

*Supplementary Material*

# Iron-Borophosphate Glass-Catalyzed Regioselective Hydrothiolation of Alkynes under Green Conditions

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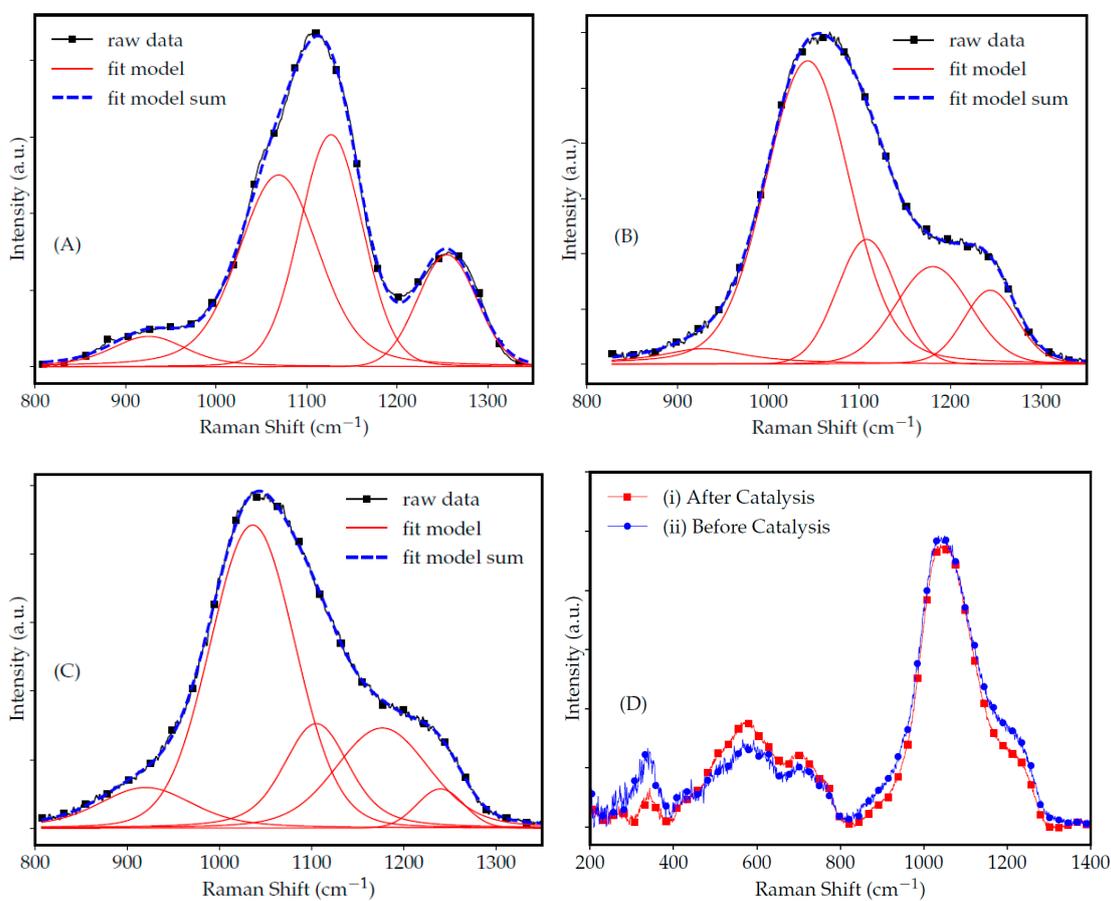
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2. <sup>1</sup>H and <sup>13</sup>C NMR spectra for all compounds

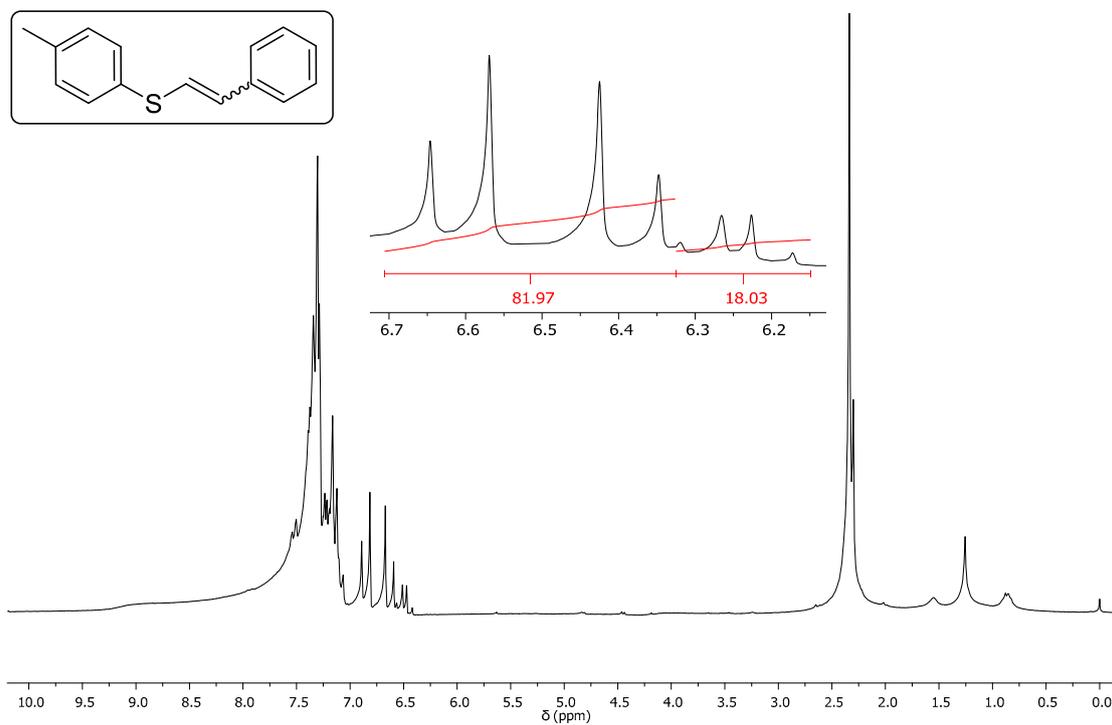
## 1. Characterization of iron-borophosphate glass



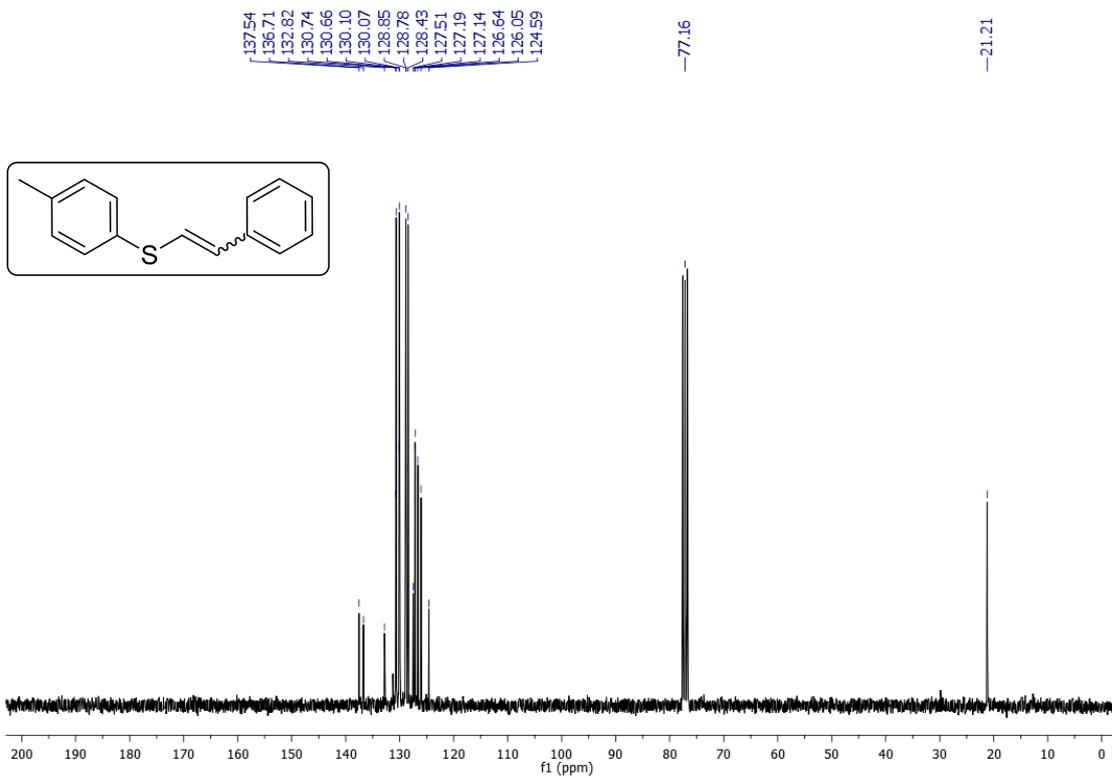
**Figure S1.** Deconvolution spectra of glasses at the region between 800 and 1350  $\text{cm}^{-1}$  with **(A)** 0%  $\text{Al}_2\text{O}_3$  and 0%  $\text{Fe}_2\text{O}_3$ , **(B)** 10%  $\text{Al}_2\text{O}_3$  and 0%  $\text{Fe}_2\text{O}_3$ , and **(C)** 10%  $\text{Al}_2\text{O}_3$ , 6%  $\text{Fe}_2\text{O}_3$ , and **(D)** full Raman spectra of the glass-based catalyst (i) after and (ii) before reaction.

## 2. $^1\text{H}$ and $^{13}\text{C}$ NMR spectra for all compounds

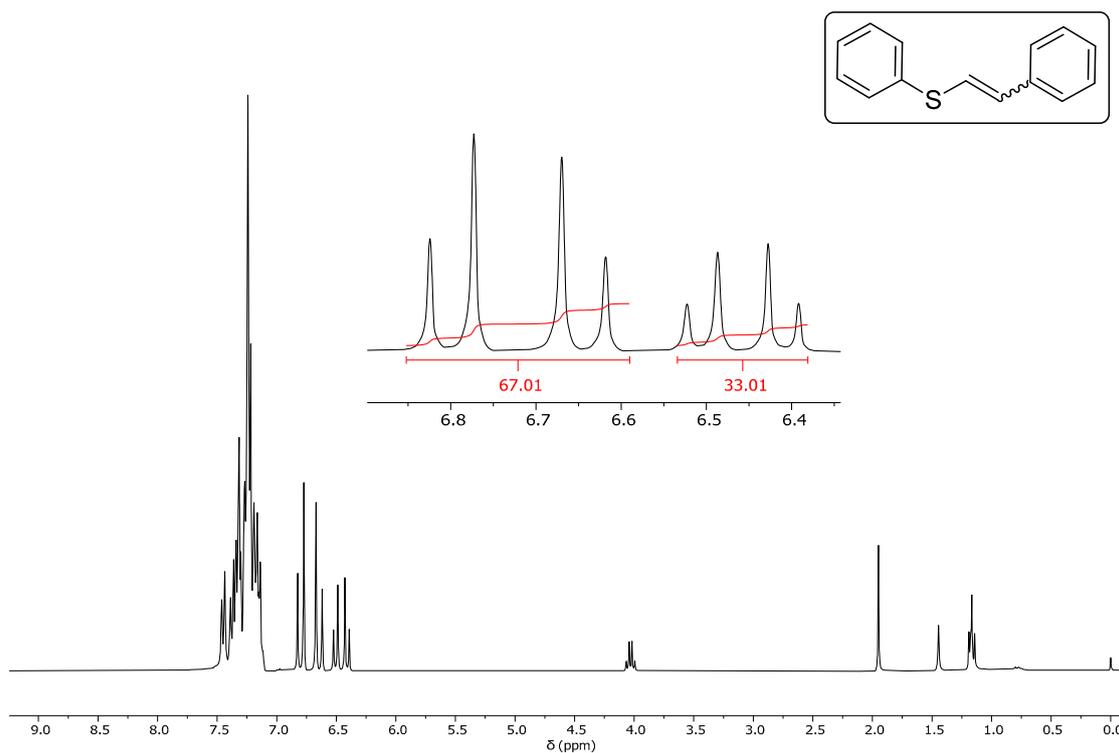
$^1\text{H}$  NMR spectrum of compound **3a** in  $\text{CDCl}_3$  (300 MHz)



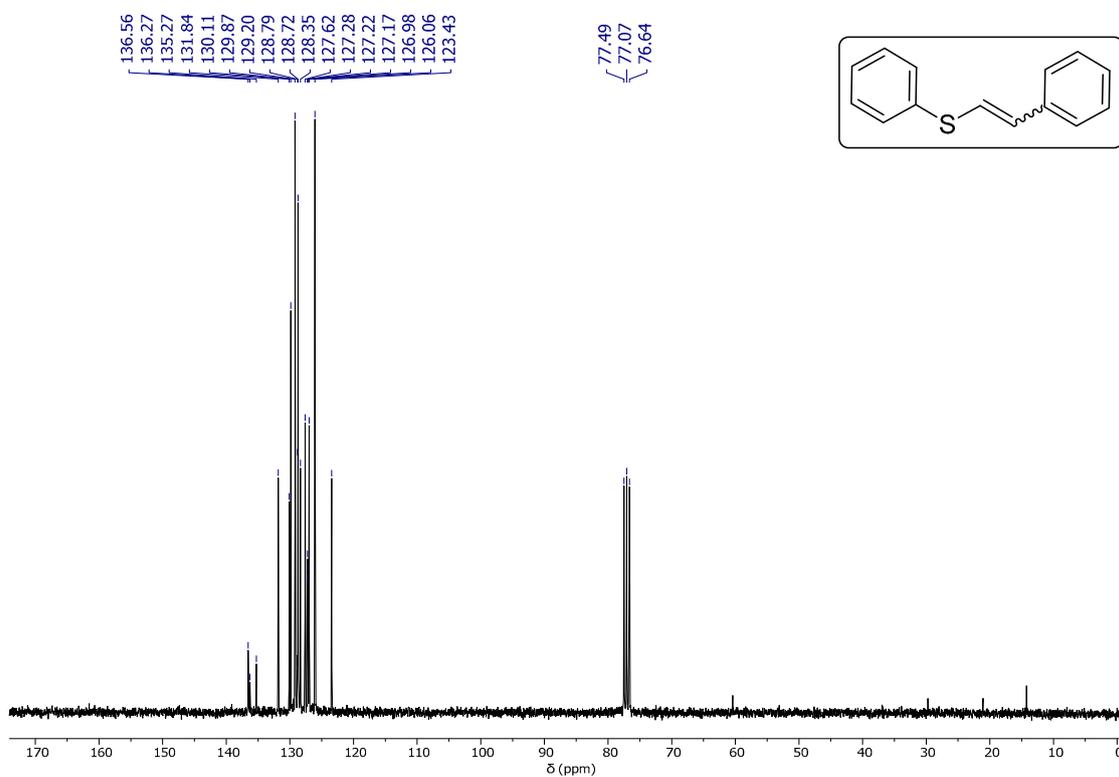
$^{13}\text{C}$  NMR spectrum of compound **3a** in  $\text{CDCl}_3$  (75 MHz)



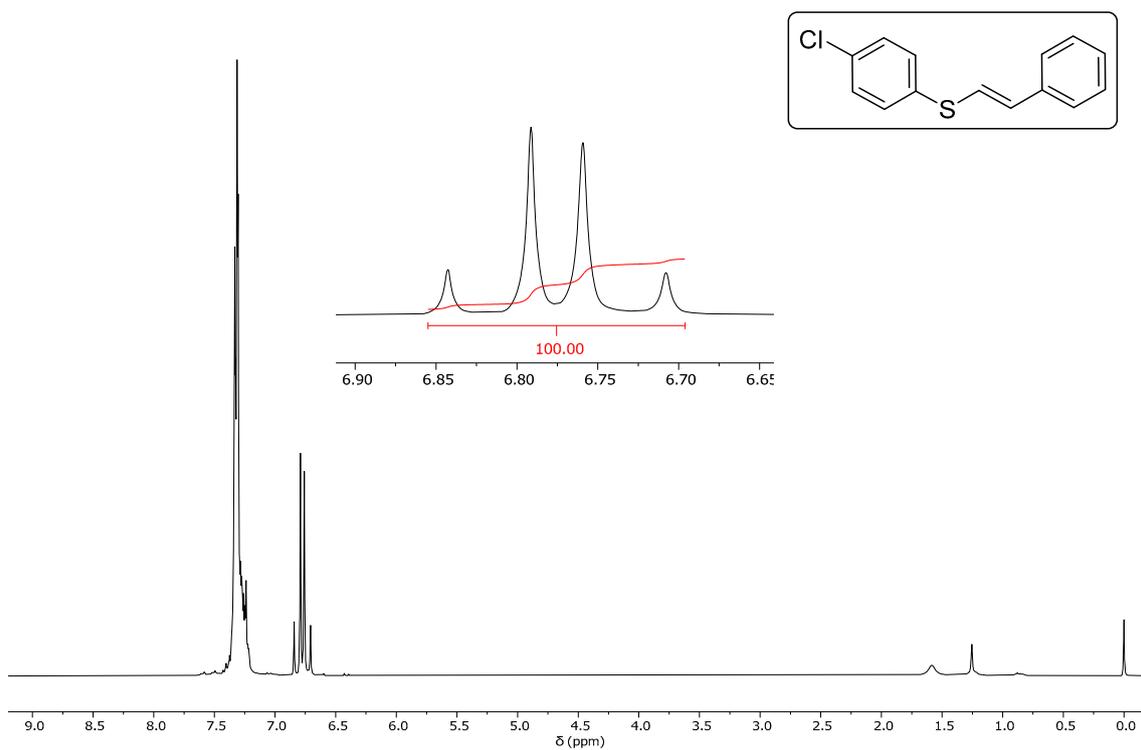
$^1\text{H}$  NMR spectrum of compound **3b** in  $\text{CDCl}_3$  (300 MHz)



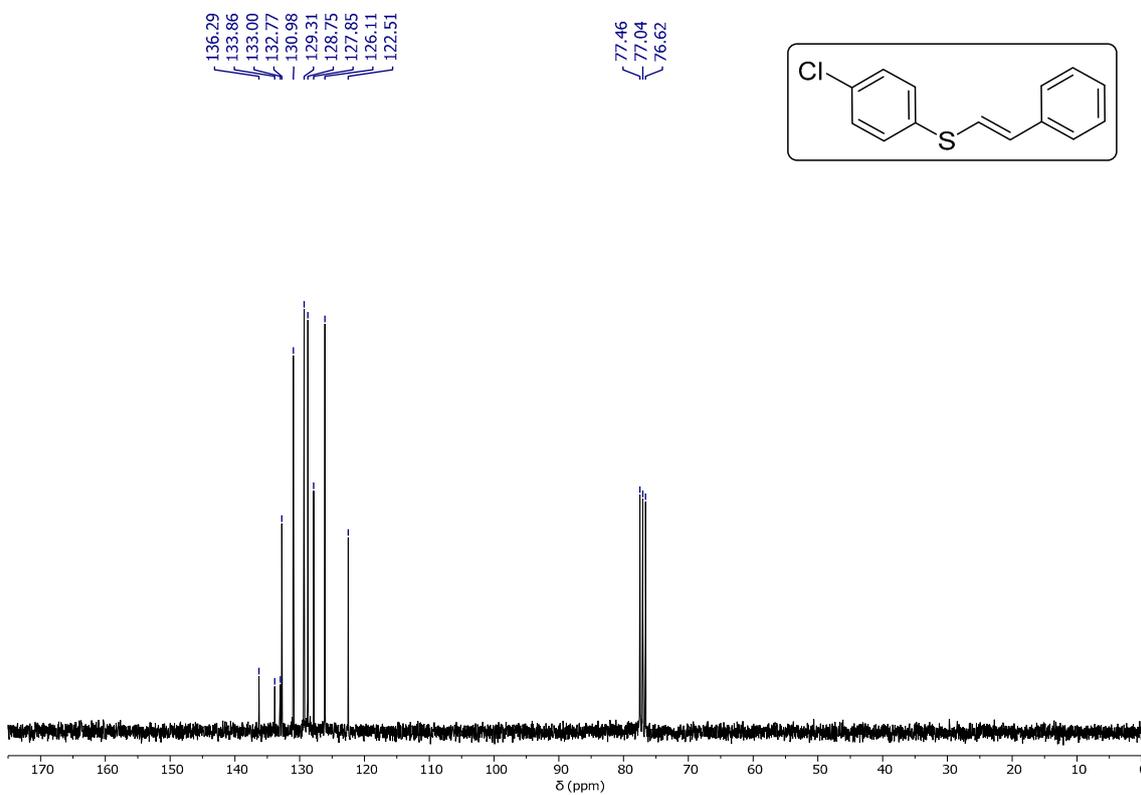
$^{13}\text{C}$  NMR spectrum of compound **3b** in  $\text{CDCl}_3$  (75 MHz)



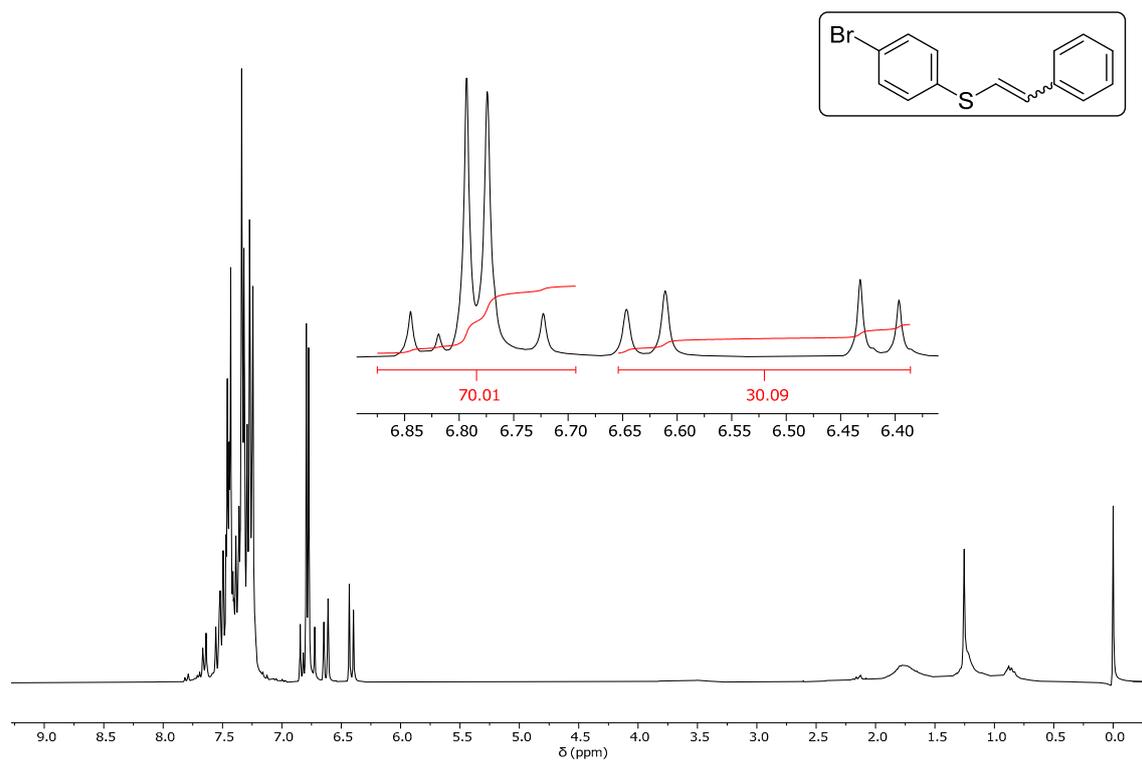
$^1\text{H}$  NMR spectrum of compound **3c** in  $\text{CDCl}_3$  (300 MHz)



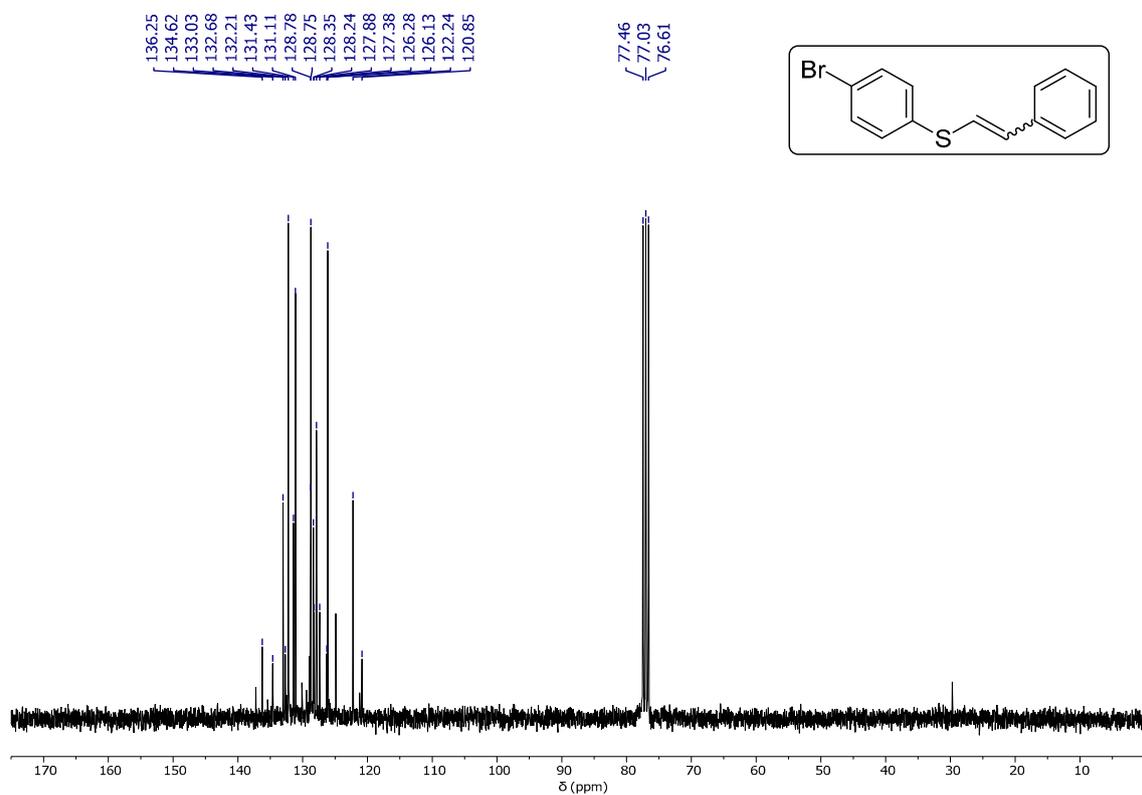
$^{13}\text{C}$  NMR spectrum of compound **3c** in  $\text{CDCl}_3$  (75 MHz)



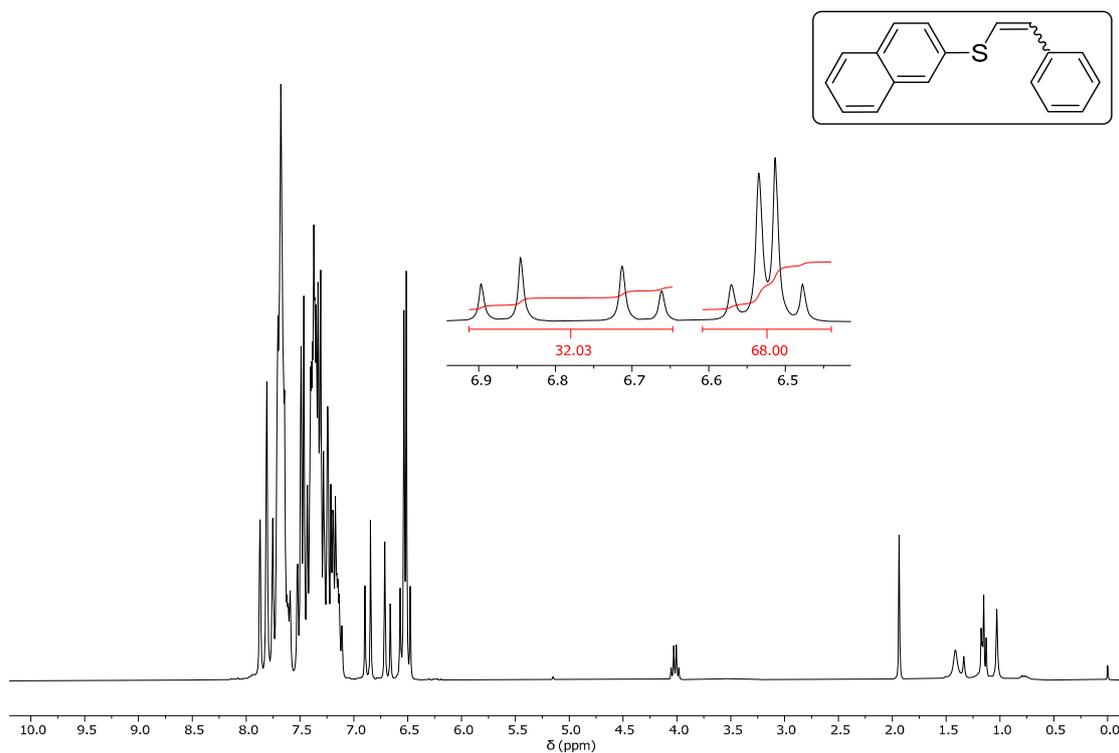
$^1\text{H}$  NMR spectrum of compound **3d** in  $\text{CDCl}_3$  (300 MHz)



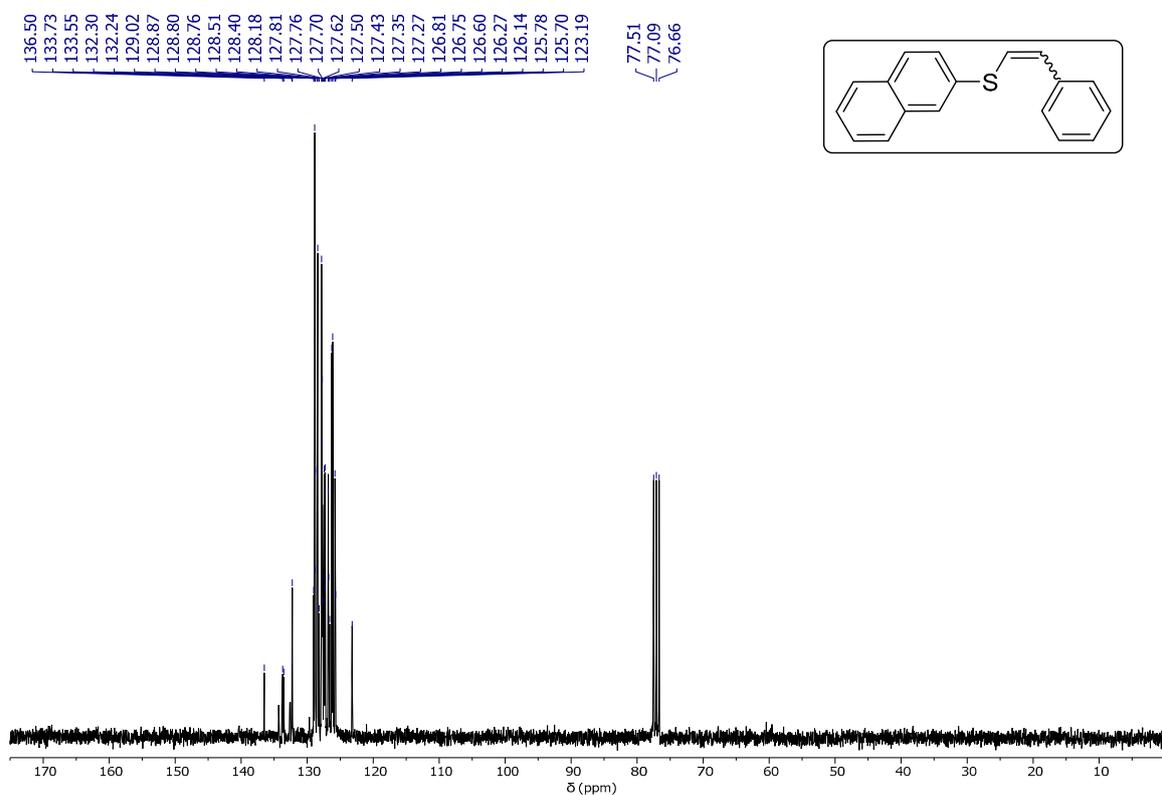
$^{13}\text{C}$  NMR spectrum of compound **3d** in  $\text{CDCl}_3$  (75 MHz)



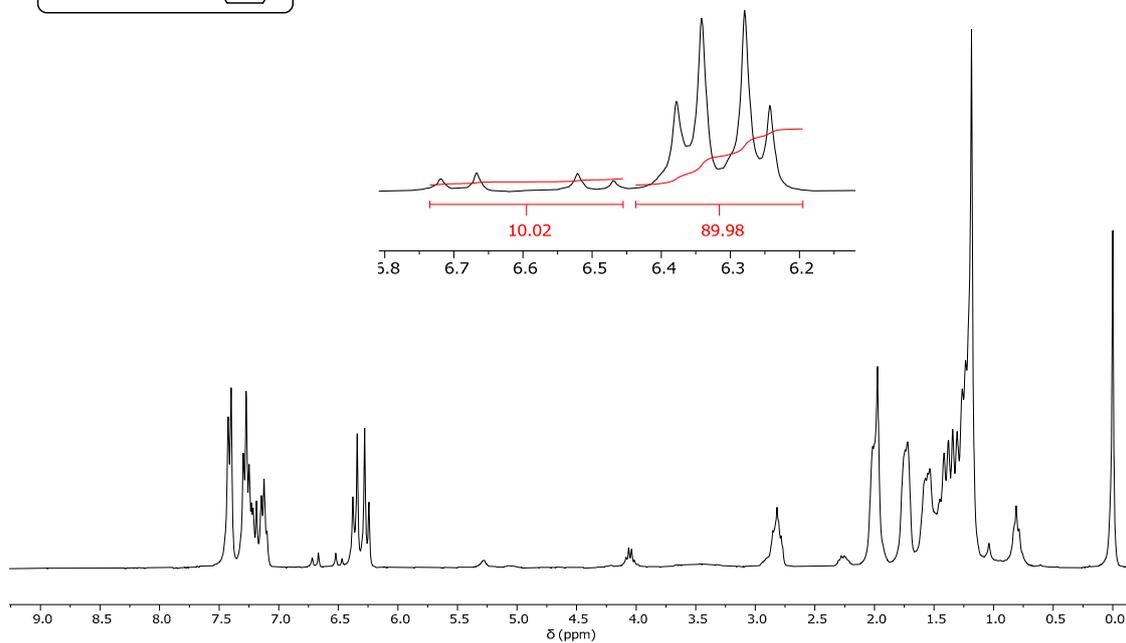
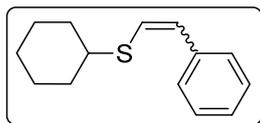
$^1\text{H}$  NMR spectrum of compound **3e** in  $\text{CDCl}_3$  (300 MHz)



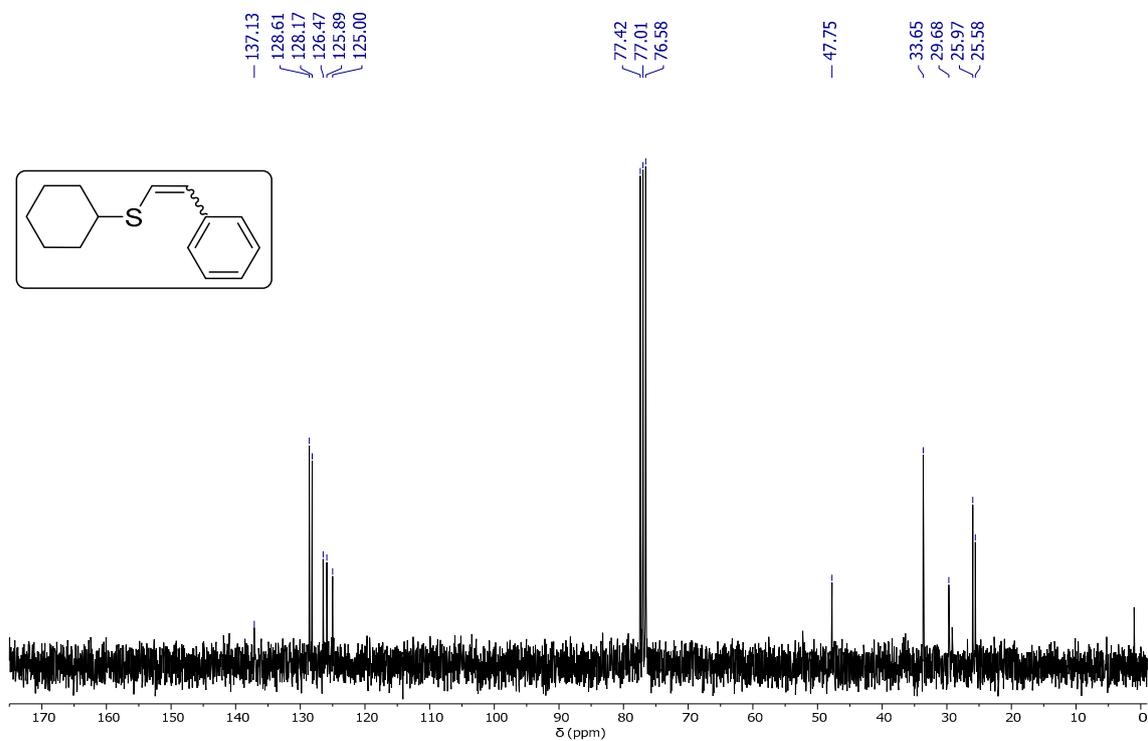
$^{13}\text{C}$  NMR spectrum of compound **3e** in  $\text{CDCl}_3$  (75 MHz)



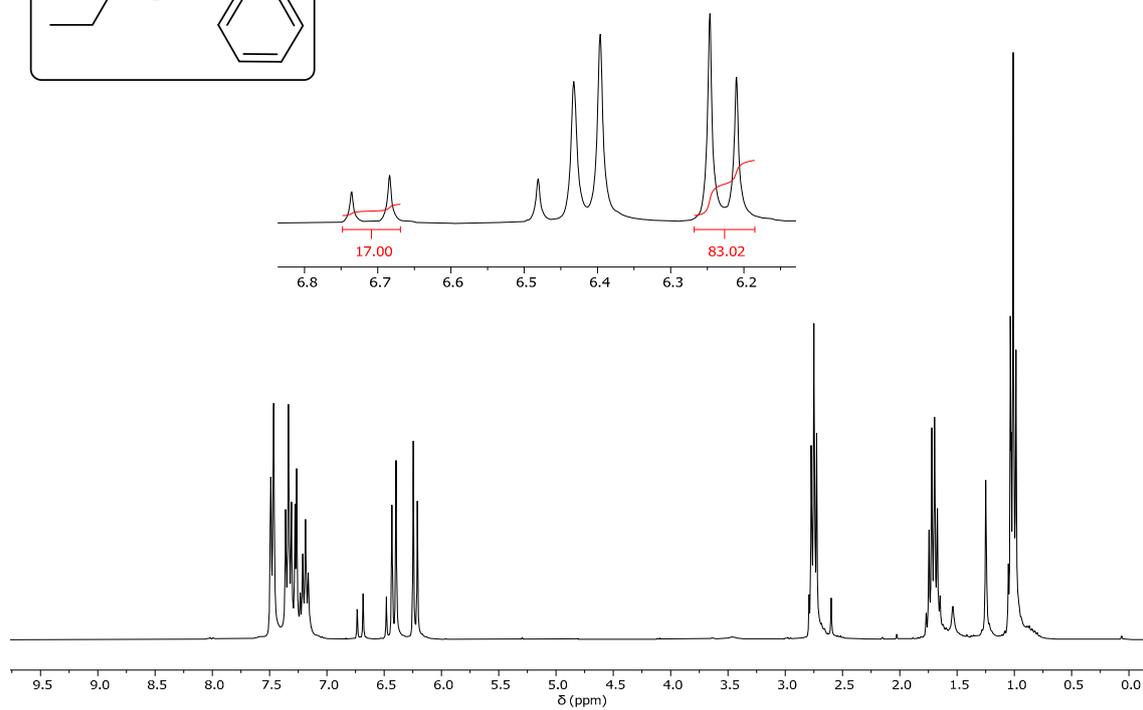
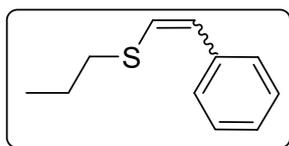
$^1\text{H}$  NMR spectrum of compound **3f** in  $\text{CDCl}_3$  (300 MHz)



$^{13}\text{C}$  NMR spectrum of compound **3f** in  $\text{CDCl}_3$  (75 MHz)



$^1\text{H}$  NMR spectrum of compound **3g** in  $\text{CDCl}_3$  (300 MHz)



$^{13}\text{C}$  NMR spectrum of compound **3g** in  $\text{CDCl}_3$  (75 MHz)

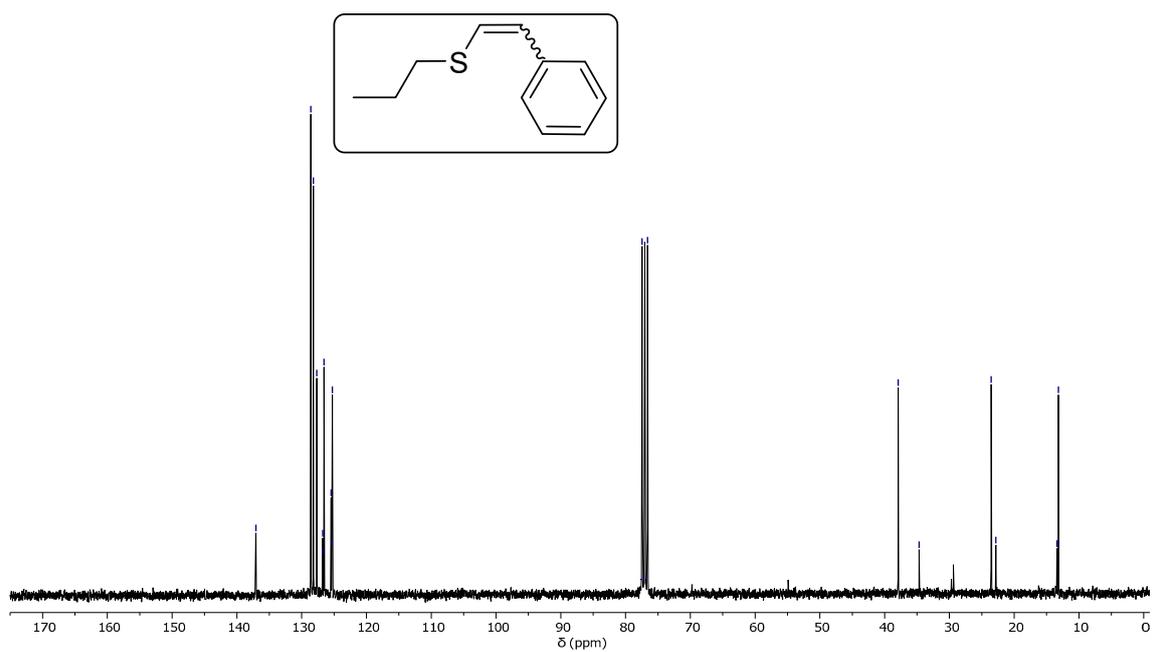
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128.60  
128.20  
127.68  
126.80  
126.76  
126.55  
125.45  
125.36  
125.27

77.45  
77.17  
76.60

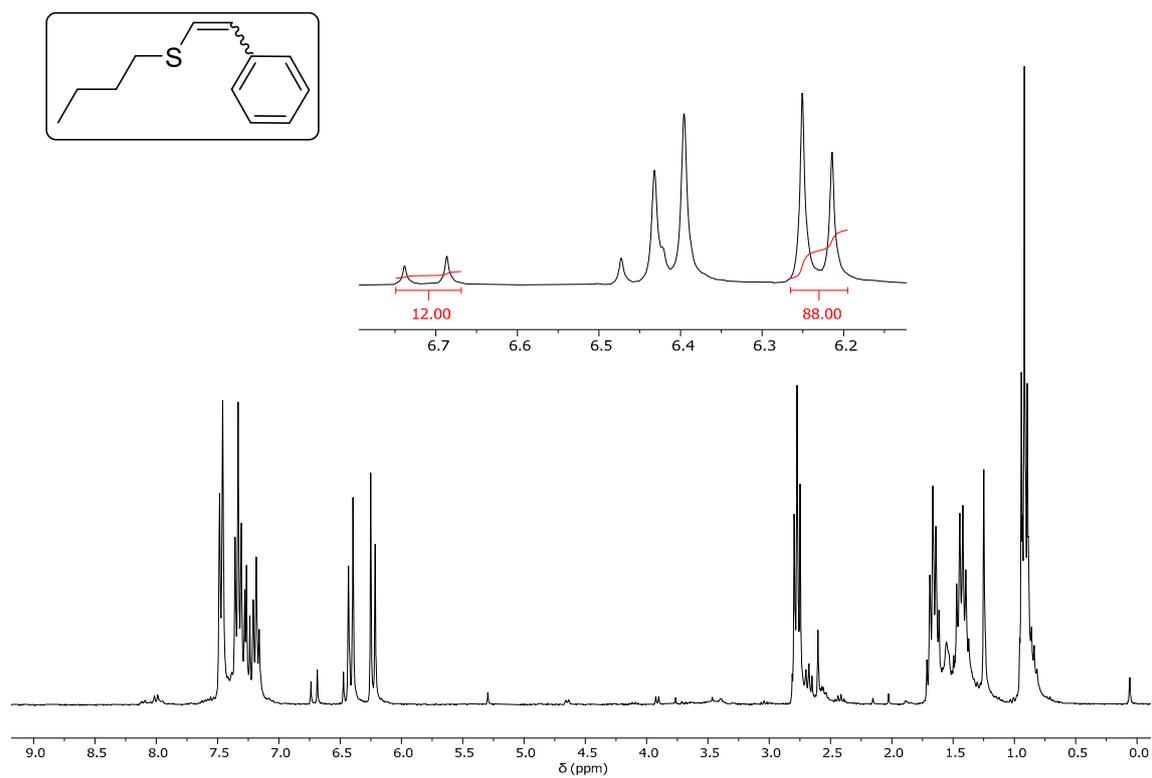
37.91  
34.67

23.55  
22.85

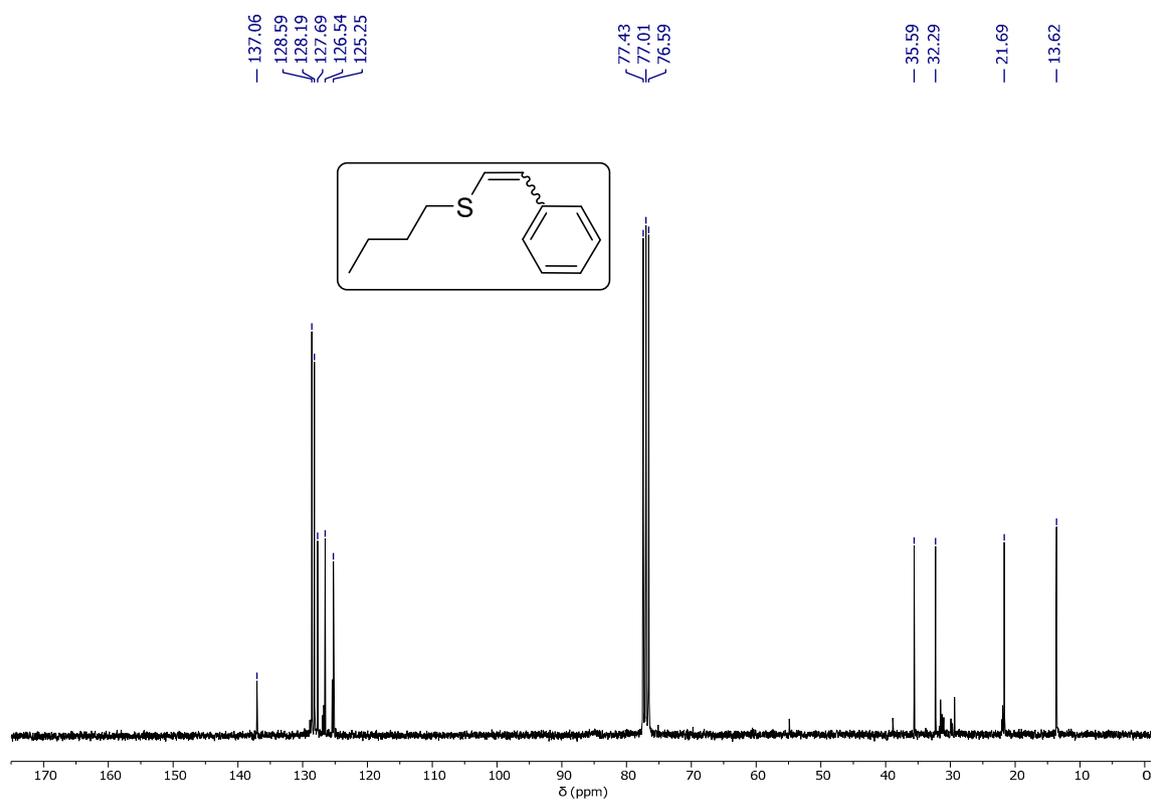
13.39  
13.18



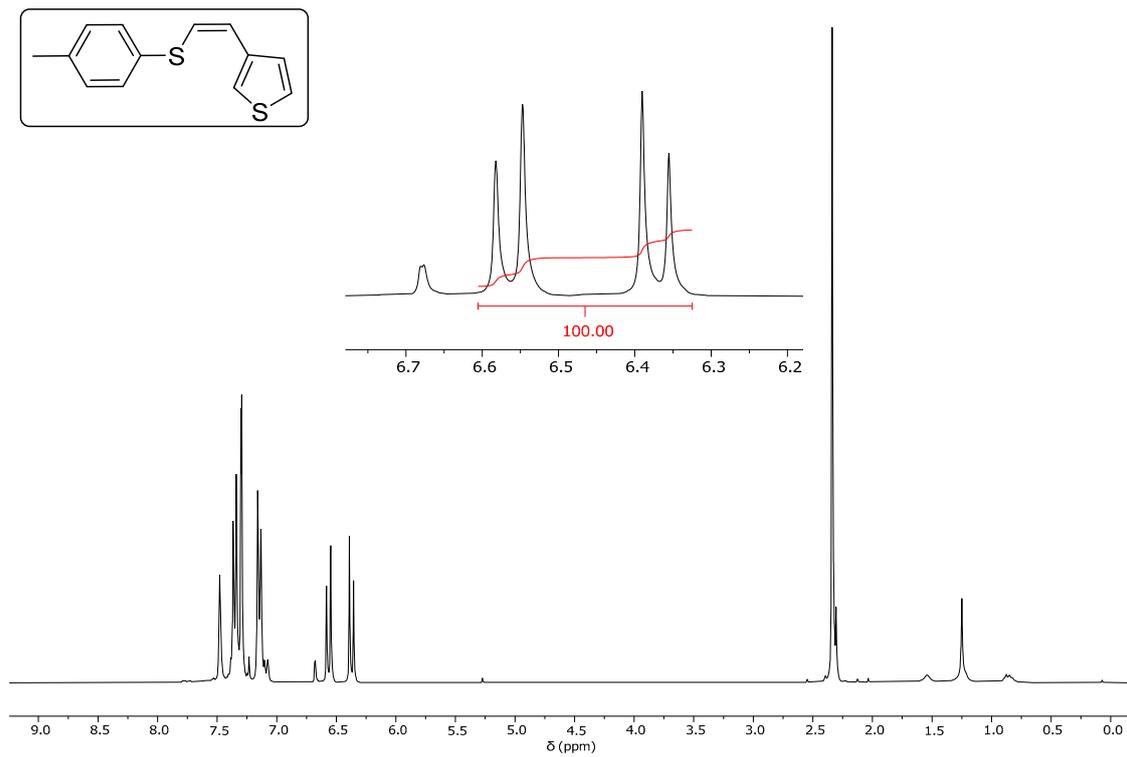
$^1\text{H}$  NMR spectrum of compound **3h** in  $\text{CDCl}_3$  (300 MHz)



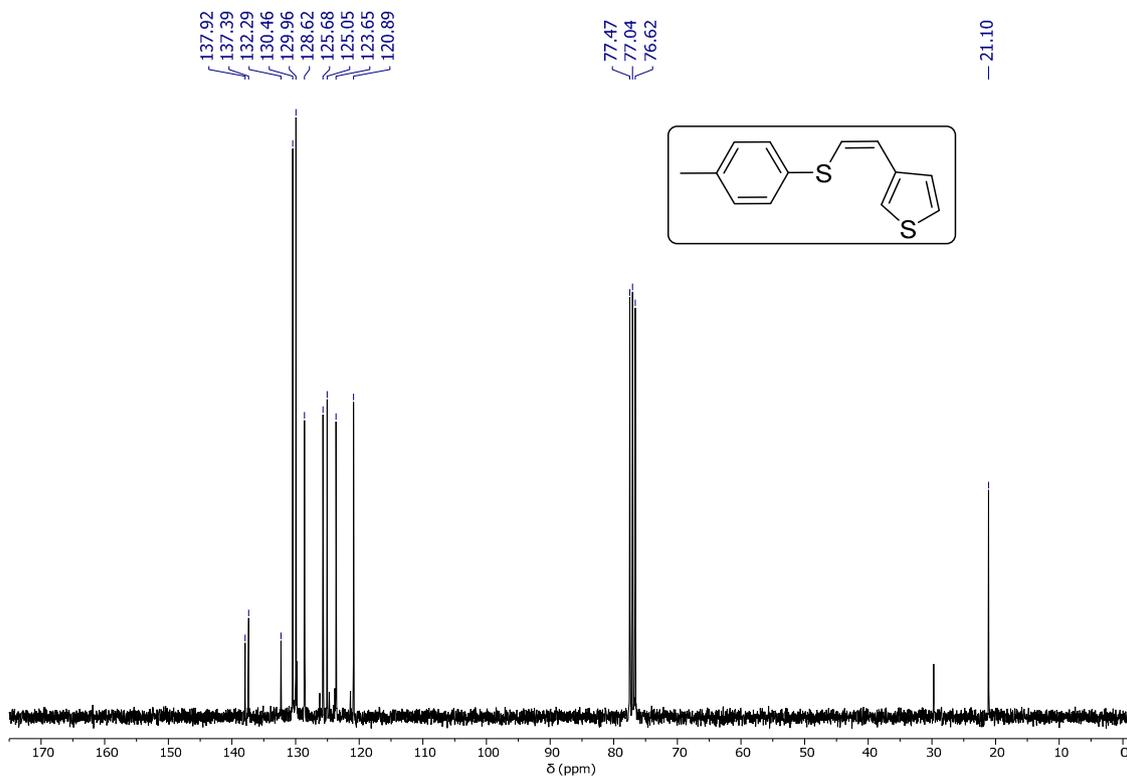
$^{13}\text{C}$  NMR spectrum of compound **3h** in  $\text{CDCl}_3$  (75 MHz)



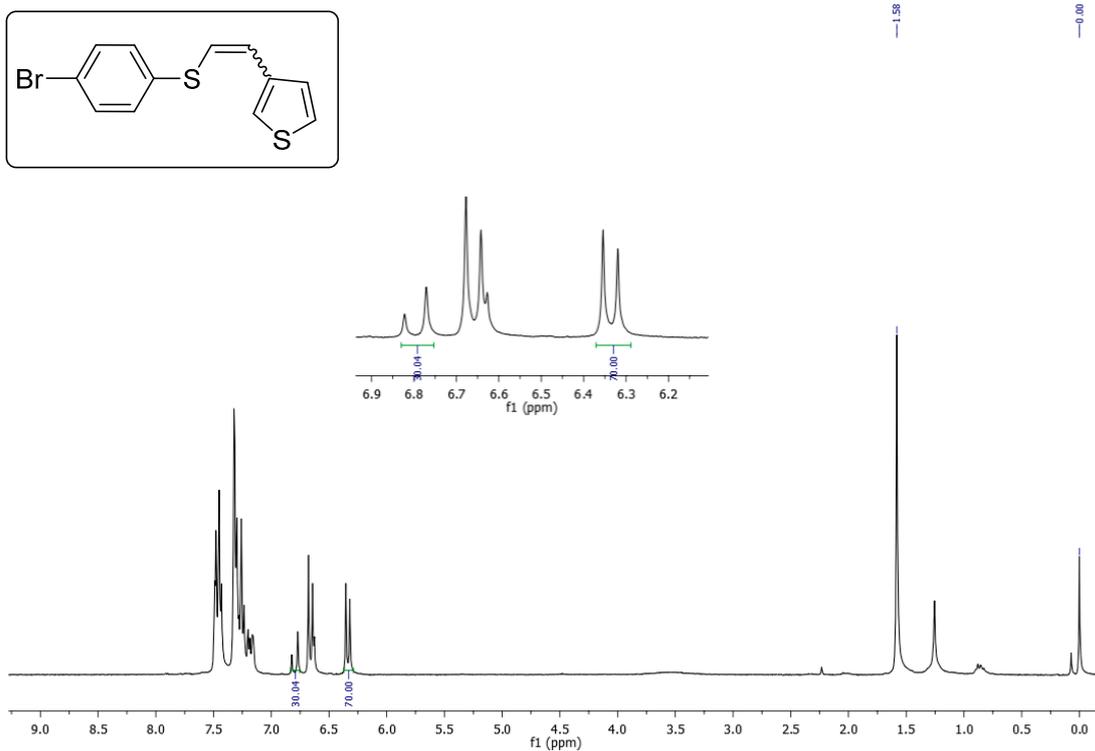
$^1\text{H}$  NMR spectrum of compound **3i** in  $\text{CDCl}_3$  (300 MHz)



$^{13}\text{C}$  NMR spectrum of compound **3i** in  $\text{CDCl}_3$  (75 MHz)



$^1\text{H}$  NMR spectrum of compound **3j** in  $\text{CDCl}_3$  (300 MHz)



$^{13}\text{C}$  NMR spectrum of compound **3j** in  $\text{CDCl}_3$  (75 MHz)

