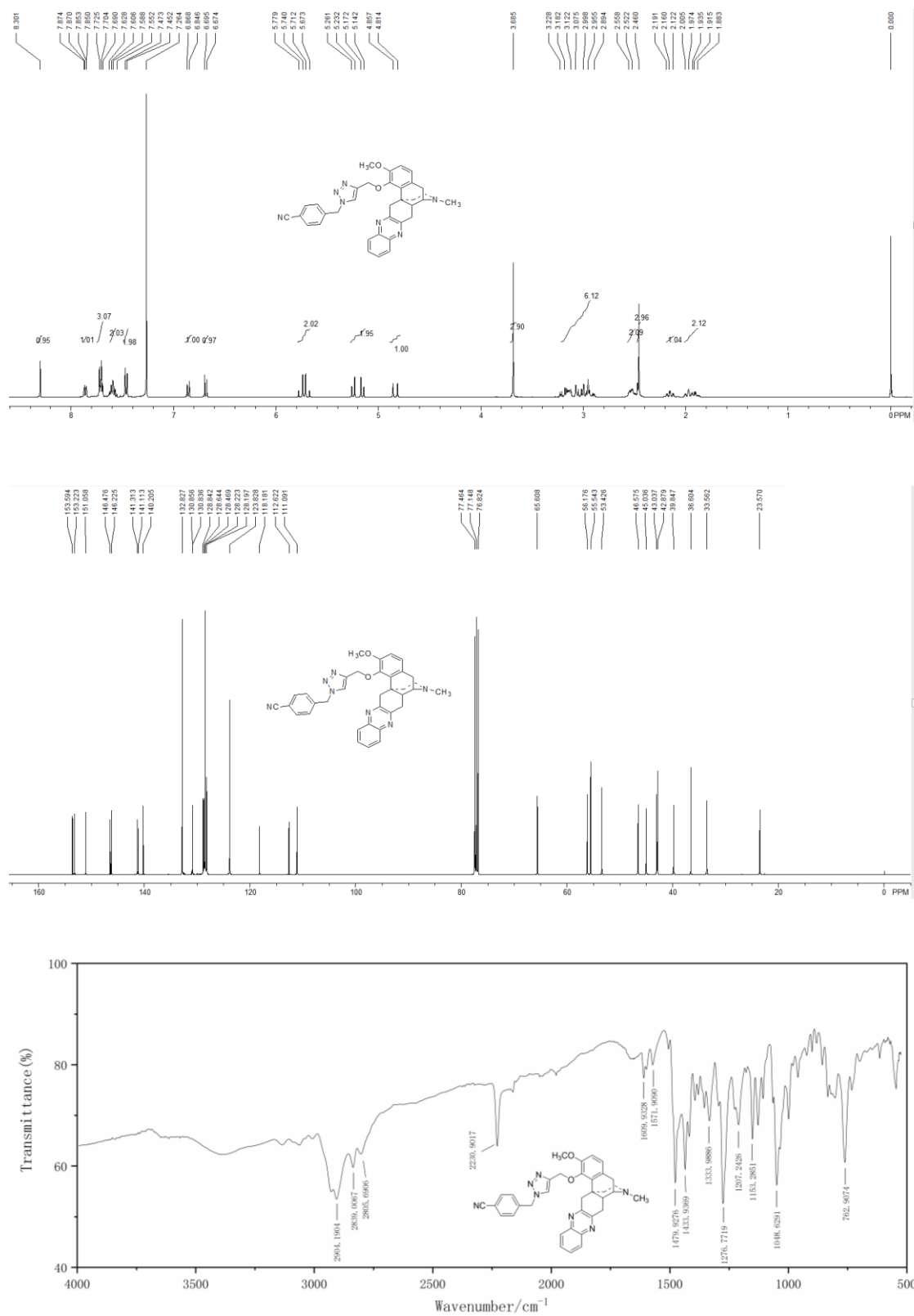


Figure S14 NMR and FT-IR spectra of 6l

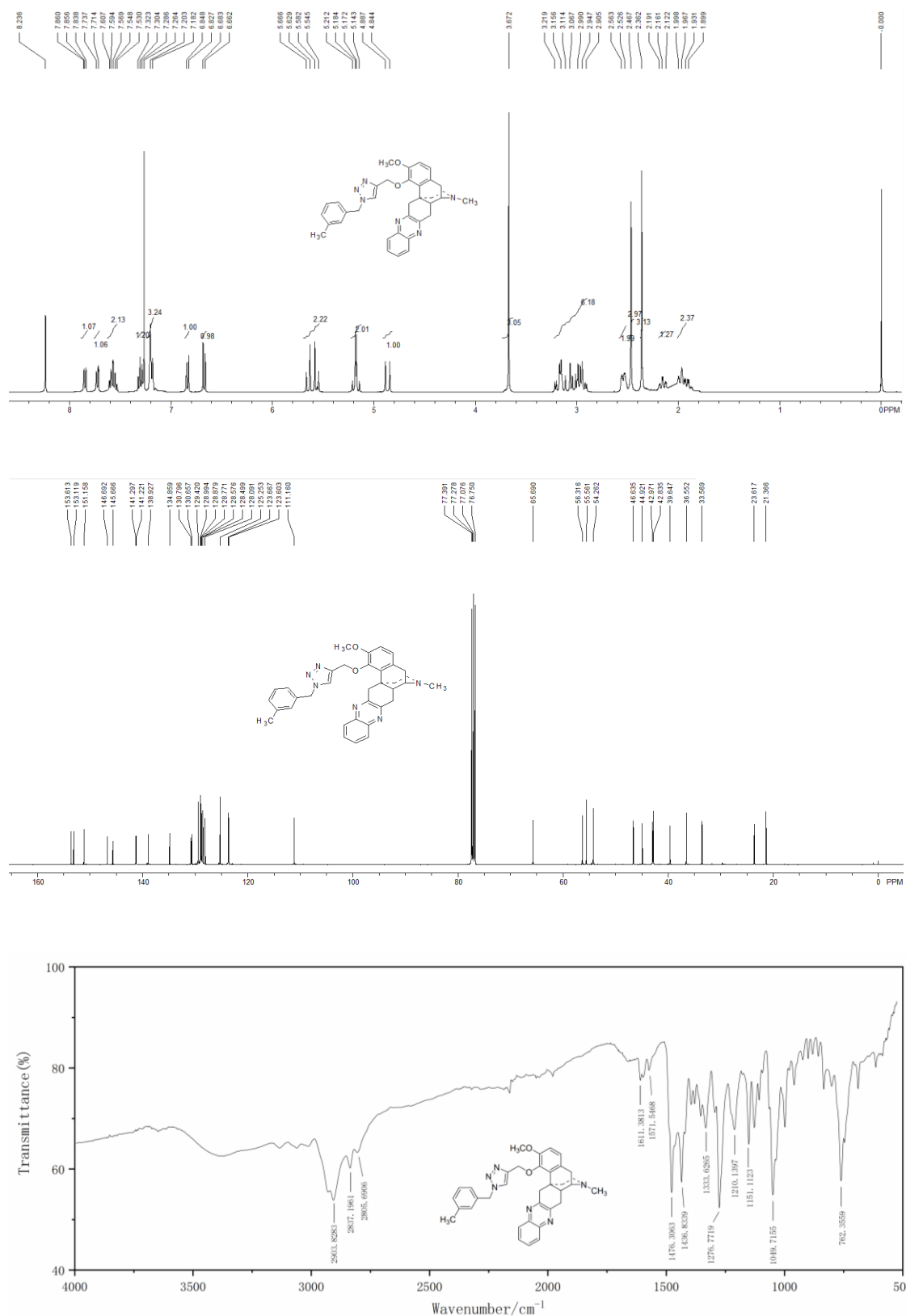


Figure S16 NMR and FT-IR spectra of **6n**

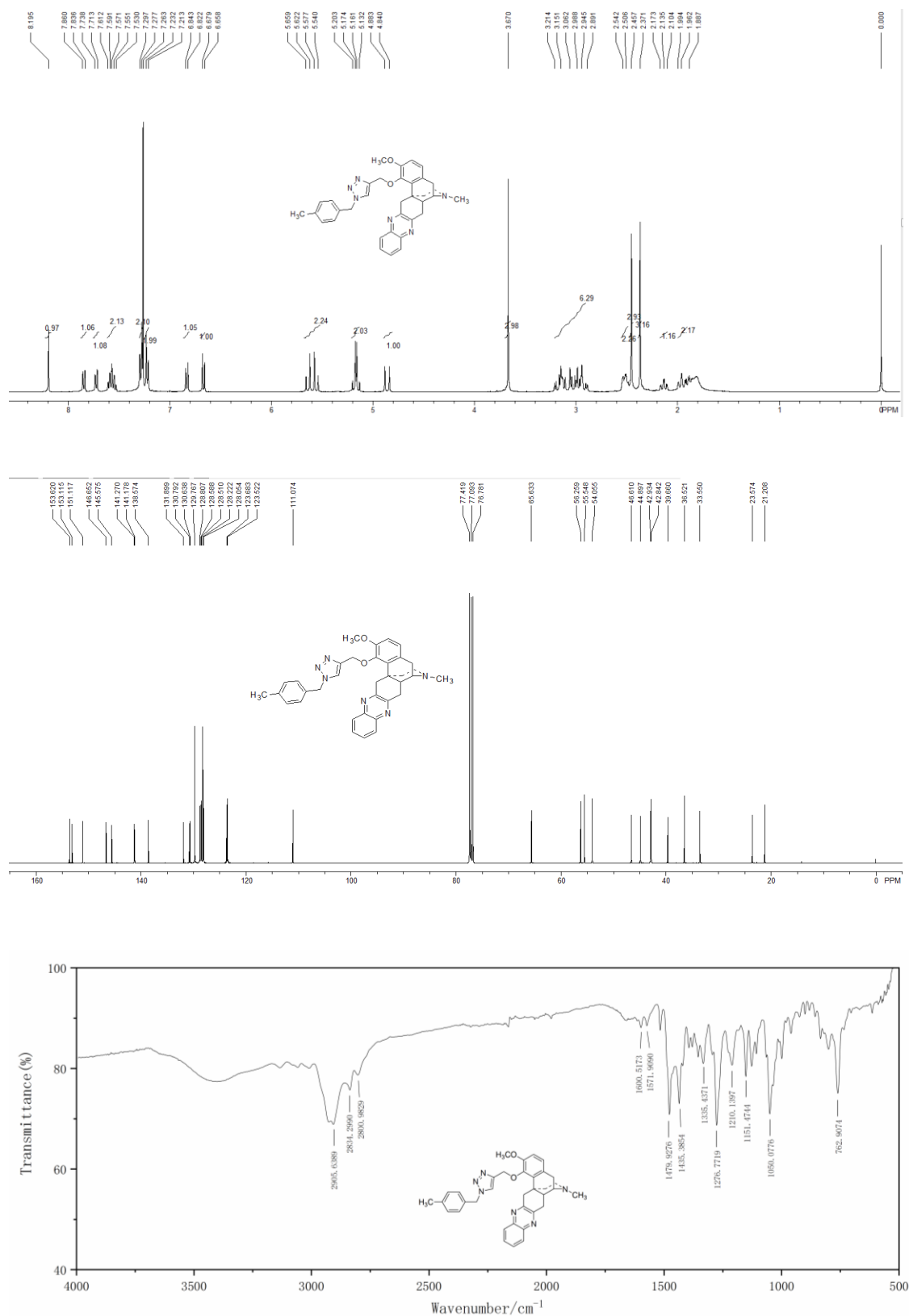


Figure S17 NMR and FT-IR spectra of **60**

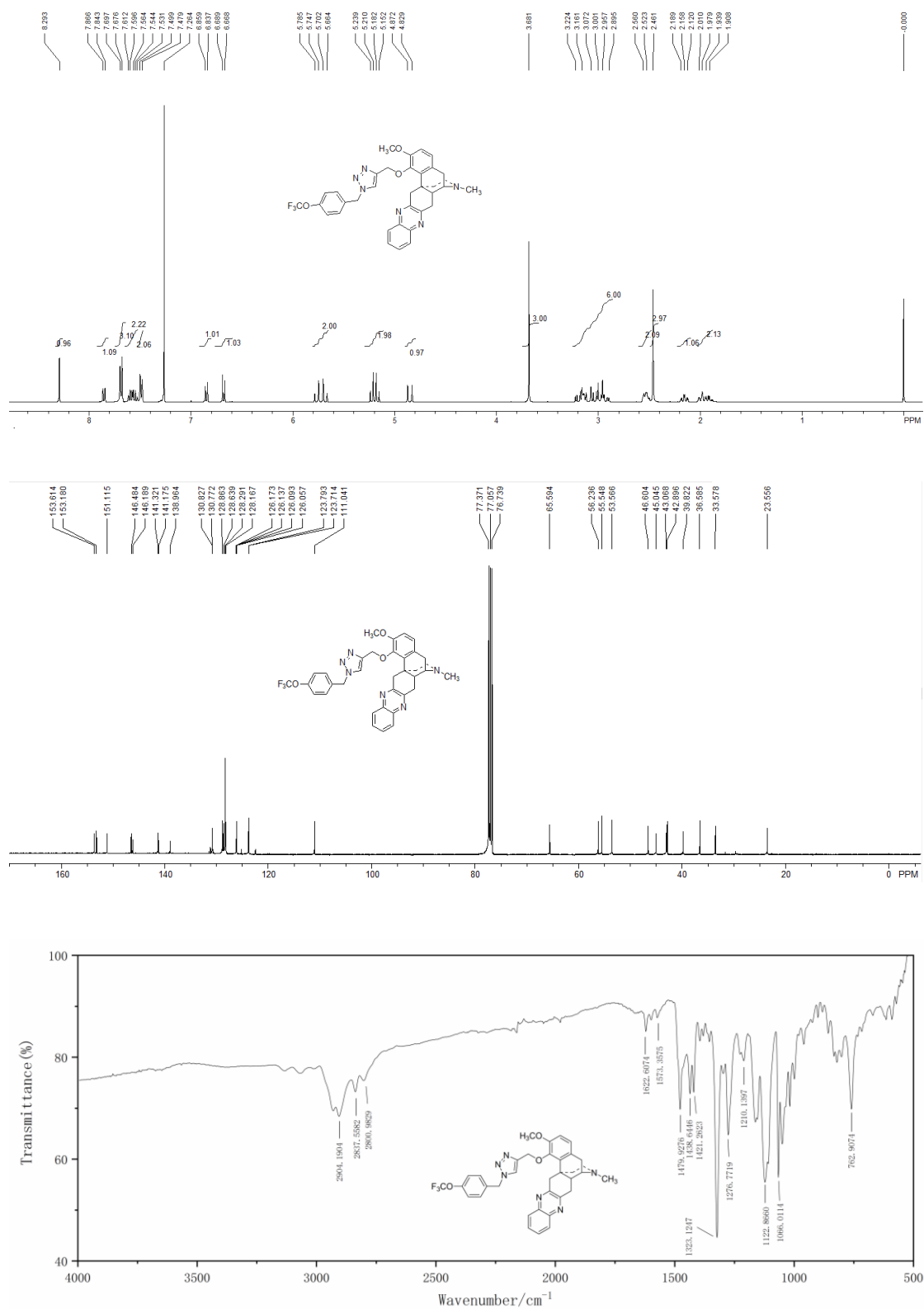


Figure S18 NMR and FT-IR spectra of 6p

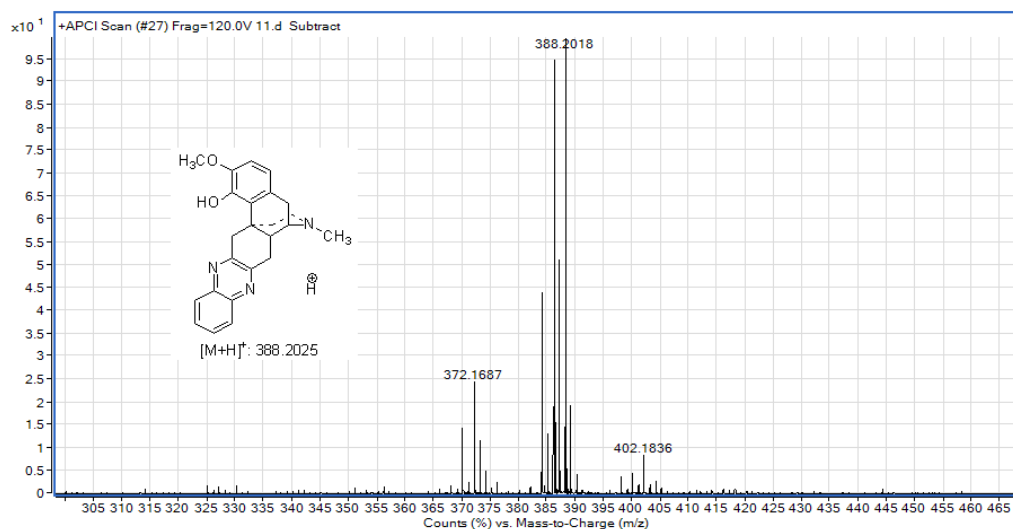


Figure S19 HRMS of 3

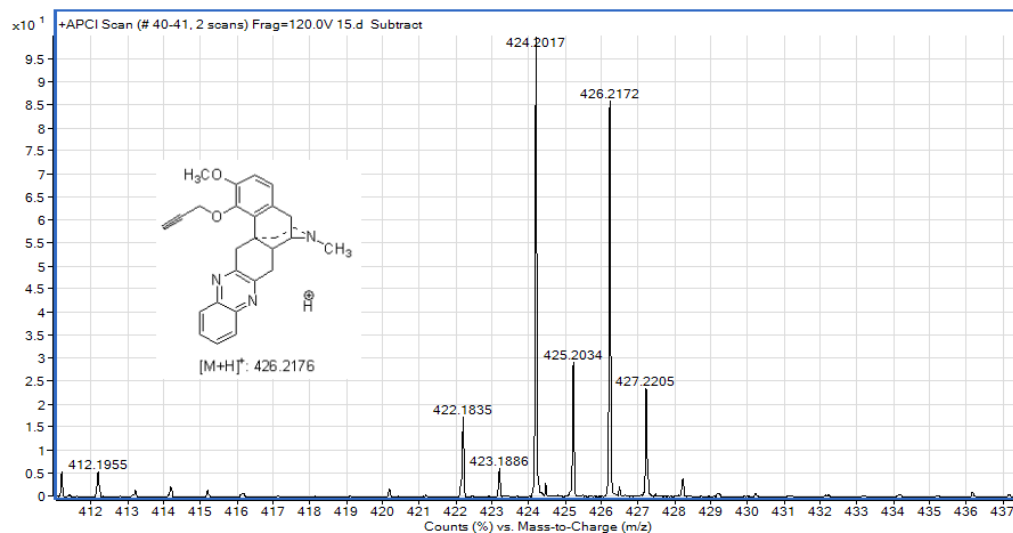


Figure S20 HRMS of 4

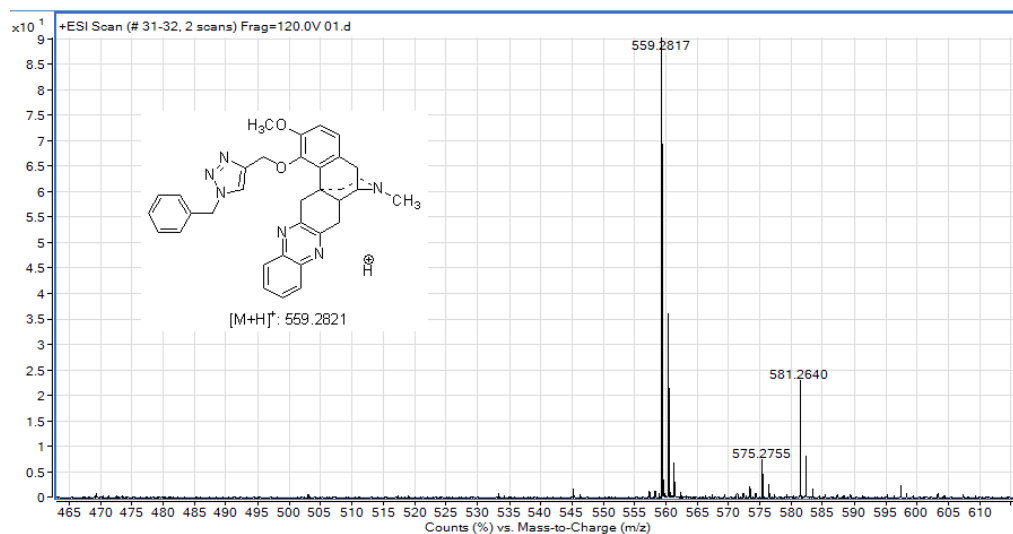


Figure S21 HRMS of 6a

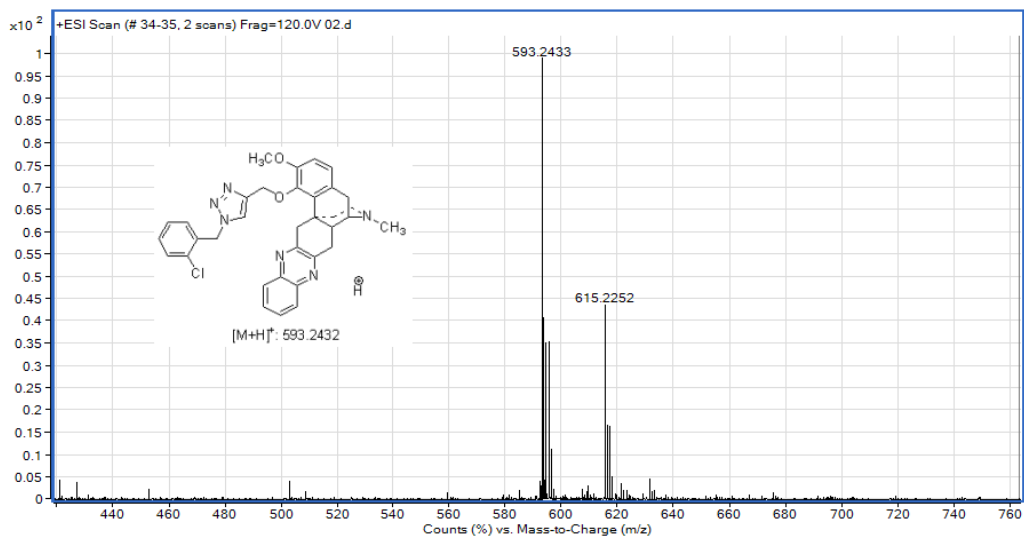


Figure S22 HRMS of 6b

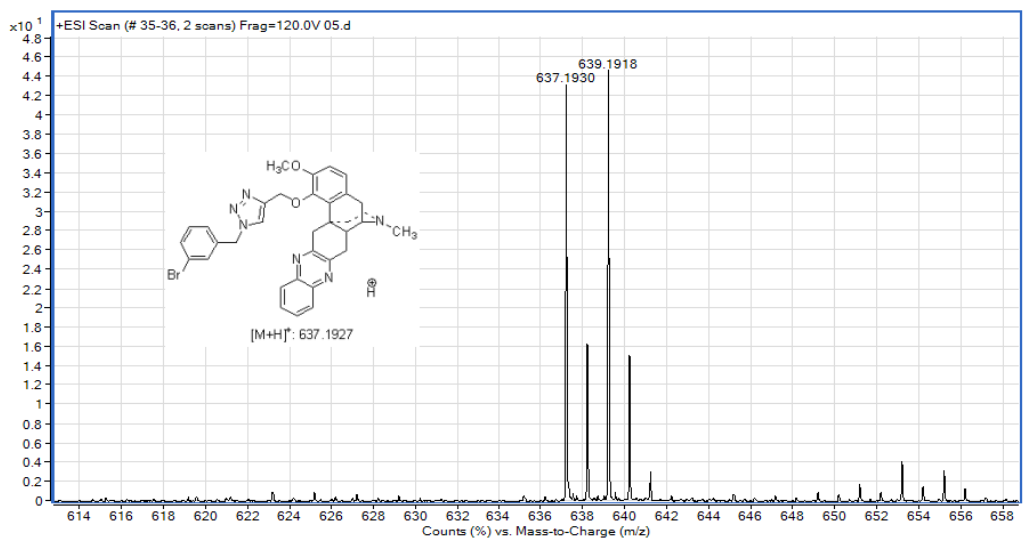


Figure S23 HRMS of 6c

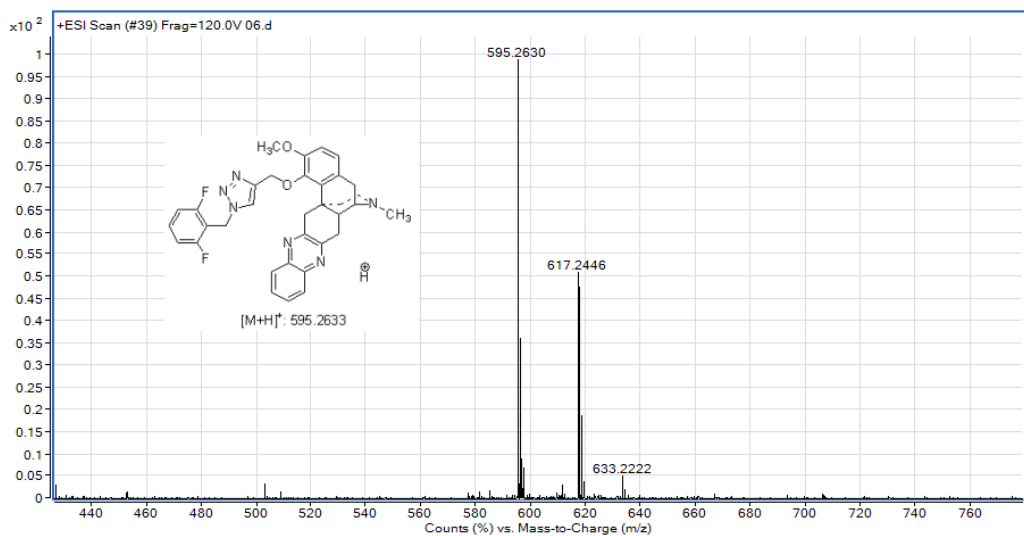


Figure S24 HRMS of 6f

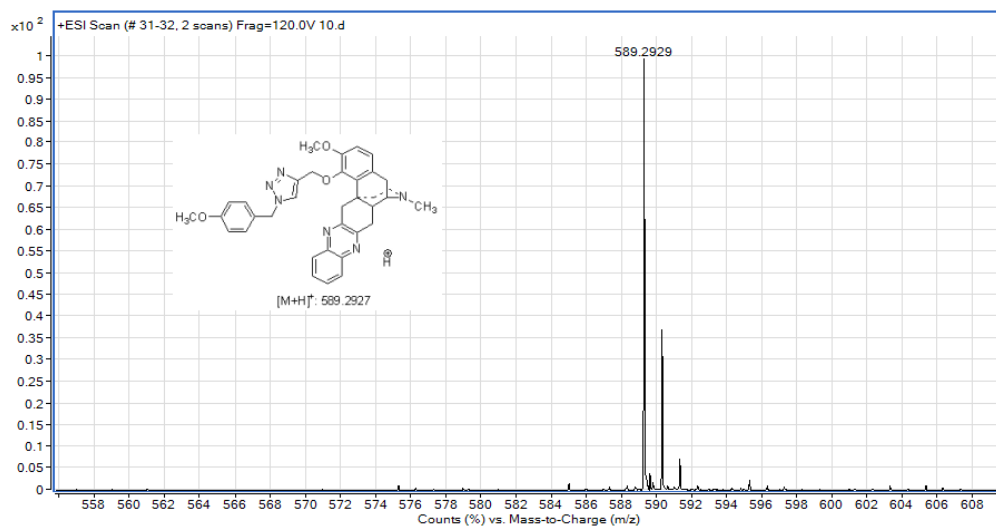


Figure S25 HRMS of 6j

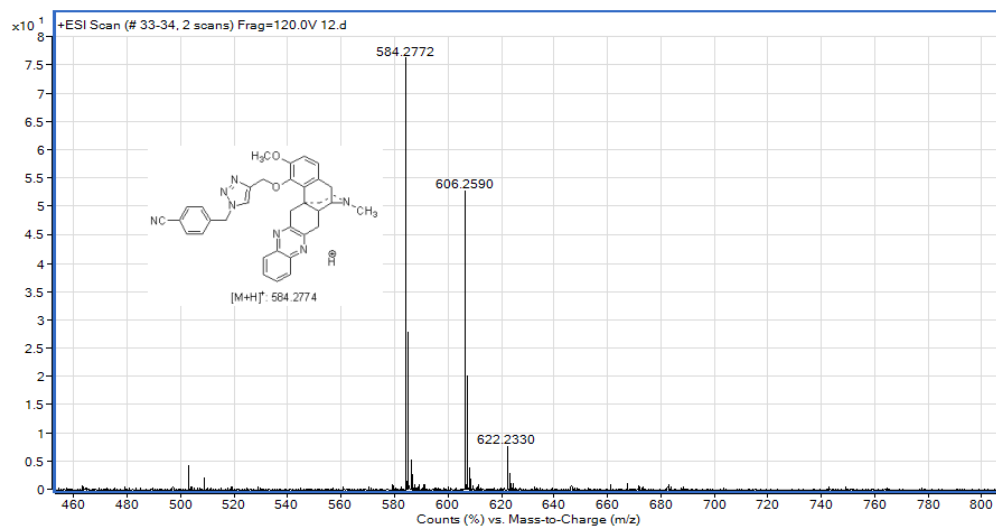


Figure S26 HRMS of 6l

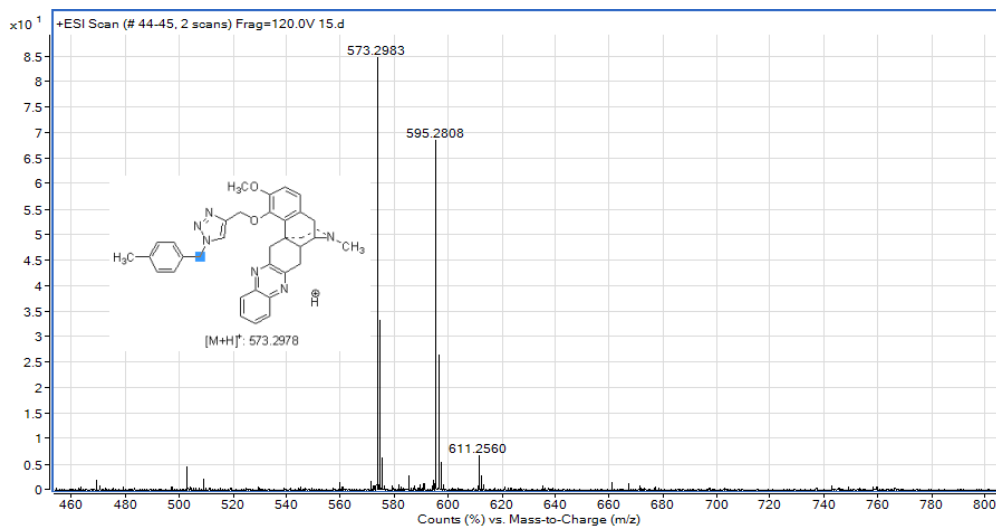
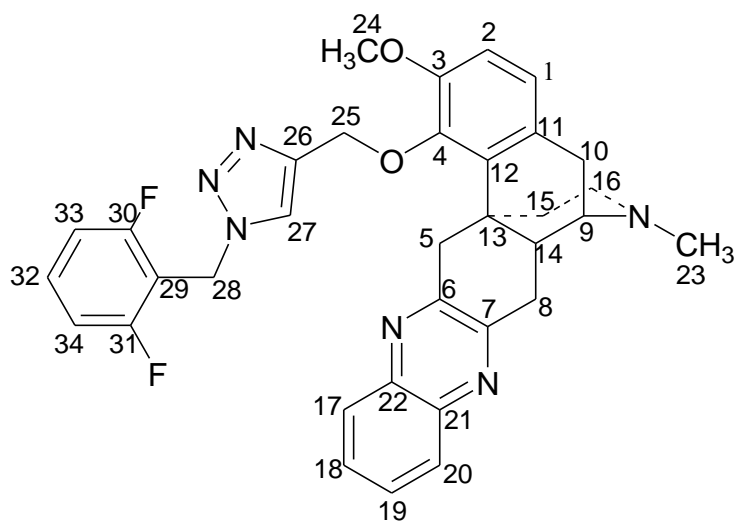
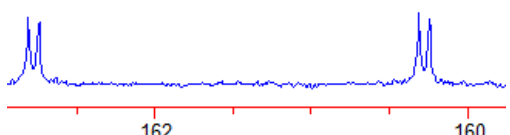
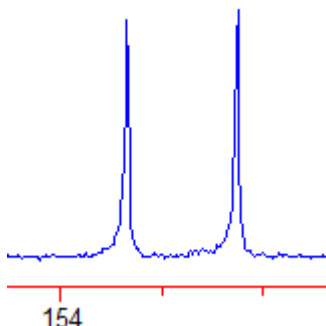
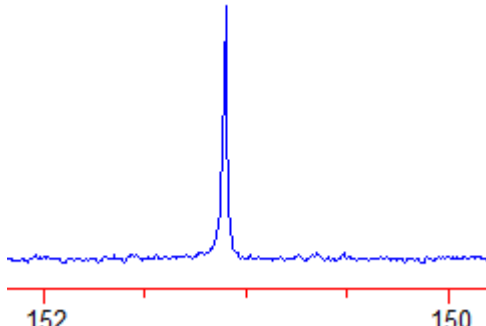
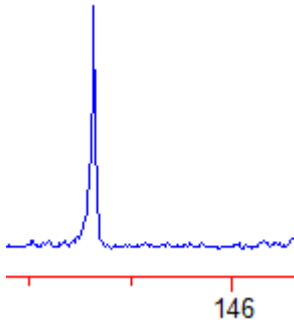
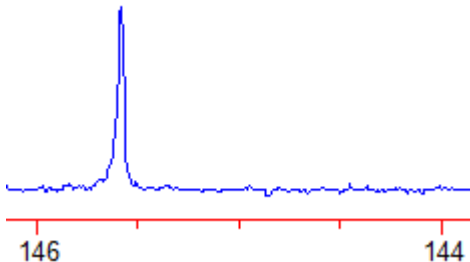
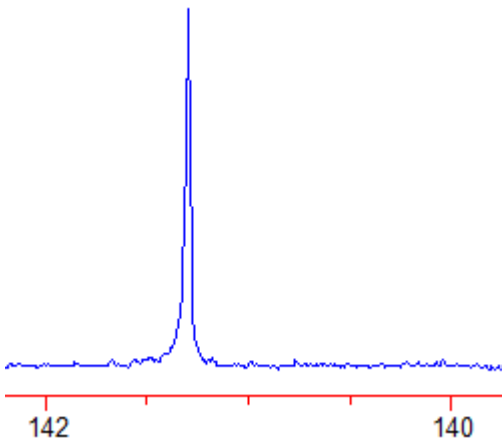
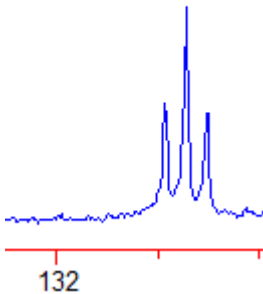


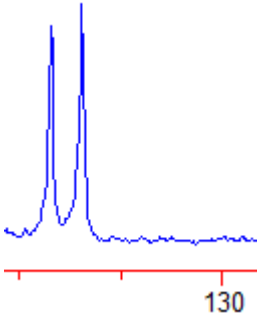
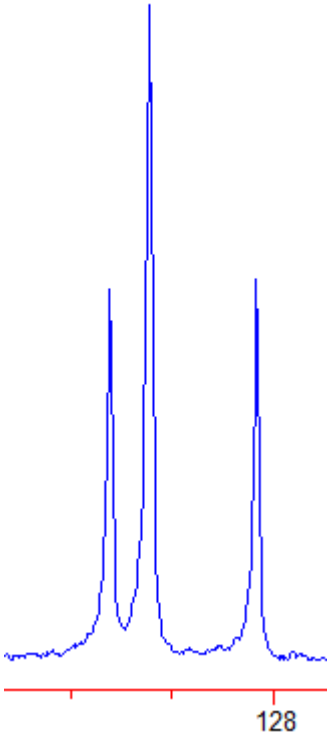
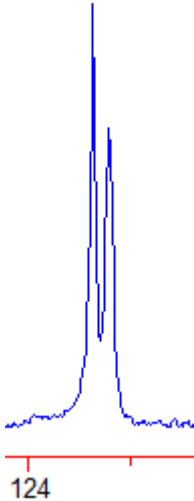
Figure S27 HRMS of 6o

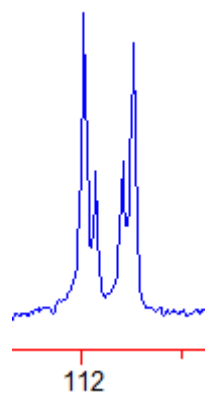
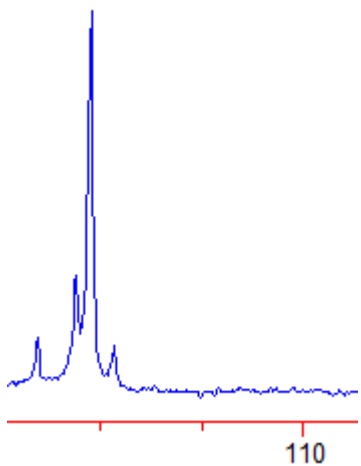
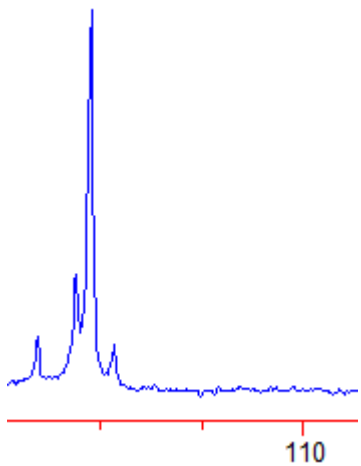


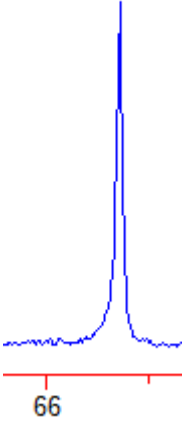
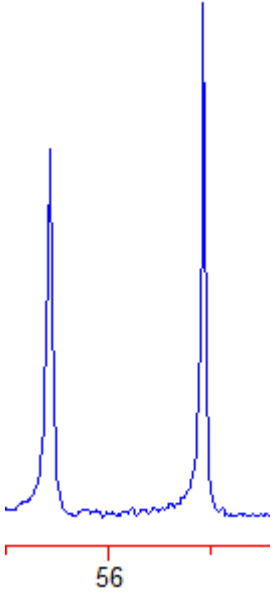
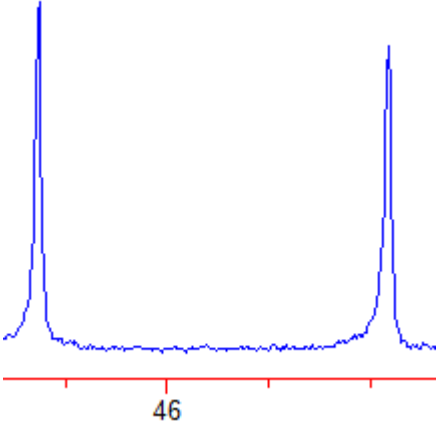
6f

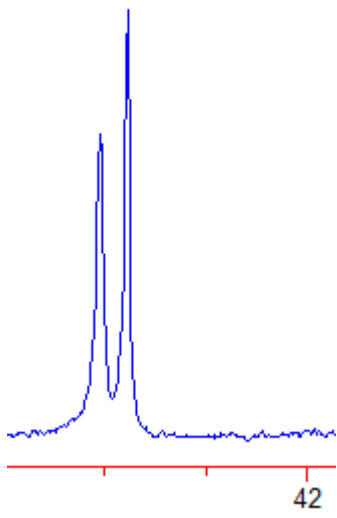
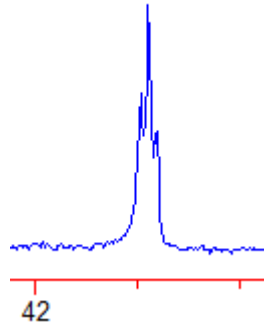
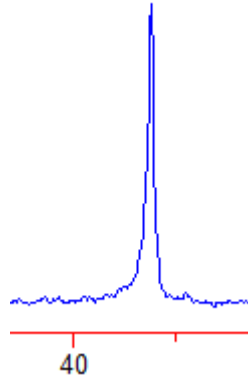
Data No.	ppm.	C No.	Peak shape
1-4	162.8, 162.7, 160.3, 160.2,	C30 C31 (C-F couplings)	
5-6	153.7, 153.1	C6 C7	
7	151.1	C3	

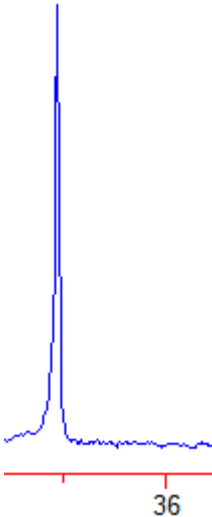
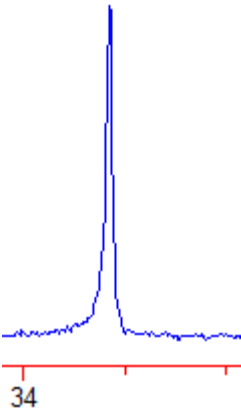
8	146.7	C4	
9	145.6	C26	
10	141.3	C21 C22 (overlap)	
11-13	131.5, 131.4, 131.2,	C32 (C-F couplings)	

14-15	130.8, 130.7,	C11 C12	
16-18	128.8, 128.6, 128.1,	C17 C18 C19 C20 (overlap)	
19-20	123.7, 123.6,	C1 C27	

21-24	112.0, 111.9, 111.8, 111.7,	C33 C34 (C-F couplings)	
25-26,28	111.3, 111.1, 110.9,	C29 (C-F couplings)	
27	111.0,	C2	

29	65.6,	C25	 <p>A chromatogram plot with a single sharp peak. The x-axis is labeled with '66' at the base of the peak. The peak is blue and rises from a noisy baseline.</p>
30-31	56.3, 55.5,	C9 C3	 <p>A chromatogram plot showing two distinct sharp peaks. The x-axis is labeled with '56' between the two peaks. Both peaks are blue and rise from a noisy baseline.</p>
32-33	46.6, 44.9,	C5 C16	 <p>A chromatogram plot showing two distinct sharp peaks. The x-axis is labeled with '46' between the two peaks. Both peaks are blue and rise from a noisy baseline.</p>

34-35	43.0, 42.9,	C14 C23	
36-38	41.5, 41.4, 41.3,	C28 (C-F couplings)	
39	39.6,	C8	

40	36.5,	C13	
41	33.6,	C15	
42	23.6	C10	