SUPPORTING INFORMATION

Convergent Route to the Spirohexenolide Macrocycle

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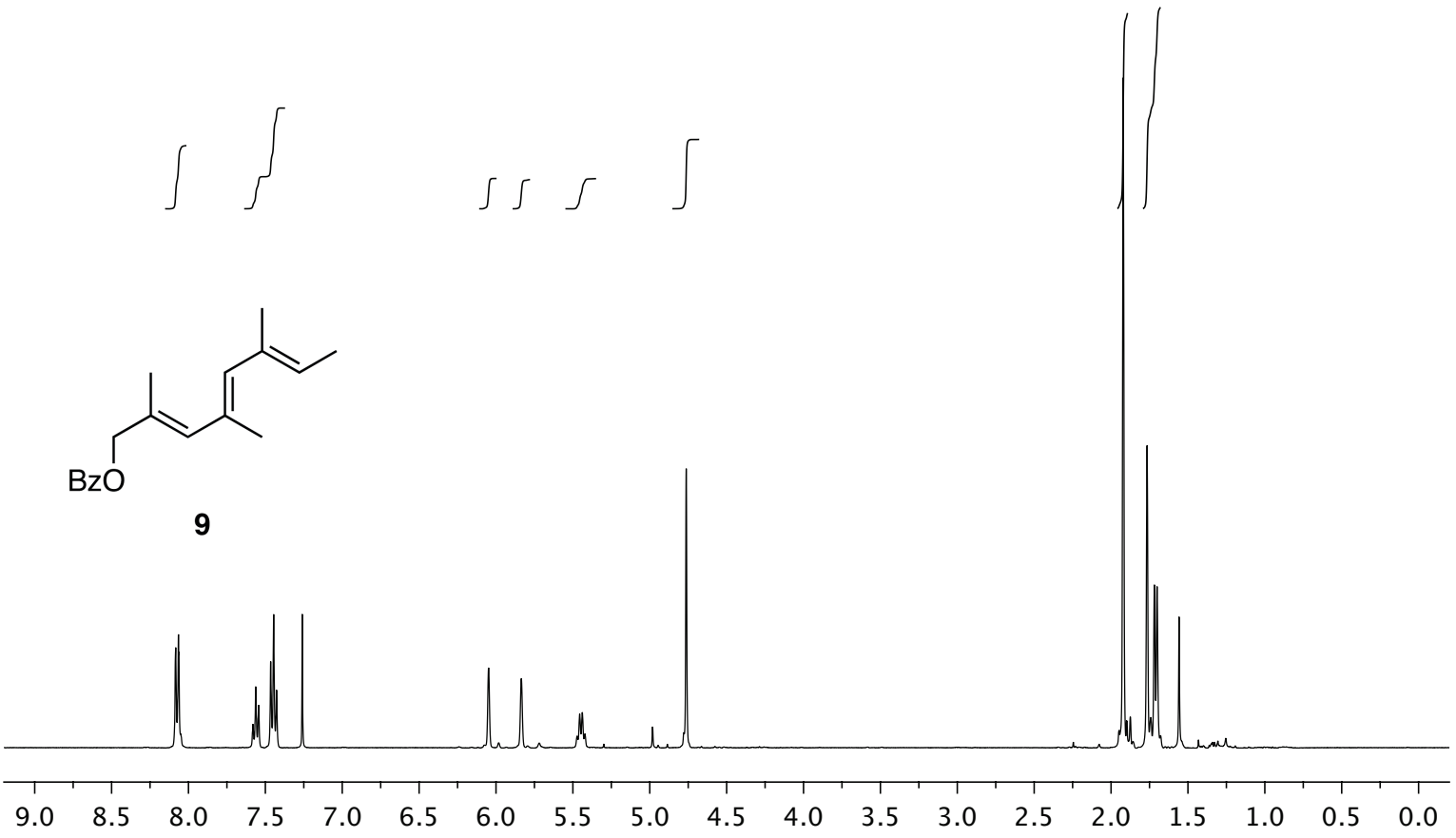
Synthetic studies were conducted by B.D.J., J.J.L, and M.D.B.

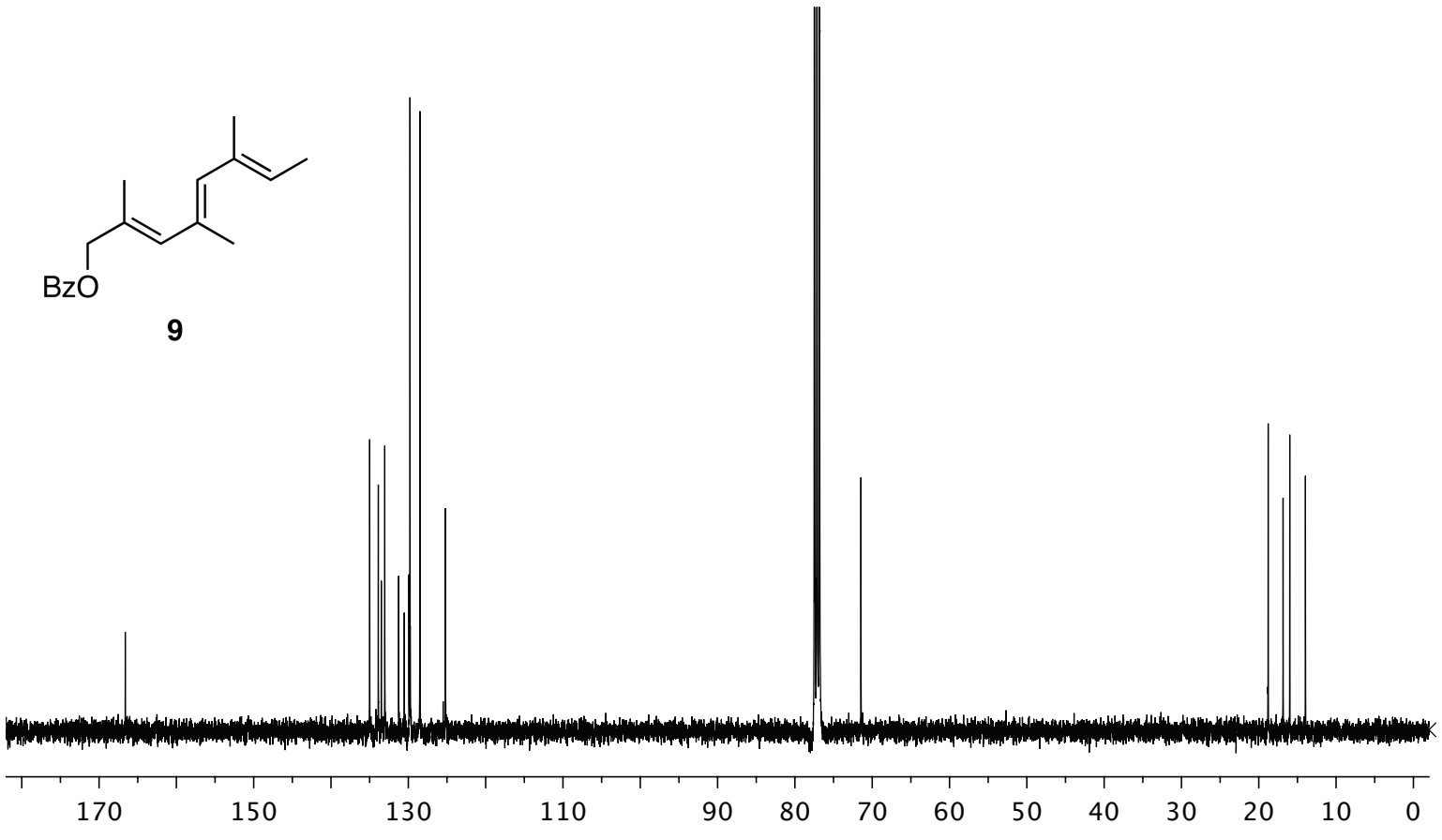
X-ray crystallography was performed by C.F.M. and A.L.R.

This file contain copies of selected NMR spectra on intermediate described within this manuscript.

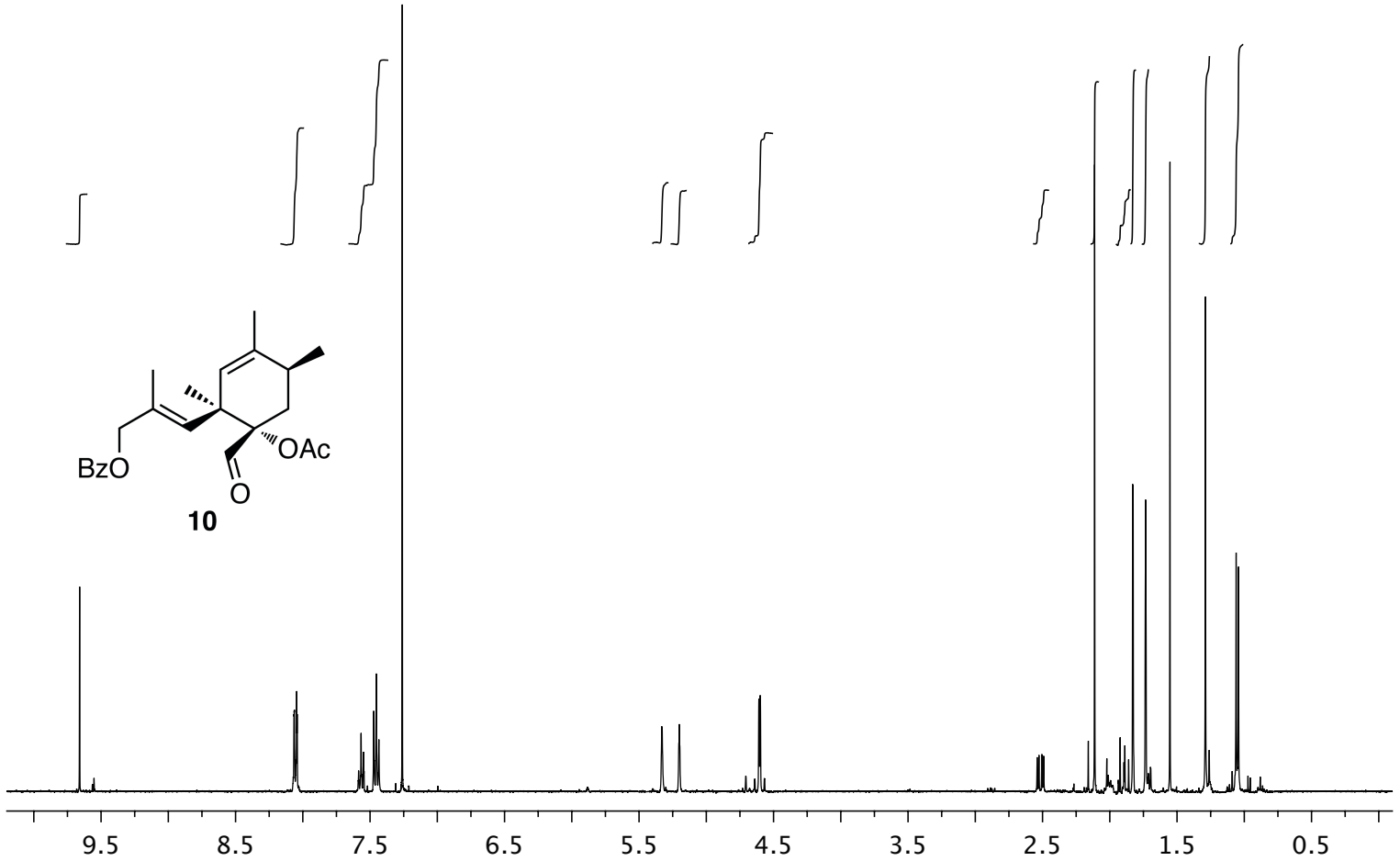
An additional file containing detailed experimental procedures has been provided and can be downloaded online at http://pubs.acs.org

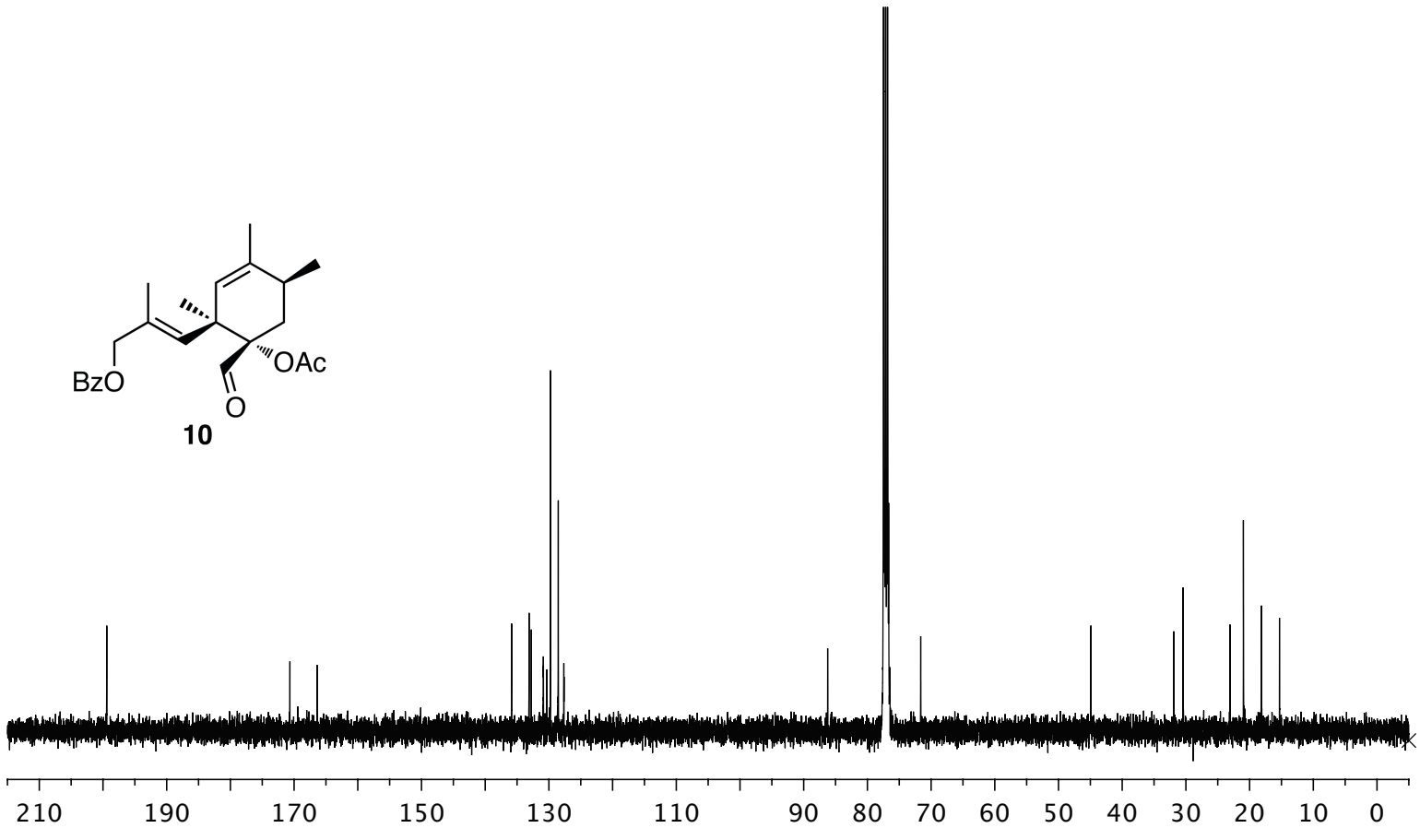
^{1}H-NMR (400 MHz) and ^{13}C-NMR (100 MHz) spectra of benzoate **9** in $CDCl_3$



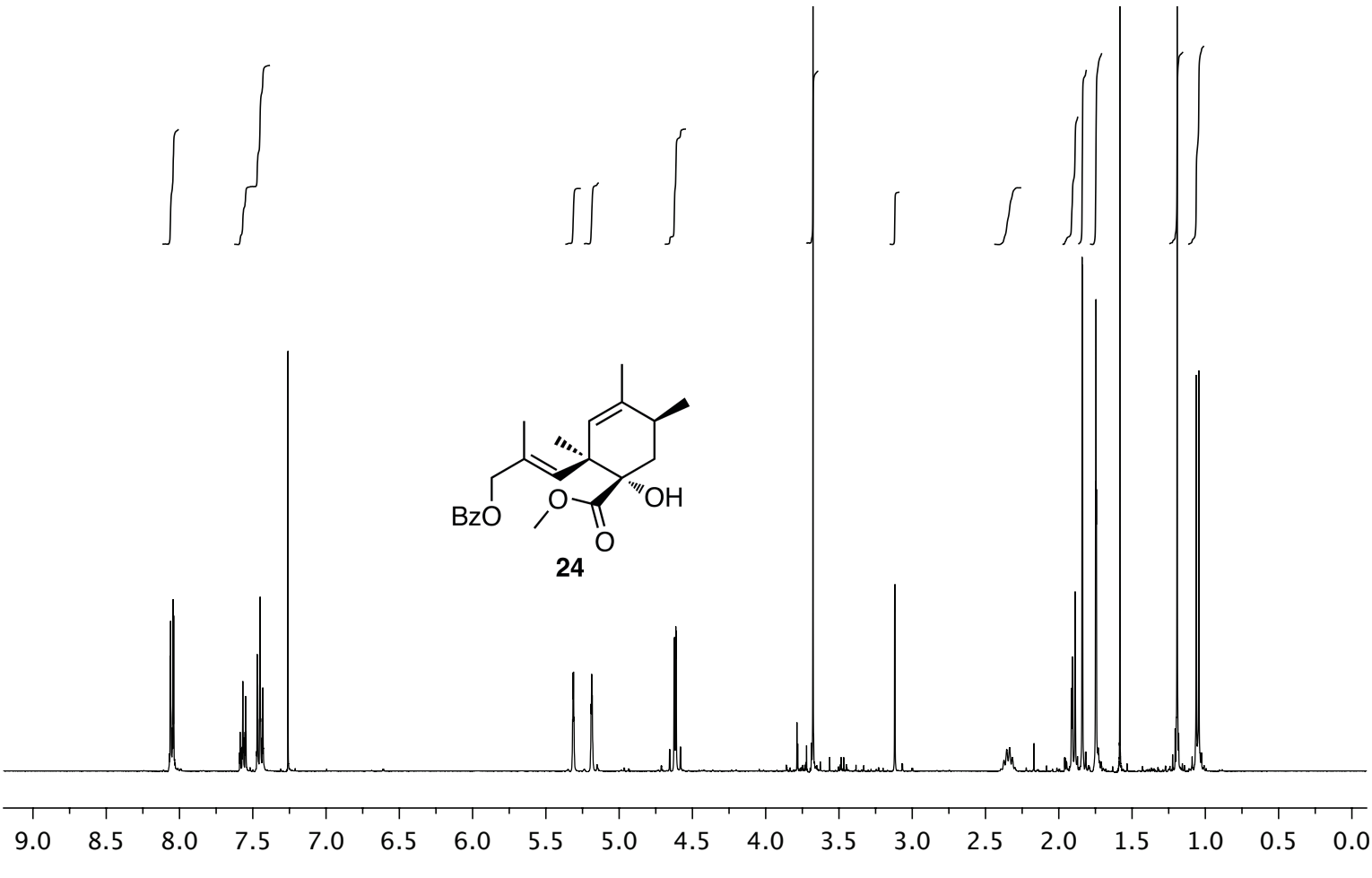


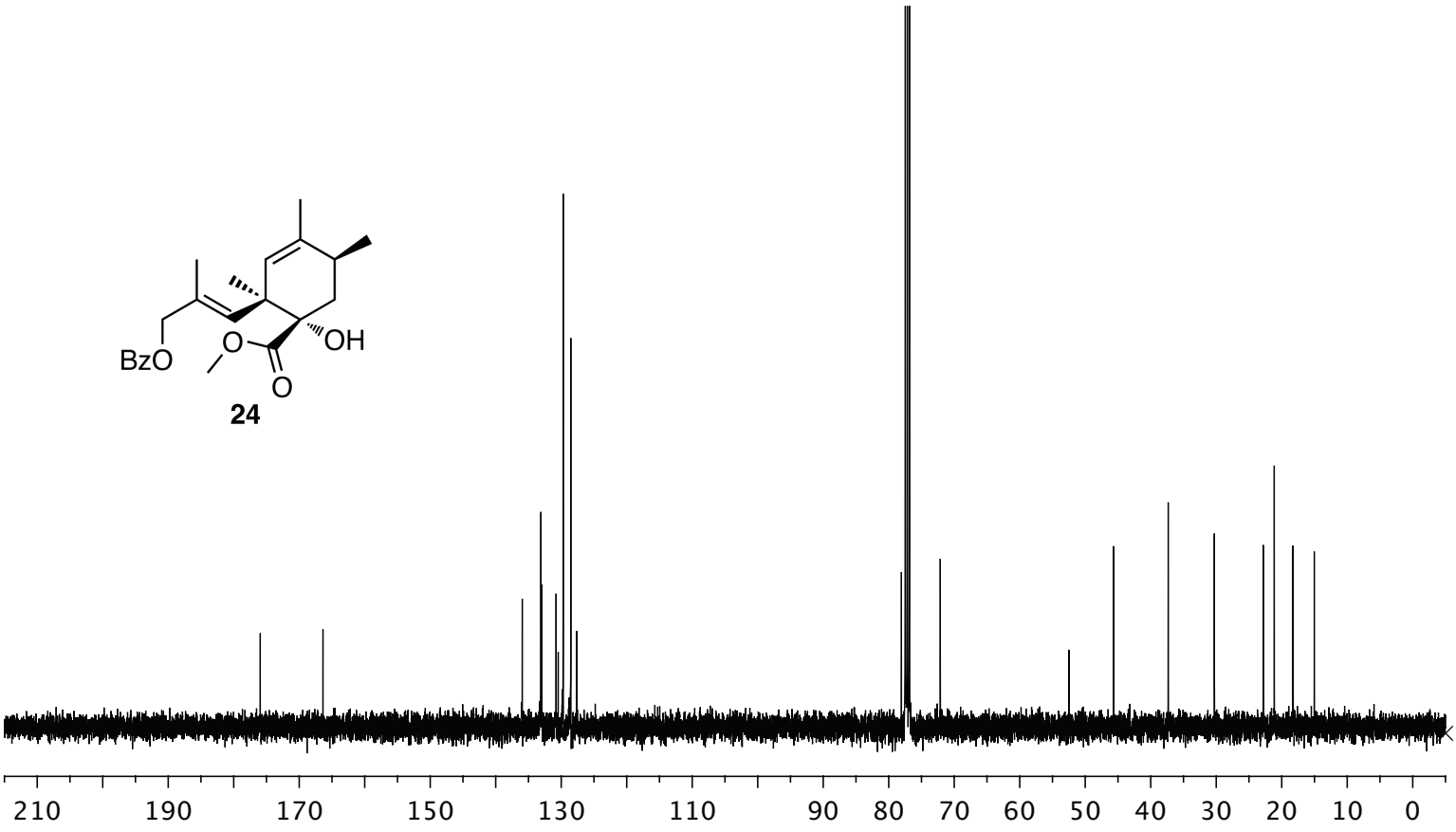
^{1}H-NMR (400 MHz) and ^{13}C-NMR (100 MHz) spectra of Diels-Alder adduct **10** in $CDCl_3$





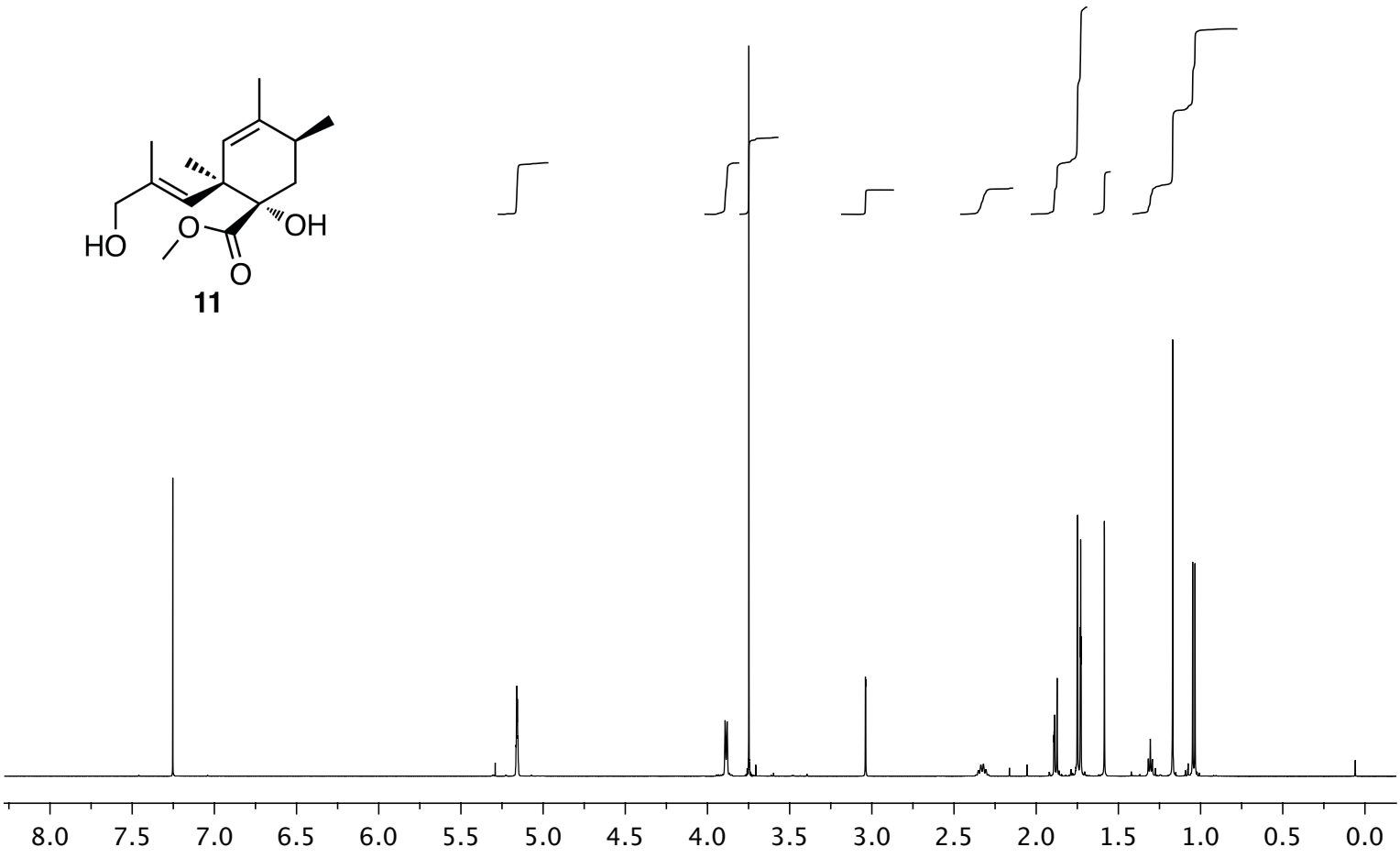
^{1}H-NMR (400 MHz) and ^{13}C-NMR (100 MHz) spectra of benzoate **24** in $CDCl_3$





^{1}H-NMR (500 MHz) and ^{13}C-NMR (125 MHz) spectra of diol **11** in $CDCl_3$

11



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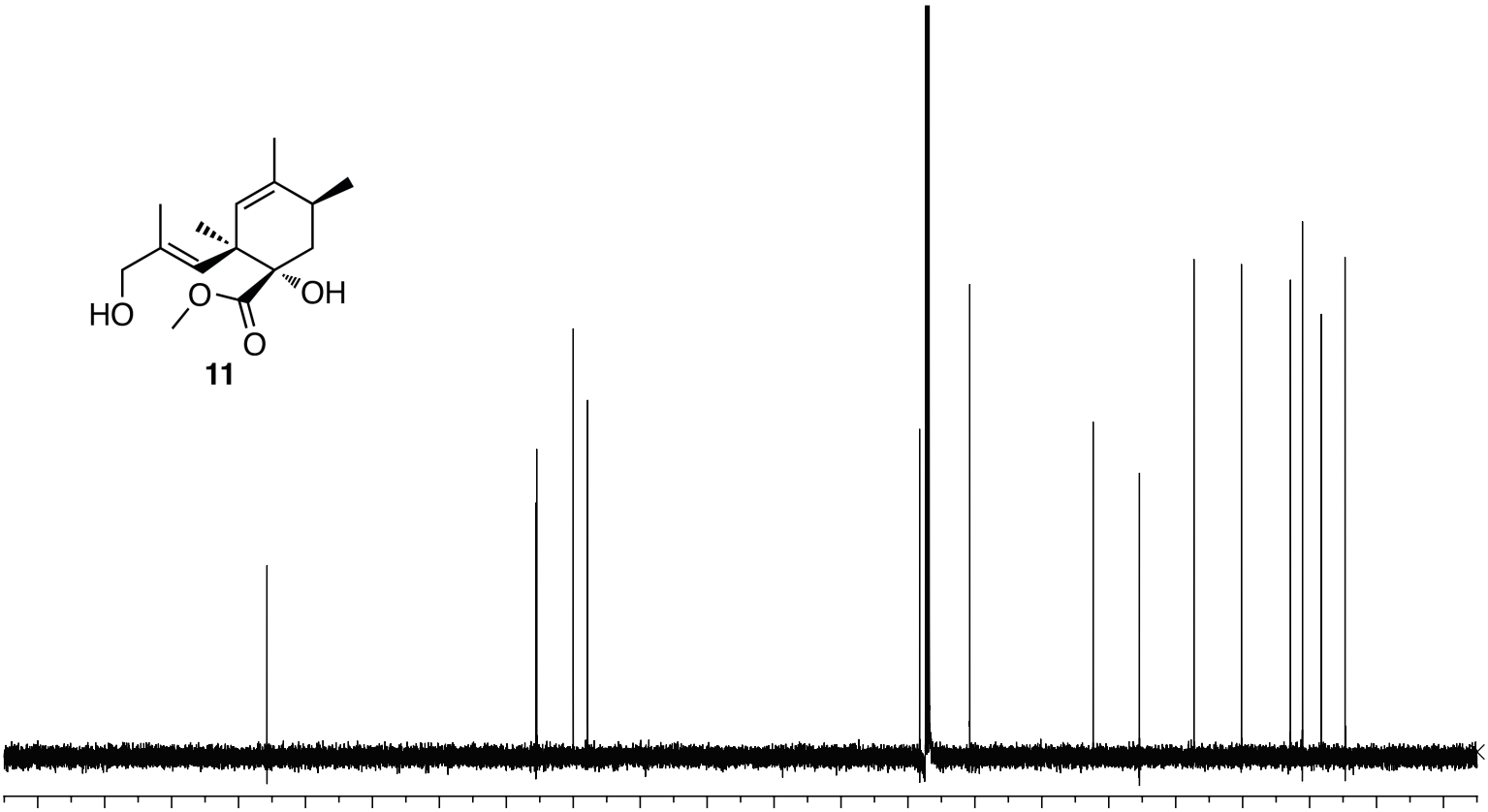
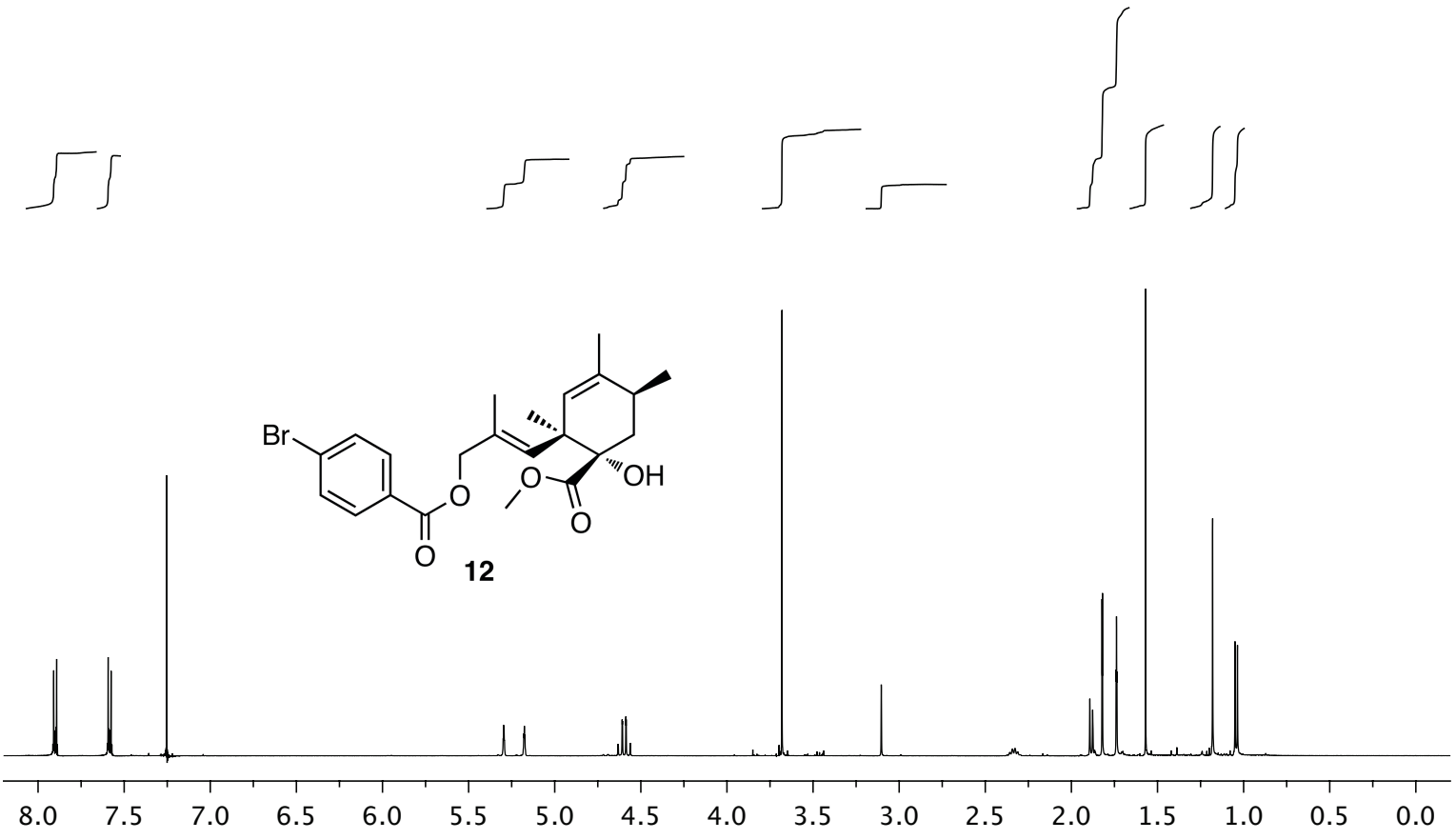
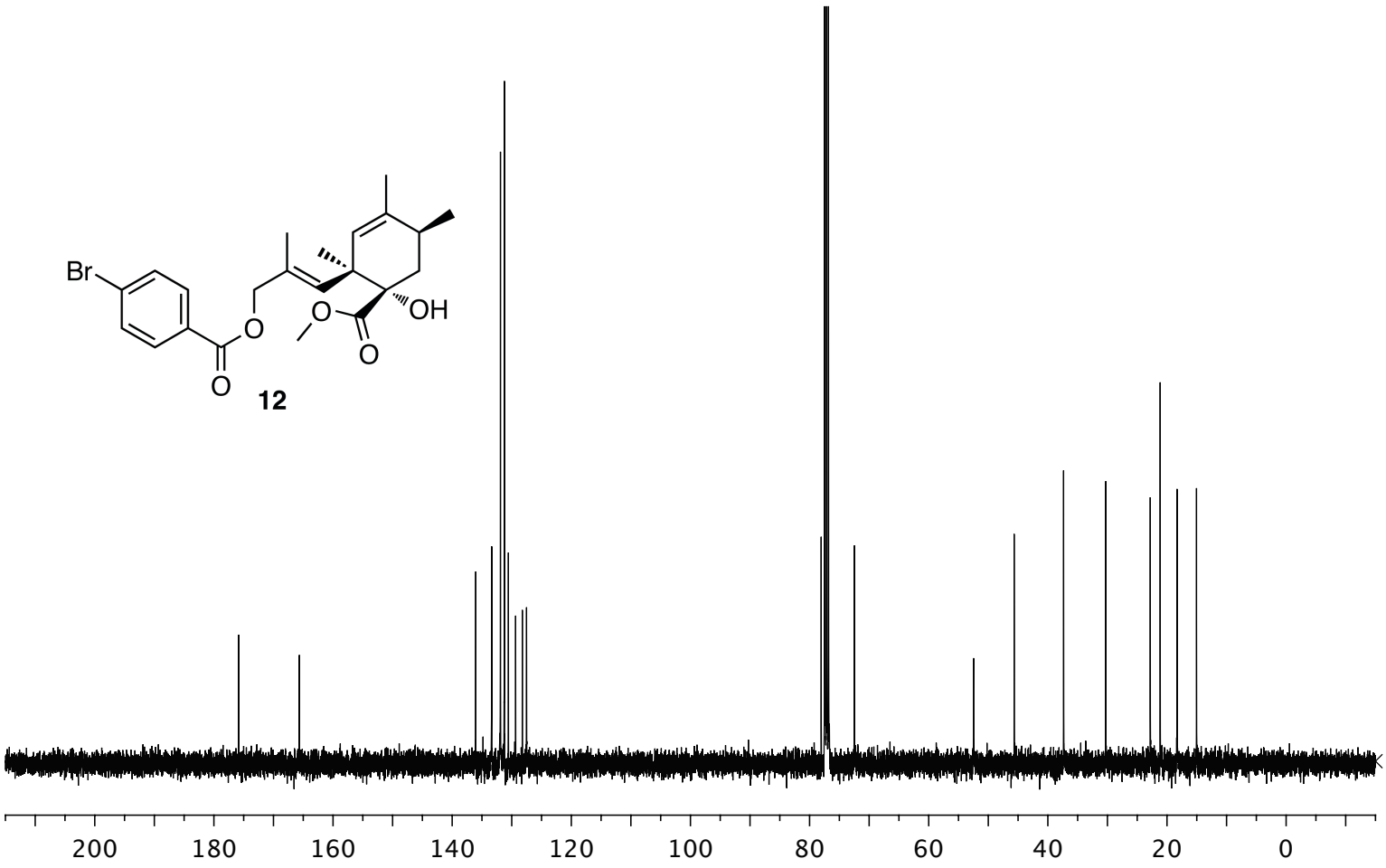


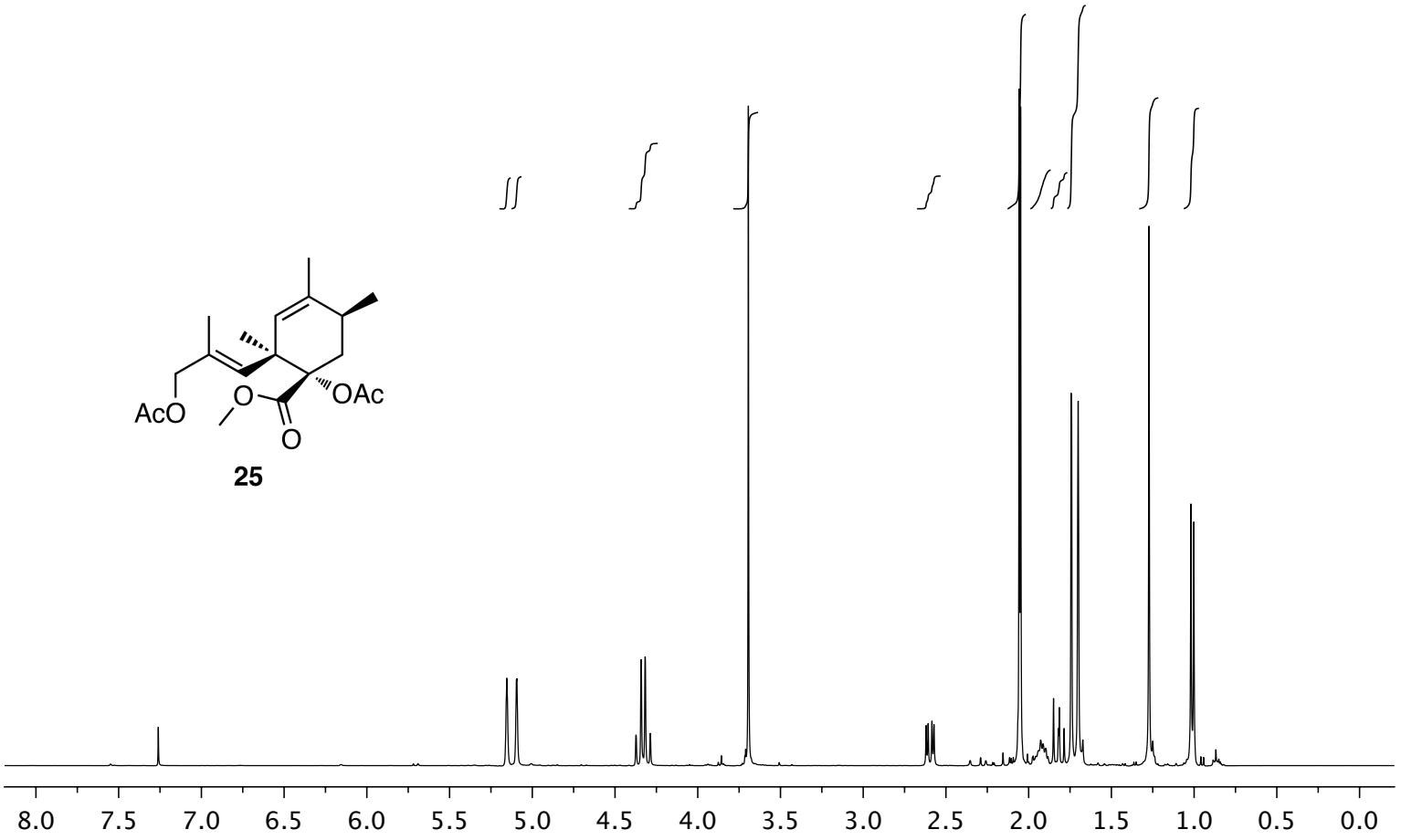
^{1}H-NMR (500 MHz) and ^{13}C-NMR (100 MHz) spectra of 4-bromobenzoate **12** in $CDCl_3$





^{1}H-NMR (400 MHz) and ^{13}C-NMR (100 MHz) spectra of bis-acetate **25** in $CDCl_3$

25



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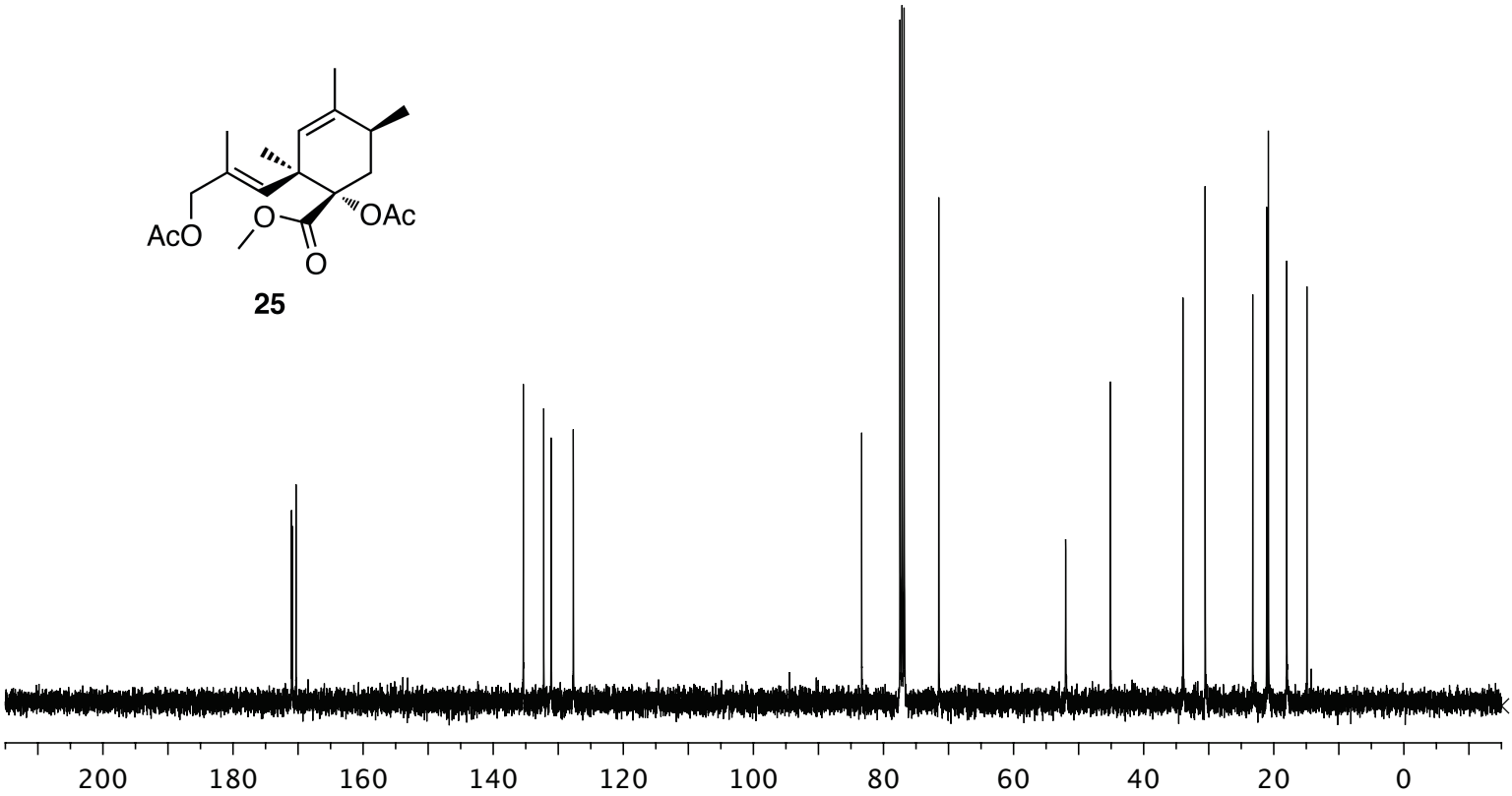
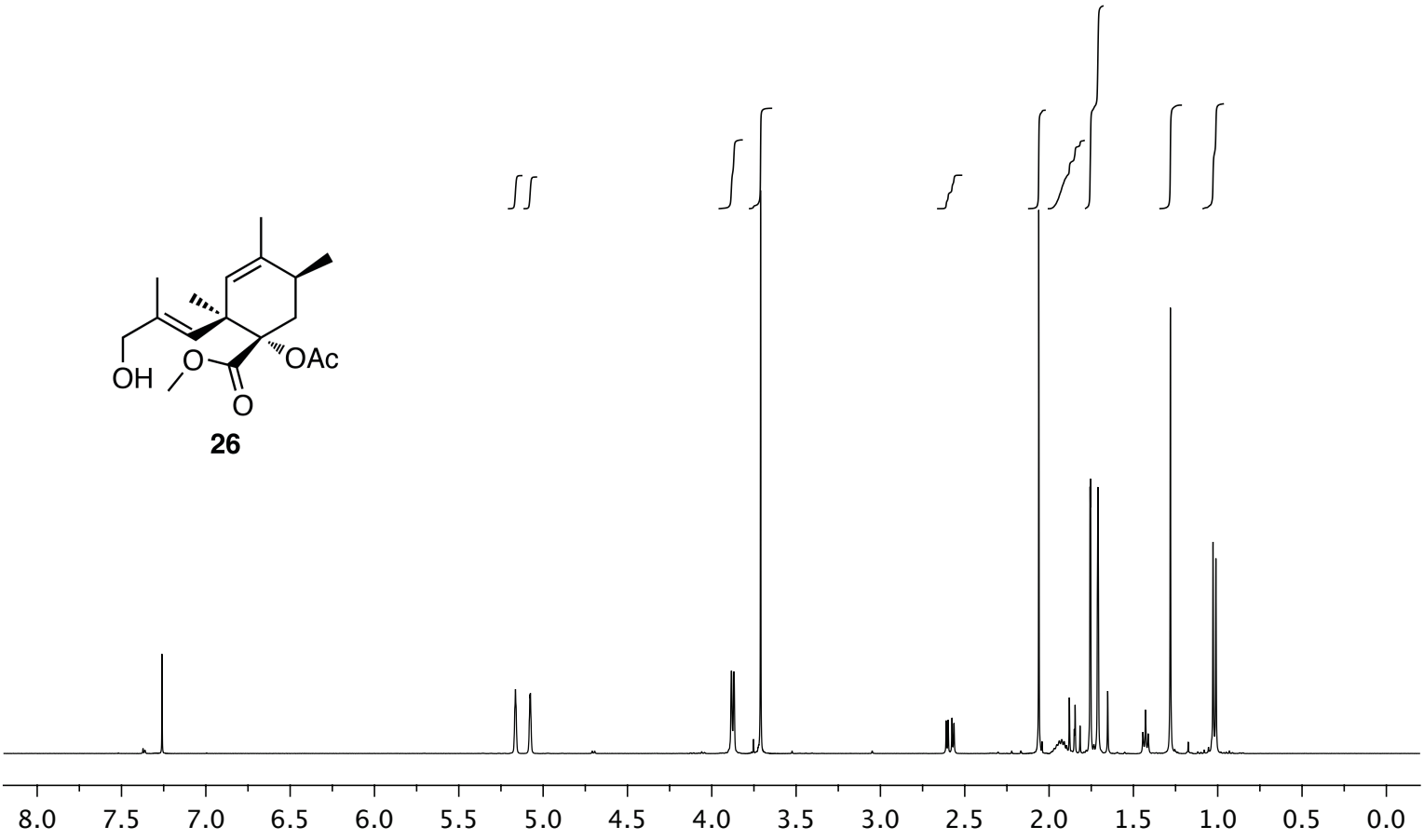


^{1}H-NMR (400 MHz) and ^{13}C-NMR (100 MHz) spectra of alcohol **26** in $CDCl_3$

26



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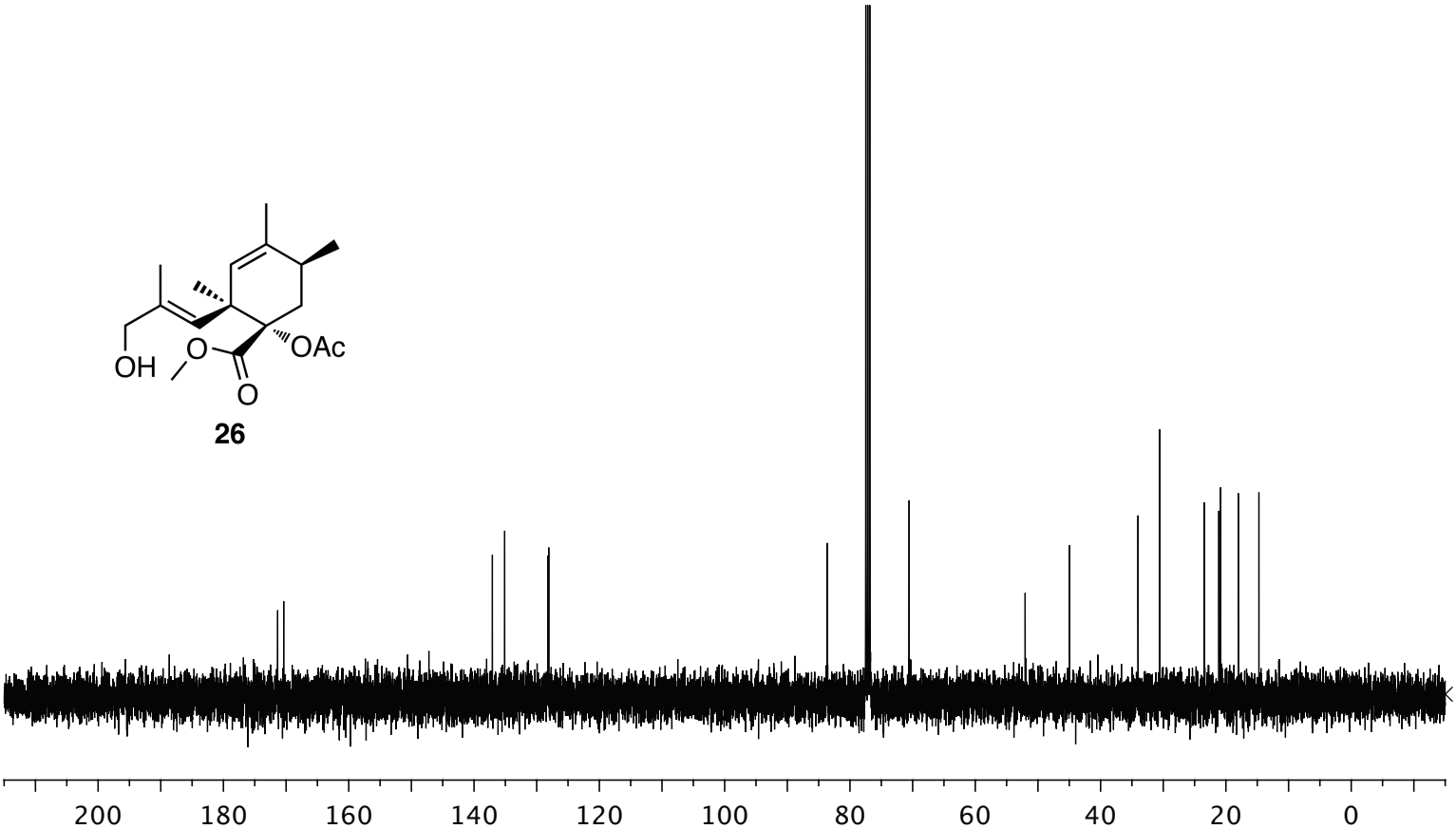
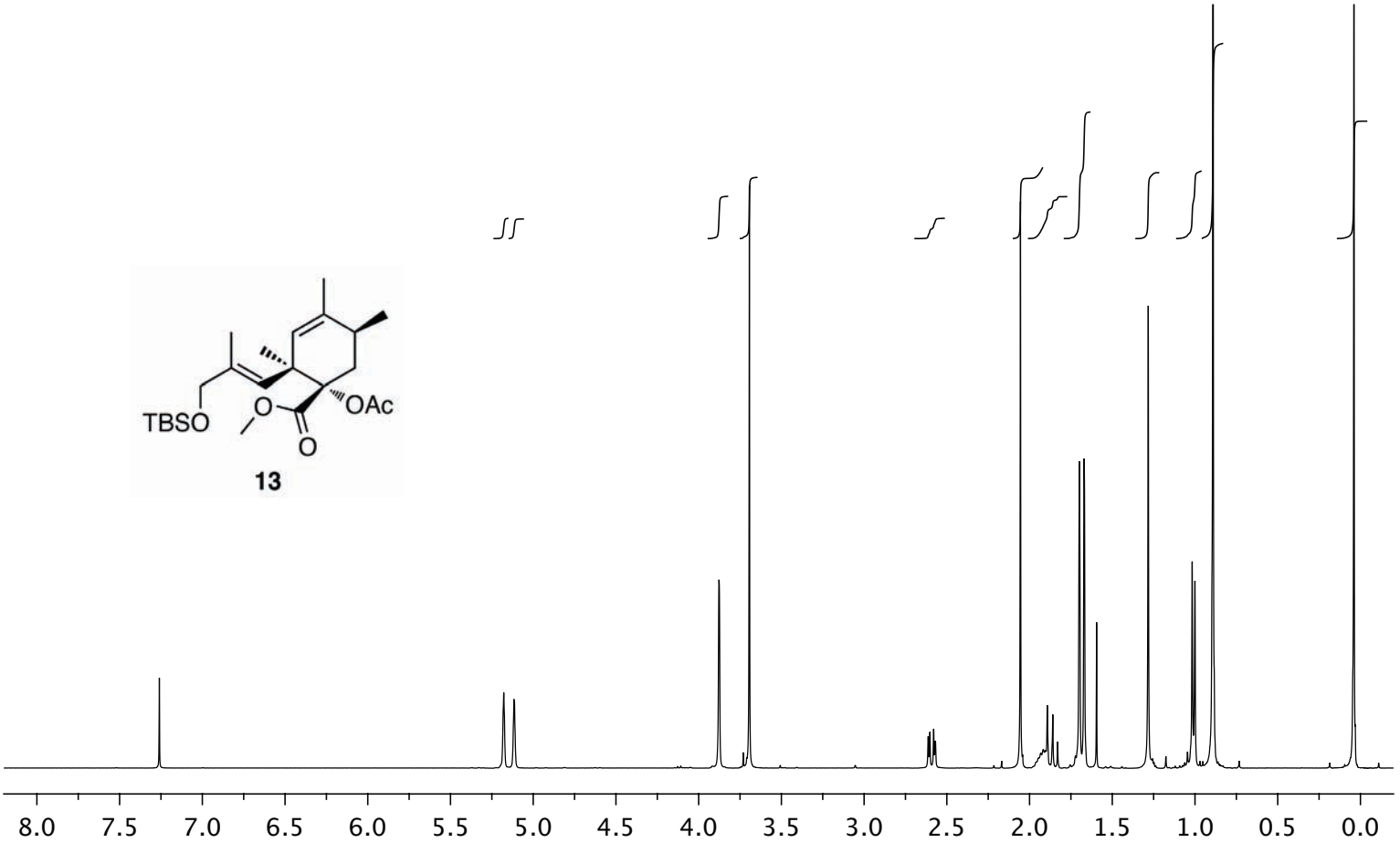
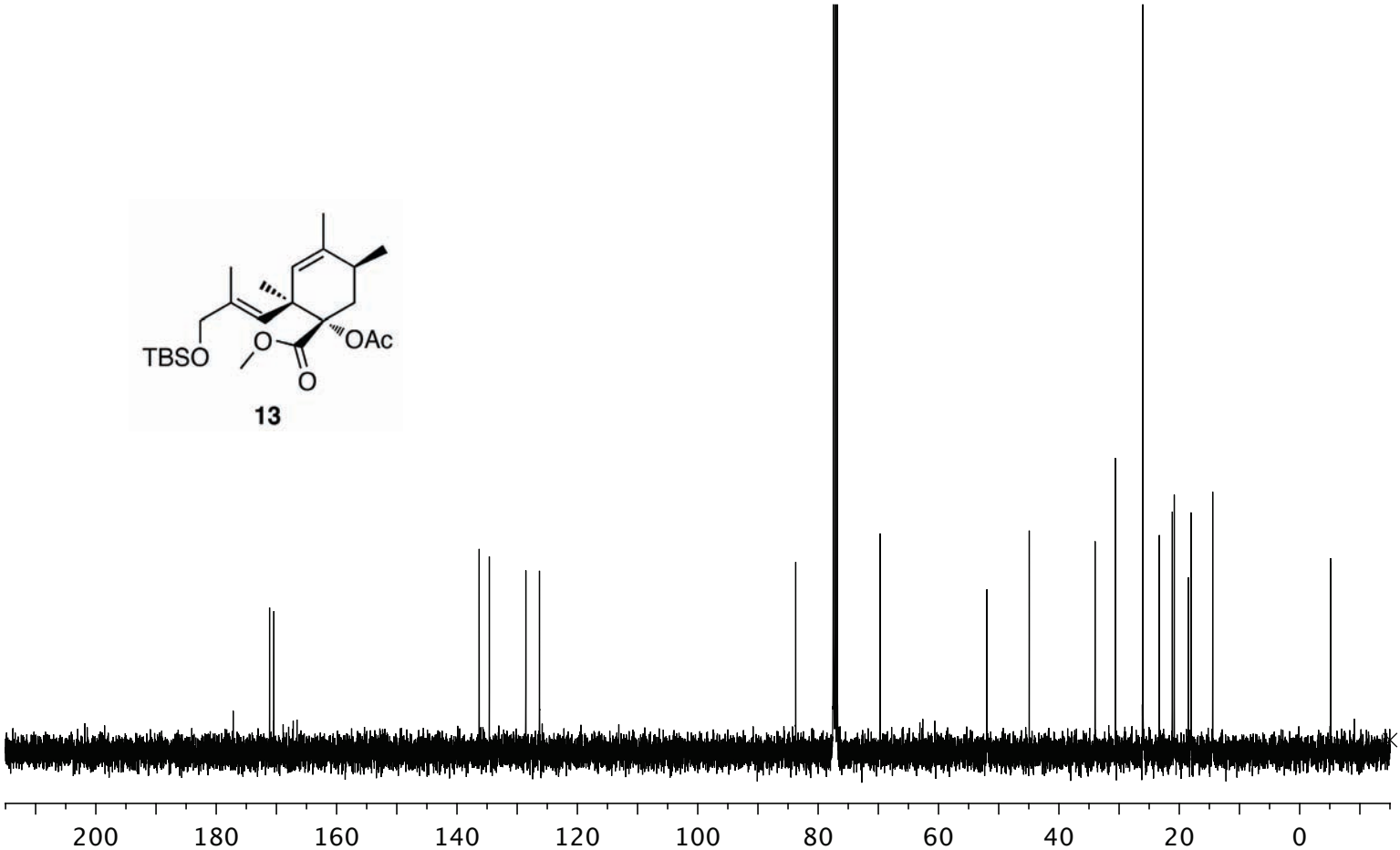


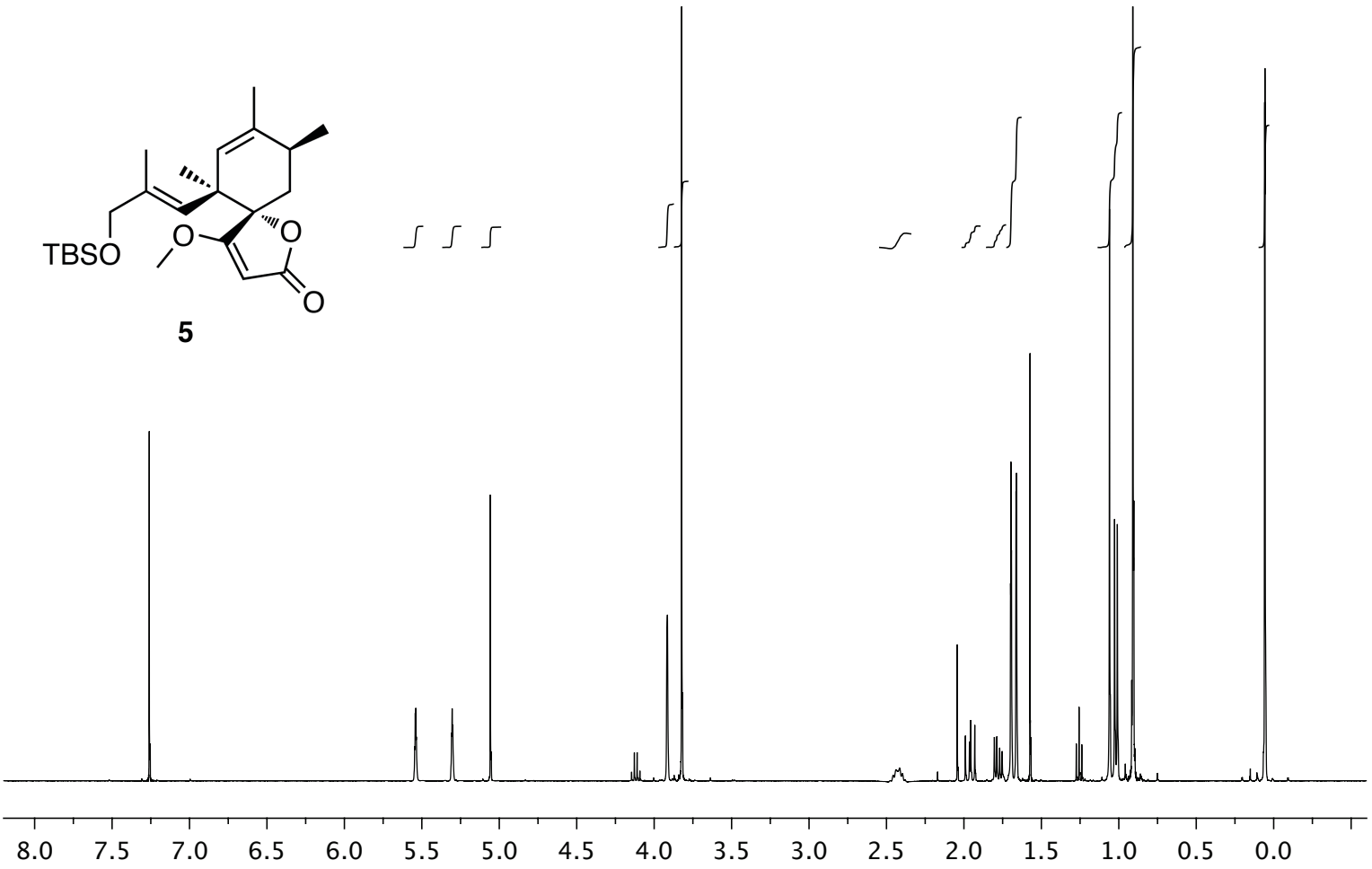
^{1}H-NMR (400 MHz) and ^{13}C-NMR (100 MHz) spectra of silyl ether **13** in $CDCl_3$





^{1}H-NMR (400 MHz) and ^{13}C-NMR (100 MHz) spectra of tetronate component **5** in $CDCl_3$

5



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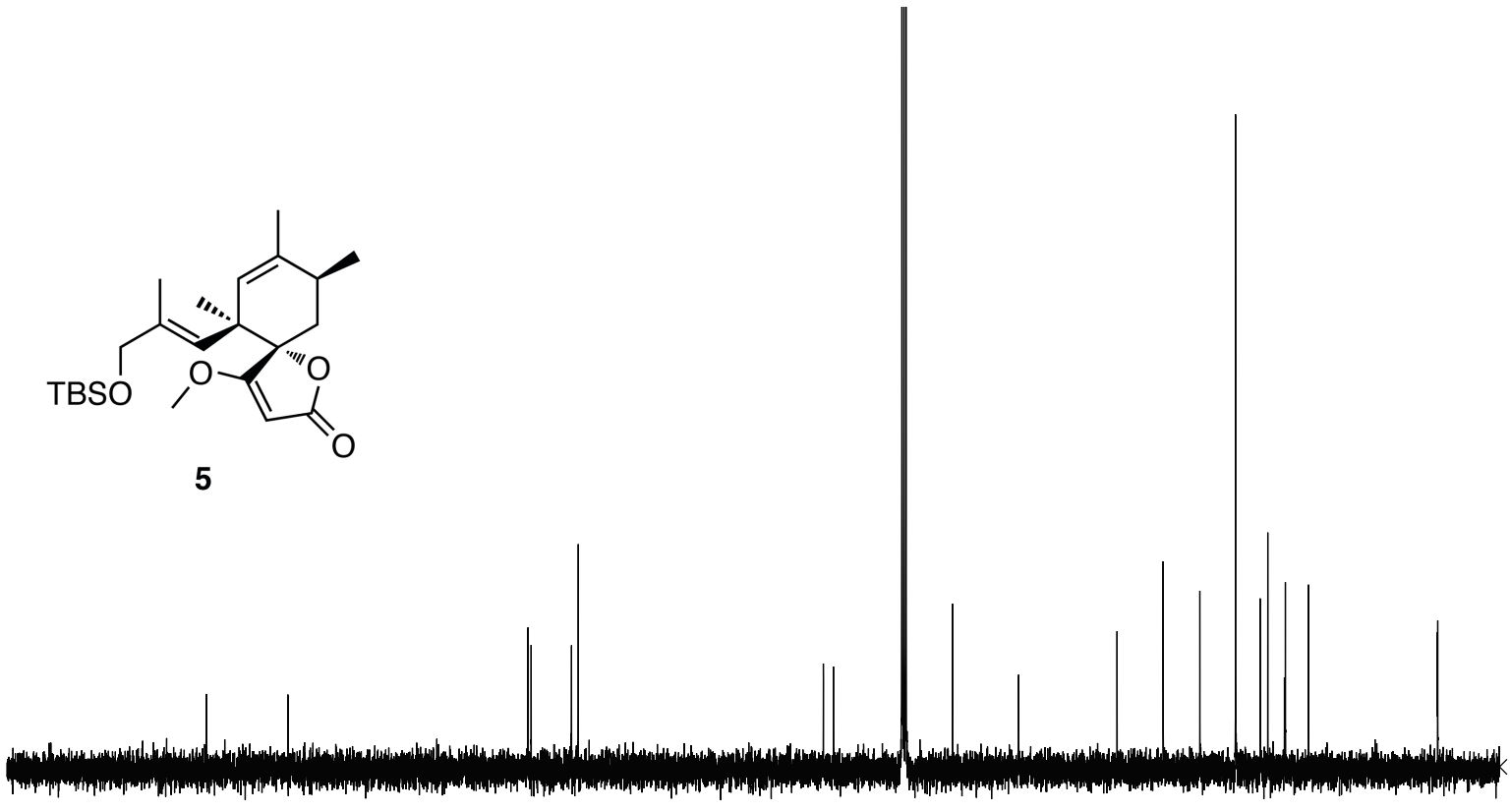
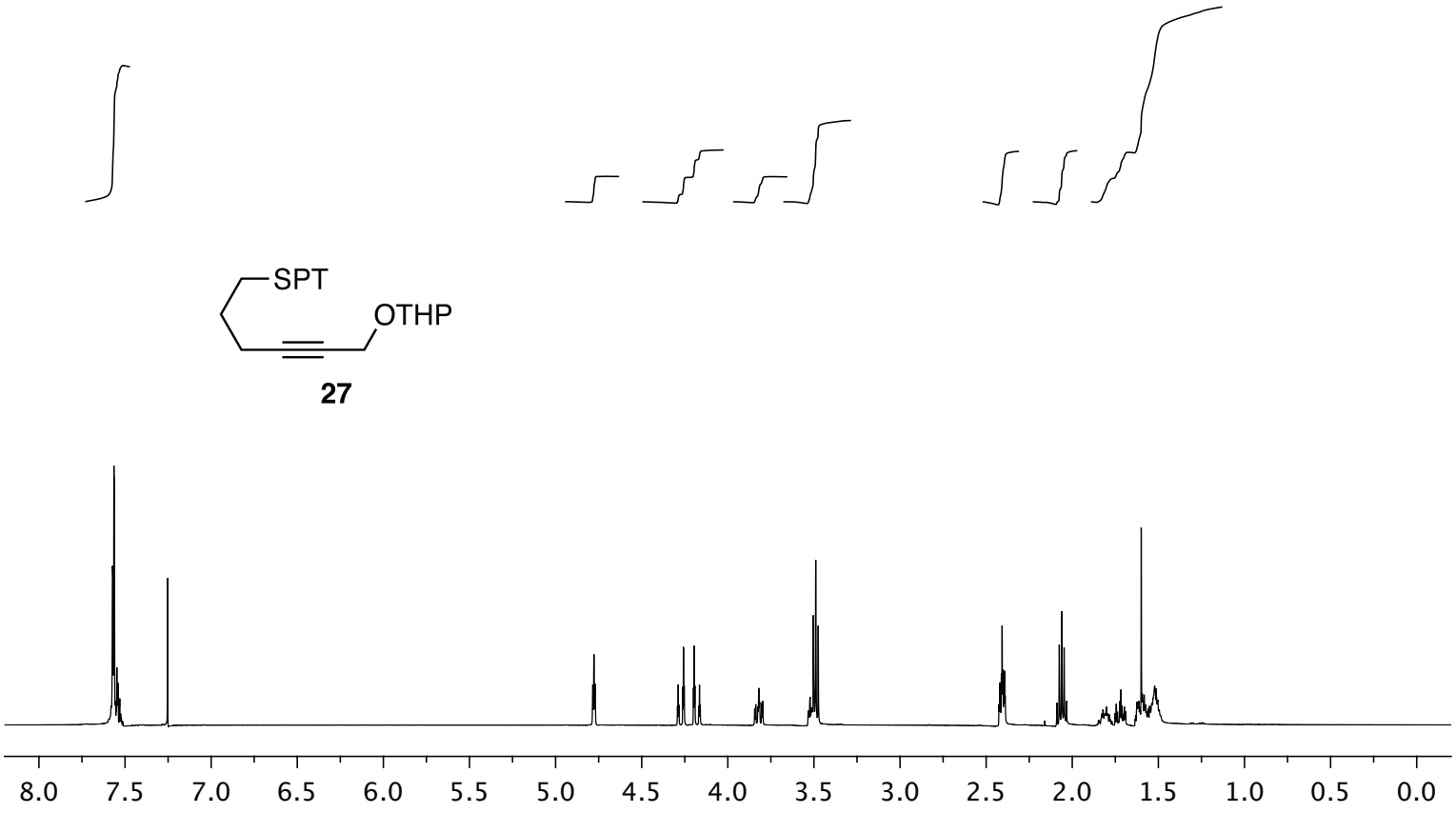


^{1}H-NMR (500 MHz) and ^{13}C-NMR (125 MHz) spectra of sulfide **27** in $CDCl_3$



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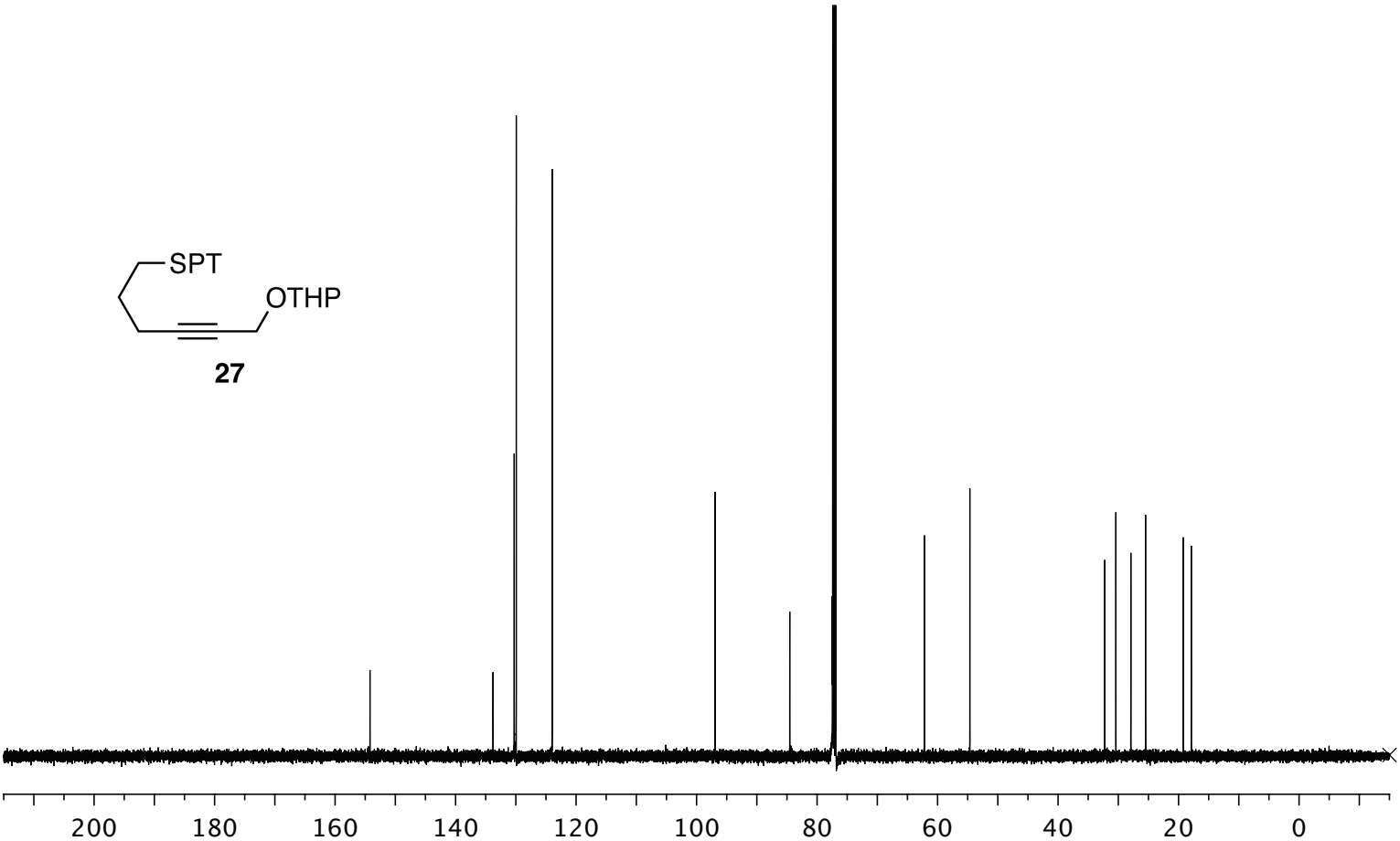

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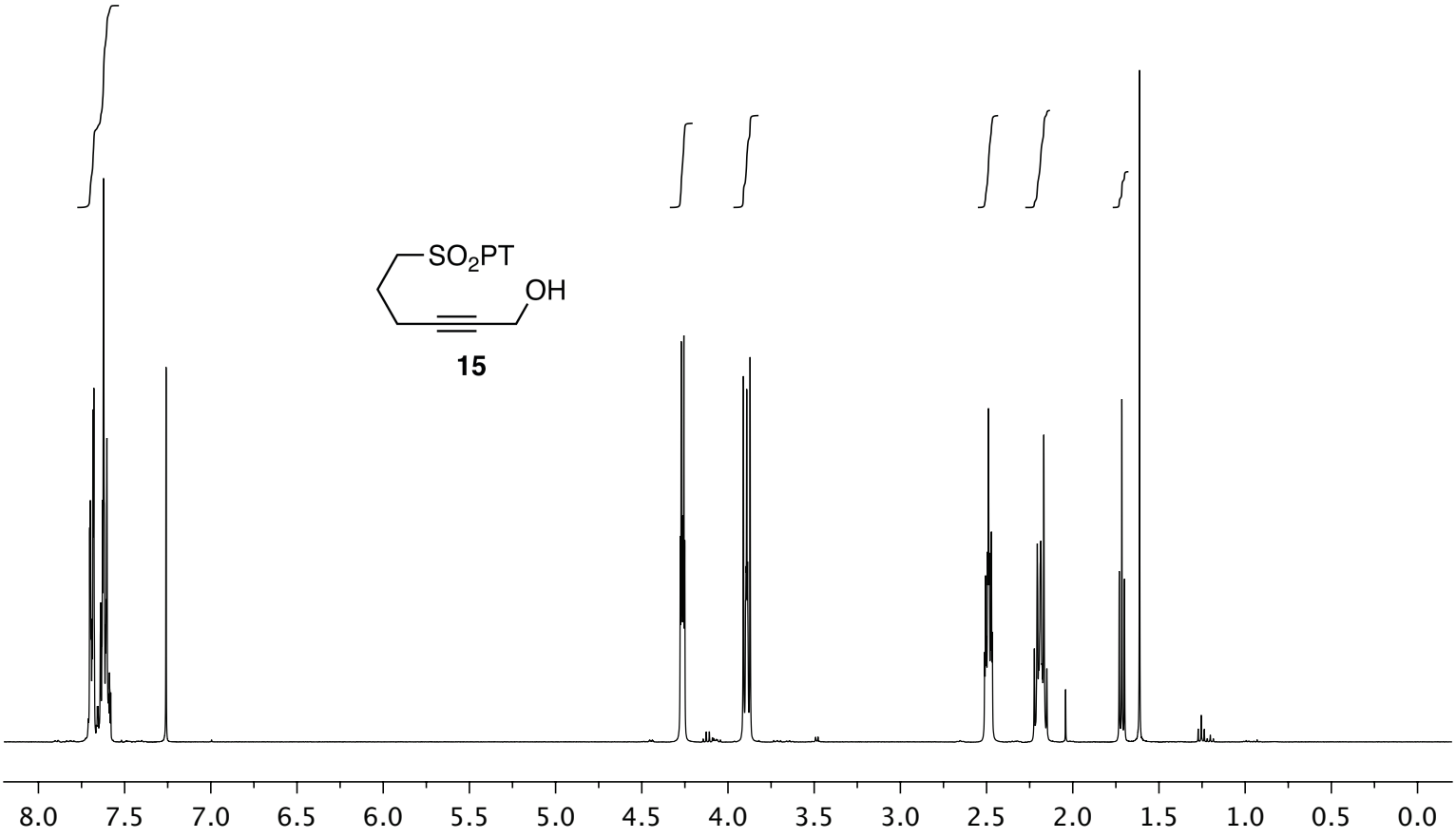
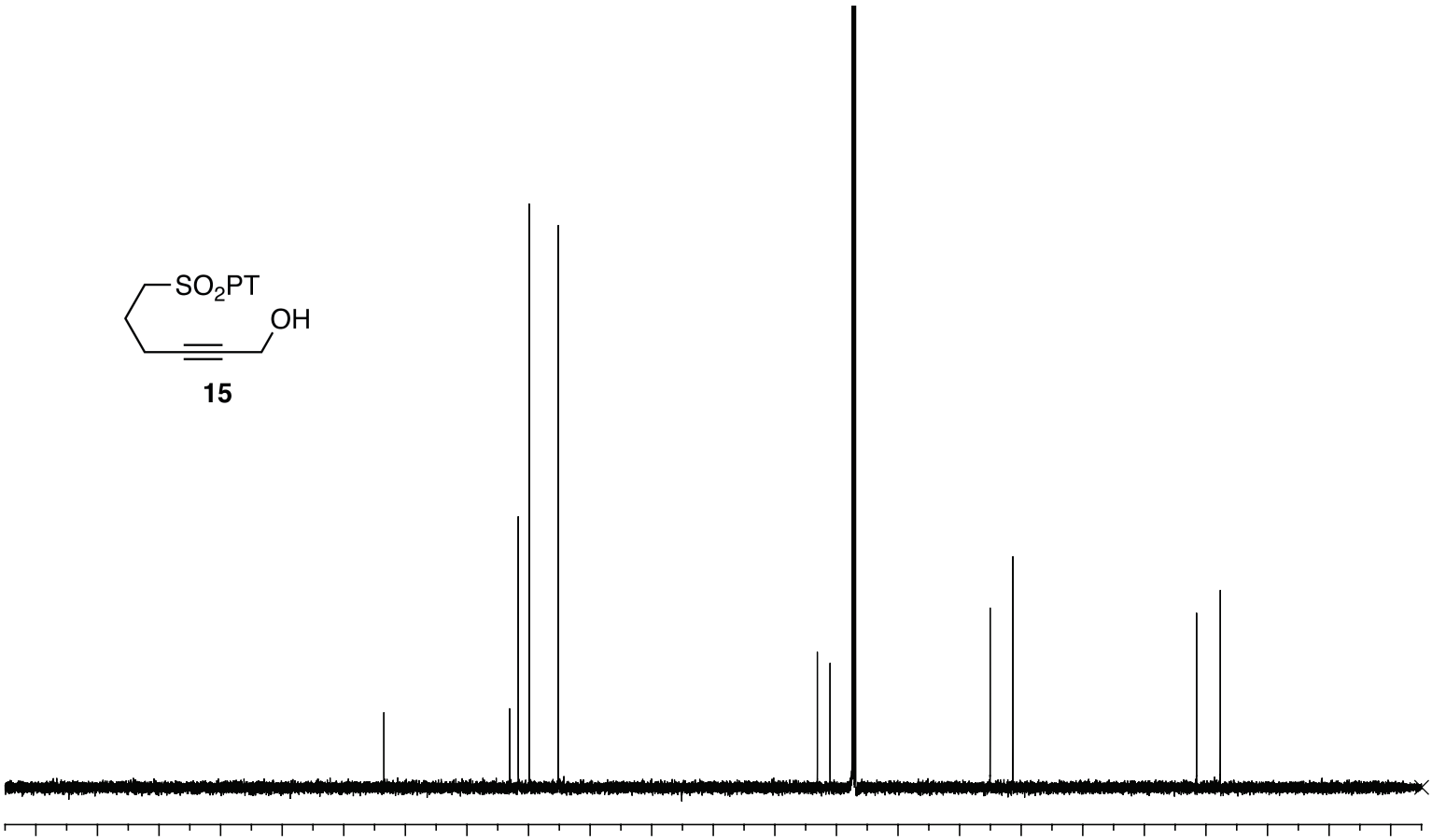
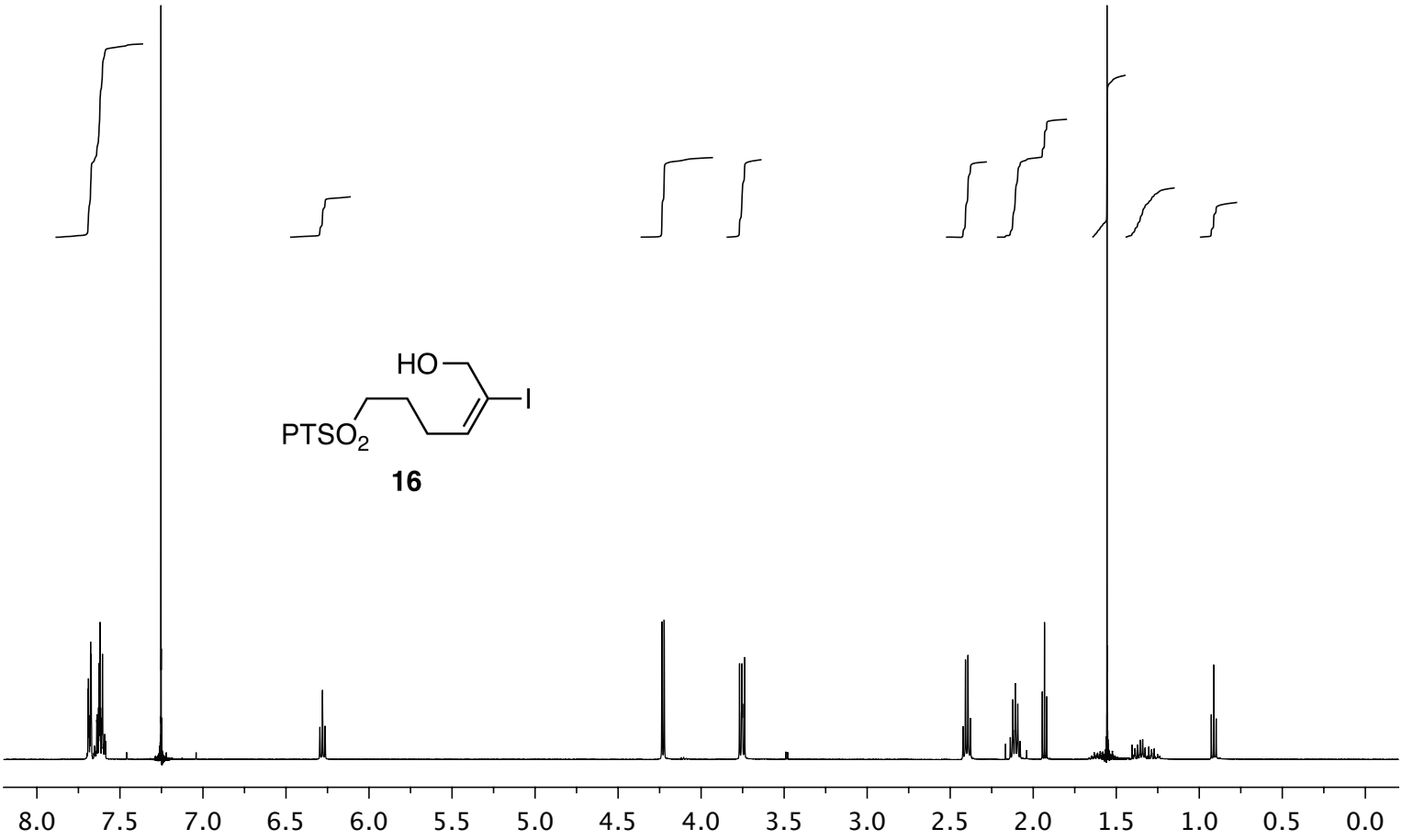
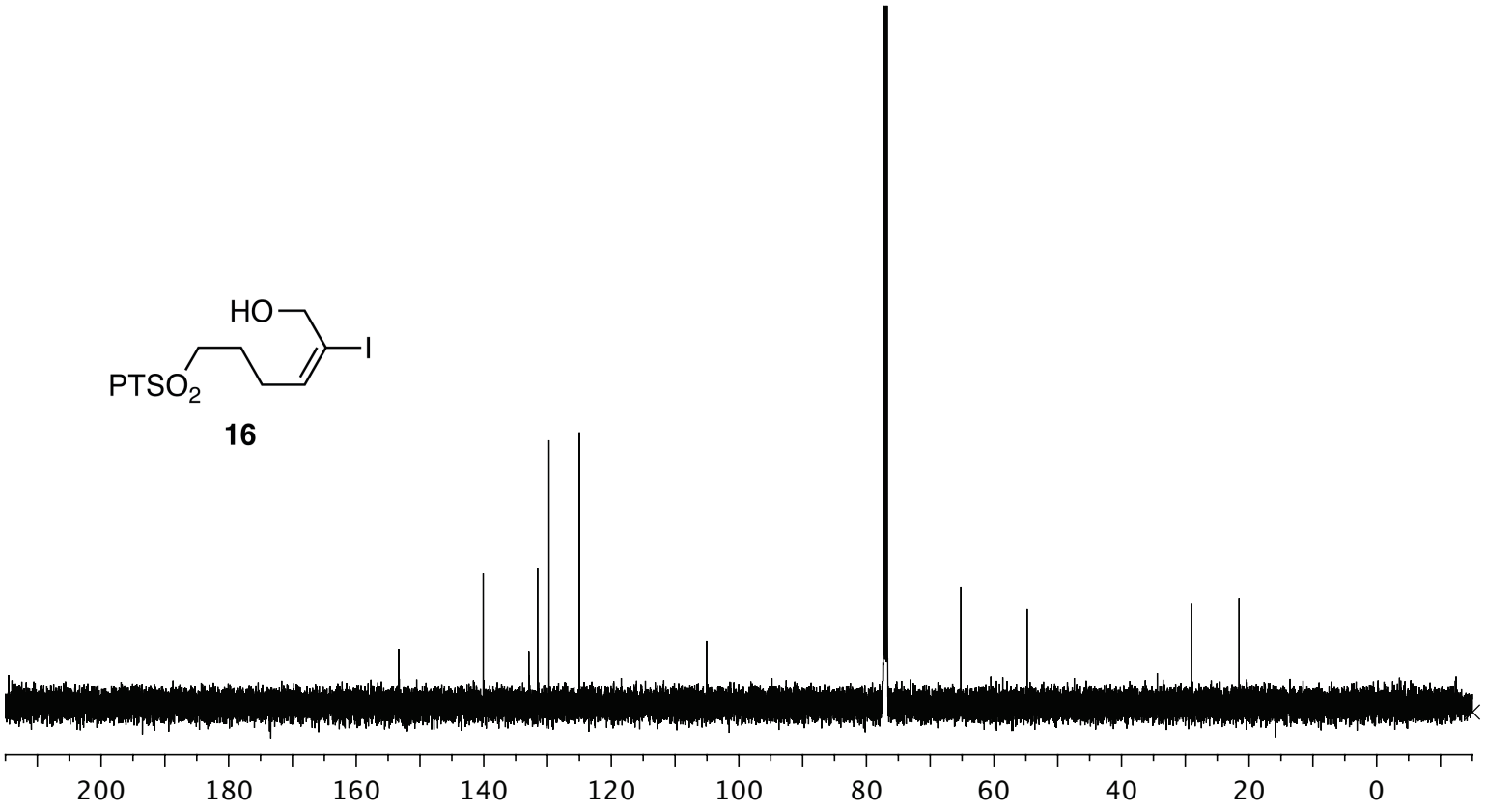
^{1}H-NMR (400 MHz) and ^{13}C-NMR (125 MHz) spectra of sulfone **15** in $CDCl_3$



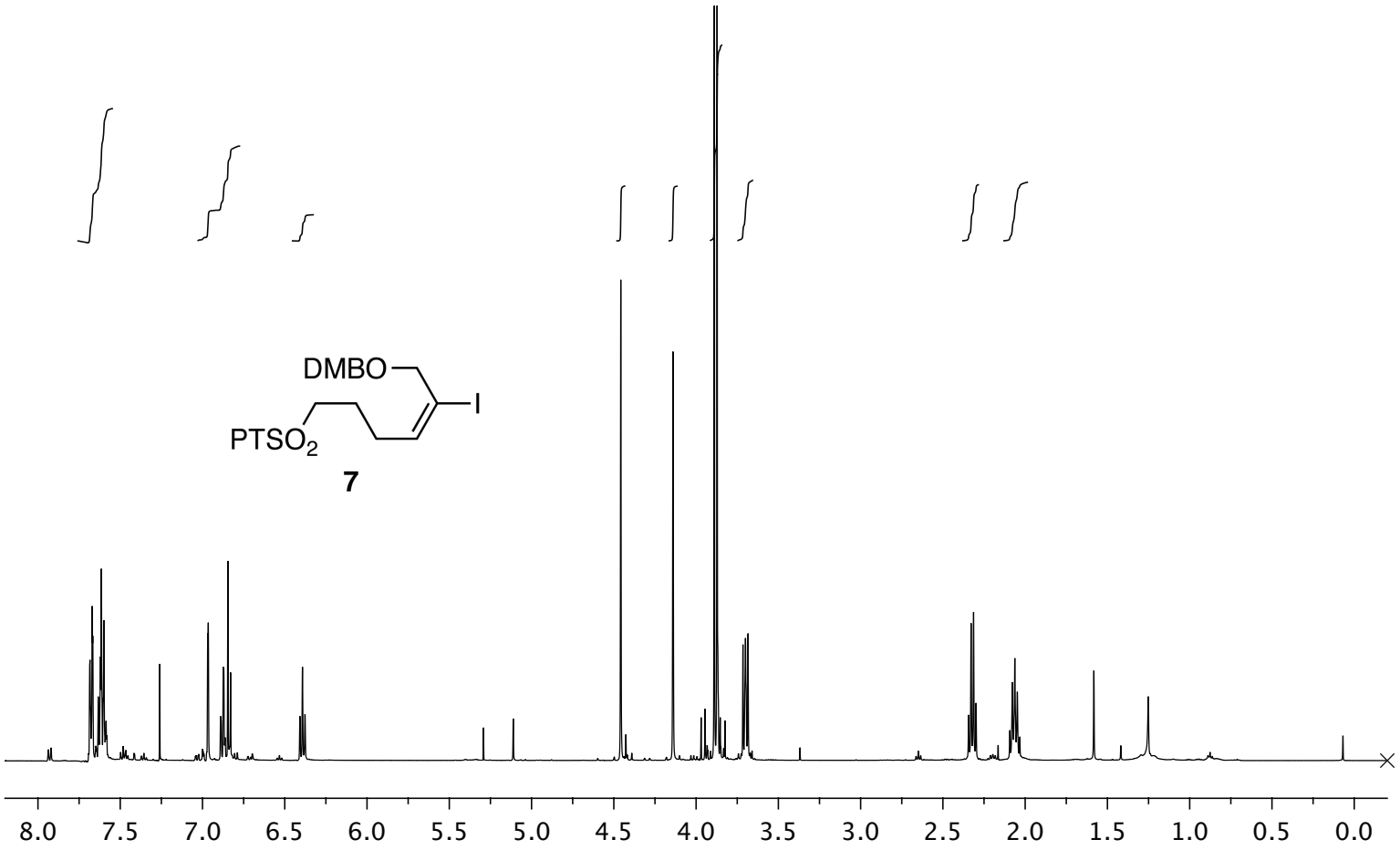


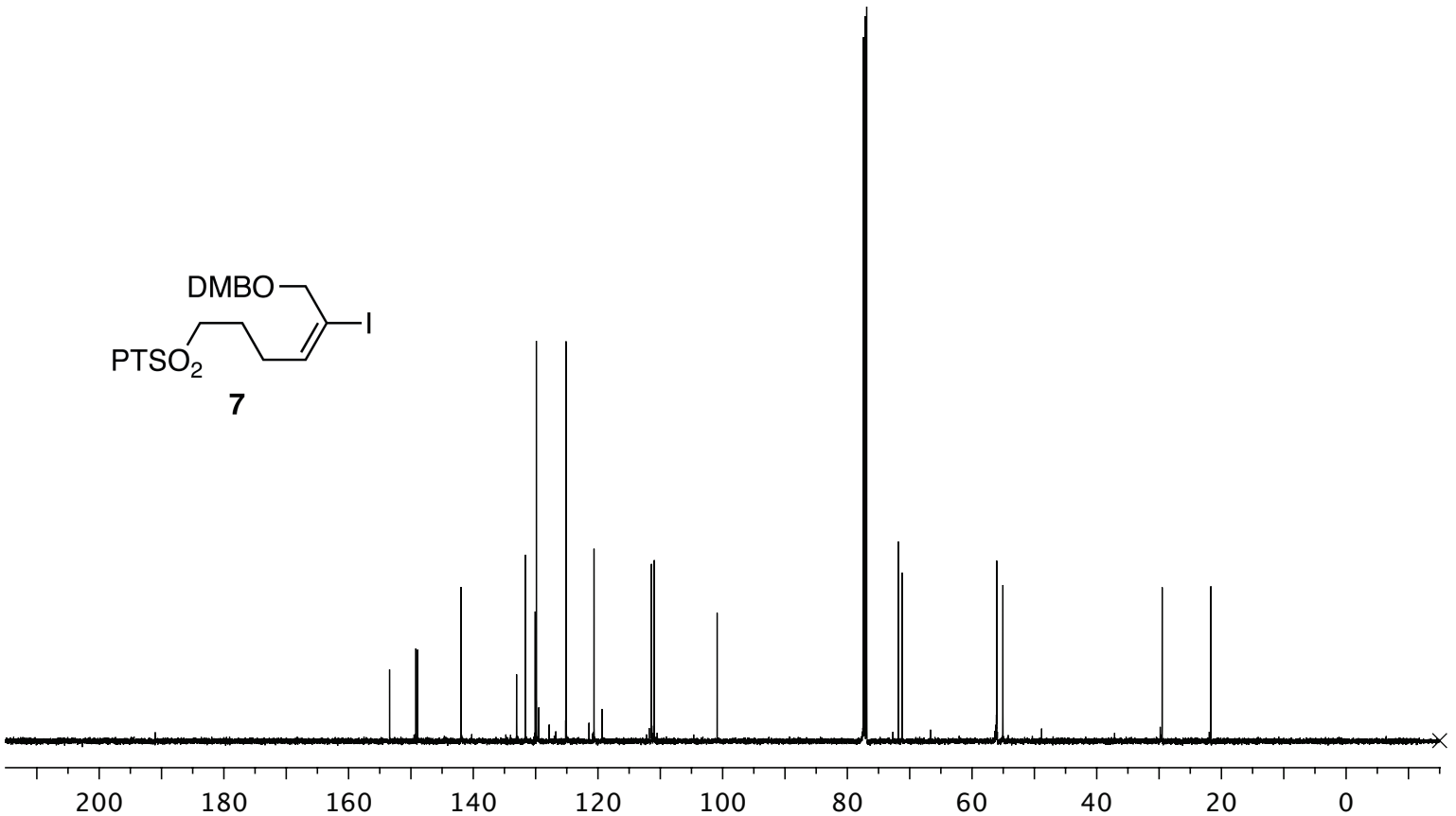
^{1}H-NMR (500 MHz) and ^{13}C-NMR (125 MHz) spectra of vinyl iodide **16** in $CDCl_3$



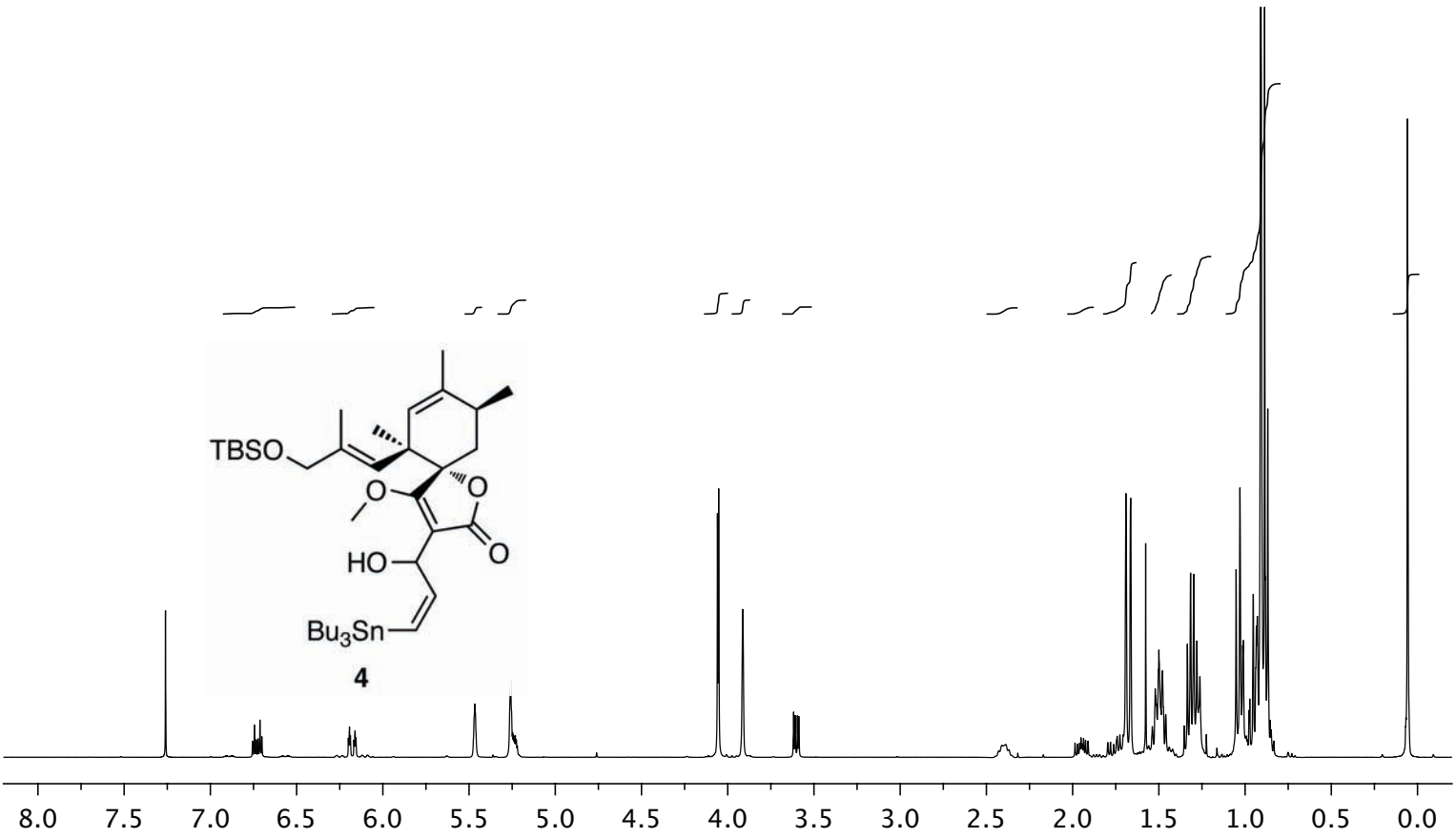


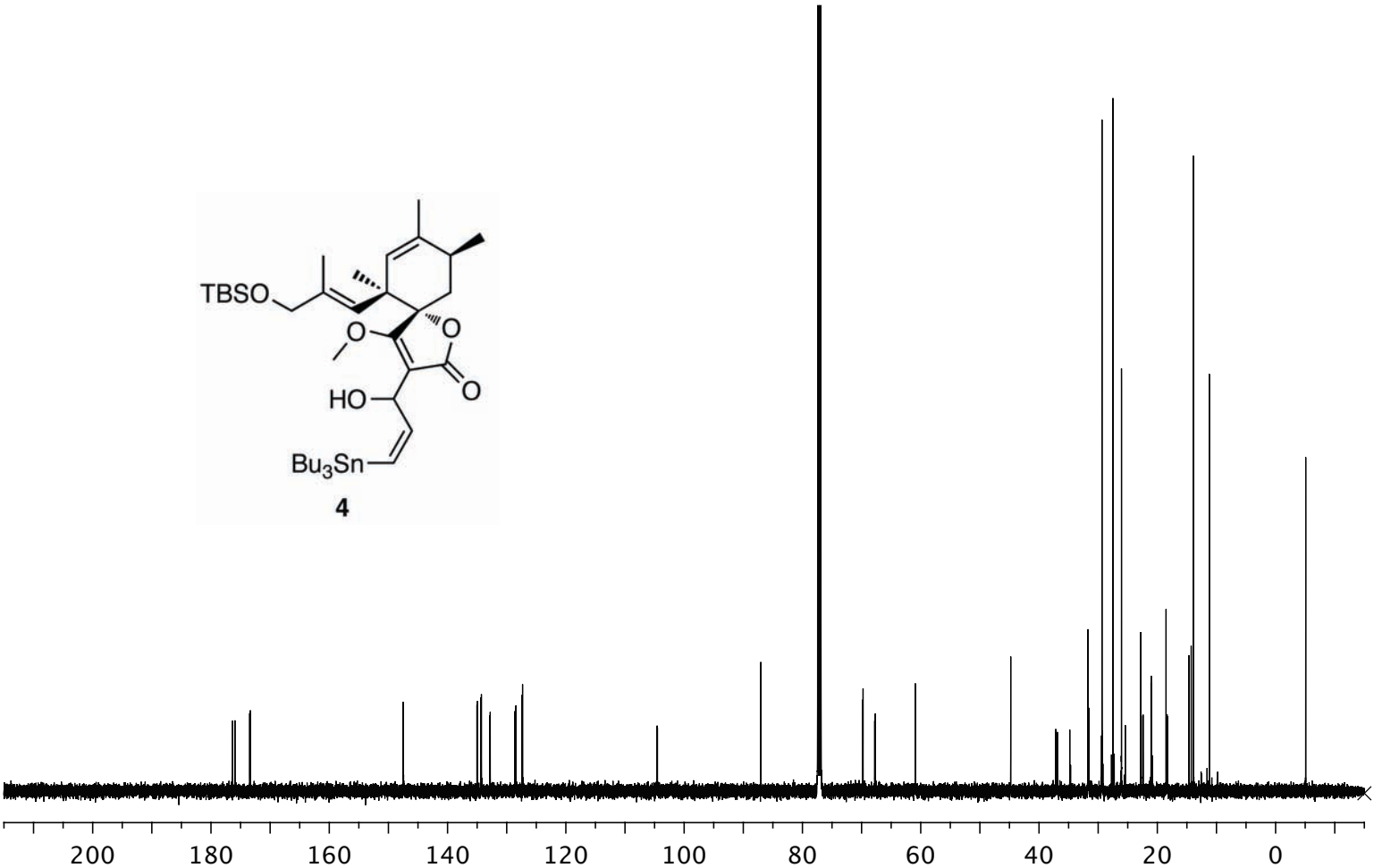
^{1}H-NMR (500 MHz) and ^{13}C-NMR (125 MHz) spectra of component **7** in $CDCl_3$



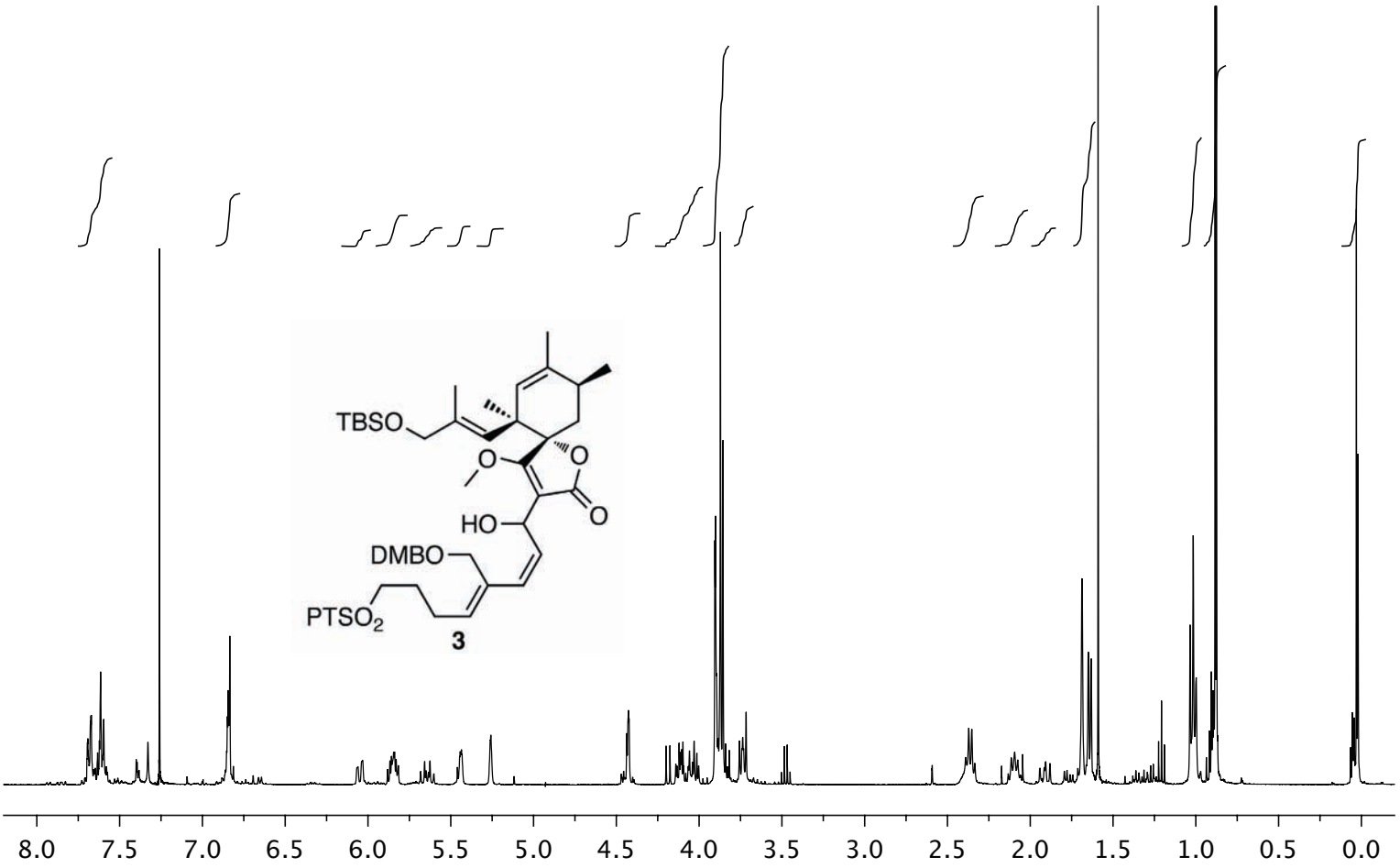


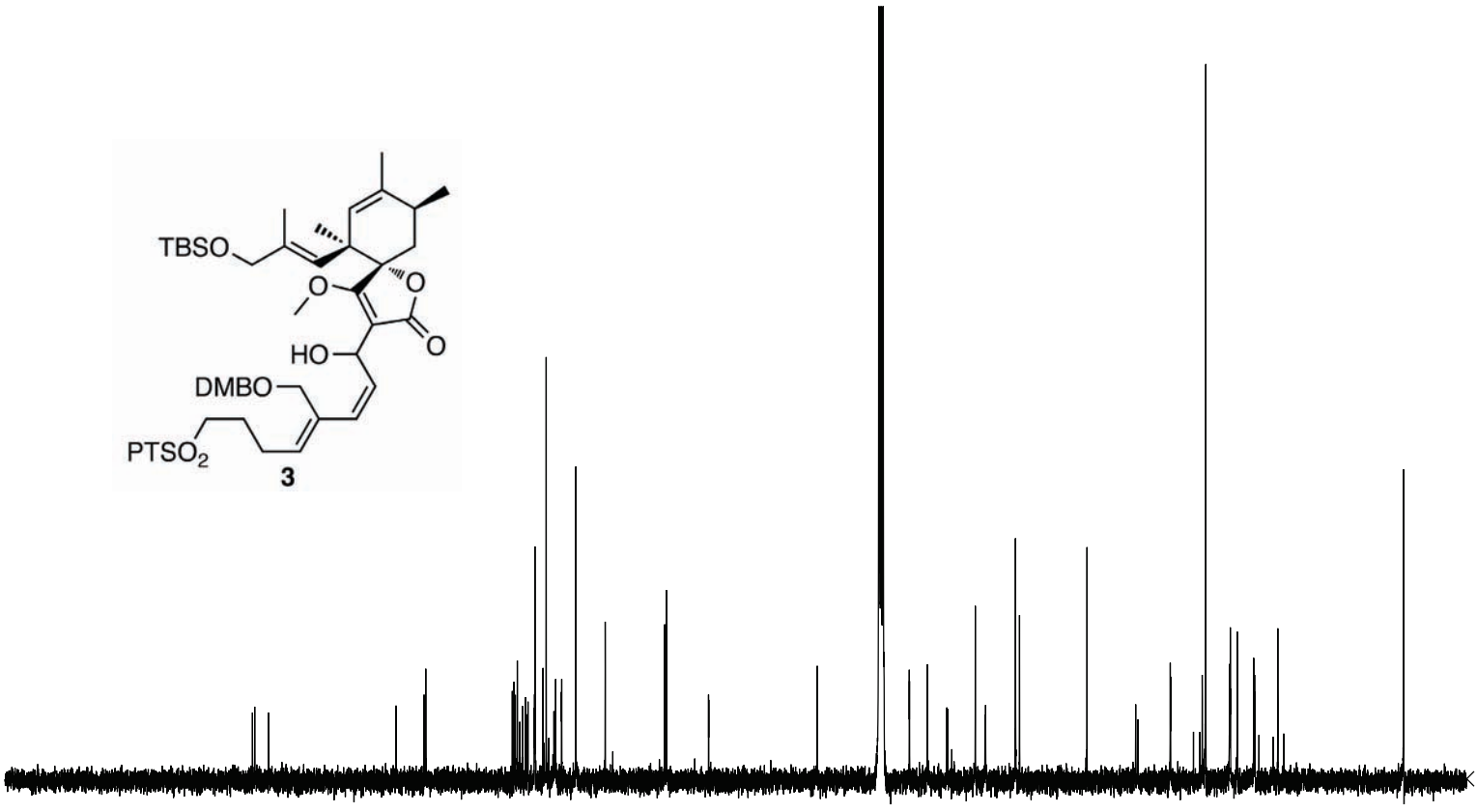
^{1}H-NMR (400 MHz) and ^{13}C-NMR (125 MHz) spectra of vinyl stannanes **4** in $CDCl_3$



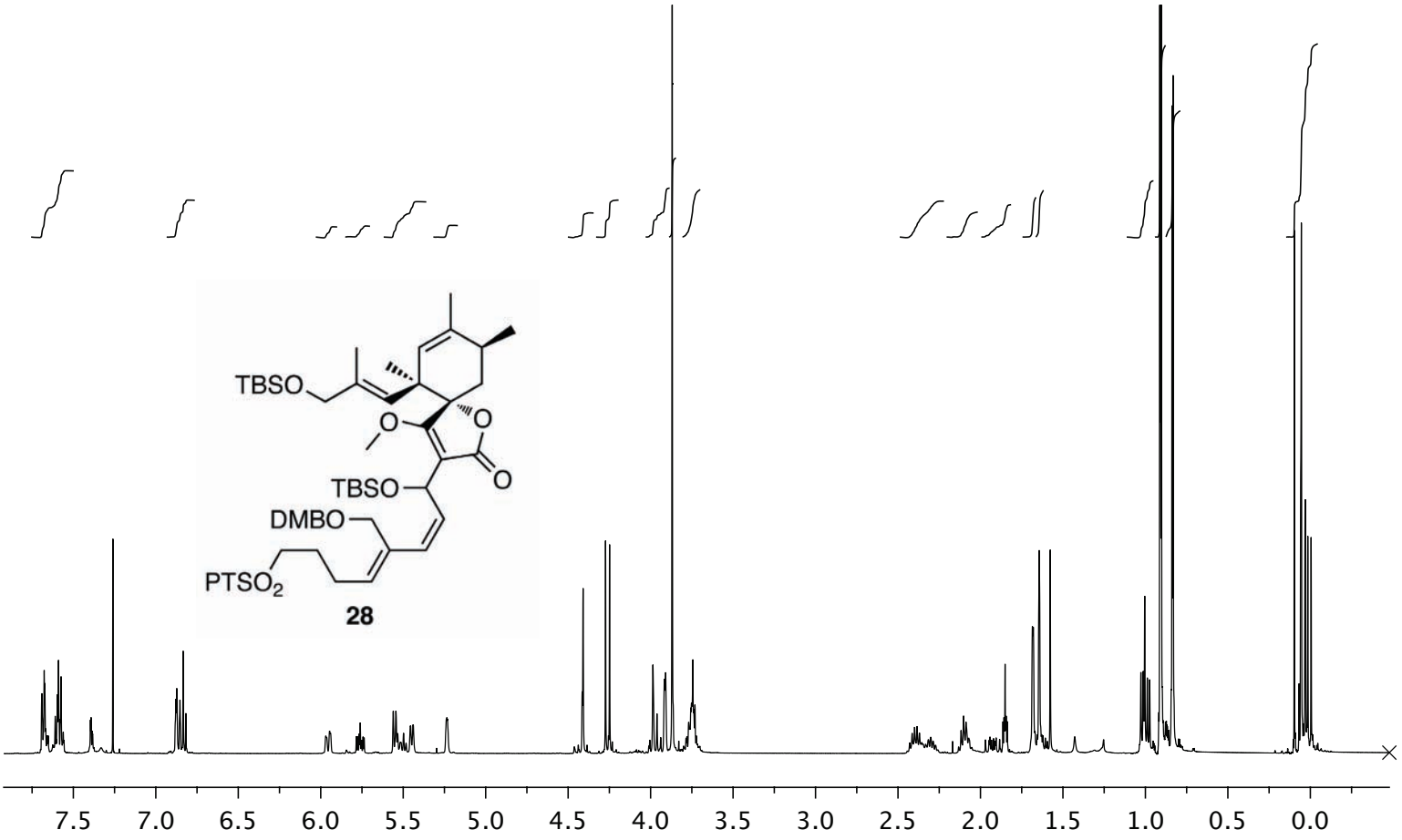


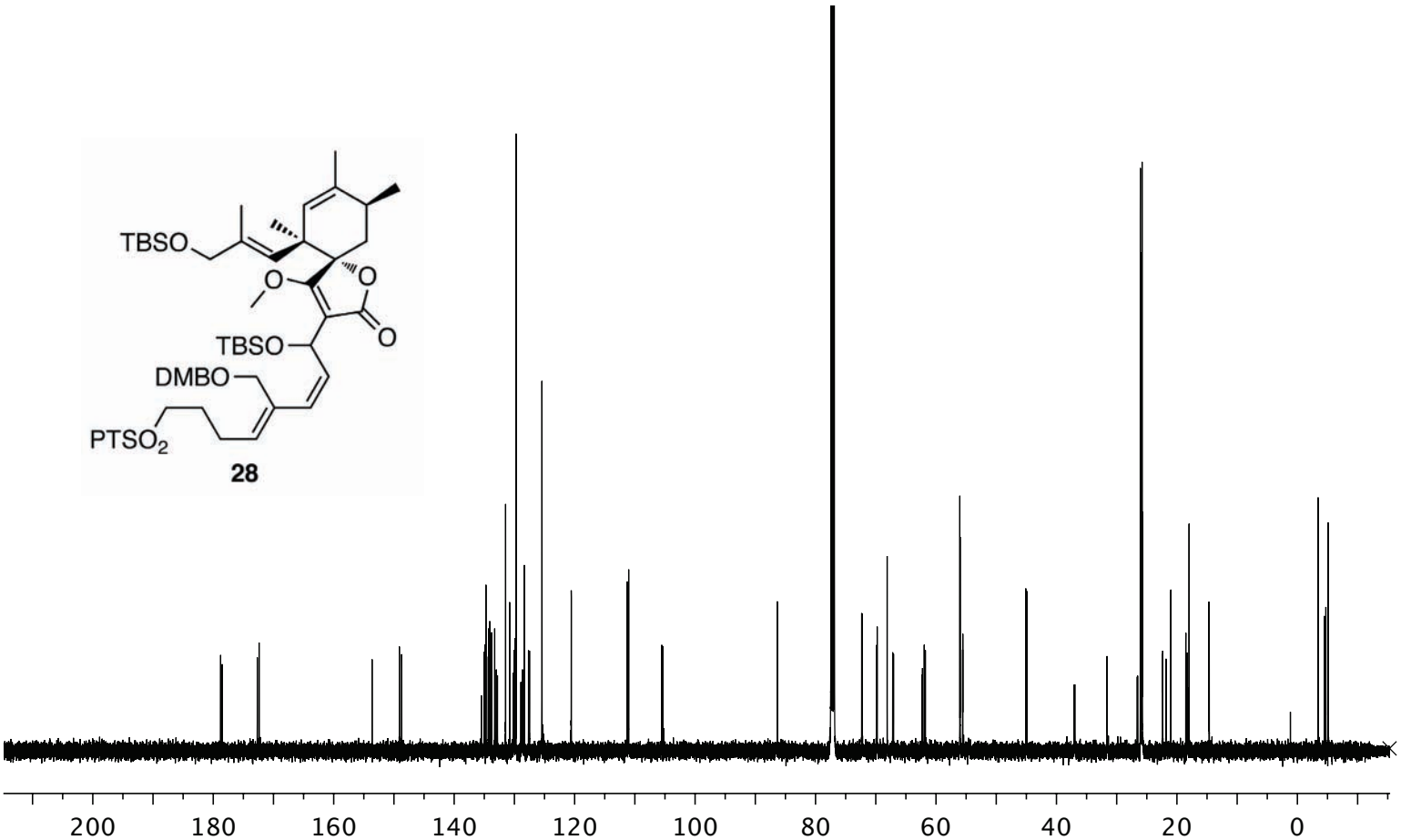
^{1}H-NMR (400 MHz) and ^{13}C-NMR (100 MHz) spectra of Stille adducts **3** in $CDCl_3$



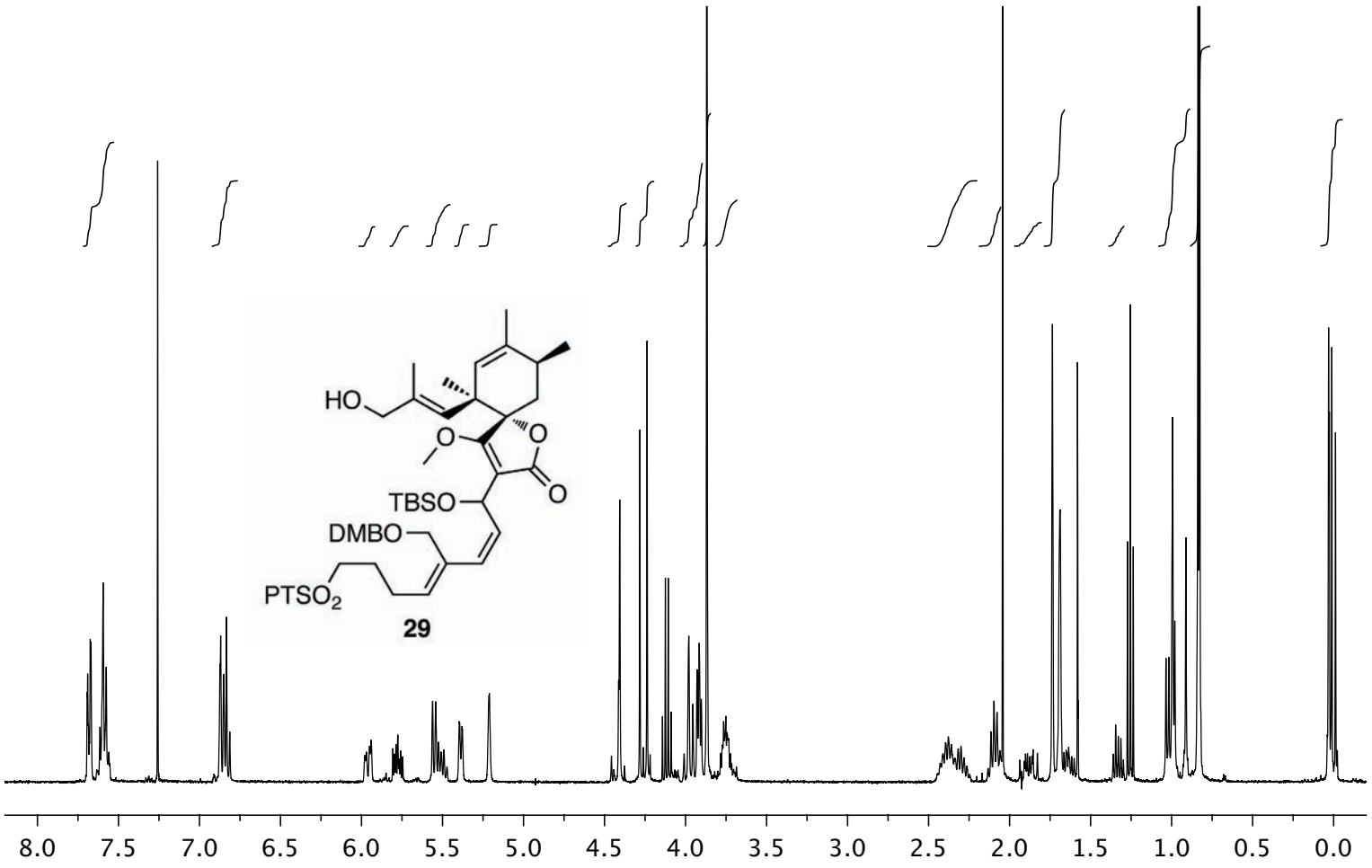


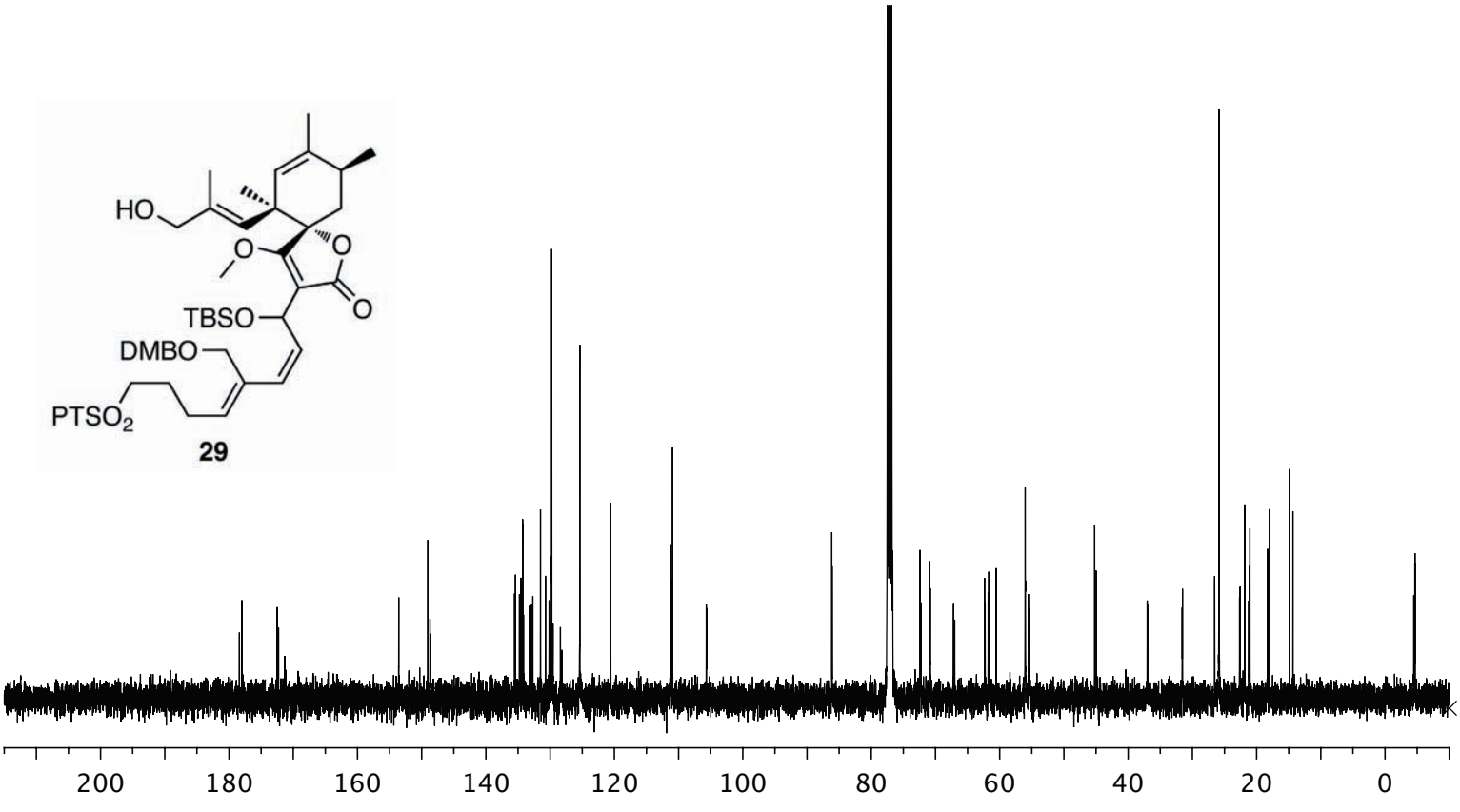
^{1}H-NMR (500 MHz) and ^{13}C-NMR (125 MHz) spectra of bis-silyl ethers **28** in $CDCl_3$





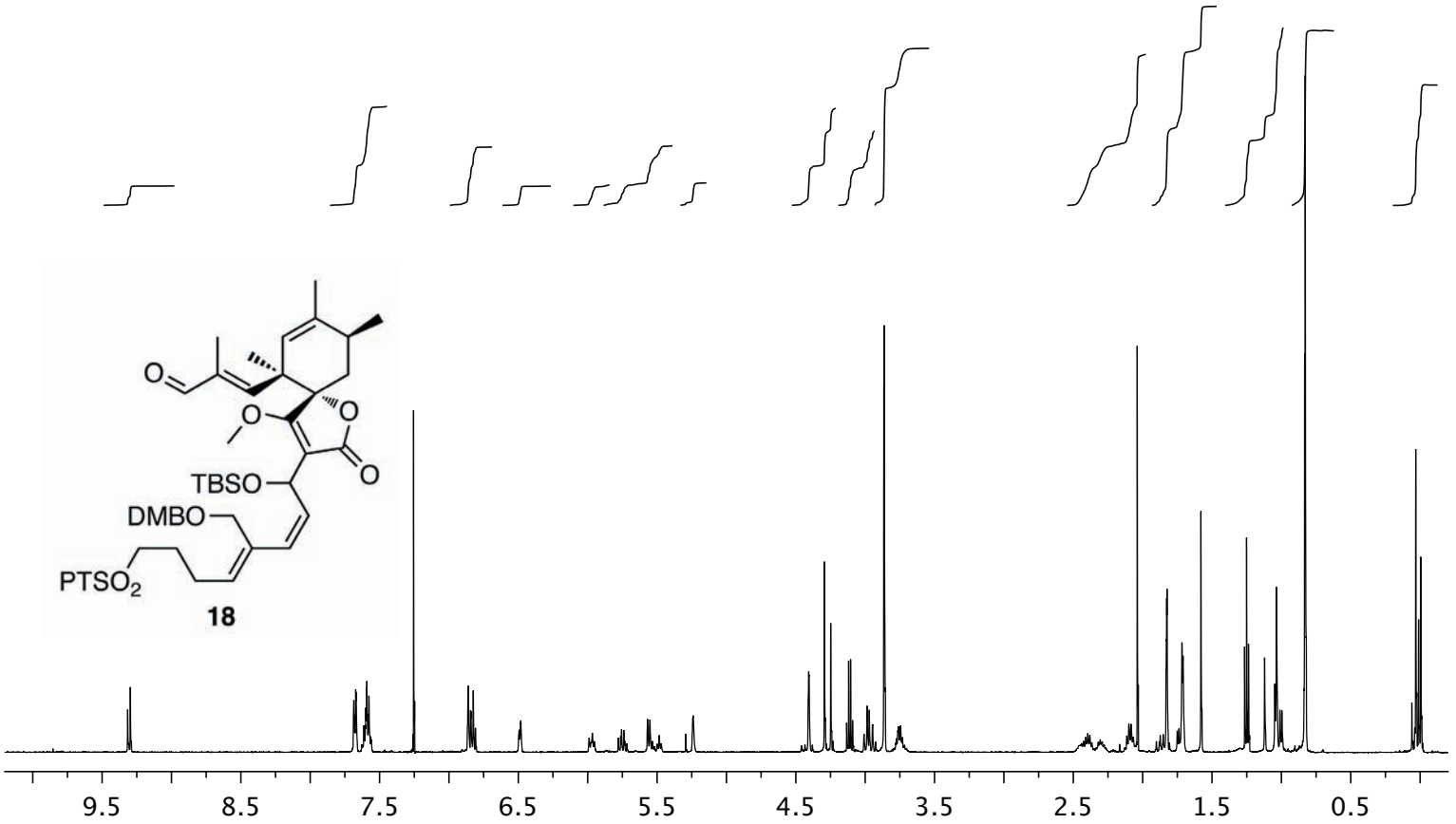
^{1}H-NMR (400 MHz) and ^{13}C-NMR (100 MHz) spectra of primary alcohols **29** in $CDCl_3$





^{1}H-NMR (500 MHz) and ^{13}C-NMR (125 MHz) spectra of aldehydes **18** in $CDCl_3$

18



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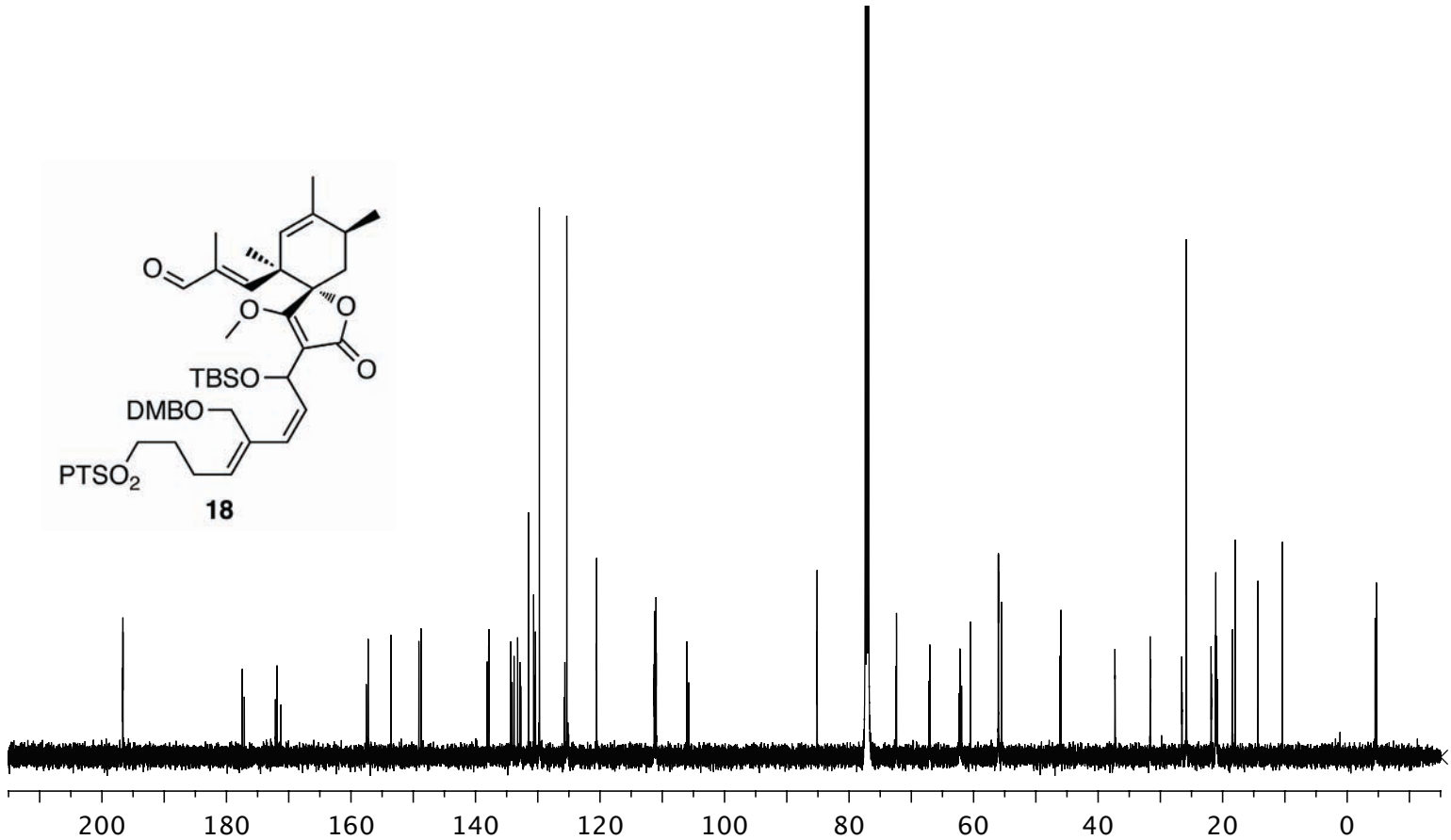
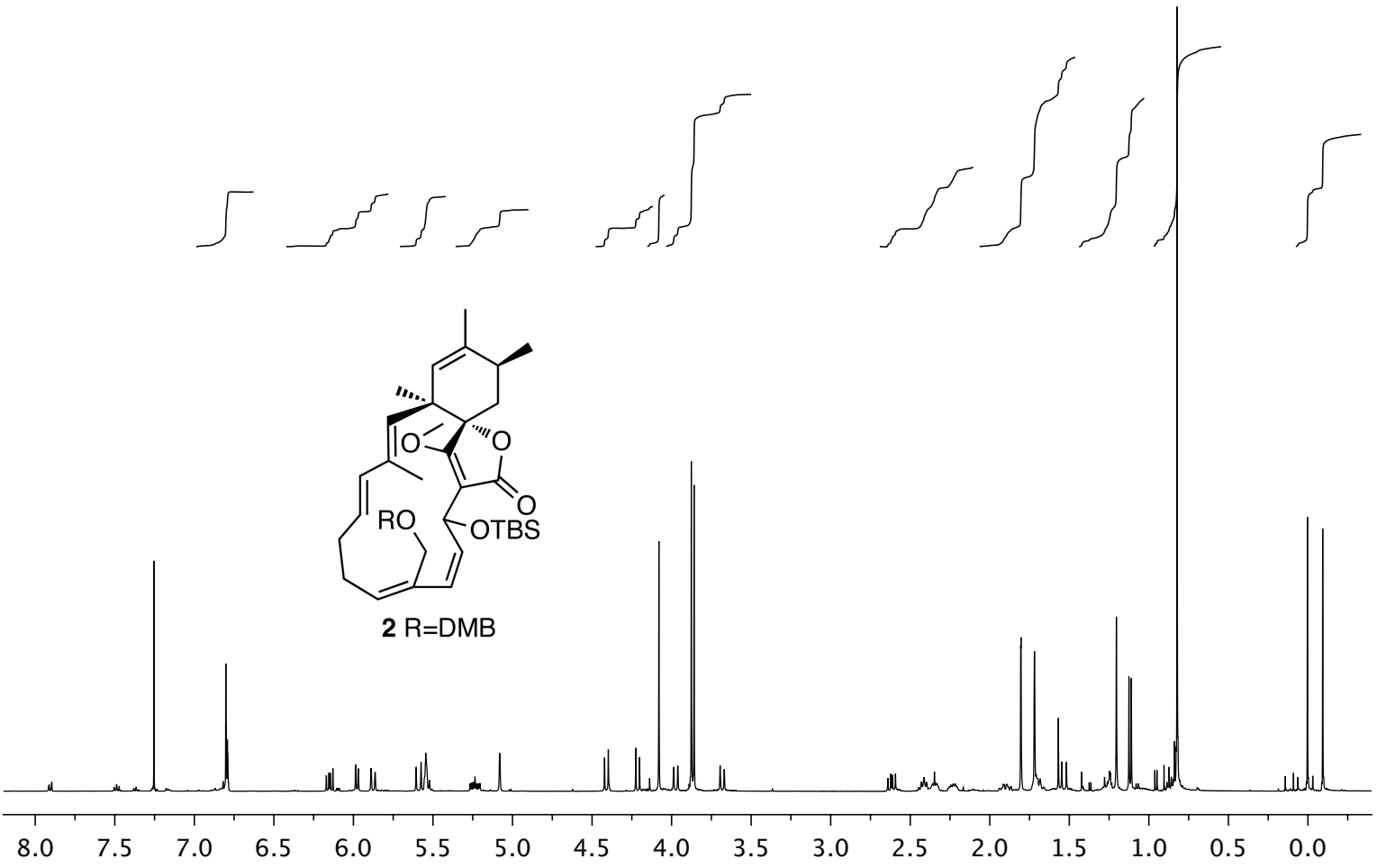


^{1}H-NMR (500 MHz) and ^{13}C-NMR (100 MHz) spectra of macrocycle **2** in $CDCl_3$



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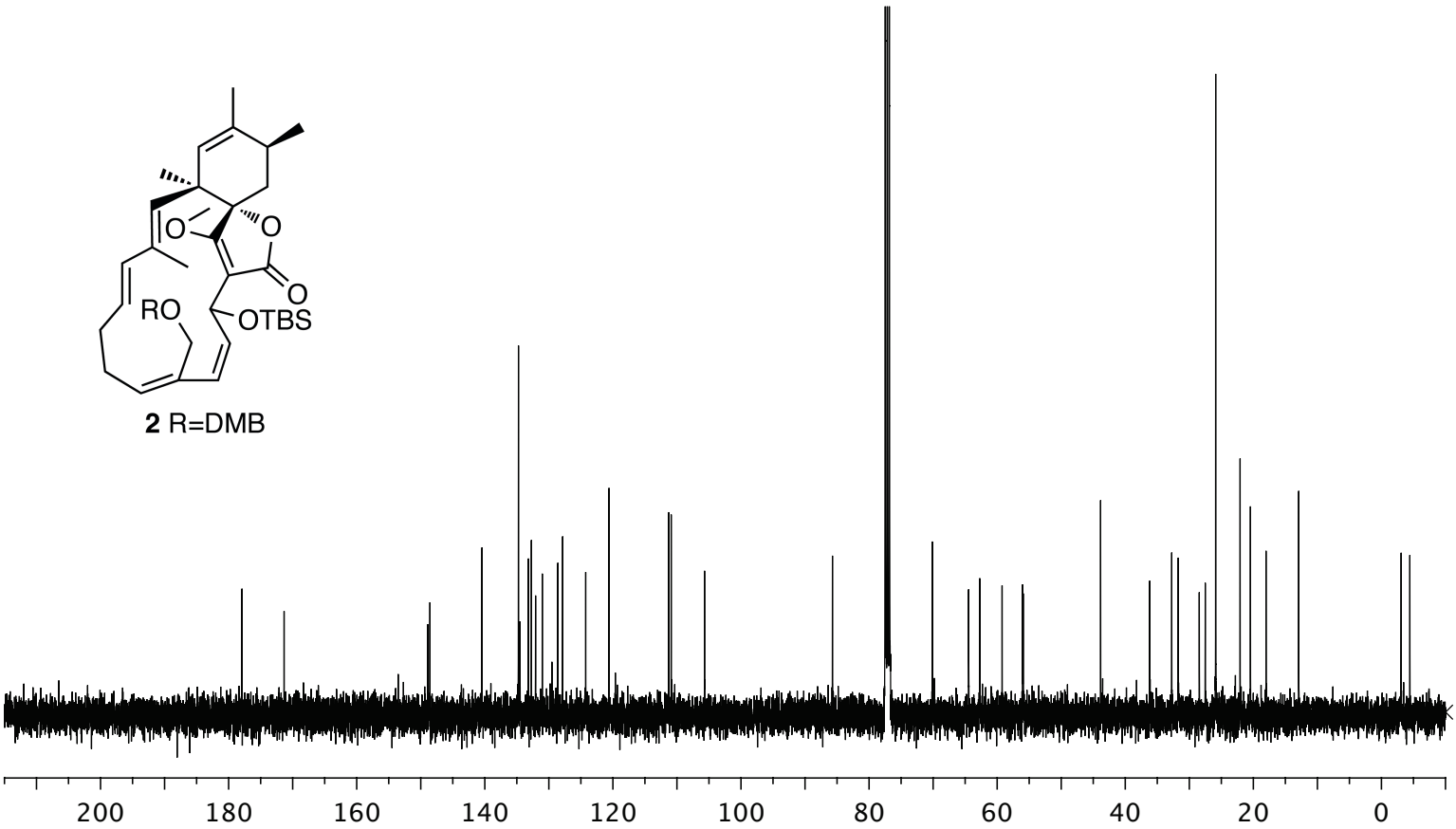
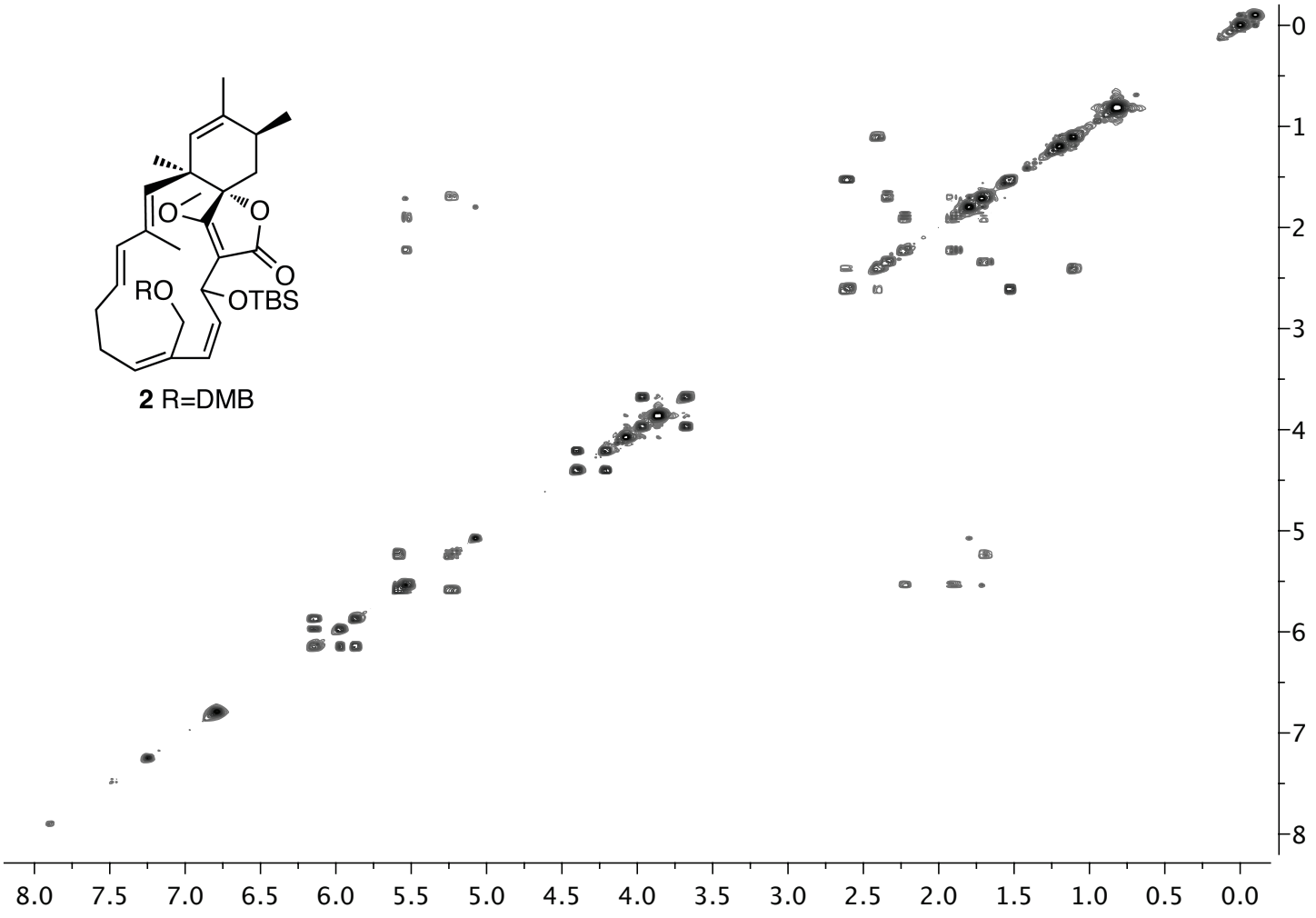
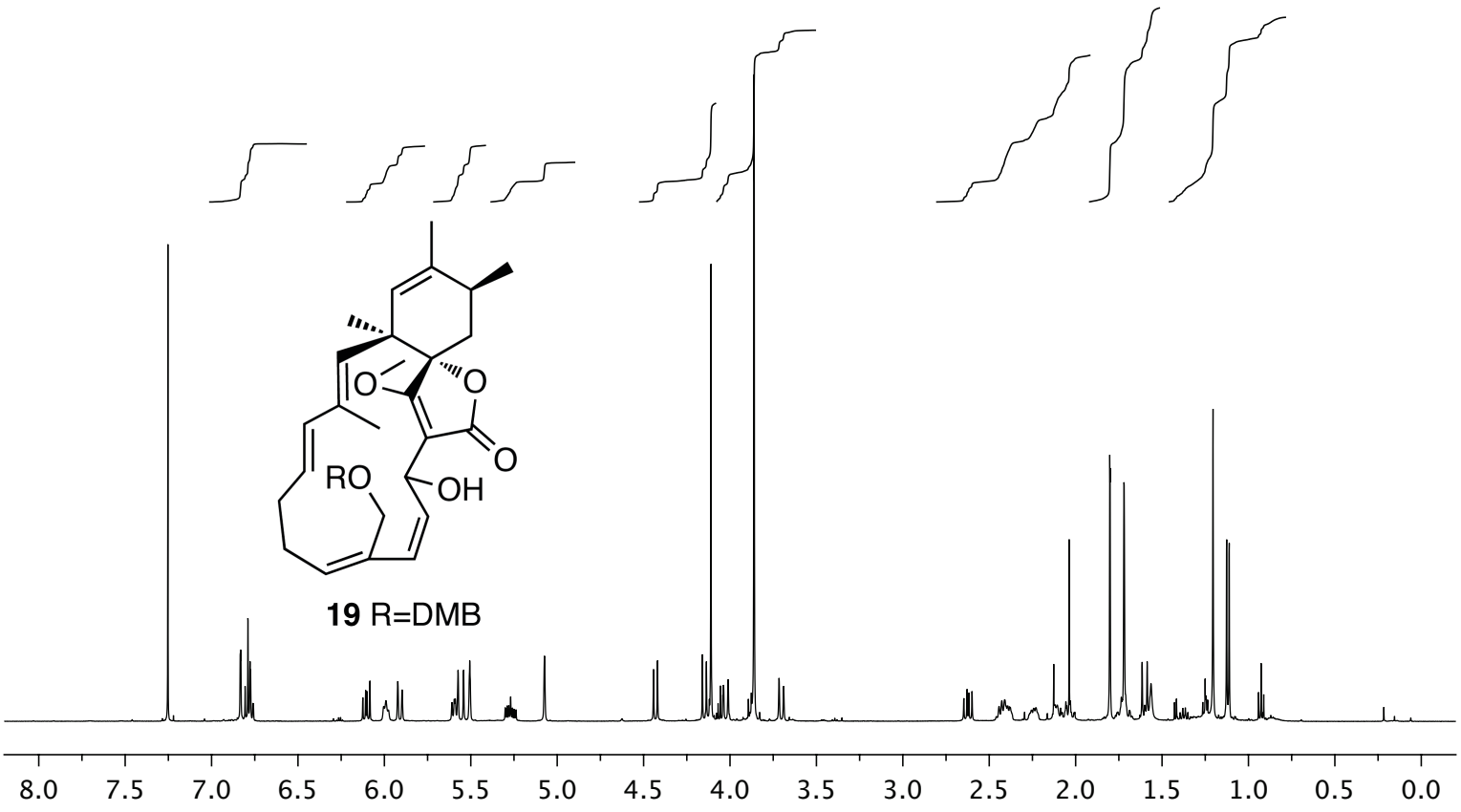


2 R=DMB

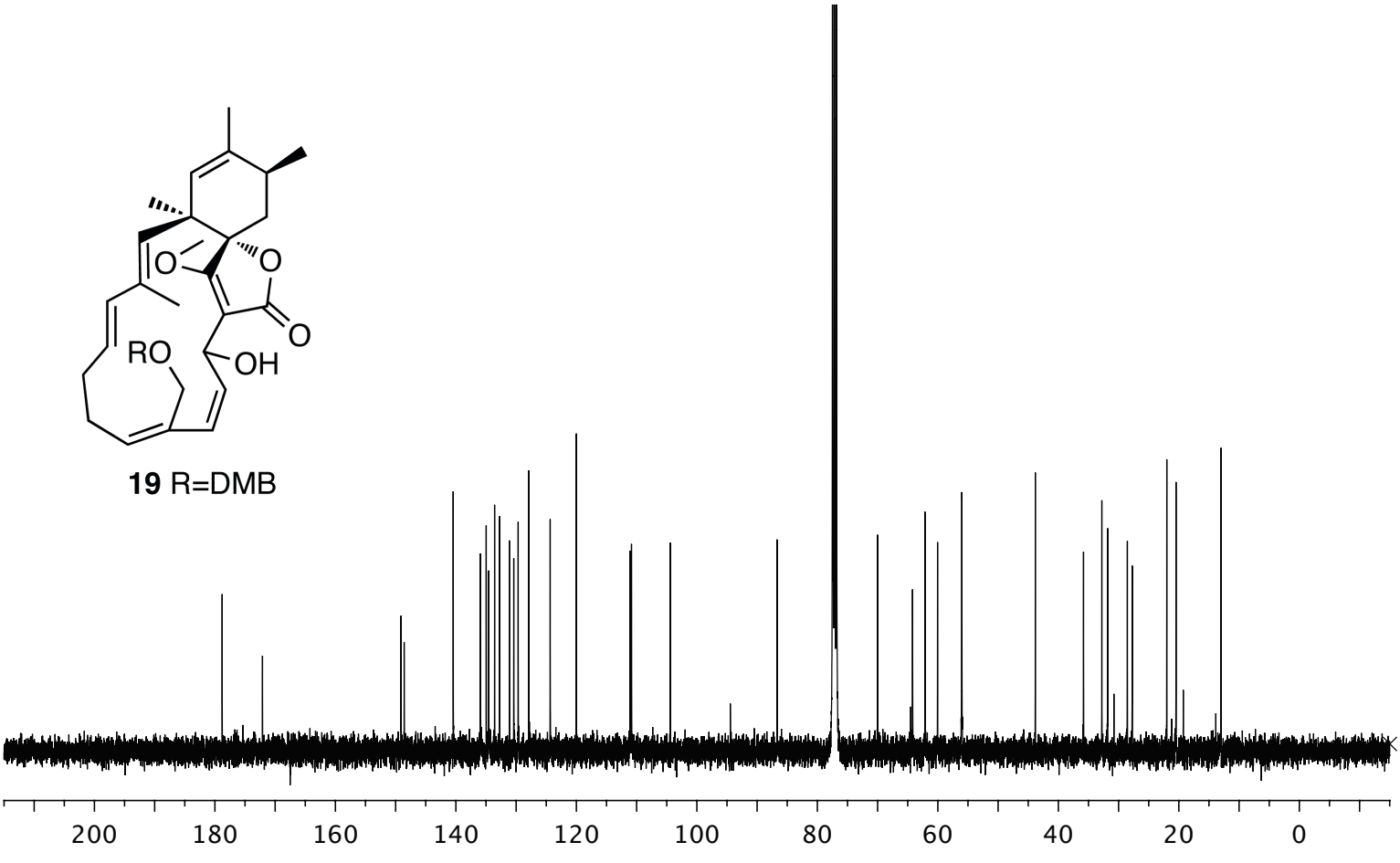
gCOSY (500 MHz) spectra of macrocycle **2** in $CDCl_3$



^{1}H-NMR (400 MHz) and ^{13}C-NMR (100 MHz) spectra of macrocyclic alcohol **19** in $CDCl_3$

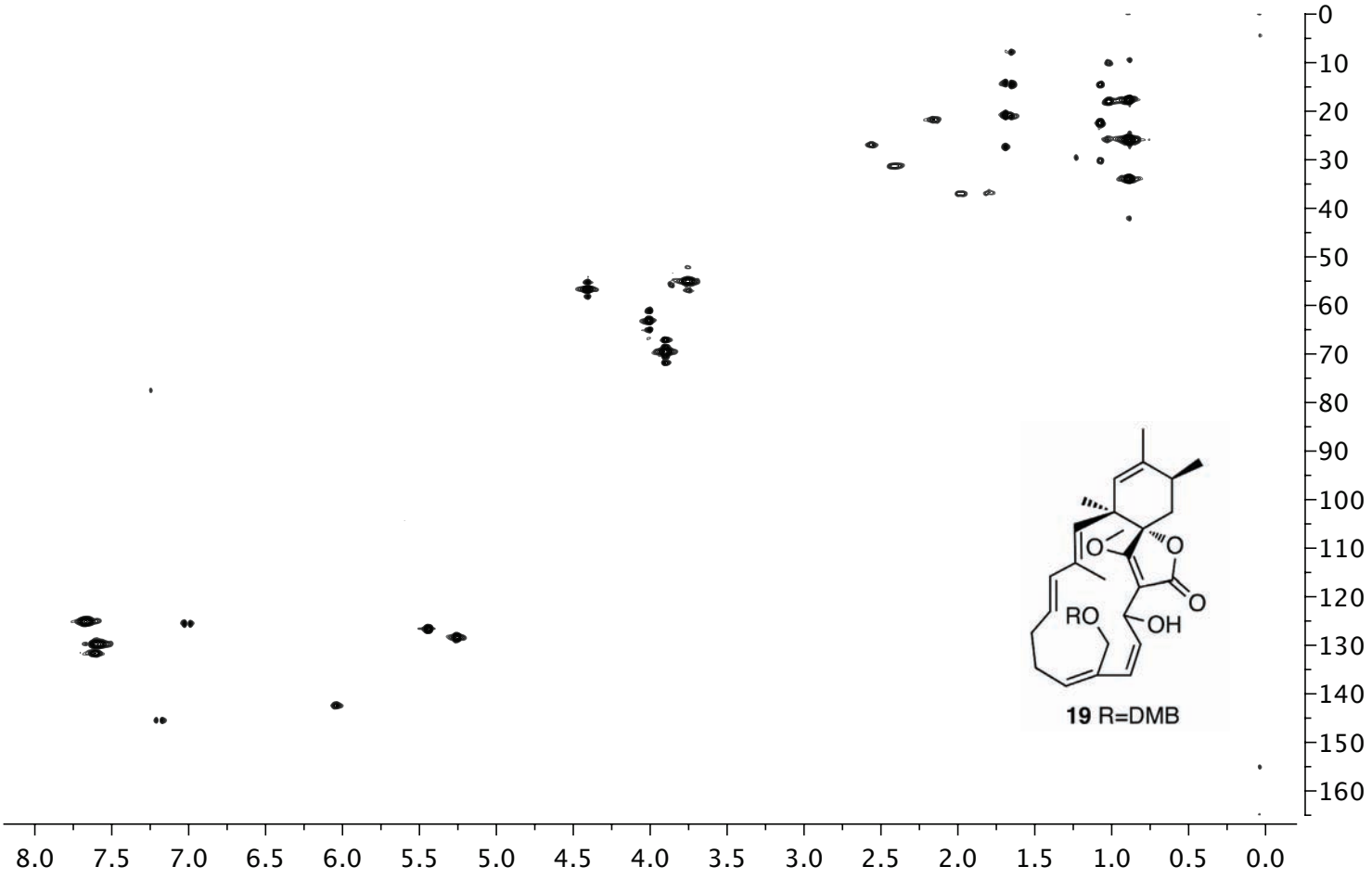


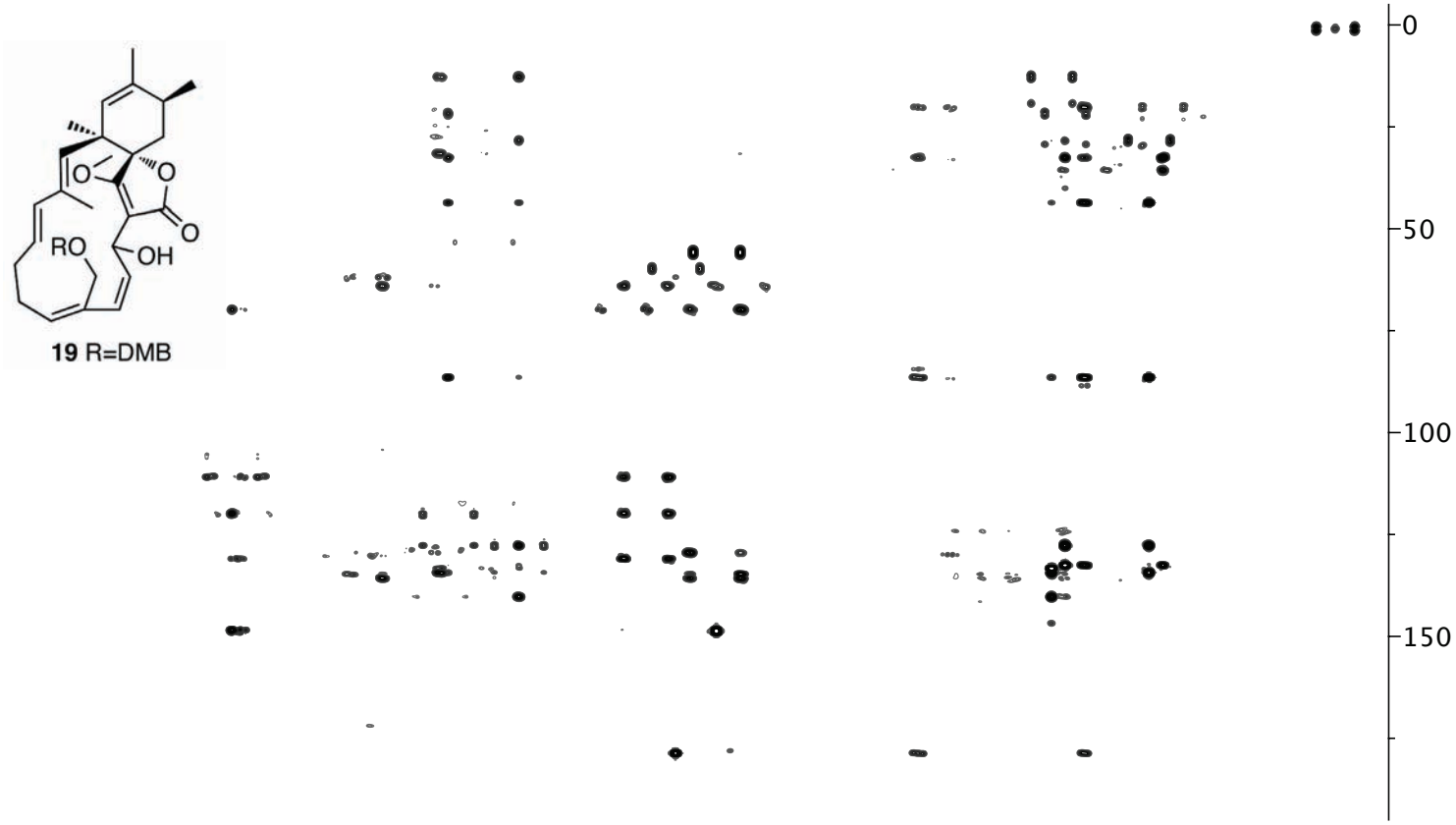
19 R=DMB



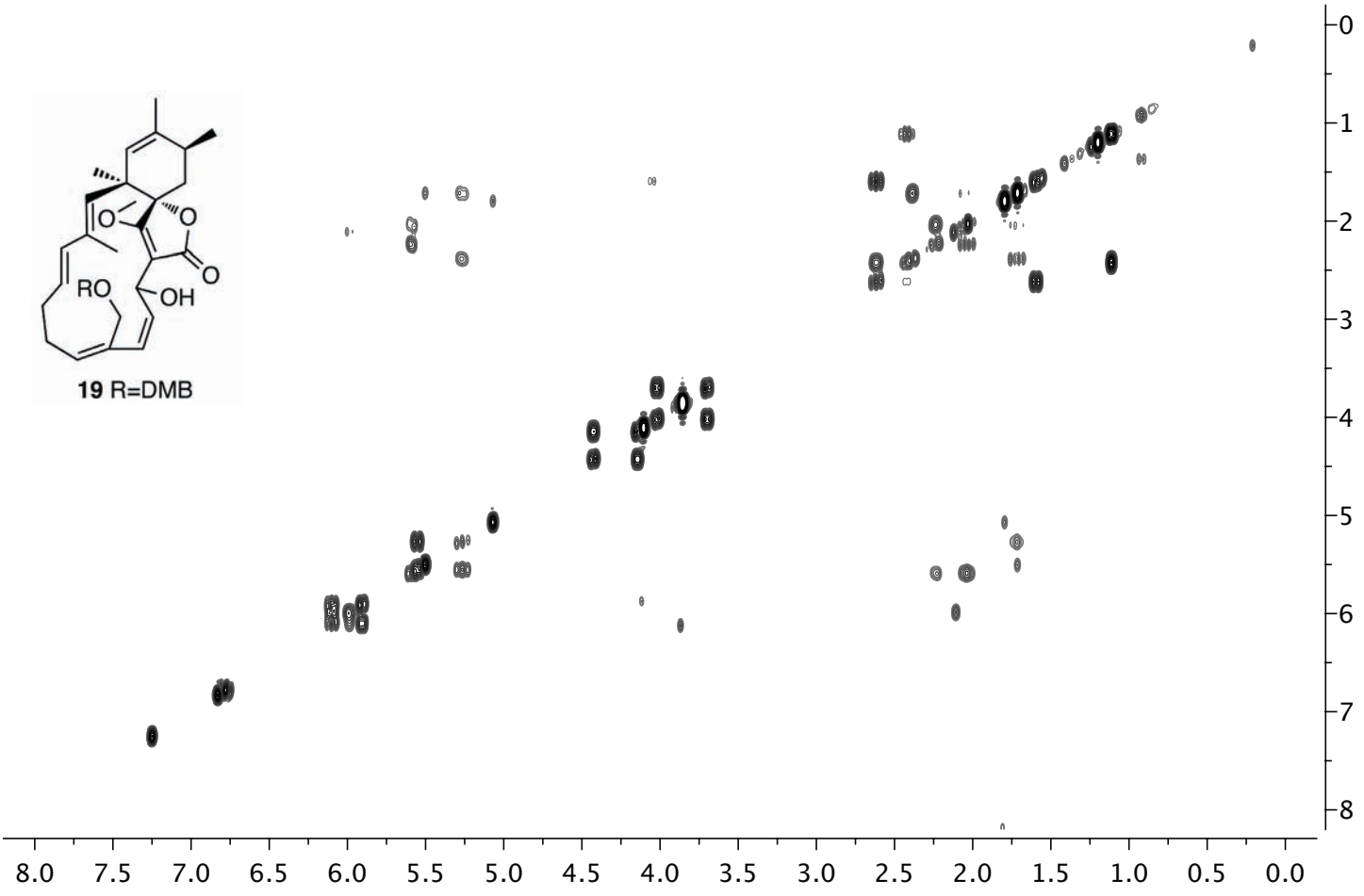
19 R=DMB

gHSQC (top) and gHMBC (bottom) spectra of macrocyclic alcohol **19** in $CDCl_3$

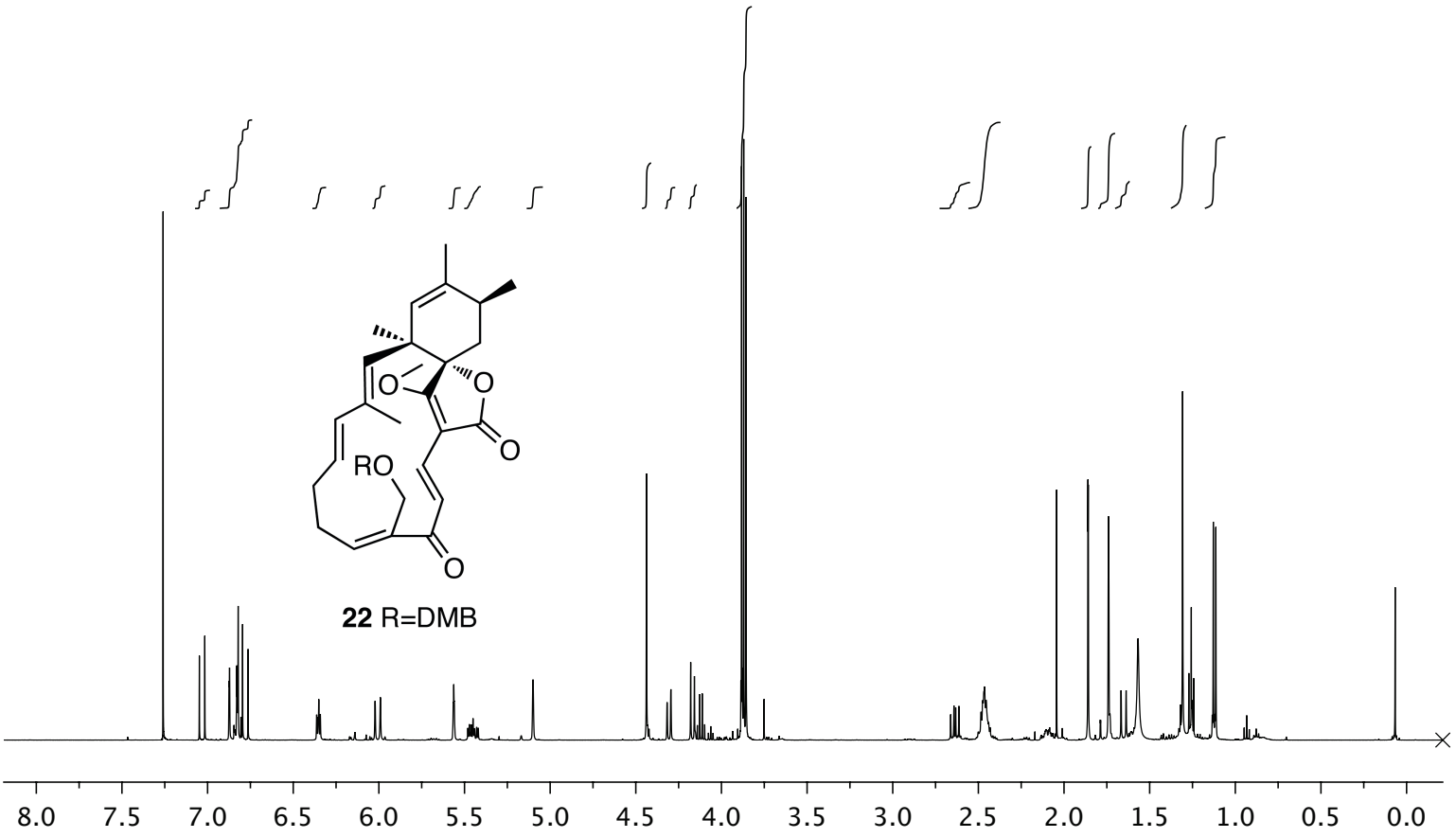




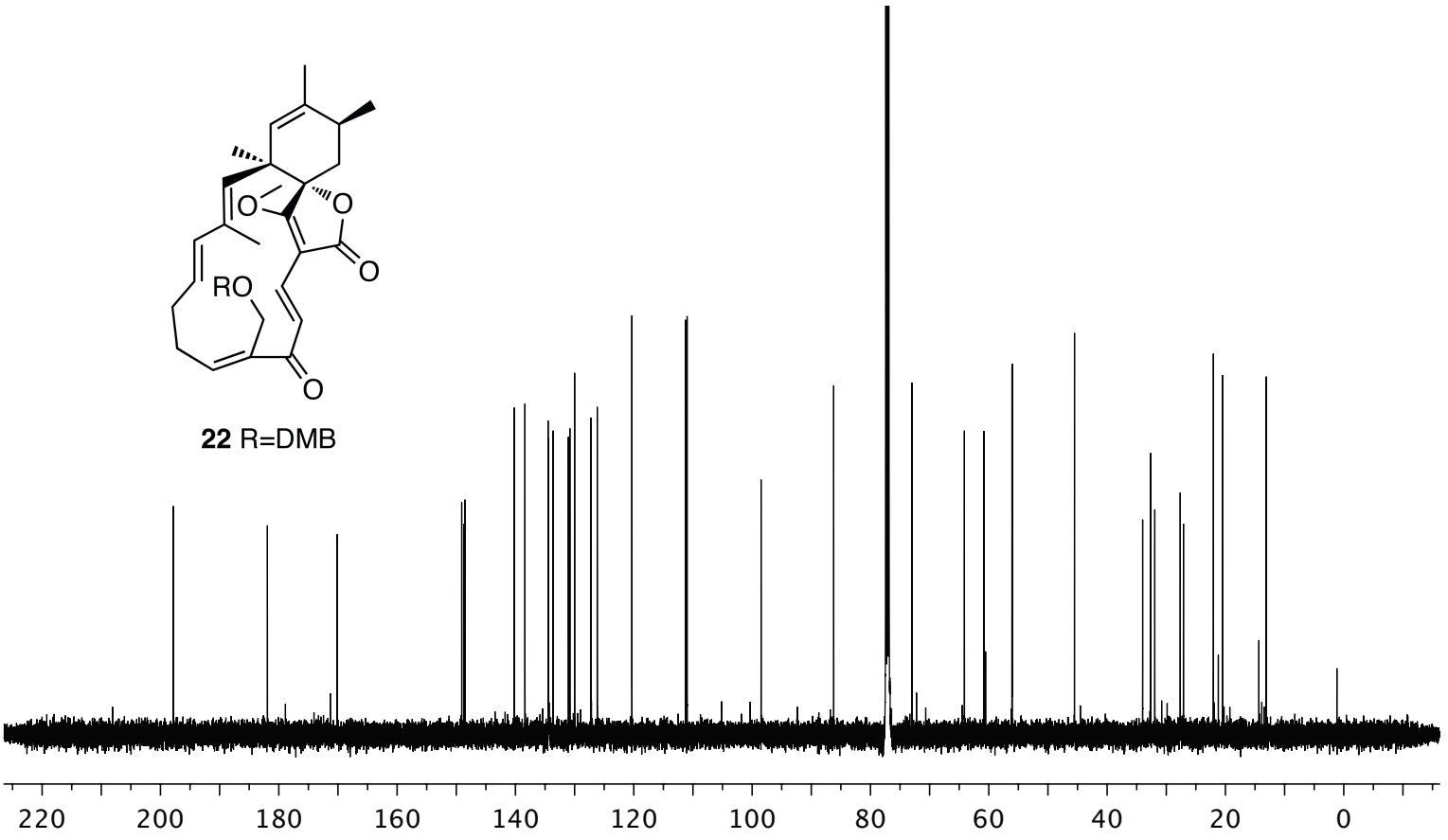
gCOSY (500 MHz) spectra of macrocyclic alcohol **19** in $CDCl_3$



^{1}H-NMR (500 MHz) and ^{13}C-NMR (125 MHz) spectra of ketone **22** in $CDCl_3$

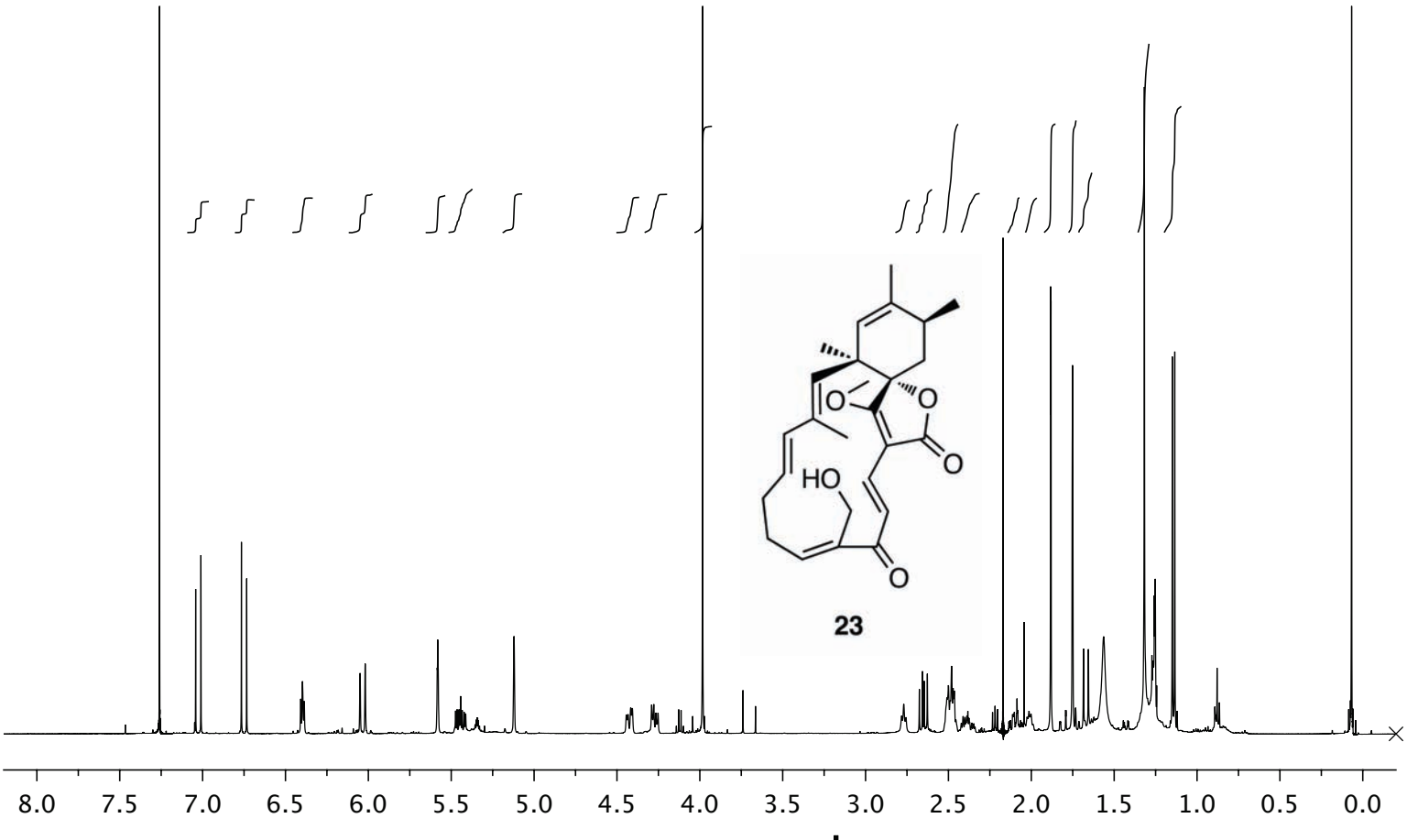


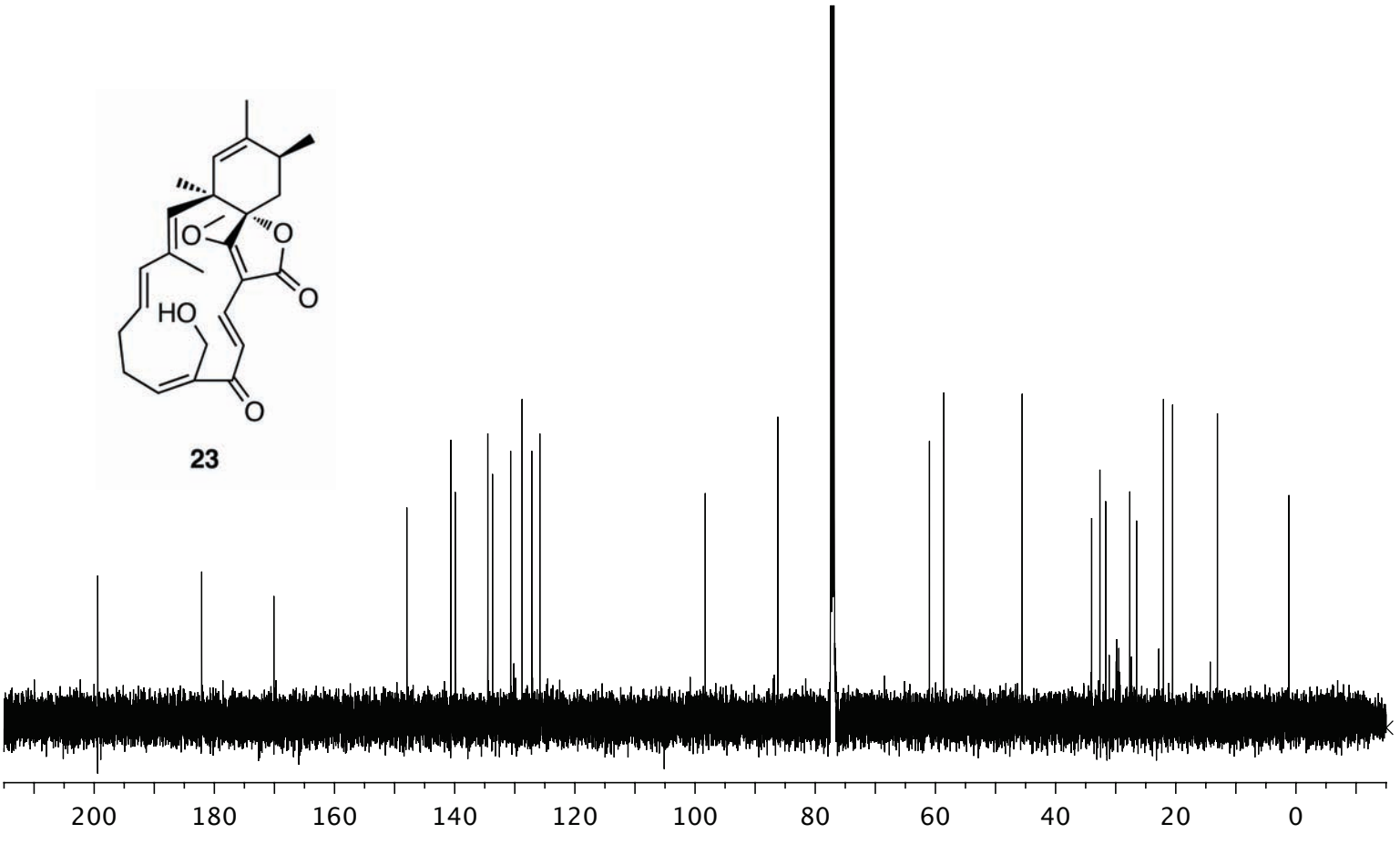
22 R=DMB



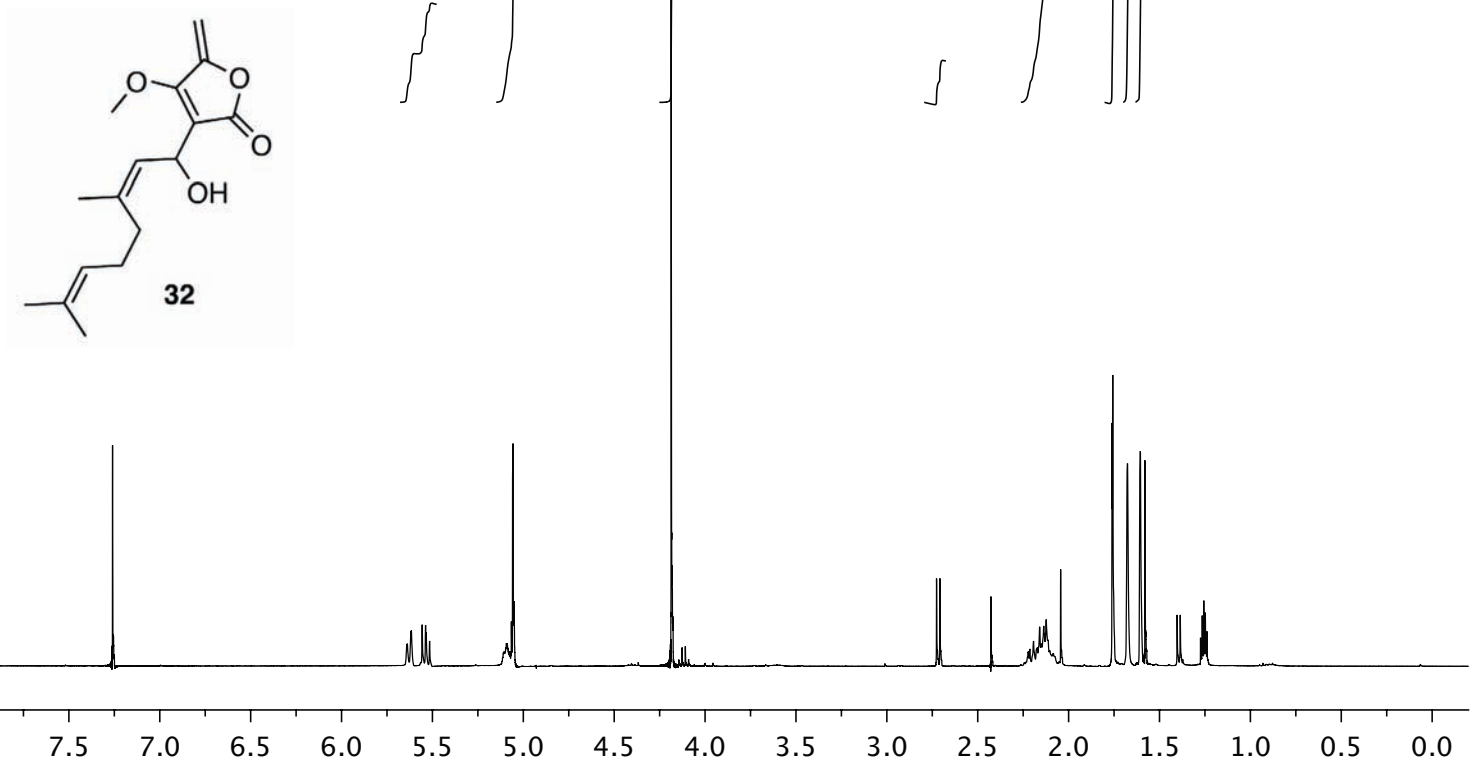
22 R=DMB

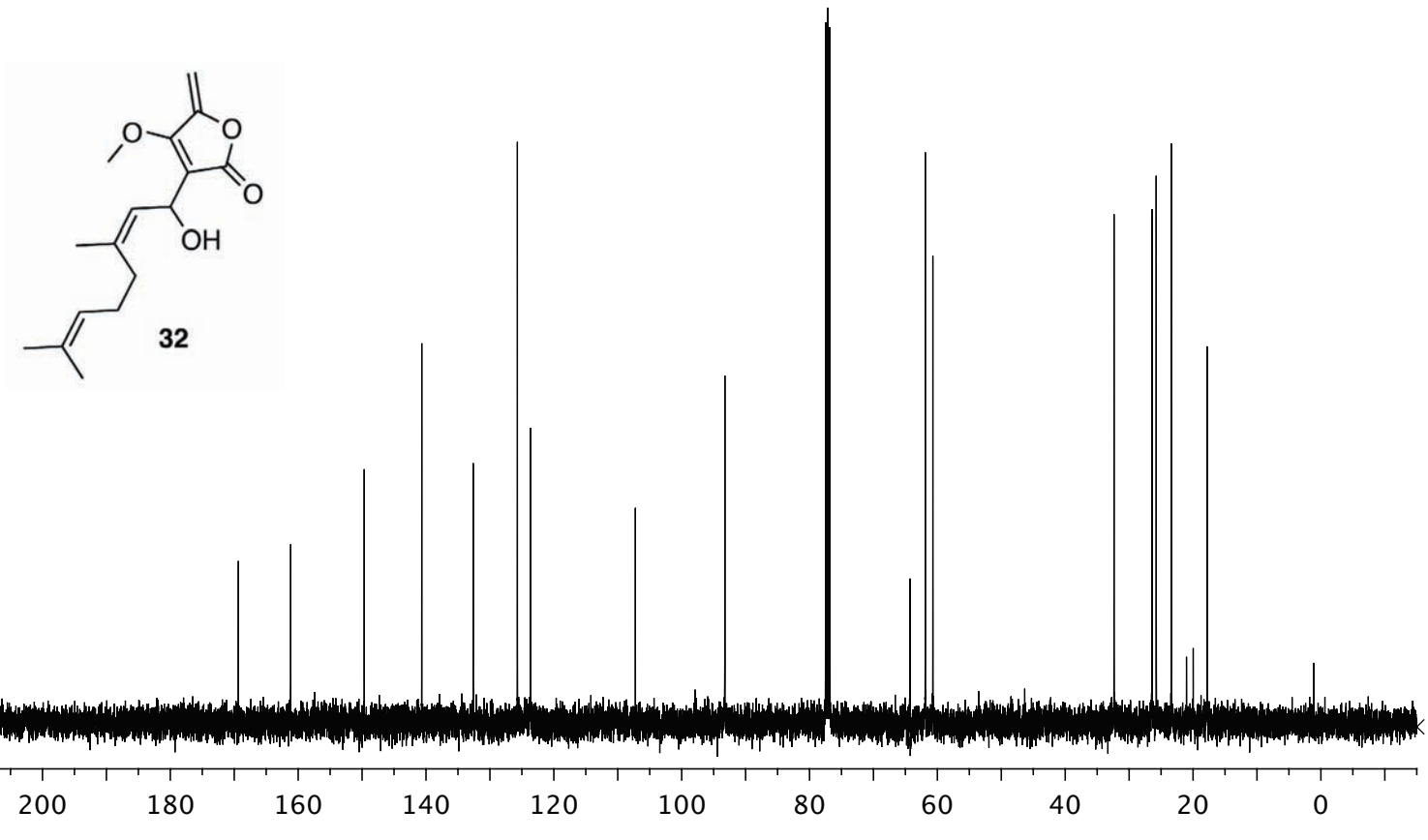
^{1}H-NMR (500 MHz) and ^{13}C-NMR (125 MHz) spectra of alcohol **23** in $CDCl_3$



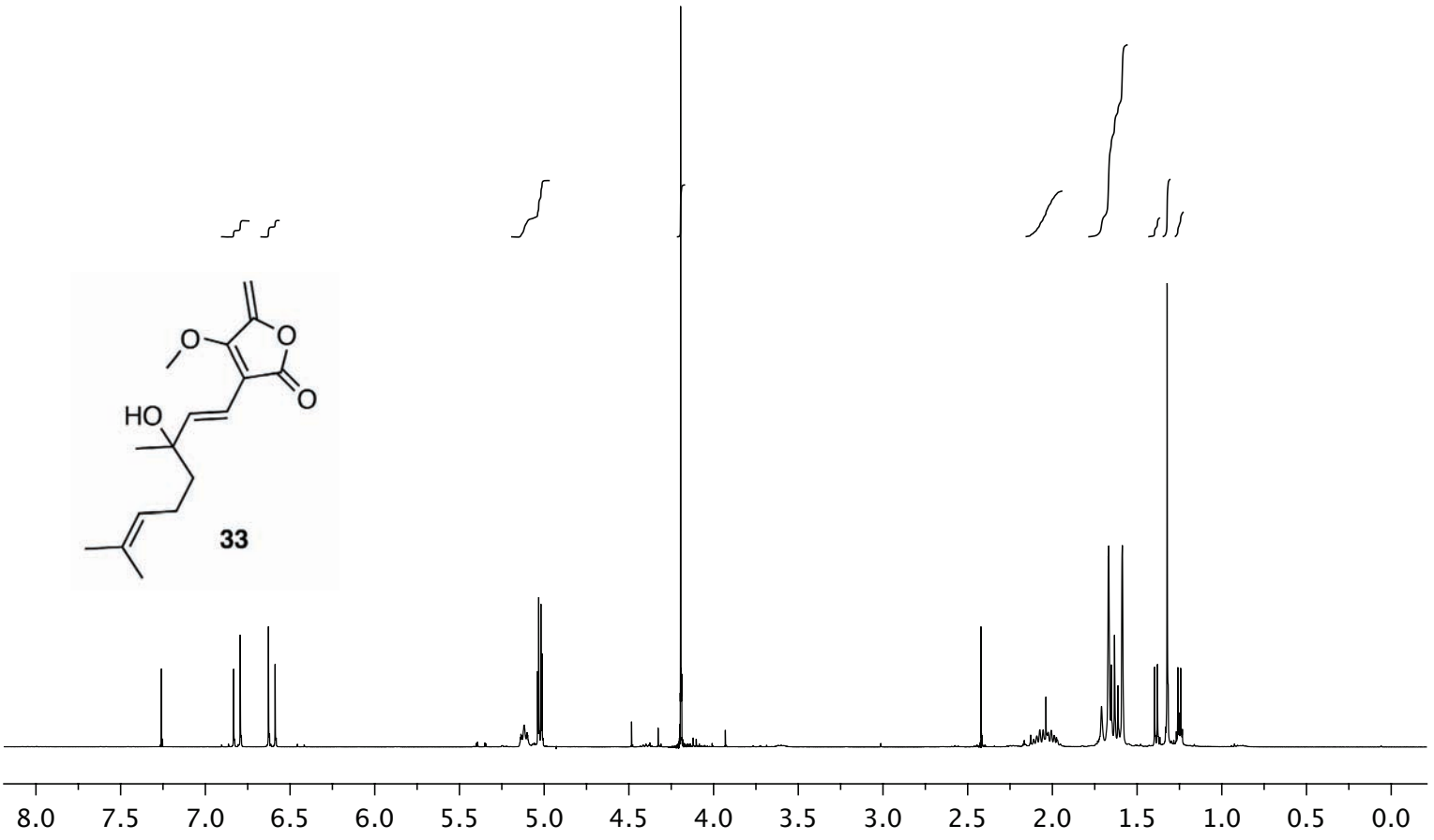


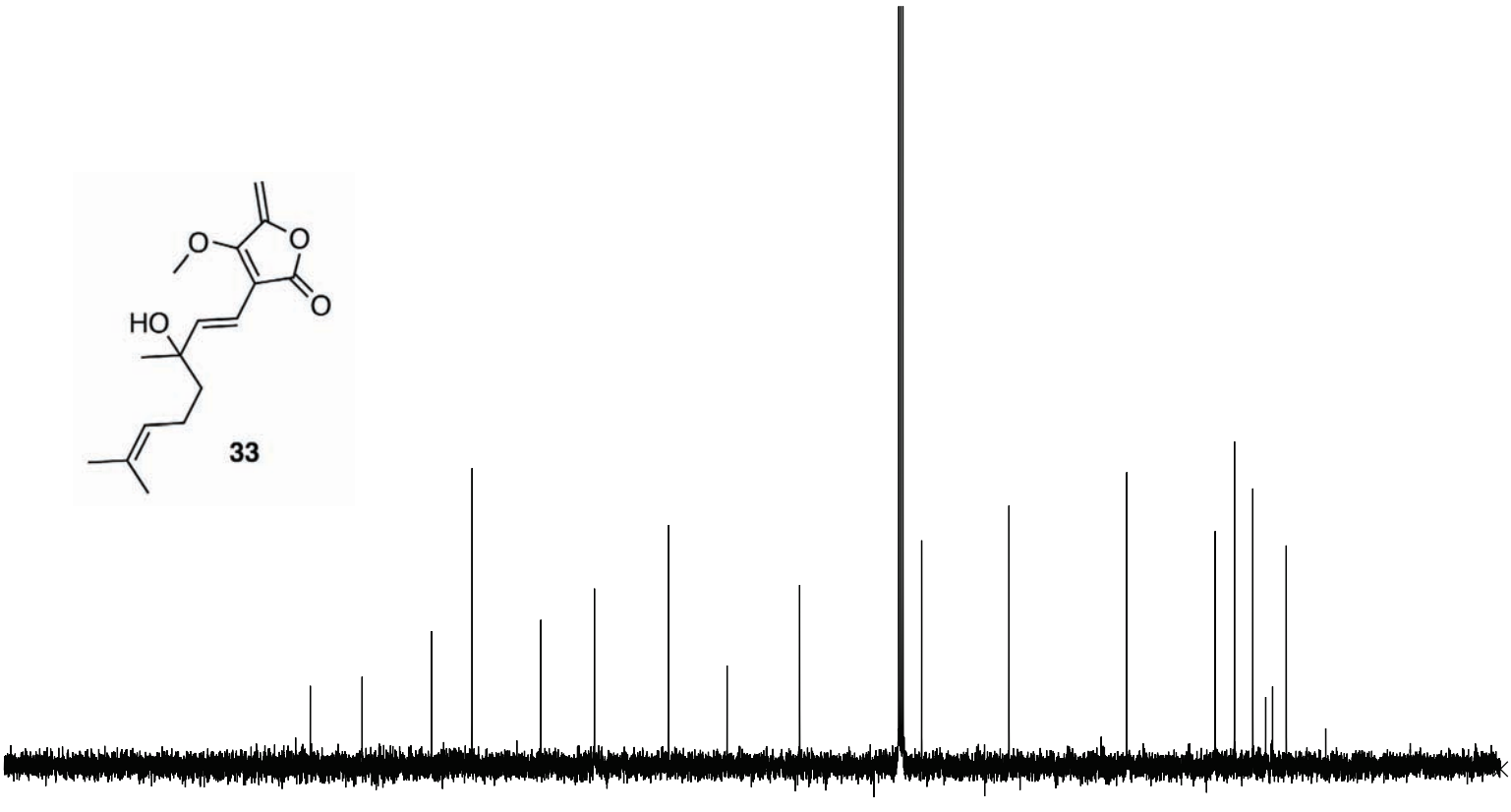
^{1}H-NMR (400 MHz) and ^{13}C-NMR (100 MHz) spectra of model bis-allylic alcohol **32** in $CDCl_3$





^{1}H-NMR (400 MHz) and ^{13}C-NMR (100 MHz) spectra of tertiary alcohol **33** in $CDCl_3$





^{1}H-NMR (400 MHz) and ^{13}C-NMR (125 MHz) spectra of ketone **34** in $CDCl_3$