# Unprecedented Intramolecular [3+2] Cycloadditions Azido-ketenimines and Azido-carbodiimides. Synthesis of Indolo[1,2-a]quinazolines and Tetrazolo[5,1-b]quinazolines

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Figure S1: ORTEP representation of the crystal structure of 4a

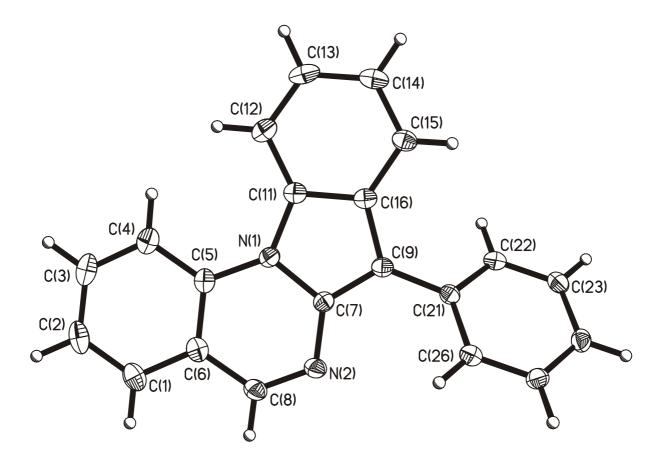
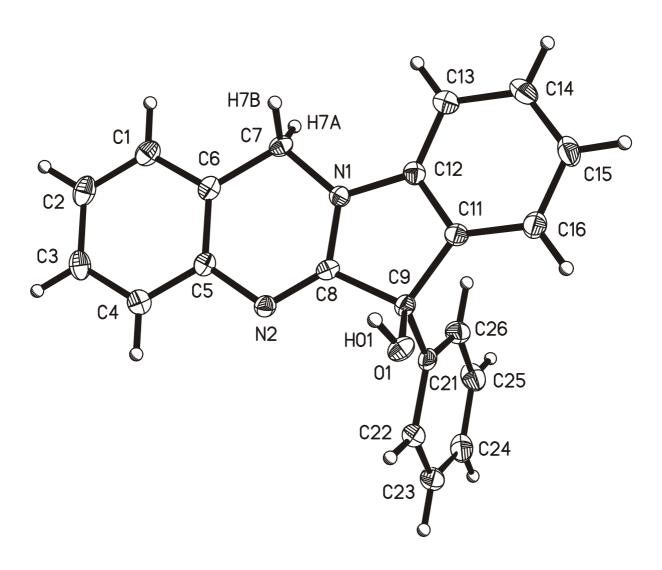
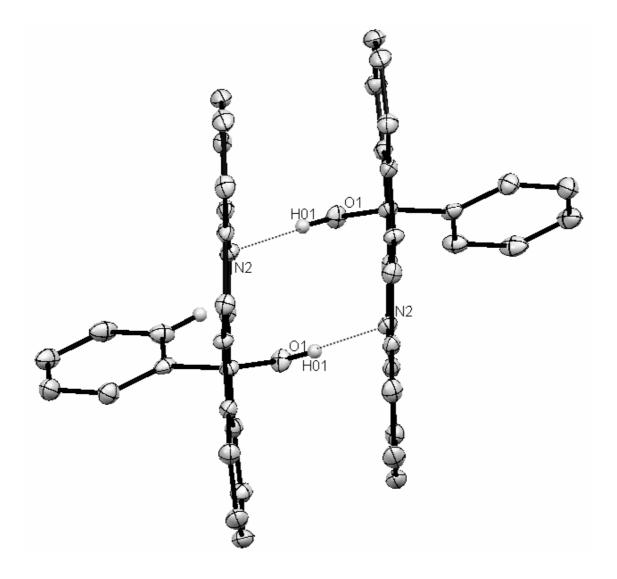


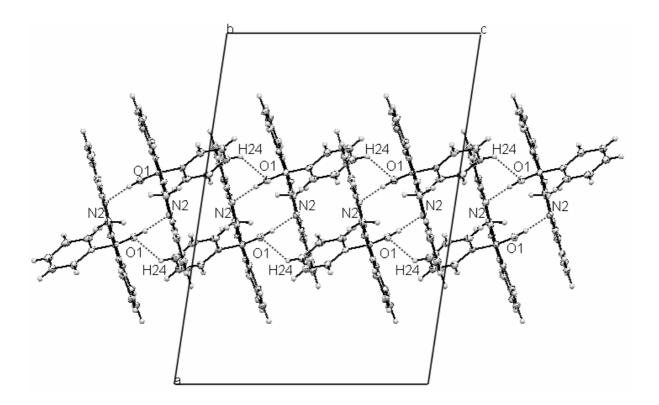
Figure S2: ORTEP representation of the crystal structure of 12



**Figure S3:** Dimer formation via O1—H1···N2 hydrogen bonds in compound **12** (some hydrogen atoms have been omitted for clarity)

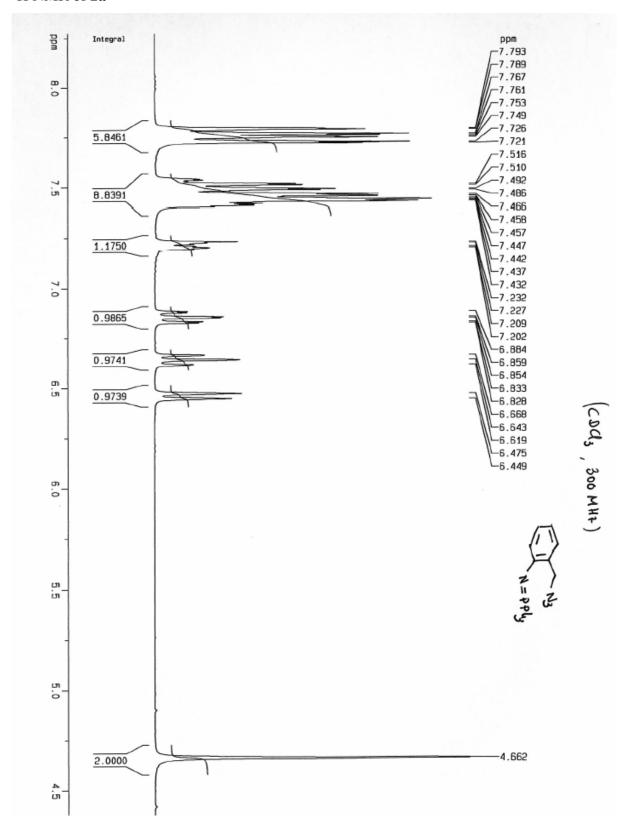


**Figure S4**. Ribbons formation via C24—H24···O1 hydrogen bonds in compound **12** (some hydrogen atoms have been omitted for clarity)

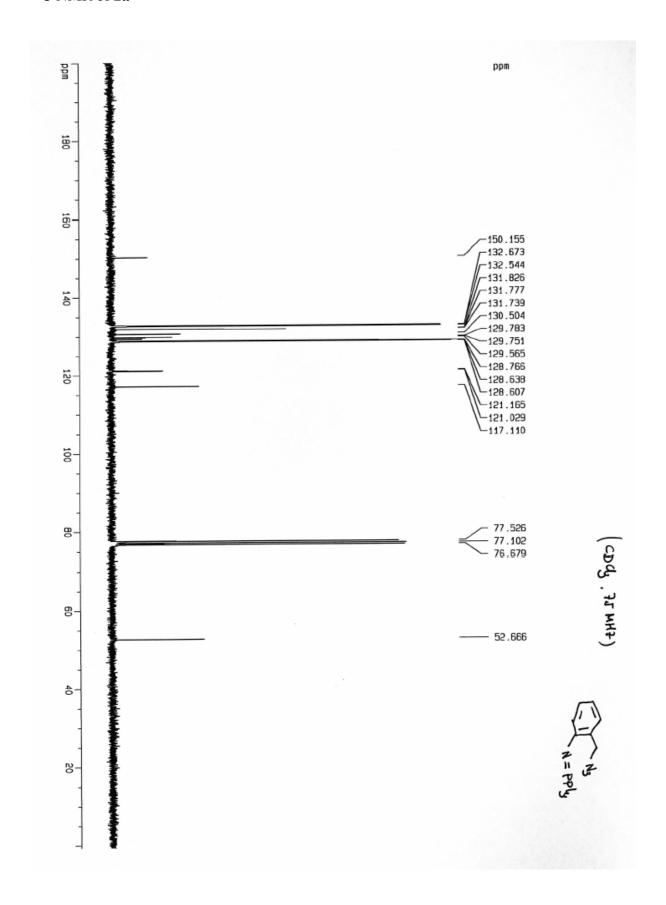


Copy of <sup>1</sup>H and <sup>13</sup>C NMR Spectra of Compounds 2, 4, 5, 12, 14 and 15. Copy of <sup>31</sup>P NMR Spectra of Compounds 2.

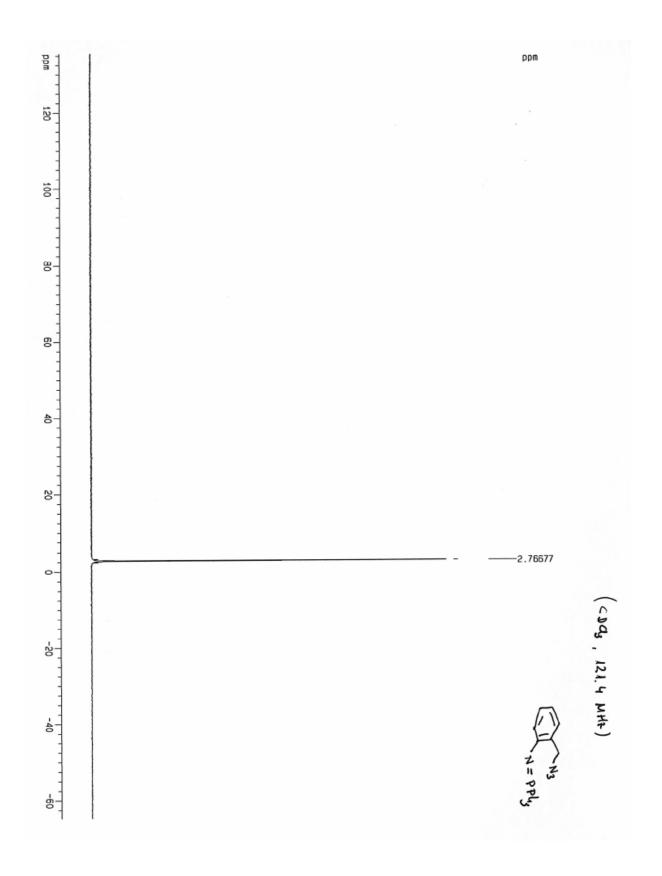
<sup>1</sup>H NMR of **2a** 



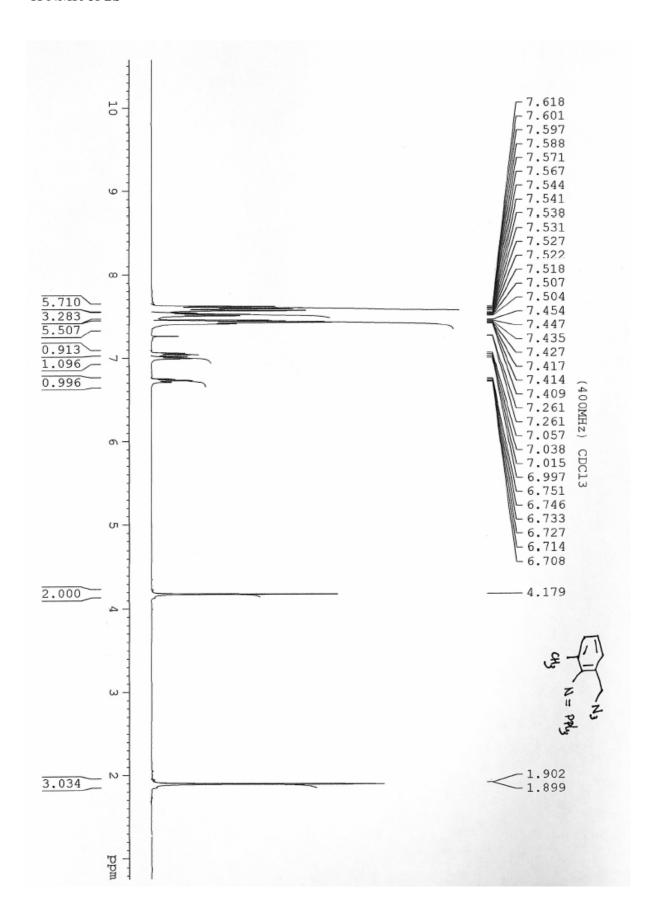
<sup>13</sup>C NMR of **2a** 



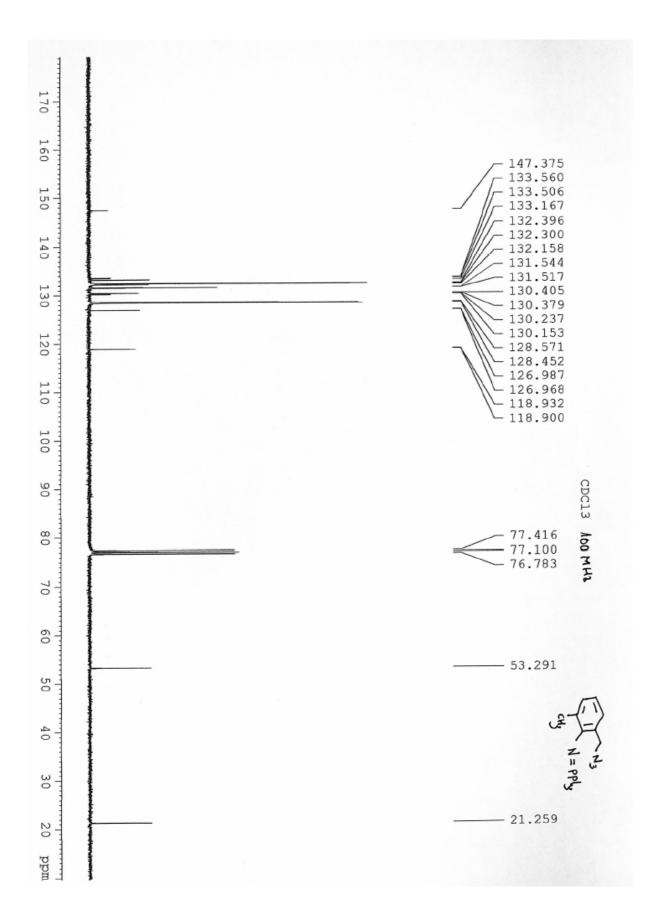
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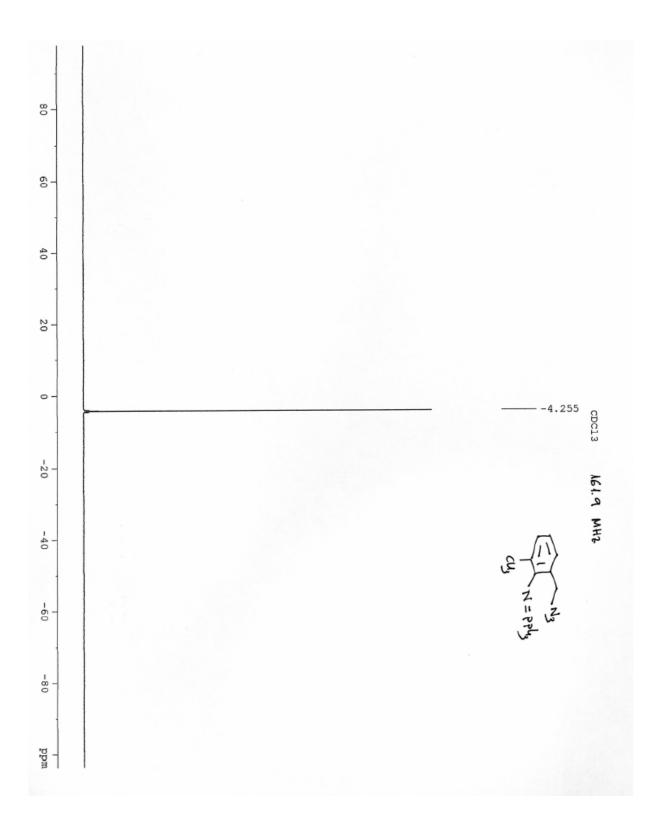
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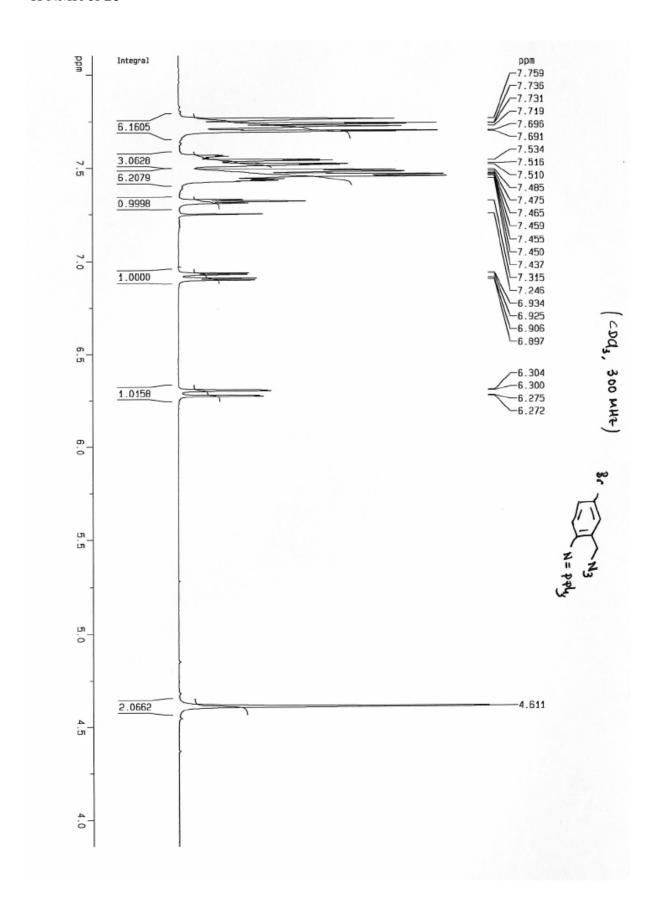
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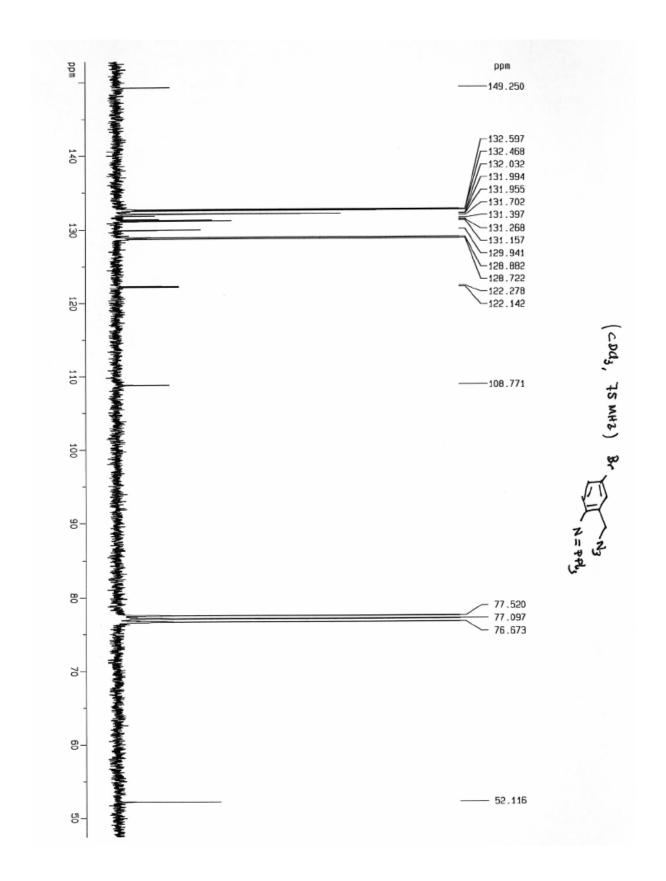
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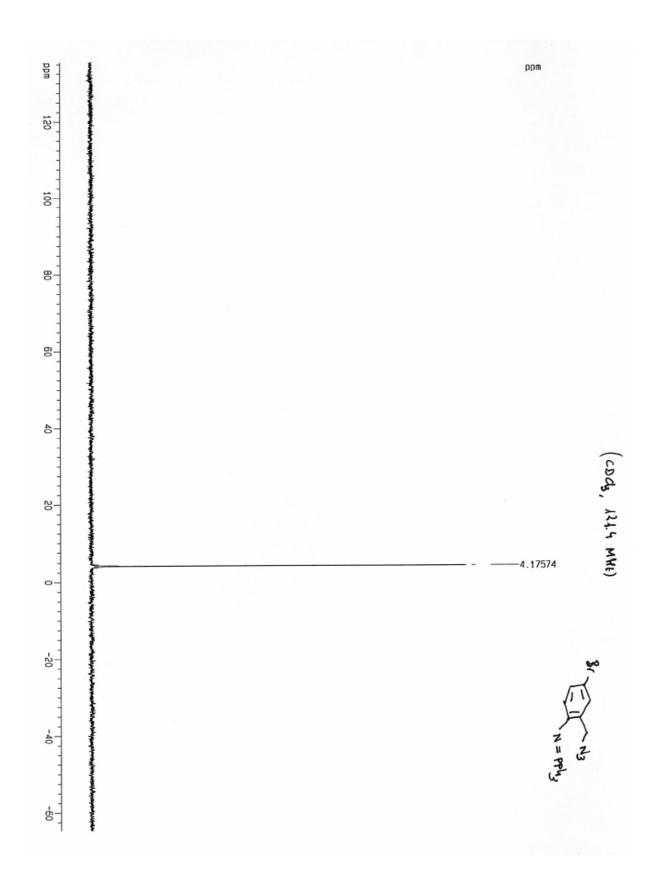
<sup>1</sup>H NMR of **2c** 



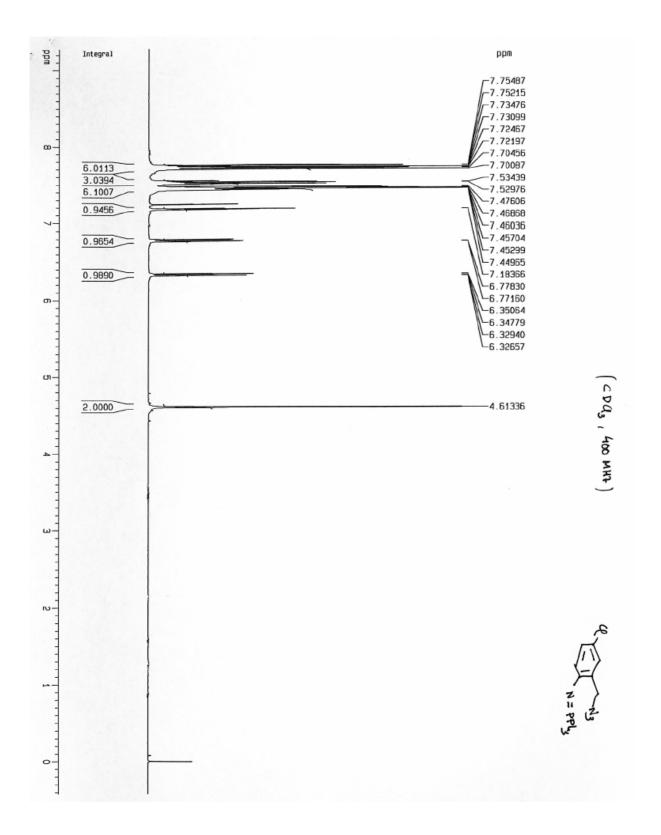
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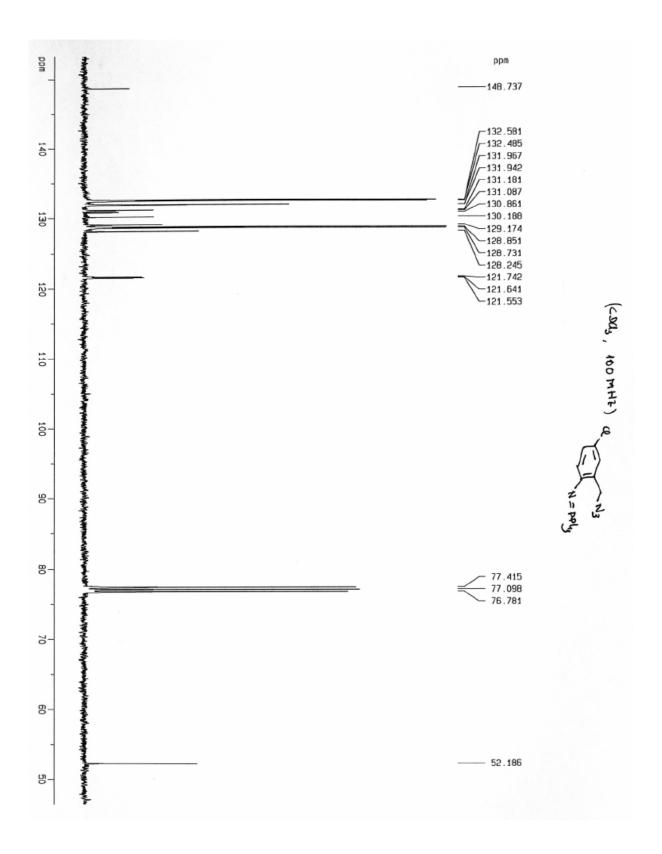
<sup>31</sup>P NMR of **2c** 



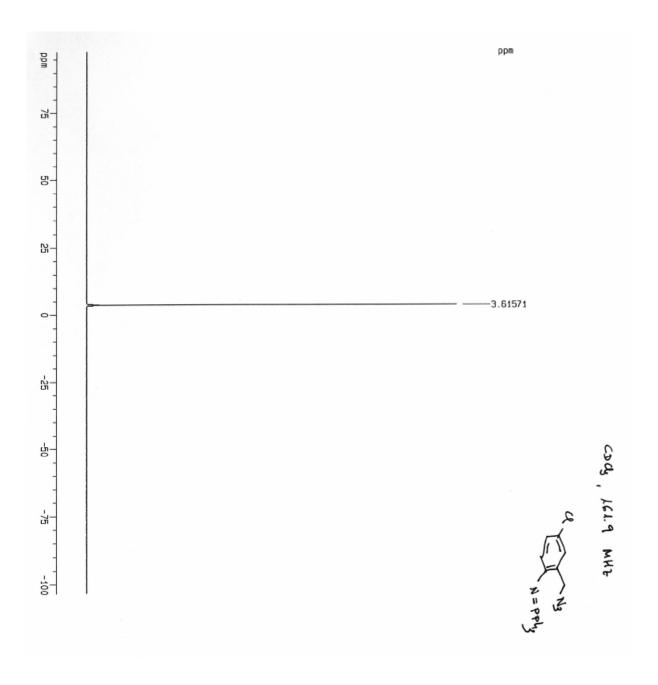
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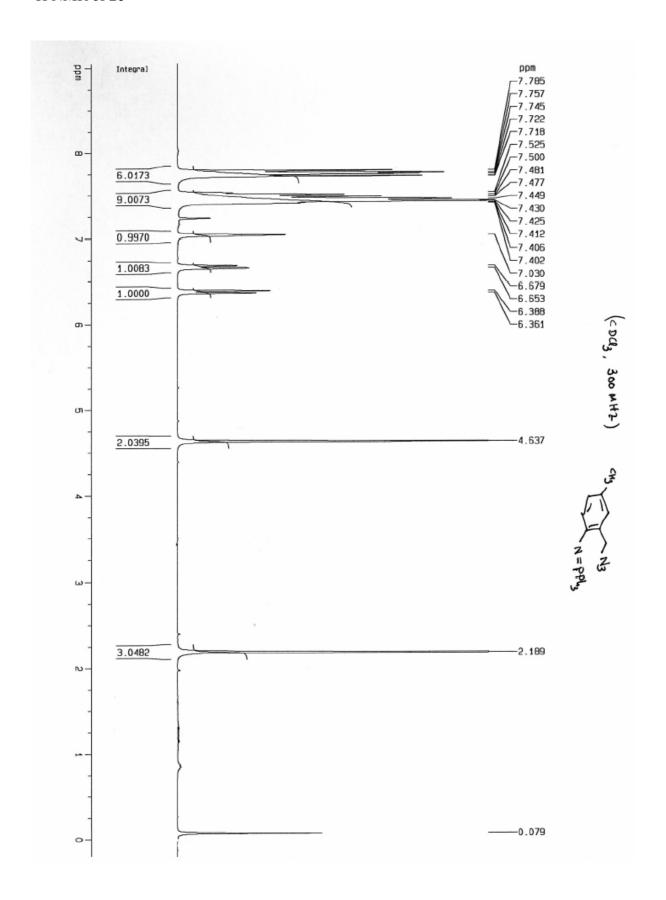
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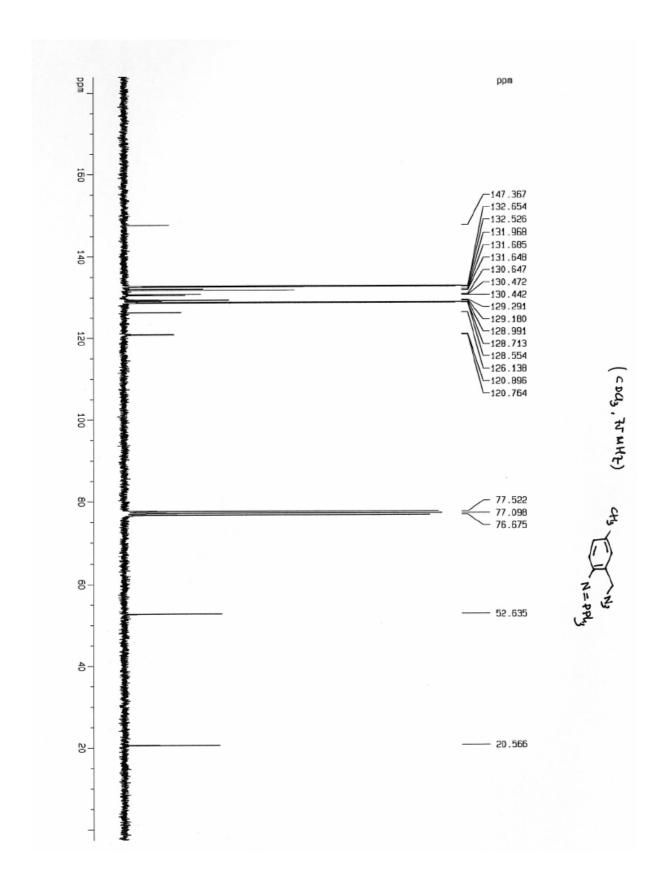
### <sup>31</sup>P NMR of **2d**



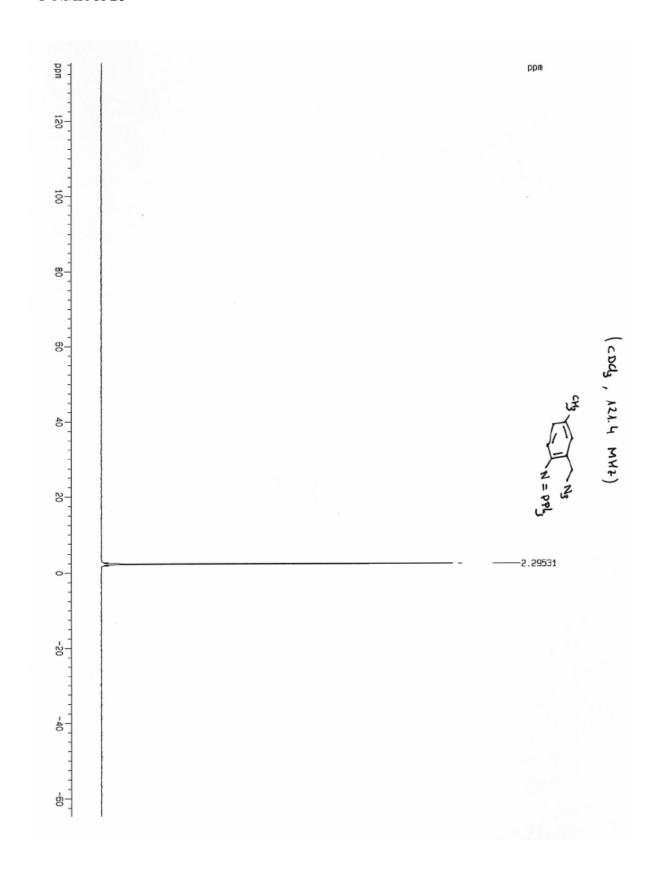
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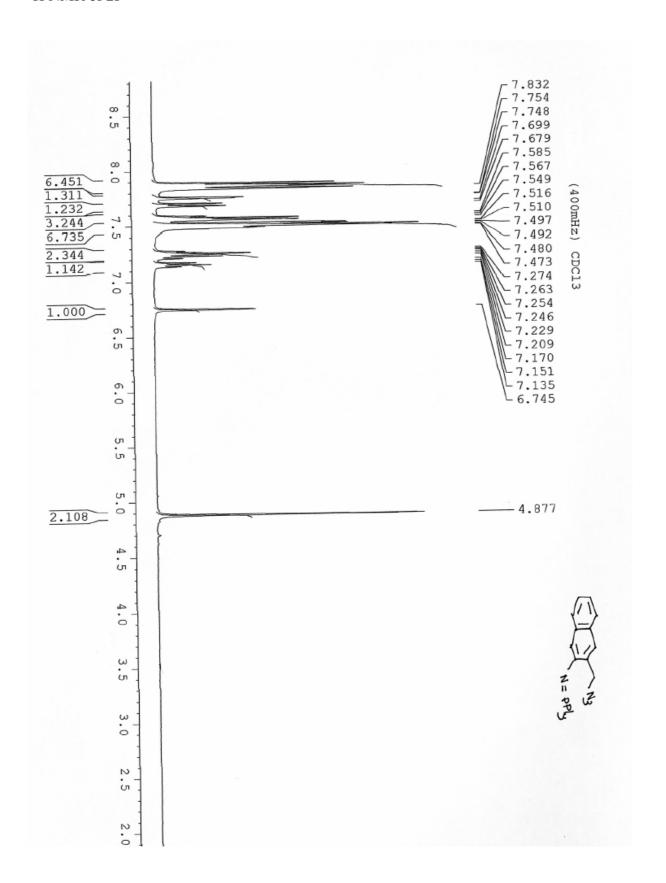
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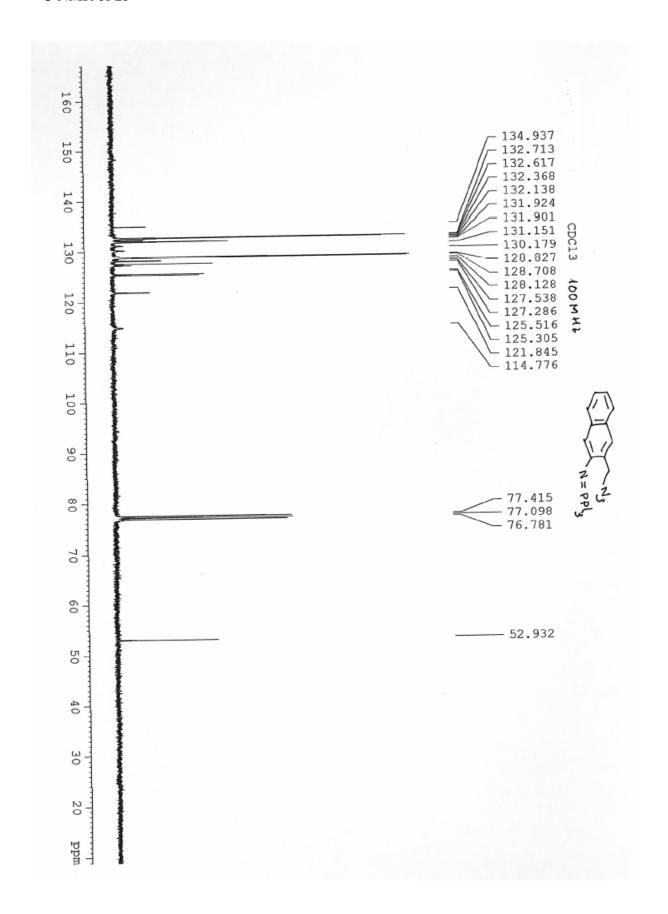
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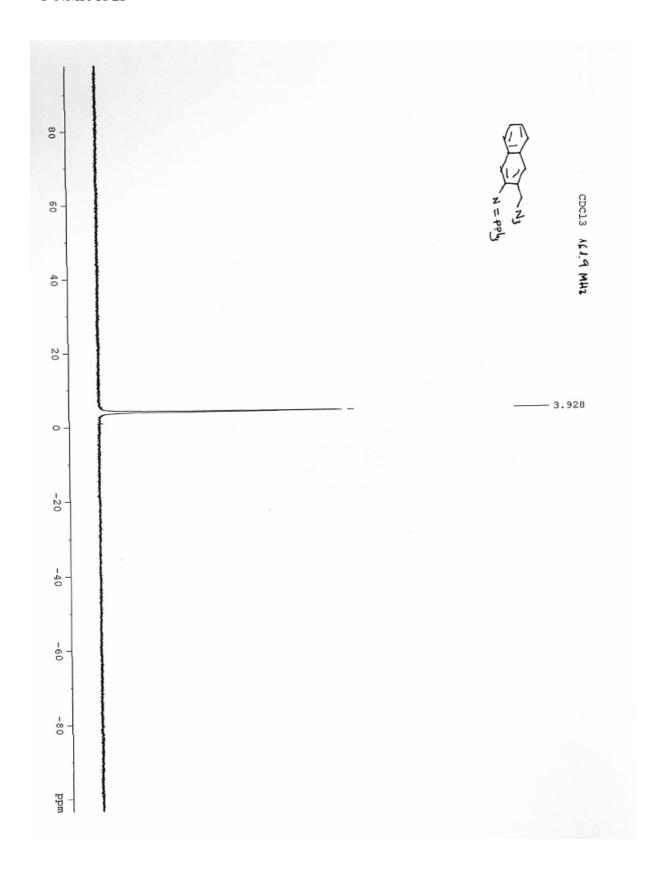
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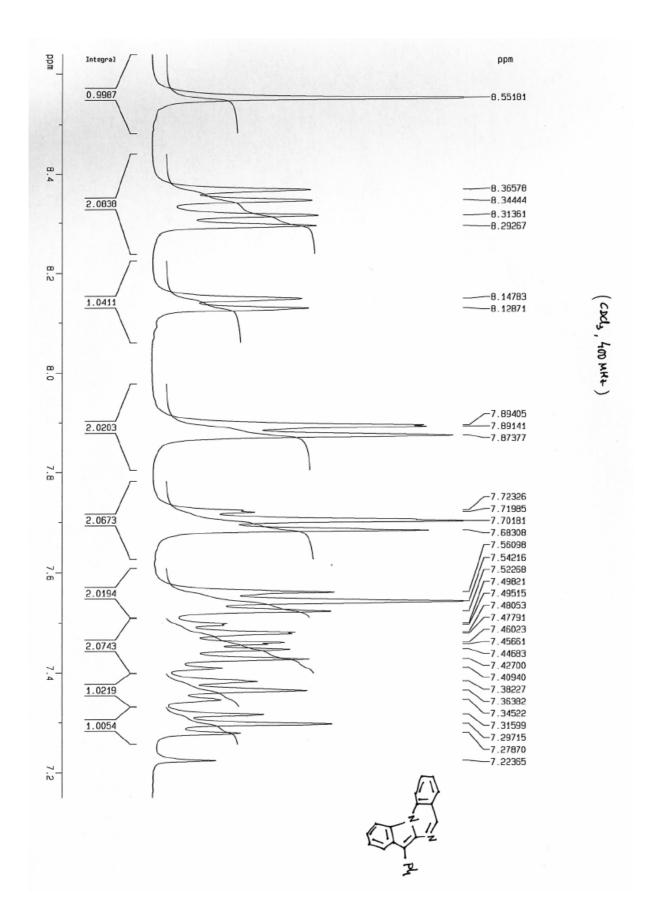
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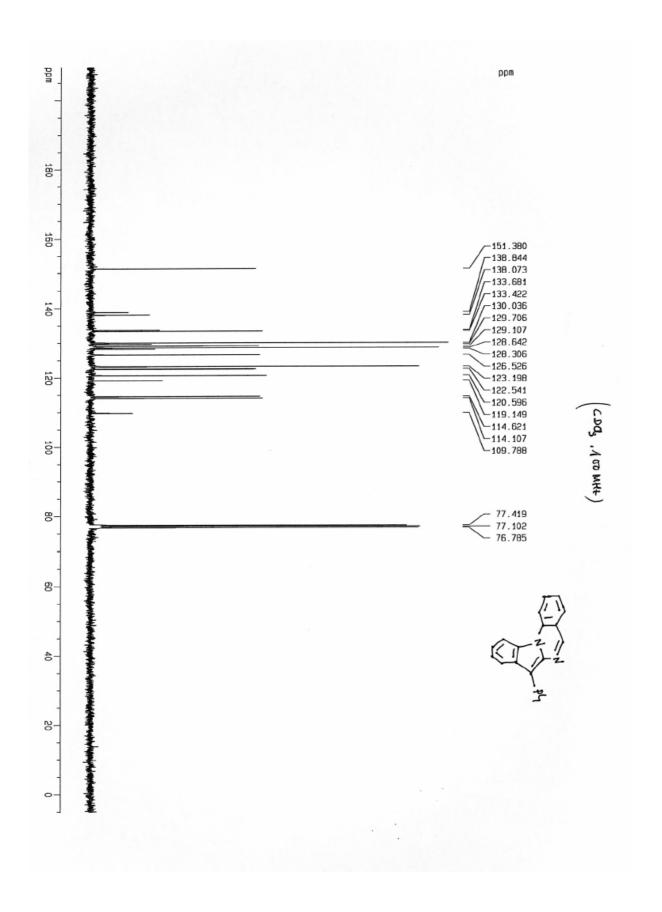
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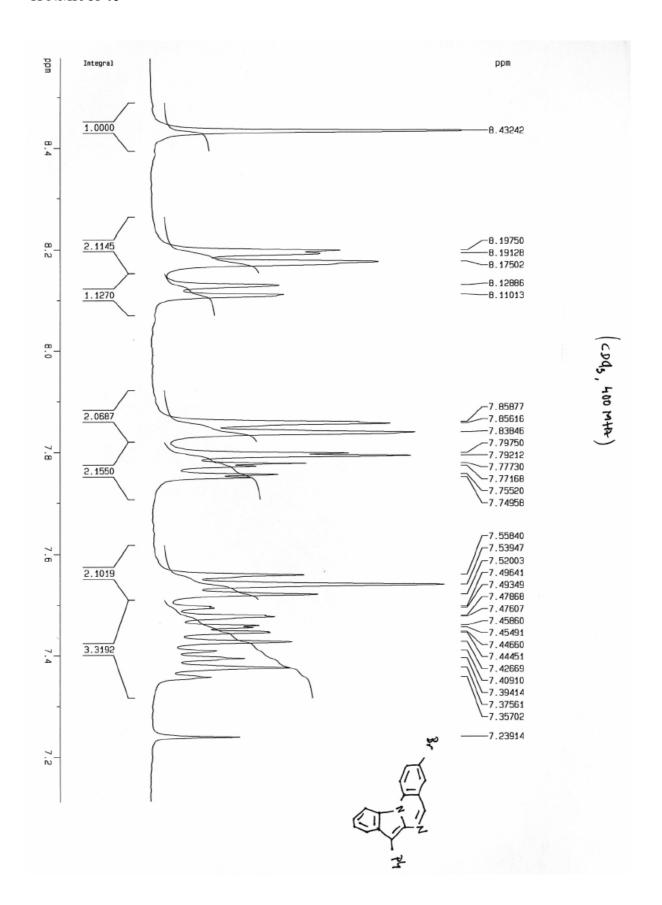
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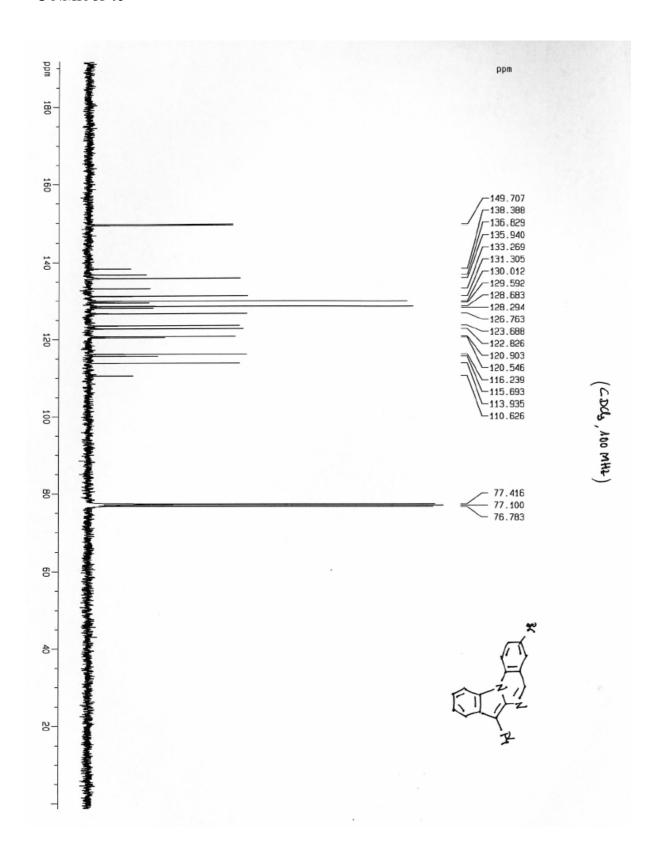
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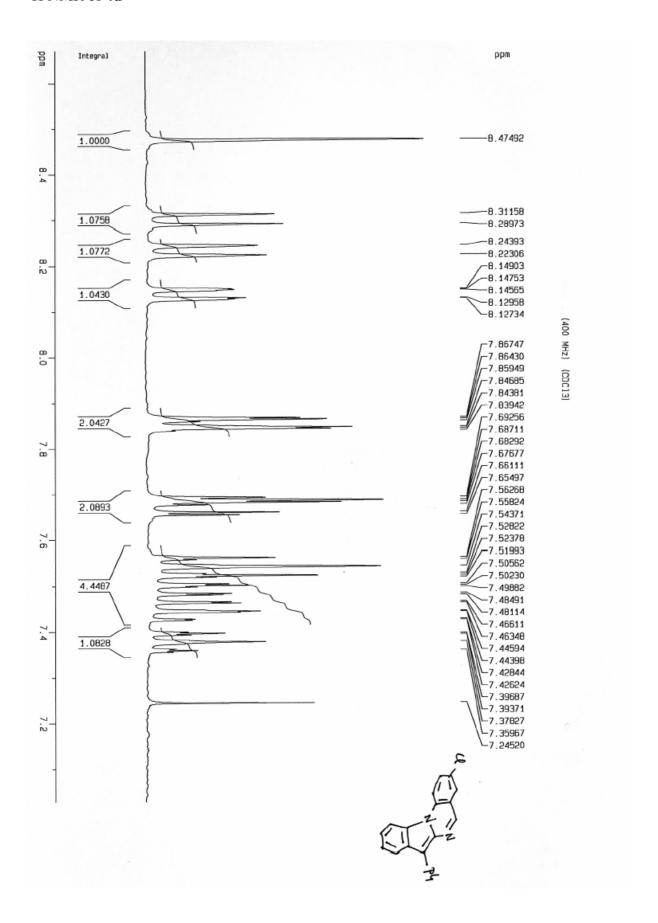
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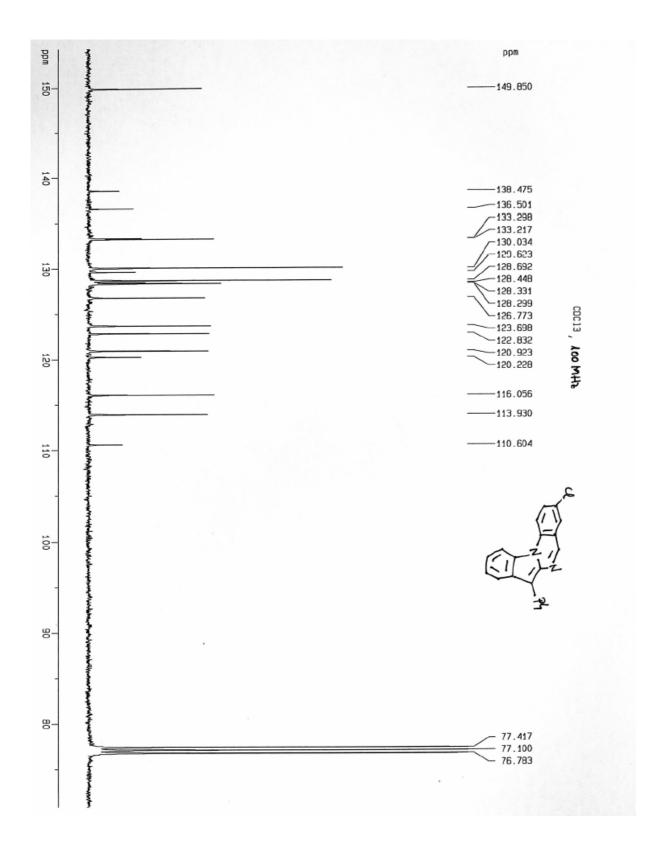
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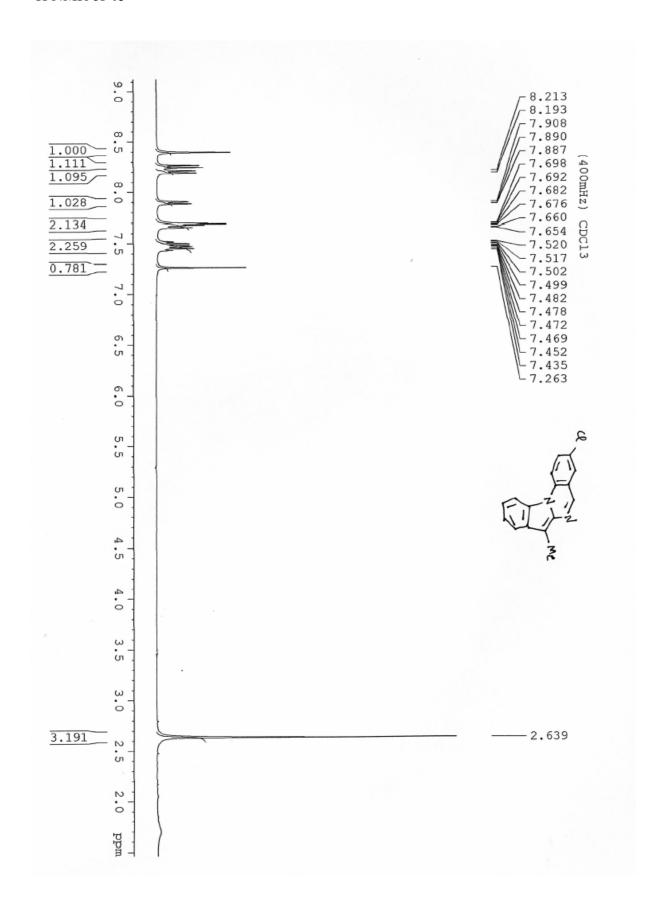
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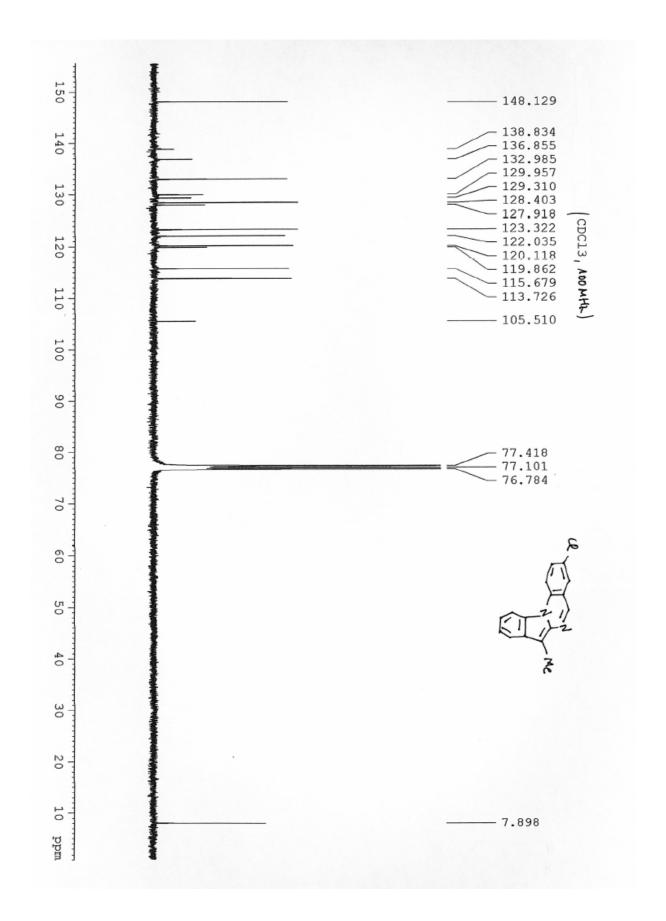
#### <sup>13</sup>C NMR of **4d**



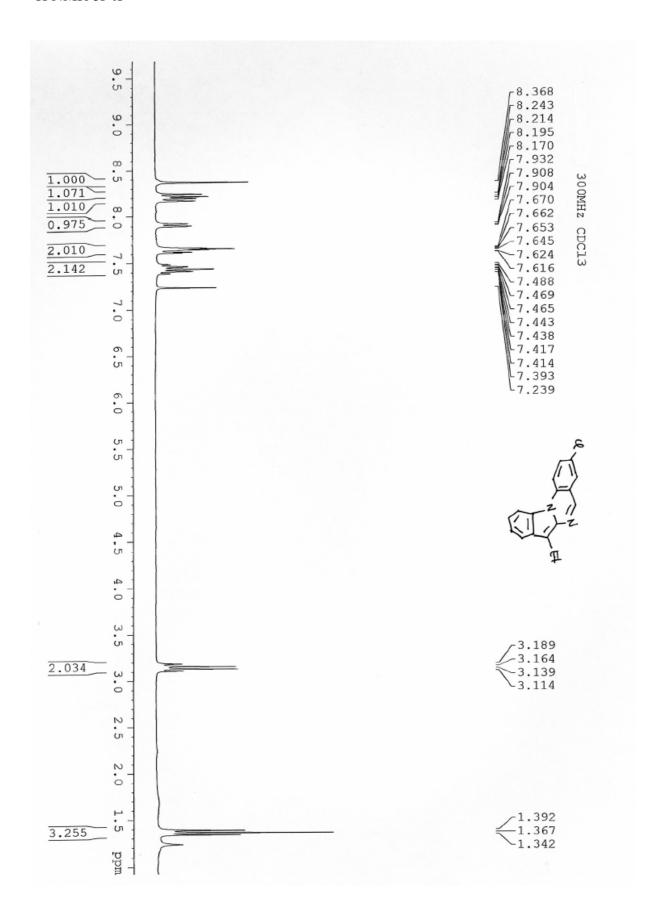
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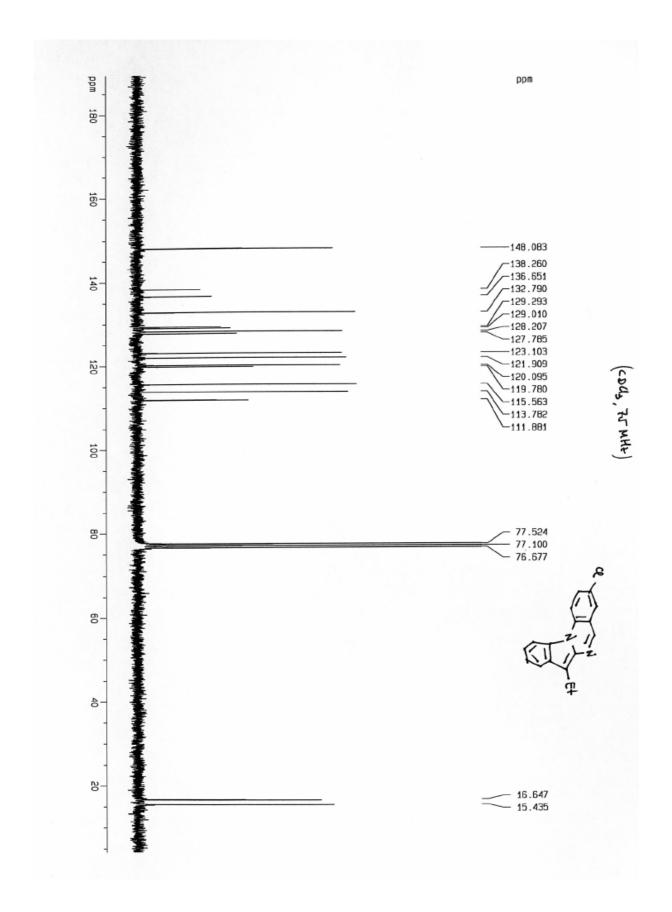
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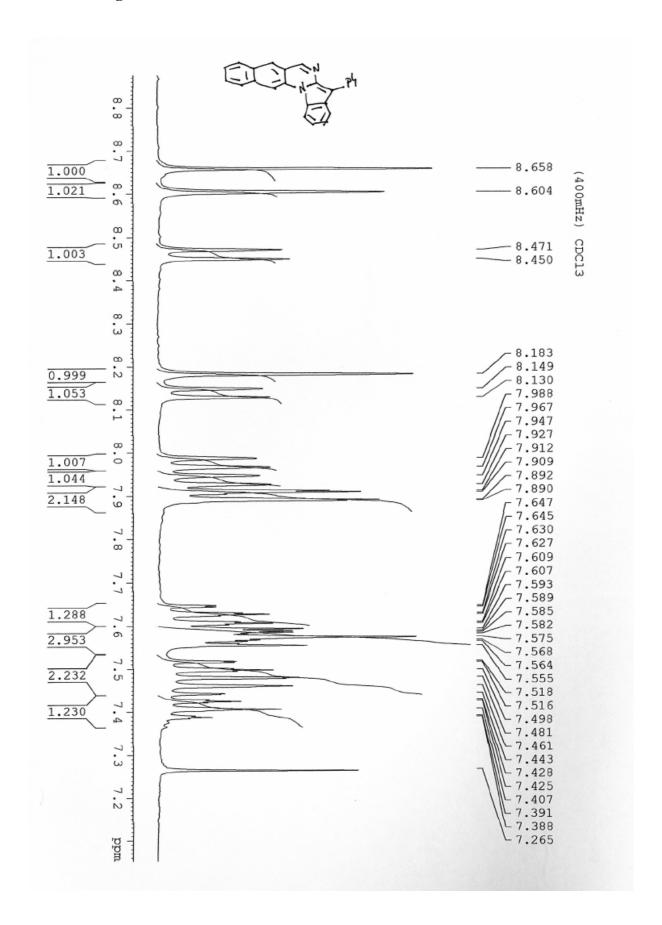
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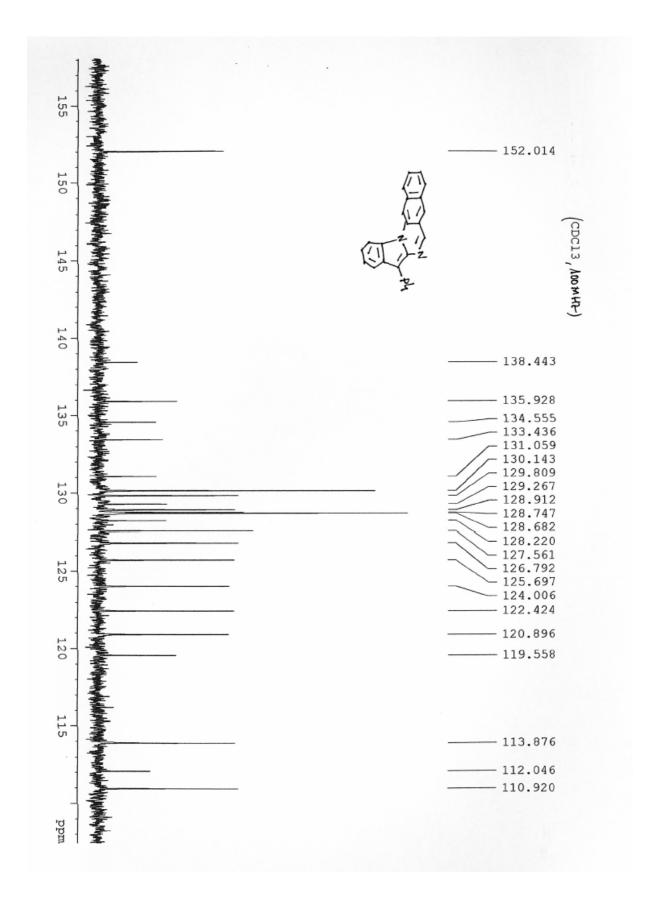
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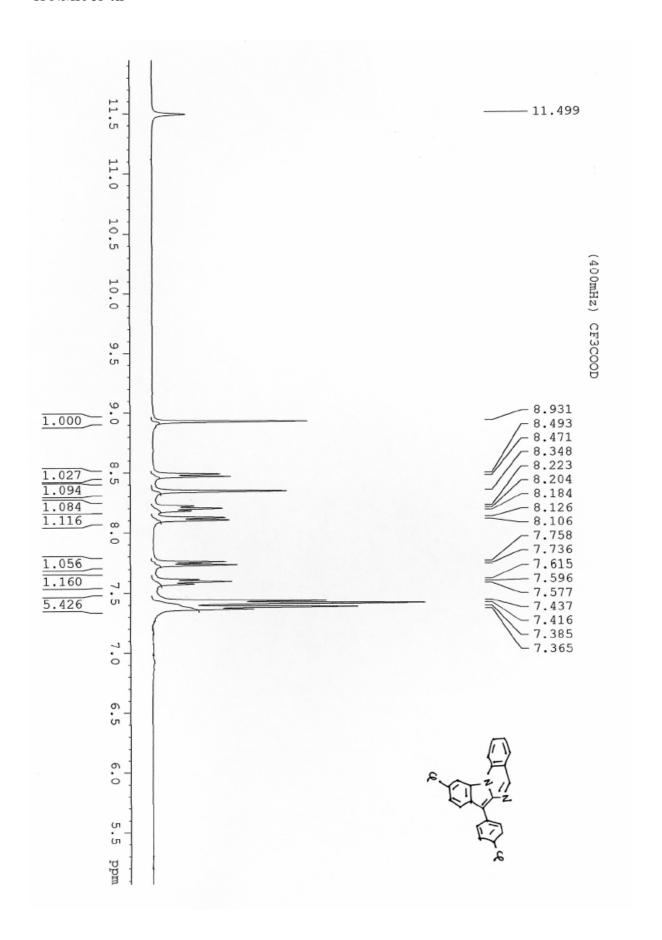
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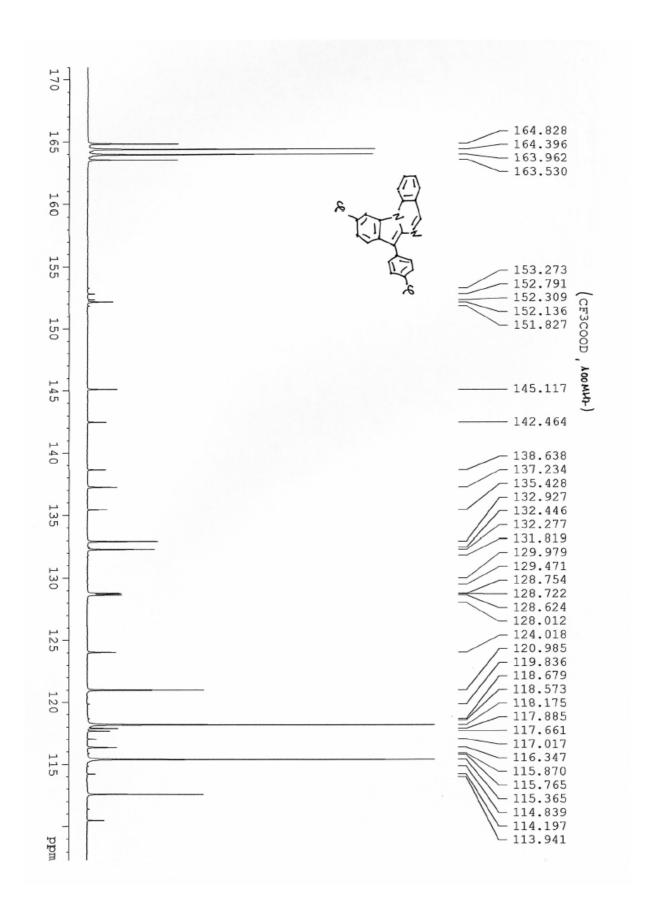
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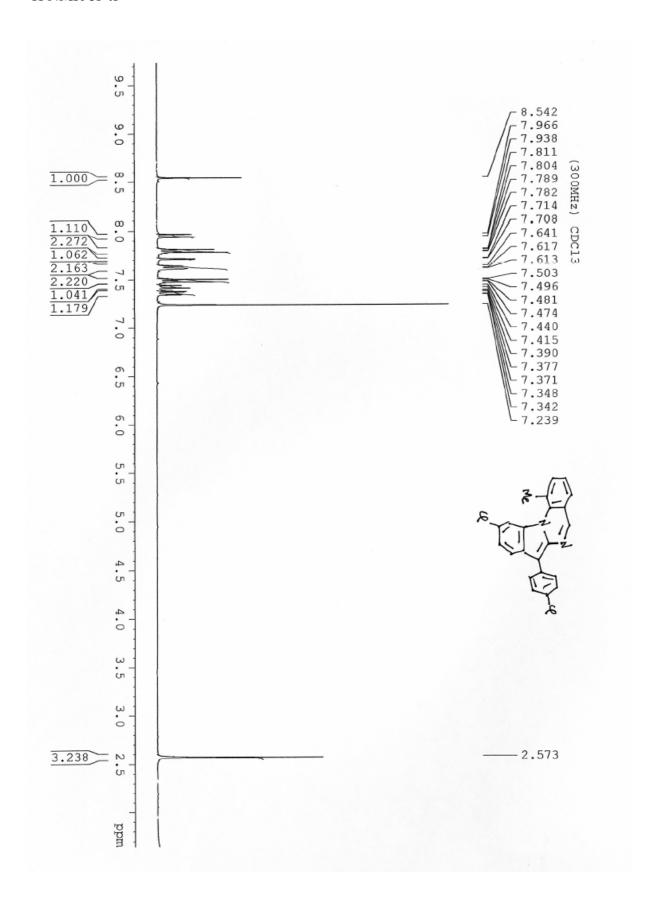
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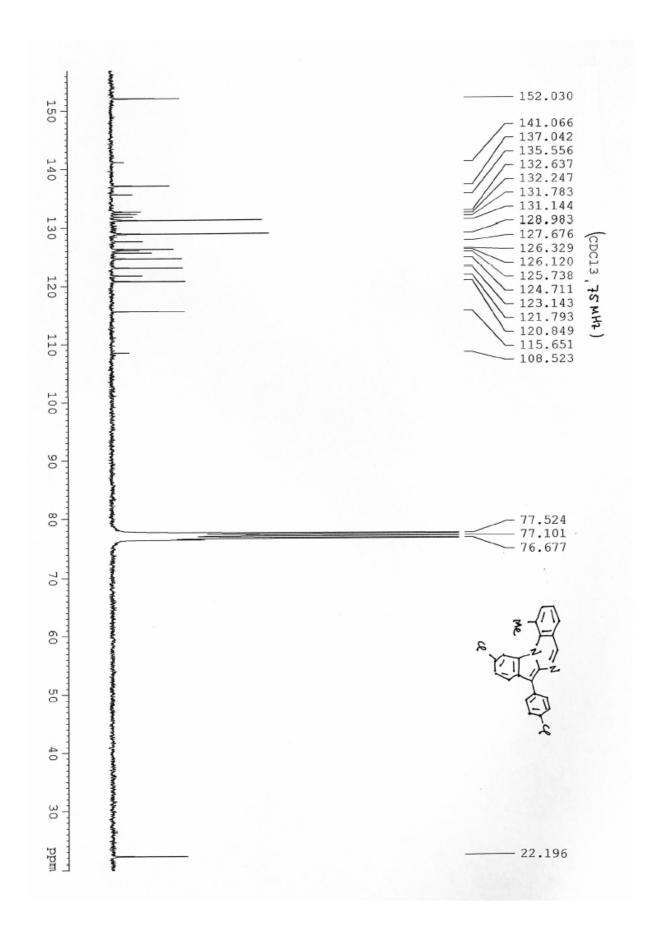
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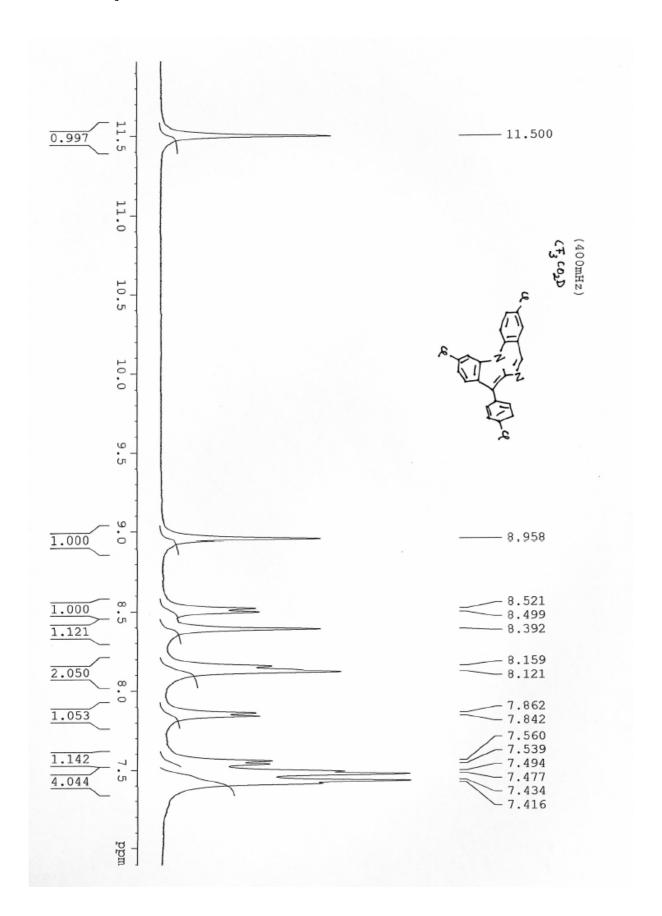
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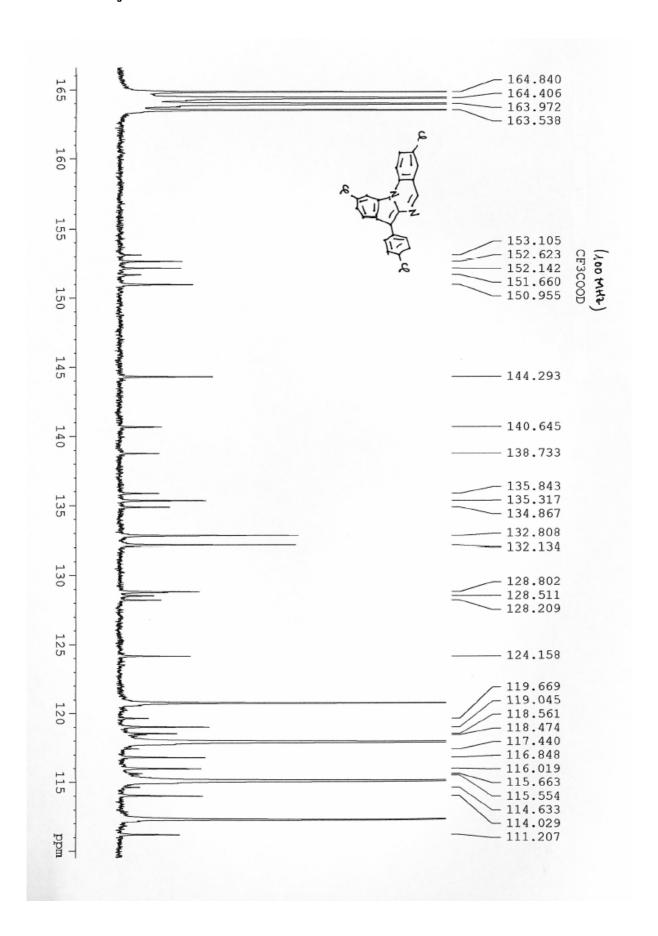
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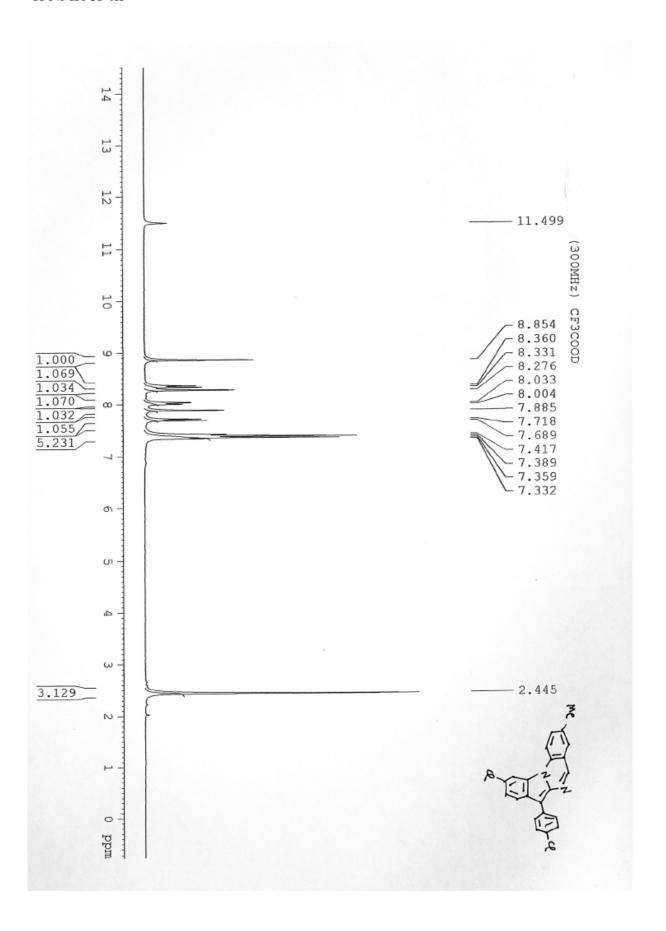
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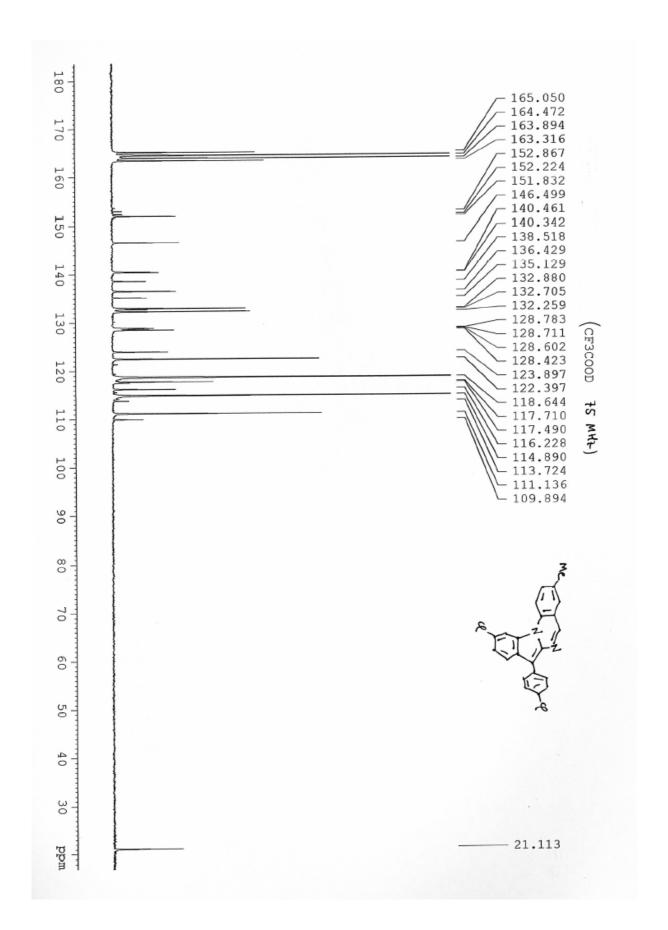
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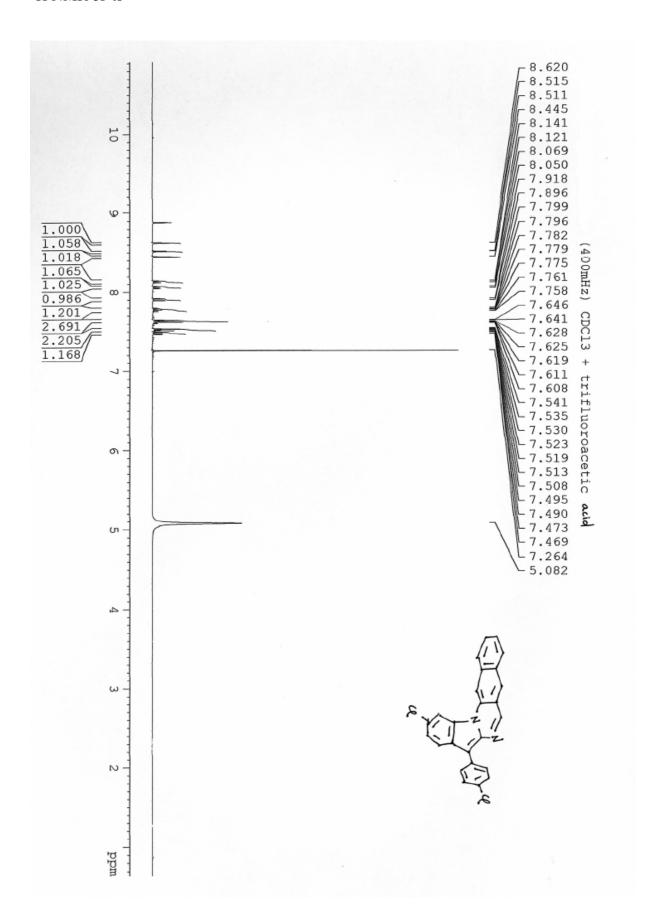
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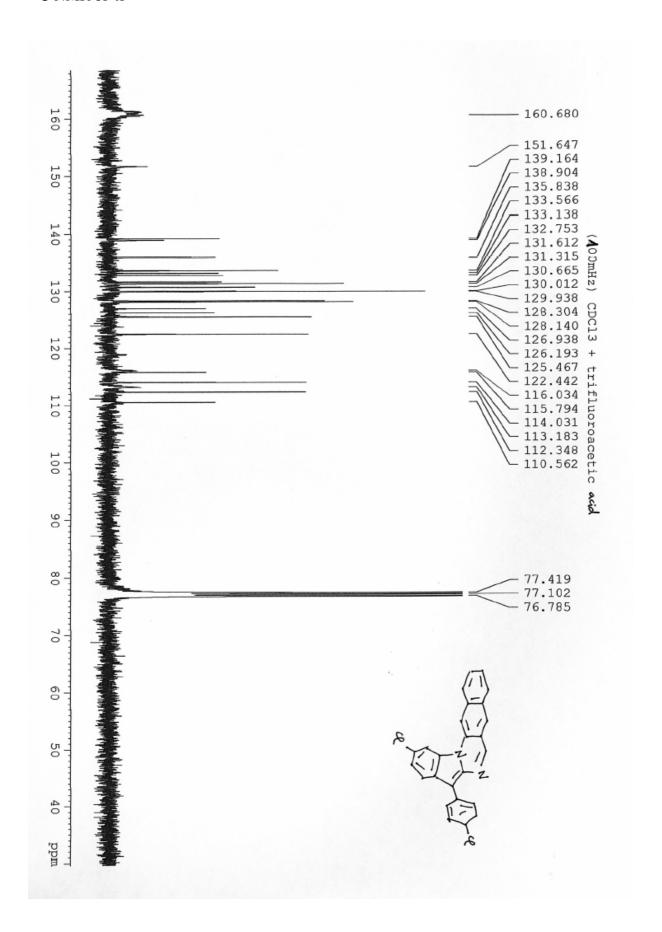
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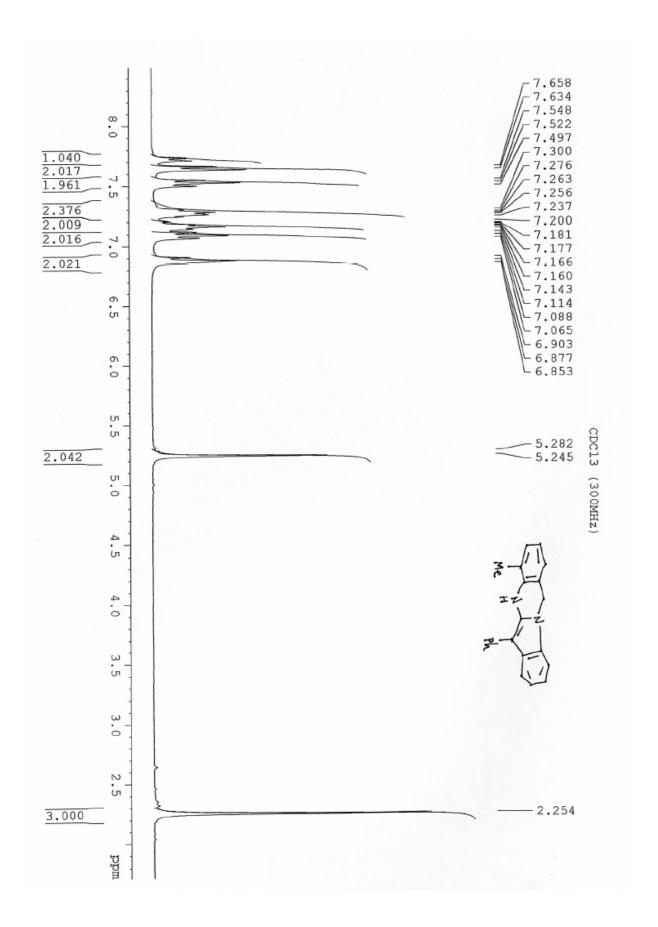
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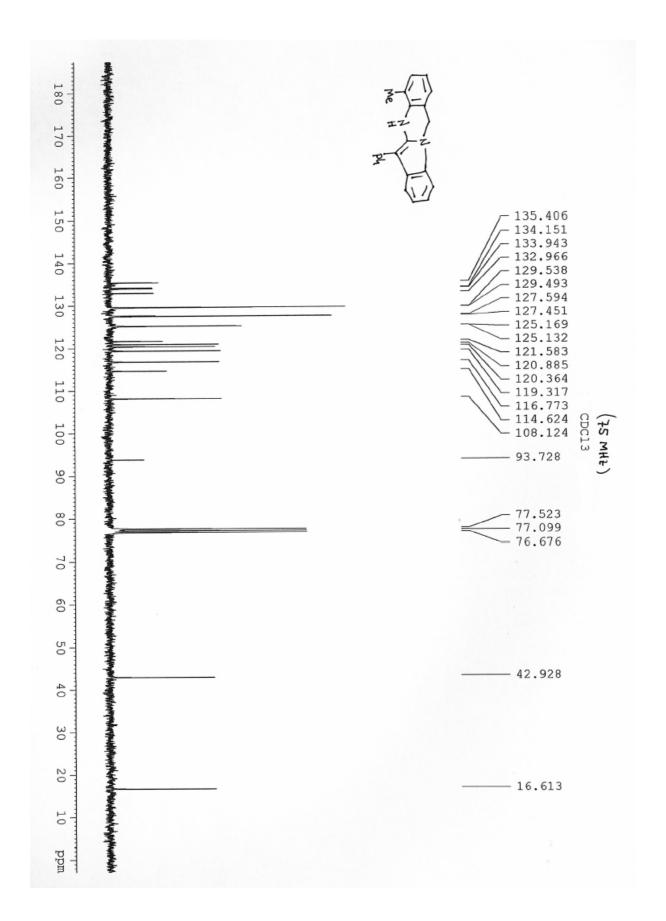
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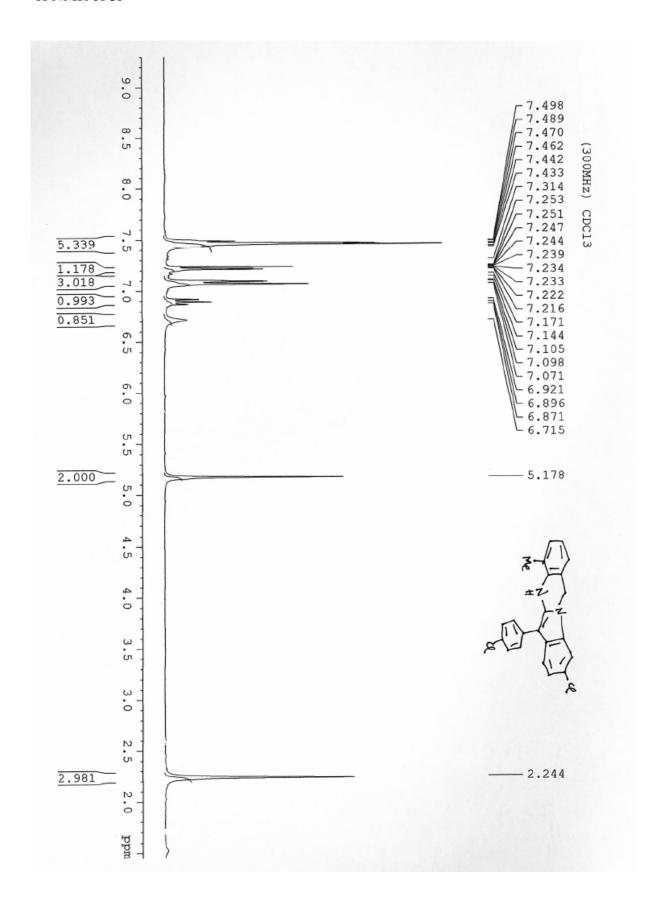
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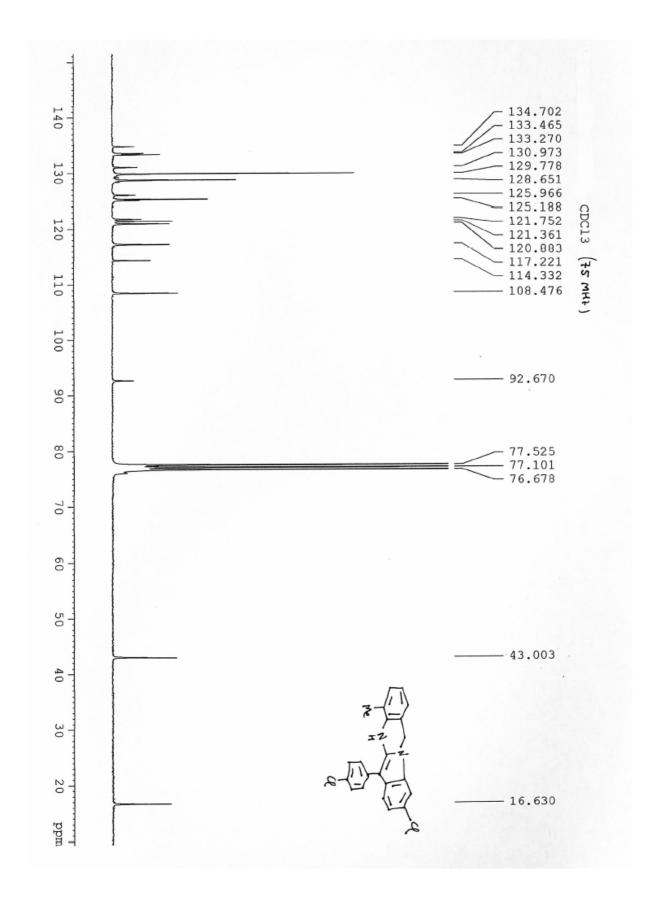
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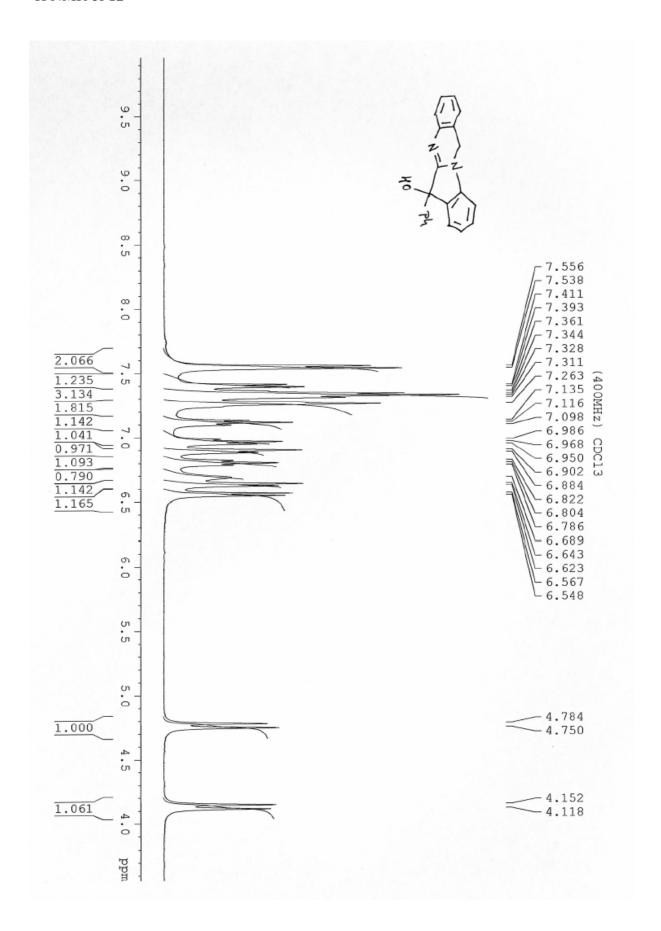
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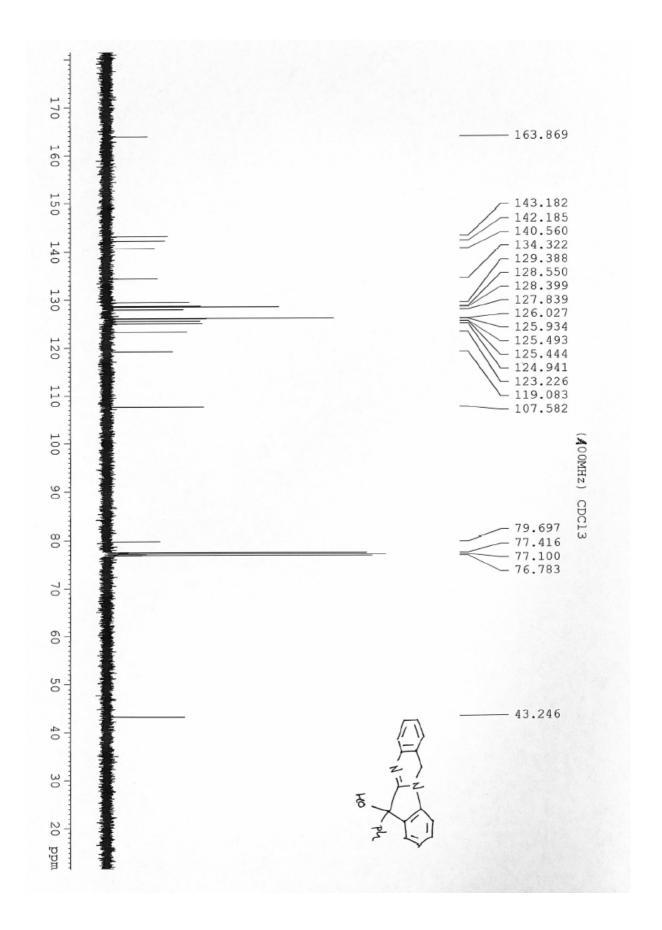
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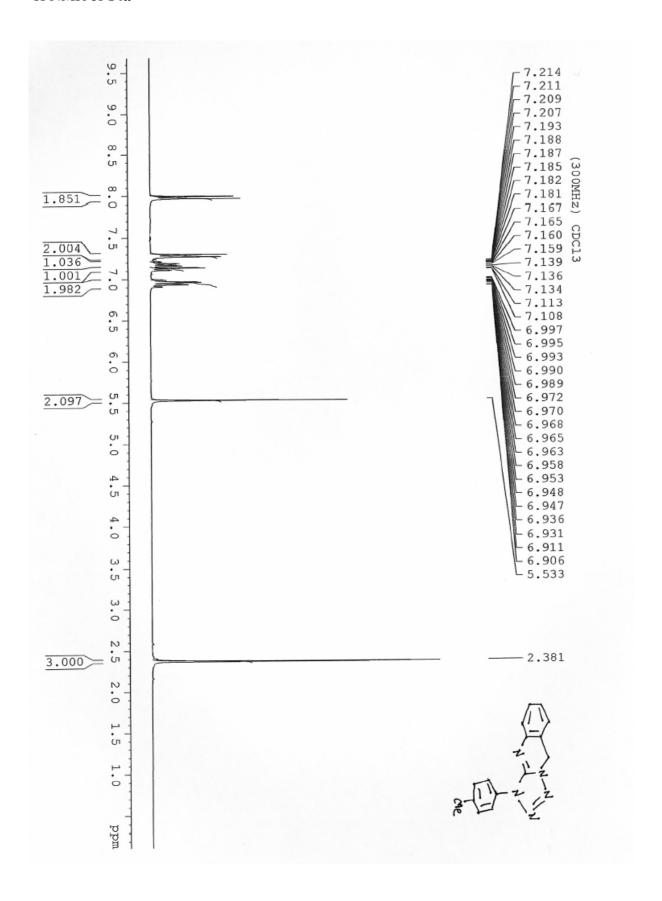
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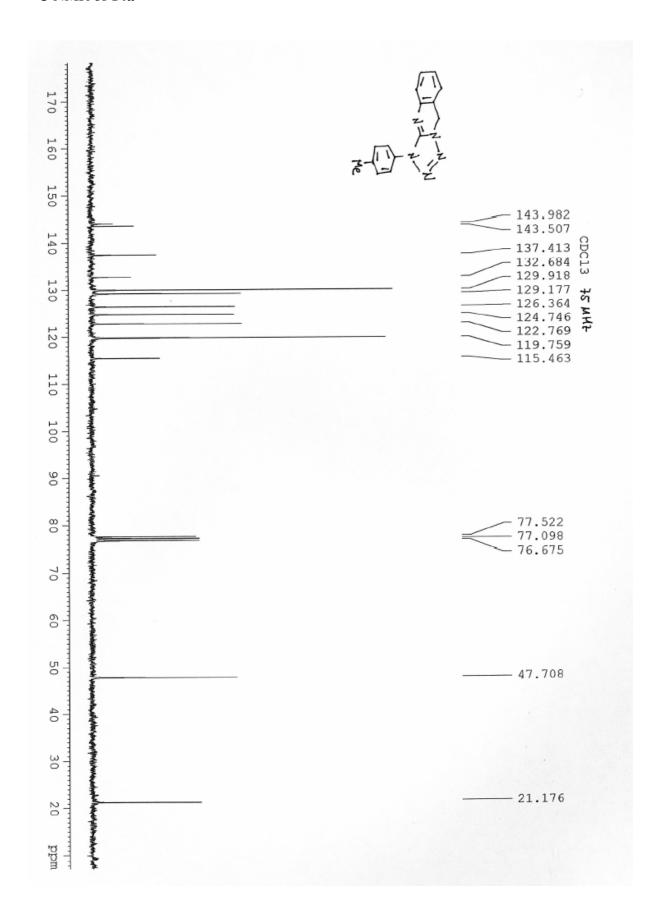
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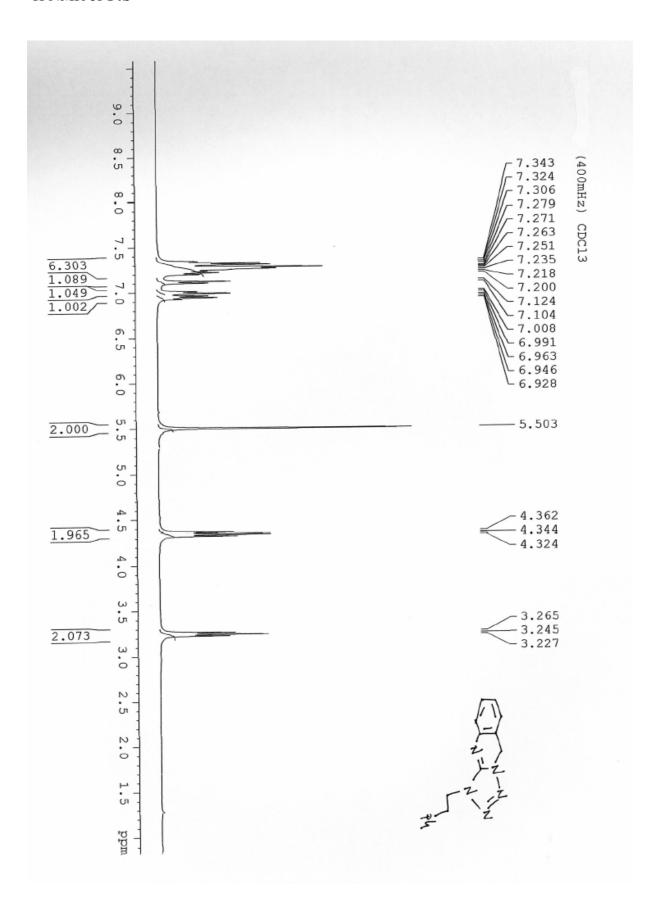
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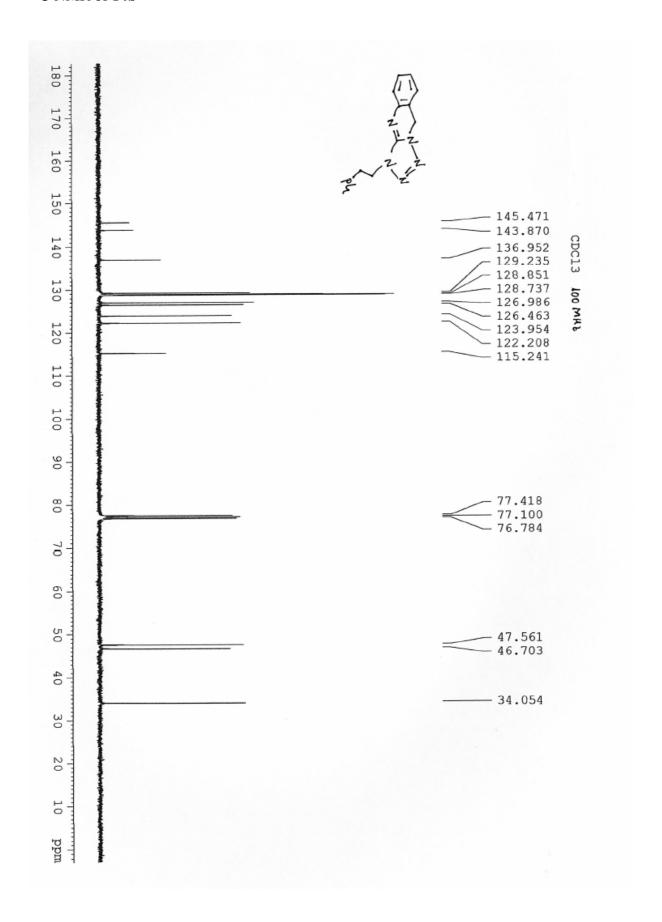
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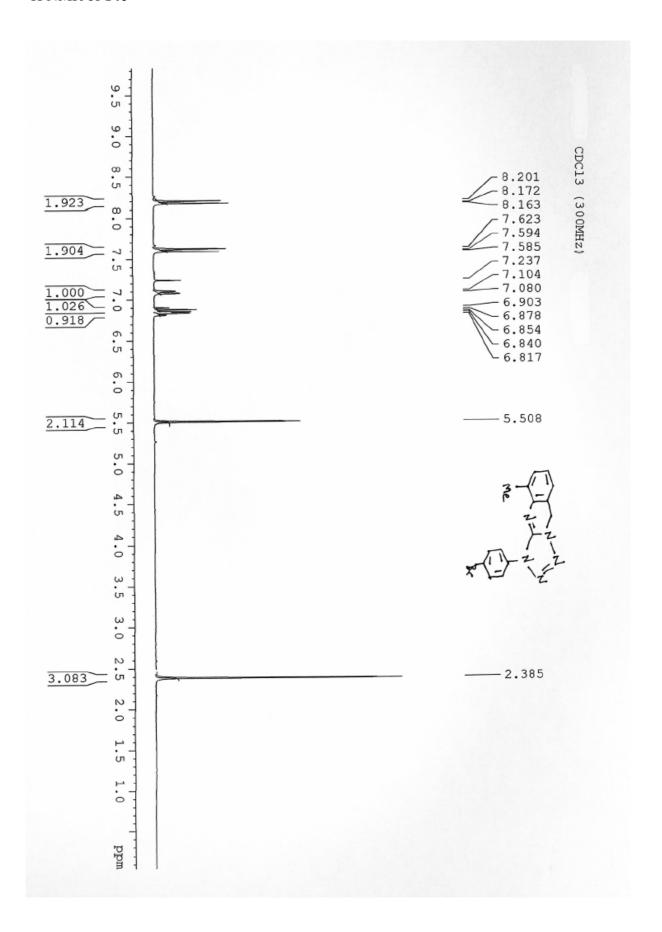
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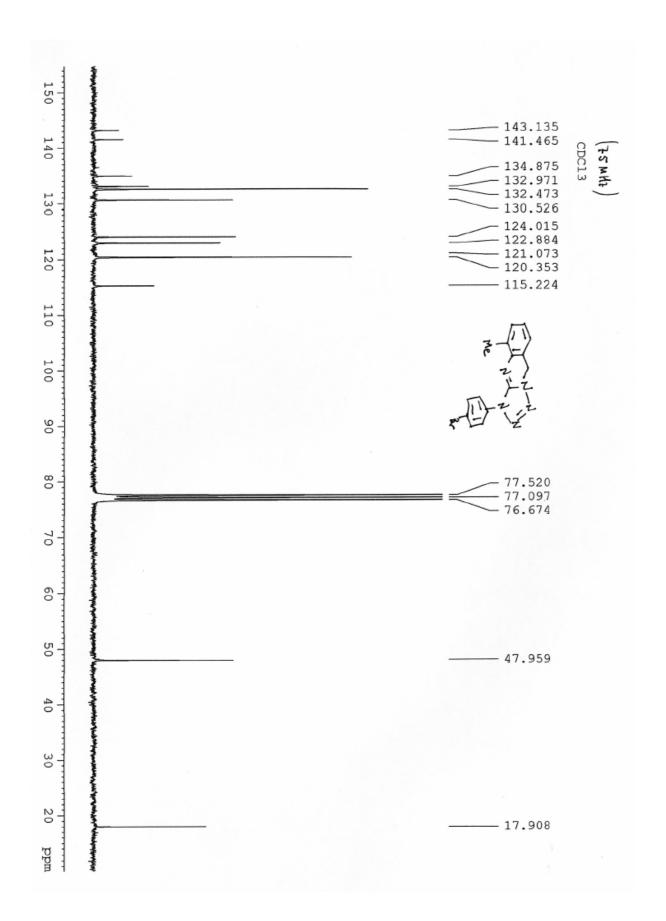
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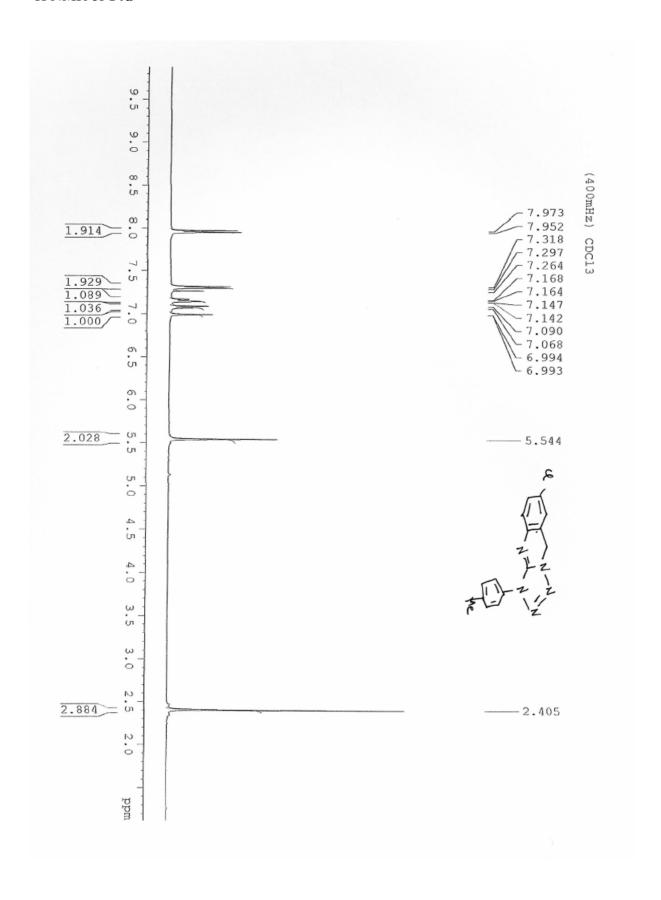
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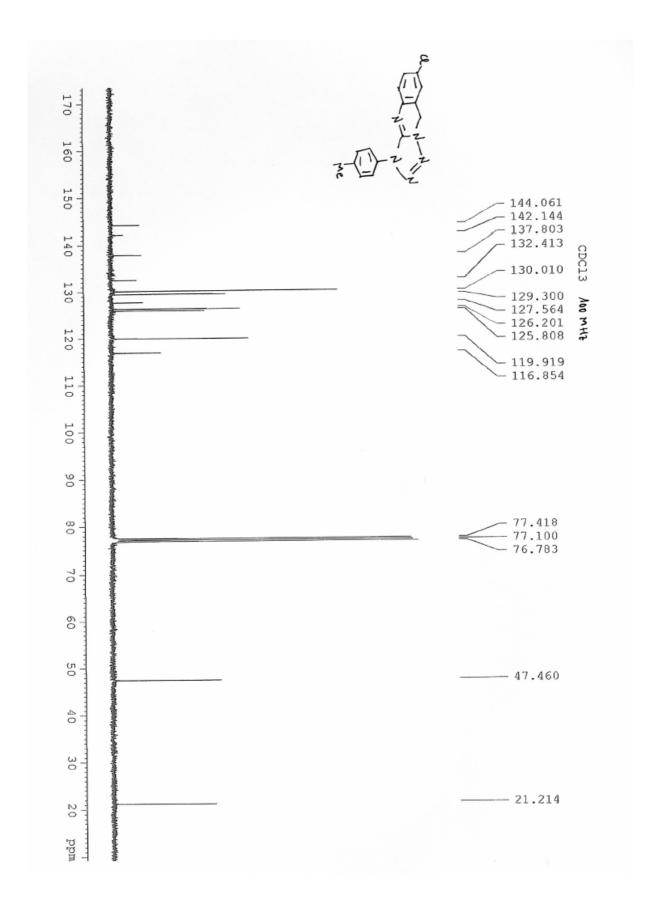
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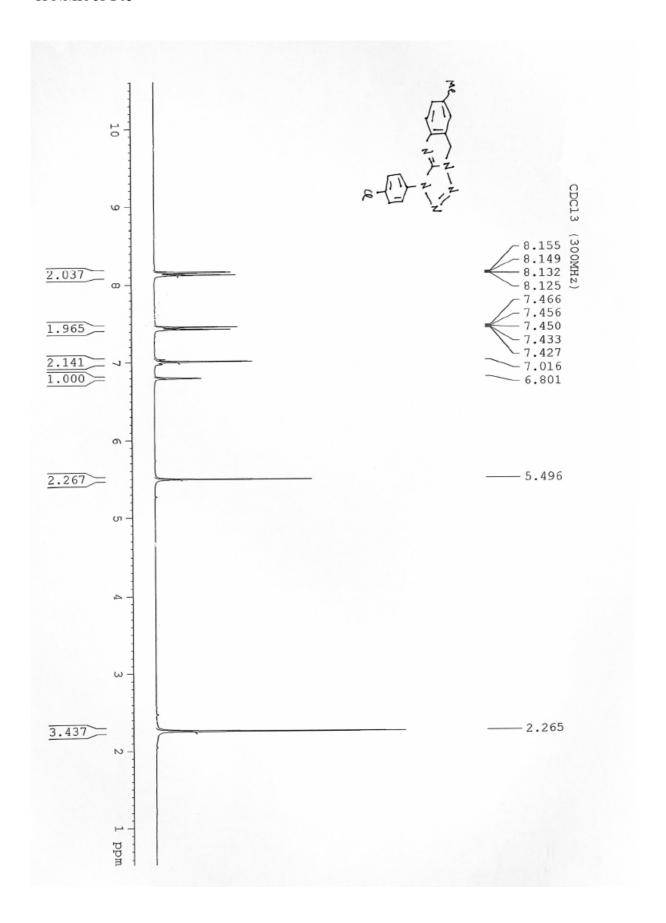
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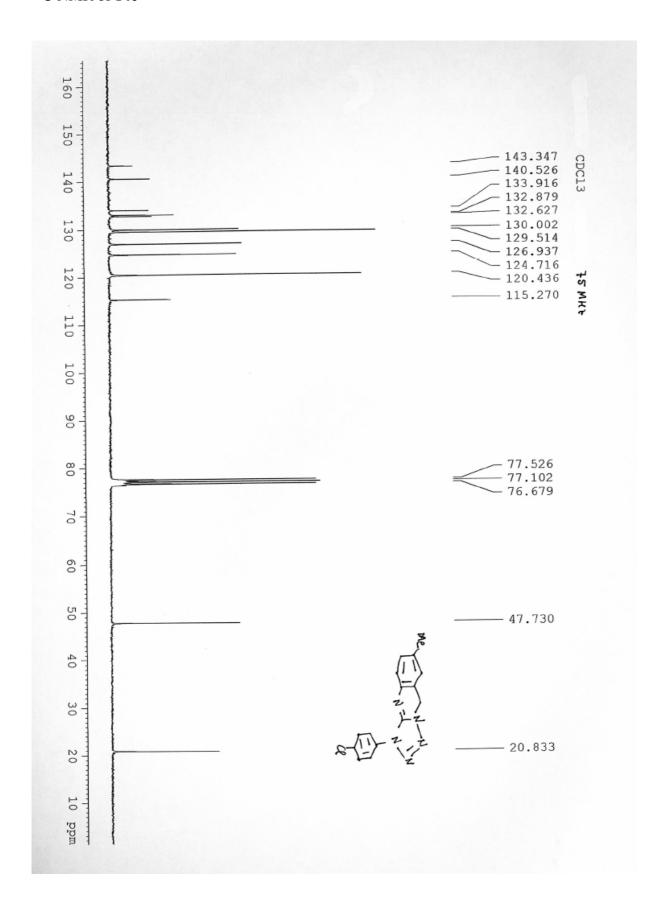
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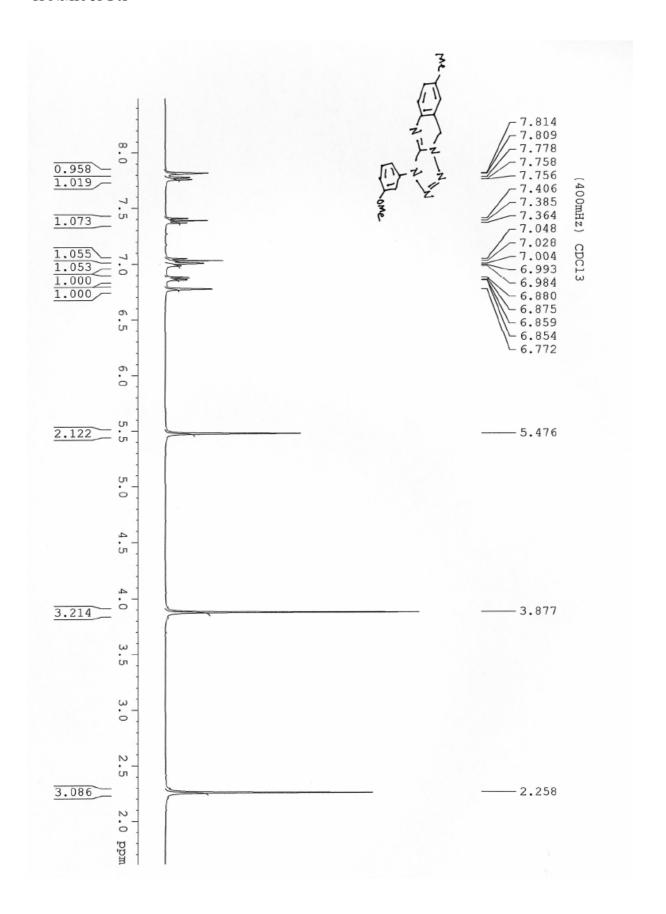
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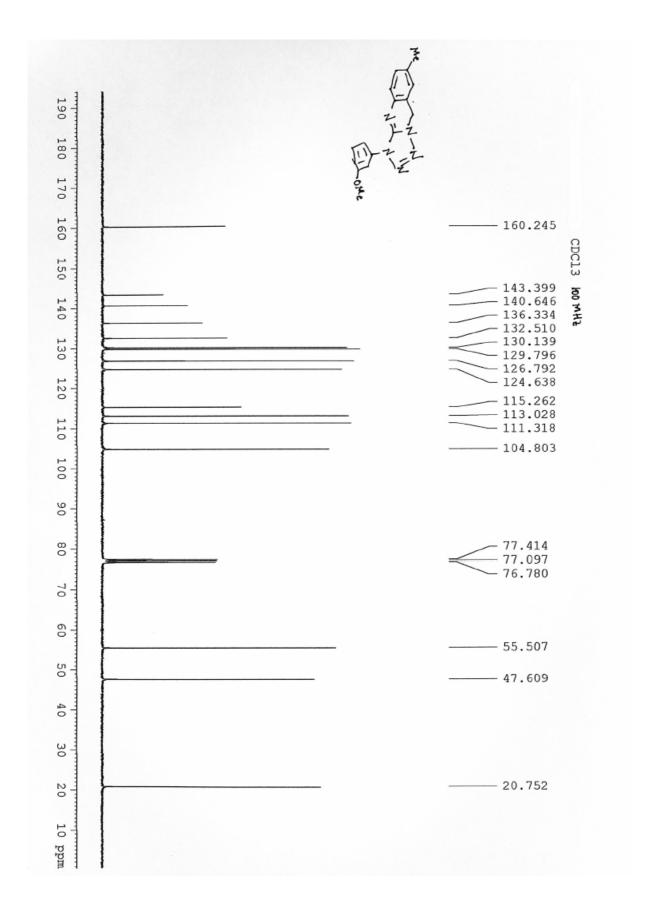
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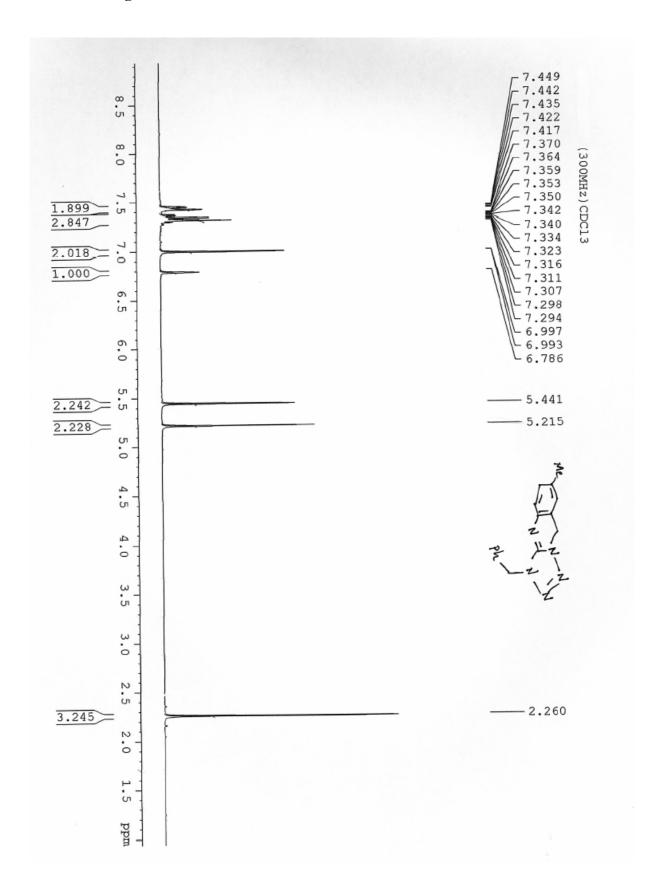
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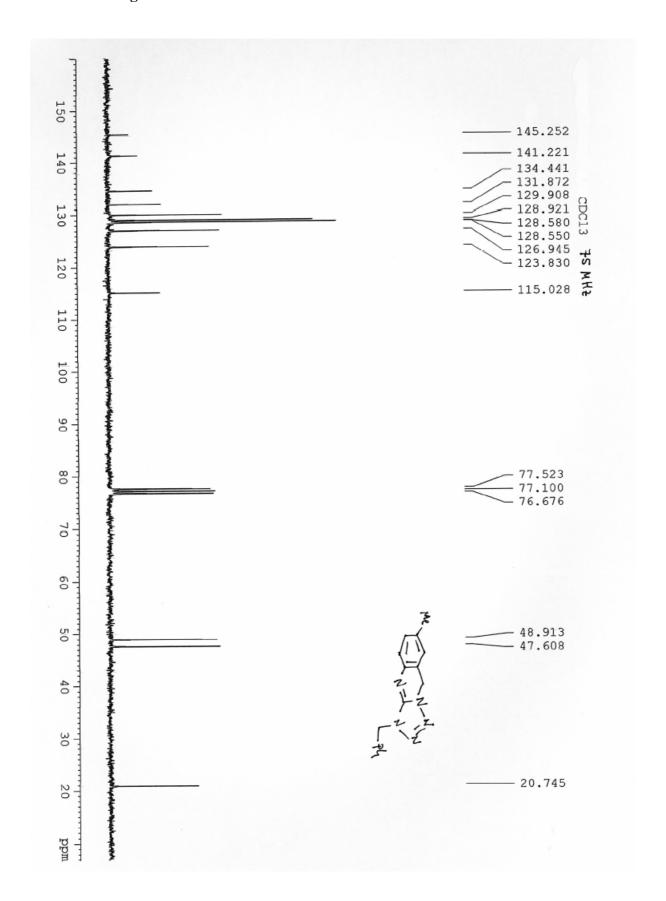
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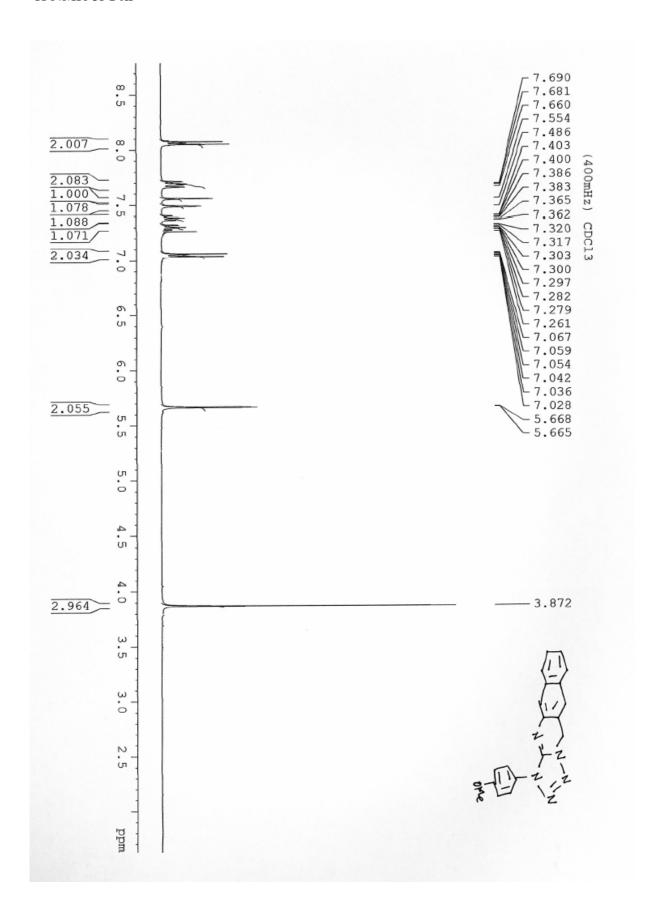
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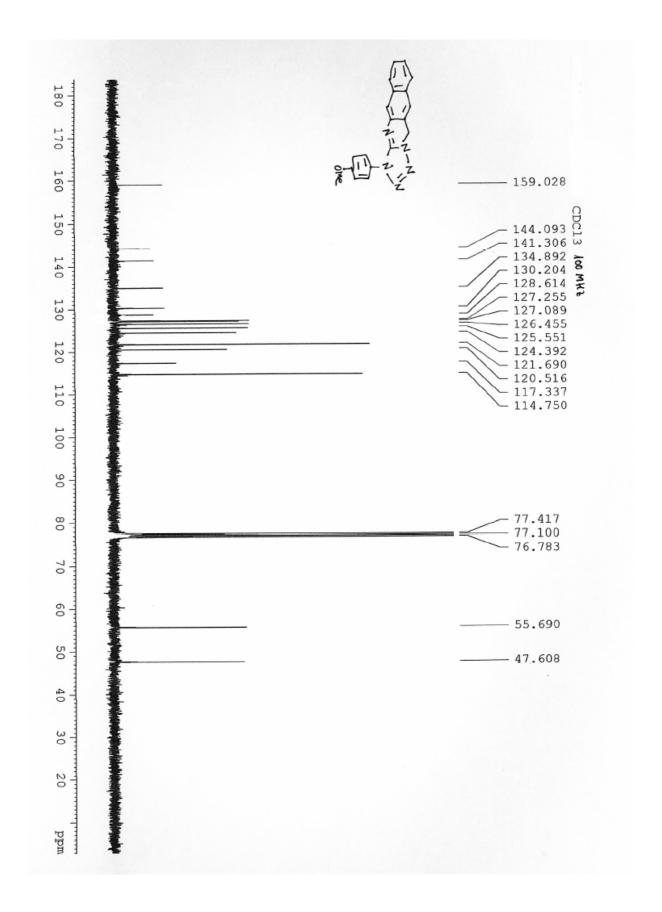
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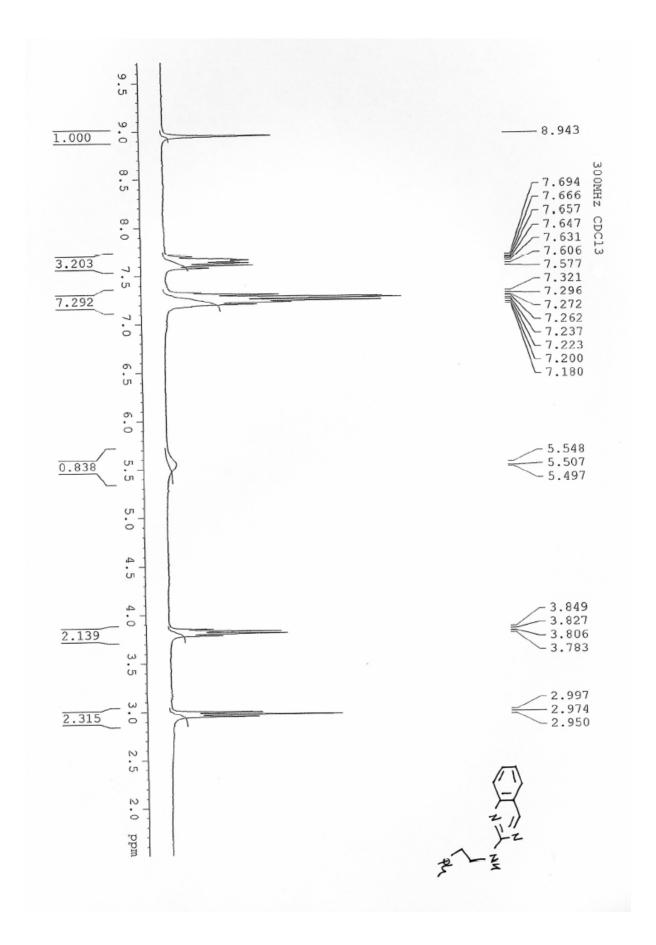
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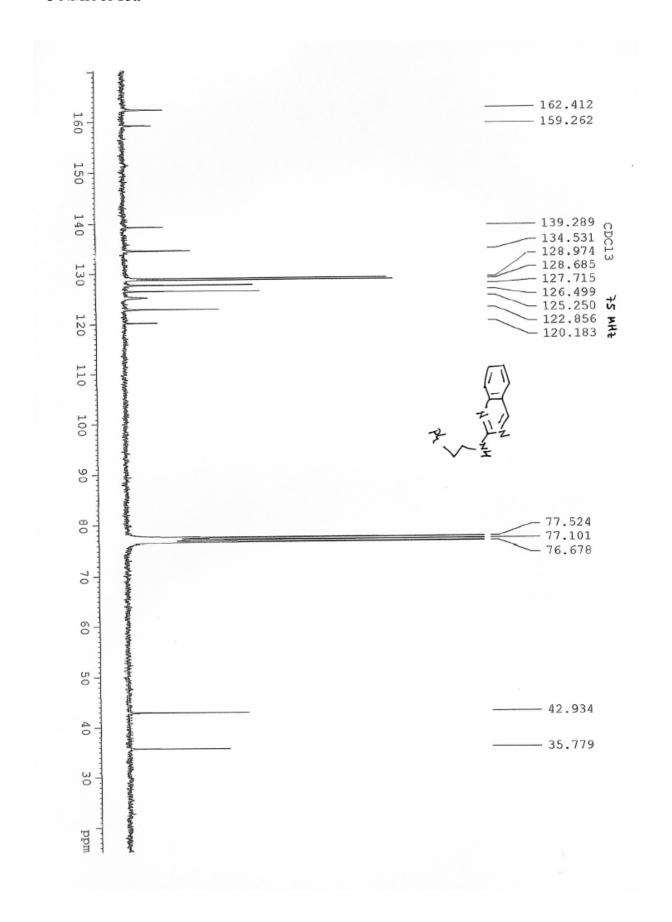
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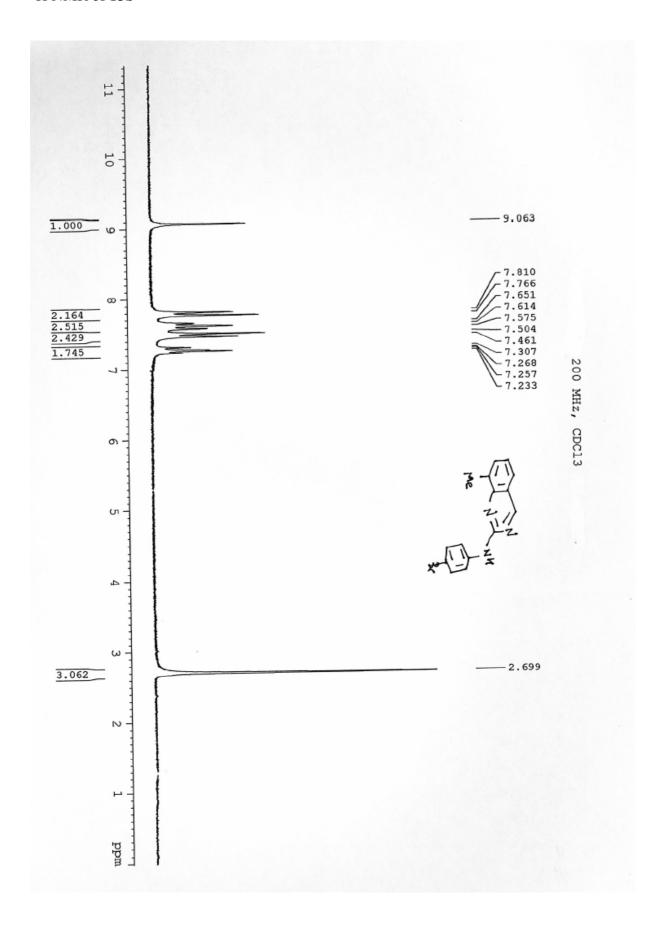
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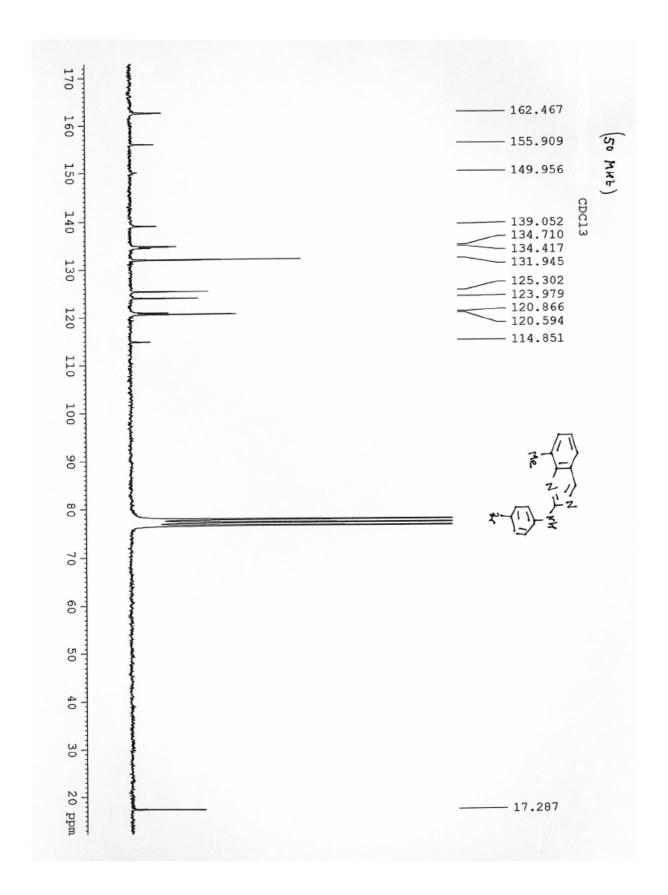
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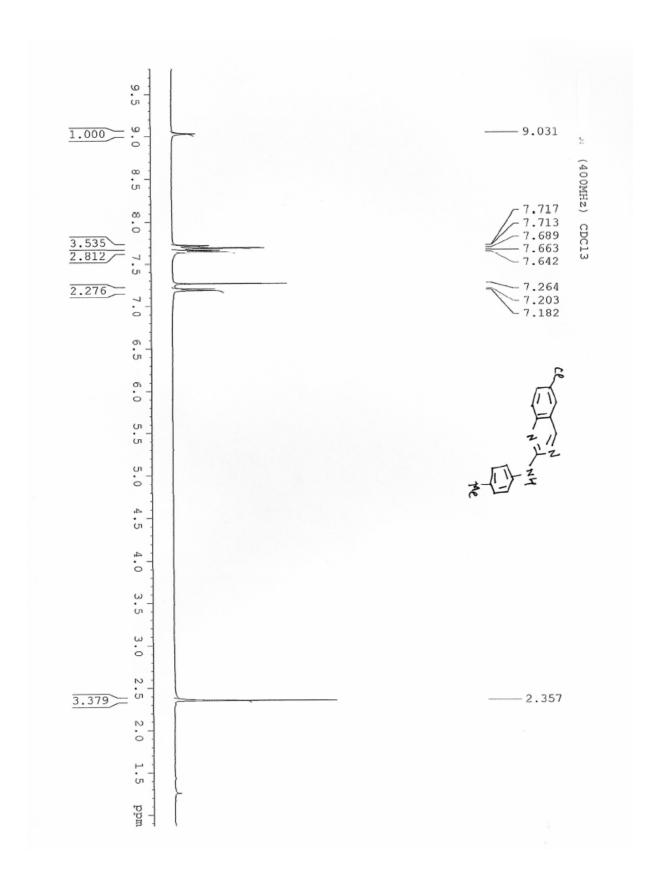
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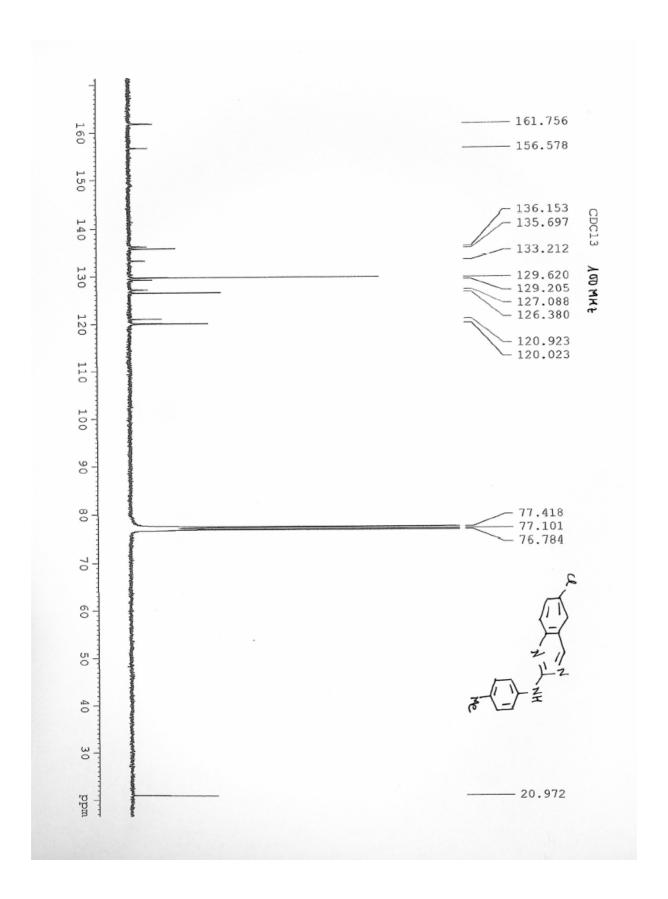
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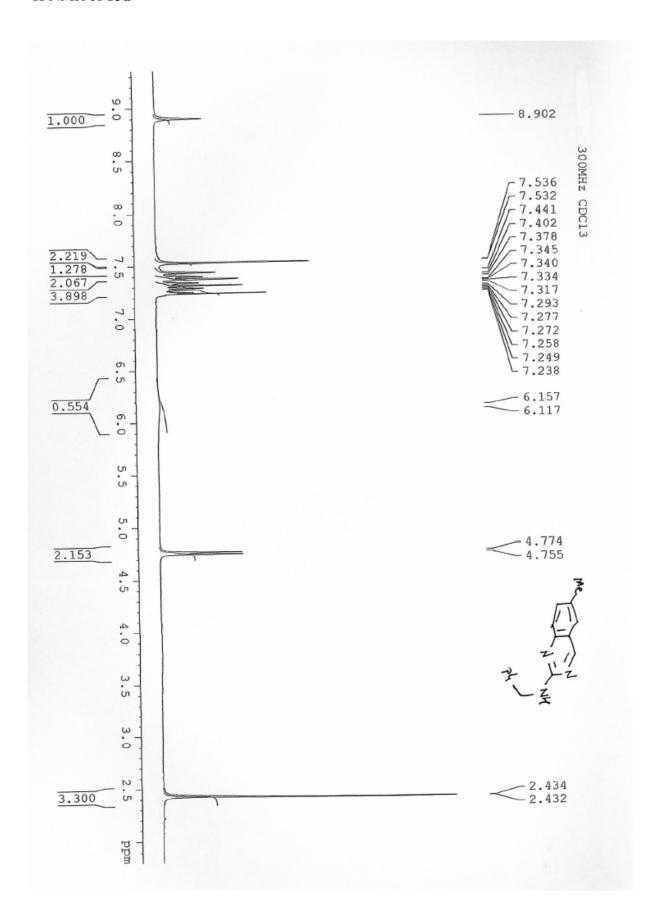
<sup>1</sup>H NMR of **15c** 



<sup>13</sup>C NMR of **15c** 



<sup>1</sup>H NMR of **15d** 



<sup>13</sup>C NMR of **15d** 

