

Supporting Information

Microwave-activated preparation of 4-amino-3-cyano-5-methoxycarbonyl- N-arylpyrazoles as building blocks for the diversity-oriented synthesis of pyrazole-based polycyclic scaffolds

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Guillaume Prestat, Christine Gravier-Pelletier, Patricia Busca*

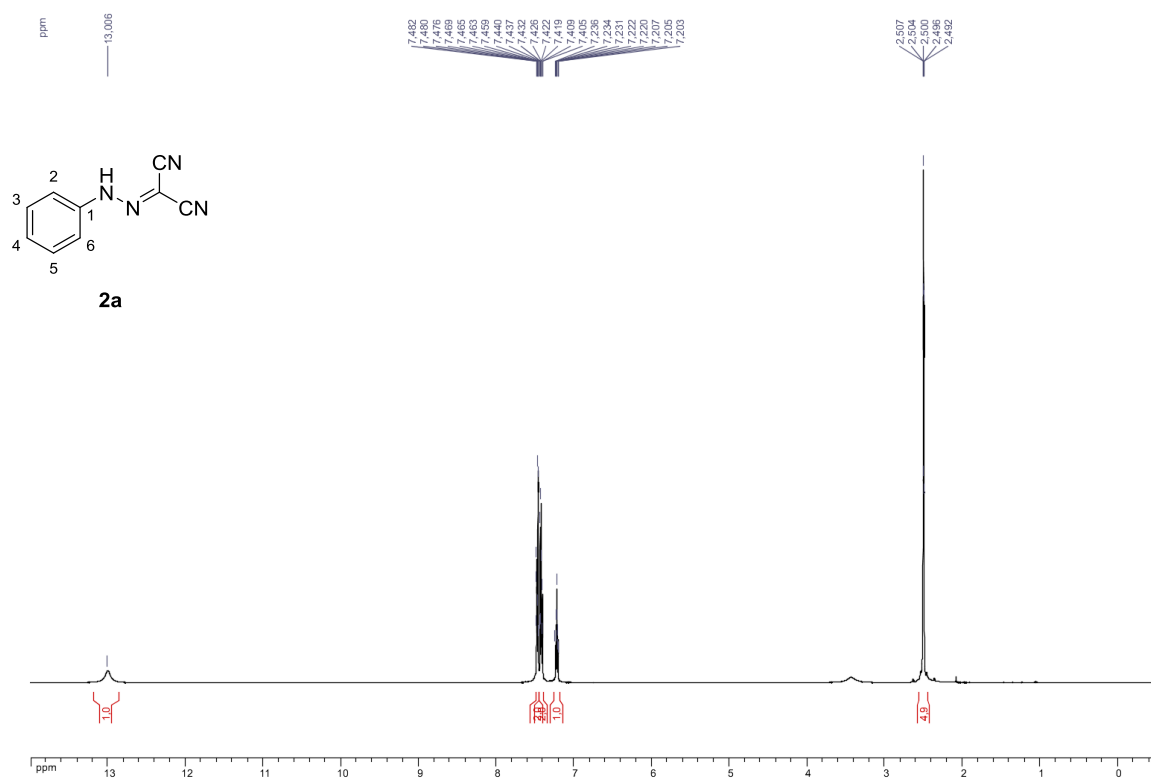
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et Toxicologiques, 45 rue des Saints Pères 75006 Paris, France.

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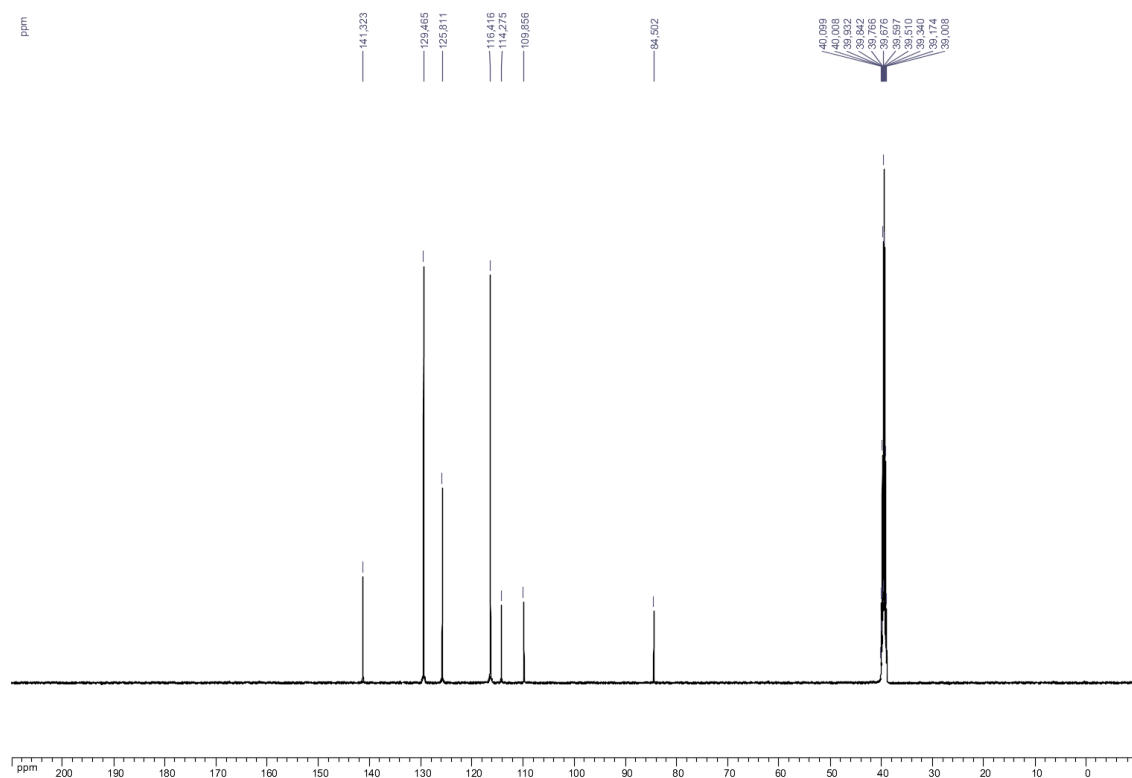
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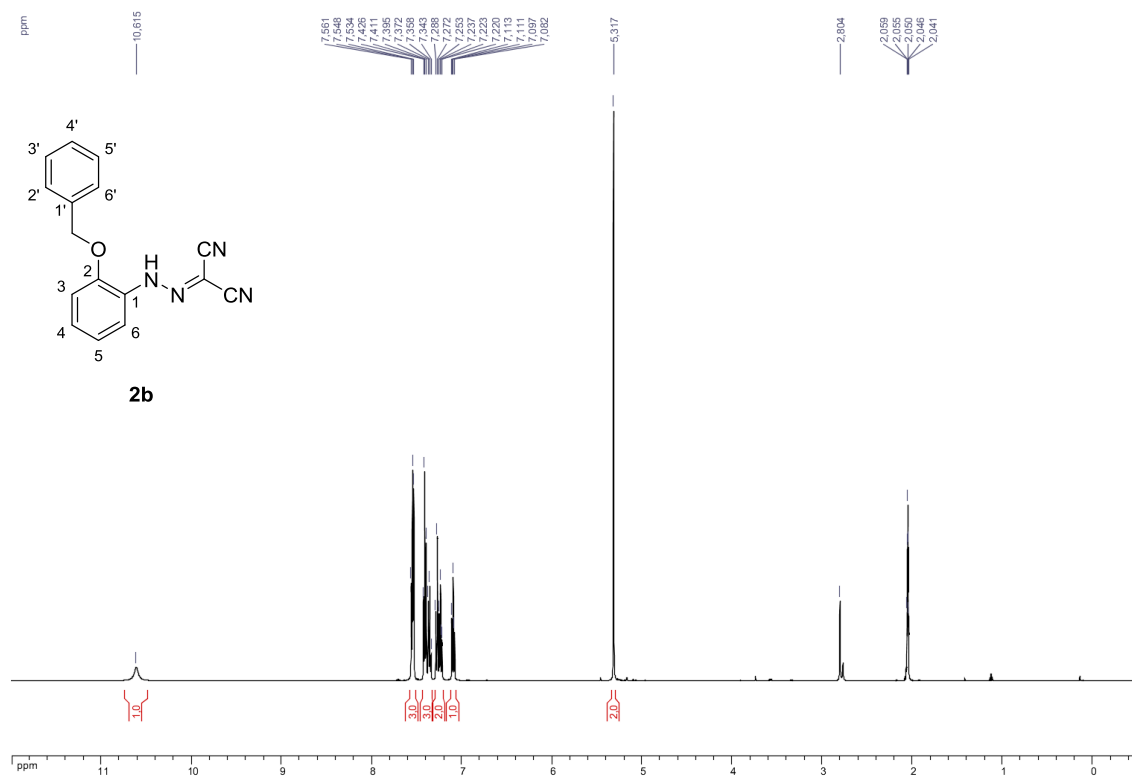
^1H NMR, 500 MHz ($\text{DMSO}-d_6$), compound **2a**



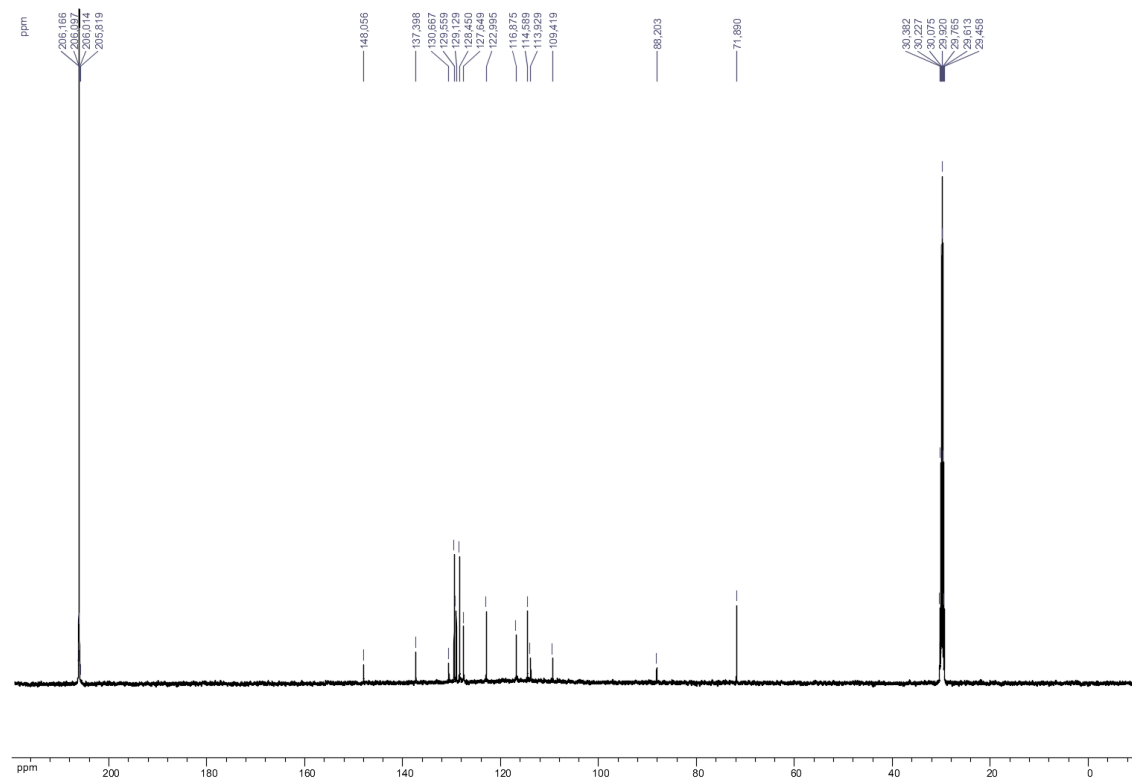
^{13}C NMR, 125 MHz ($\text{DMSO}-d_6$), compound **2a**



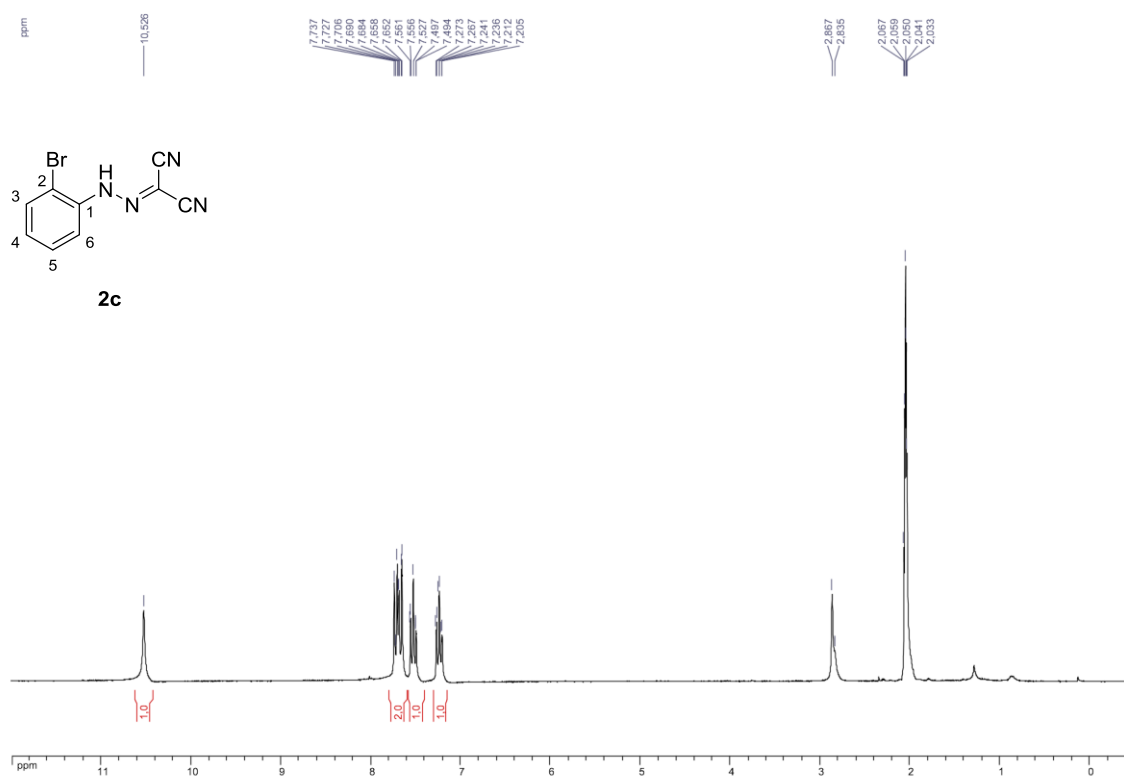
¹H NMR, 500 MHz (acetone-*d*₆), compound **2b**



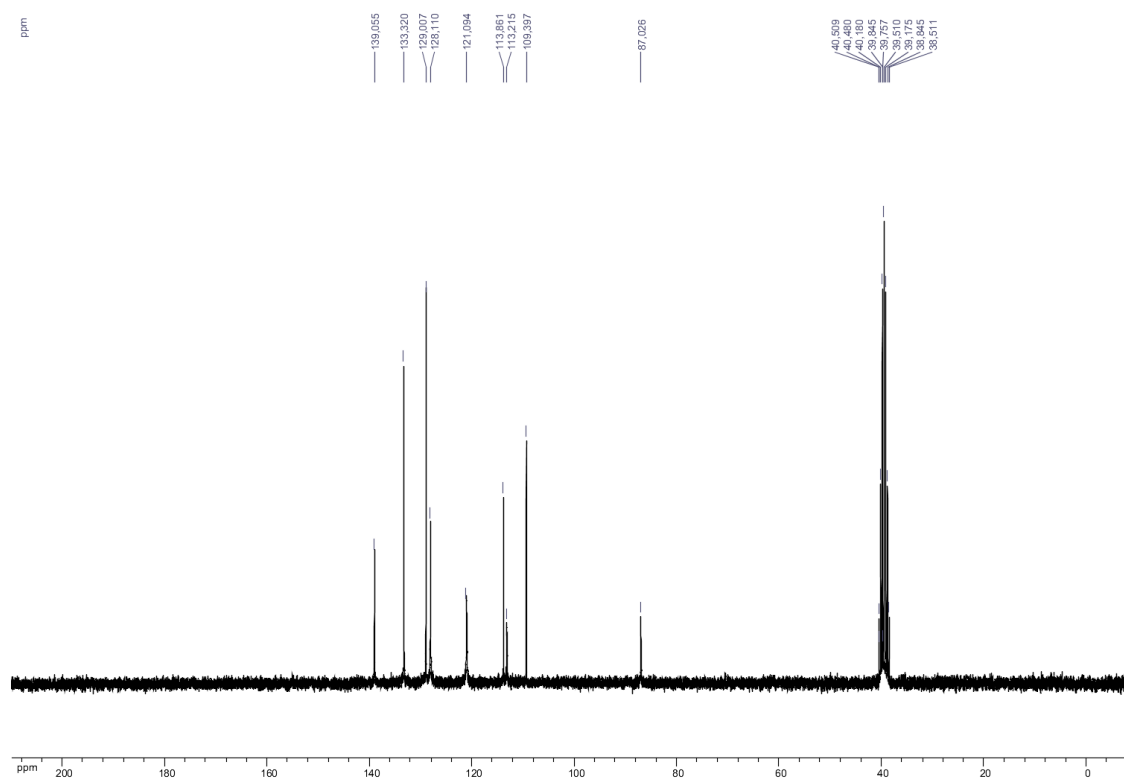
¹³C NMR, 125 MHz (acetone-*d*₆), compound **2b**



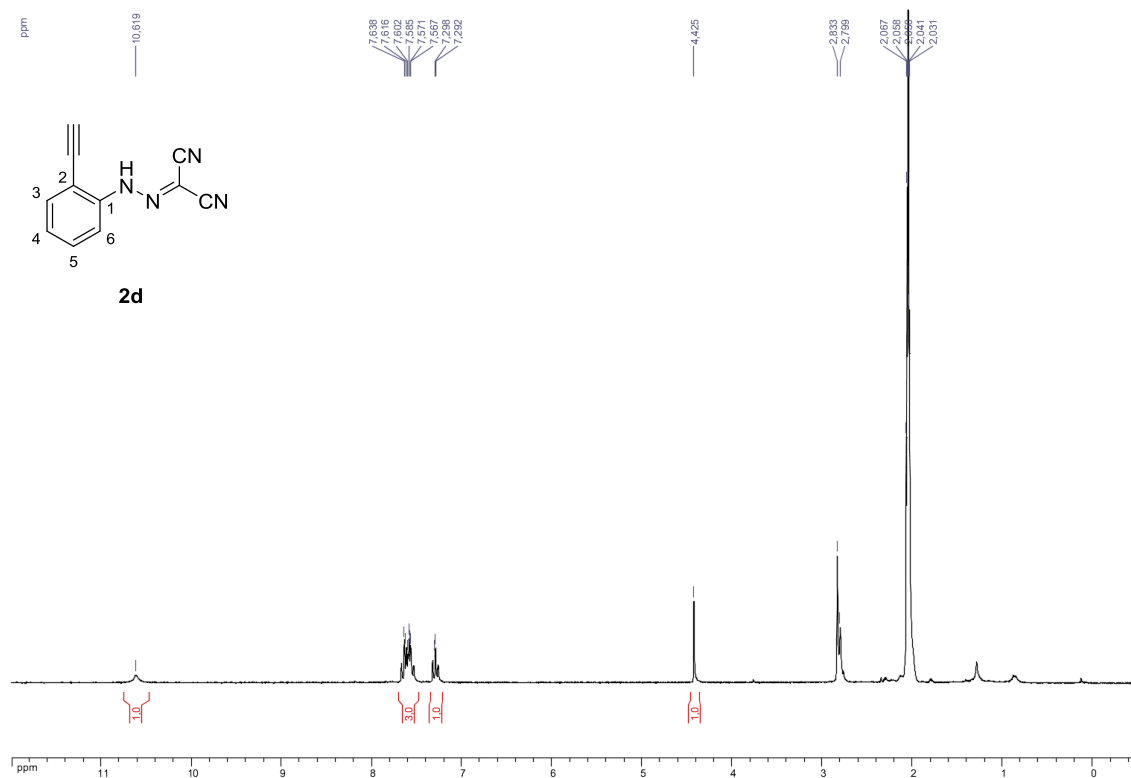
^1H NMR, 250 MHz (acetone- d_6), compound **2c**



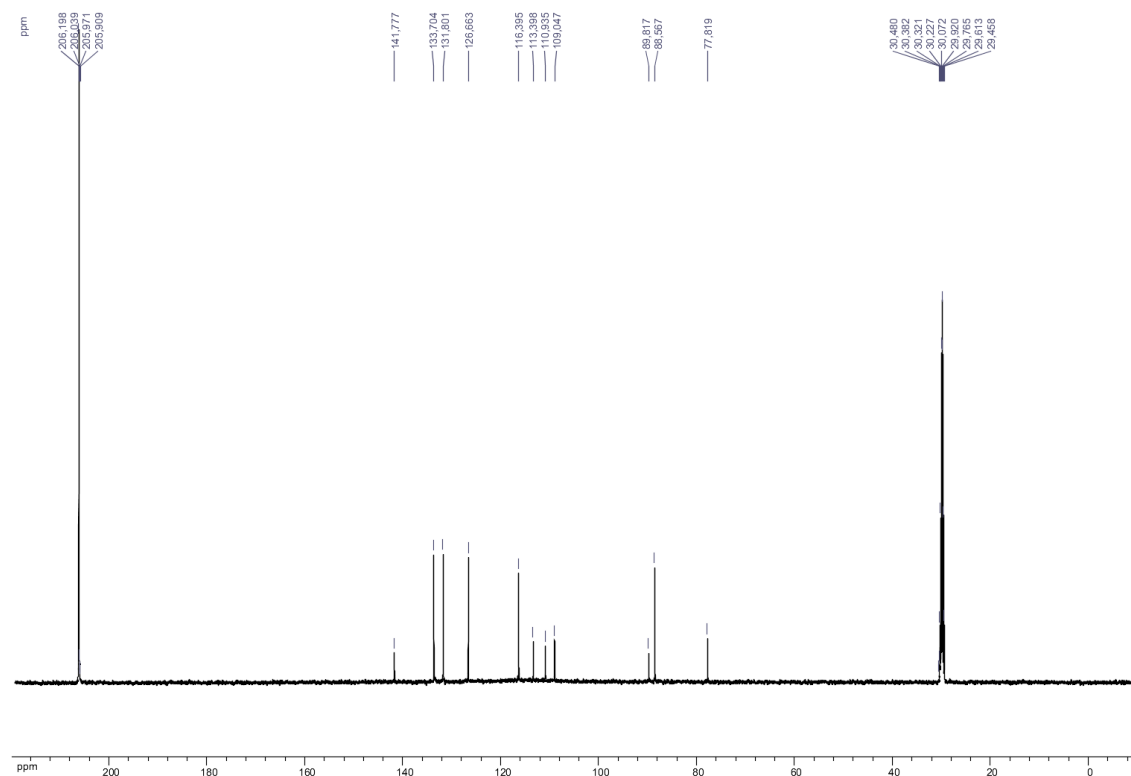
^{13}C NMR, 63 MHz (acetone- d_6), compound **2c**



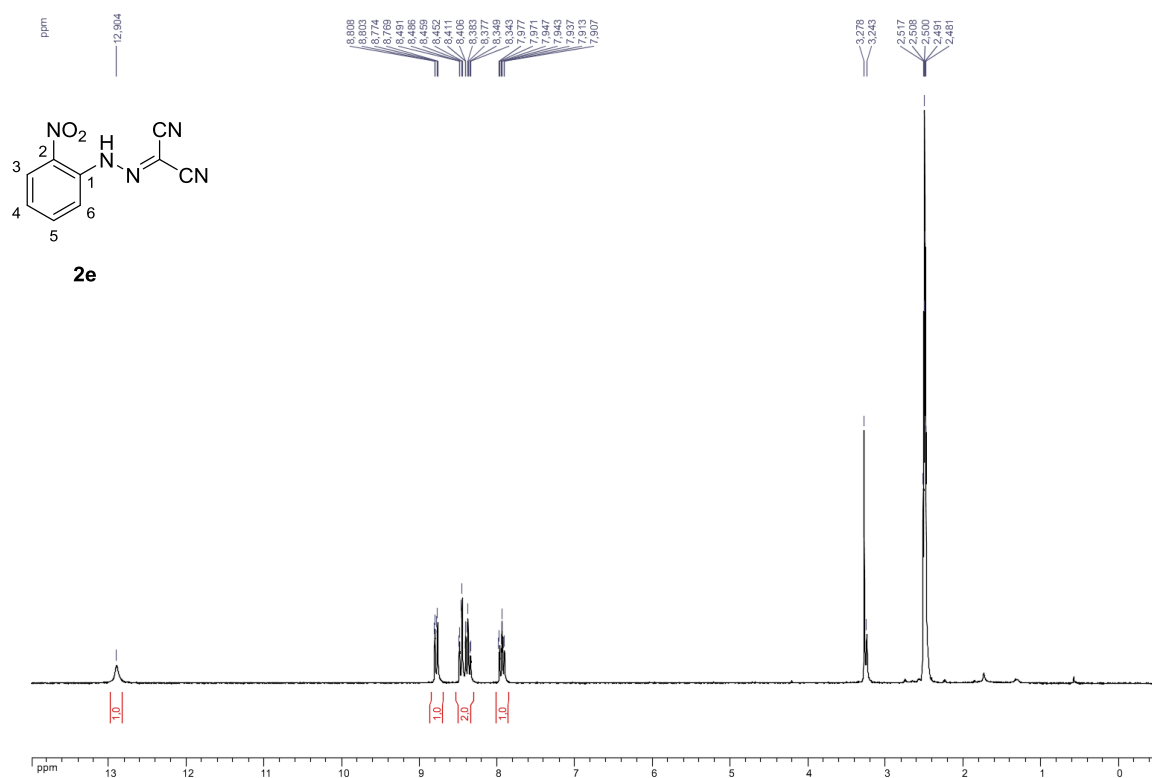
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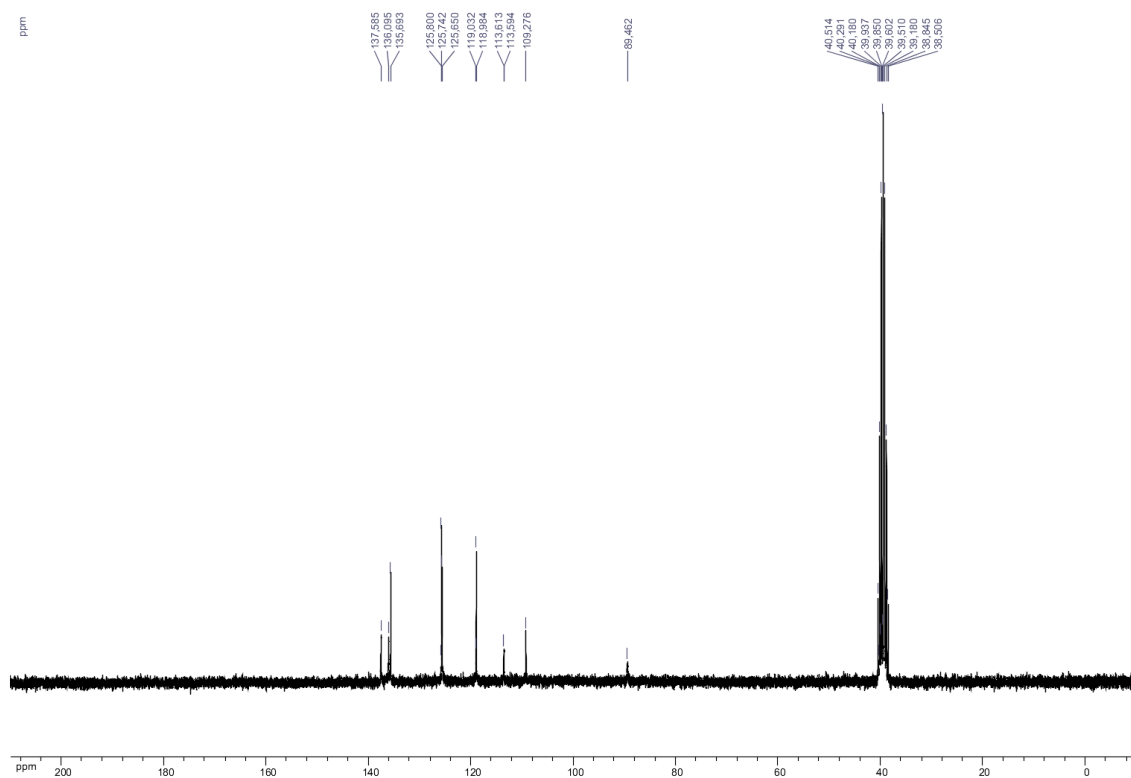
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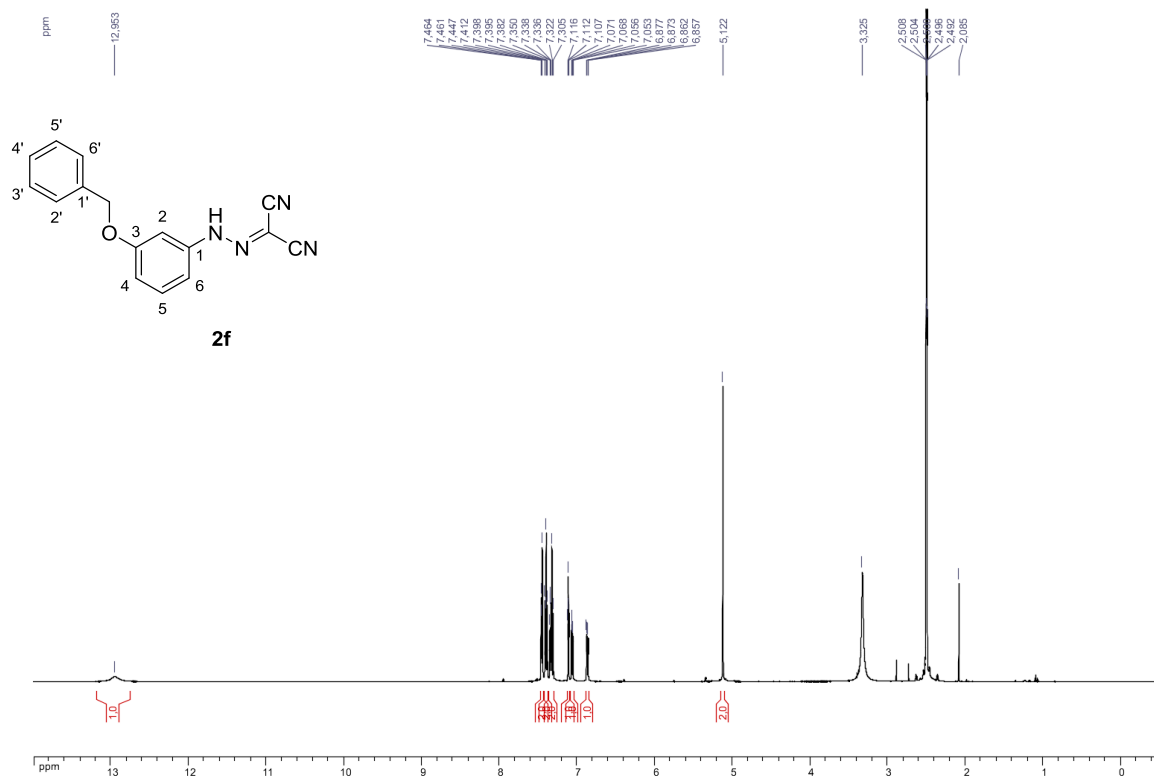
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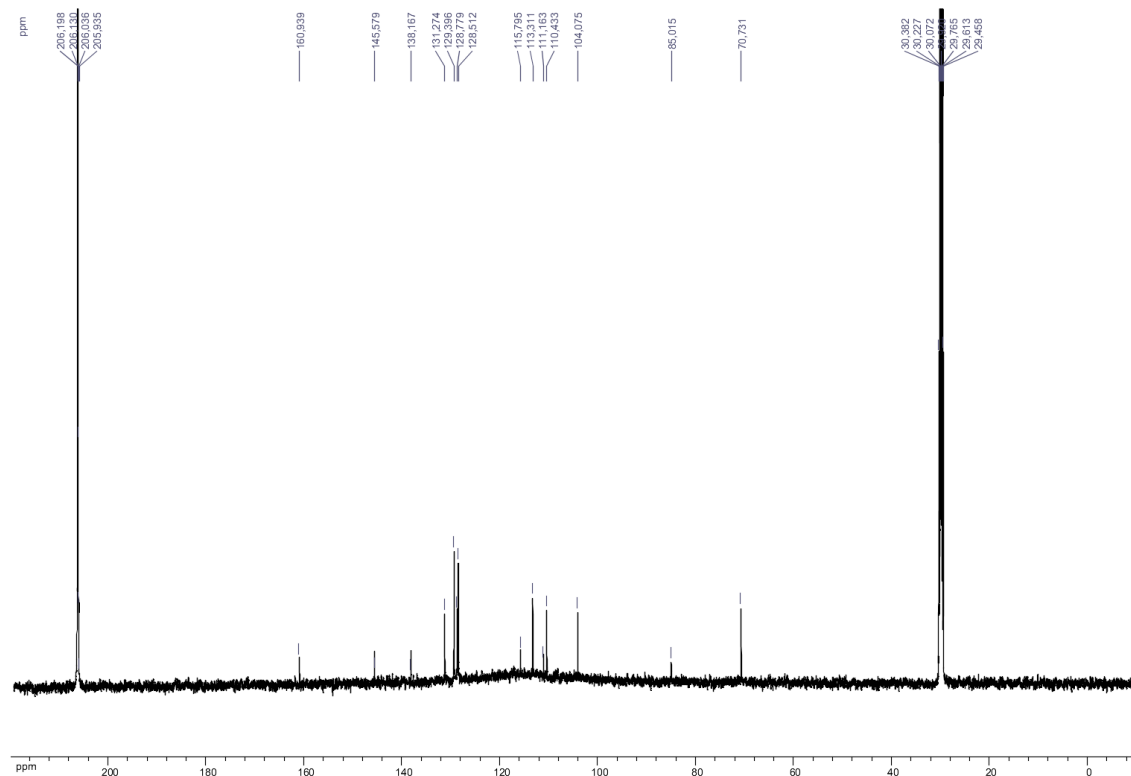
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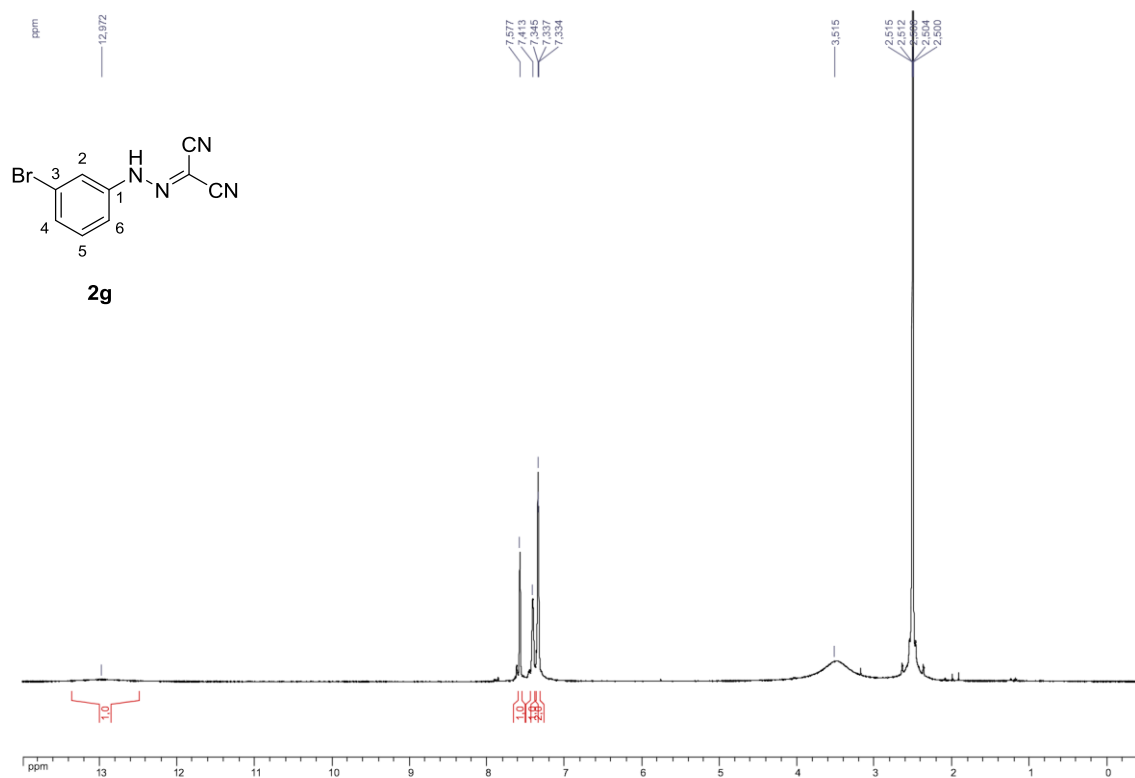
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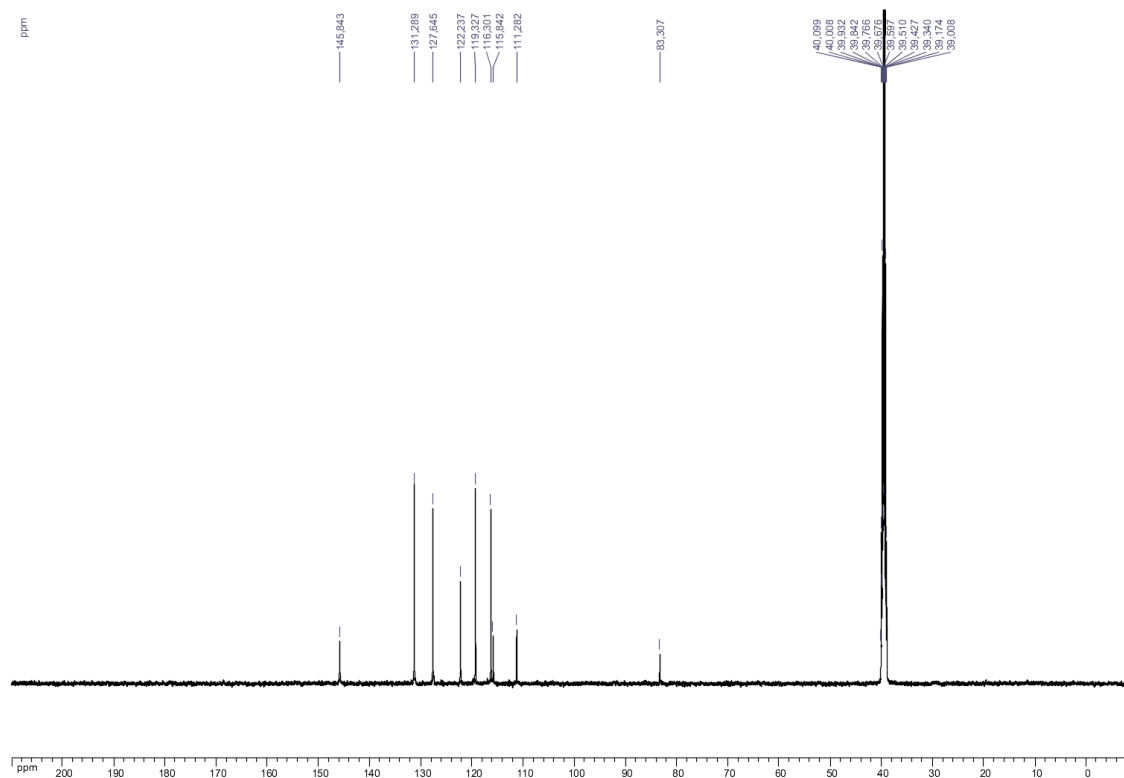
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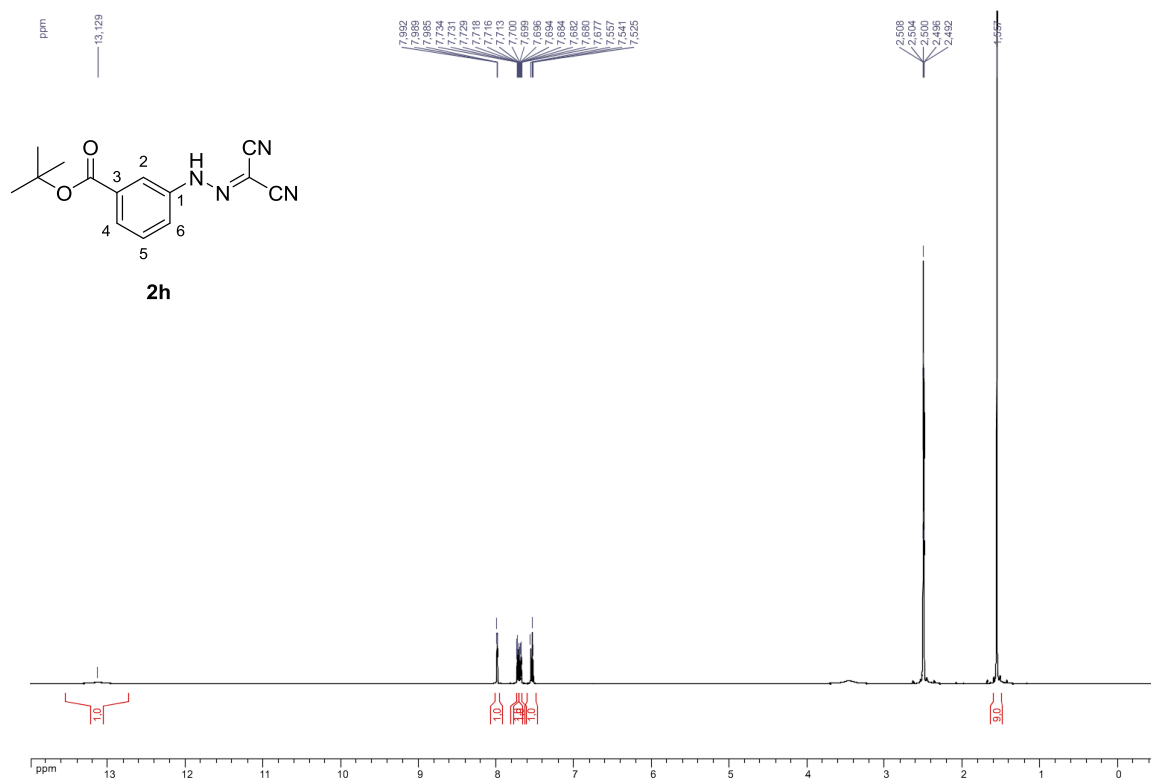
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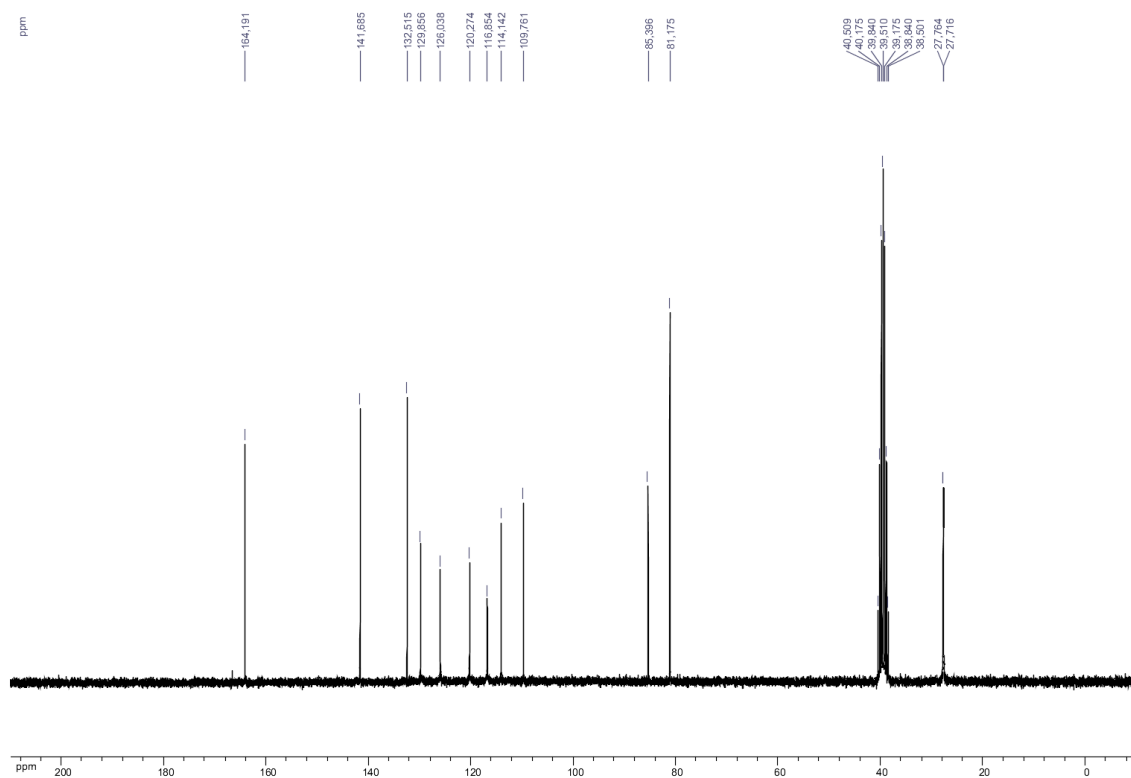
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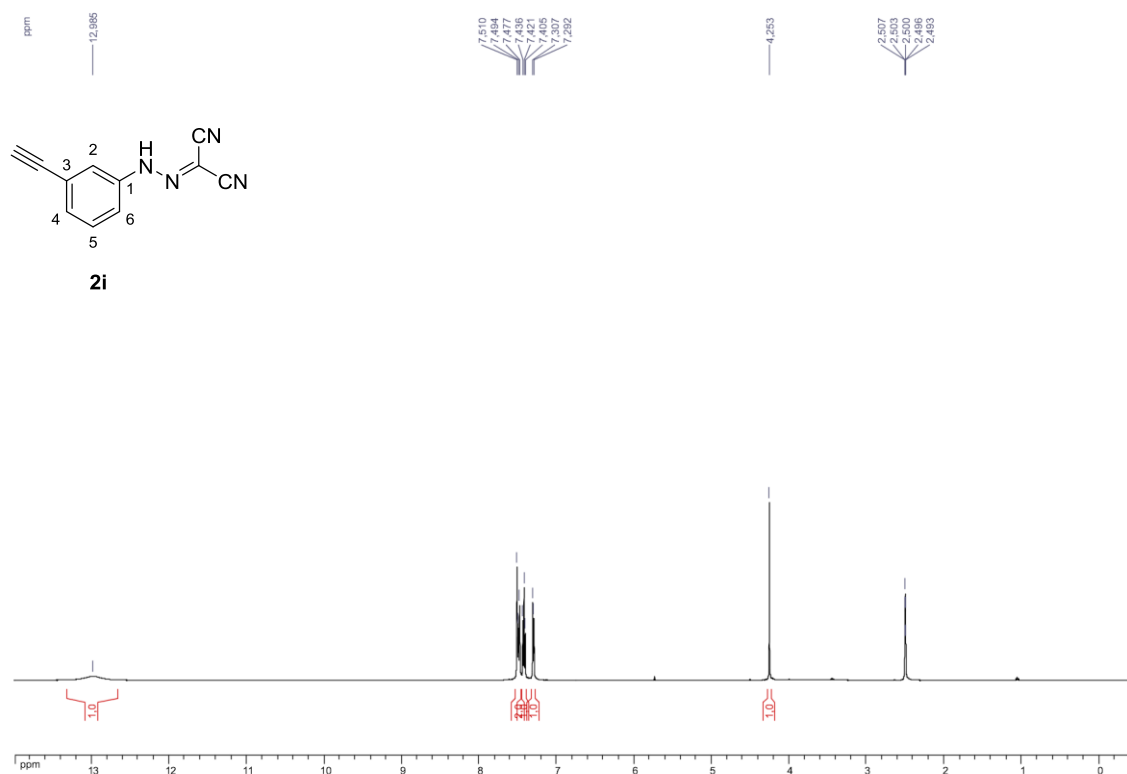
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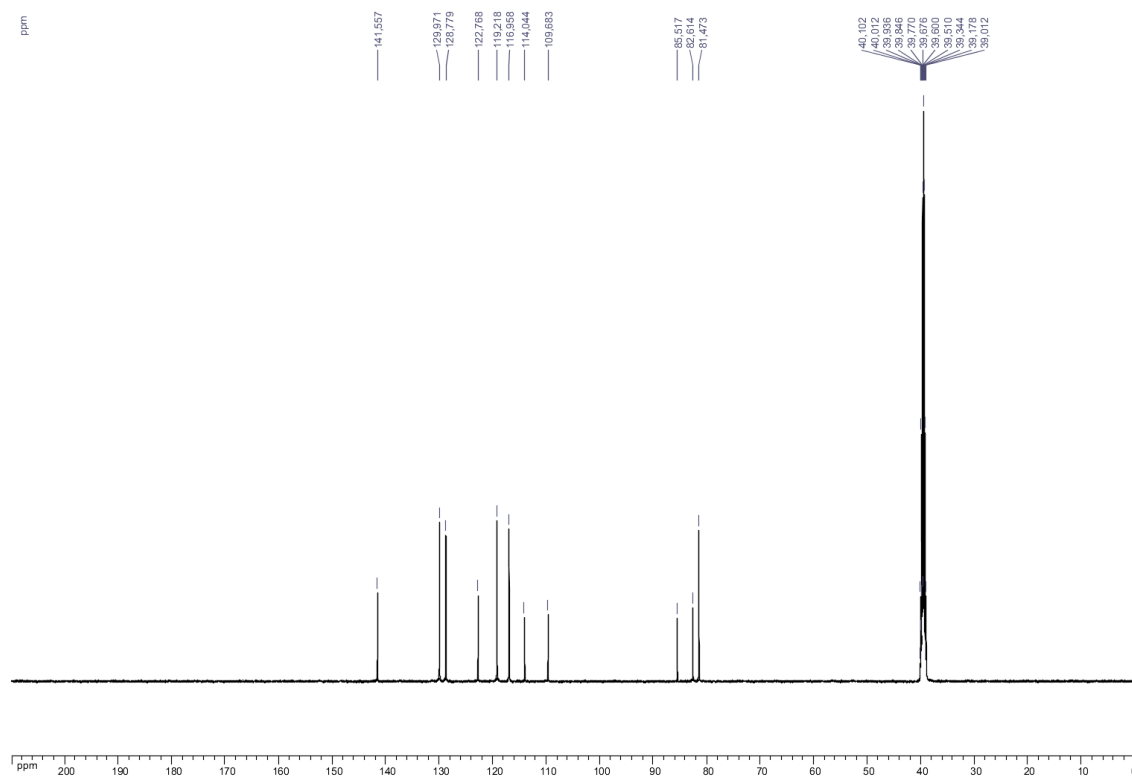
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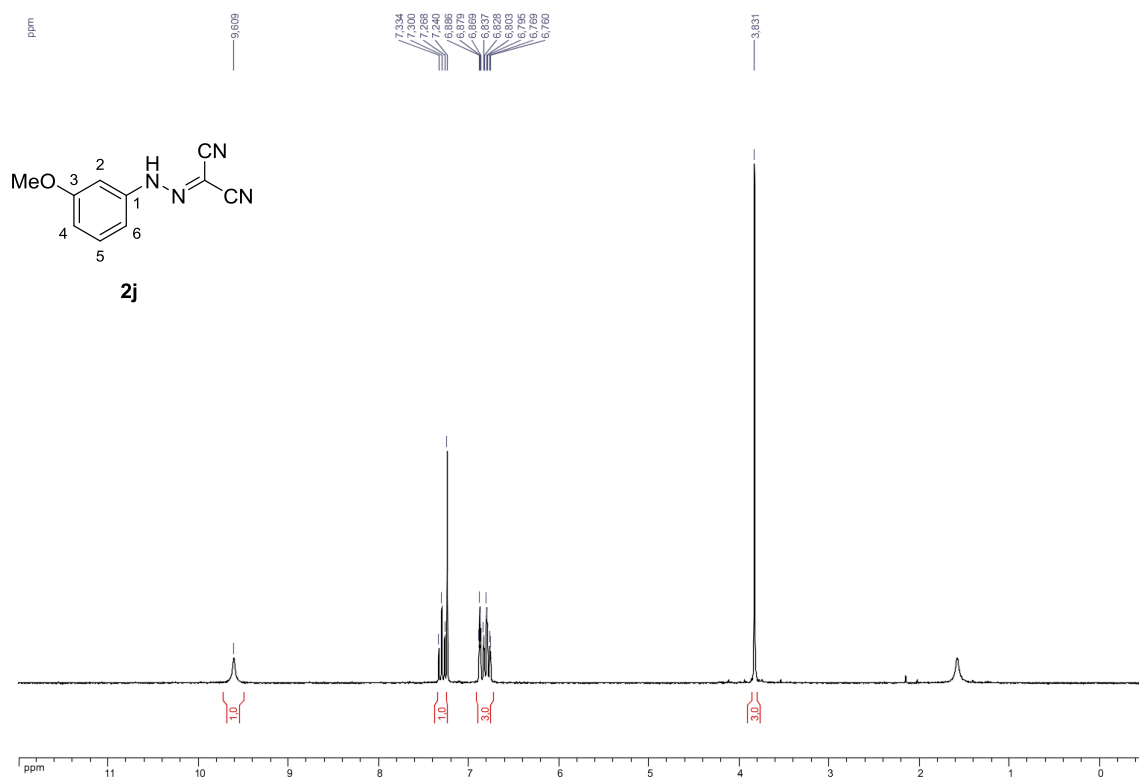
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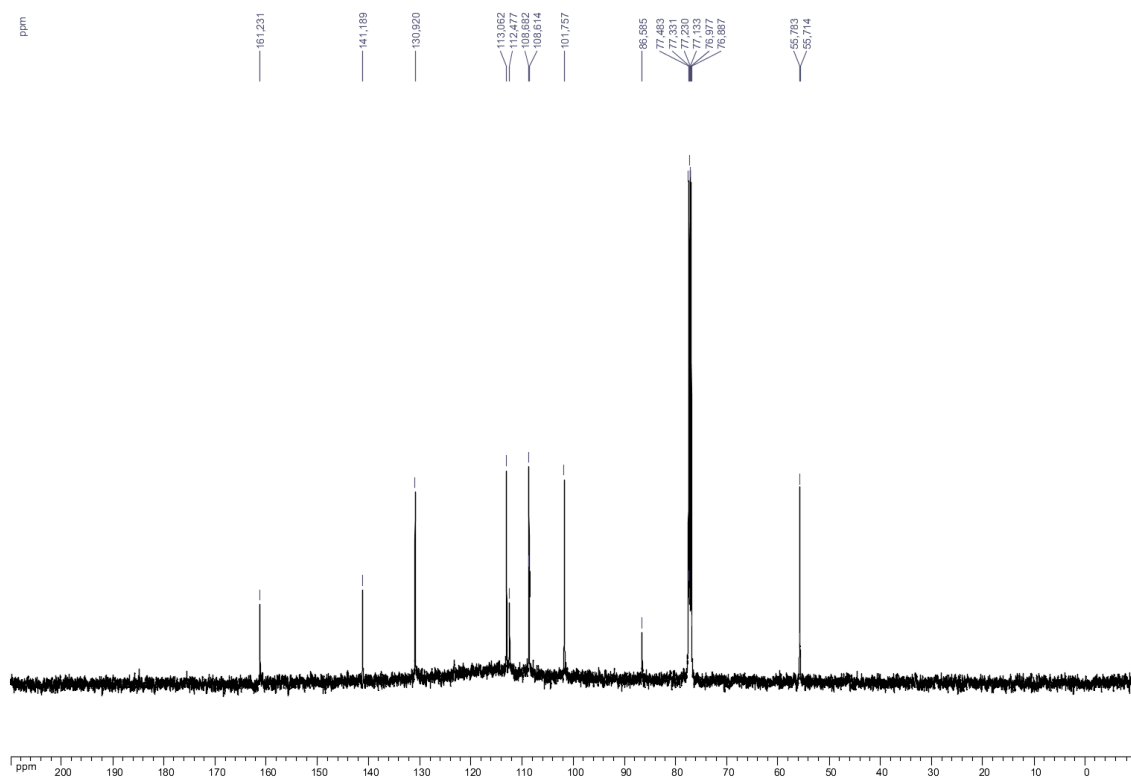
^{13}C NMR, 125 MHz ($\text{DMSO}-d_6$), compound **2i**

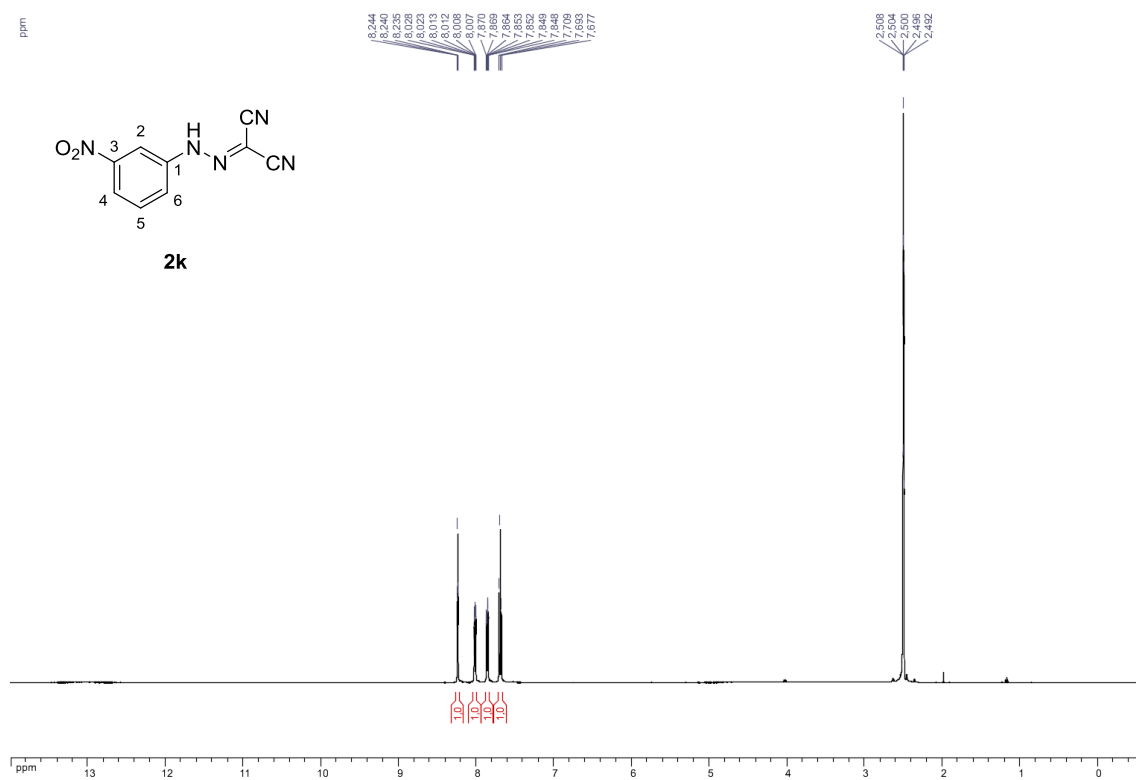
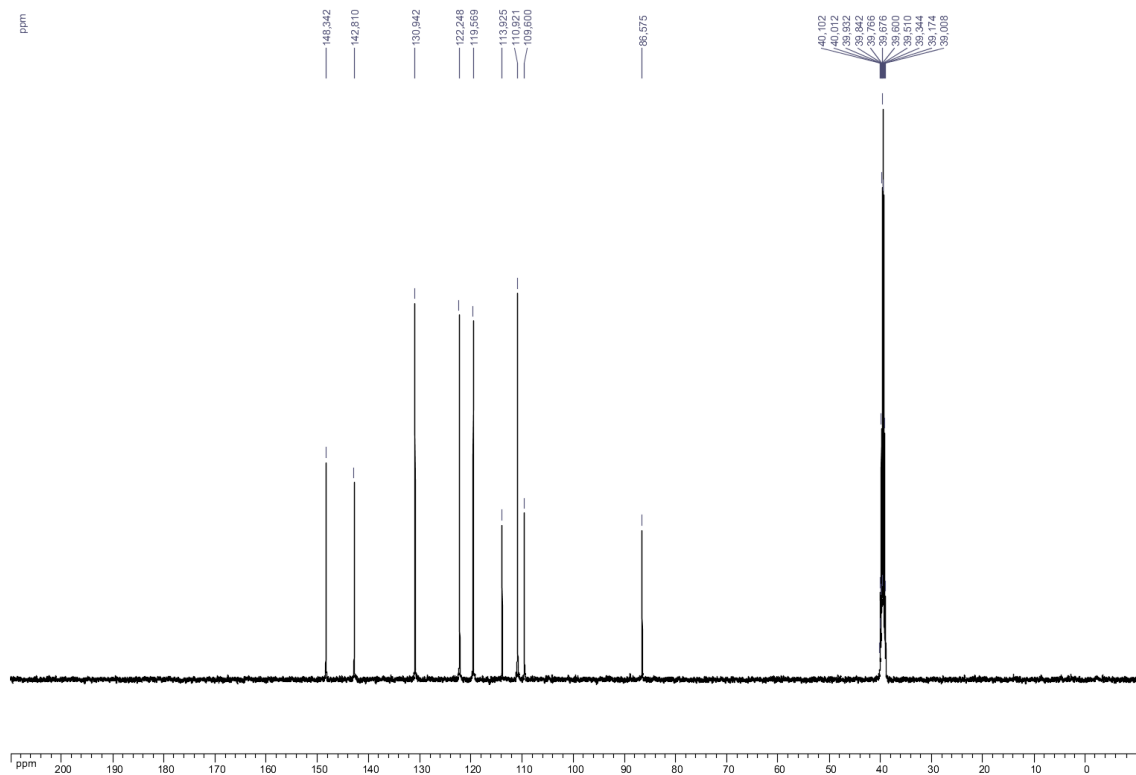


^1H NMR, 250 MHz (CDCl_3), compound **2j**

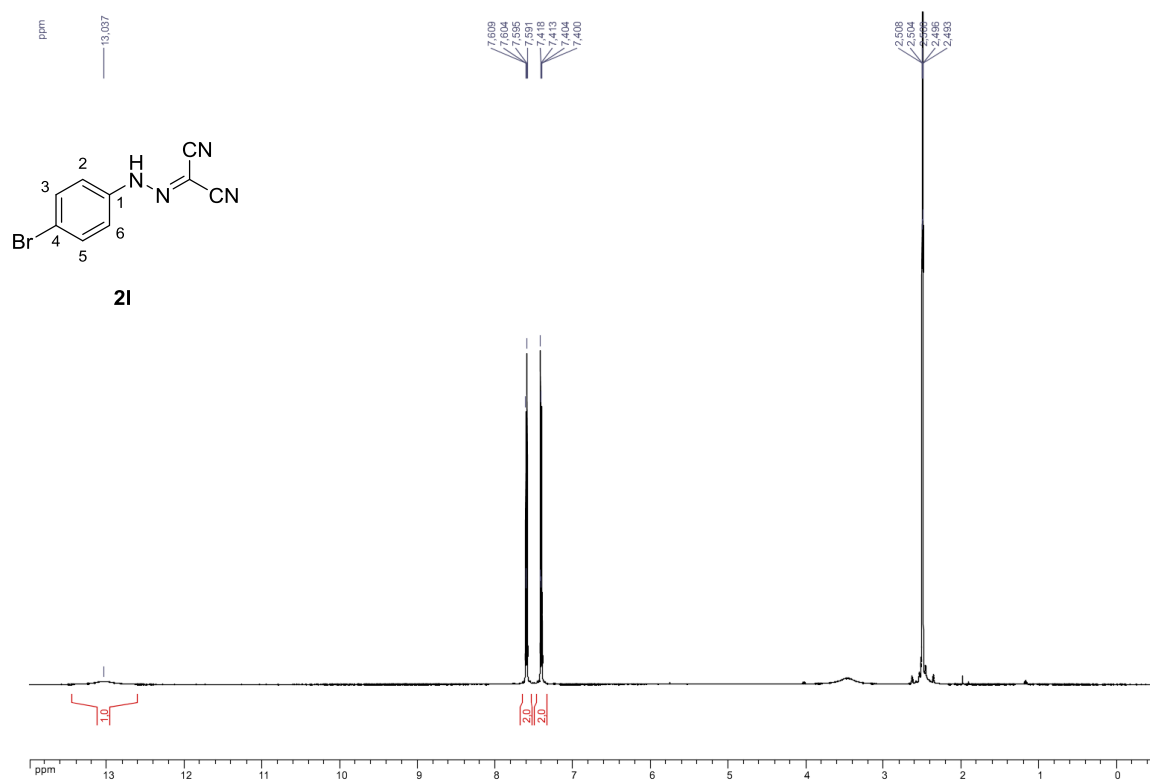


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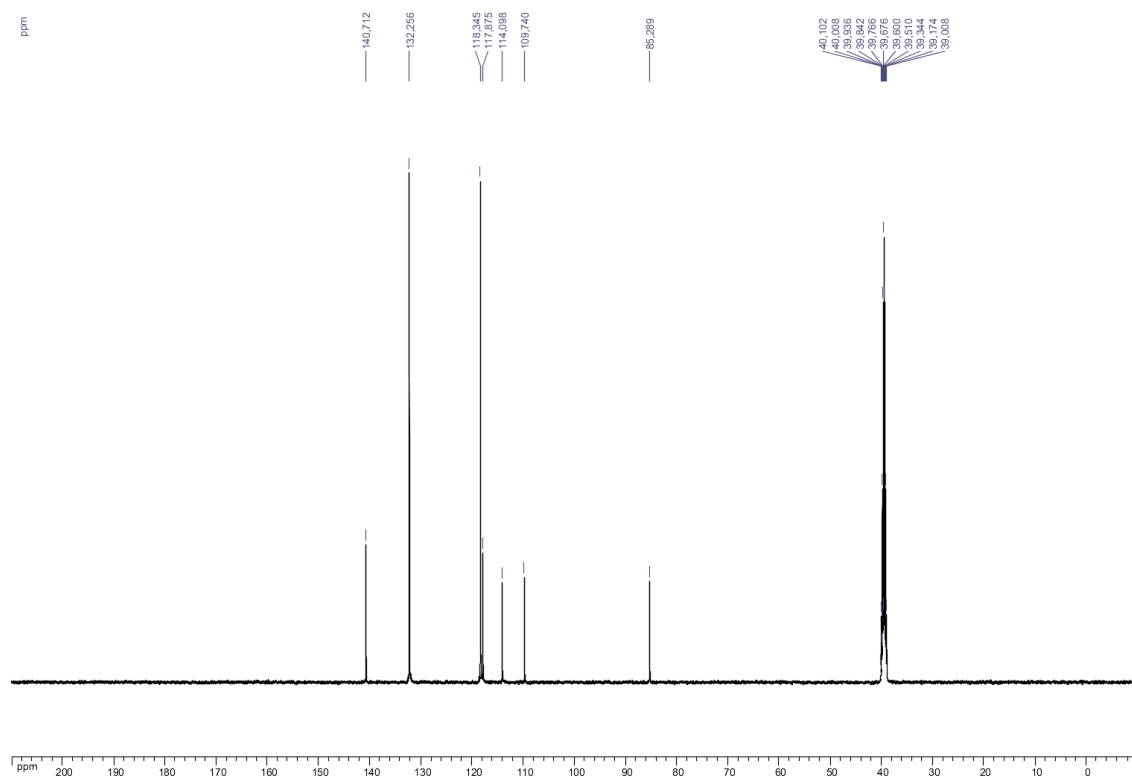


¹H NMR, 500 MHz (DMSO-*d*₆), compound **2k** ^{13}C NMR, 125 MHz (DMSO- d_6), compound **2k**

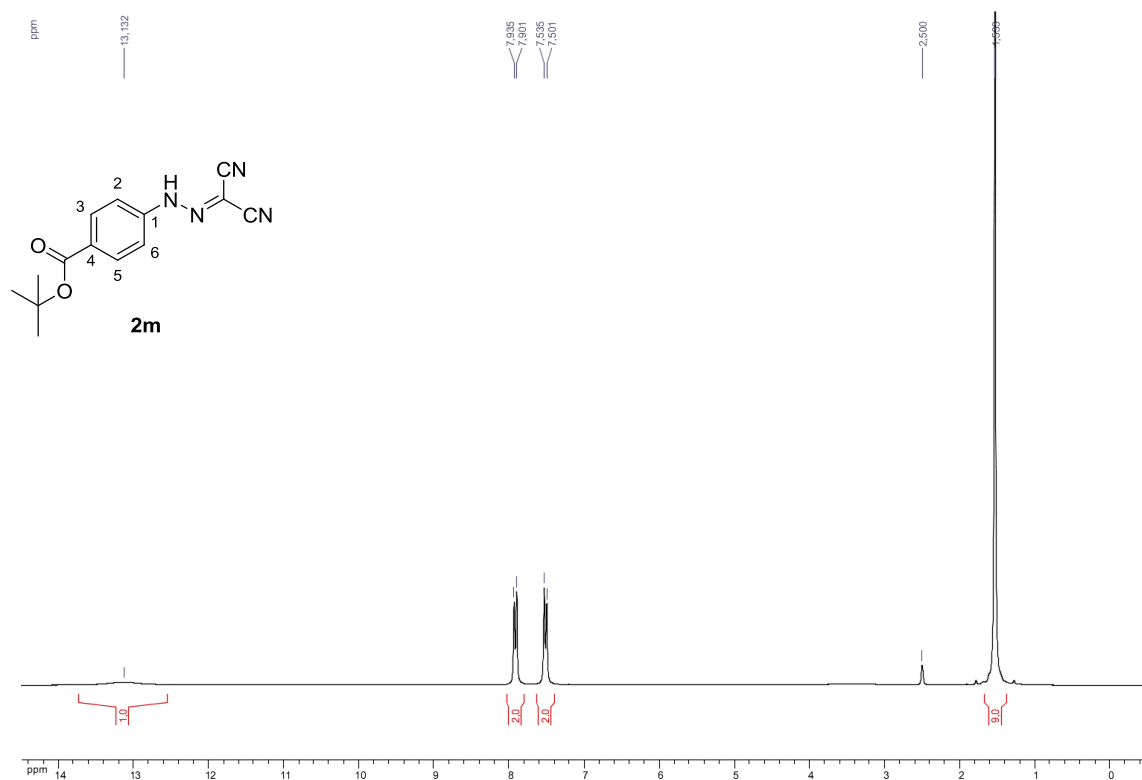
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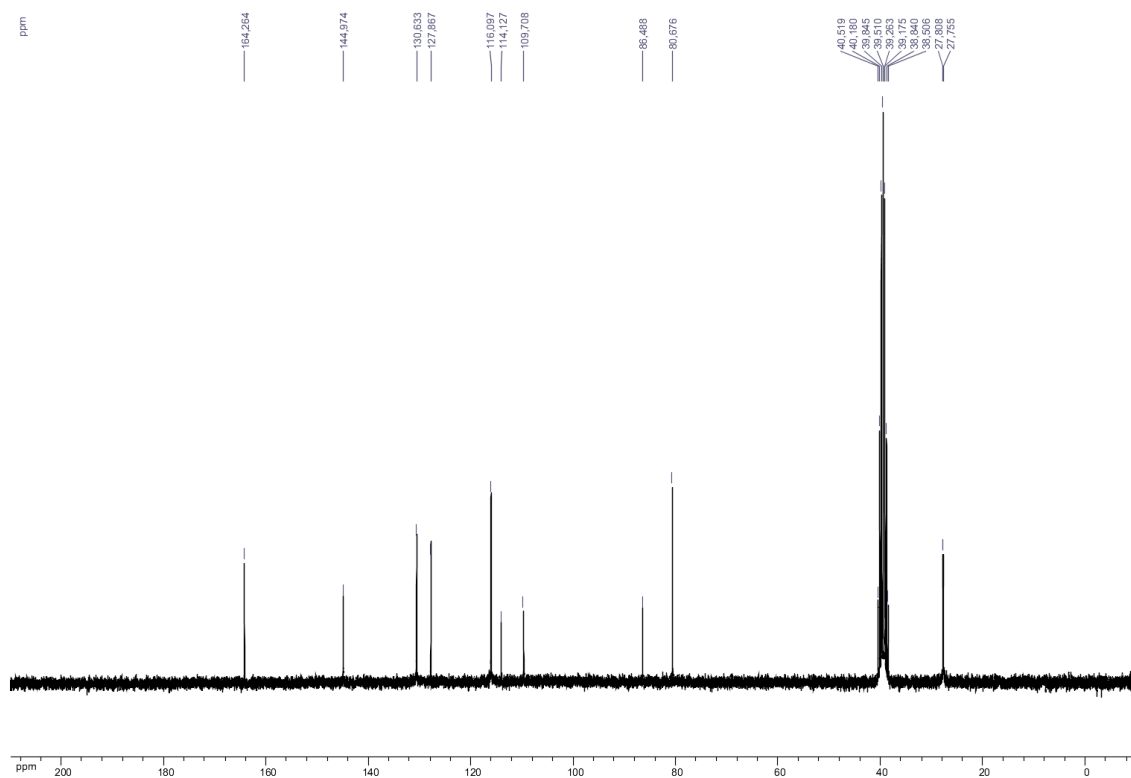
^{13}C NMR, 125 MHz ($\text{DMSO}-d_6$), compound **2I**



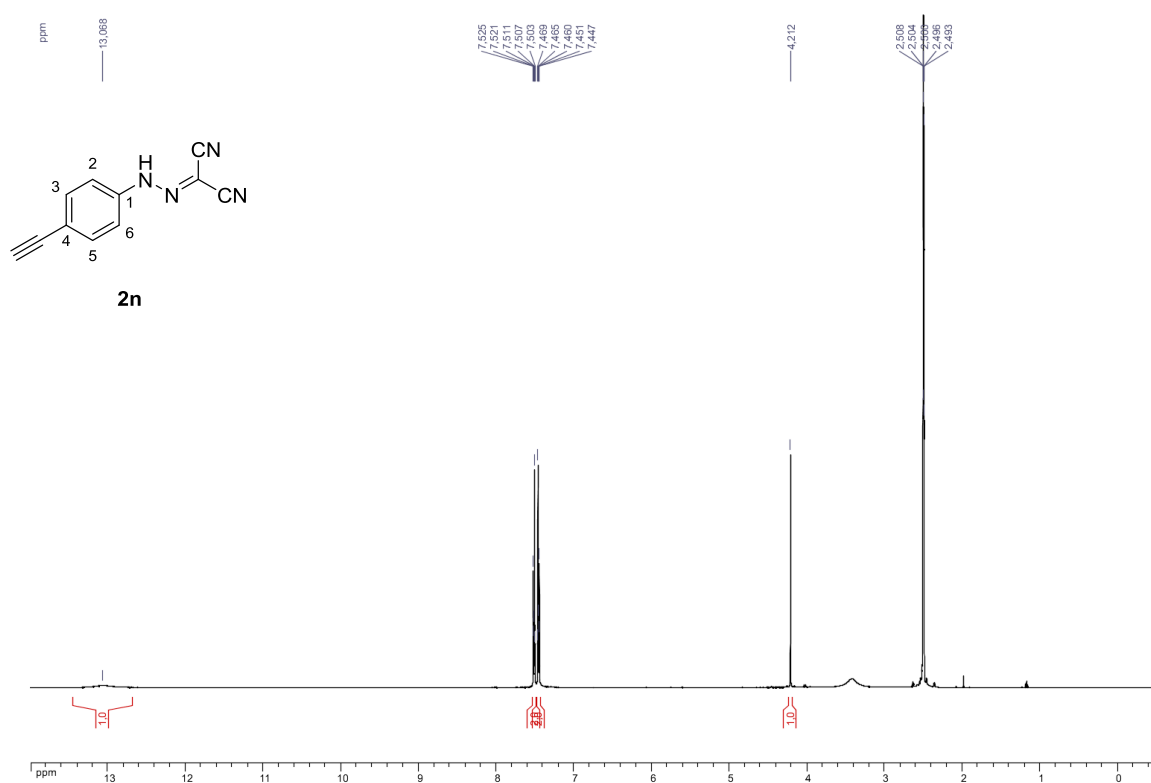
^1H NMR, 250 MHz ($\text{DMSO}-d_6$), compound **2m**



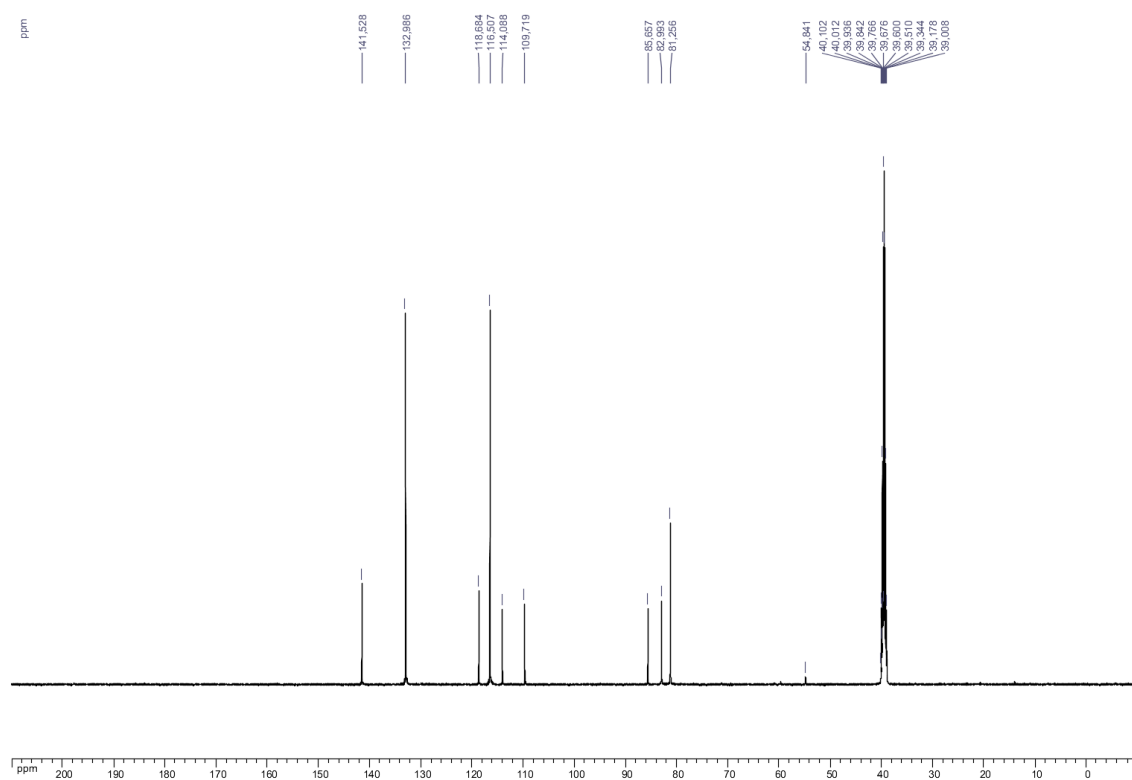
^{13}C NMR, 63 MHz ($\text{DMSO}-d_6$), compound **2m**



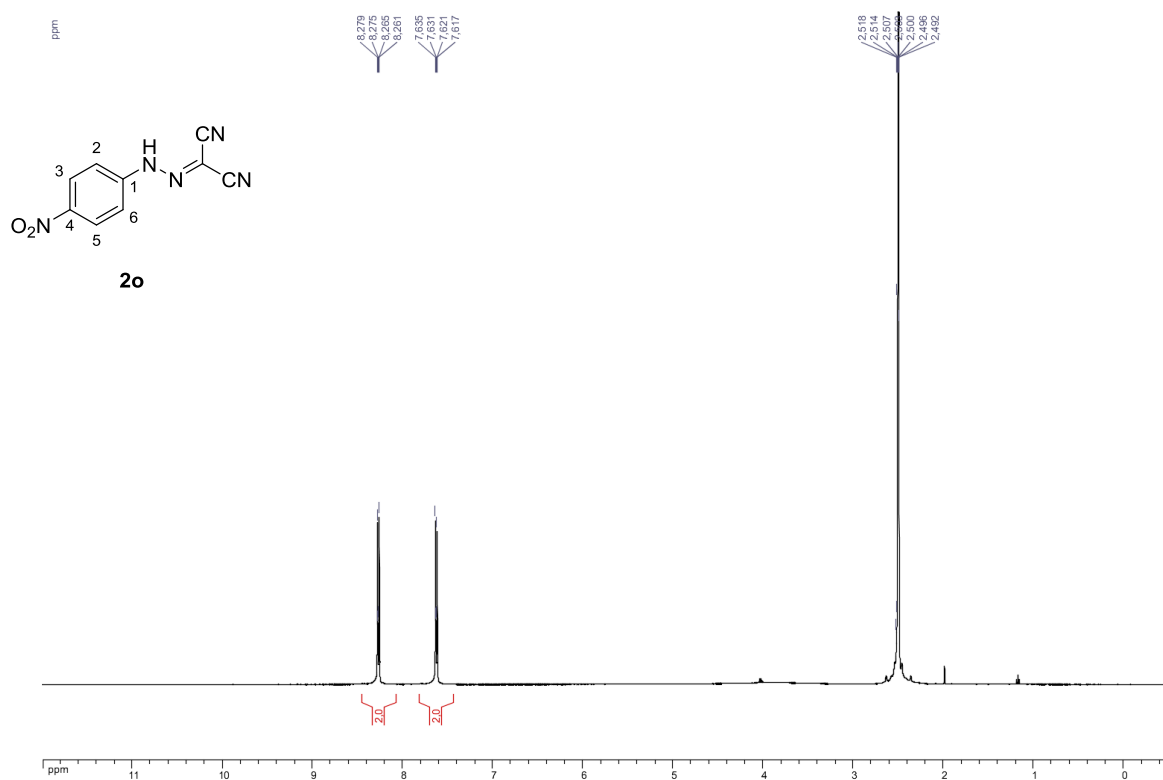
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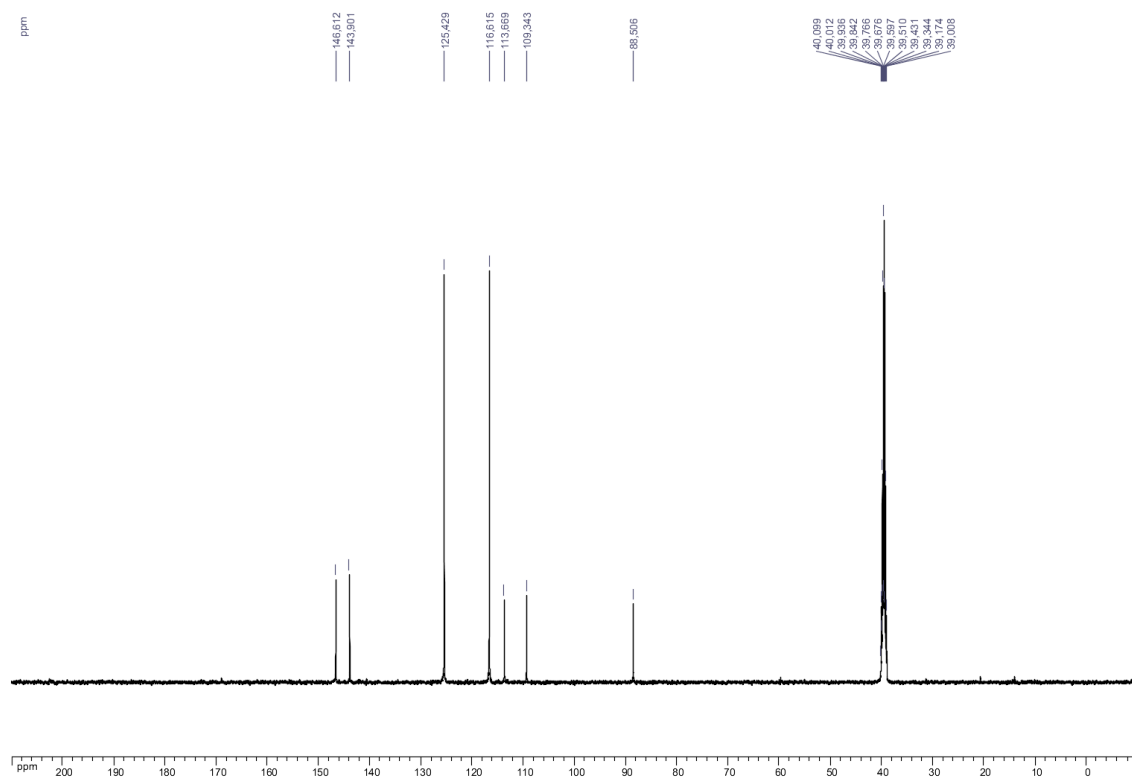
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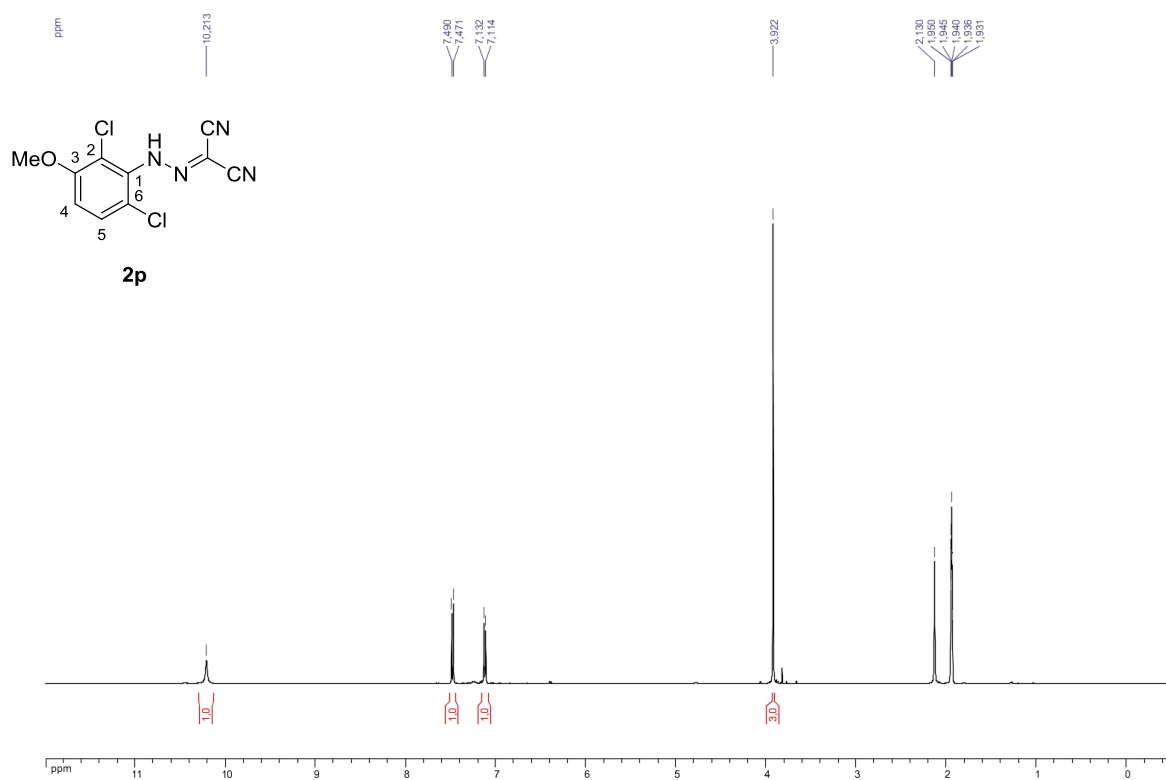
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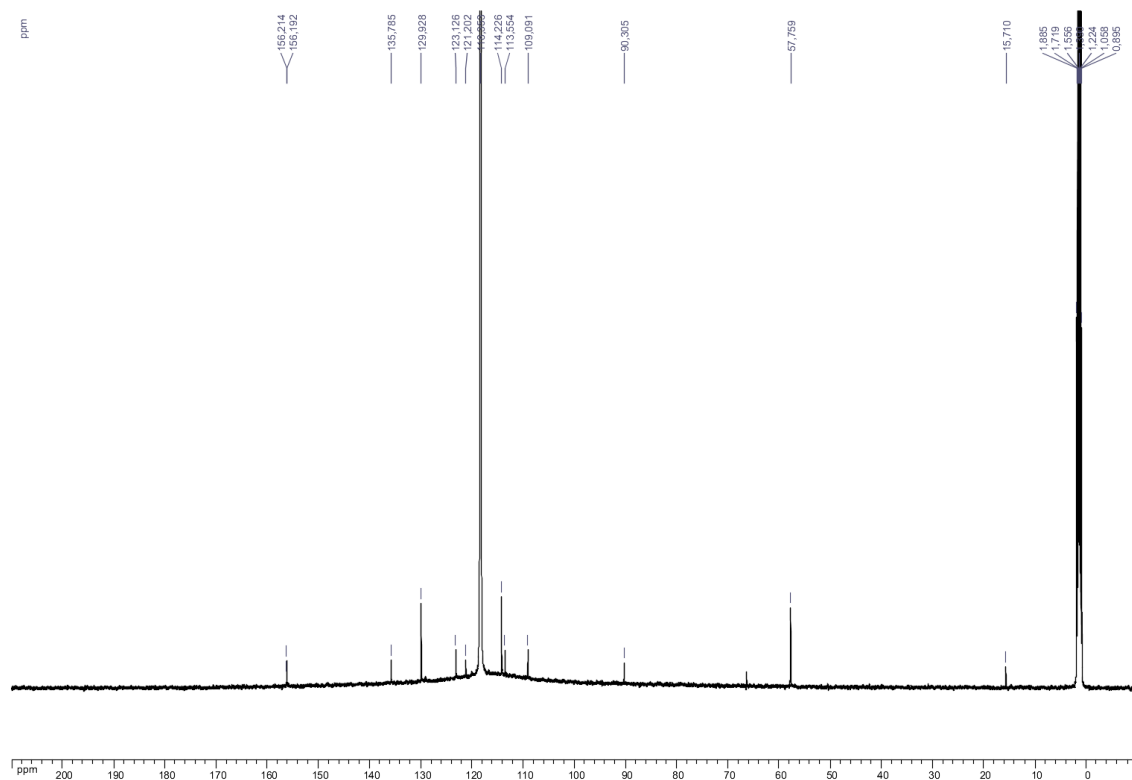
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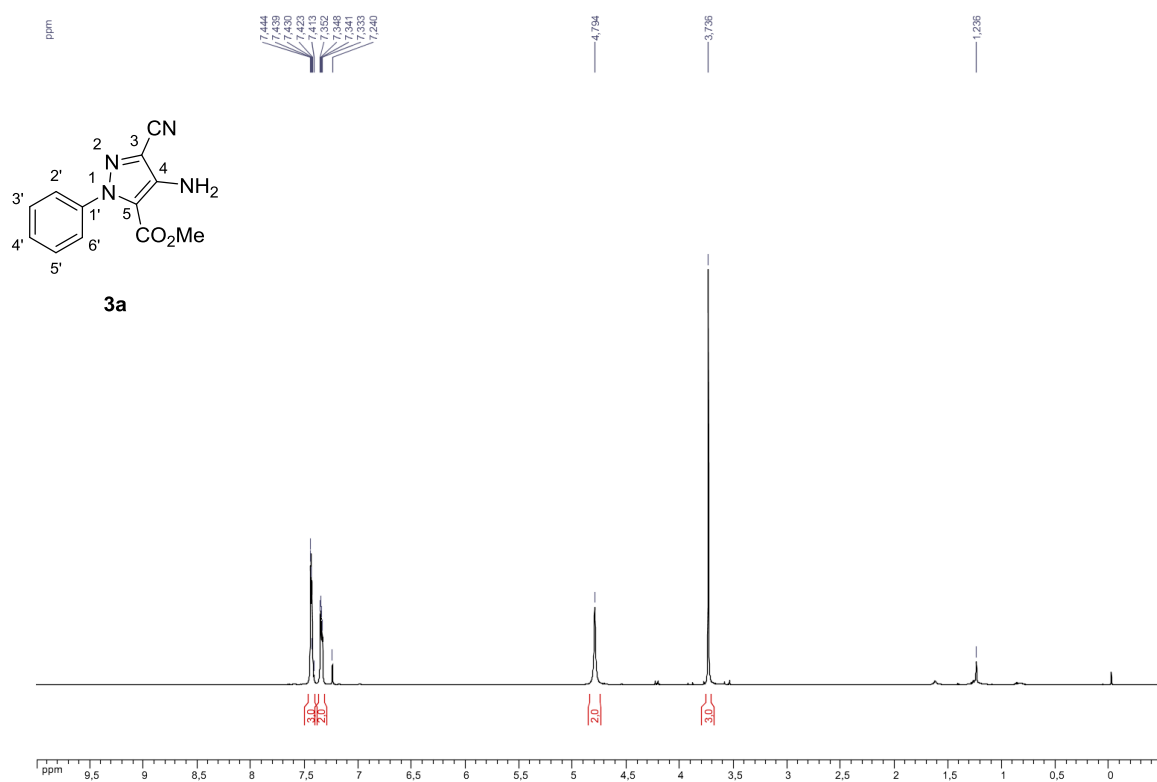
^1H NMR, 500 MHz (CD_3CN), compound **2p**



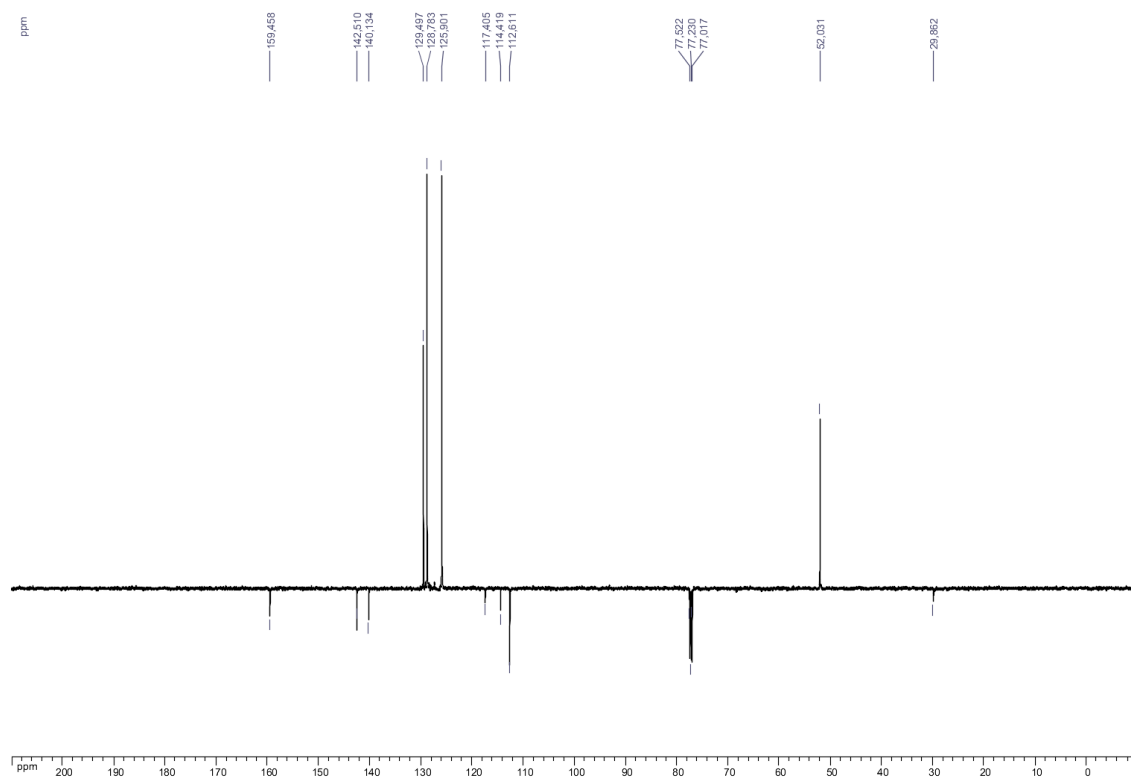
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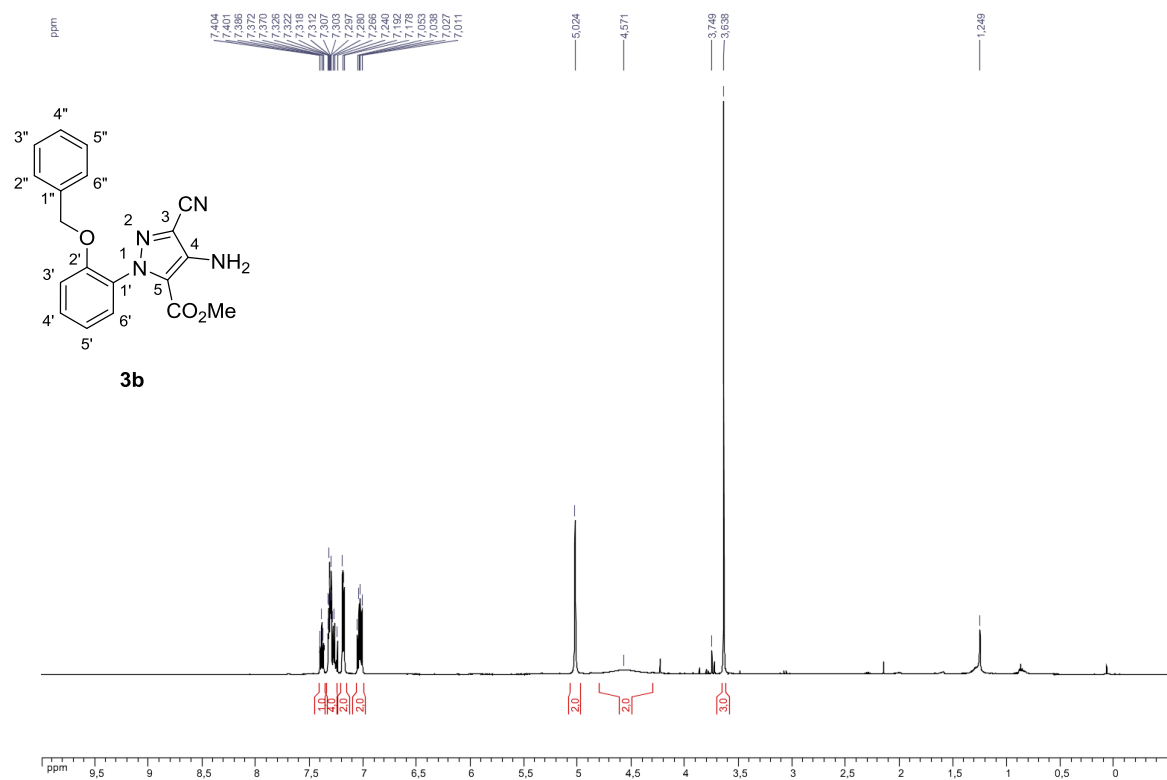
^1H NMR, 500 MHz (CDCl_3), compound **3a**



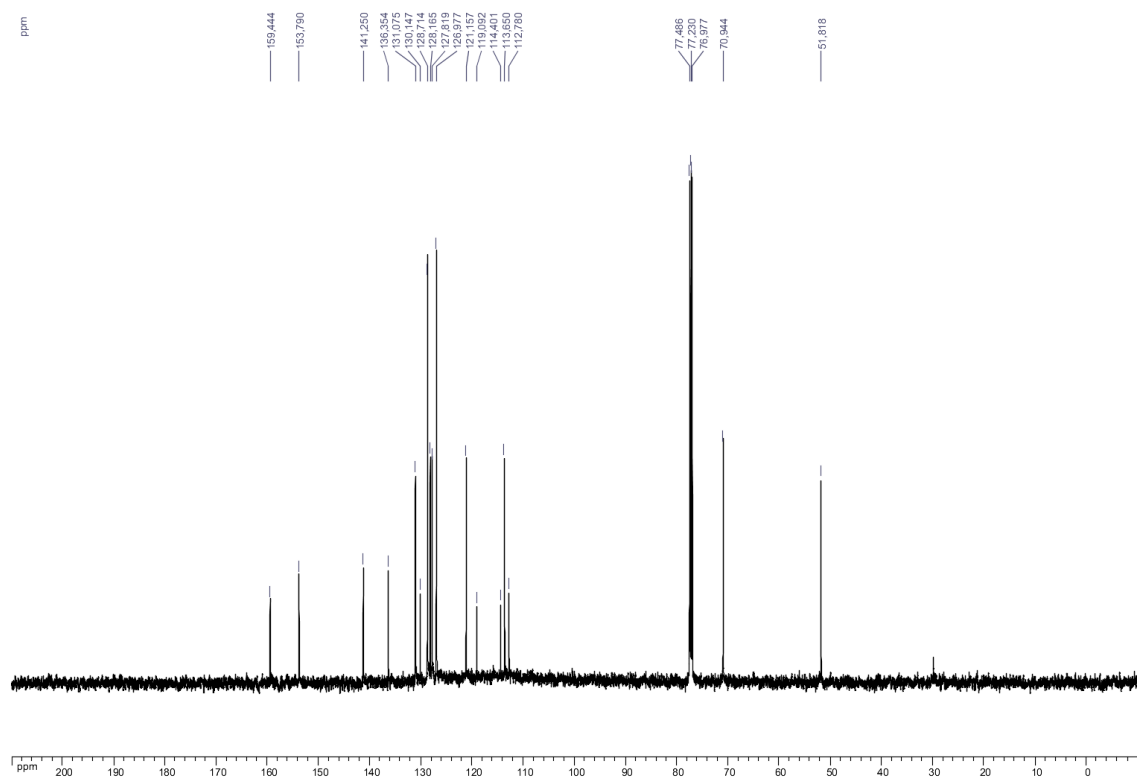
^{13}C NMR APT, 125 MHz (CDCl_3), compound **3a**



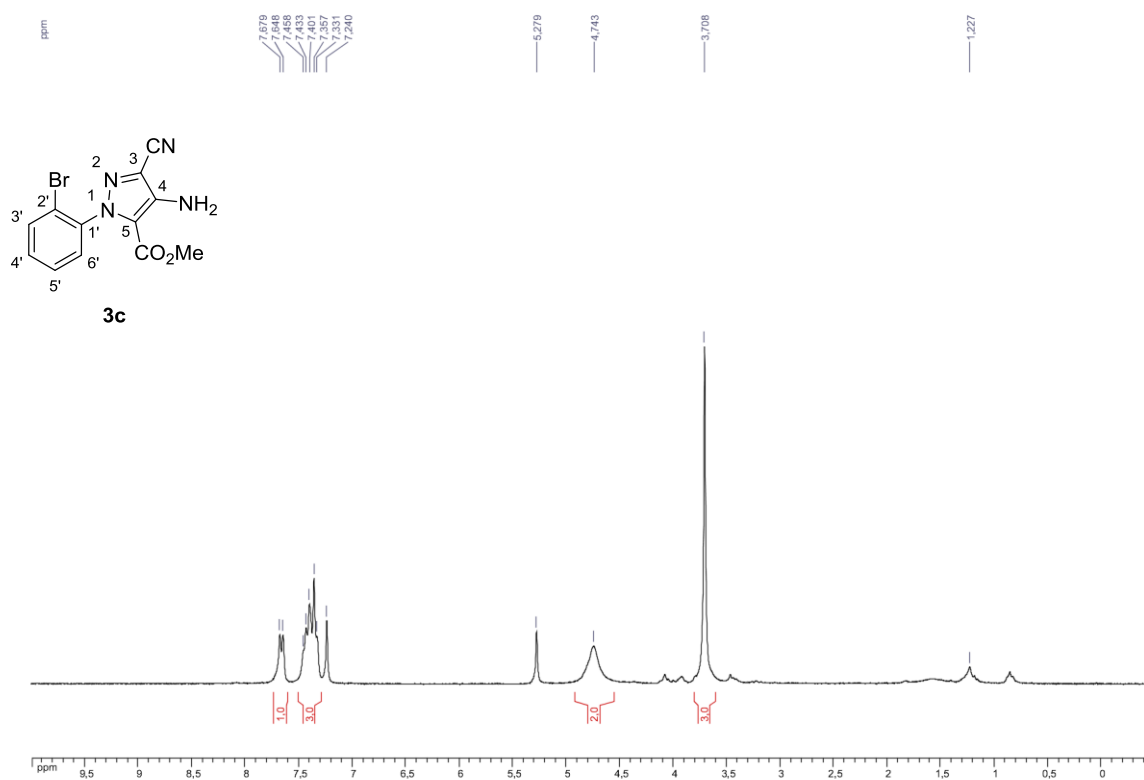
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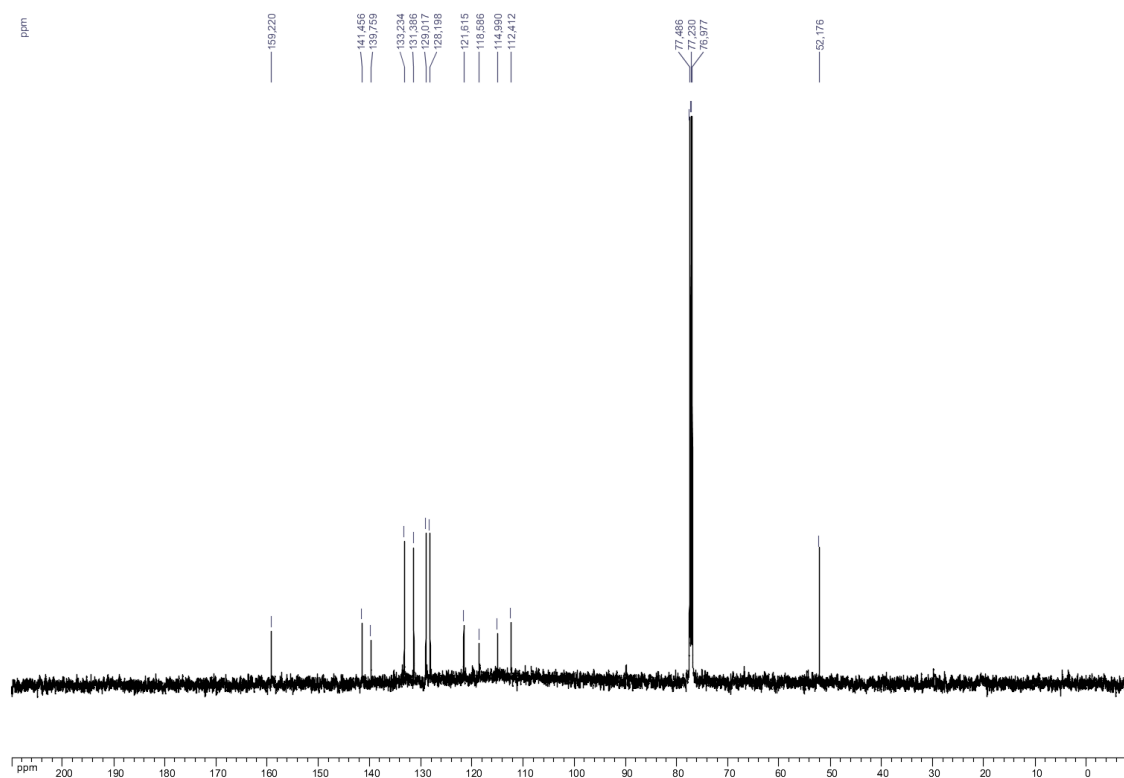
^{13}C NMR, 125 MHz (CDCl_3), compound **3b**



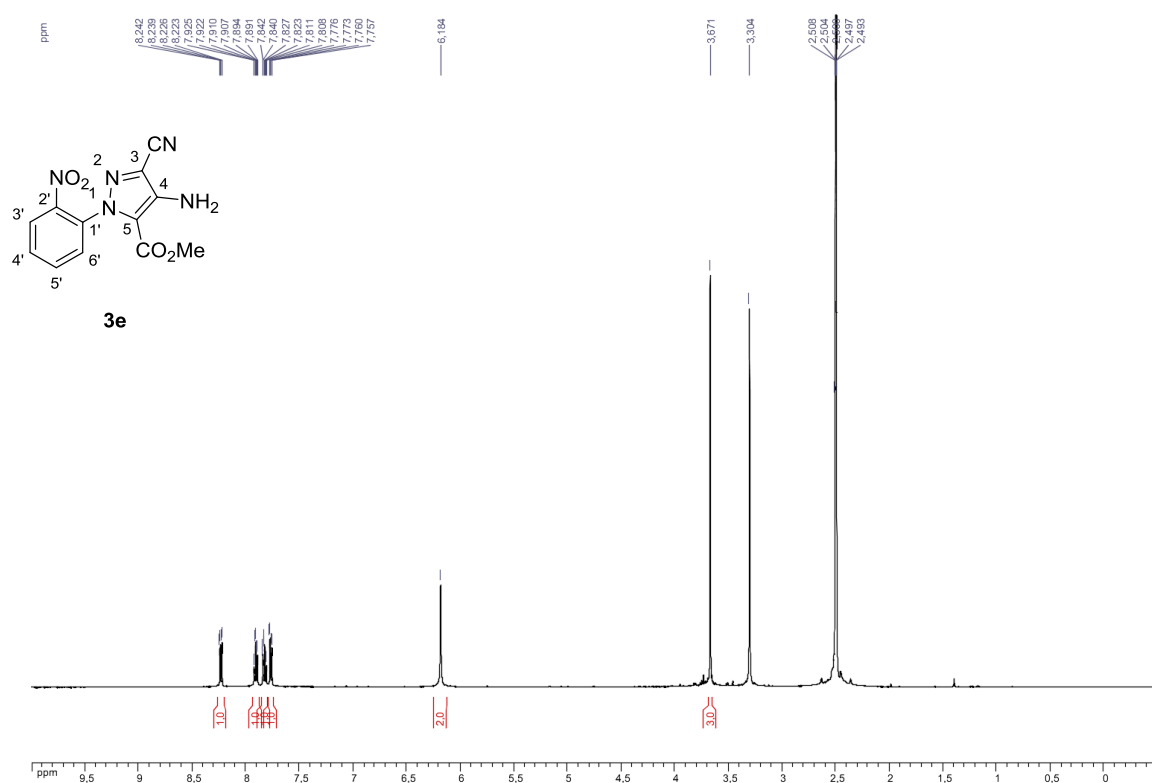
^1H NMR, 250 MHz (CDCl_3), compound **3c**



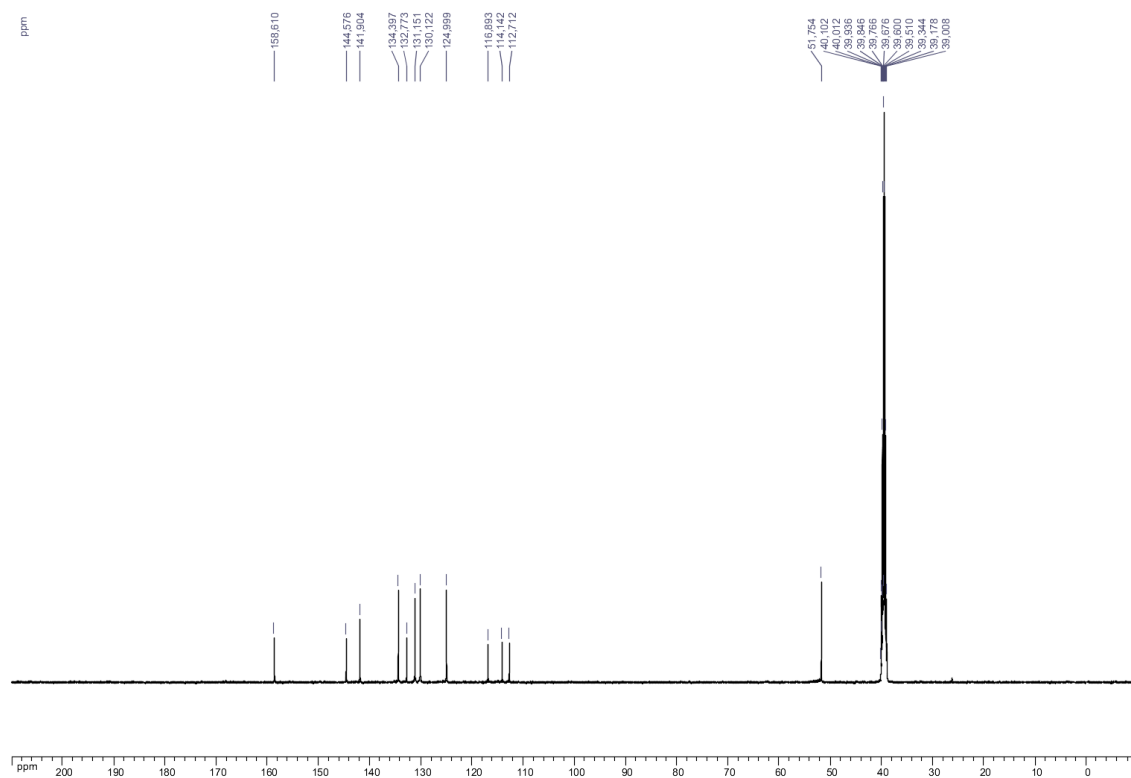
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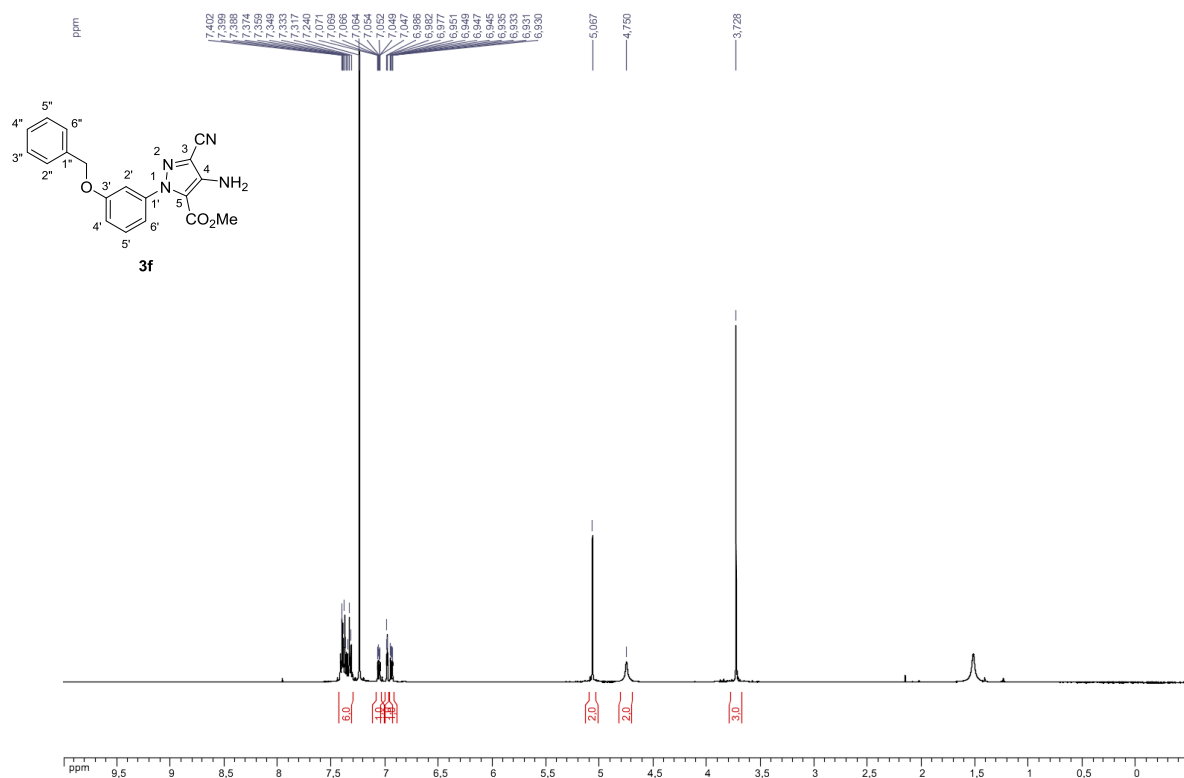
^1H NMR, 500 MHz ($\text{DMSO}-d_6$), compound **3e**



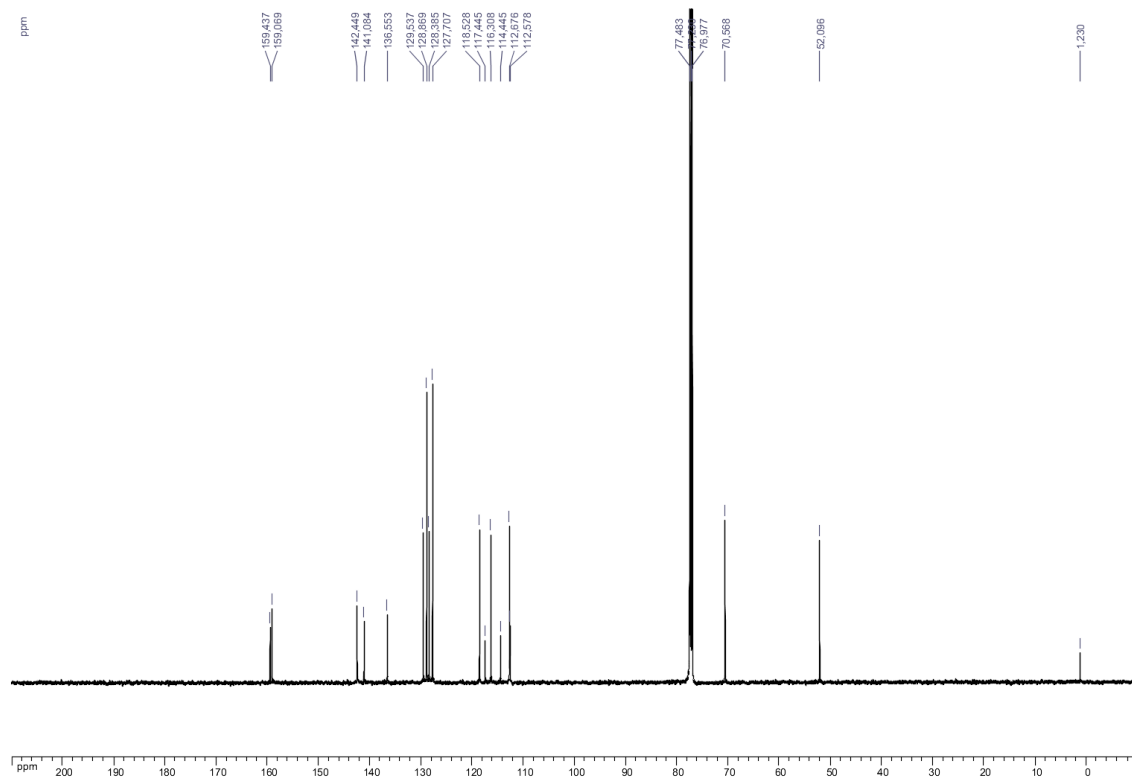
^{13}C NMR, 125 MHz ($\text{DMSO}-d_6$), compound **3e**



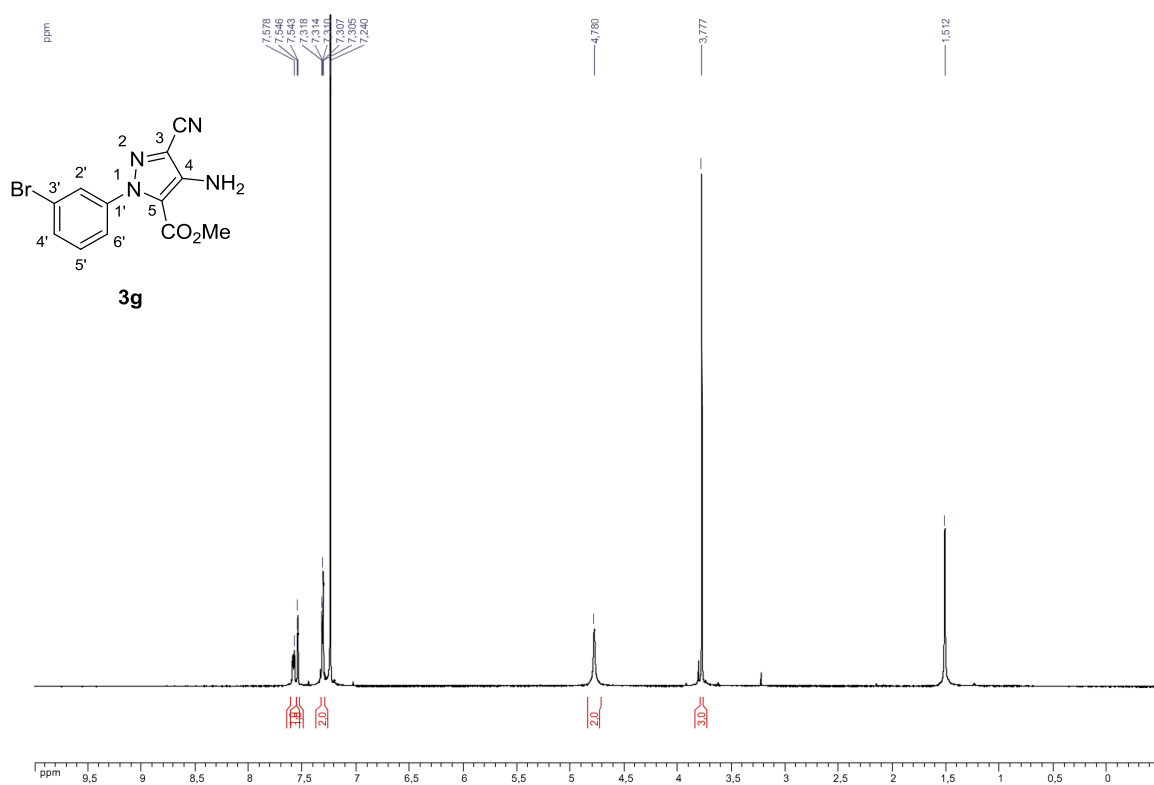
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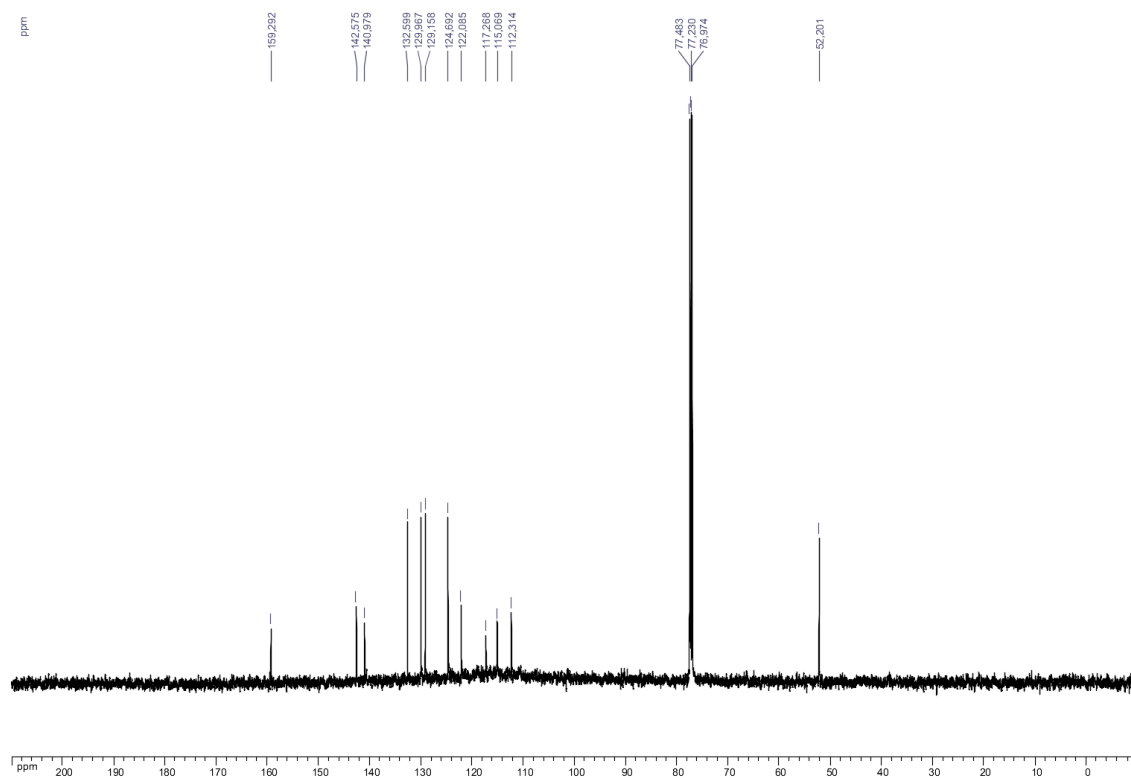
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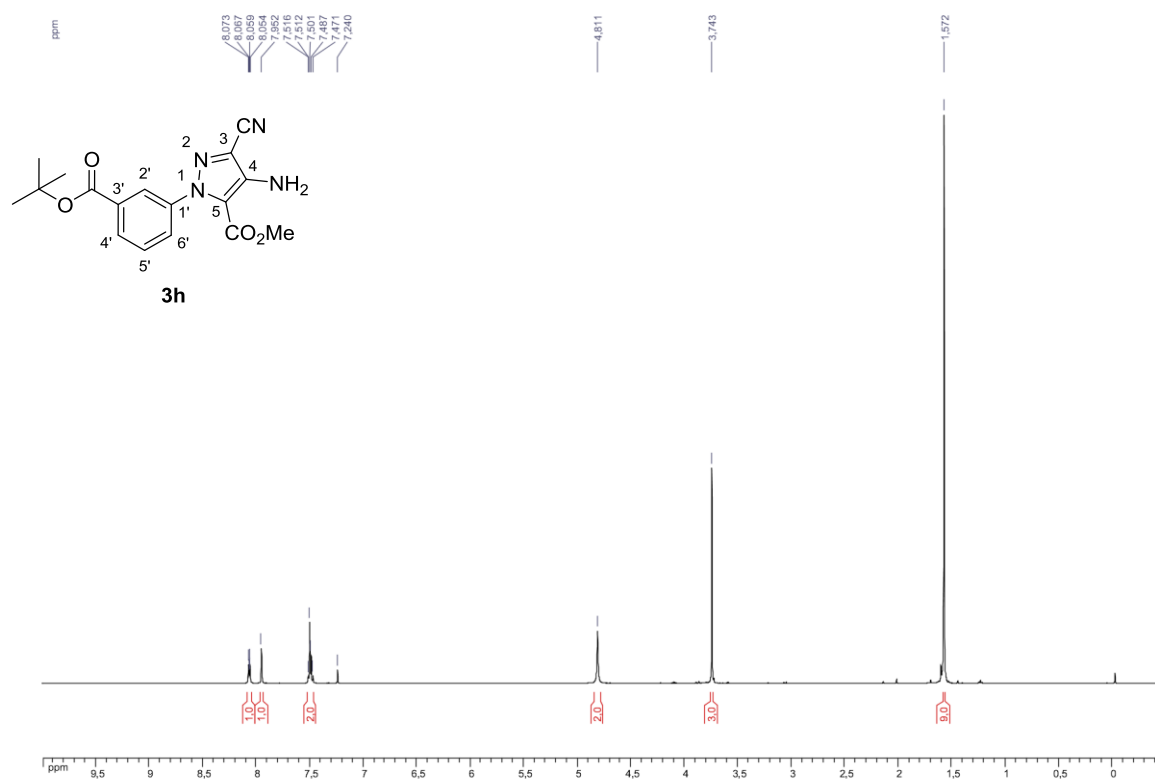
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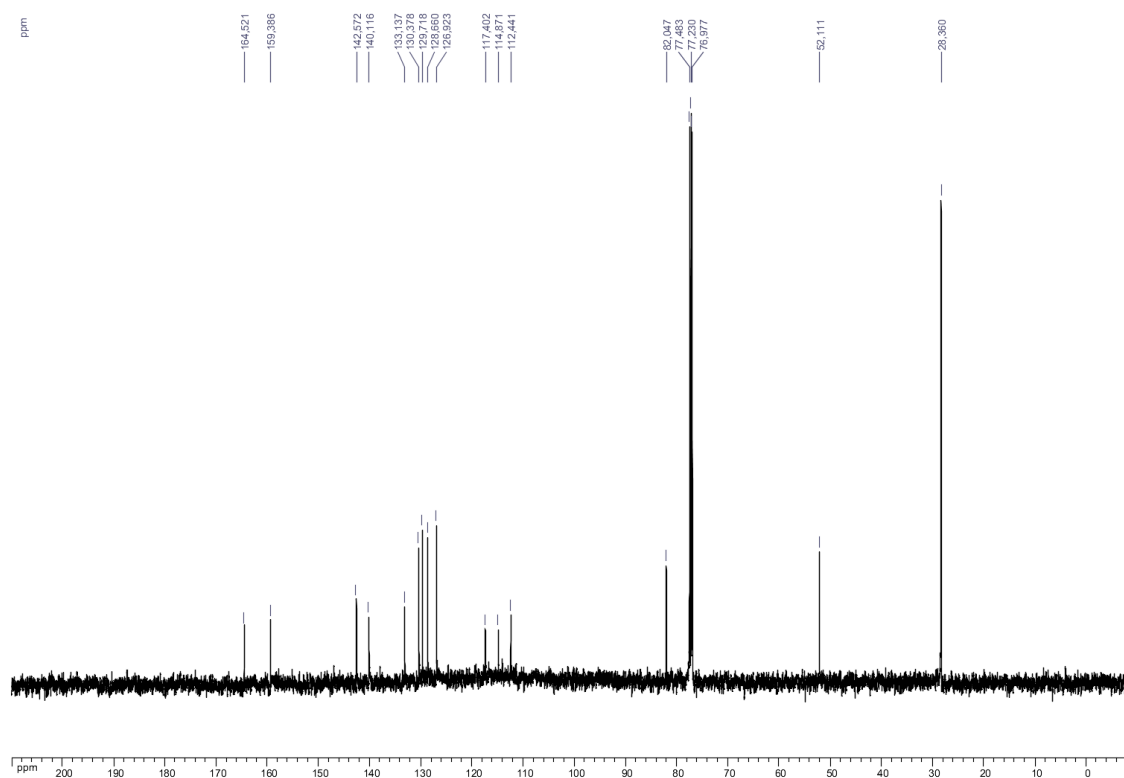
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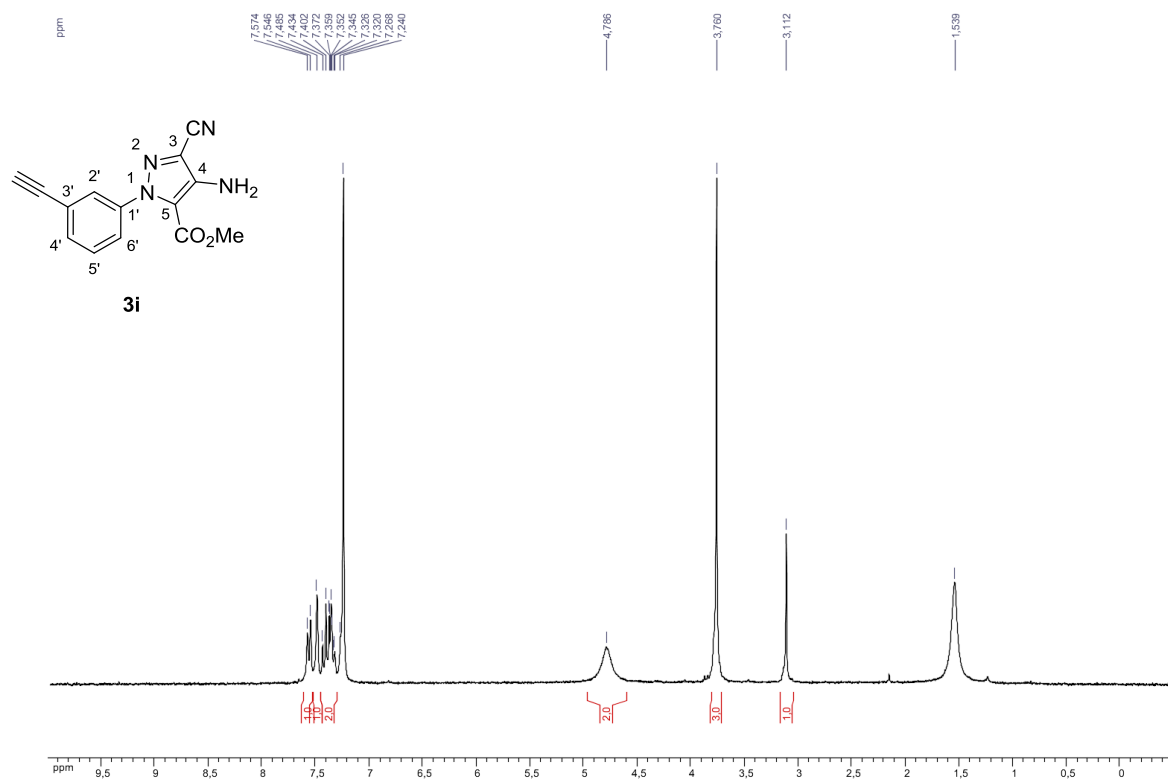
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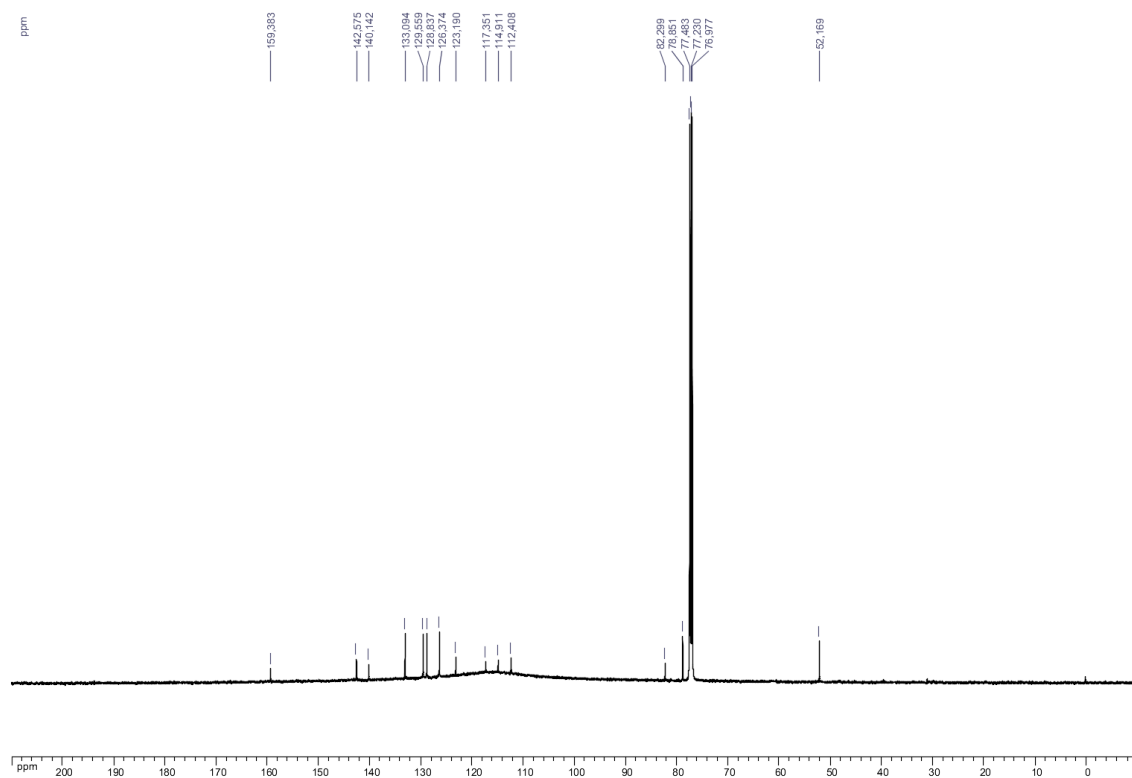
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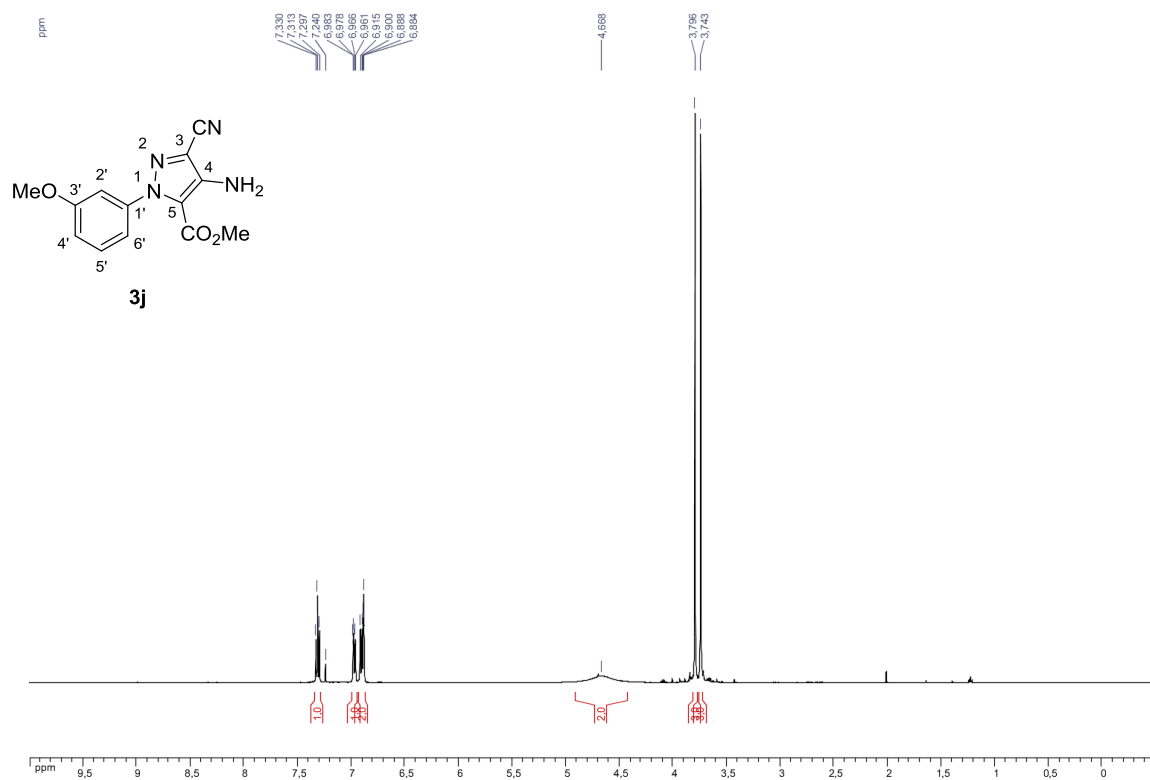
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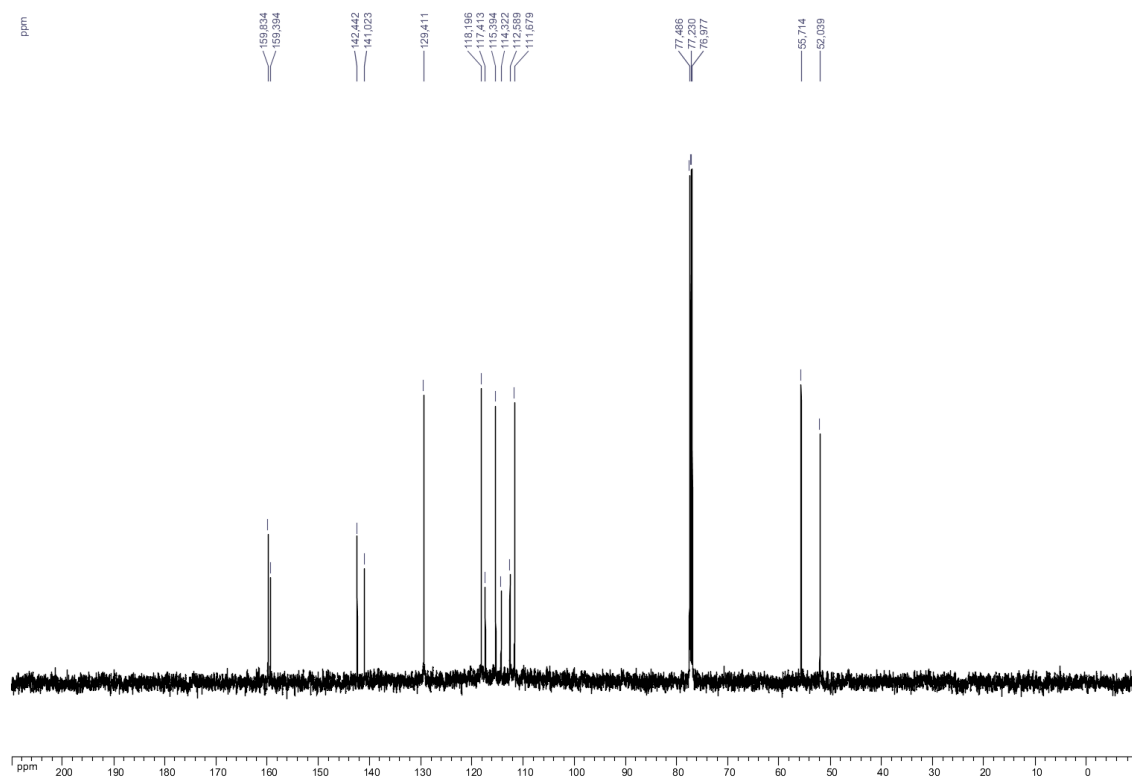
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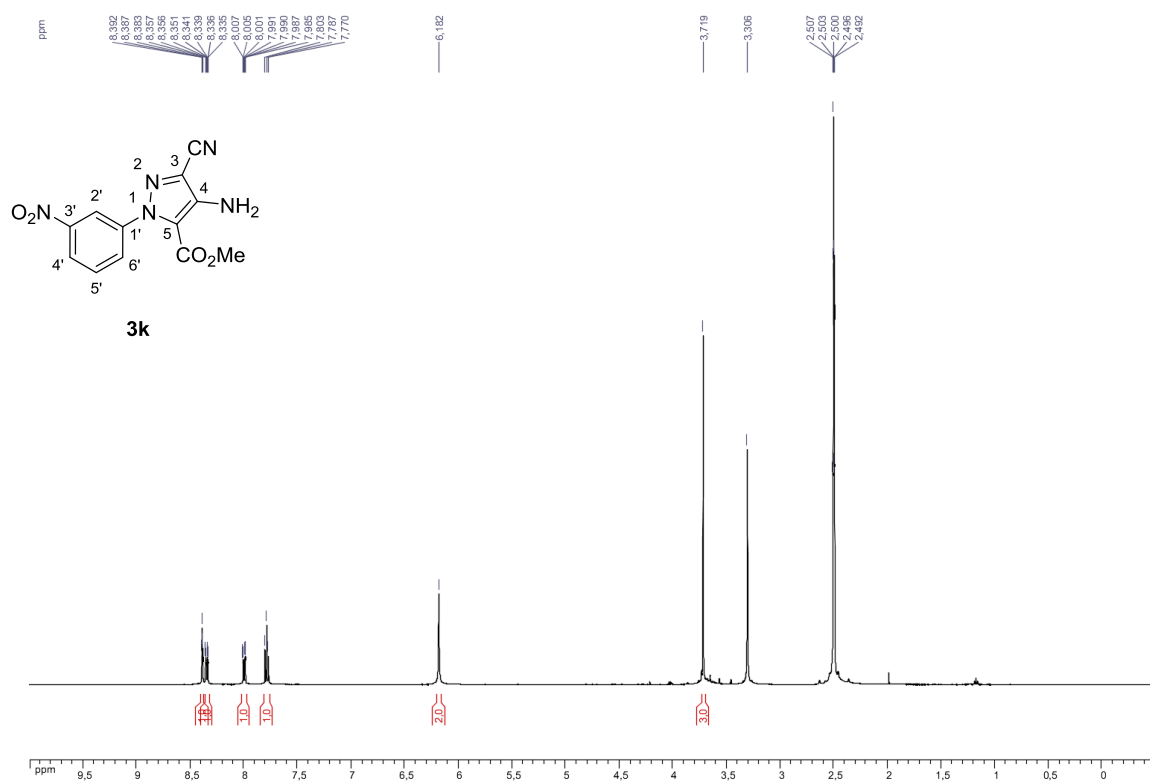
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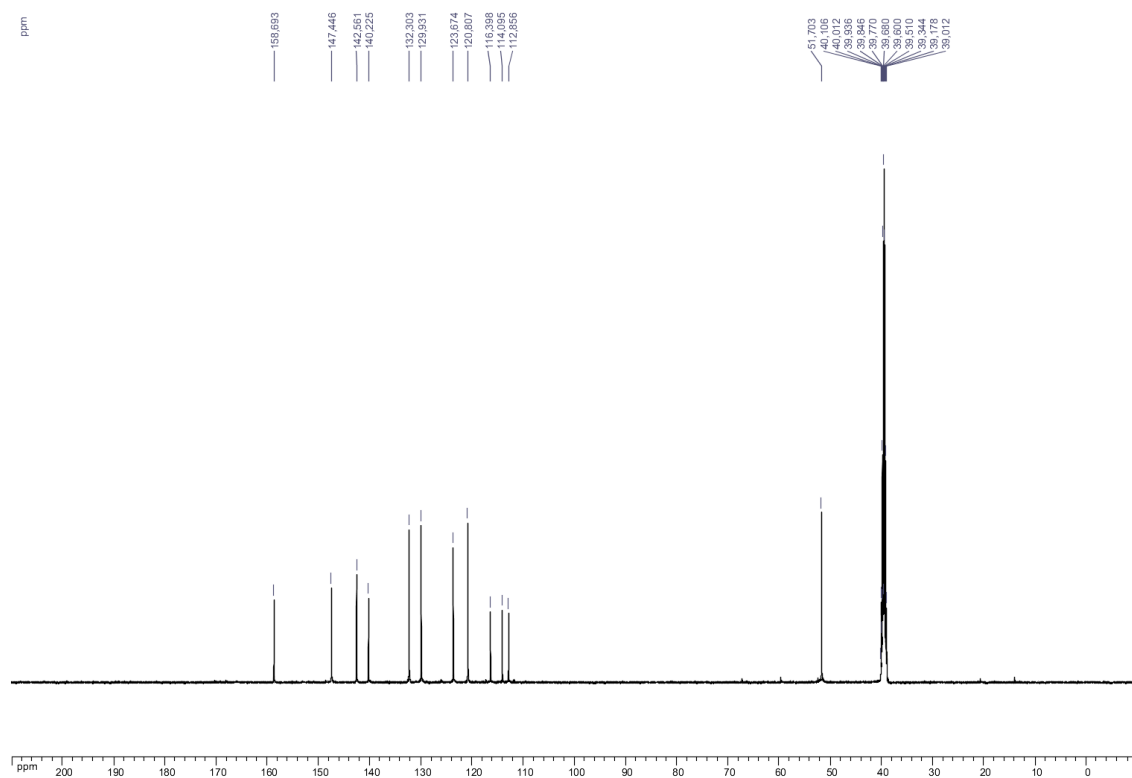
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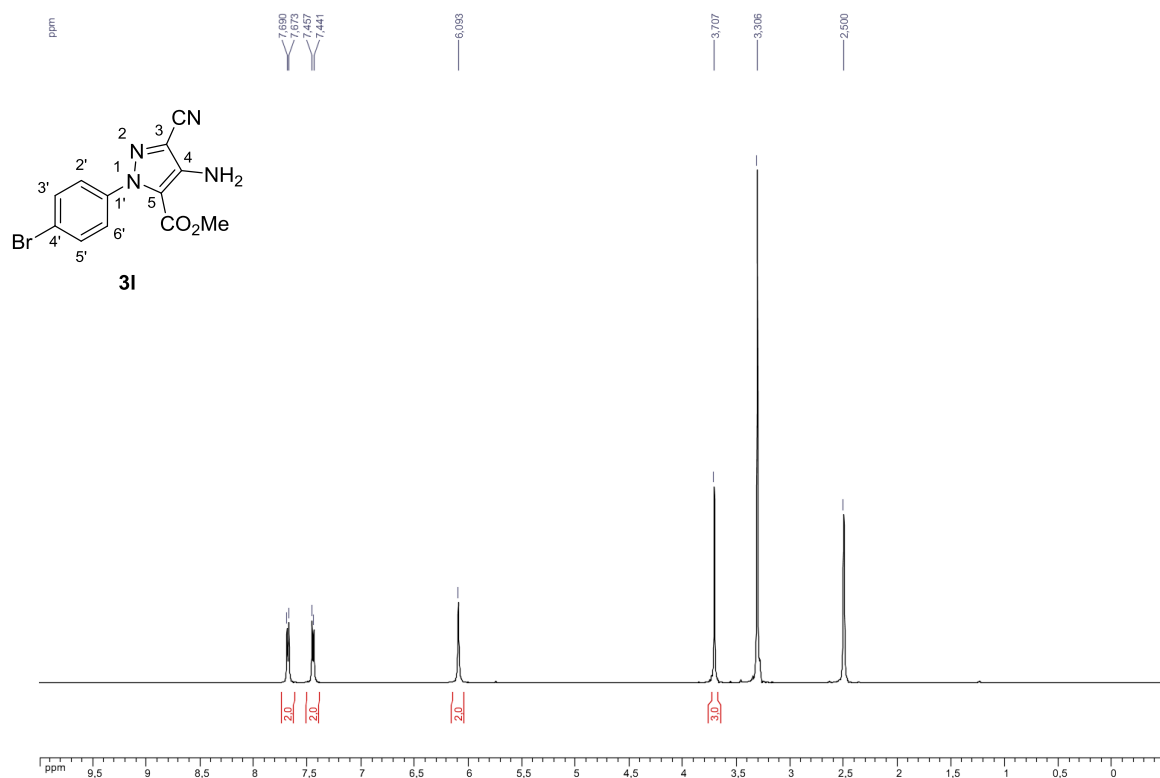
^1H NMR, 500 MHz ($\text{DMSO}-d_6$), compound **3k**



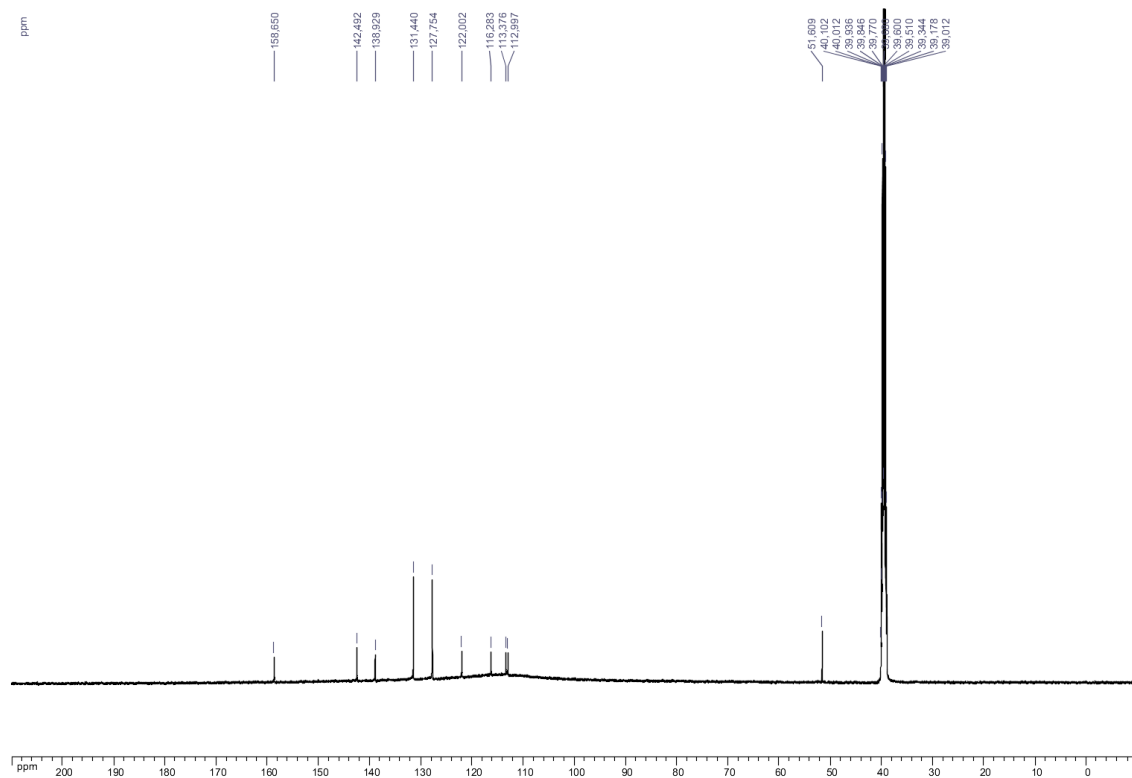
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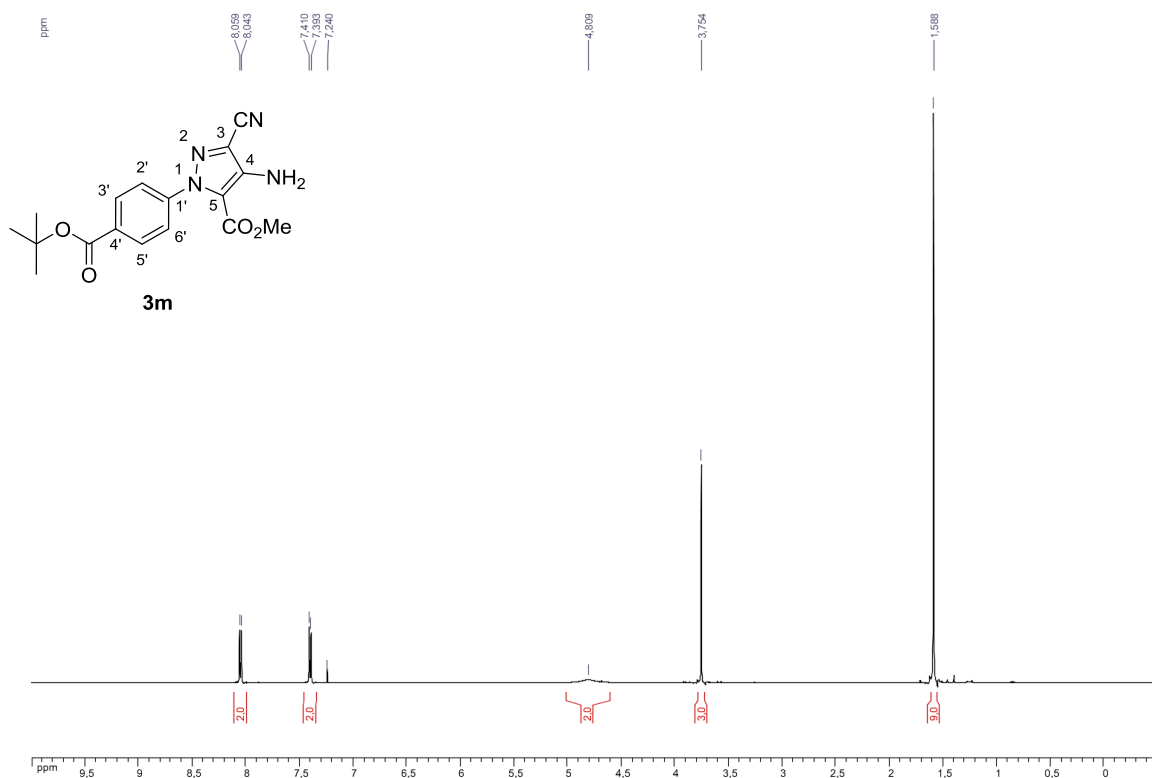
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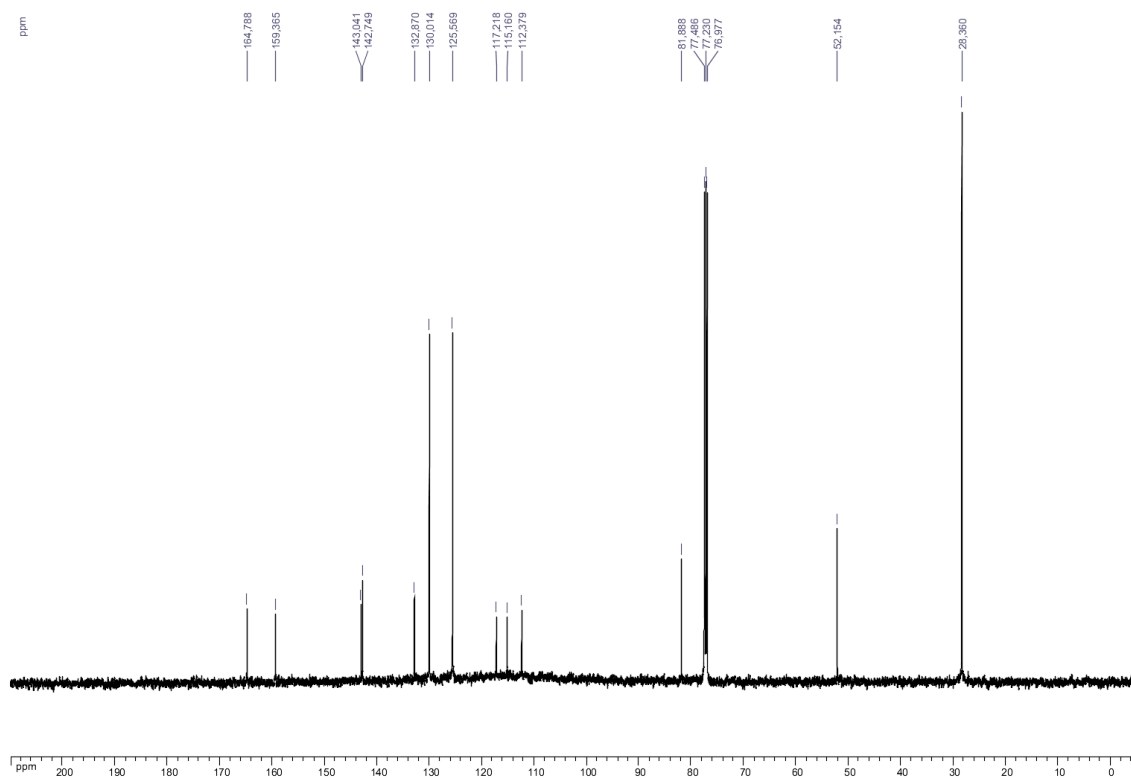
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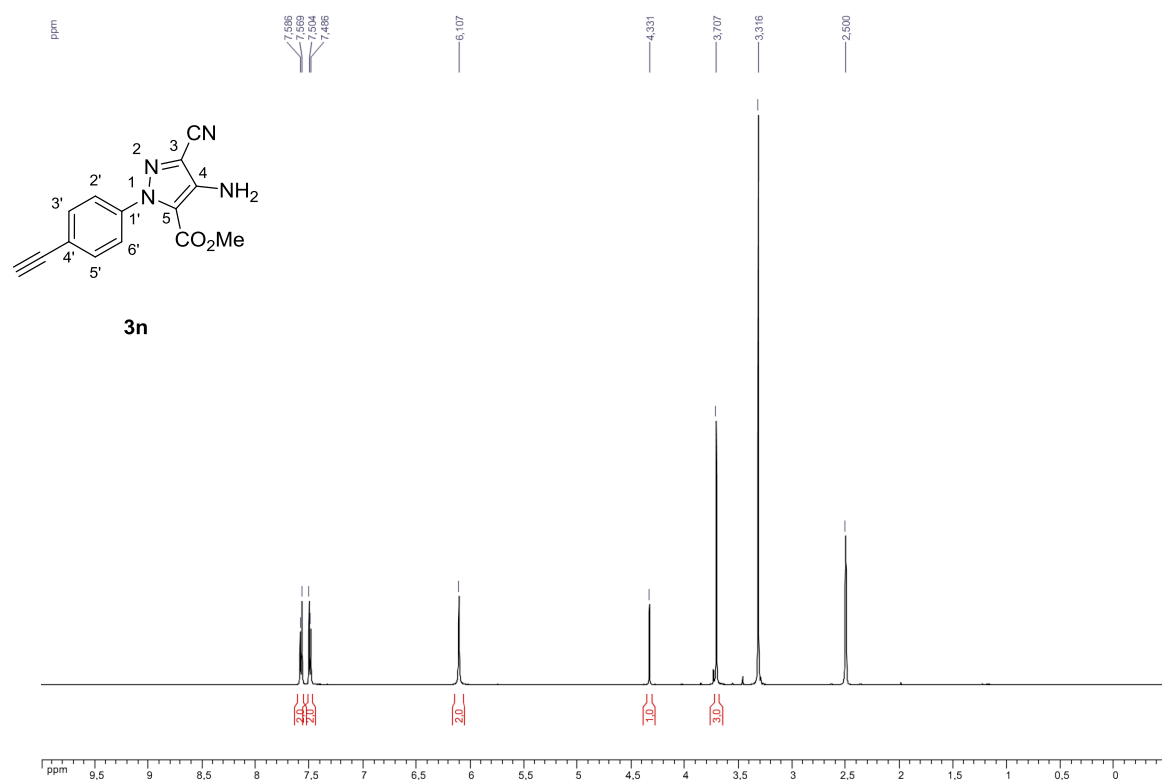
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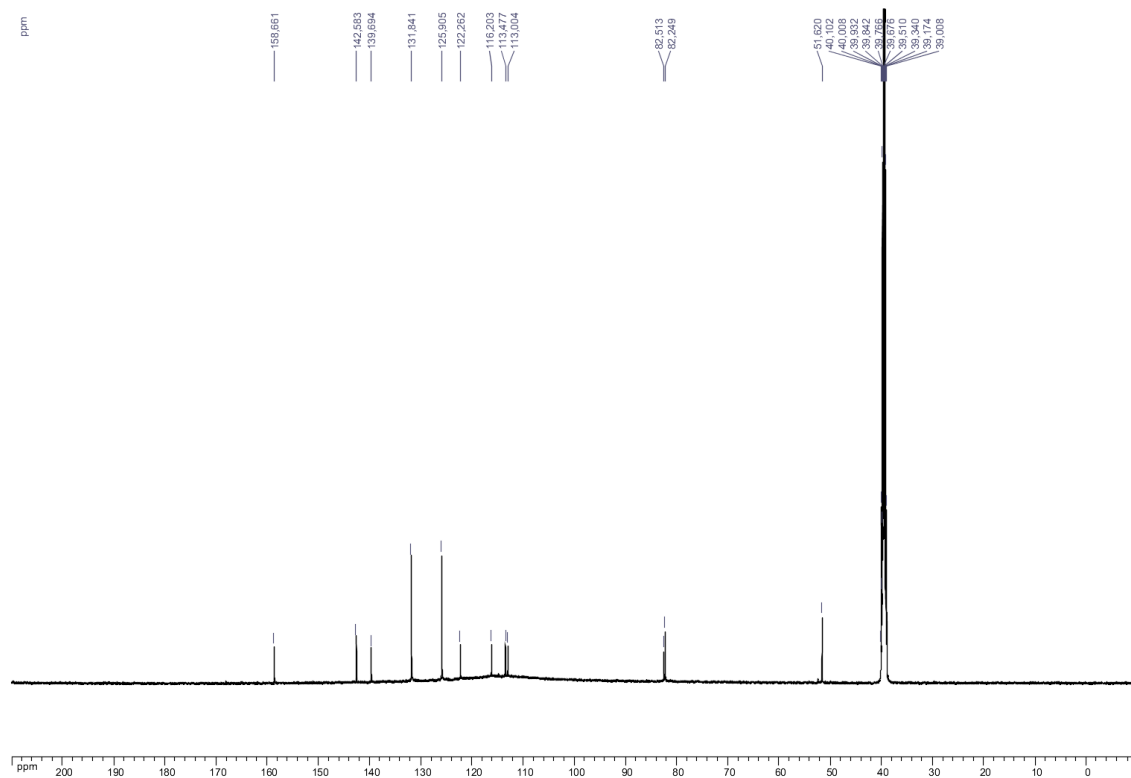
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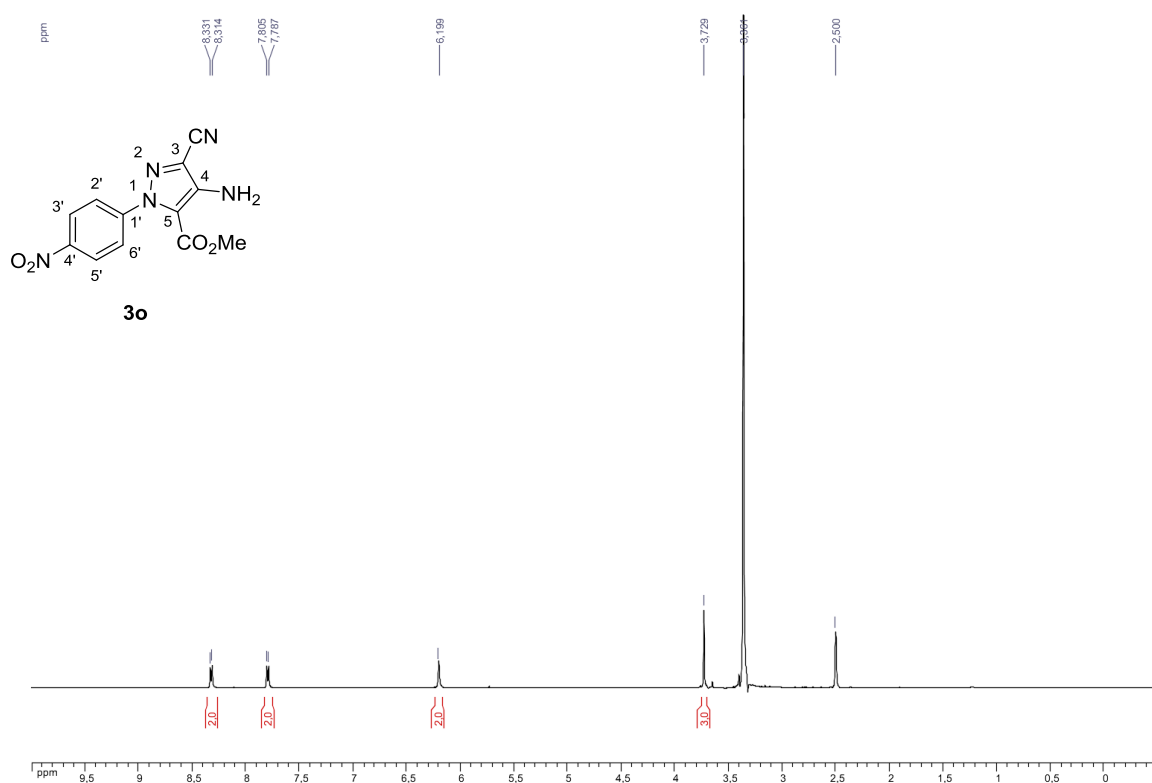
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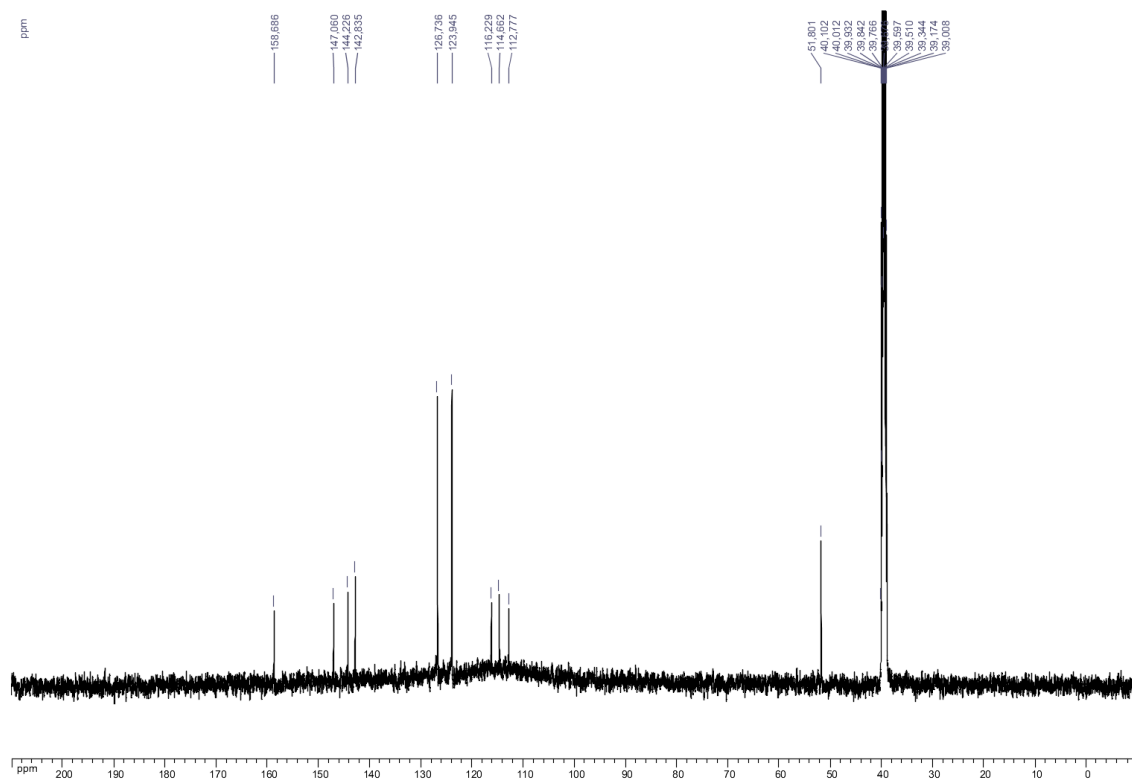
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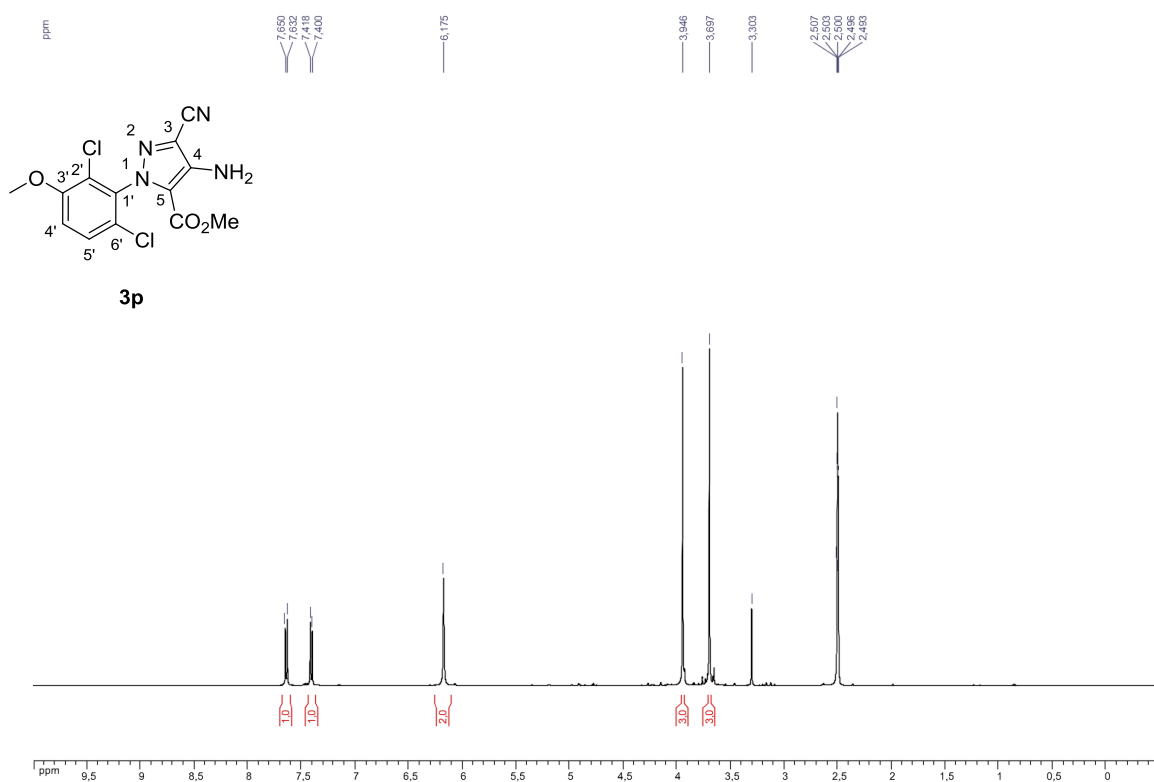
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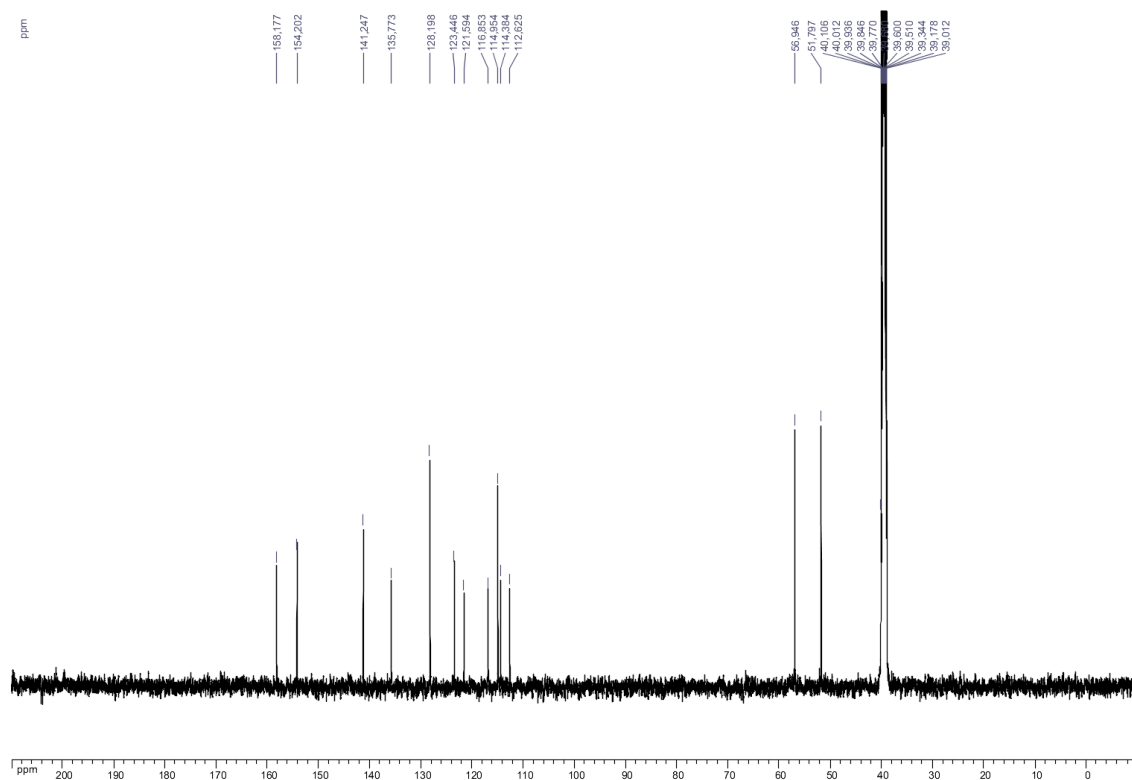
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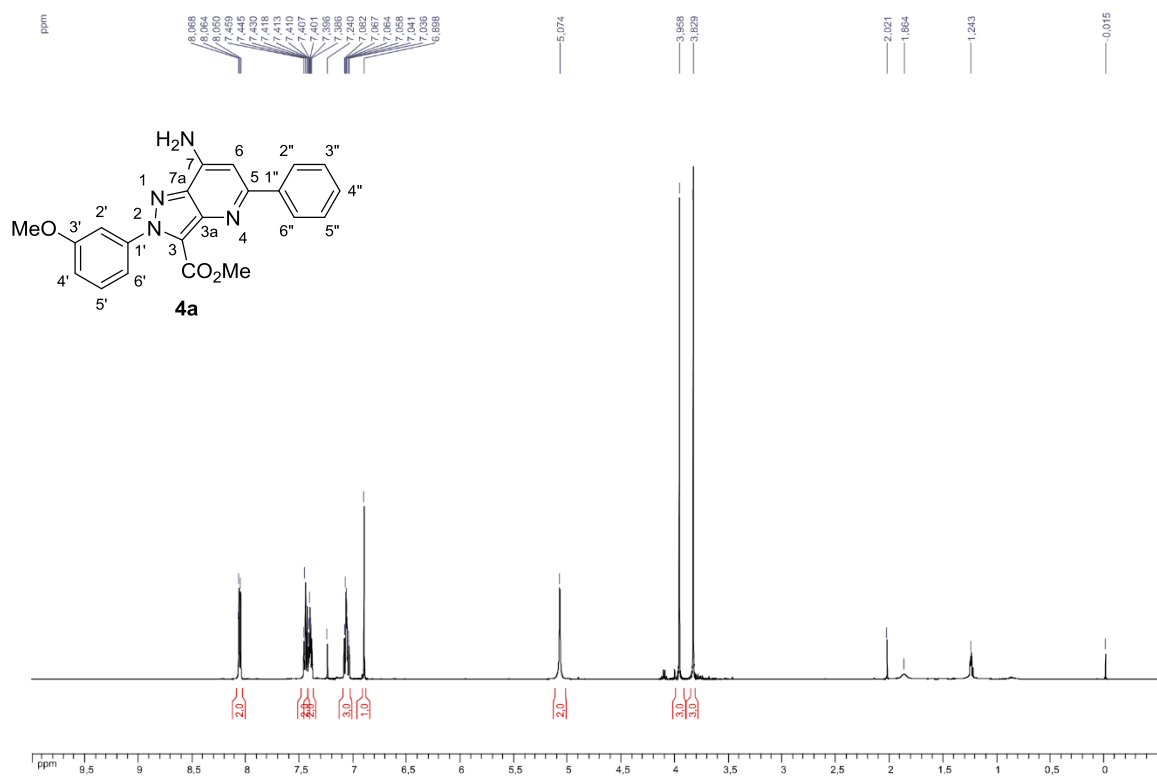
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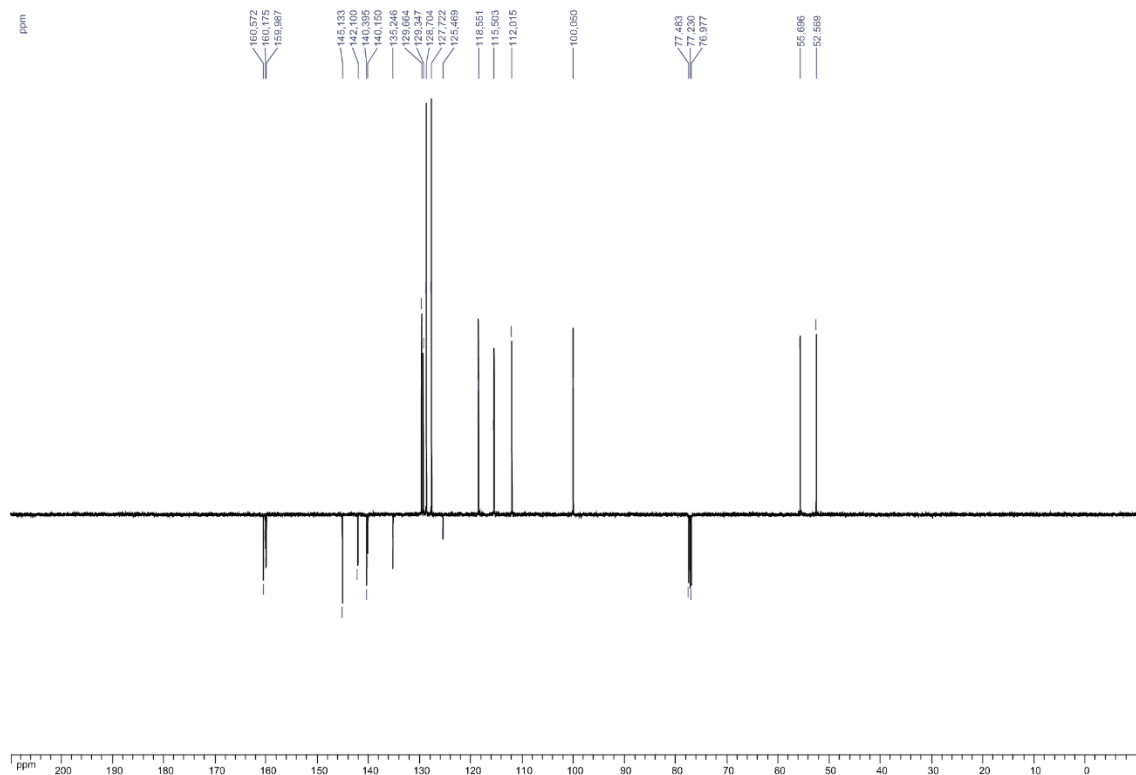
^{13}C NMR, 125 MHz ($\text{DMSO}-d_6$), compound **3p**

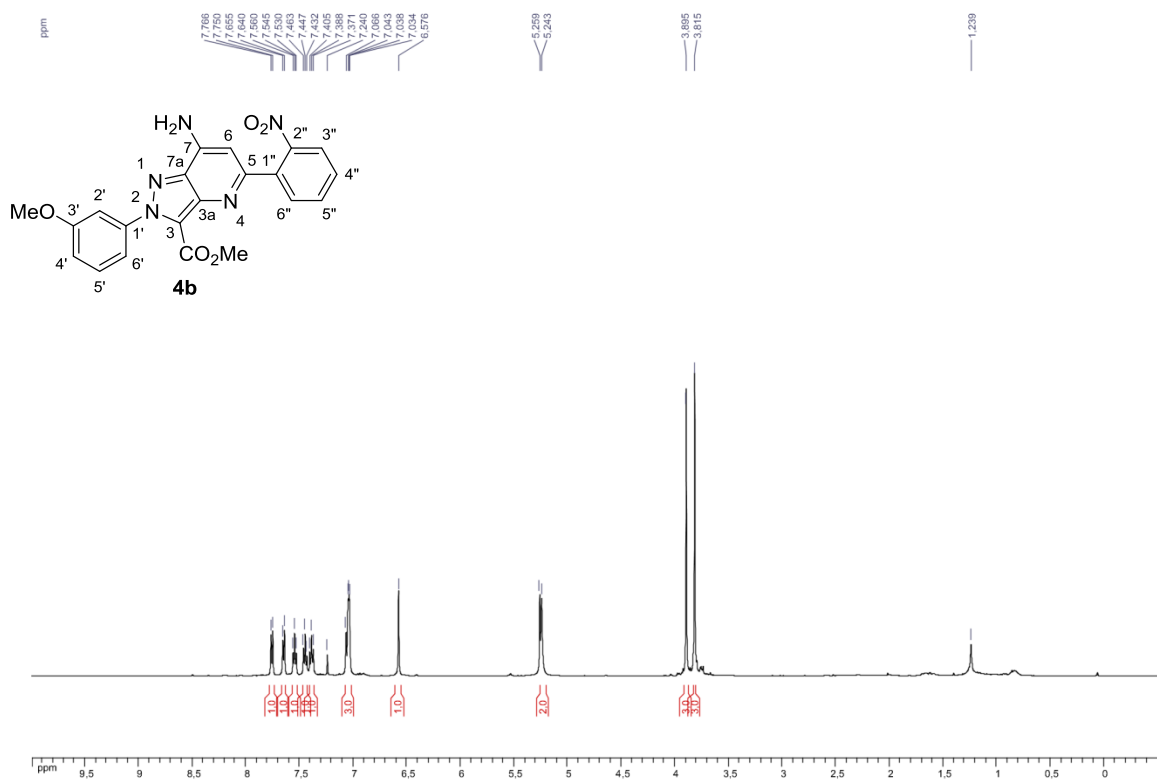
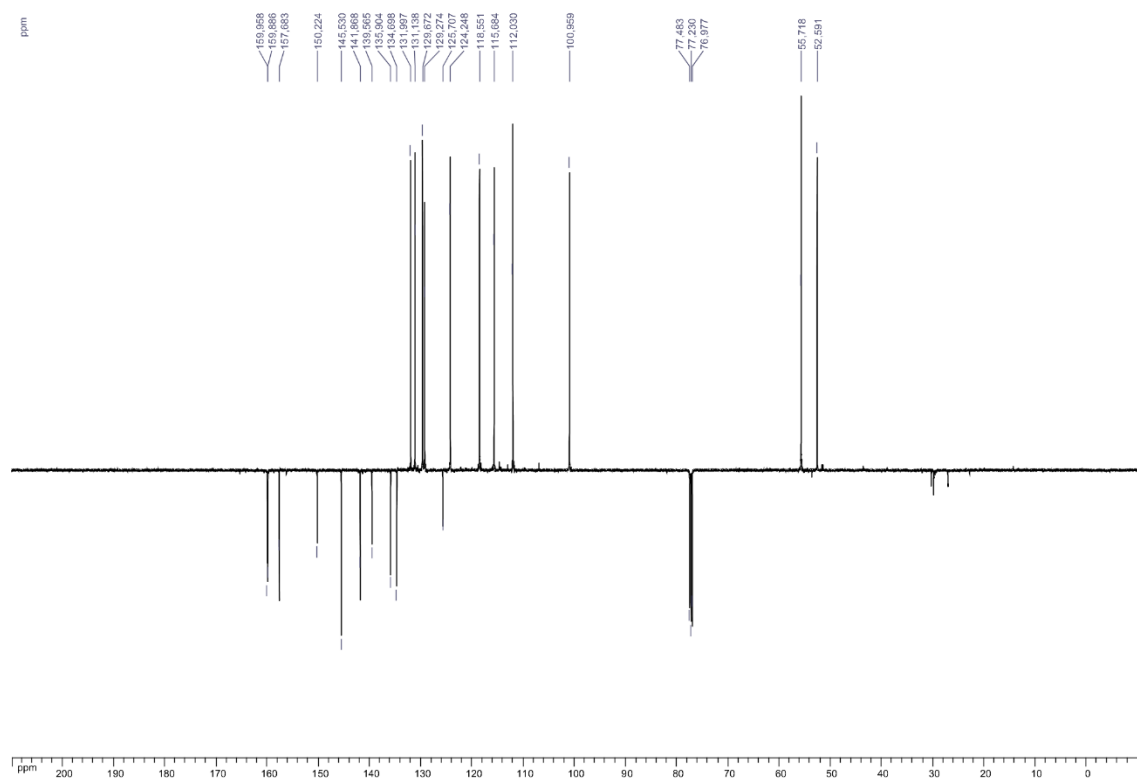


^1H NMR, 500 MHz (CDCl_3), compound **4a**

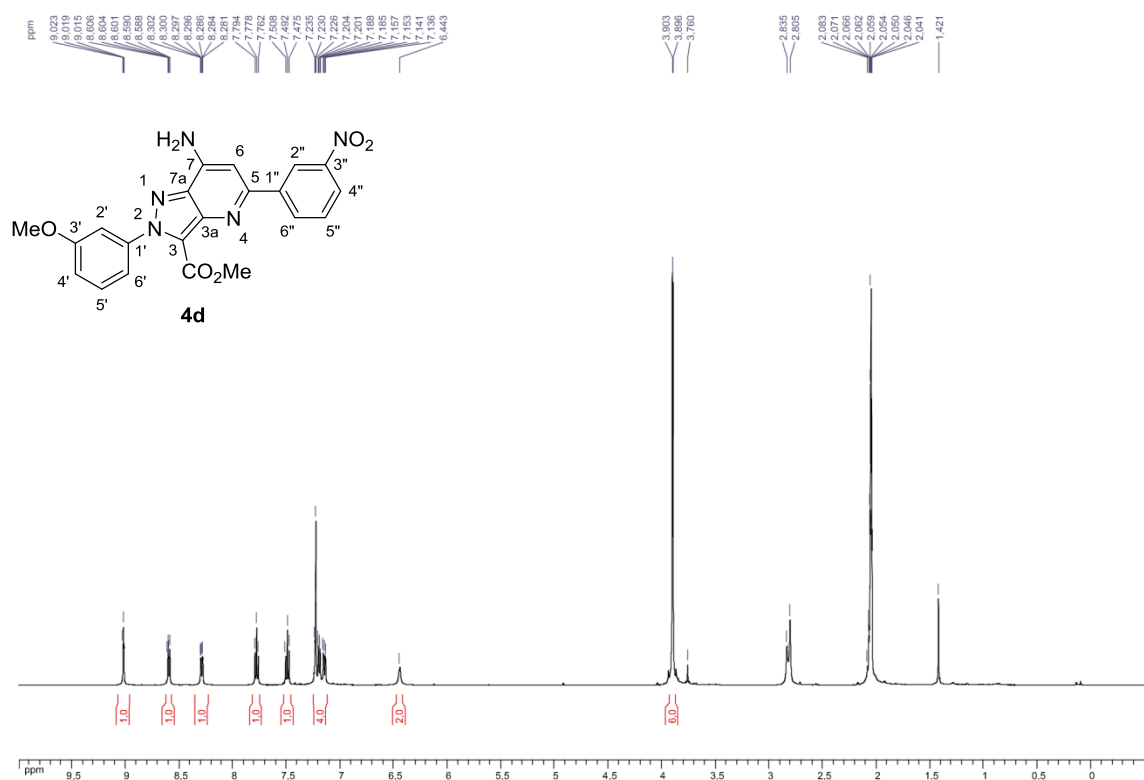


^{13}C NMR APT, 125 MHz (CDCl_3), compound **4a**

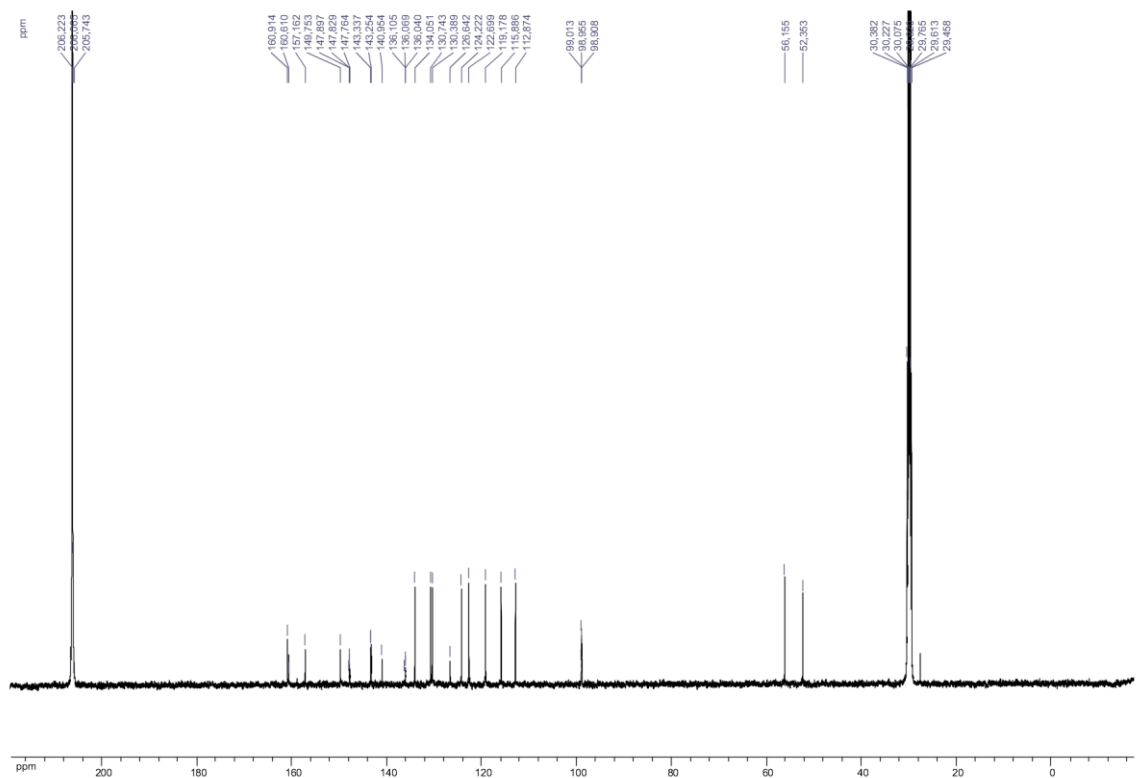


¹H NMR, 500 MHz (CDCl₃), compound **4b** ^{13}C NMR APT, 125 MHz (CDCl_3), compound **4b**

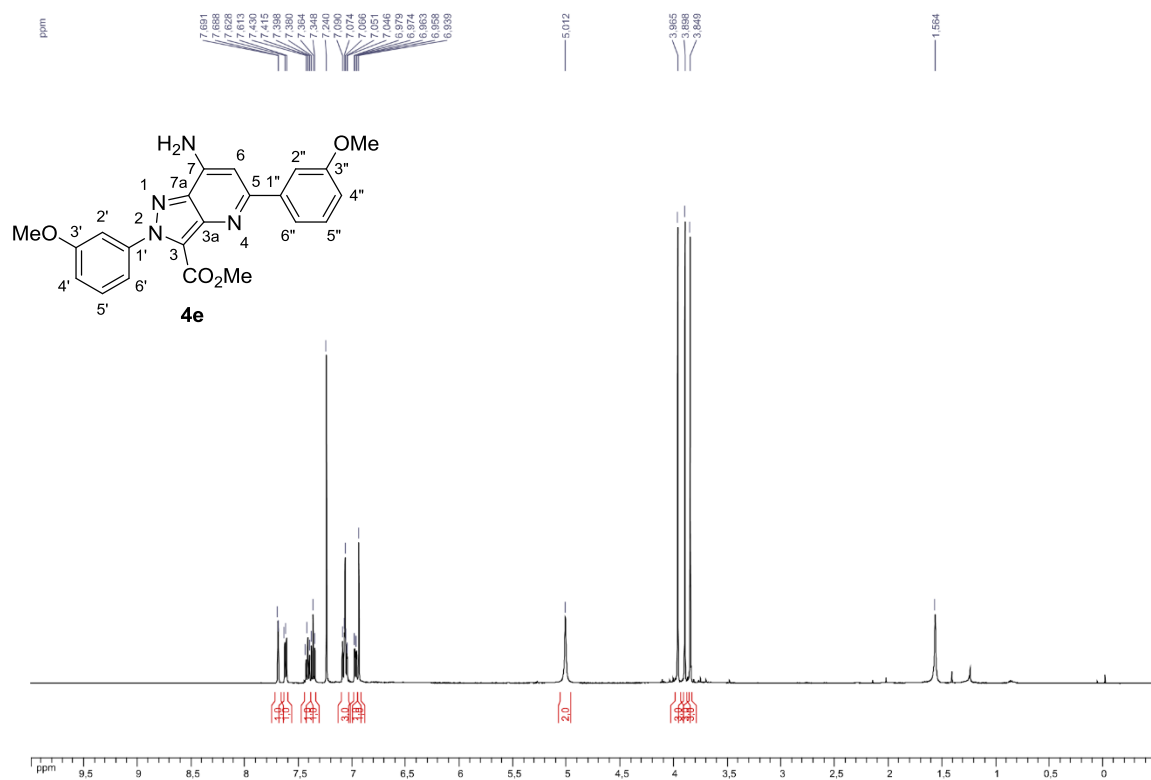
^1H NMR, 500 MHz (acetone- d_6), compound **4d**



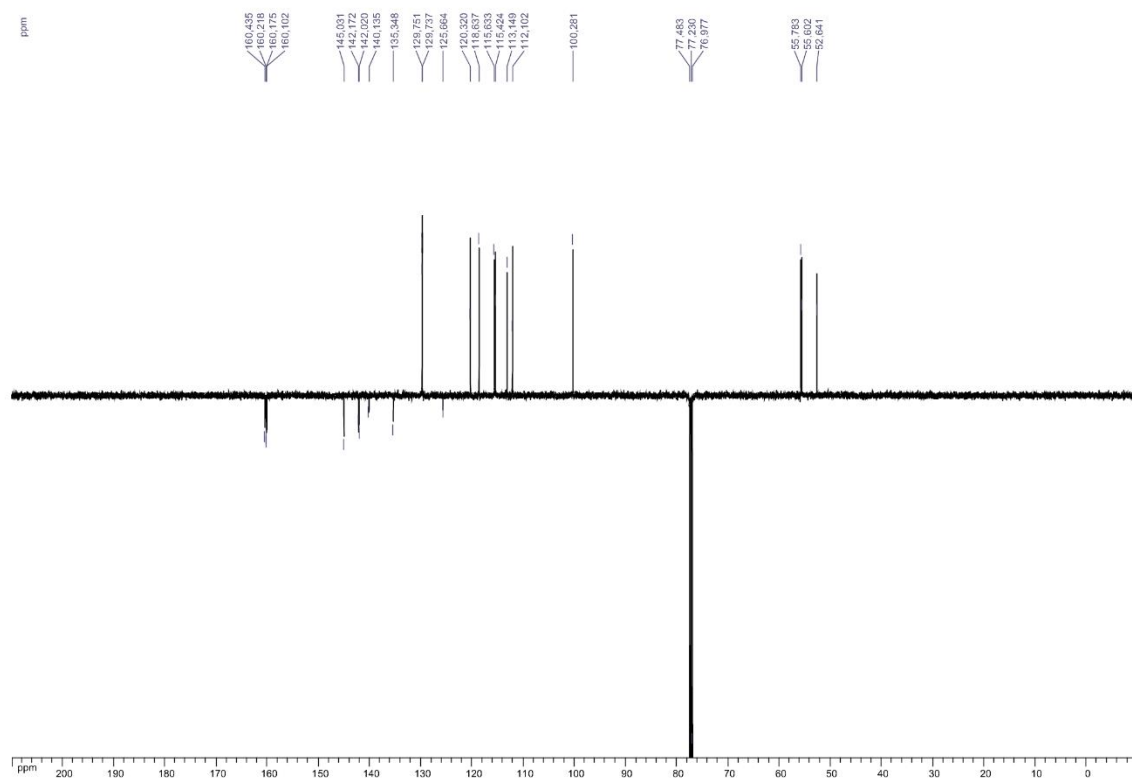
^{13}C NMR APT, 125 MHz (acetone- d_6), compound **4d**



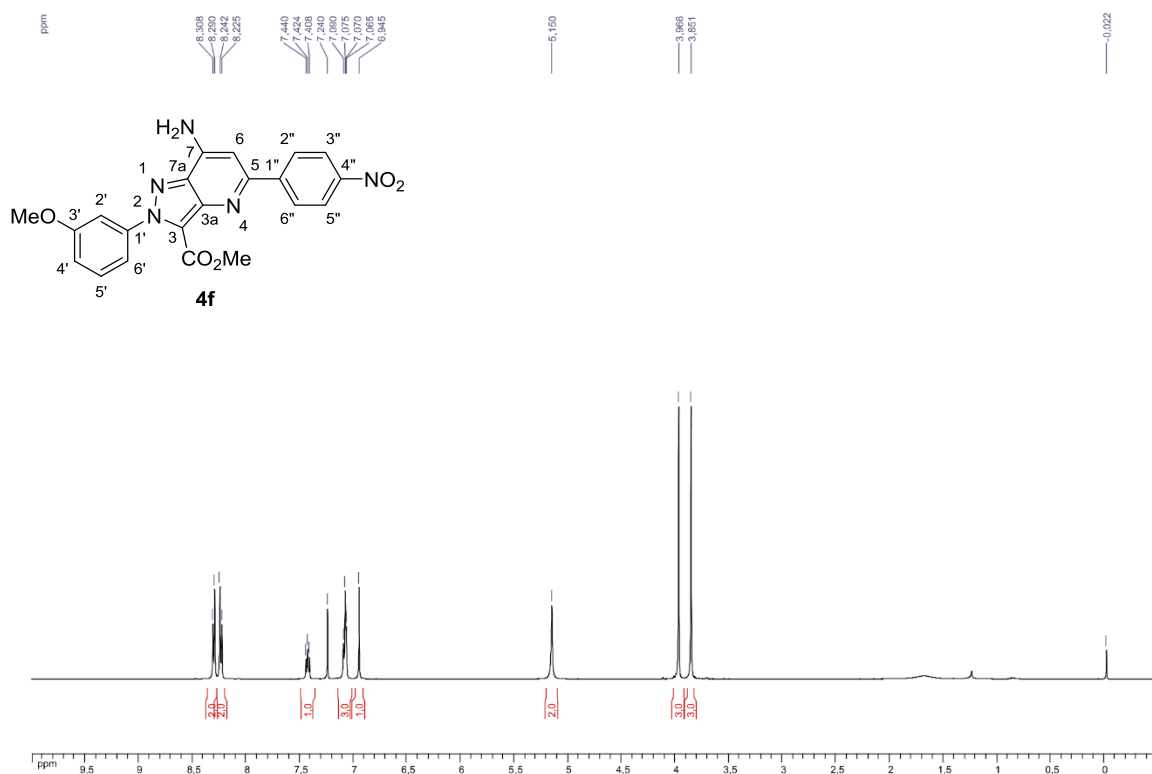
^1H NMR, 500 MHz (CDCl_3), compound **4e**



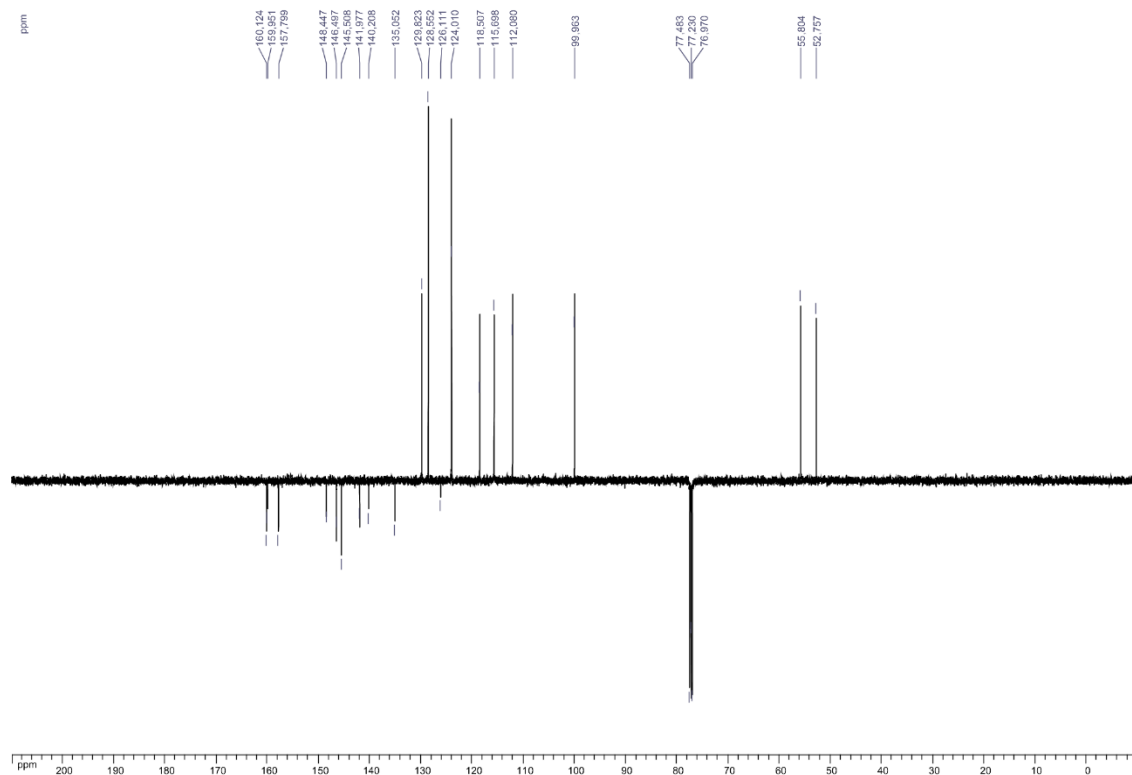
^{13}C NMR APT, 125 MHz (CDCl_3), compound **4e**



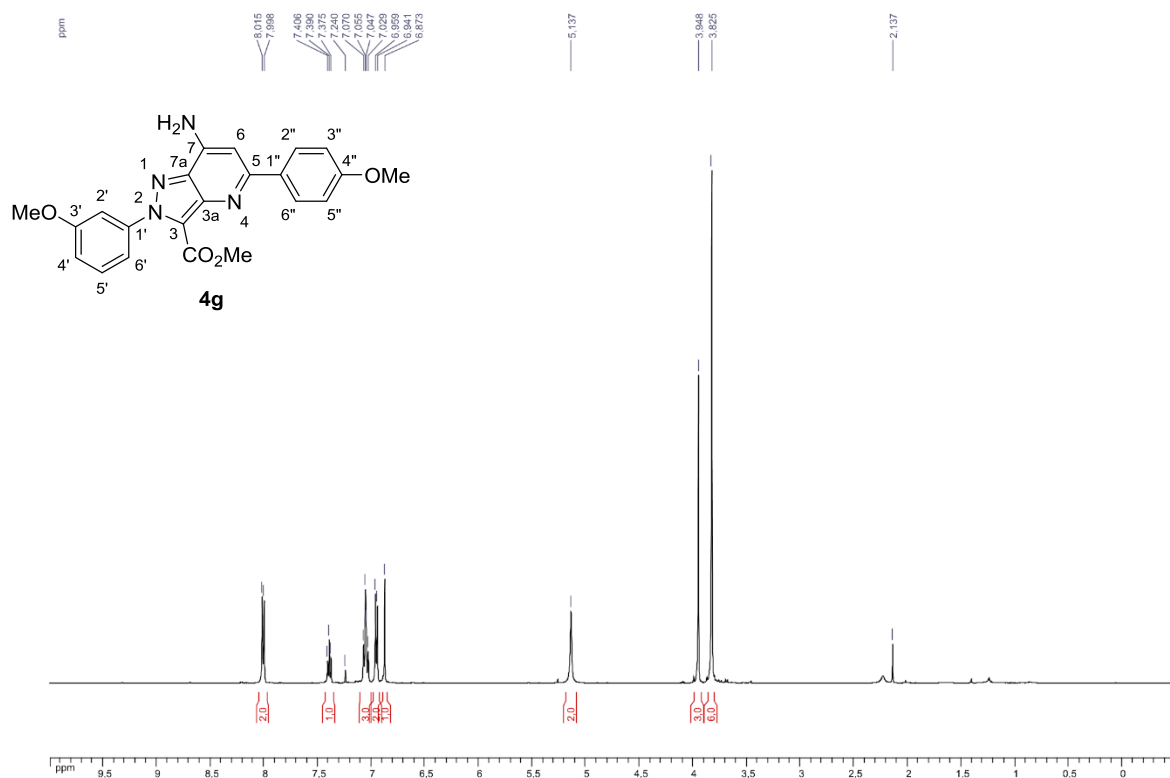
^1H NMR, 500 MHz (CDCl_3), compound **4f**



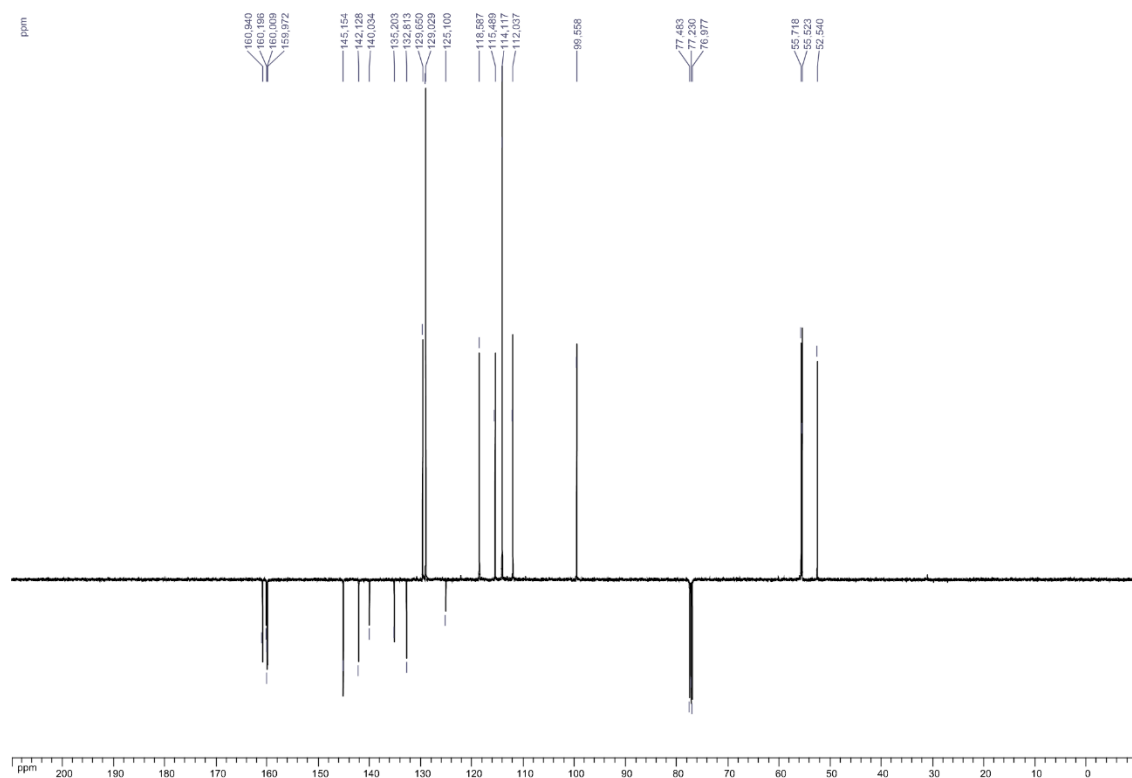
^{13}C NMR APT, 125 MHz (CDCl_3), compound **4f**



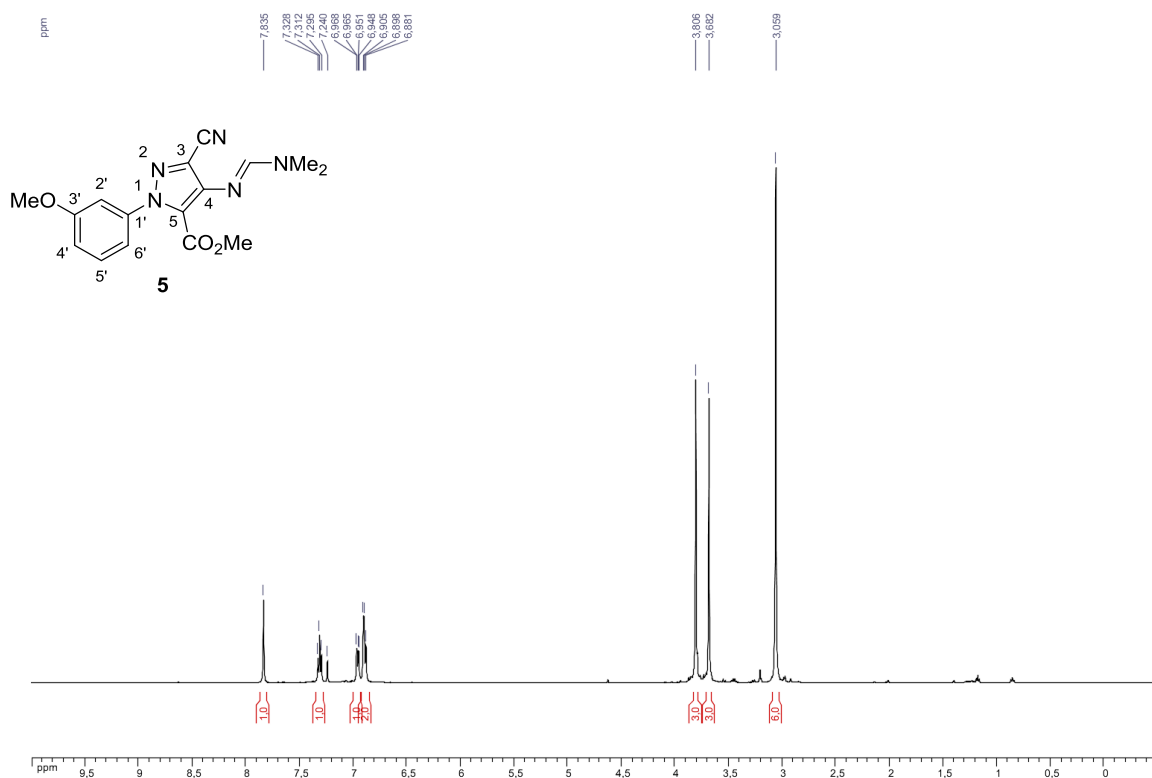
^1H NMR, 500 MHz (CDCl_3), compound **4g**



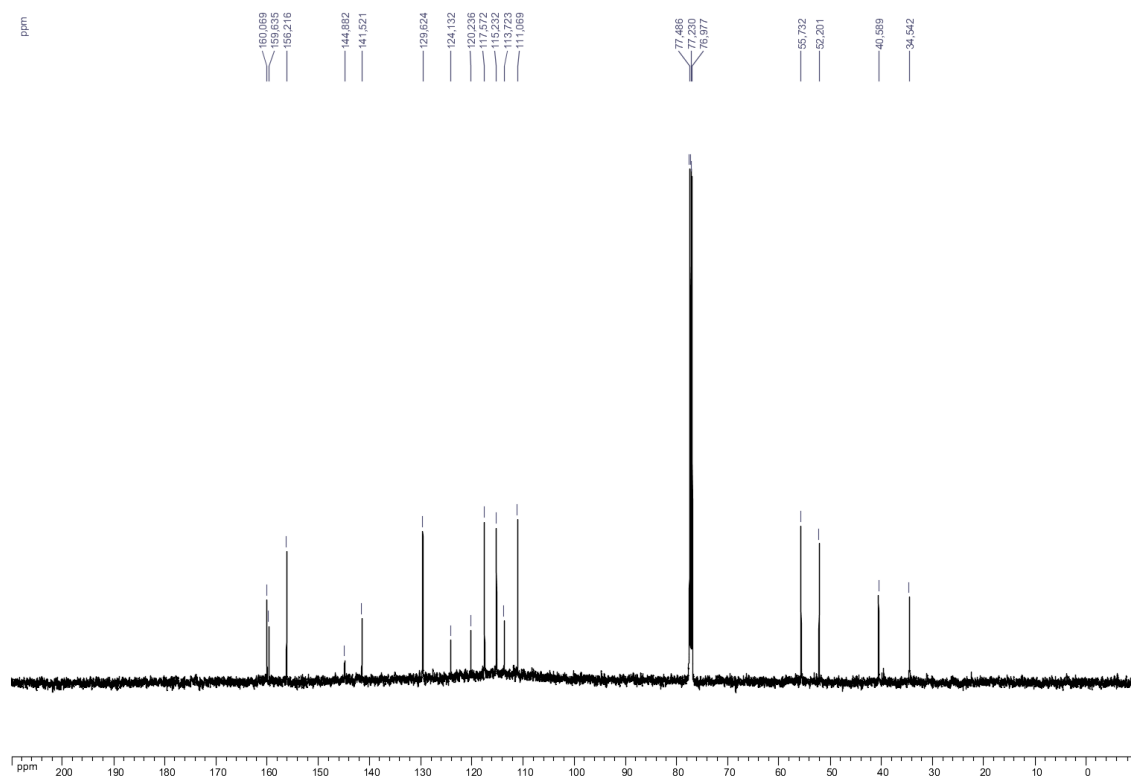
^{13}C NMR APT, 125 MHz (CDCl_3), compound **4g**



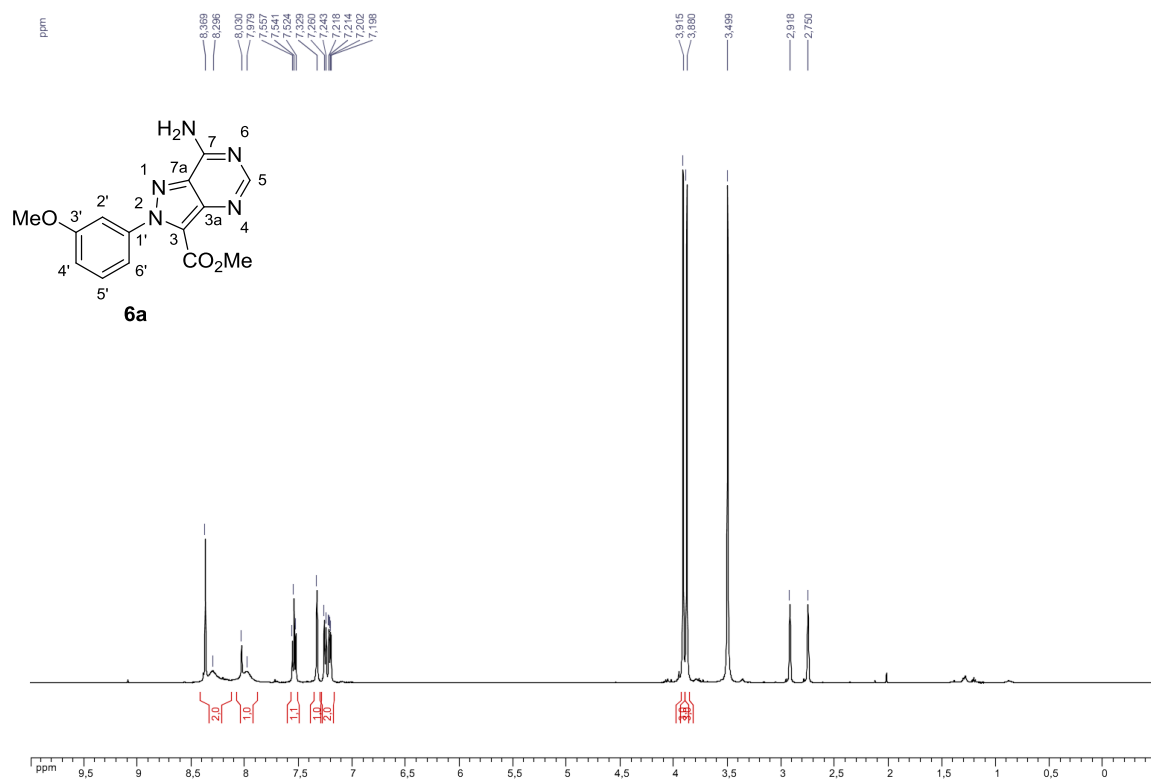
^1H NMR, 500 MHz (CDCl_3), compound **5**



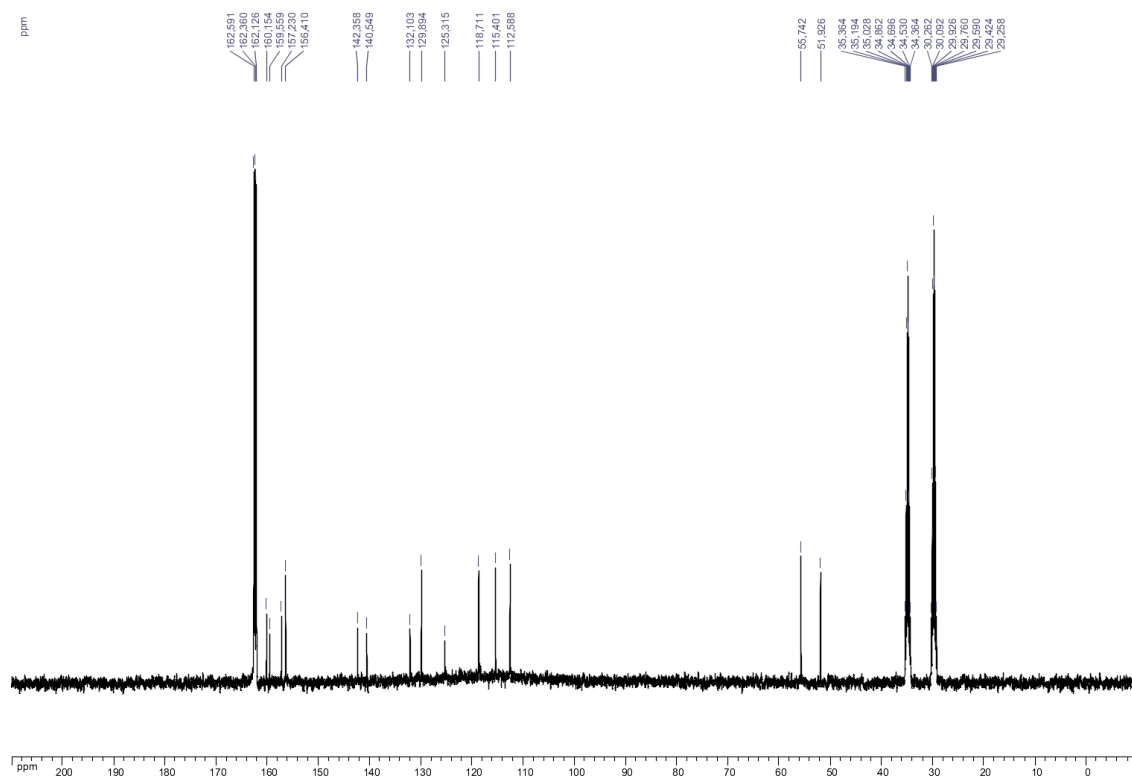
^{13}C NMR, 125 MHz (CDCl_3), compound **5**



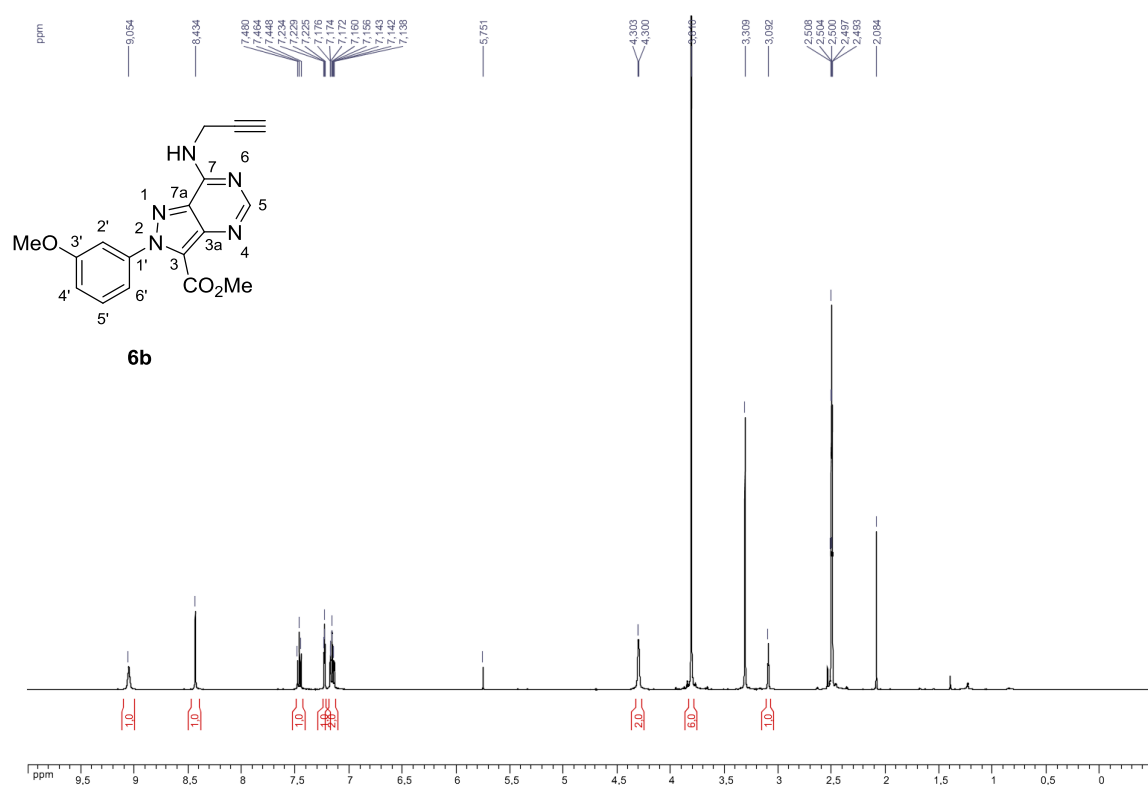
^1H NMR, 500 MHz ($\text{DMF-}d_7$), compound **6a**



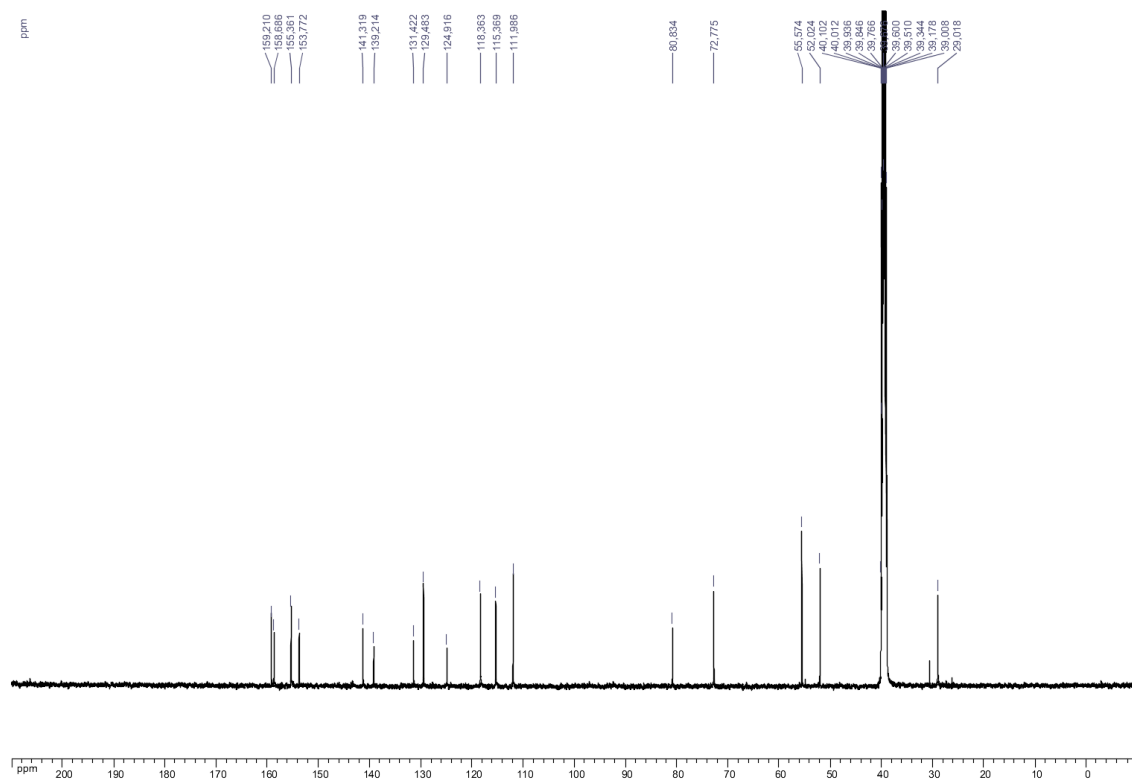
^{13}C NMR, 125 MHz ($\text{DMF-}d_7$), compound **6a**



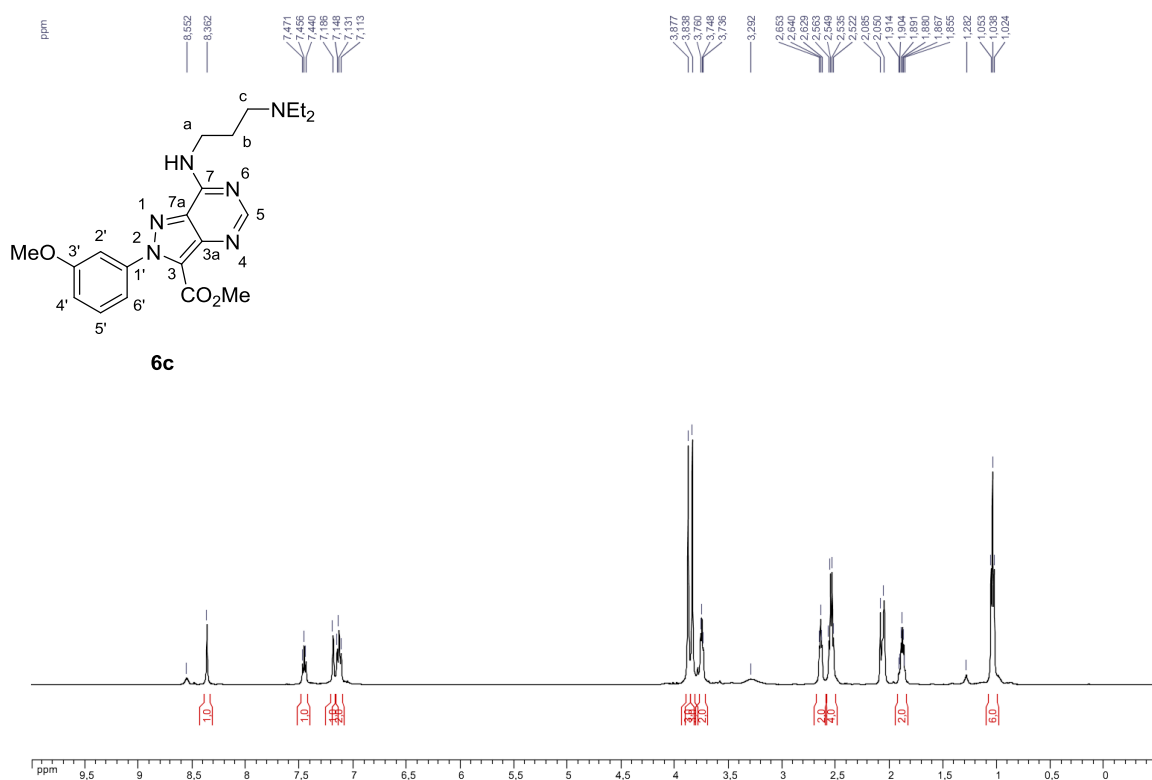
^1H NMR, 500 MHz ($\text{DMSO}-d_6$), compound **6b**



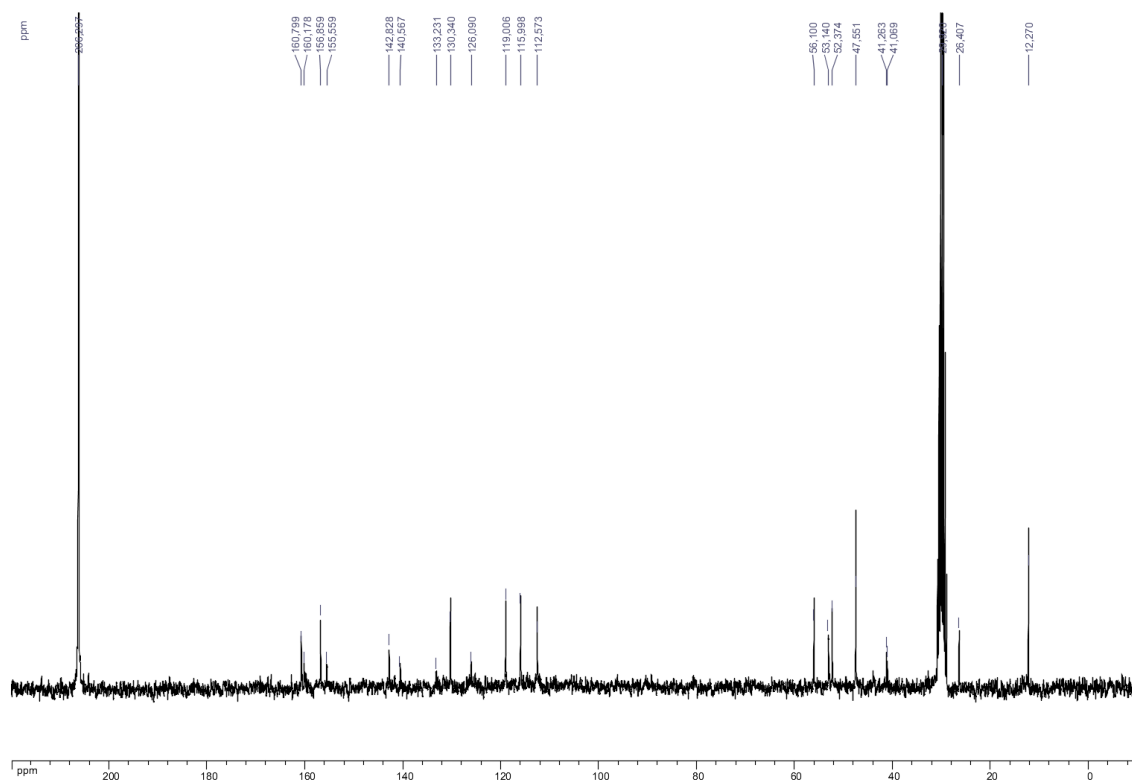
^{13}C NMR, 125 MHz ($\text{DMSO}-d_6$), compound **6b**



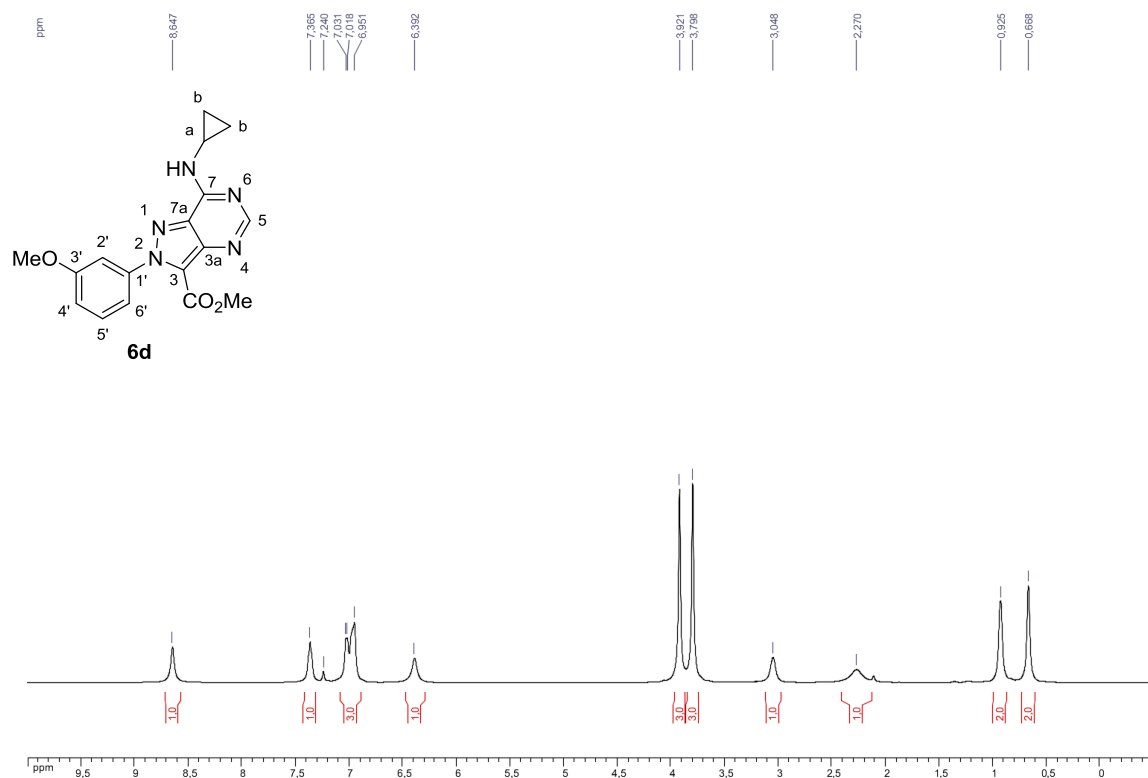
^1H NMR, 500 MHz (acetone- d_6), compound **6c**



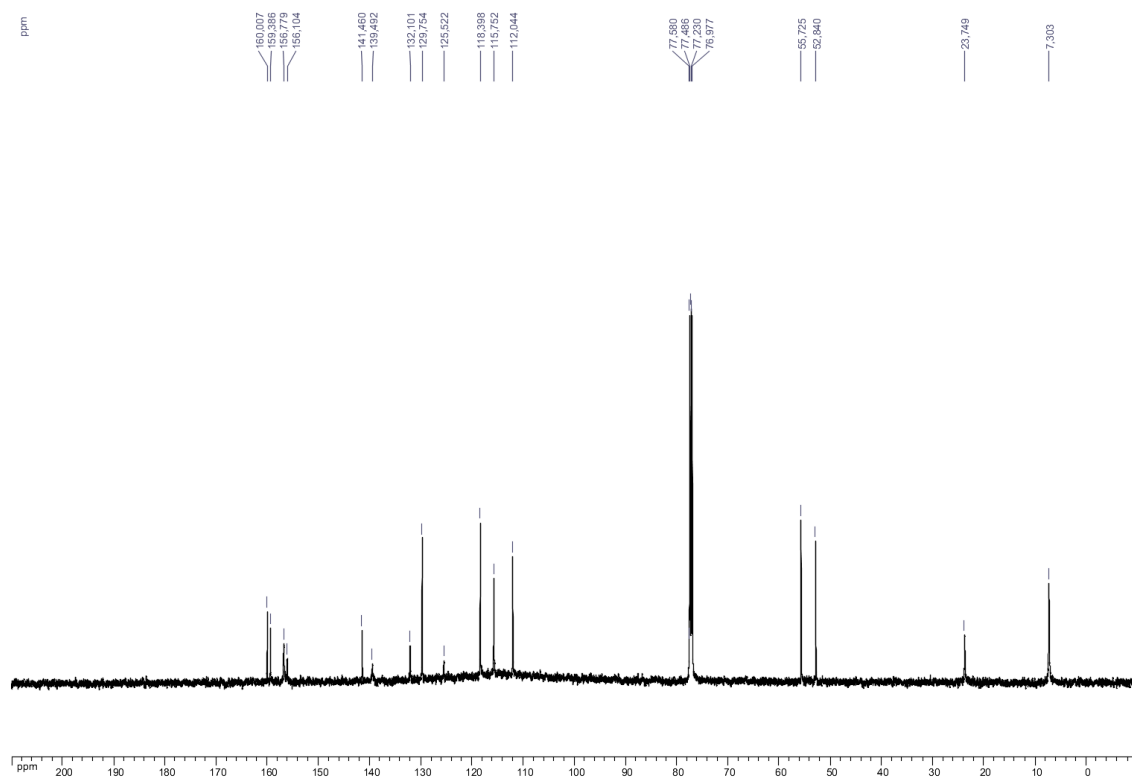
^{13}C NMR, 63 MHz (acetone- d_6), compound **6c**



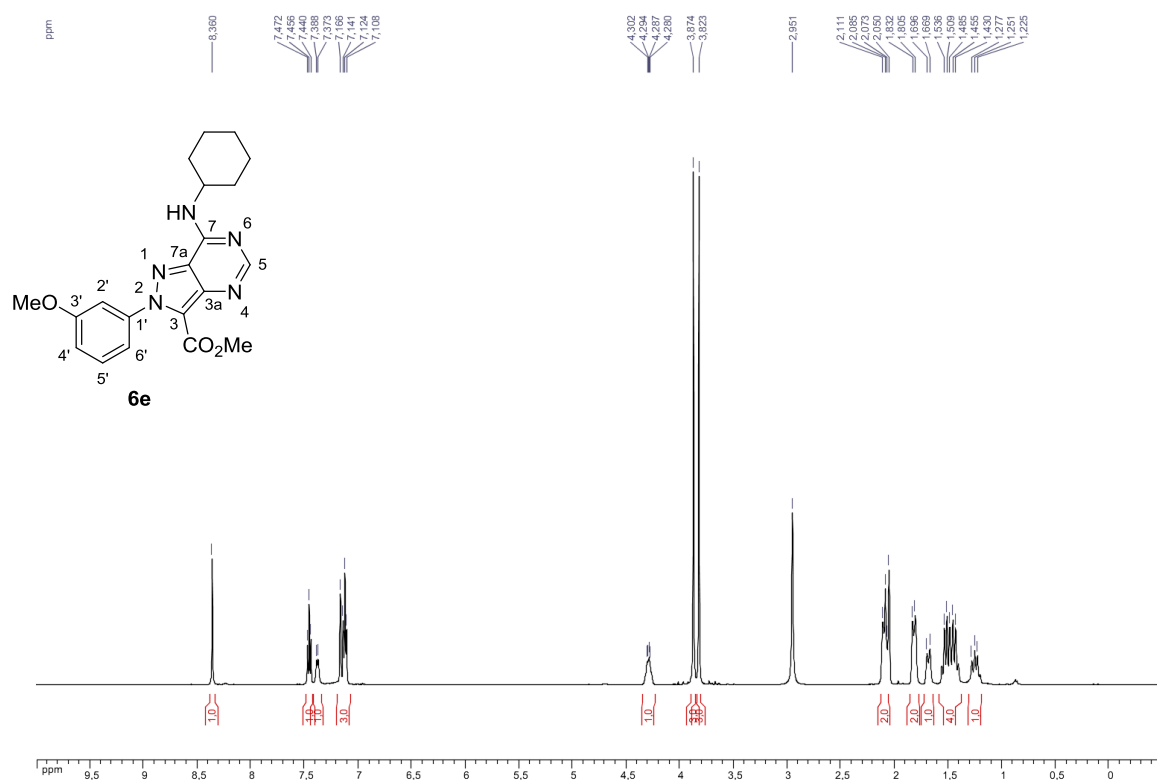
^1H NMR, 500 MHz (CDCl_3), compound **6d**



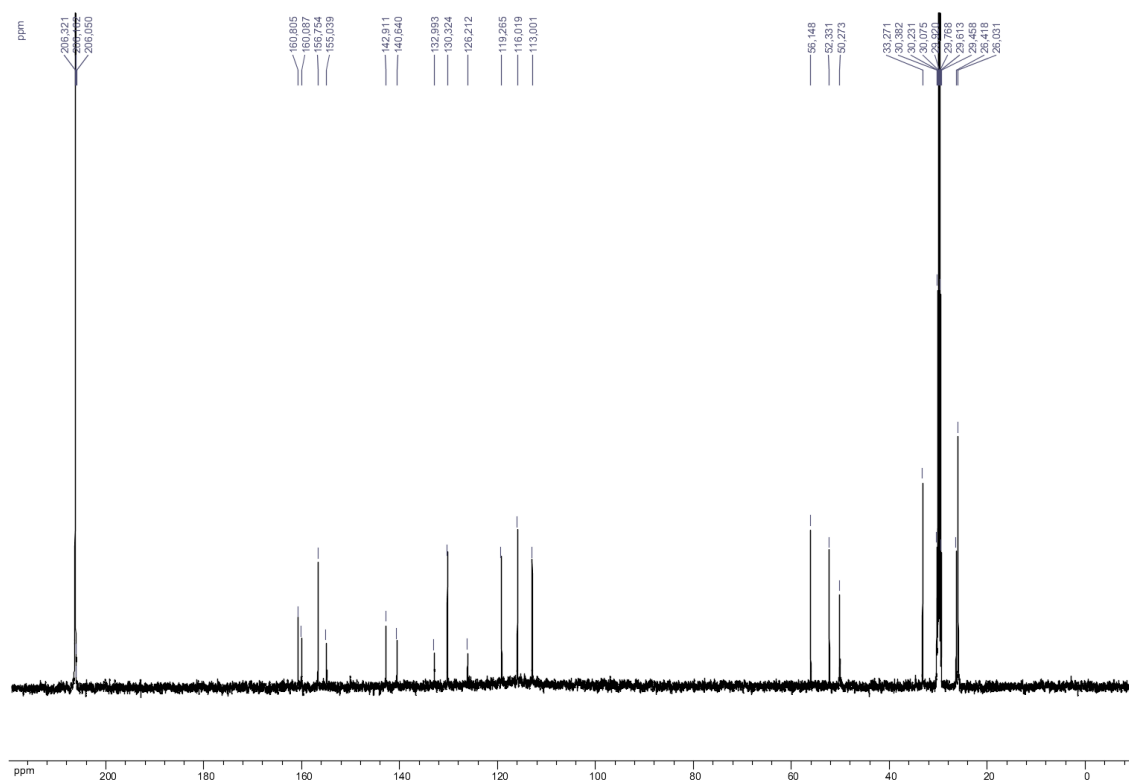
^{13}C NMR, 125 MHz (CDCl_3), compound **6d**



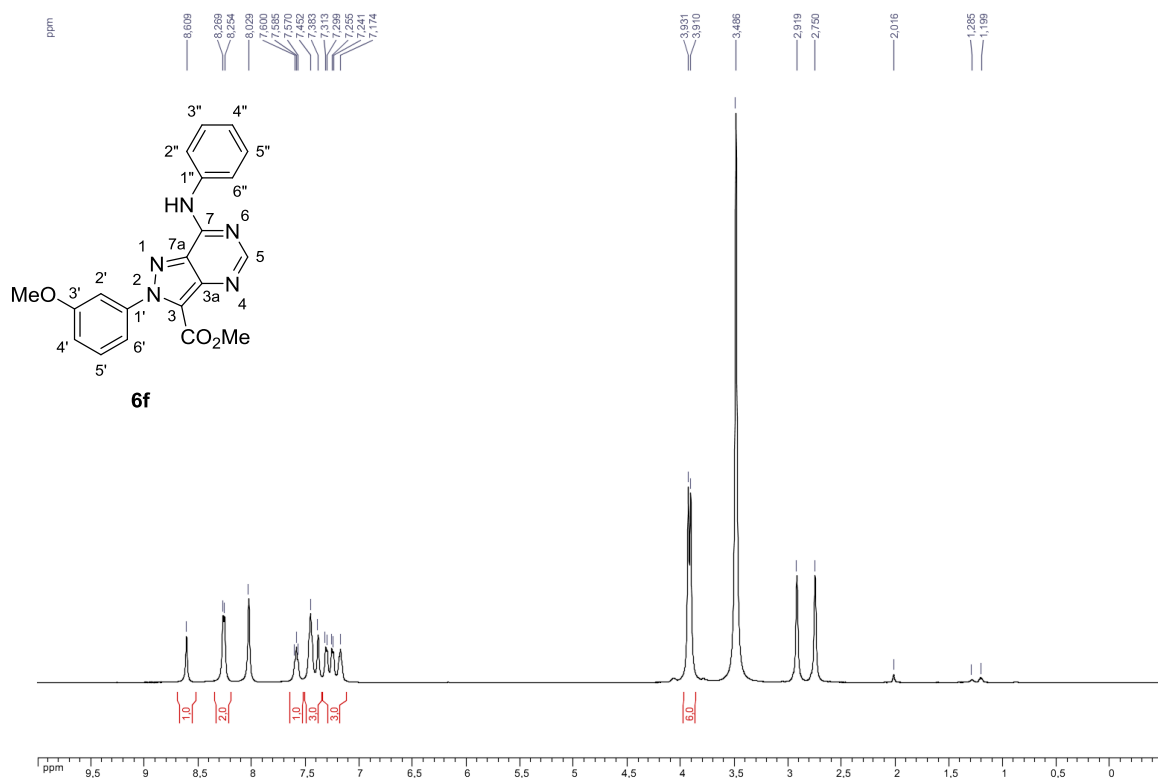
^1H NMR, 500 MHz (acetone- d_6), compound **6e**



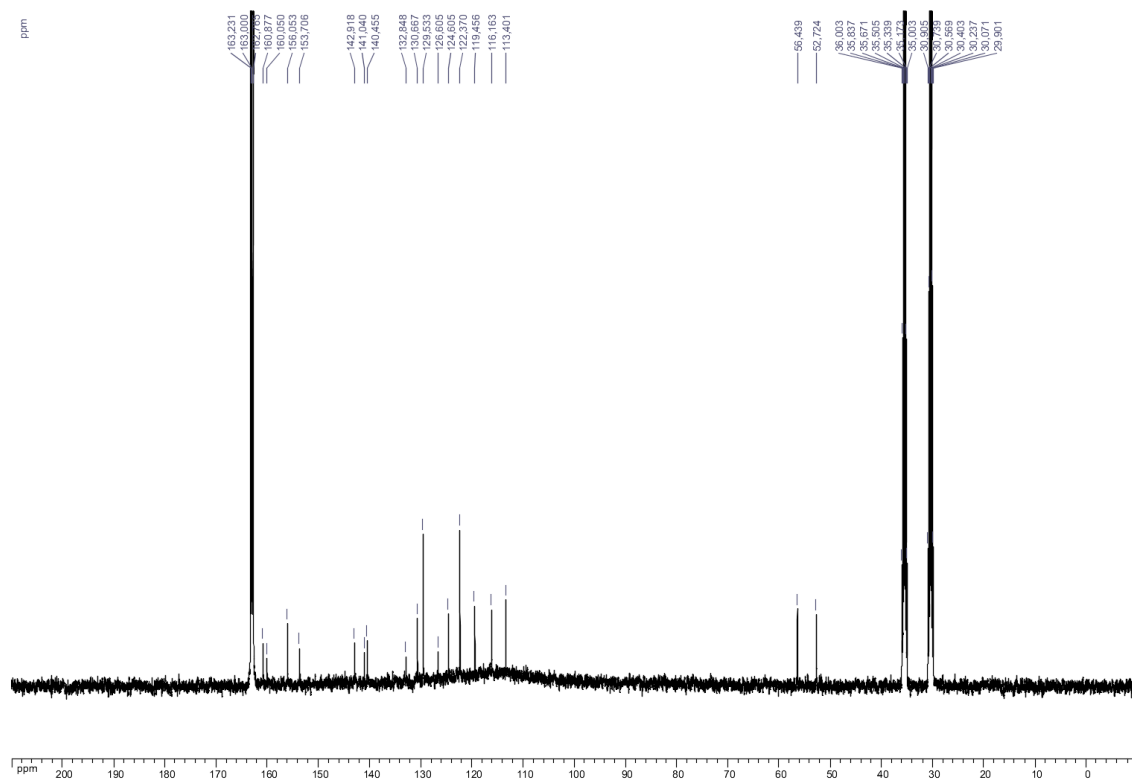
^{13}C NMR, 125 MHz (acetone- d_6), compound **6e**



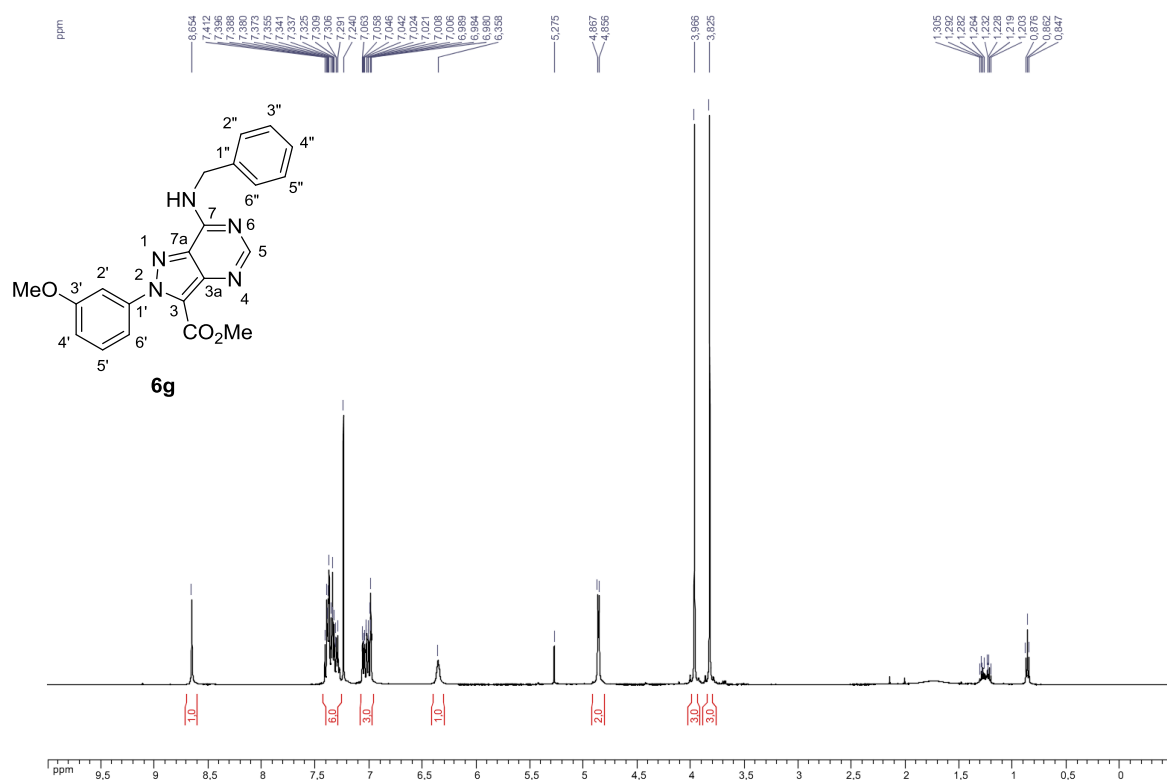
^1H NMR, 500 MHz (DMF- d_7), compound **6f**



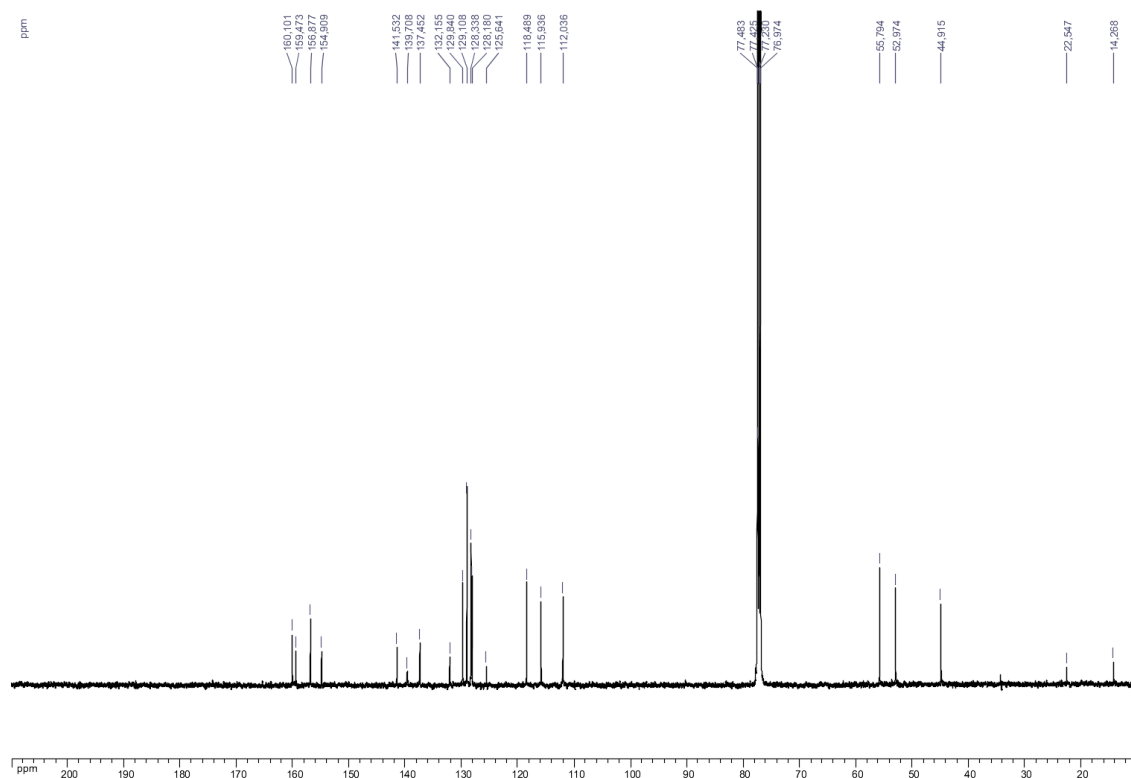
^{13}C NMR, 125 MHz (DMF- d_7), compound **6f**



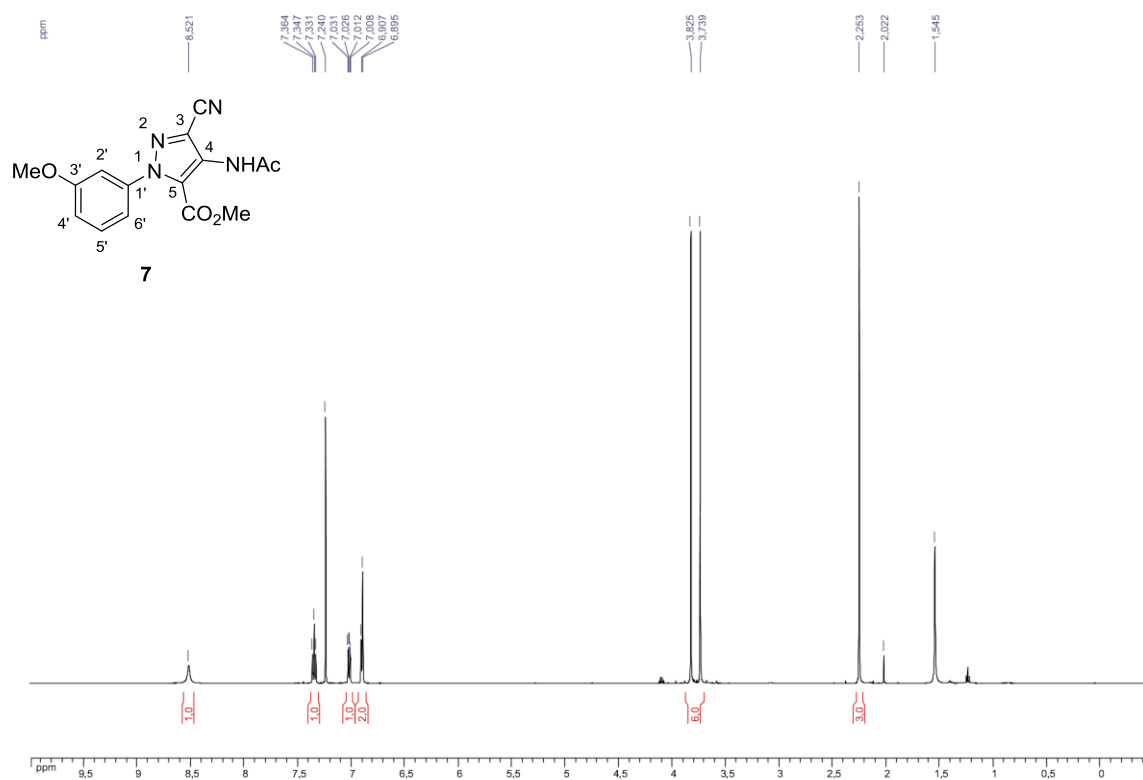
^1H NMR, 500 MHz (CDCl_3), compound **6g**



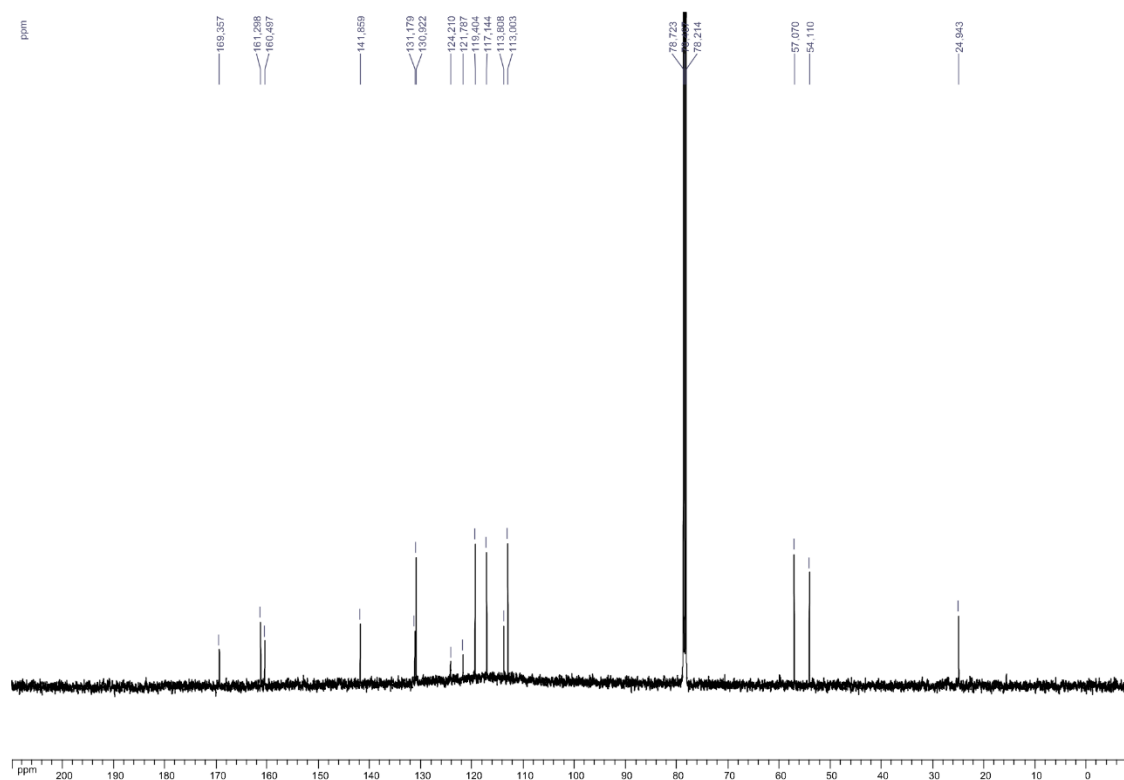
^{13}C NMR, 125 MHz (CDCl_3), compound **6g**



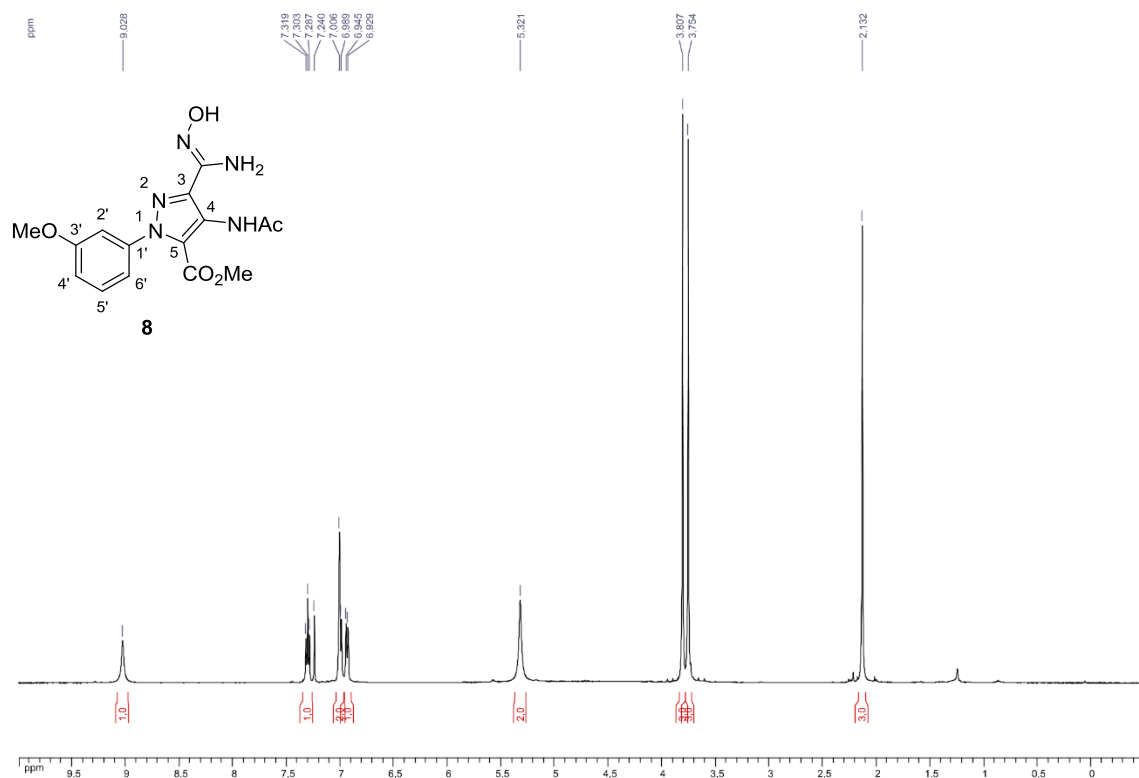
^1H NMR, 500 MHz (CDCl_3), compound **7**



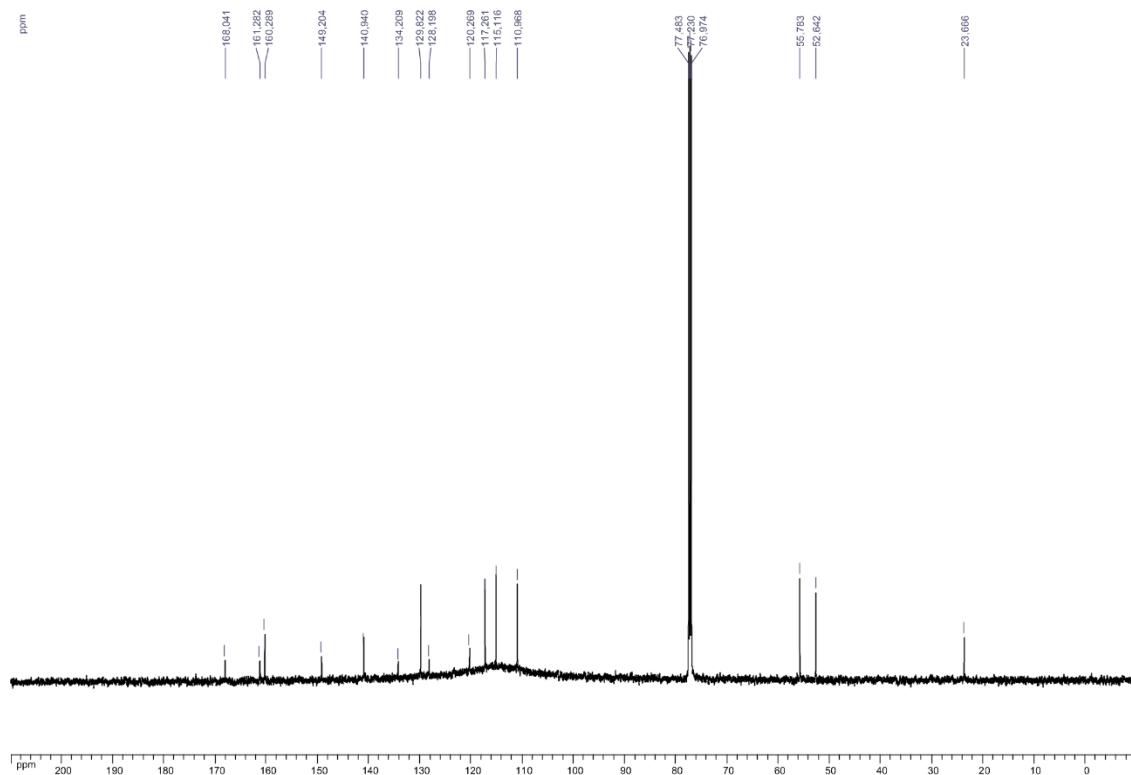
^{13}C NMR, 125 MHz (CDCl_3), compound **7**



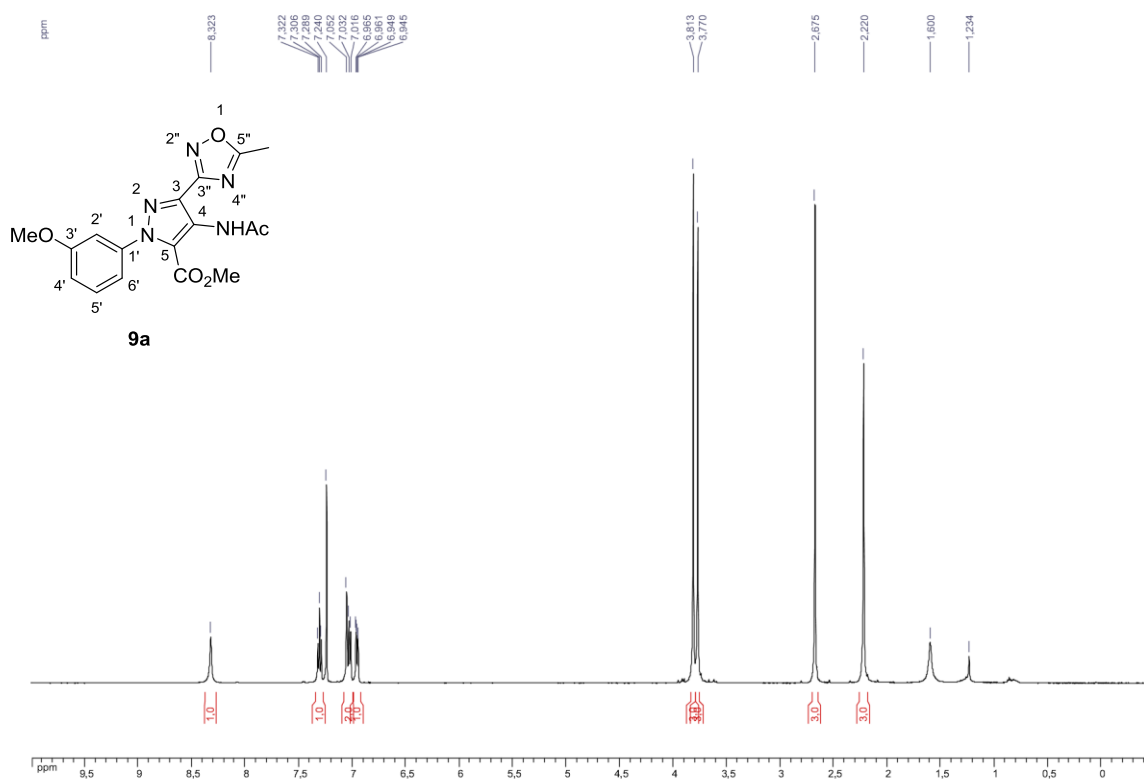
^1H NMR, 500 MHz (CDCl_3), compound **8**



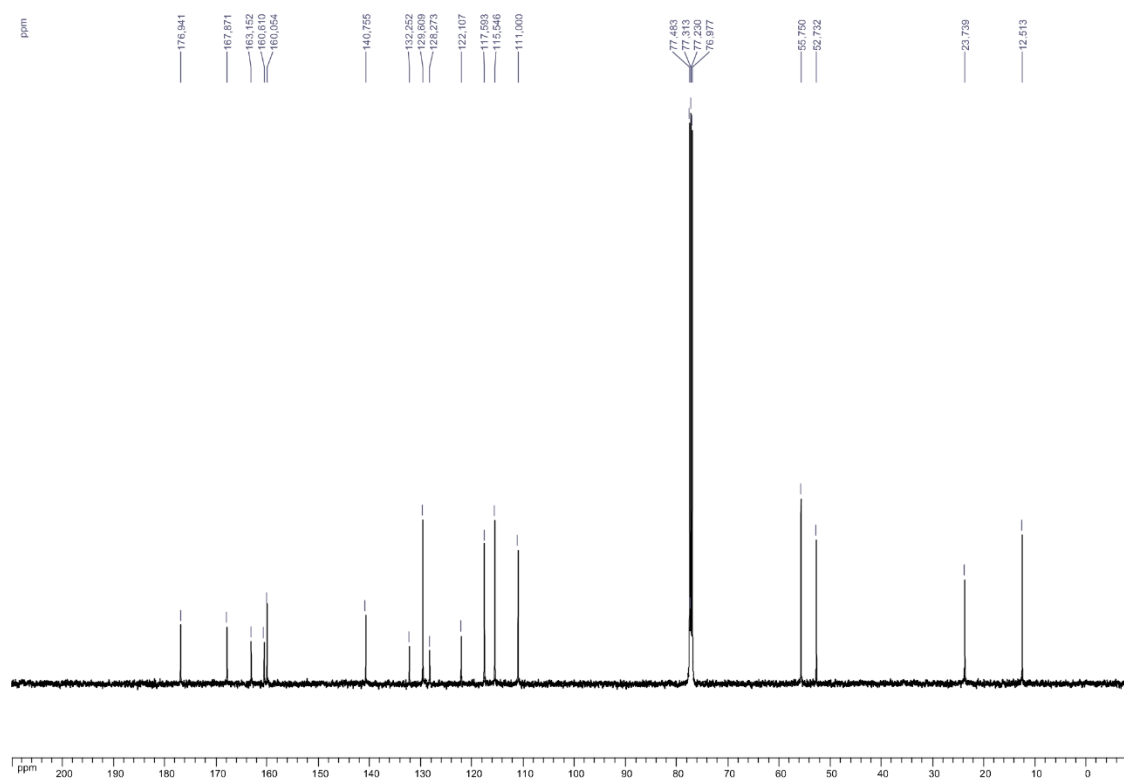
^{13}C NMR, 125 MHz (CDCl_3), compound **8**



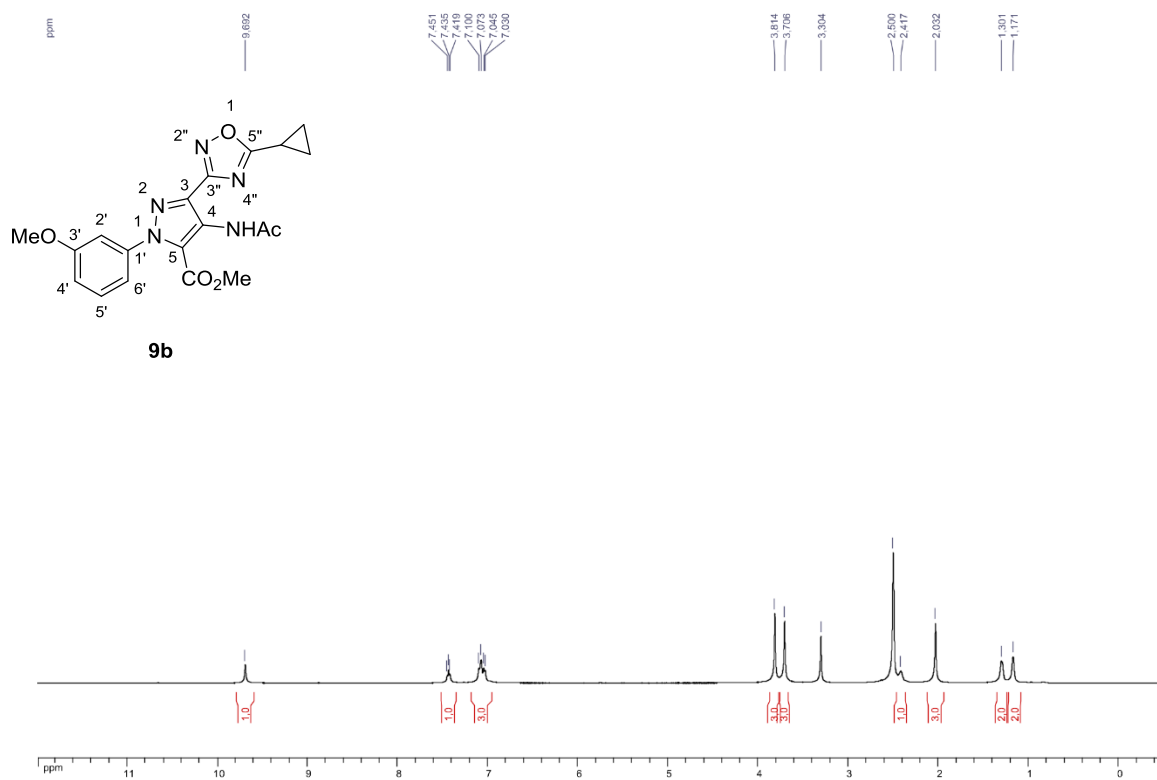
^1H NMR, 500 MHz (CDCl_3), compound **9a**



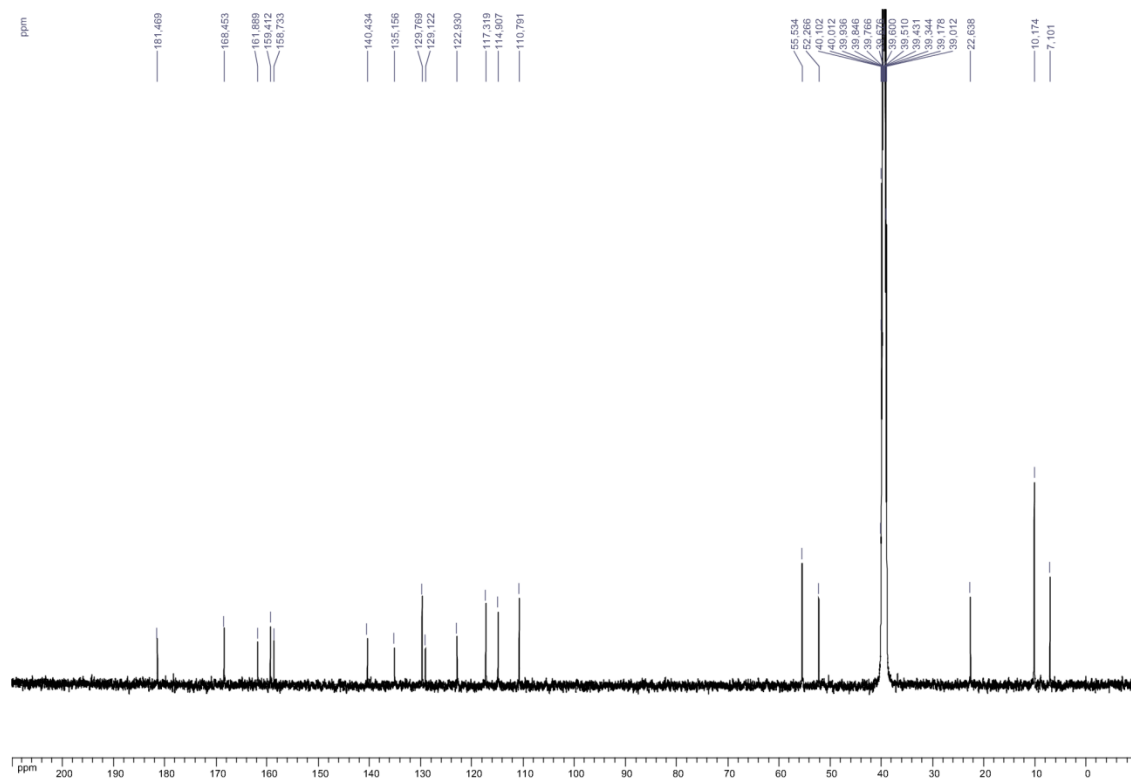
^{13}C NMR, 125 MHz (CDCl_3), compound **9a**



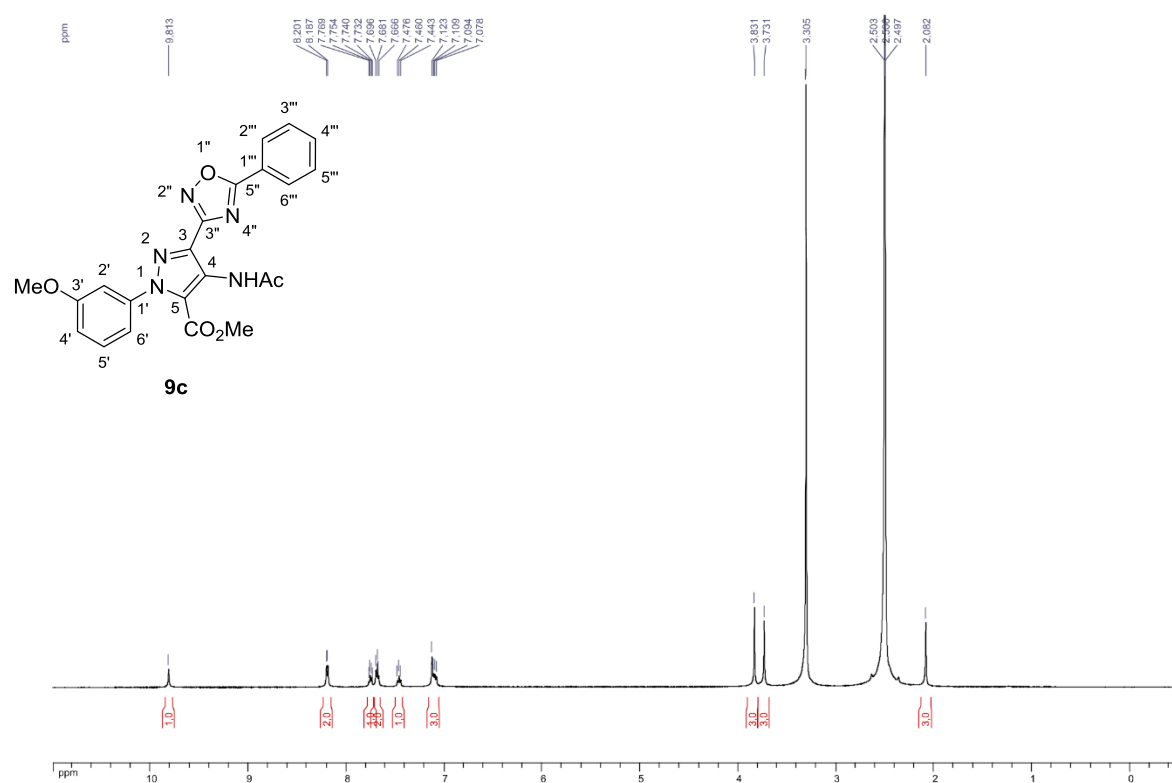
¹H NMR, 500 MHz (DMSO-*d*₆), compound **9b**



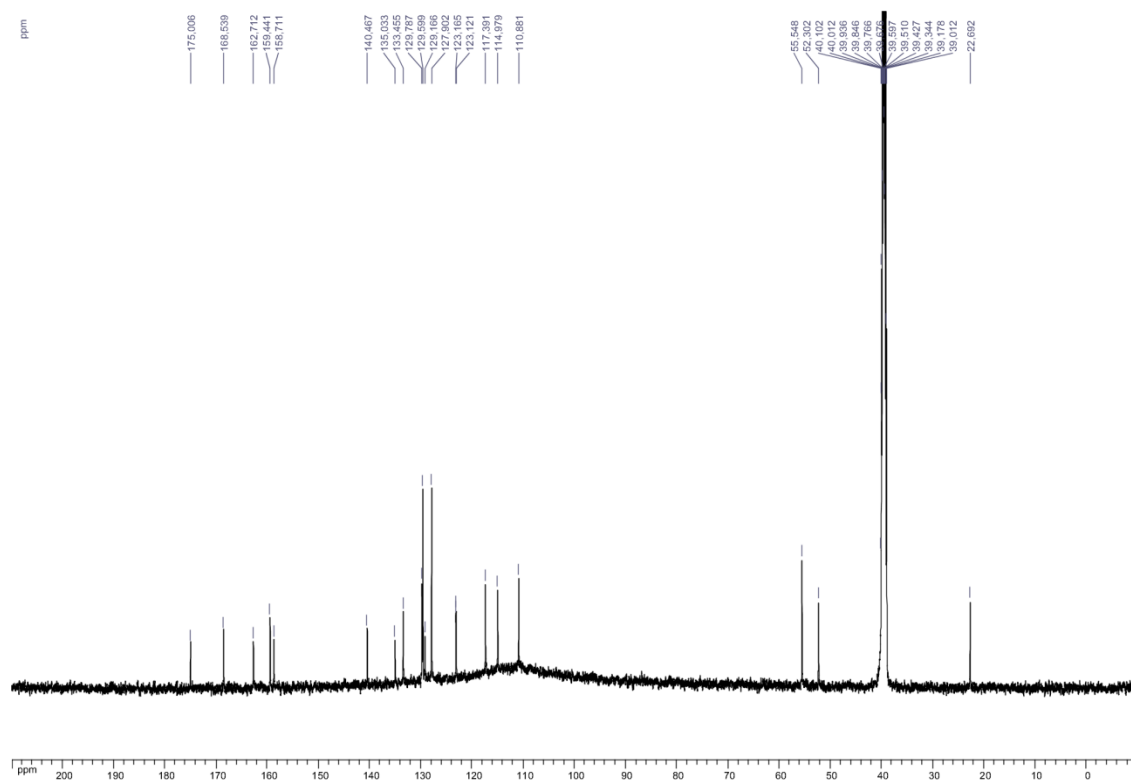
¹³C NMR, 125 MHz (DMSO-*d*₆), compound **9b**



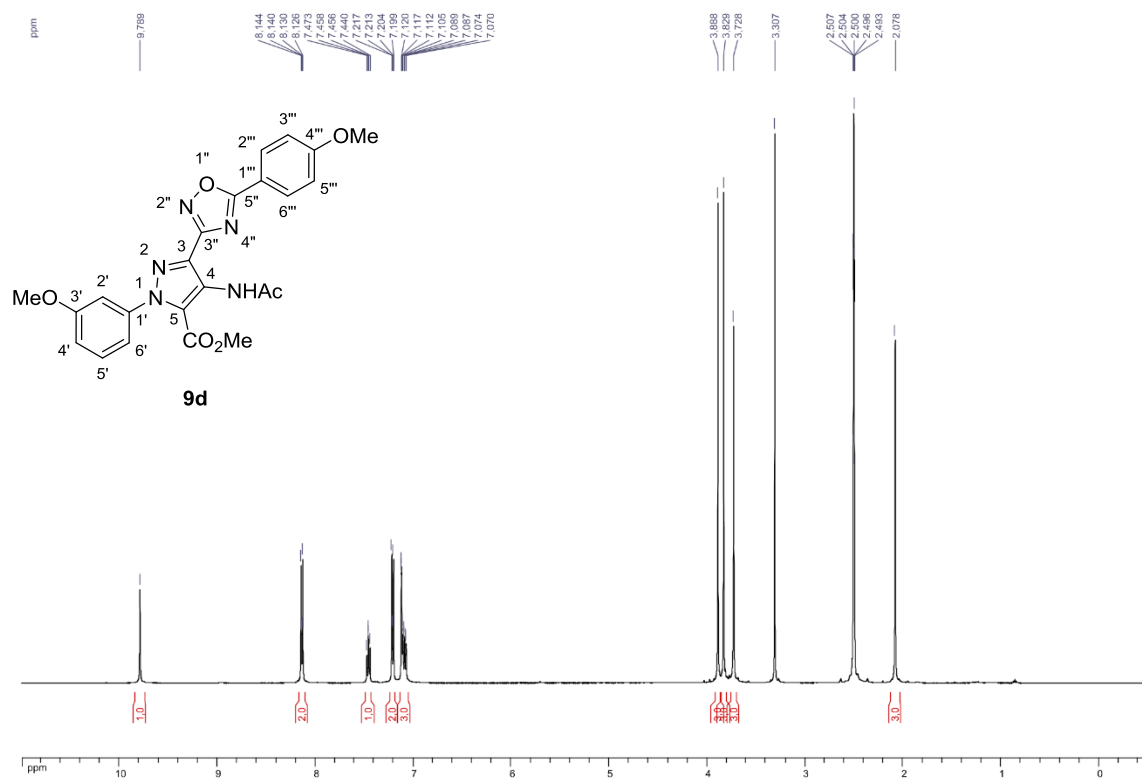
^1H NMR, 500 MHz ($\text{DMSO-}d_6$), compound **9c**



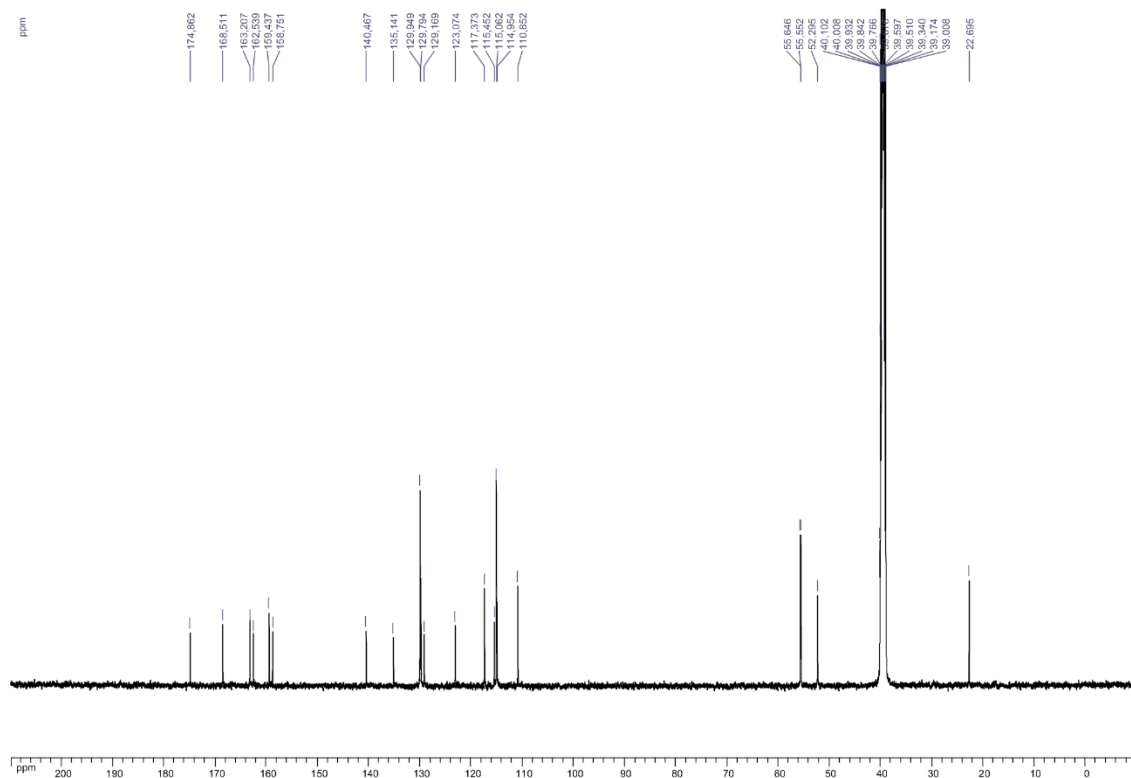
^{13}C NMR, 125 MHz ($\text{DMSO-}d_6$), compound **9c**



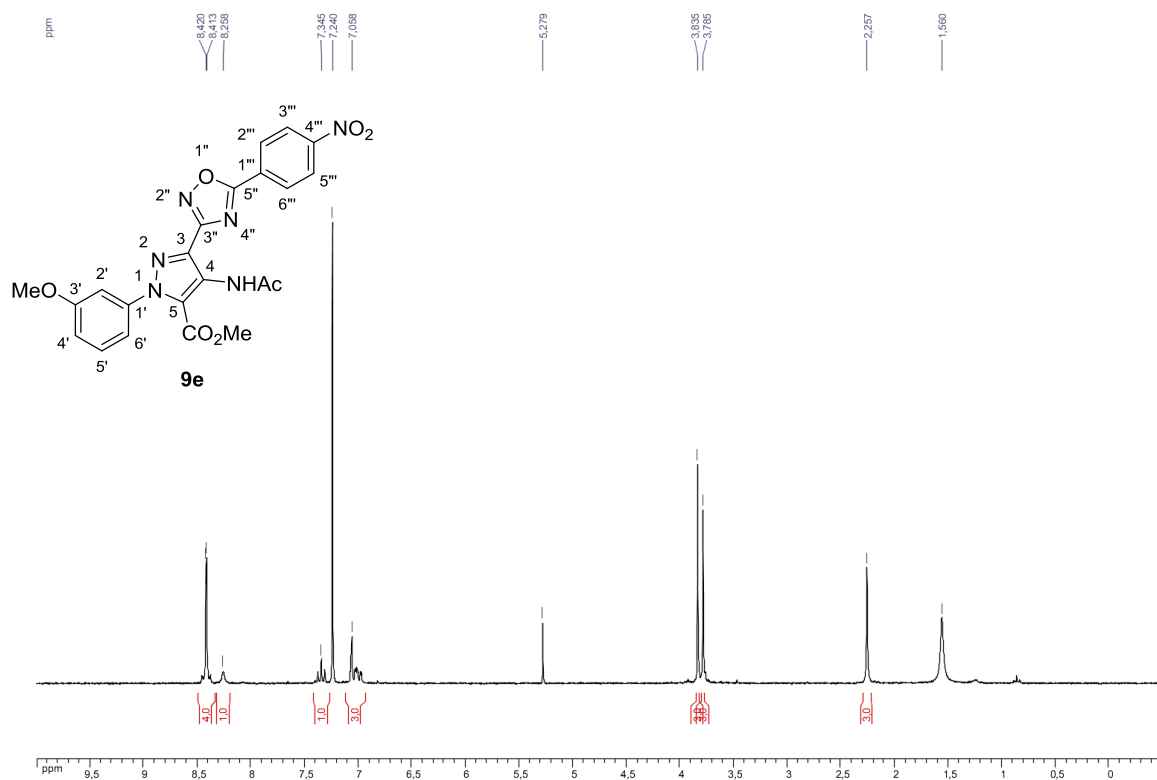
^1H NMR, 500 MHz ($\text{DMSO-}d_6$), compound **9d**



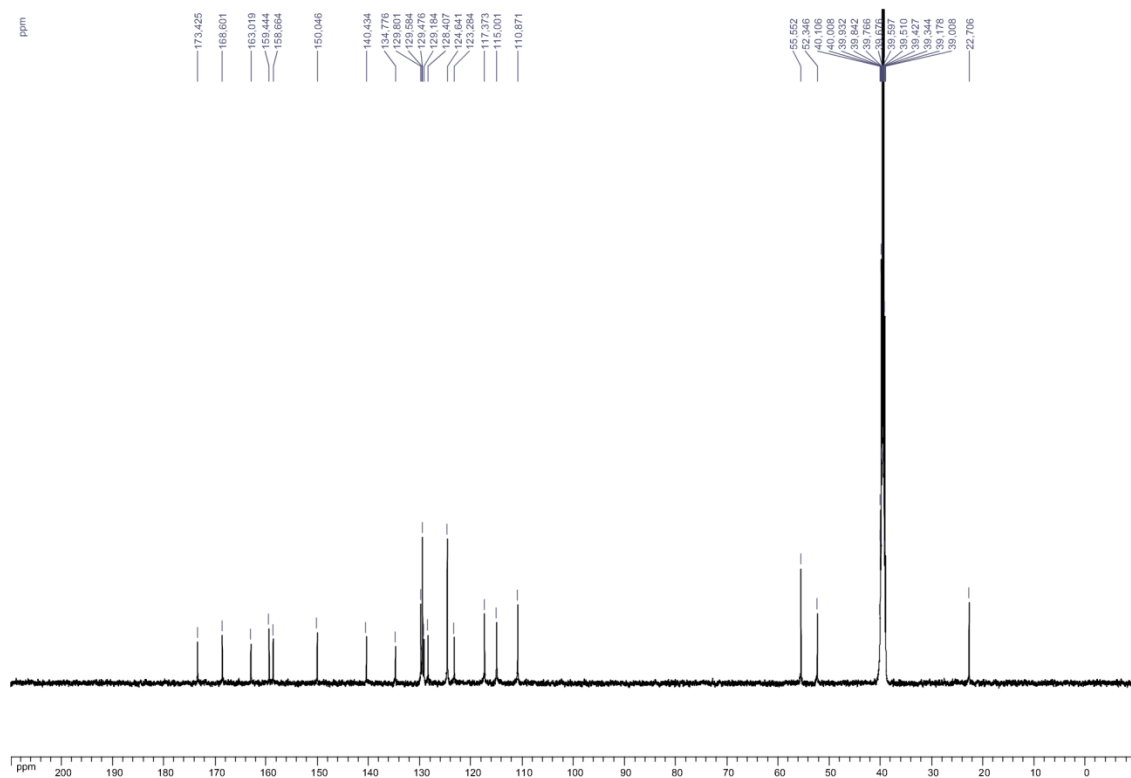
^{13}C NMR, 125 MHz ($\text{DMSO-}d_6$), compound **9d**



^1H NMR, 250 MHz (CDCl_3), compound **9e**



^{13}C NMR, 125 MHz ($\text{DMSO}-d_6$), compound **9e**



^1H - ^1H NMR, 500 MHz (acetone- d_6), compound **6e**

