

Electronic Supplementary Information

Reverse regioselectivity in Pd(0)/InI mediated allylation of aldehydes with ϵ -amido-allylindiums generated from β -lactams. A new entry to nonracemic highly substituted γ -butyrolactones.

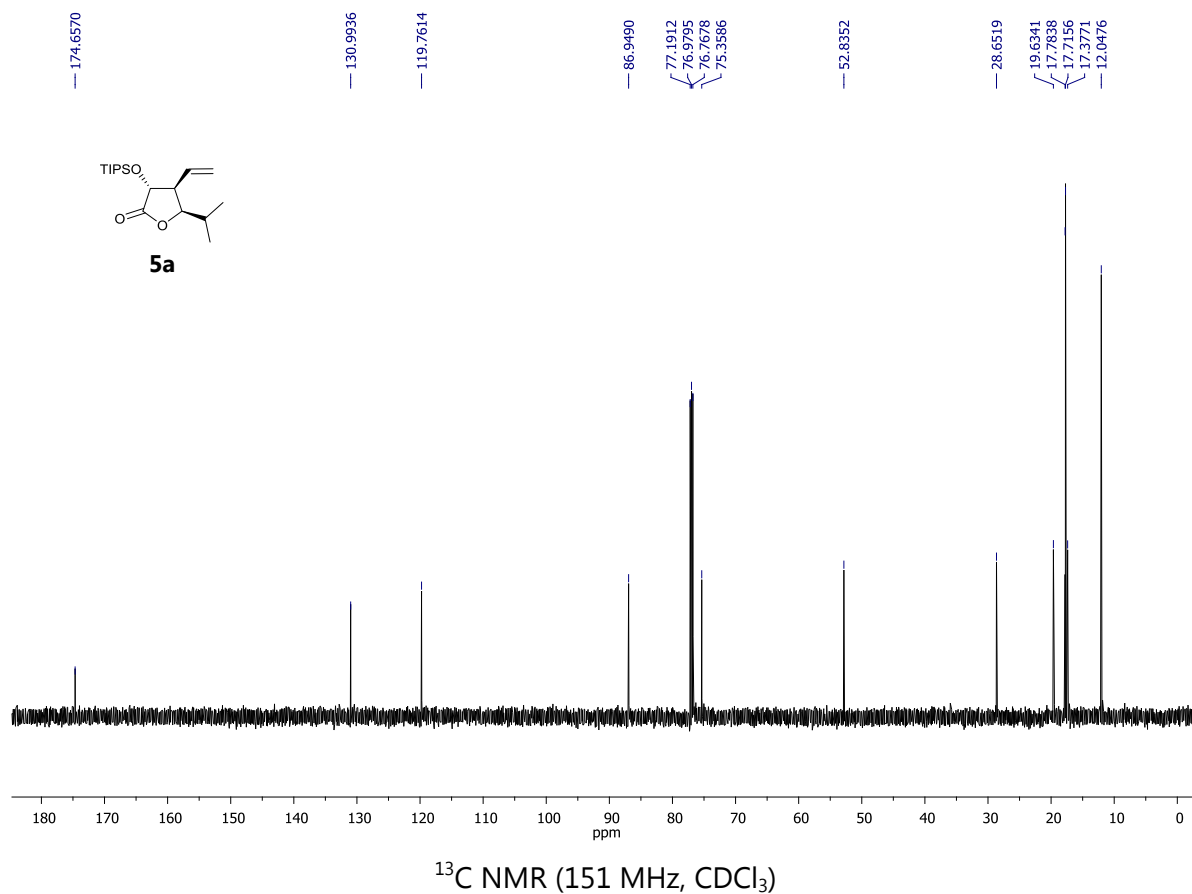
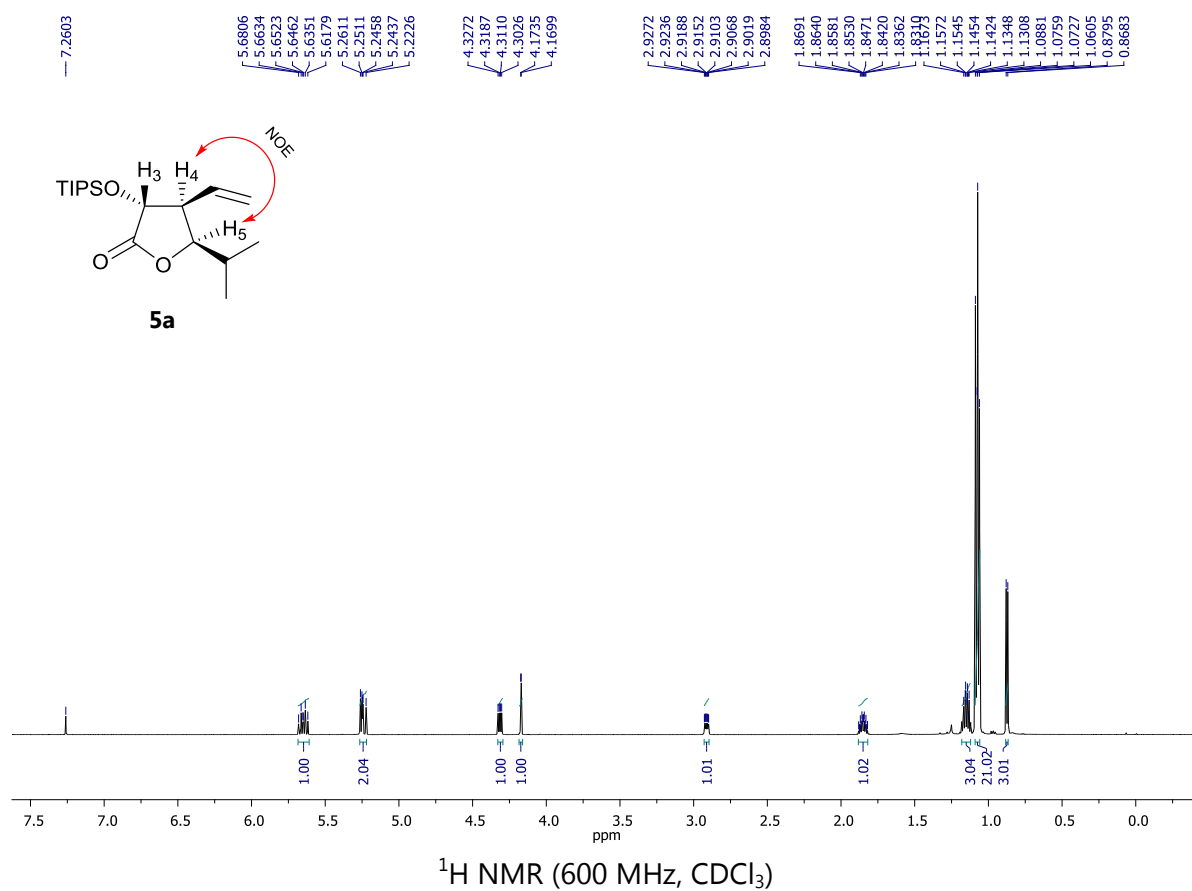
Urszula Klimczak, Olga Staszewska-Krajewska, Bartosz K. Zambrón*

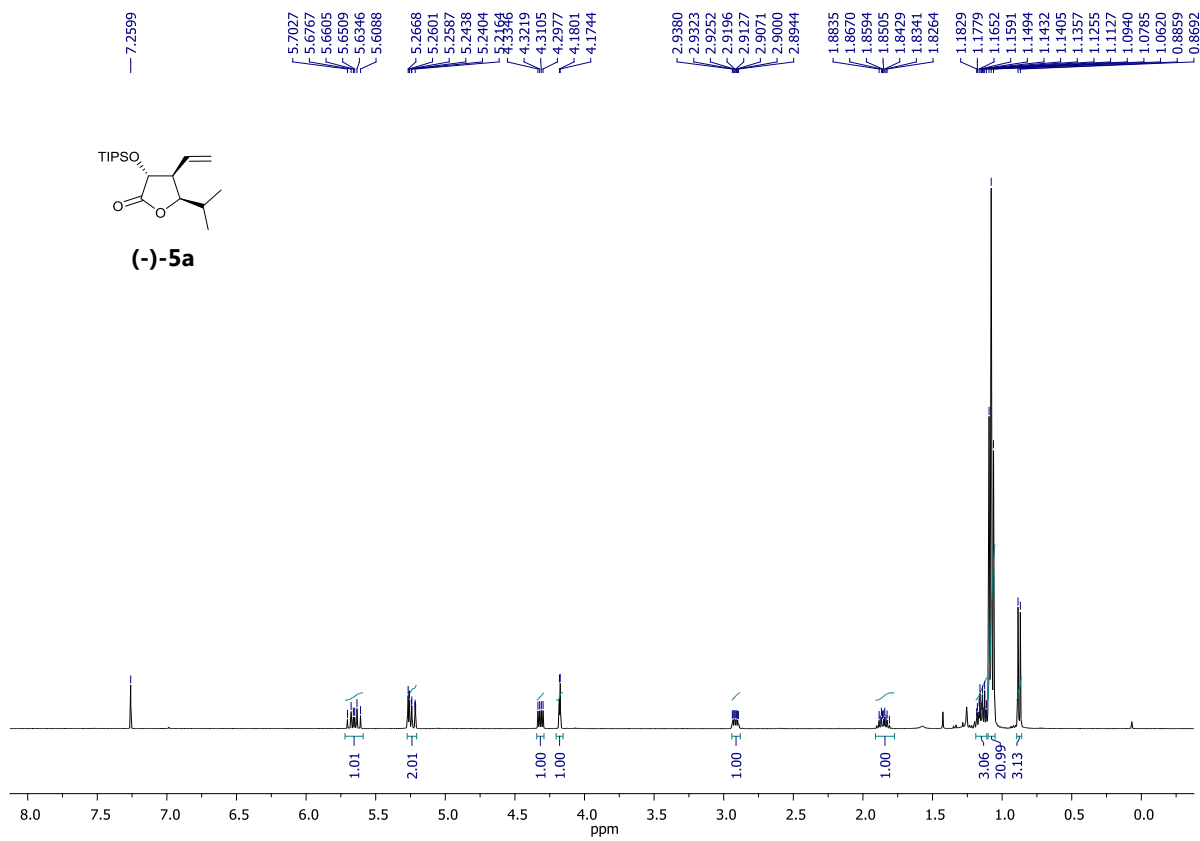
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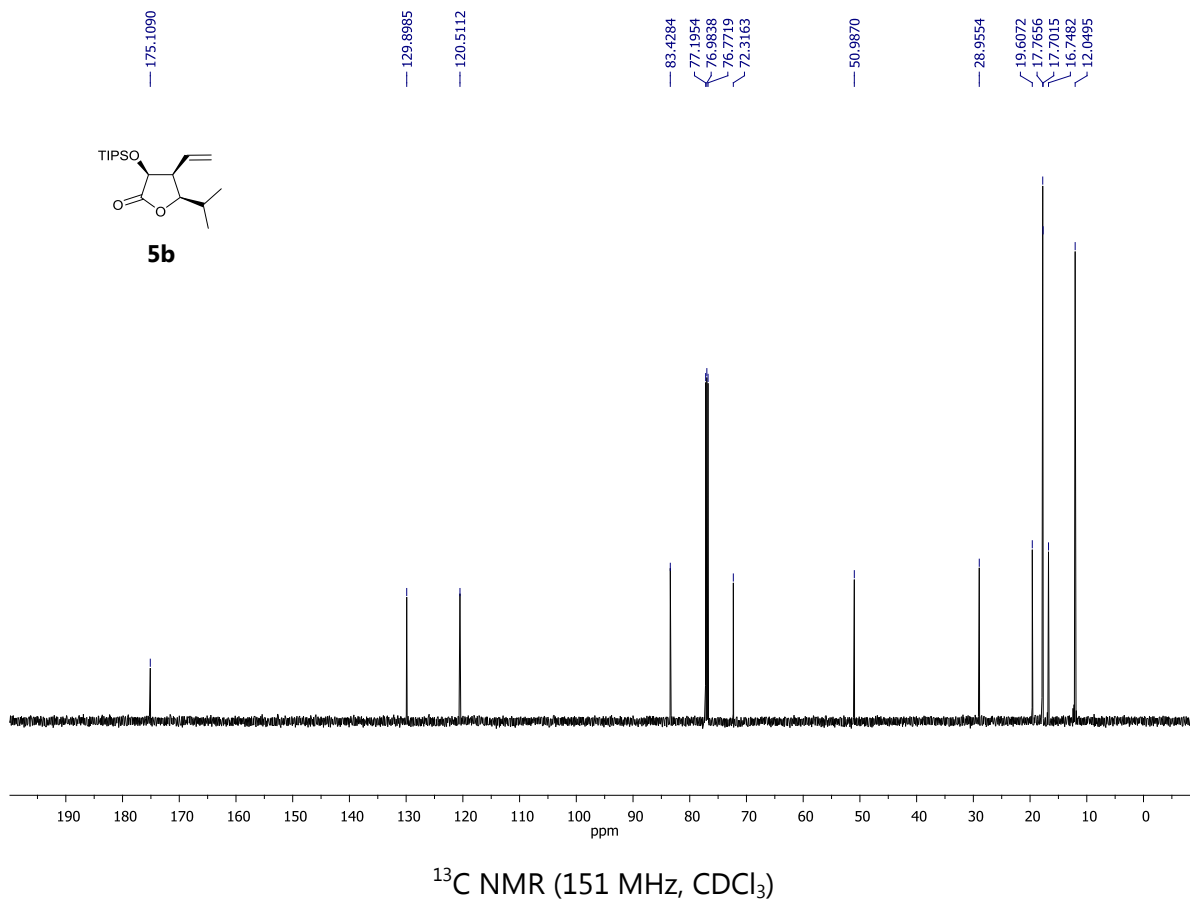
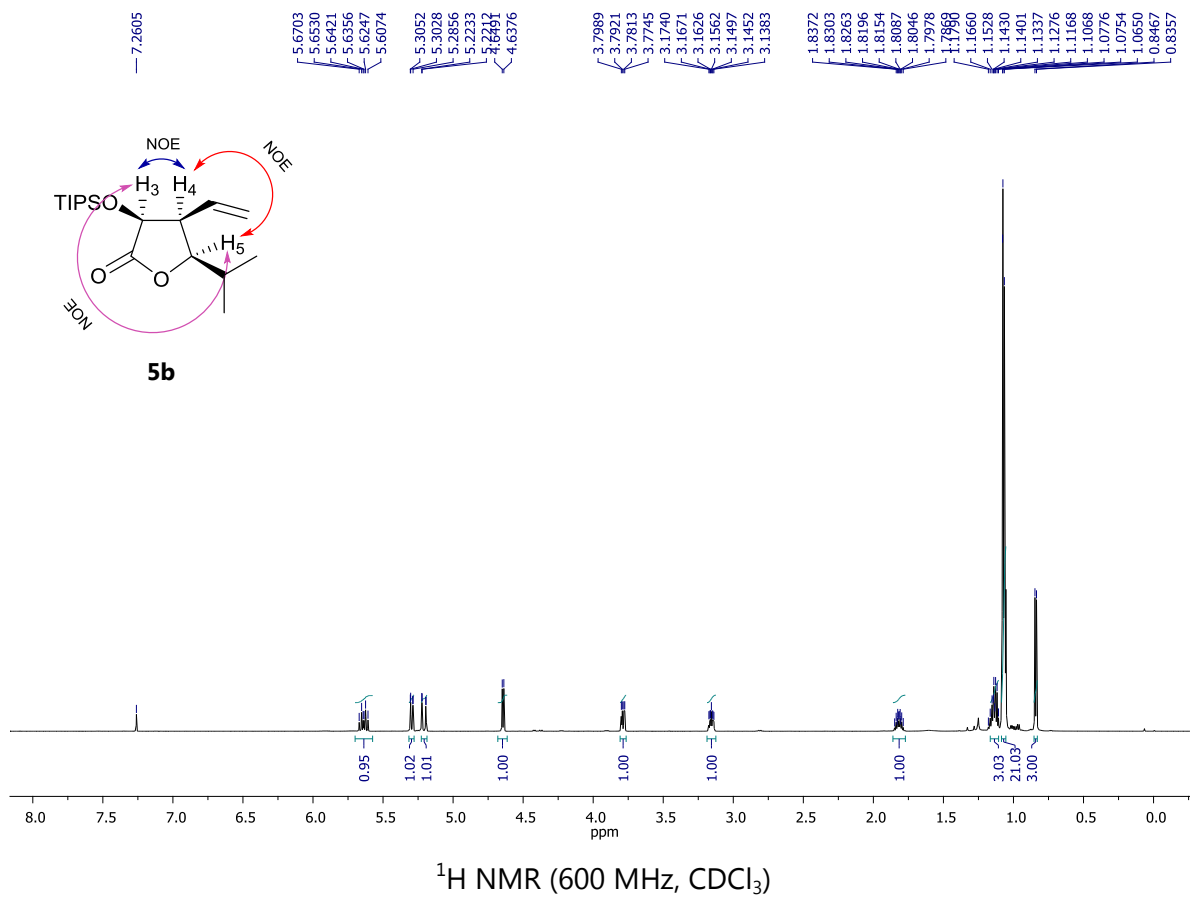
E-Mail: bartosz.zambron@icho.edu.pl

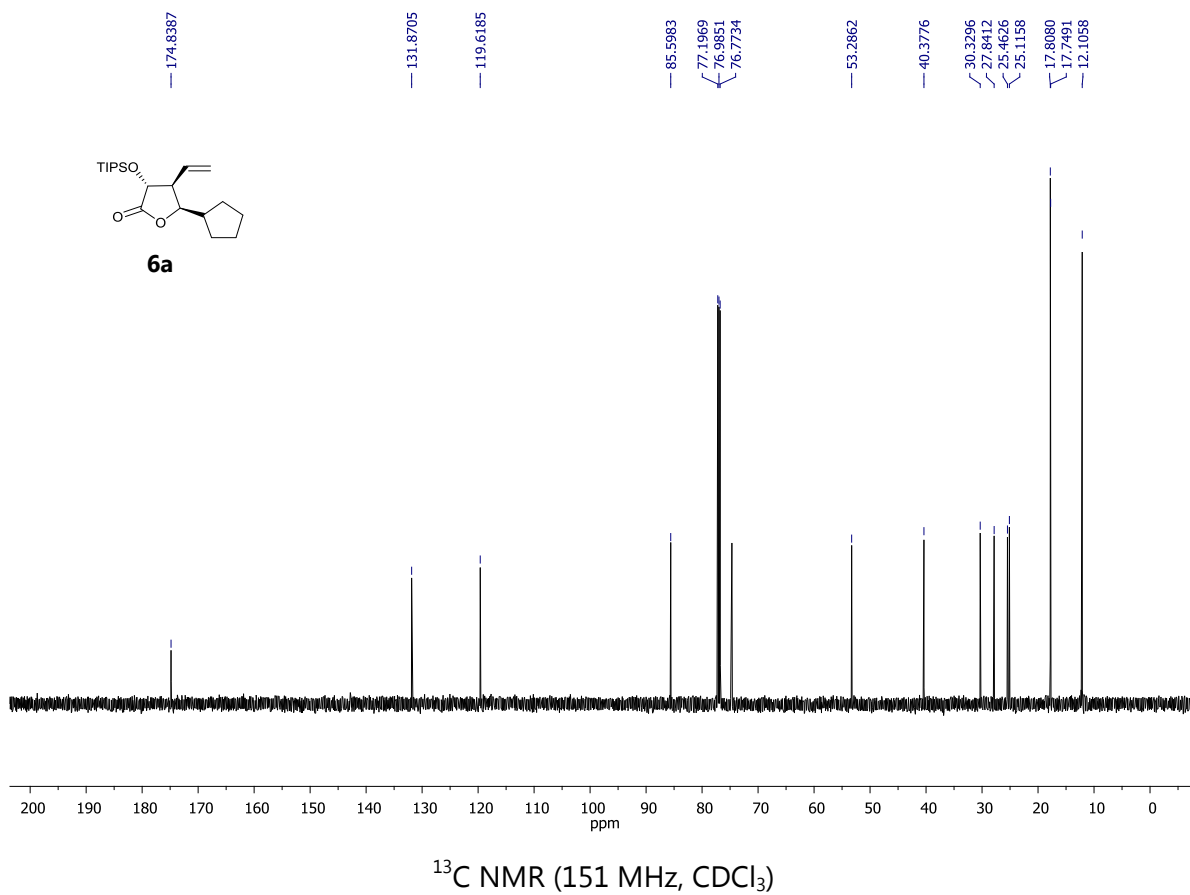
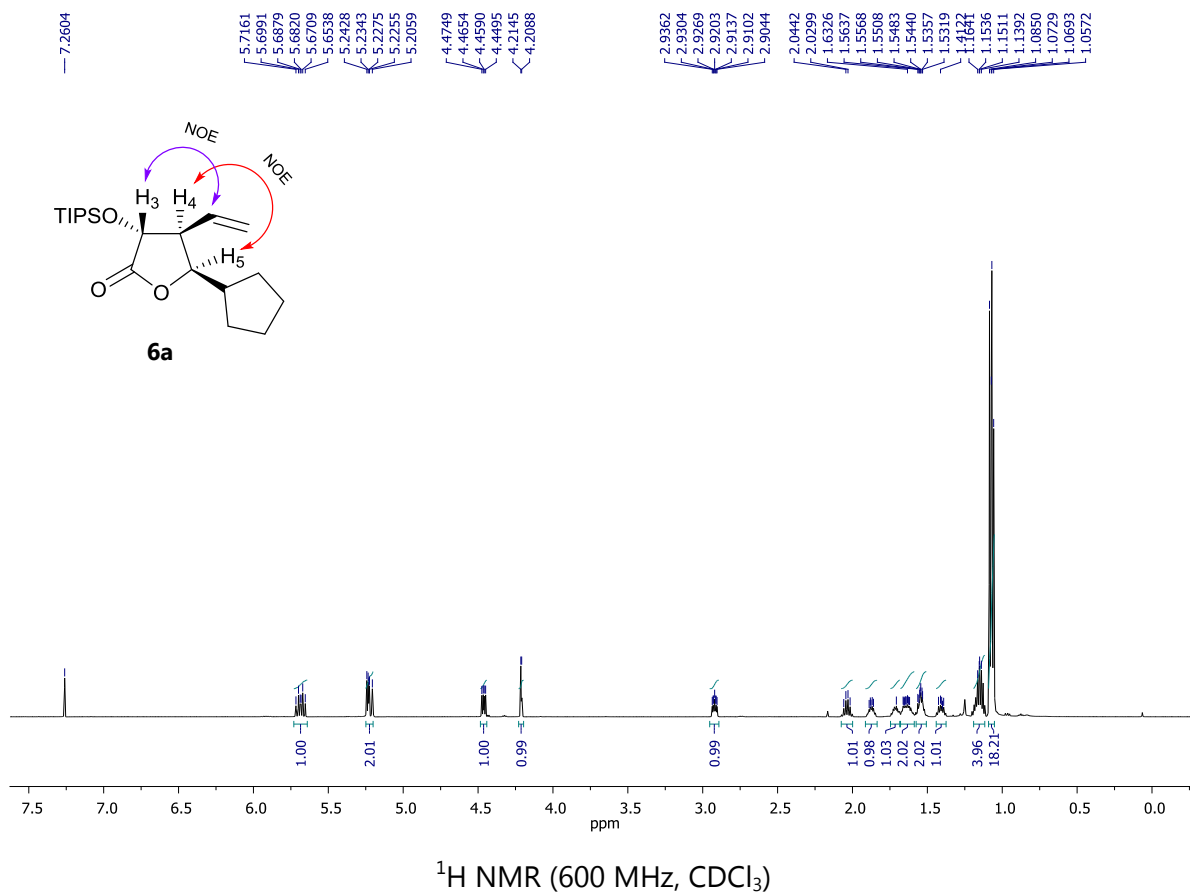
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Copies of ^1H NMR and ^{13}C NMR spectra

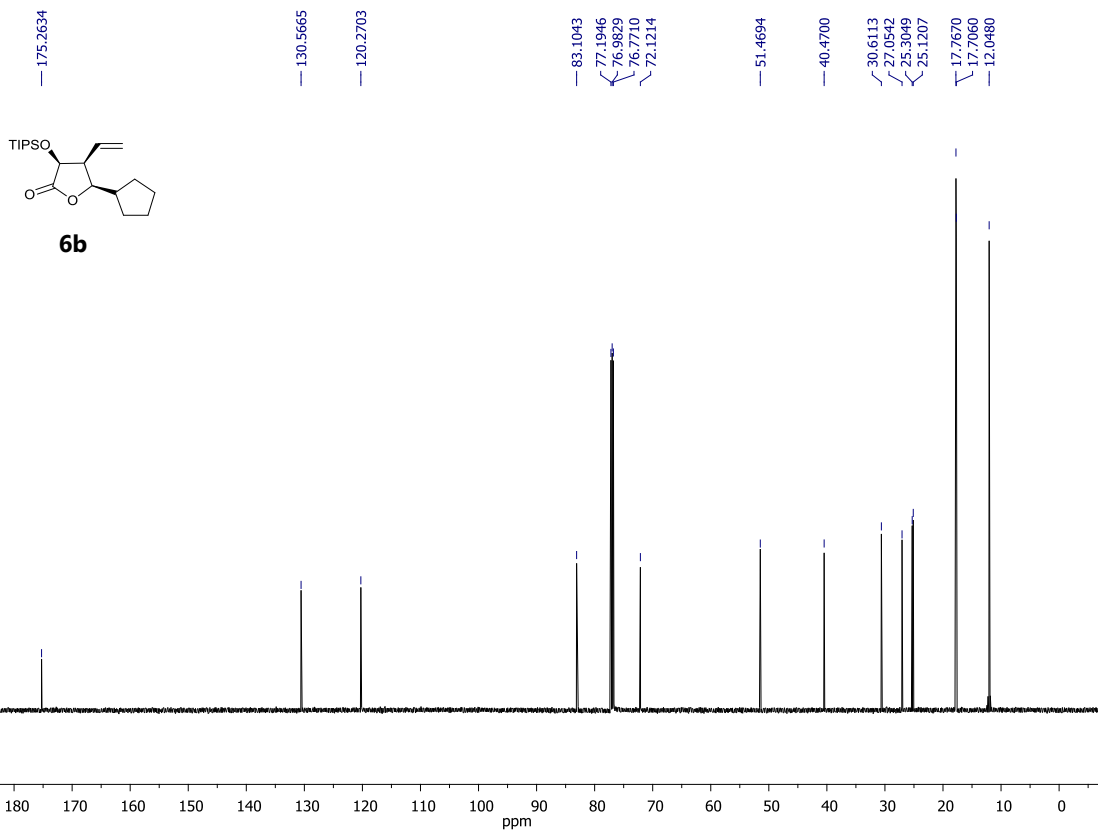
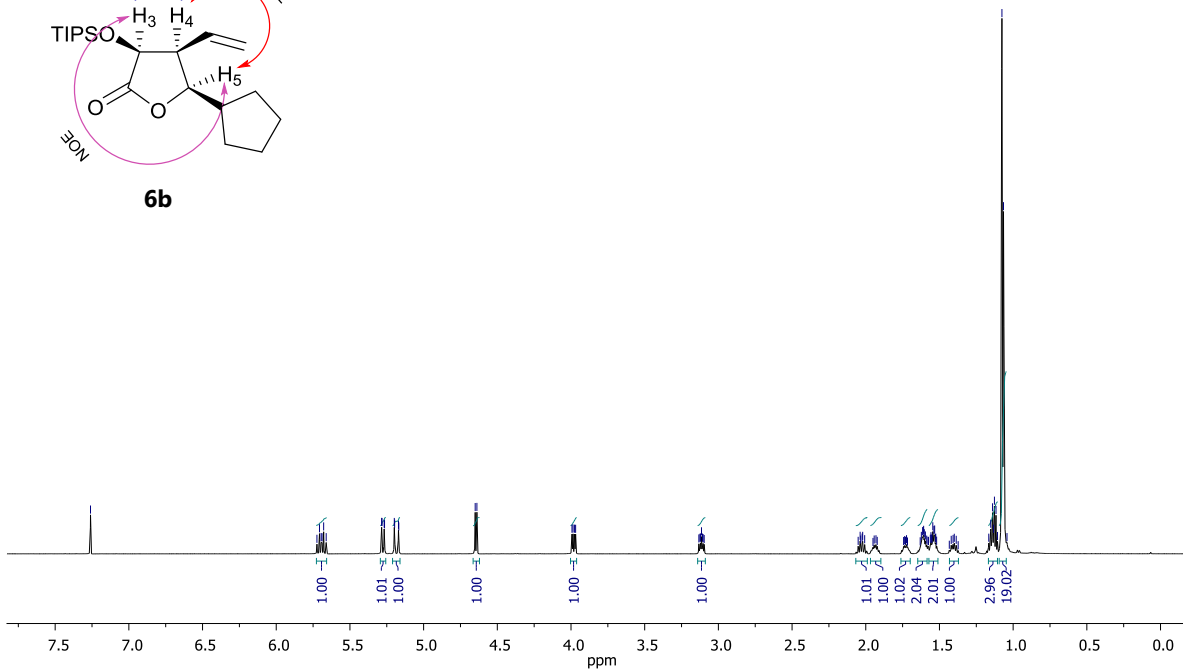
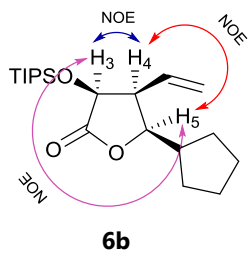


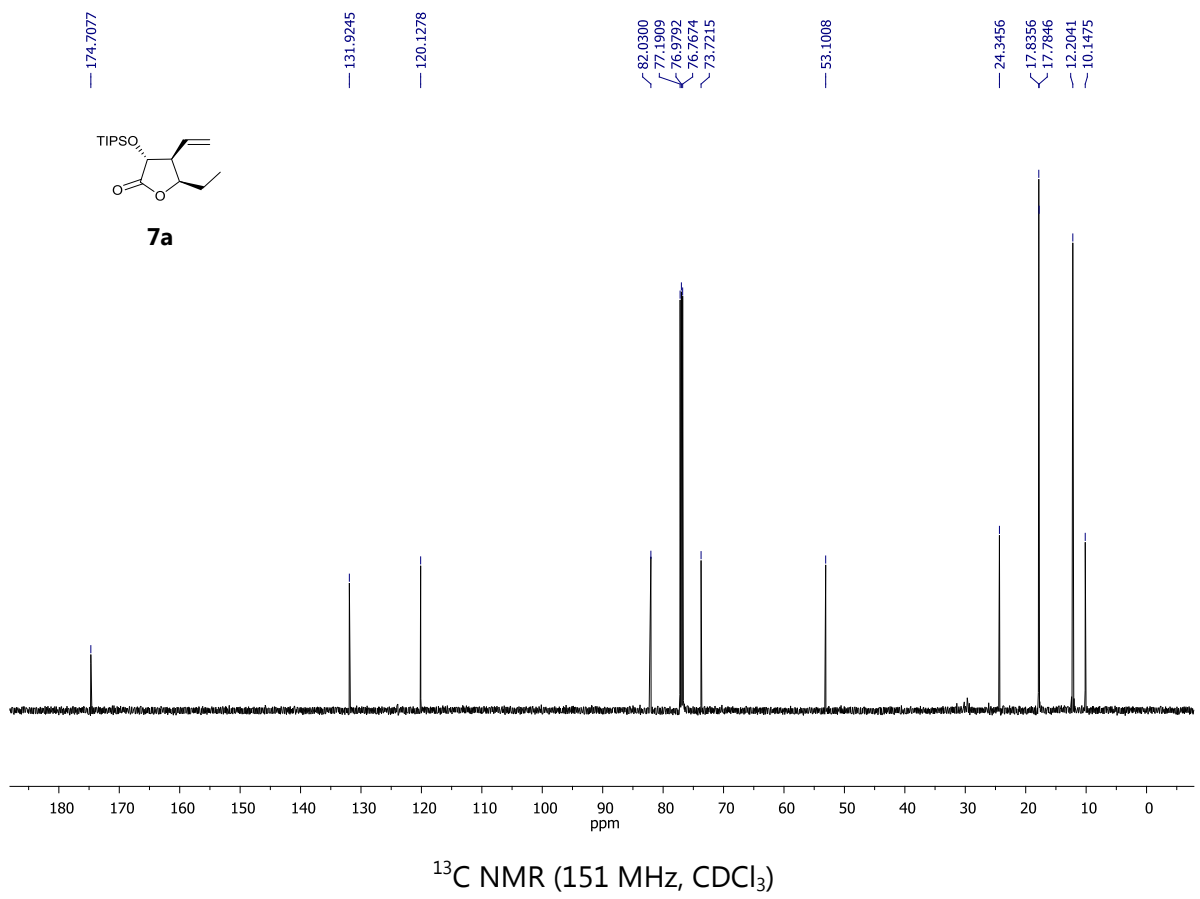
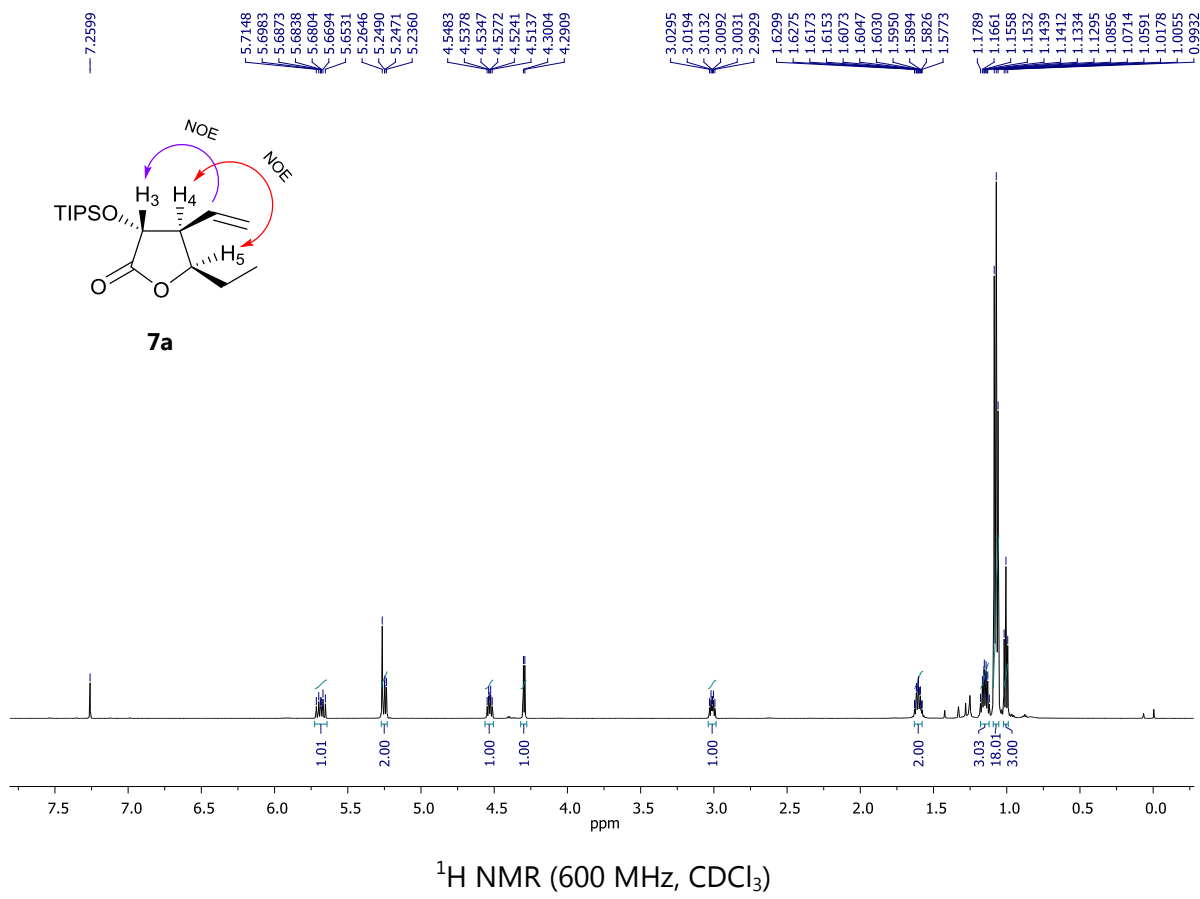


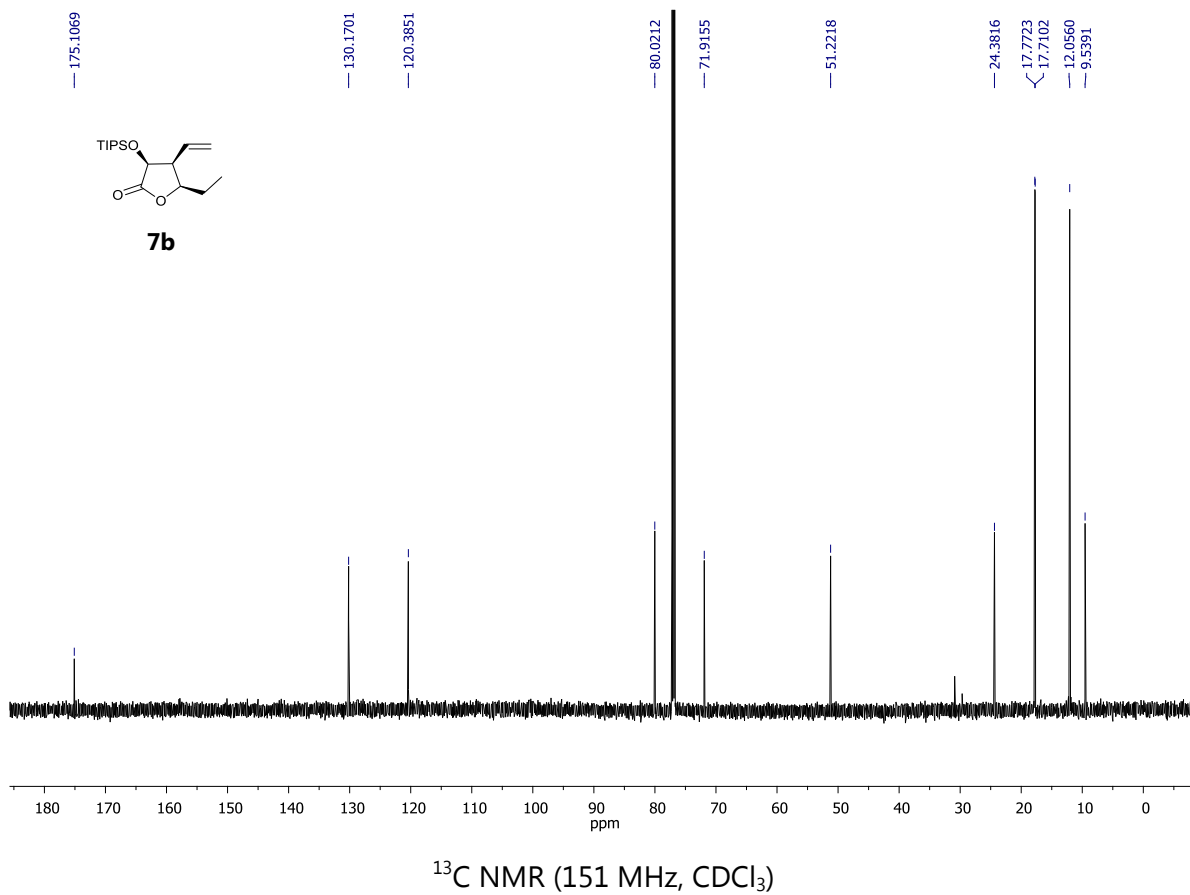
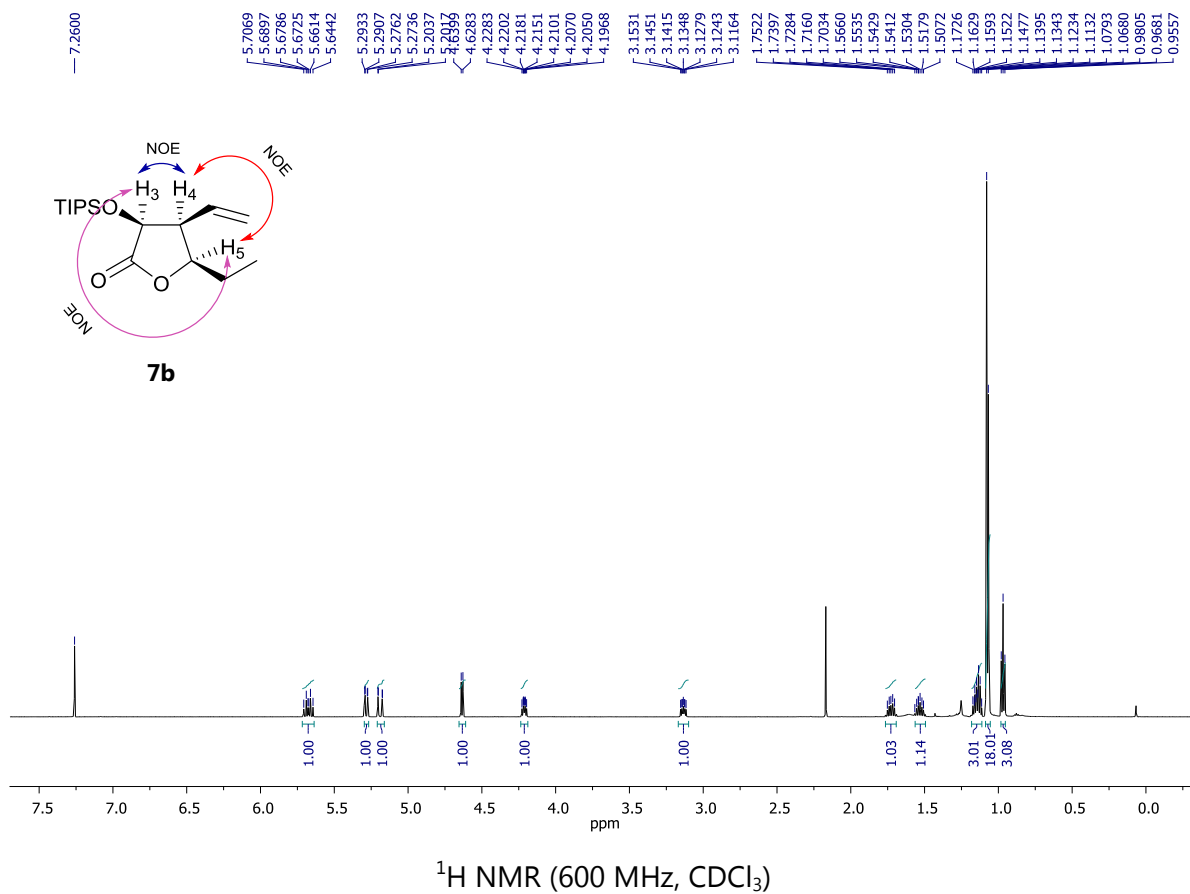


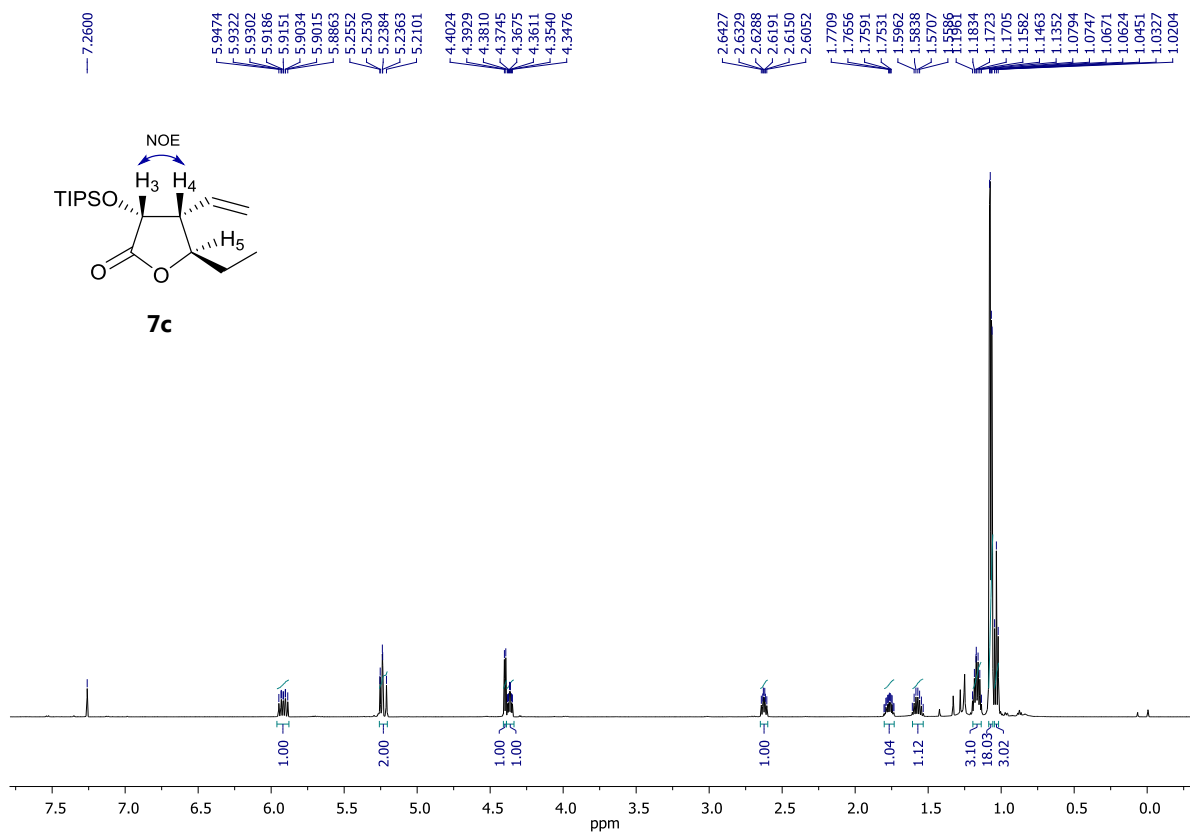


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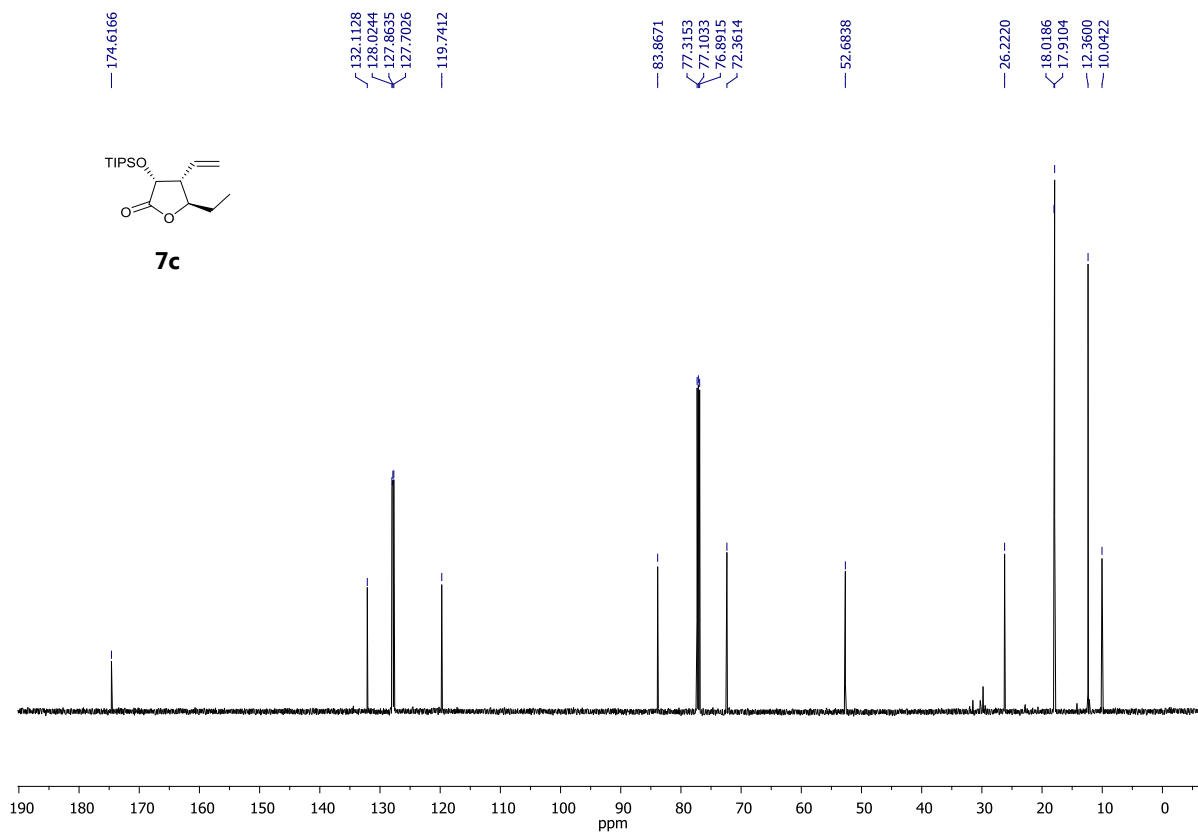




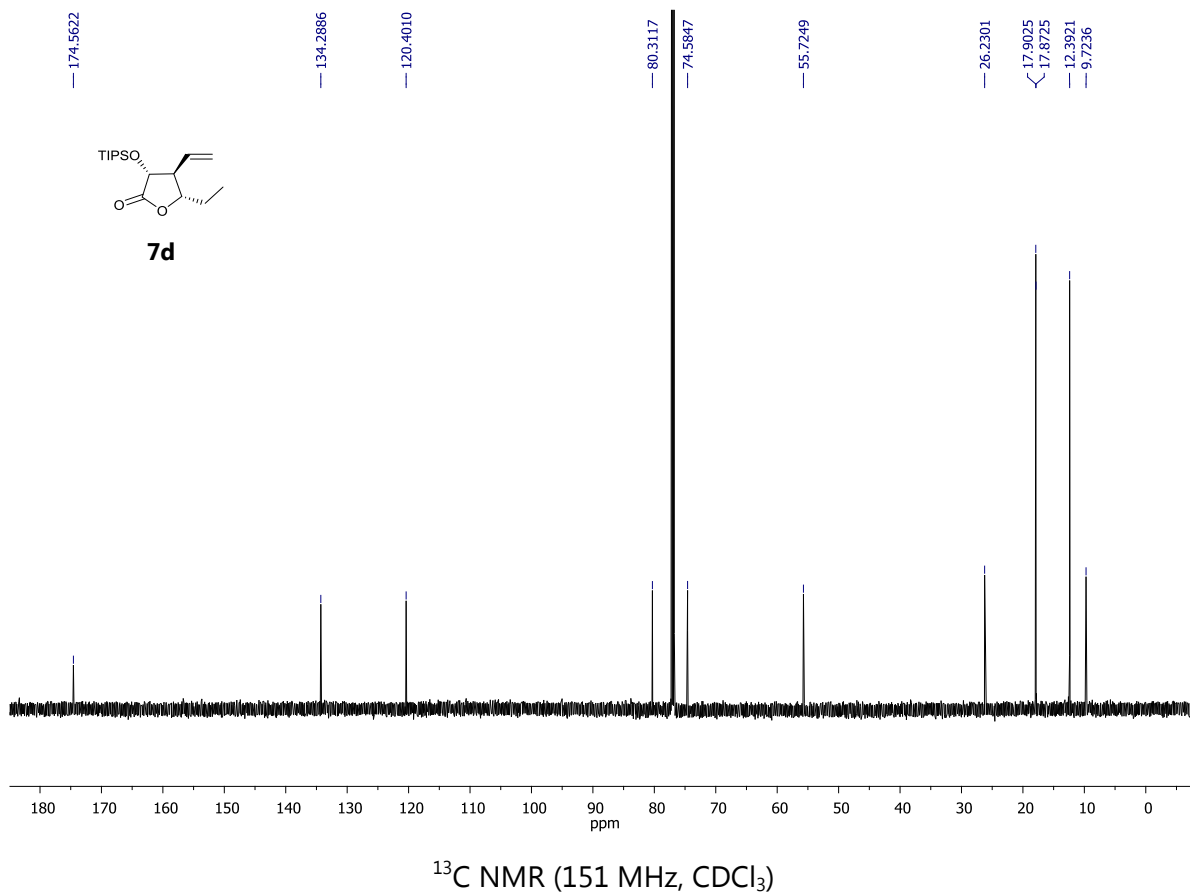
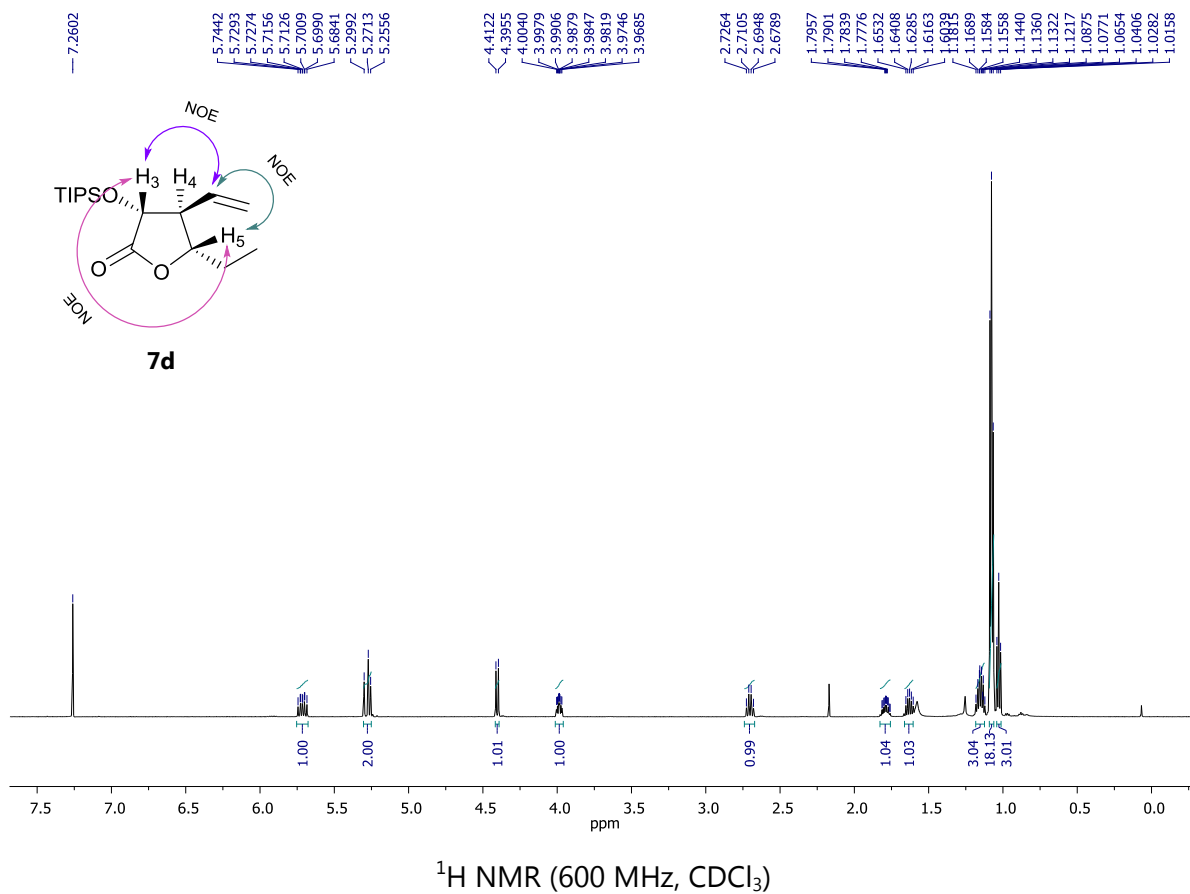


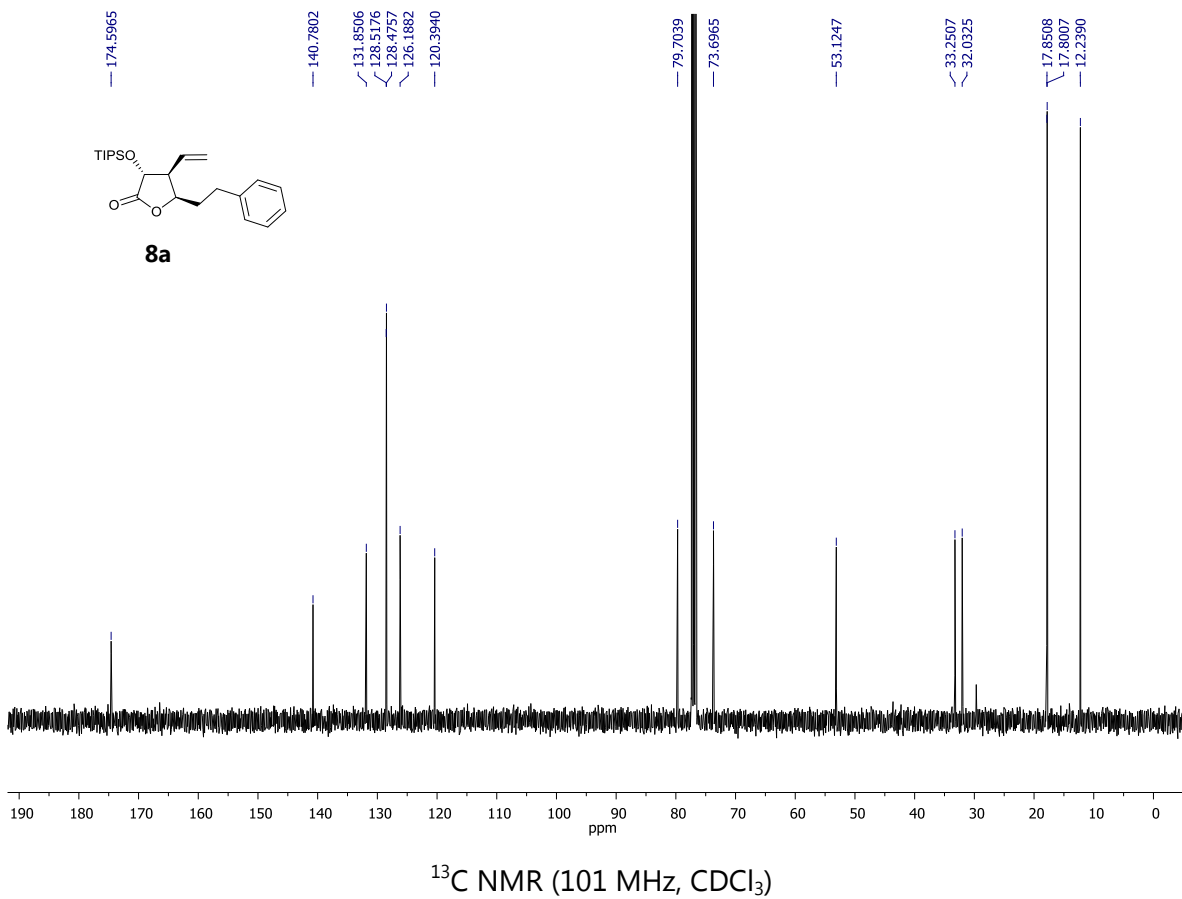
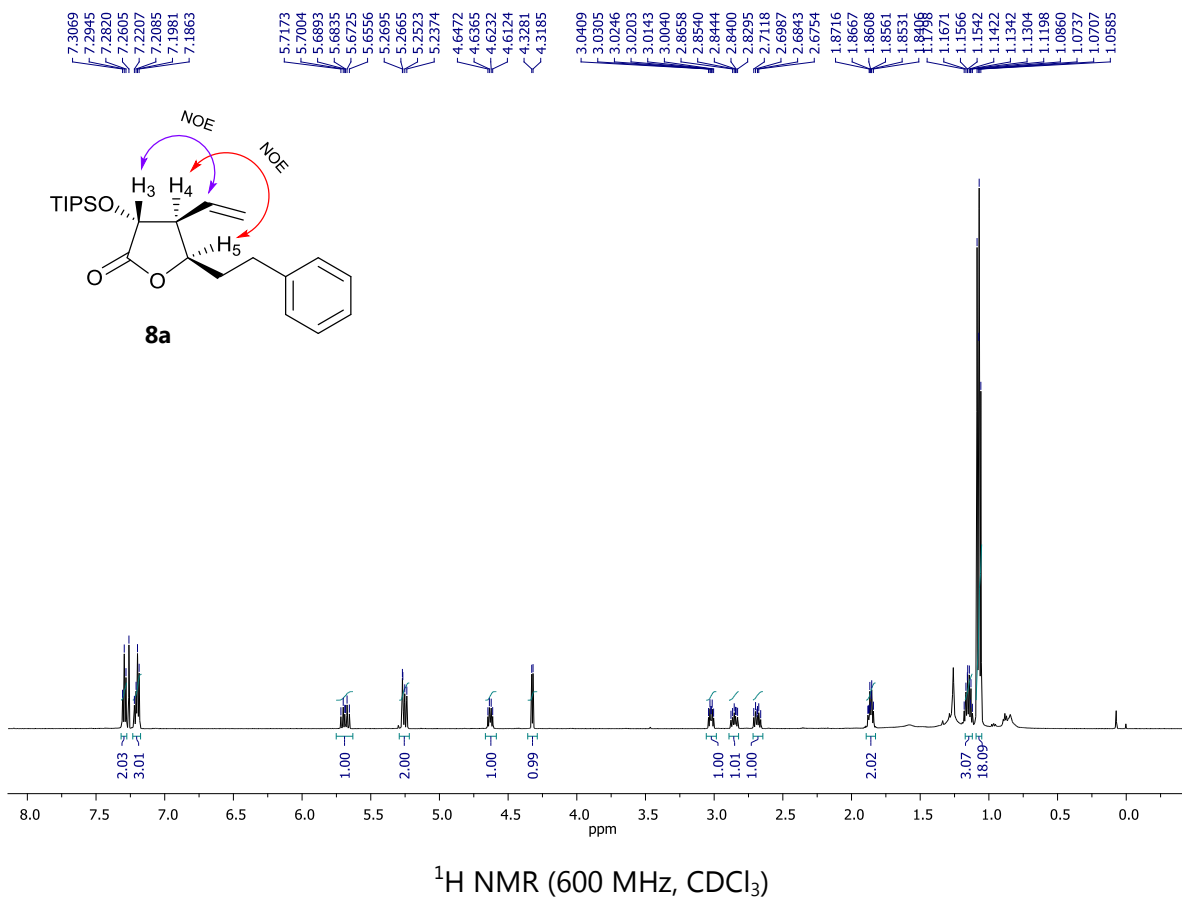


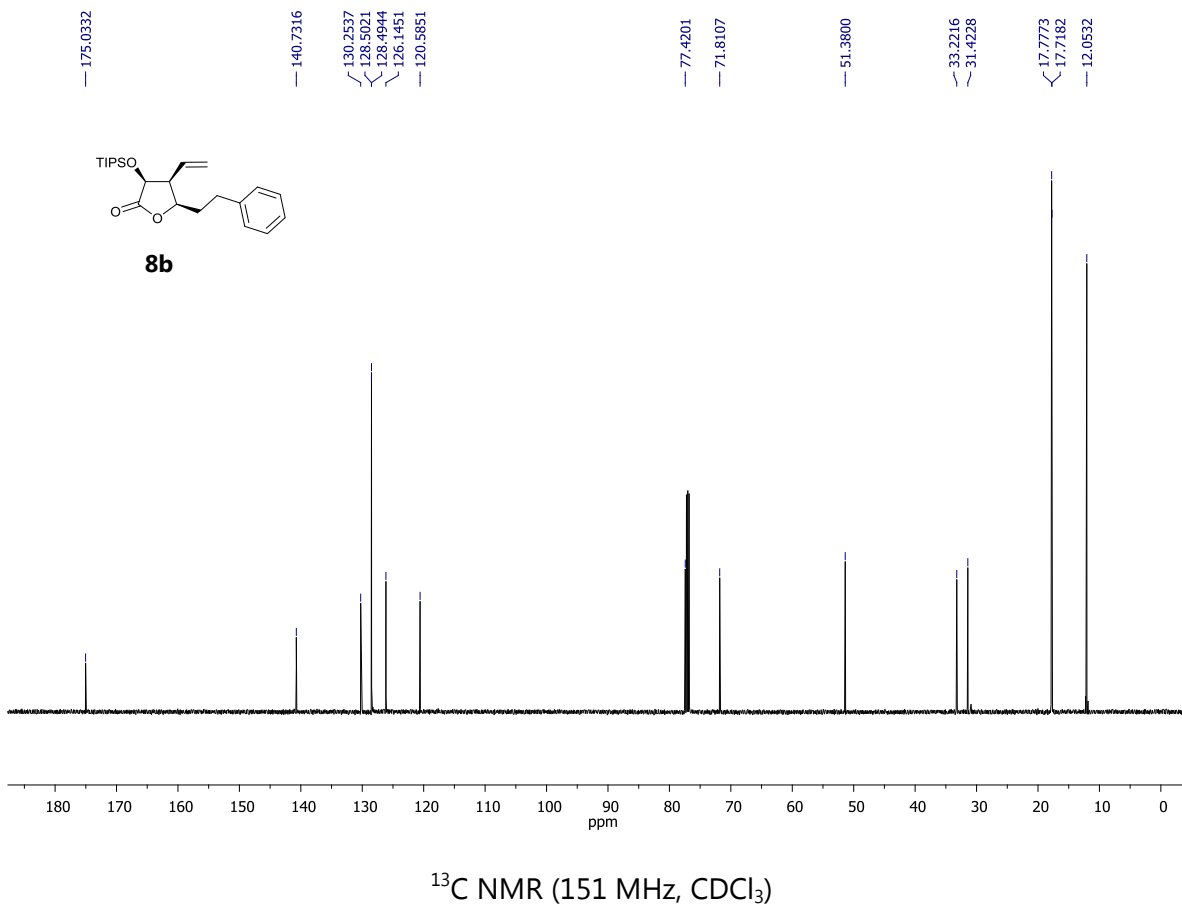
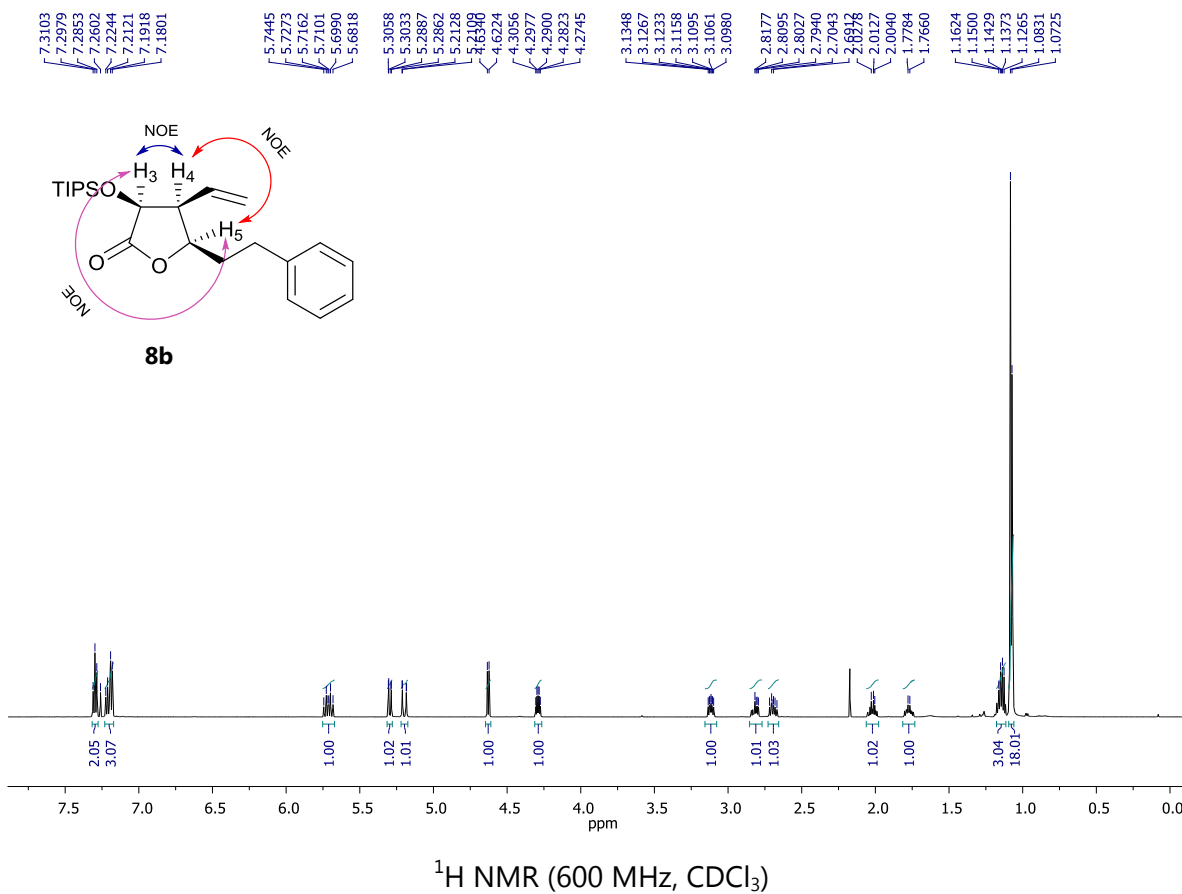
¹H NMR (600 MHz, CDCl₃:C₆D₆ 3:2)

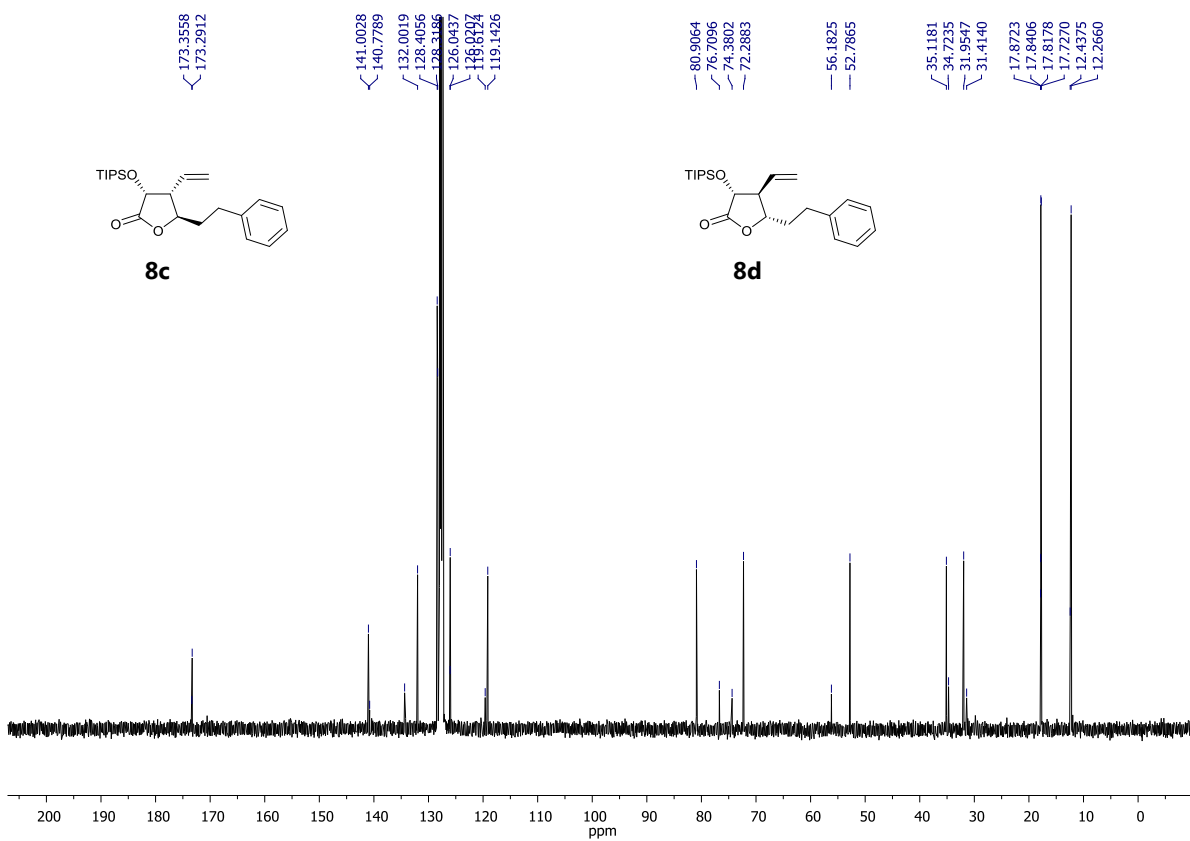
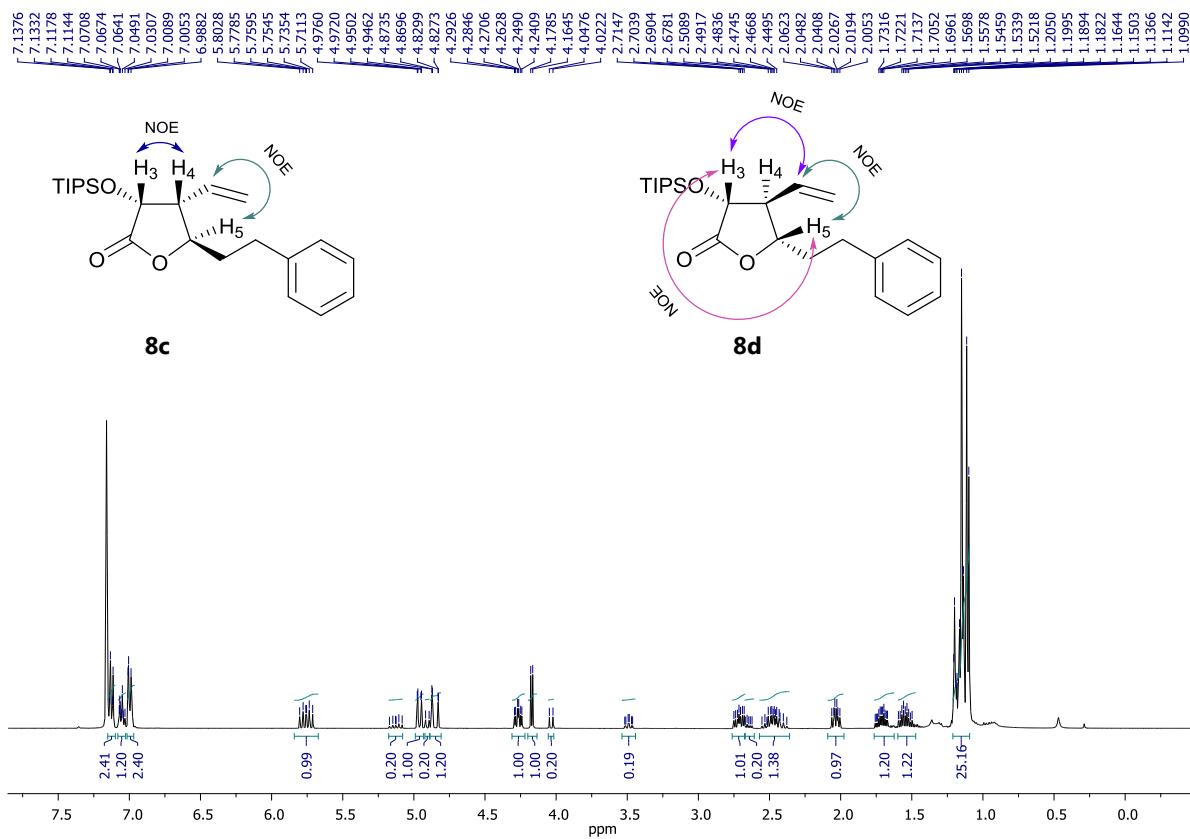


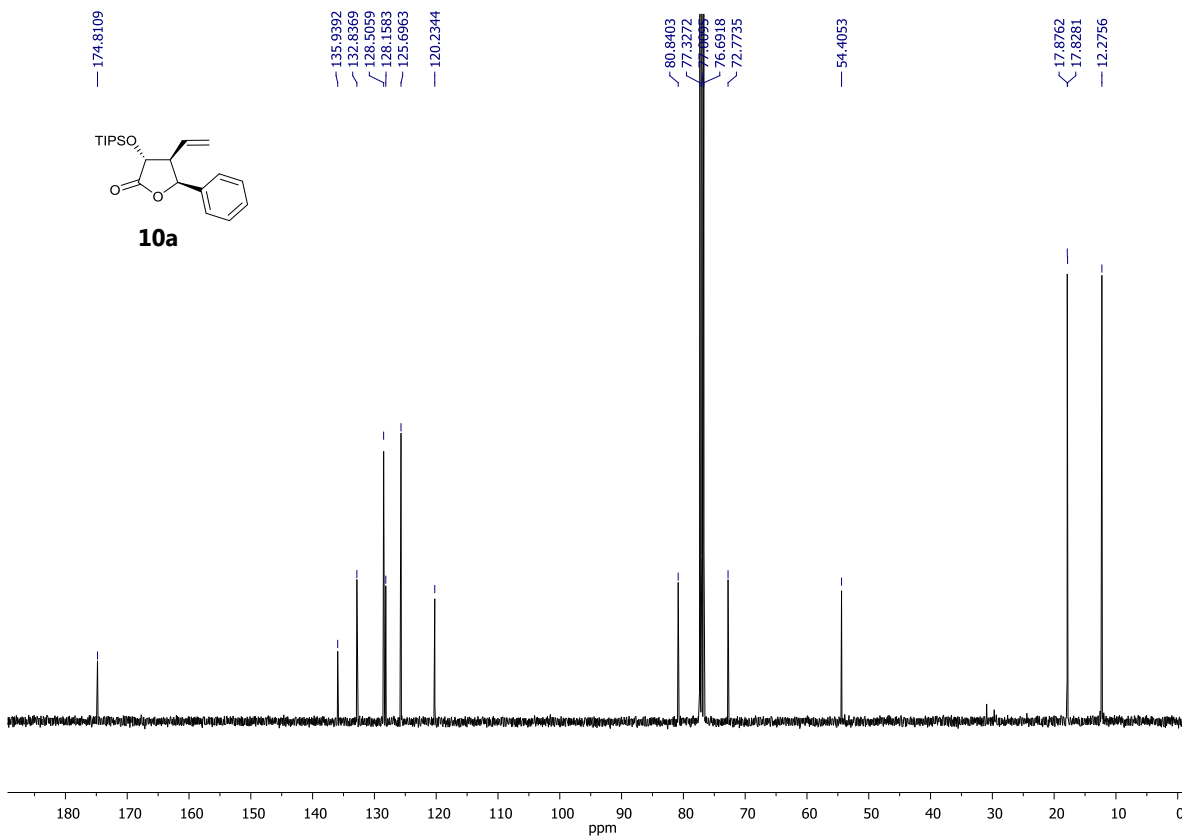
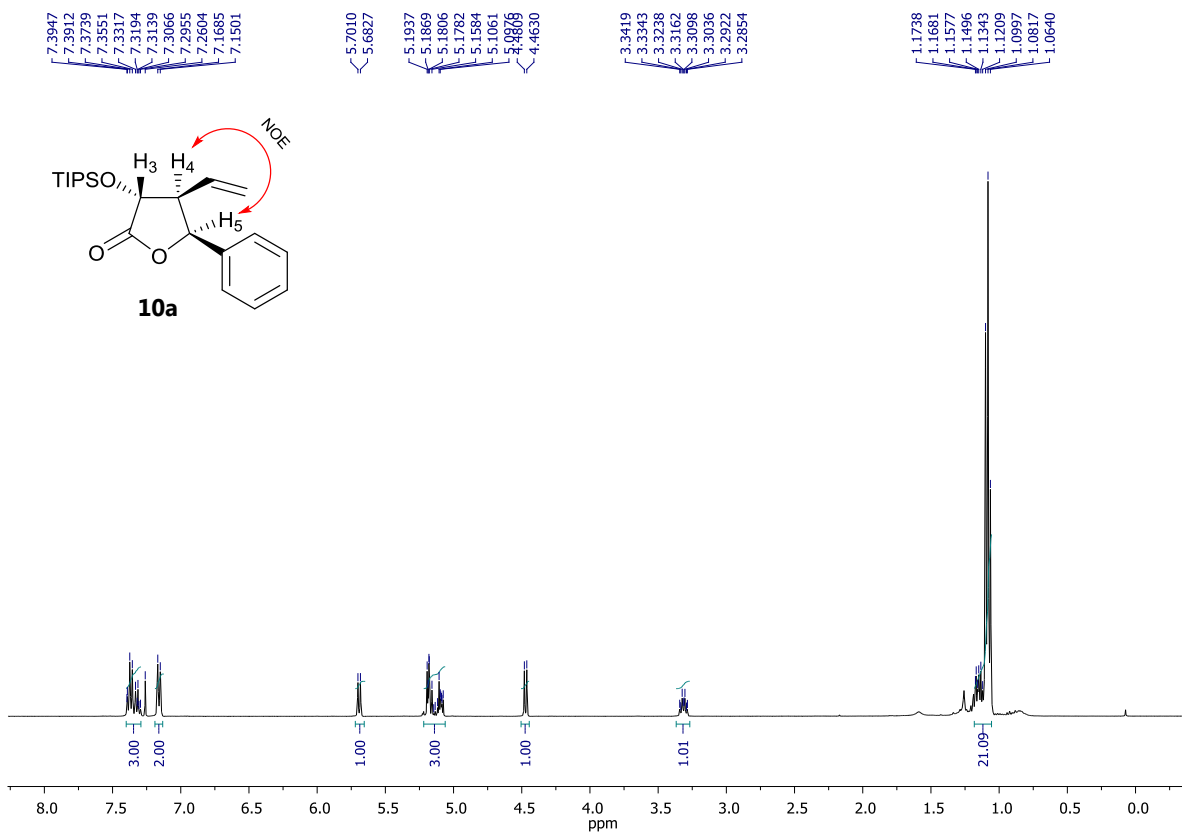
¹³C NMR (151 MHz, CDCl₃:C₆D₆ 3:2)

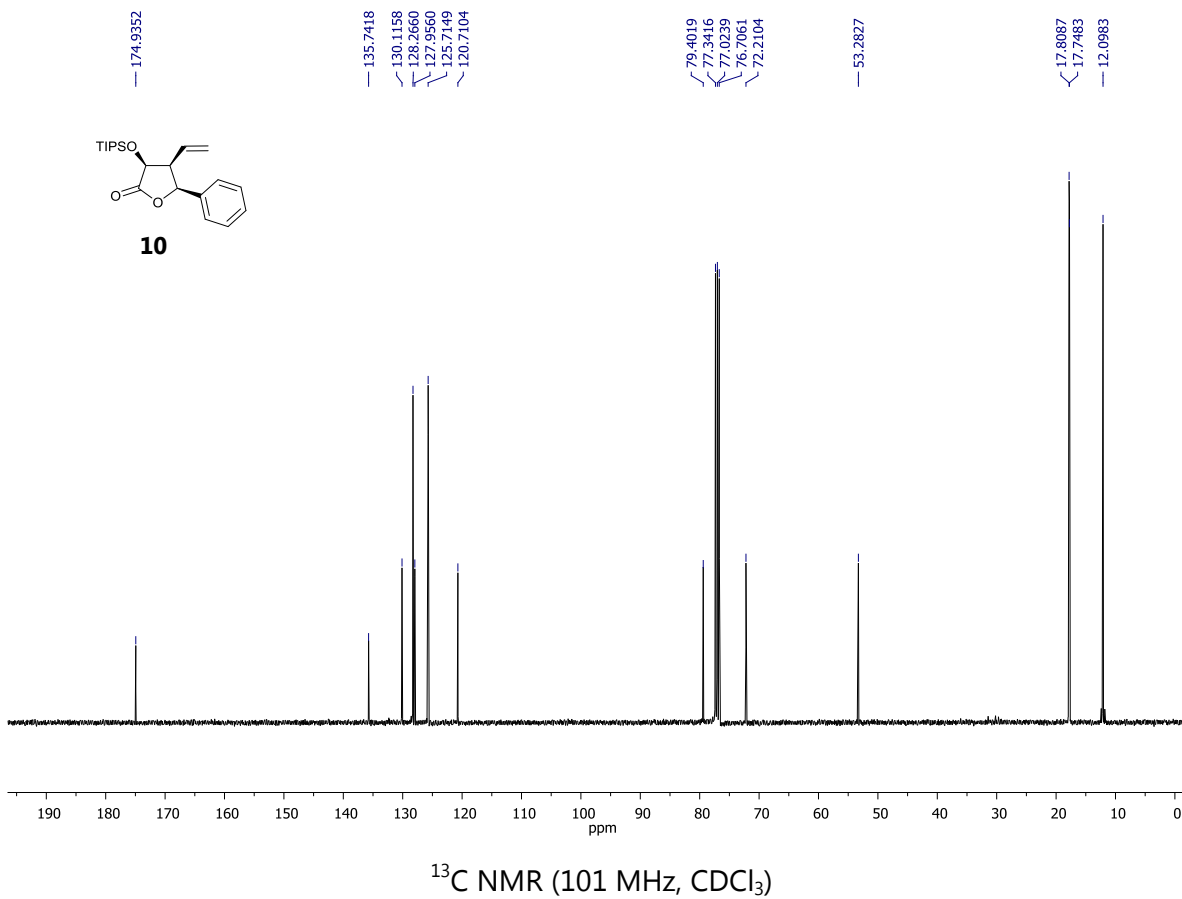
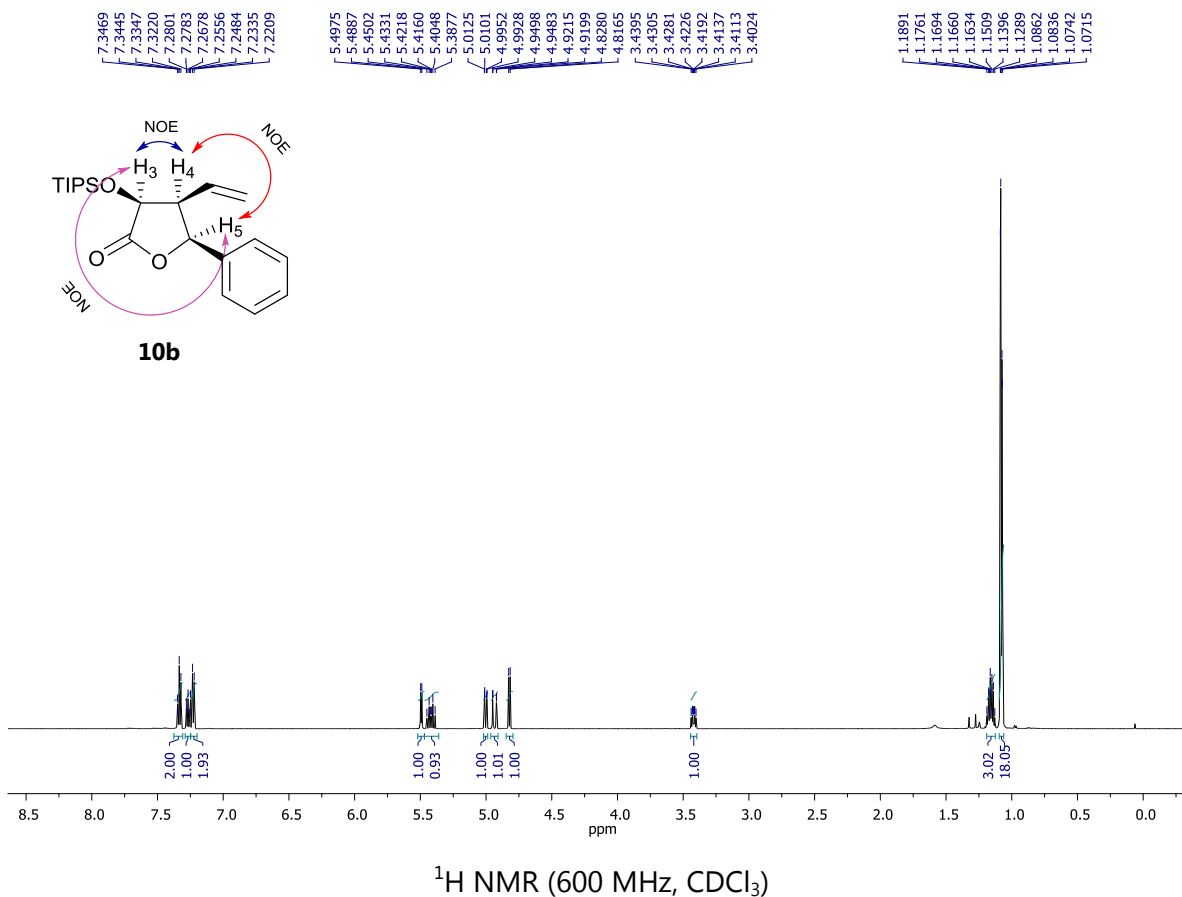


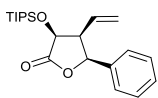
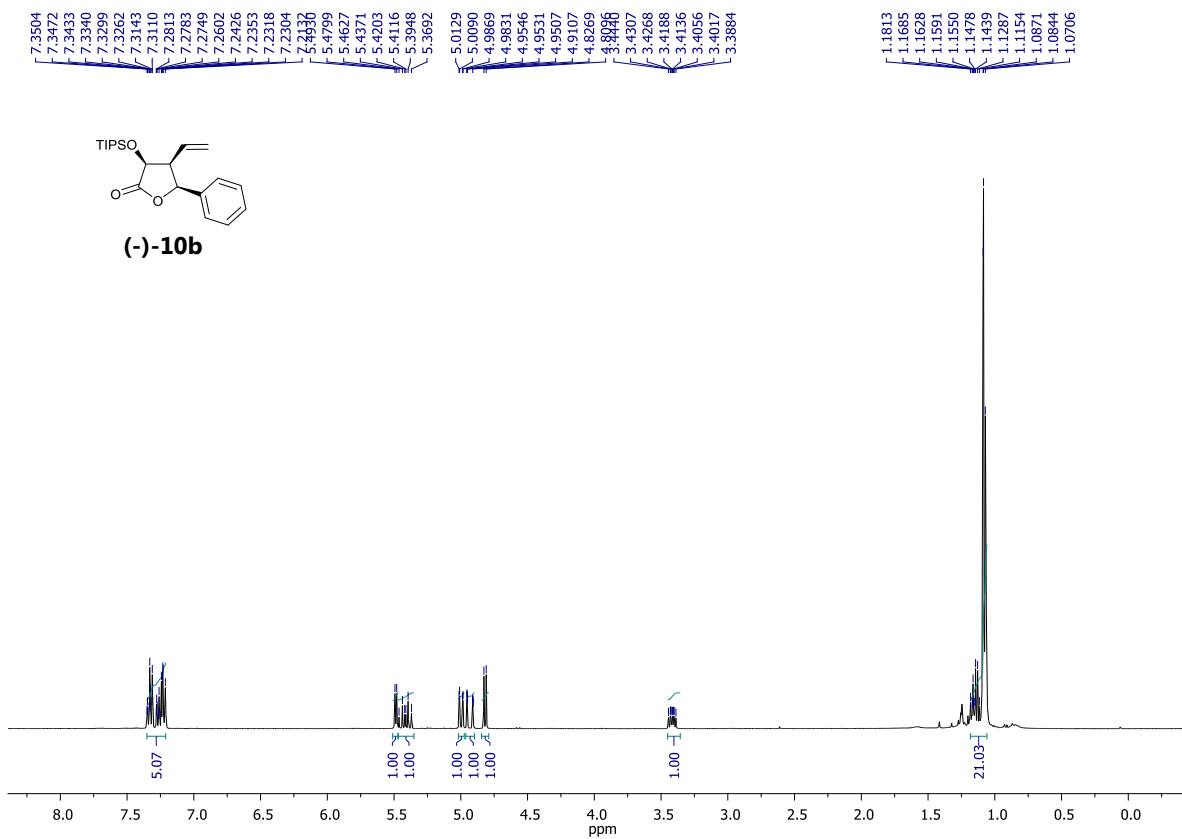






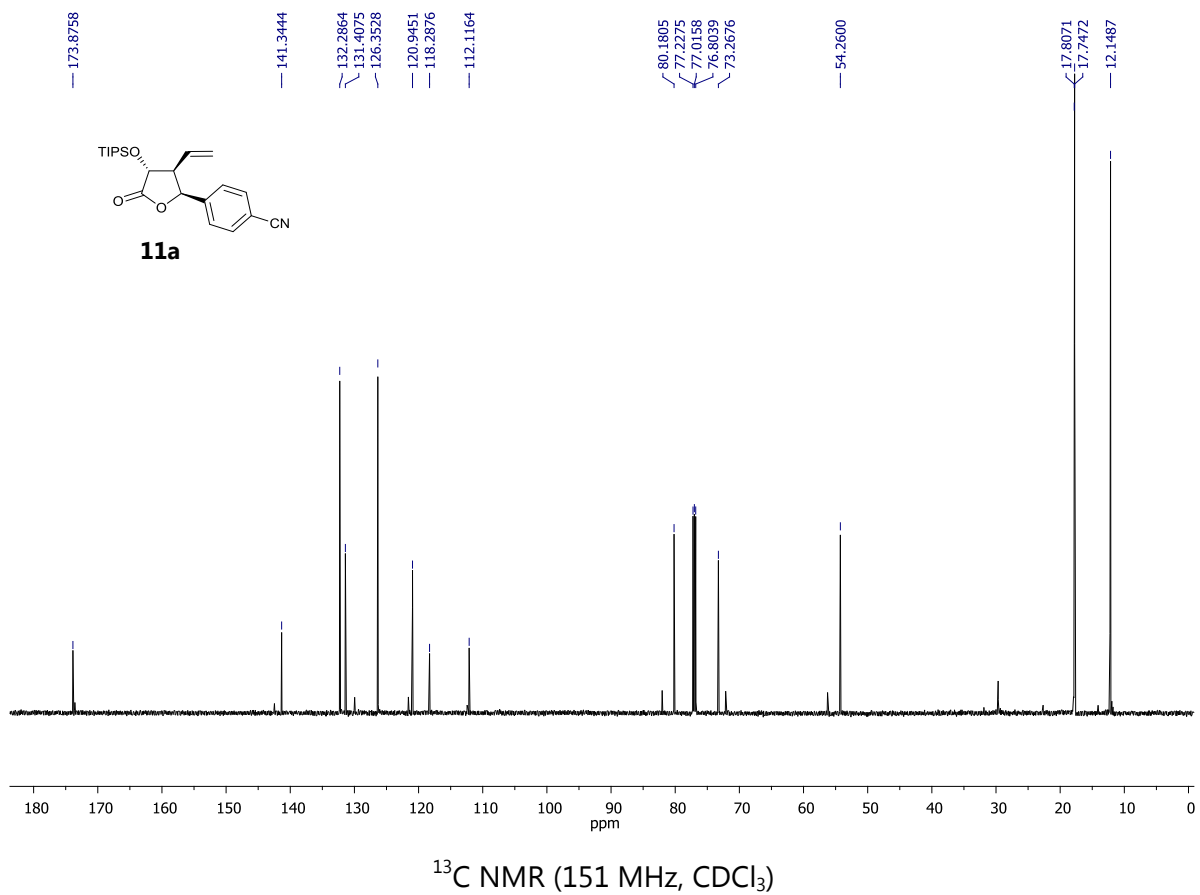
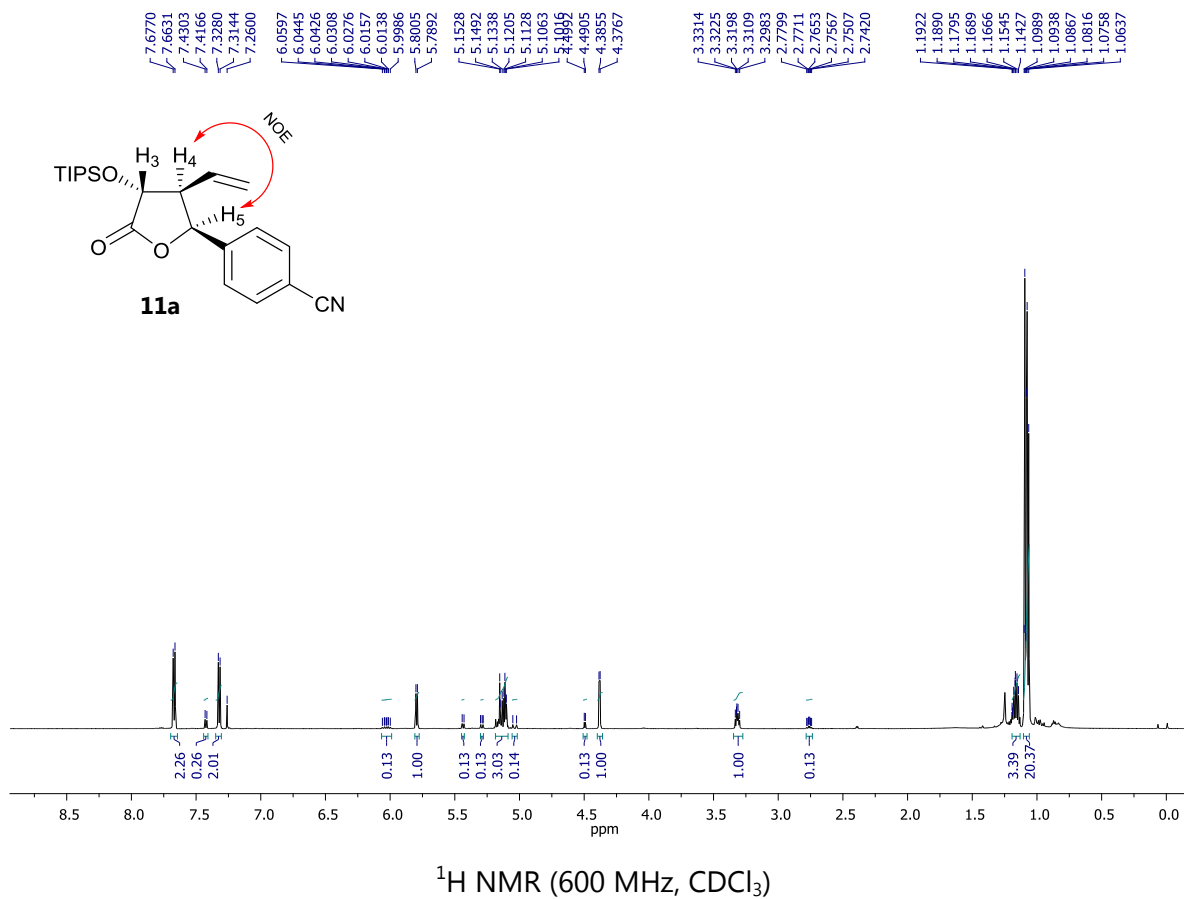


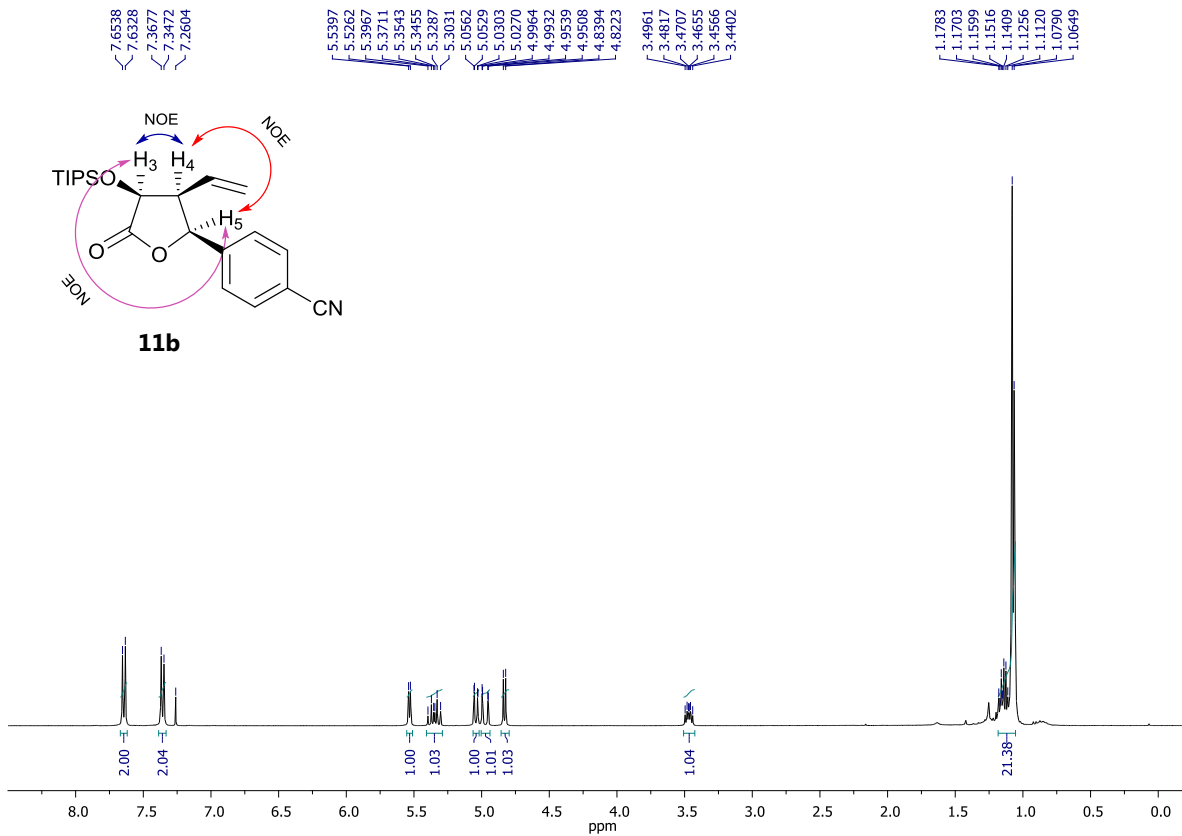




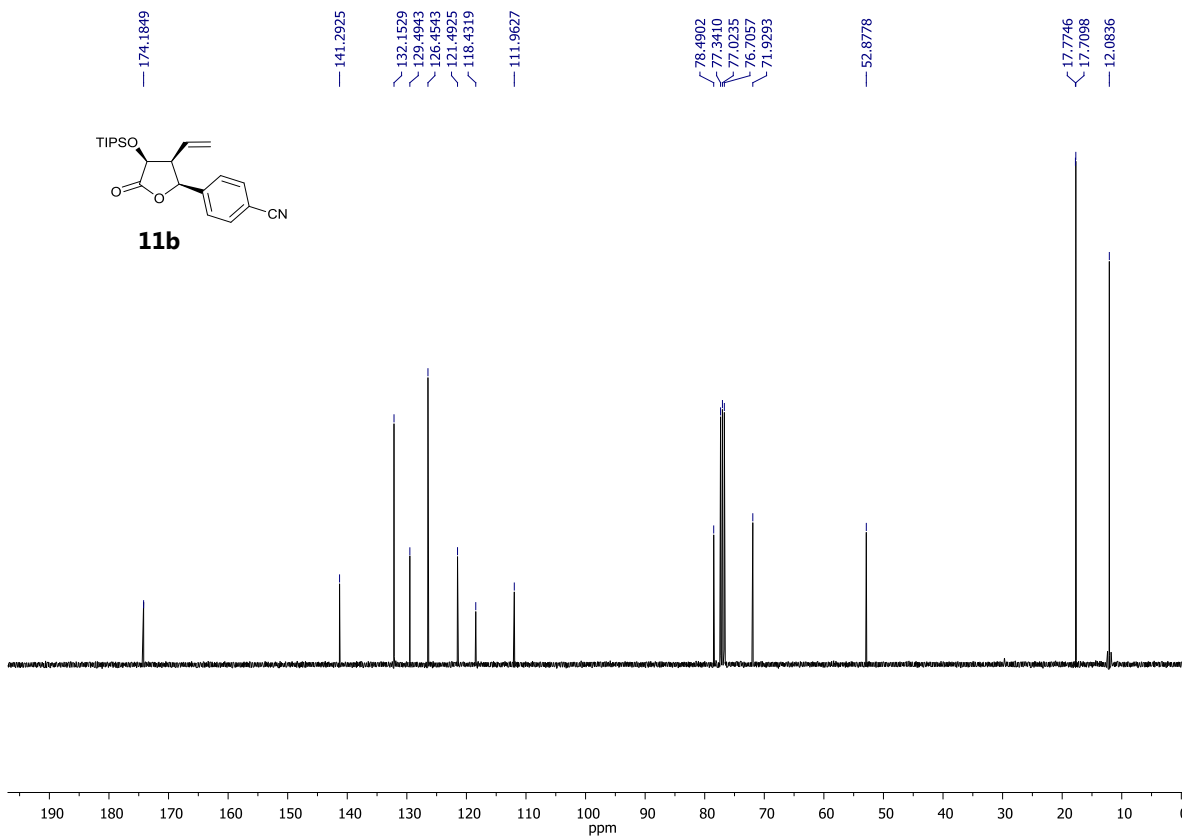
(-)-10b

^1H NMR (400 MHz, CDCl_3)

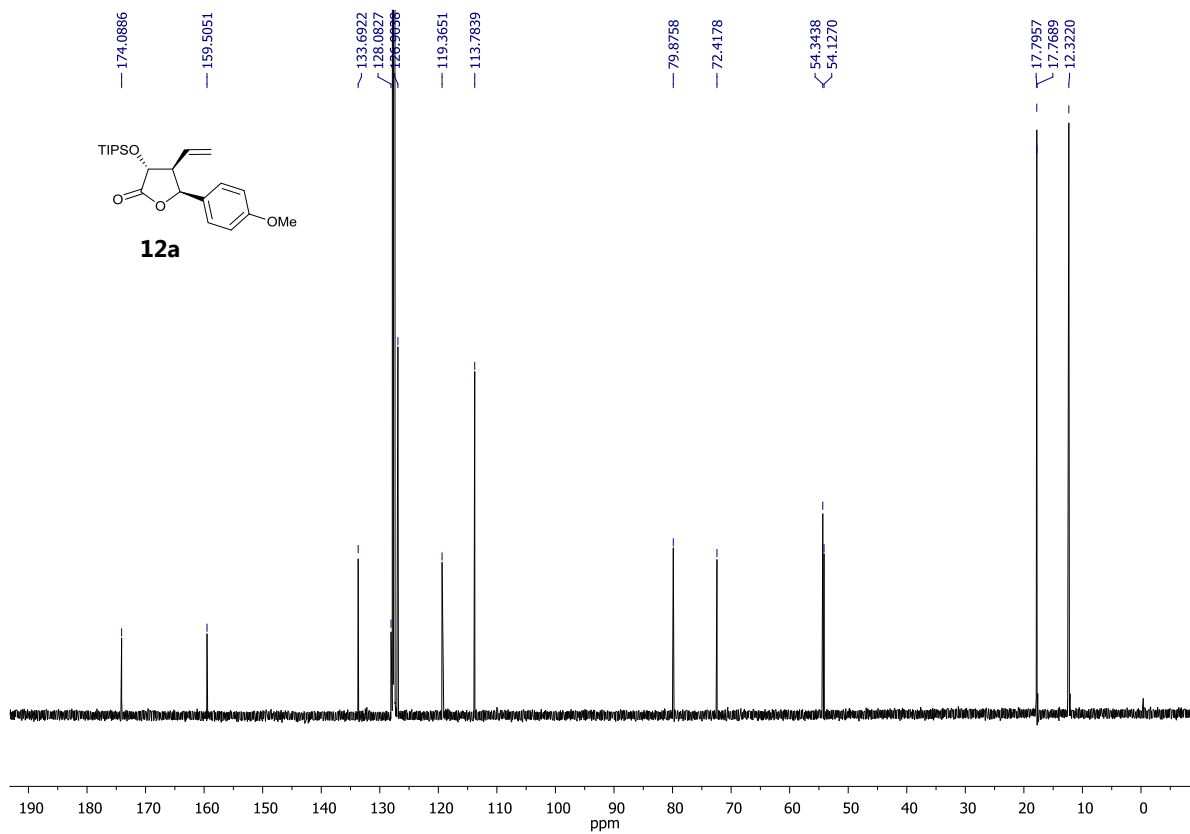
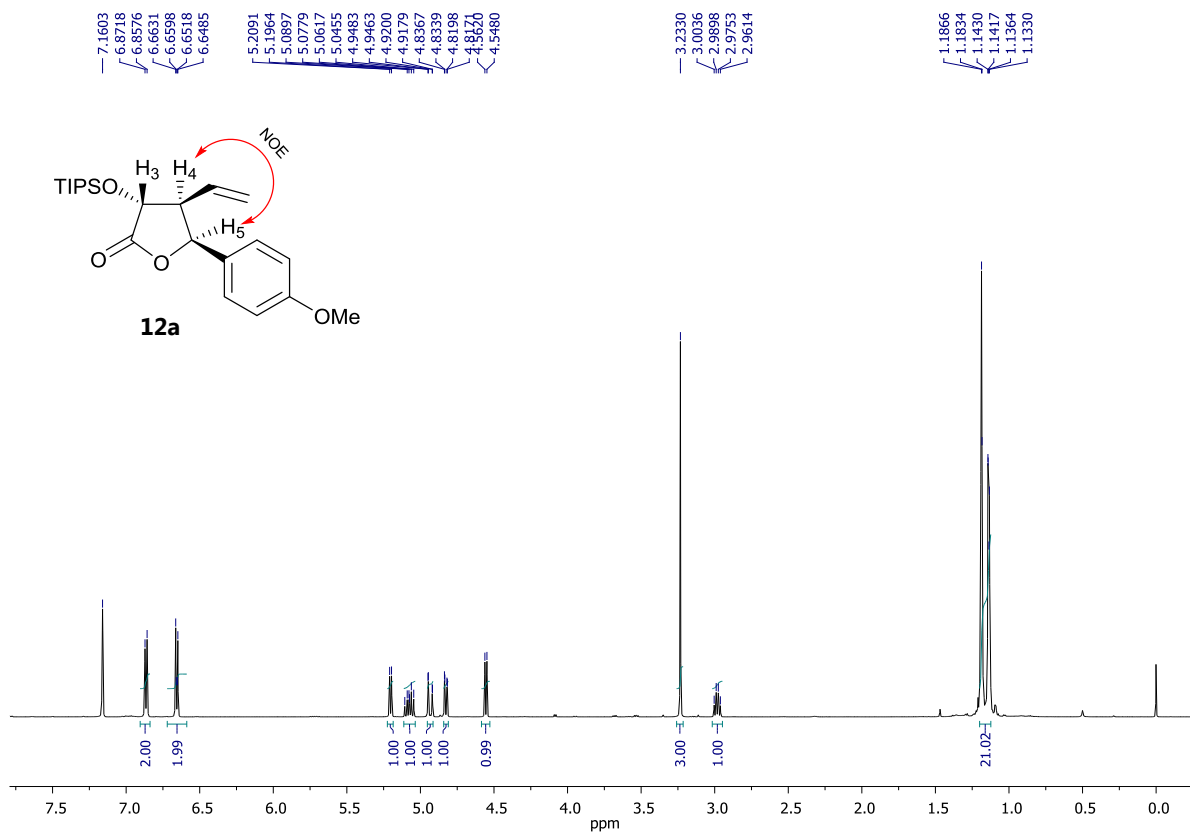


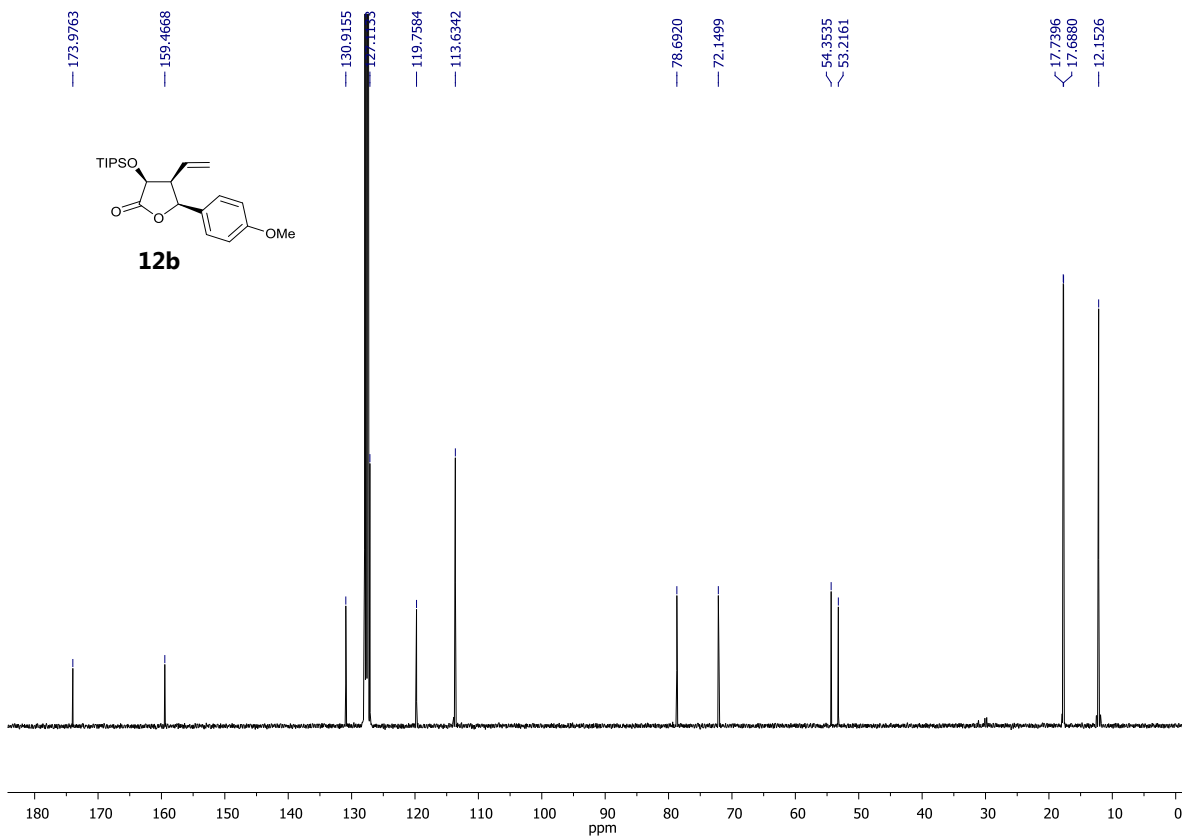
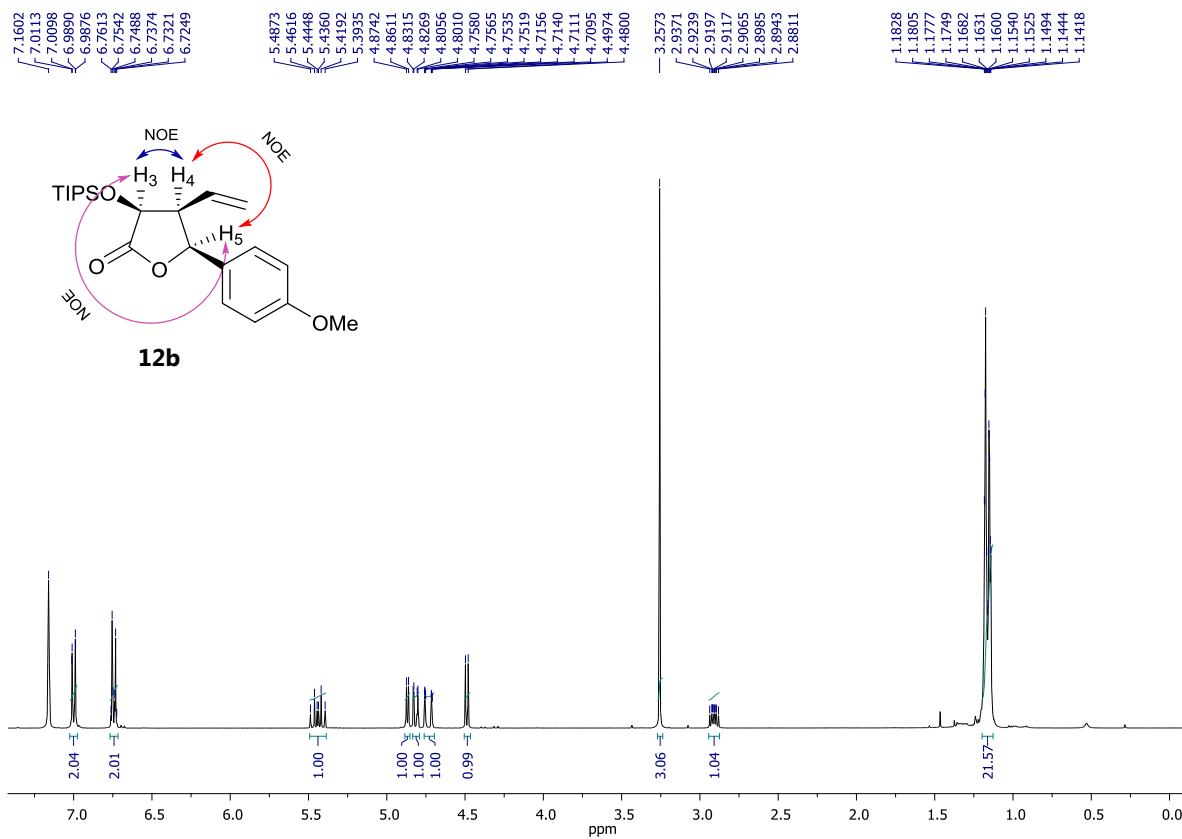


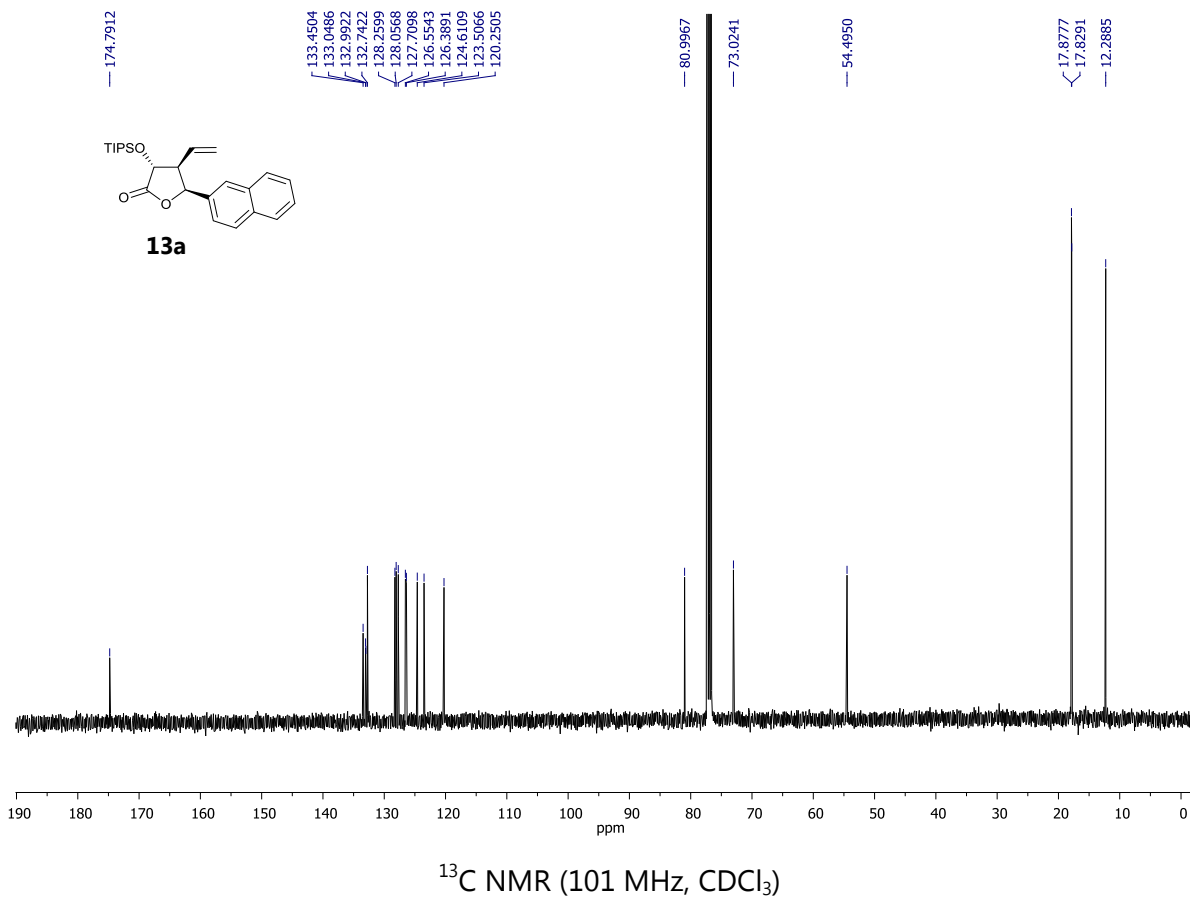
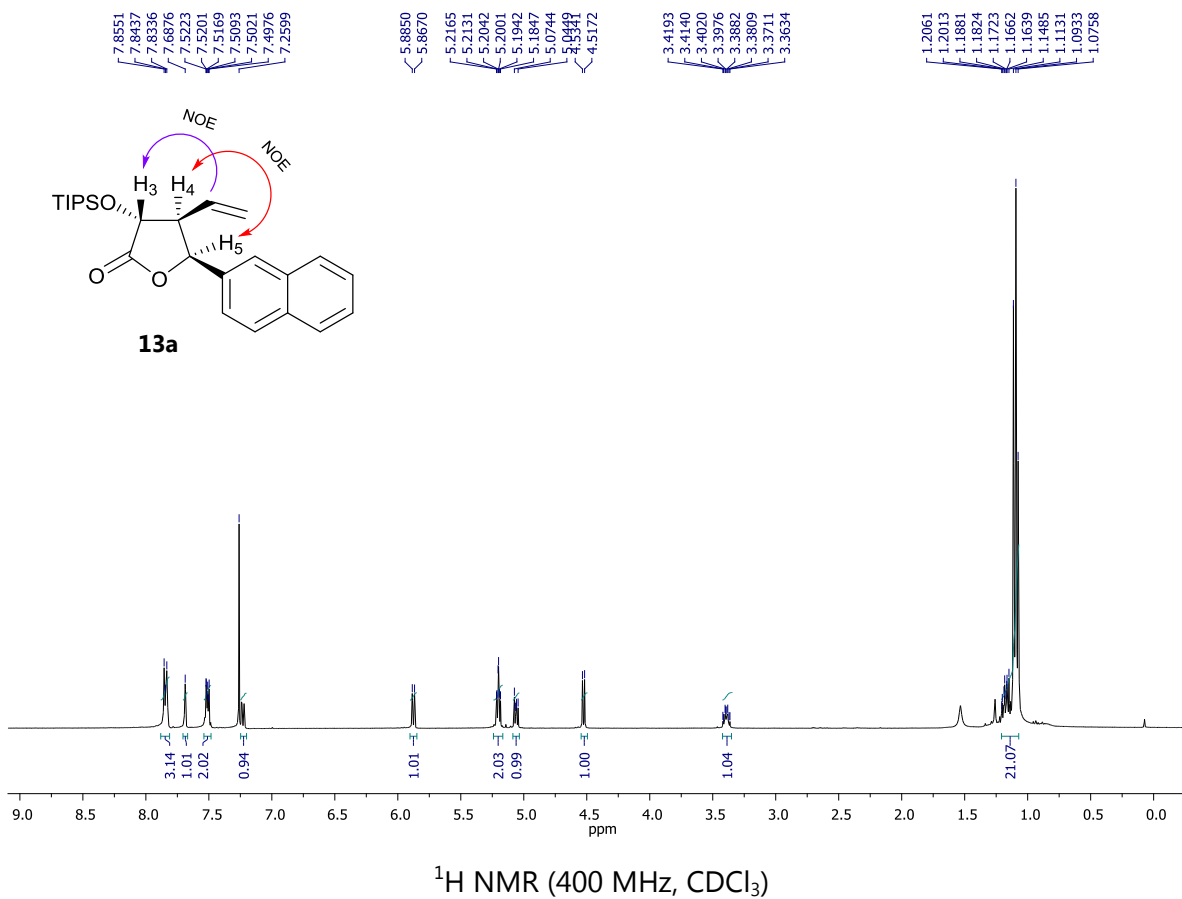
¹H NMR (400 MHz, CDCl₃)

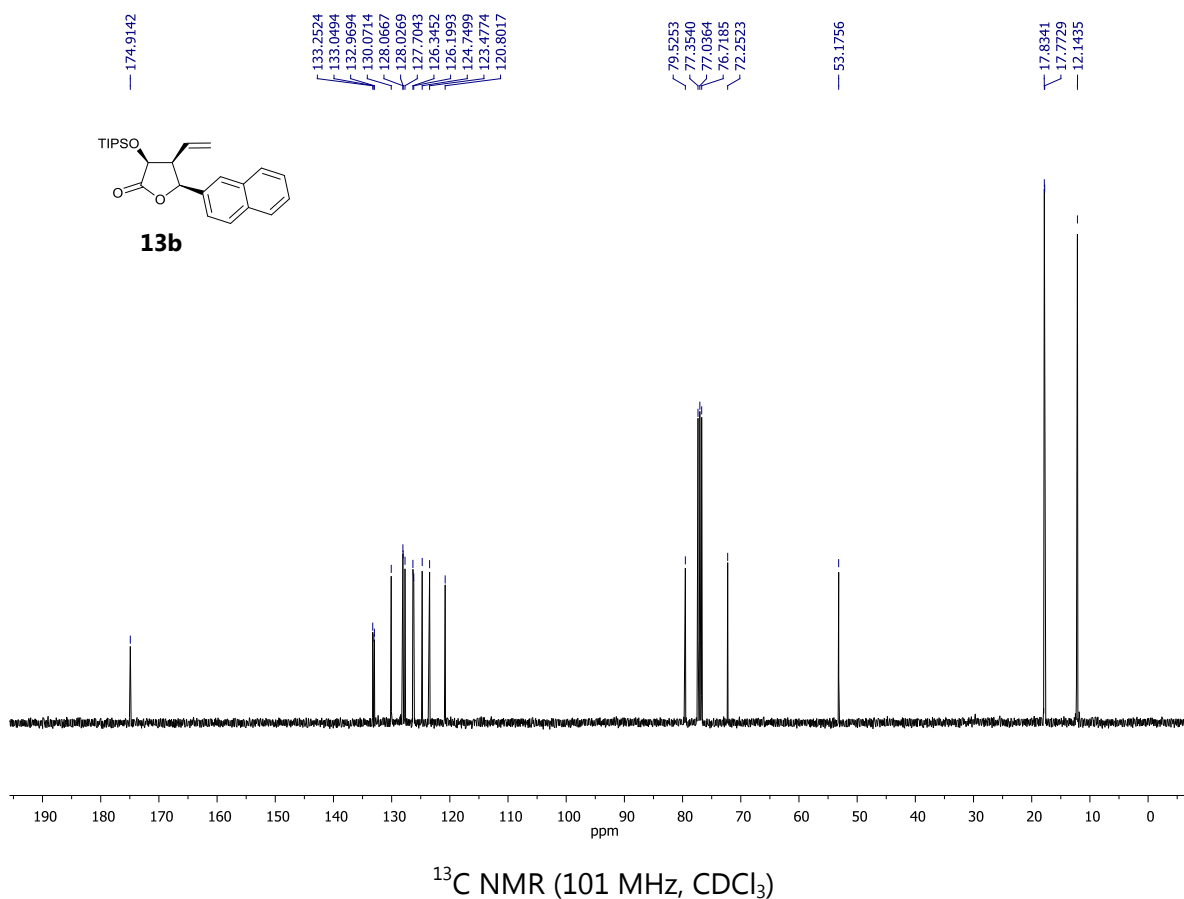
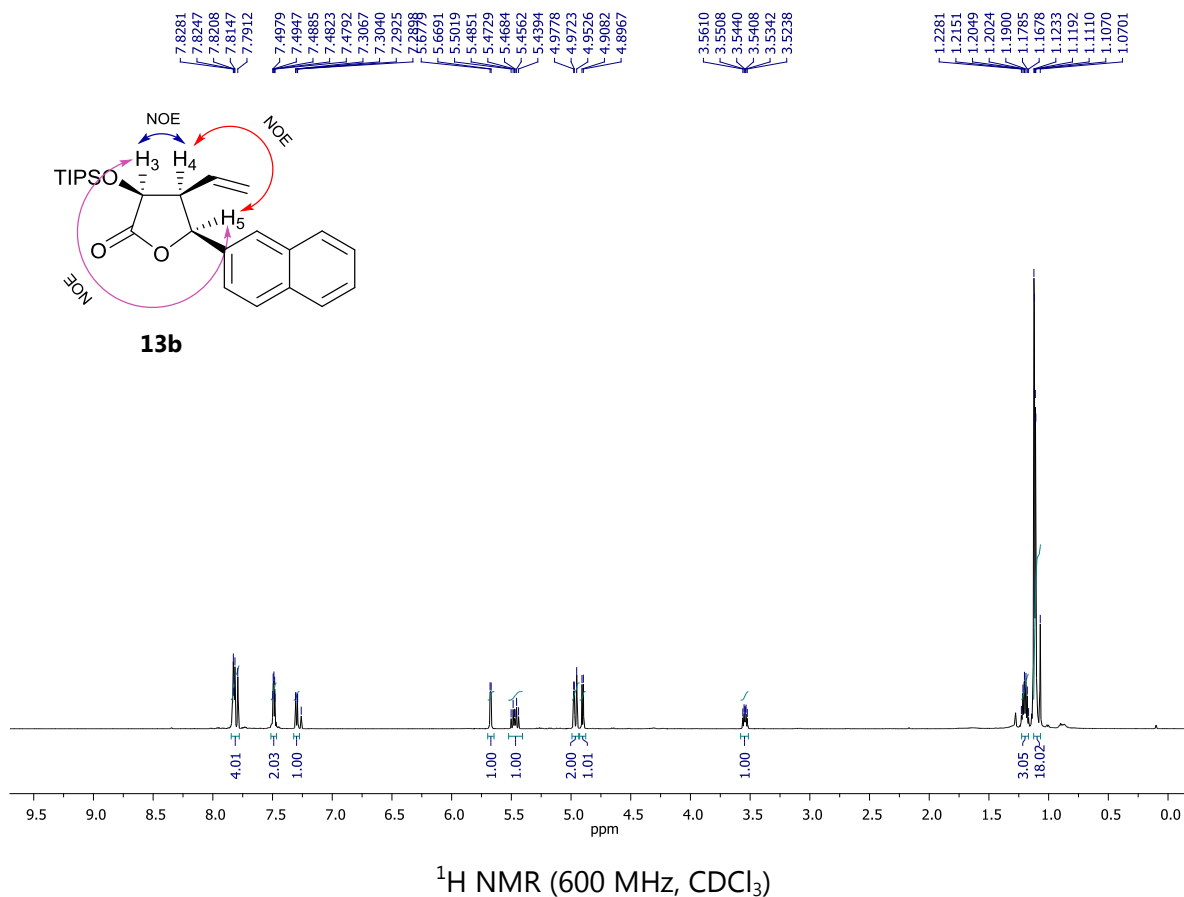


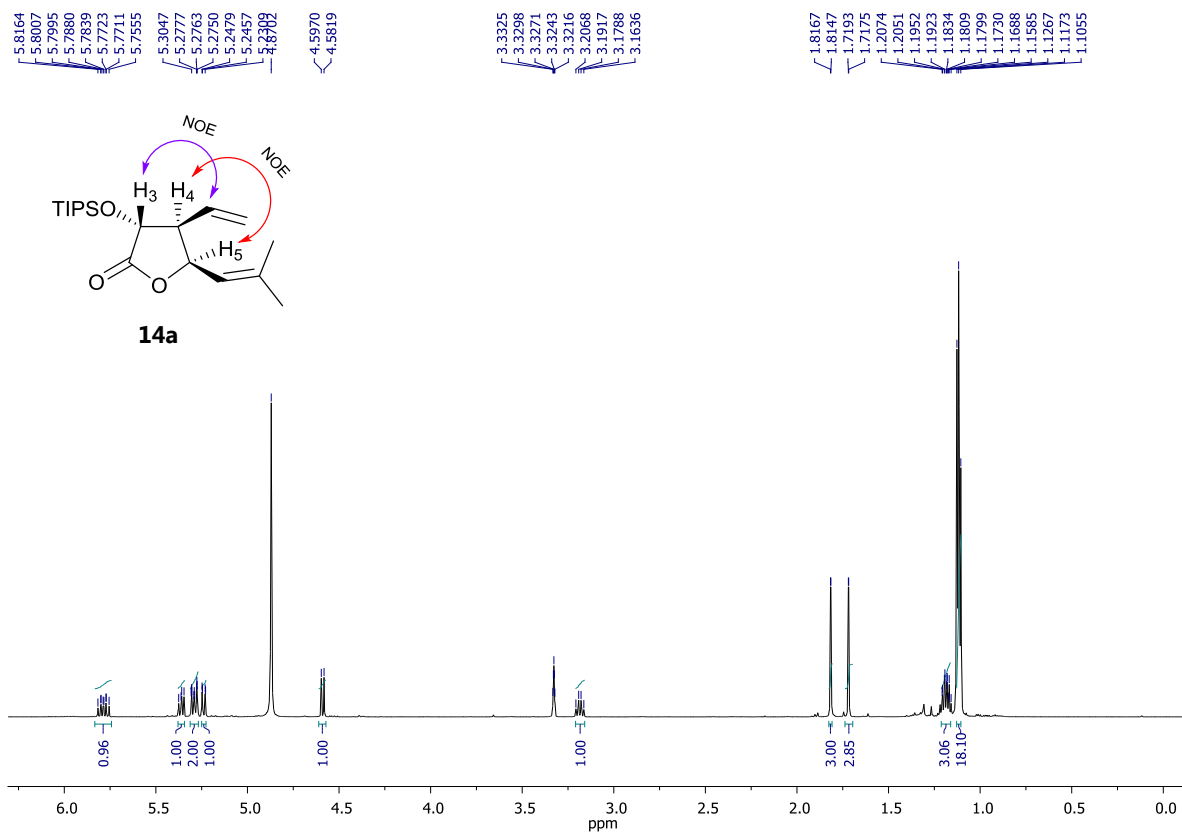
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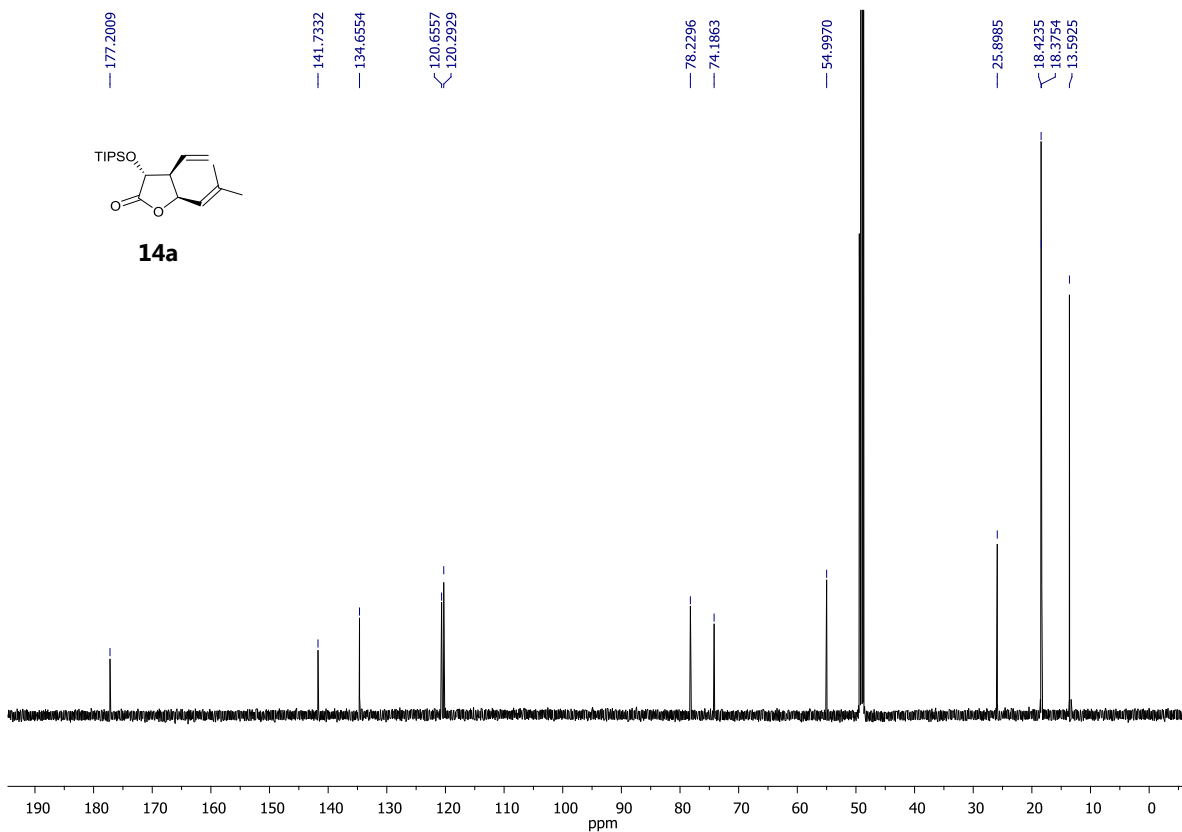




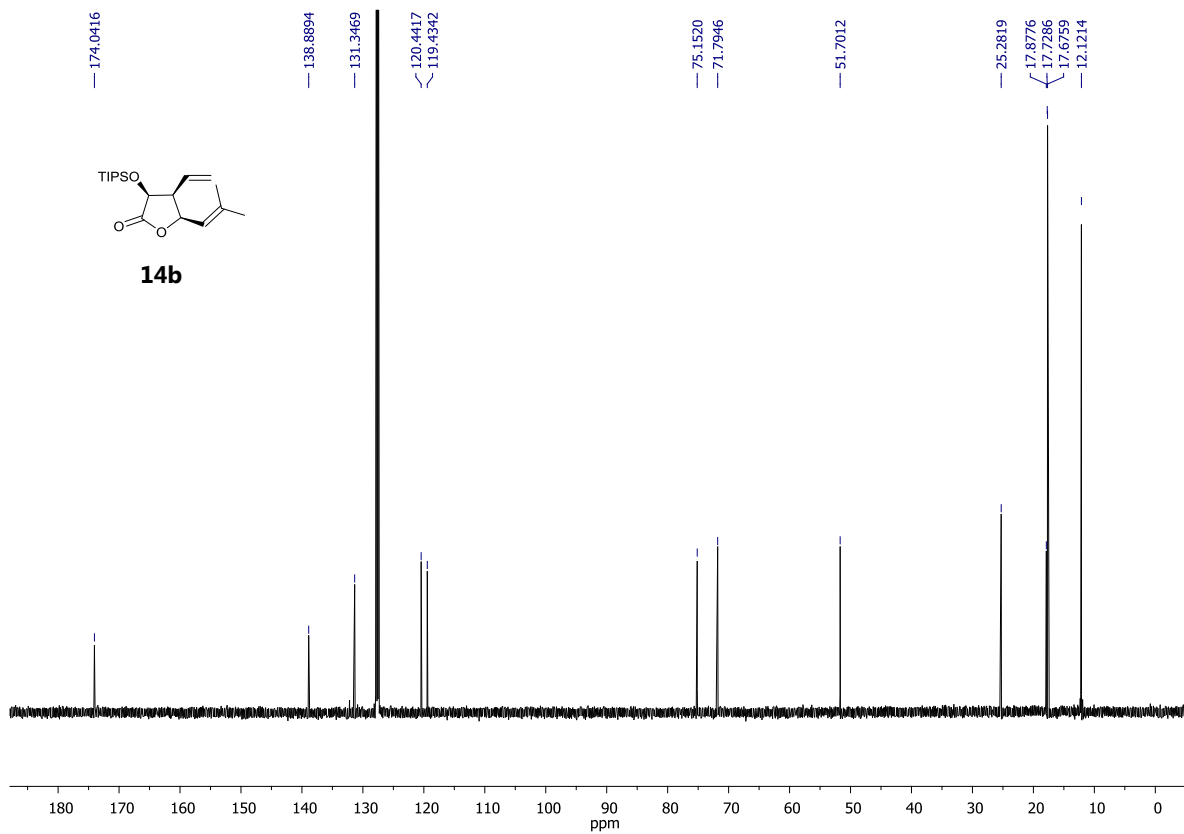
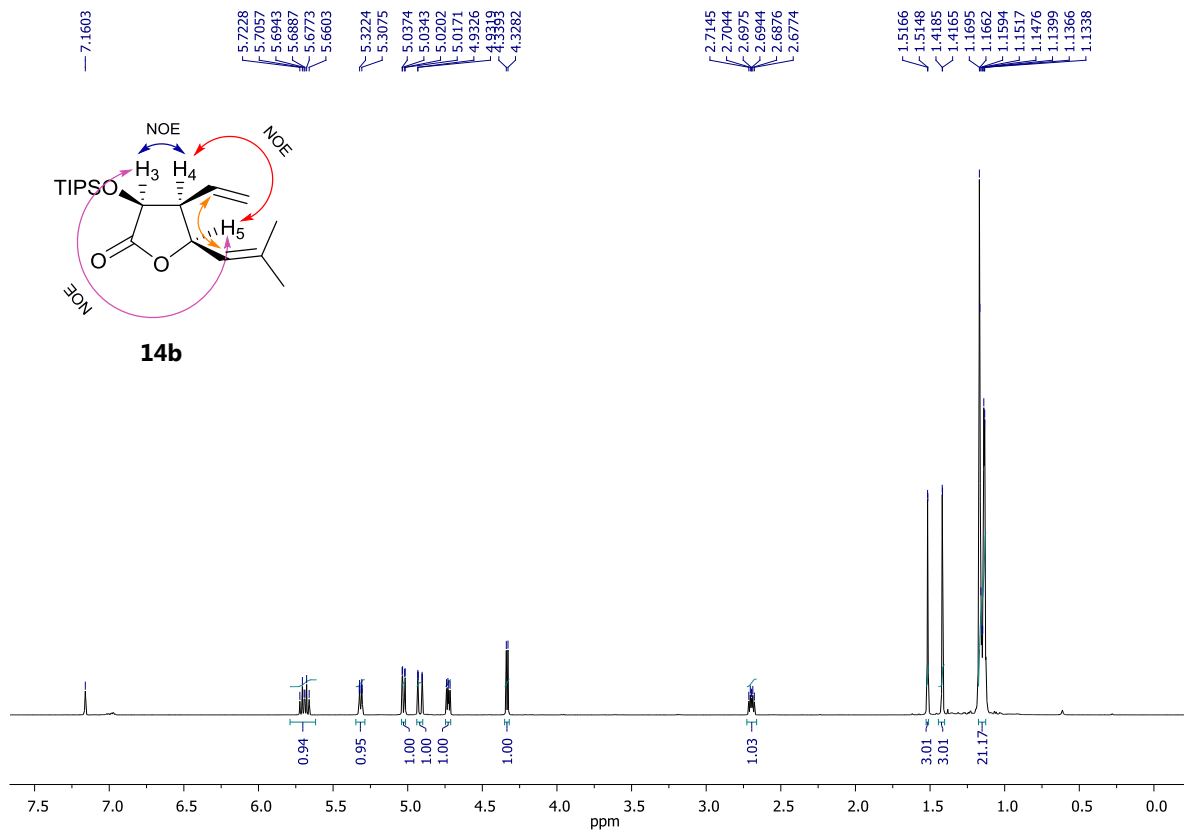


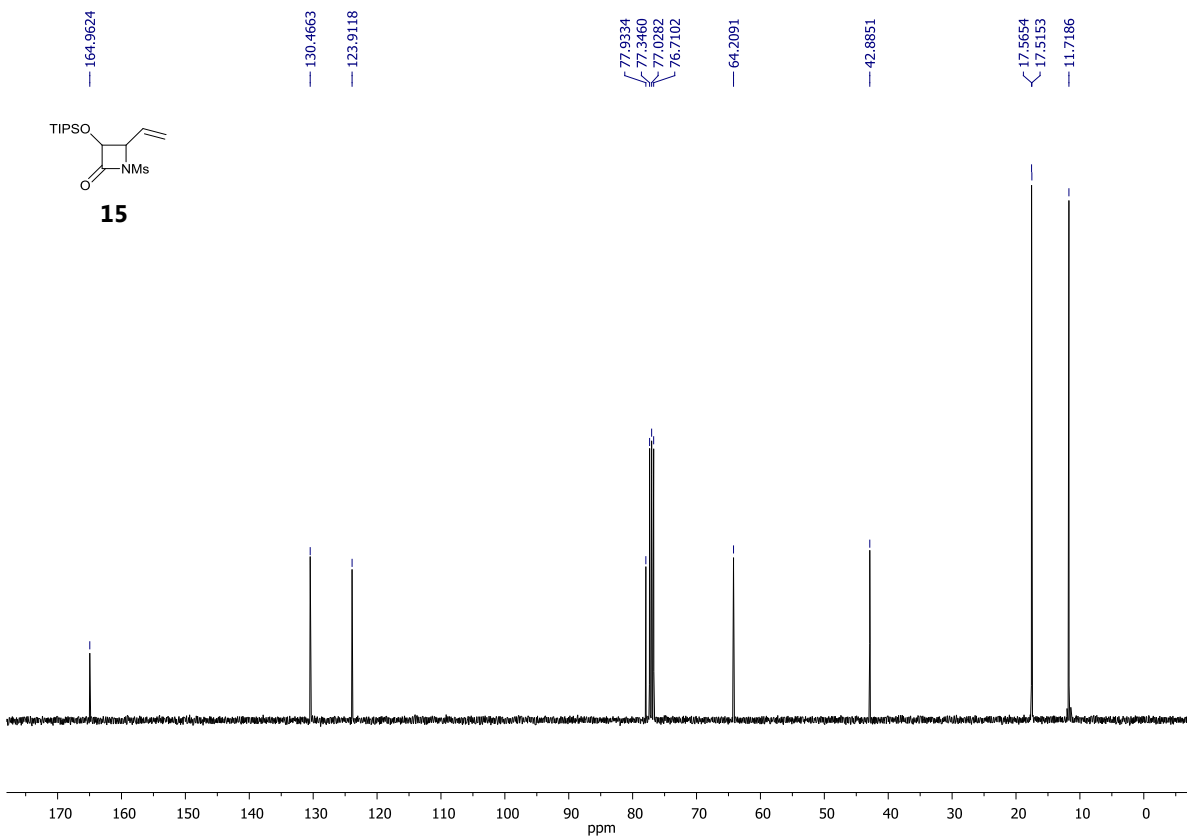
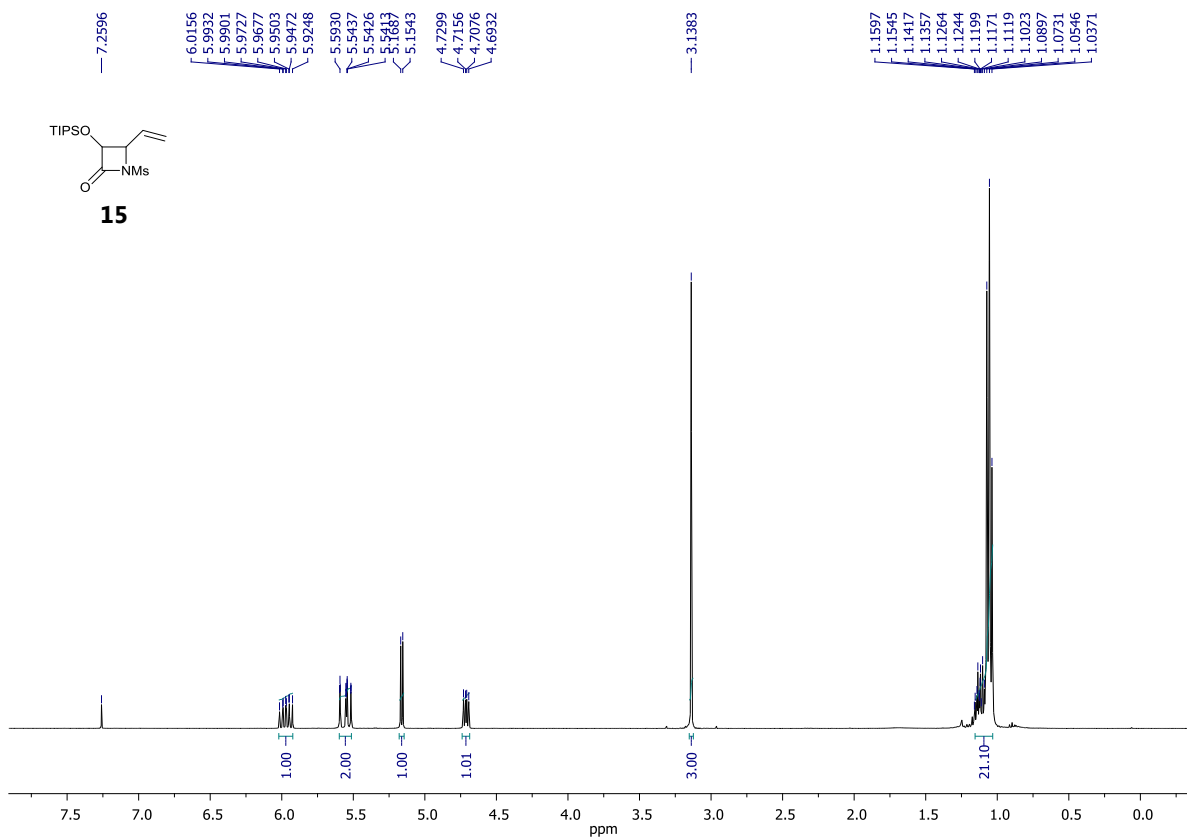


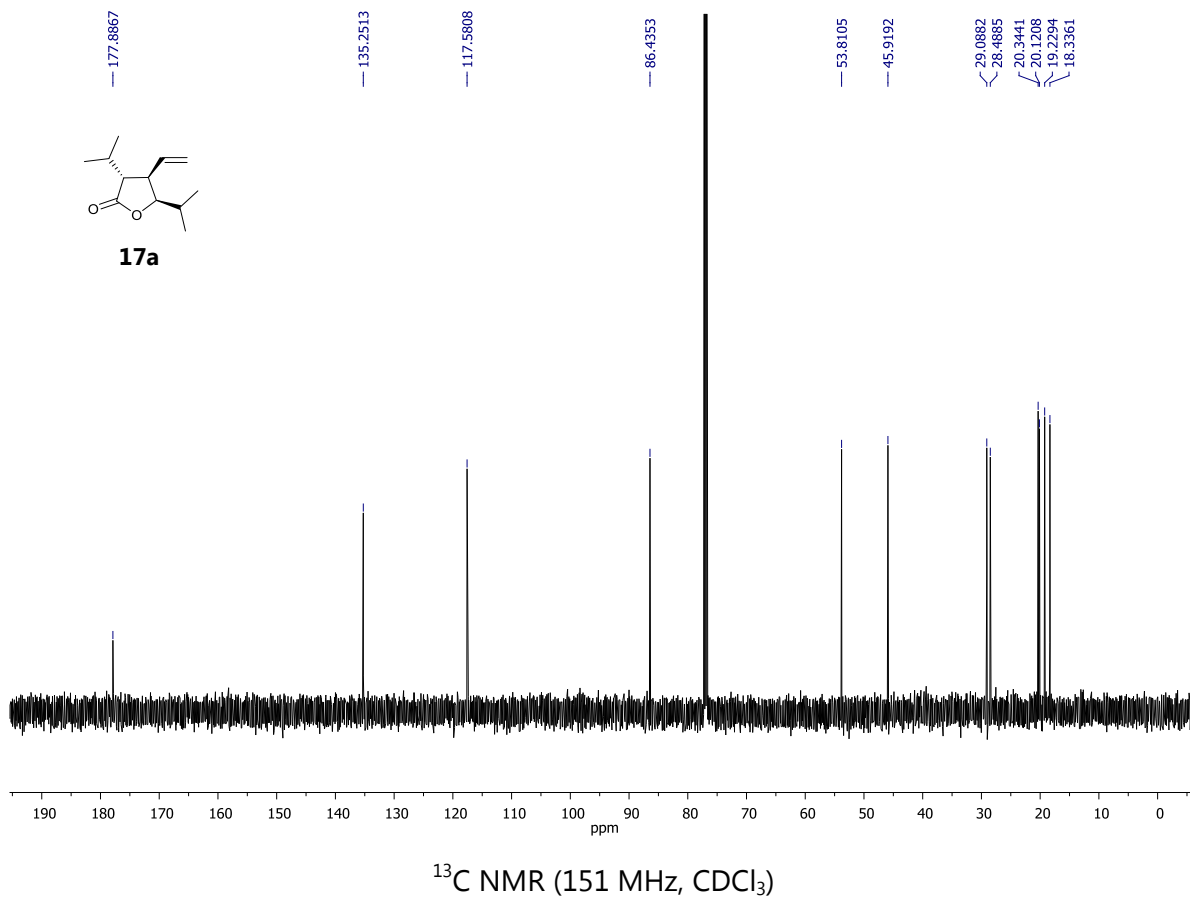
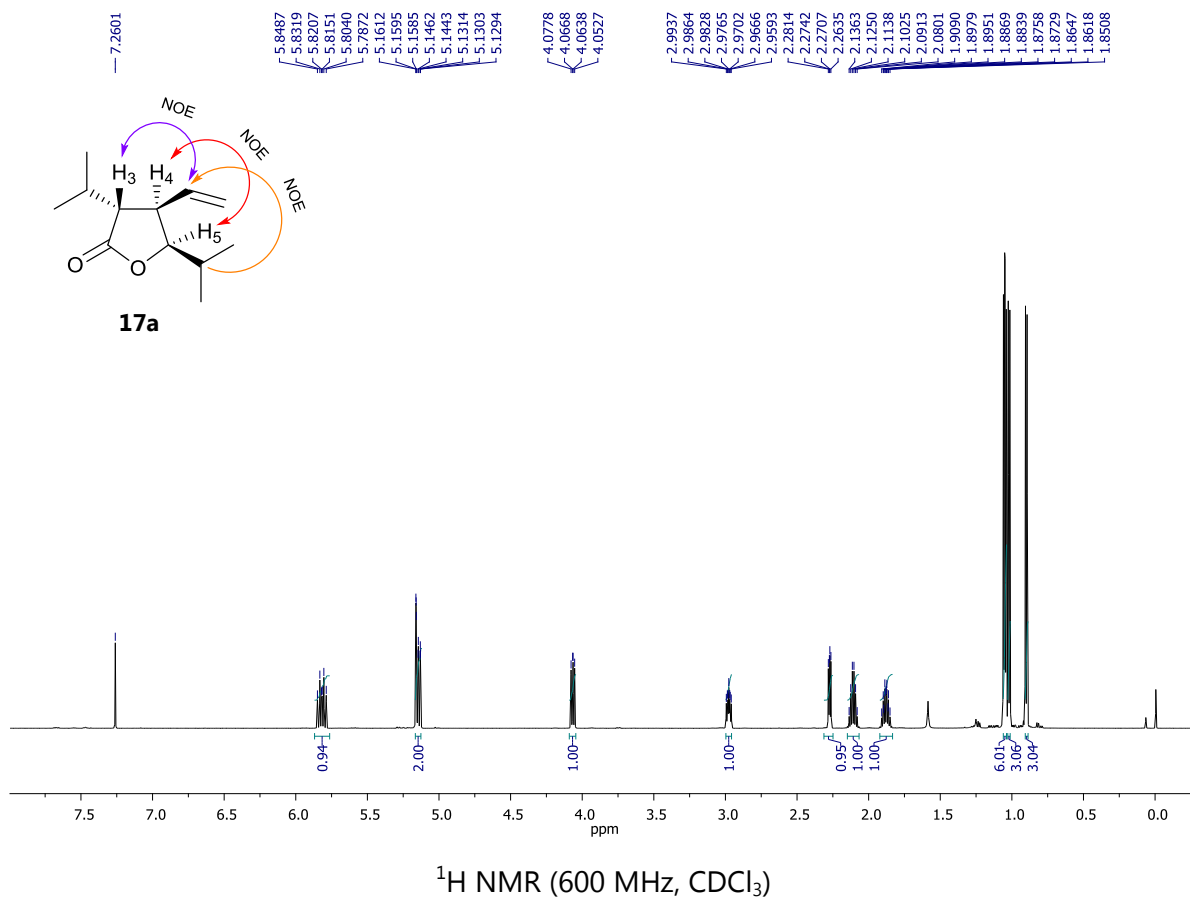
^1H NMR (600 MHz, CD_3OD)

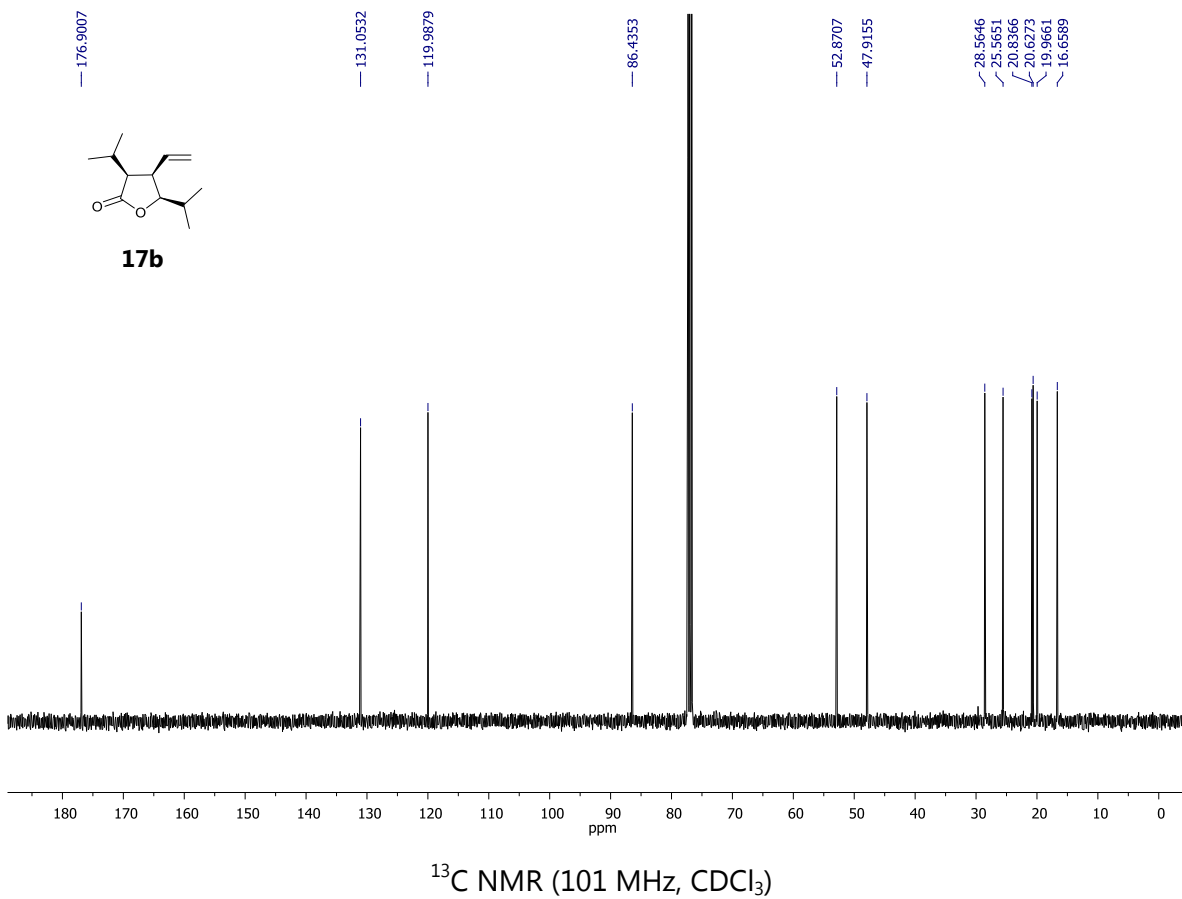
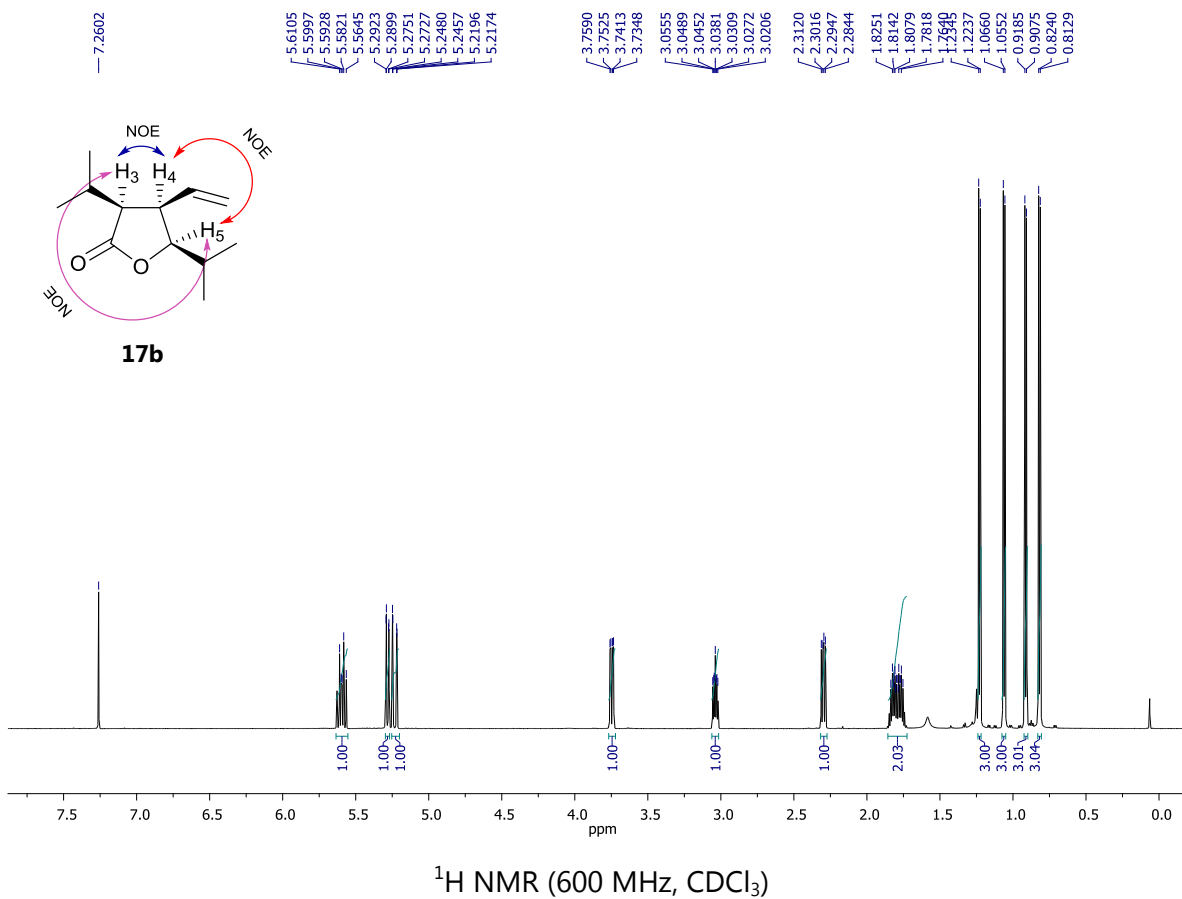


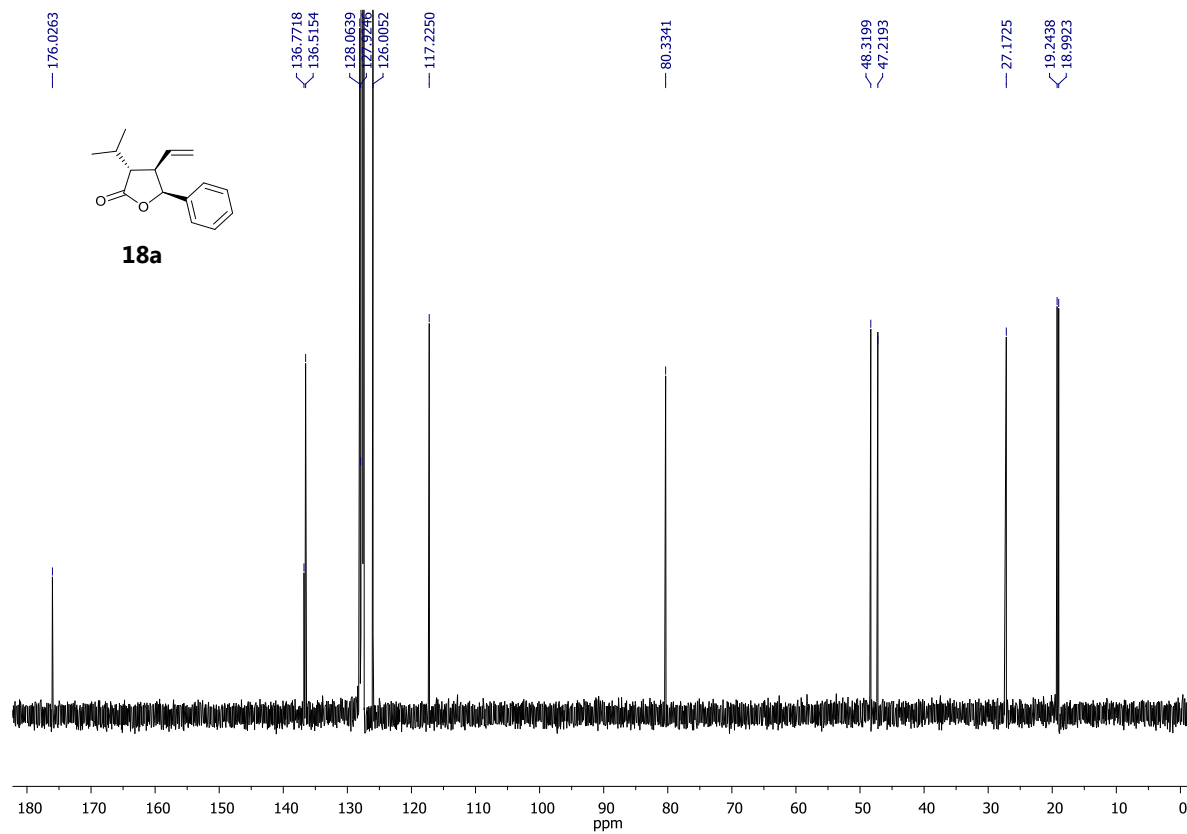
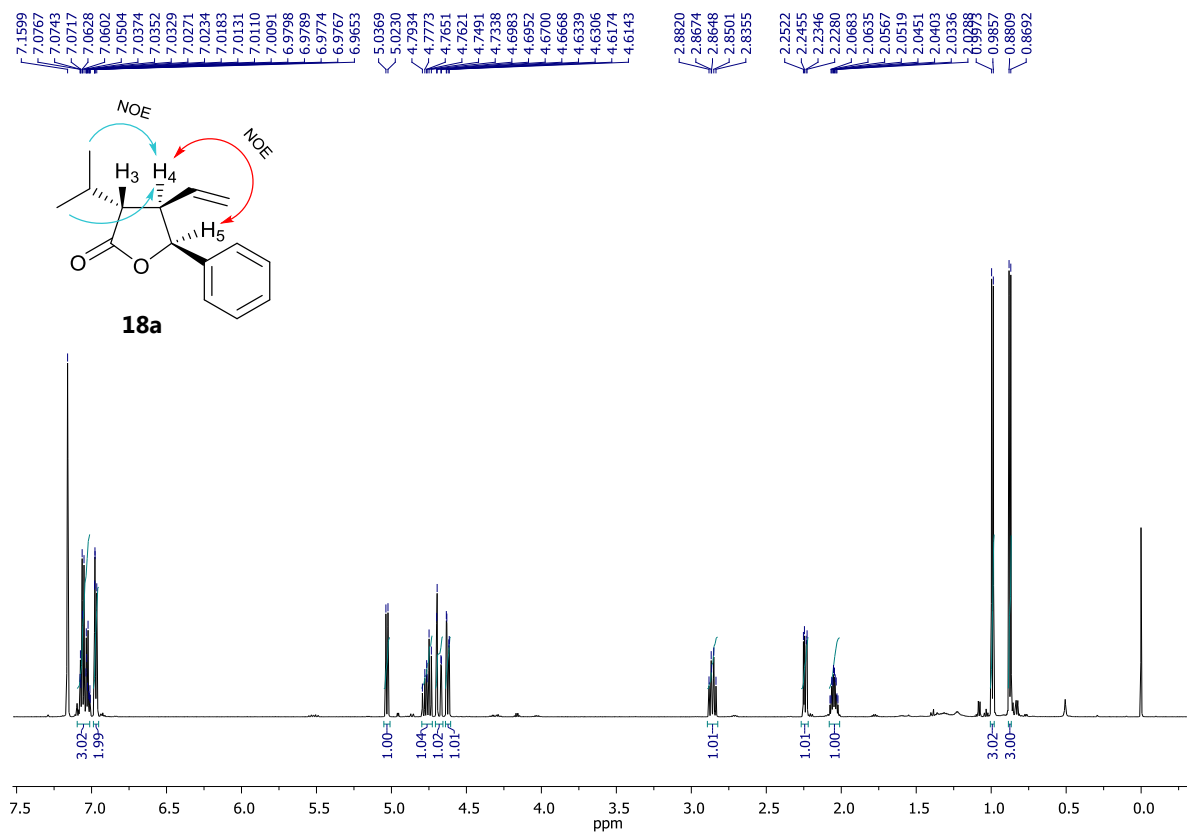
^{13}C NMR (151 MHz, CD_3OD)

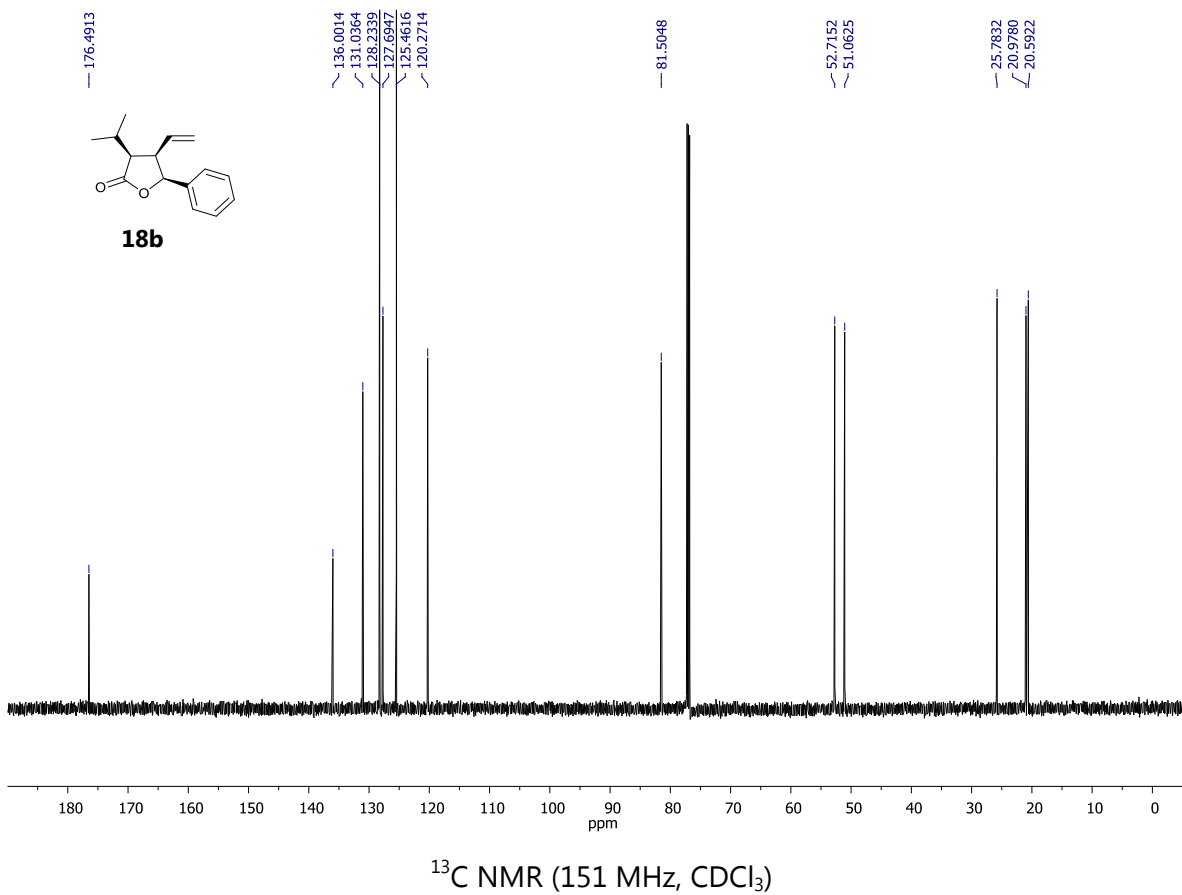
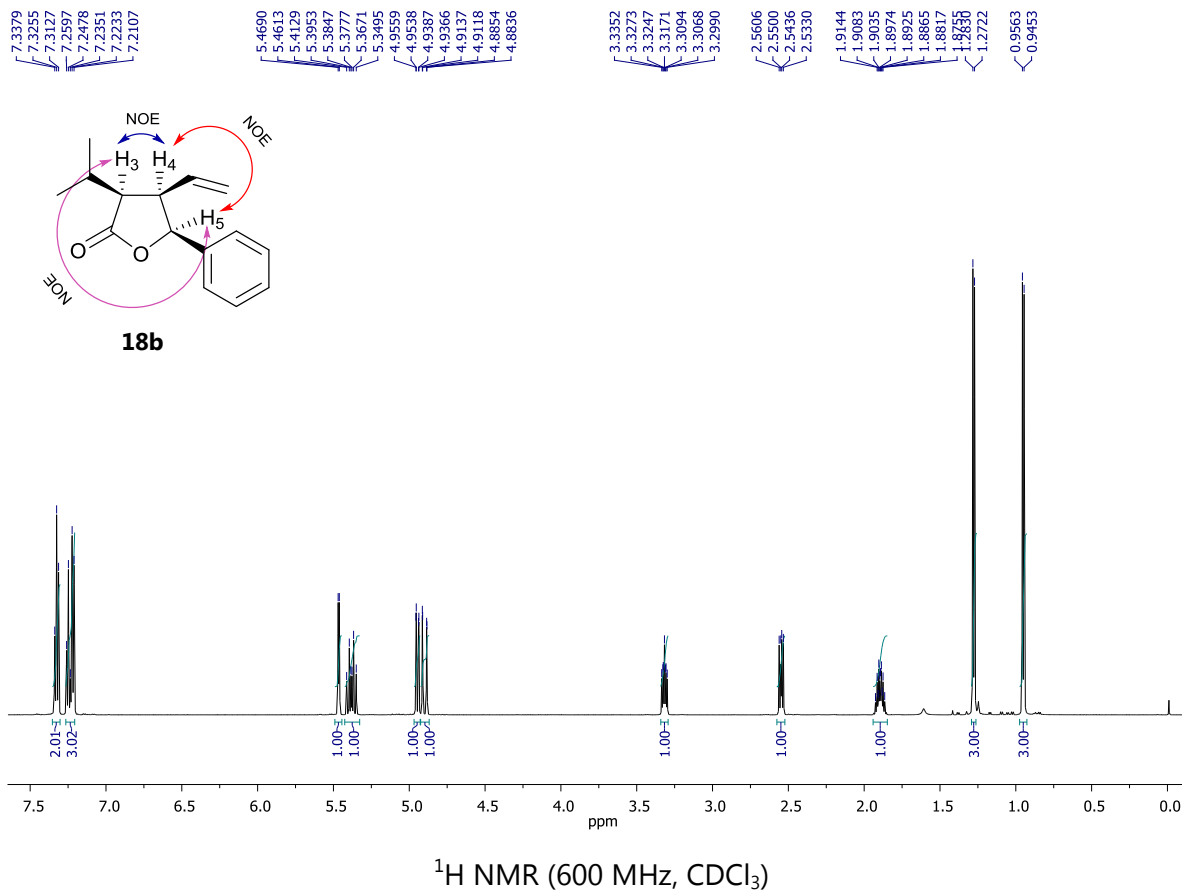


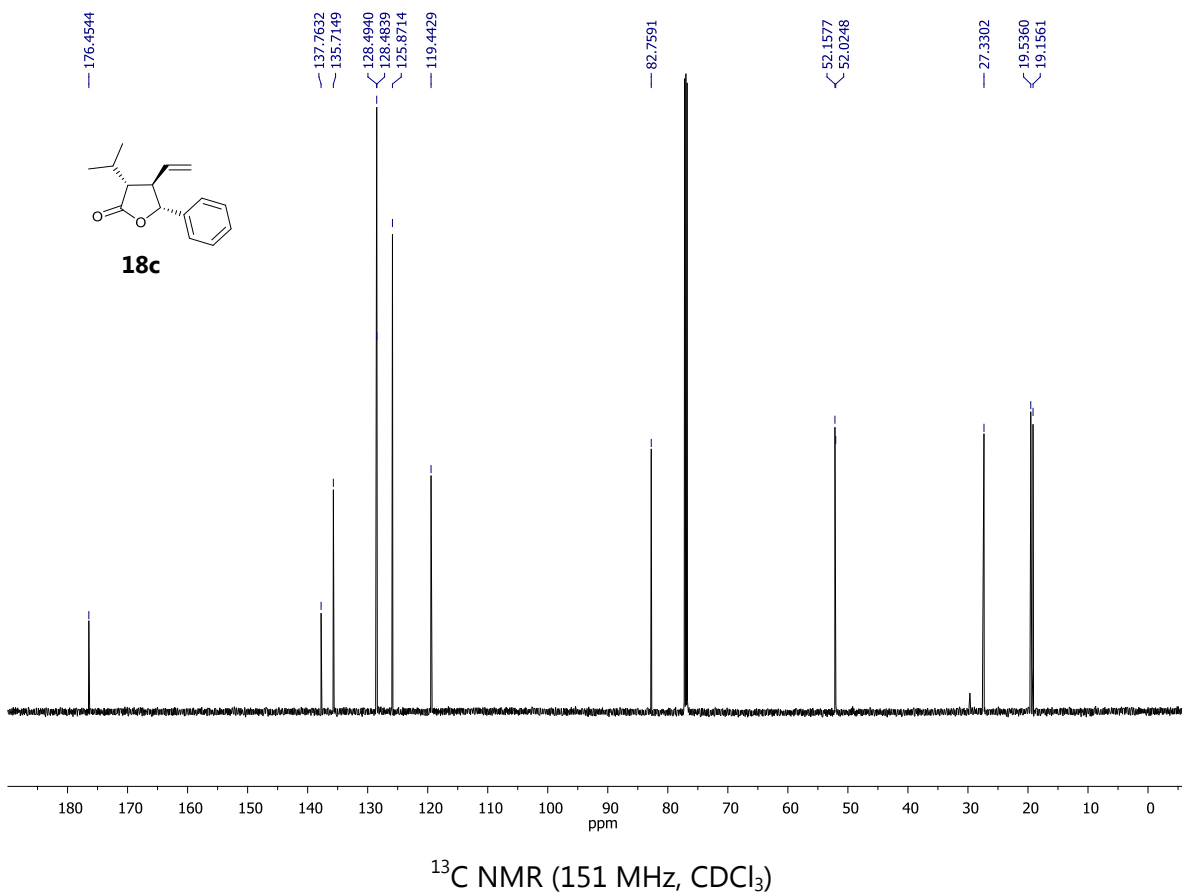
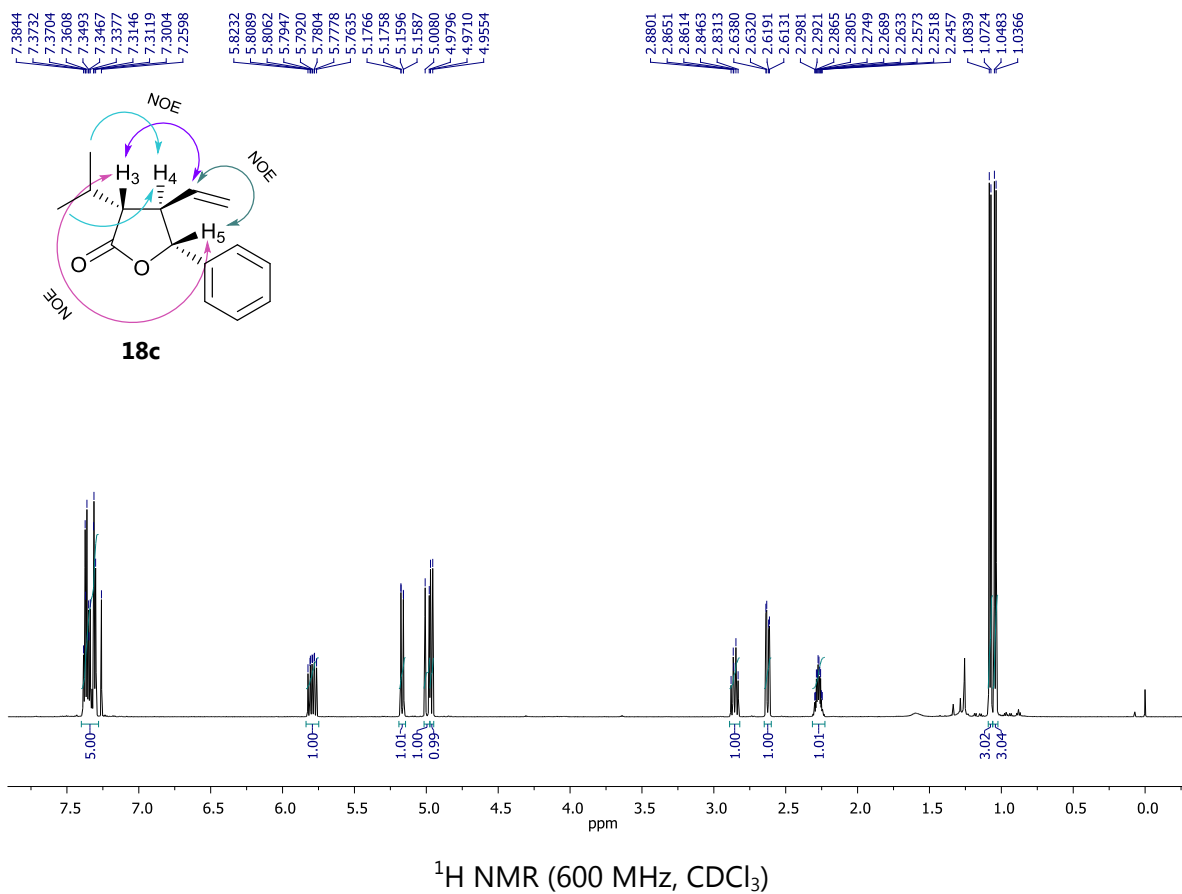




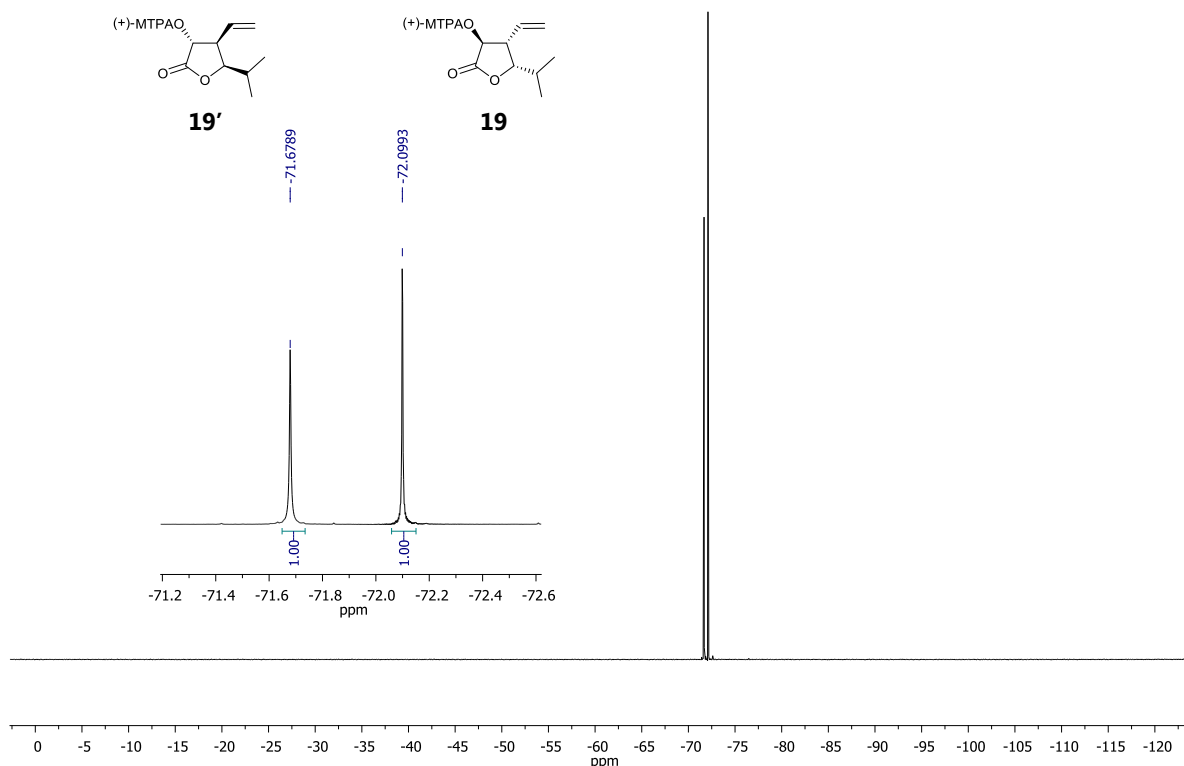




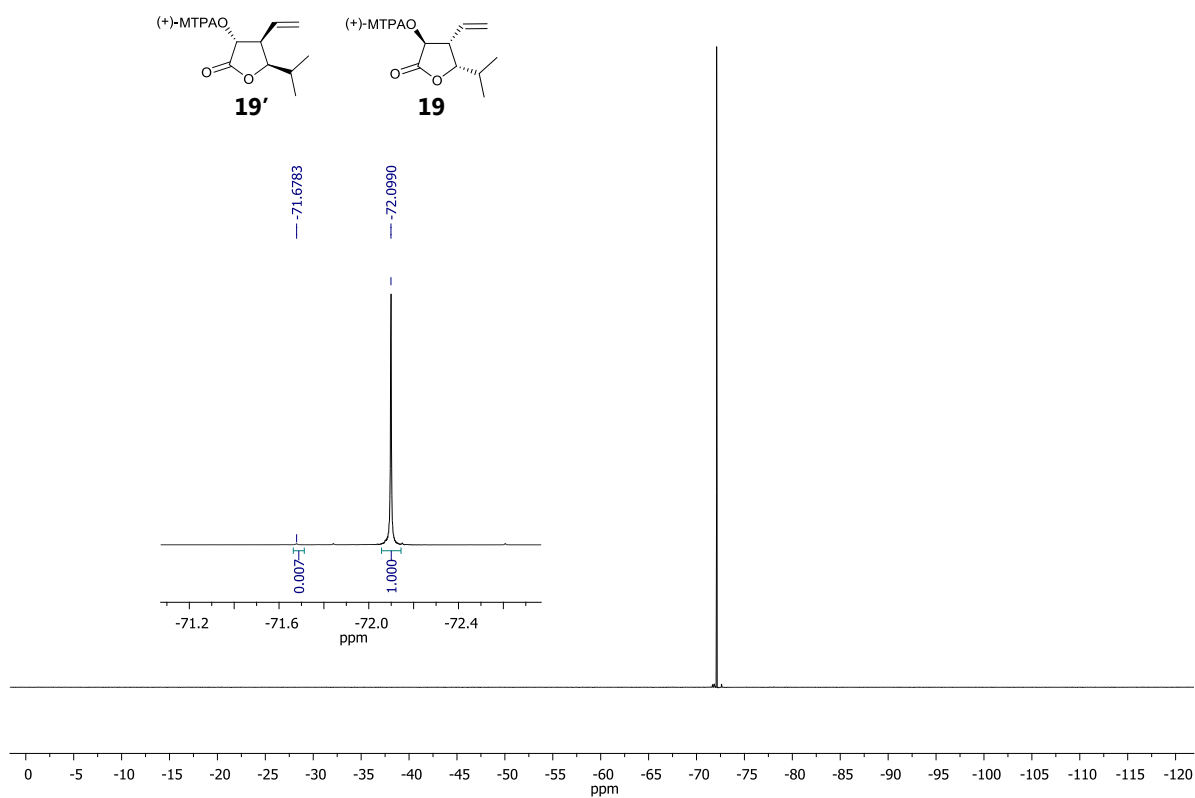




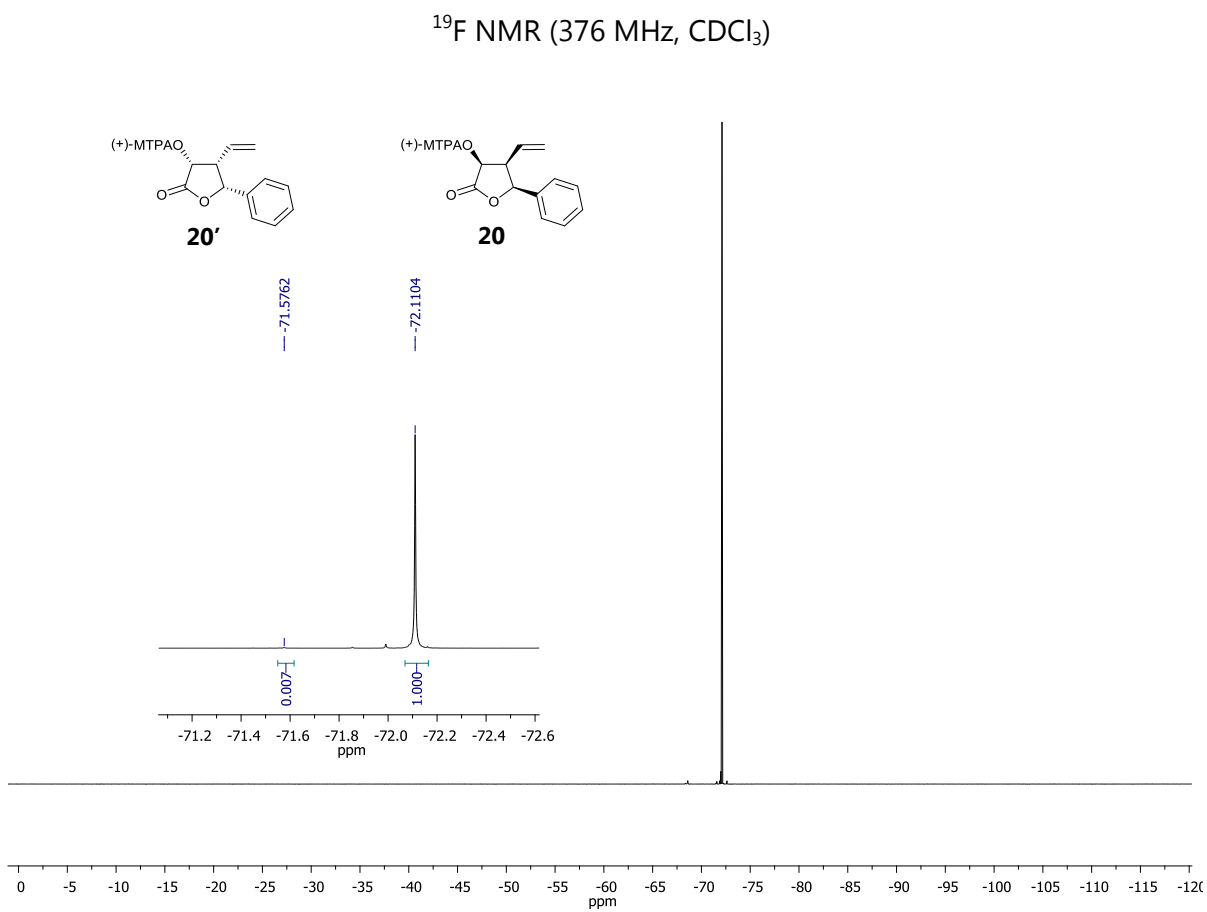
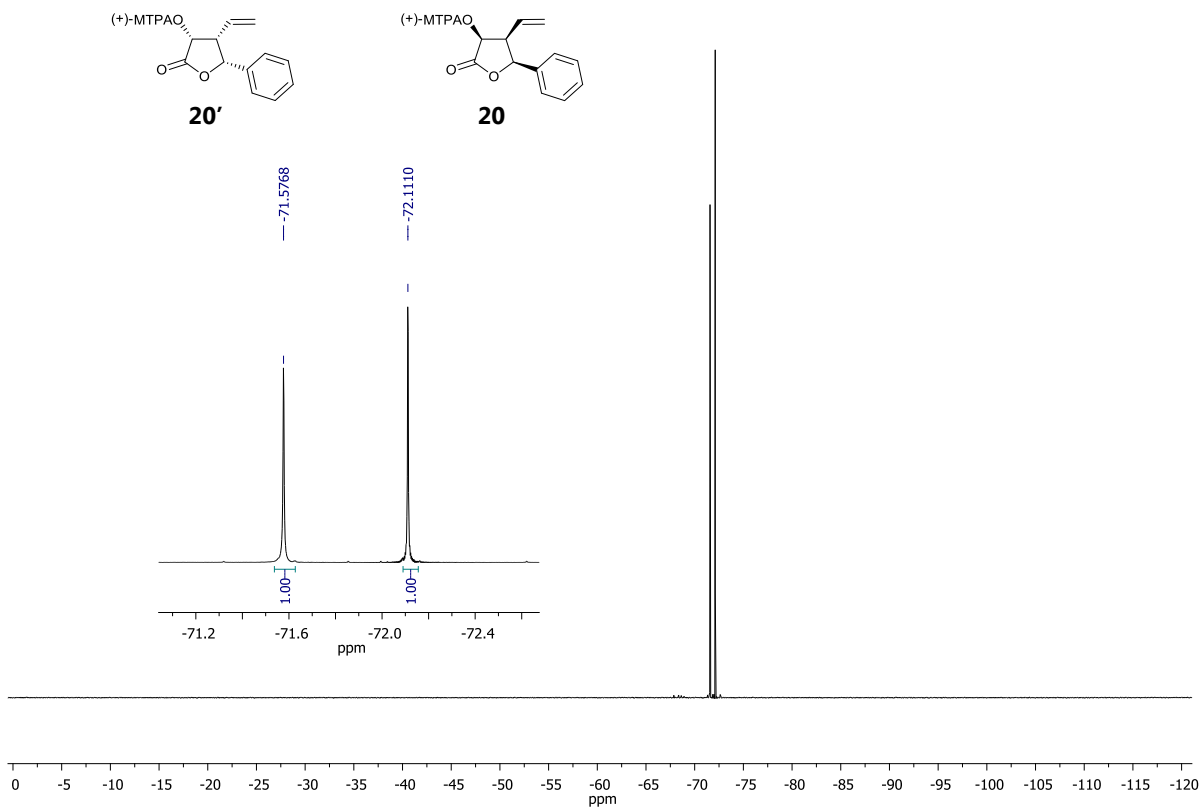
Copies of ^{19}F NMR spectra of Moscher's esters



^{19}F NMR (376 MHz, CDCl_3)

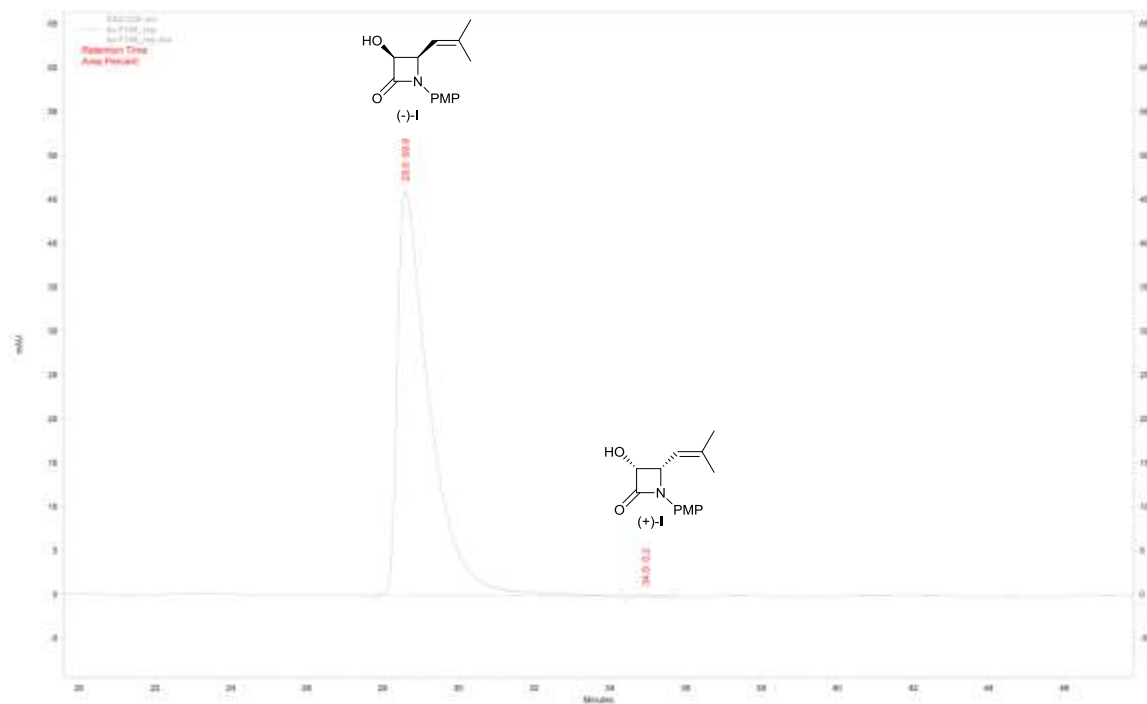
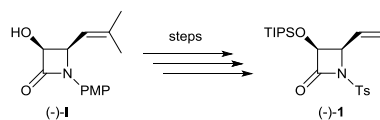


^{19}F NMR (376 MHz, CDCl_3)

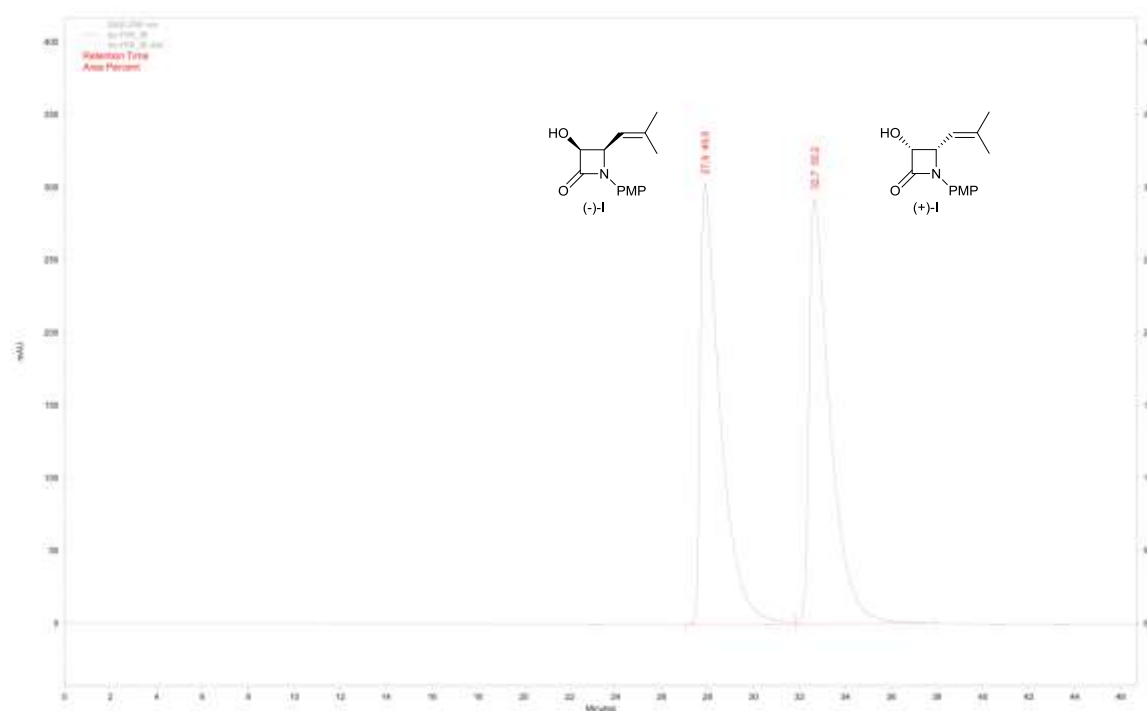


HPLC chromatograms of (-)-**1** and (±)-**1** :

Nonracemic β -lactam (-)-**1** was prepared from compound (-)-**1** according to the literature procedure.^[1]



Chromatogram of (-)-**1** (IB column; hexane/*i*-PrOH 97:3; 1.0 mL/min, $\lambda = 212$ nm): major peak 28.6 min (ee > 99%)



Chromatogram of (±)-**1** (IB column; hexane/*i*-PrOH 97:3; 1.0 mL/min, $\lambda = 212$ nm): 28.6 min ((-)-**1**), 34.9 min ((+)-**1**)

References :

- [1] U. K. Klimczak, B. K. Zambroń, *Chem. Commun.* **2015**, 51, 6796–6799.