

Schiff base Mo(VI) Complexes grafted on Merrifield resin as recyclable and efficient catalyst for  
synthesis of pyrrole-2-ones

Supporting Information

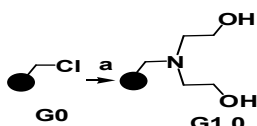


Figure S1 Synthesis of triethylamine grafted on Merrifield resin (G1.0)

As shown in Figure S2, there is a significant change in the FTIR of (G0) and (G1.0). The IR of (G0) exhibits strong C-Cl absorption peaks at 1264  $\text{cm}^{-1}$  and 675  $\text{cm}^{-1}$ , indicating the presence of a large amount of chloromethyl in the raw resin. In the IR of (G1.0), the absorption peaks at these two positions have decreased to very weak, indicating that most of the chlorine in the raw resin (G0) has been replaced; A wide absorption peak appeared at 3364  $\text{cm}^{-1}$ , indicating the presence of -OH peak; Strong C-N bond stretching vibration absorption peaks were observed at 1042  $\text{cm}^{-1}$  for primary alcohols. All these prove that the diethanolamine has been successful grafted on the raw resin and produced the resin G1.0.

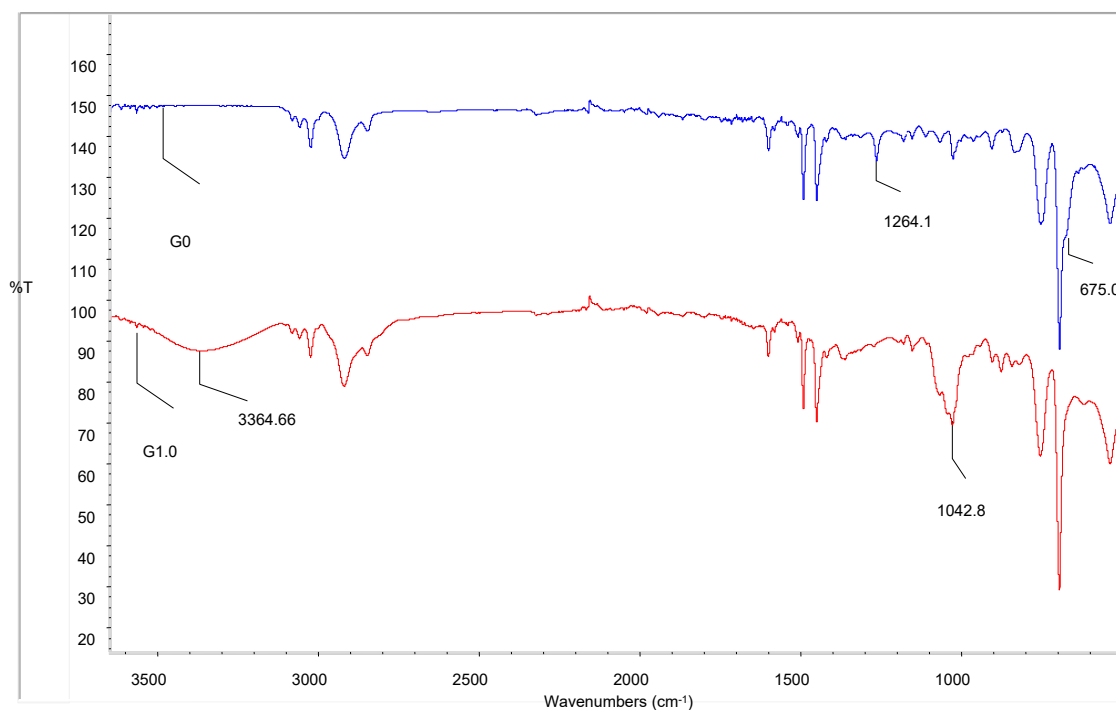


Figure S2 IR spectra of raw resin (G0) and synthetic resin (G1.0)

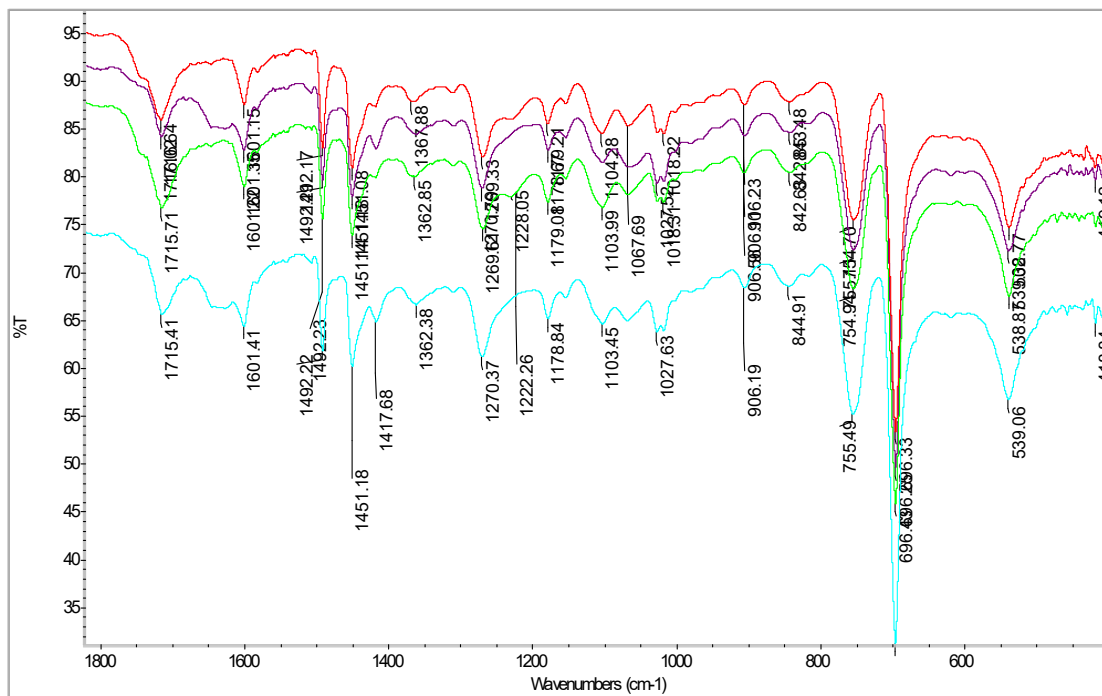
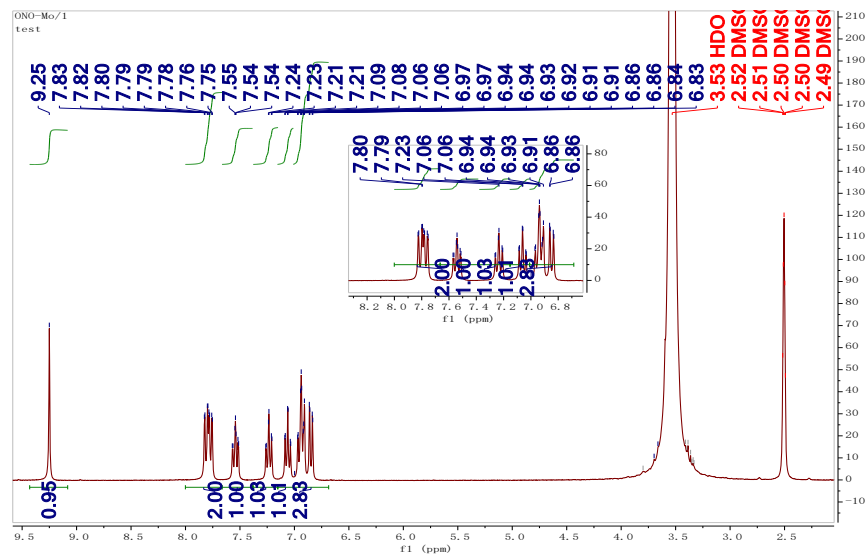


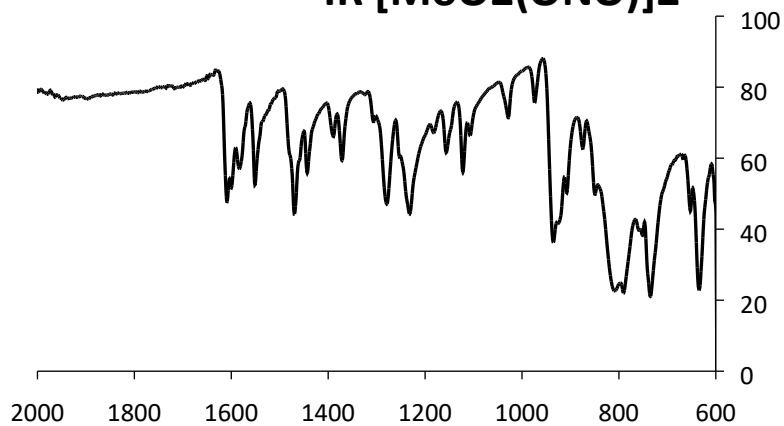
Figure S3 IR spectra of G1.1, G2.0, G2.1, G3.1

<sup>1</sup>H NMR: [MoO<sub>2</sub>(ONO)<sub>2</sub>]



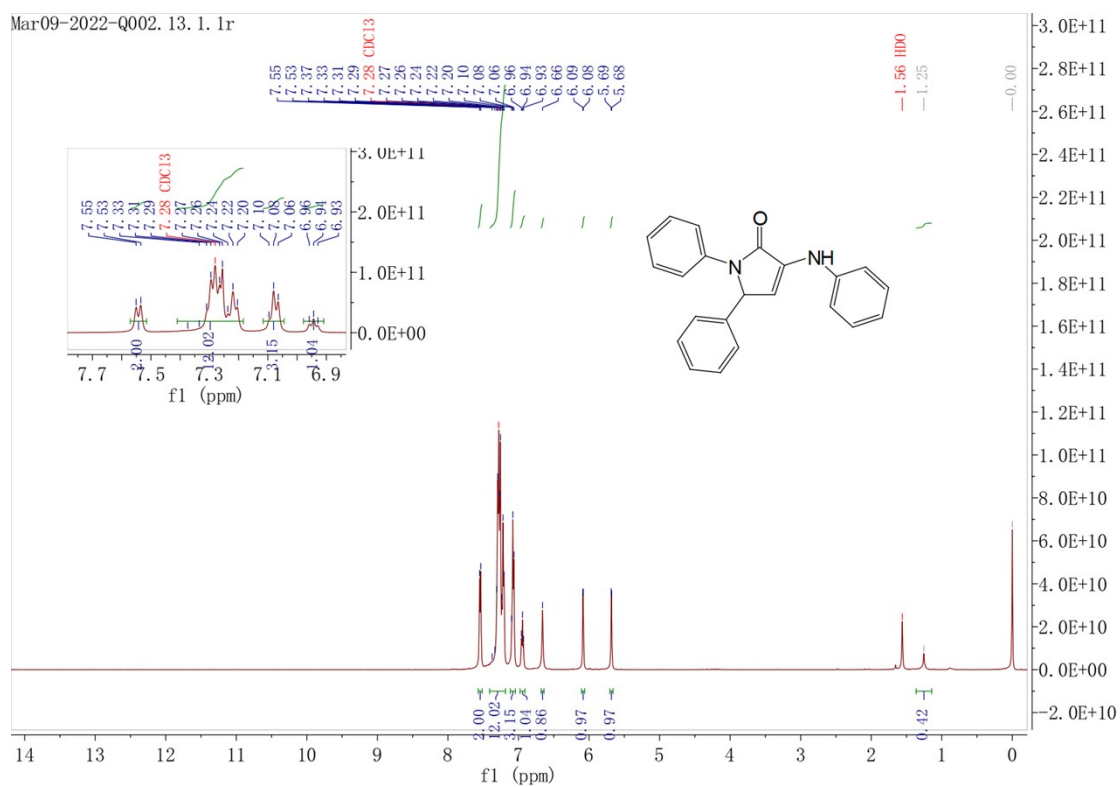
IR spectrum of [MoO<sub>2</sub>(ONO)<sub>2</sub>]

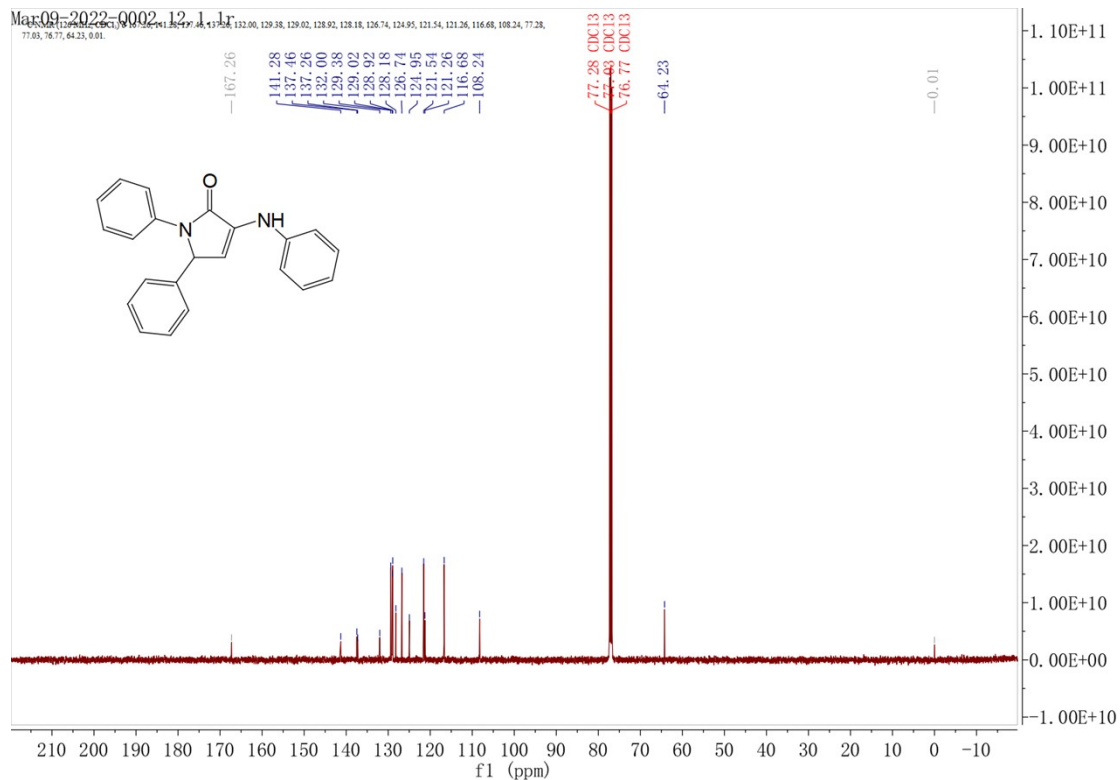
# IR [MoO2(ONO)]2



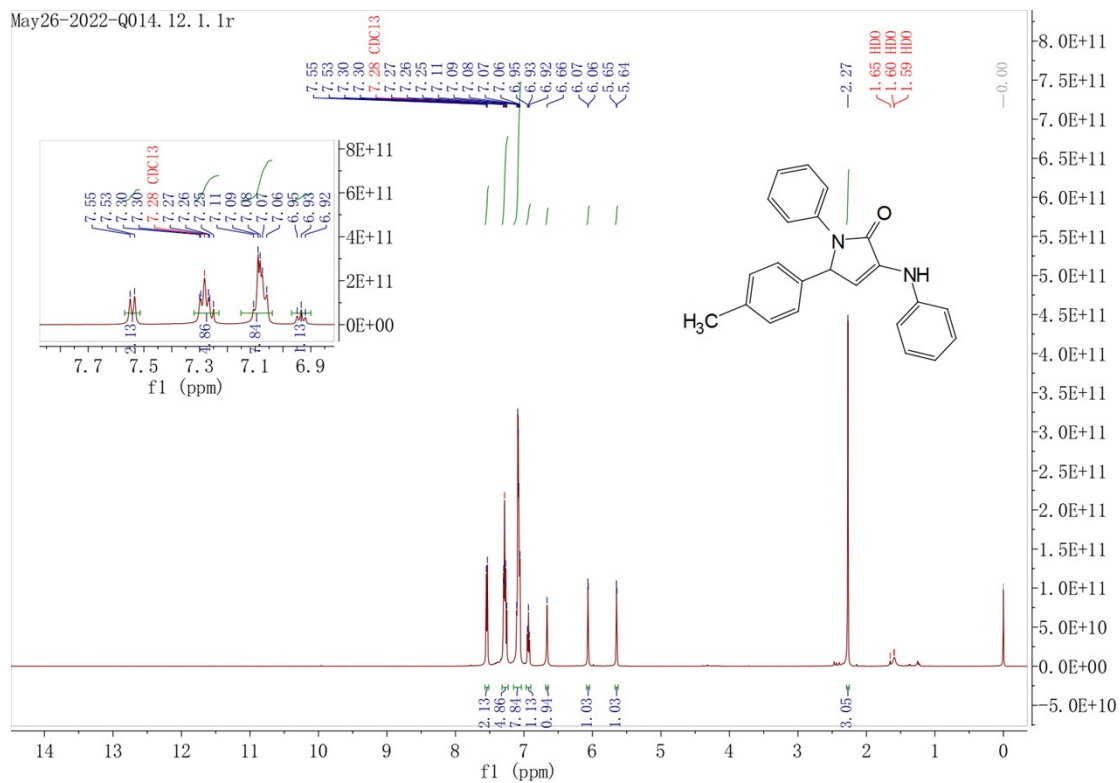
NMR spectra of pyrrole-2-ones products

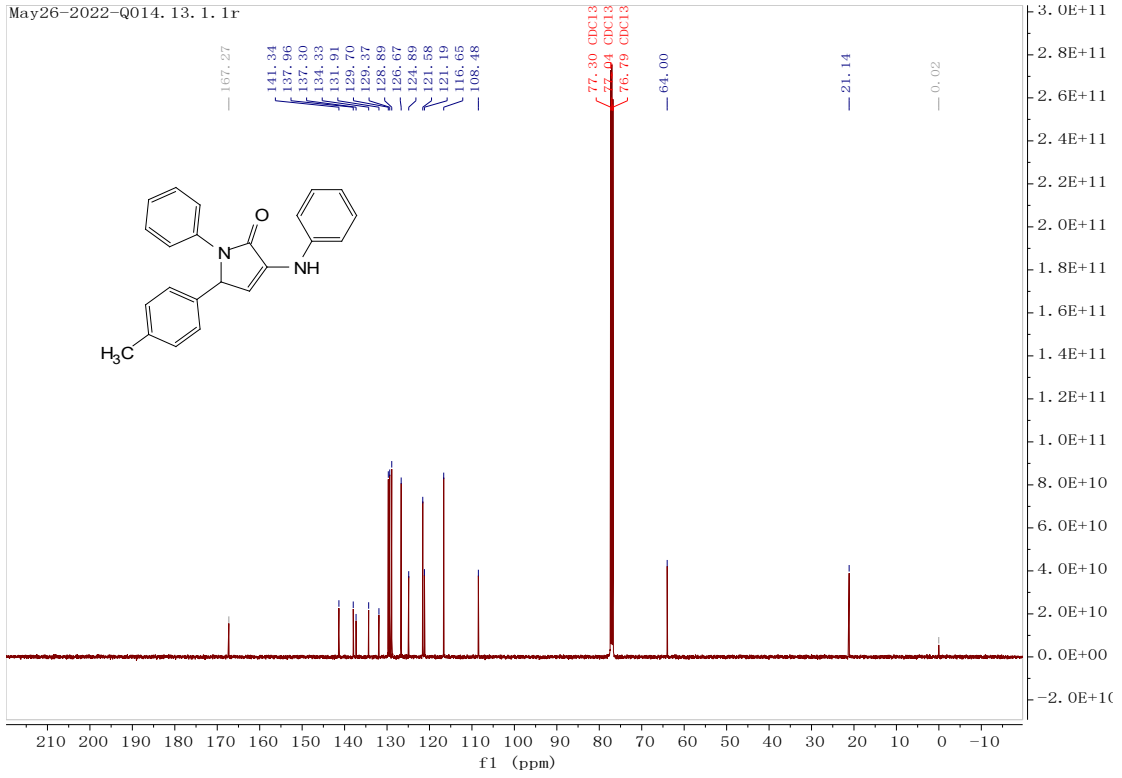
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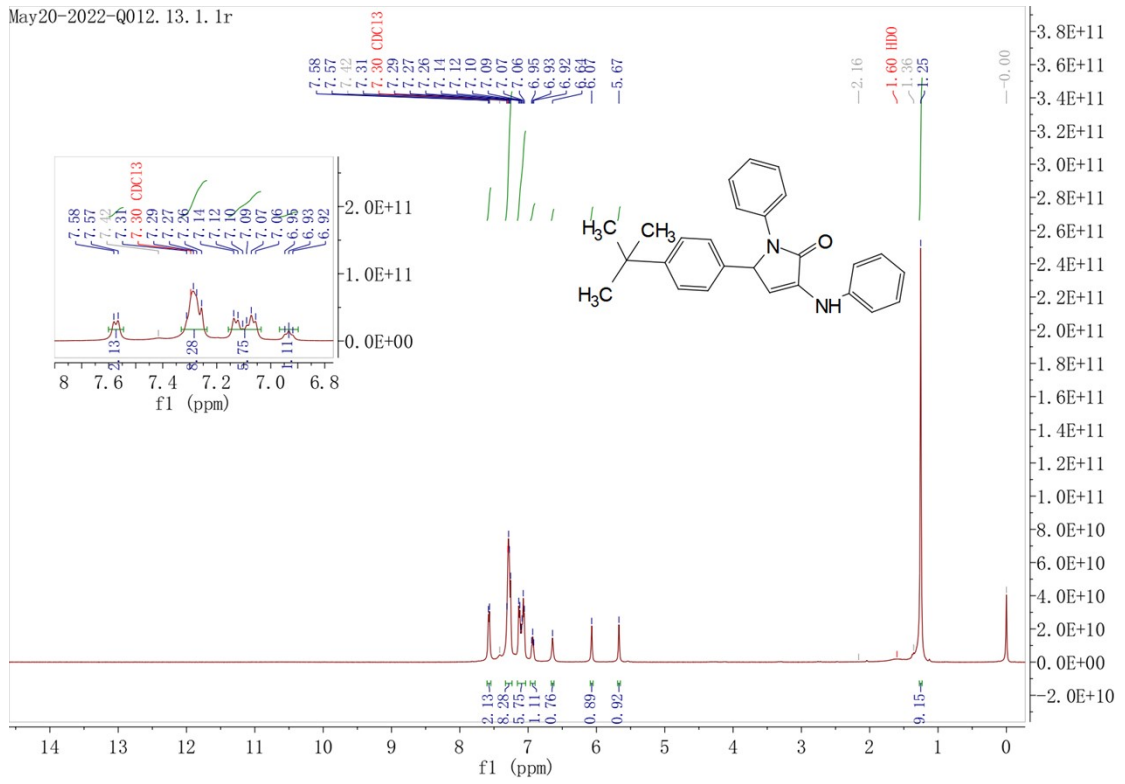


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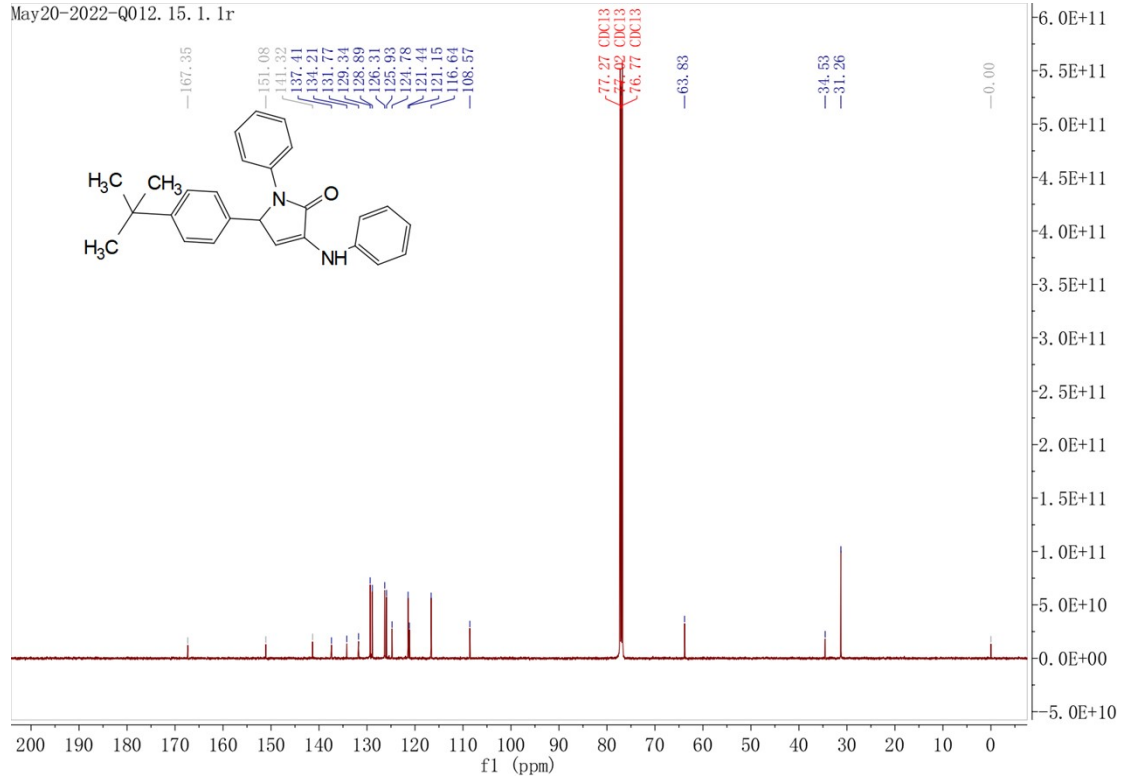




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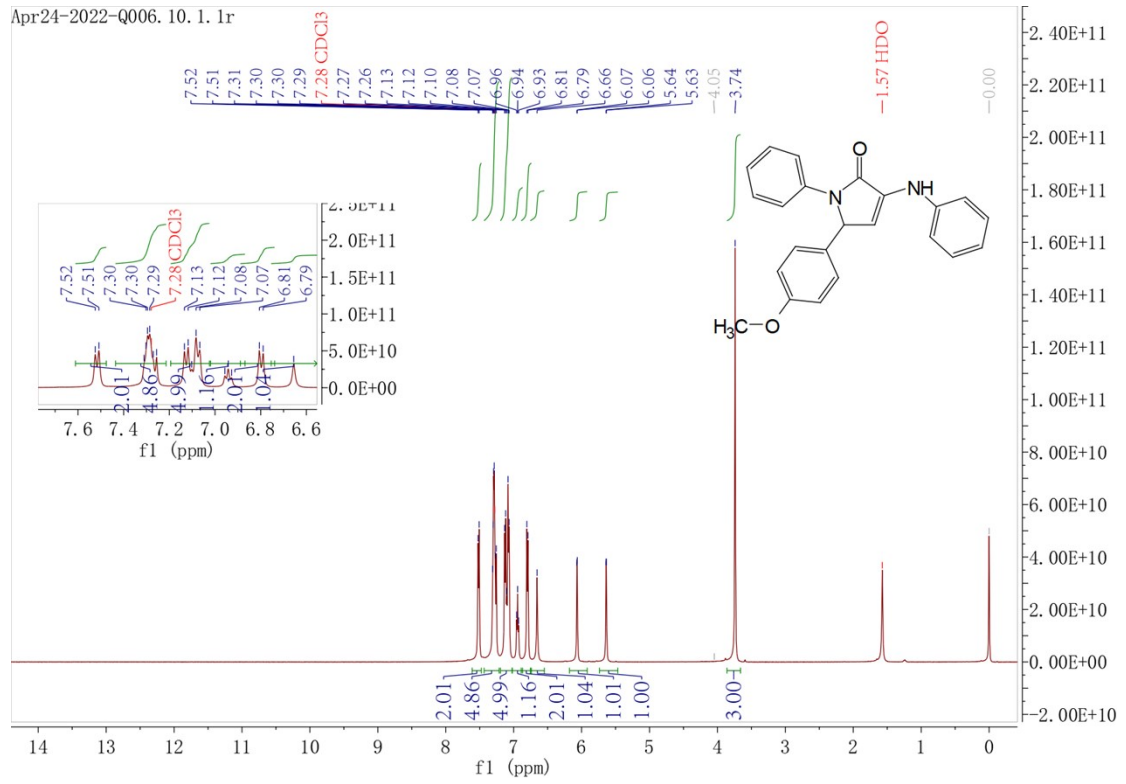


May20-2022-Q012. 15. 1. 1r

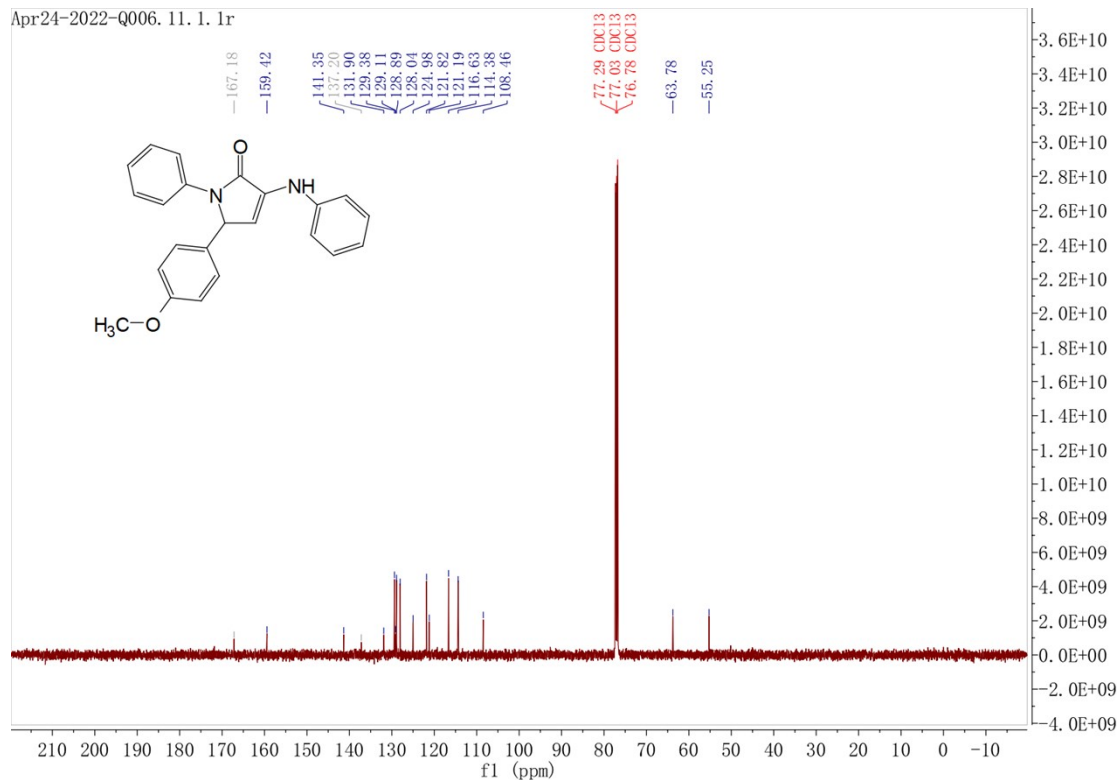


4d

Apr24-2022-Q006. 10. 1. 1r

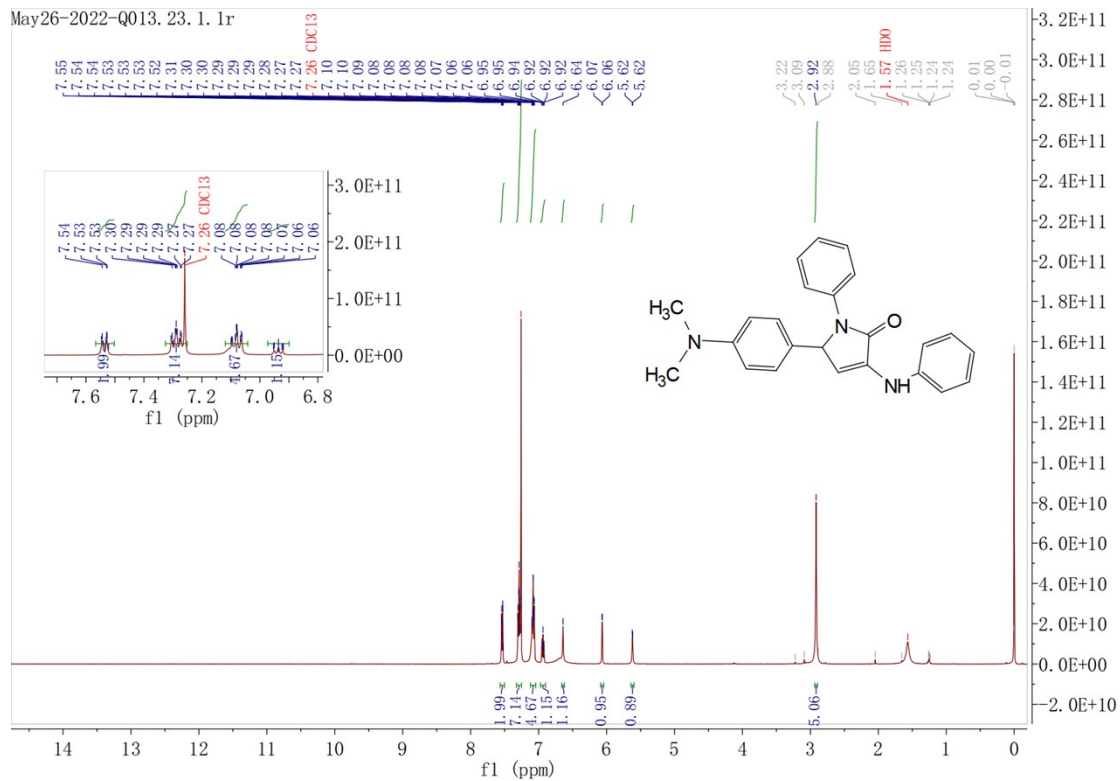


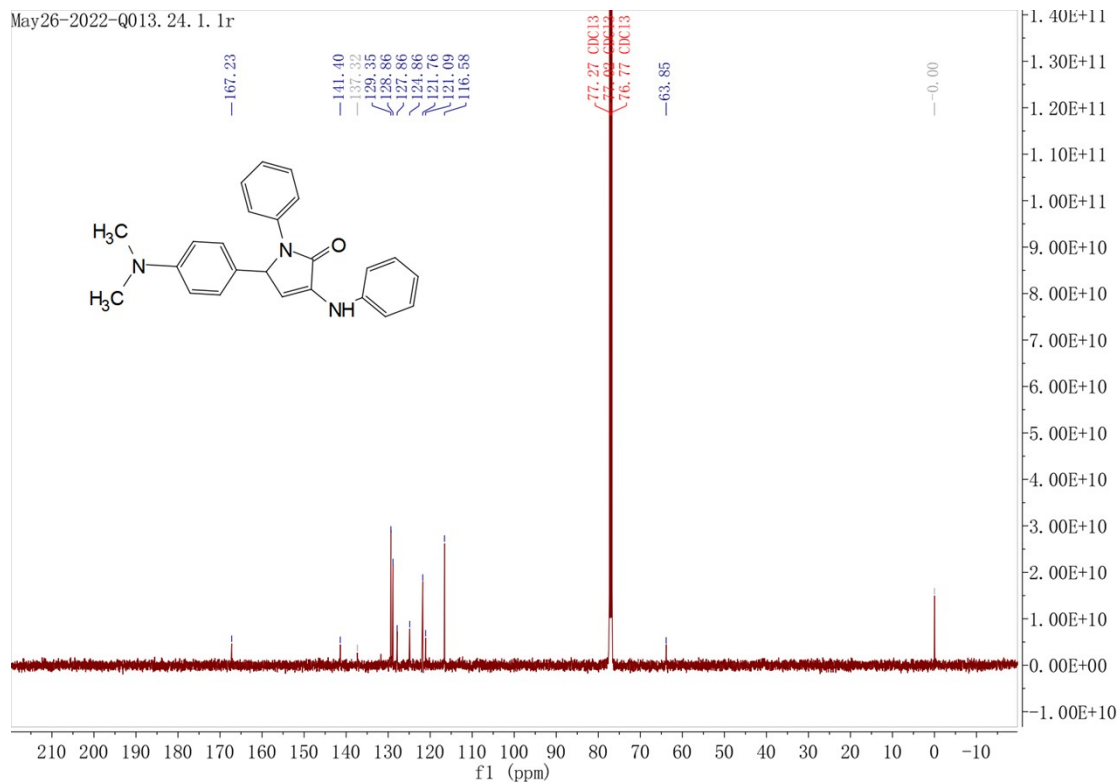
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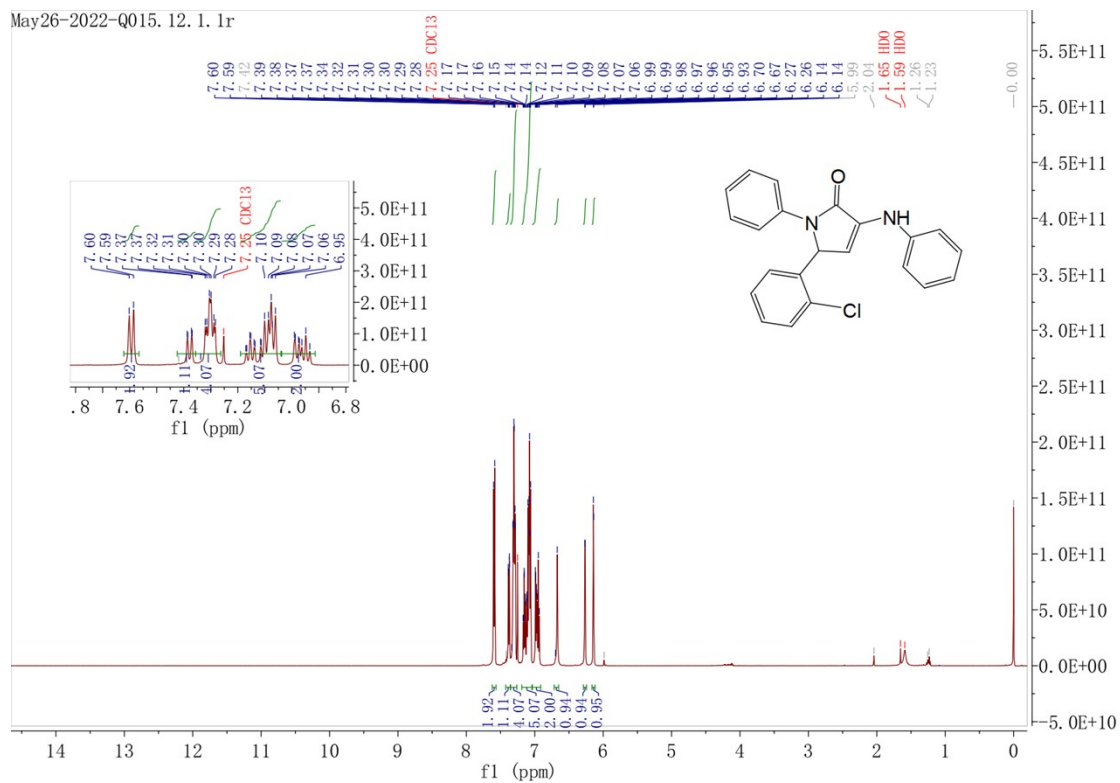
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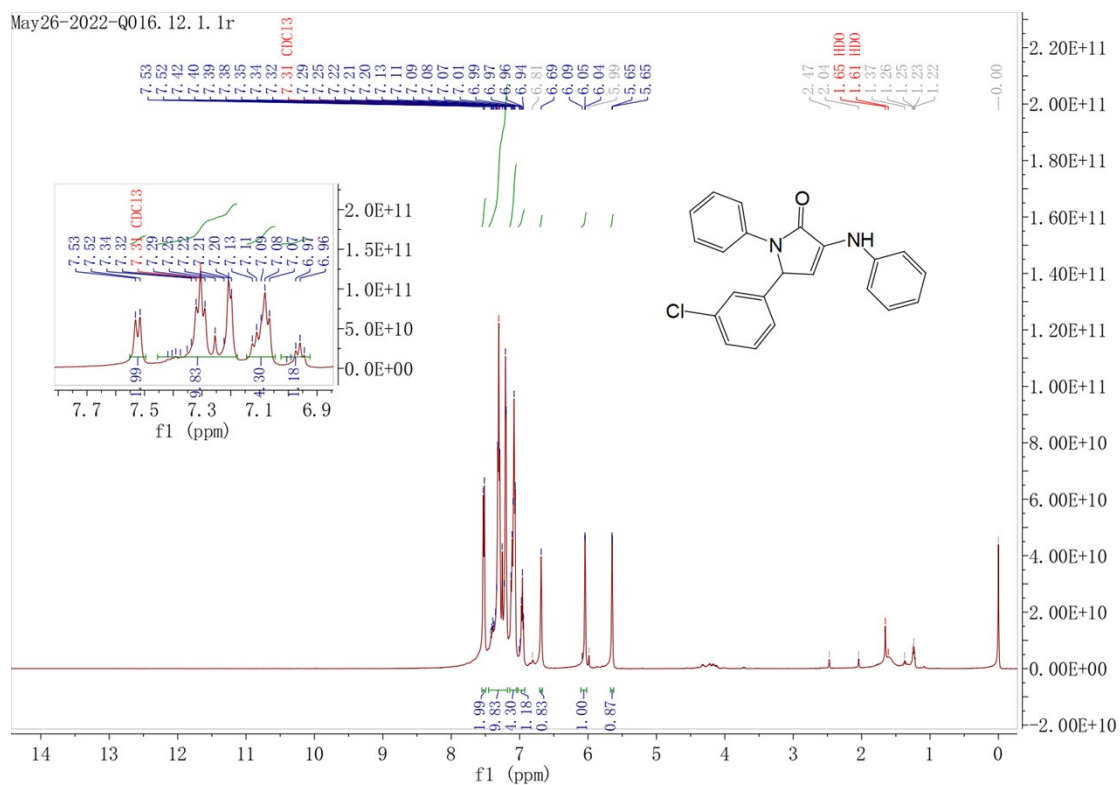
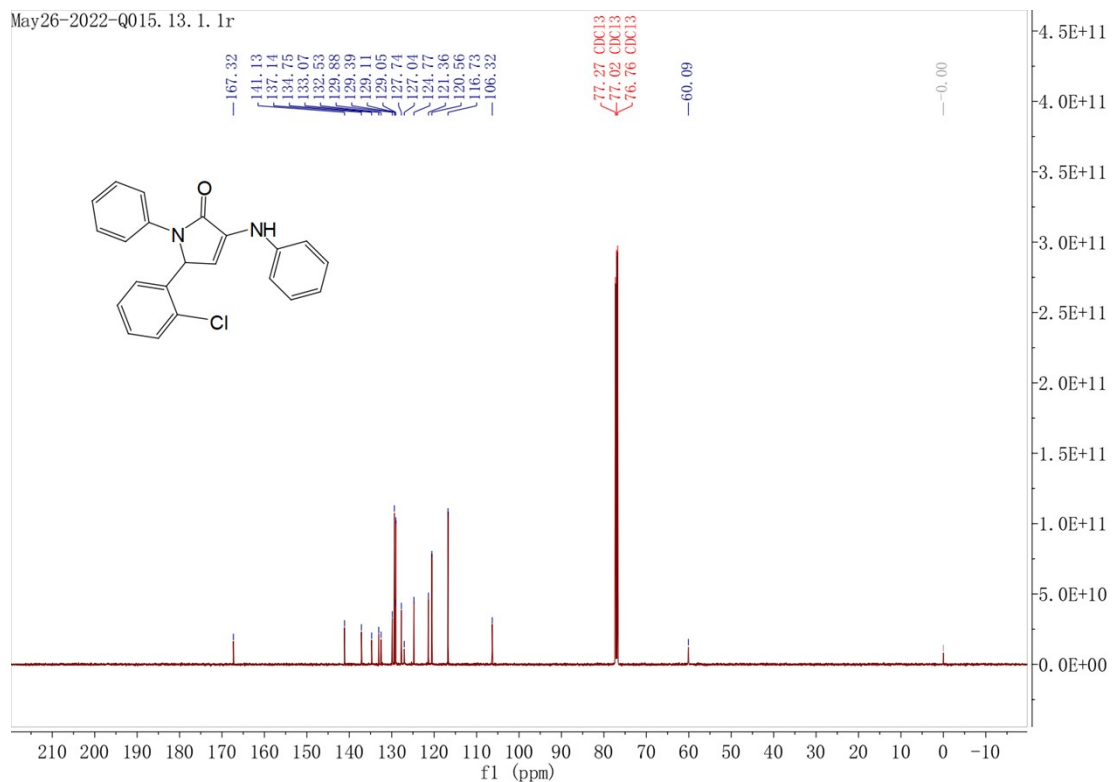


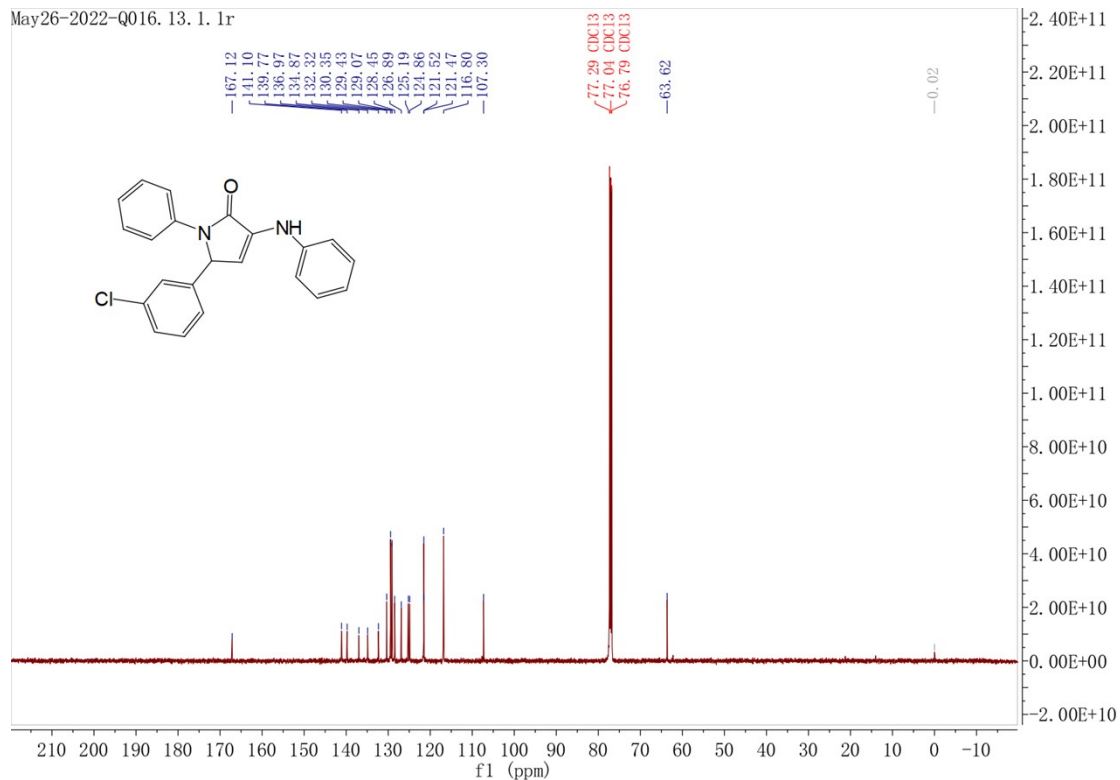


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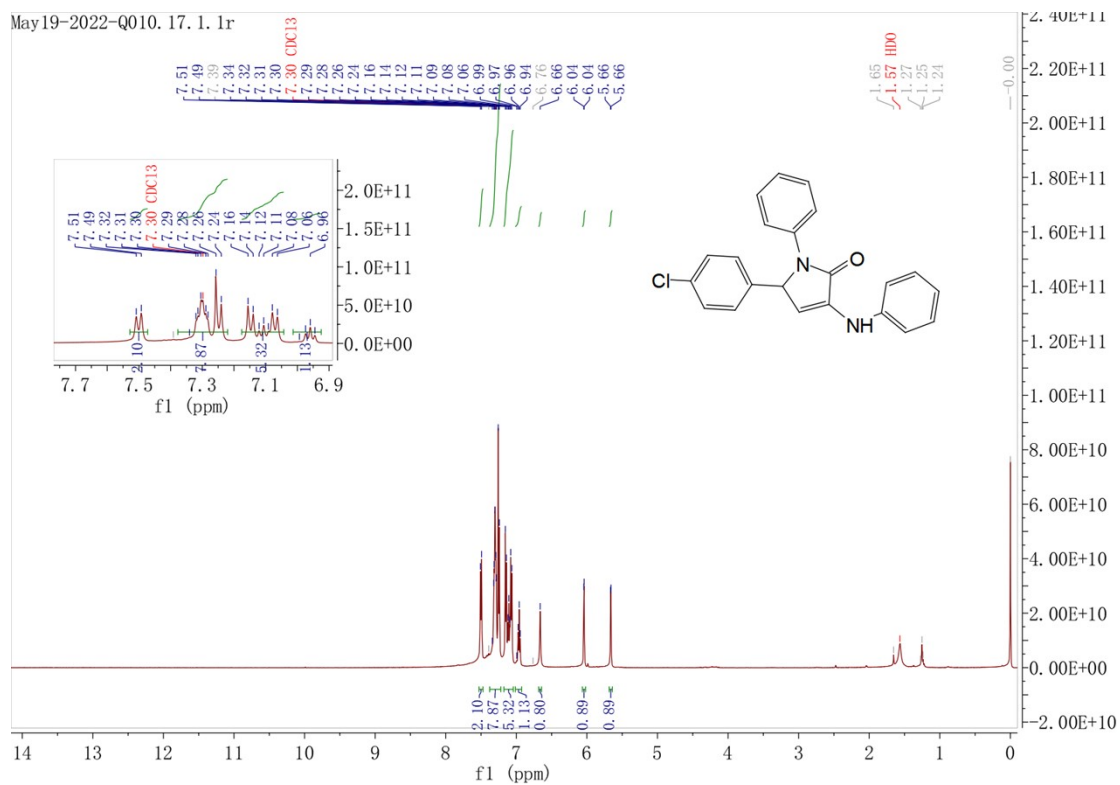




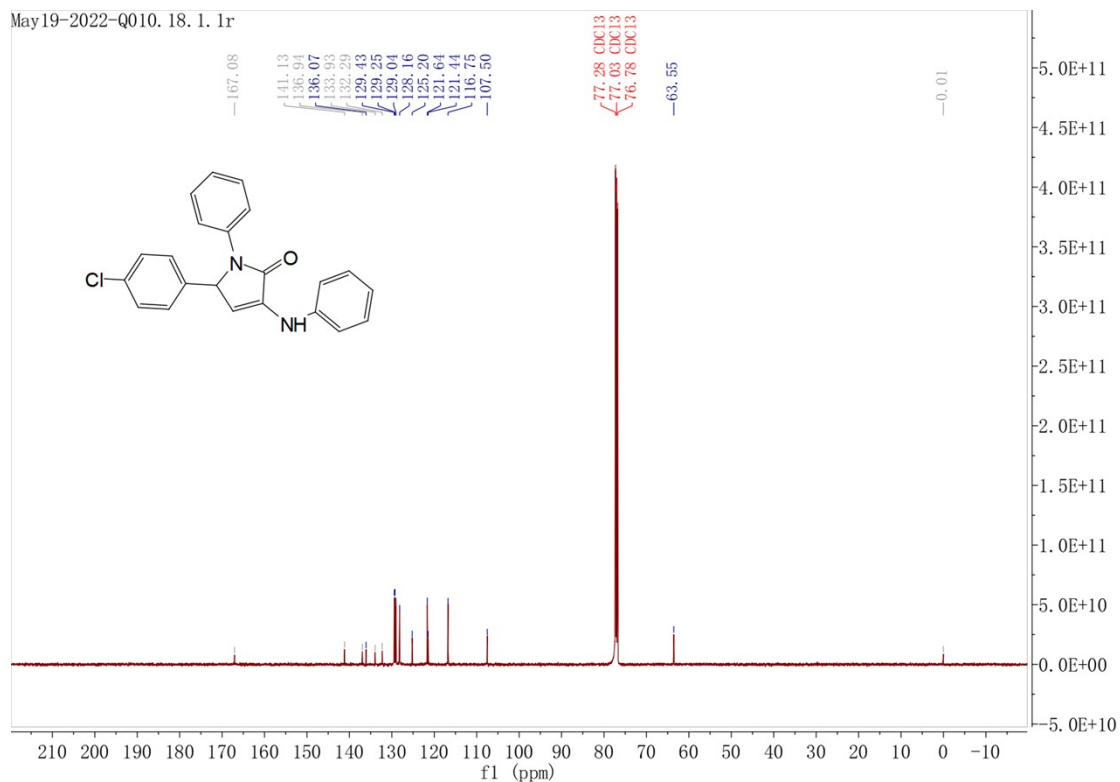




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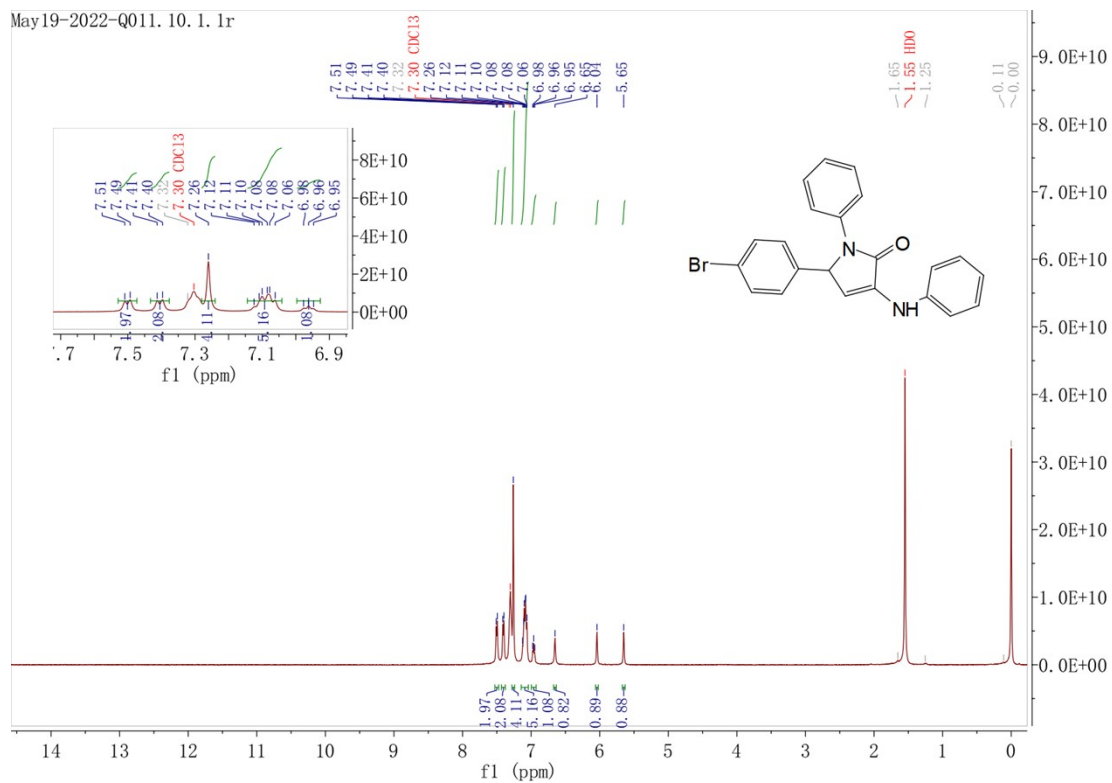


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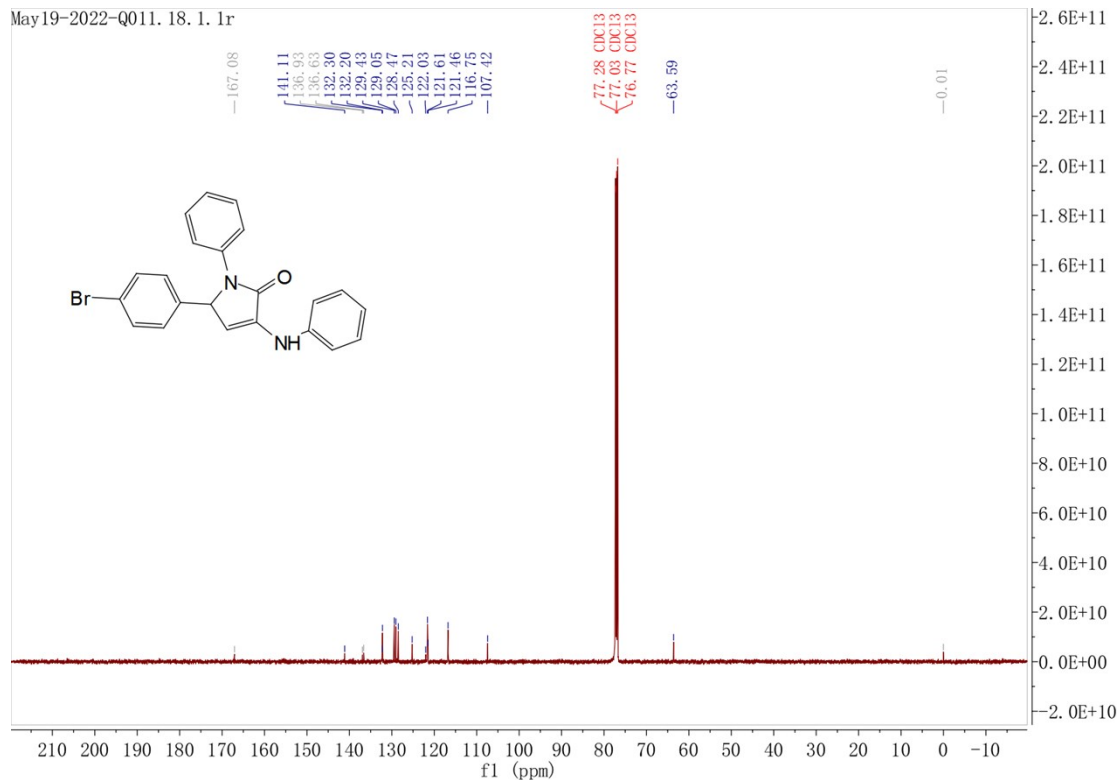


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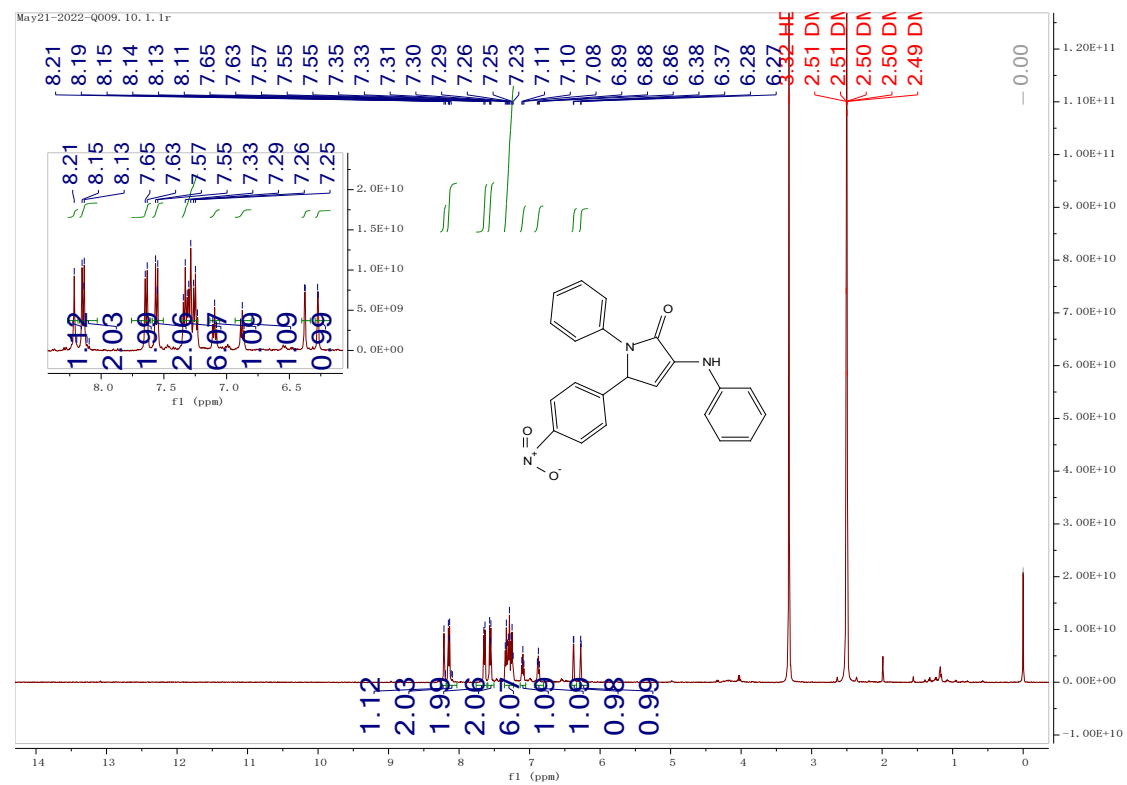
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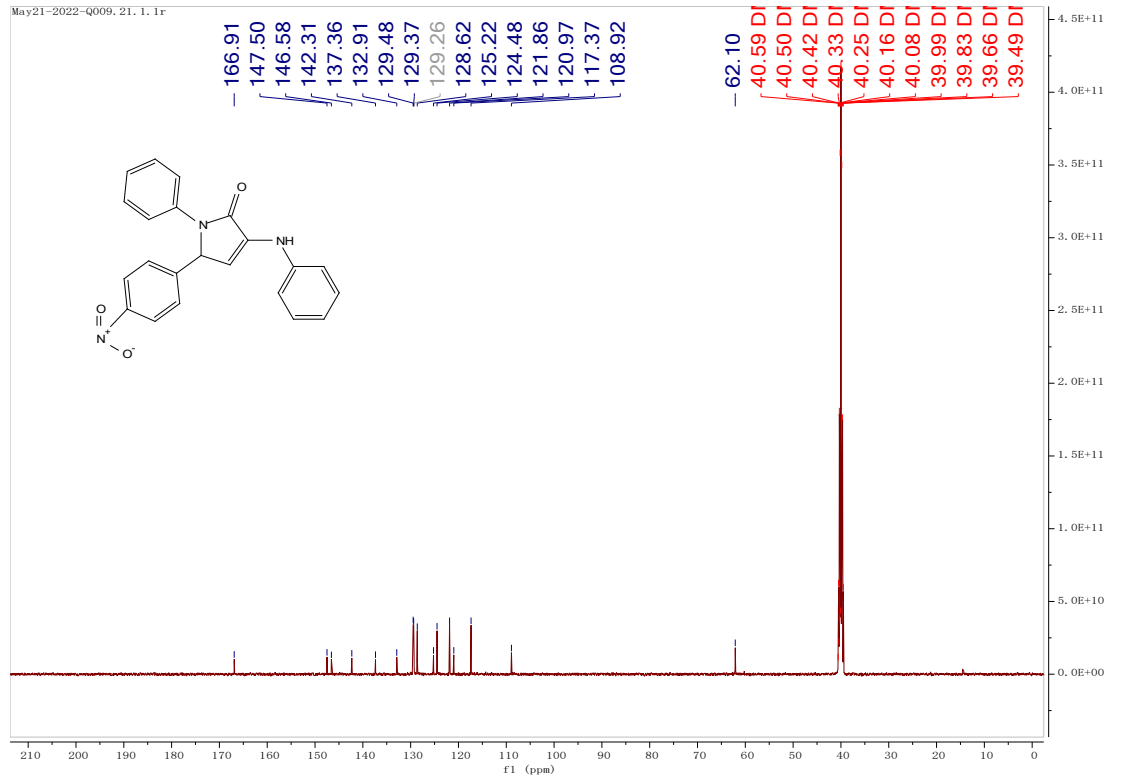
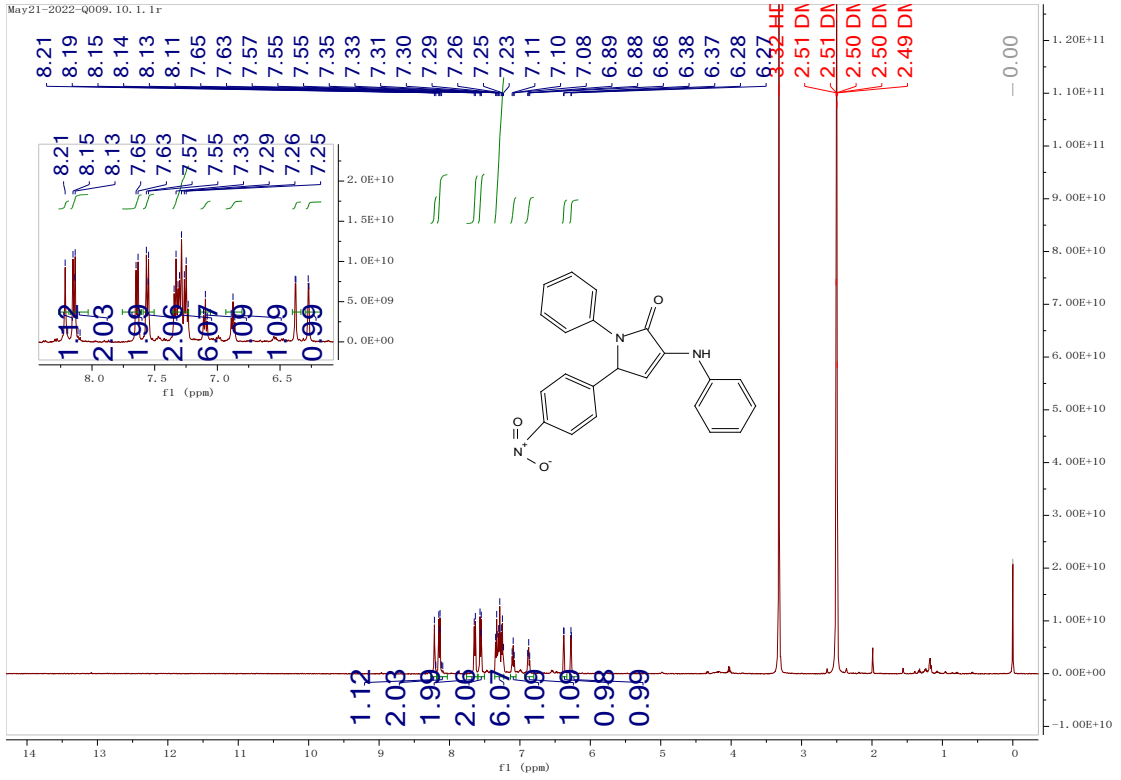


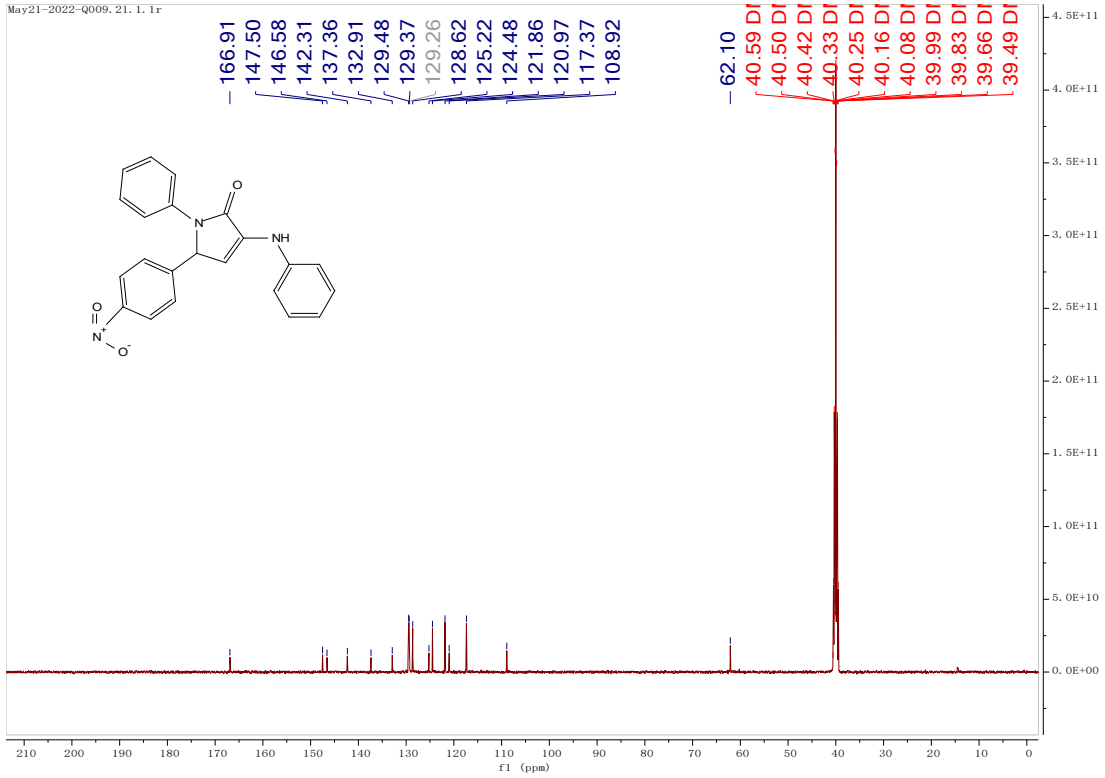
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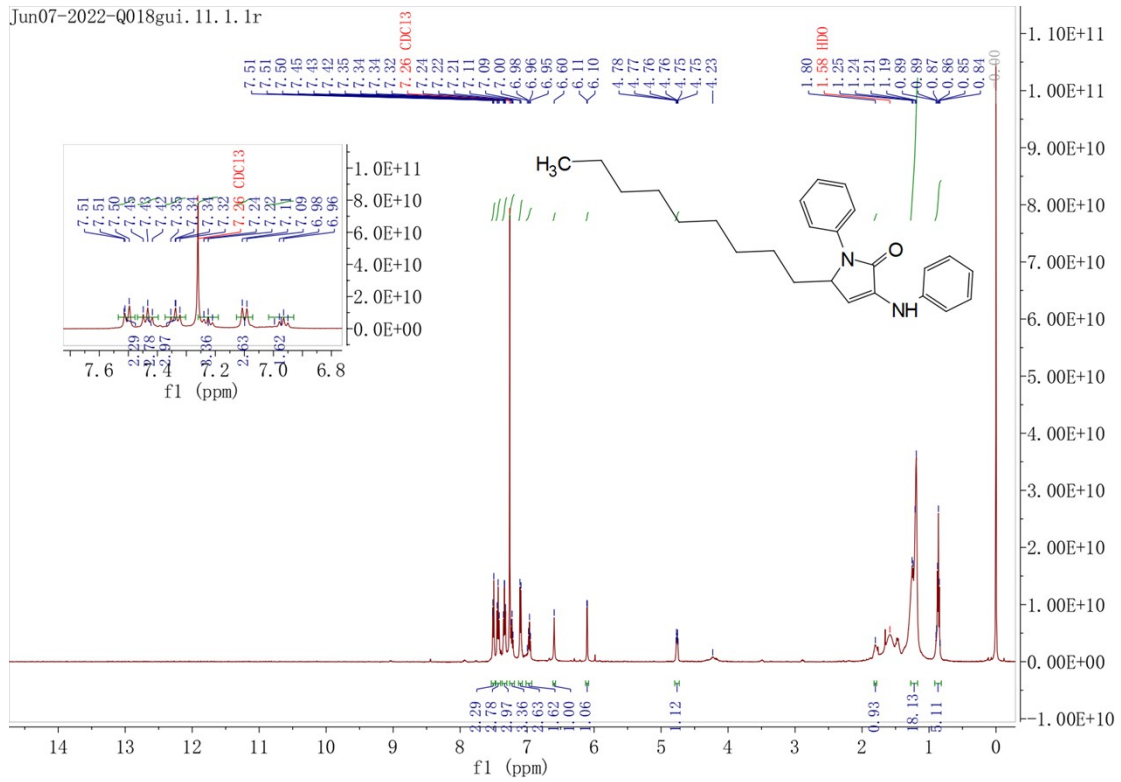
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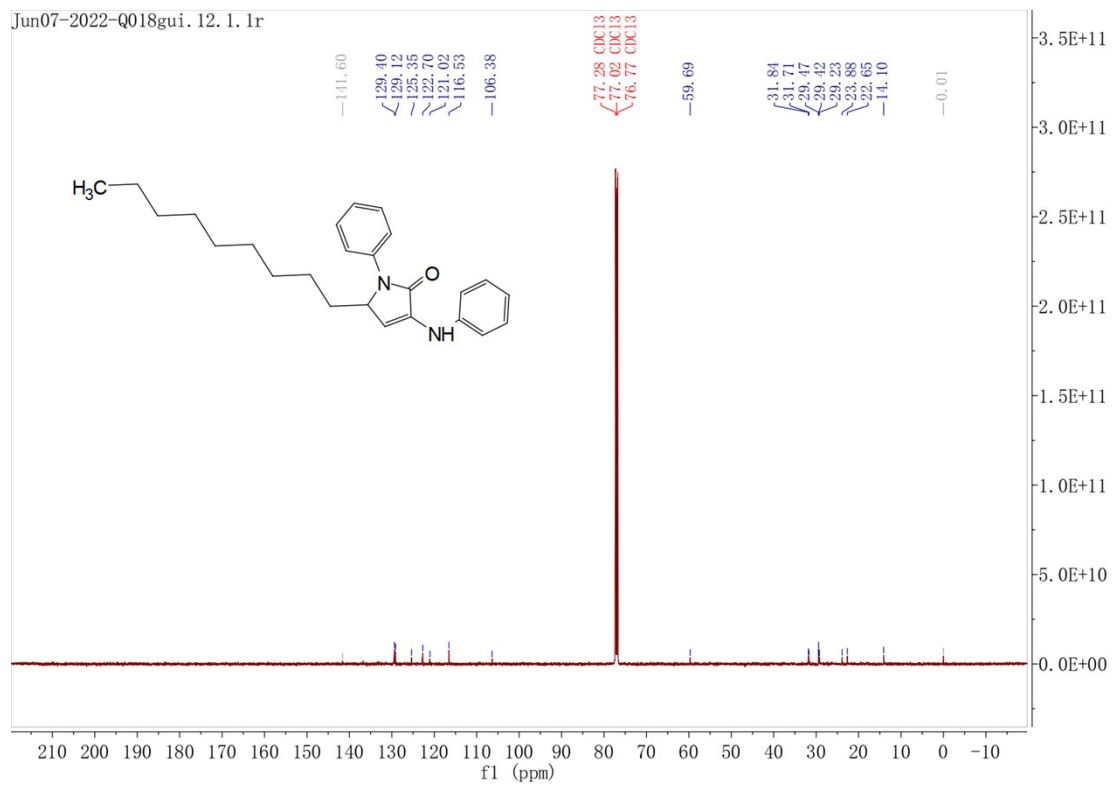


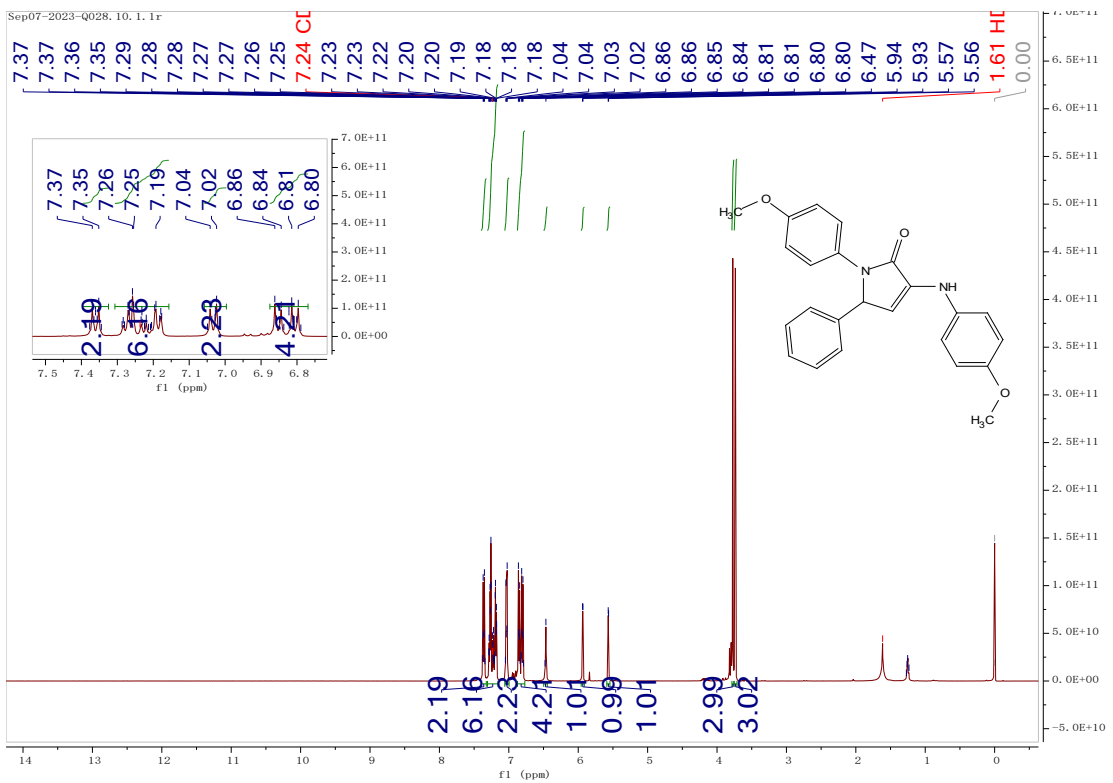
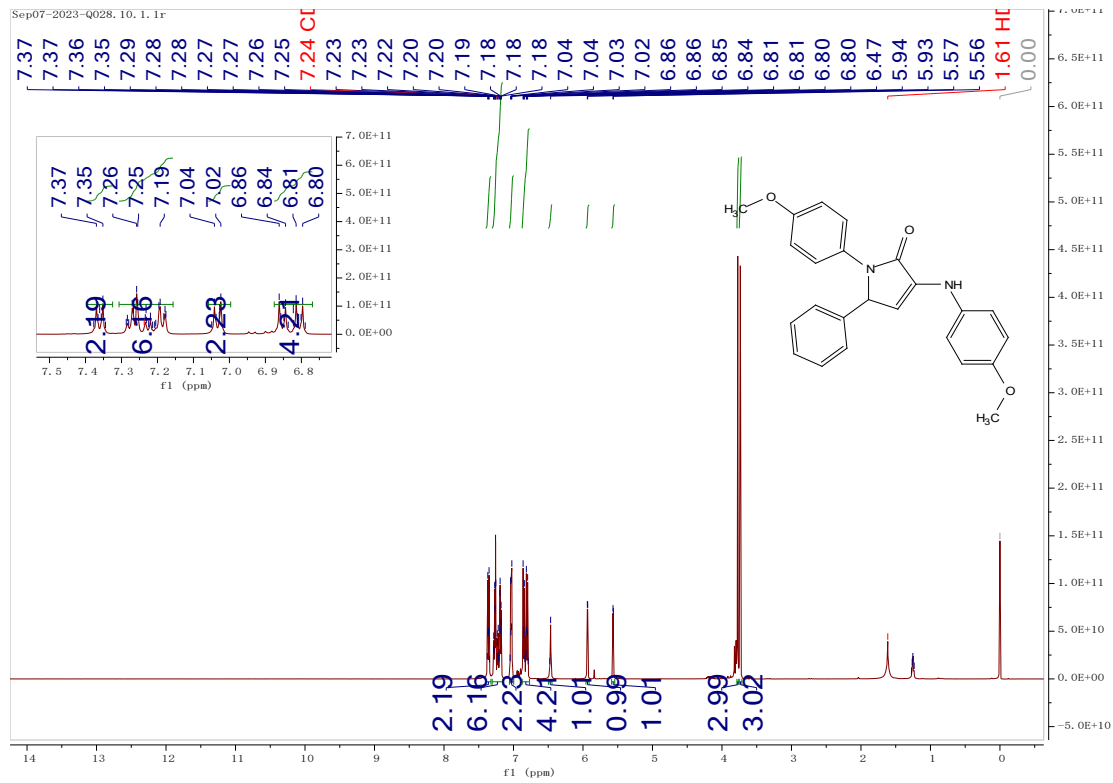


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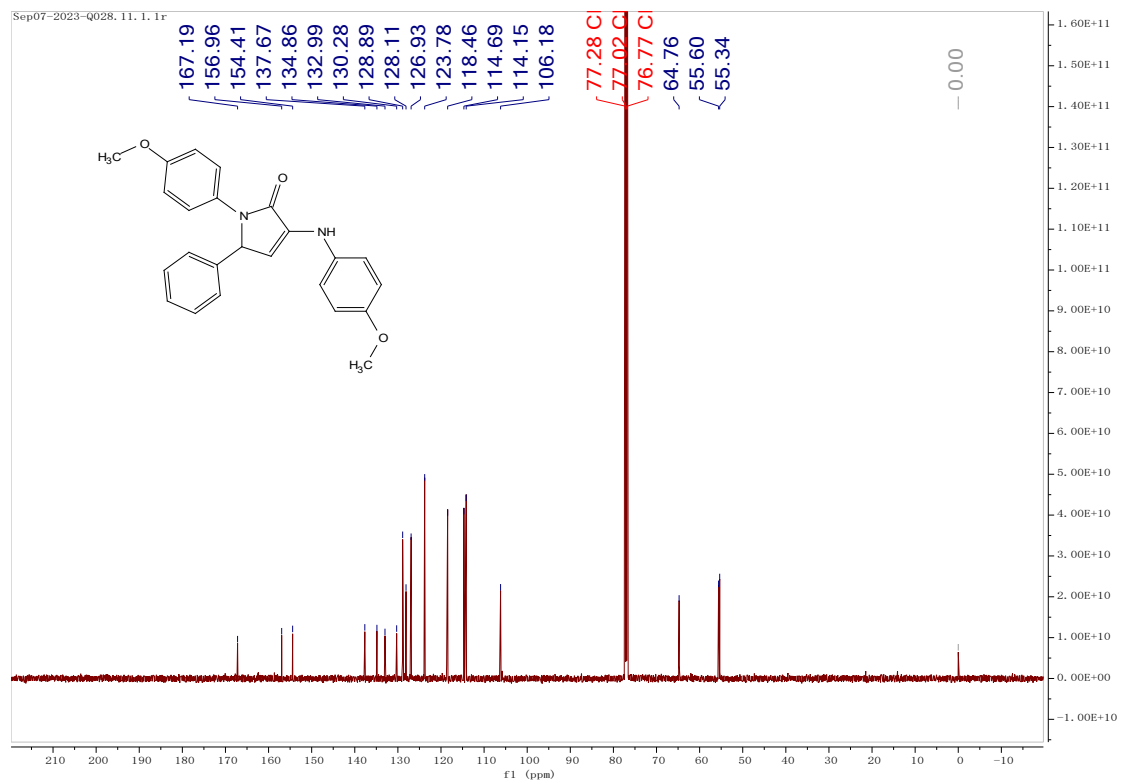
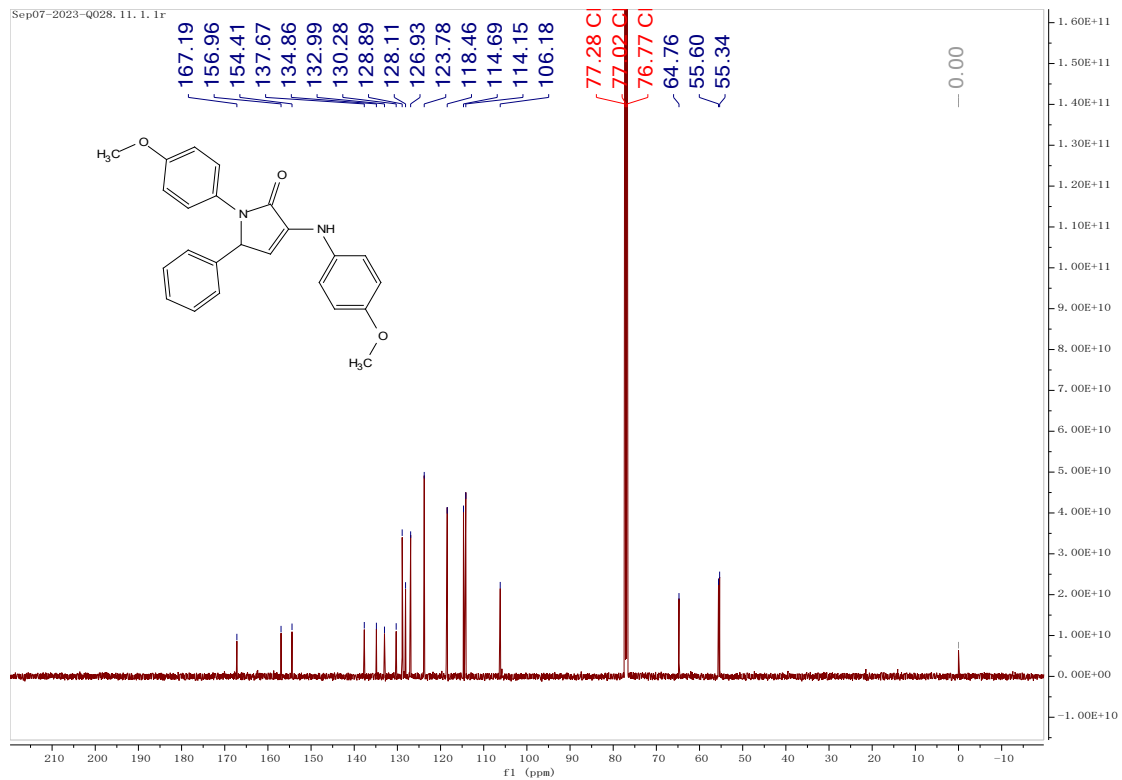


Jun07-2022-Q018gui. 12. 1. 1r









4m

