

Chemoselective synthesis of fully-substituted pyrroles *via* a one-pot four-component isocyanide-based reaction

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X-RAY CRYSTALLOGRAPHIC INFORMATION

ORTEP diagram for **51**; summary of data: The Cambridge Crystallographic Data Centre (CCDC)

no.: 2023035; unit cell parameters: $a = 12.135(2)$ $b = 13.466(3)$ $c = 13.797(3)$ P-1.

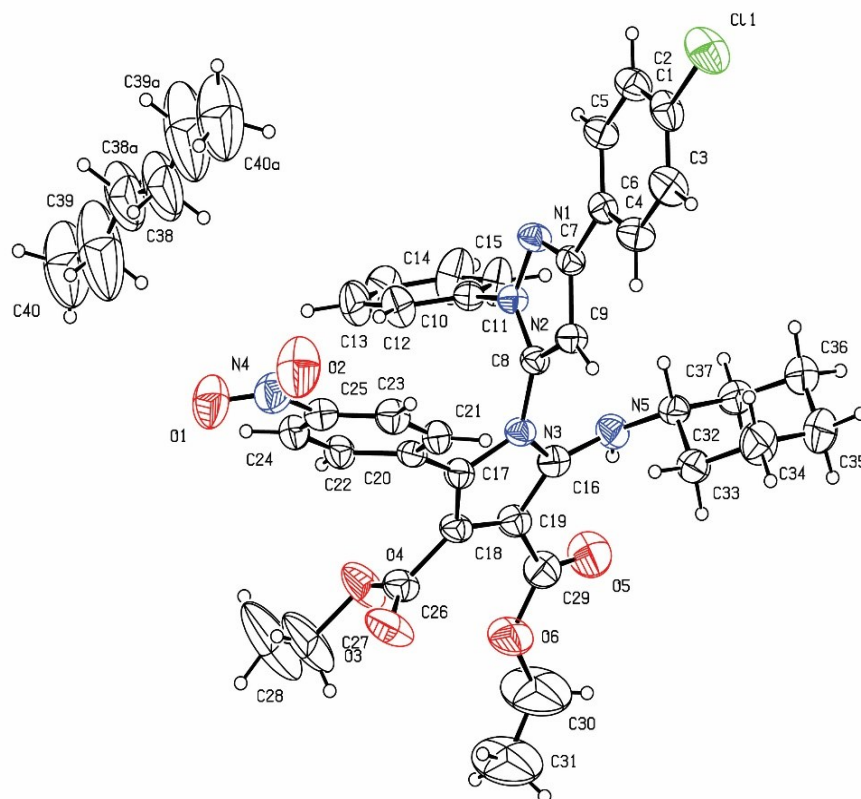
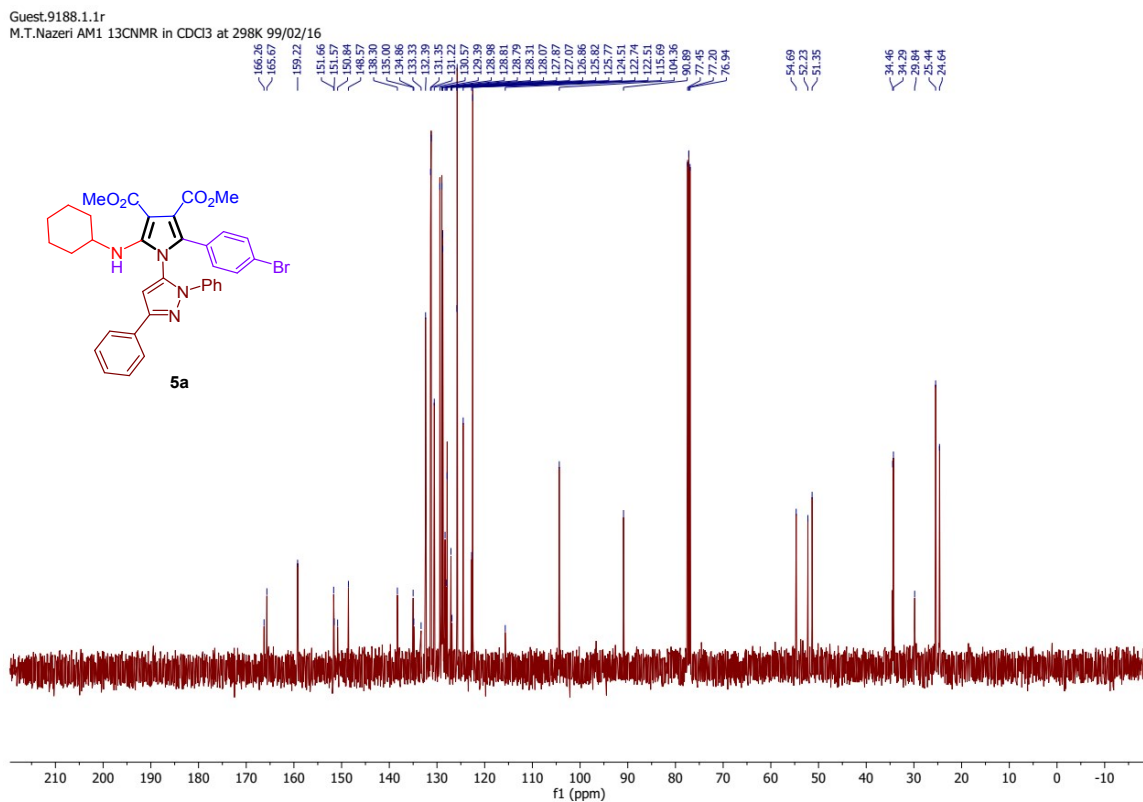
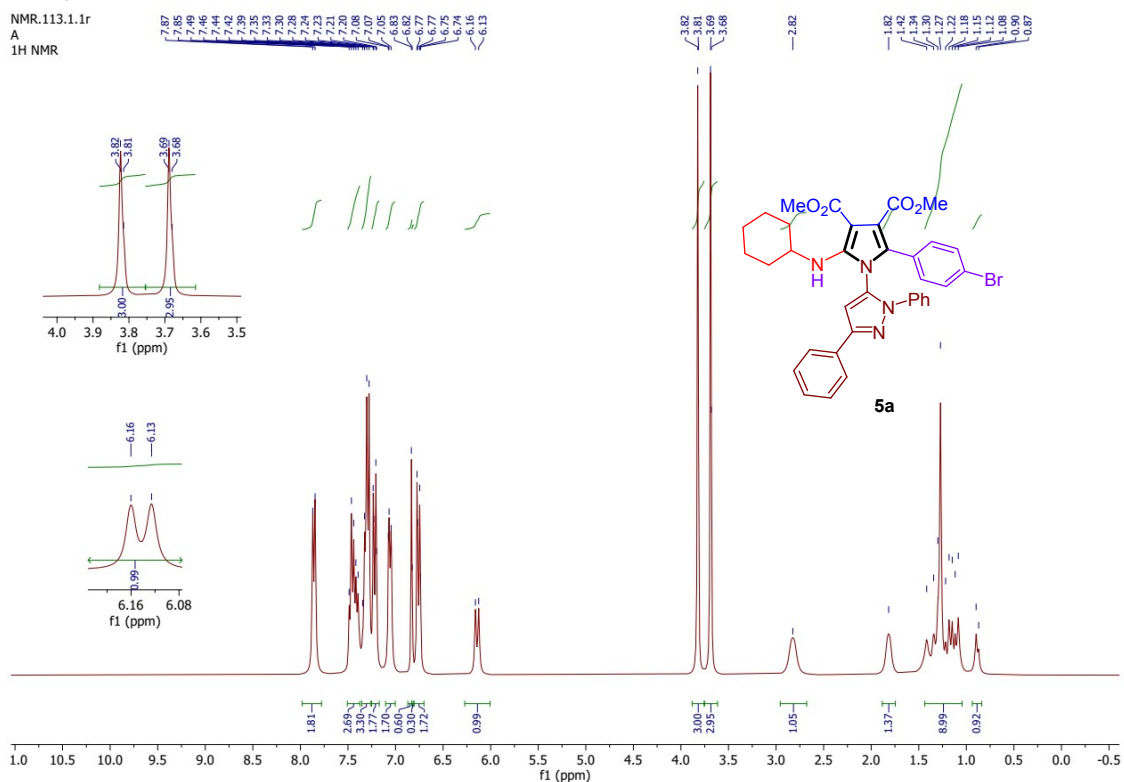
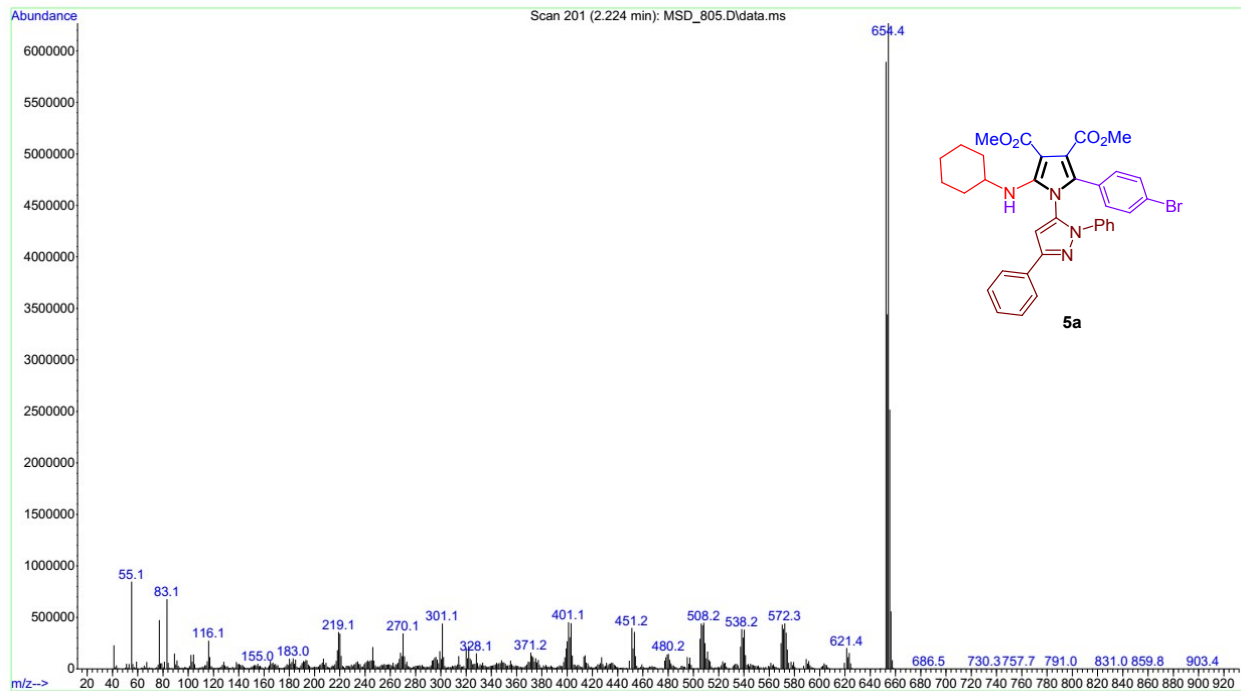


Figure 1. X-ray crystal structure of compound **51**.

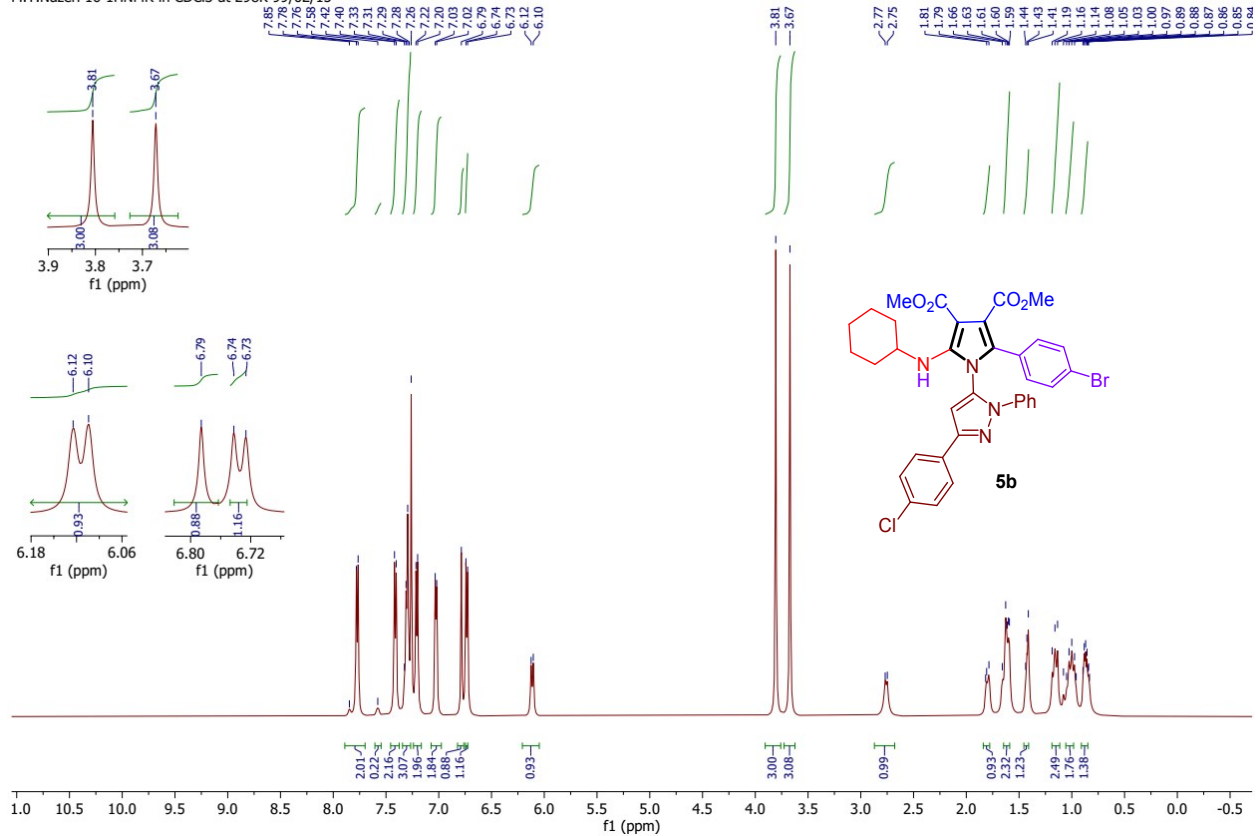
¹H NMR, ¹³C NMR AND MASS SPECTRA OF THE COMPOUNDS



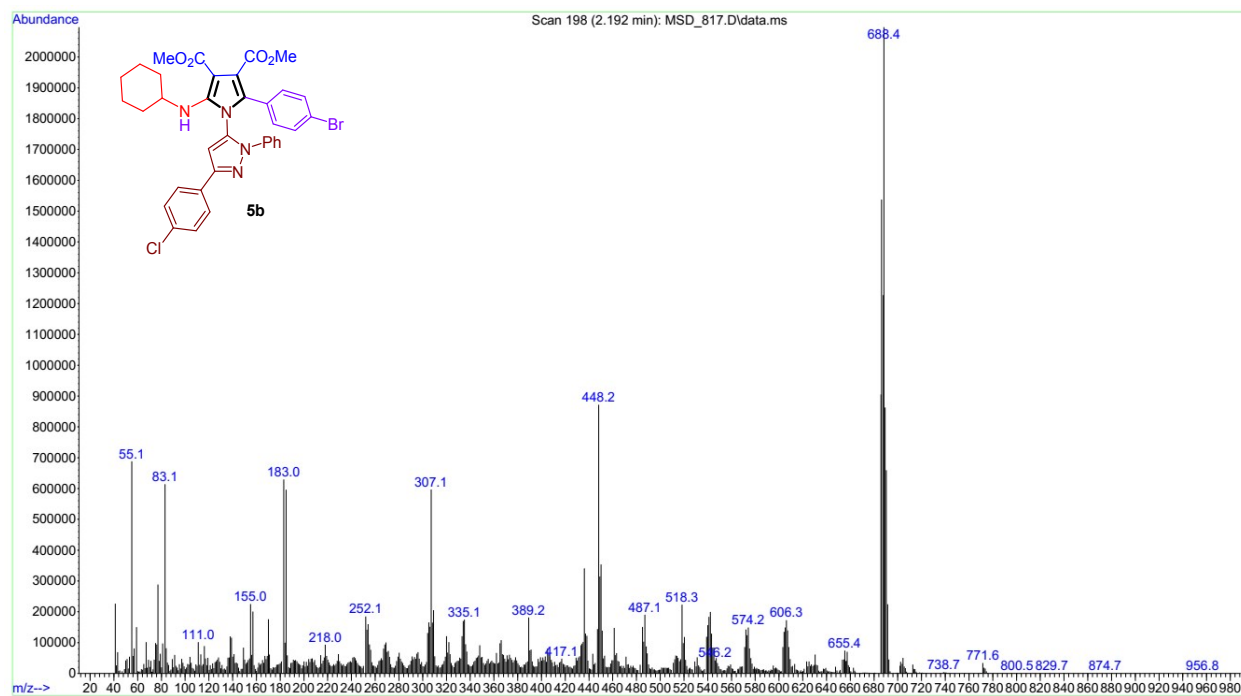
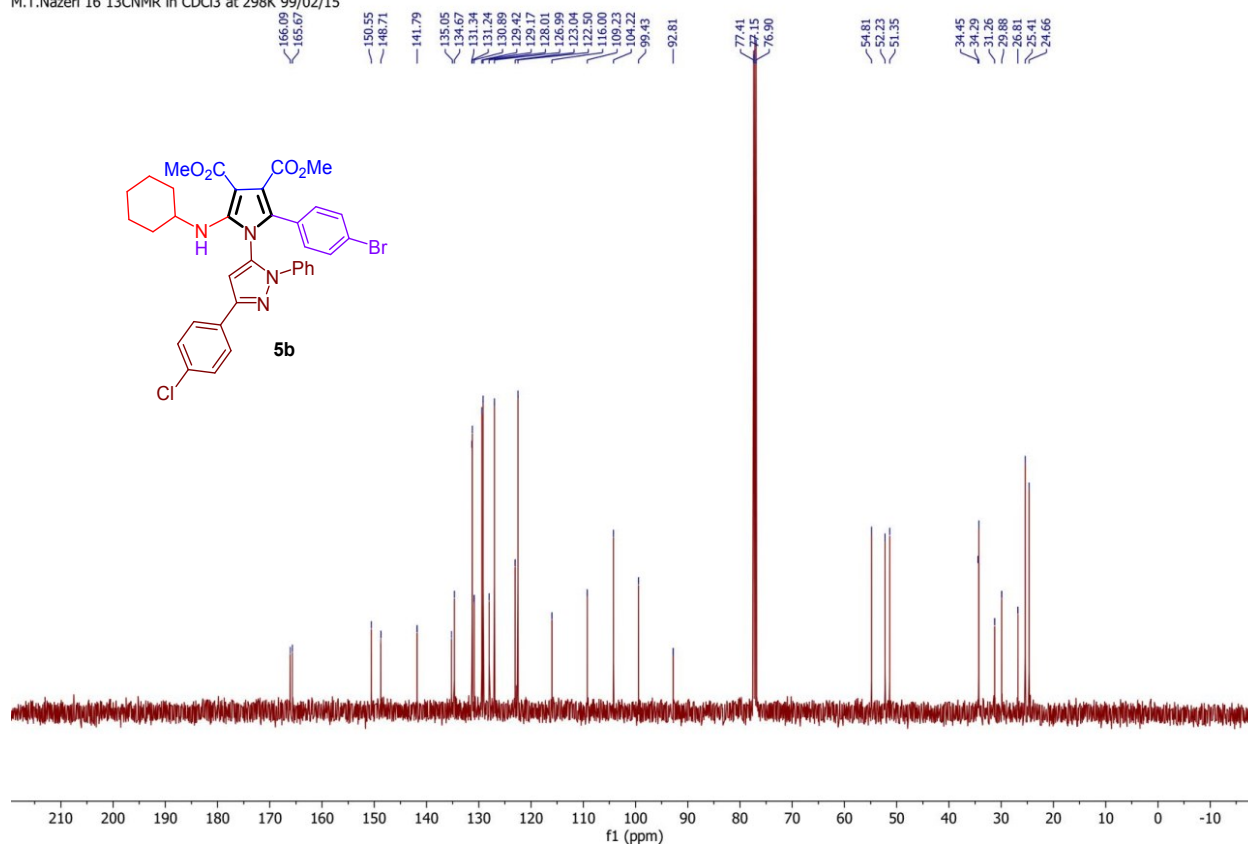


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M.T.Nazeri 16 ¹H NMR in CDCl₃ at 298K 99/02/15

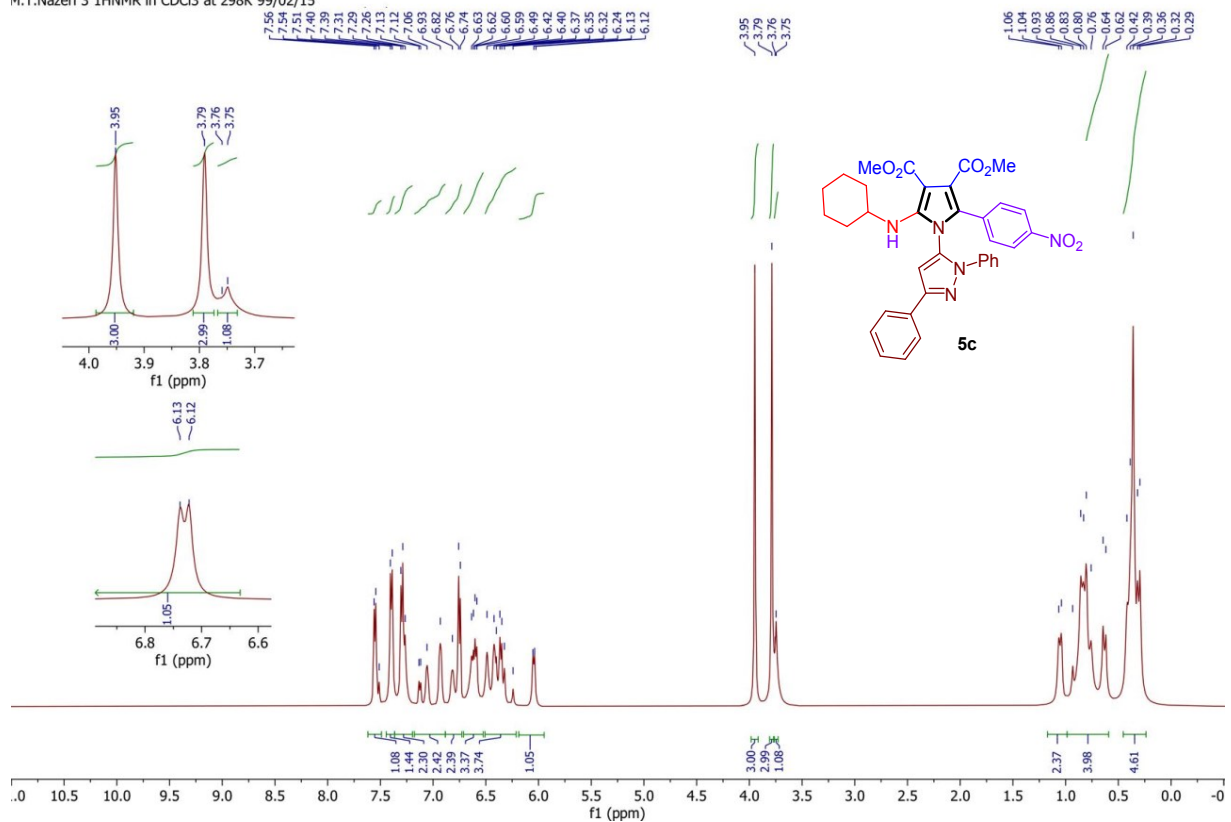


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M.T.Nazeri 16 13CNMR in CDCl3 at 298K 99/02/15



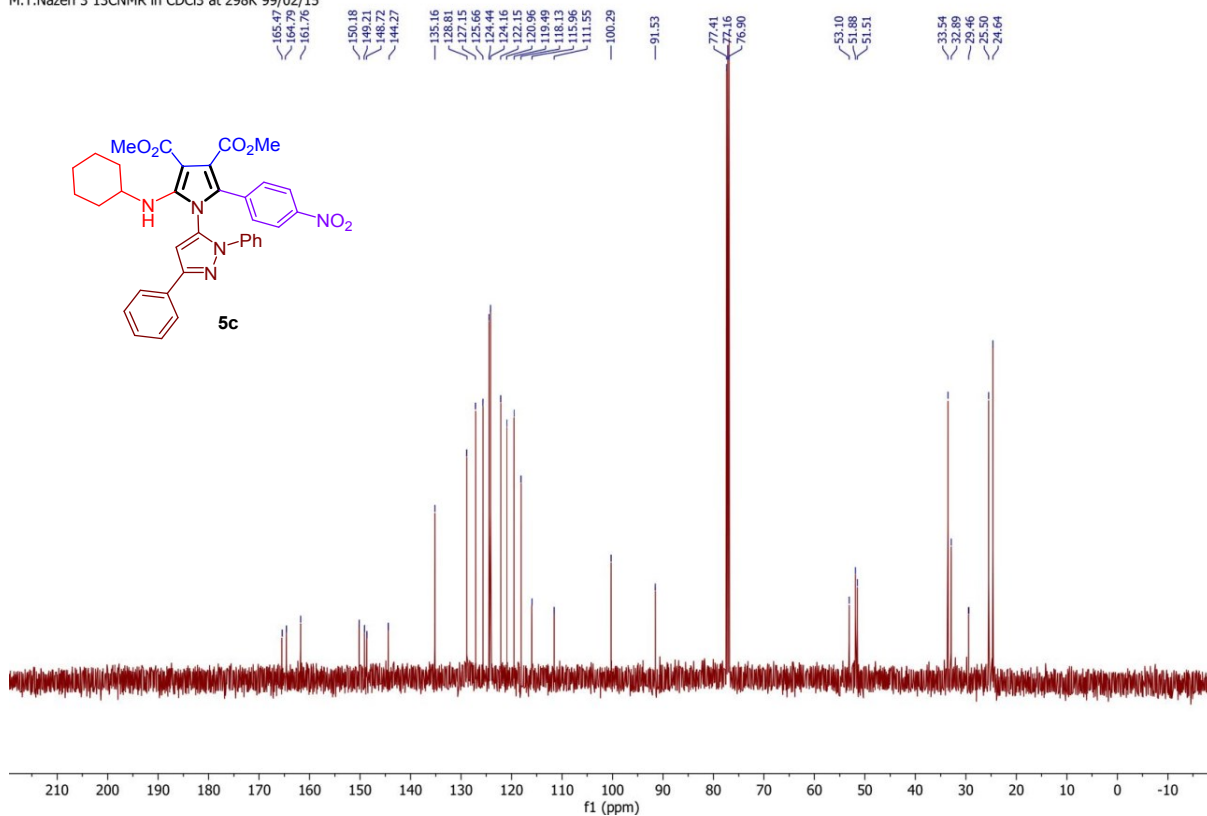
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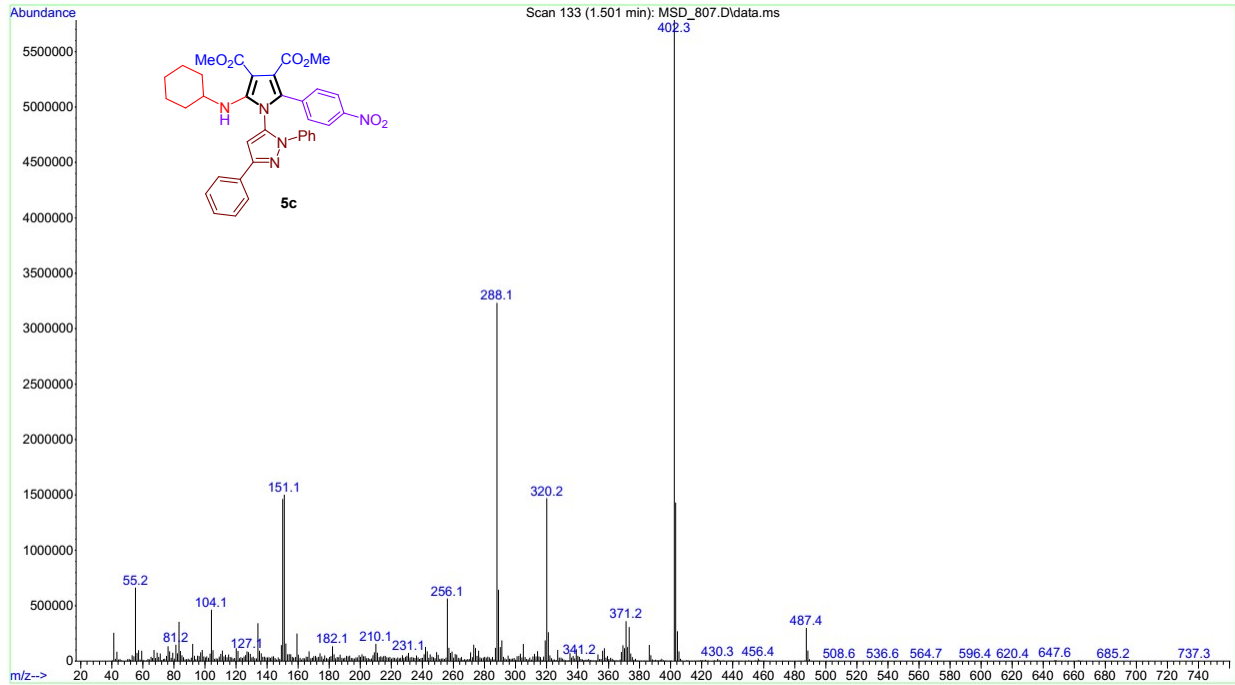
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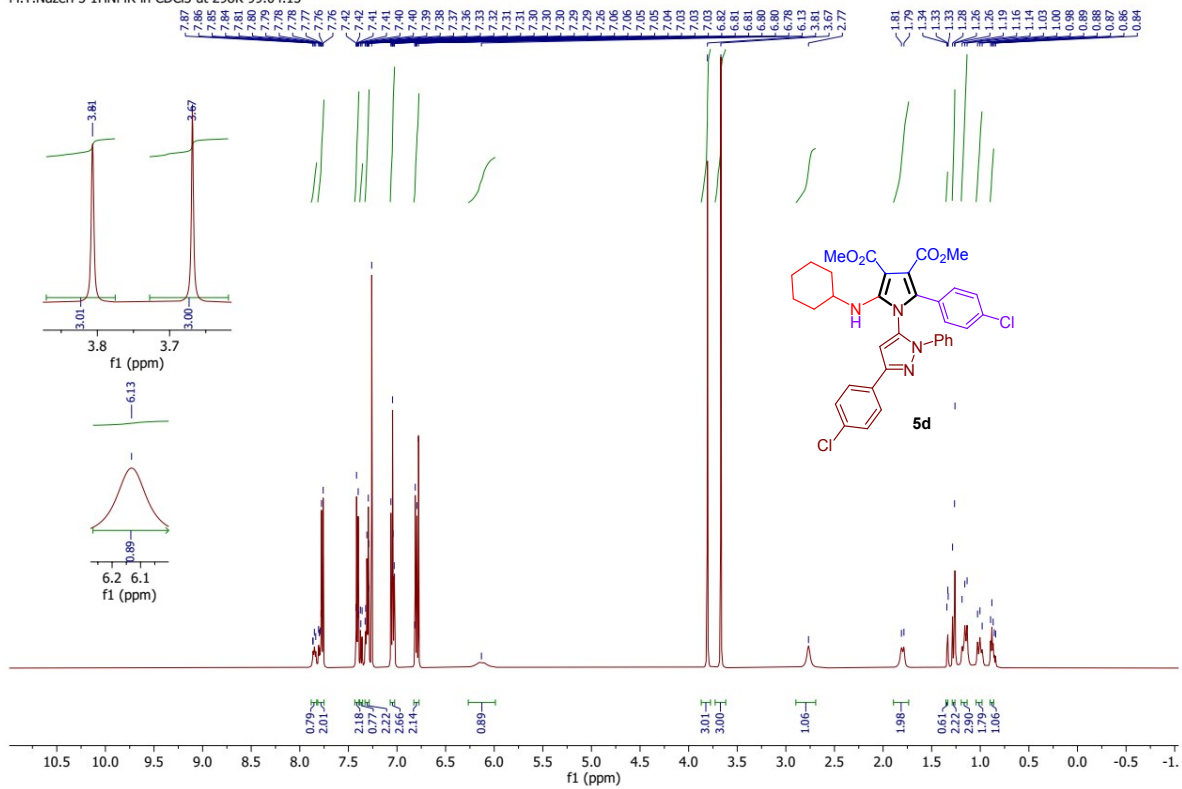
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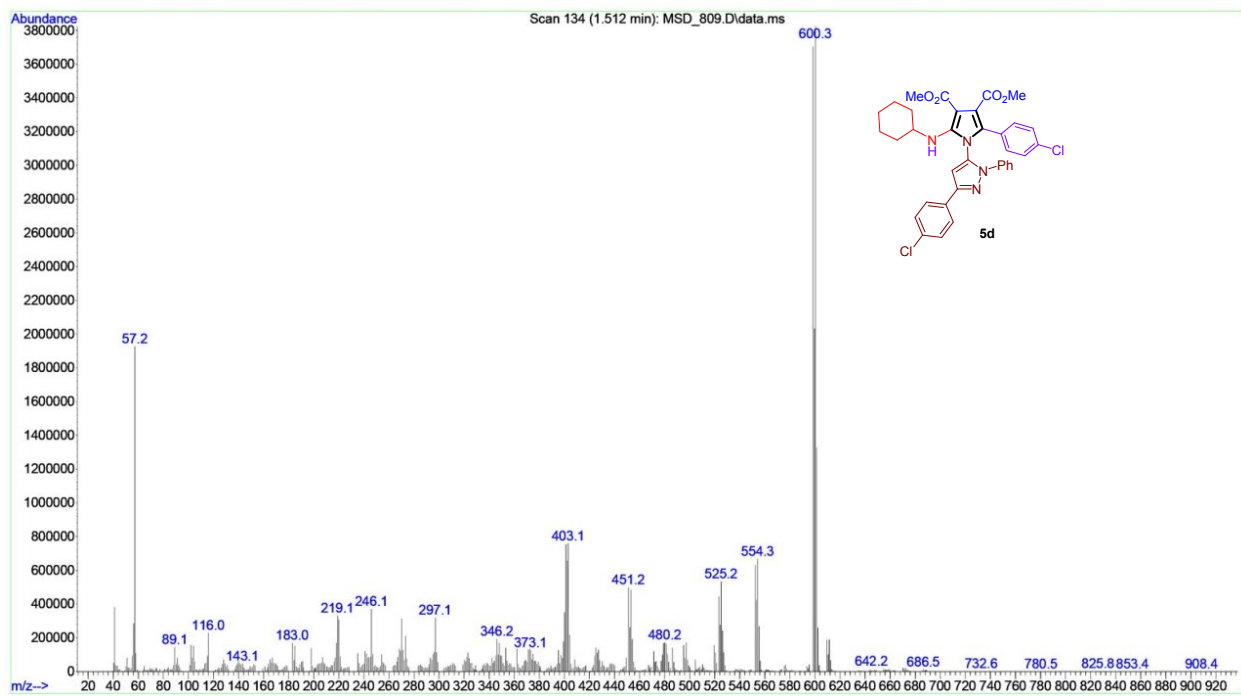
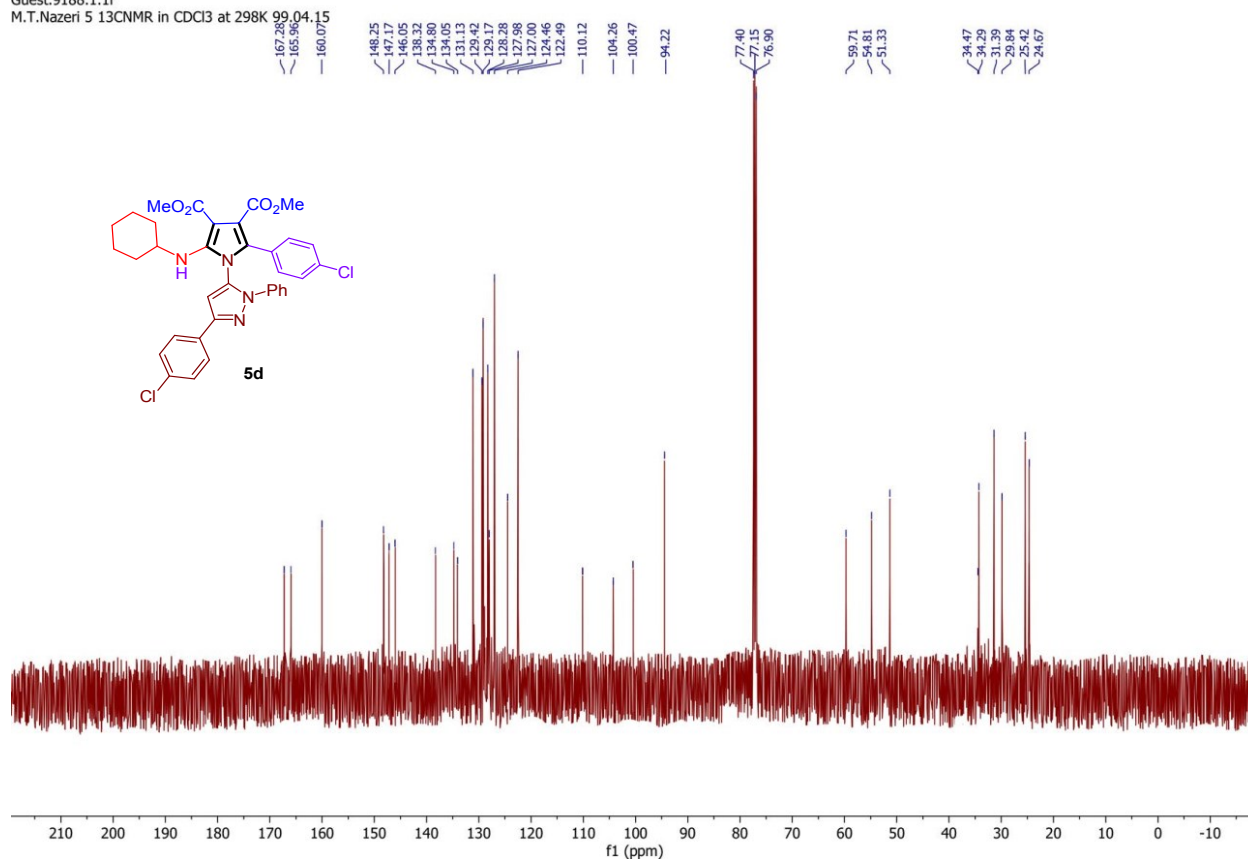
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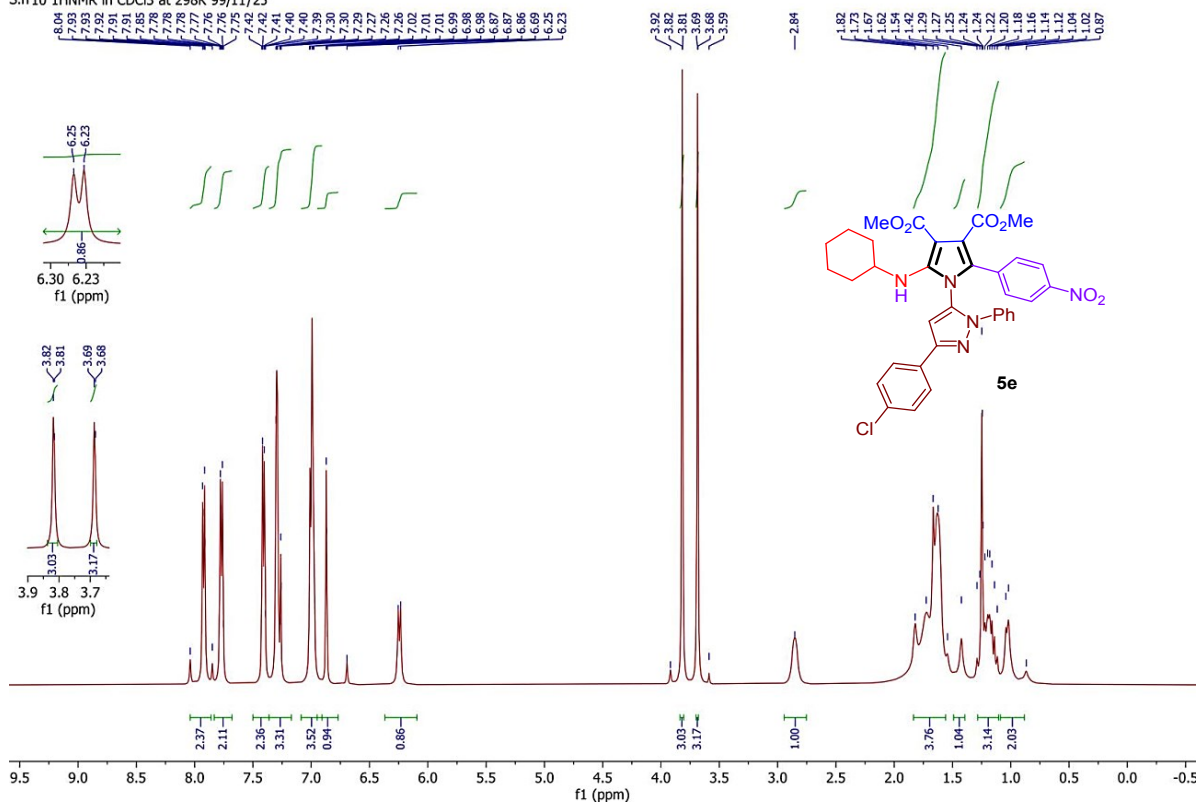


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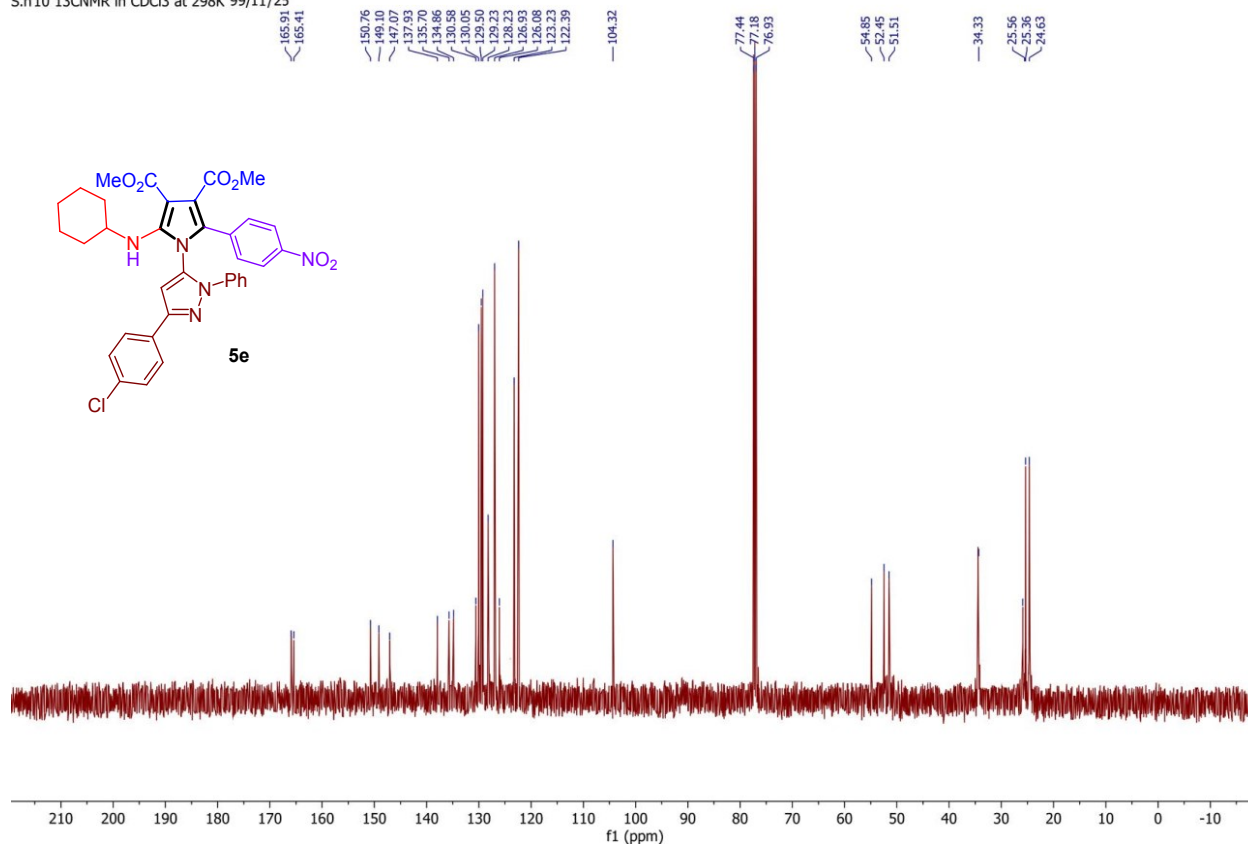
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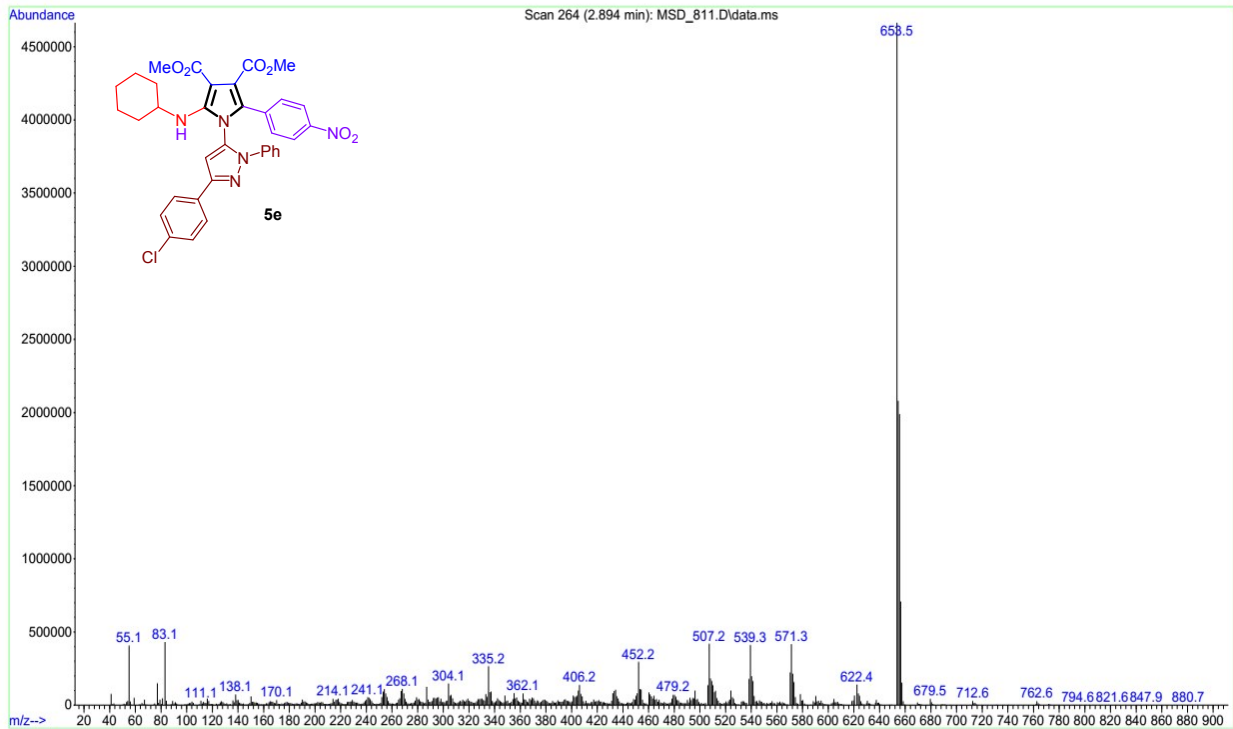


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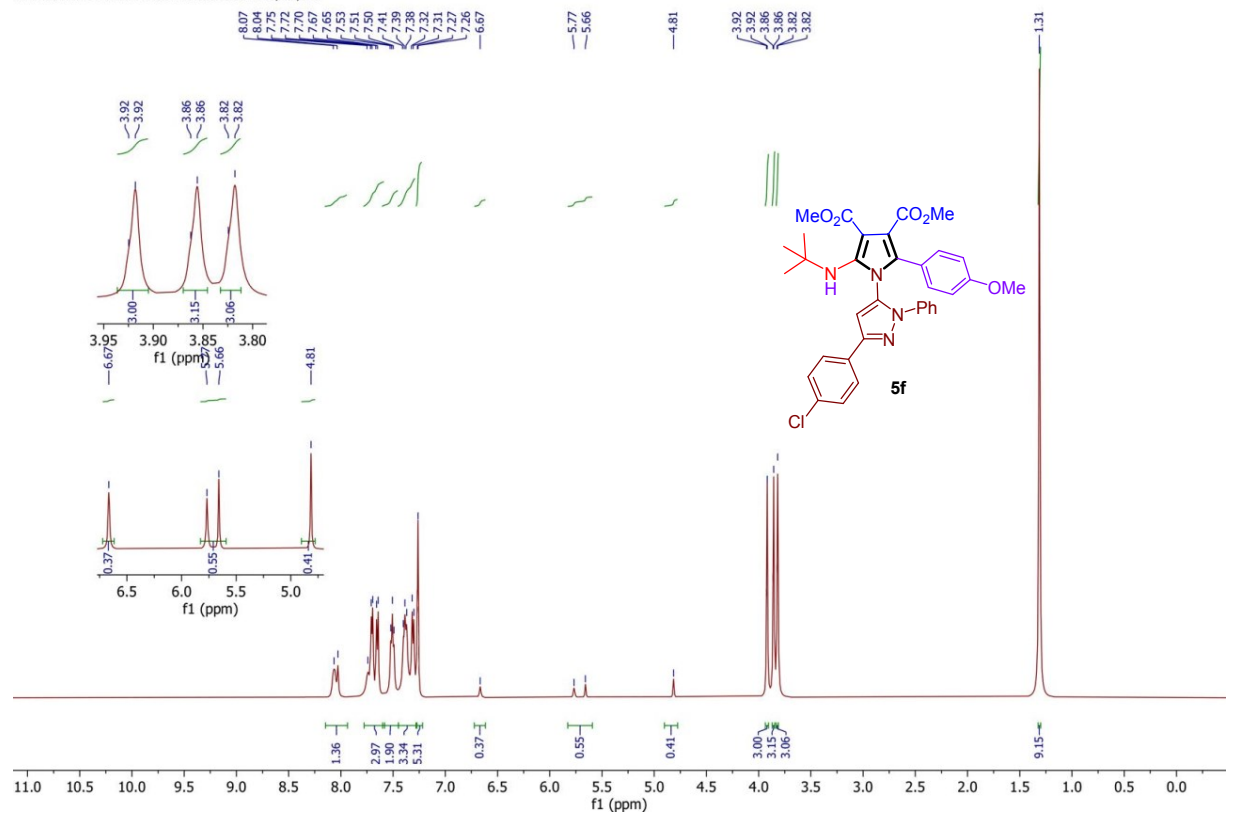
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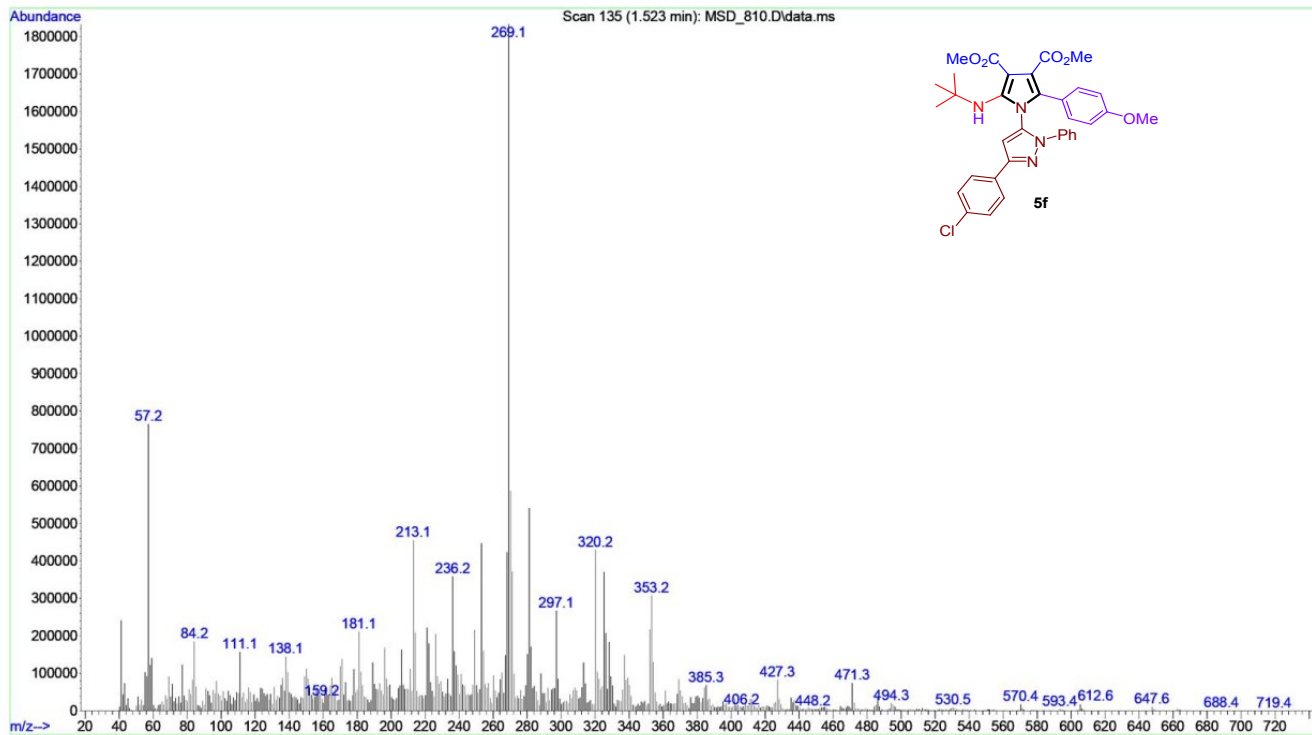
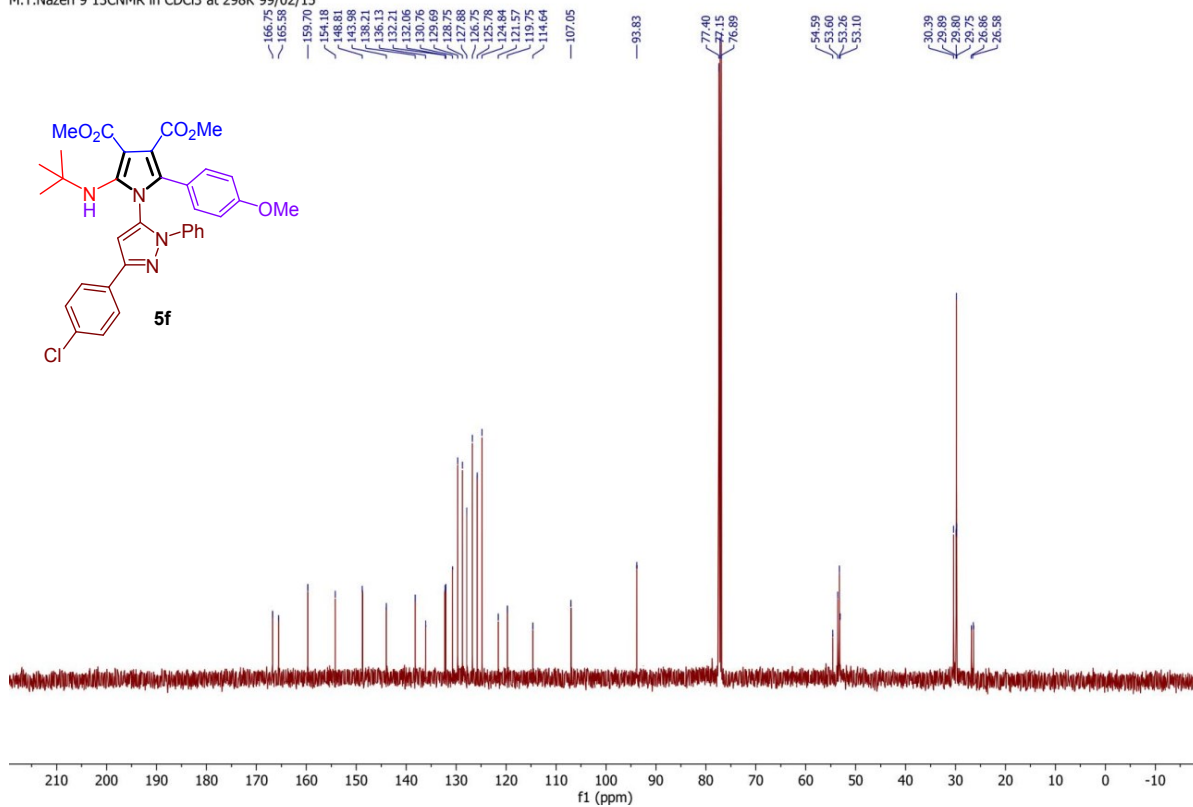


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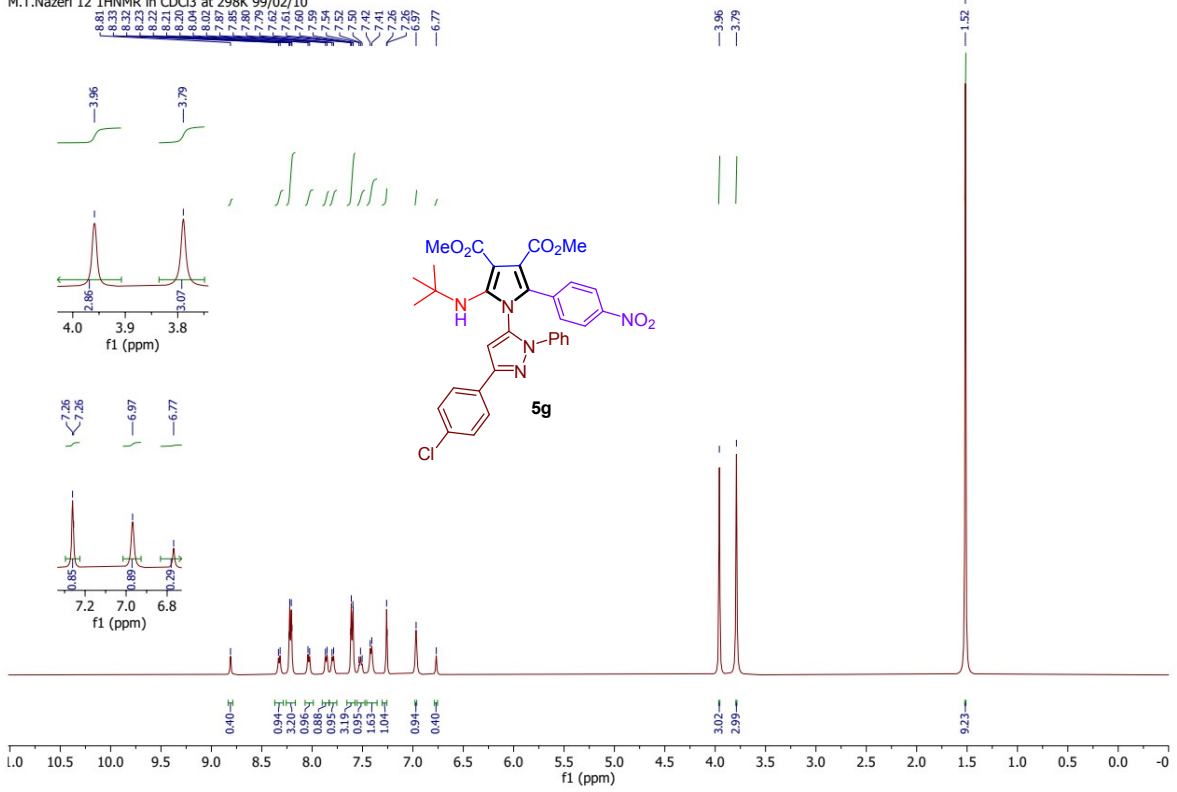


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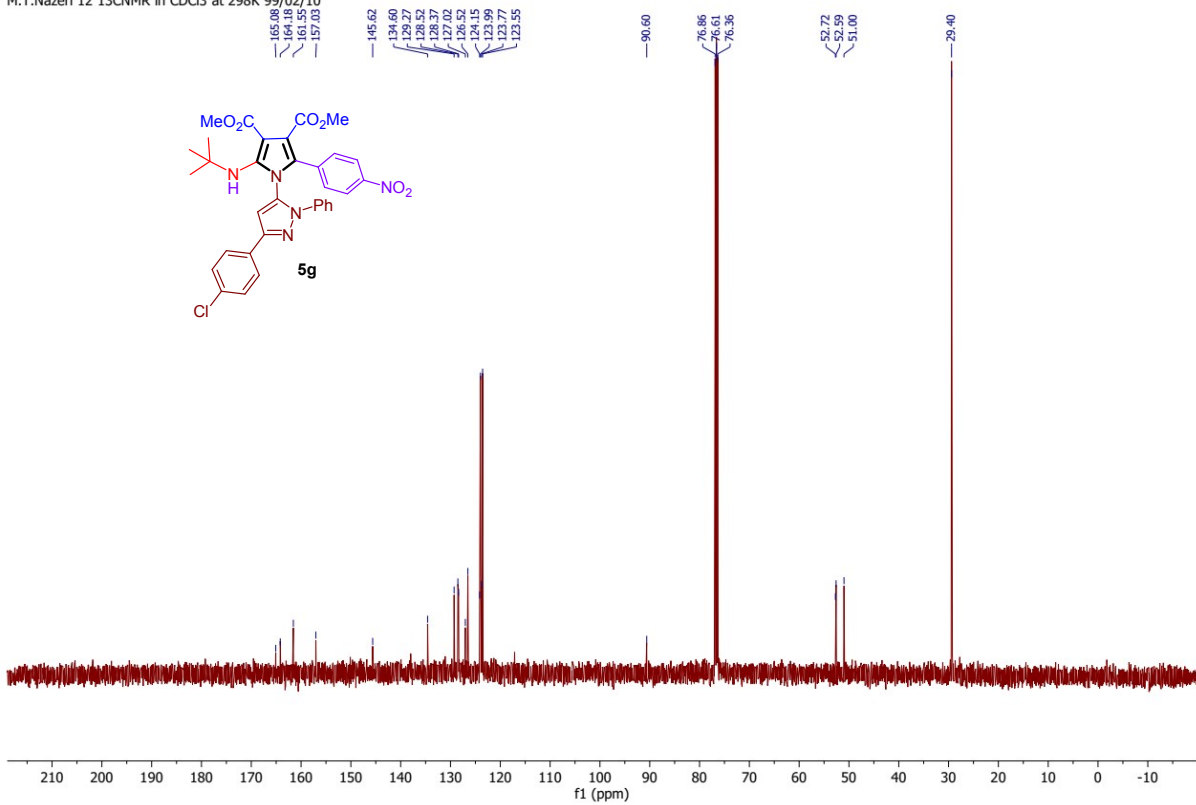
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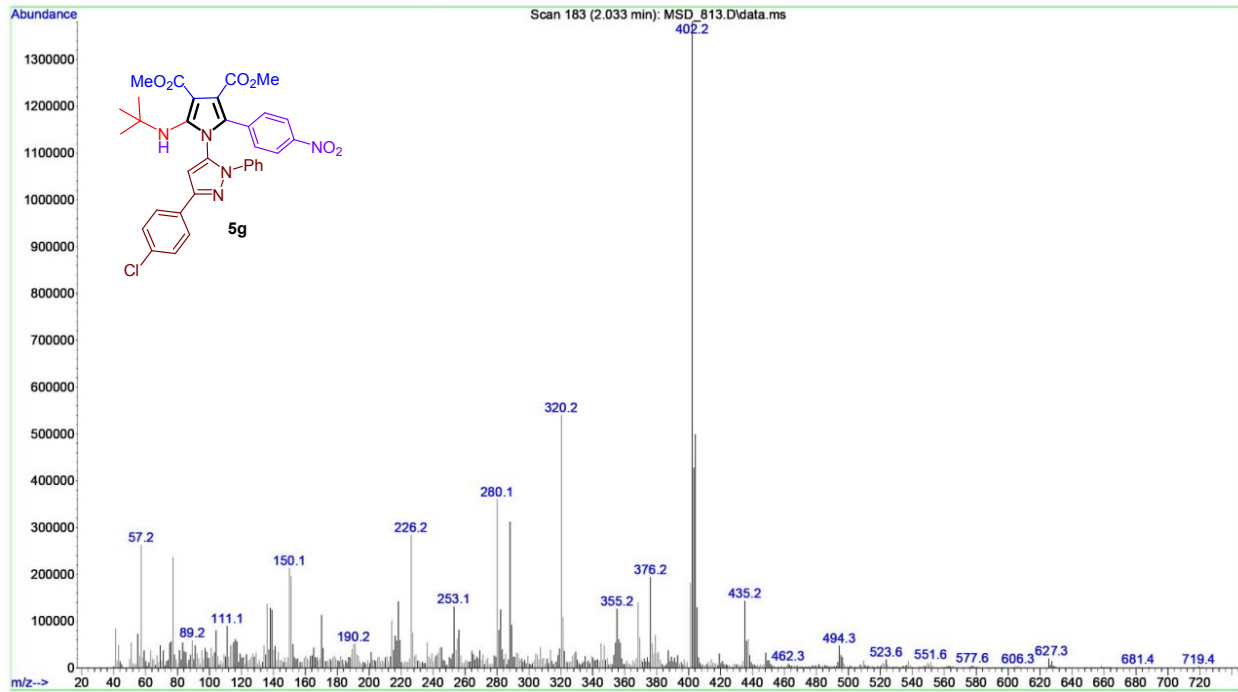
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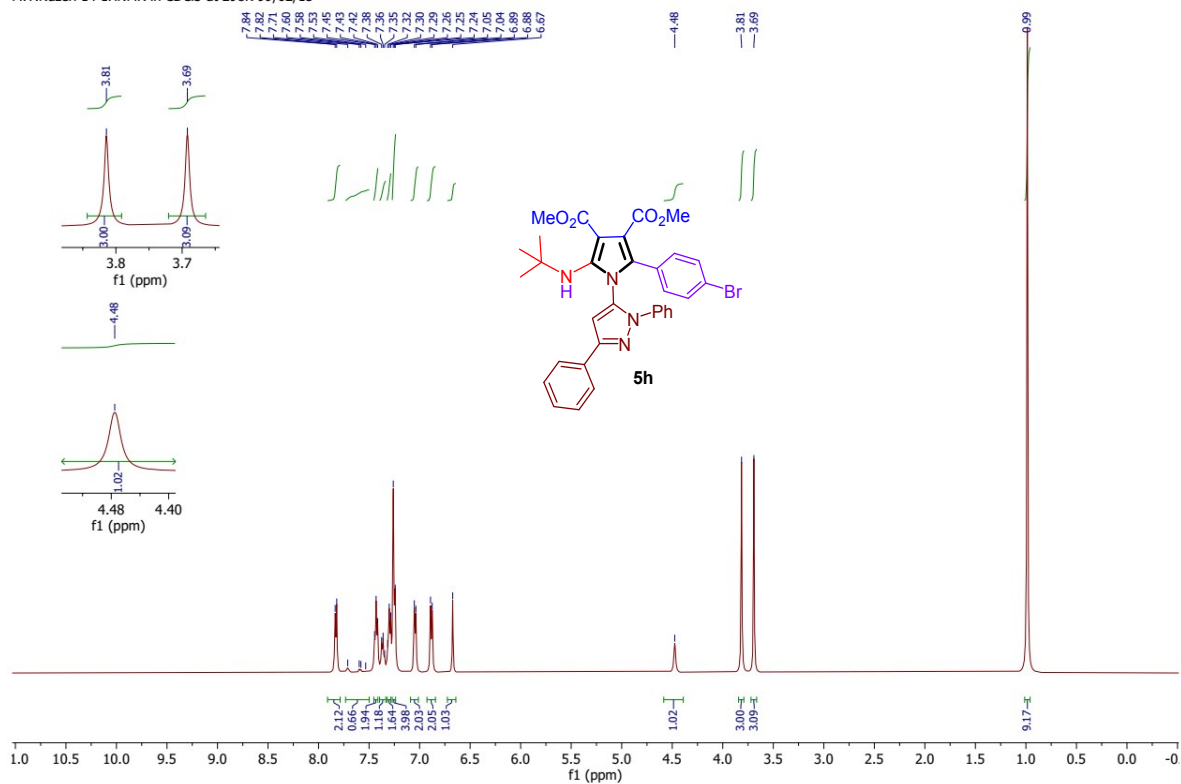
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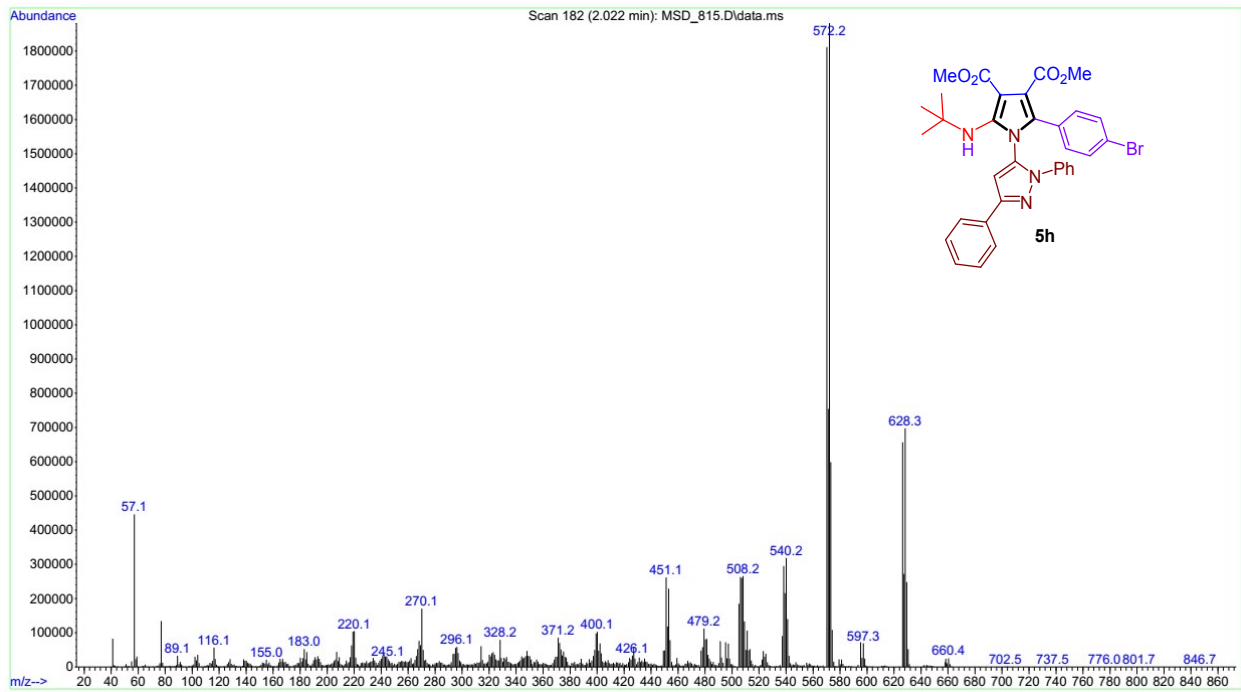
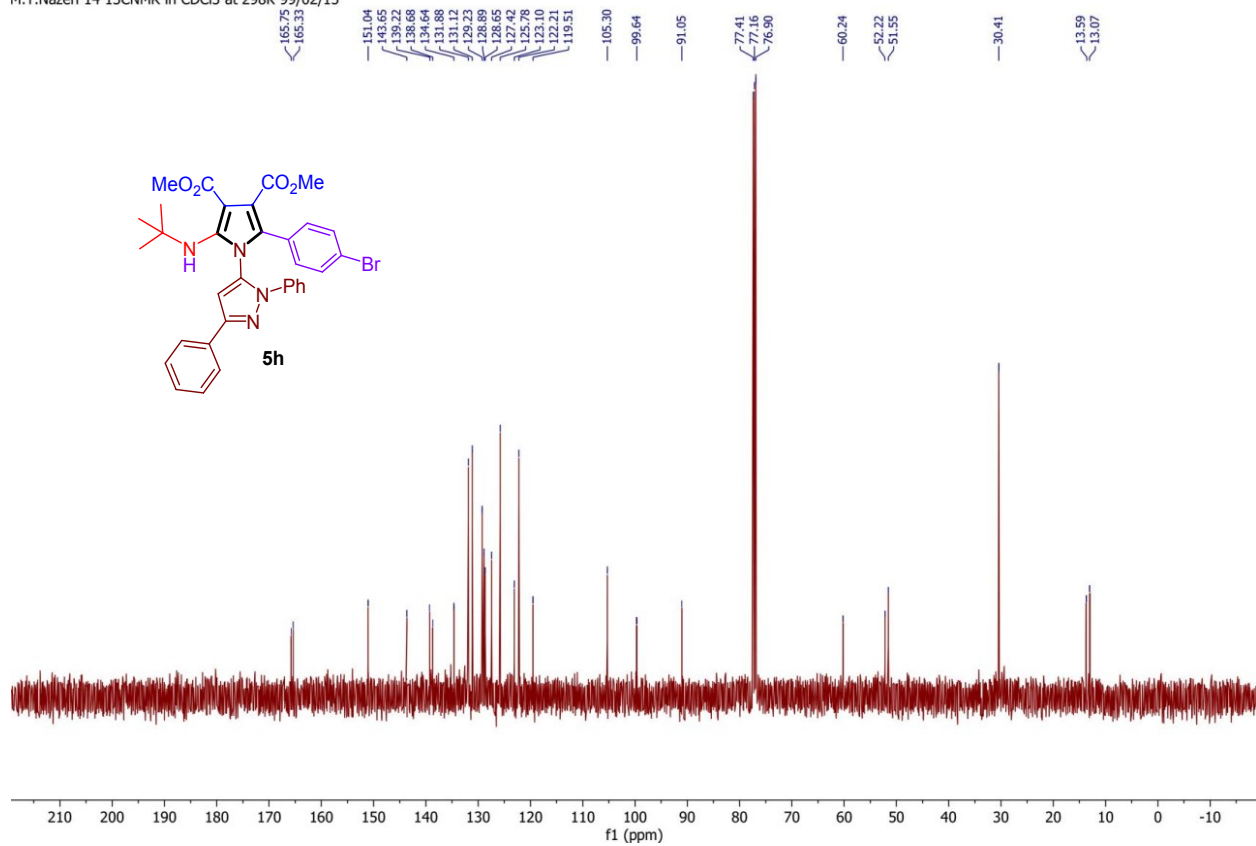


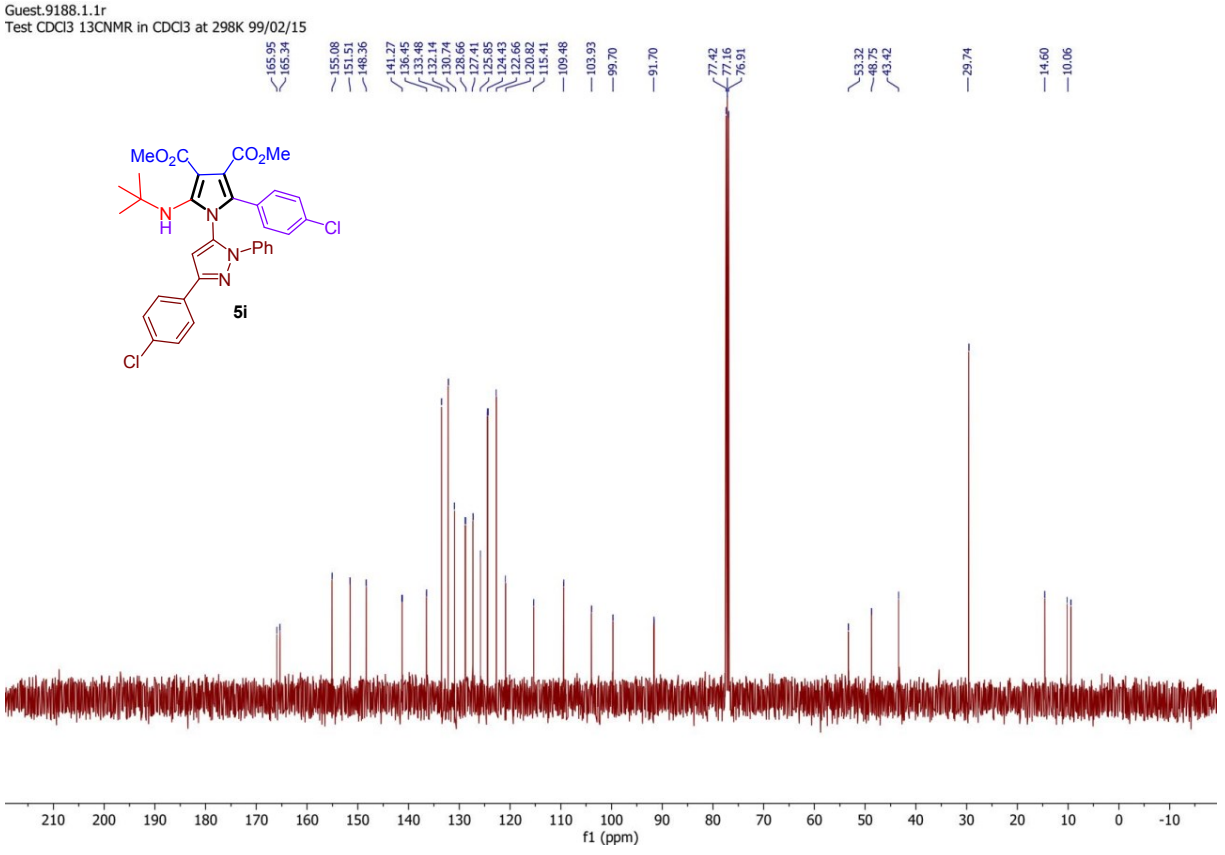
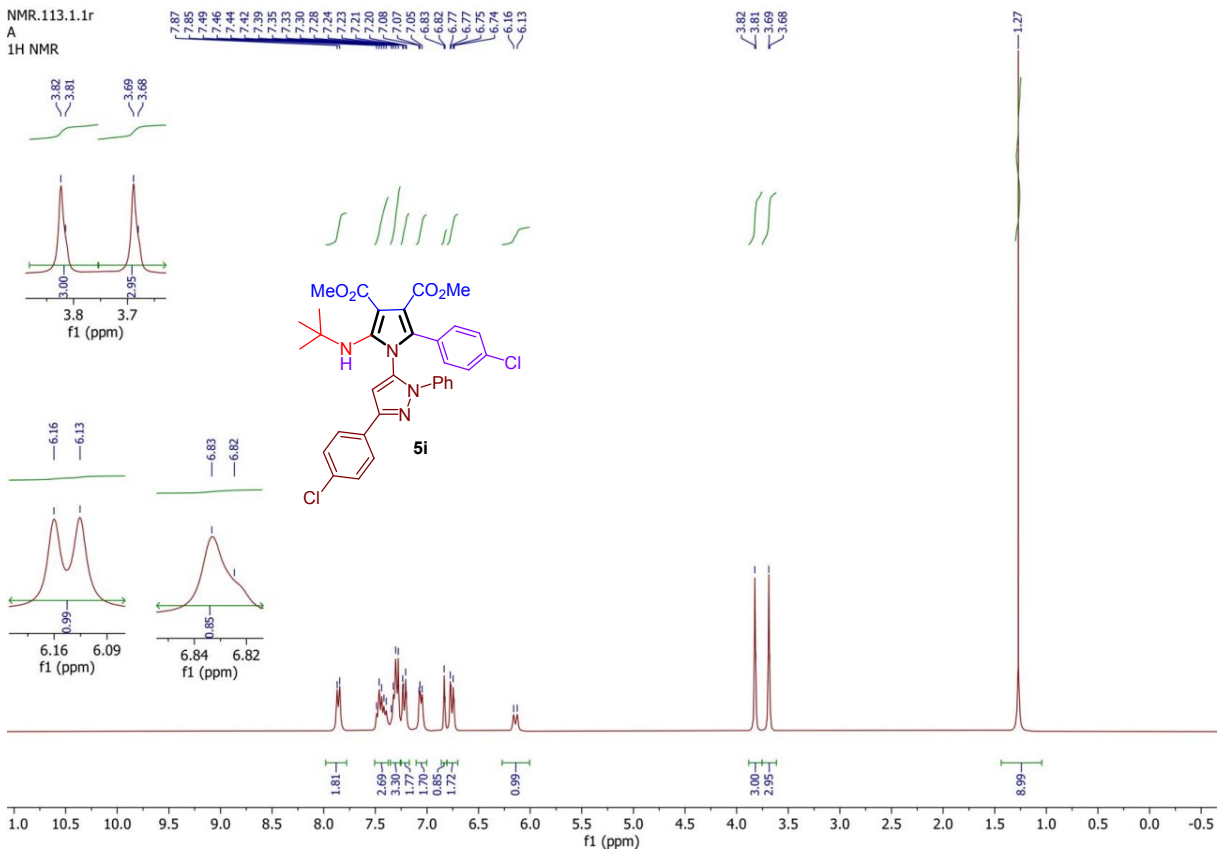
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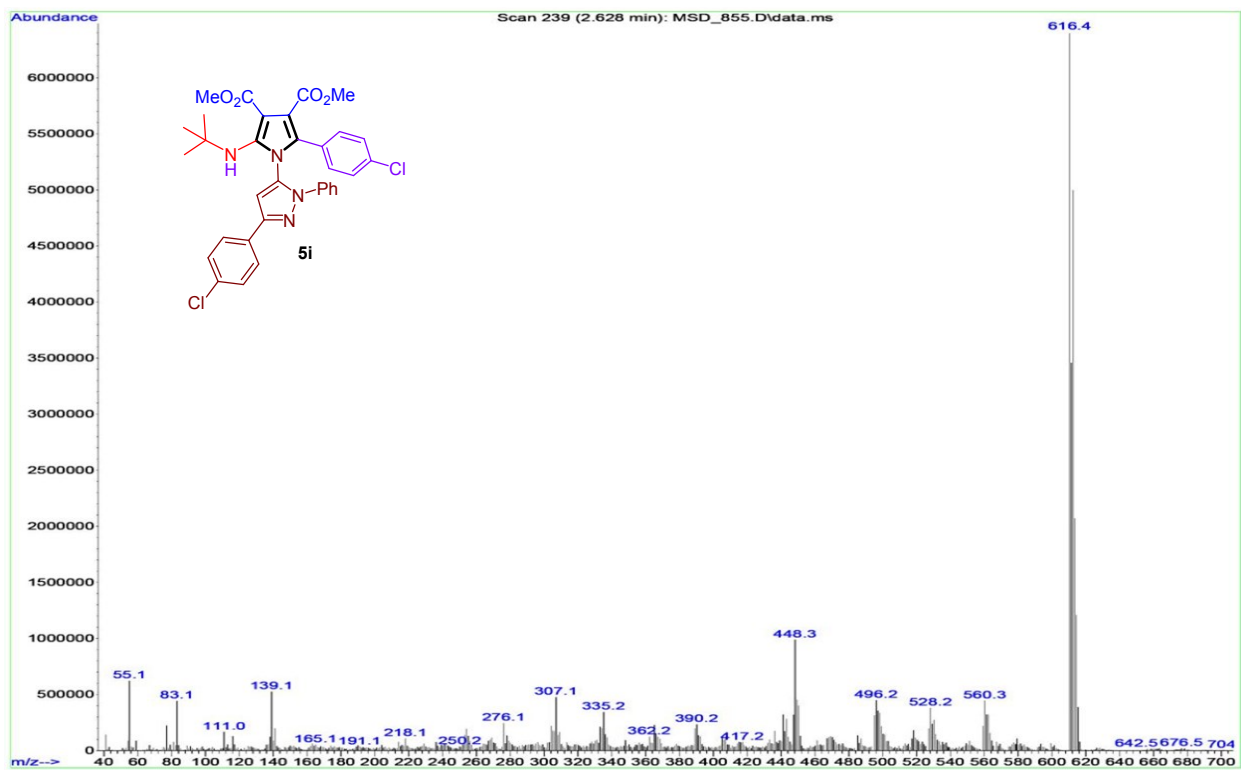
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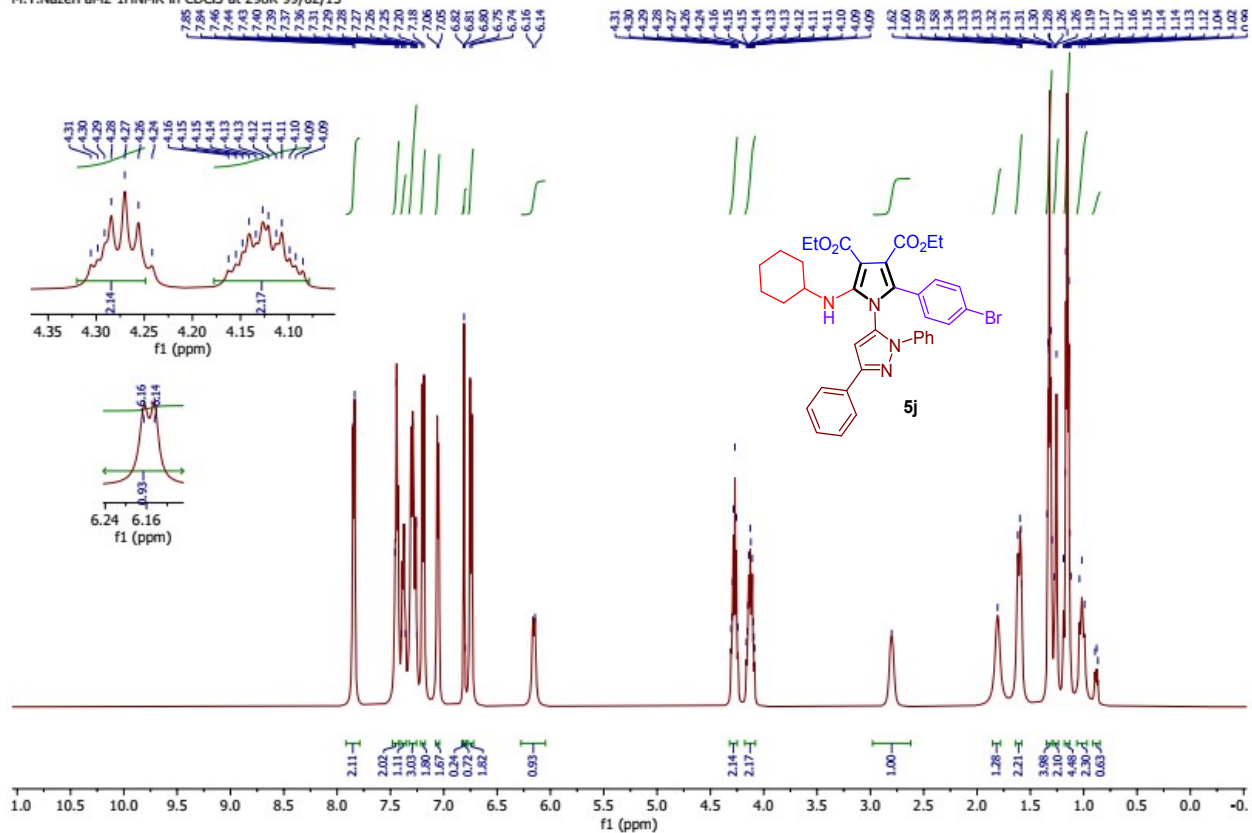




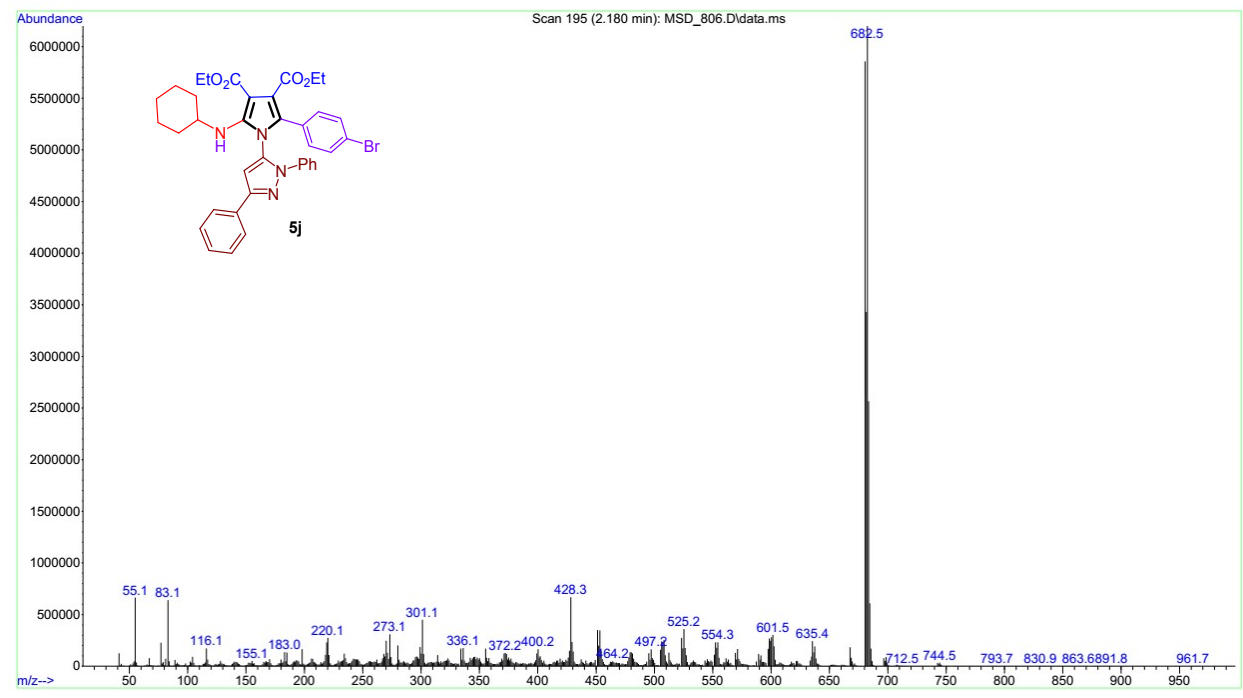
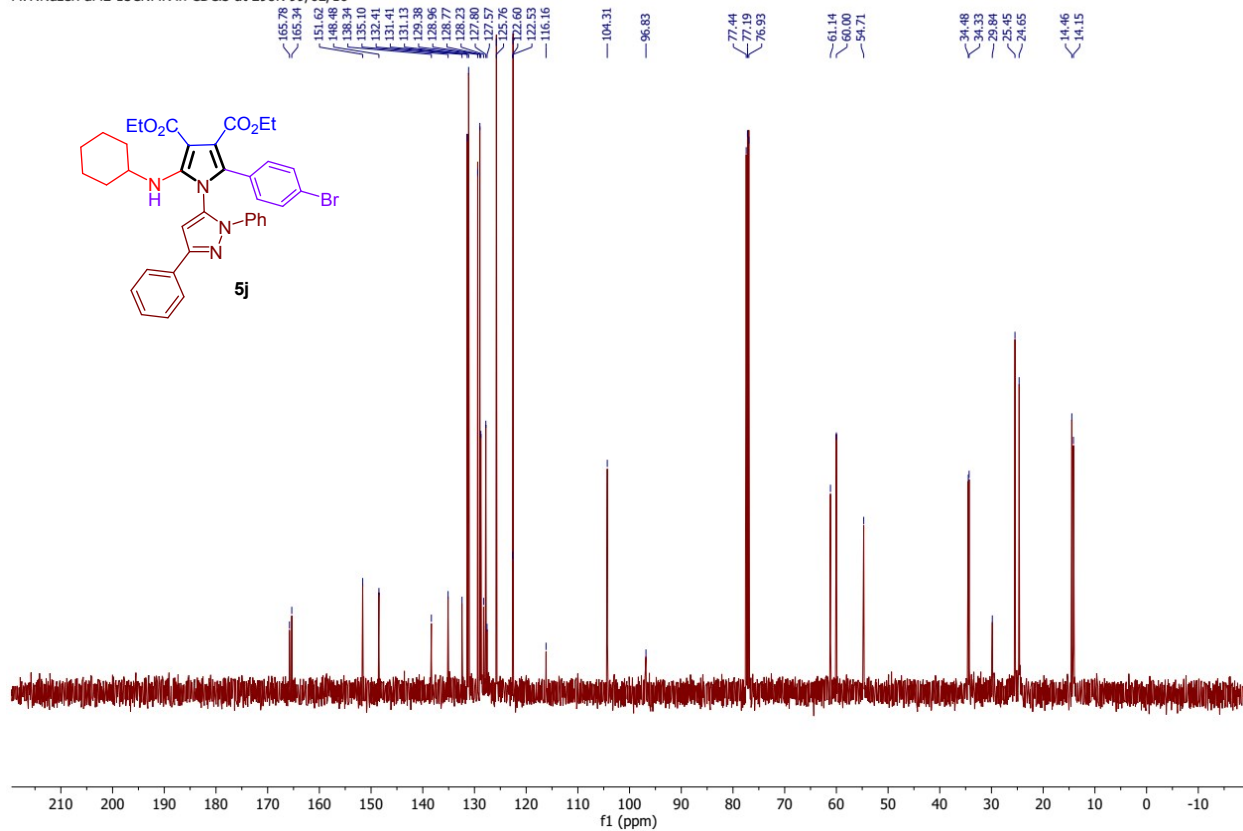


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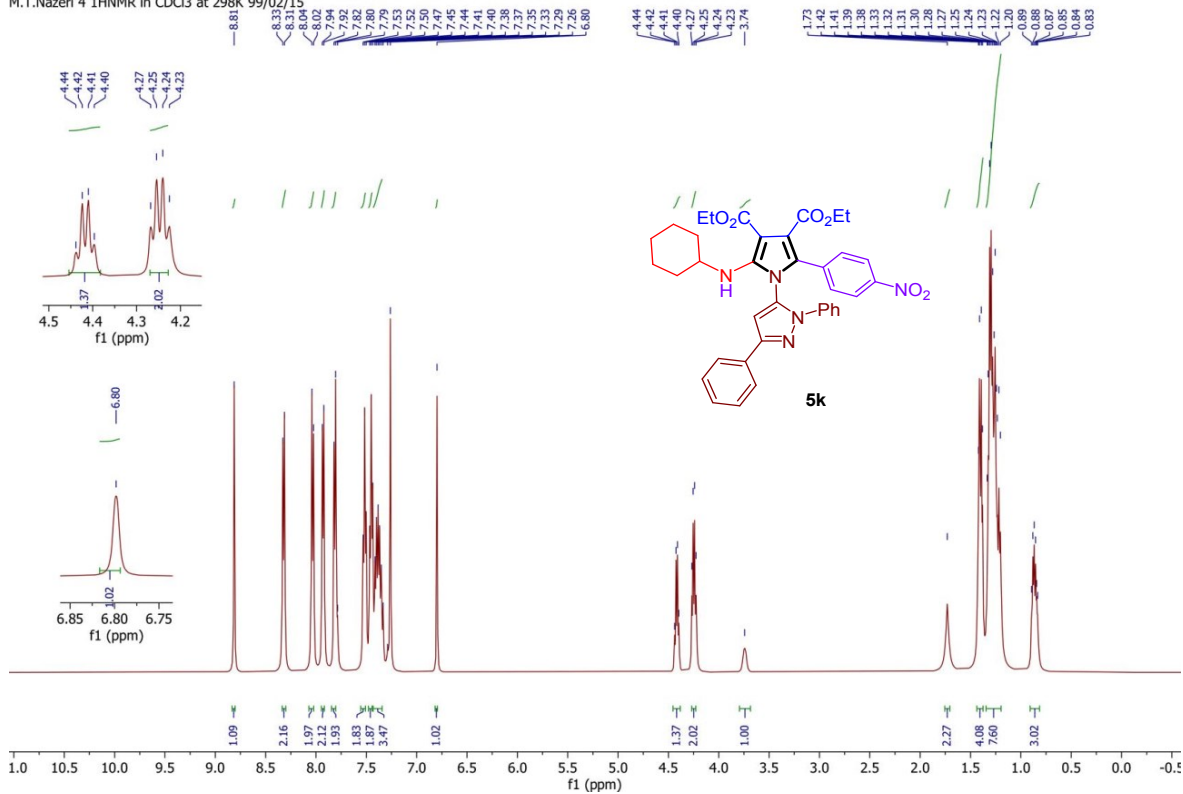


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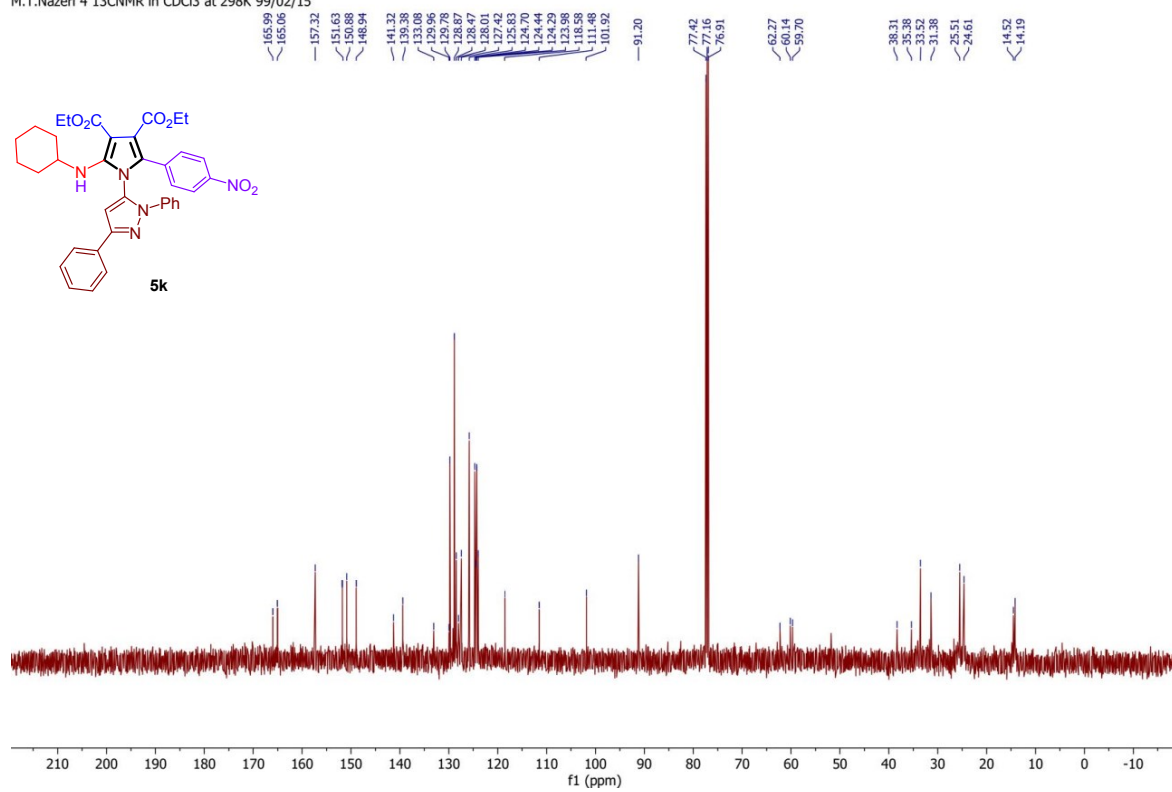
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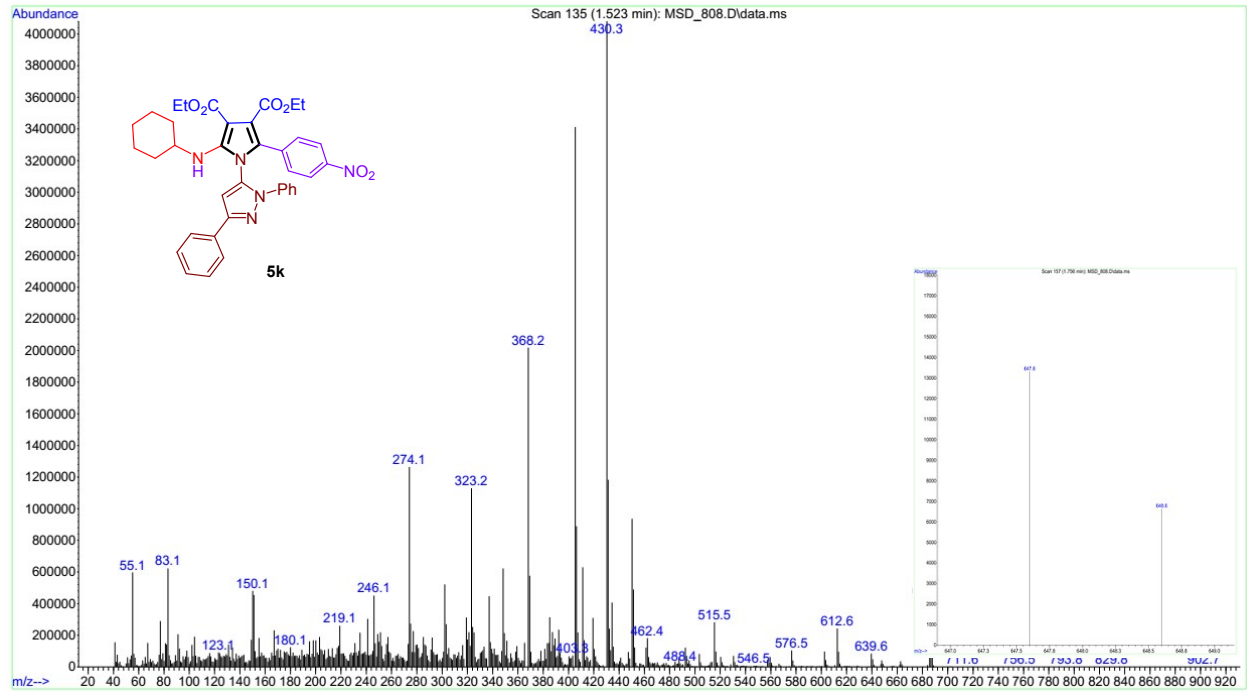
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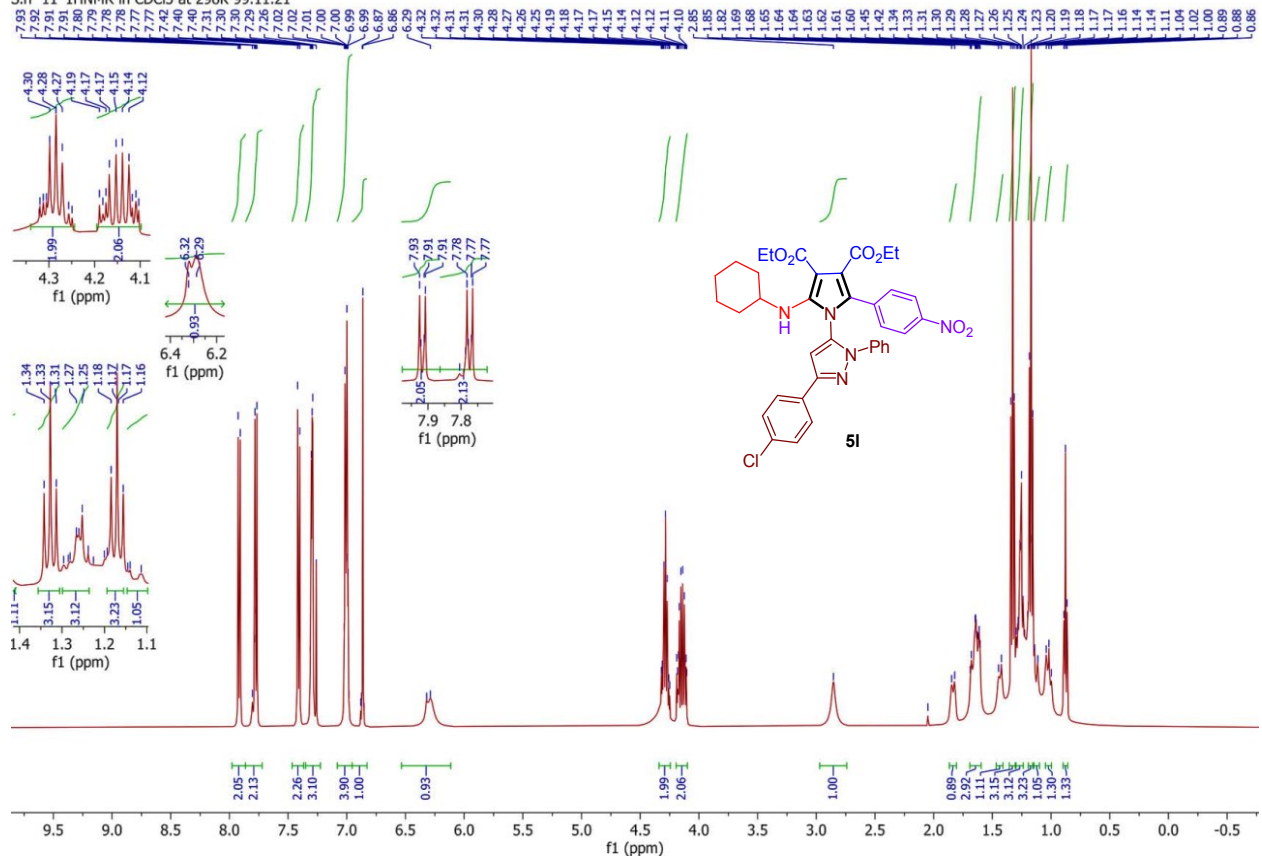
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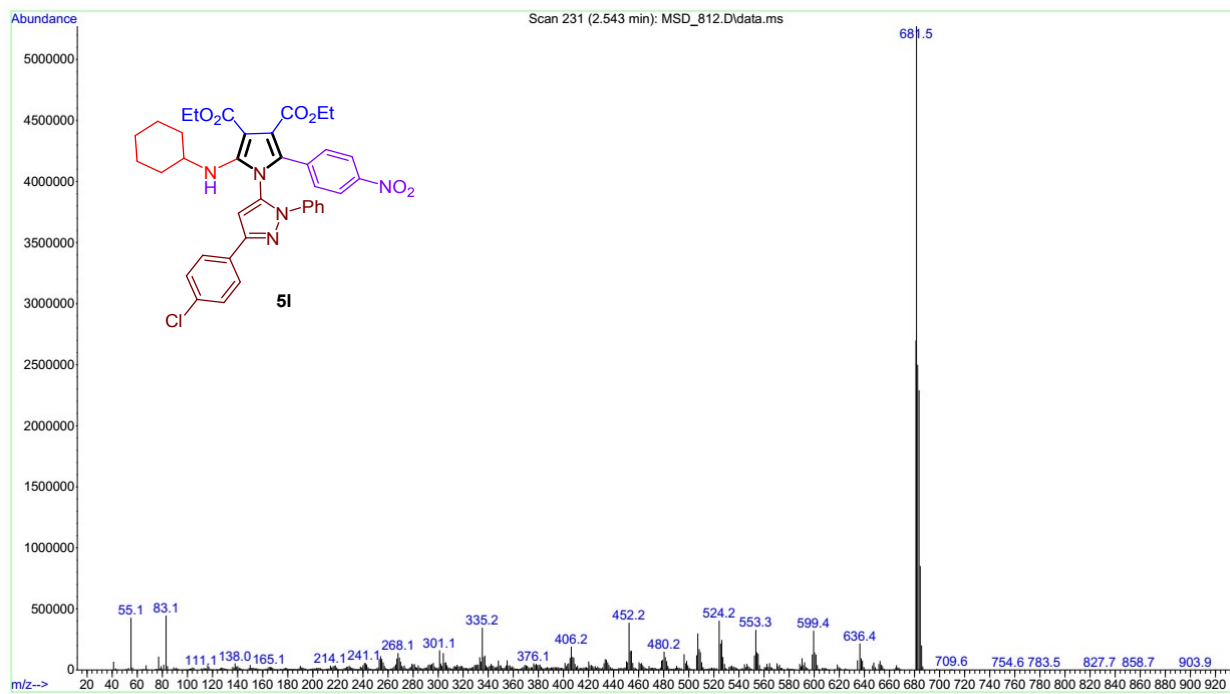
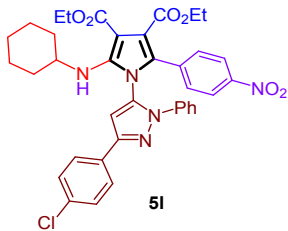
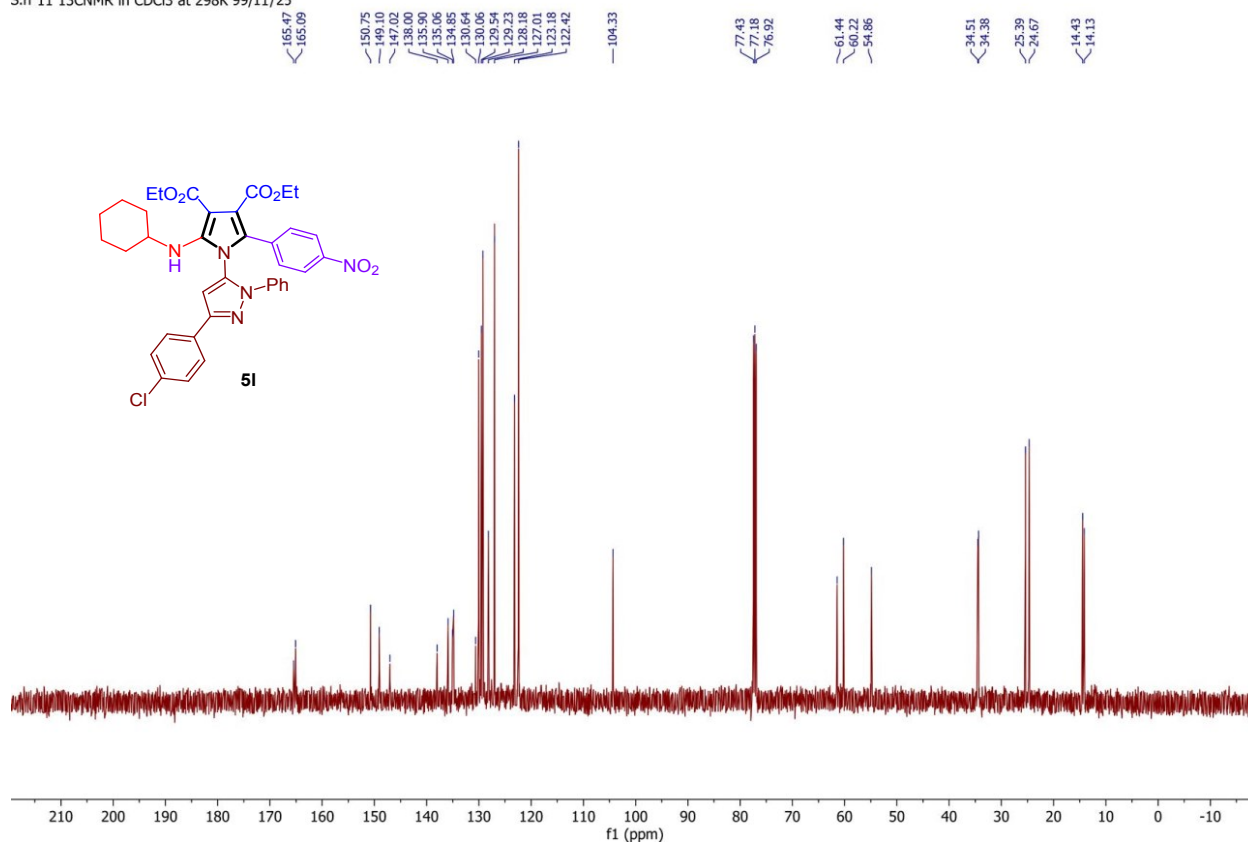


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S.n 11 1HNMNR in CDCl3 at 298K 99.11.21

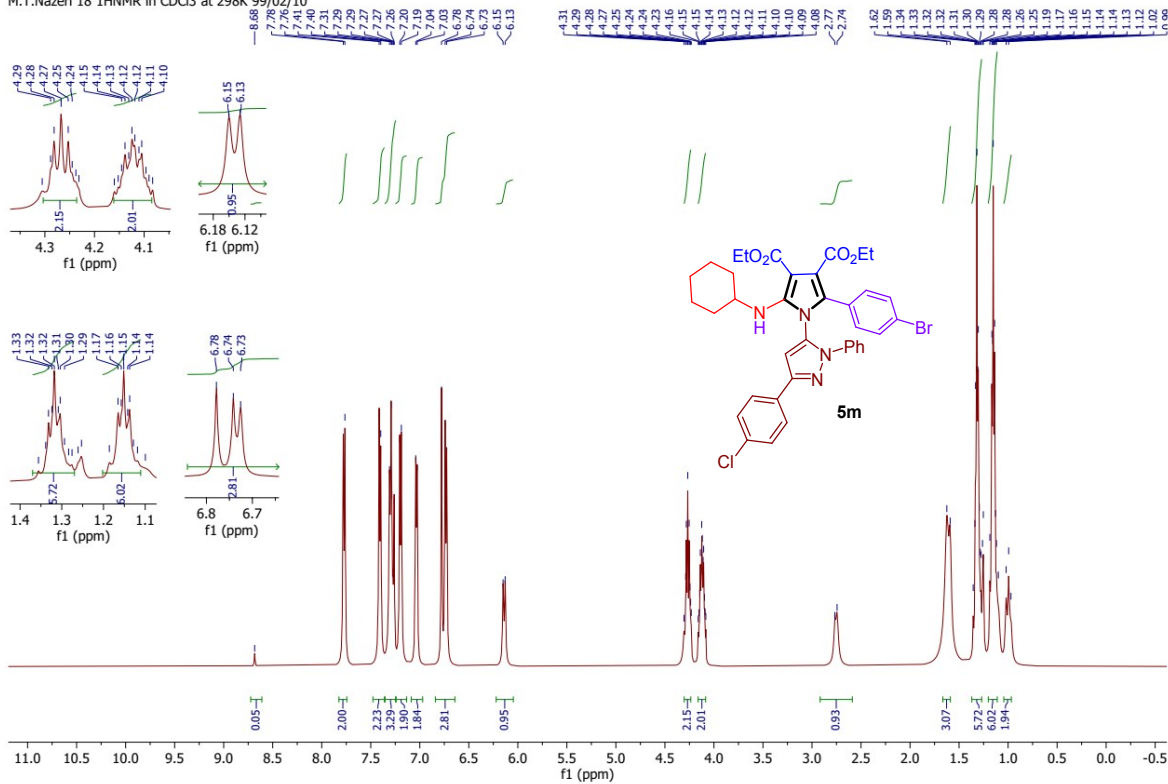


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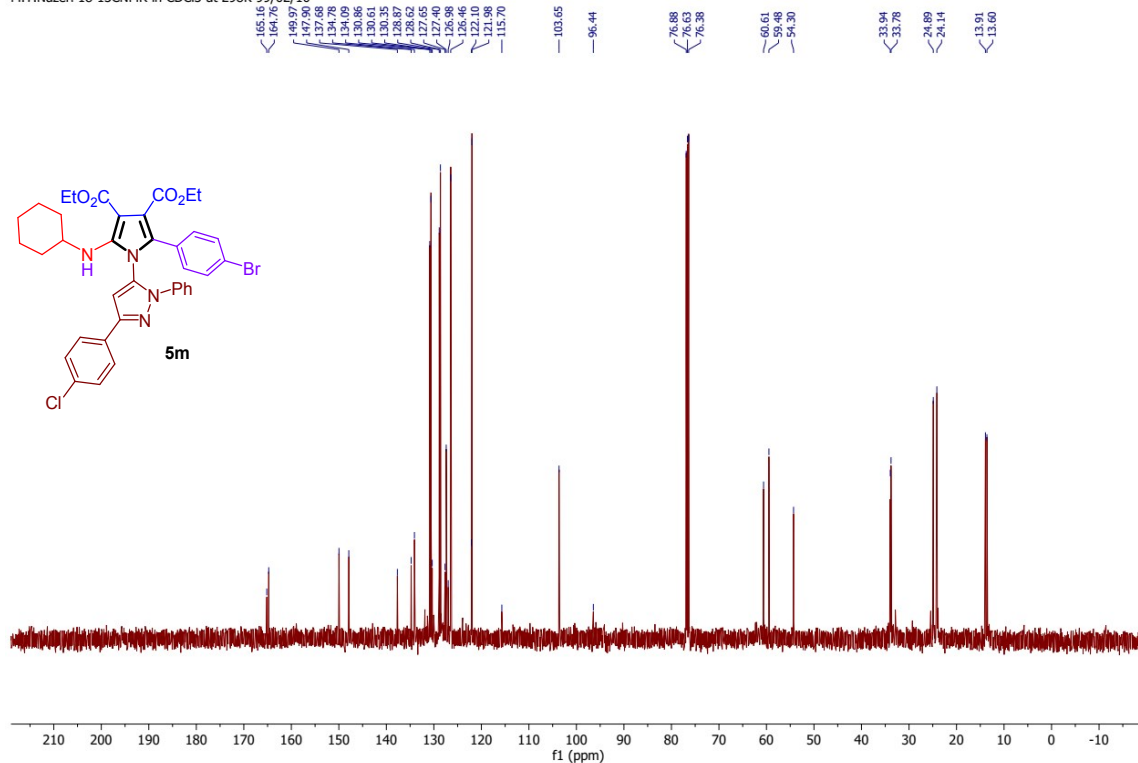
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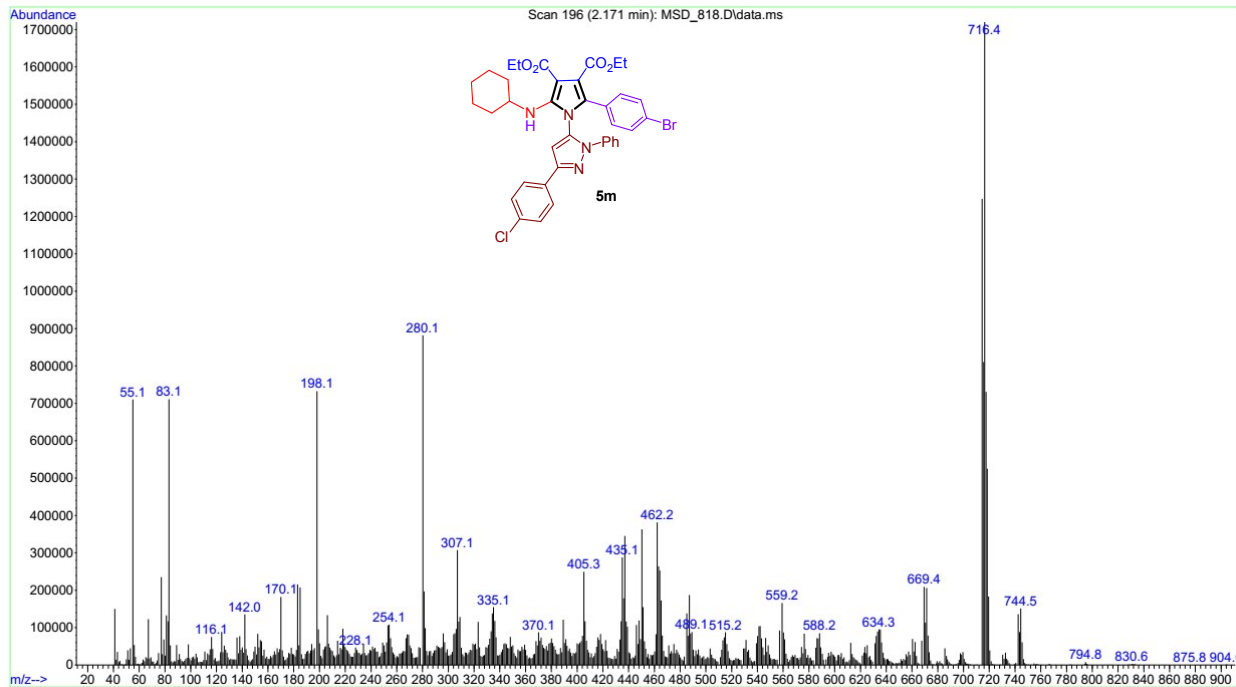
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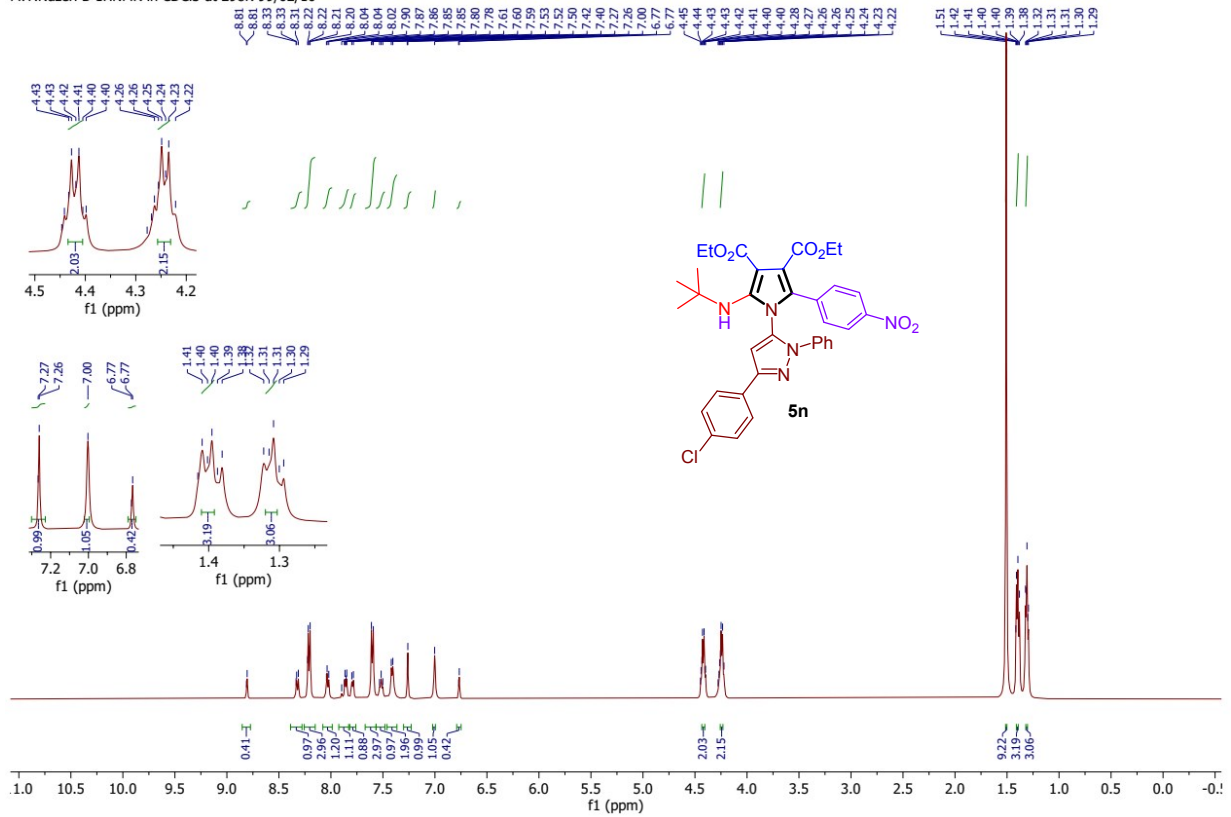
M.T.Nazeri 18 13C NMR in CDCl3 at 298K 99/02/10



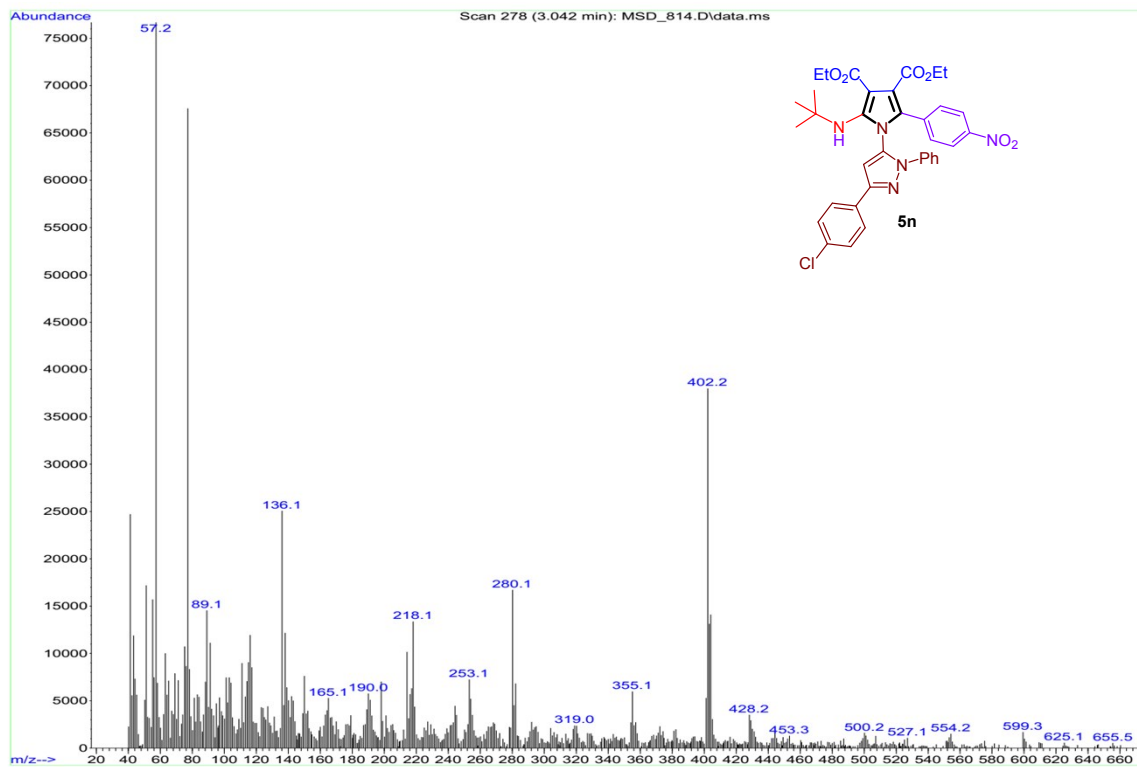
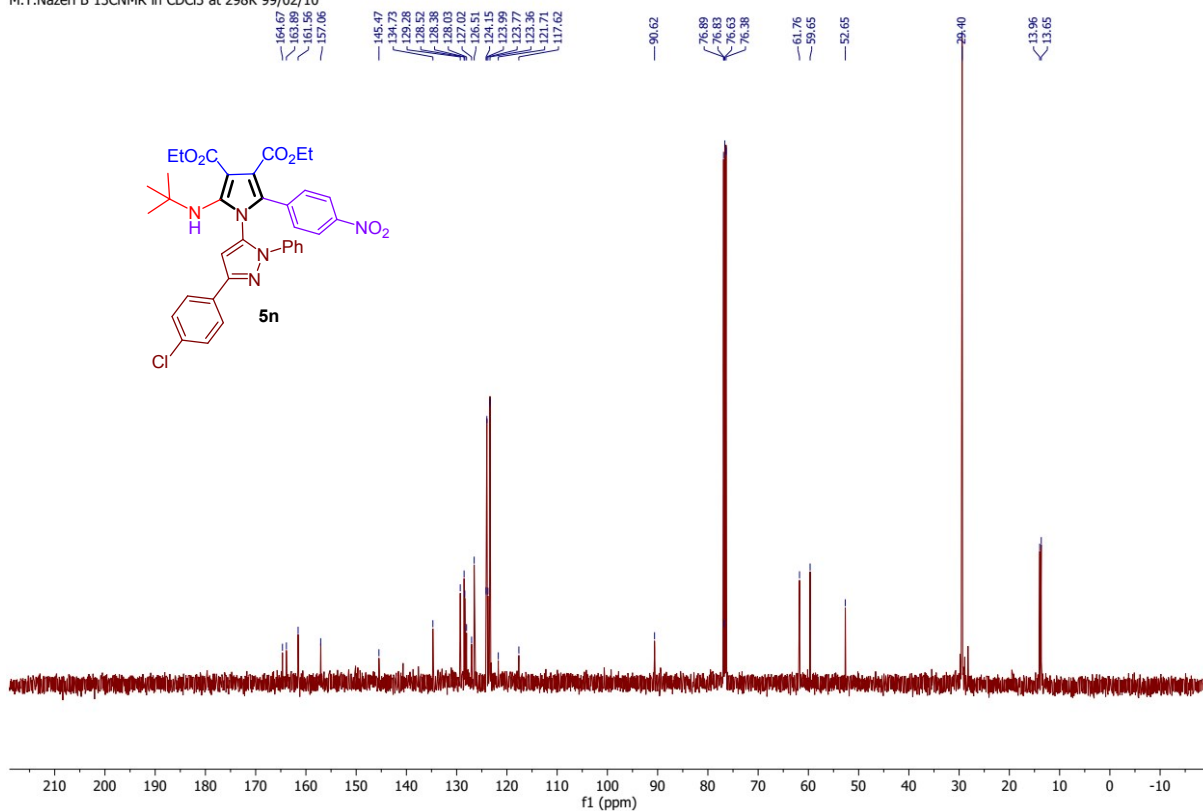


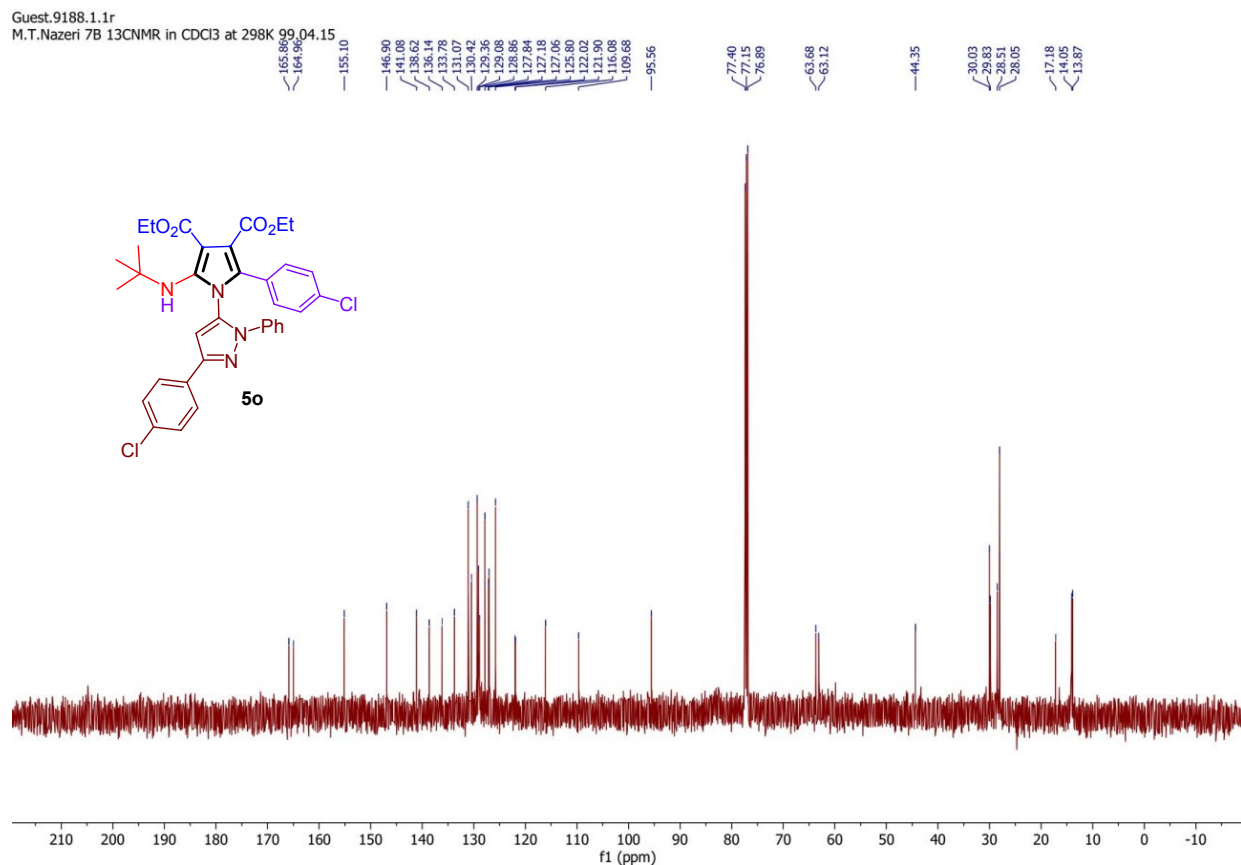
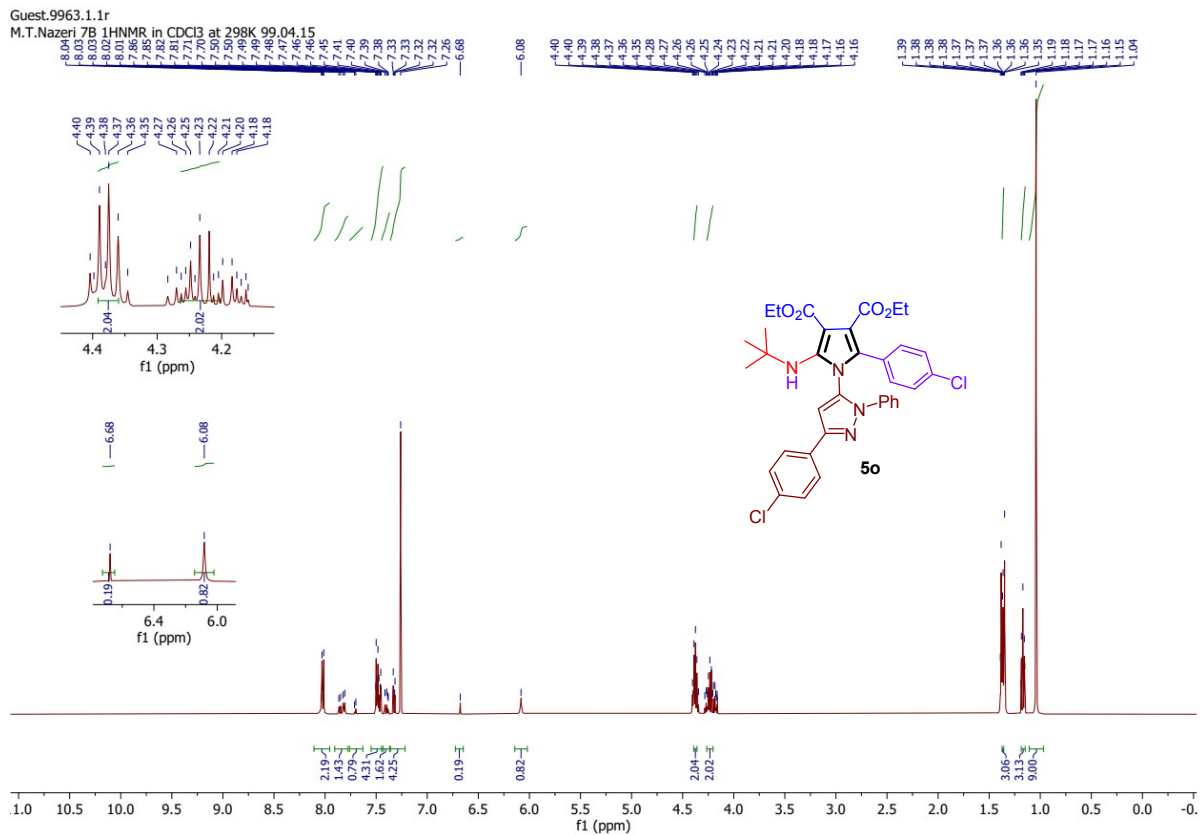
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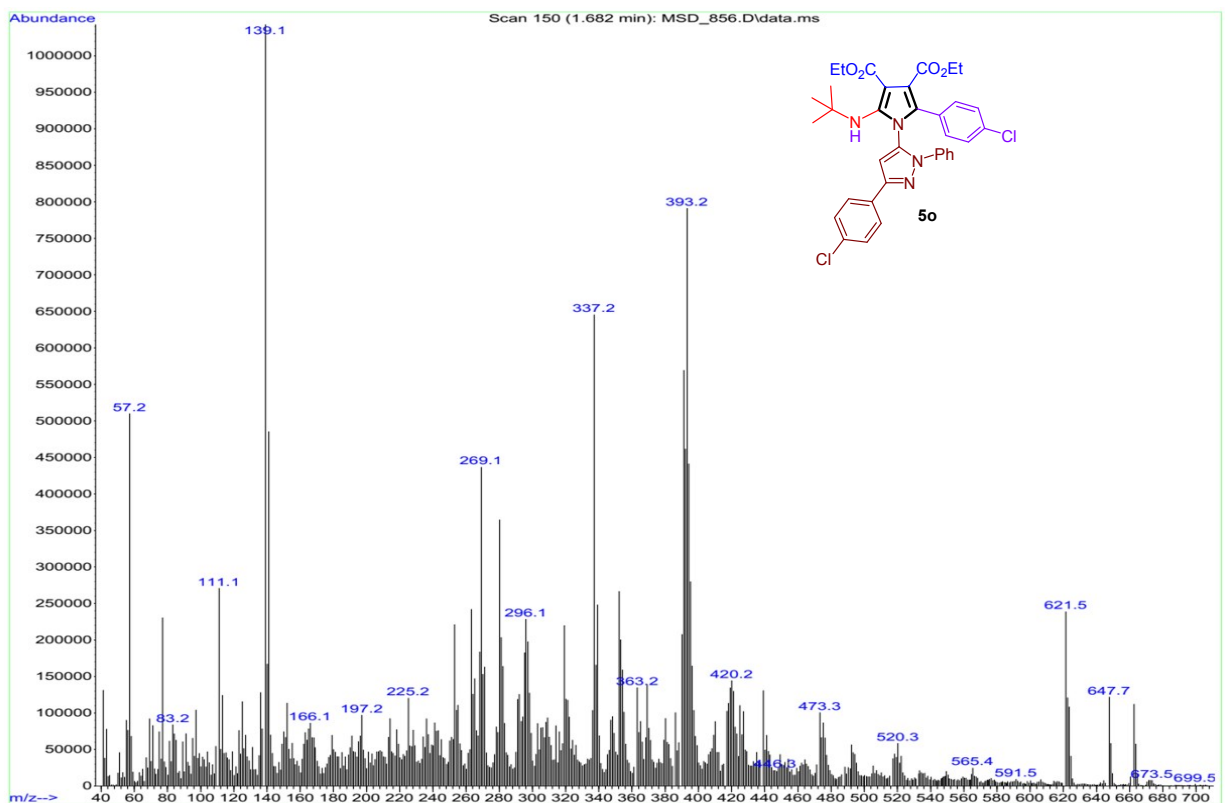
M.T.Nazeri B 1HNMR in CDCl₃ at 298K 99/02/10



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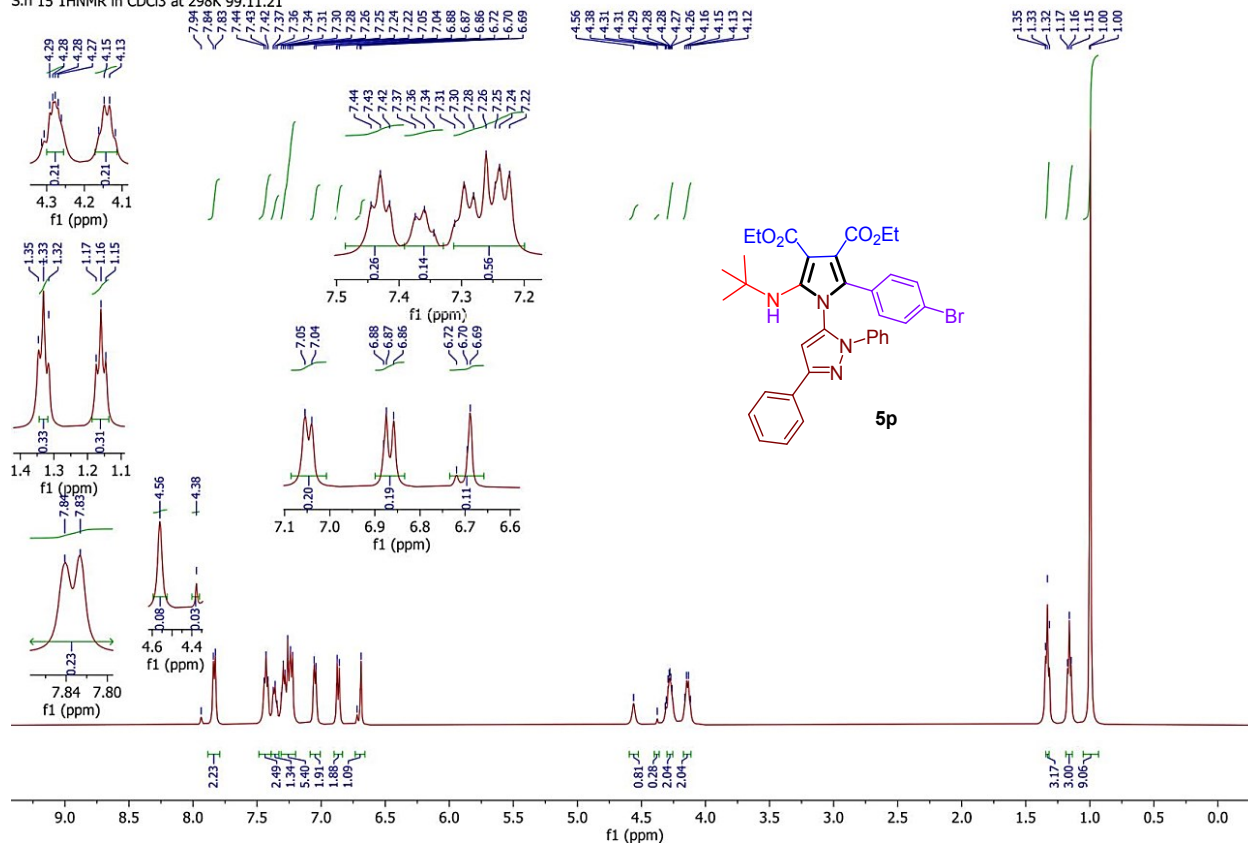




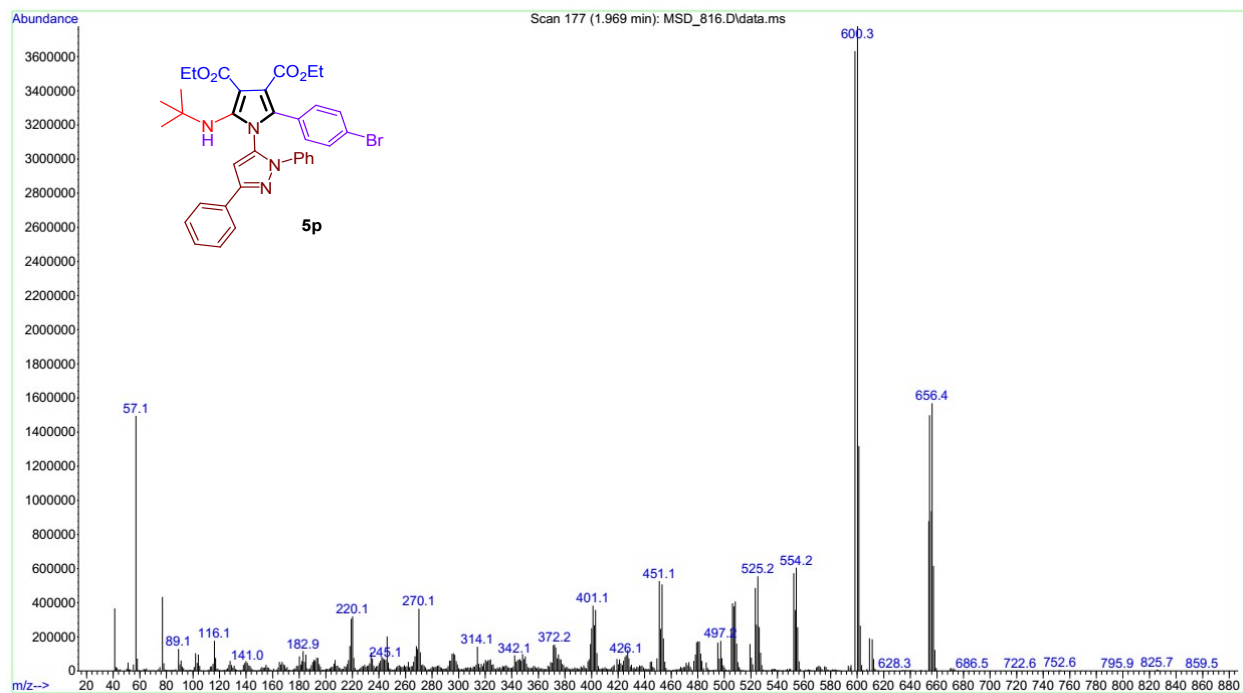
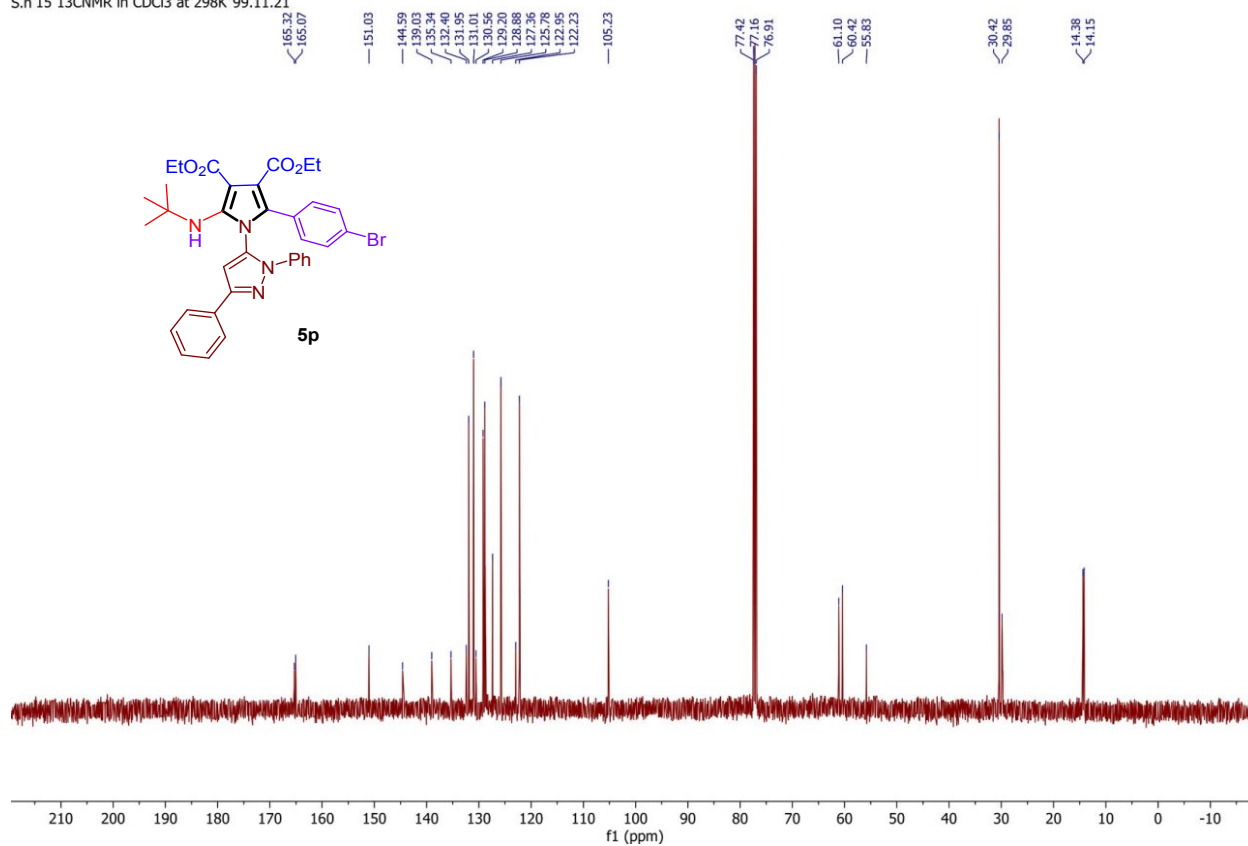


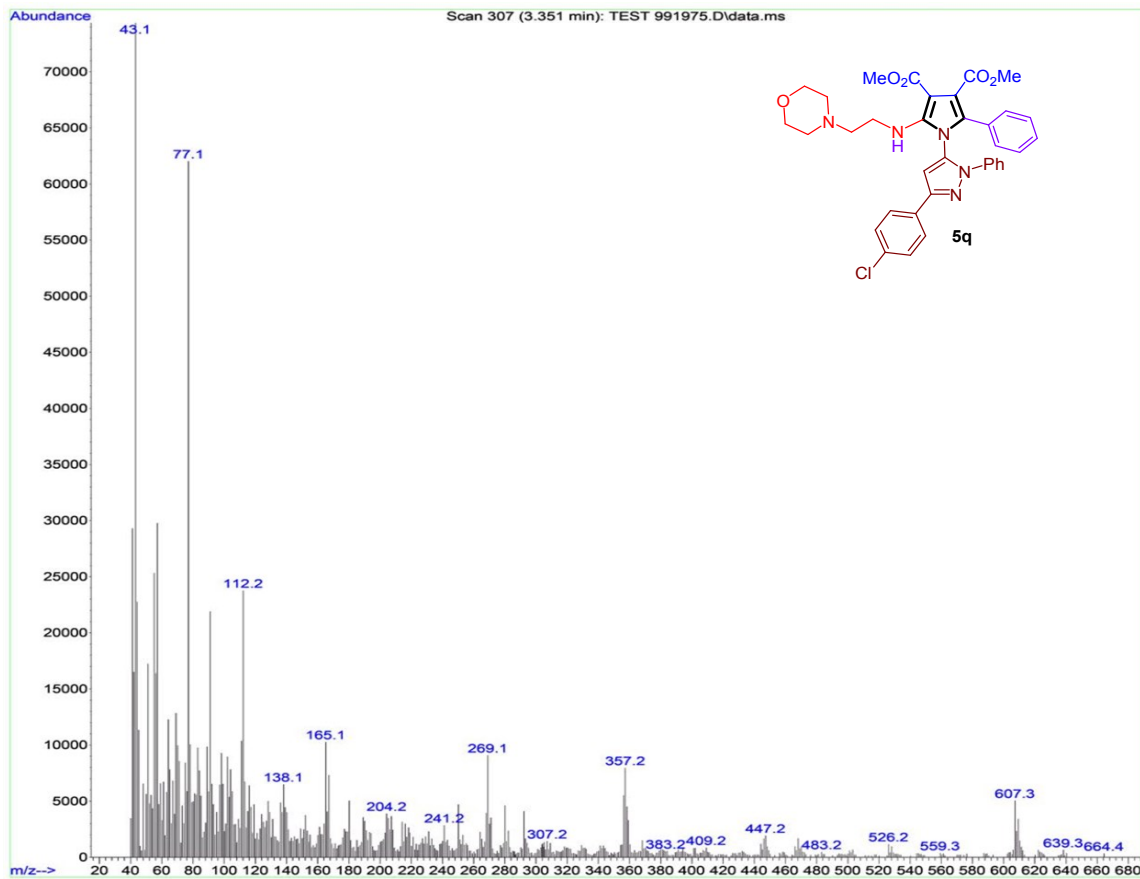
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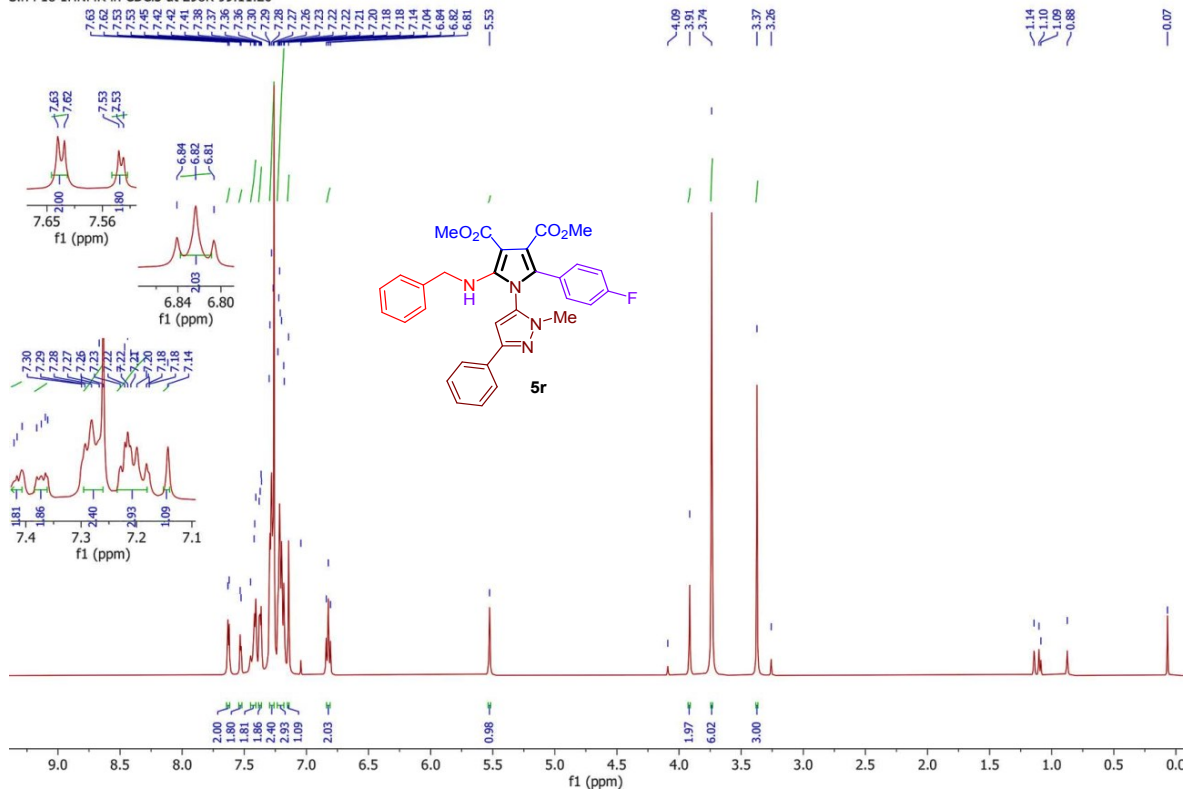
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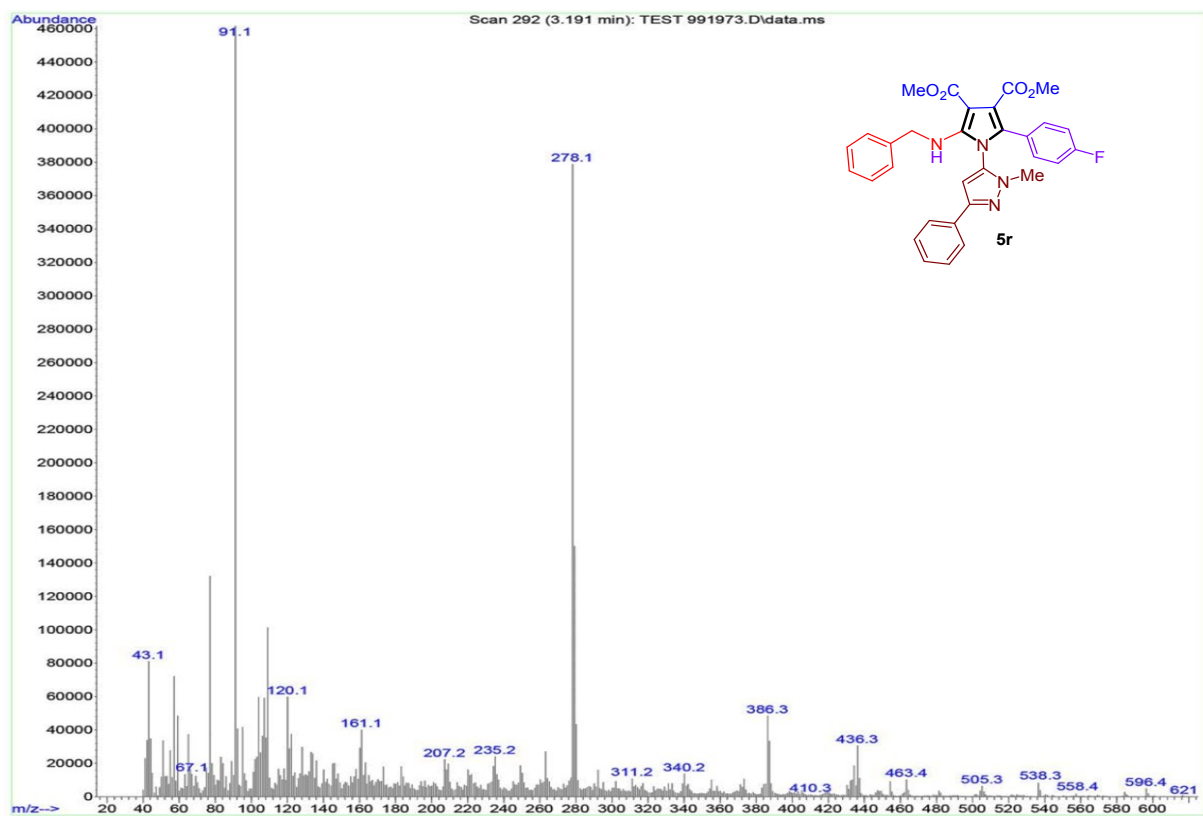
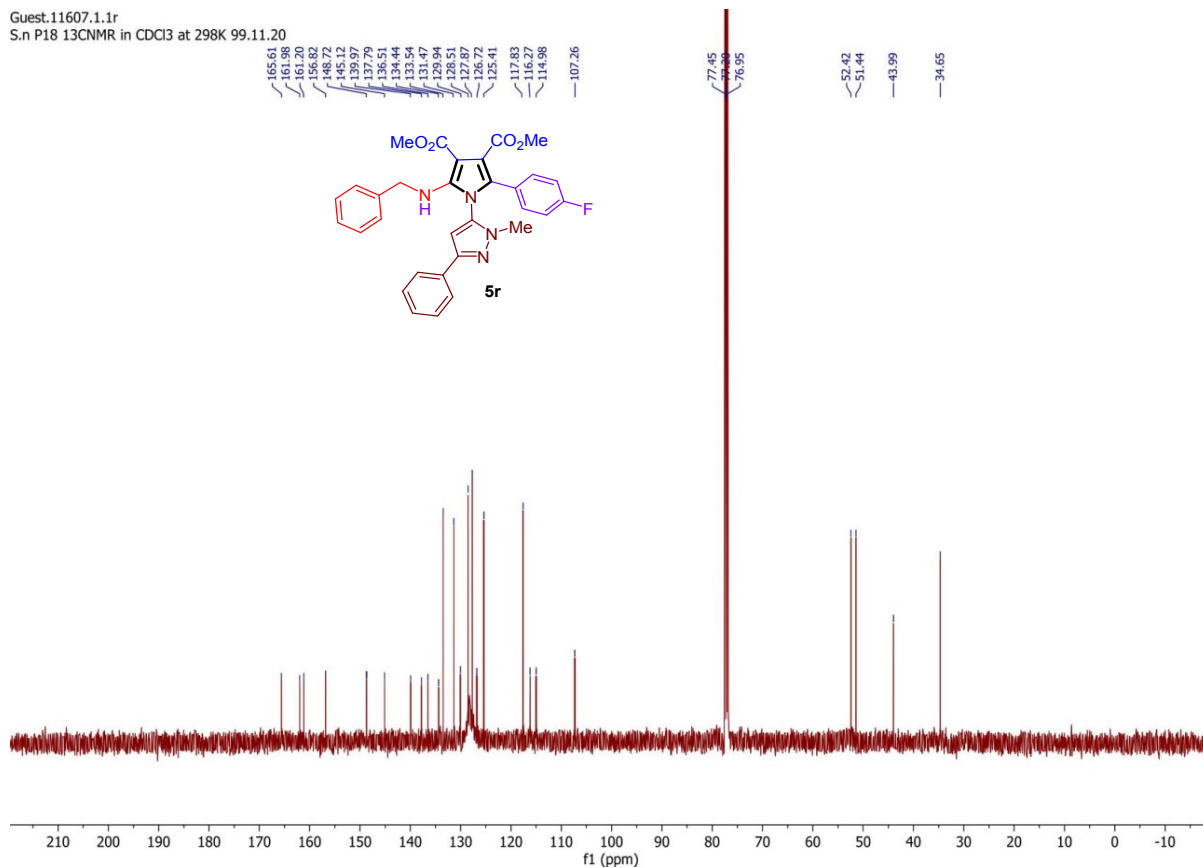


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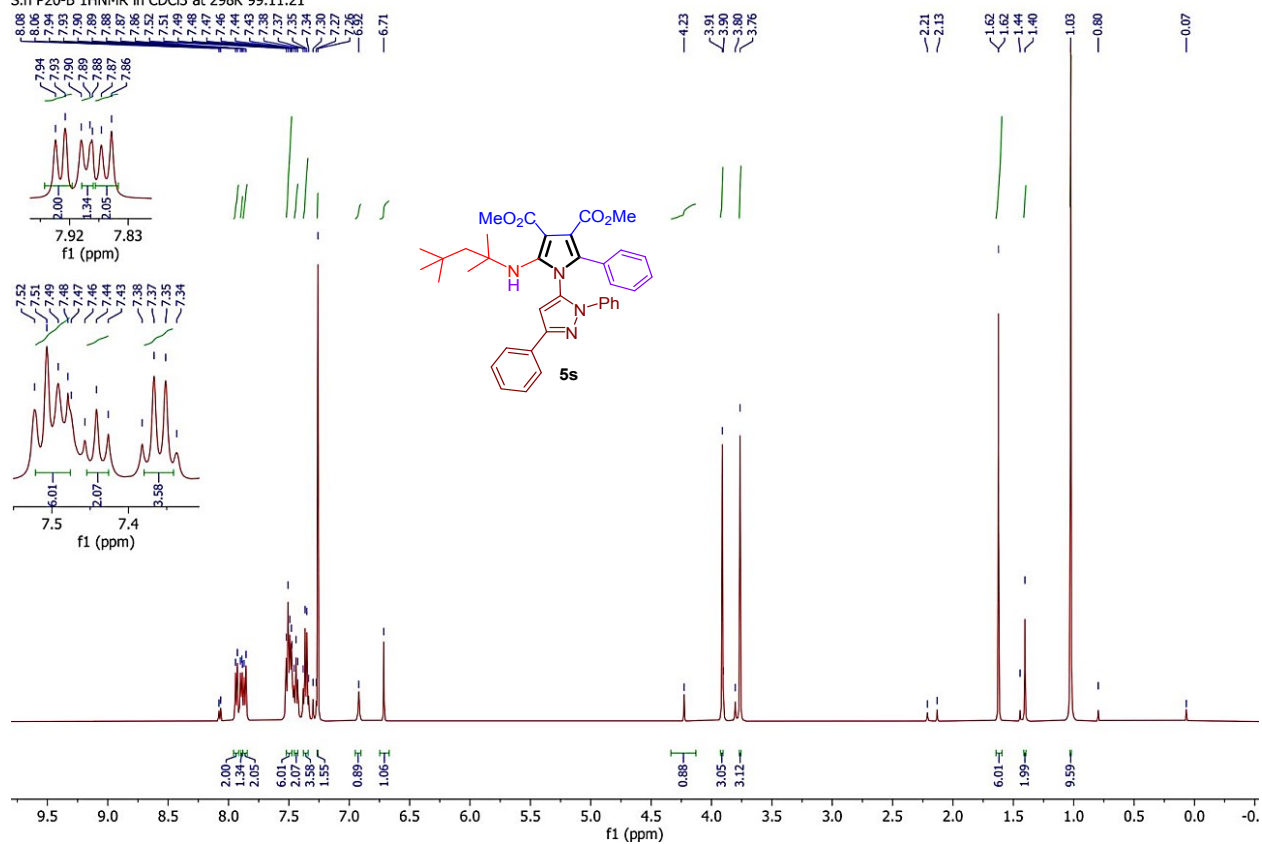


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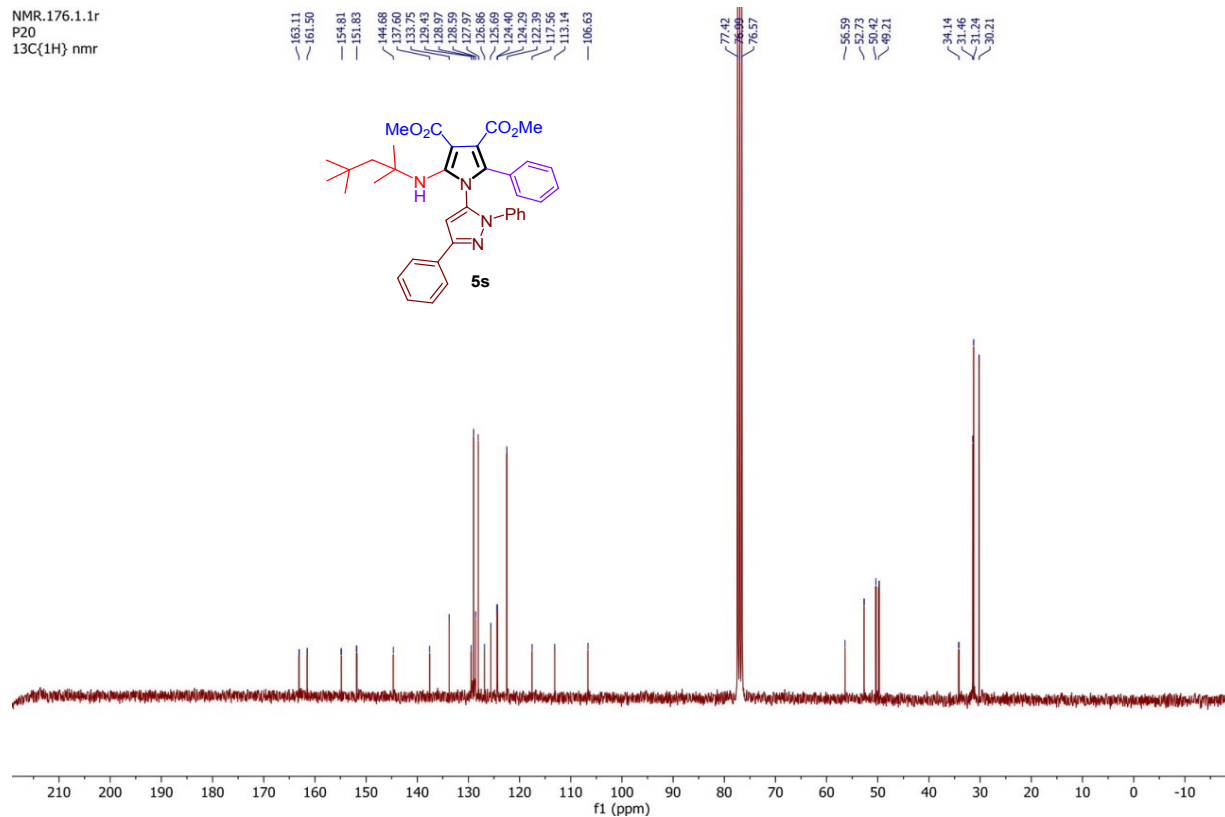


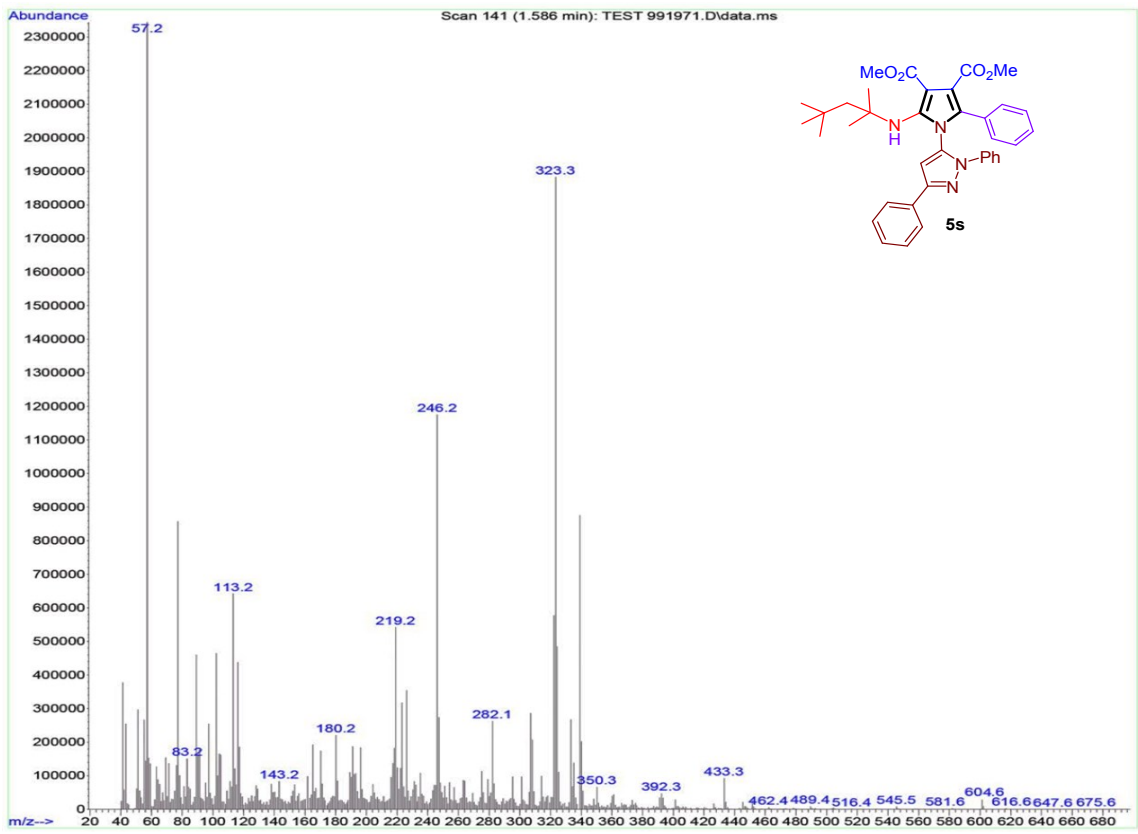
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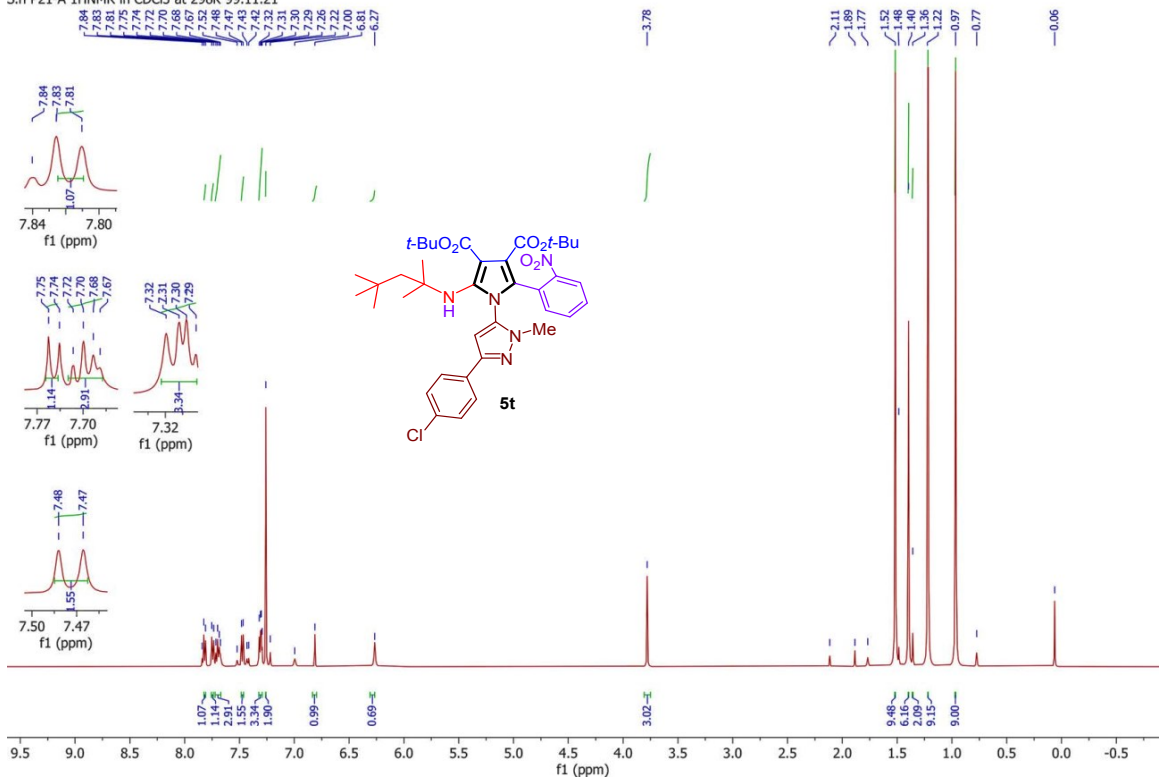


NMR.176.1.1r
P20
13C{1H} nmr

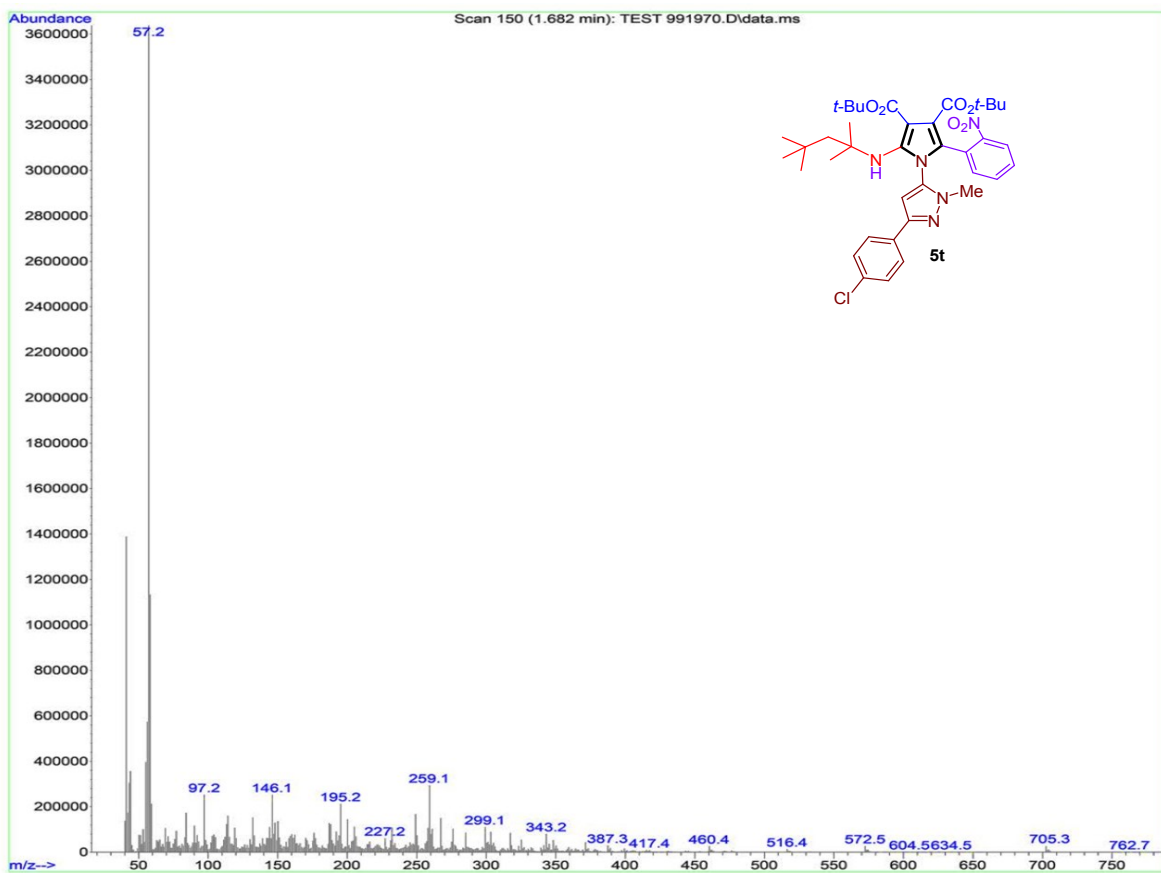
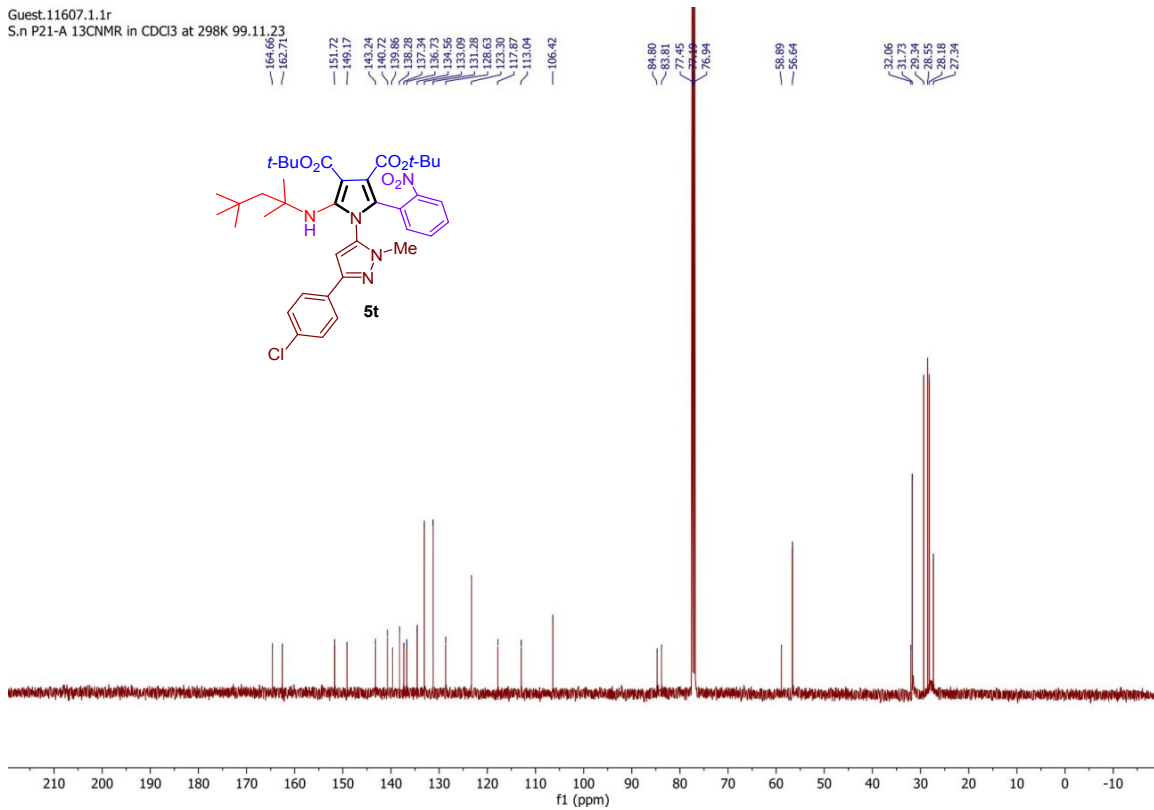




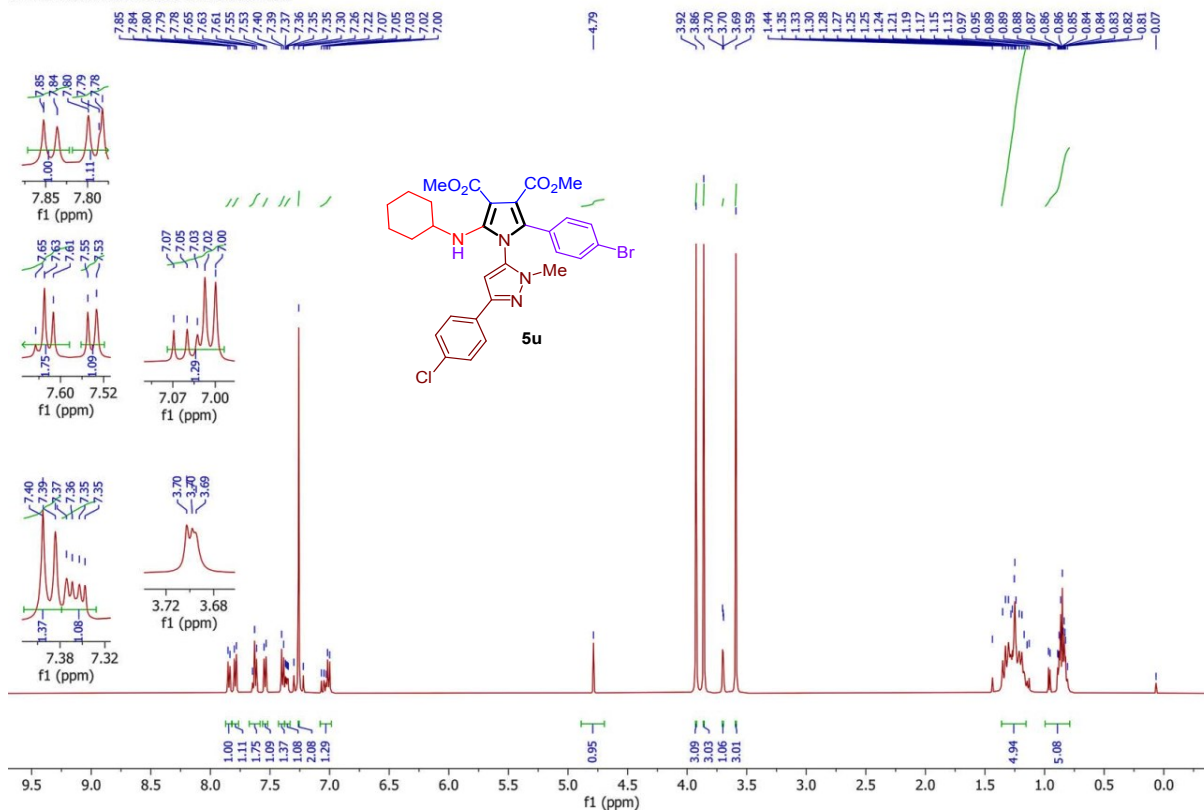
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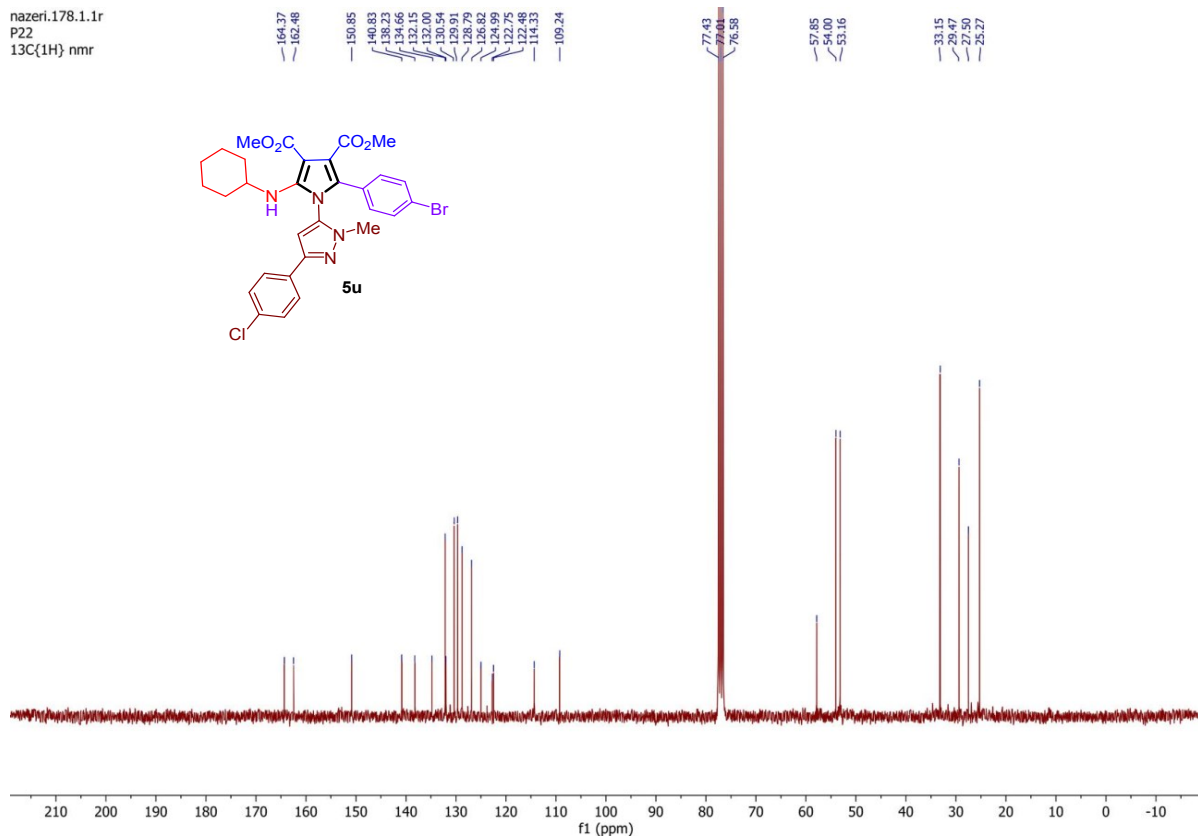
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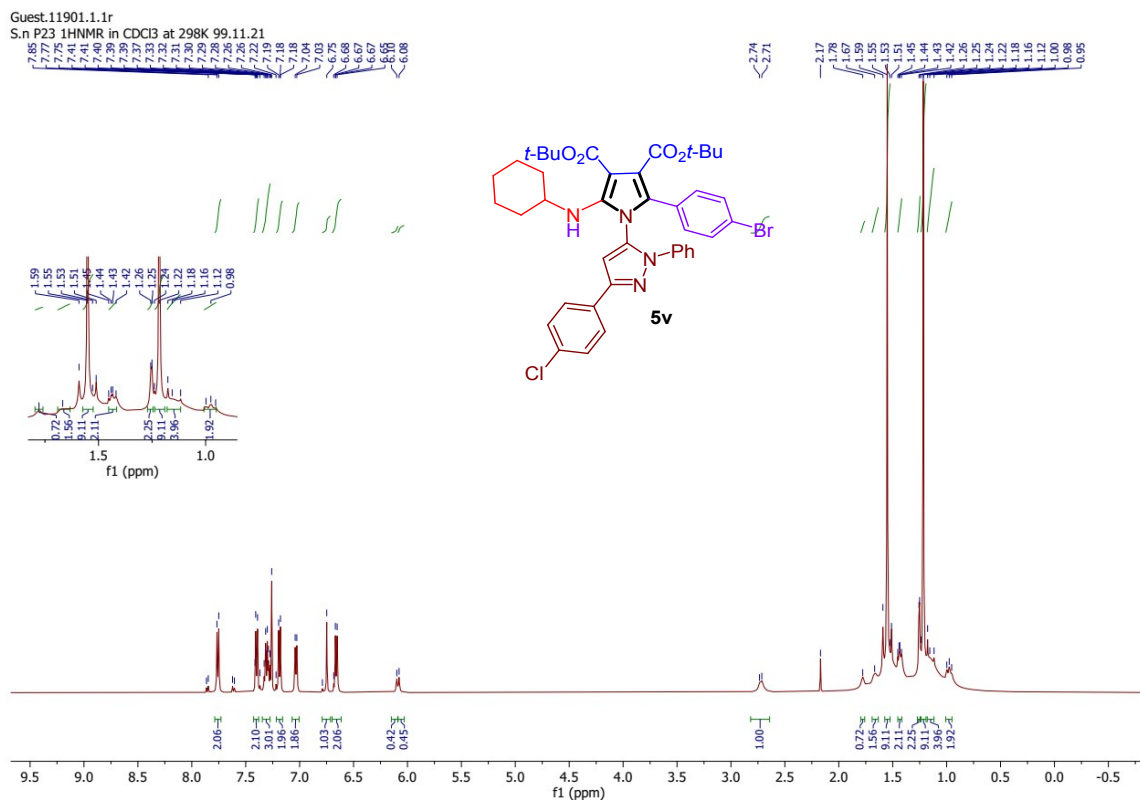
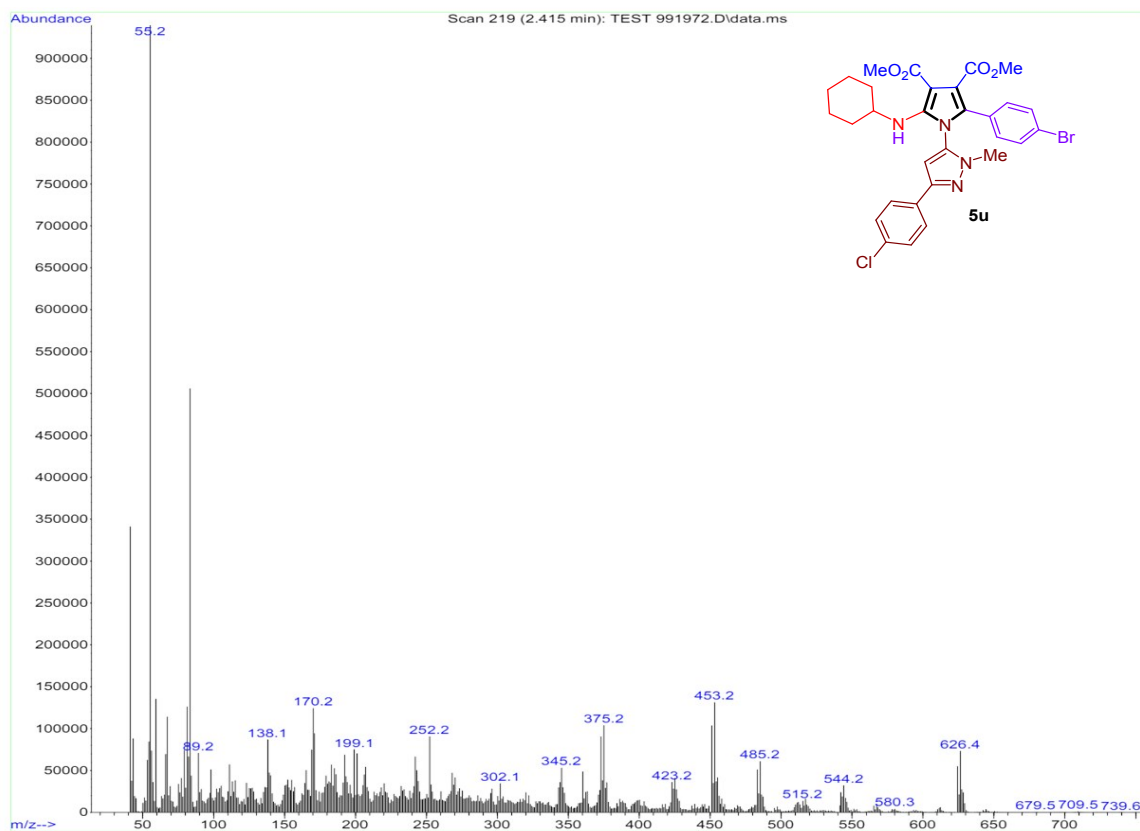


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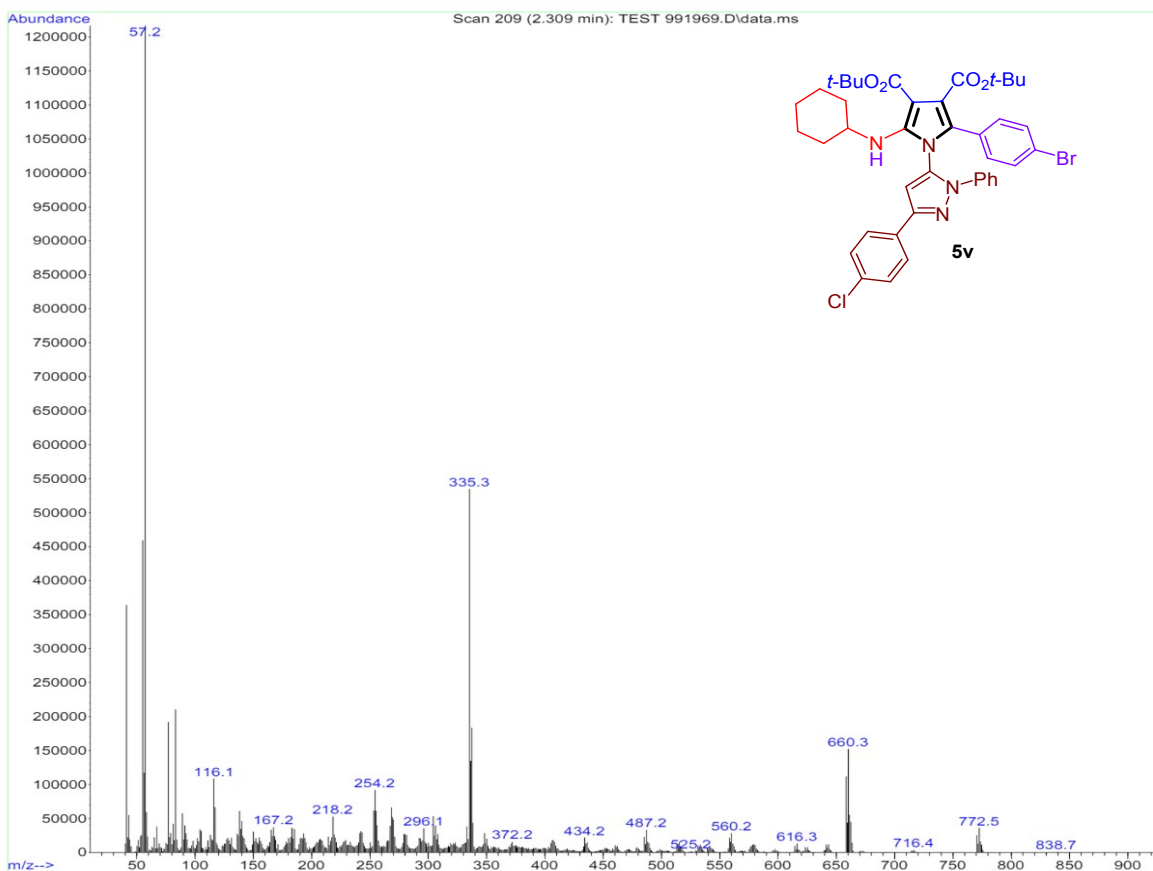
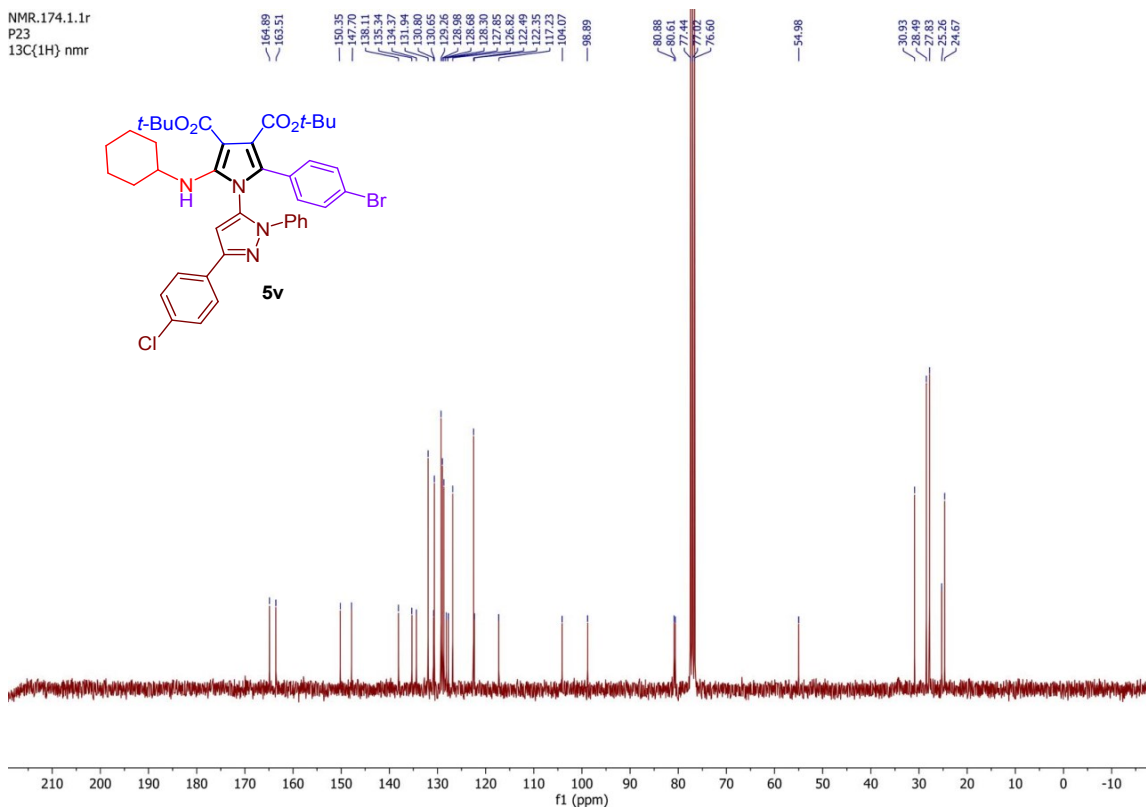


nazeri.178.1.1r
 P22
 13C{1H} nmr

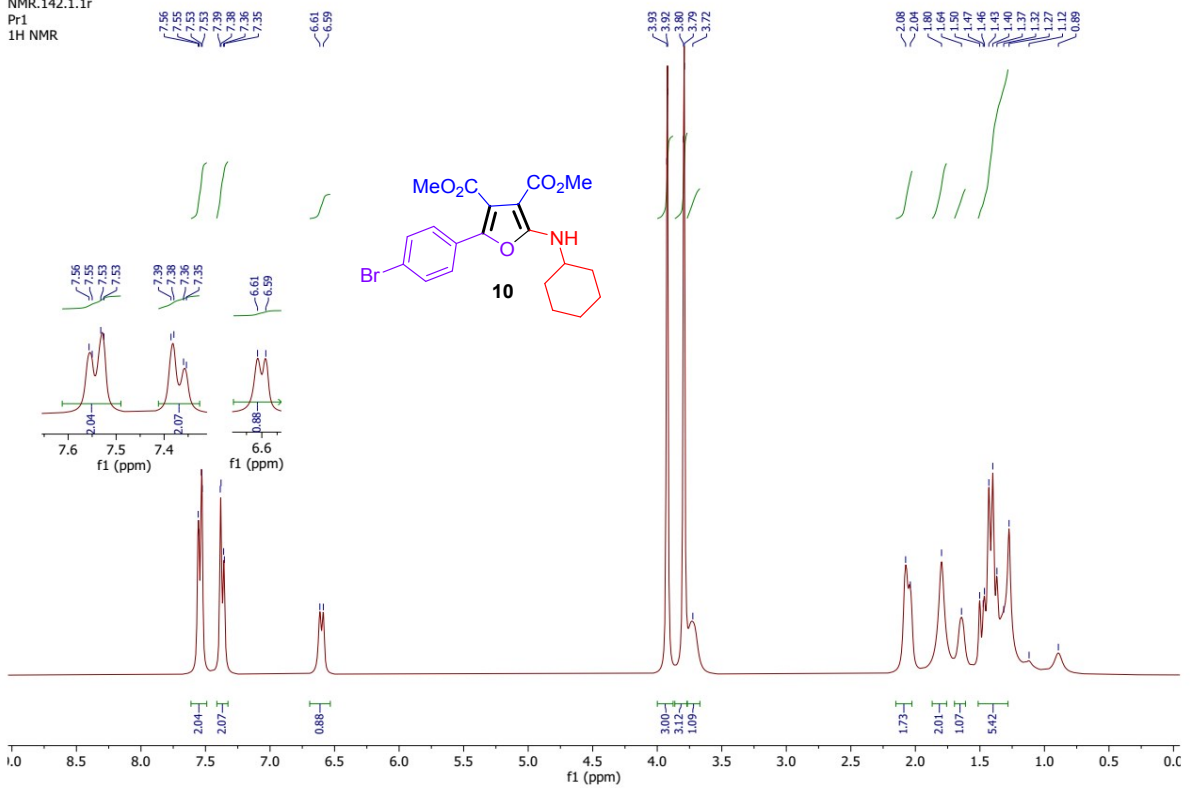




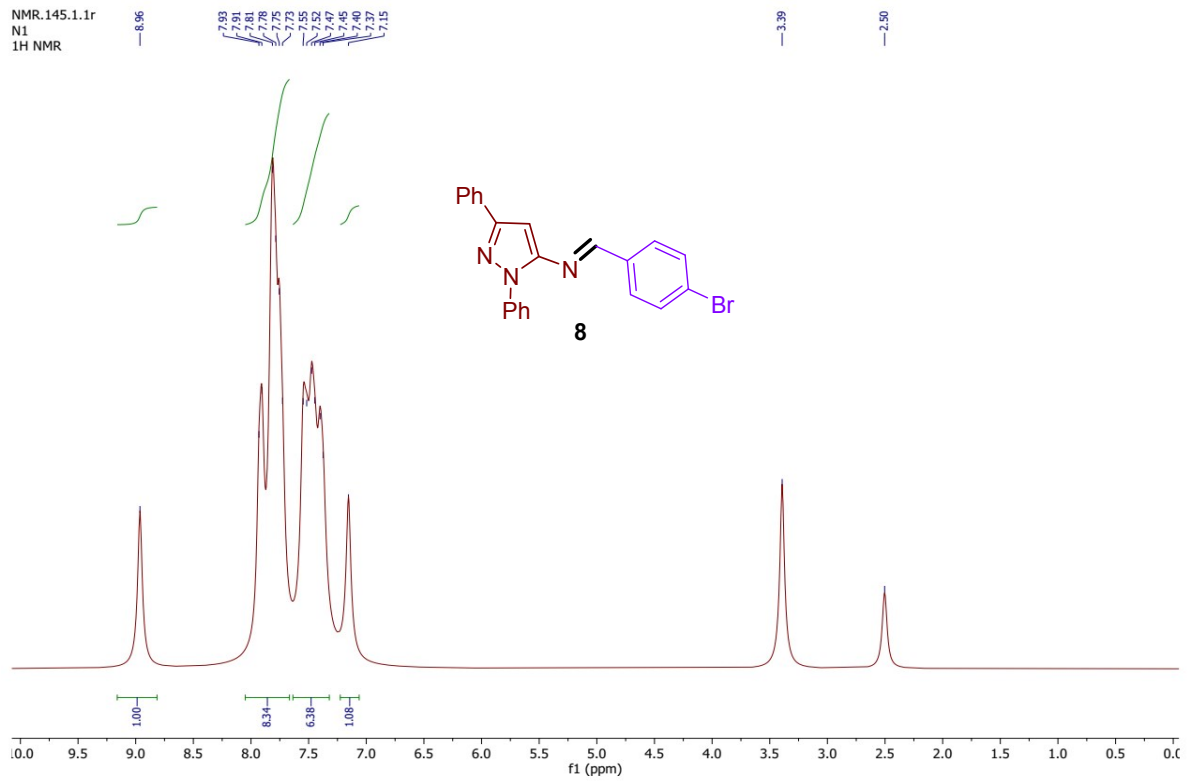
NMR.174.1.1r
P23
13C(1H) nmr



NMR.142.1.1r
Pr1
1H NMR



NMR.145.1.1r
N1
1H NMR



NMR_146.1.1r
N1
13C{1H} nmr

