

Molybdenum-Catalyzed Enantioselective Ring-Closing Metathesis/ Kinetic Resolution of Racemic Planar-Chiral 1,1'-Diallylferrocenes

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Supplementary Materials

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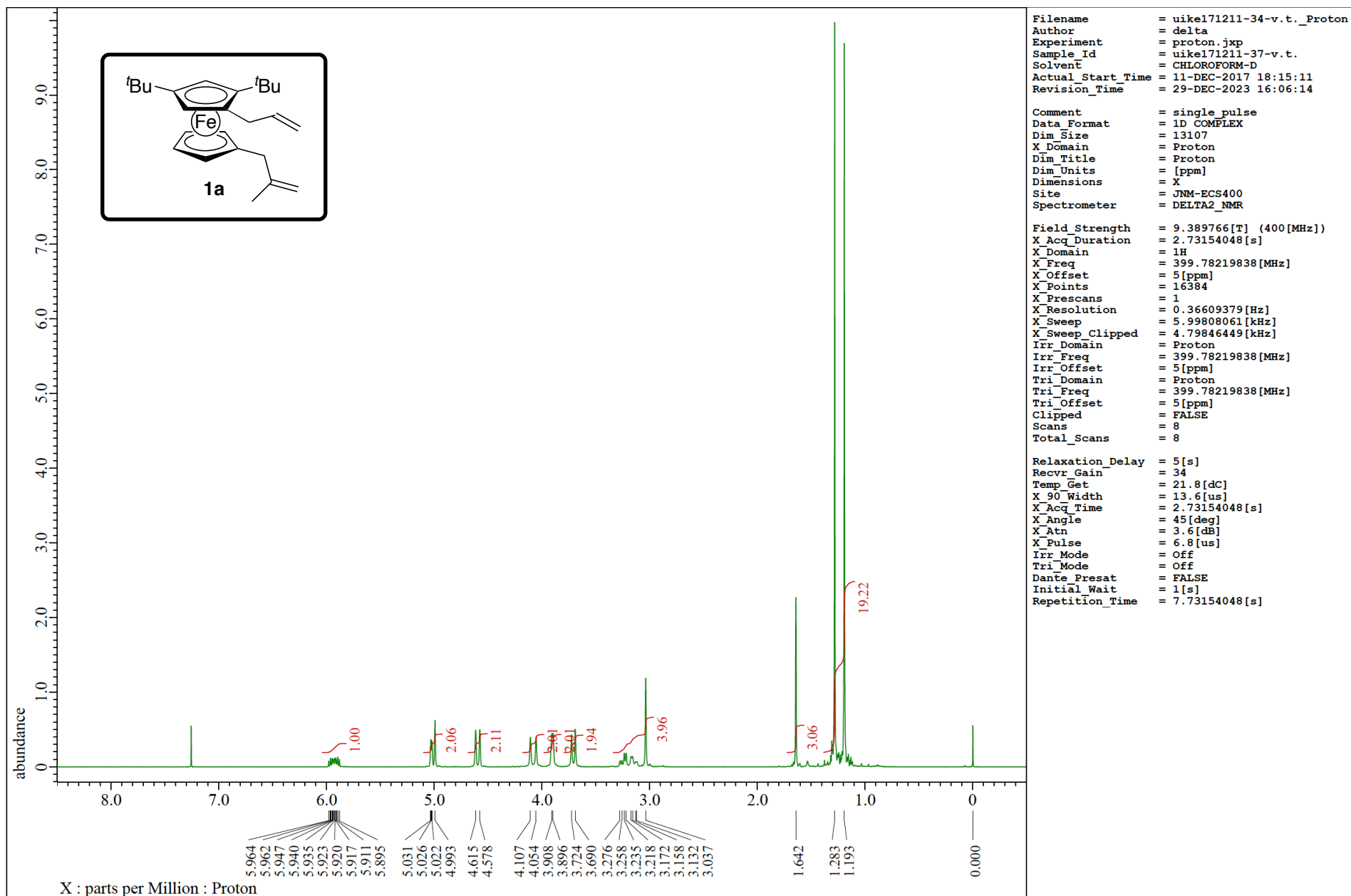


Figure S1. ¹H-NMR Spectrum of **1a** in CDCl₃ at 400 MHz.

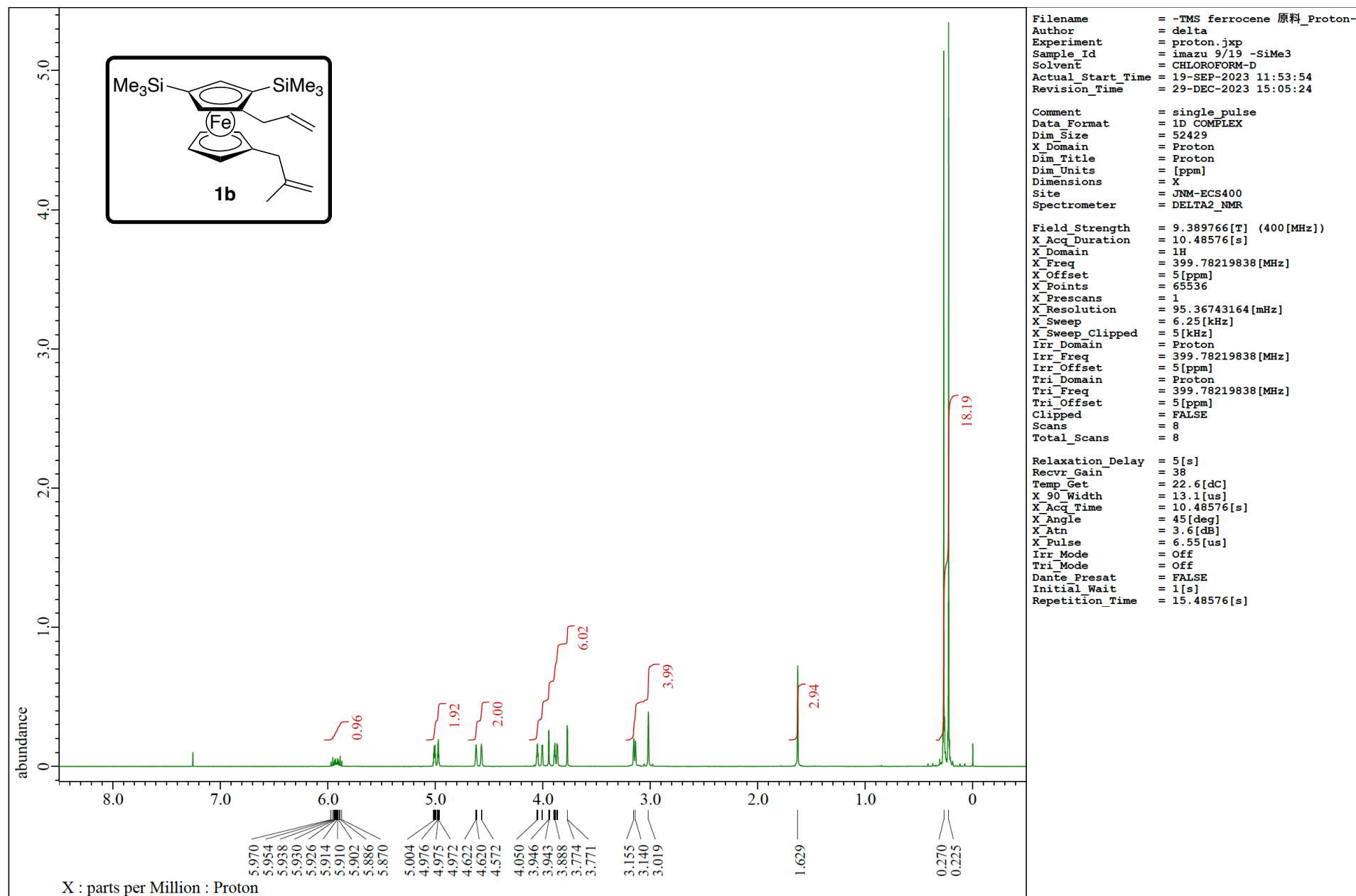


Figure S2. ¹H-NMR Spectrum of **1b** in CDCl₃ at 400 MHz.



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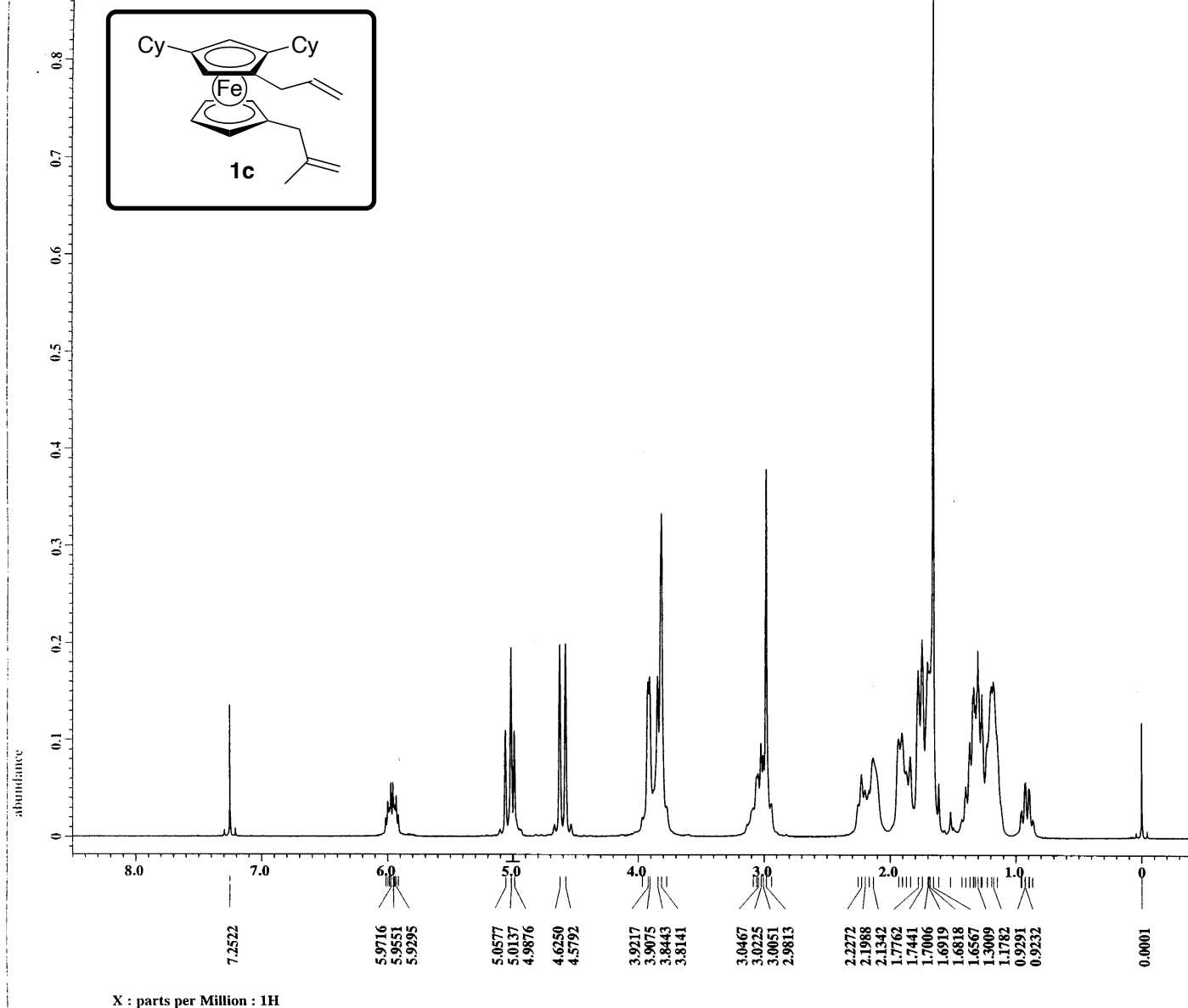


Figure S3. ¹H-NMR Spectrum of 1c in CDCl₃ at 400 MHz.

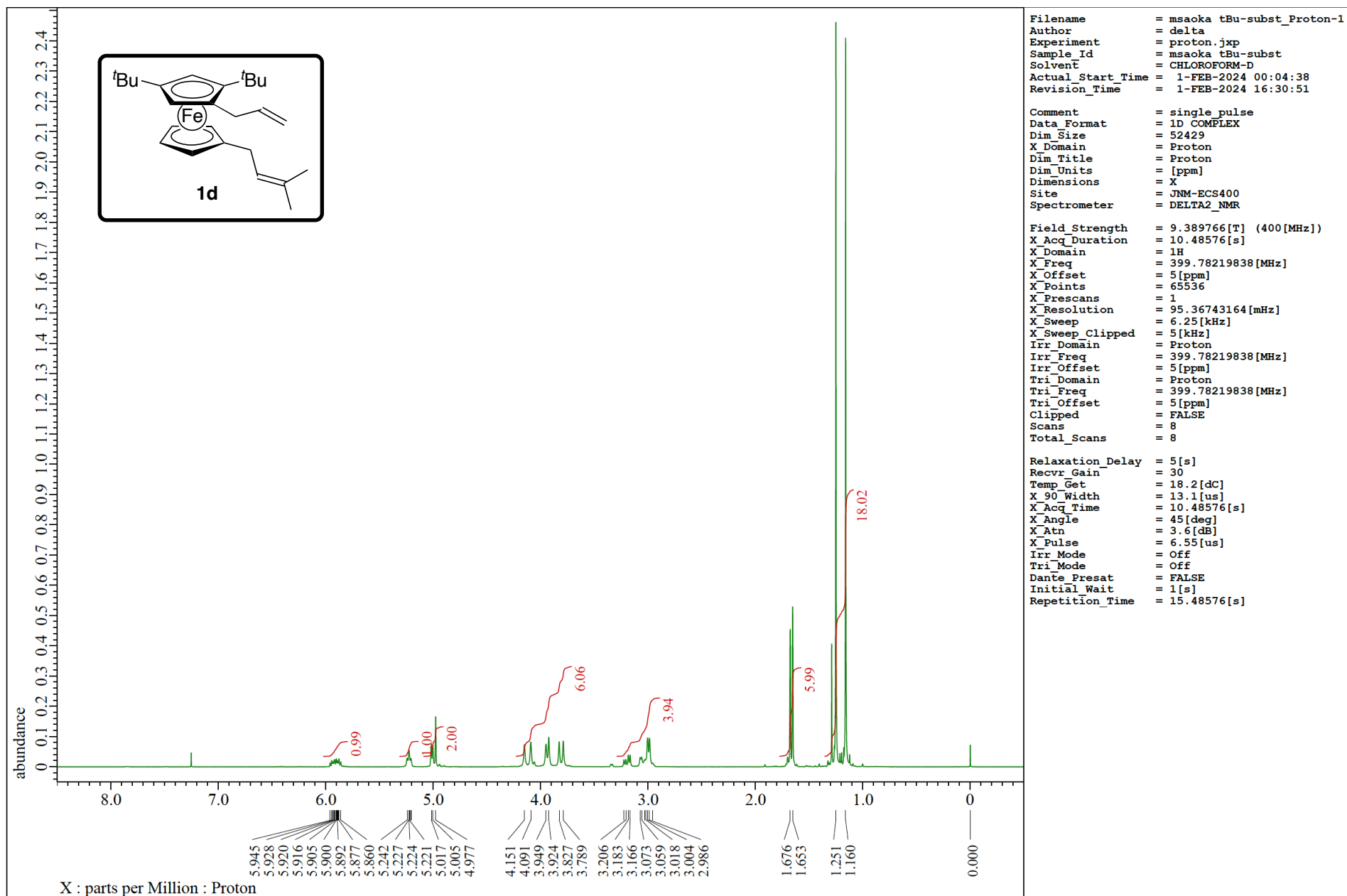


Figure S4. ^1H -NMR Spectrum of **1d** in CDCl_3 at 400 MHz.

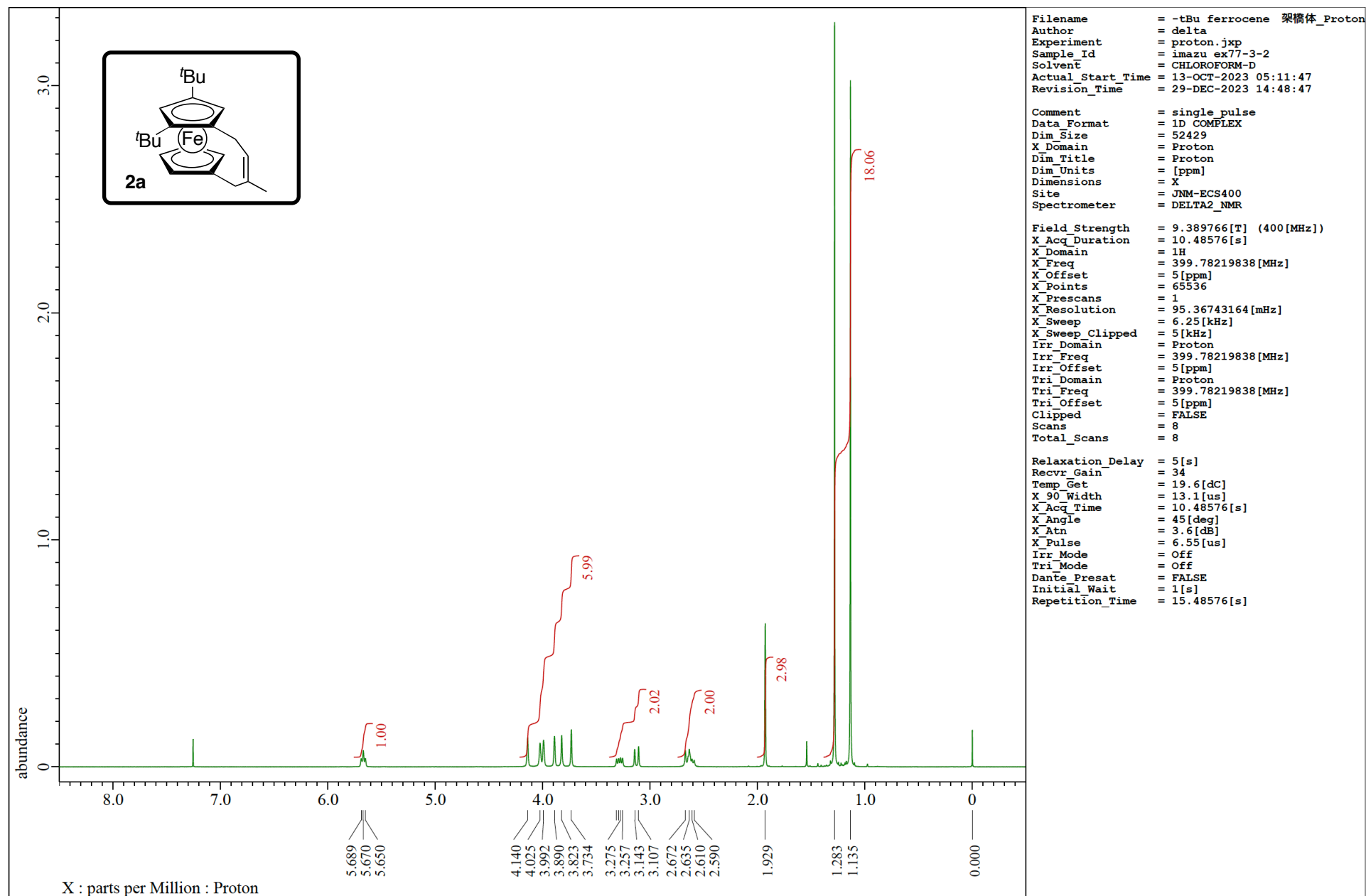


Figure S5. ¹H-NMR Spectrum of **2a** in CDCl₃ at 400 MHz.

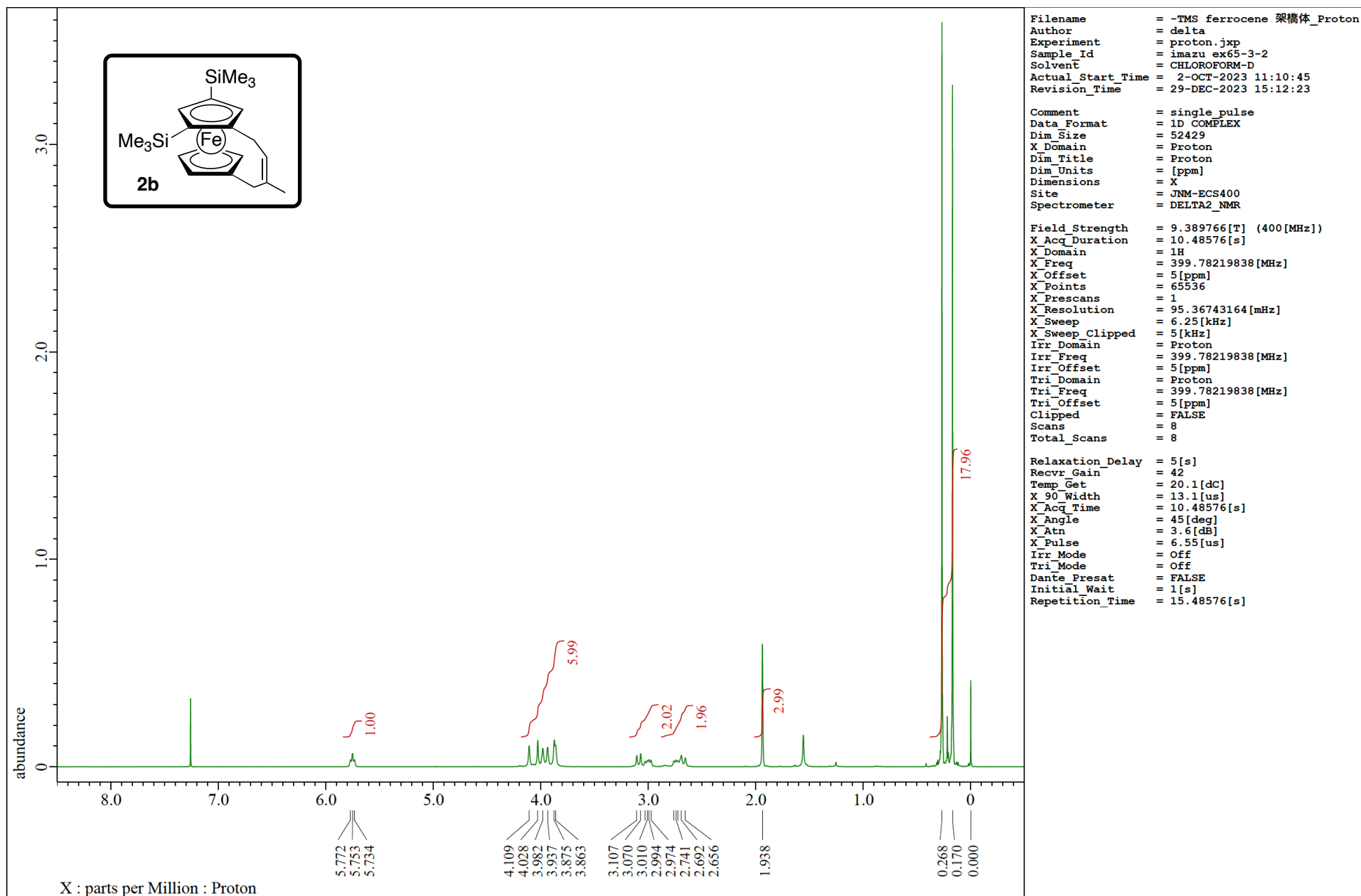


Figure S6. ¹H-NMR Spectrum of **2b** in CDCl₃ at 400 MHz.

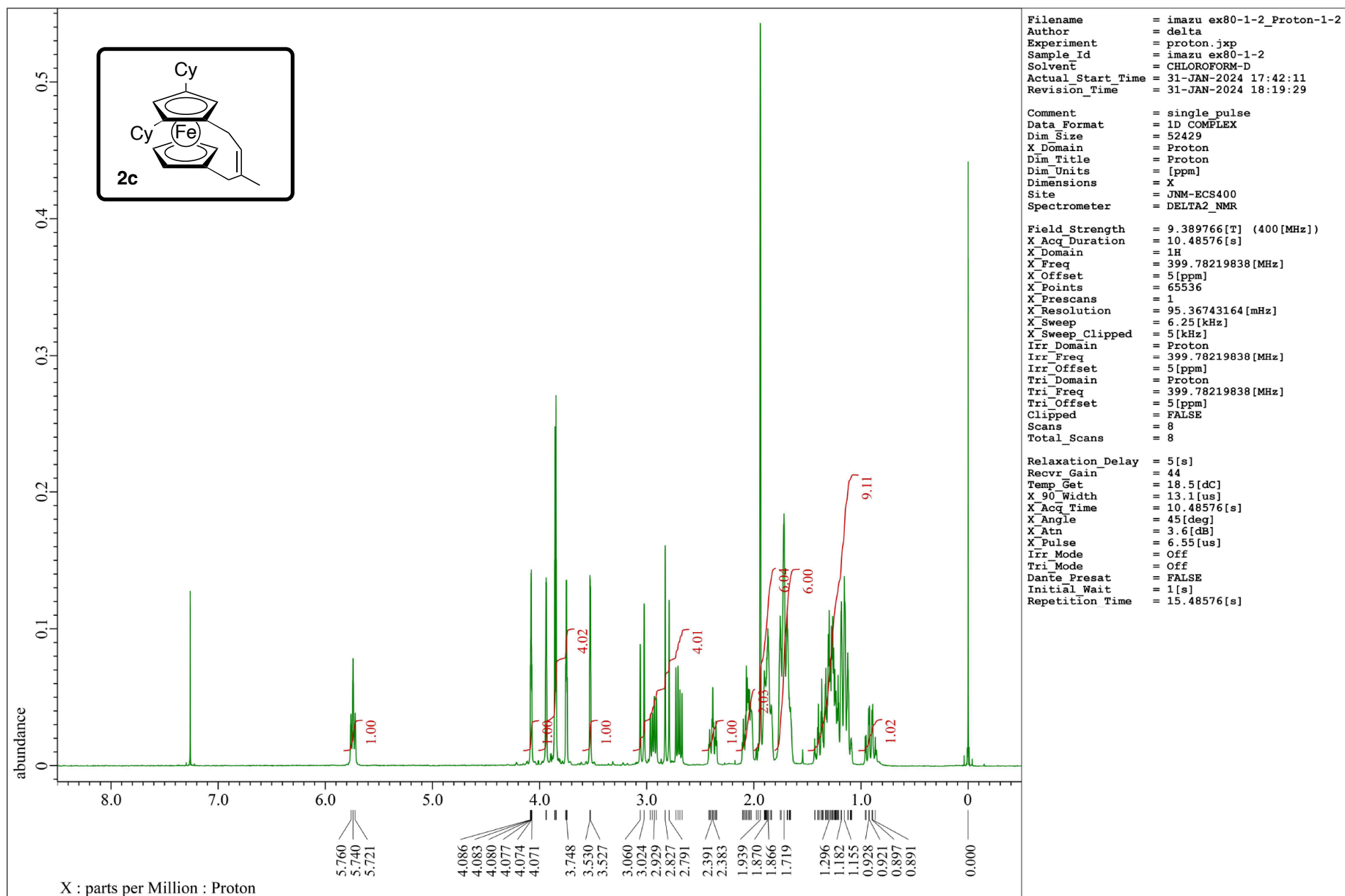


Figure S7. ¹H-NMR Spectrum of **2c** in CDCl₃ at 400 MHz.

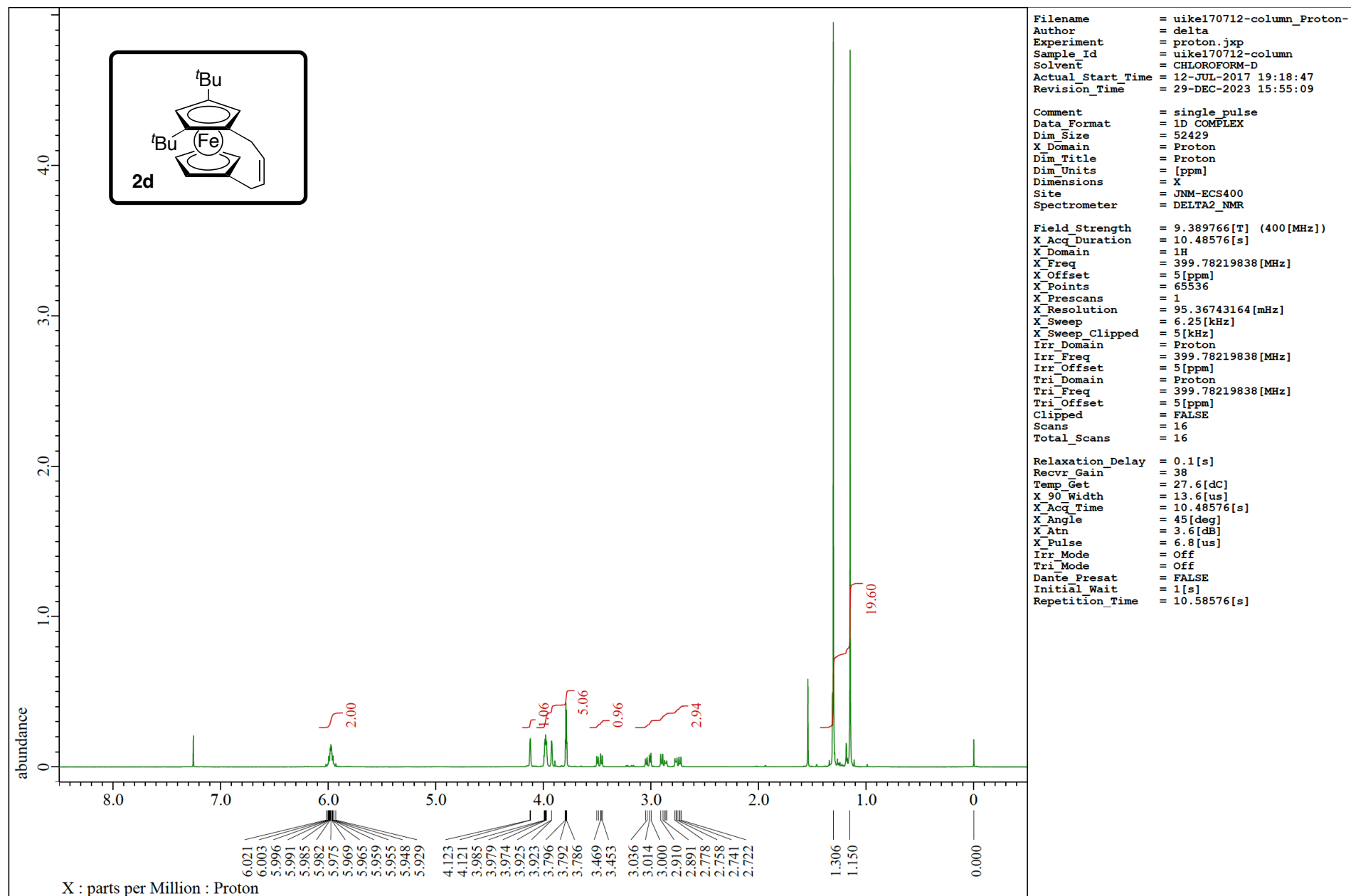
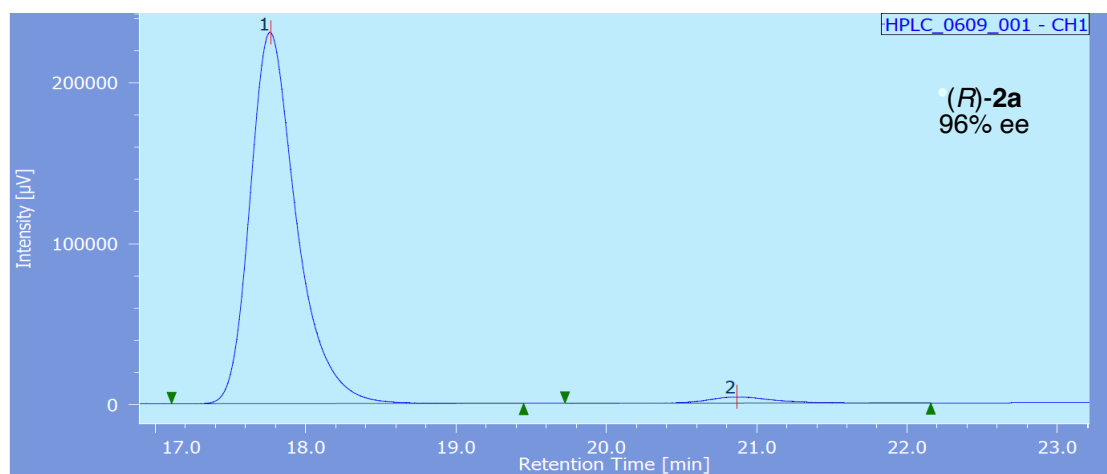
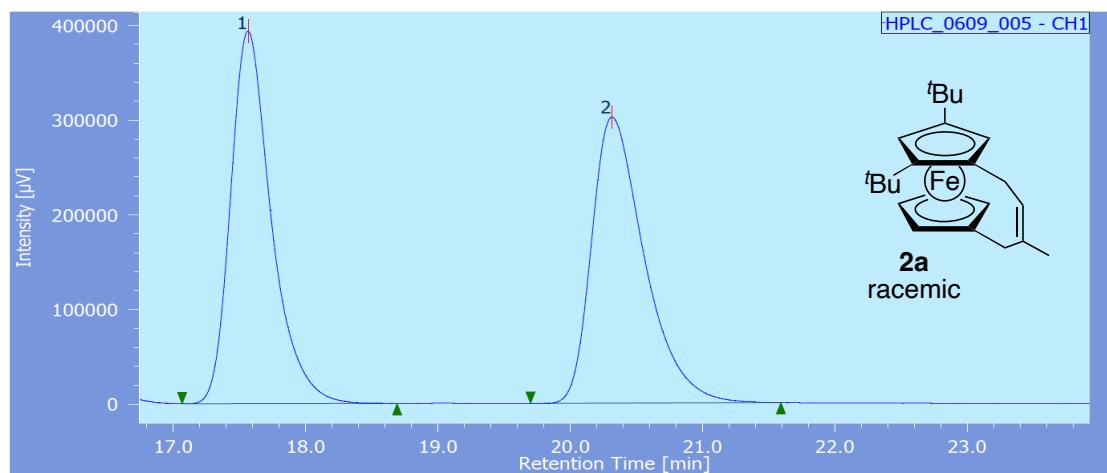
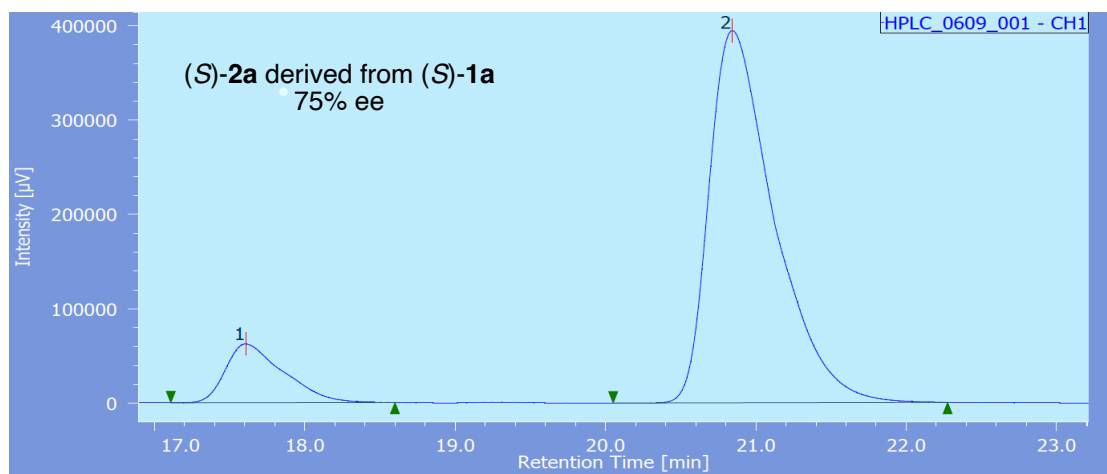


Figure S8. ¹H-NMR Spectrum of **2d** in CDCl₃ at 400 MHz.

Figure S9. Chiral HPLC Analysis of **2a** (Table 1, Entry 4).
Chiralcel OD-H; eluent: hexane/*i*PrOH = 2000/1; flow rate: 1.0 mL/min.

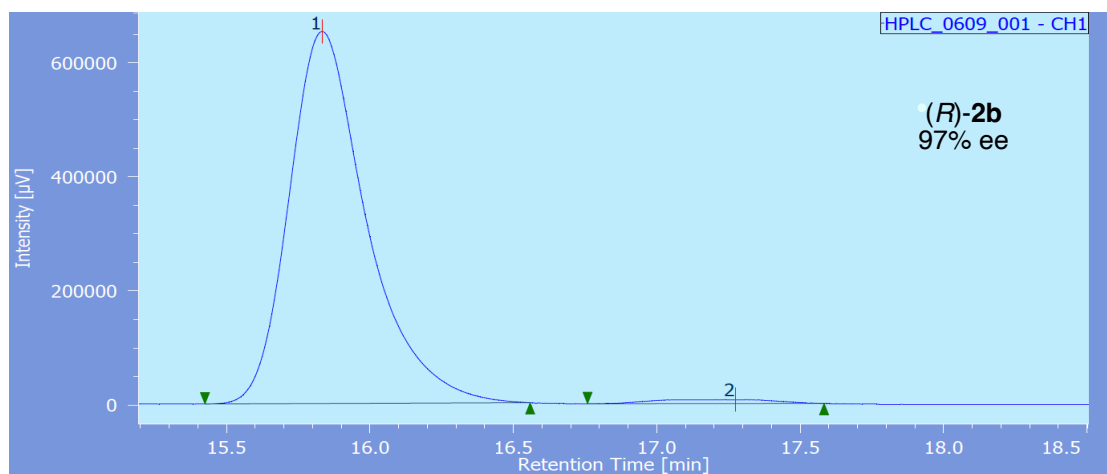
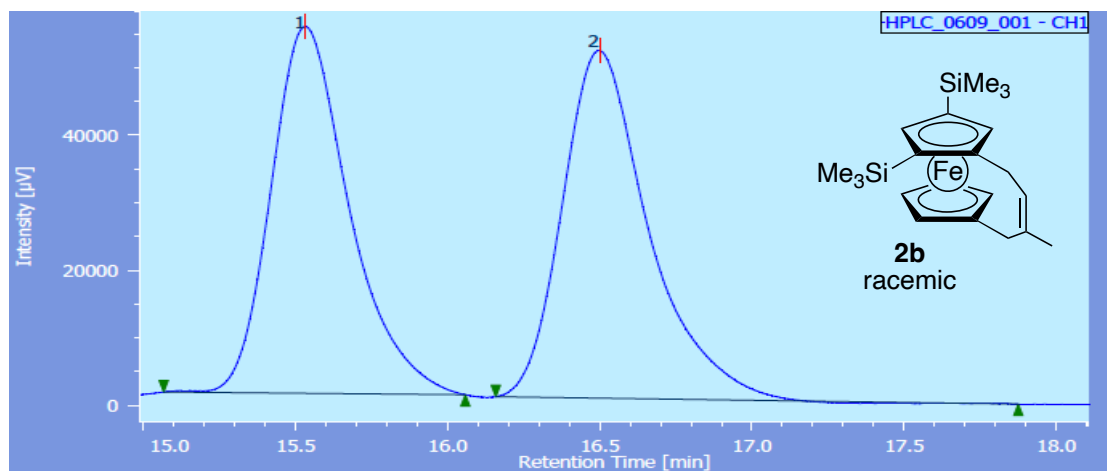


#	peak name	CH	tR [min]	area [μV·sec]	height [μV]	area %	height %	NTP	resolution	symmetry coefficient
1	(R)-isomer	1	17.767	4962831	230740	97.783	98.367	17415	4.867	1.342
2	(S)-isomer	1	20.867	112544	3831	2.217	1.633	12765	N/A	1.265

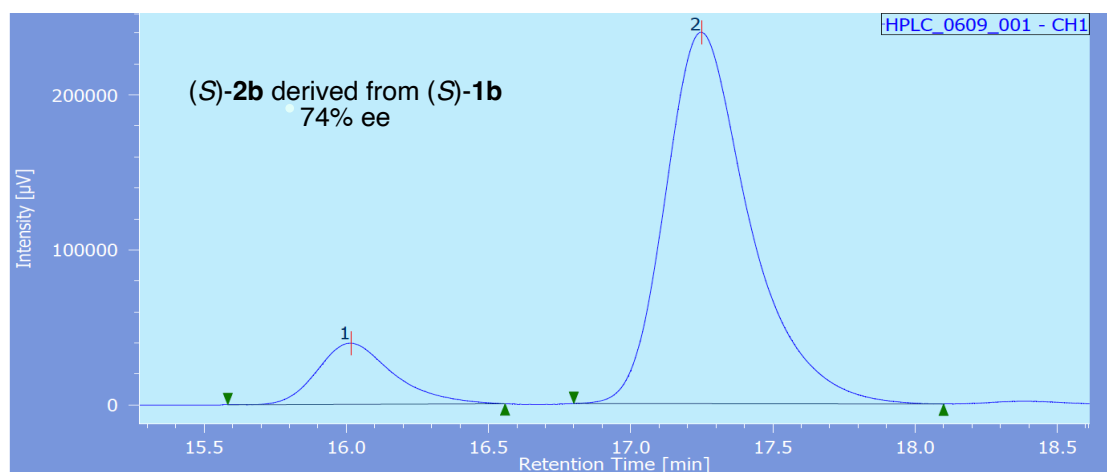


#	peak name	CH	tR [min]	area [μV·sec]	height [μV]	area %	height %	NTP	resolution	symmetry coefficient
1	(R)-isomer	1	17.608	1661901	62385	12.313	13.660	10101	4.454	1.568
2	(S)-isomer	1	20.842	11835420	394315	87.687	86.340	12193	N/A	1.660

Figure S10. Chiral HPLC Analysis of **2b** (Table 1, Entry 11).
Chiralcel OD-H; eluent: hexane/*i*PrOH = 2000/1; flow rate: 1.0 mL/min.

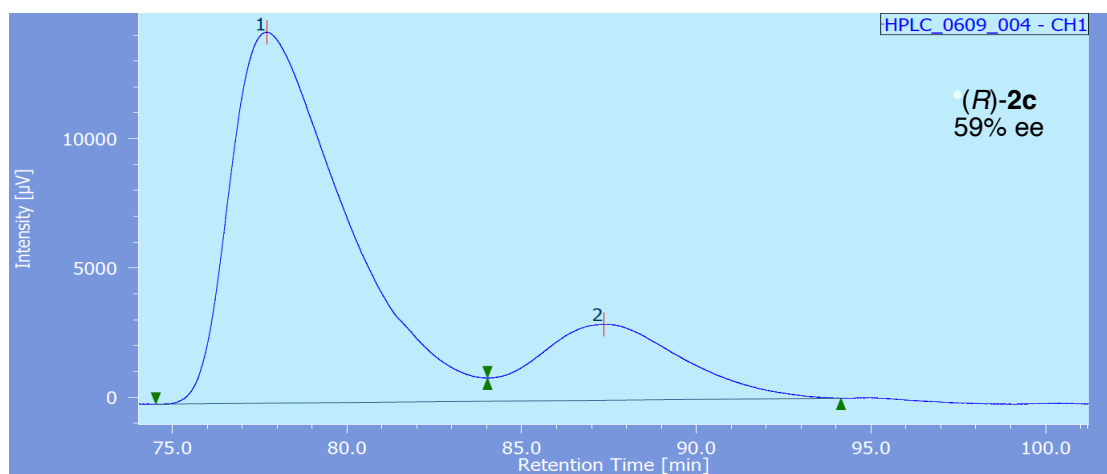
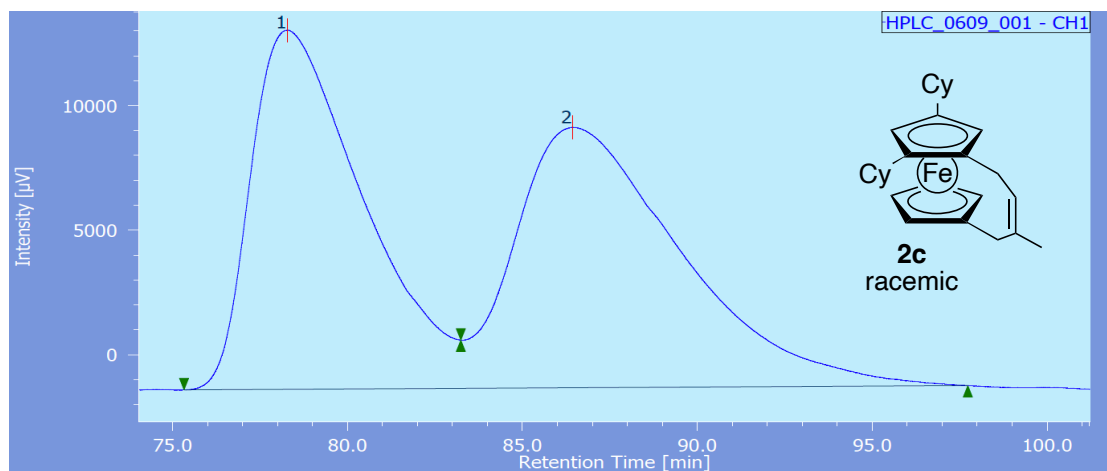


#	peak name	CH	tR [min]	area [μV·sec]	height [μV]	area %	height %	NTP	resolution	symmetry coefficient
1	(R)-isomer	1	15.833	12263708	651920	98.367	98.942	18134	2.206	1.381
2	(S)-isomer	1	17.275	203654	6972	1.633	1.058	6761	N/A	0.819

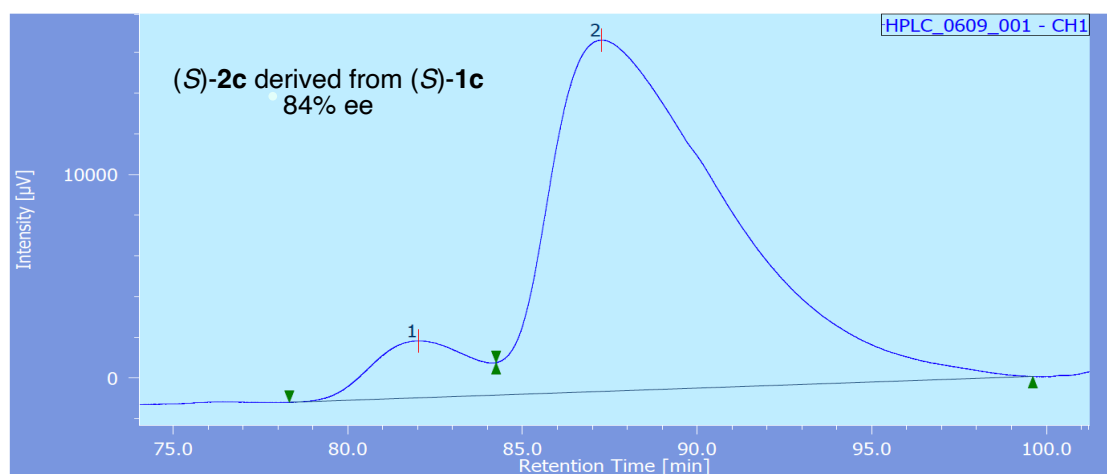


#	peak name	CH	tR [min]	area [μV·sec]	height [μV]	area %	height %	NTP	resolution	symmetry coefficient
1	(R)-isomer	1	16.017	731302	39365	12.867	14.117	18471	2.499	1.300
2	(S)-isomer	1	17.250	4952047	239483	87.133	85.883	17731	N/A	1.353

Figure S11. Chiral HPLC Analysis of **2c** (Table 1, Entry 17).
Chiralcel OD-H; eluent: hexane; flow rate: 0.5 mL/min.

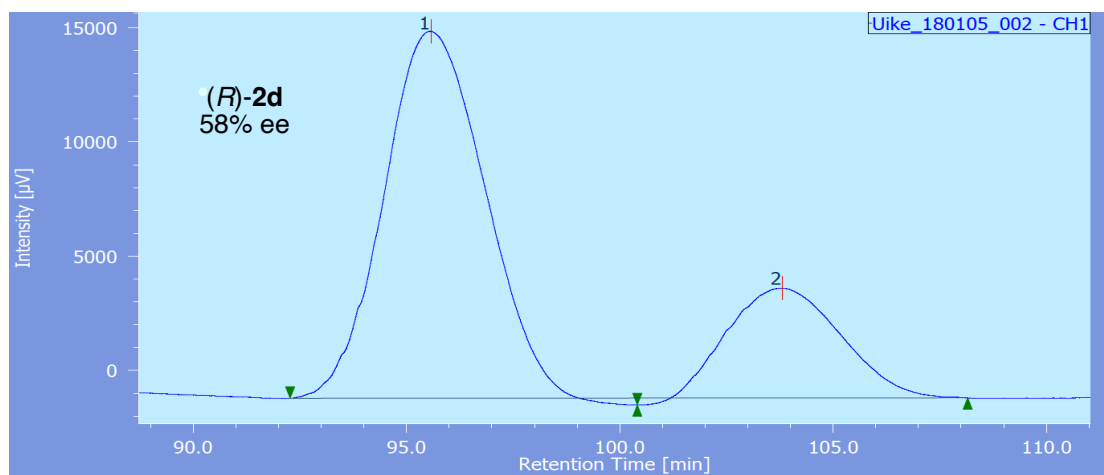
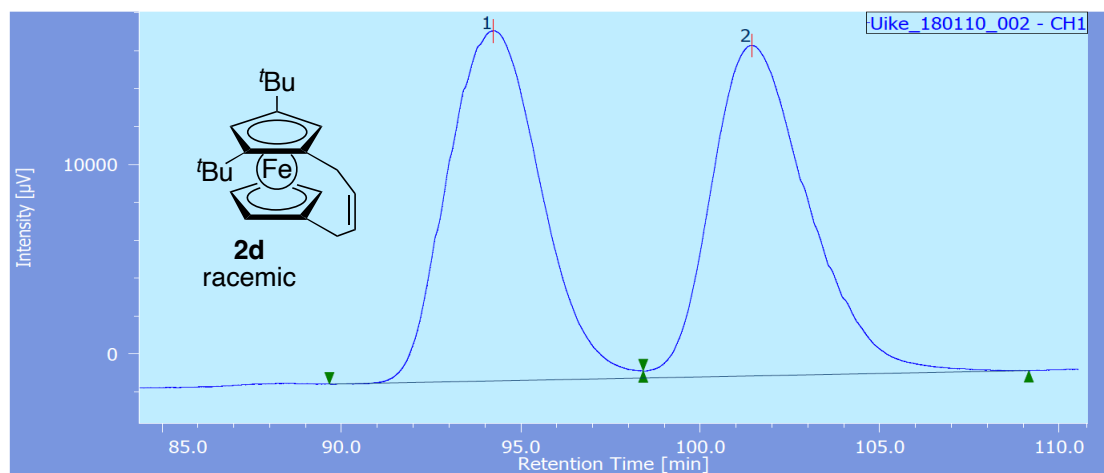


#	peak name	CH	tR [min]	area [μV·sec]	height [μV]	area %	height %	NTP	resolution	symmetry coefficient
1	(R)-isomer	1	77.708	3276973	14329	79.336	83.006	2783	1.416	N/A
2	(S)-isomer	1	87.358	853520	2934	20.664	16.994	2022	N/A	N/A

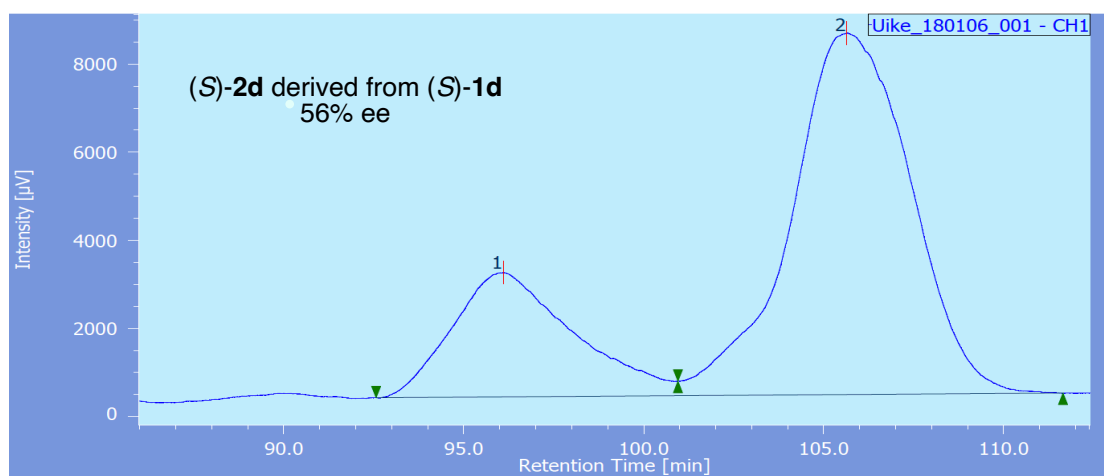


#	peak name	CH	tR [min]	area [μV·sec]	height [μV]	area %	height %	NTP	resolution	symmetry coefficient
1	(R)-isomer	1	82.017	532648	2796	8.080	13.946	N/A	N/A	N/A
2	(S)-isomer	1	87.267	6059717	17255	91.920	86.054	1471	N/A	N/A

Figure S12. Chiral HPLC Analysis of **2d** (Scheme 3, bottom).
Chiralcel OD-H \times 2; eluent: hexane/*i*PrOH = 3000/1; flow rate: 0.1 mL/min.



#	peak name	CH	tR [min]	area [μV·sec]	height [μV]	area %	height %	NTP	resolution	symmetry coefficient
1	(R)-isomer	1	95.575	2639640	16058	78.953	76.978	7486	1.729	1.080
2	(S)-isomer	1	103.800	703676	4802	21.047	23.022	6569	N/A	1.140



#	peak name	CH	tR [min]	area [μV·sec]	height [μV]	area %	height %	NTP	resolution	symmetry coefficient
1	(R)-isomer	1	96.100	537100	2820	22.031	25.582	3984	1.587	N/A
2	(S)-isomer	1	105.633	1900784	8204	77.869	74.418	5031	N/A	0.937