

# Supplementary Information

Figure S1.  $^1\text{H}$  NMR spectrum of 7.

CCW090729 H1 CDC13 2009-7-29  
Pulse Sequence: s2pu1

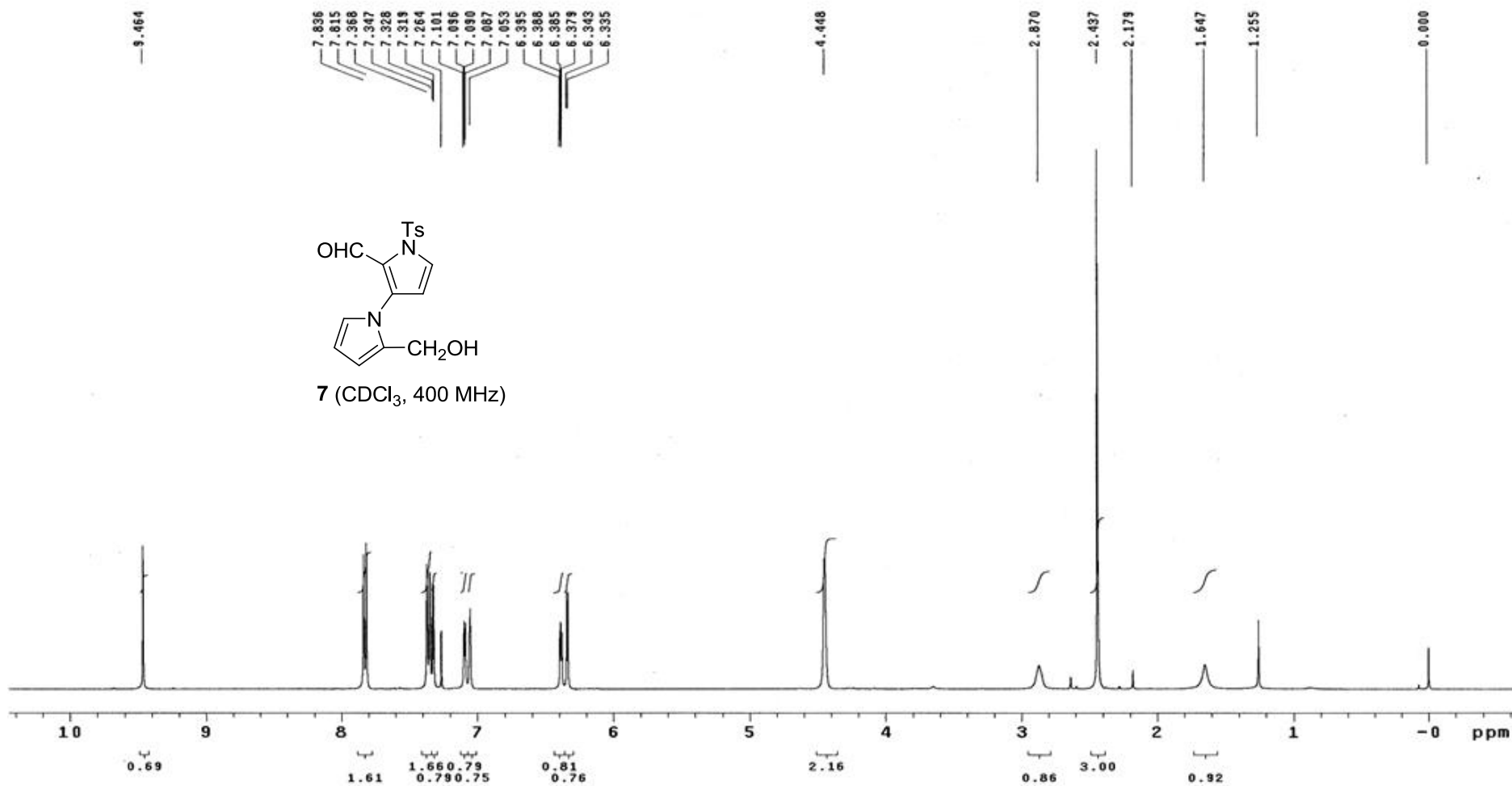


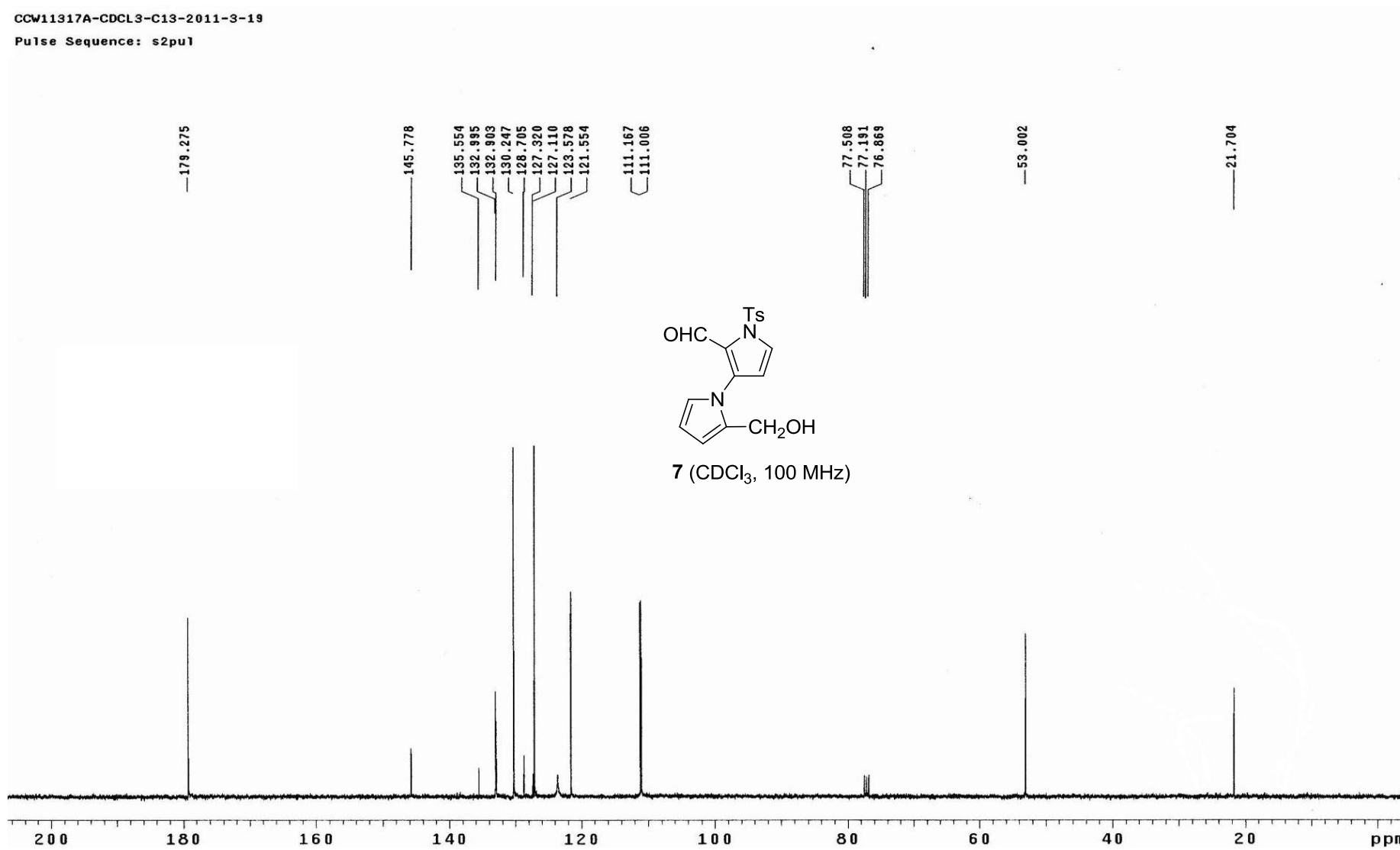
Figure S2.  $^{13}\text{C}$  NMR spectrum of 7.

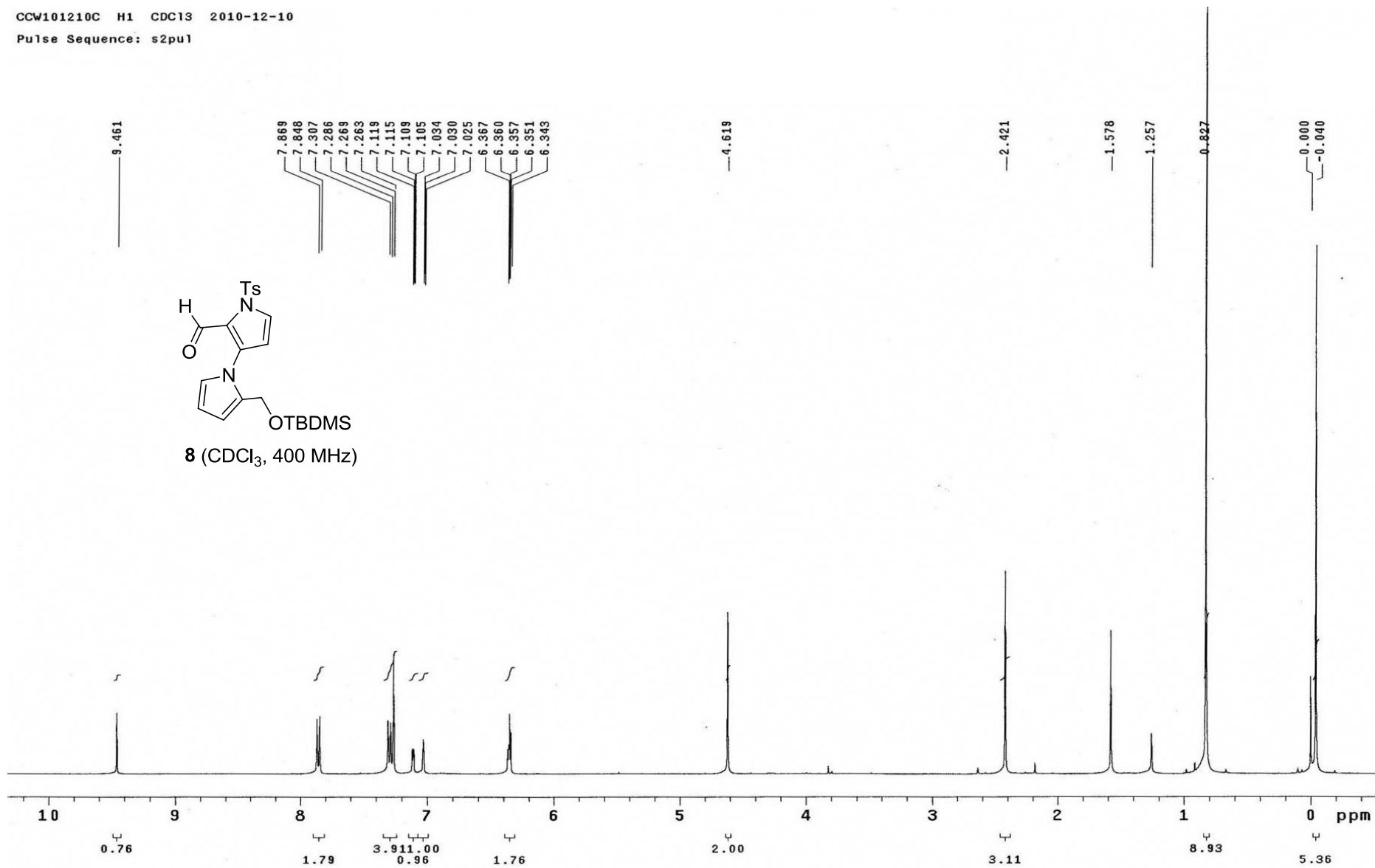
Figure S3.  $^1\text{H}$  NMR spectrum of **8**.

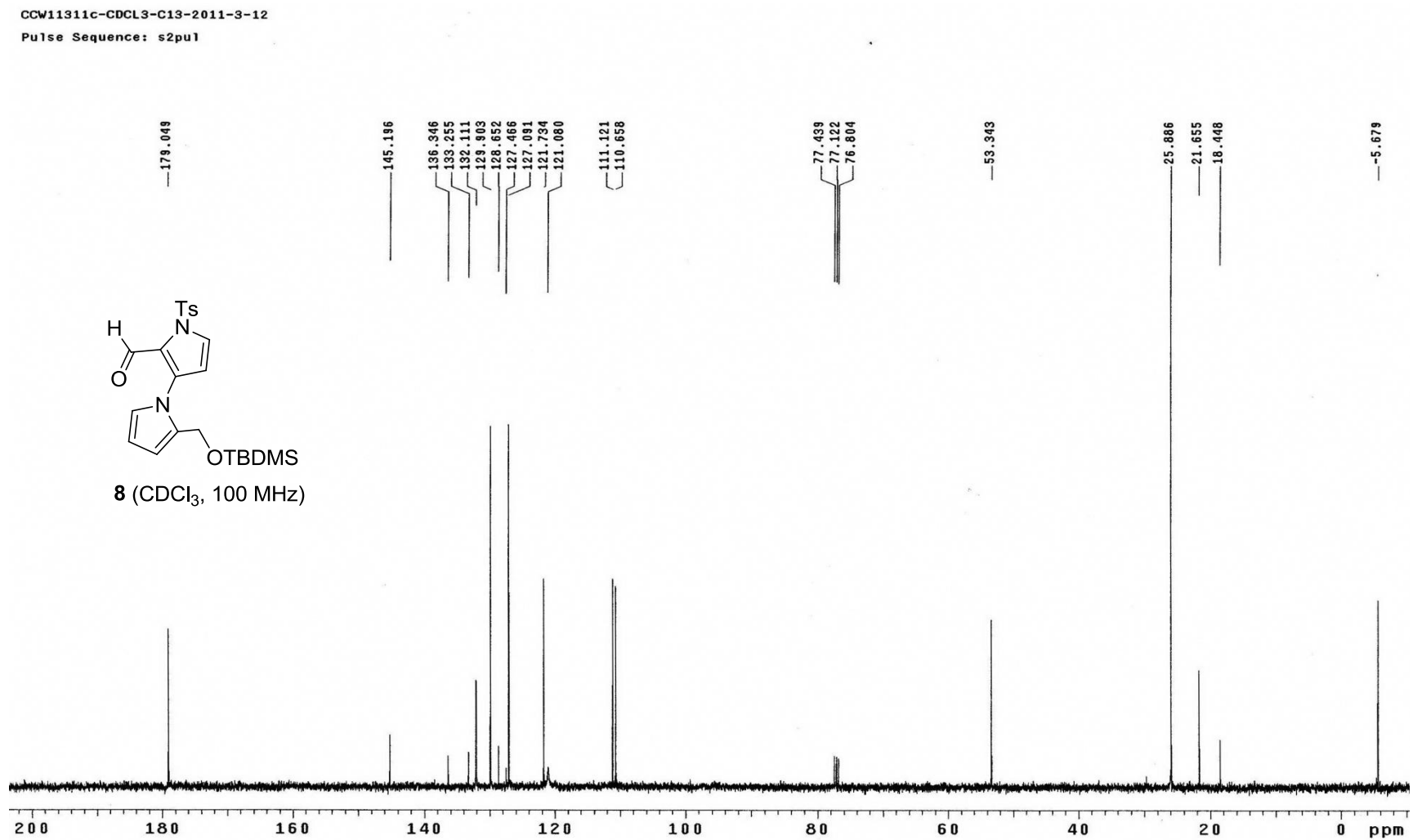
Figure S4.  $^{13}\text{C}$  NMR spectrum of **8**.

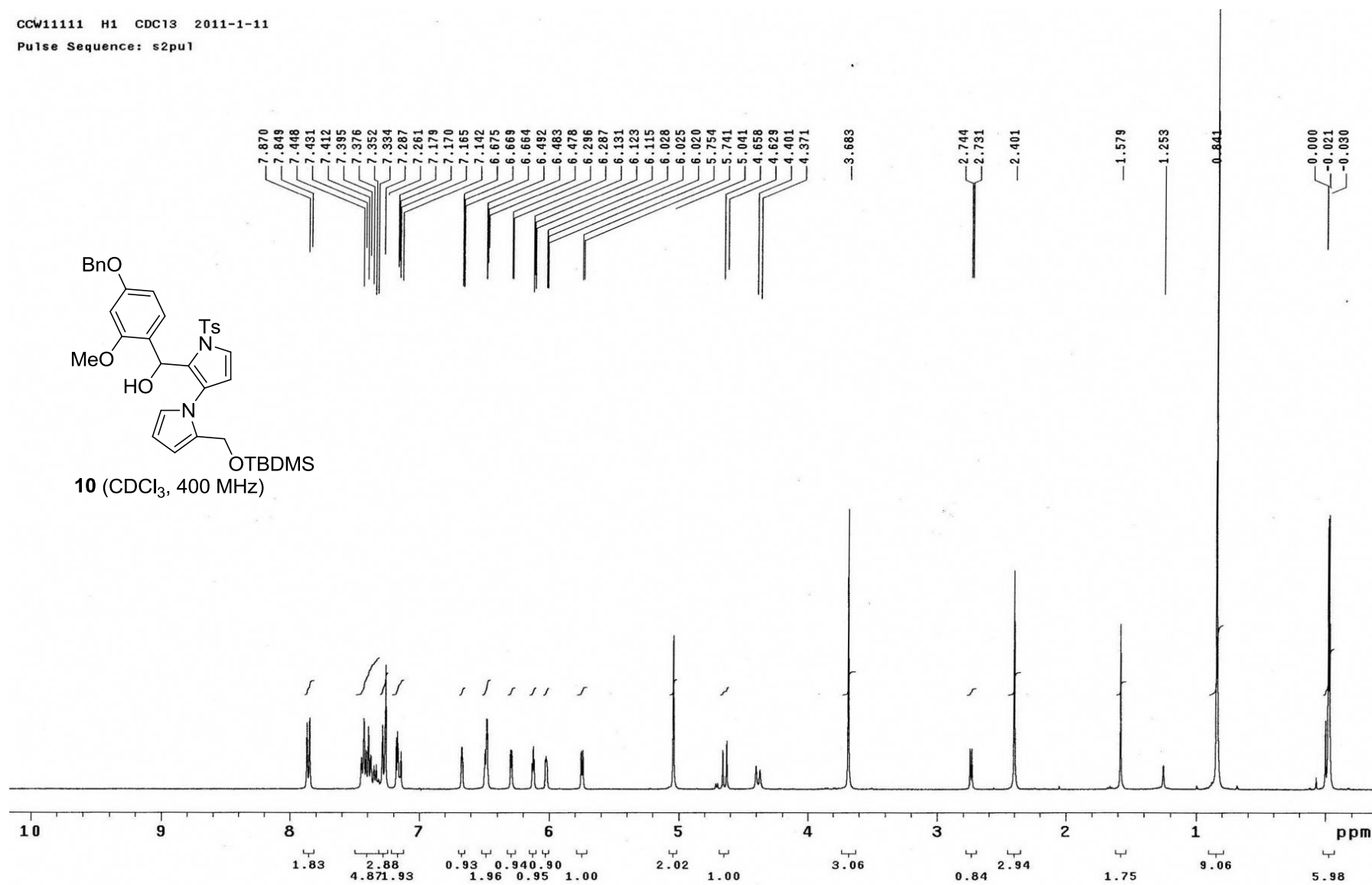
Figure S5.  $^1\text{H}$  NMR spectrum of 10.

Figure S6.  $^{13}\text{C}$  NMR spectrum of 10.

CCW11311d-CDCL3-C13-2011-3-12

Pulse Sequence: s2pu1

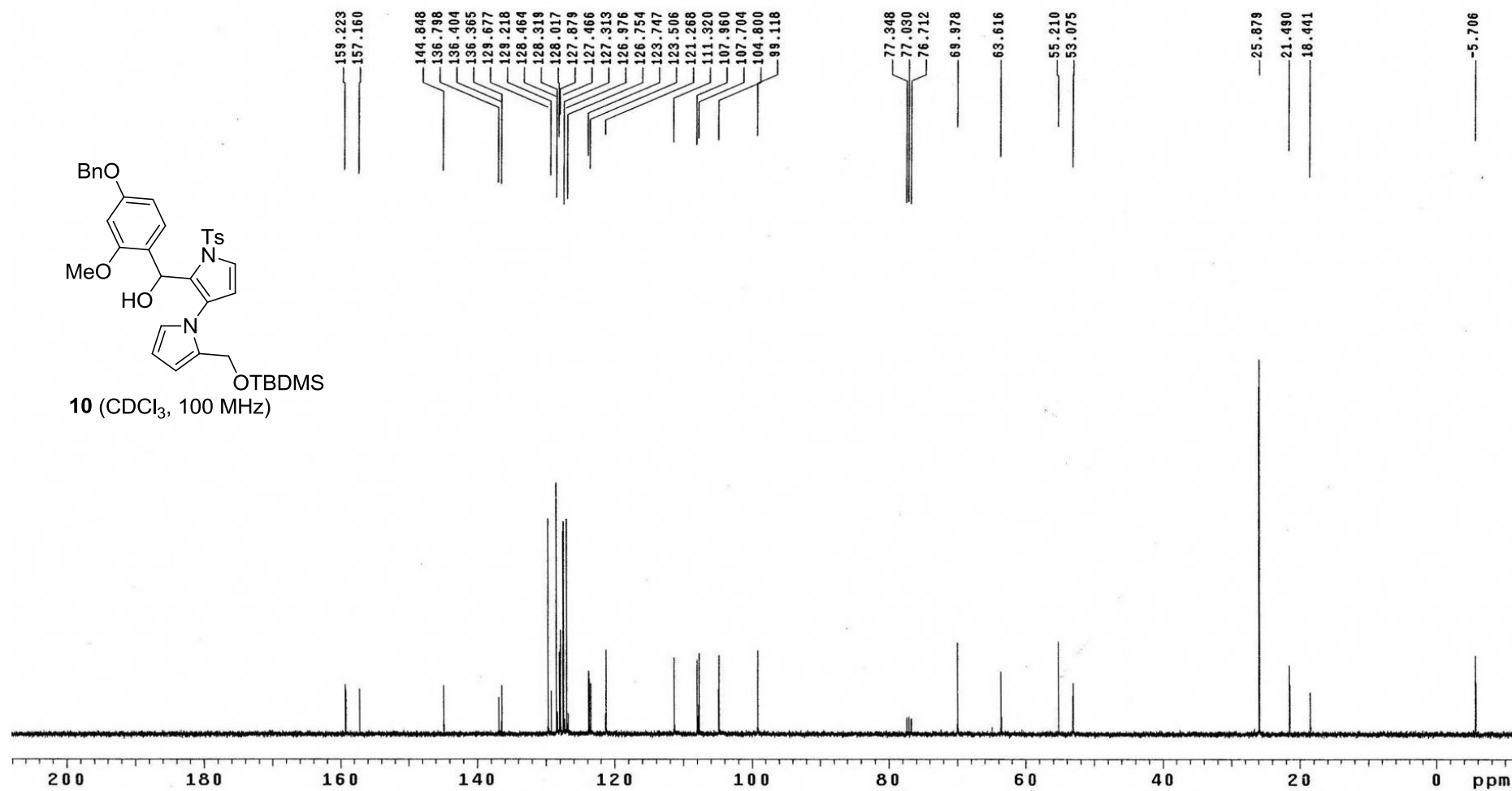


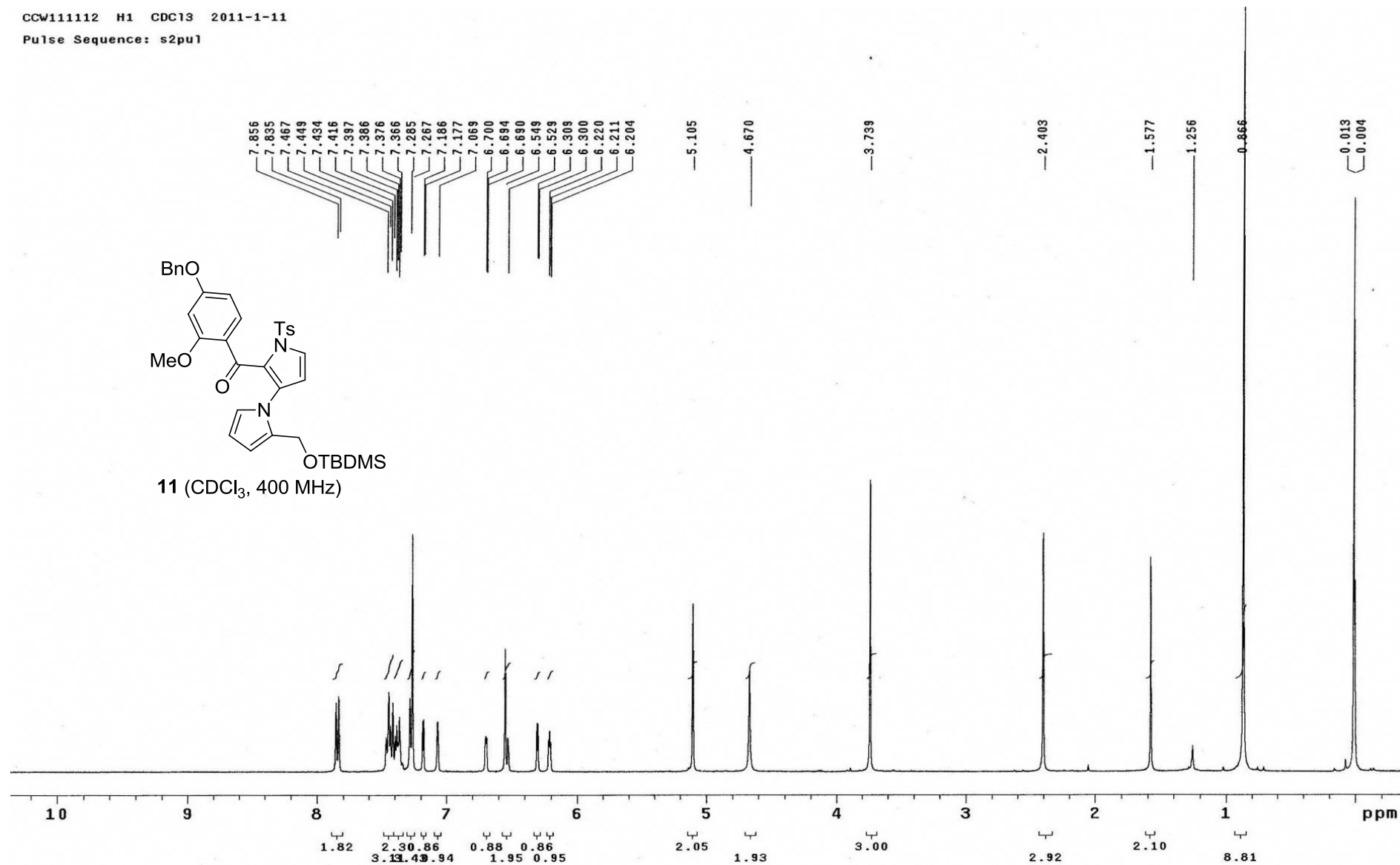
Figure S7.  $^1\text{H}$  NMR spectrum of 11.

Figure S8.  $^{13}\text{C}$  NMR spectrum of 11.

CCW113111-CDCL3-C13-2011-3-12

Pulse Sequence: s2pu1

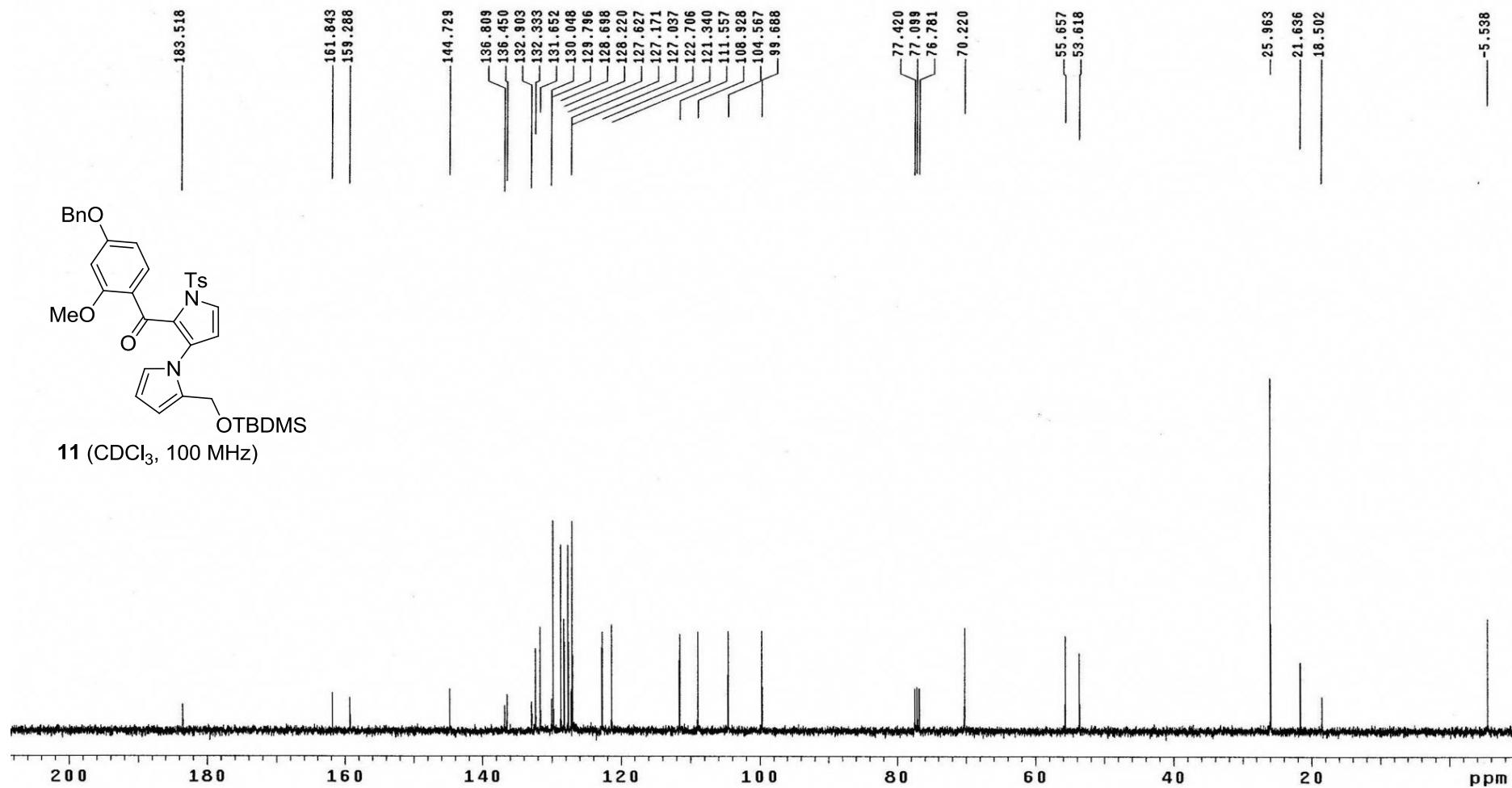




Figure S9.  $^1\text{H}$  NMR spectrum of 12.

CCW110504B H1 CDC13 2011-5-4  
Pulse Sequence: s2pu1

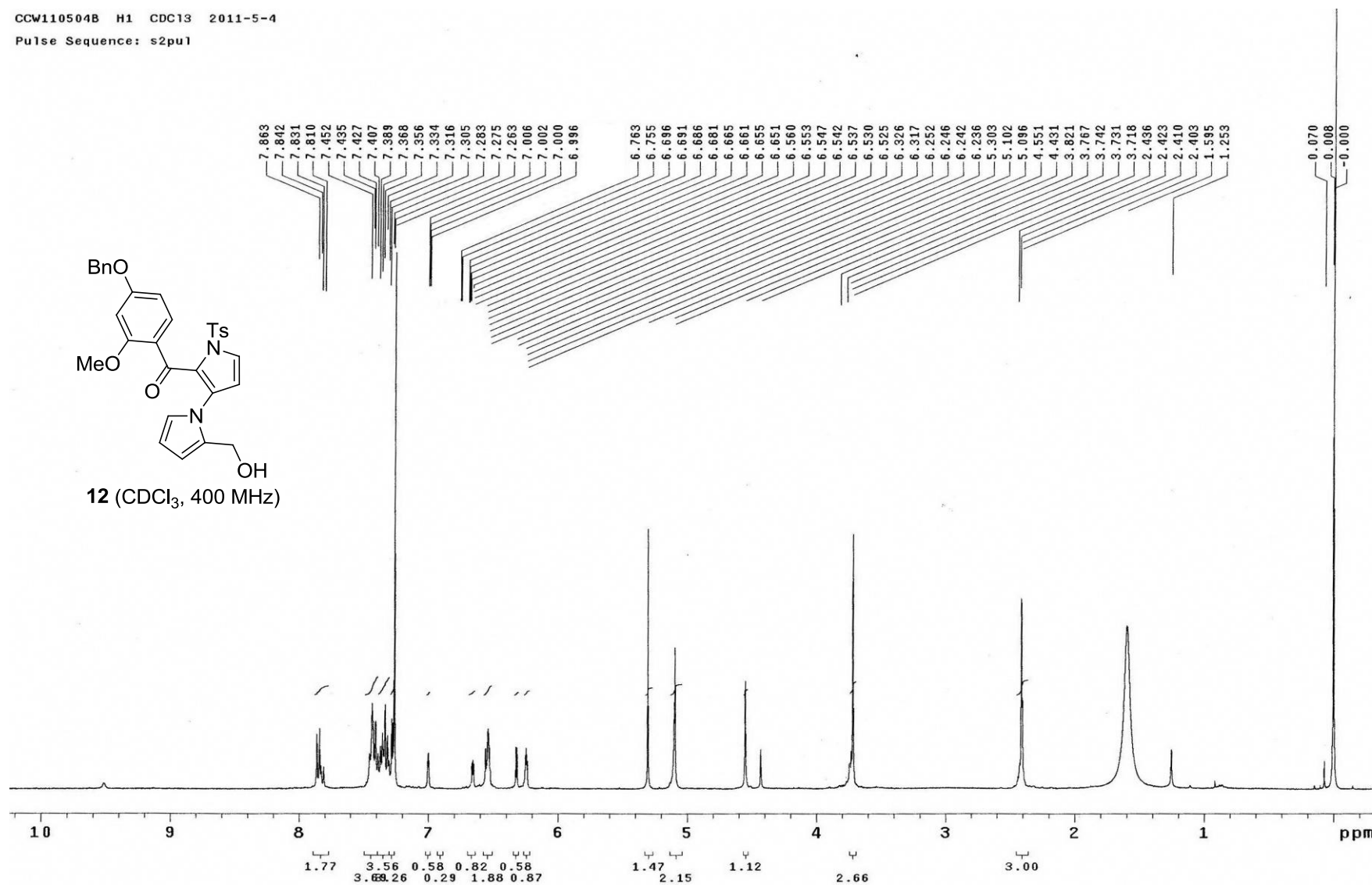


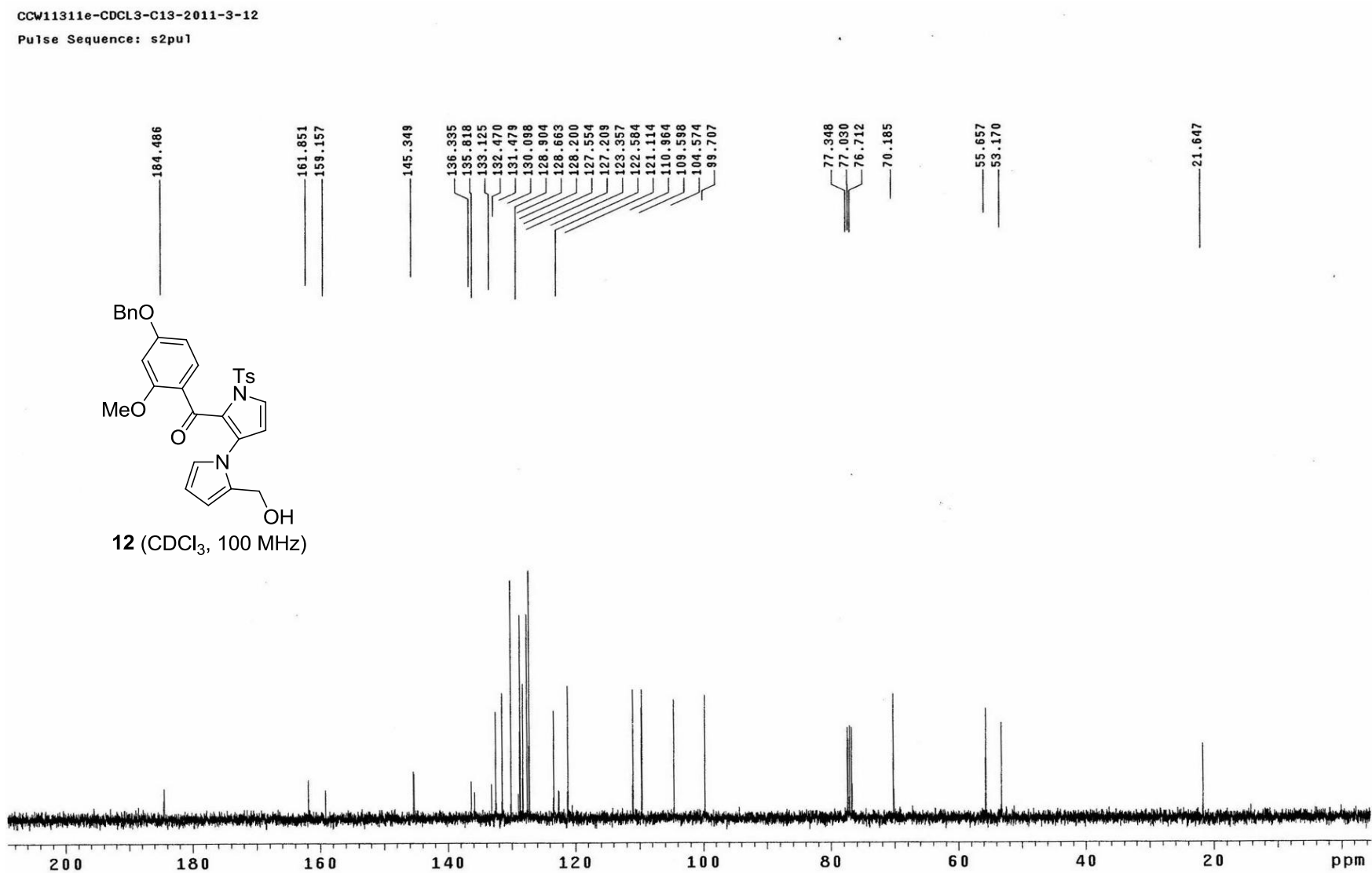
Figure S10.  $^{13}\text{C}$  NMR spectrum of 12.

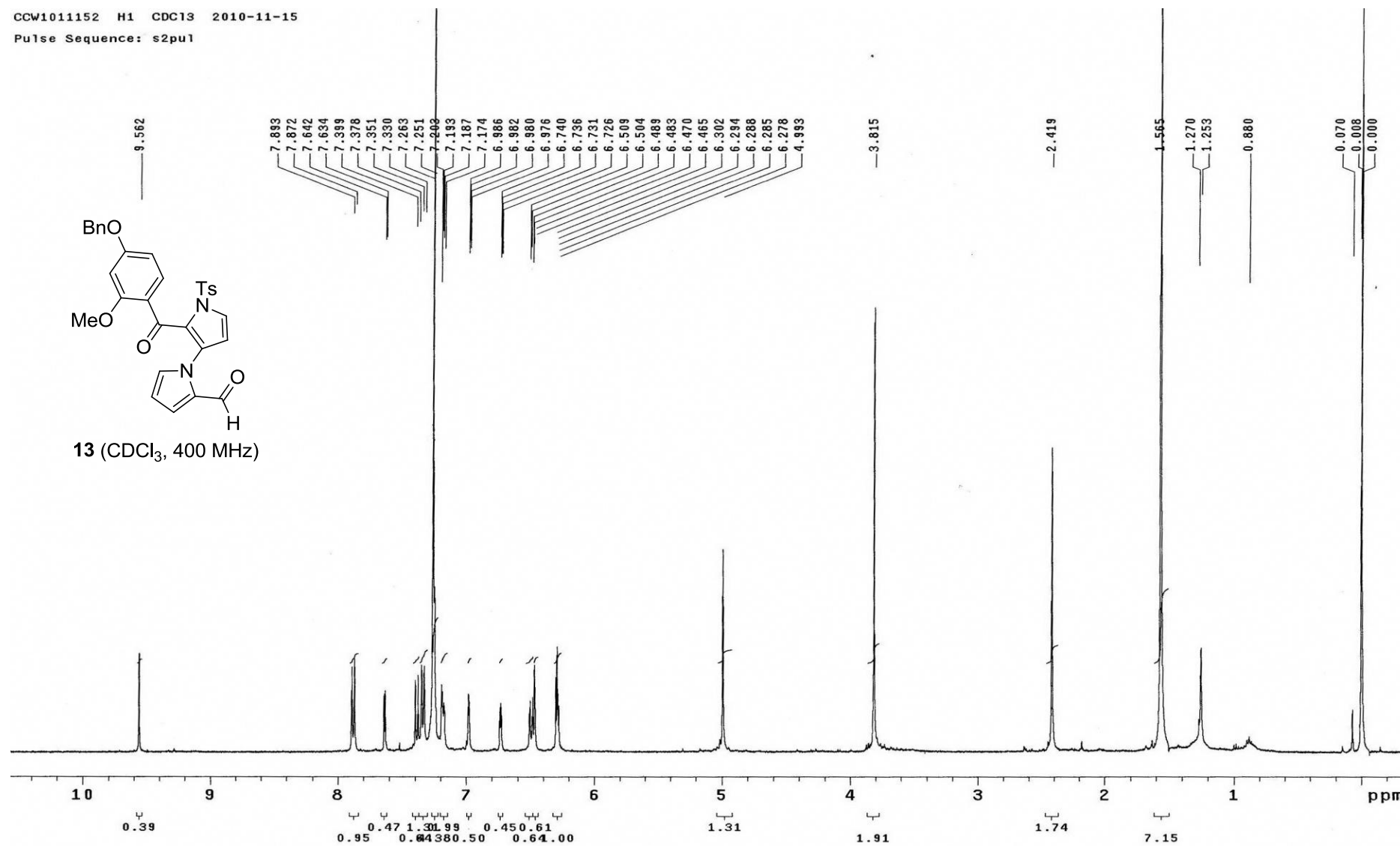
Figure S11.  $^1\text{H}$  NMR spectrum of 13.

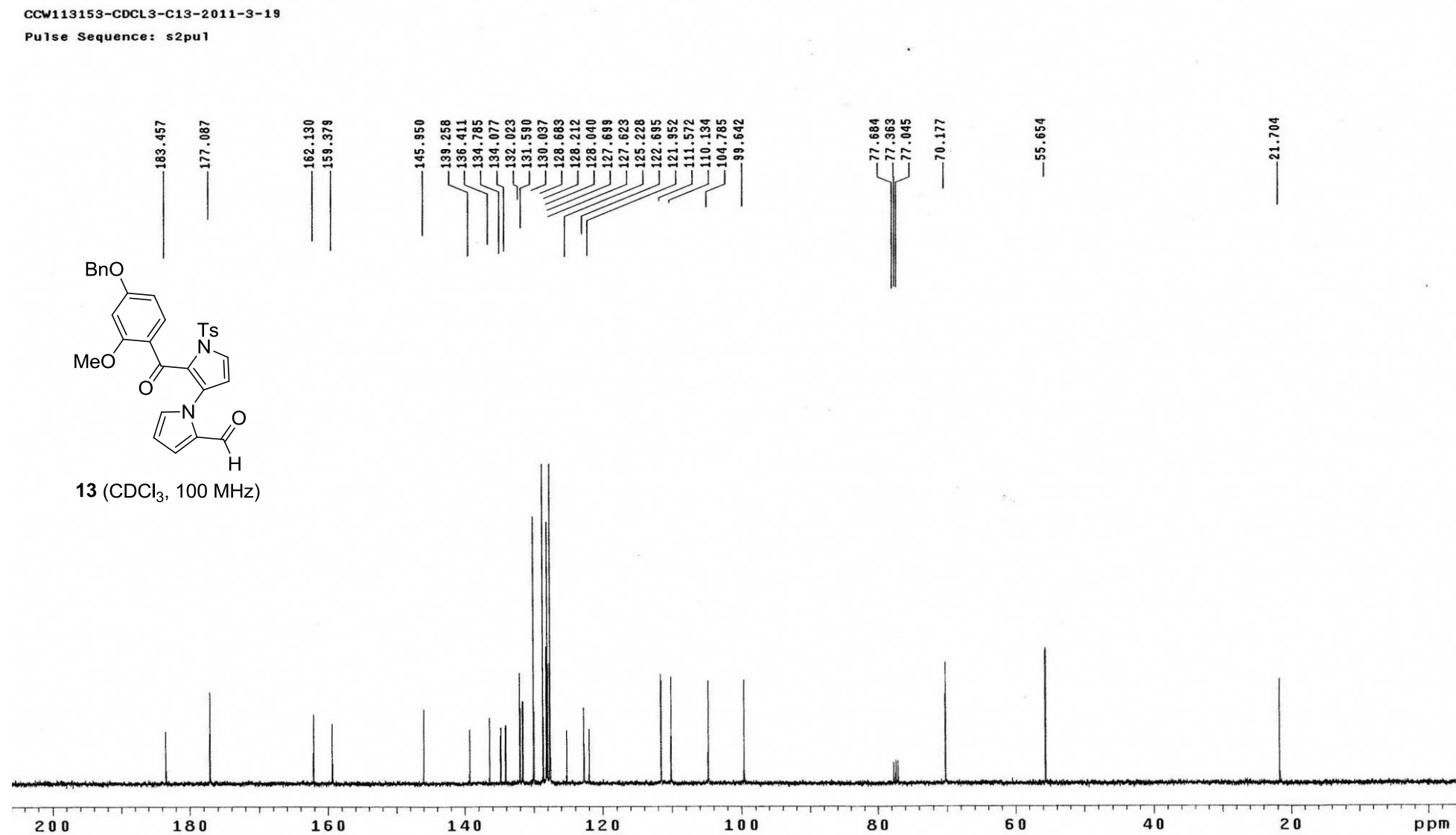
Figure S12.  $^{13}\text{C}$  NMR spectrum of 13.

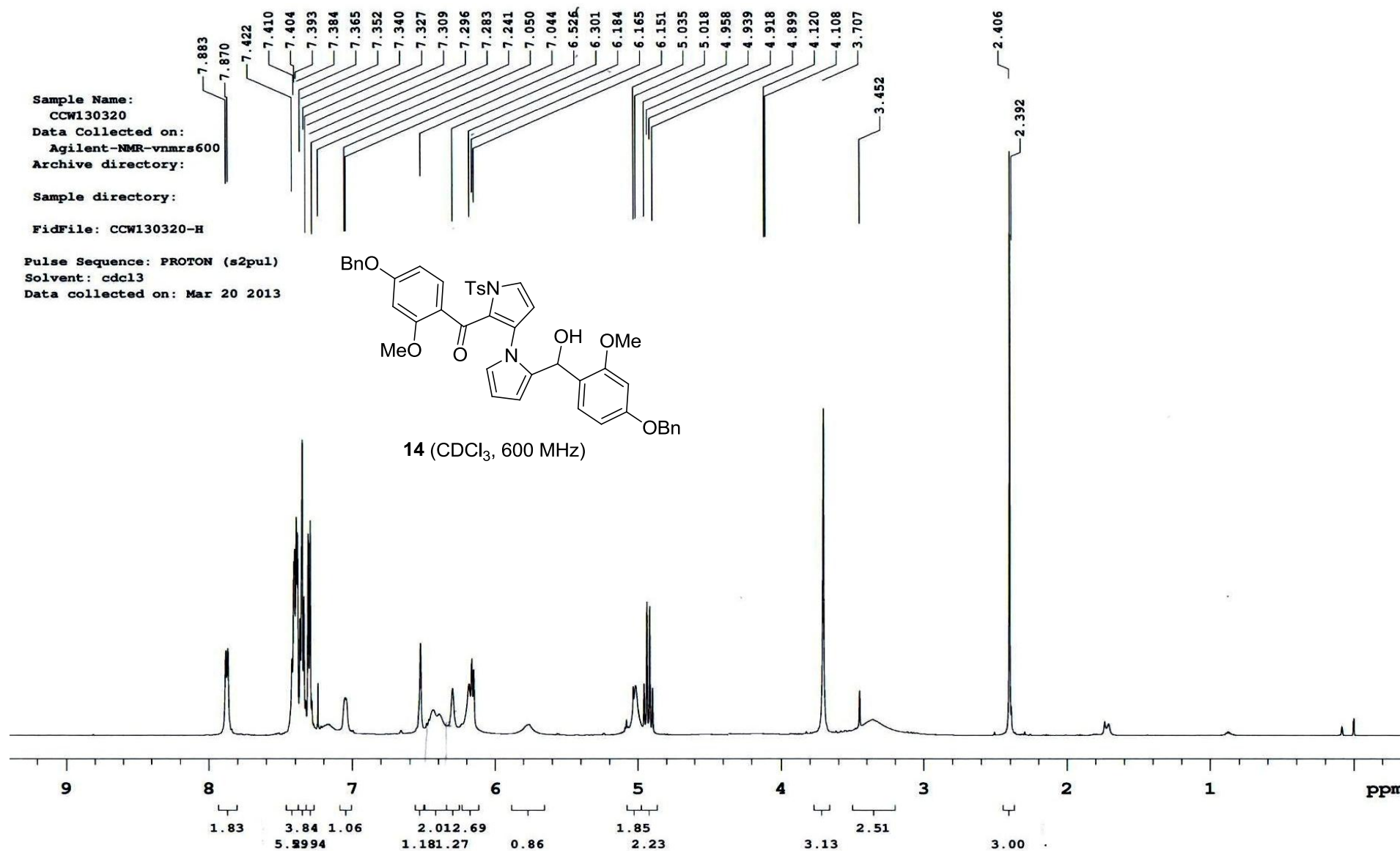
Figure S13.  $^1\text{H}$  NMR spectrum of 14.

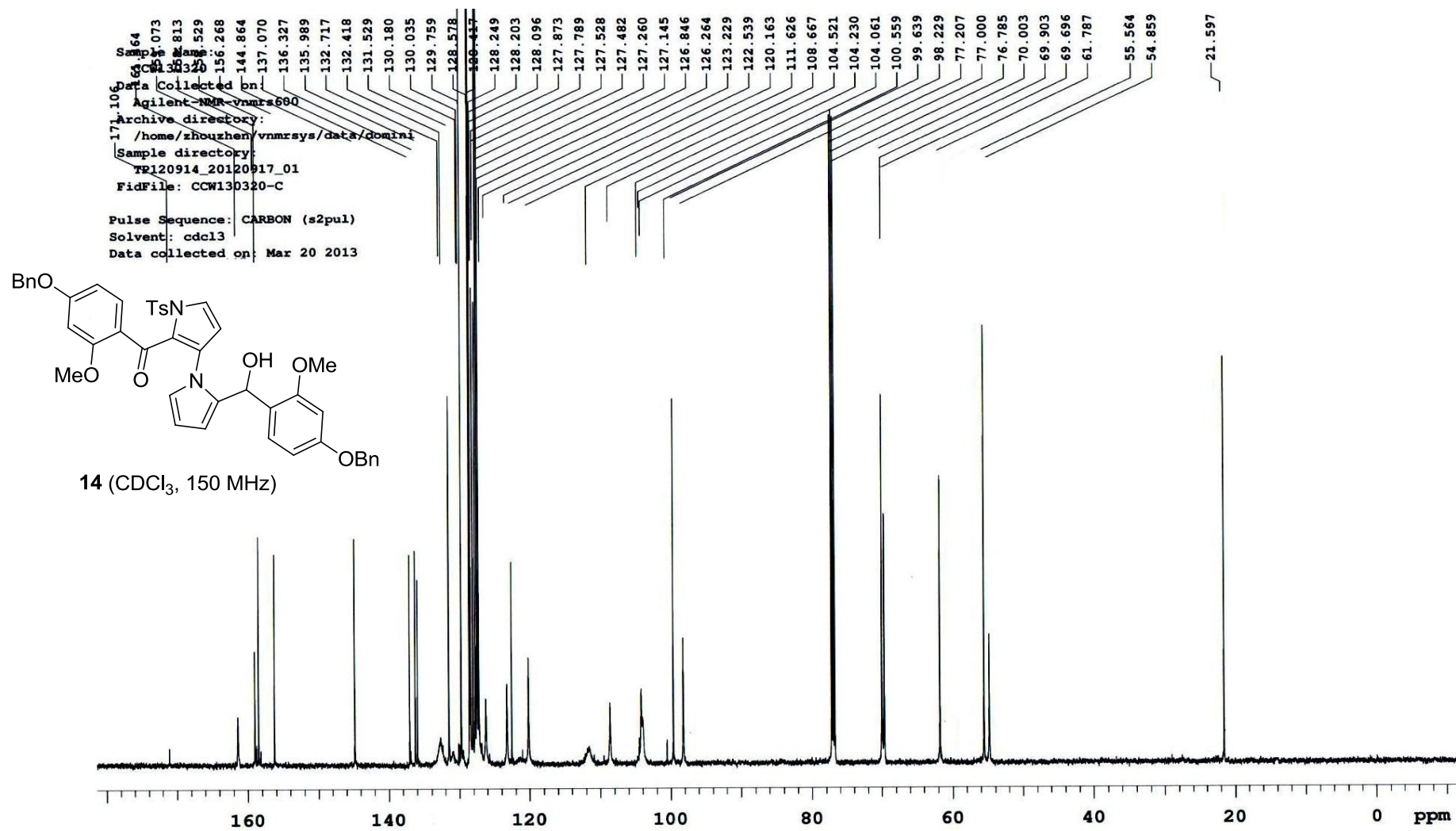
Figure S14.  $^{13}\text{C}$  NMR spectrum of 14.

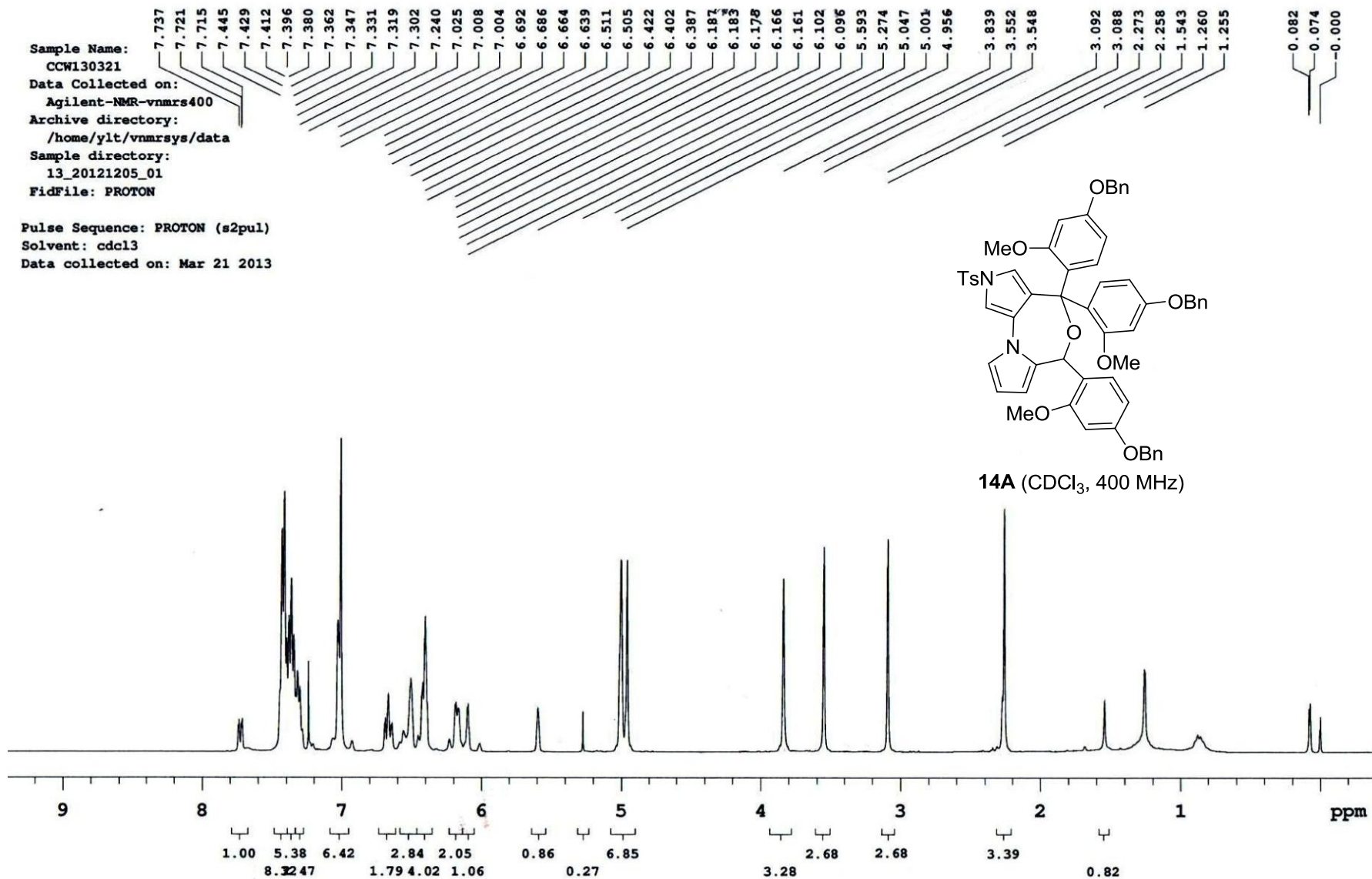
Figure S15.  $^1\text{H}$  NMR spectrum of 14A.







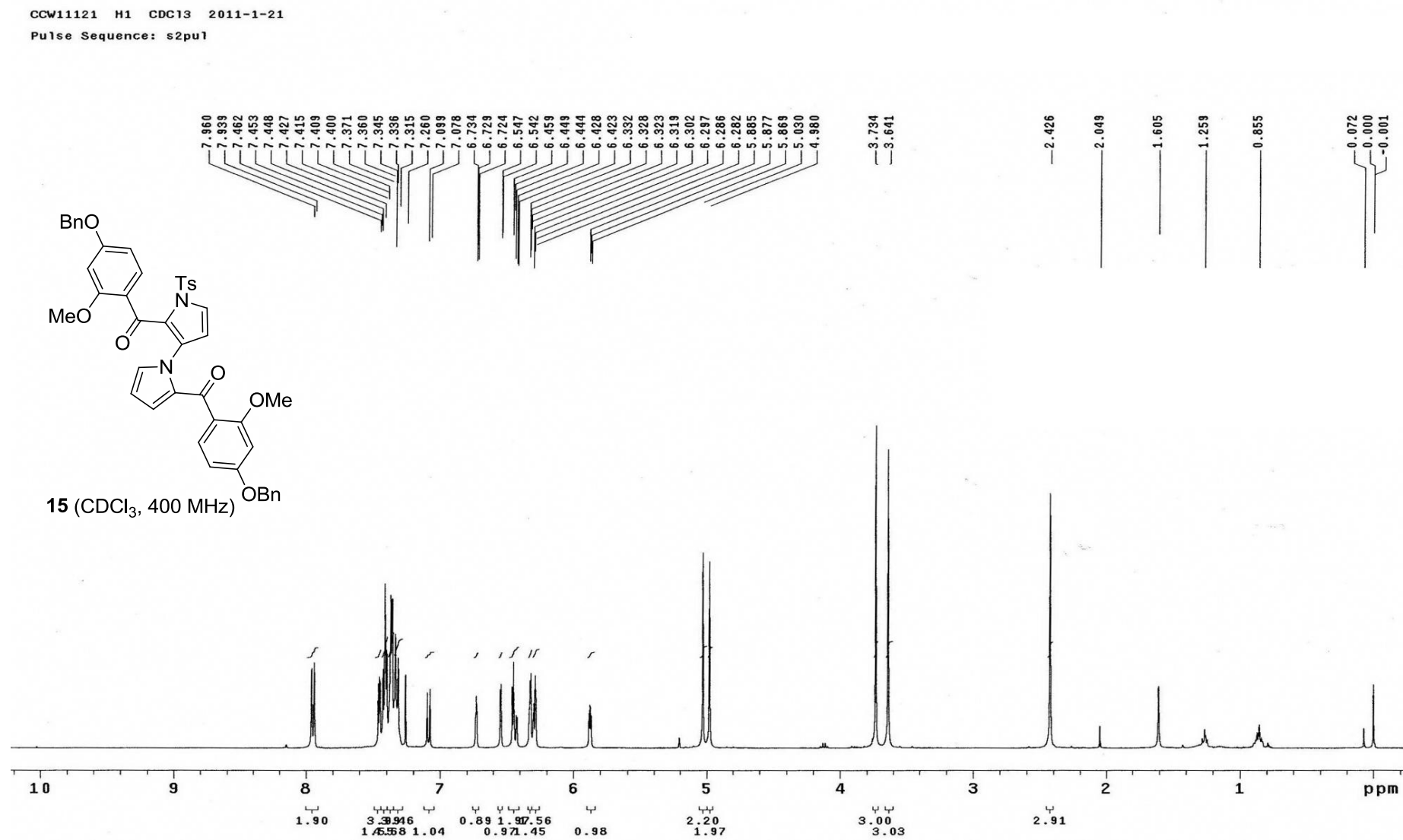
Figure S17.  $^1\text{H}$  NMR spectrum of 15.

Figure S18.  $^{13}\text{C}$  NMR spectrum of 15.

CCW11411-CDCL3-C13-2011-4-11

Pulse Sequence: s2pu1

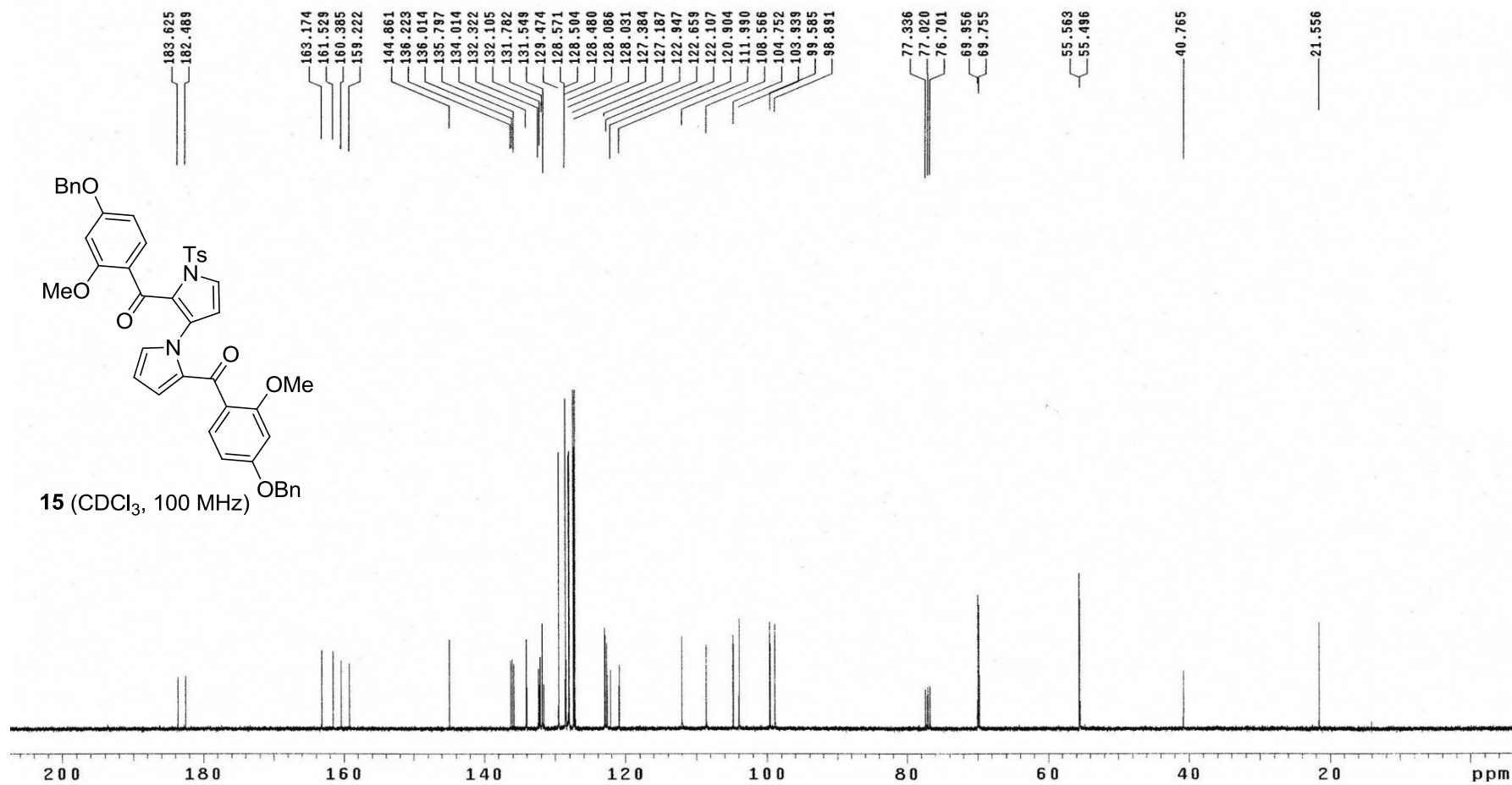


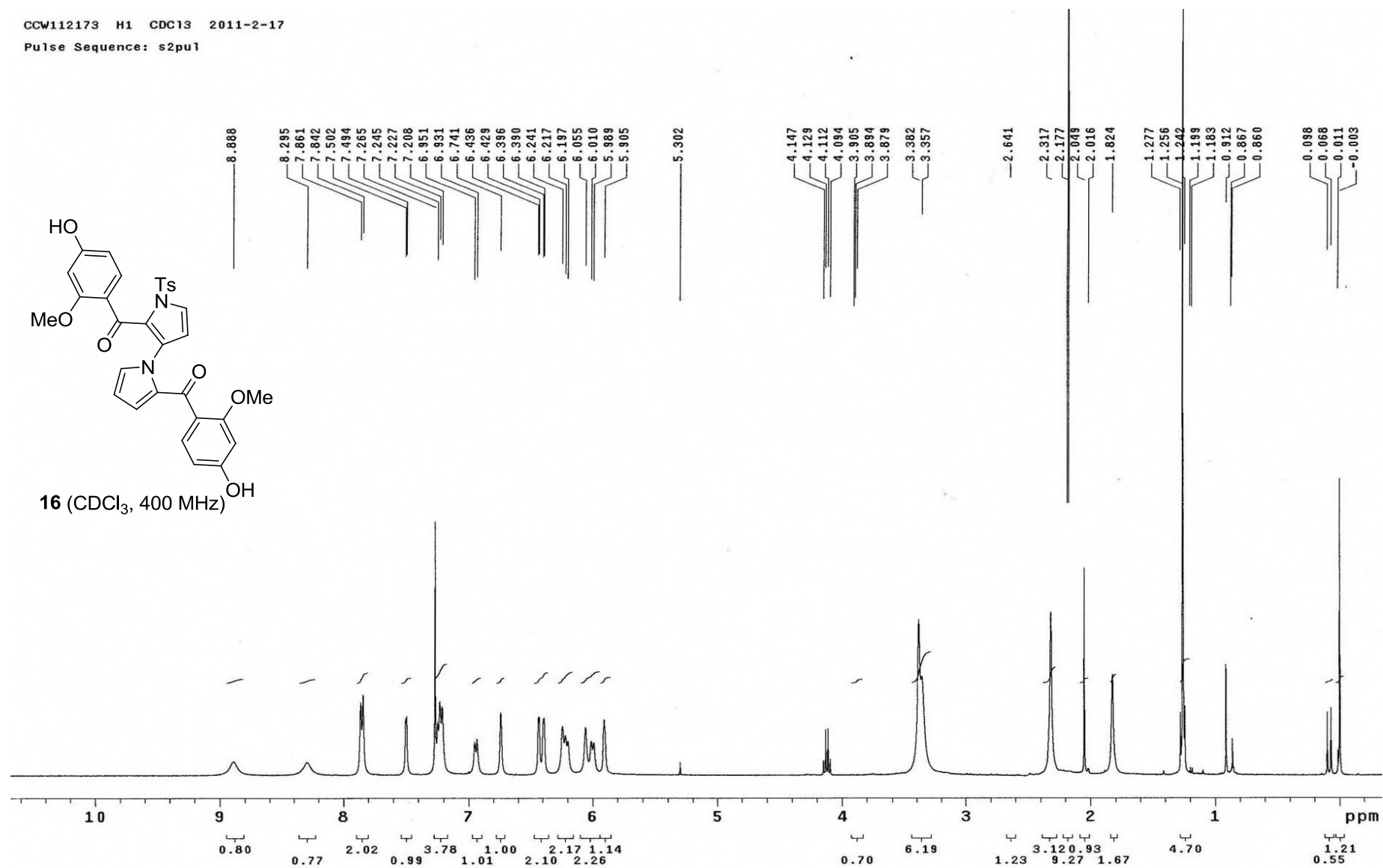
Figure S19.  $^1\text{H}$  NMR spectrum of 16.

Figure S20.  $^{13}\text{C}$  NMR spectrum of 16.

CCW110415A-C3D60-C13-2011-4-16

Pulse Sequence: s2pu1

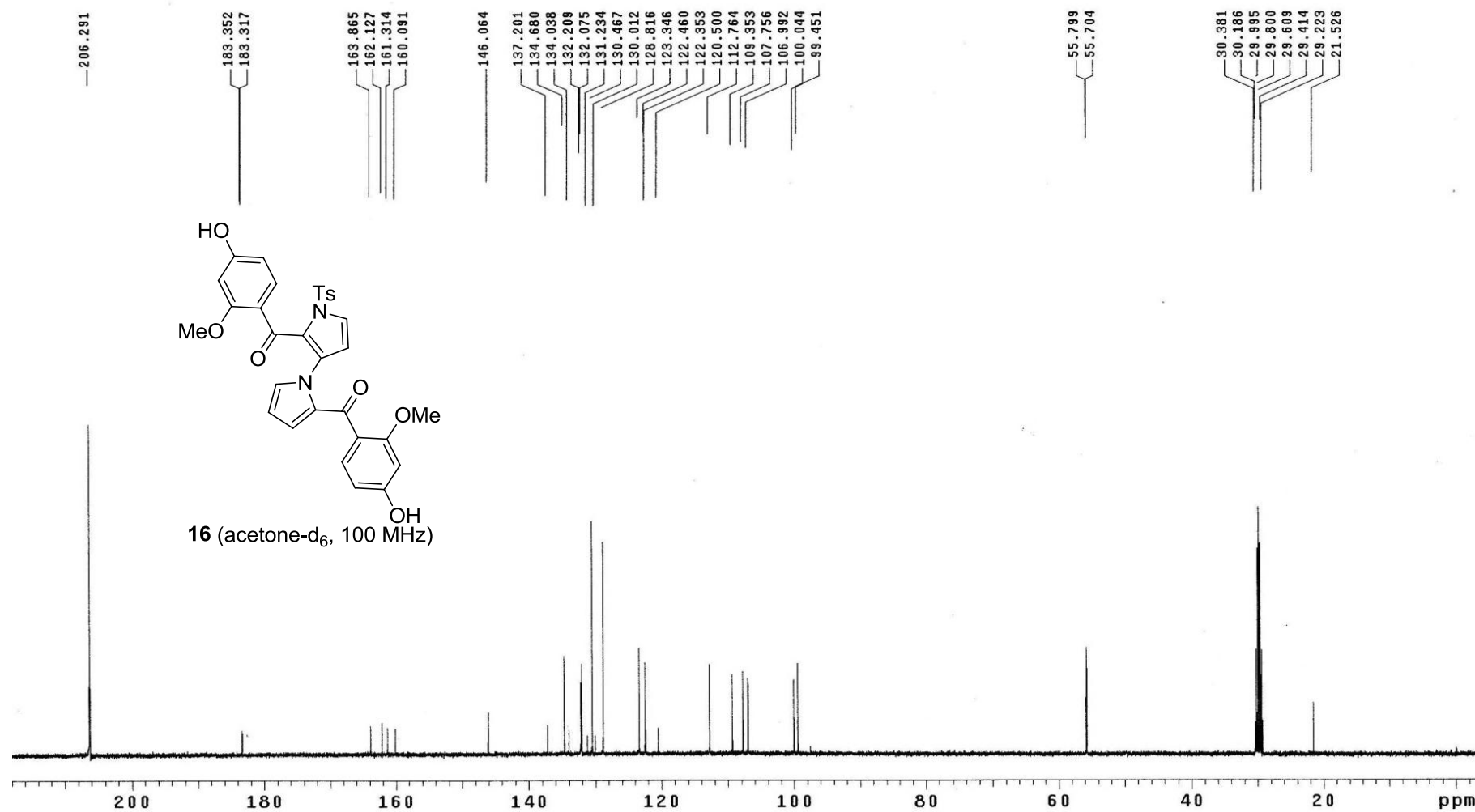


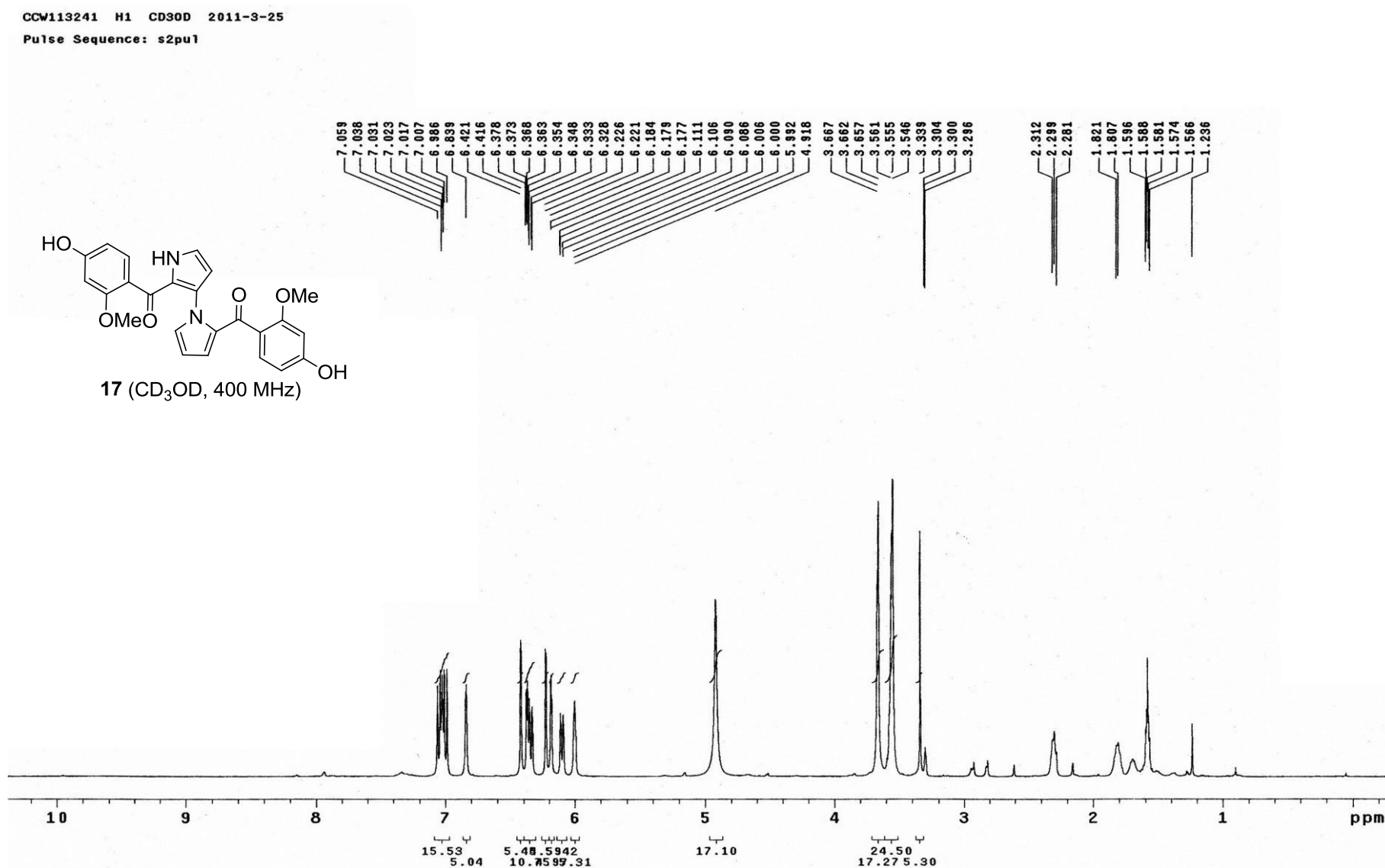
Figure S21.  $^1\text{H}$  NMR spectrum of 17.

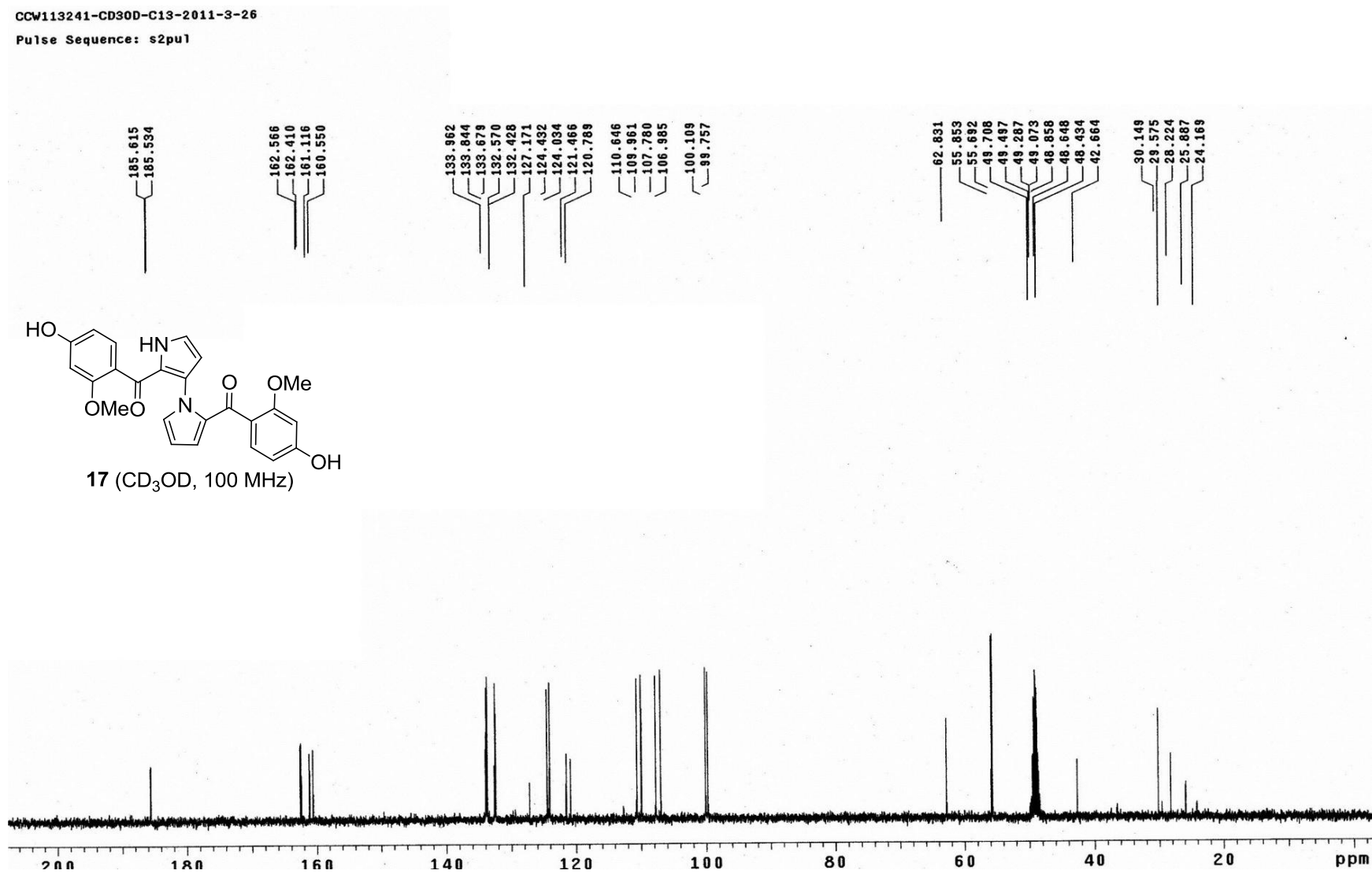
Figure S22.  $^{13}\text{C}$  NMR spectrum of 17.

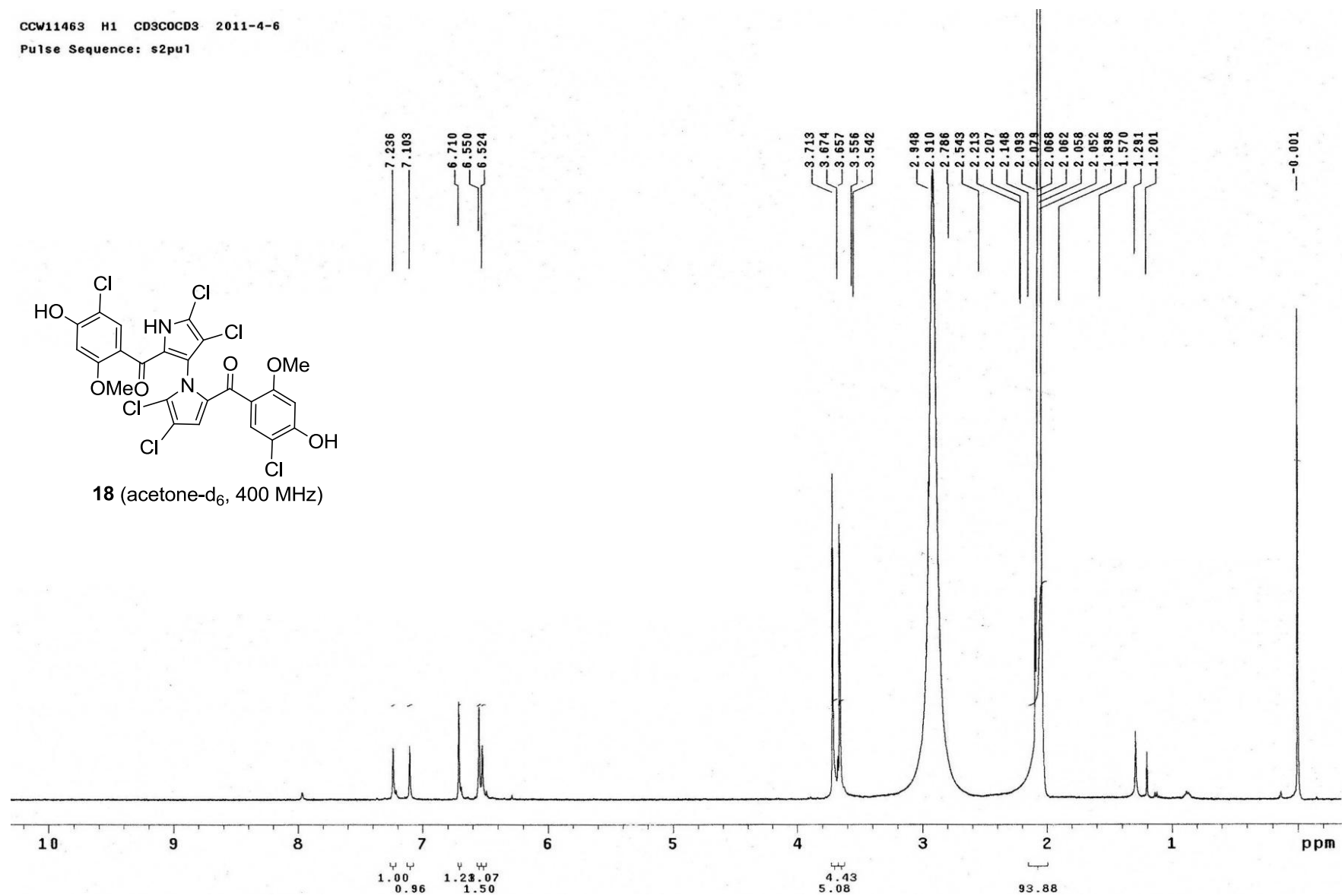
Figure S23.  $^1\text{H}$  NMR spectrum of 18.

Figure S24.  $^{13}\text{C}$  NMR spectrum of 18.

CCW11482 C13 CDC13+CD3OD 2011-4-10

Pulse Sequence: s2pu1

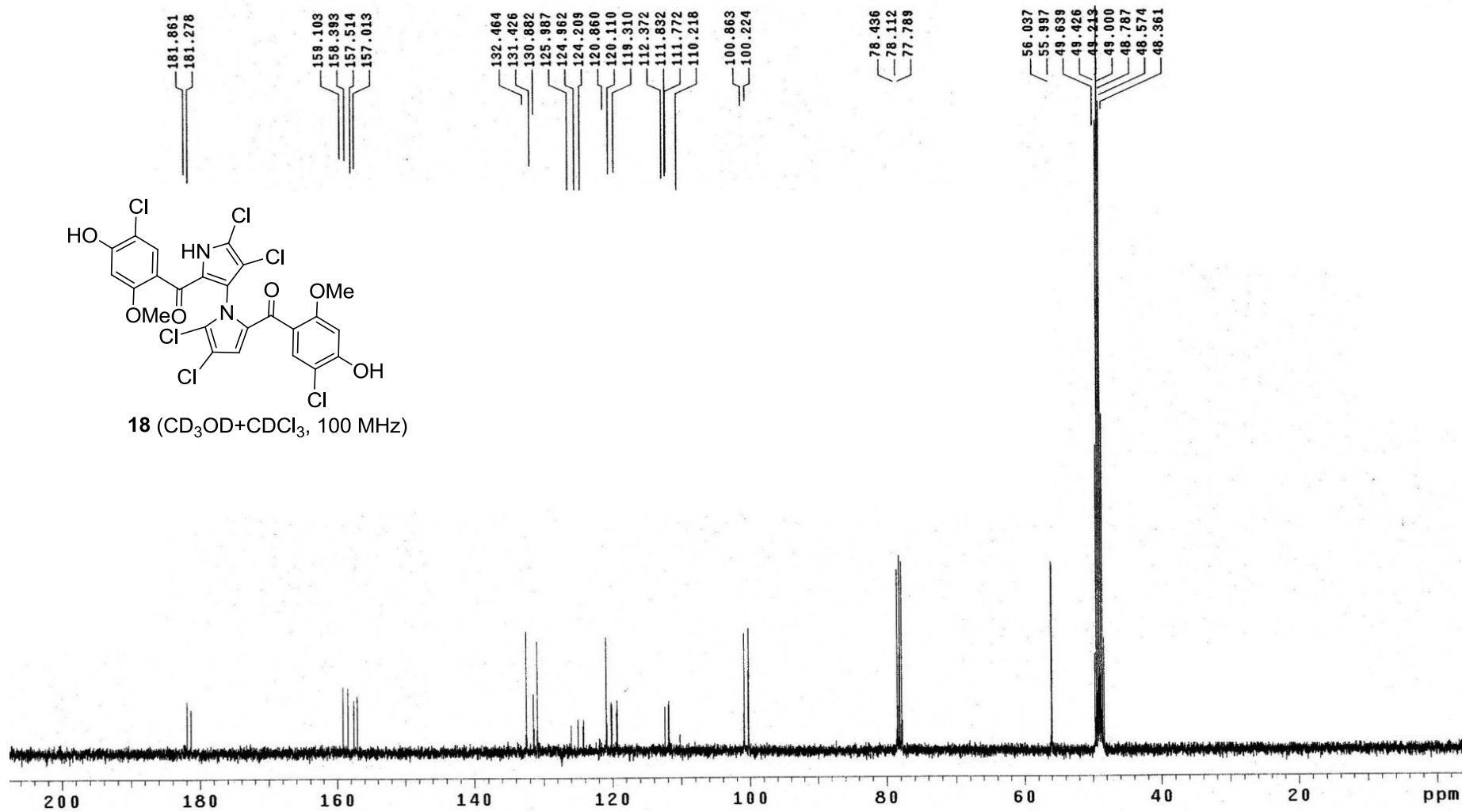




Figure S25.  $^1\text{H}$  NMR spectrum of **19**.

CCW11414 H1 CD3OD 2011-4-14  
Pulse Sequence: s2pu1

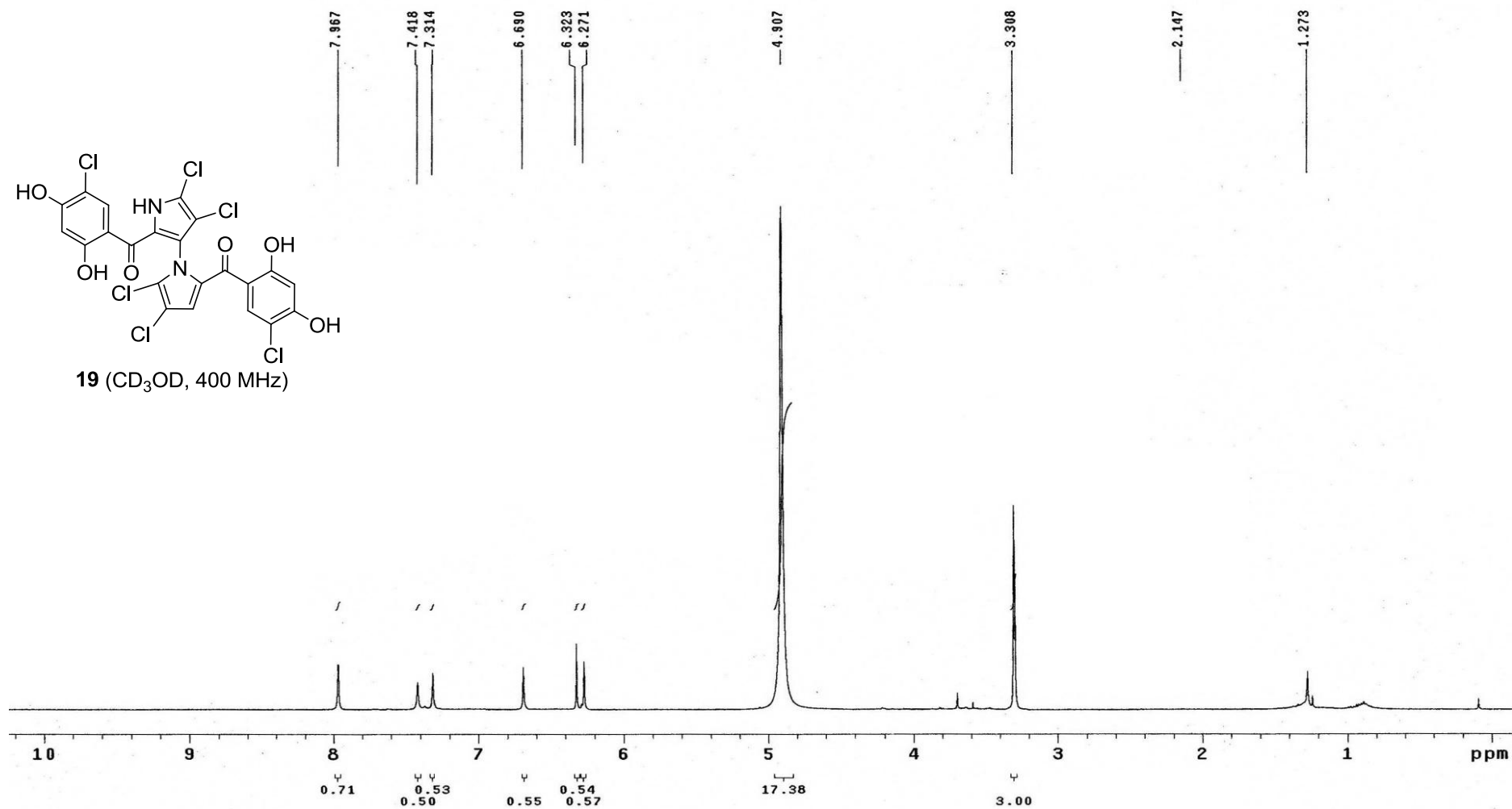


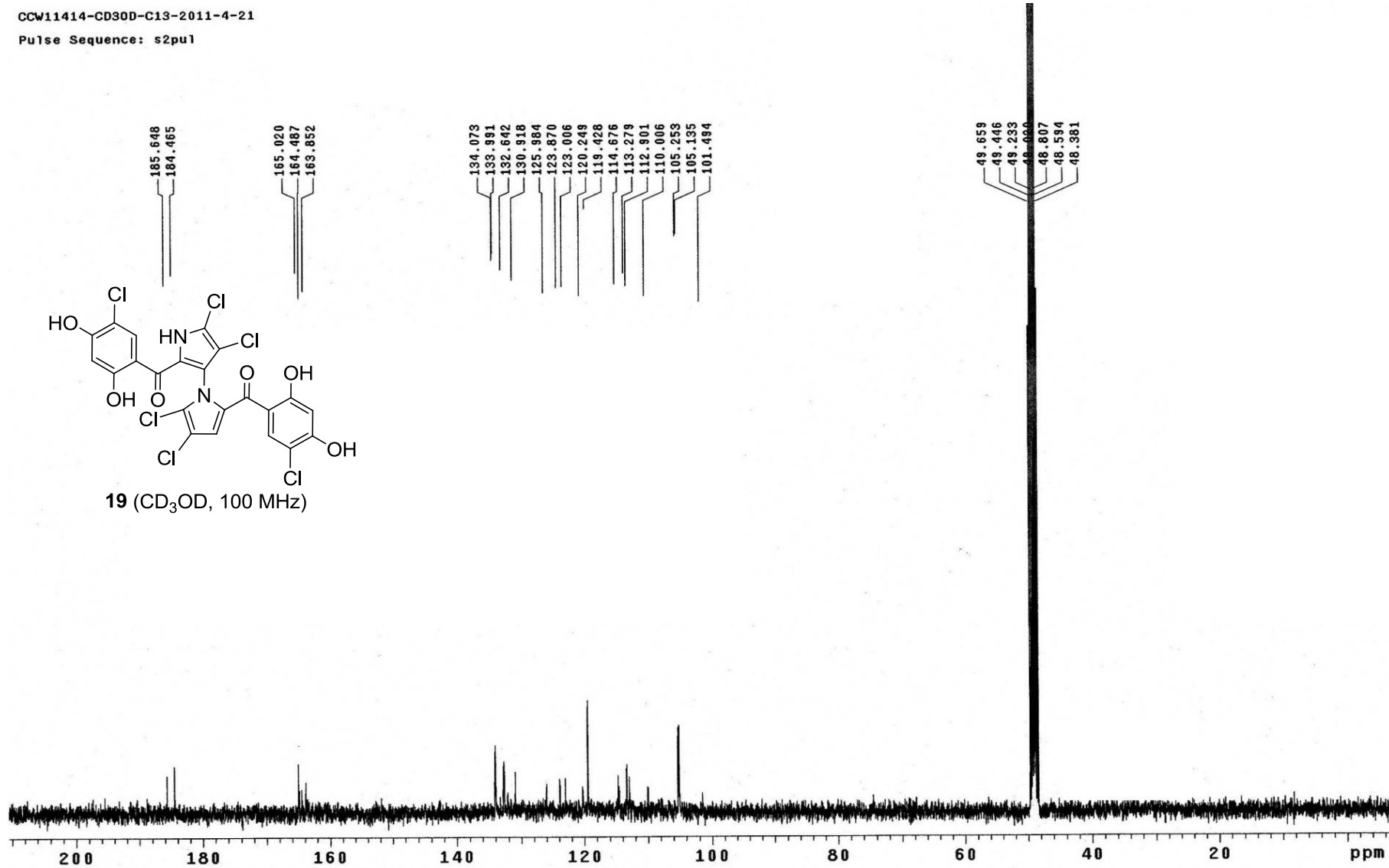
Figure S26.  $^{13}\text{C}$  NMR spectrum of 19.

Figure S27.  $^1\text{H}$  NMR spectrum of **20**.

CCW112183 H1 CDC13 2011-2-18

Pulse Sequence: s2pu1

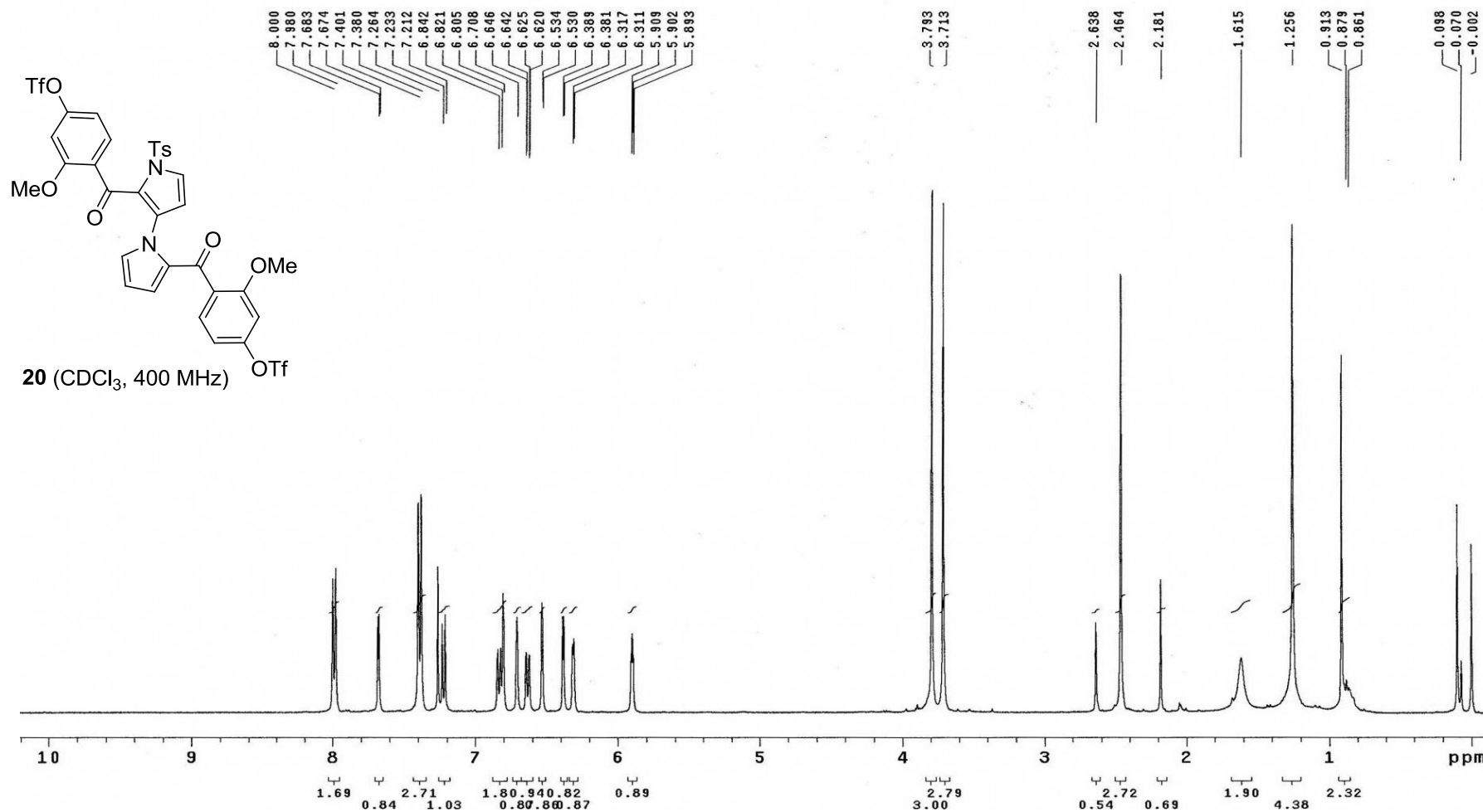


Figure S28.  $^{13}\text{C}$  NMR spectrum of 20.

CCW113251-CDCL3-C13-2011-3-26

Pulse Sequence: s2pu1

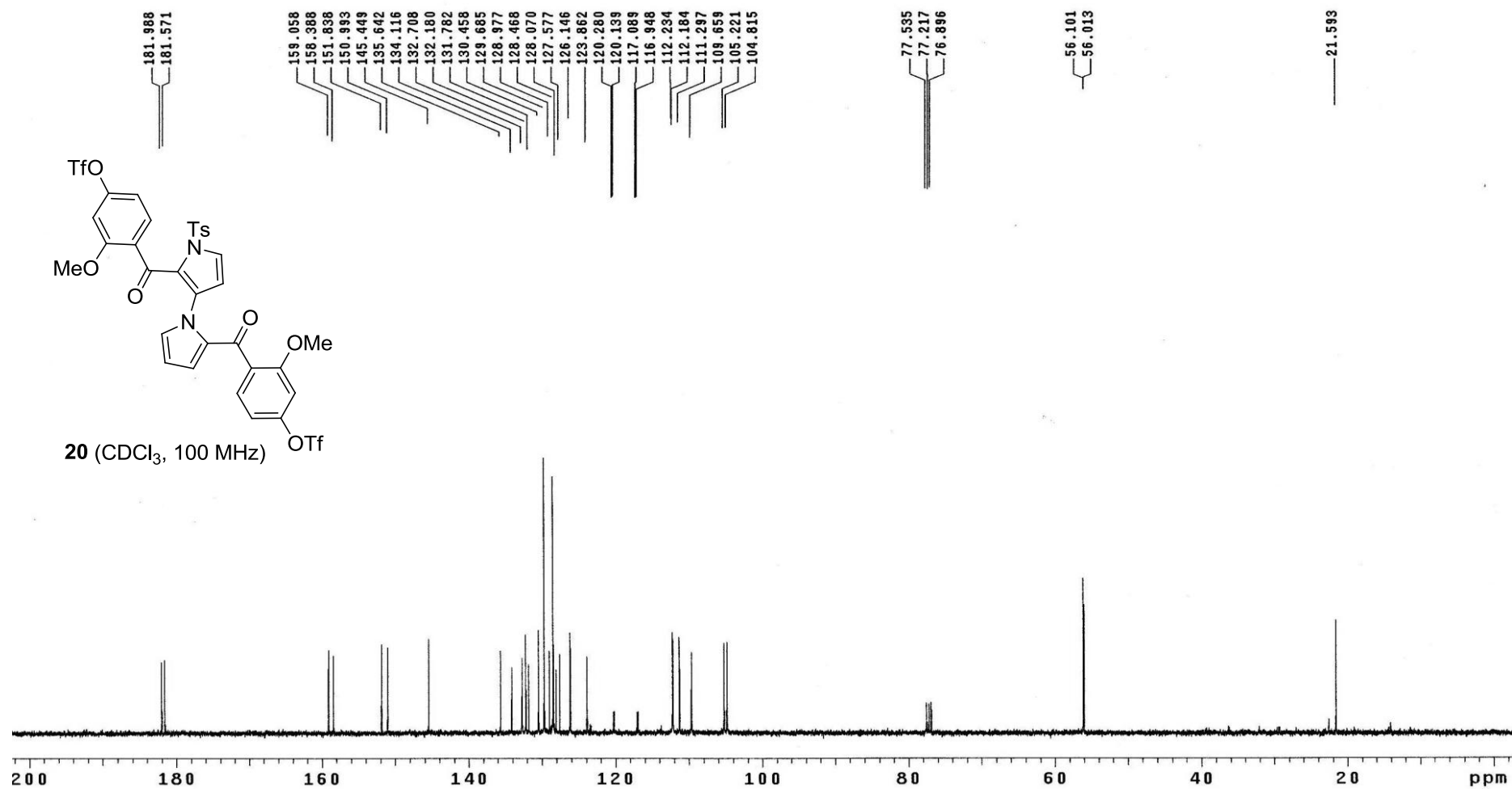


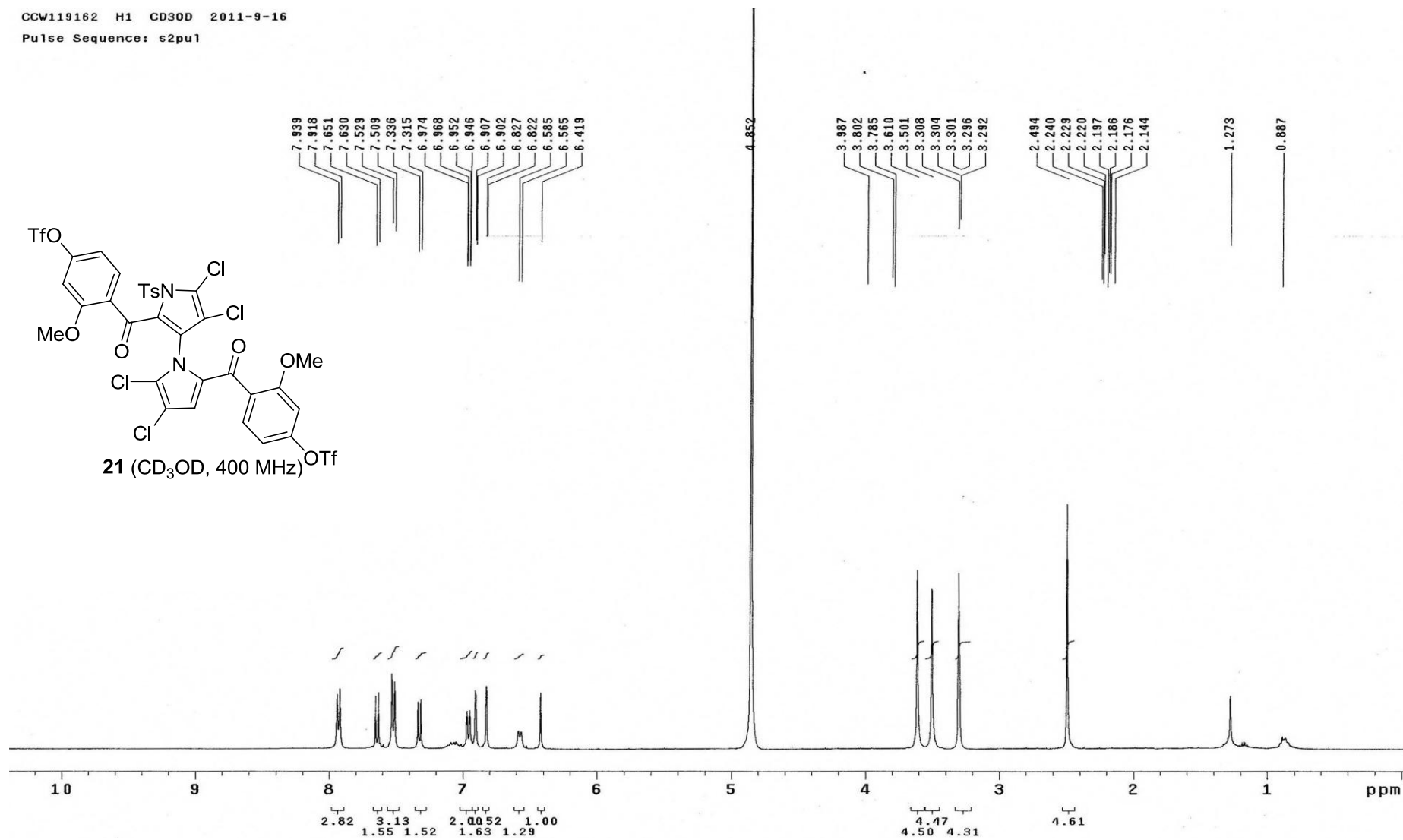
Figure S29.  $^1\text{H}$  NMR spectrum of 21.

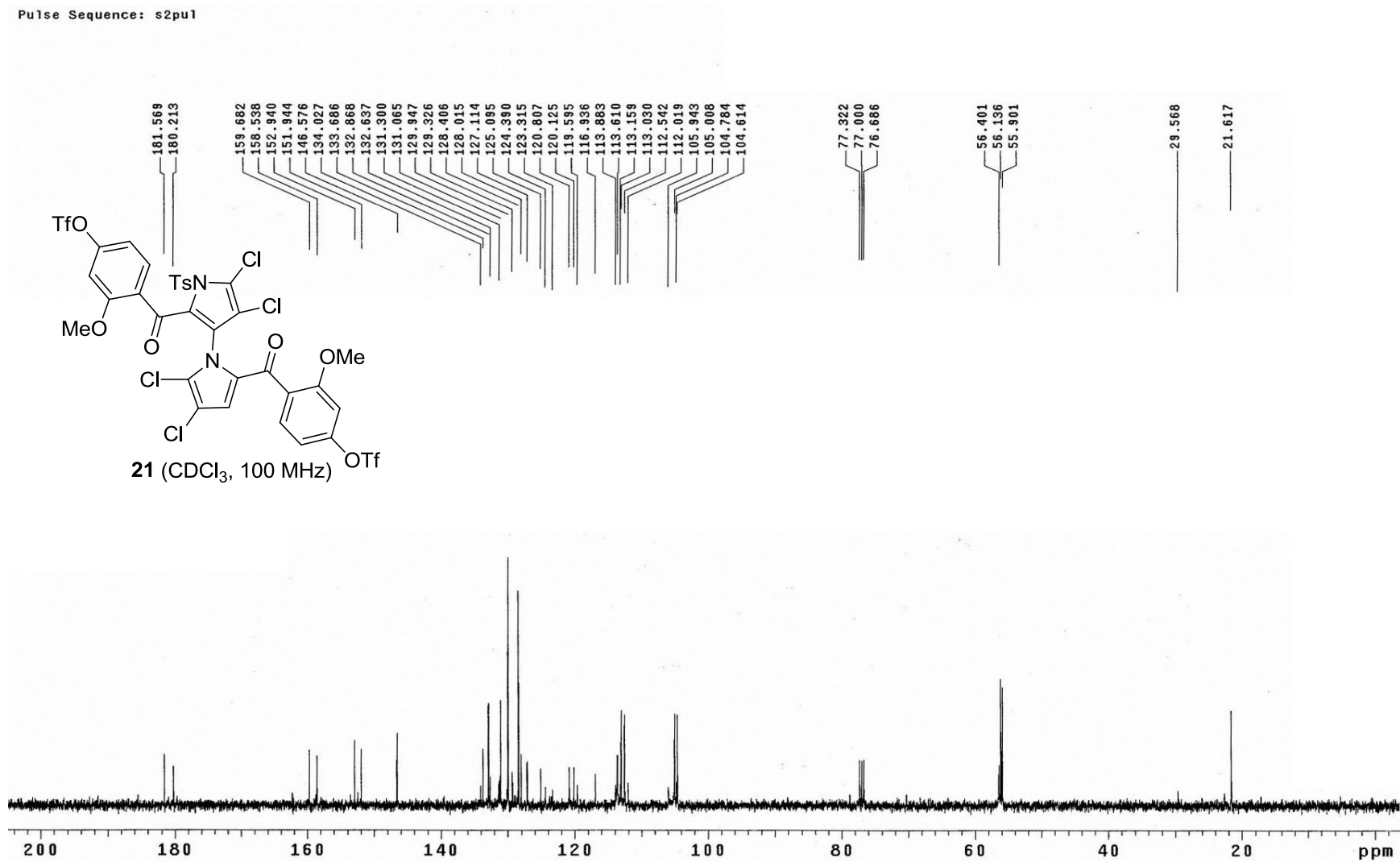
Figure S30.  $^{13}\text{C}$  NMR spectrum of 21.

Figure S31.  $^1\text{H}$  NMR spectrum of 22.

CCW119163 H1 CDC13 2011-9-16  
Pulse Sequence: s2pu1

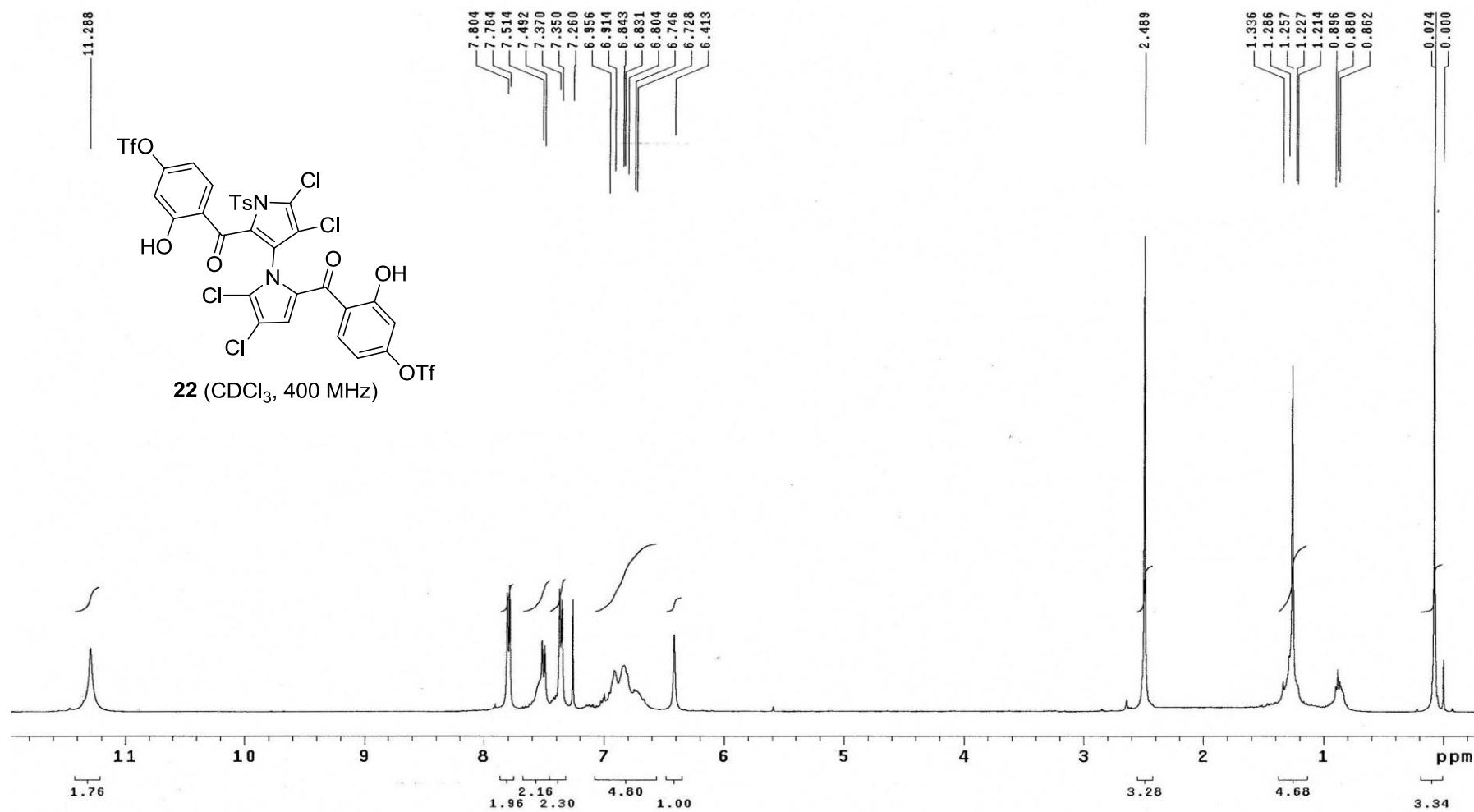


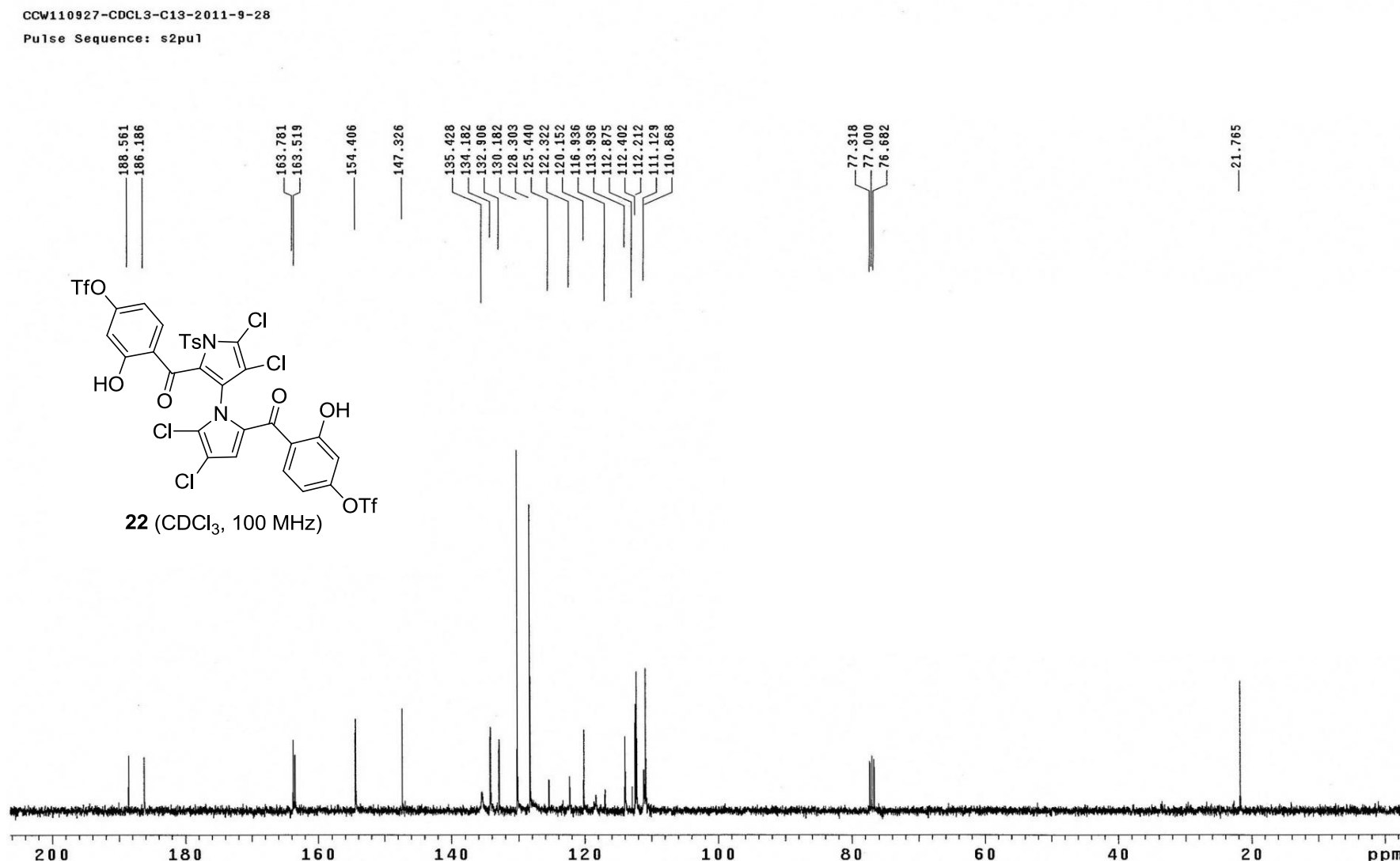
Figure S32.  $^{13}\text{C}$  NMR spectrum of **22**.



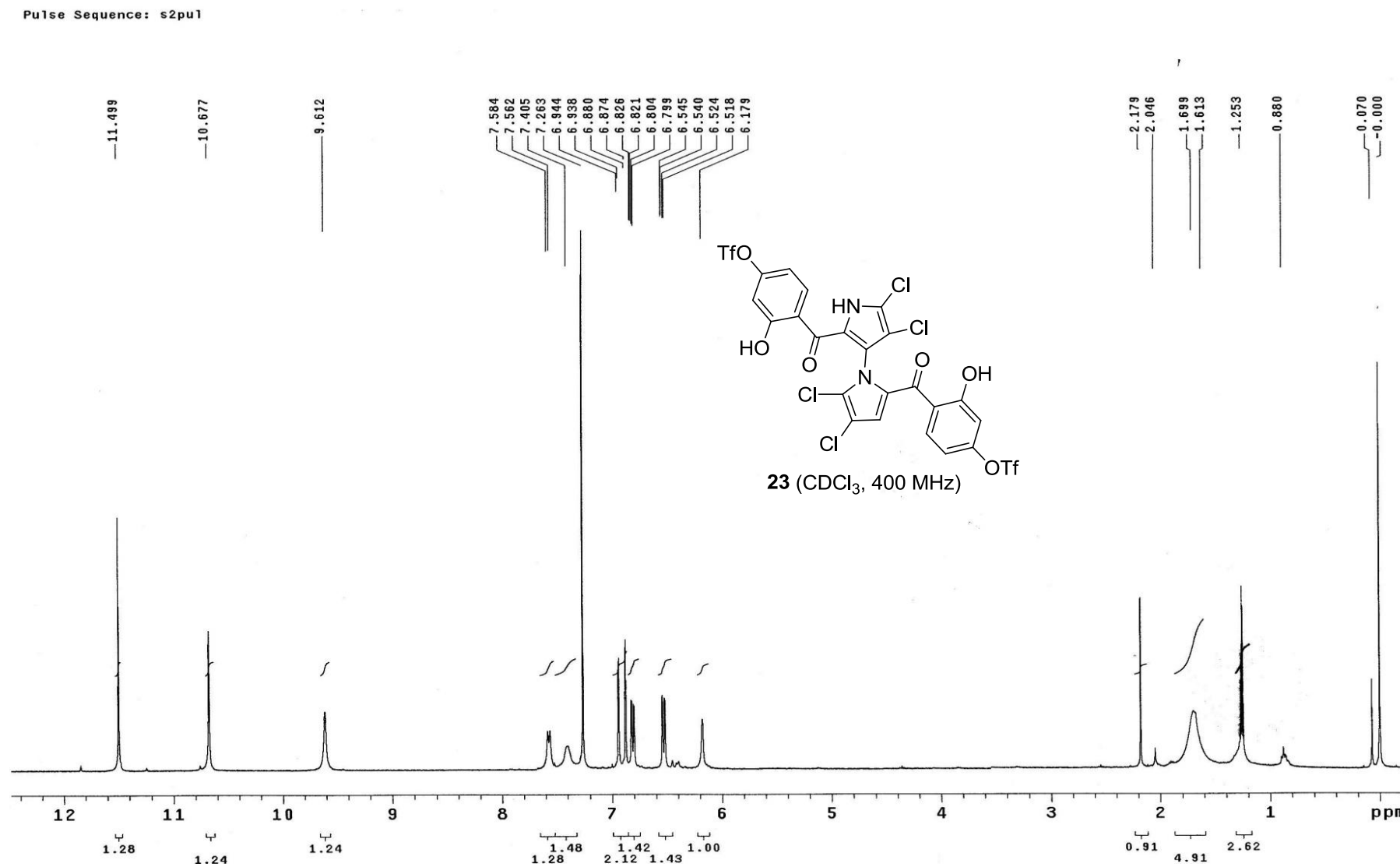
Figure S33.  $^1\text{H}$  NMR spectrum of 23.

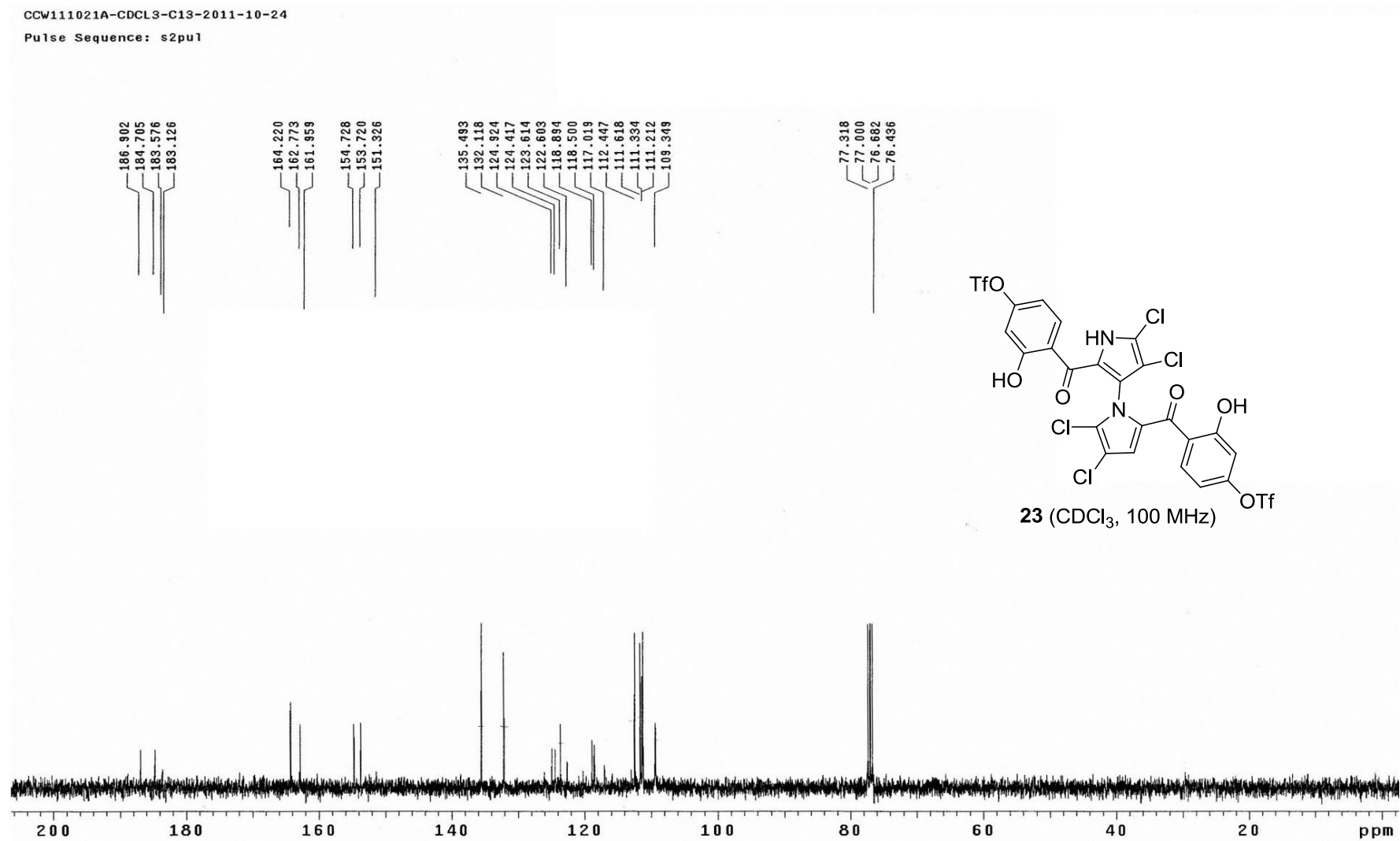
Figure S34.  $^{13}\text{C}$  NMR spectrum of **23**.

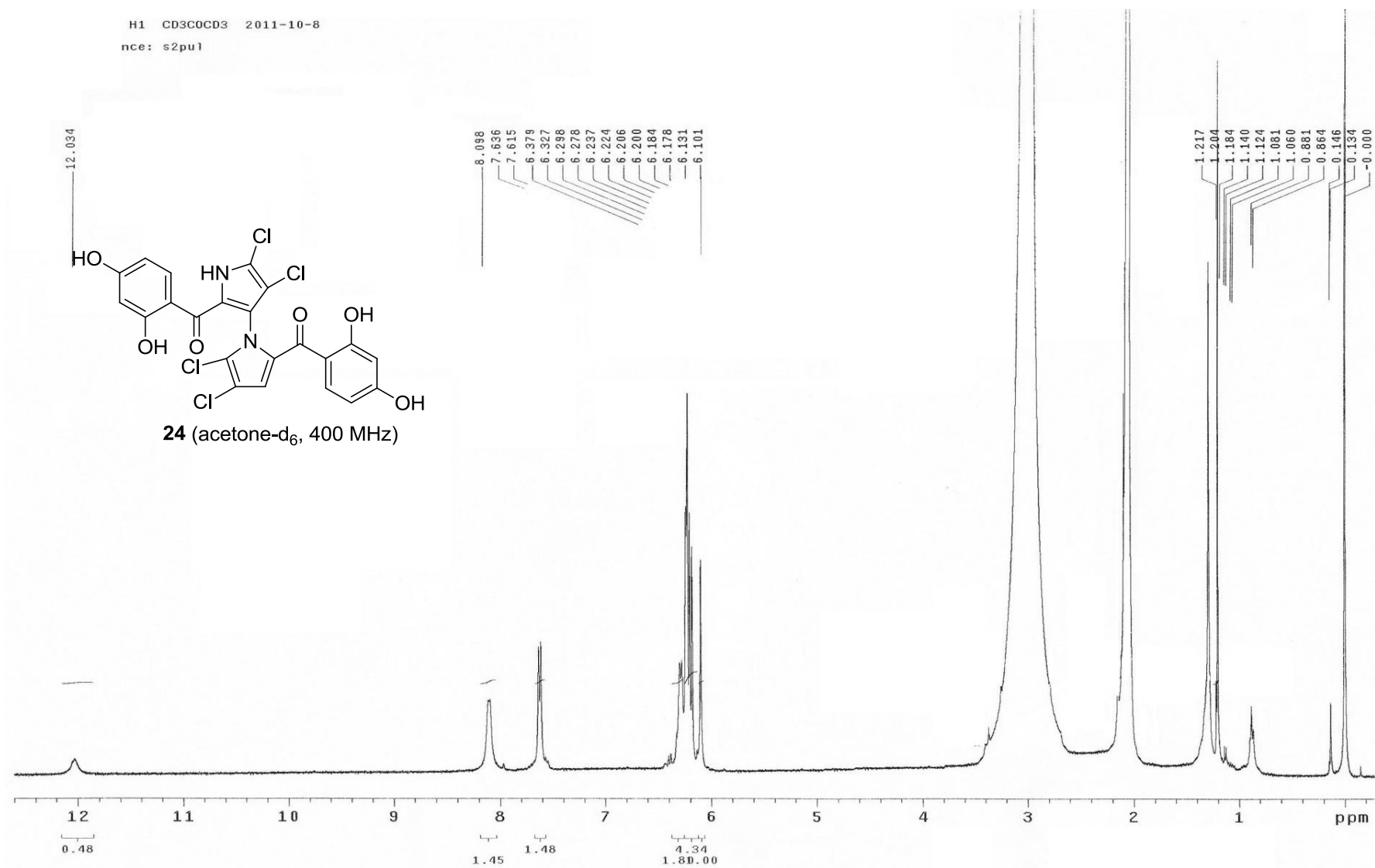
Figure S35.  $^1\text{H}$  NMR spectrum of 24.

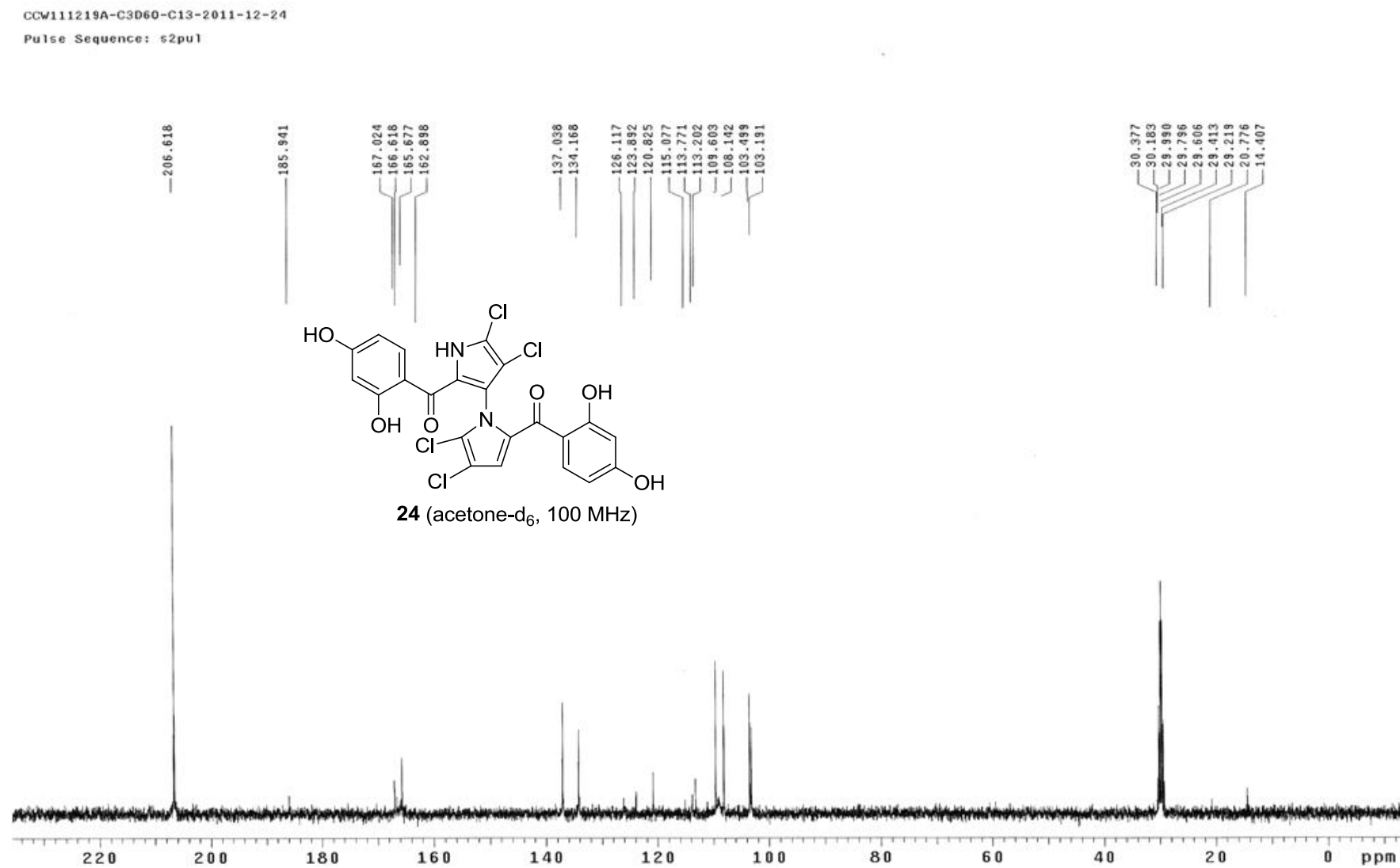
Figure S36.  $^{13}\text{C}$  NMR spectrum of 24.

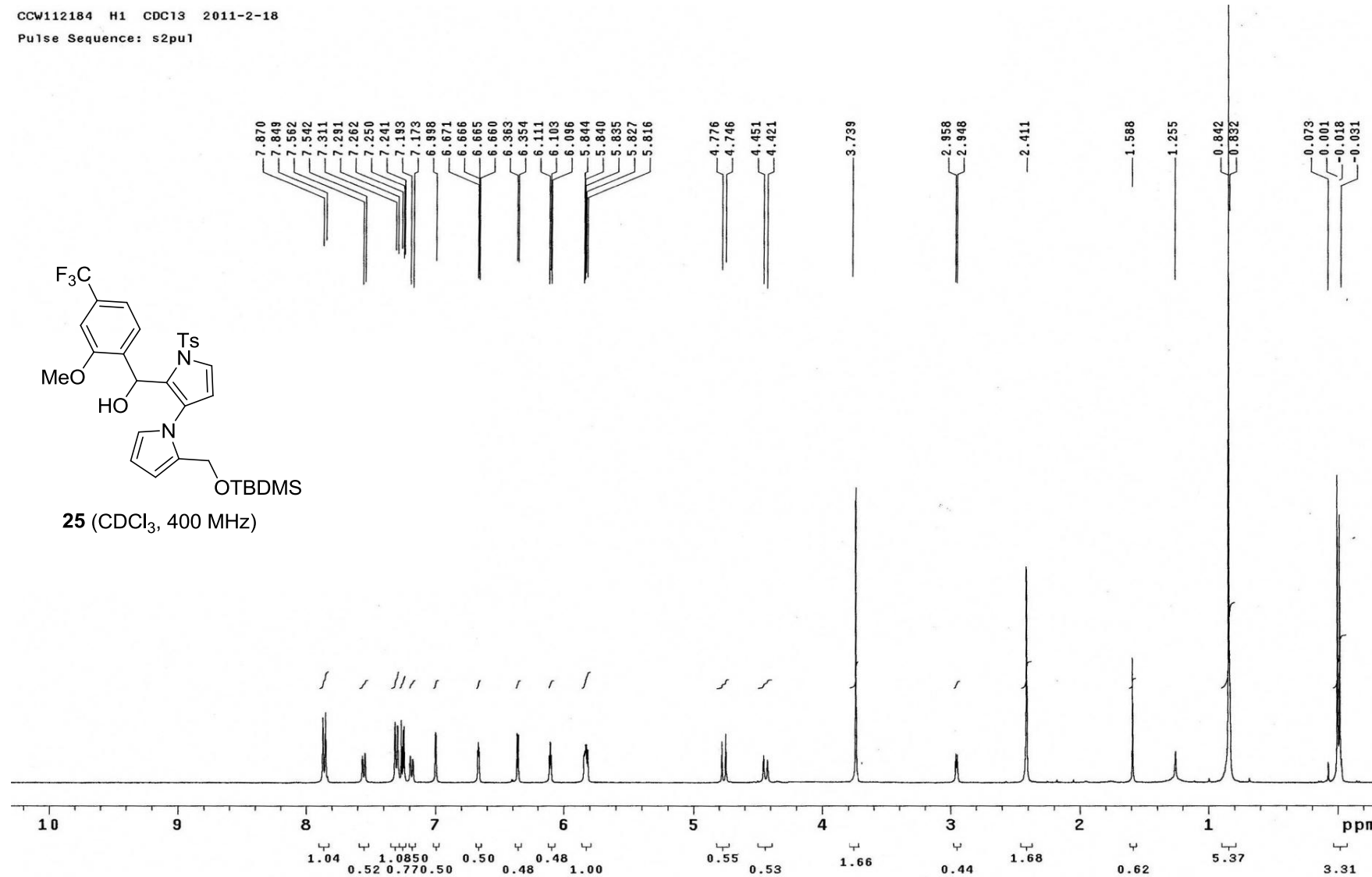
Figure S37.  $^1\text{H}$  NMR spectrum of 25.

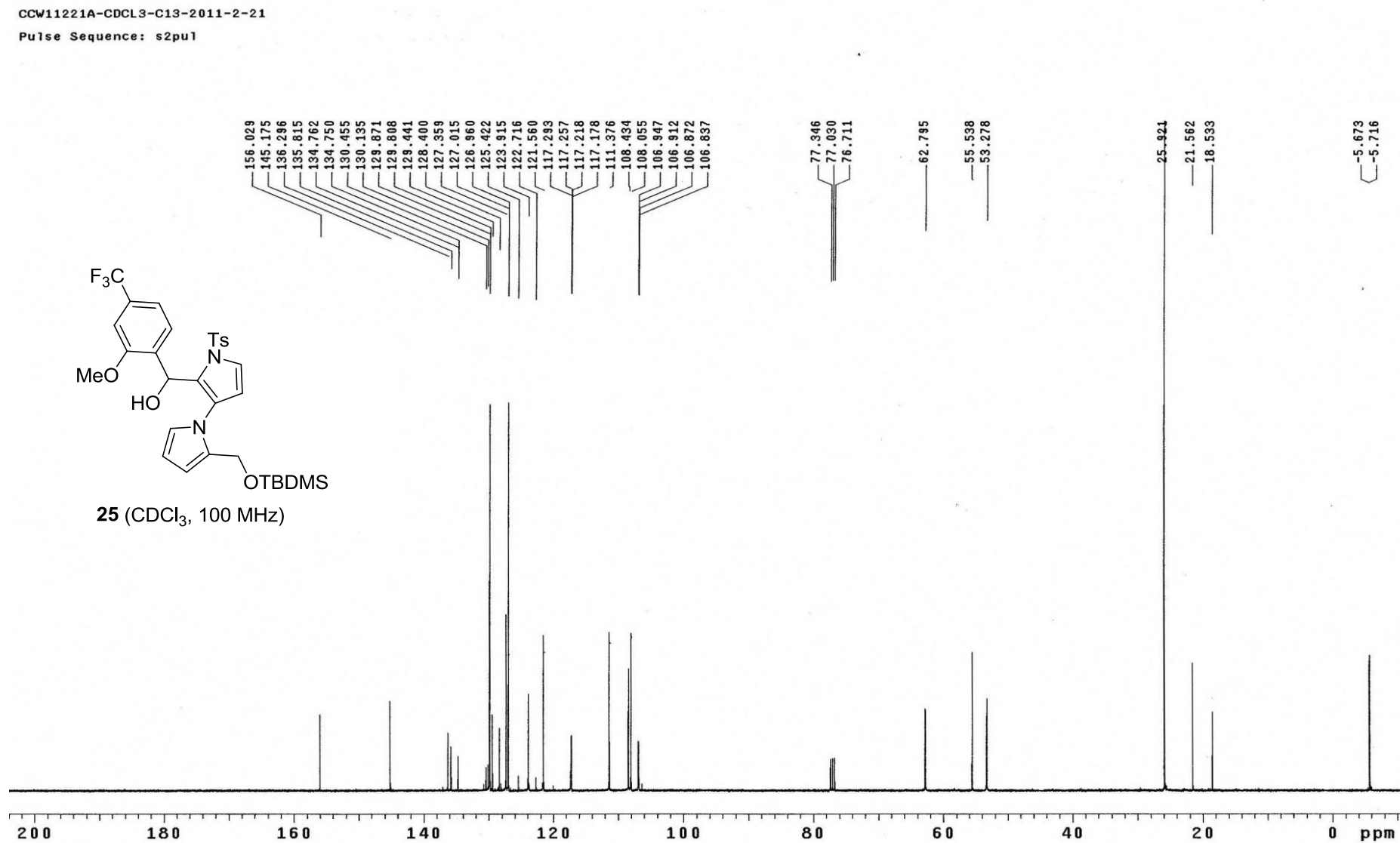
Figure S38.  $^{13}\text{C}$  NMR spectrum of 25.

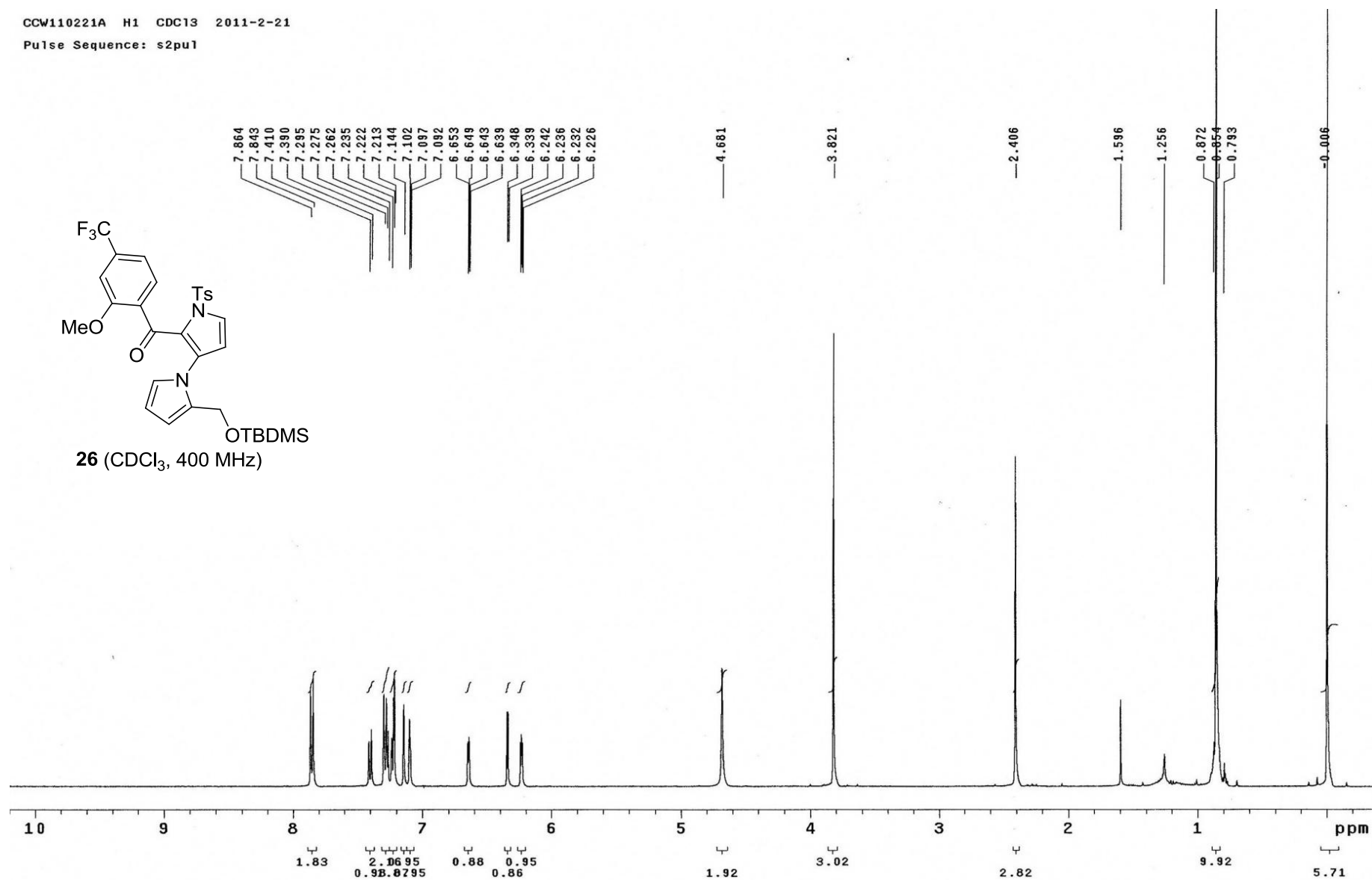
Figure S39.  $^1\text{H}$  NMR spectrum of 26.

Figure S40.  $^{13}\text{C}$  NMR spectrum of 26.

CCW110222A-CDCL3-C13-2011-2-23

Pulse Sequence: s2pu1

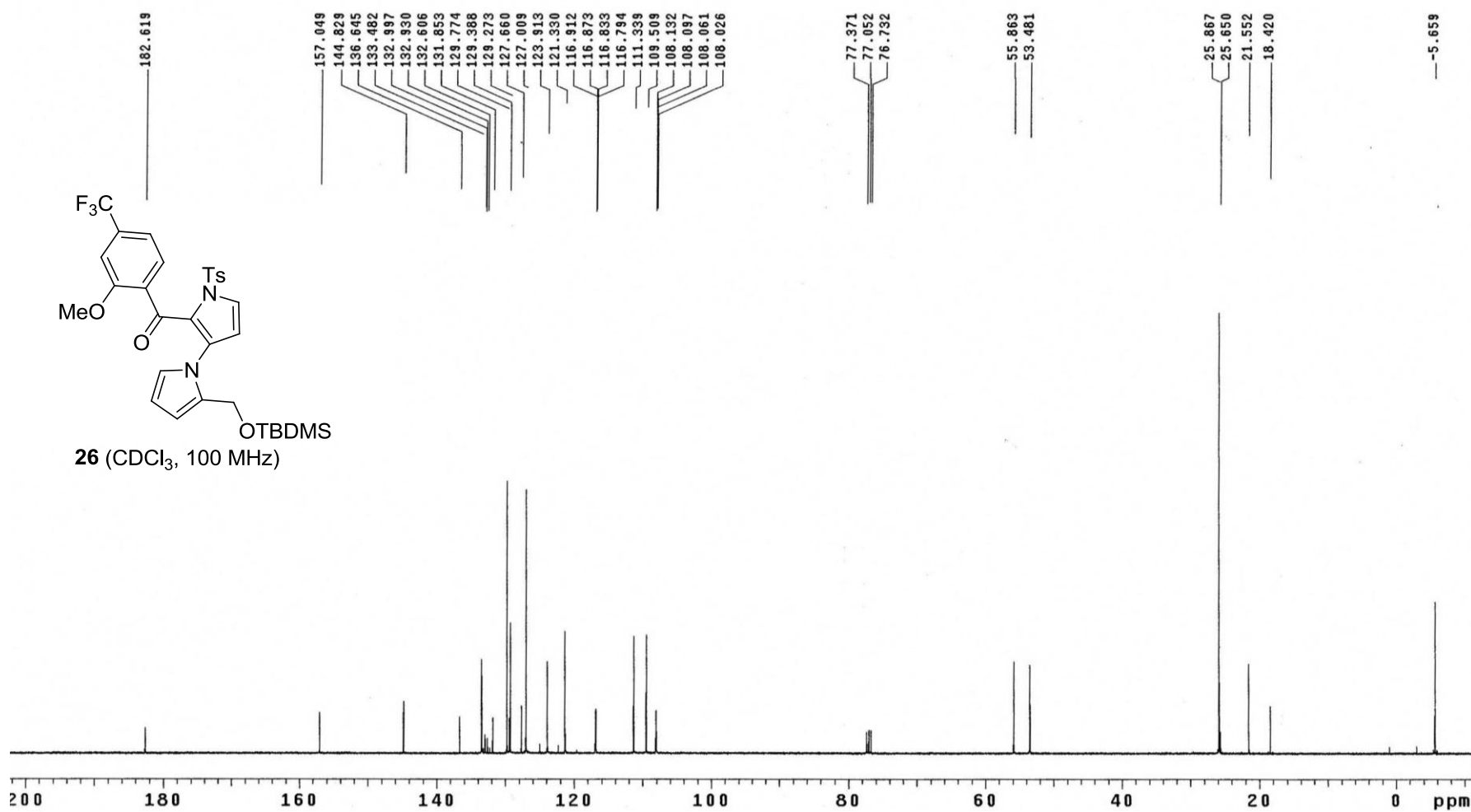




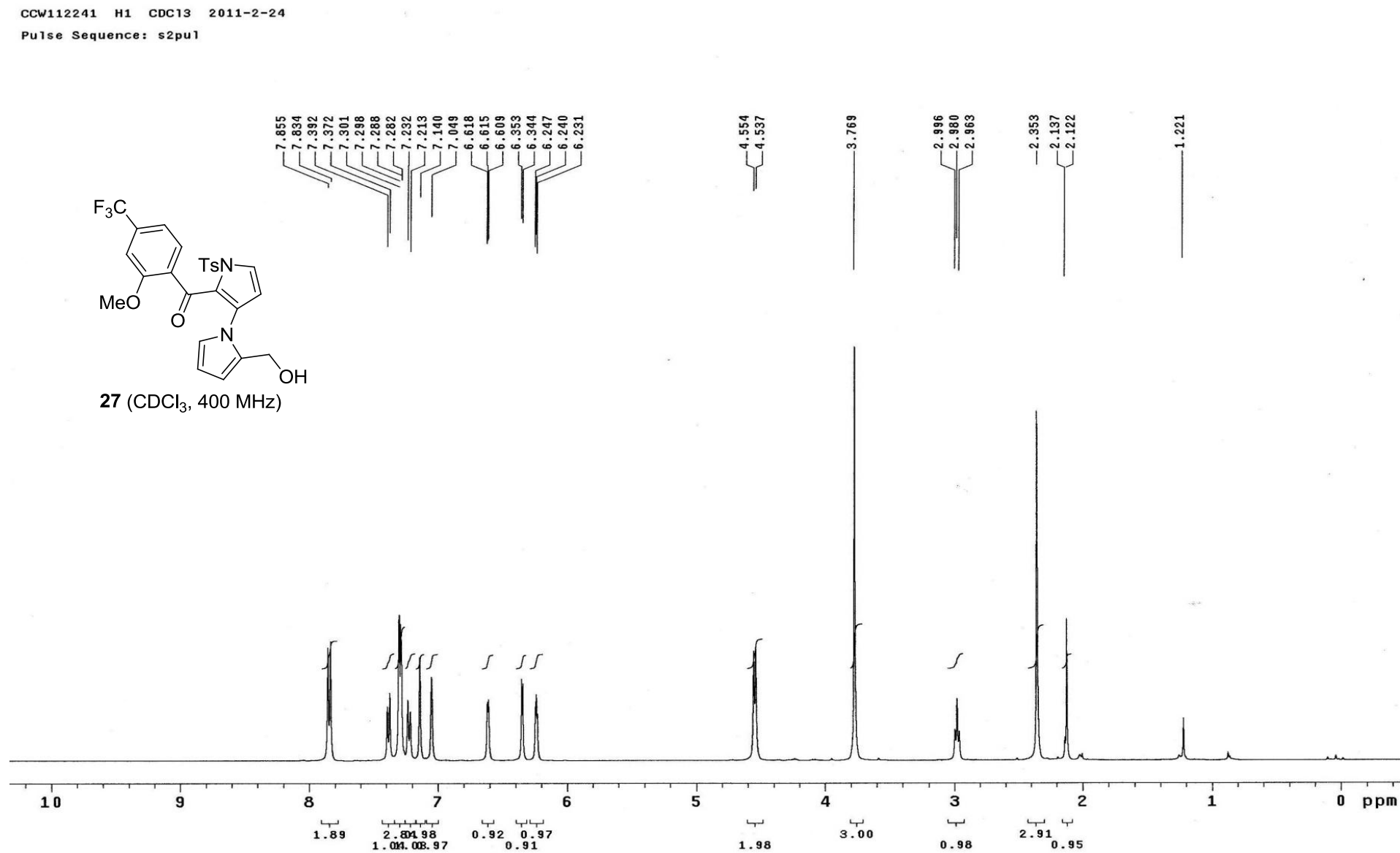
Figure S41.  $^1\text{H}$  NMR spectrum of 27.

Figure S42.  $^{13}\text{C}$  NMR spectrum of 27.

CCW112241-CDCL3-C13-2011-2-25

Pulse Sequence: s2pu1

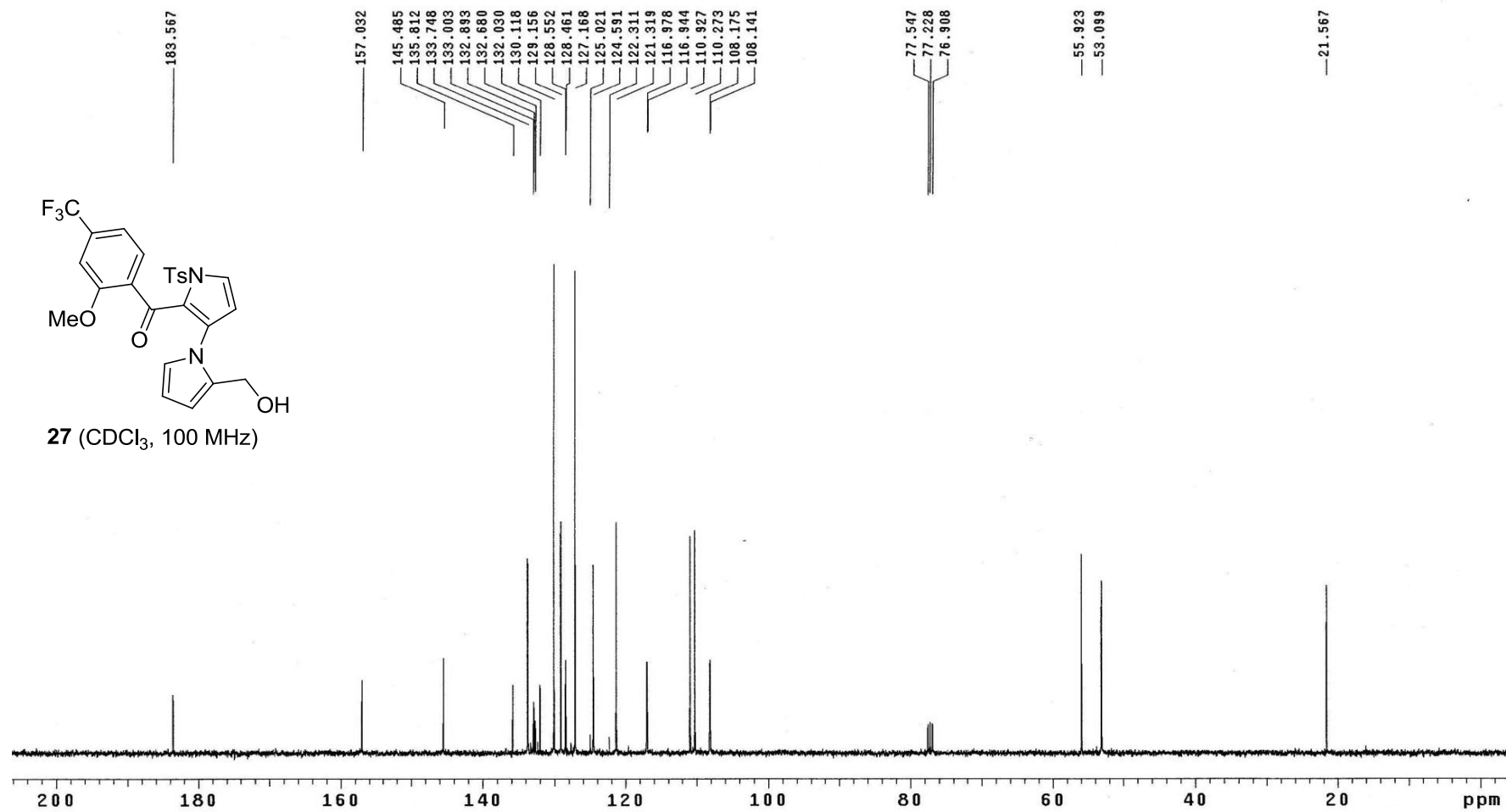


Figure S43.  $^1\text{H}$  NMR spectrum of 28.

CCW107301 H1 CDC13 2010-7-30

Pulse Sequence: s2pu1

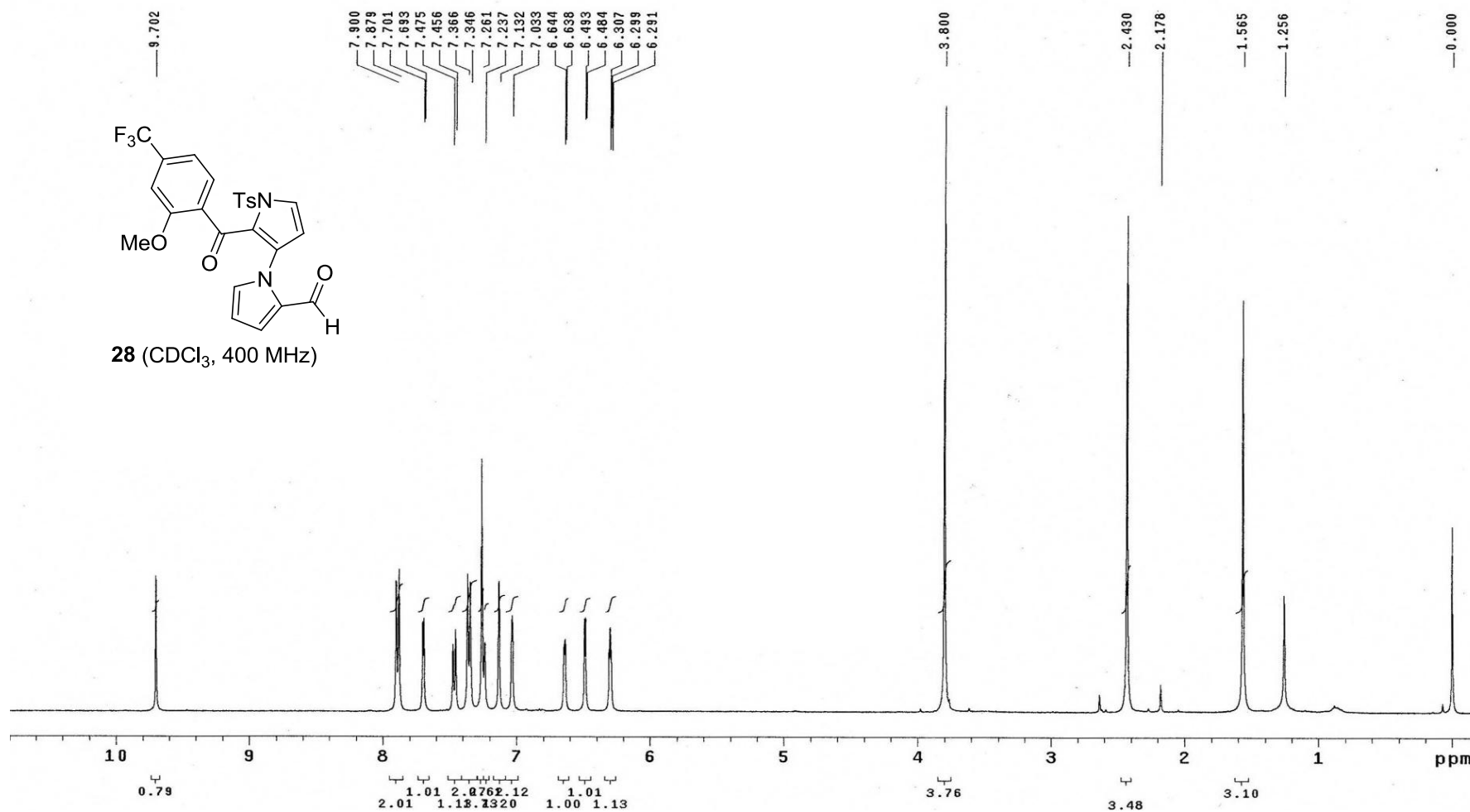


Figure S44.  $^{13}\text{C}$  NMR spectrum of 28.CCW110228A-CDCl<sub>3</sub>-C13-2011-3-1

Pulse Sequence: s2pu1

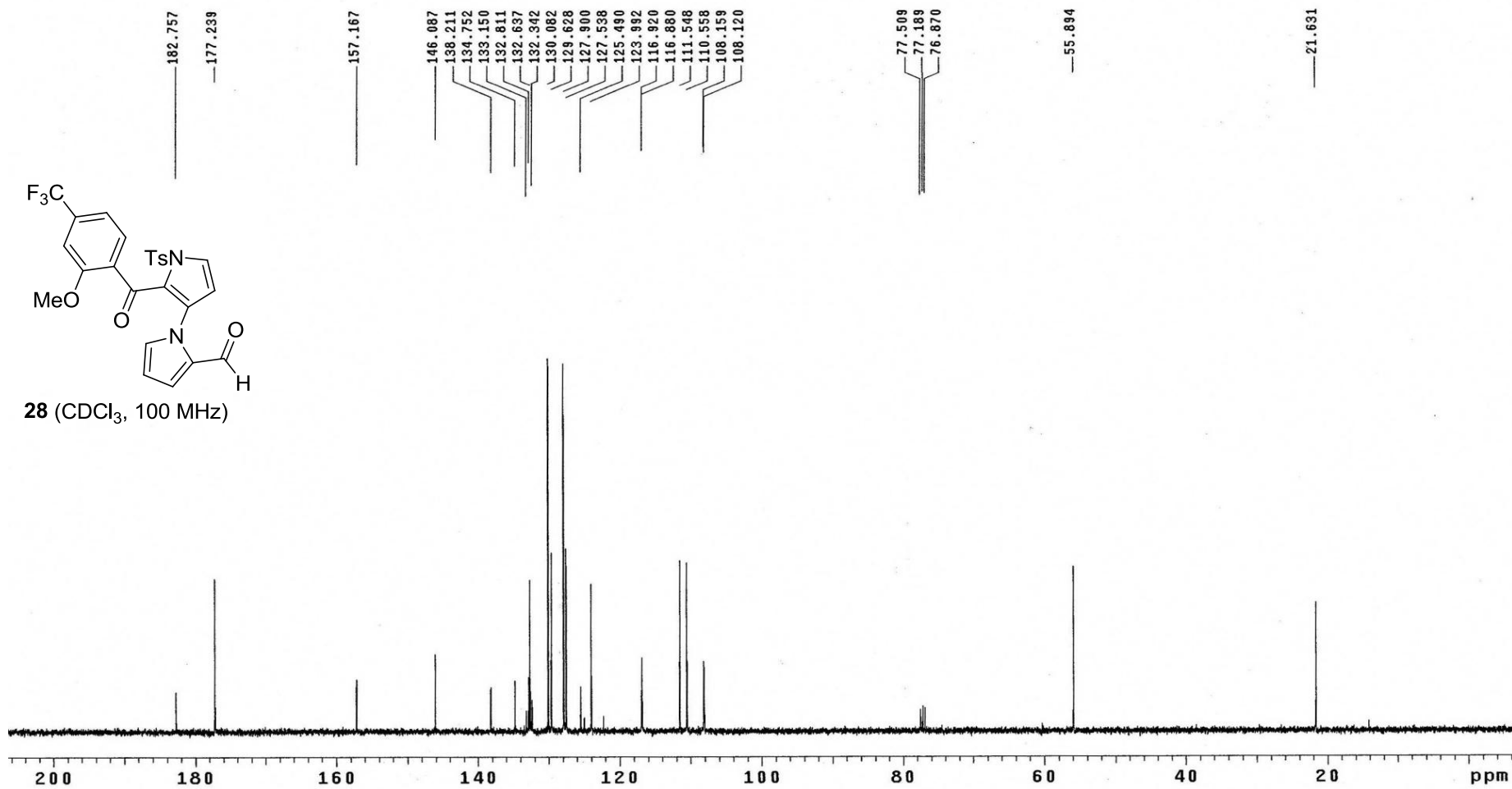


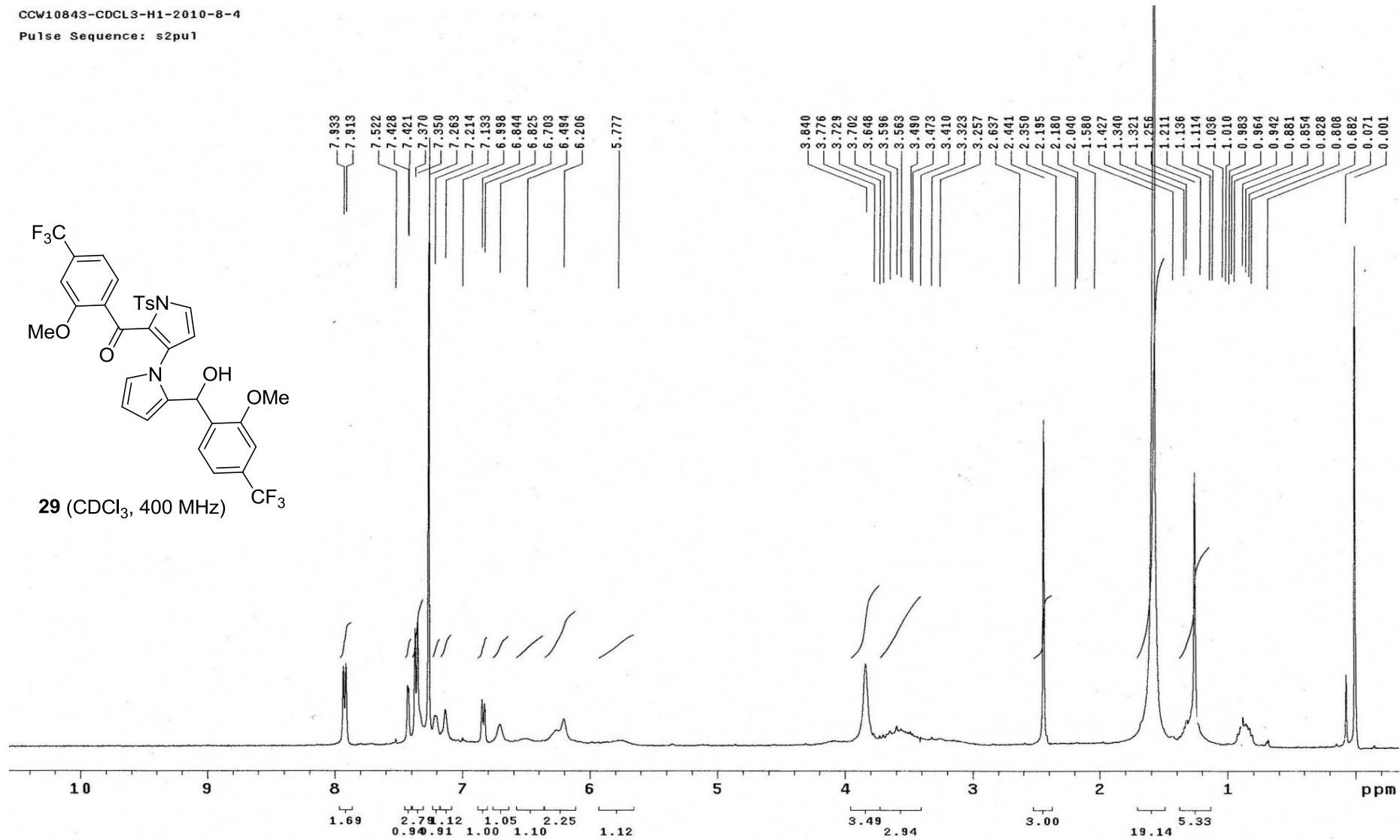
Figure S45.  $^1\text{H}$  NMR spectrum of **29**.

Figure S46.  $^{13}\text{C}$  NMR spectrum of 29.

CCW11311b-CDCL3-C13-2011-3-12

Pulse Sequence: s2pu1

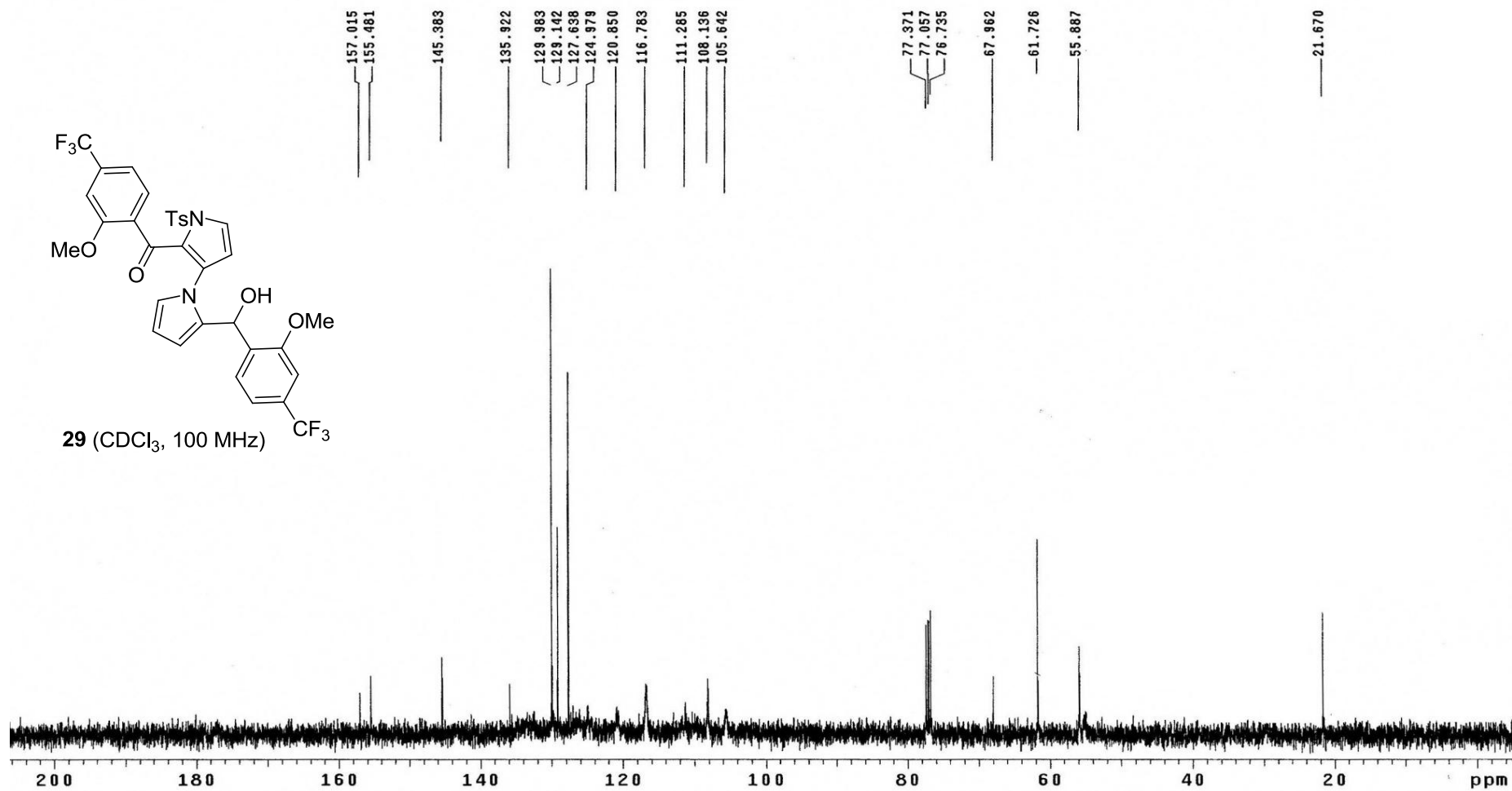


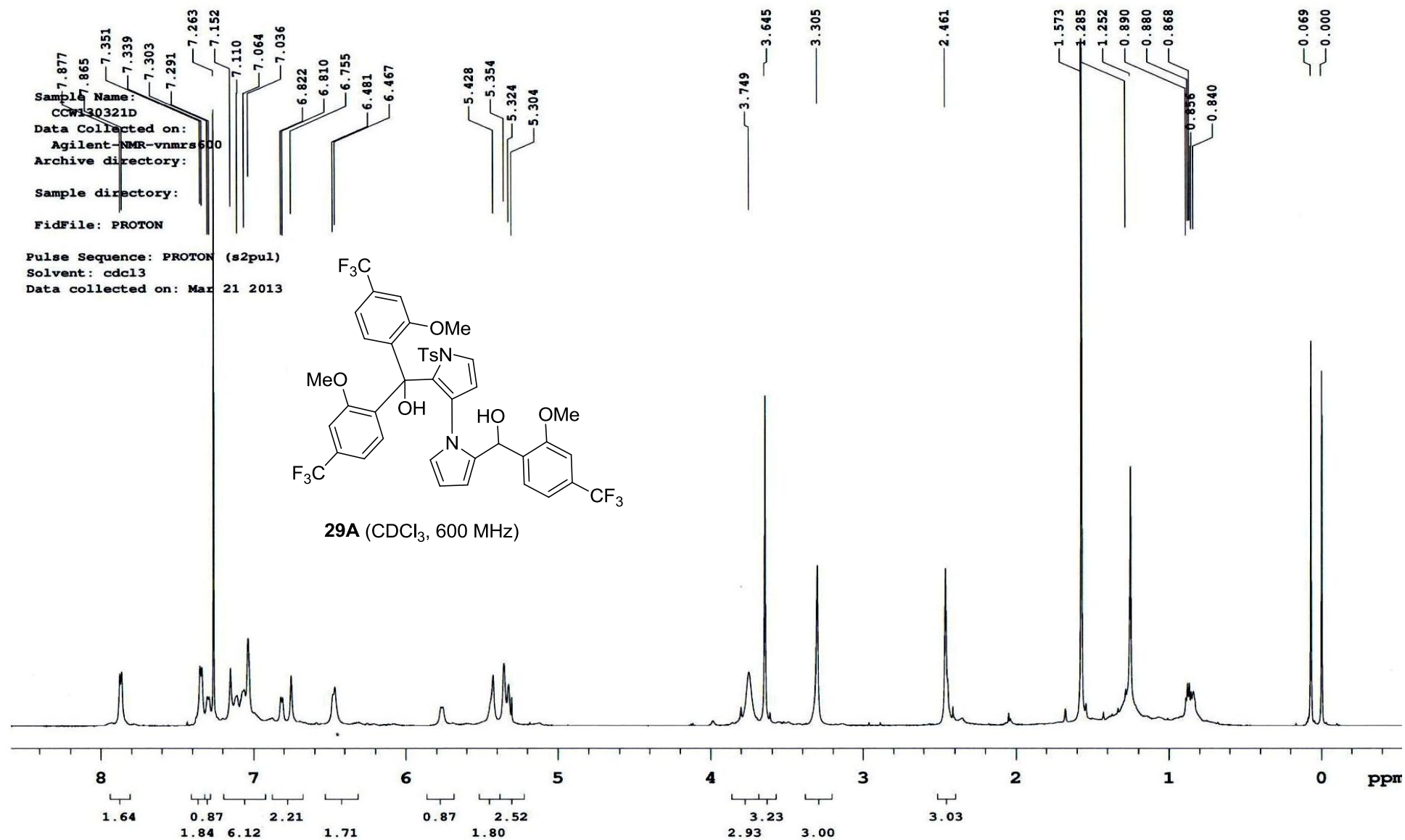
Figure S47.  $^1\text{H}$  NMR spectrum of 29A.

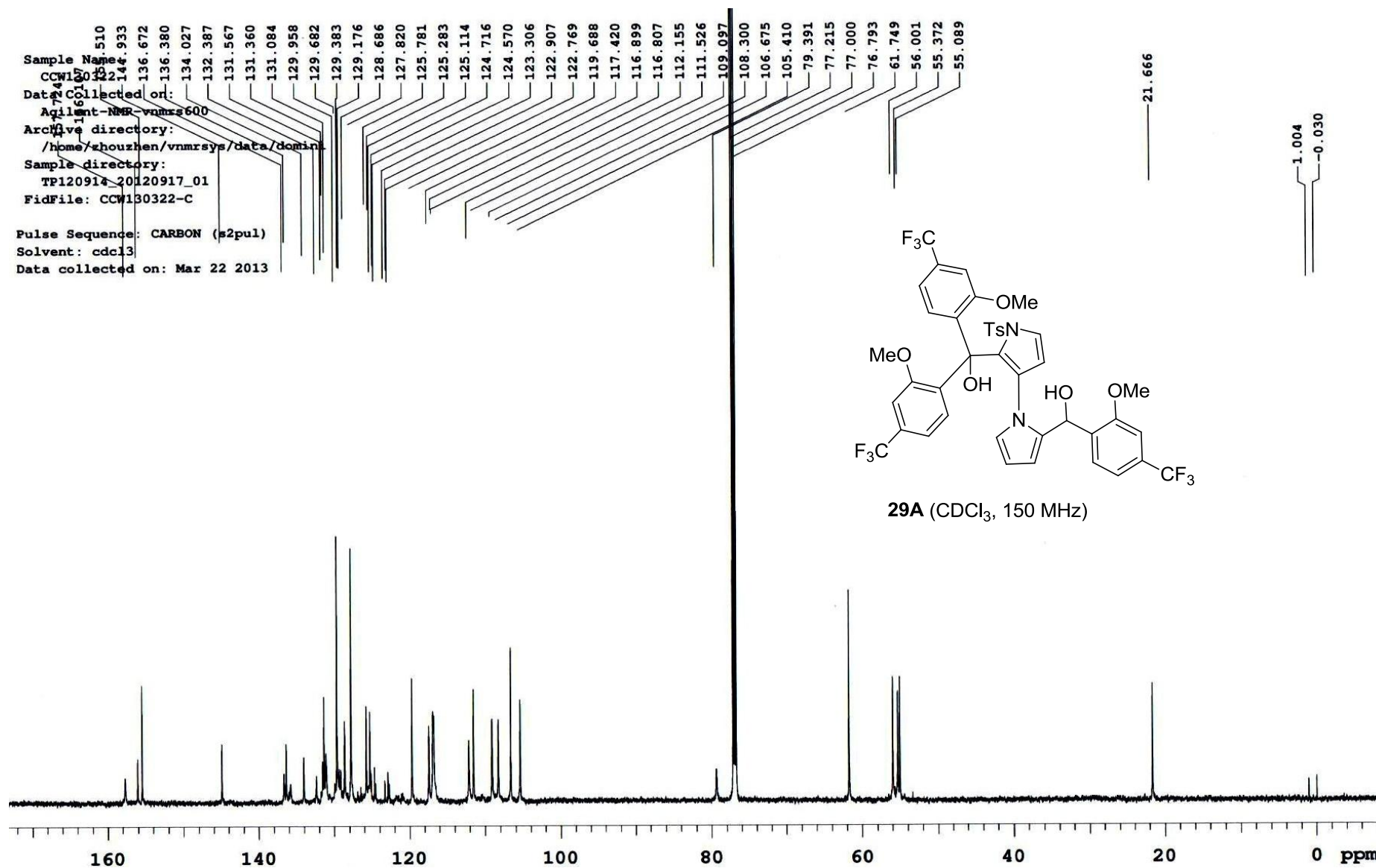
Figure S48.  $^{13}\text{C}$  NMR spectrum of 29A.



Figure S49.  $^1\text{H}$  NMR spectrum of **30**.

CCW103102 H1 CDC13 2010-3-10

Pulse Sequence: s2pu1

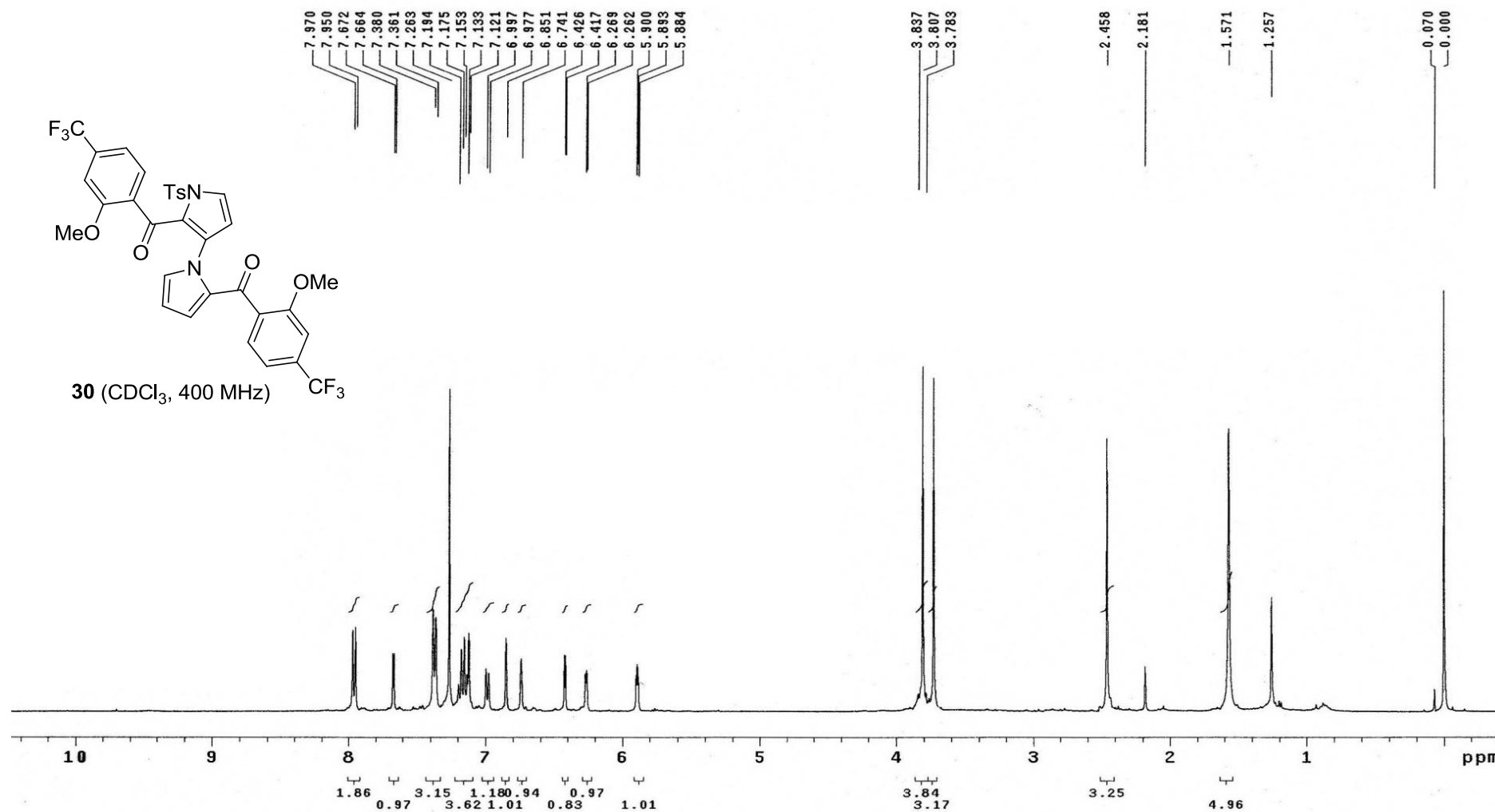


Figure S50.  $^{13}\text{C}$  NMR spectrum of 30.

CCW11321-CDCL3-C13-2011-3-22

Pulse Sequence: s2pu1

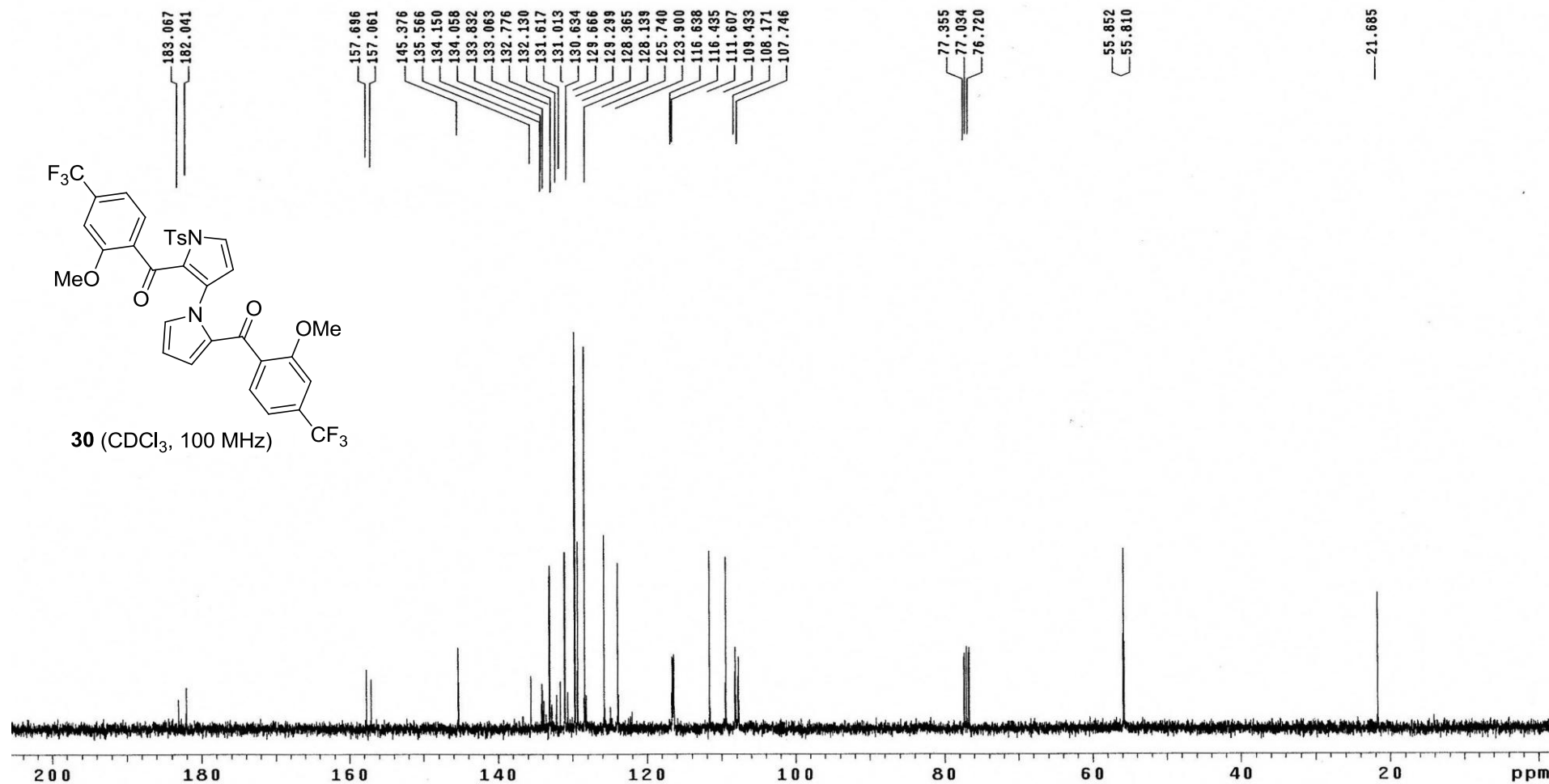


Figure S51.  $^1\text{H}$  NMR spectrum of 31.

CCW10316 H1 CDC13 2010-3-16  
Pulse Sequence: s2pu1

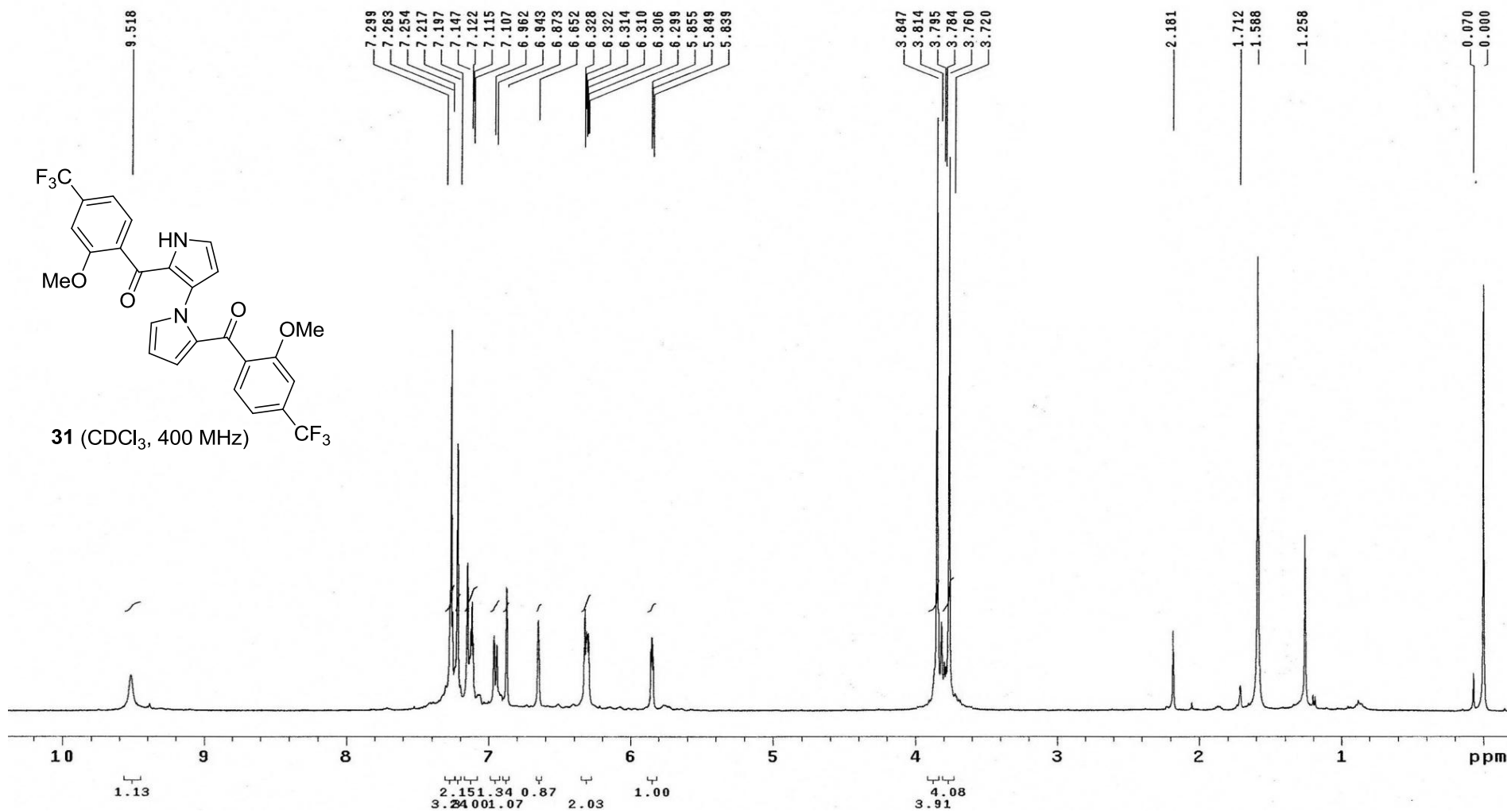


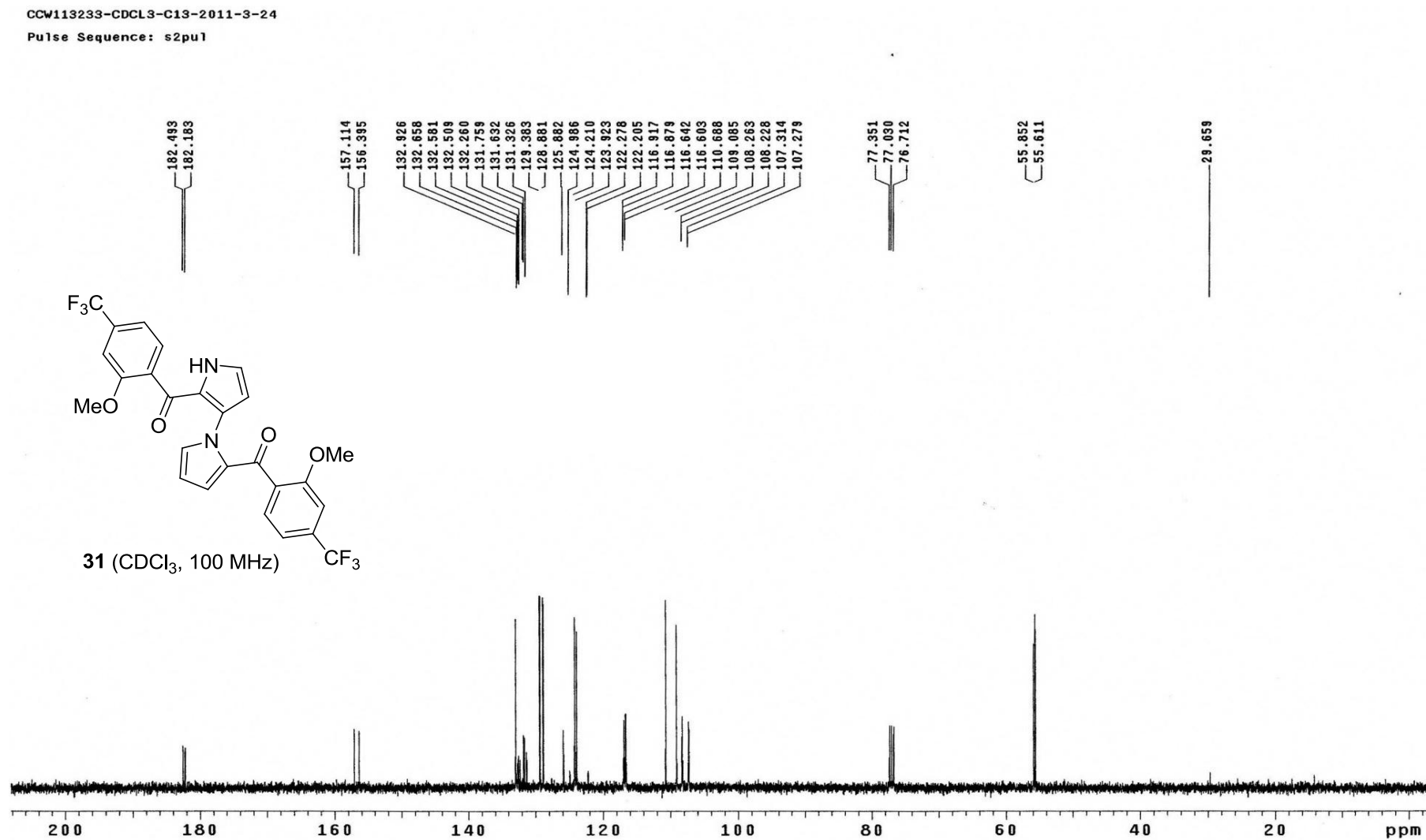
Figure S52.  $^{13}\text{C}$  NMR spectrum of 31.

Figure S53.  $^1\text{H}$  NMR spectrum of 32.

CCW12423 H1 CDC13 2012-4-23  
Pulse Sequence: s2pu1

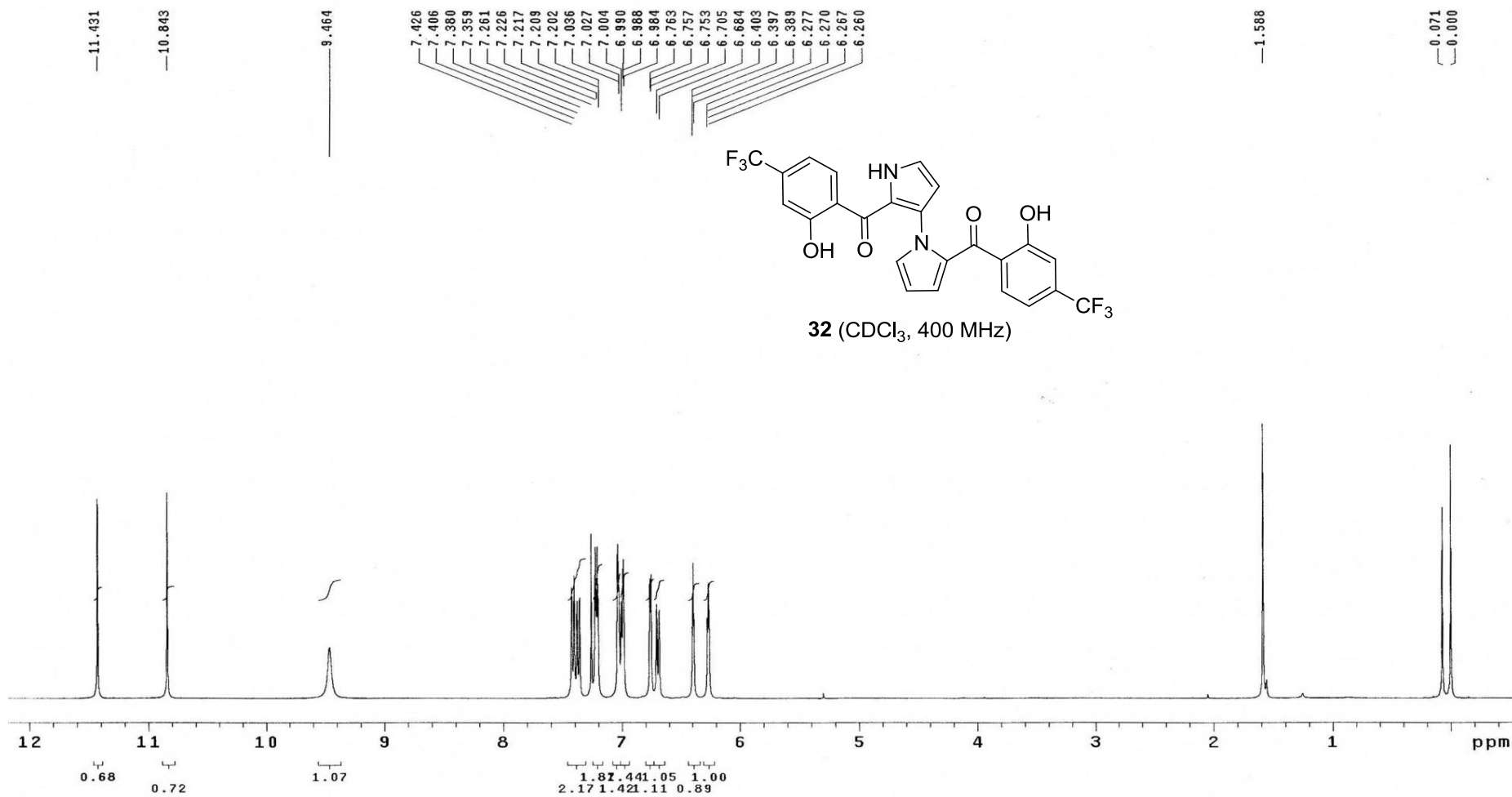


Figure S54.  $^{13}\text{C}$  NMR spectrum of 32.

CCW110711B-CDCL3-C13-2011-7-11

Pulse Sequence: s2pu1

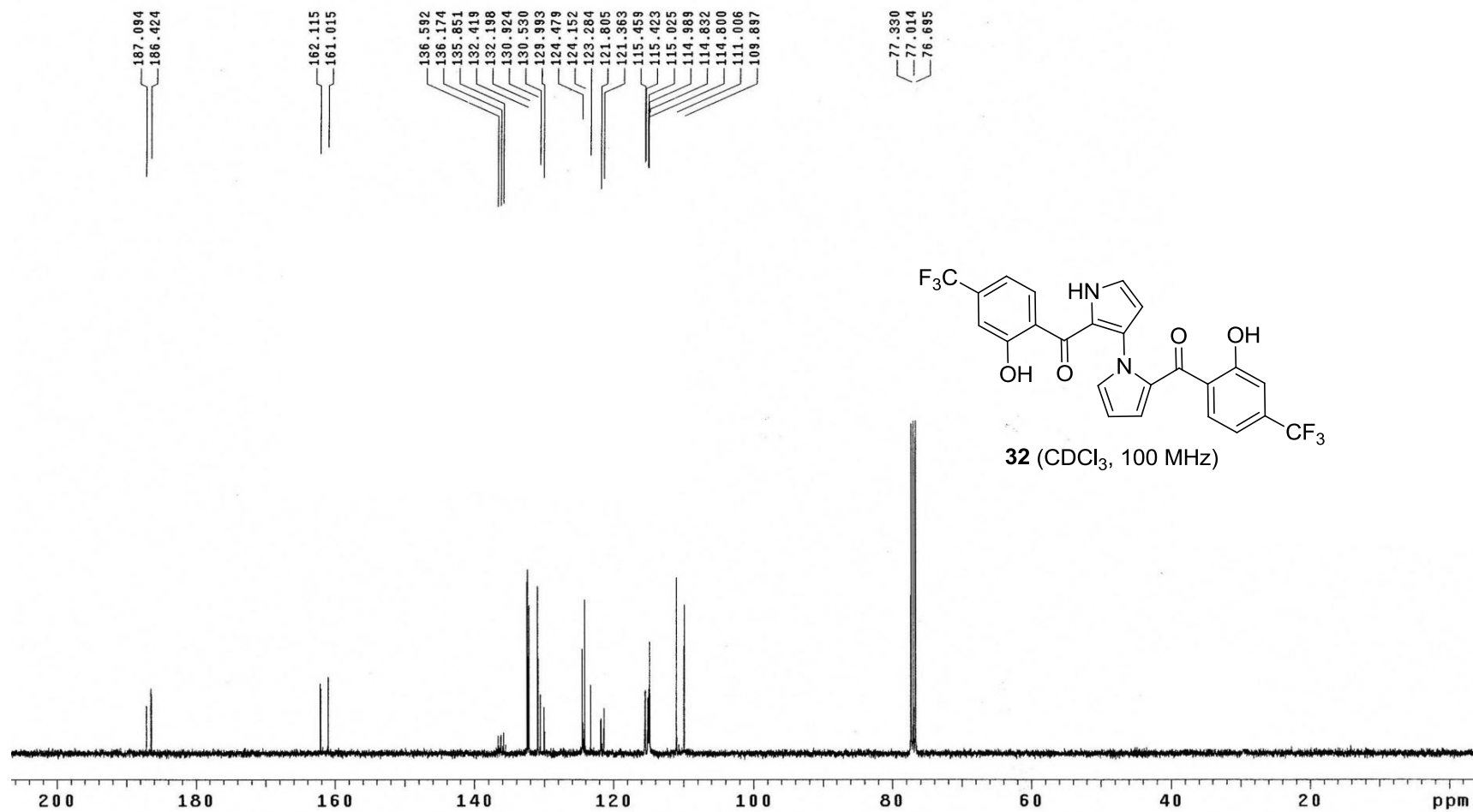


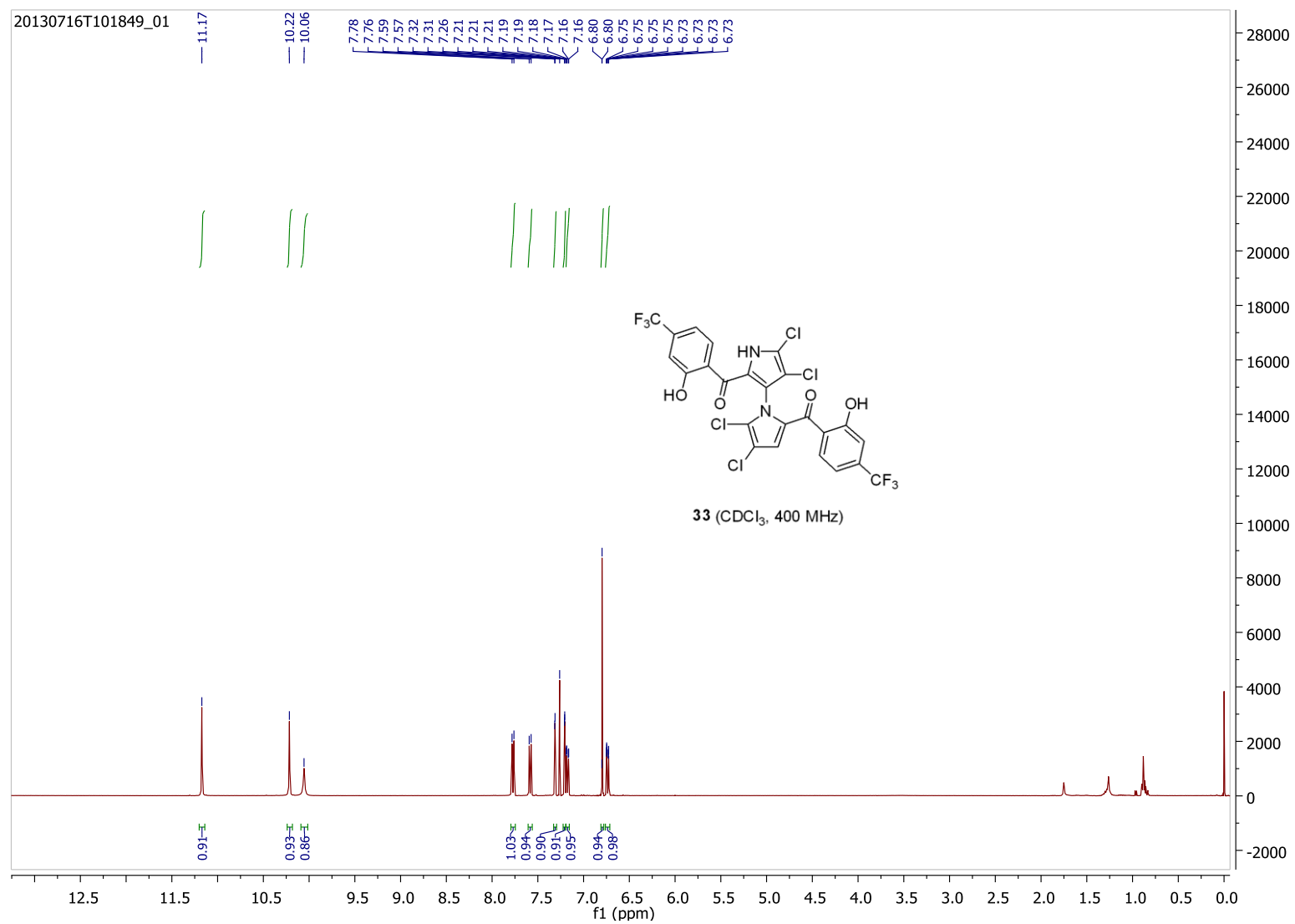
Figure S55. <sup>1</sup>H NMR spectrum of **33**.

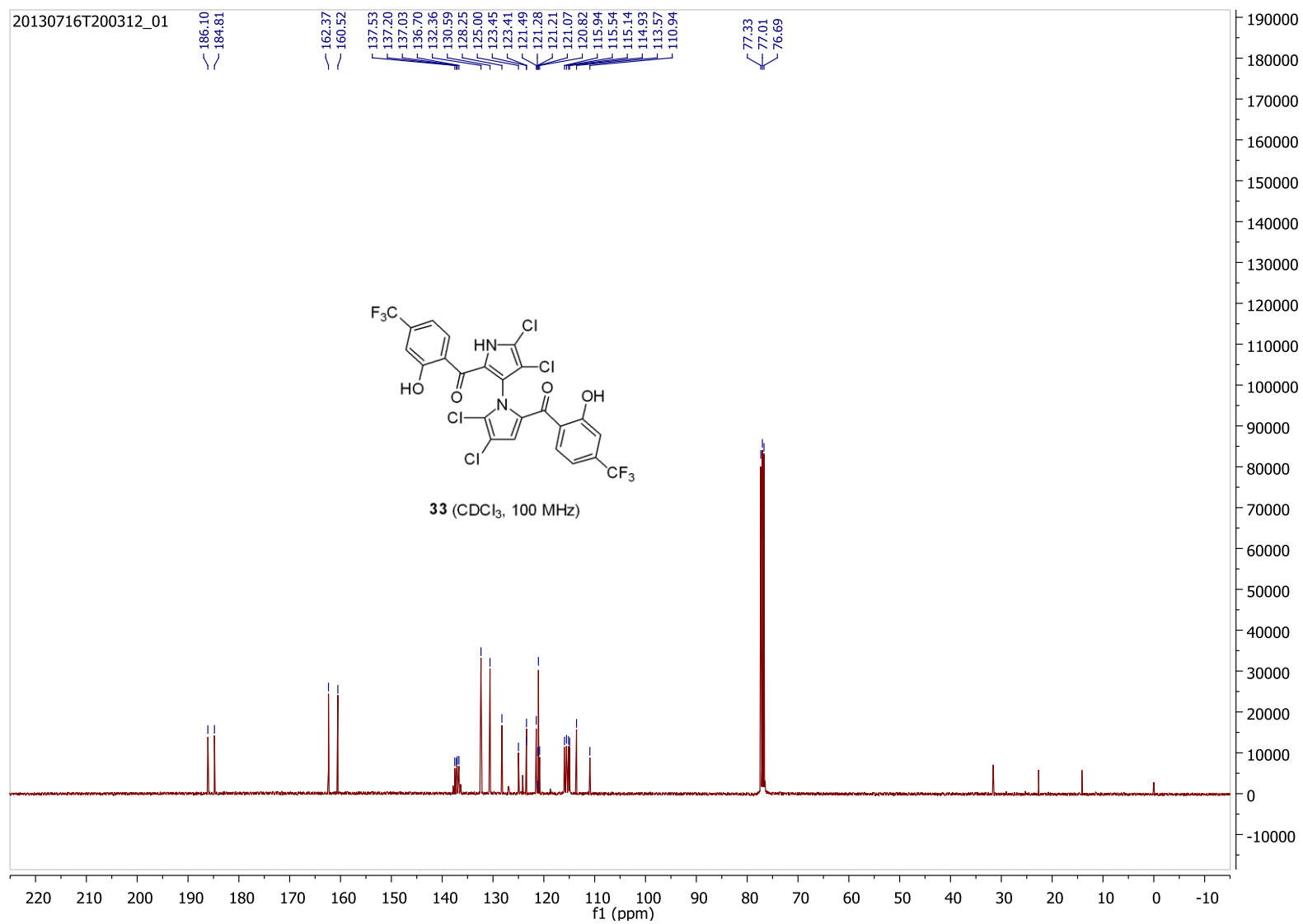
Figure S56.  $^{13}\text{C}$  NMR spectrum of **33**.



Figure S57. Purity of 24 by HPLC.

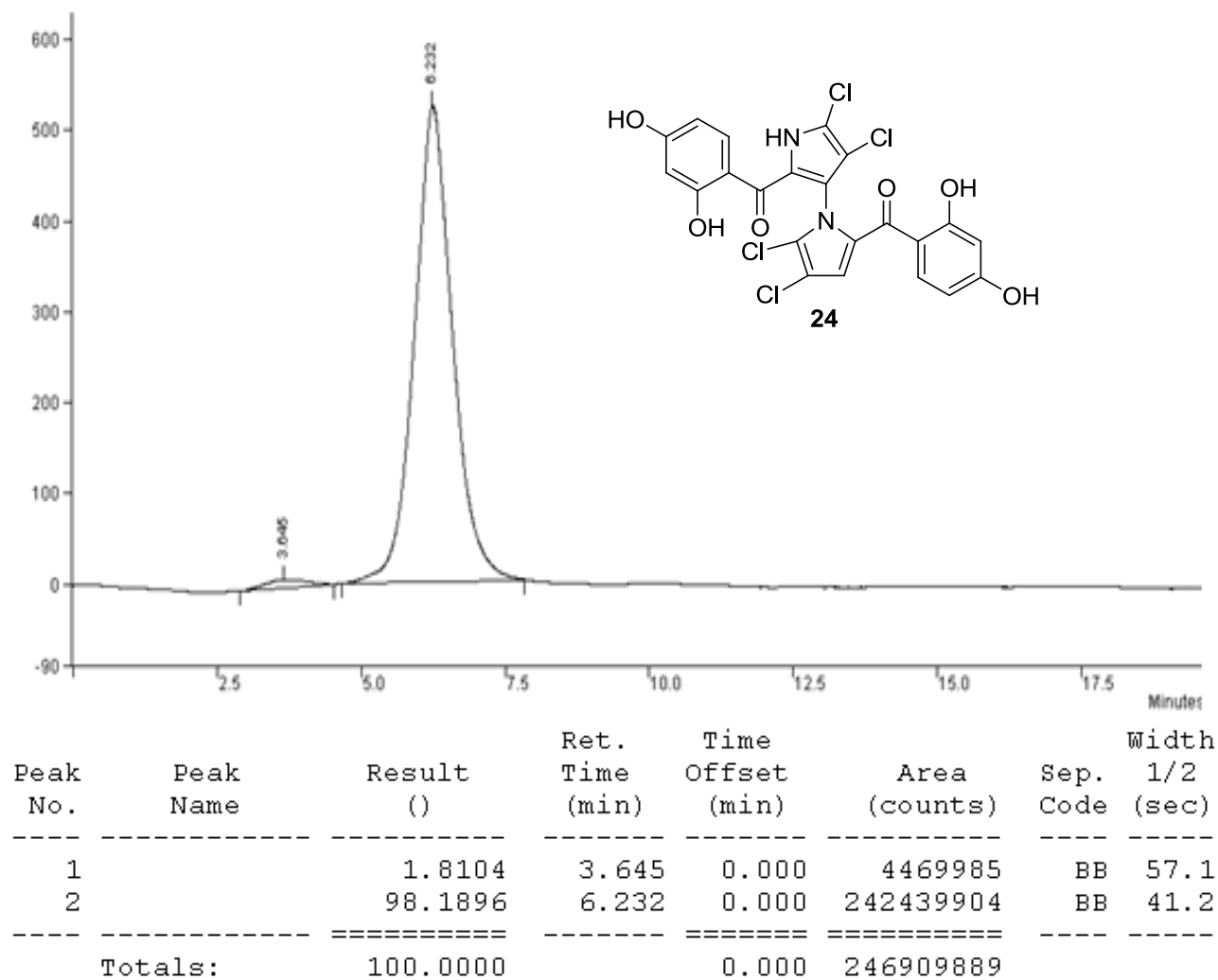
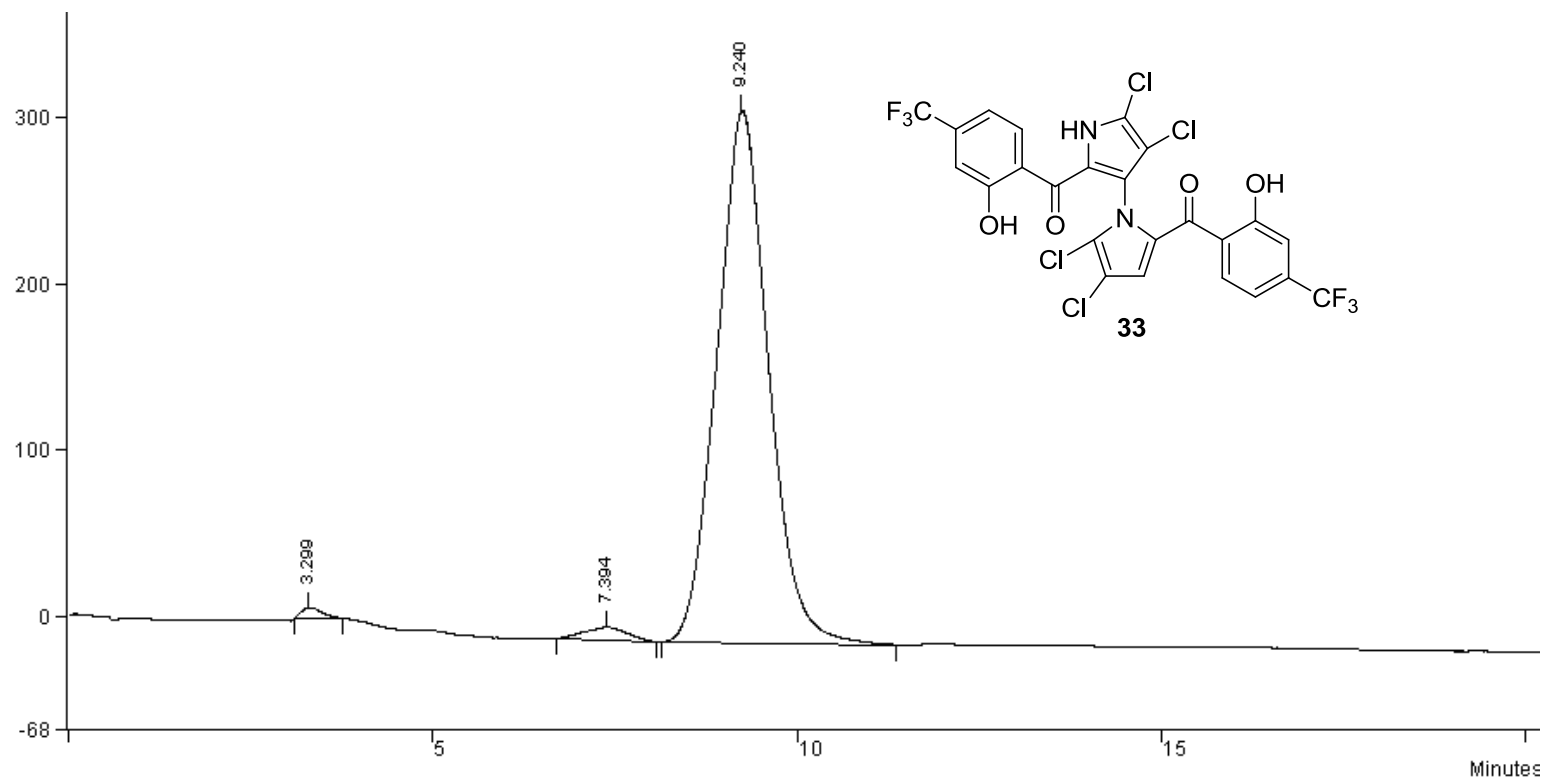


Figure S58. Purity of 33 by HPLC.



Peak No.	Peak Name	Result ( )	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)
1		0.7681	3.299	0.000	1244523	BB	18.7
2		2.0153	7.394	0.000	3265186	BB	38.0
3		97.2166	9.240	0.000	157511904	BB	44.6
Totals:		100.0000		0.000	162021613		