

Electronic supplementary information (ESI)

**Polymerization with Cu(I)-Catalyzed Doyle-Kirmse Reaction of
Bis(allyl sulfides) and Bis(α -diazoesters)**

Zihao Fu,^a Qi Zhou,^a Yiyang Xiao,^a Jianbo Wang^{a,b,*}

^a*Beijing National Laboratory of Molecular Sciences (BNLMS) and Key Laboratory of Bioorganic Chemistry and Molecular Engineering of Ministry of Education, College of Chemistry, Peking University, Beijing 100871, China*

^b*State Key Laboratory of Organometallic Chemistry, Chinese Academy of Sciences, Shanghai 200032, China*

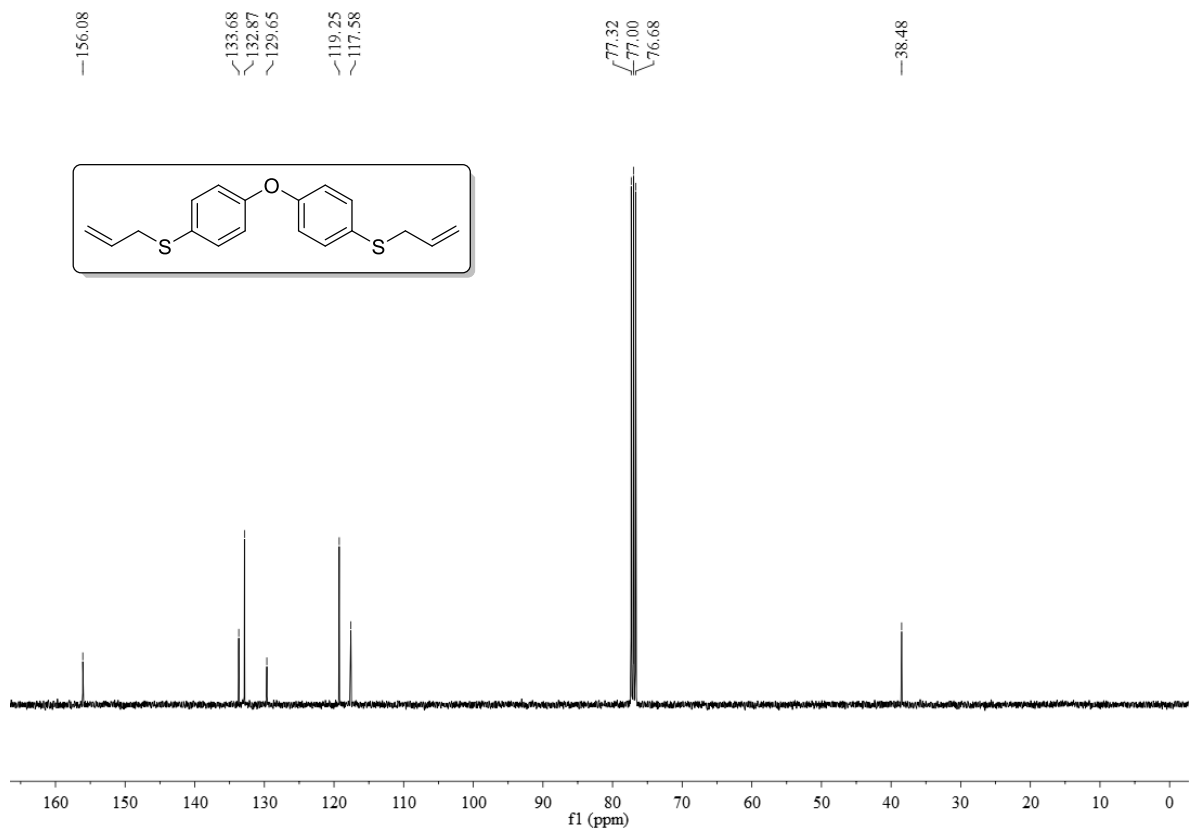
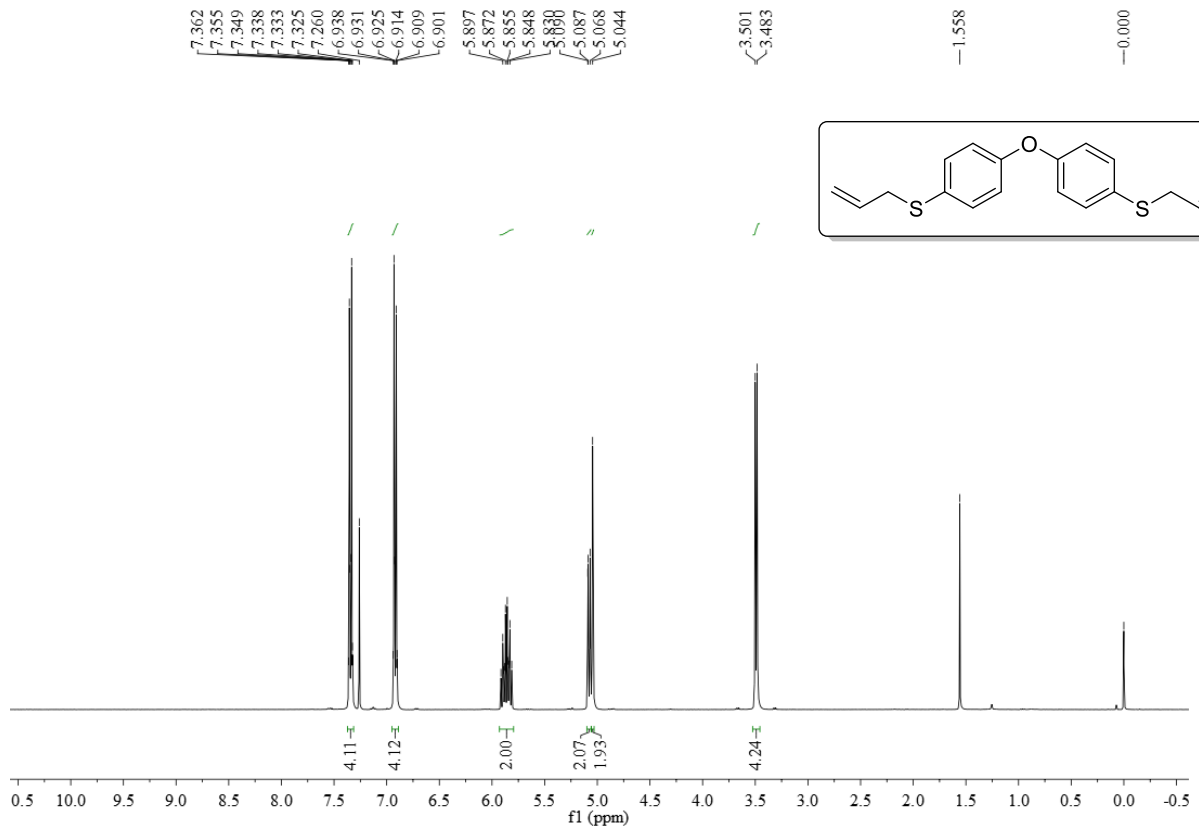
Email: wangjb@pku.edu.cn

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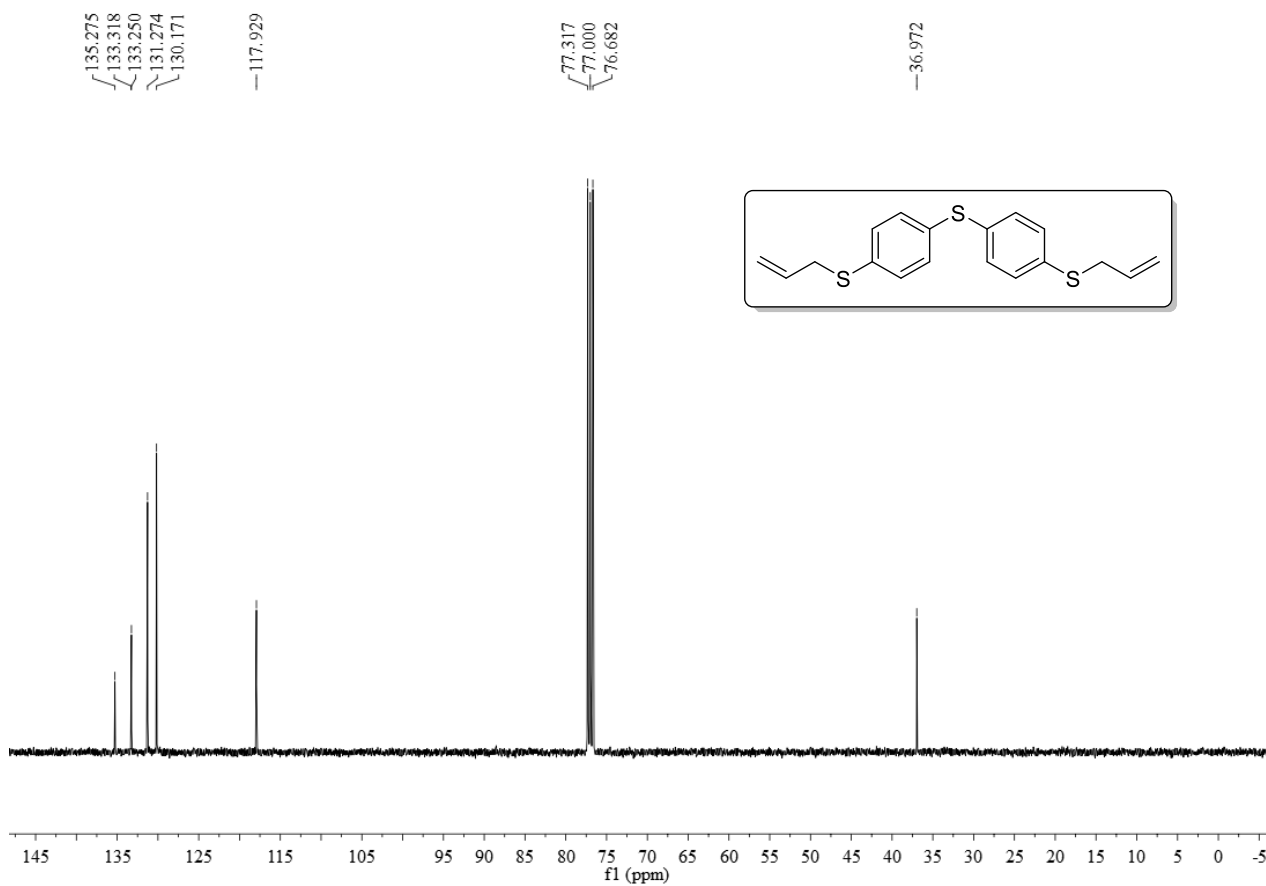
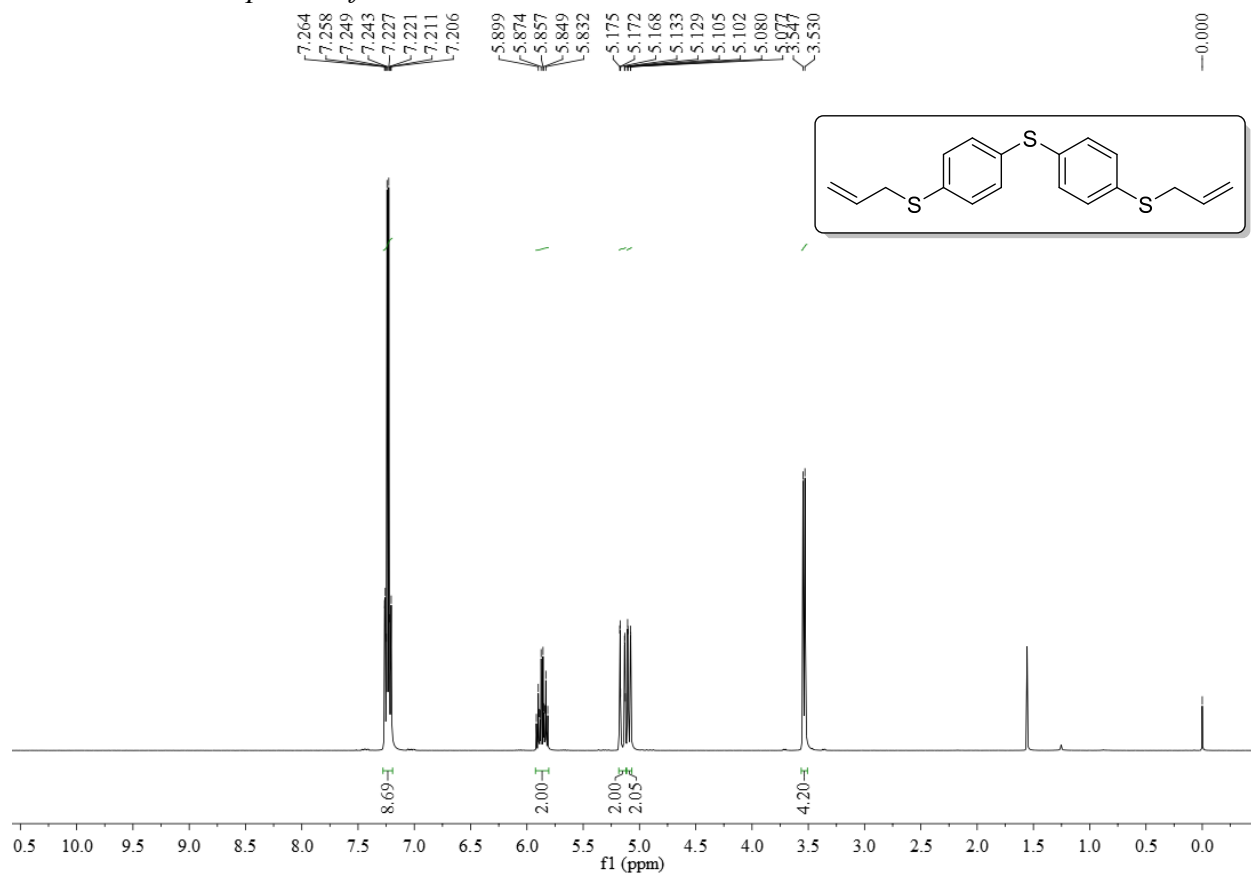
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1) ^1H and ^{13}C NMR spectra of the monomers

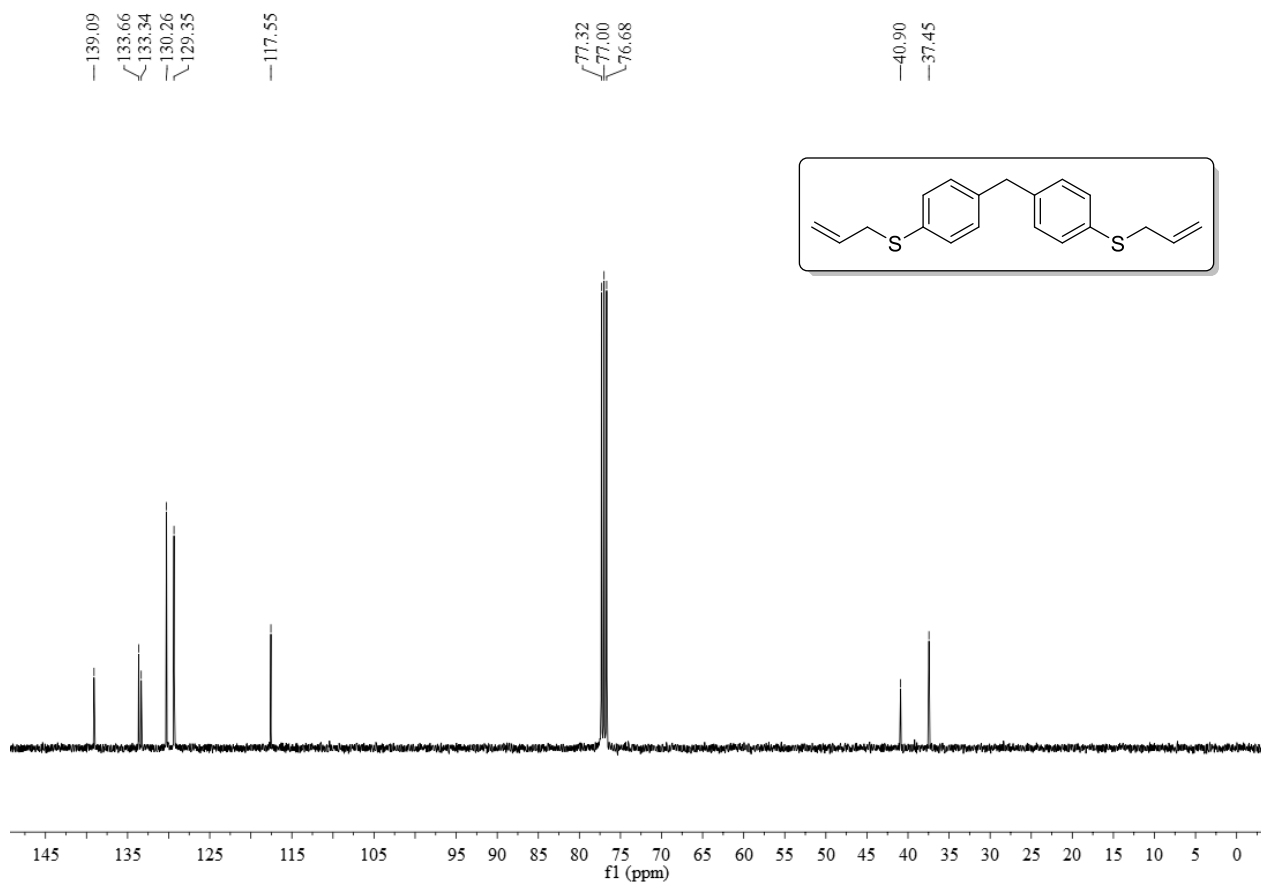
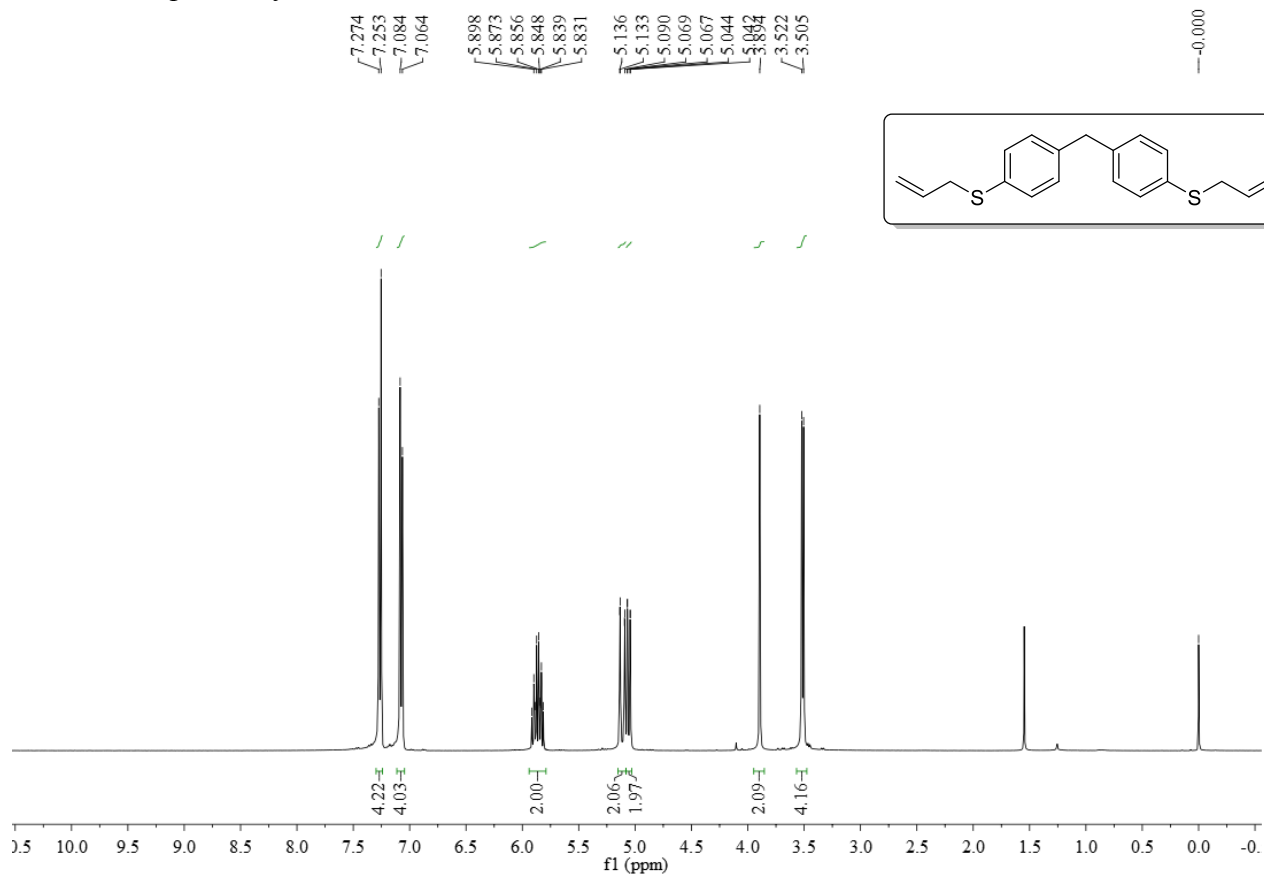
^1H and ^{13}C NMR spectra of **4a**



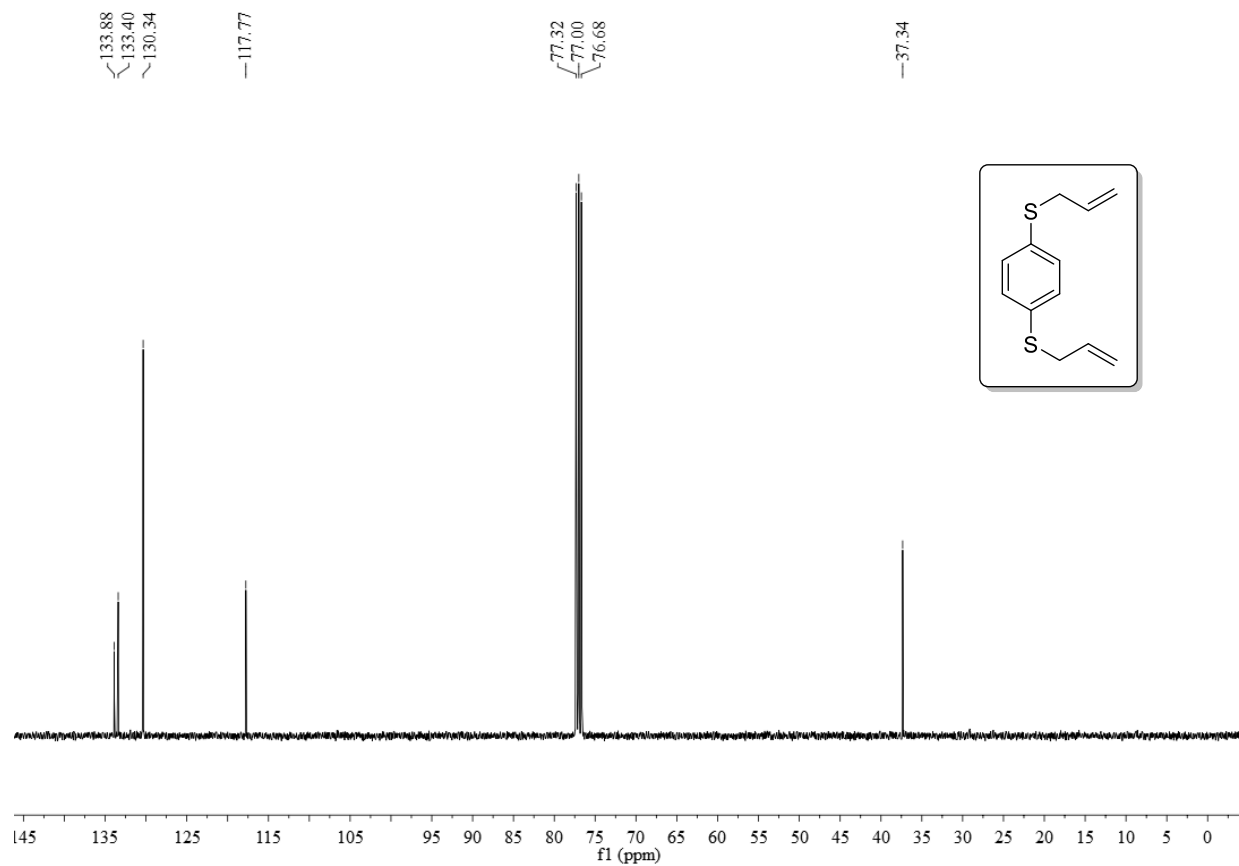
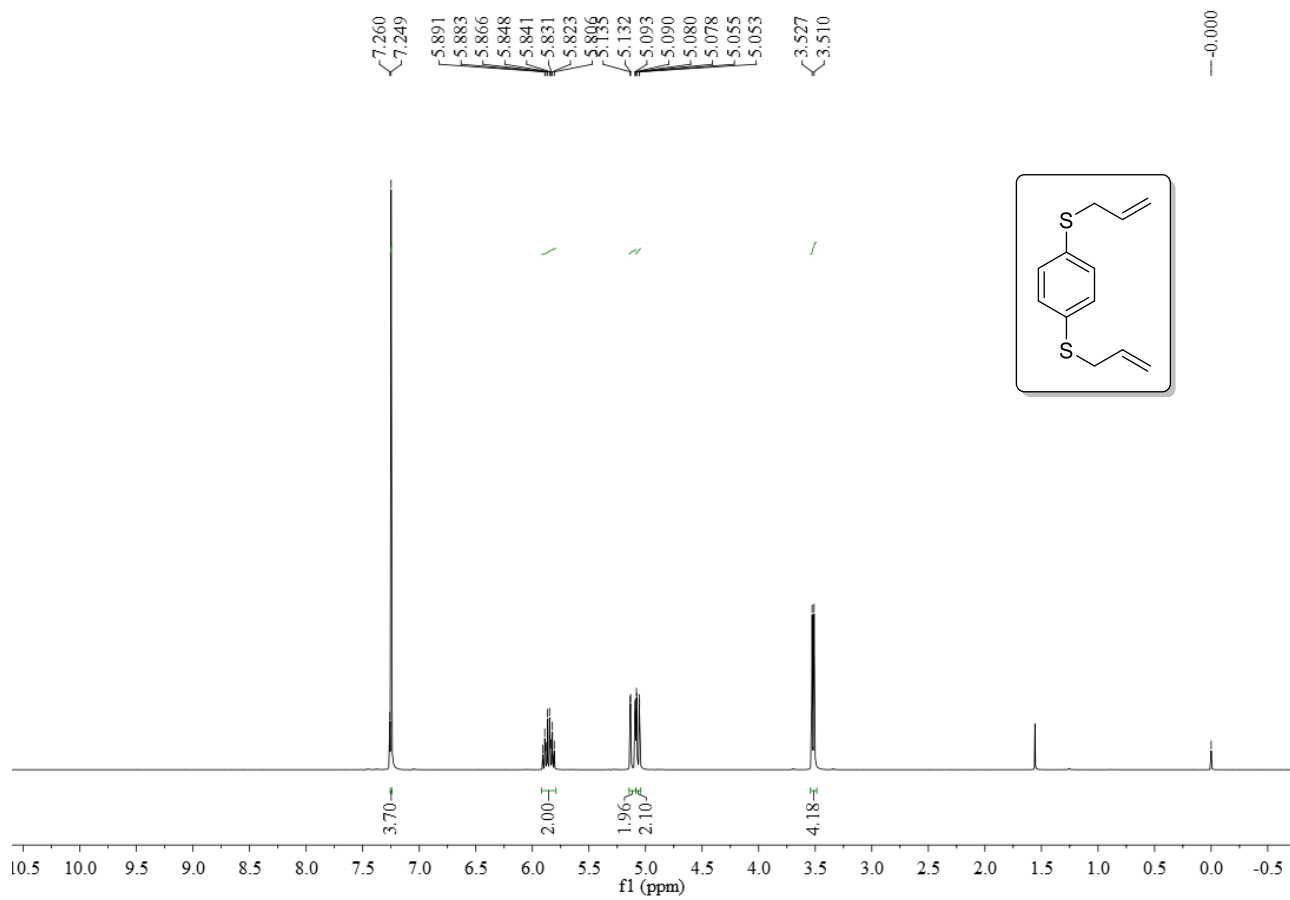
¹H and ¹³C NMR spectra of **4b**



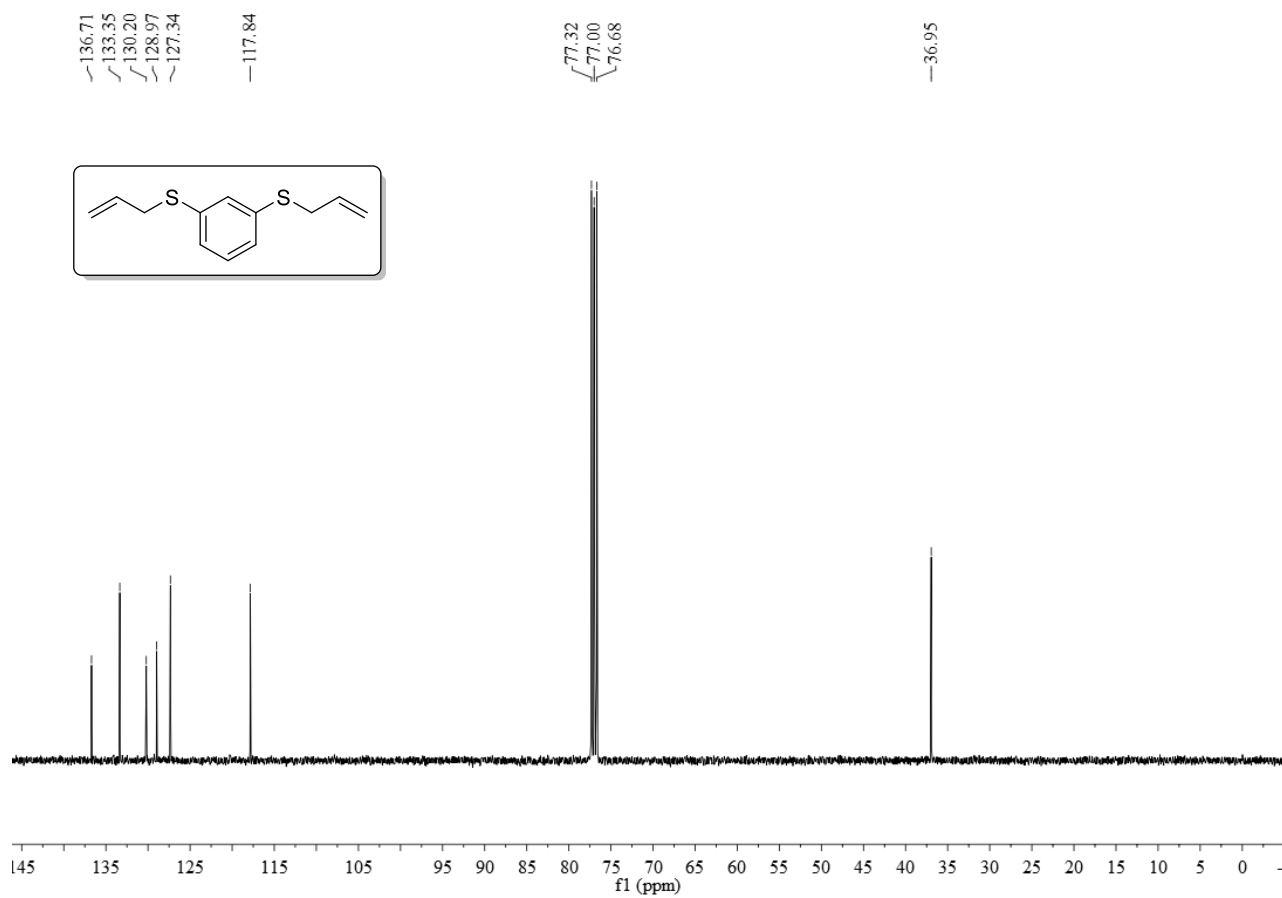
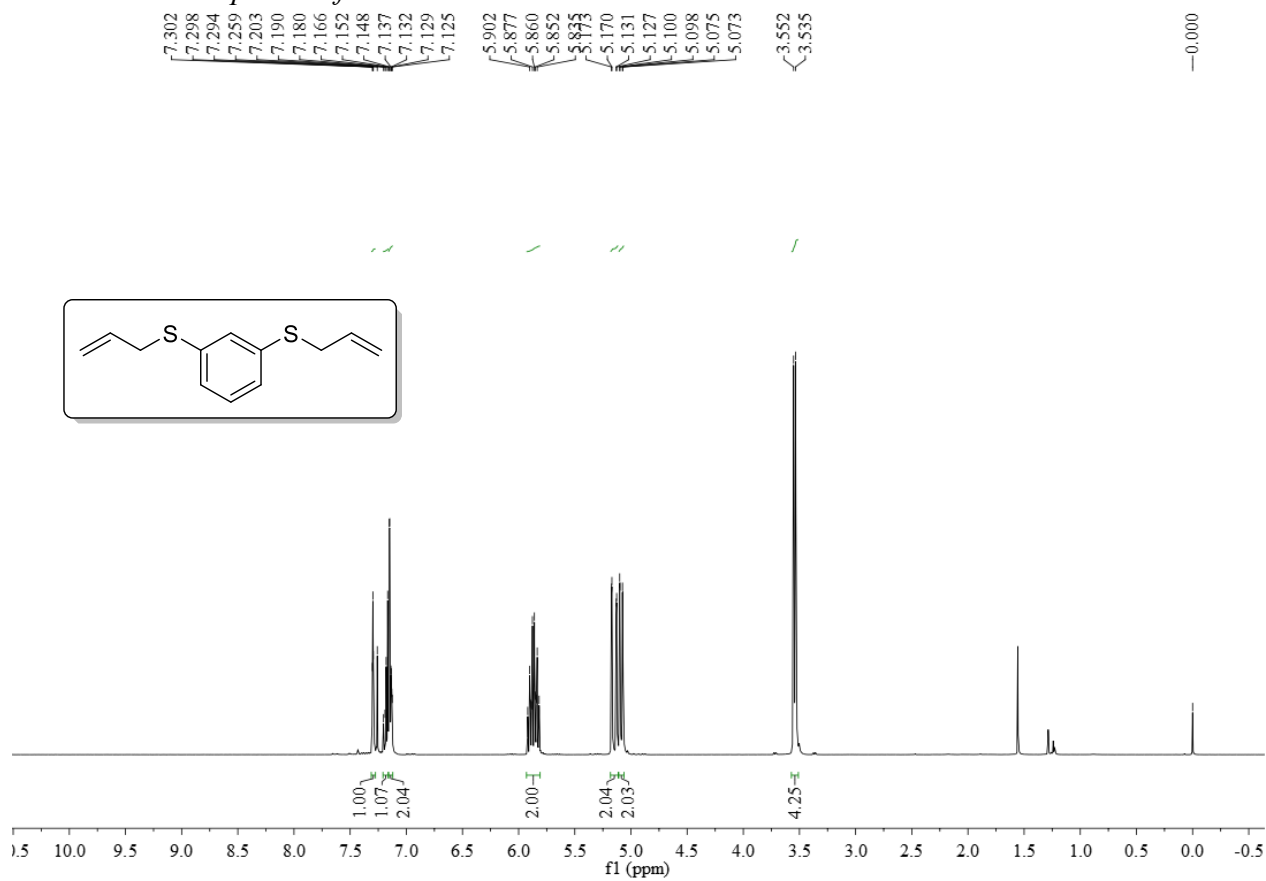
^1H and ^{13}C spectra of **4c**



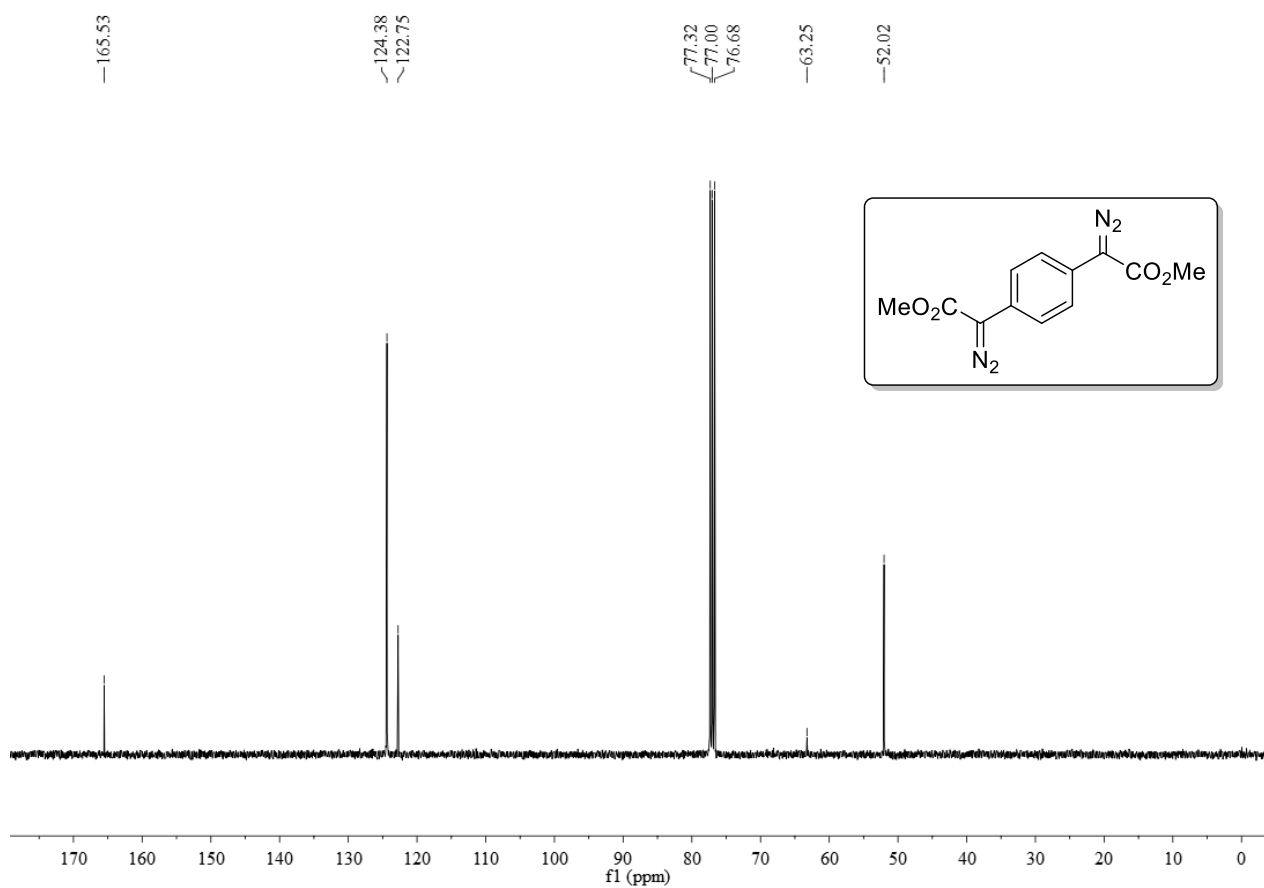
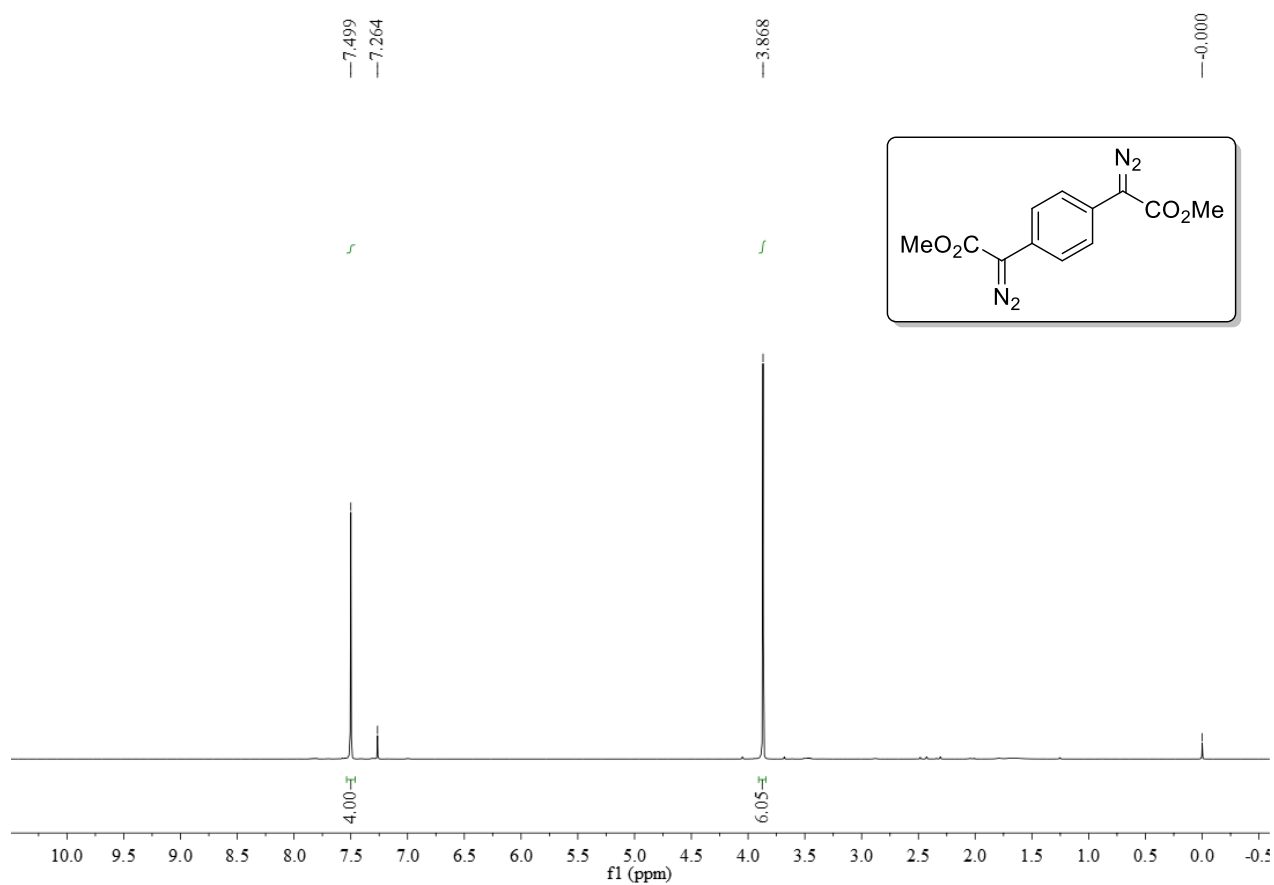
^1H and ^{13}C NMR spectra of **4d**



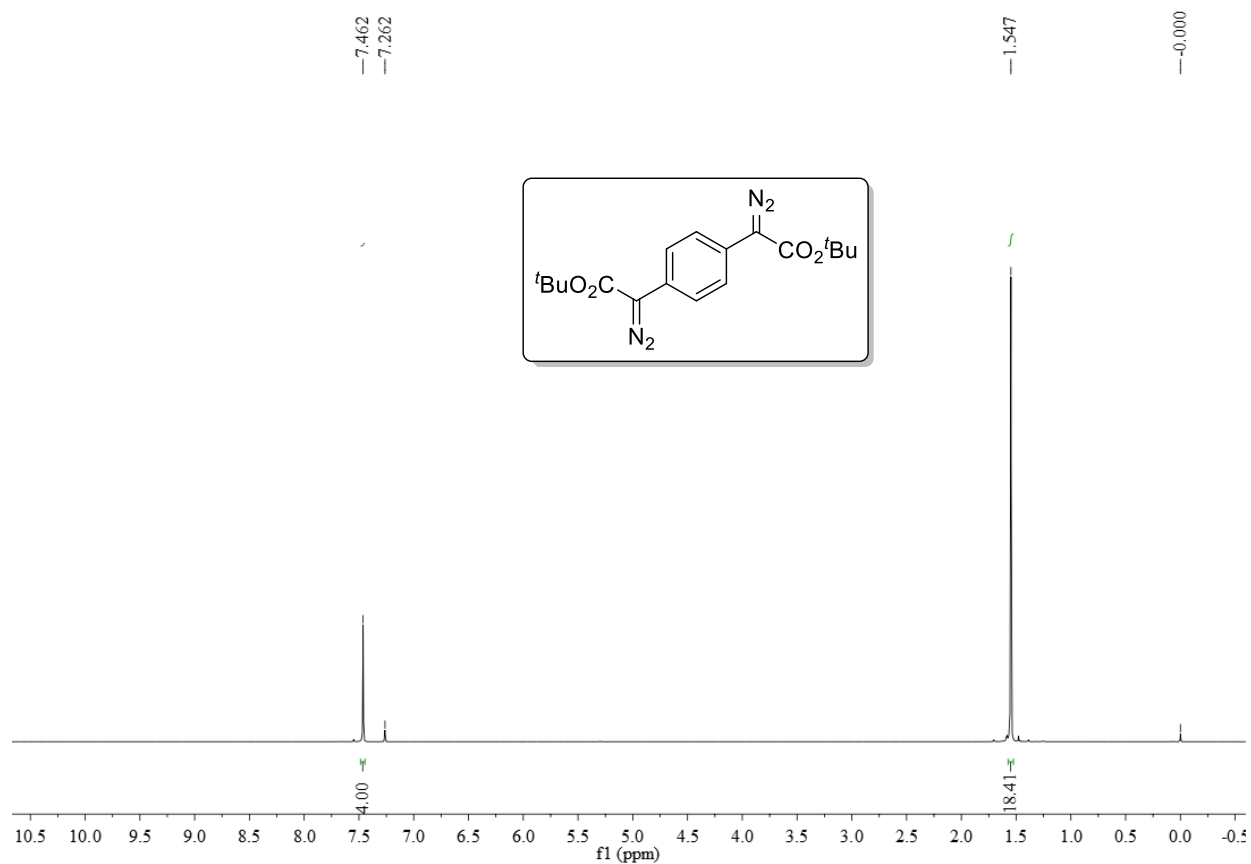
¹H and ¹³C NMR spectra of **4e**



^1H and ^{13}C NMR spectra of **5a**



^1H and ^{13}C NMR spectra of **5b**



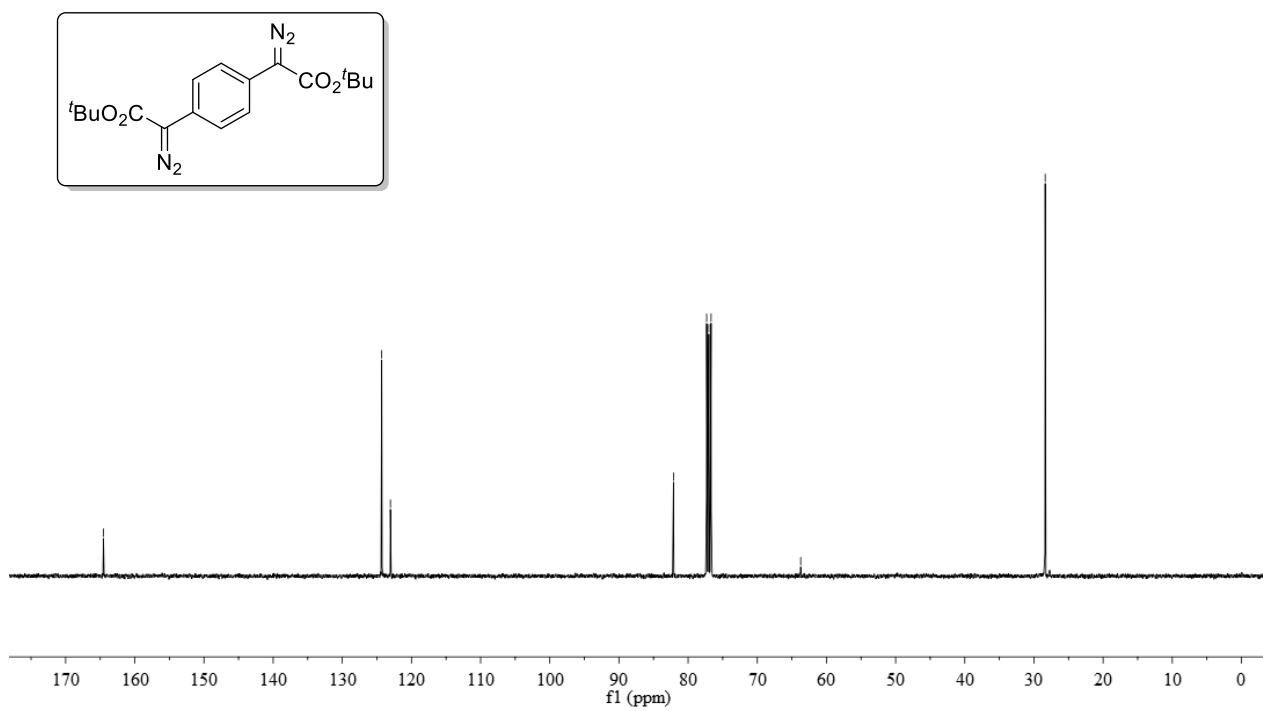
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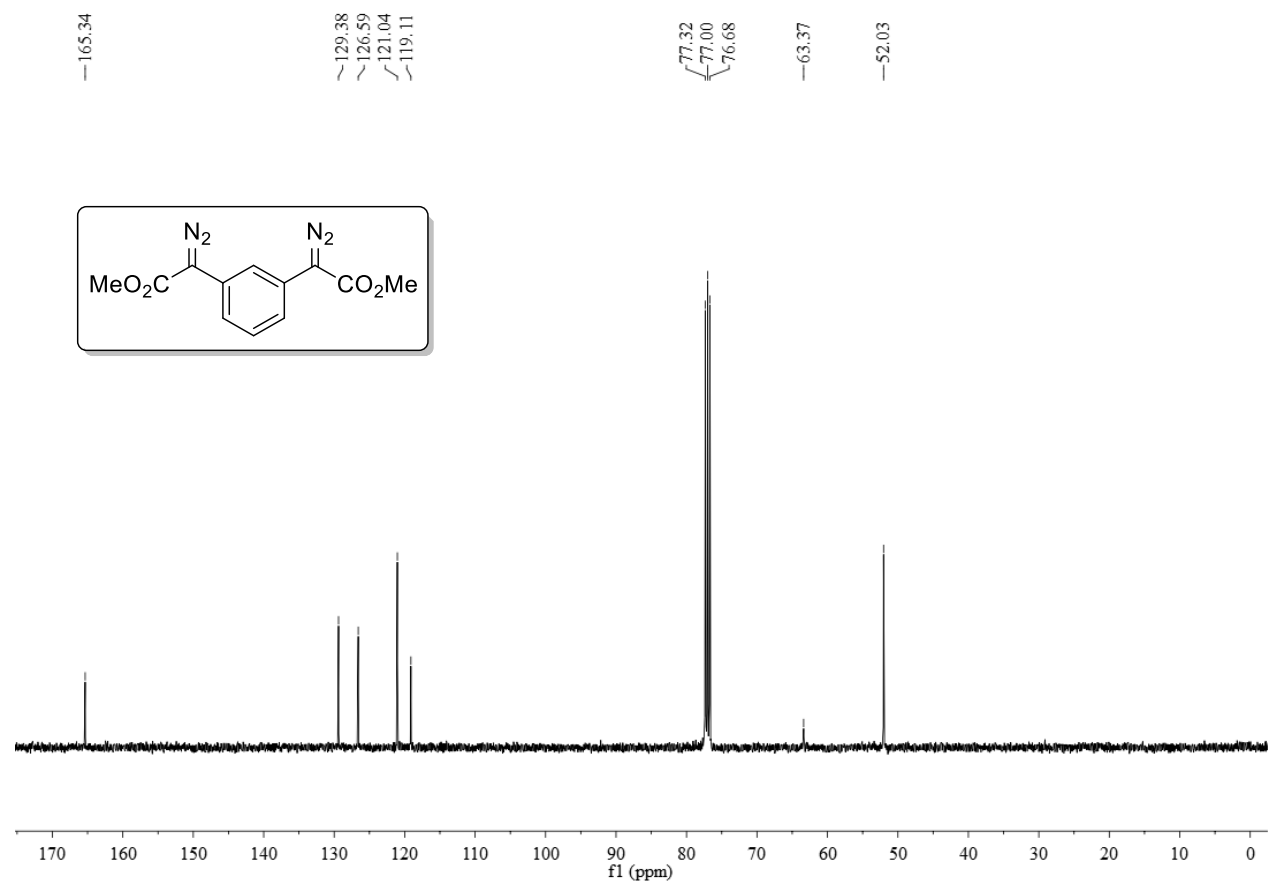
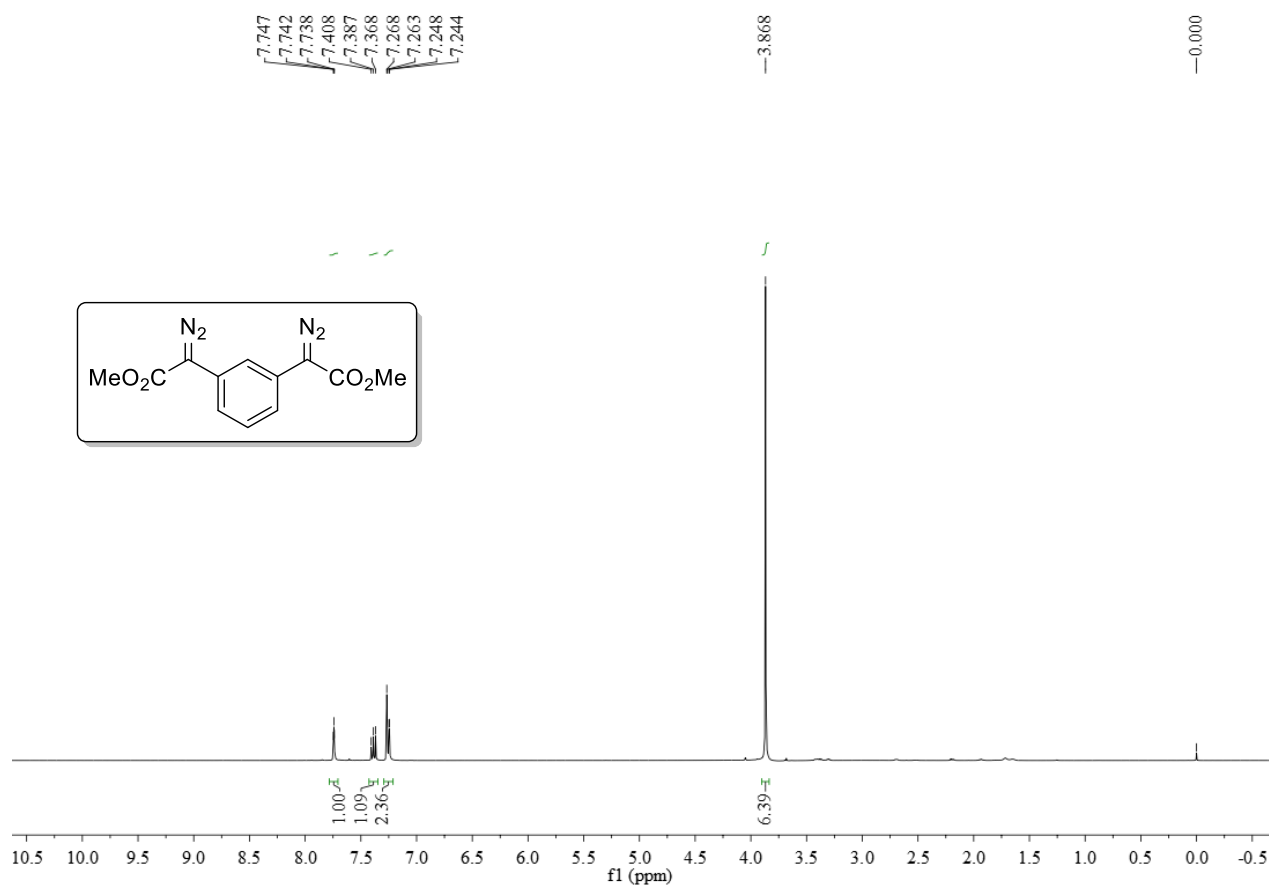
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77.00
76.68

63.73

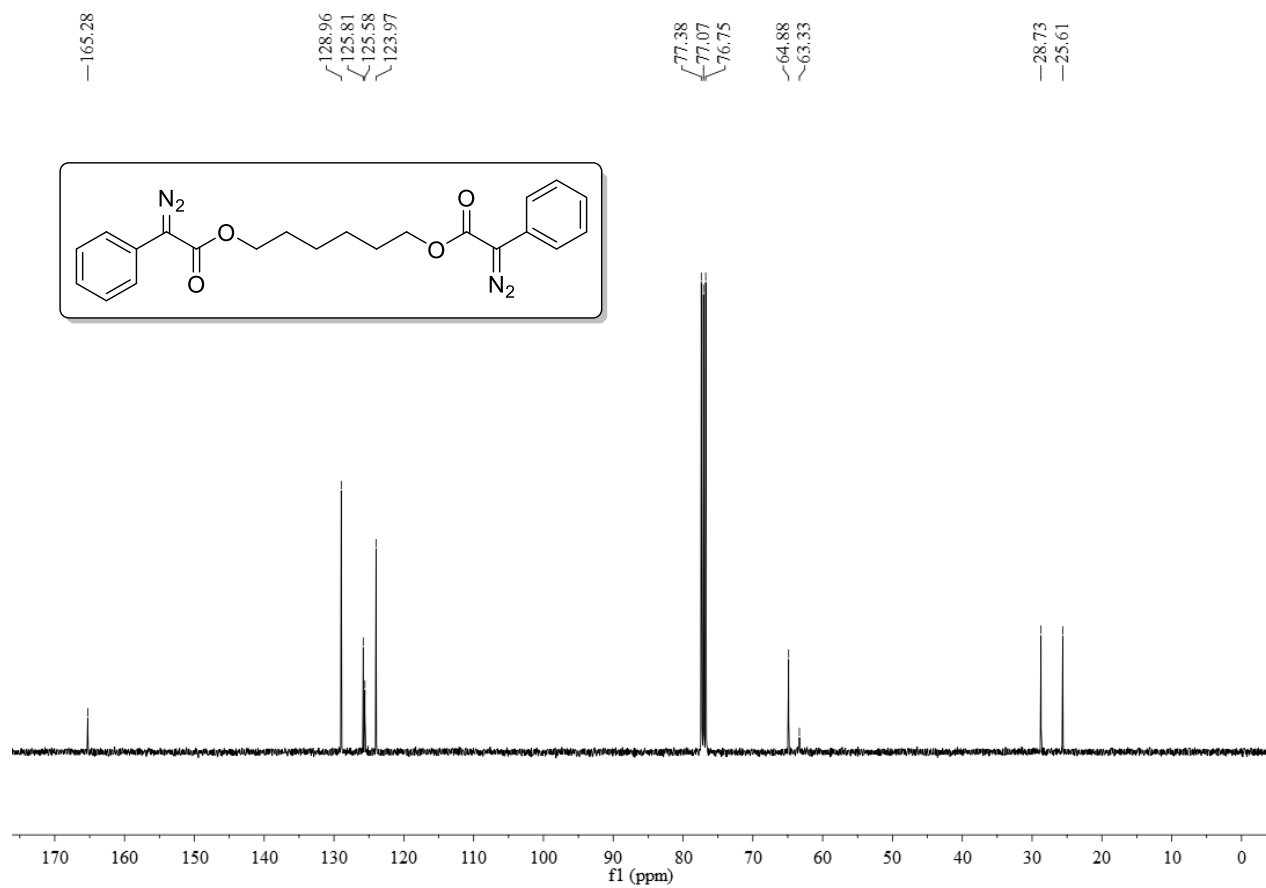
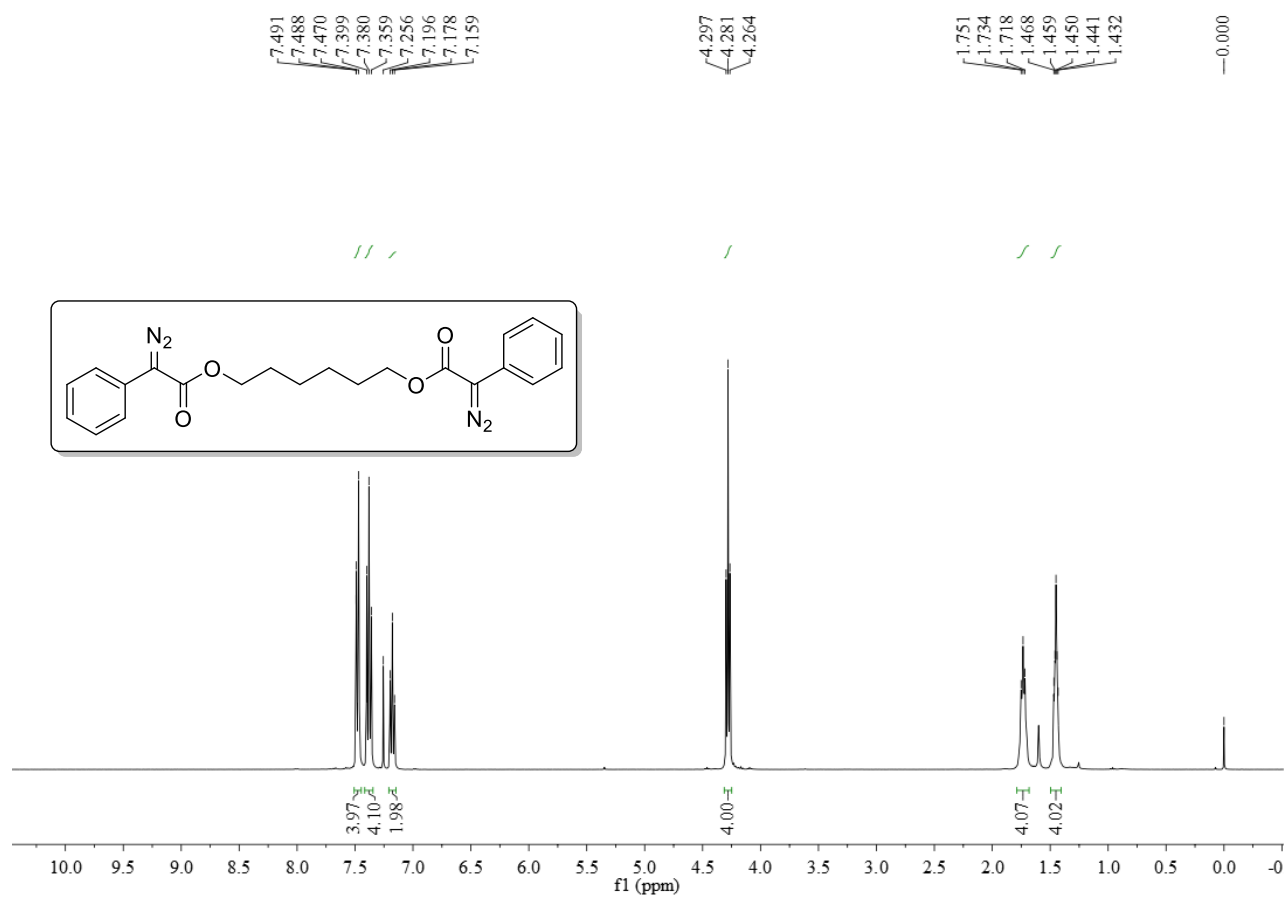
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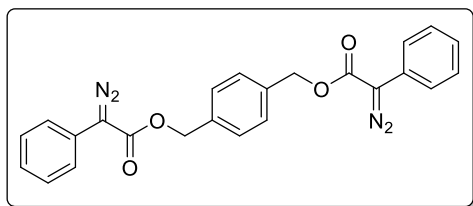
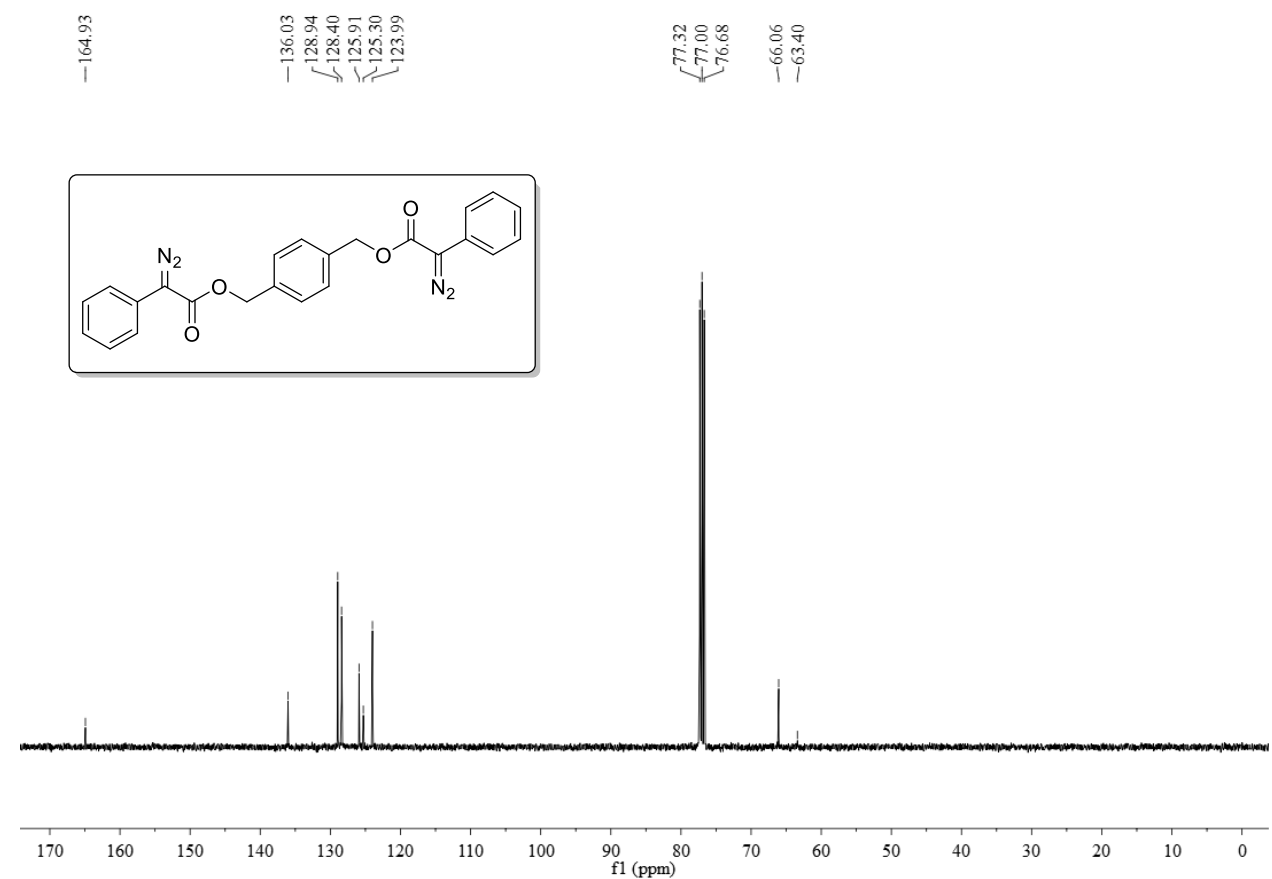
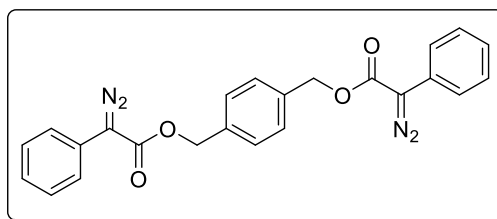
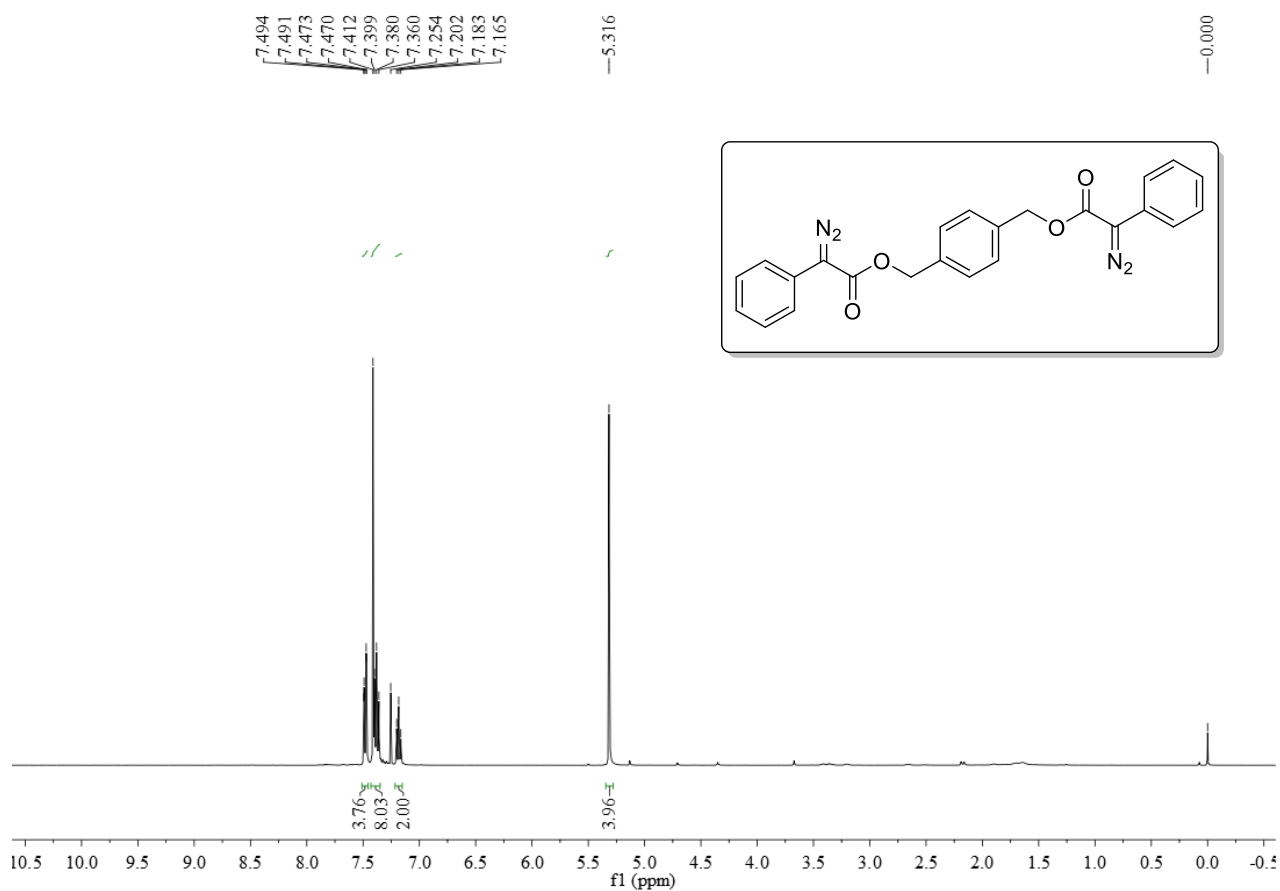
^1H and ^{13}C NMR spectra of **5c**



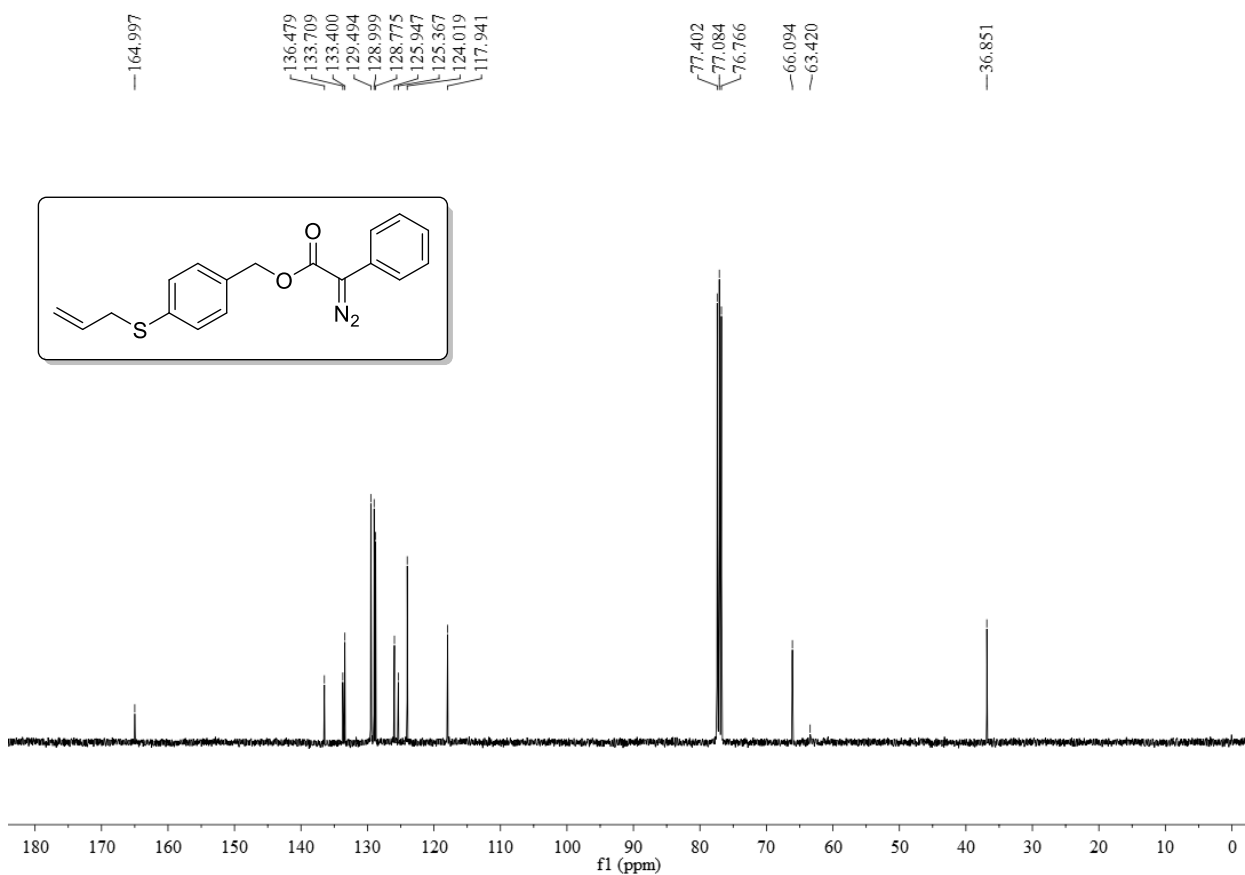
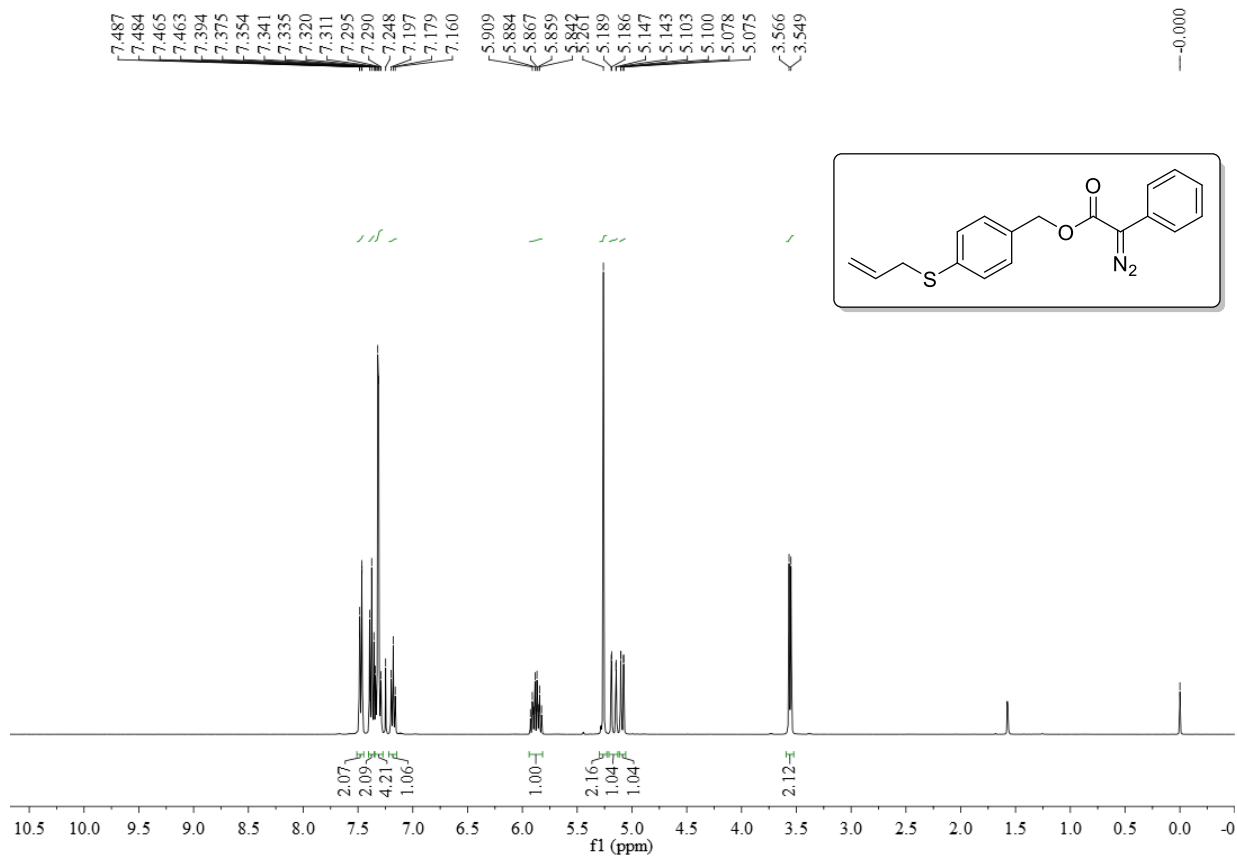
^1H and ^{13}C NMR spectra of **5d**



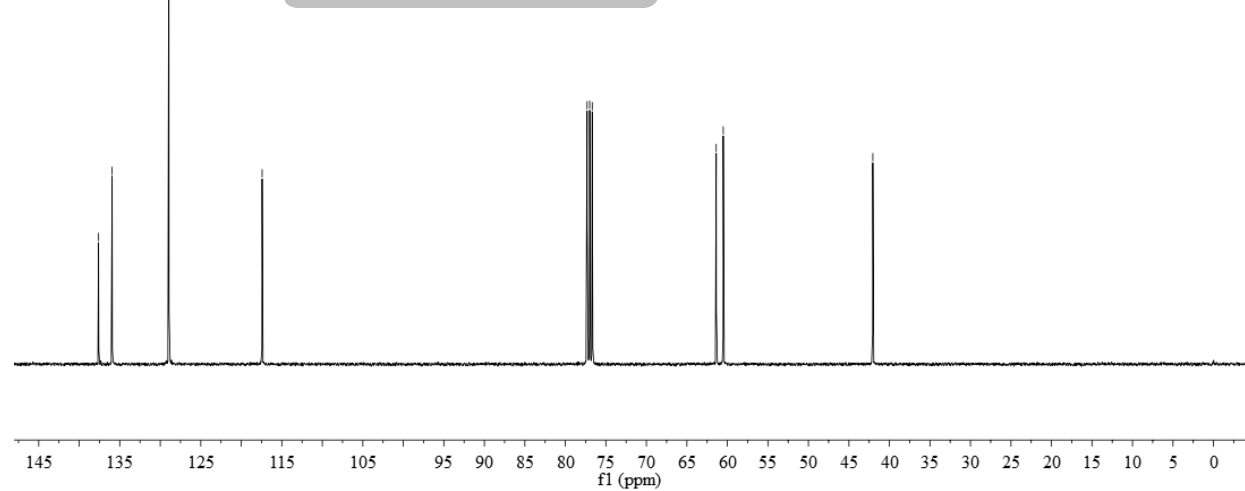
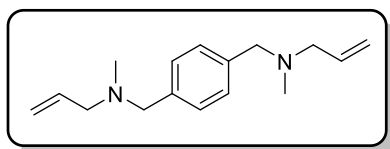
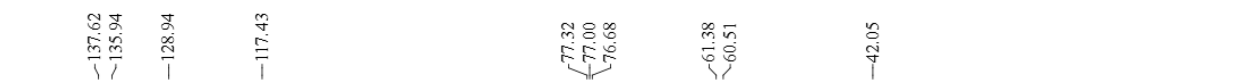
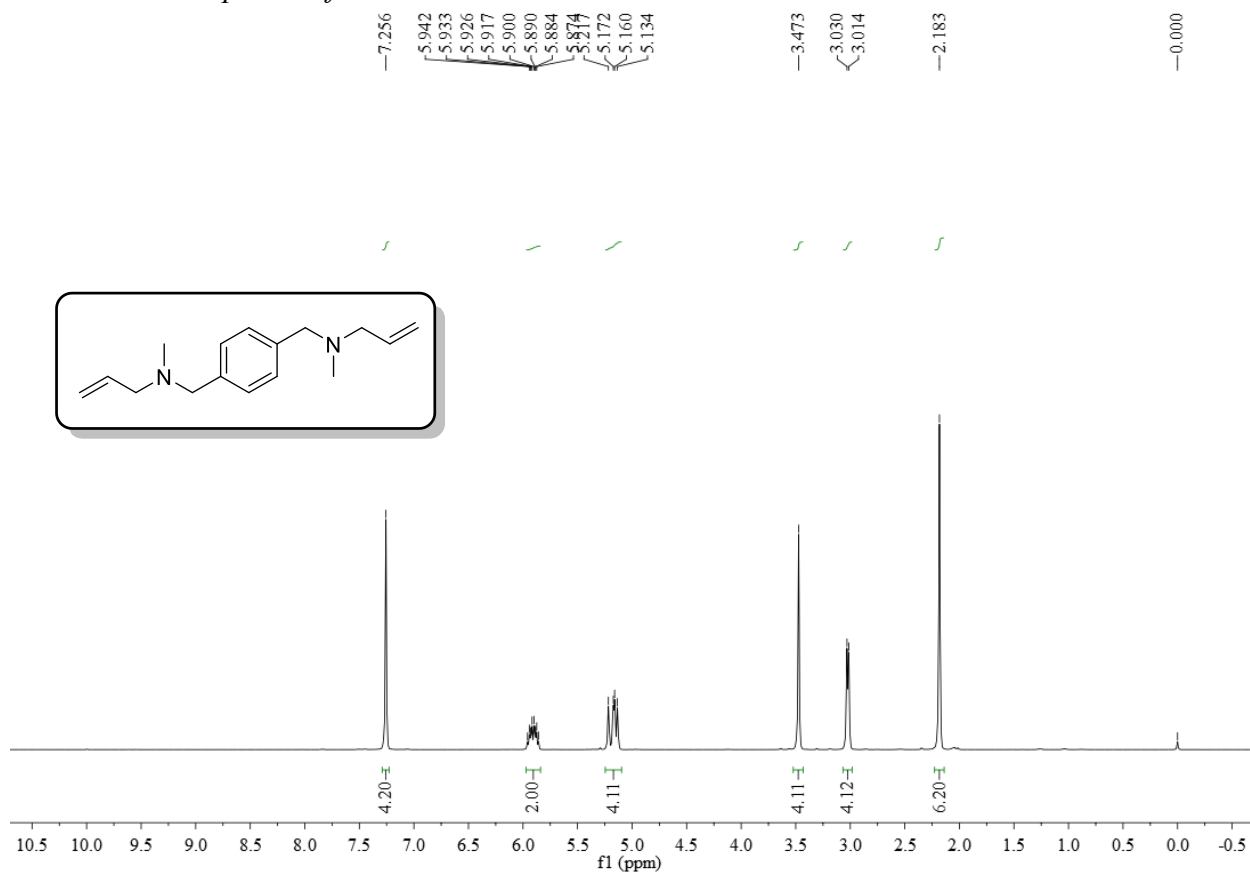
^1H and ^{13}C NMR spectra of **5e**



^1H and ^{13}C NMR spectra of **6**

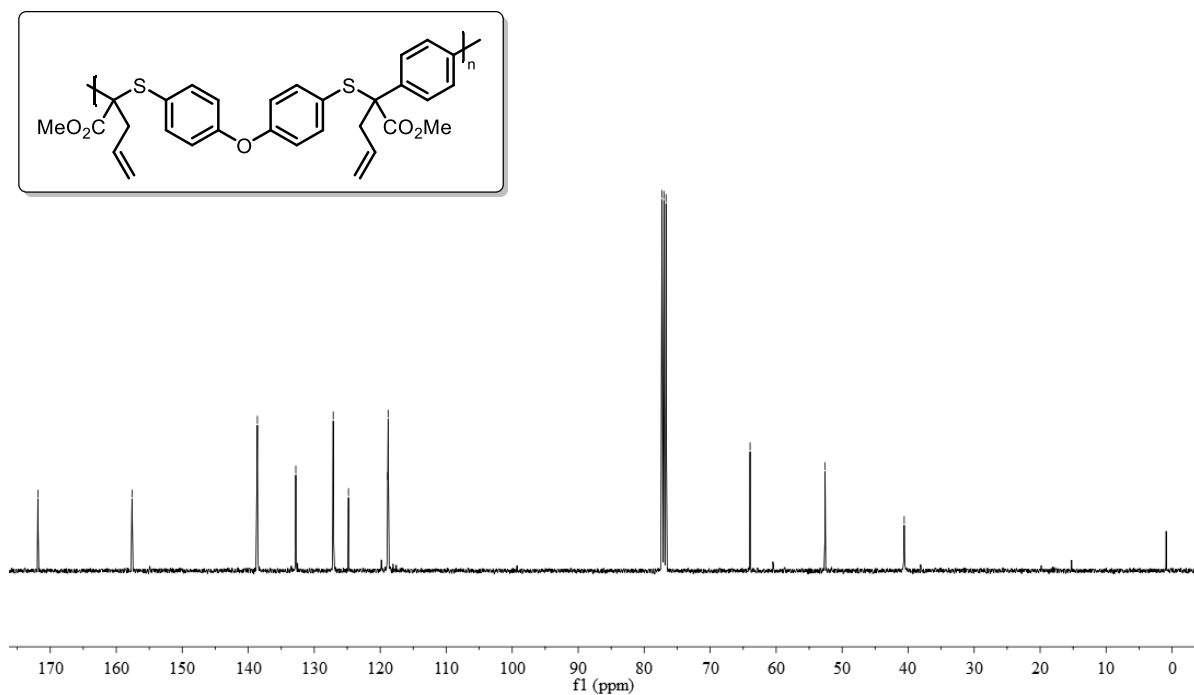
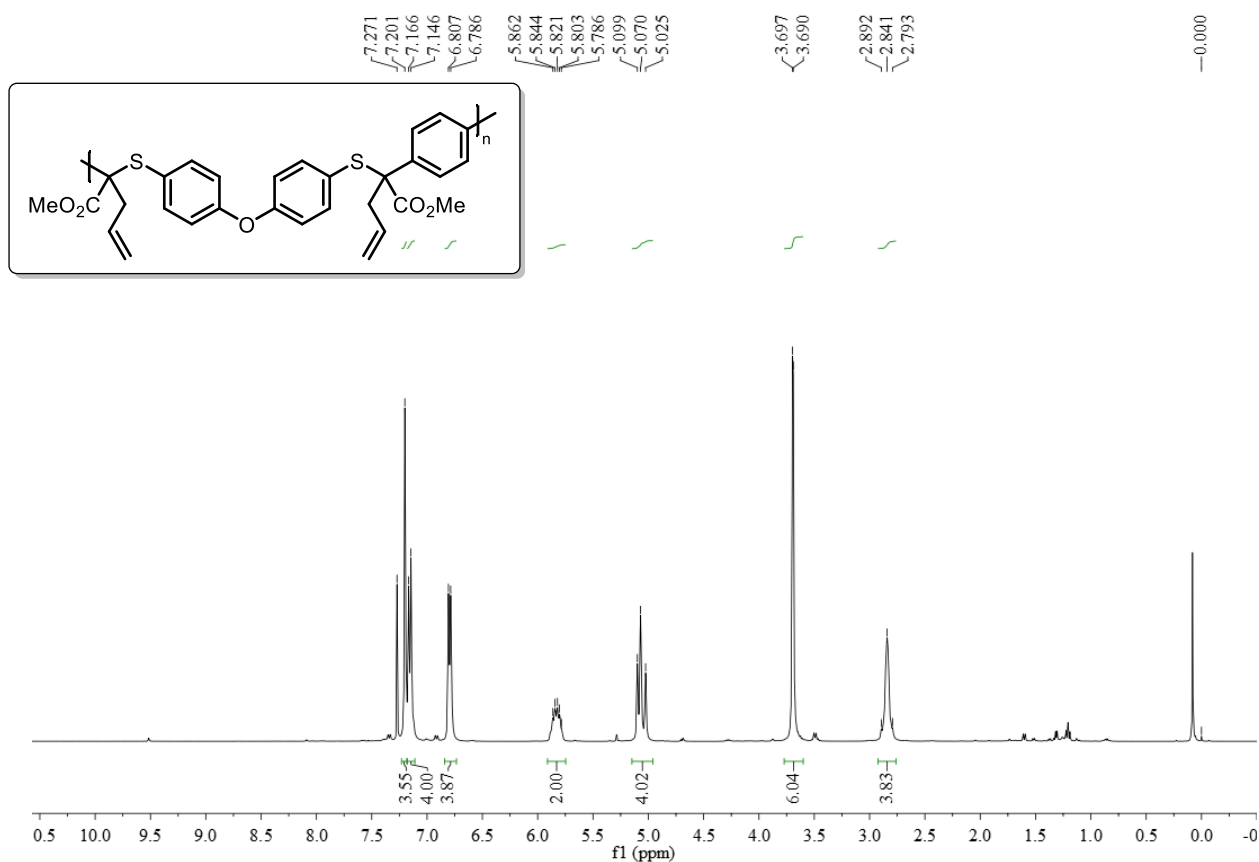


^1H and ^{13}C NMR spectra of **7**

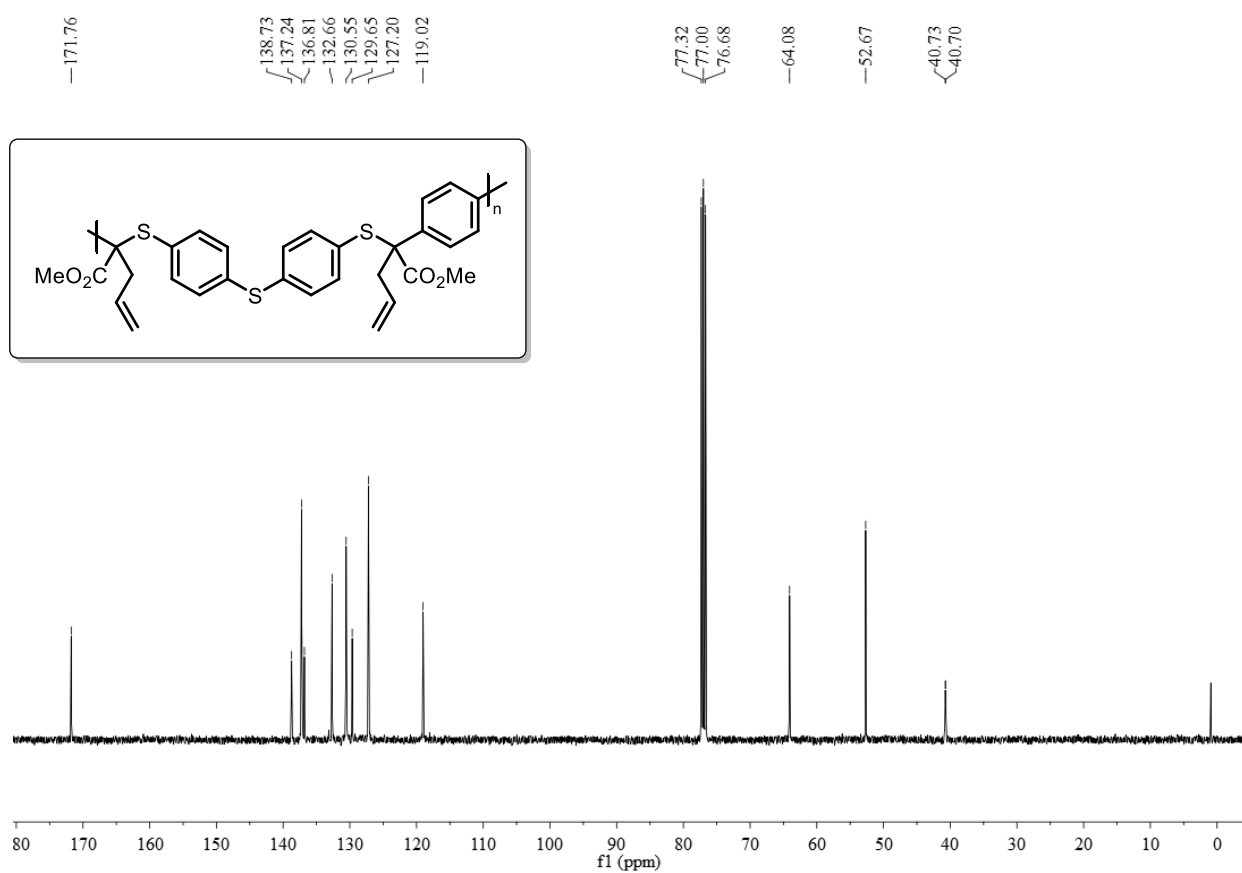
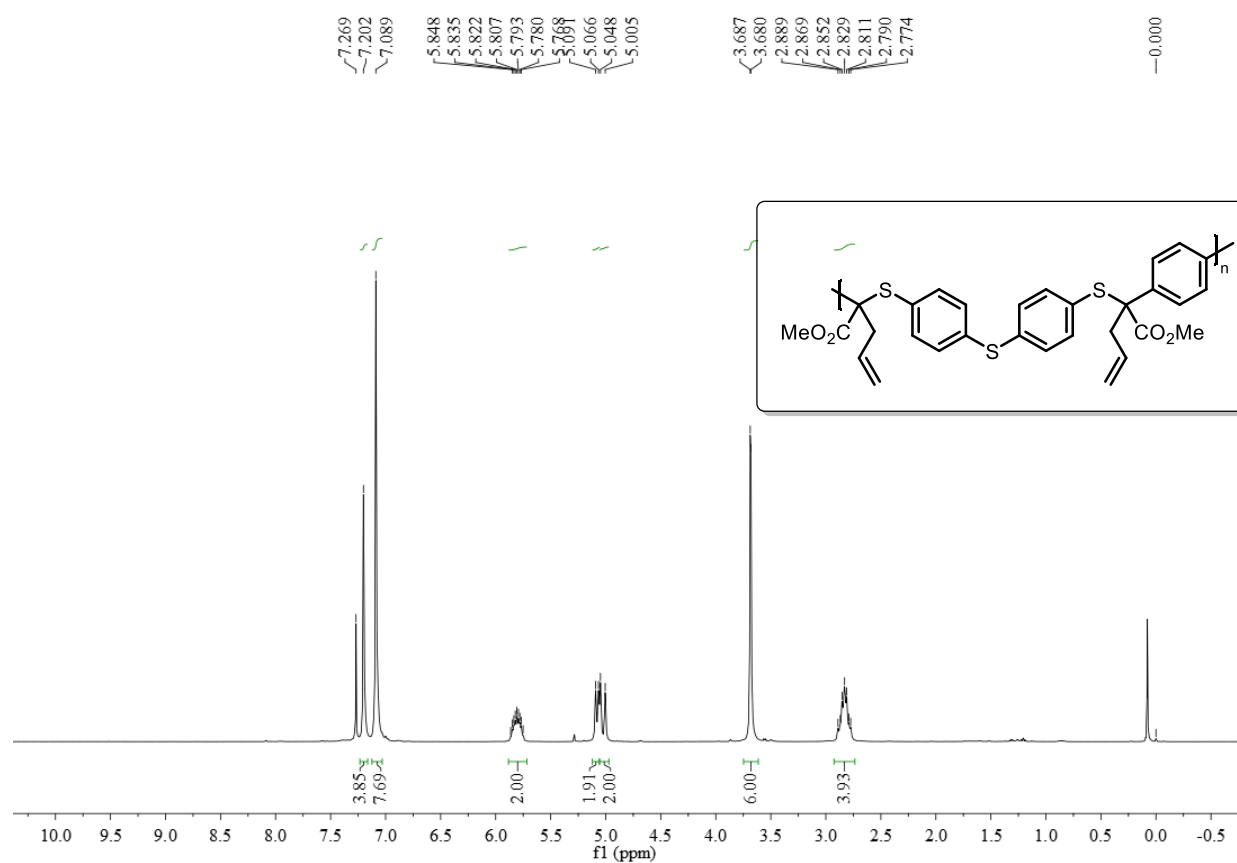


2) ^1H and ^{13}C NMR spectra of the polymer products

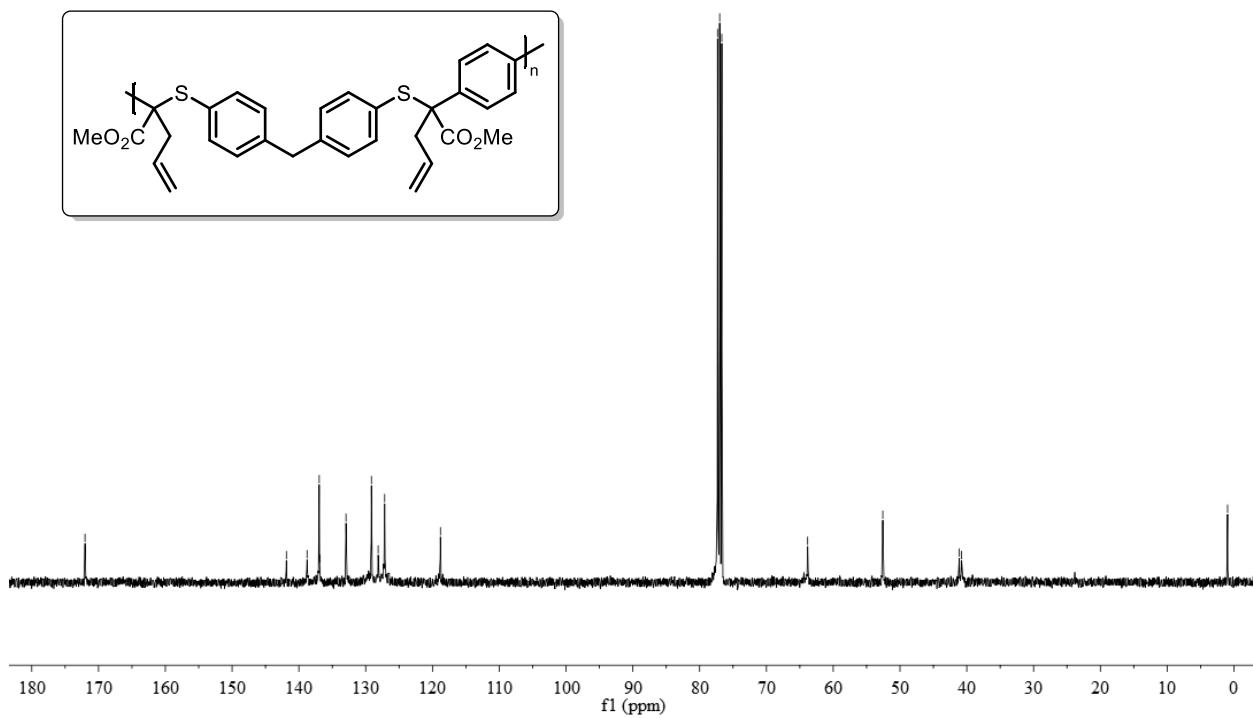
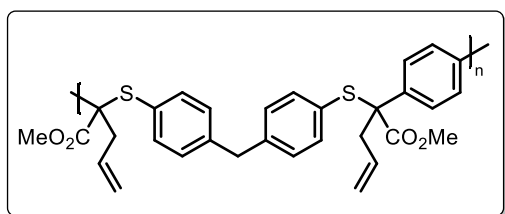
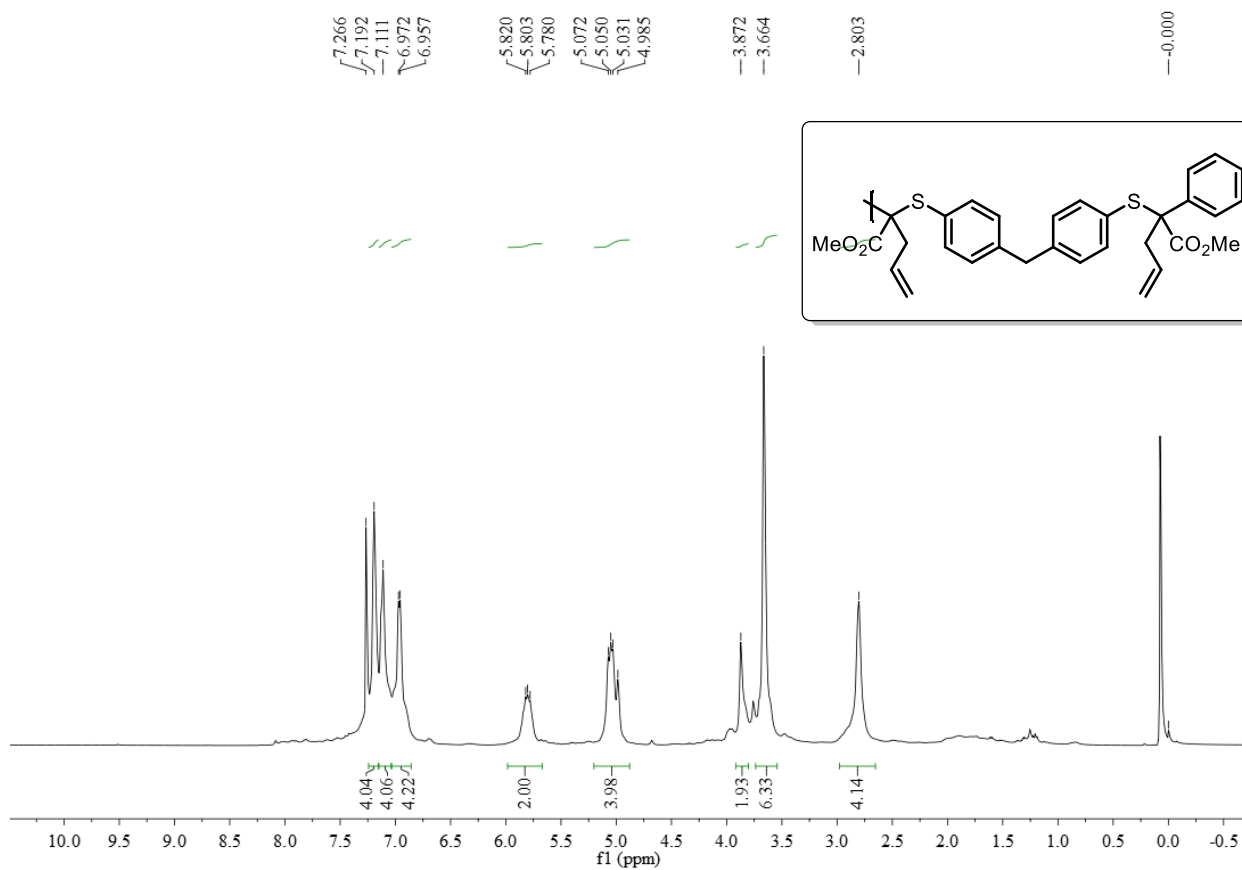
^1H and ^{13}C NMR spectra of **PI**



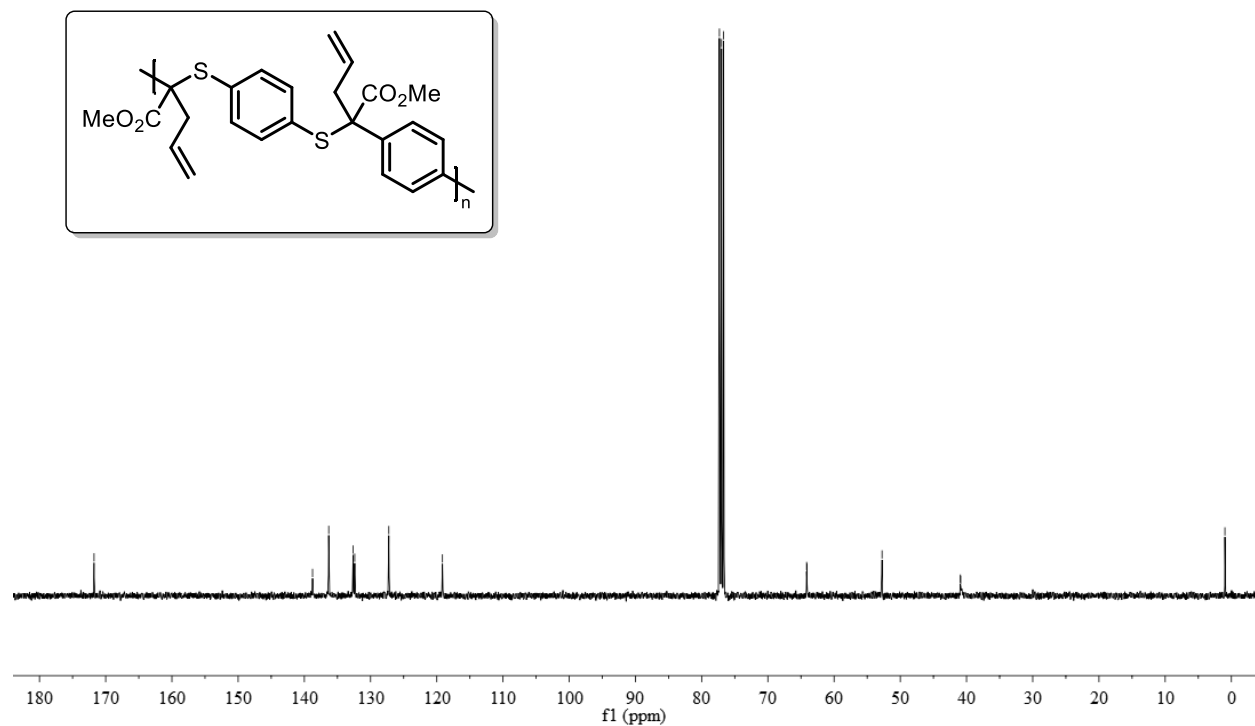
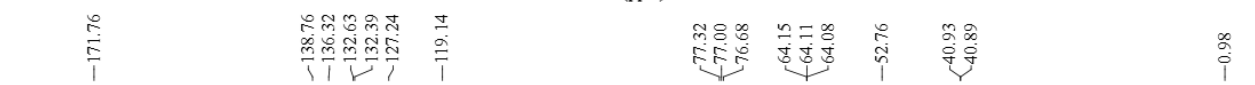
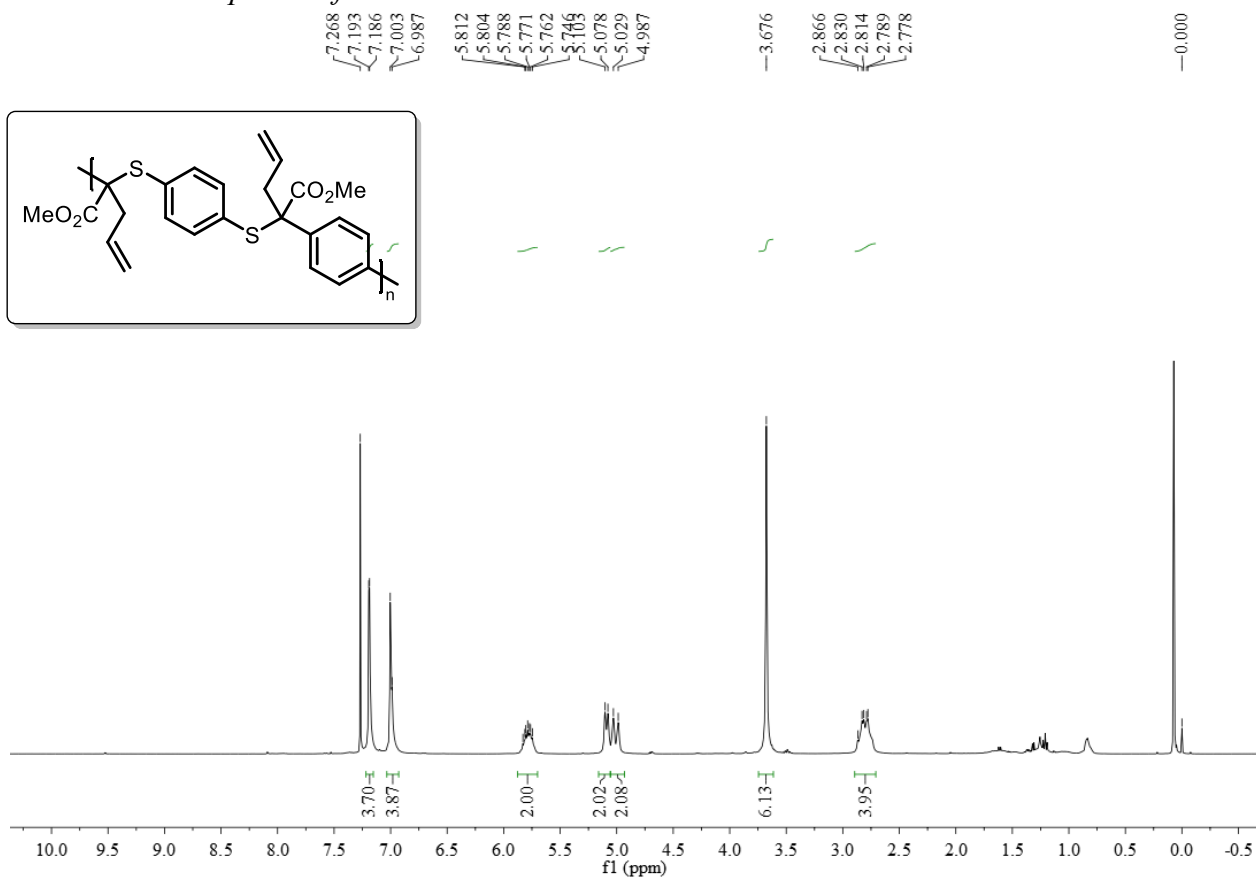
^1H and ^{13}C NMR spectra of **P2**



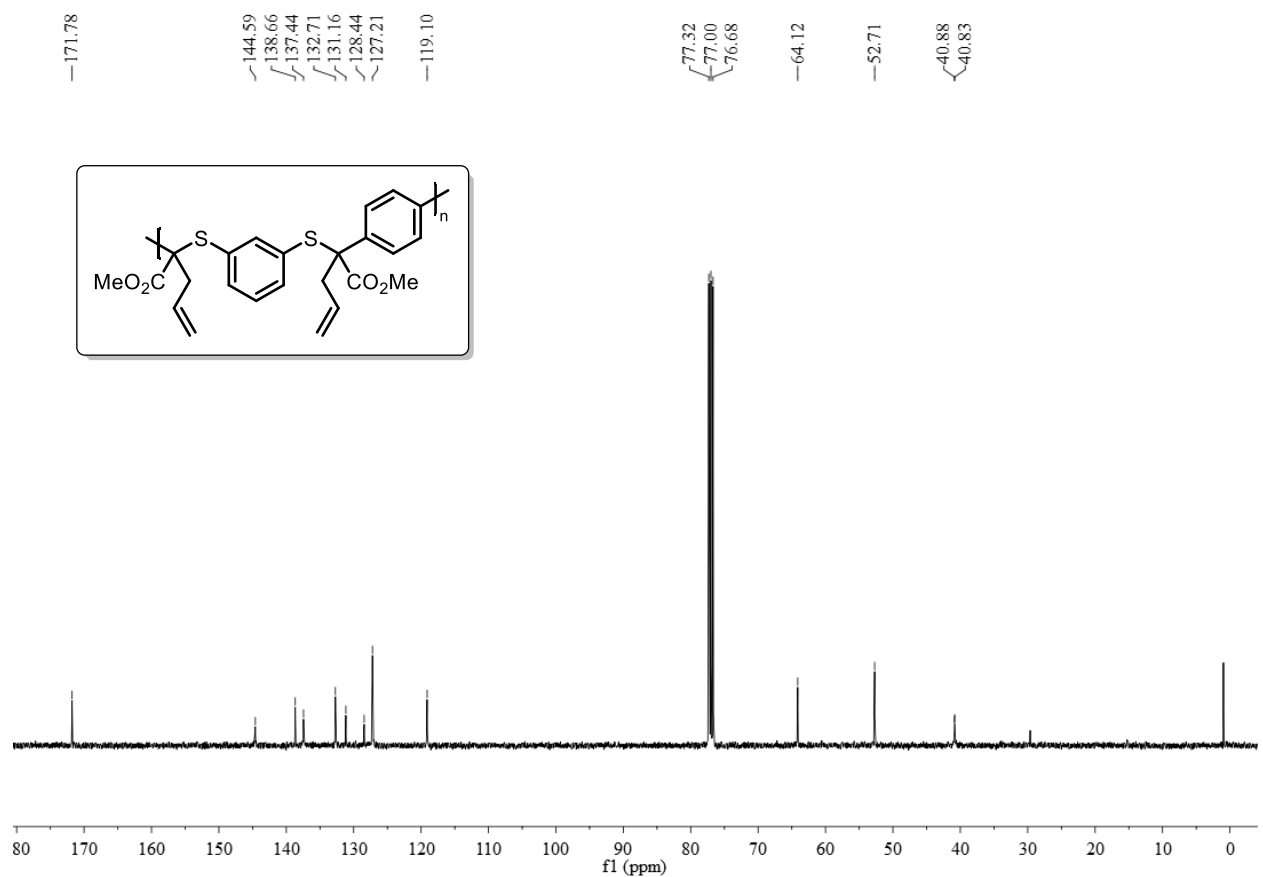
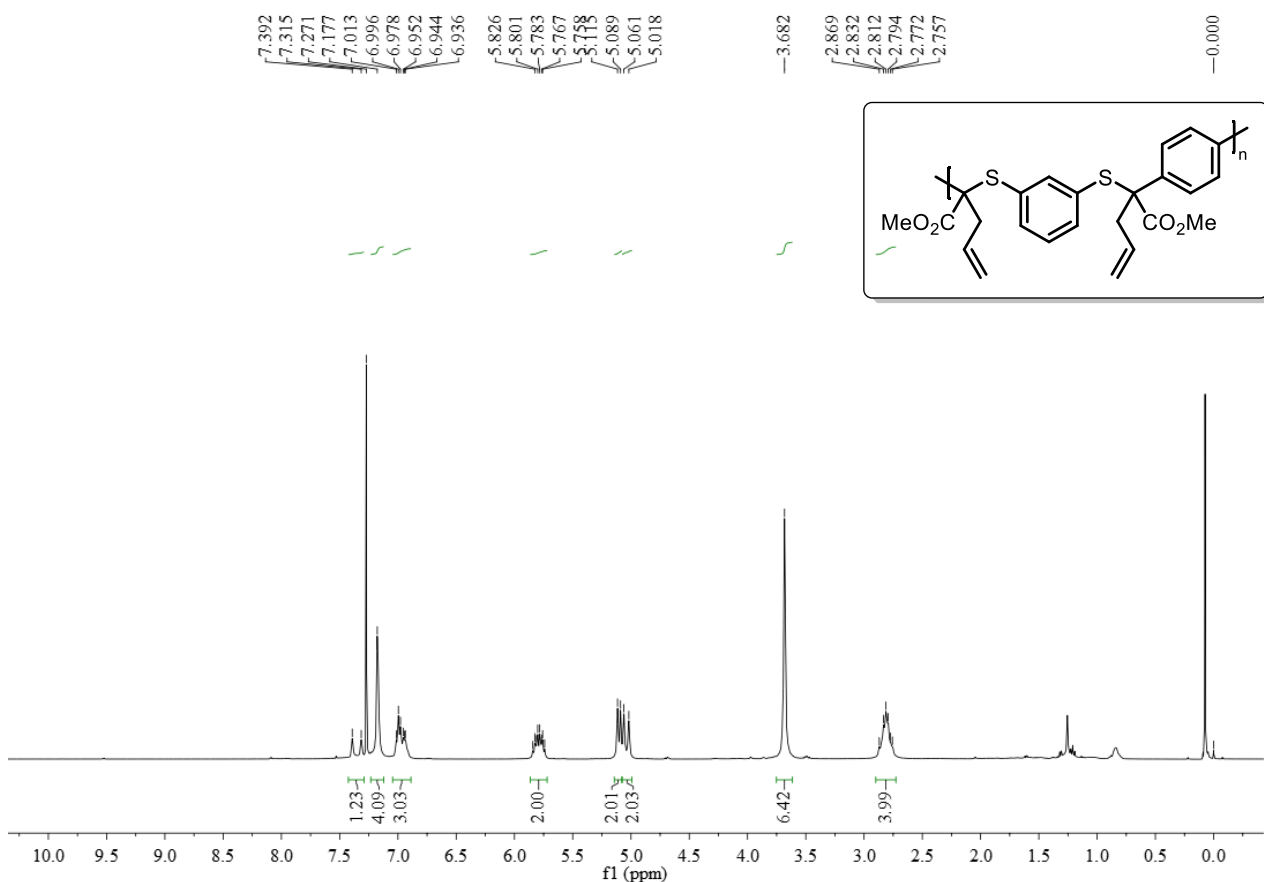
^1H and ^{13}C NMR spectra of **P3**



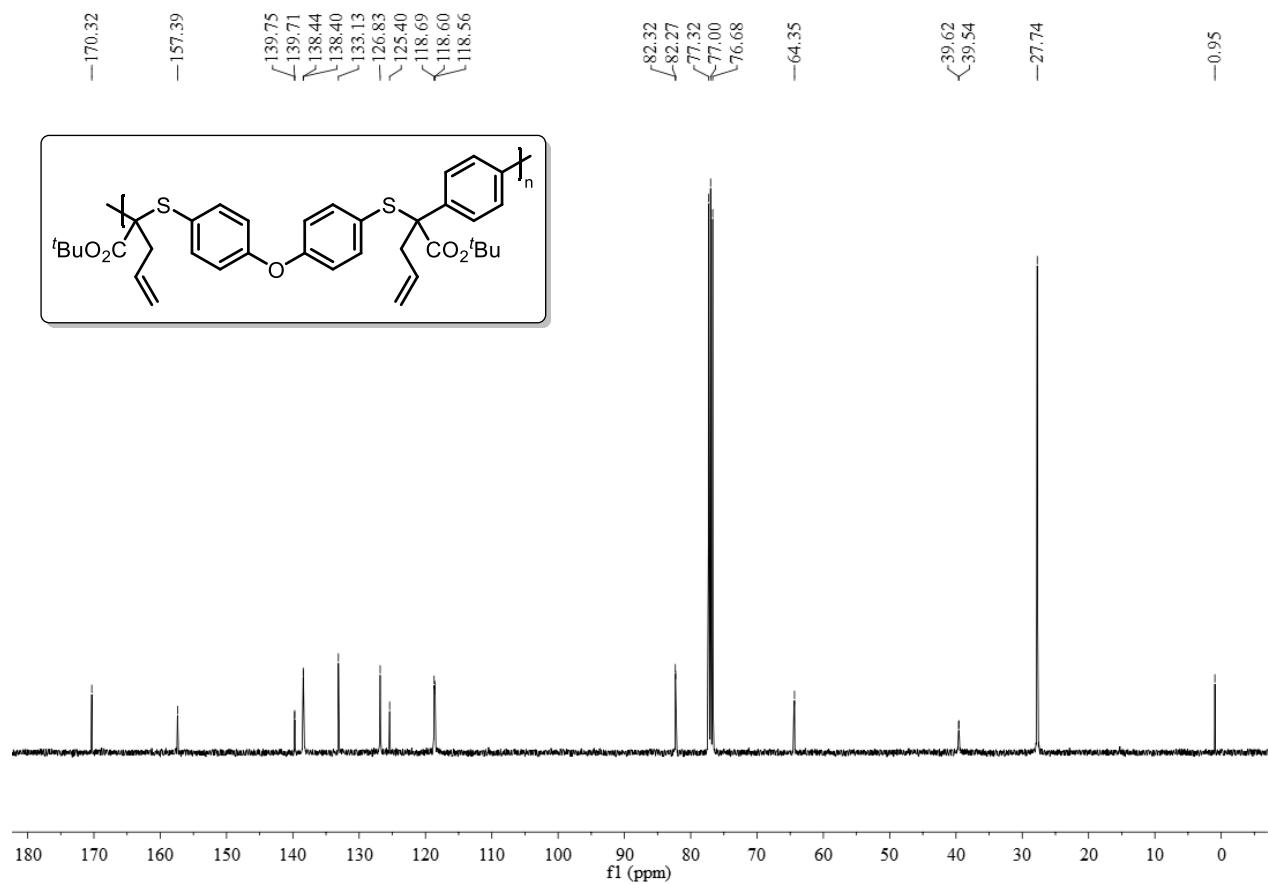
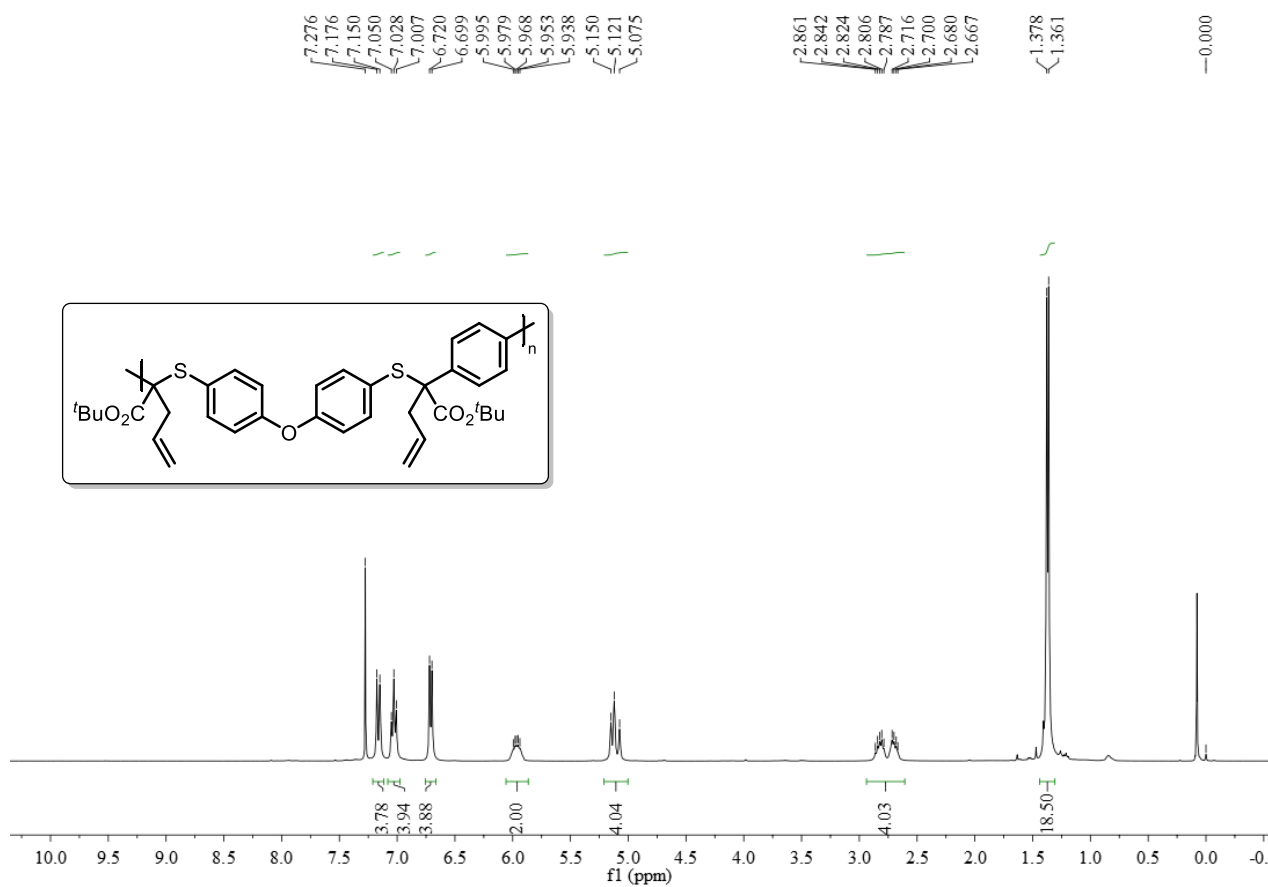
¹H and ¹³C NMR spectra of **P4**



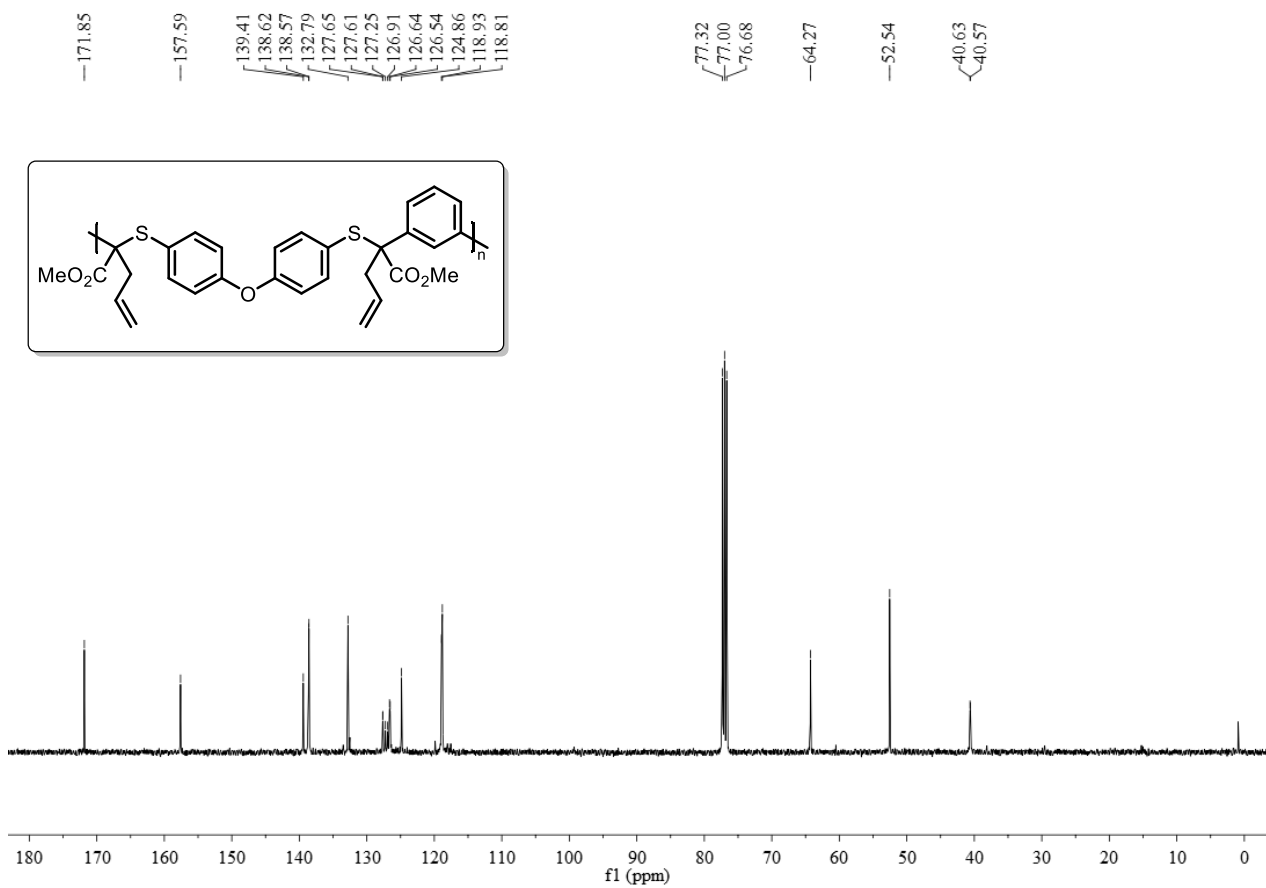
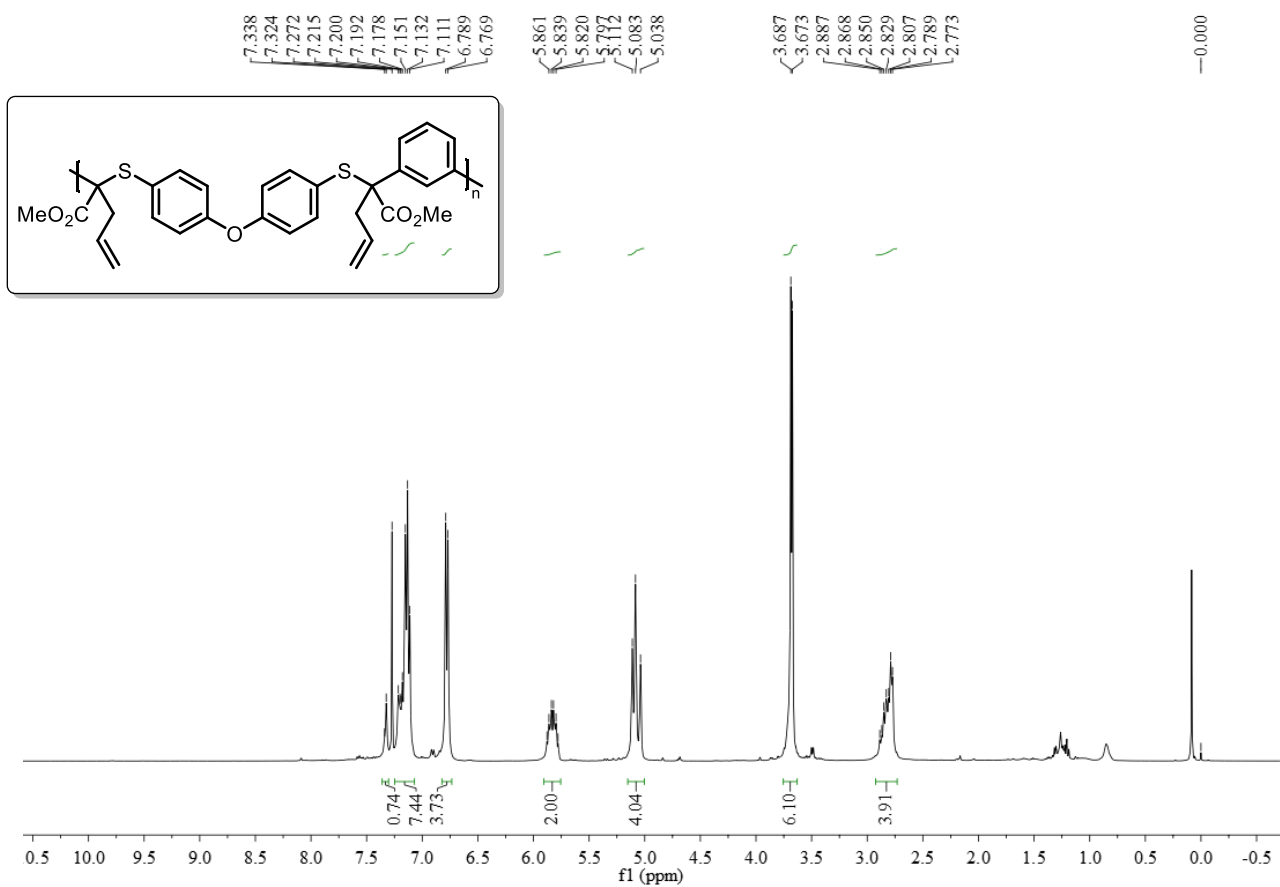
^1H and ^{13}C NMR spectra of **P5**



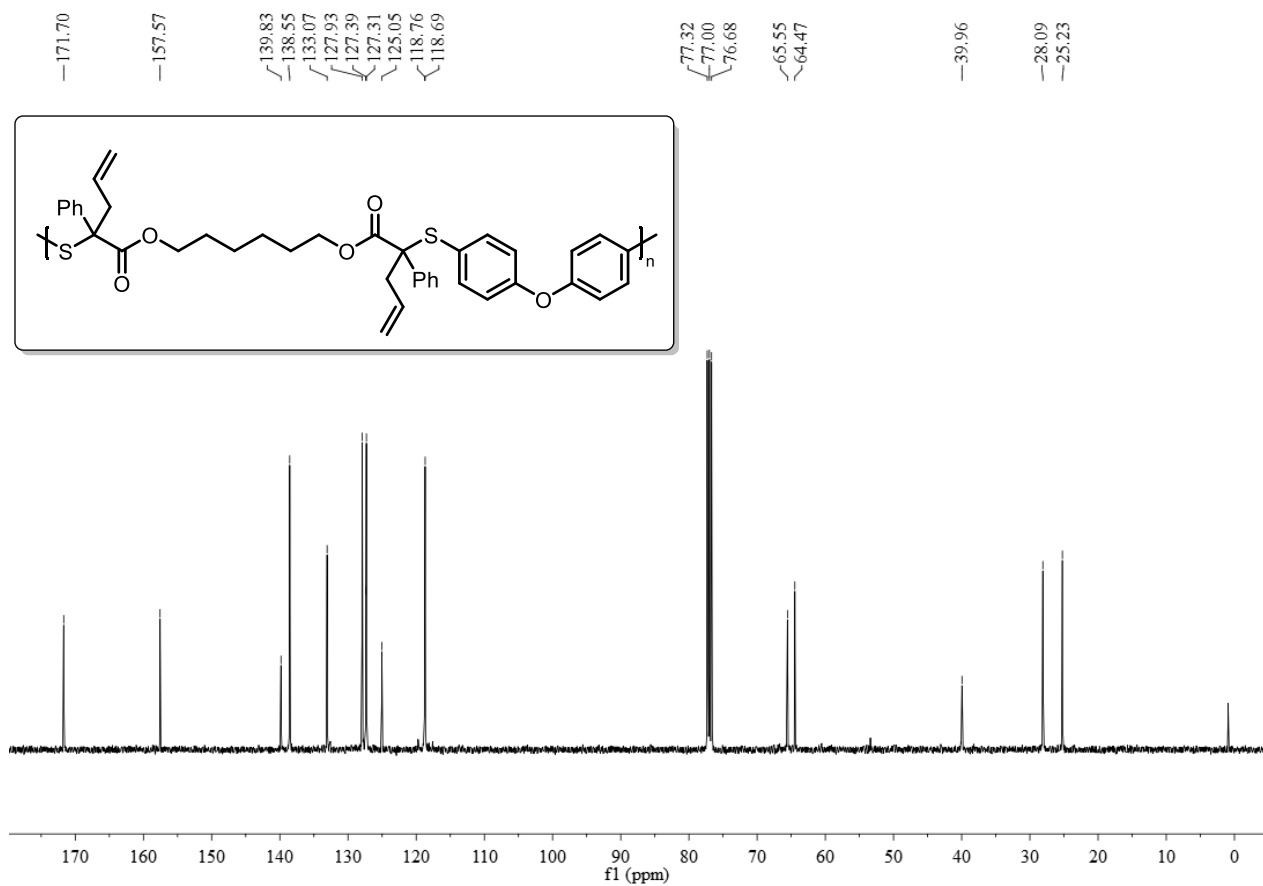
^1H and ^{13}C NMR spectra of **P6**



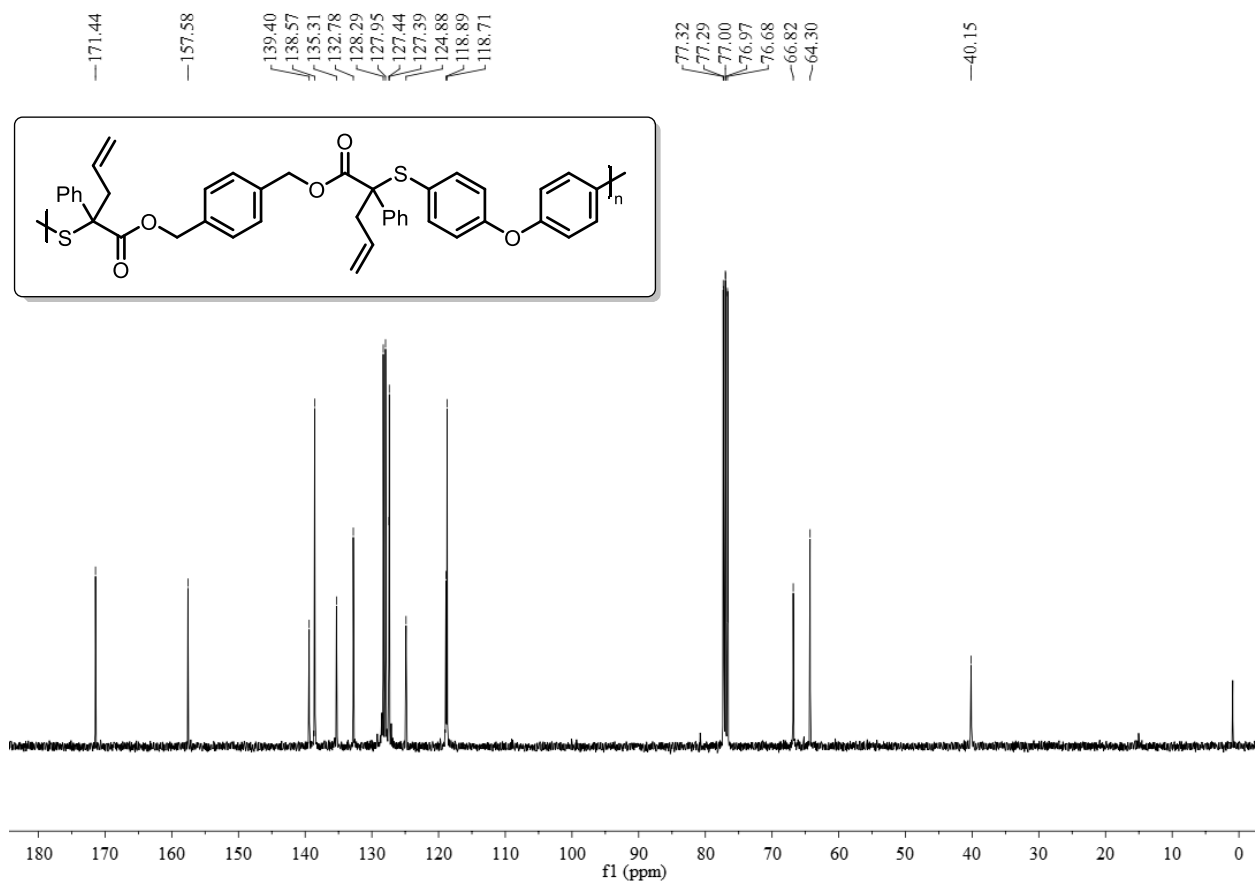
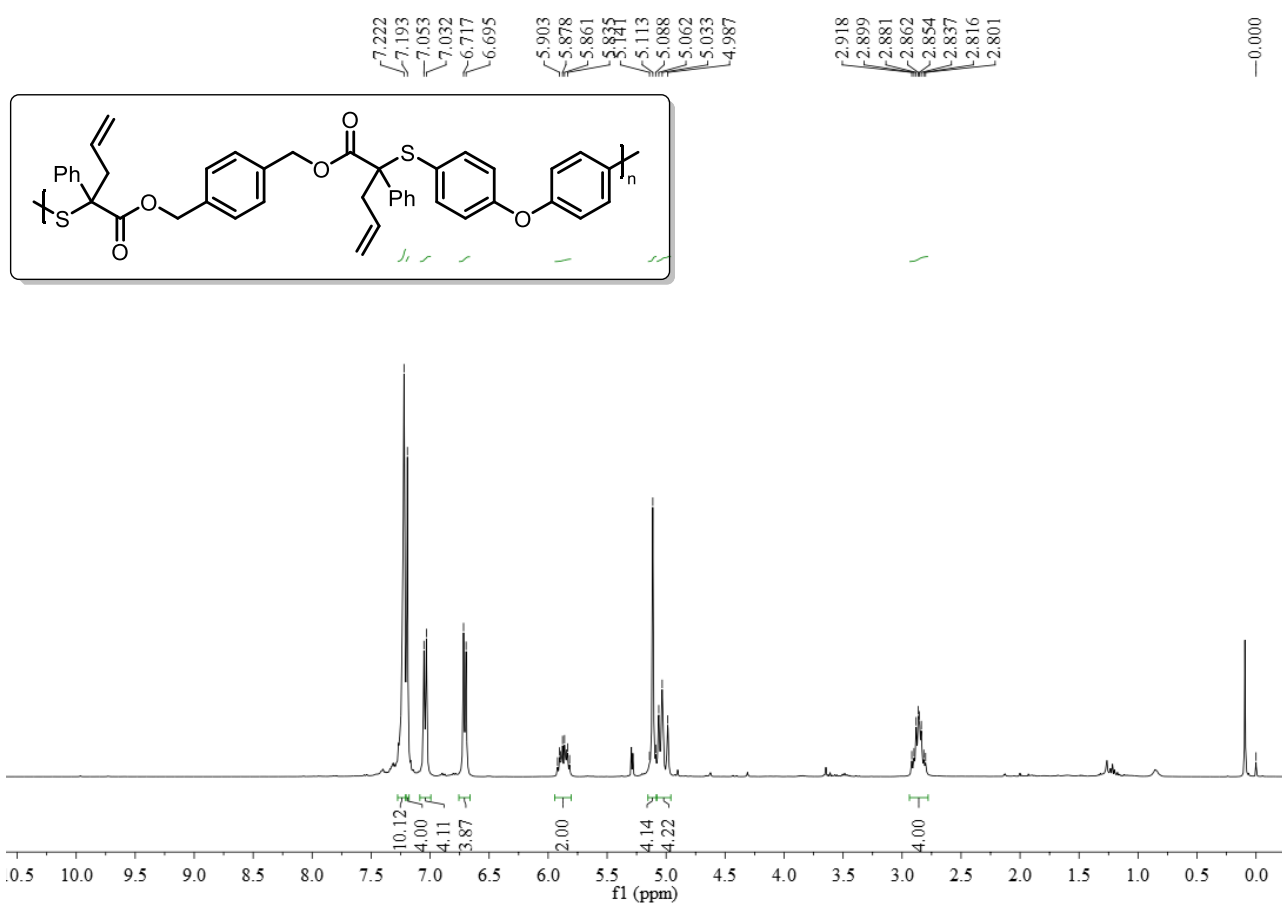
^1H and ^{13}C NMR spectra of **P7**



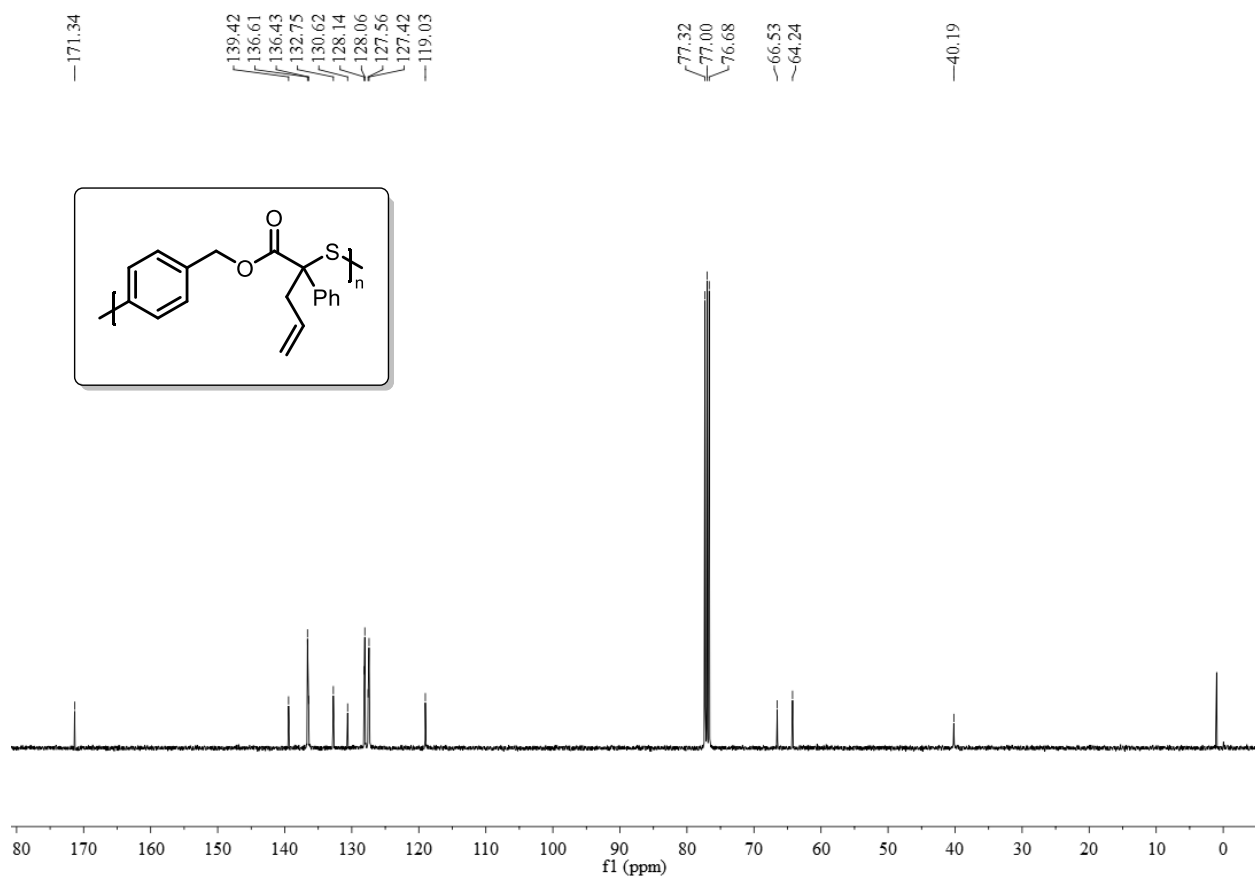
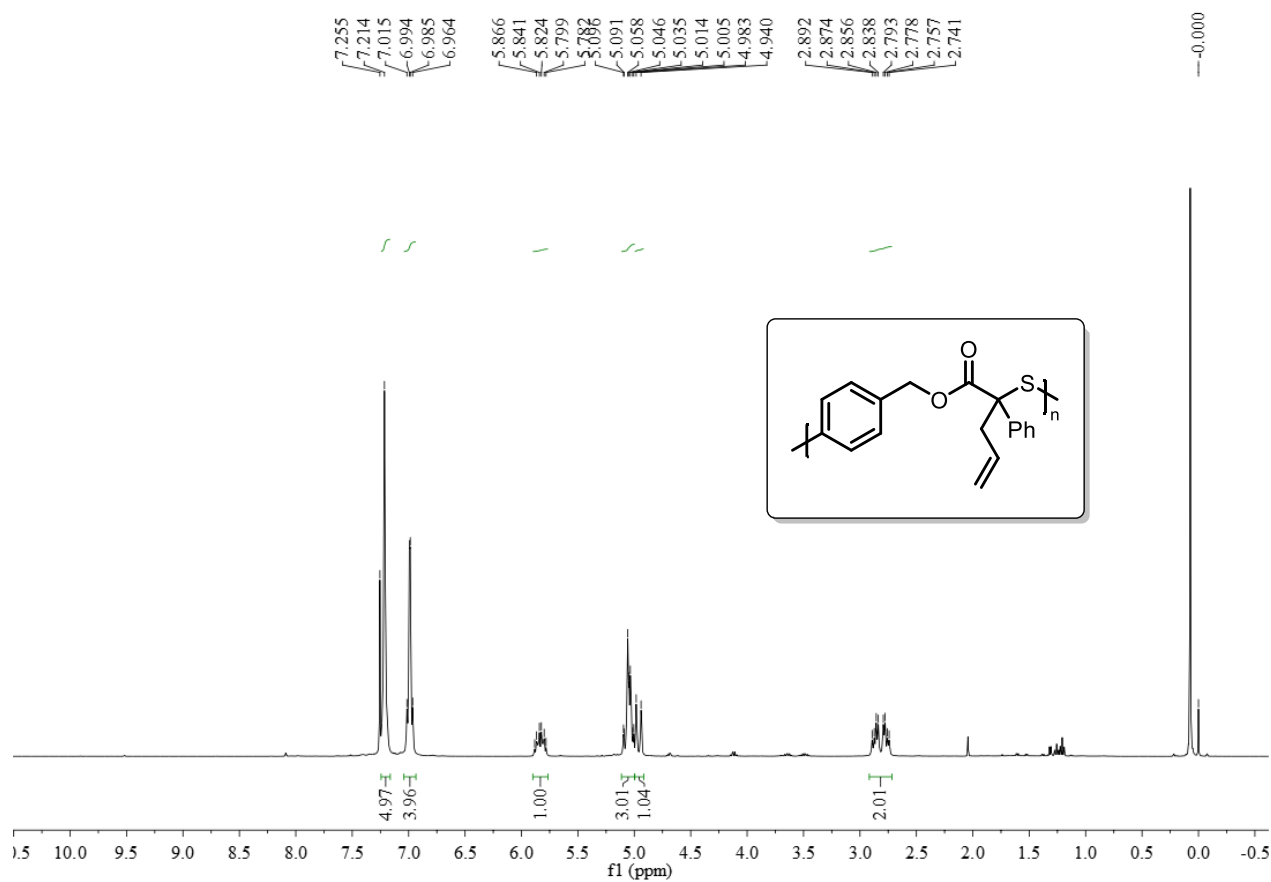
^1H and ^{13}C NMR spectra of **P8**



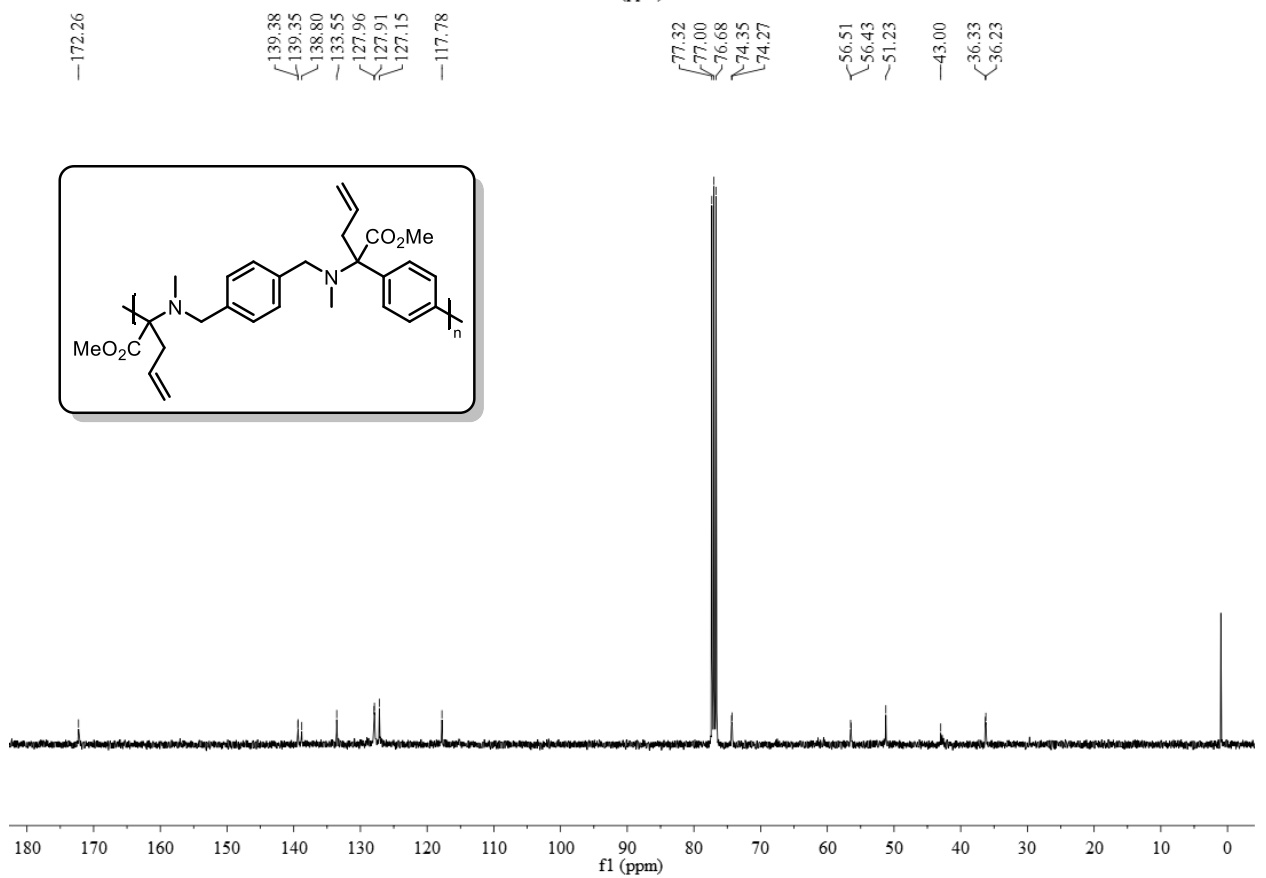
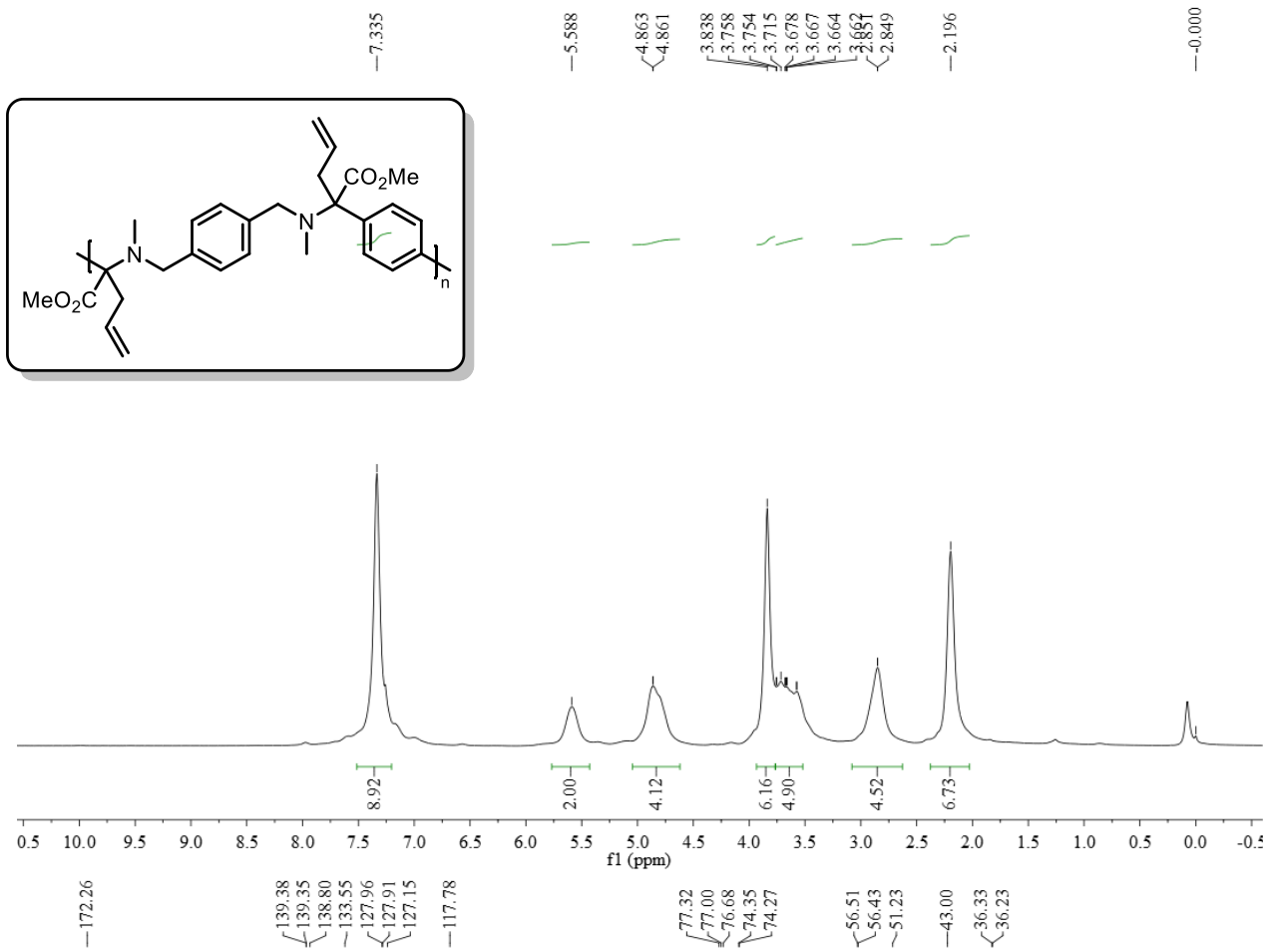
^1H and ^{13}C NMR spectra of **P9**



¹H and ¹³C NMR spectra of **P10**



^1H and ^{13}C NMR spectra of **P11**



3) MALDI-TOF-MS spectrum of P10

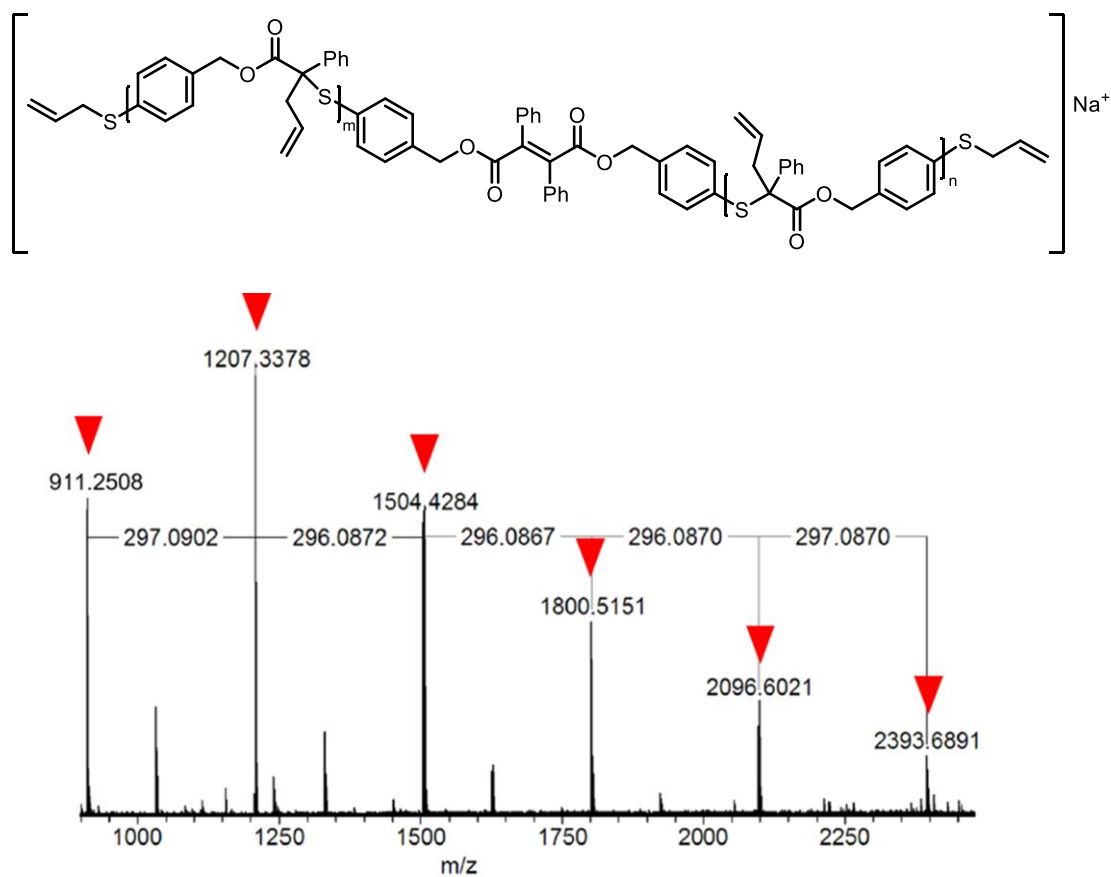


Figure S1. MALDI-TOF-MS spectrum of polymer P10.

4) HRMS analysis of hydrolysis of P10

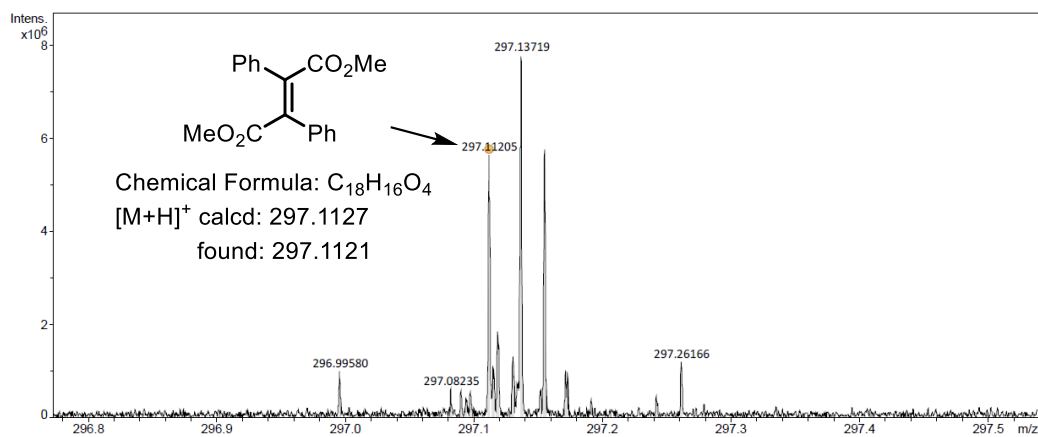
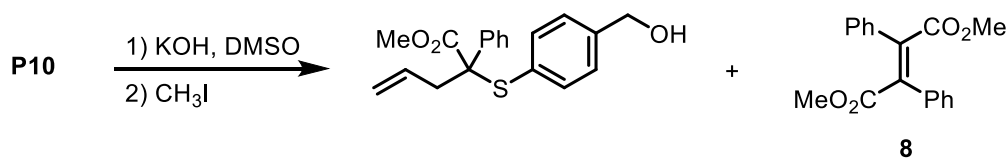
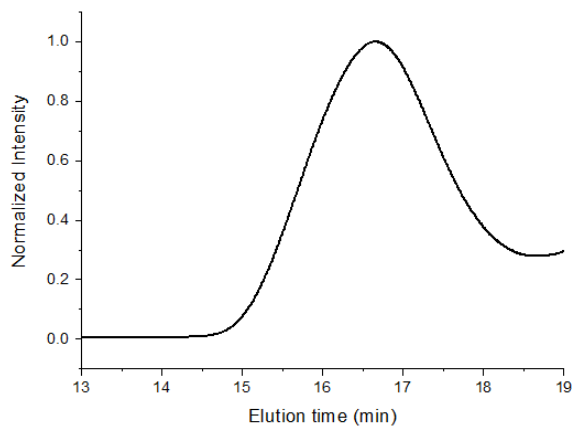


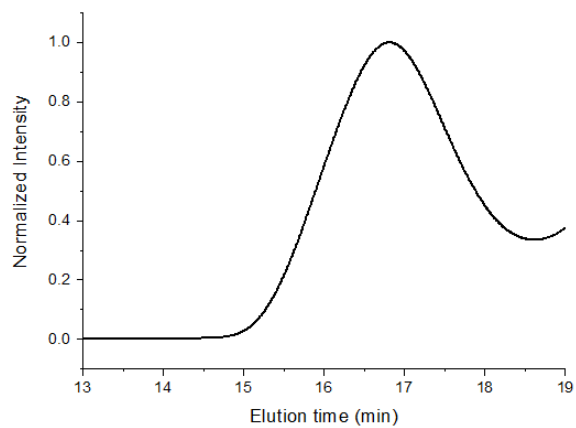
Figure S2. HRMS analysis of 8

5) SEC traces of the polymer products

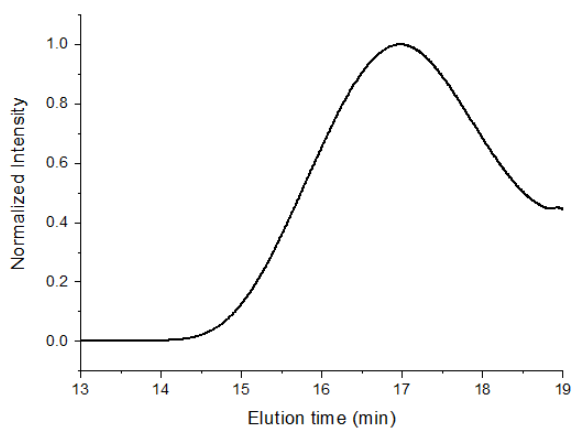
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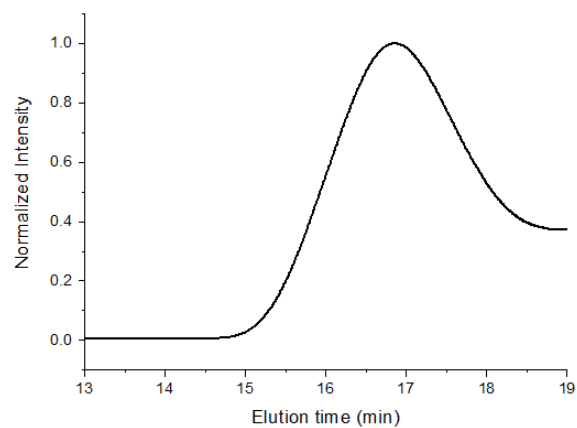
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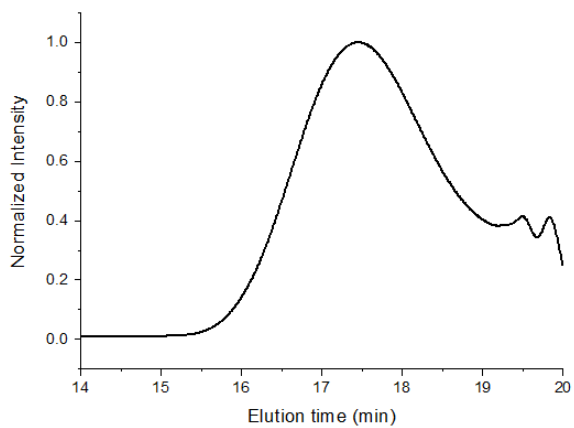
c) P3



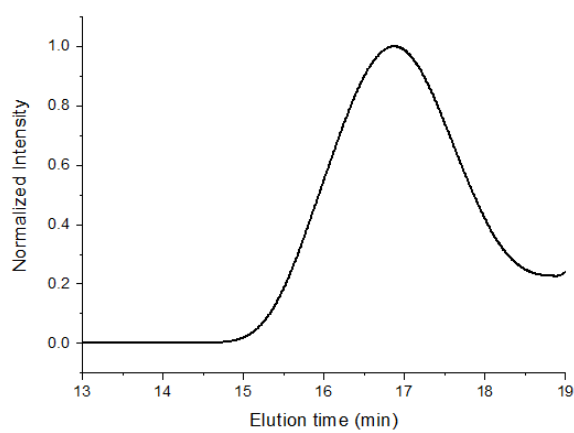
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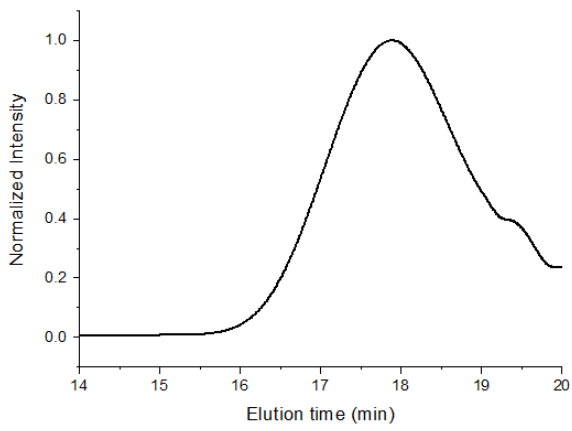
e) P5



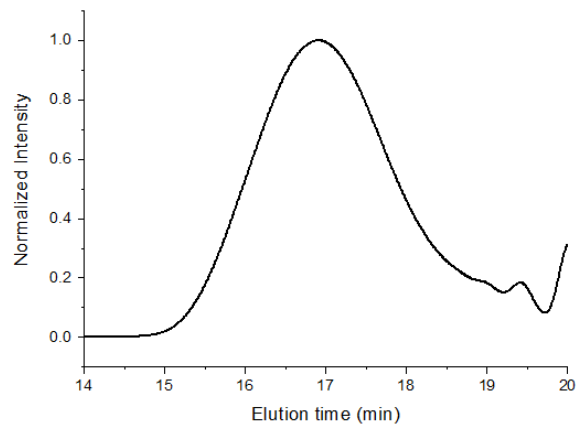
f) P6



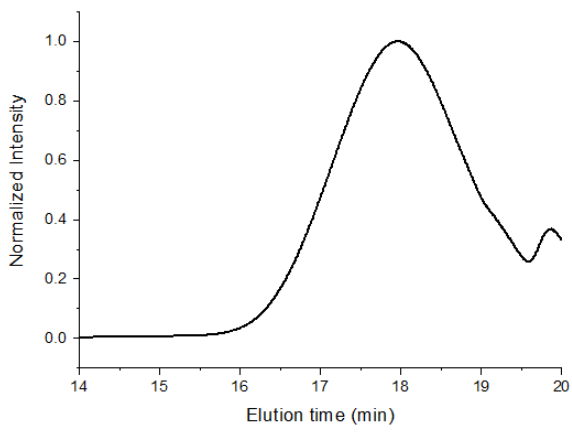
g) P7



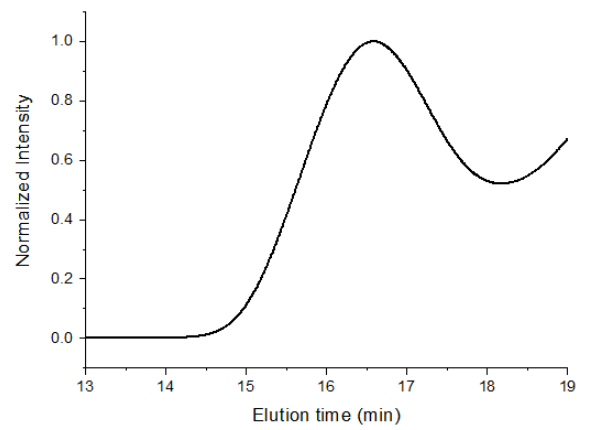
h) P8



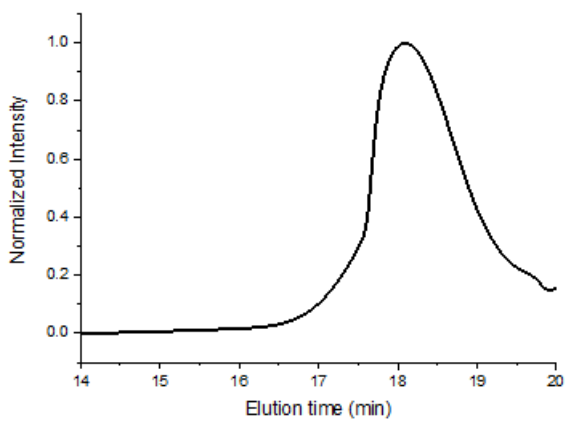
i) P9



j) P10

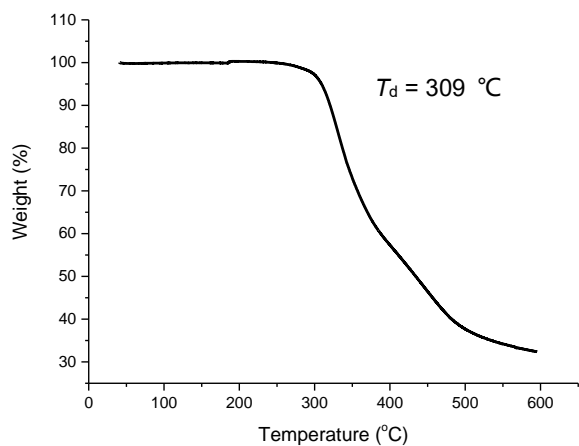


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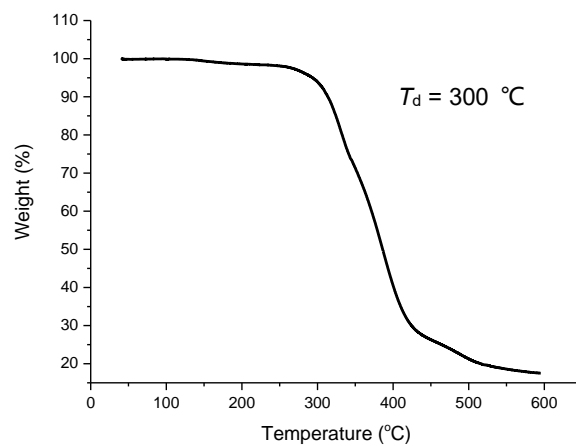


6) TGA data of the polymer products

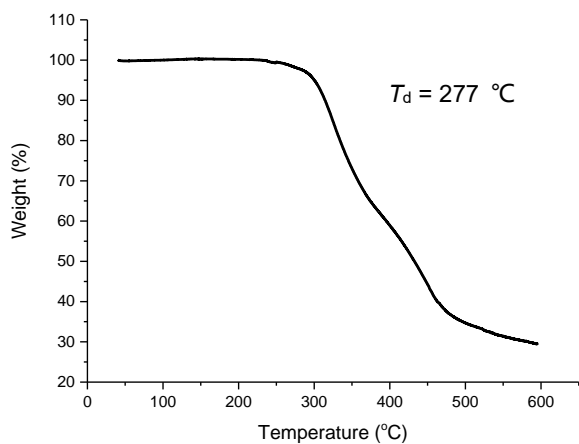
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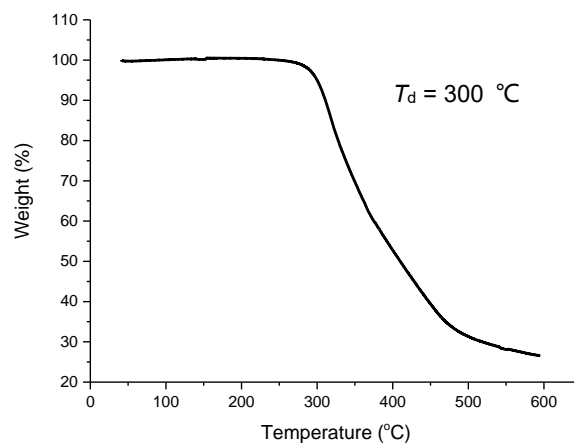
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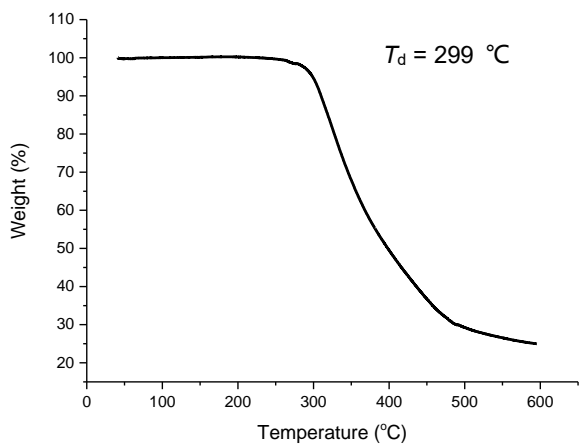
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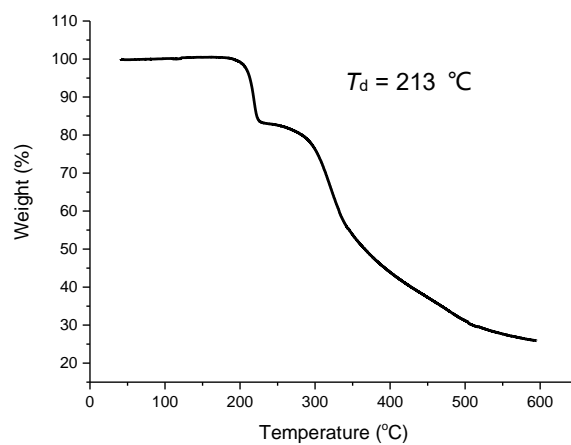
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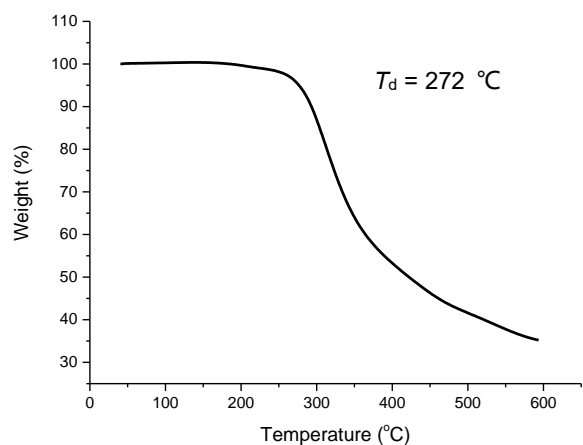
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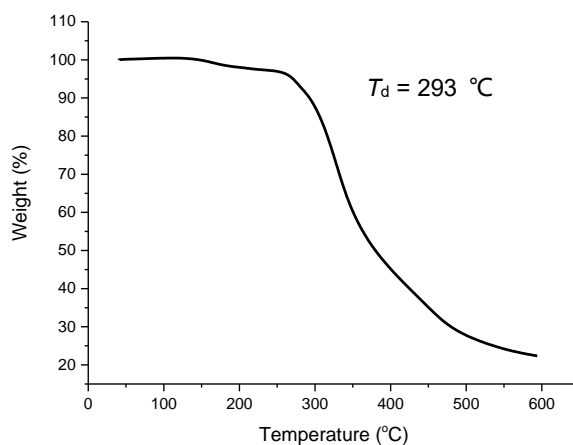
f) P6



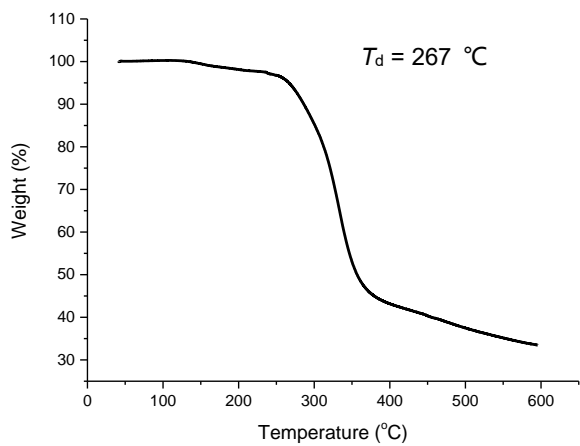
g) P7



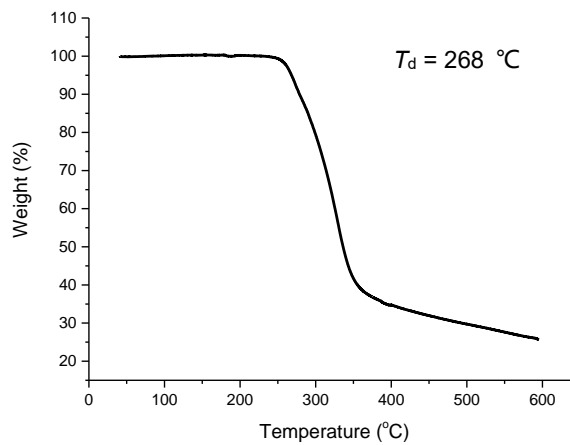
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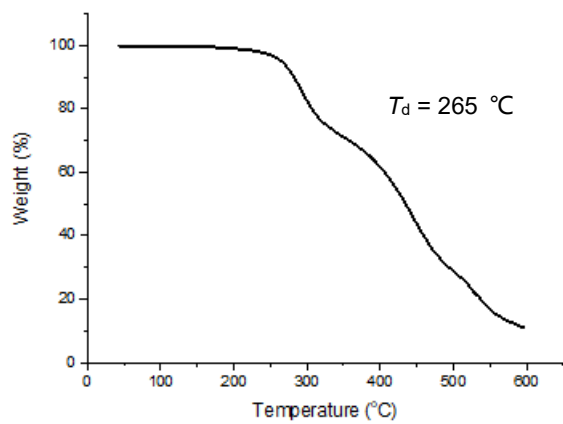
i) P9



j) P10

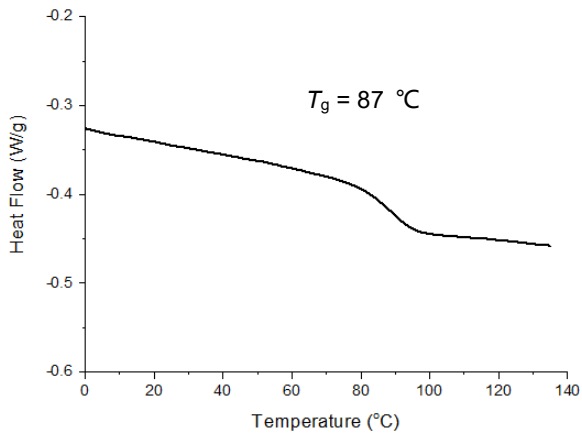


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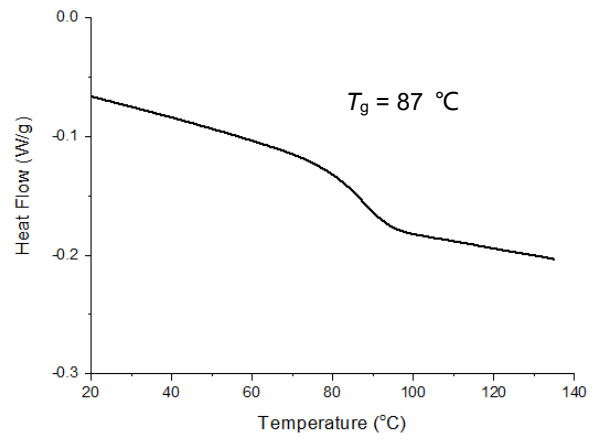


7) DSC data of the polymer products

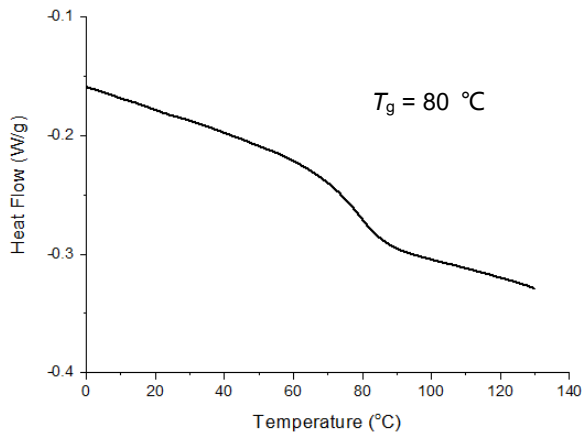
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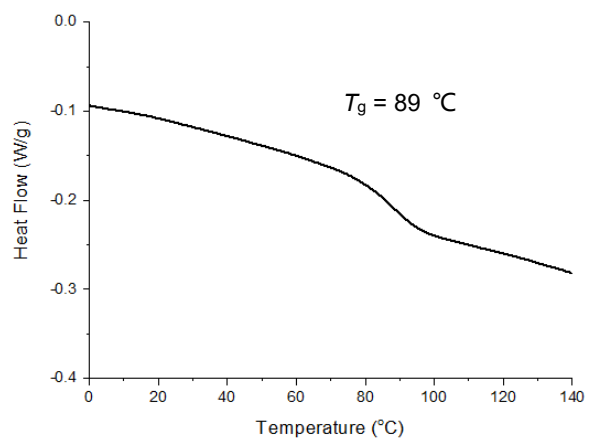
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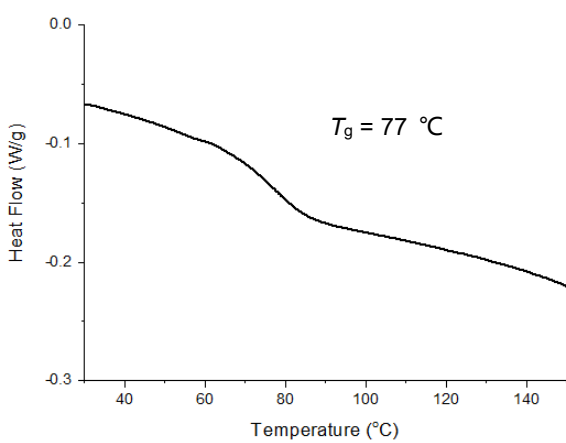
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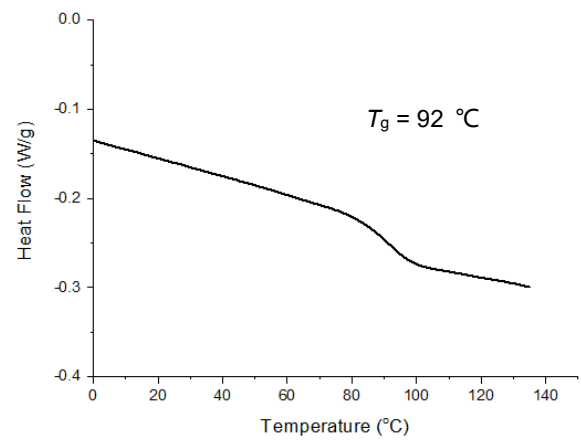
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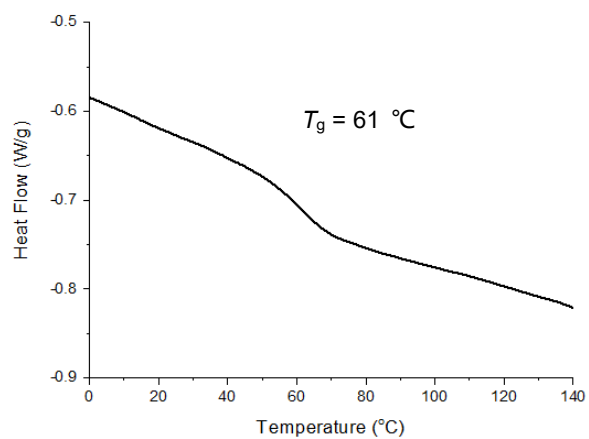
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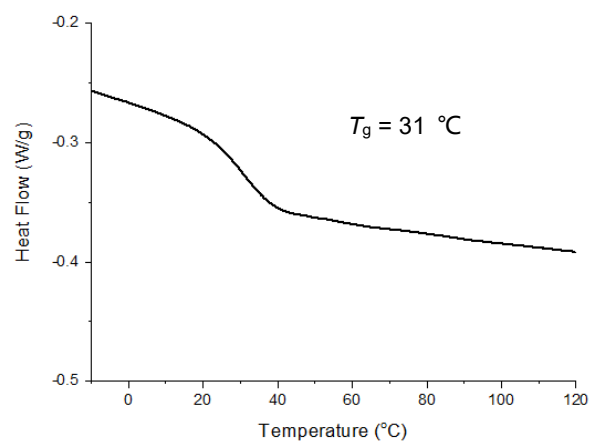
f) P6



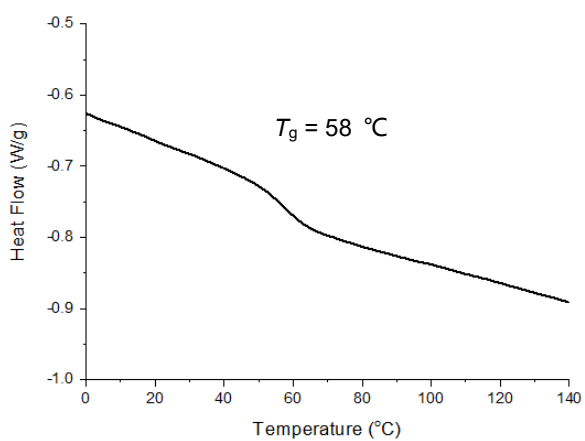
g) P7



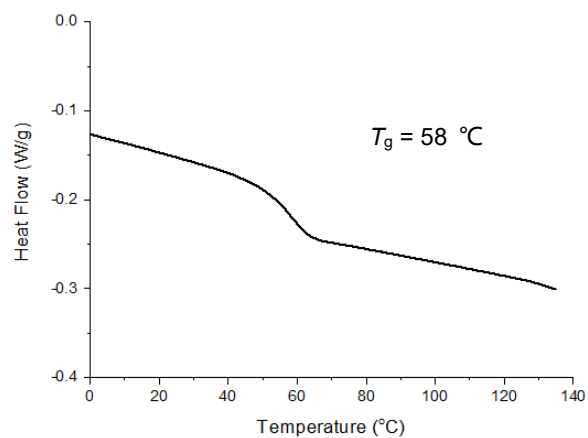
h) P8



i) P9



j) P10



k) P11

