



The
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Appendix

Copper Mediated Transformations of Alkyl Boronic Esters

James Grayson

Supervisor:

Dr. Benjamin Partridge

The University of Sheffield

Faculty of Science

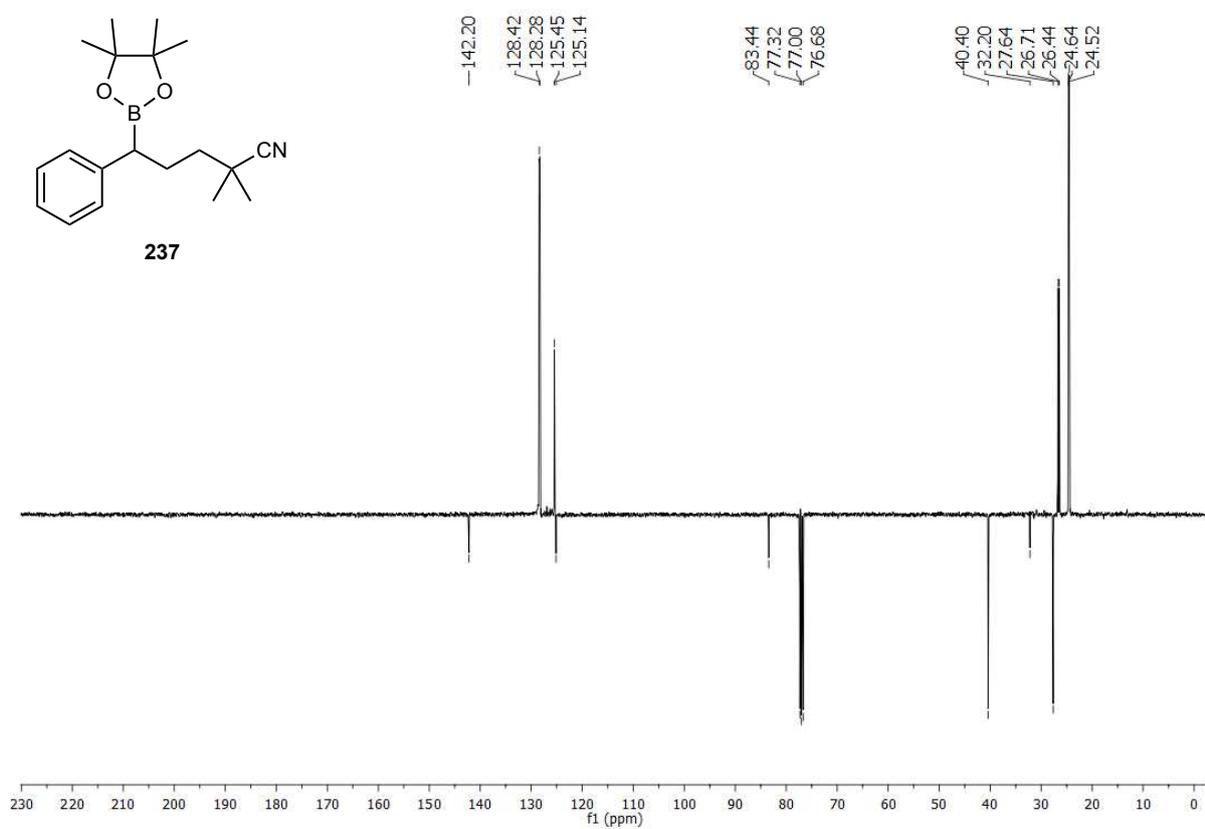
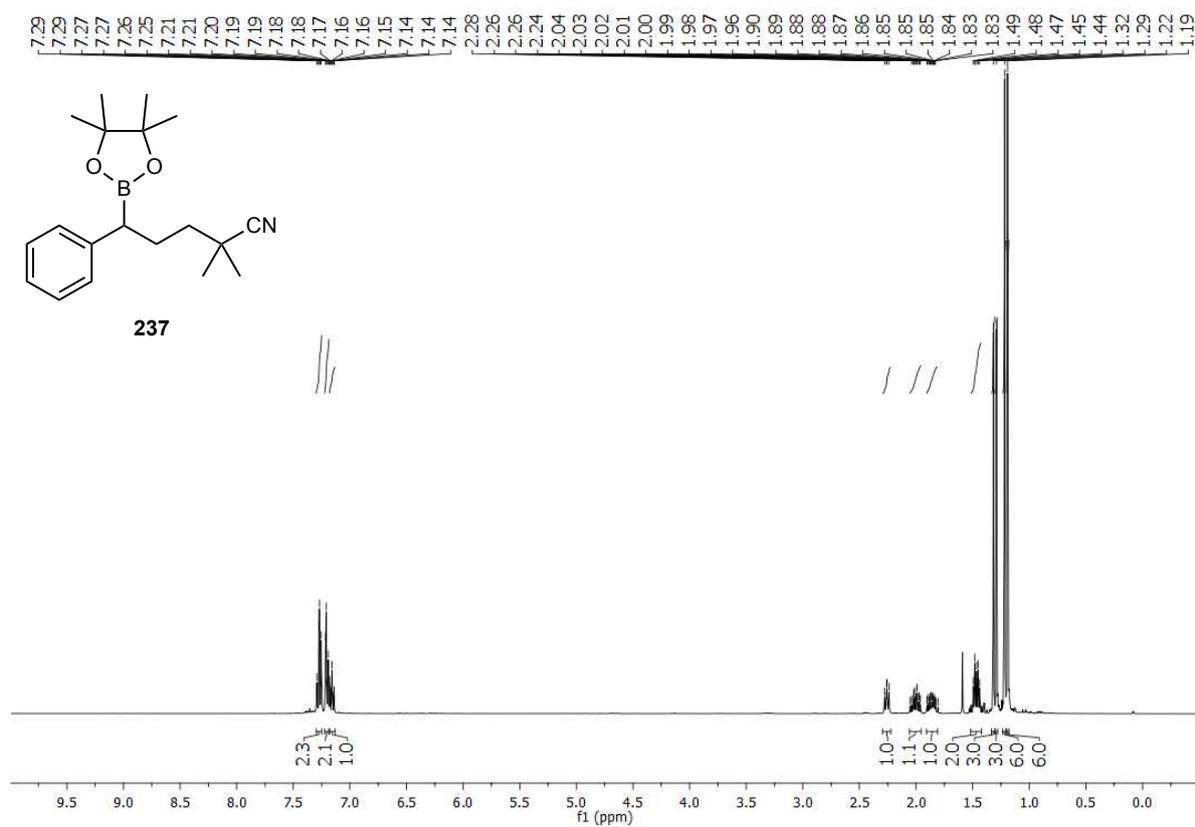
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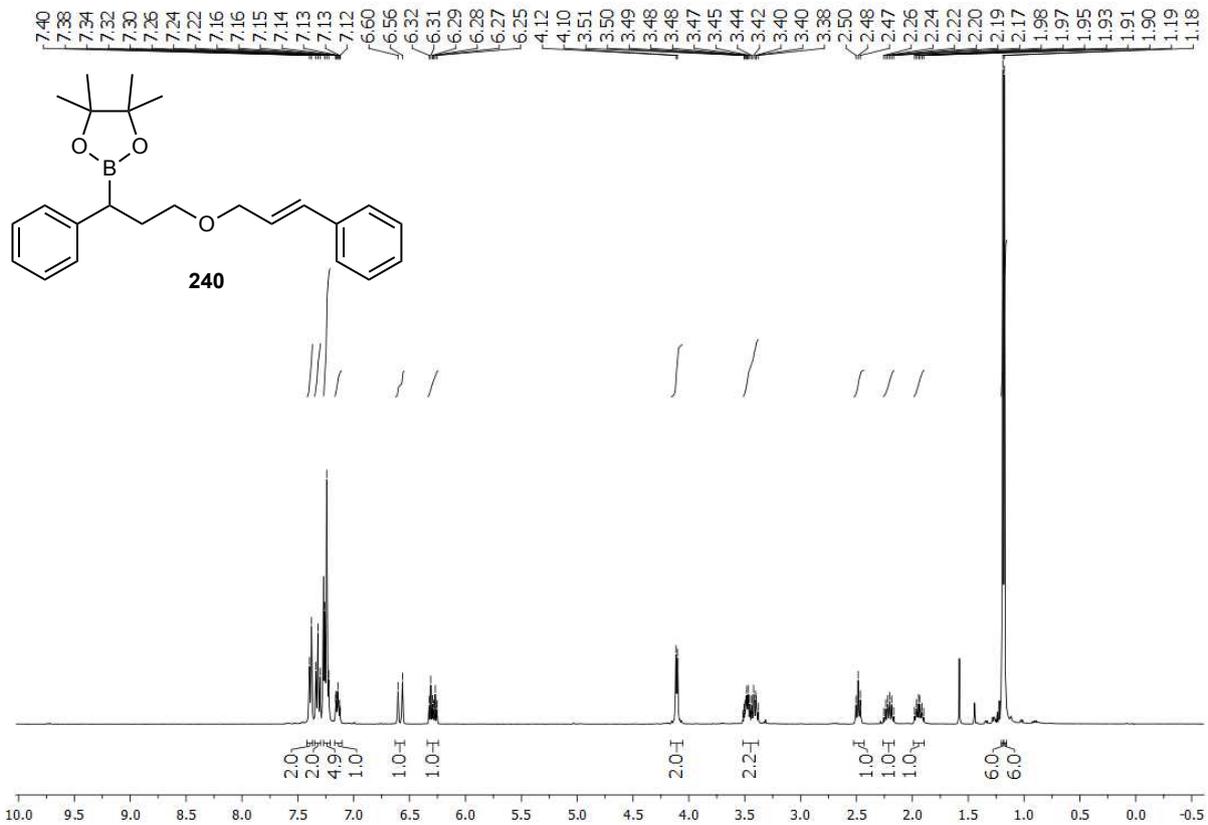
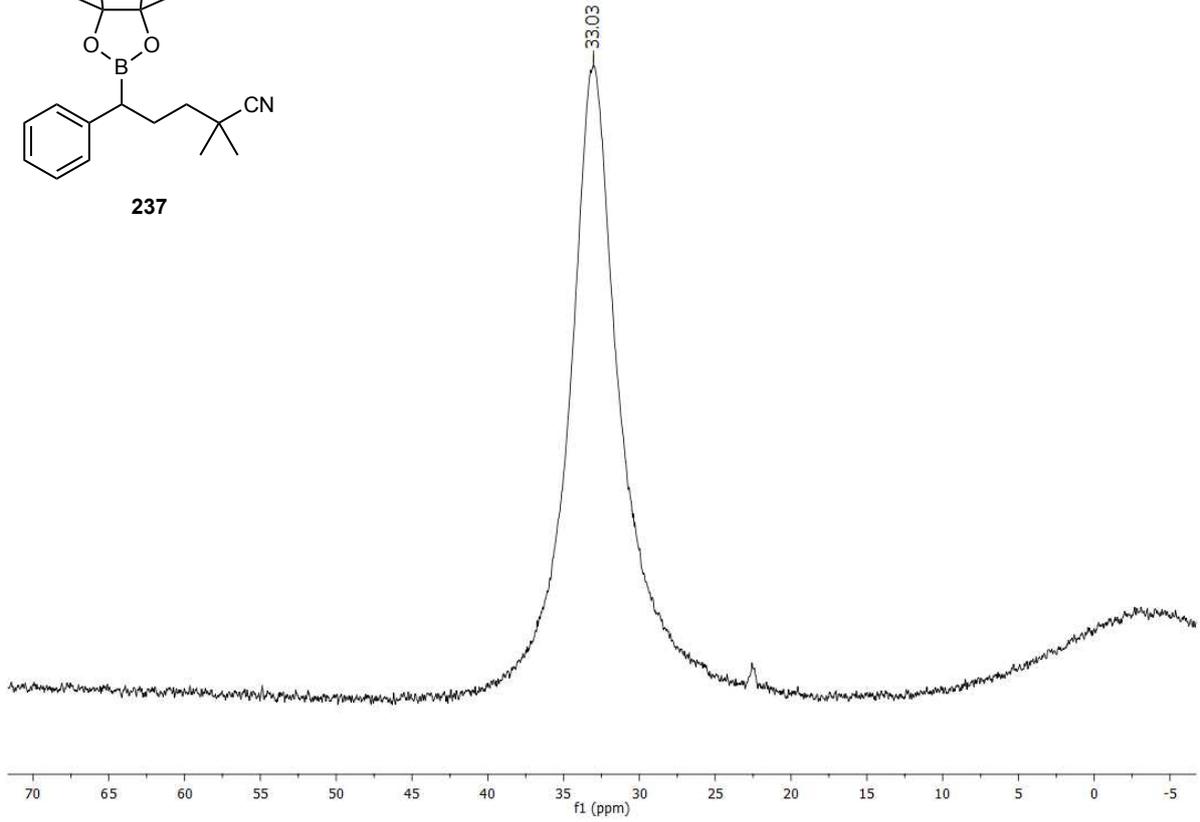
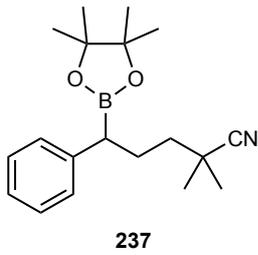
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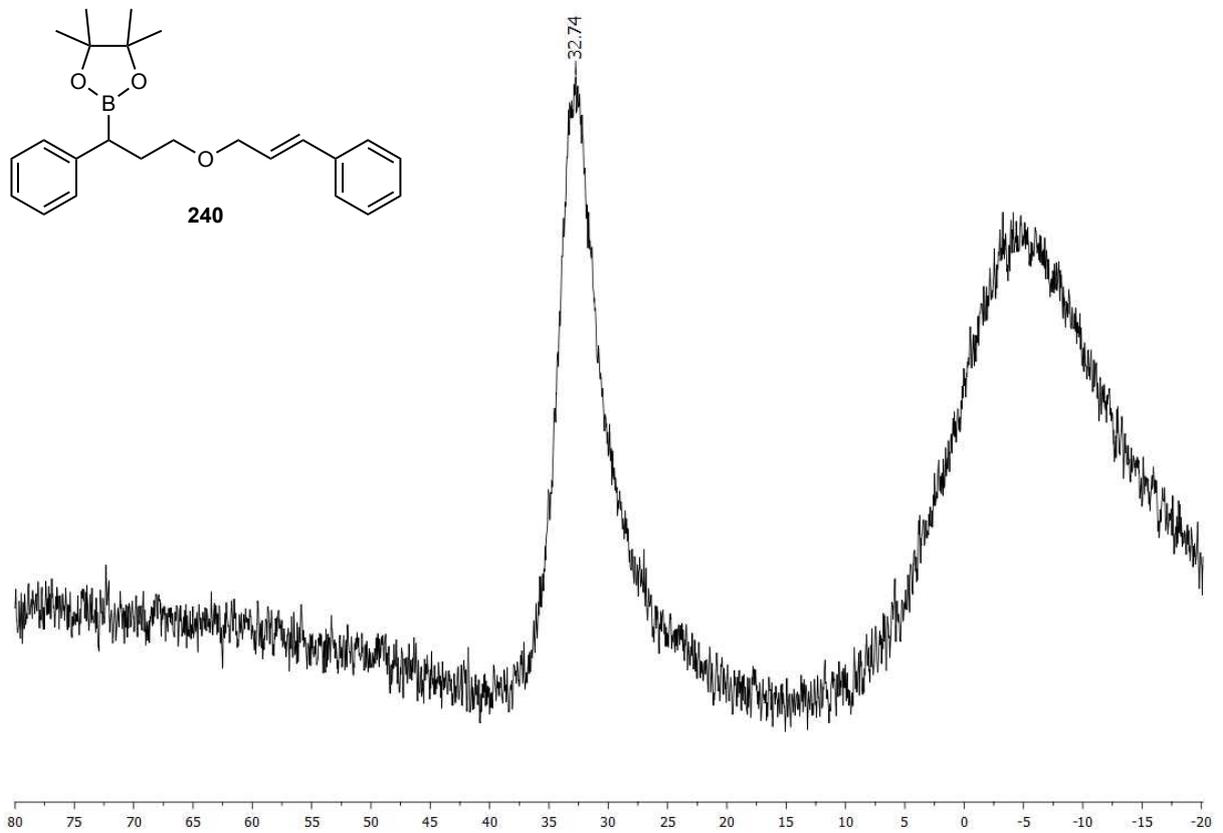
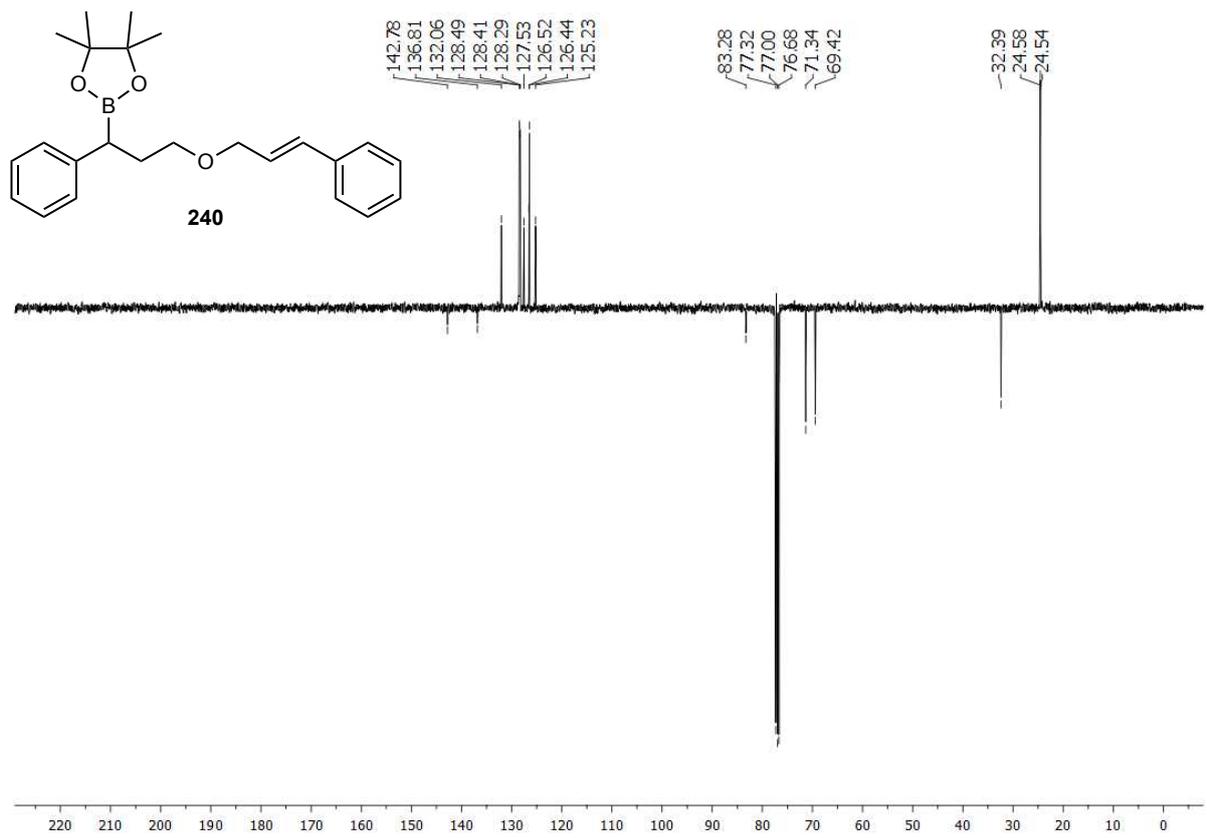
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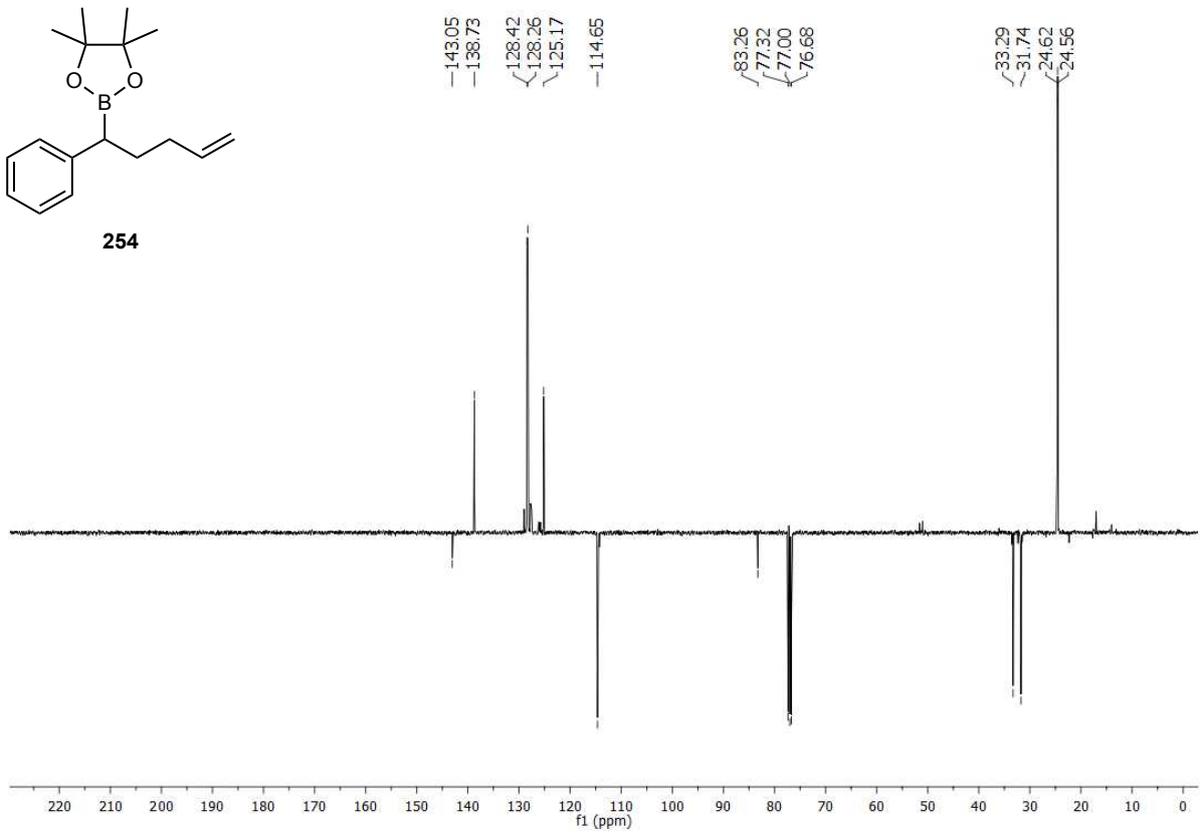
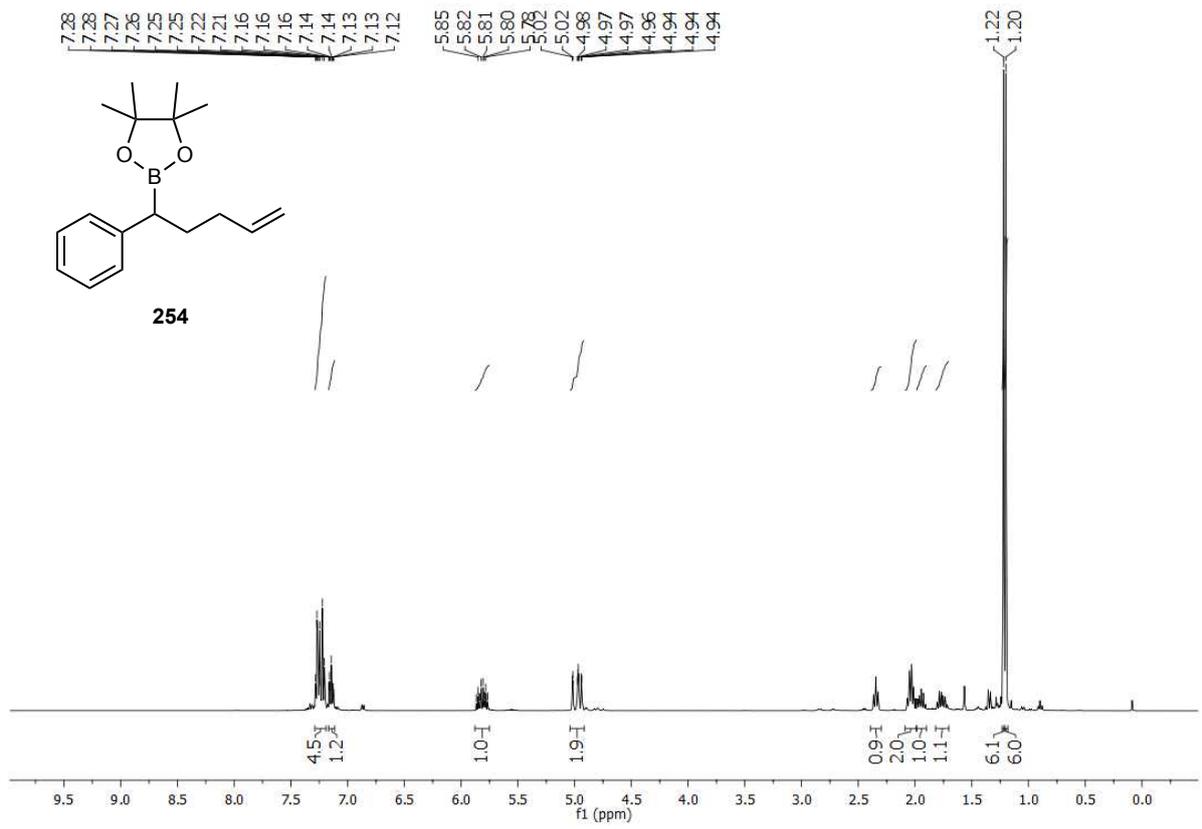
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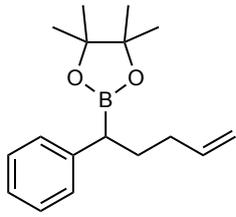
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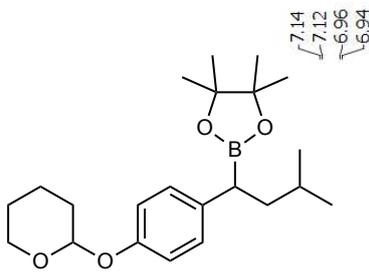
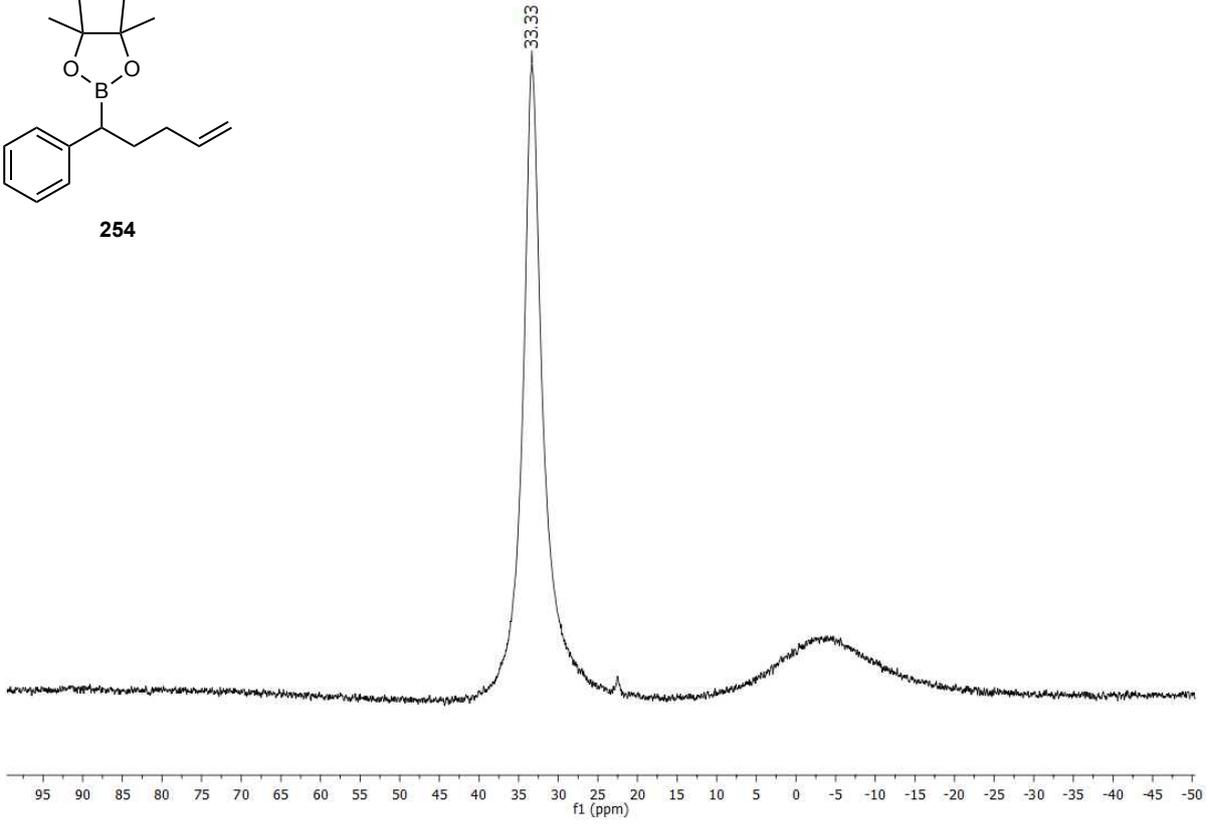




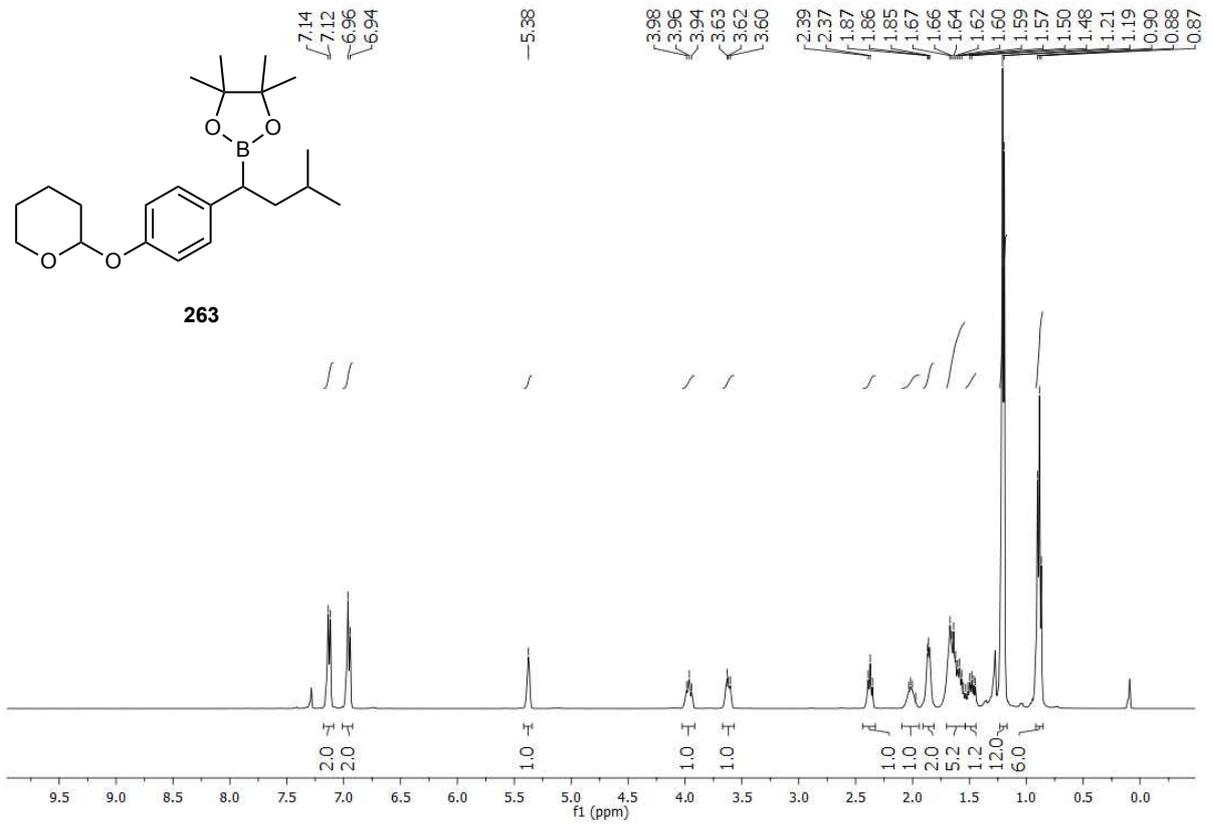


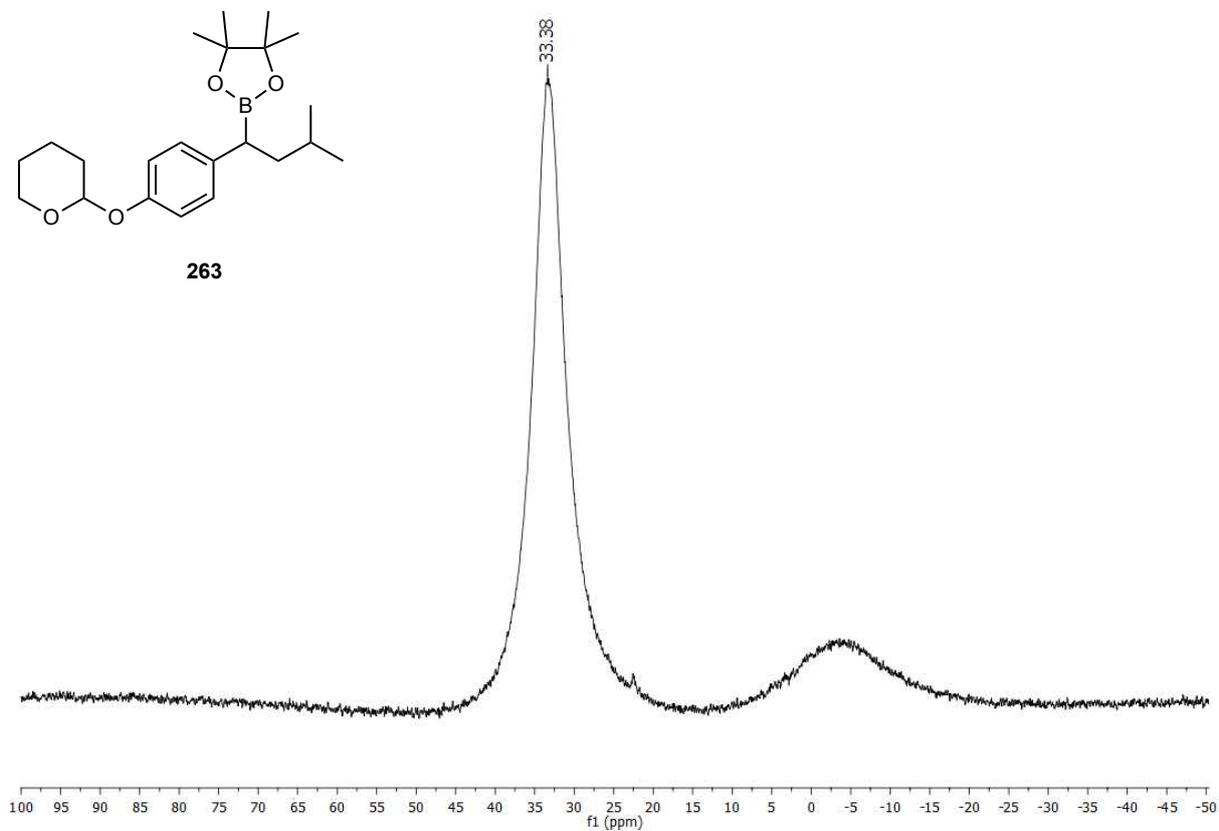
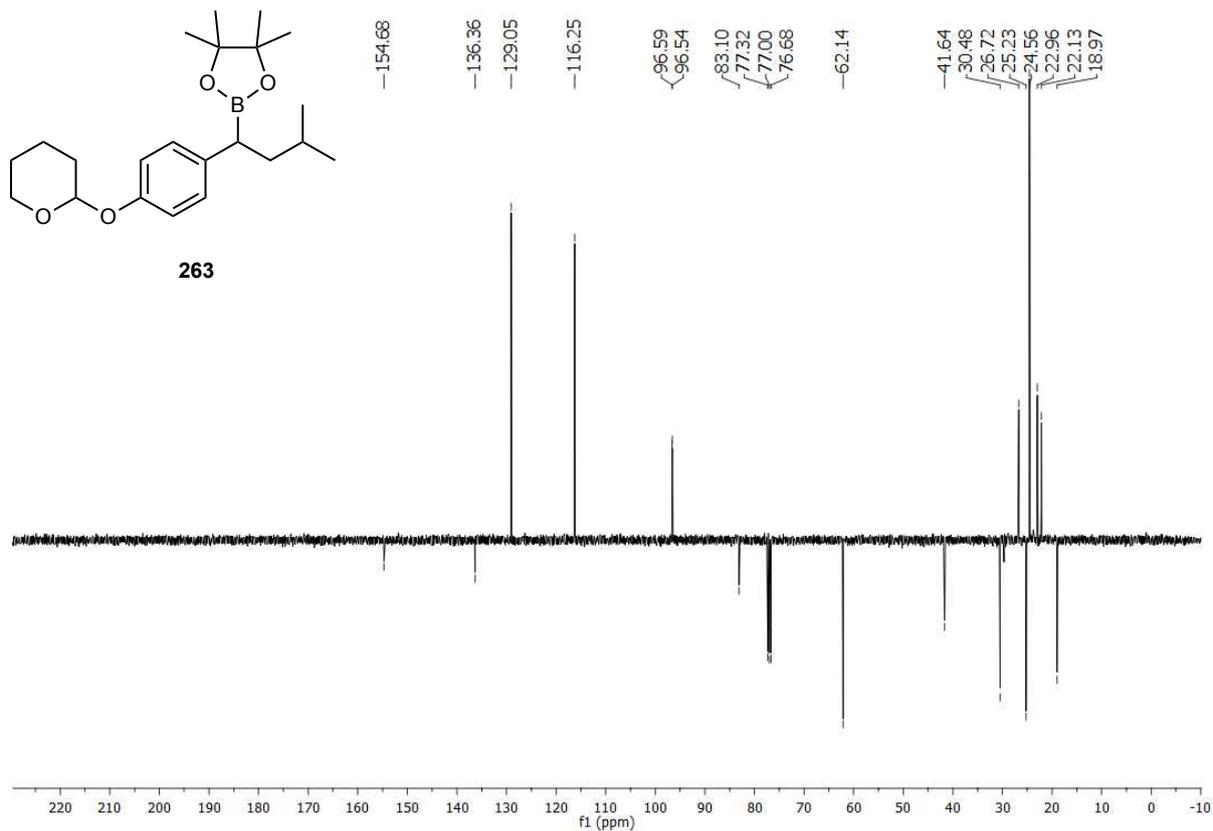


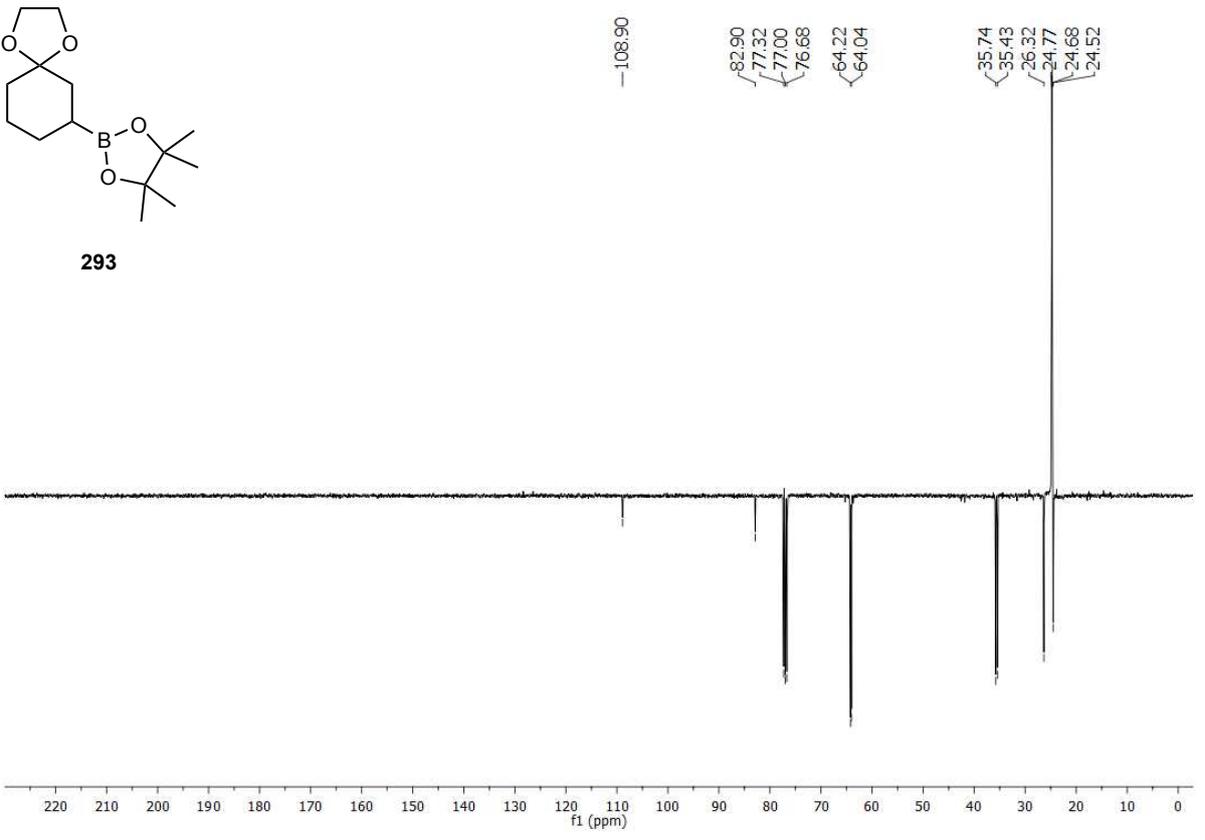
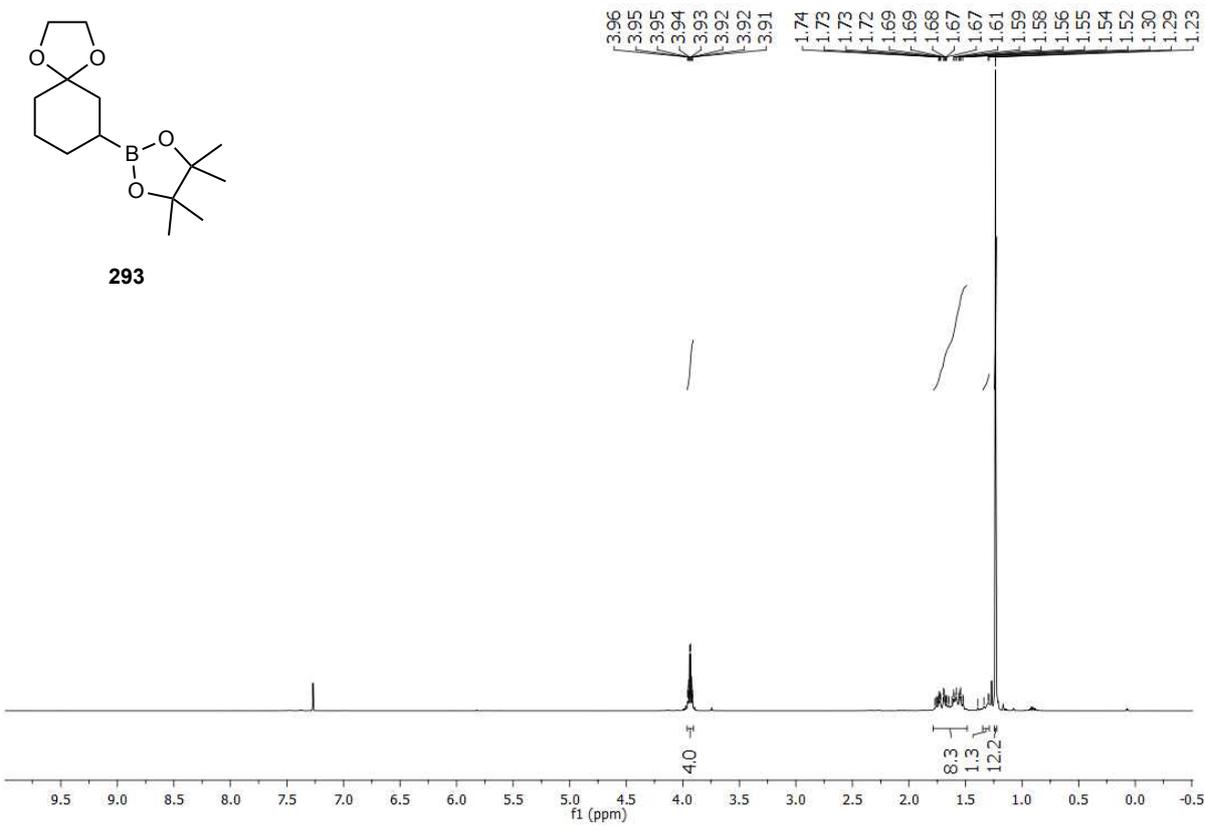
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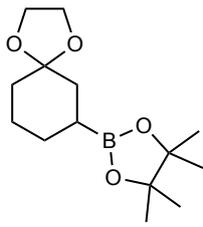


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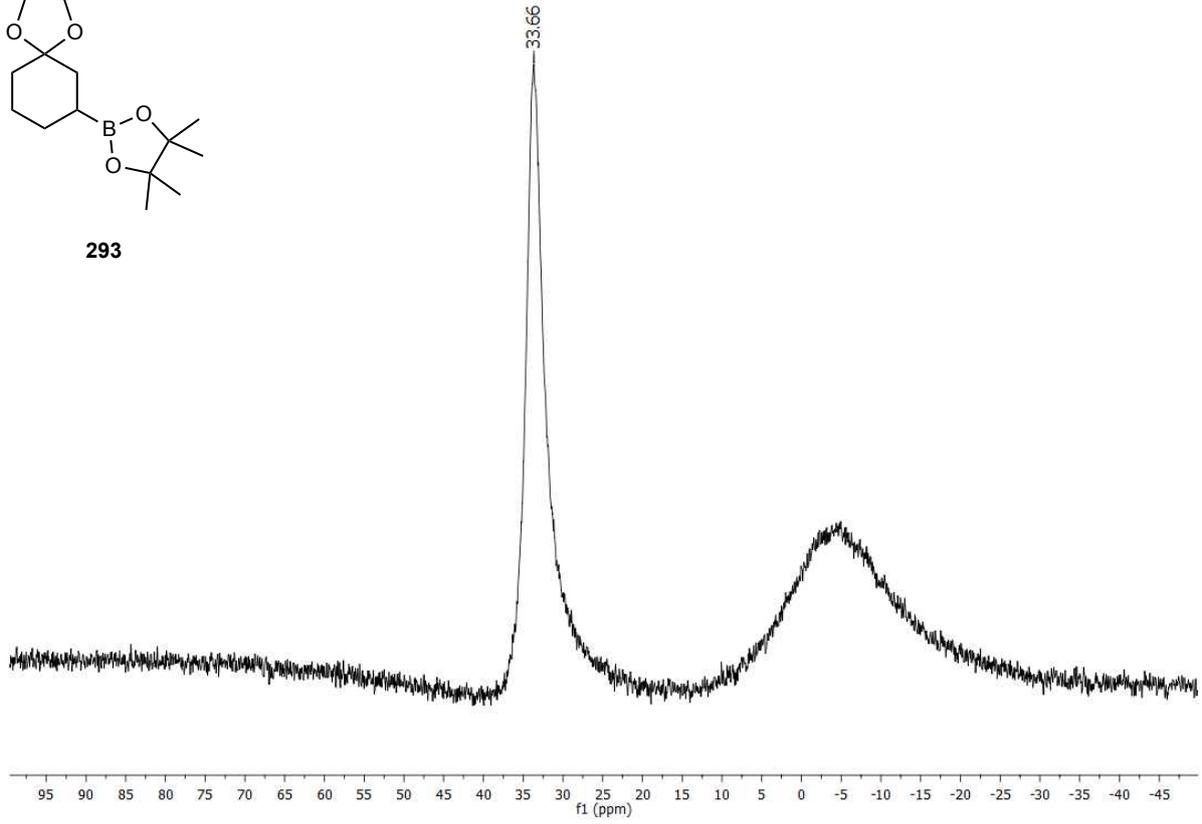




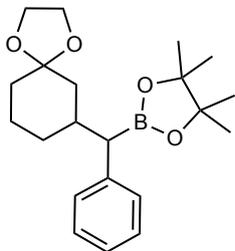




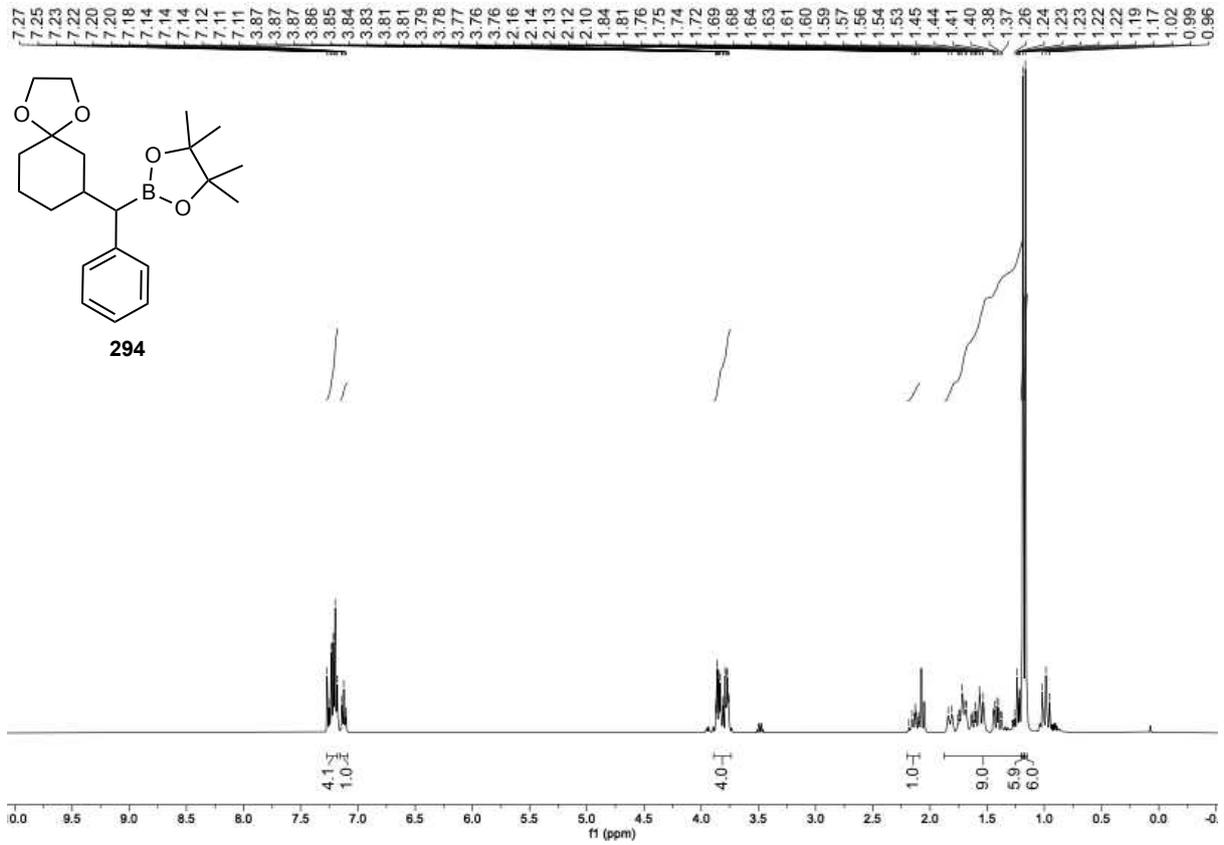
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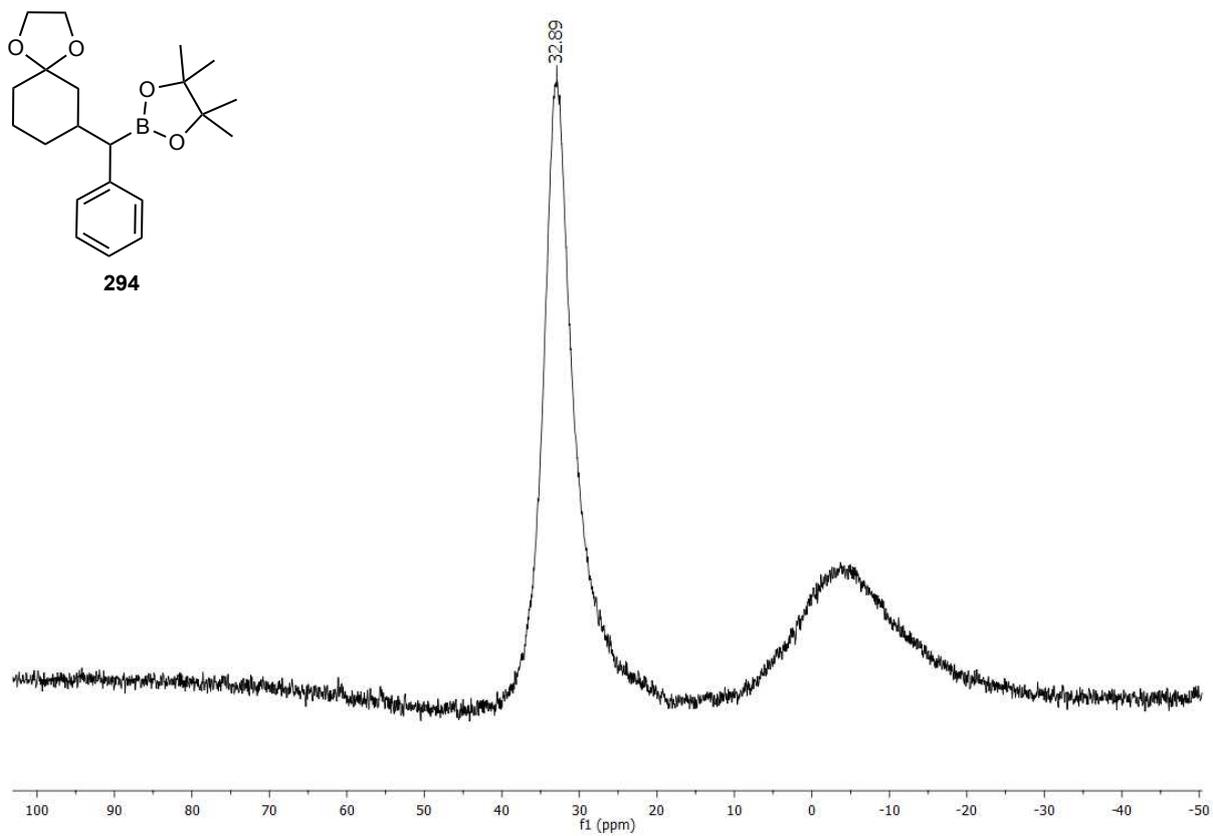
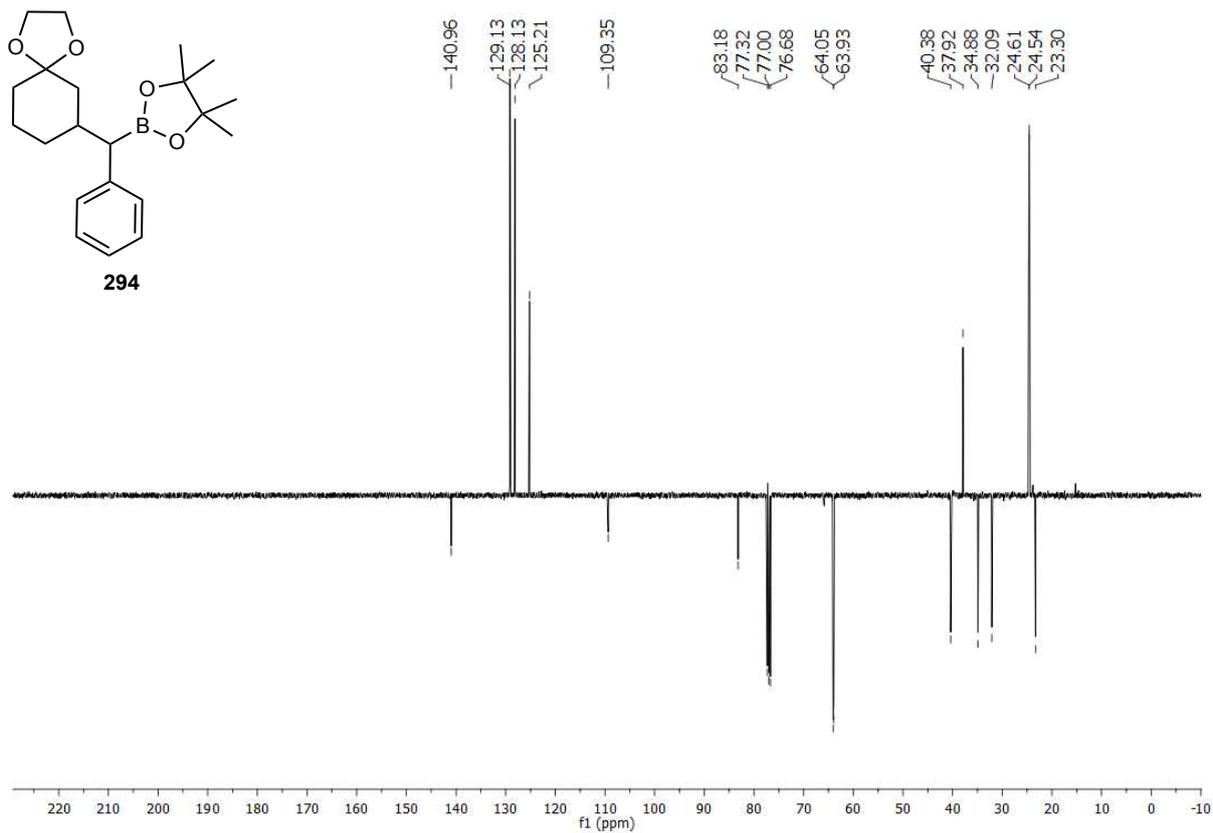


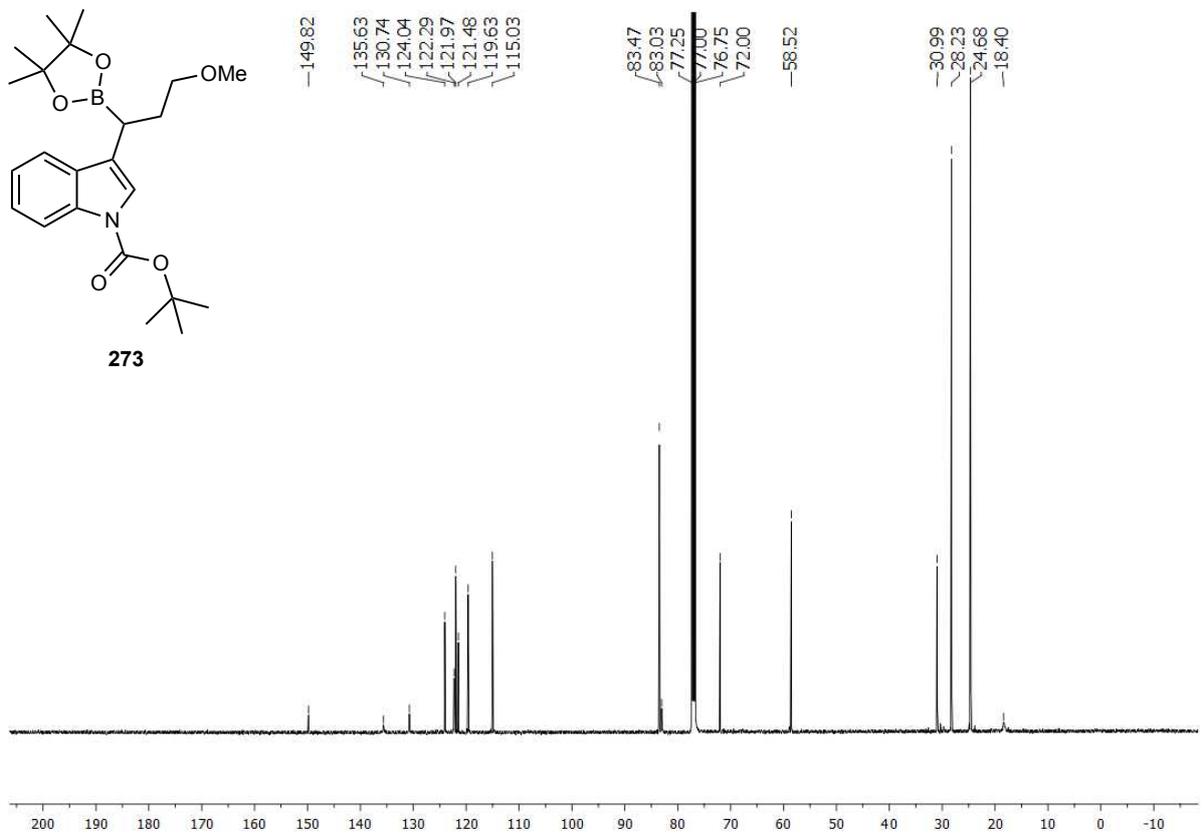
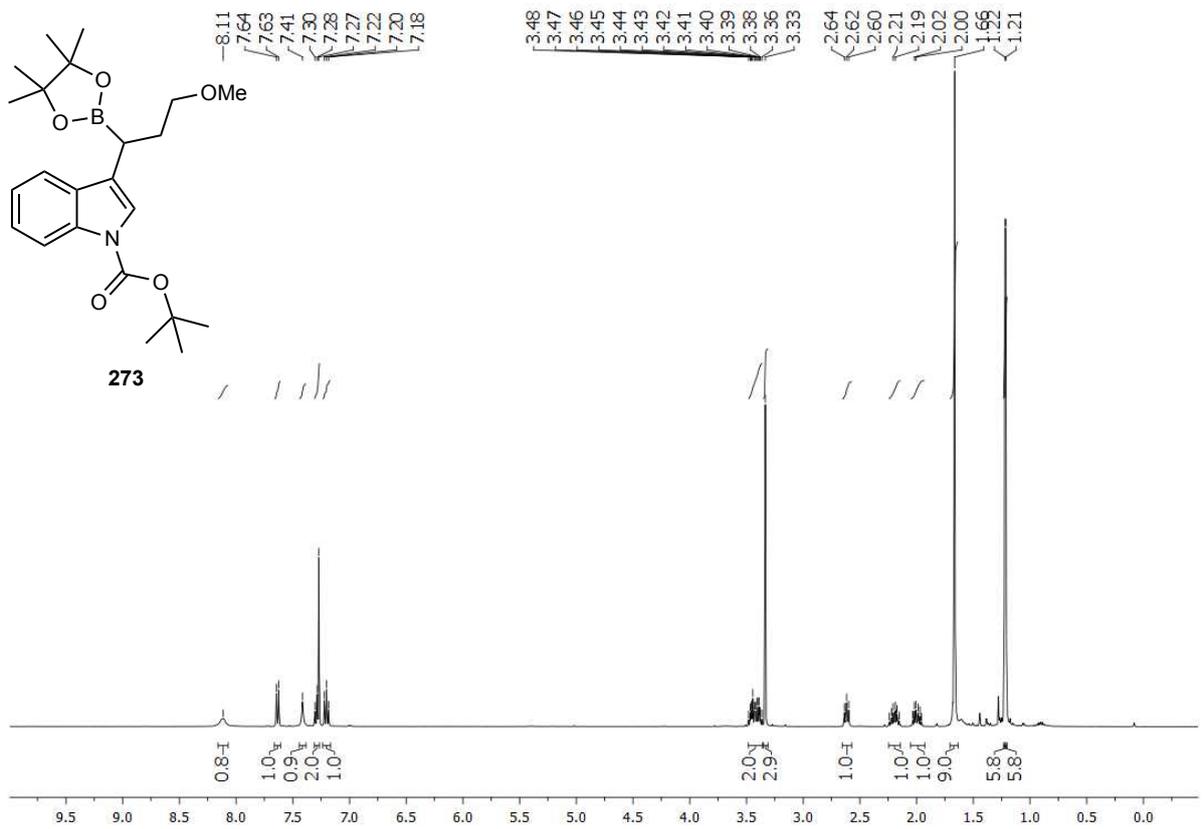
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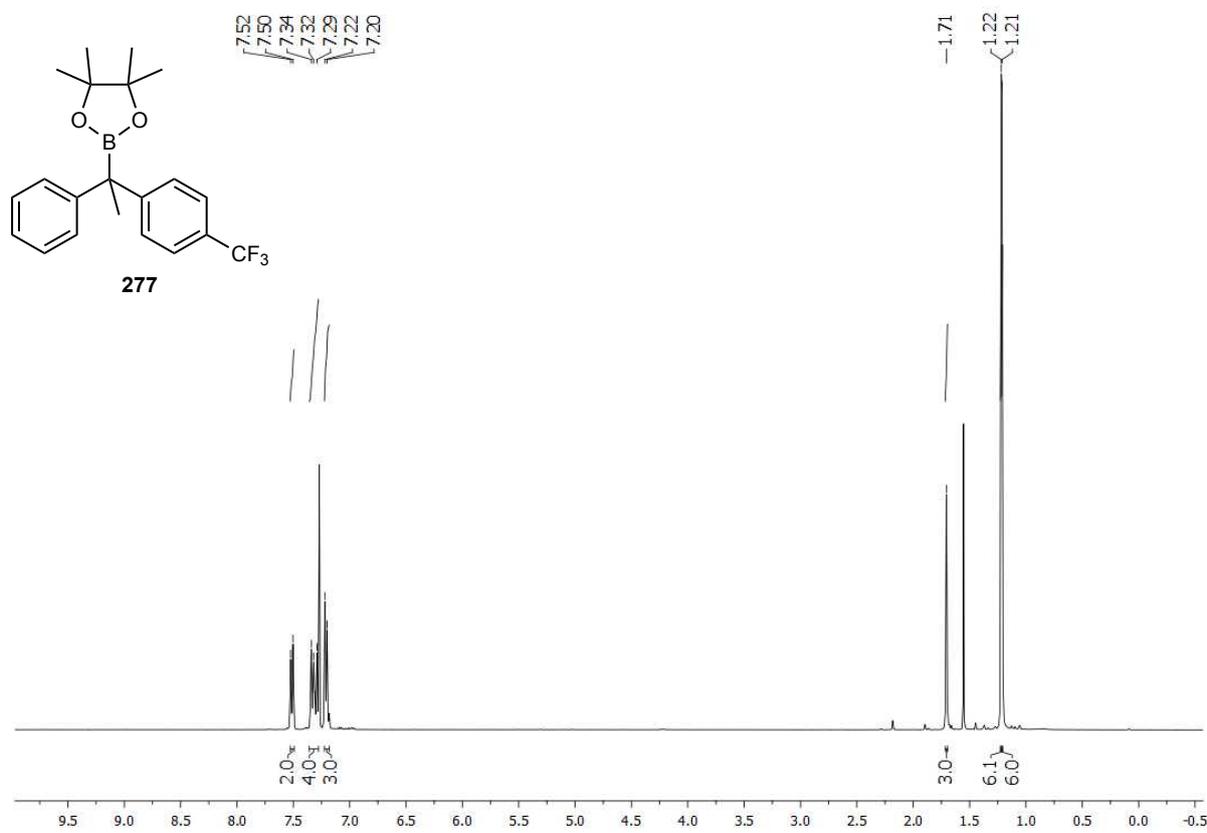
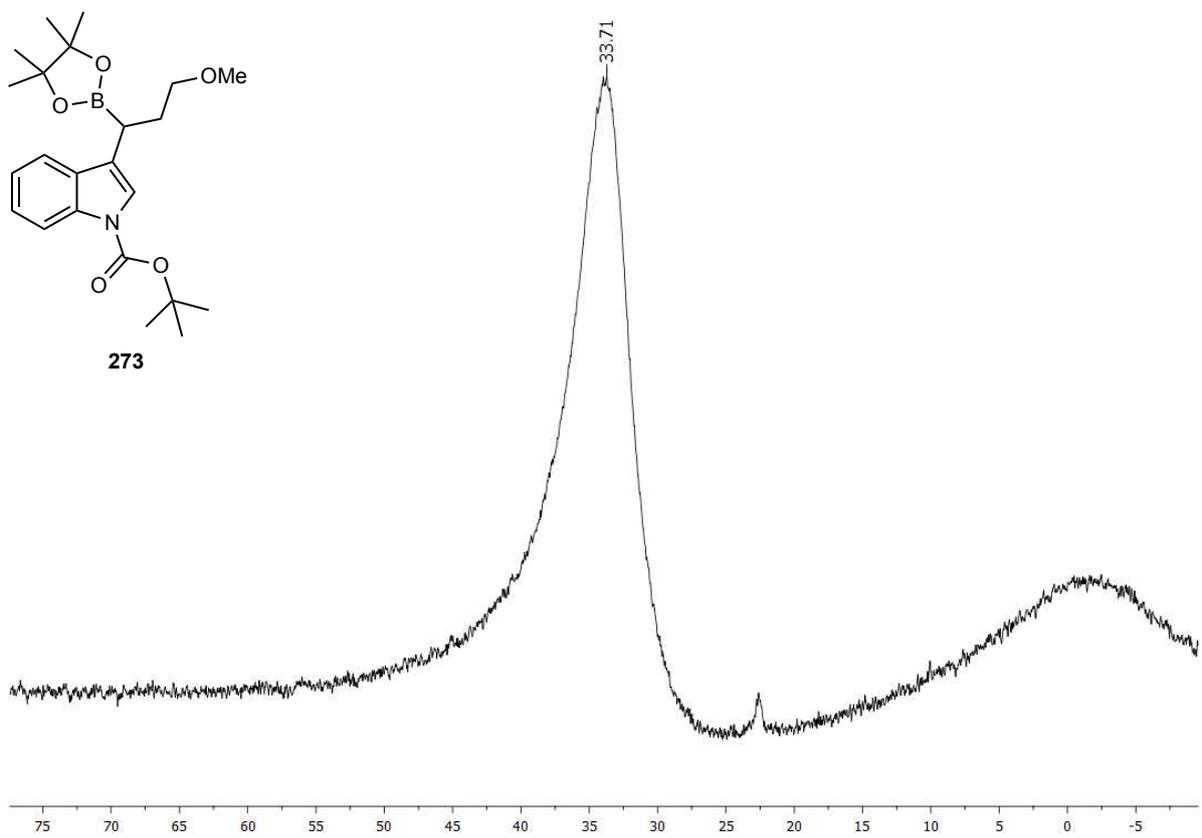


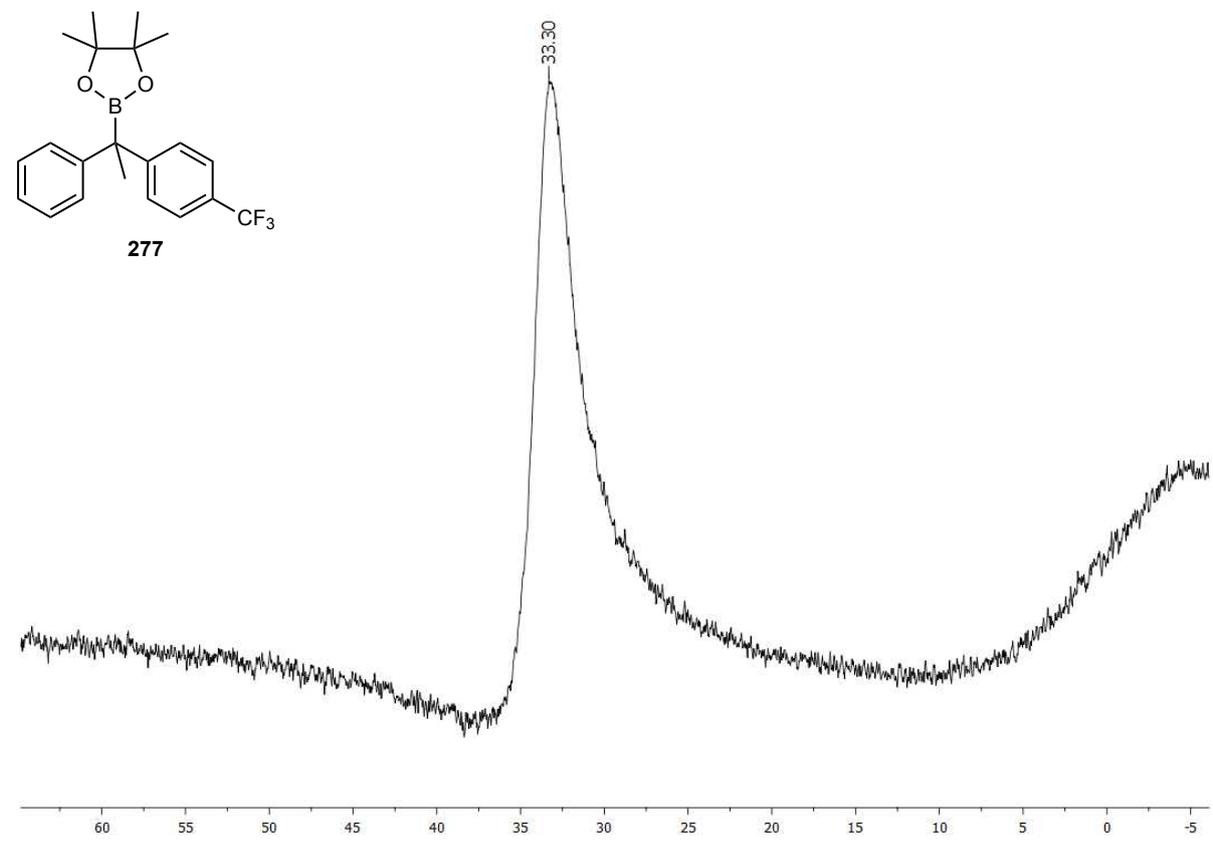
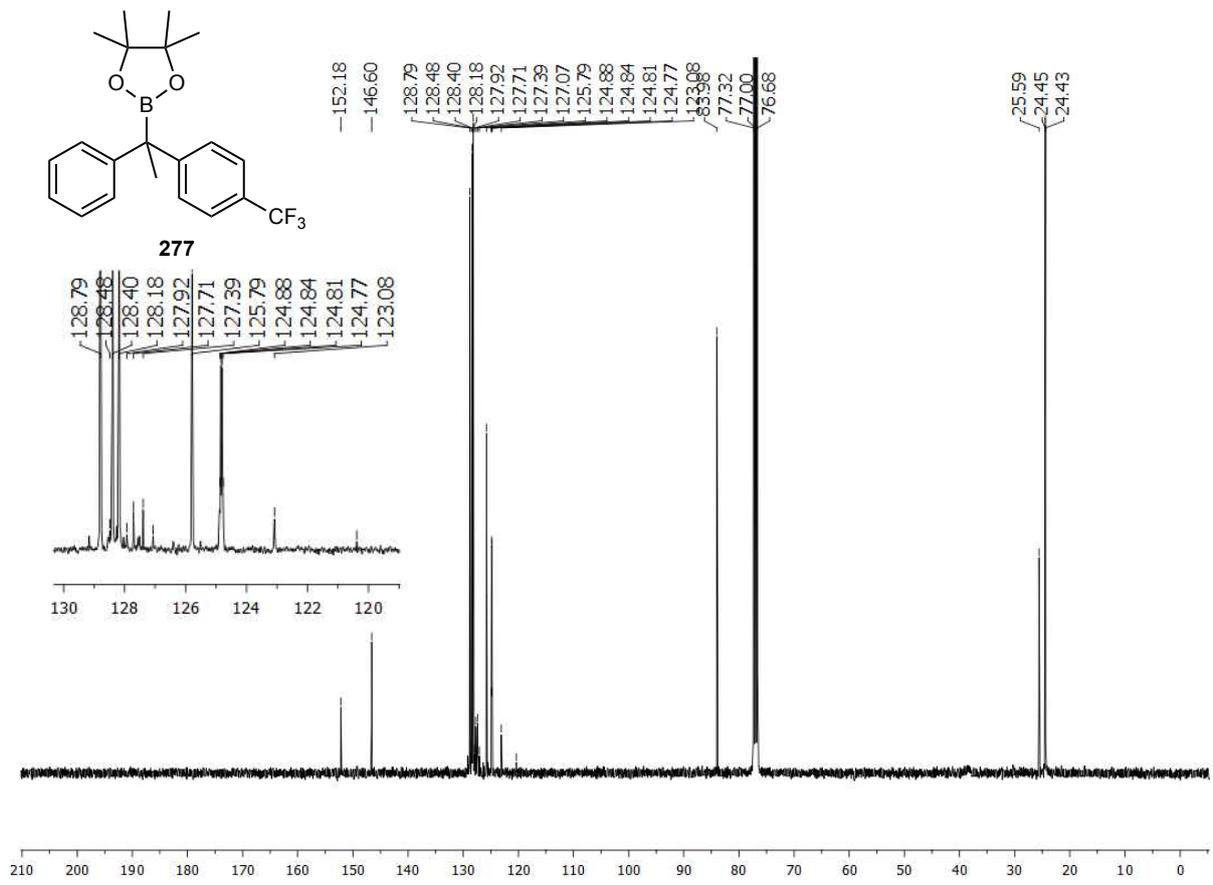
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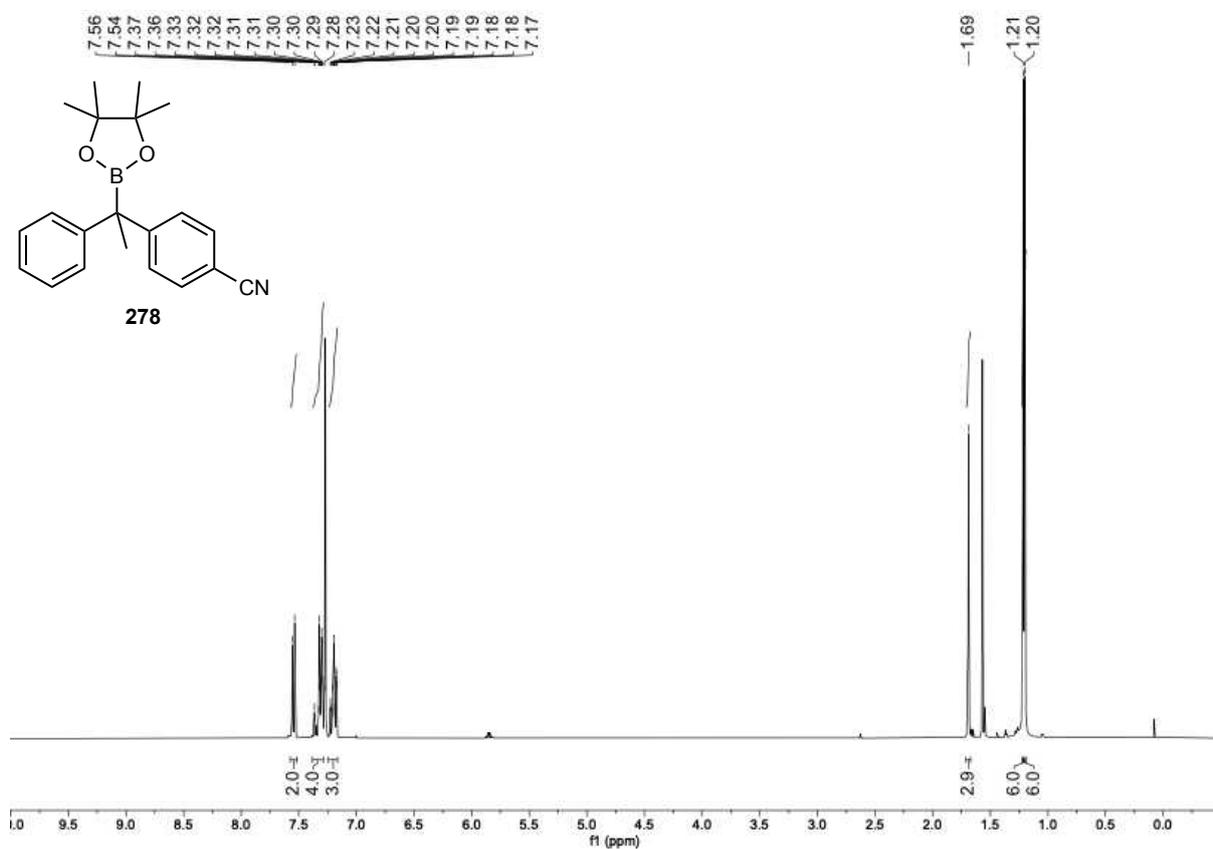
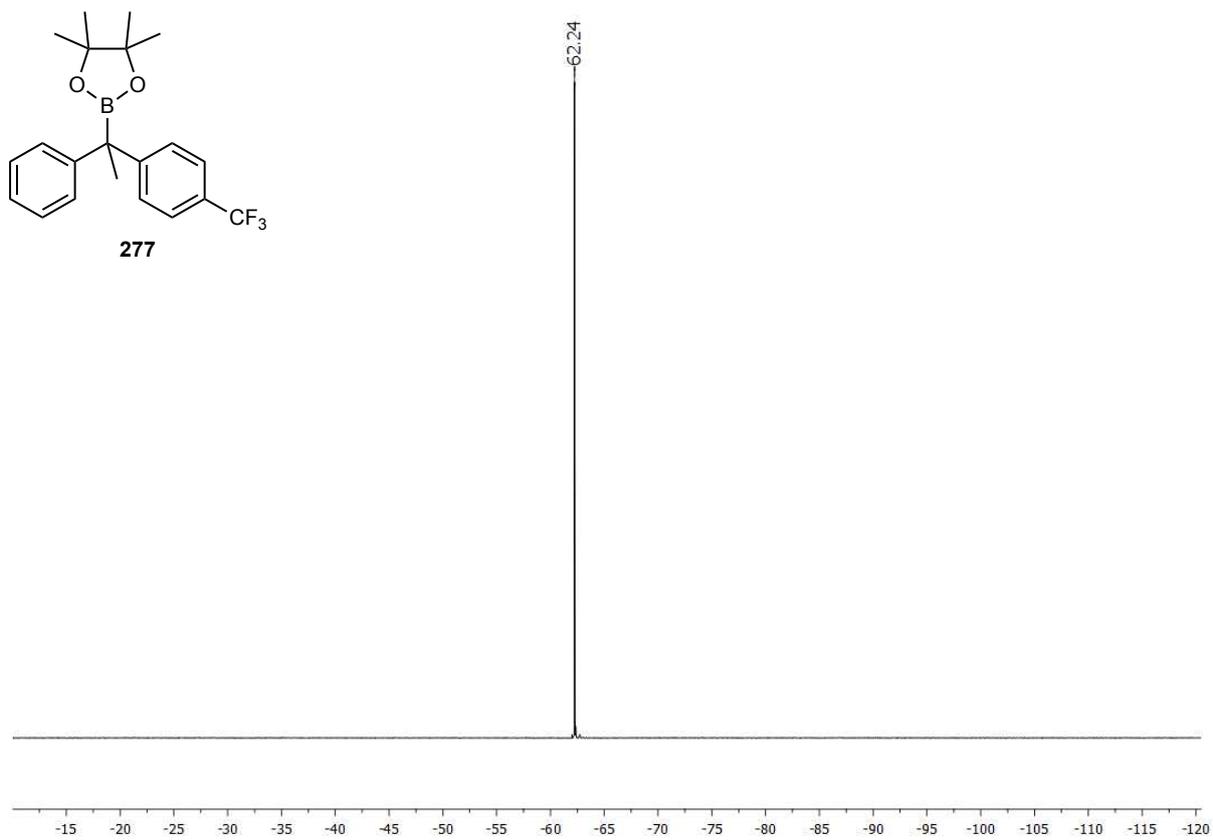


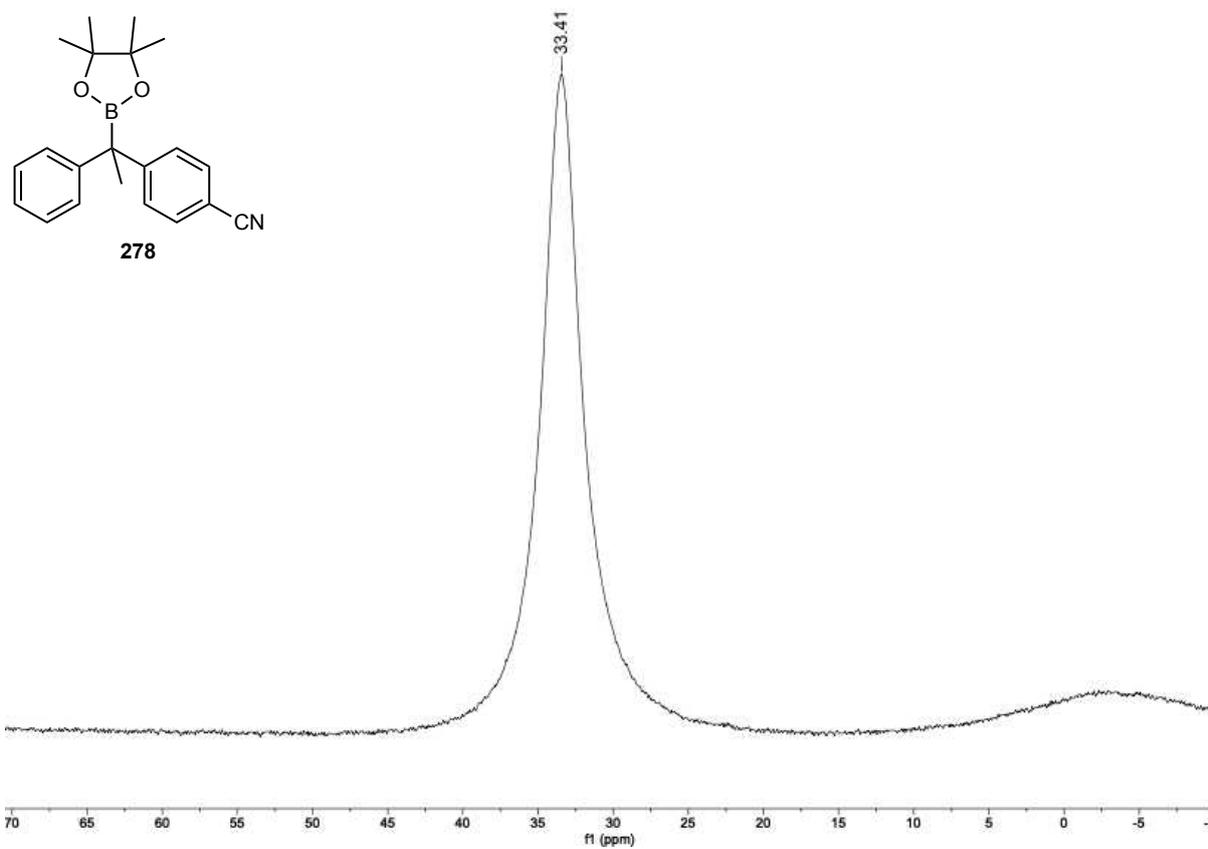
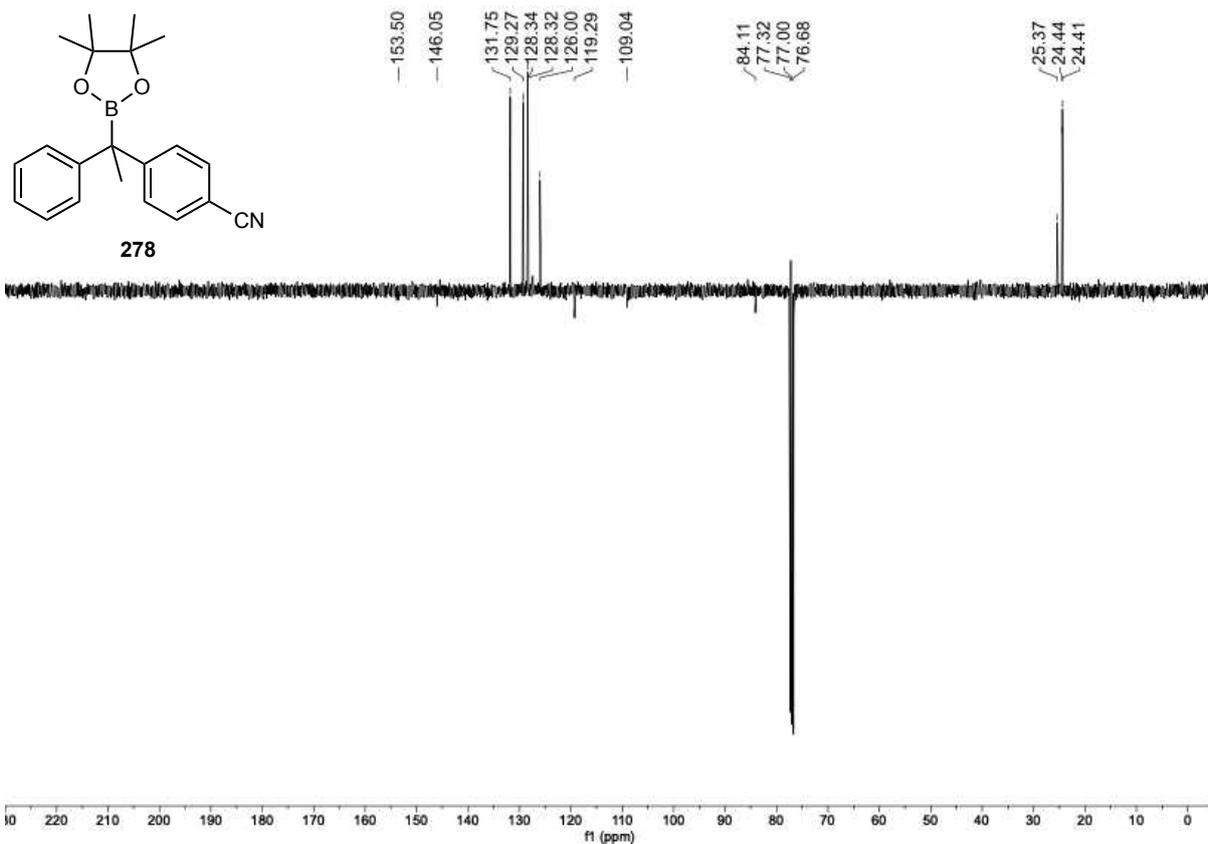


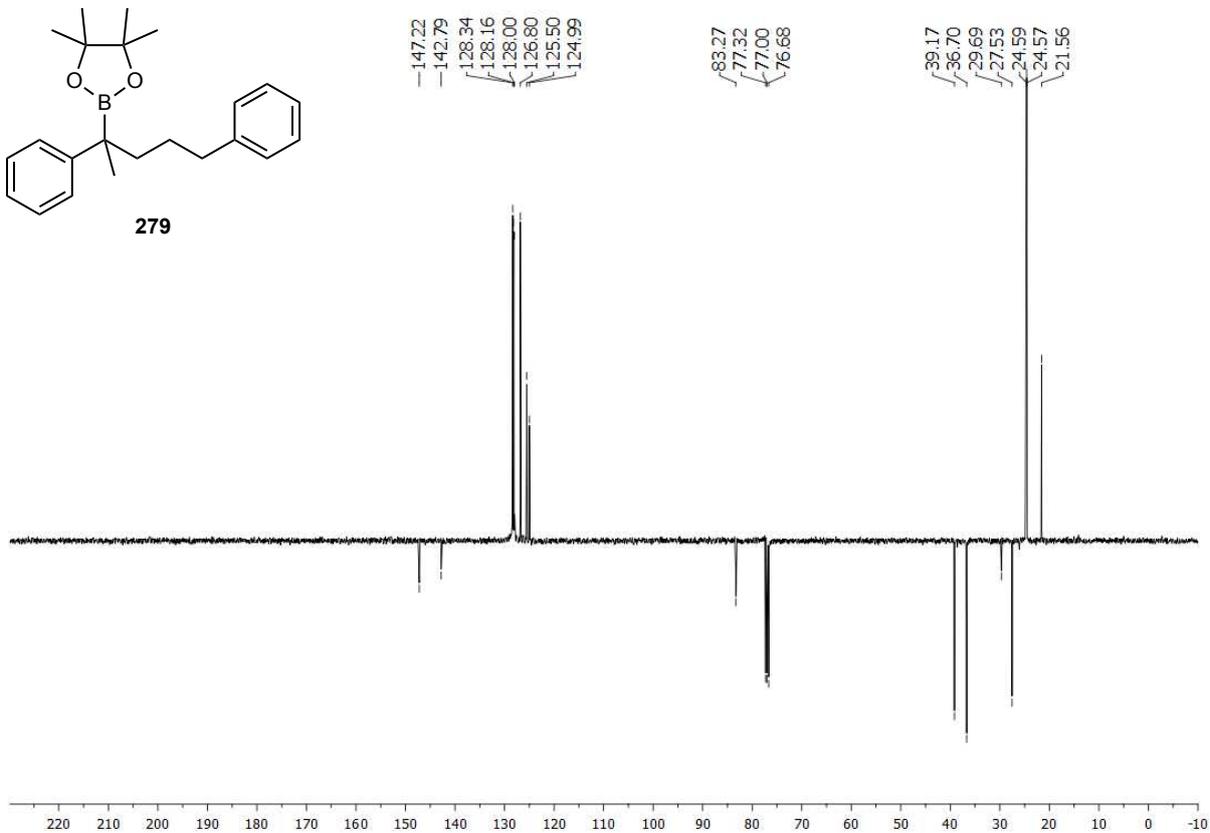
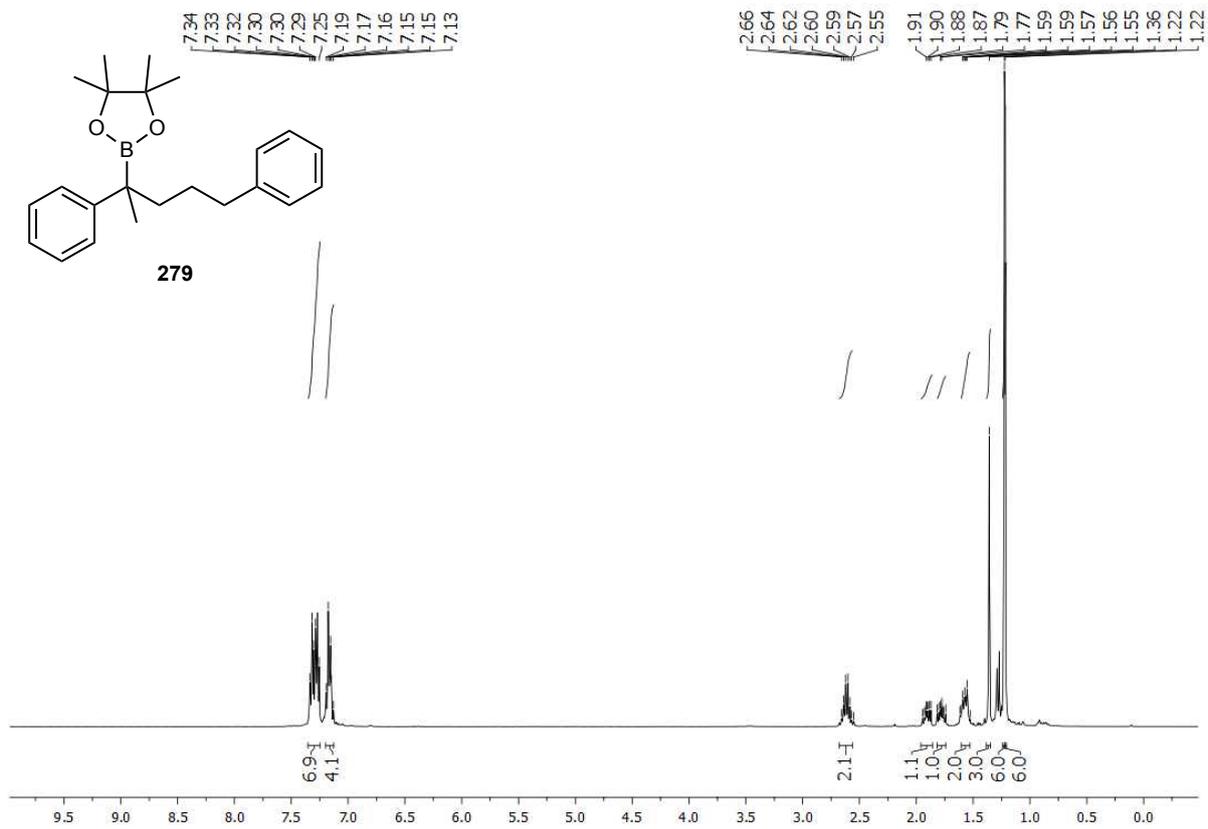


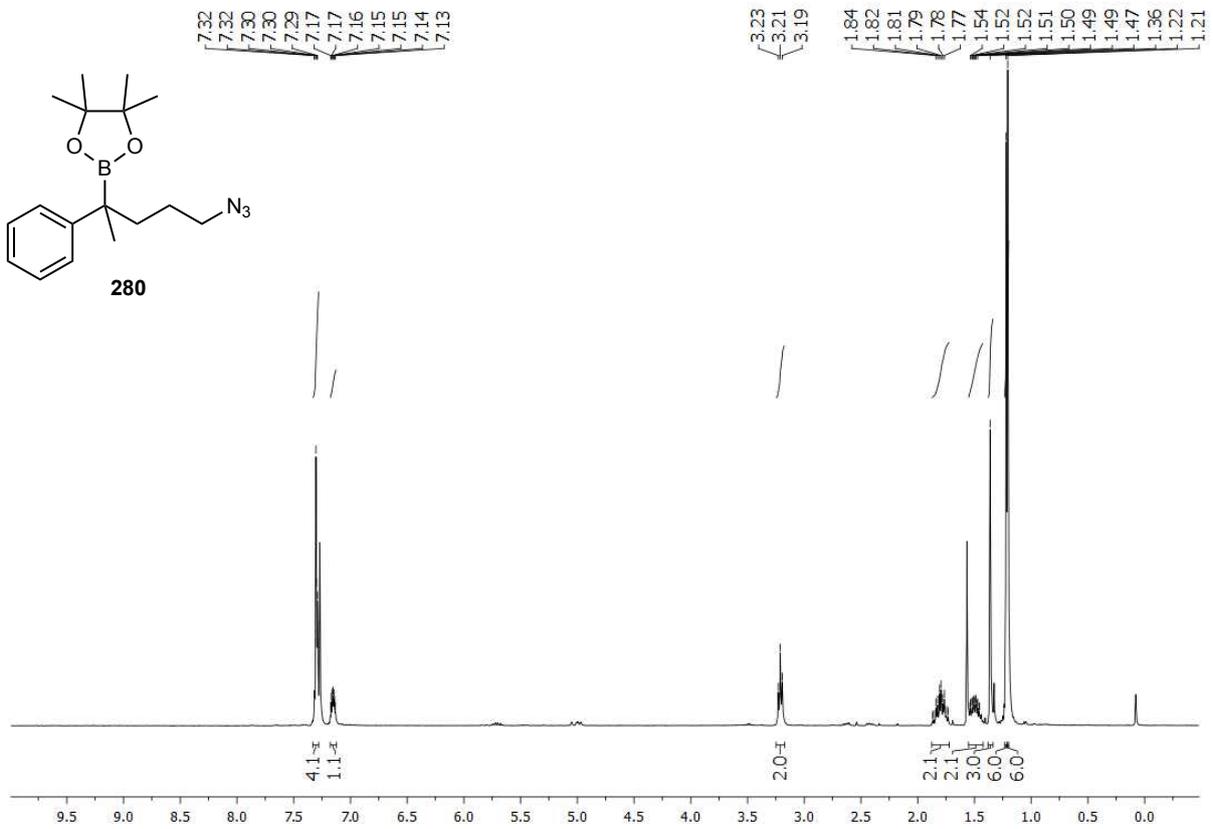
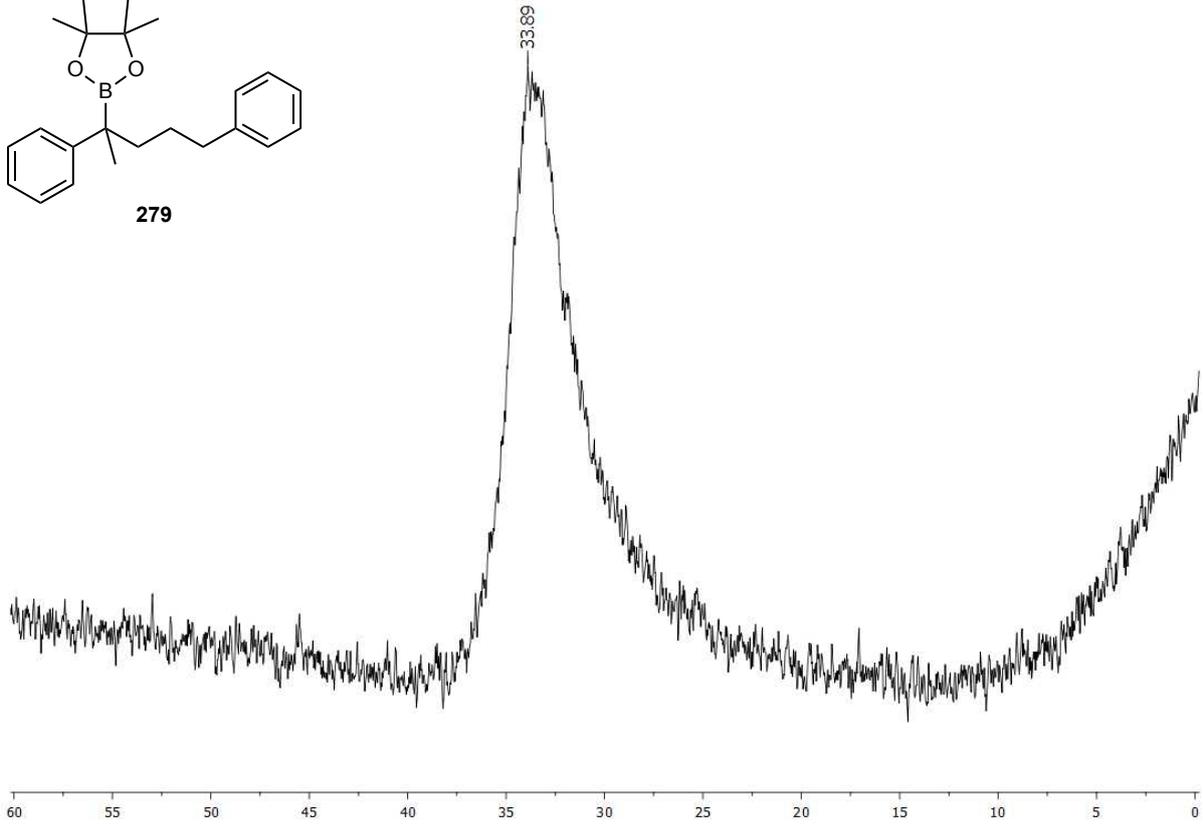
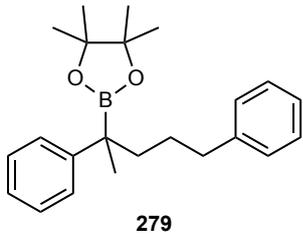


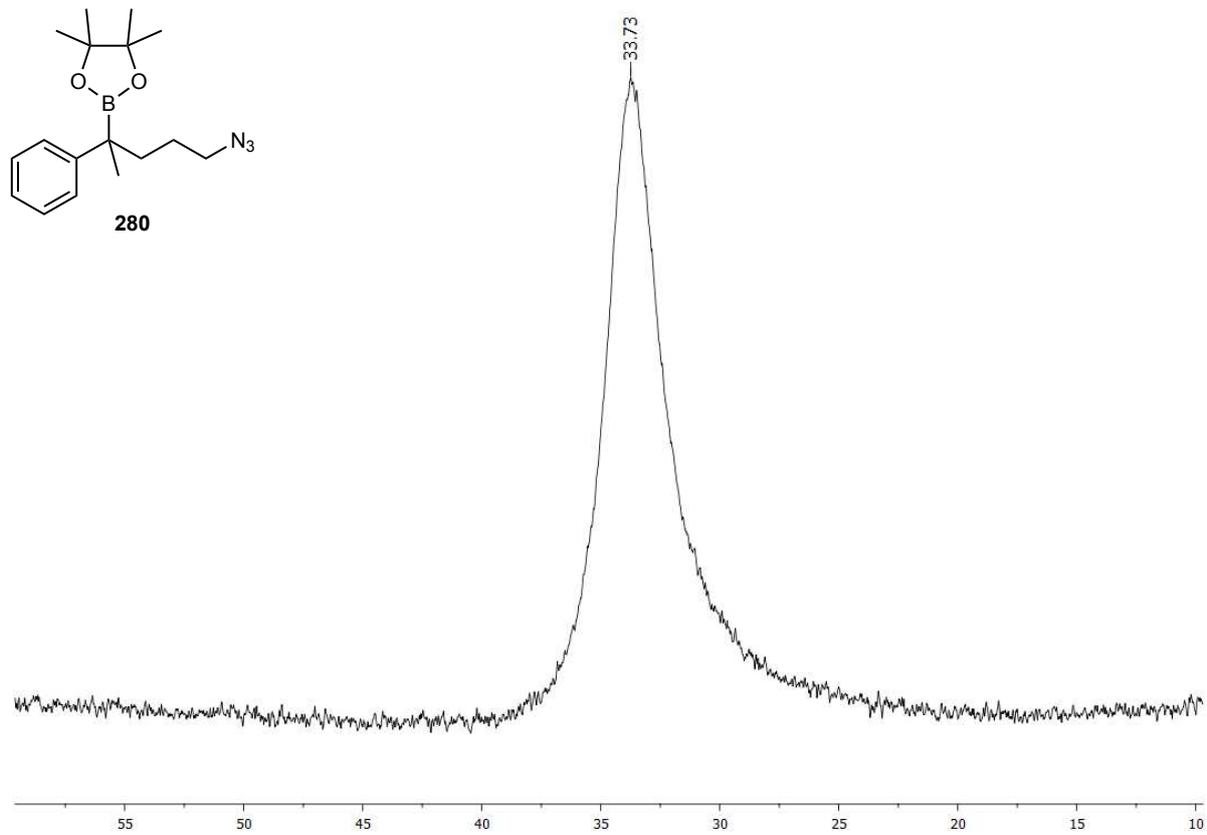
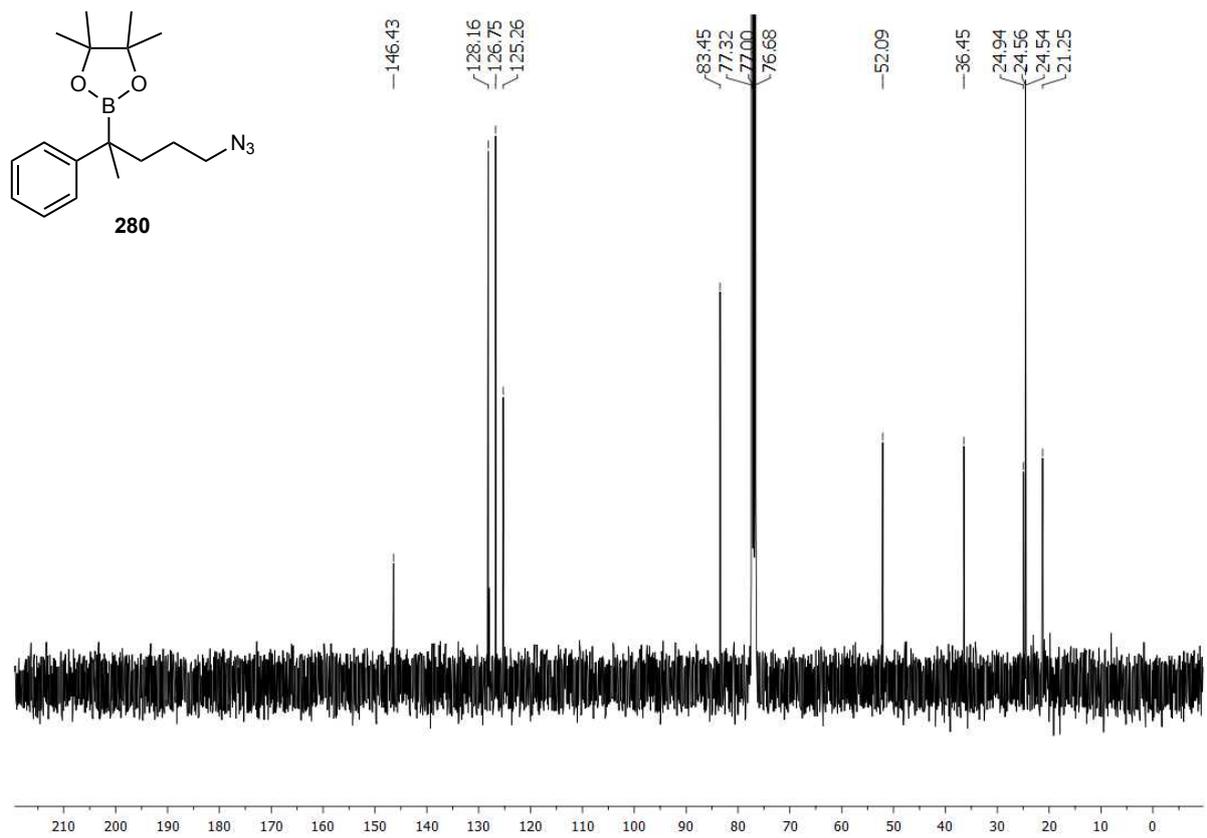


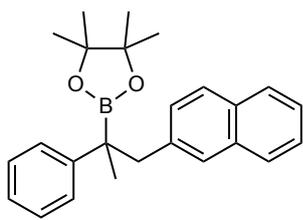




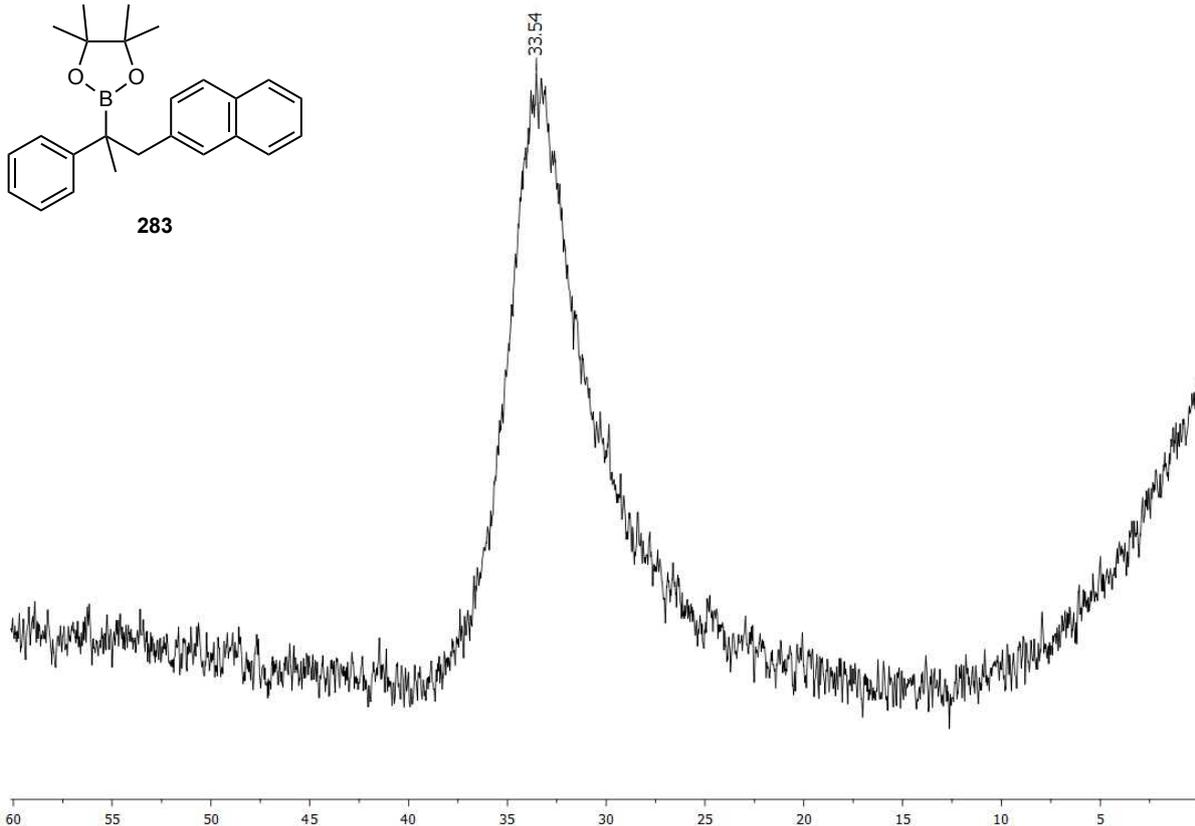




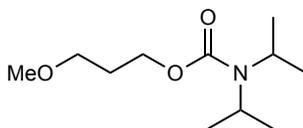




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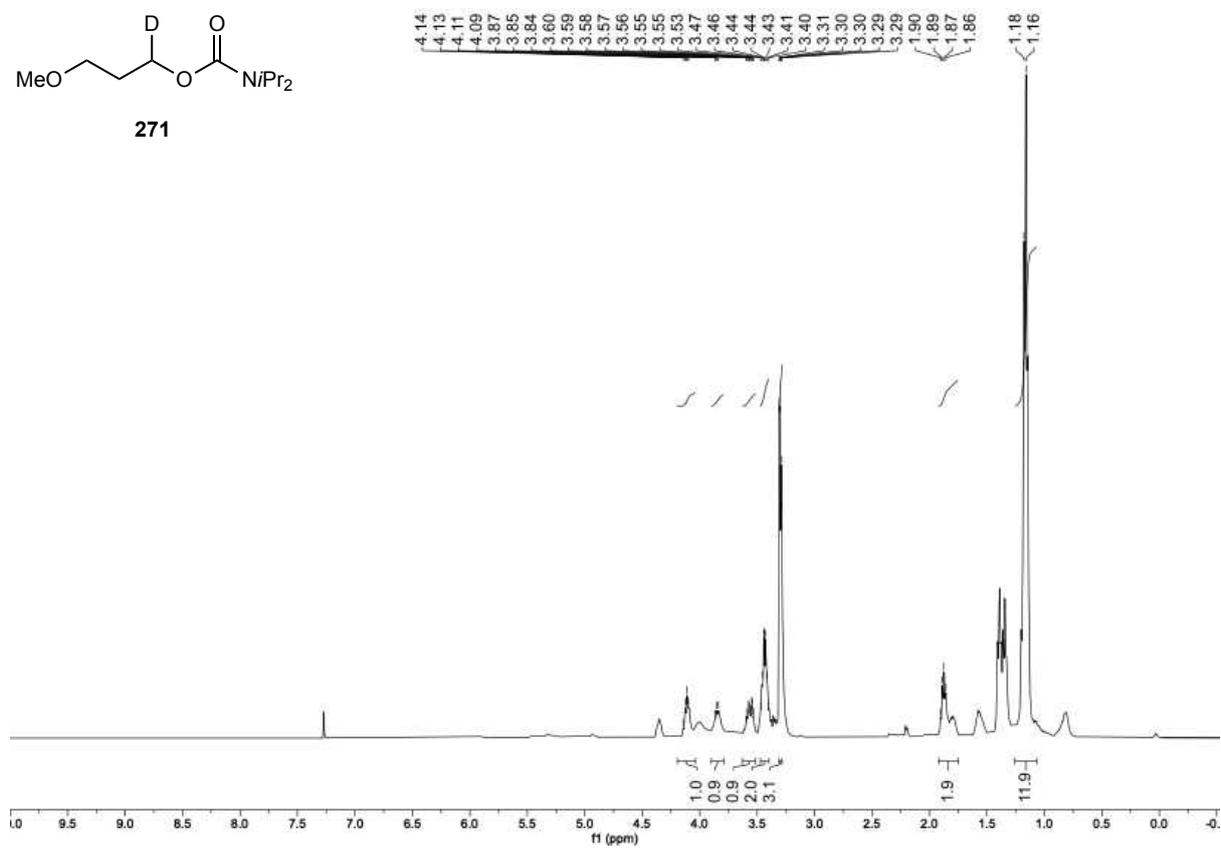
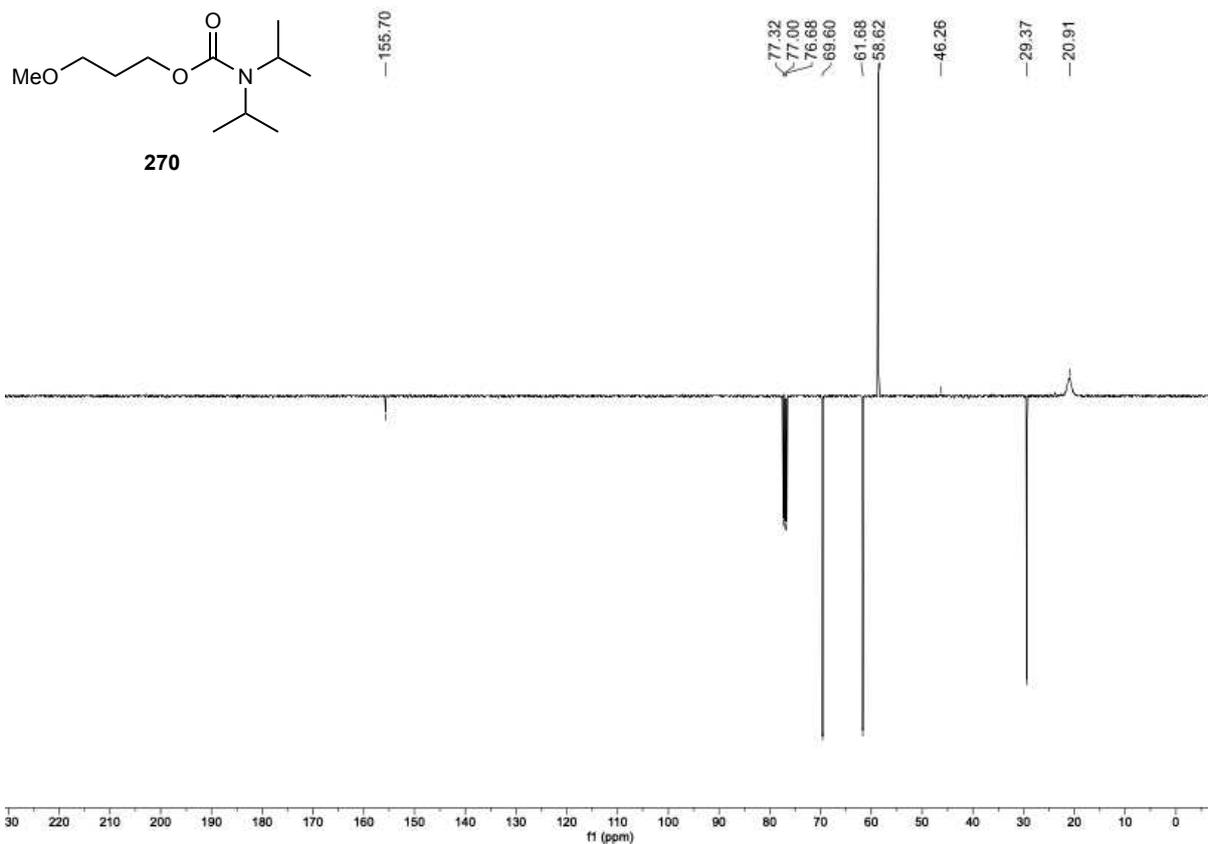


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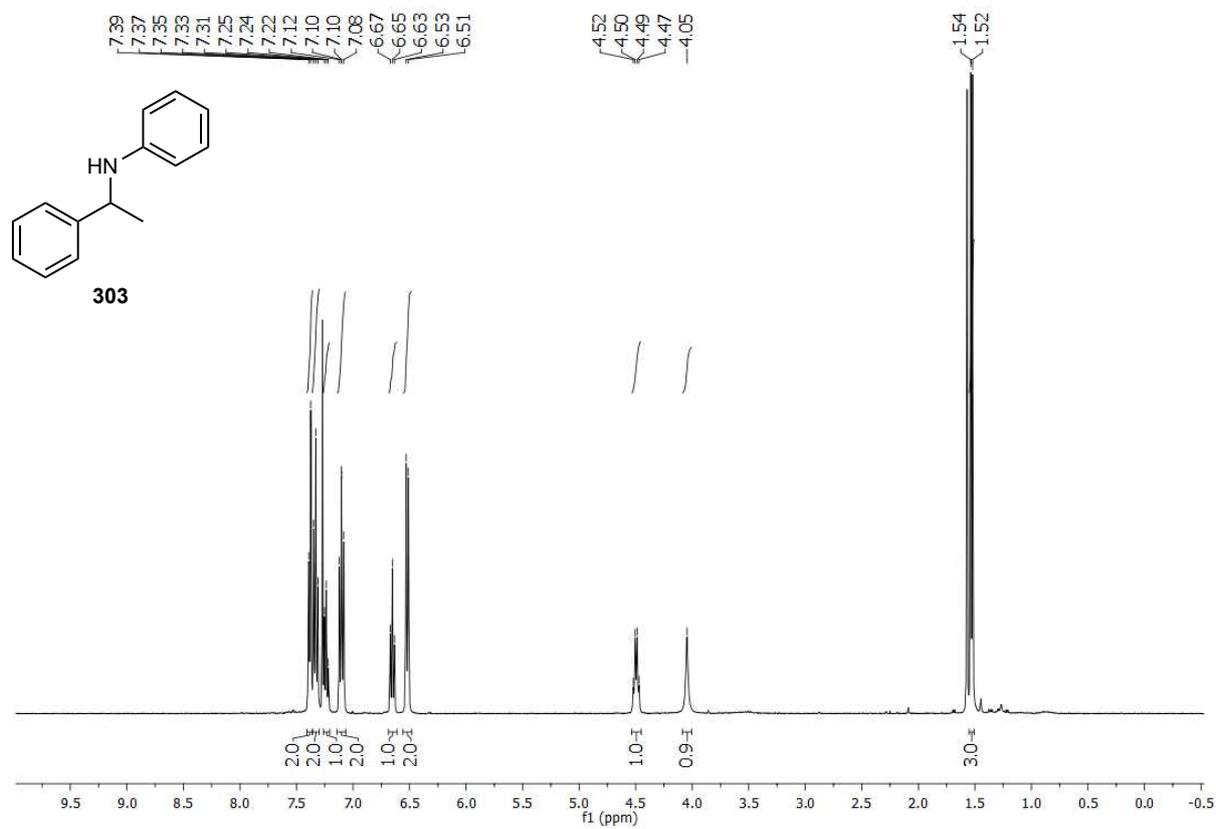


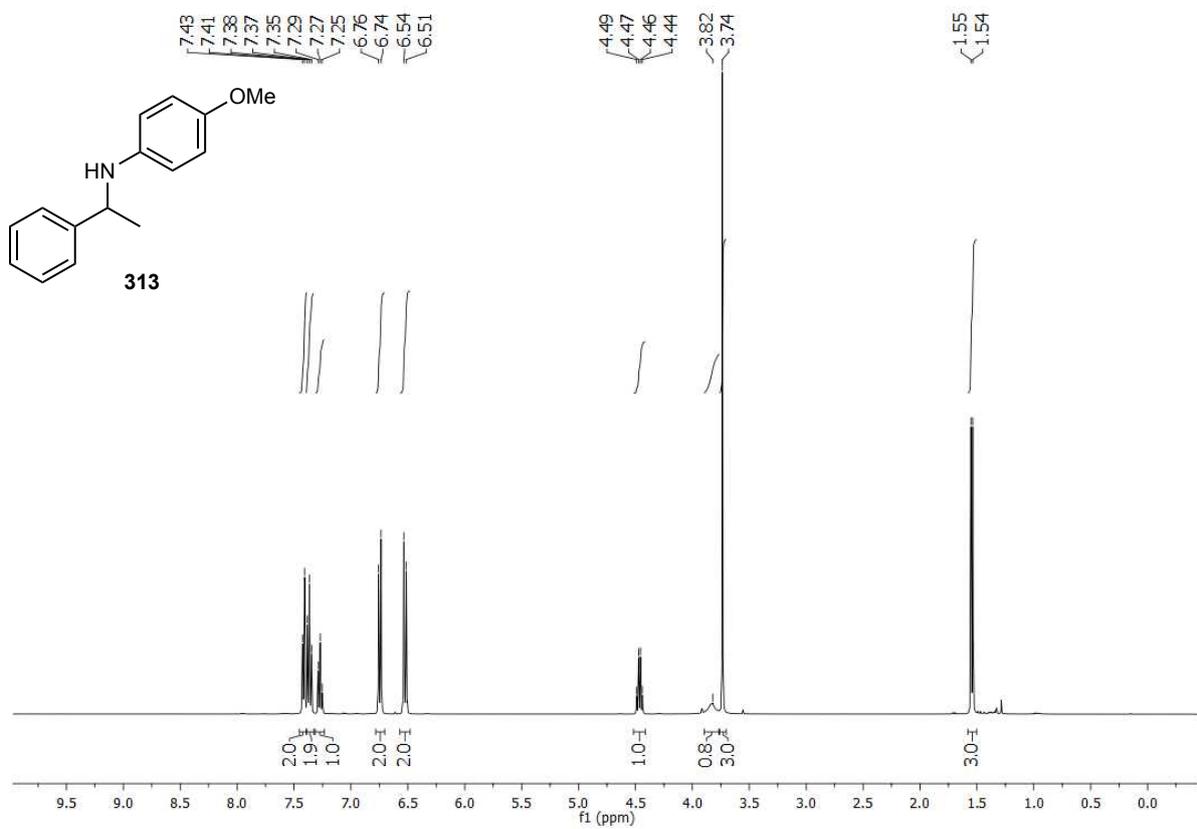
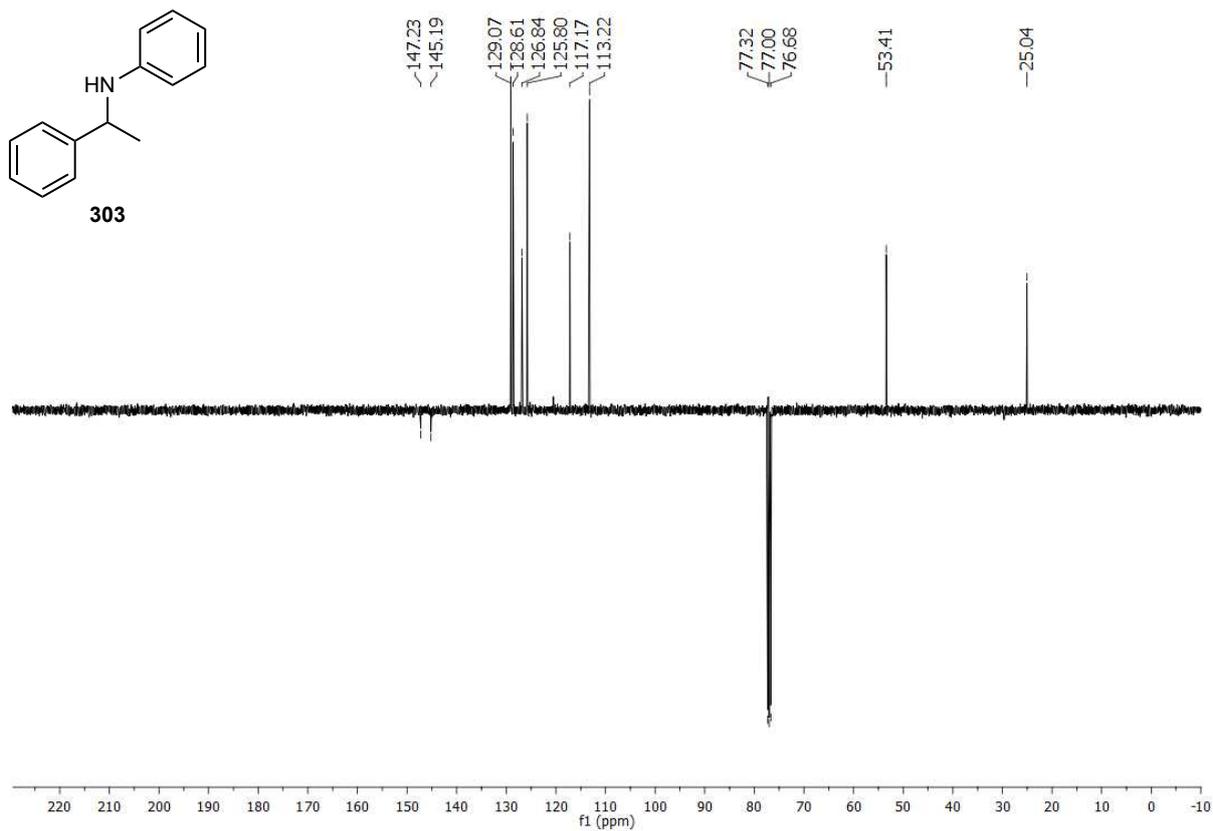
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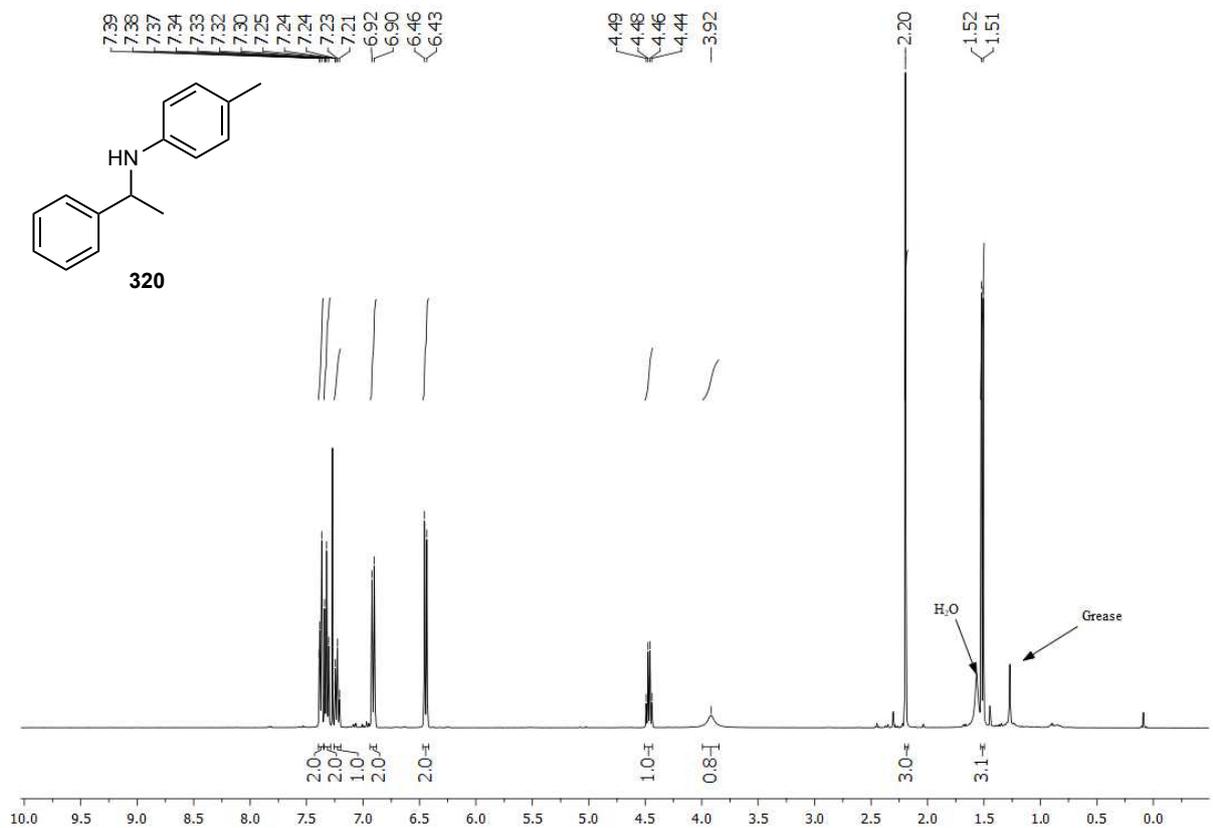
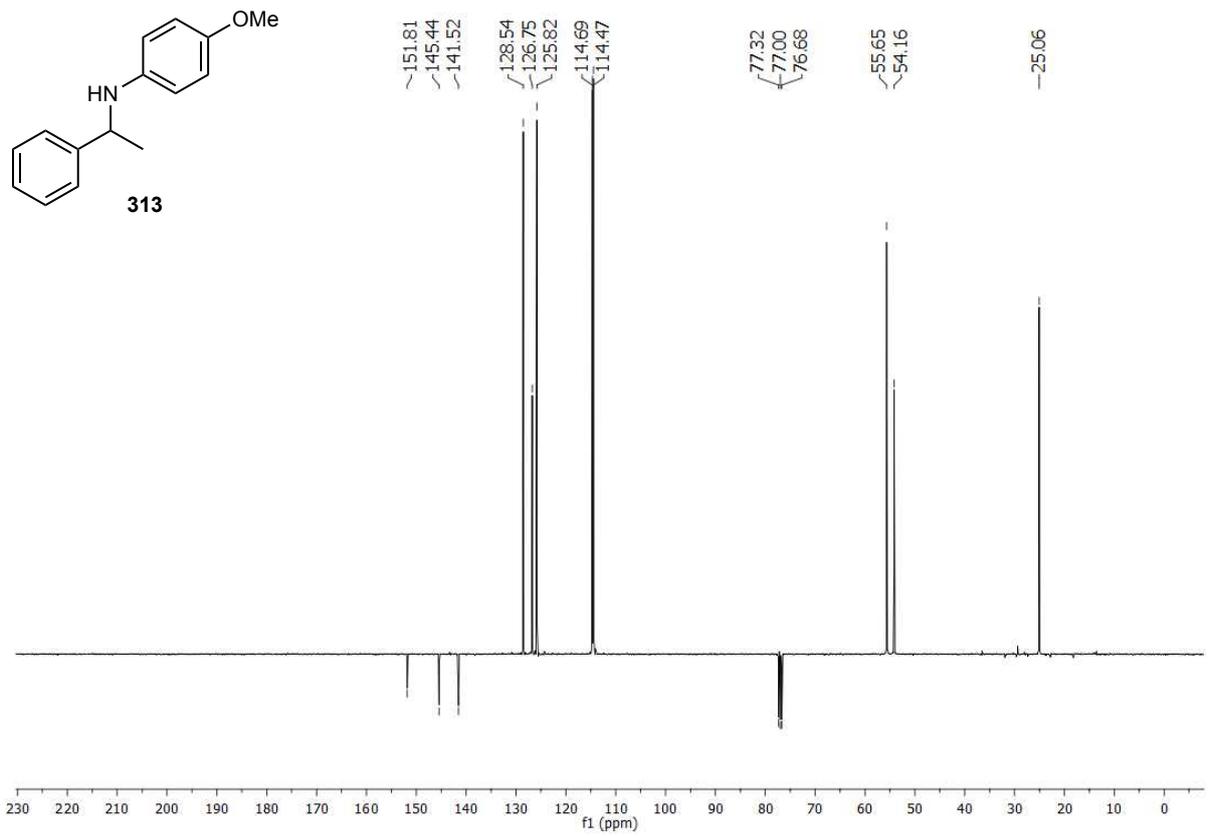


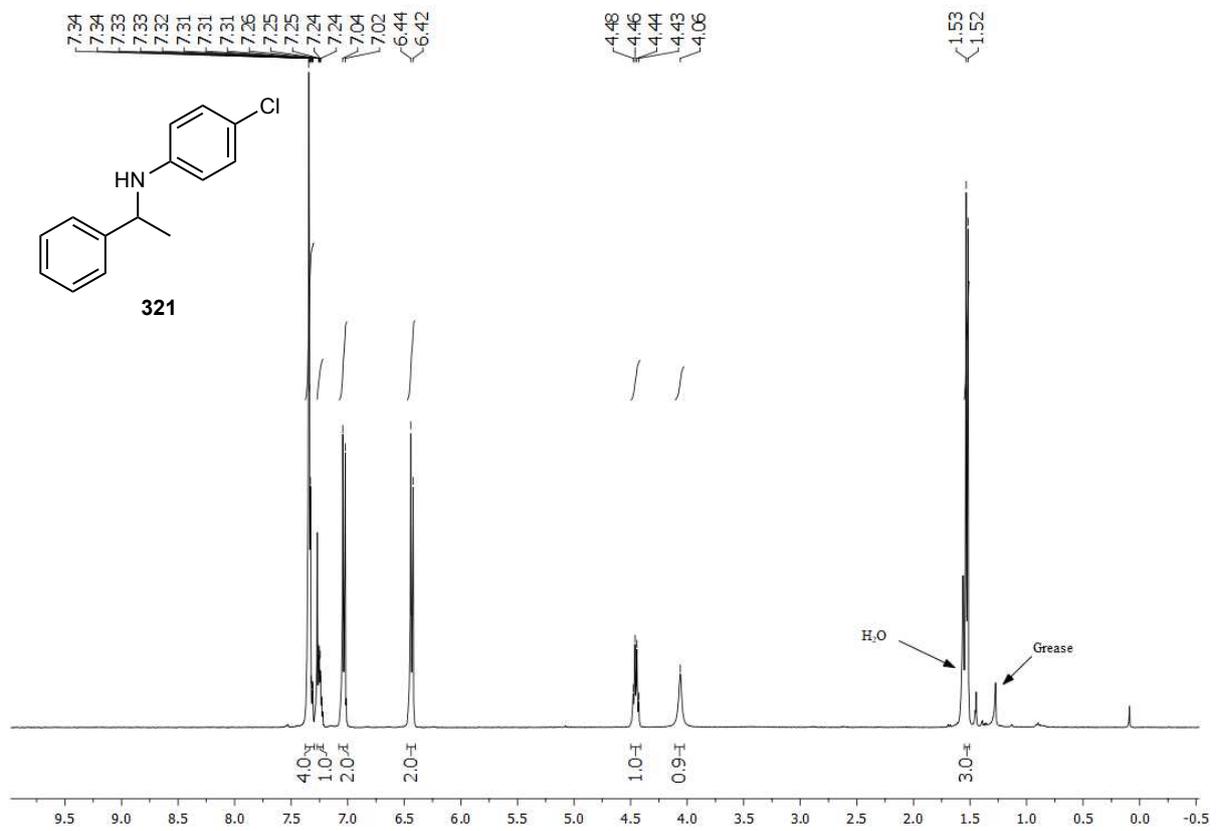
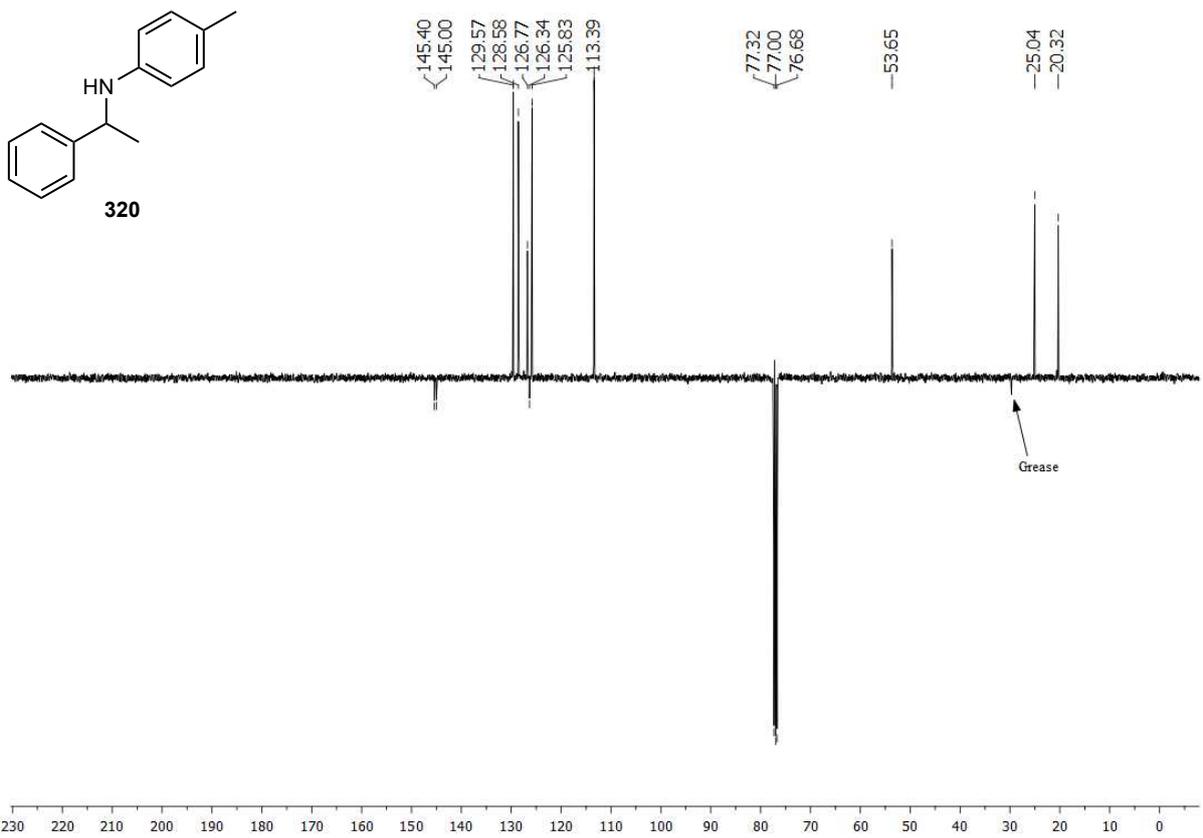


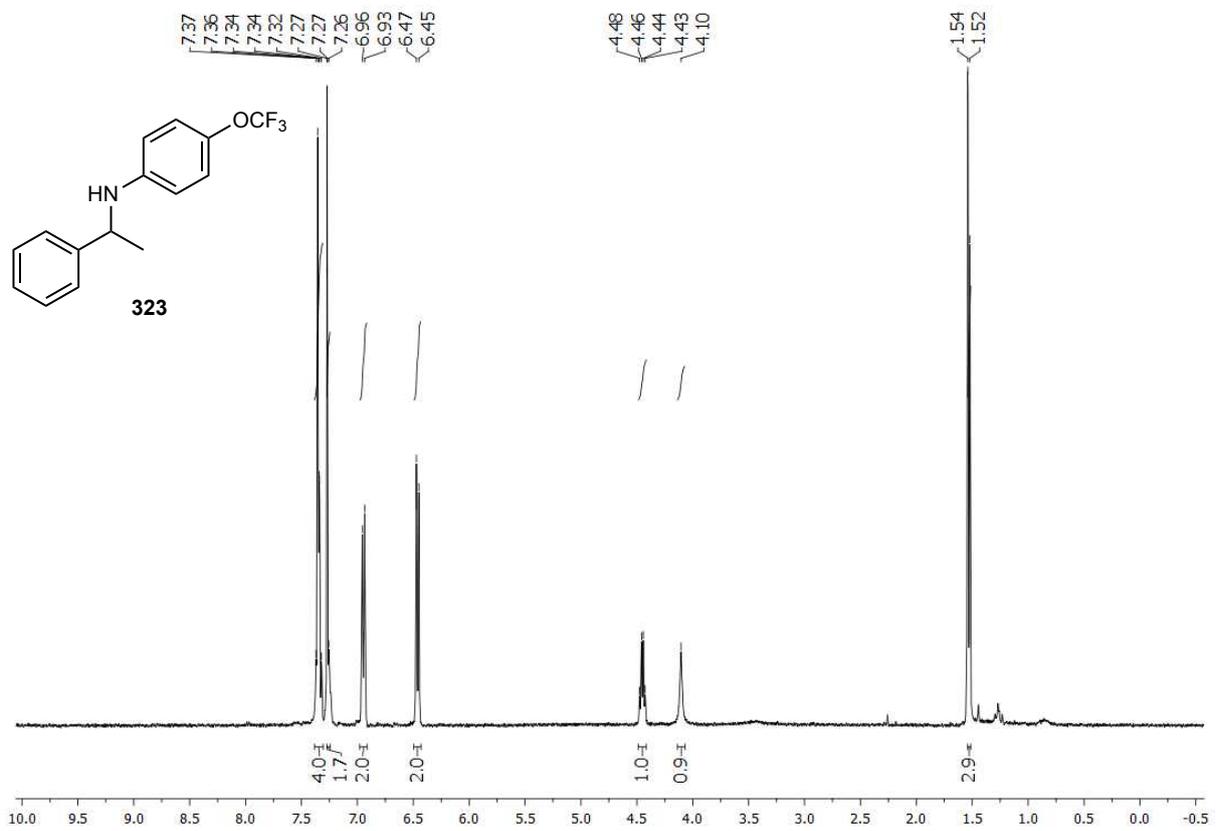
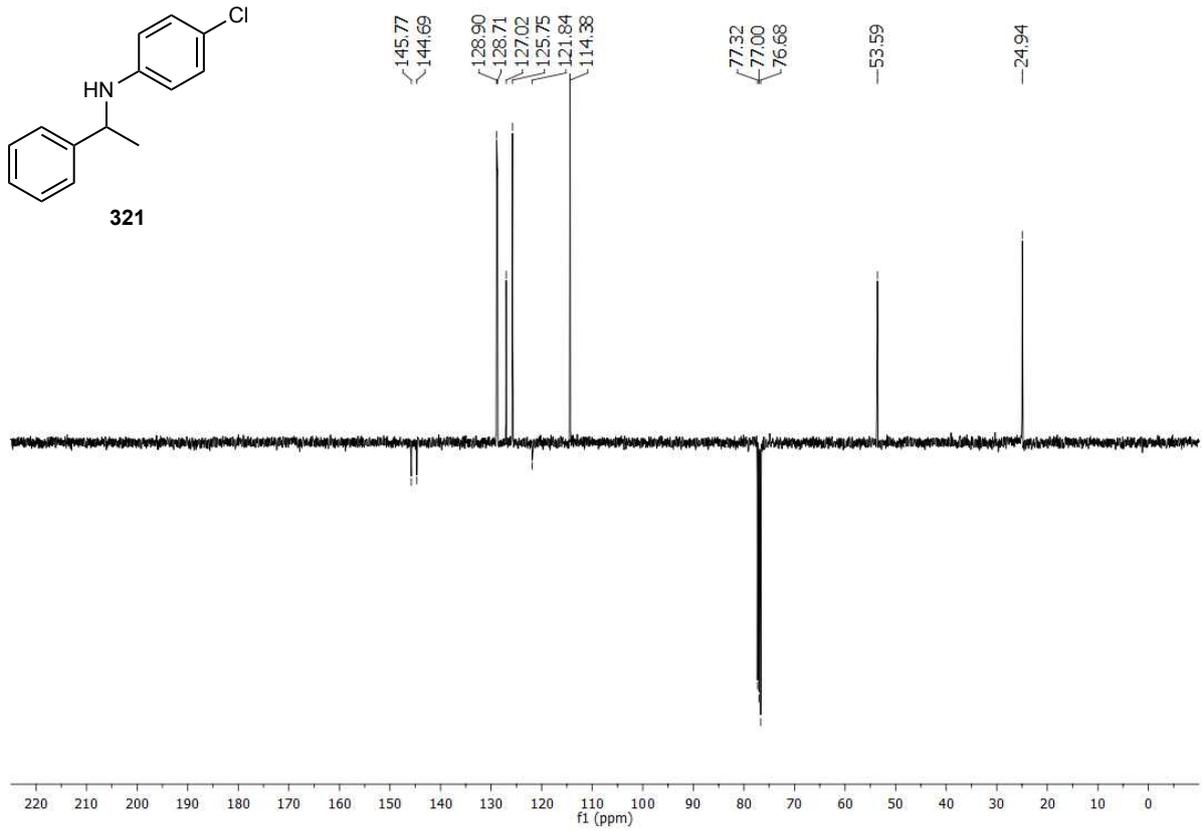
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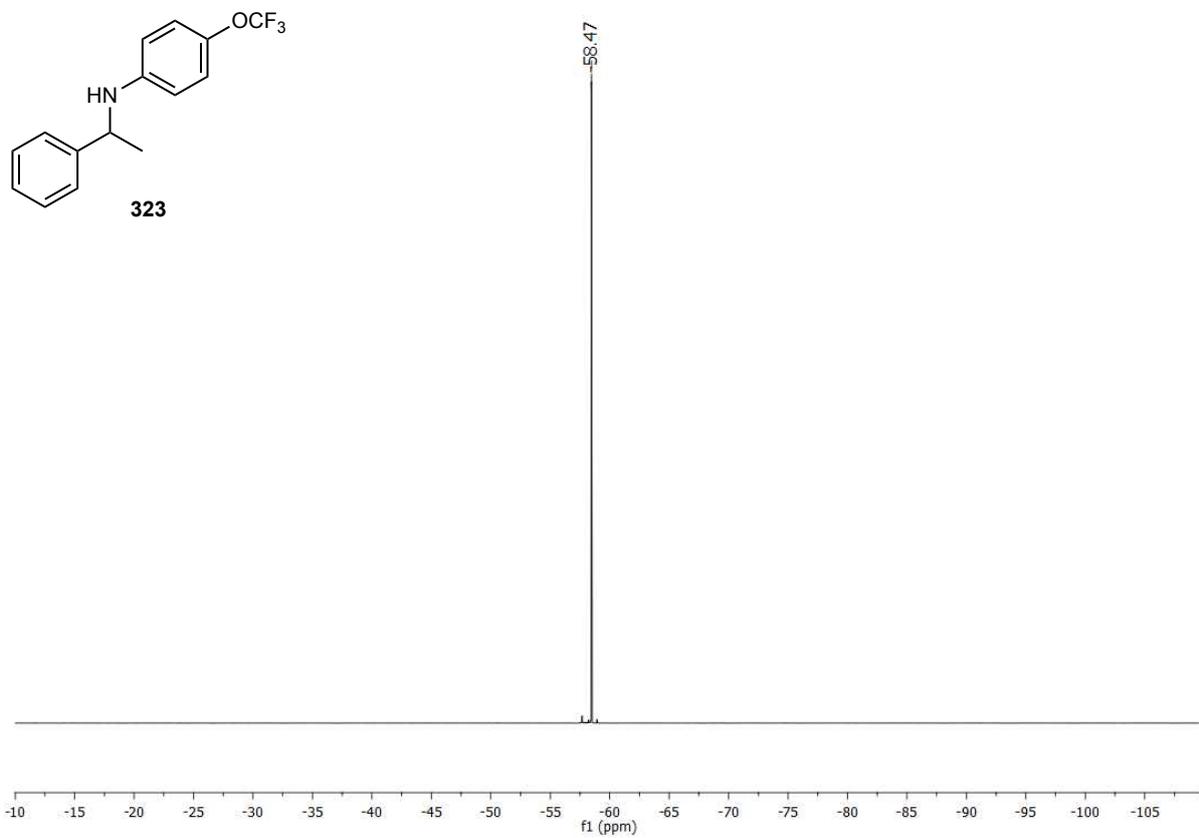
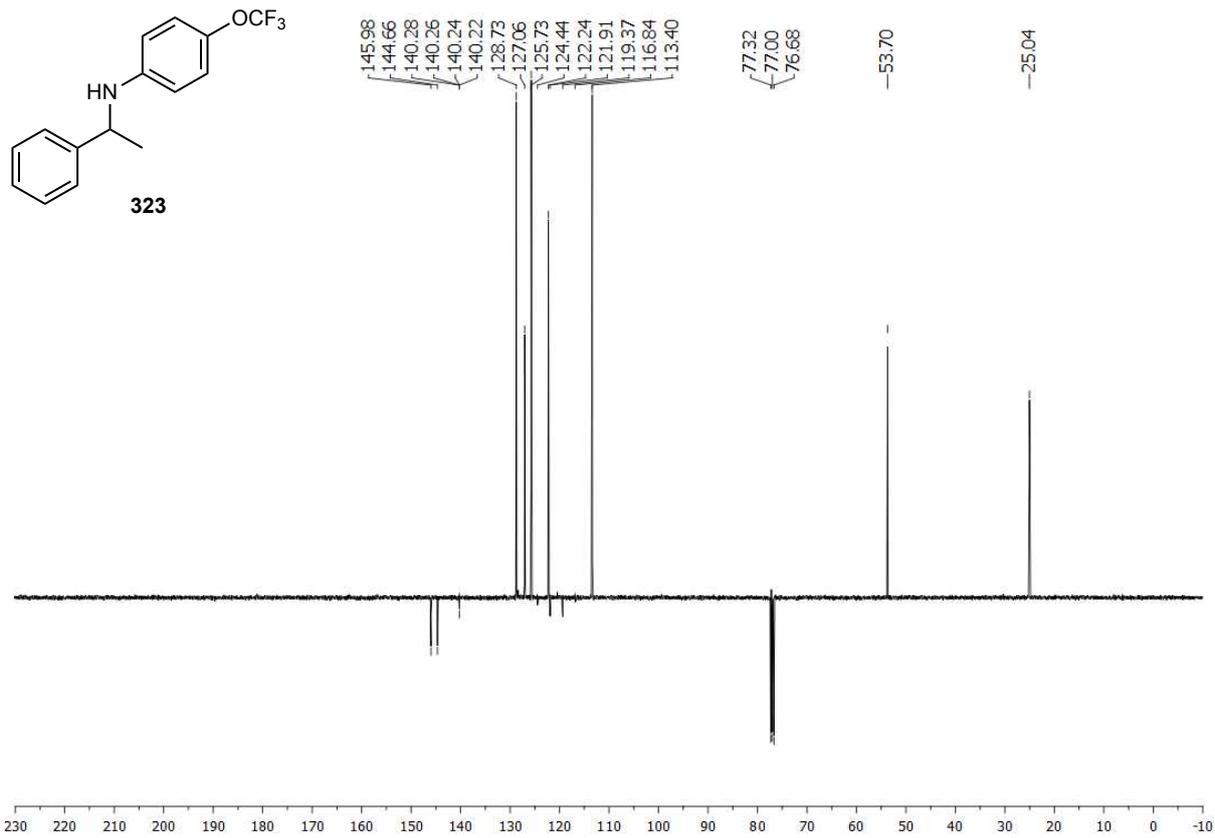


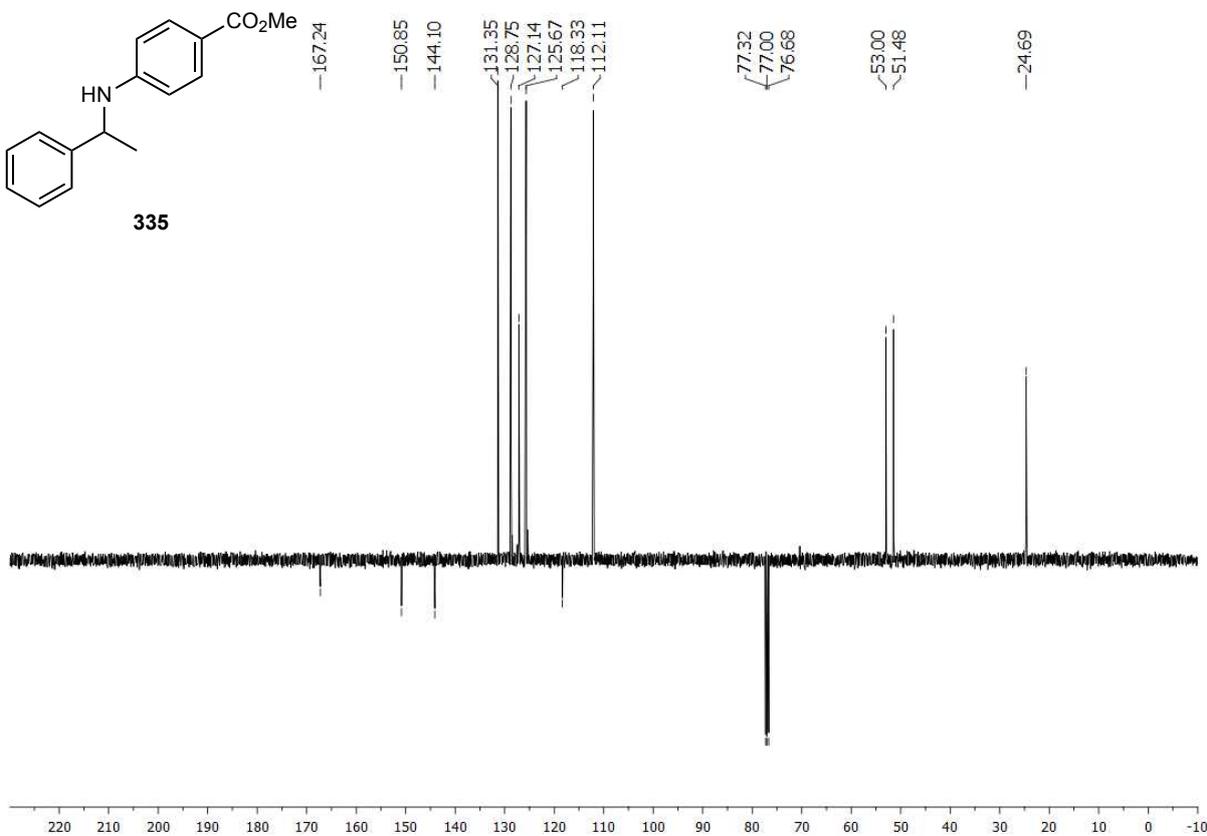
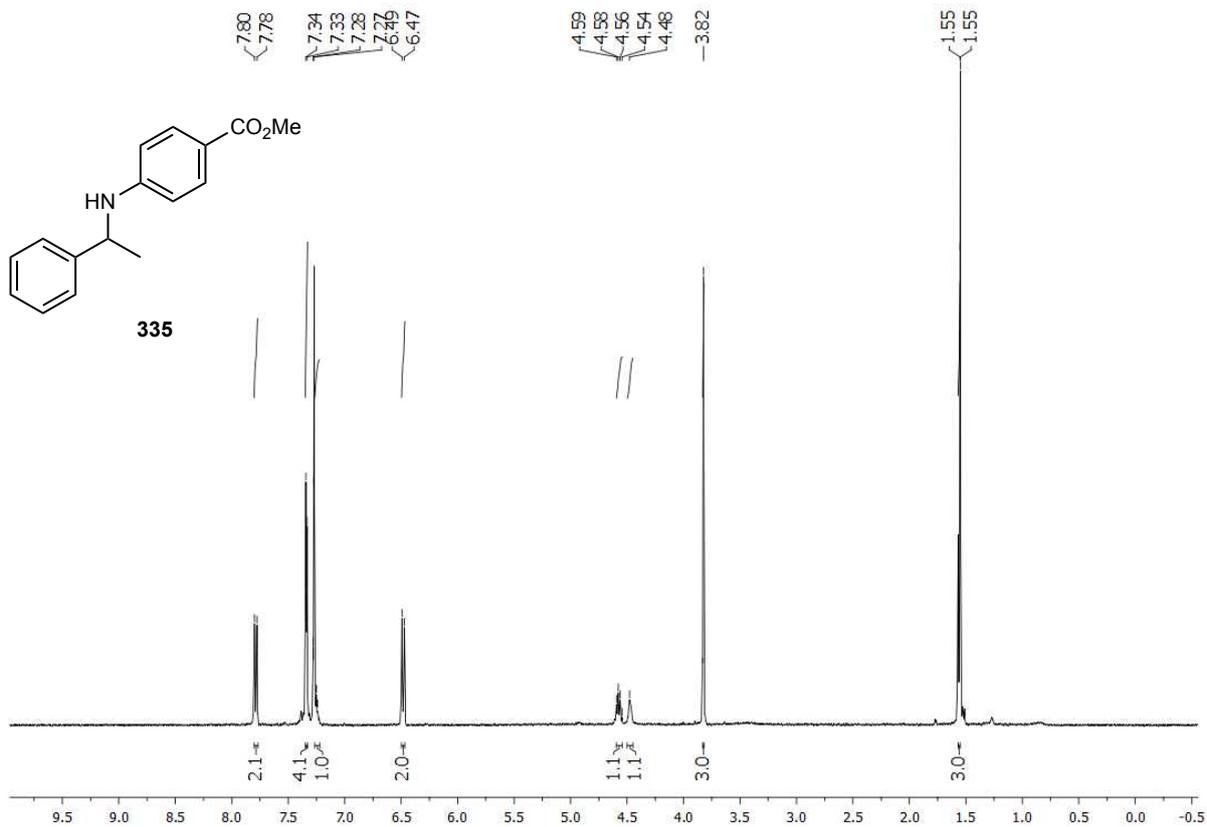


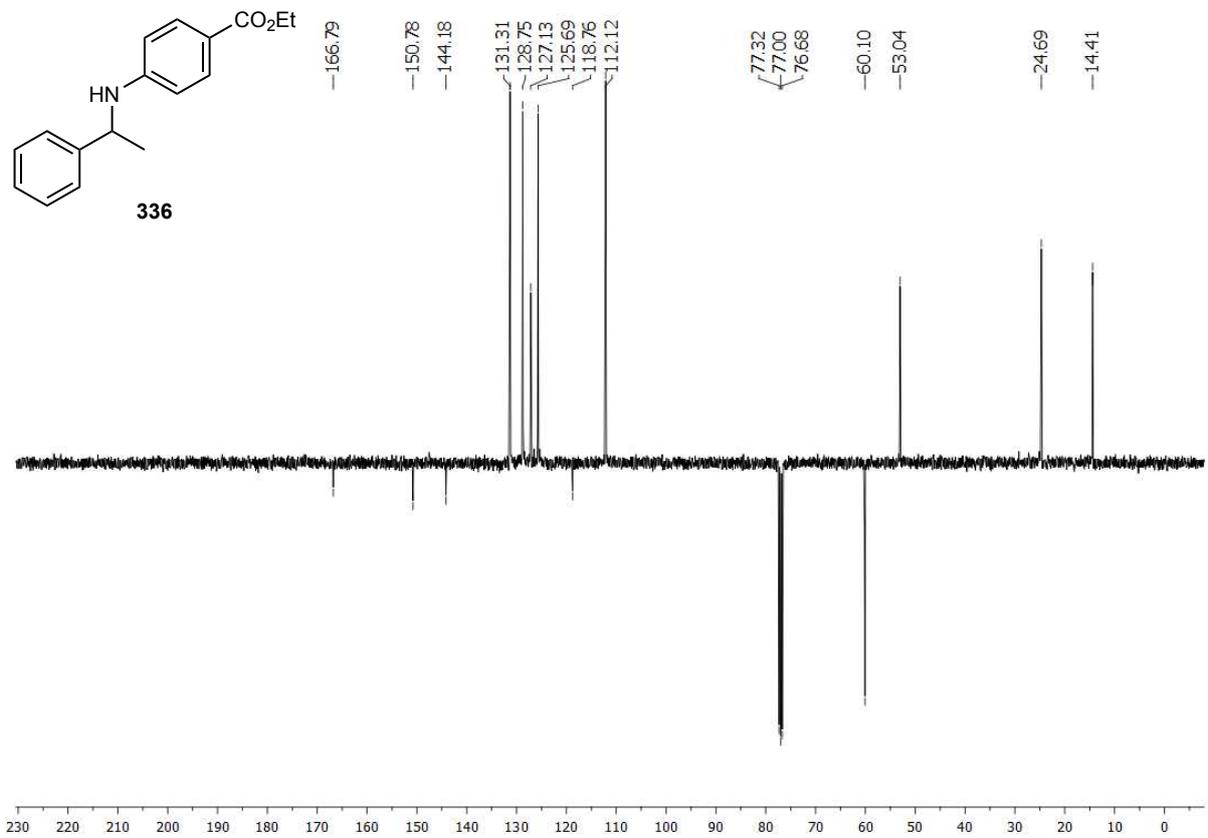
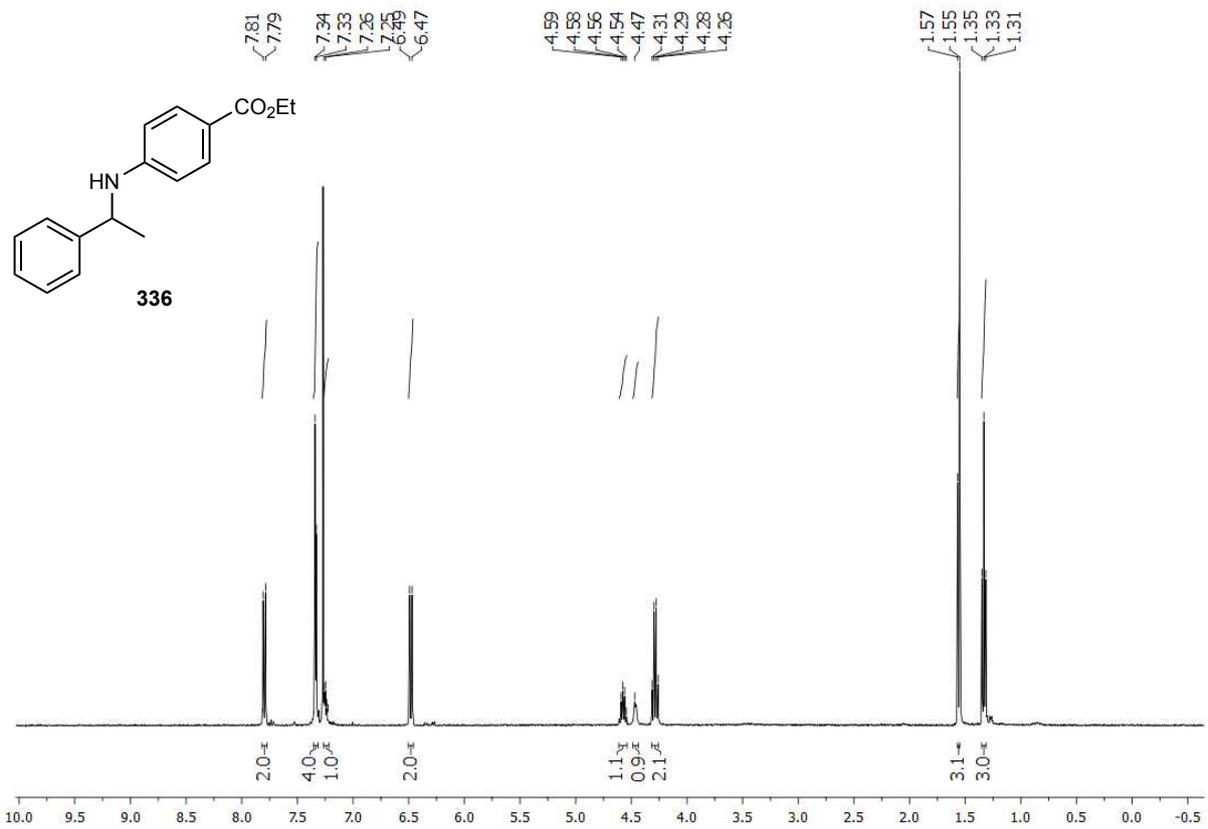


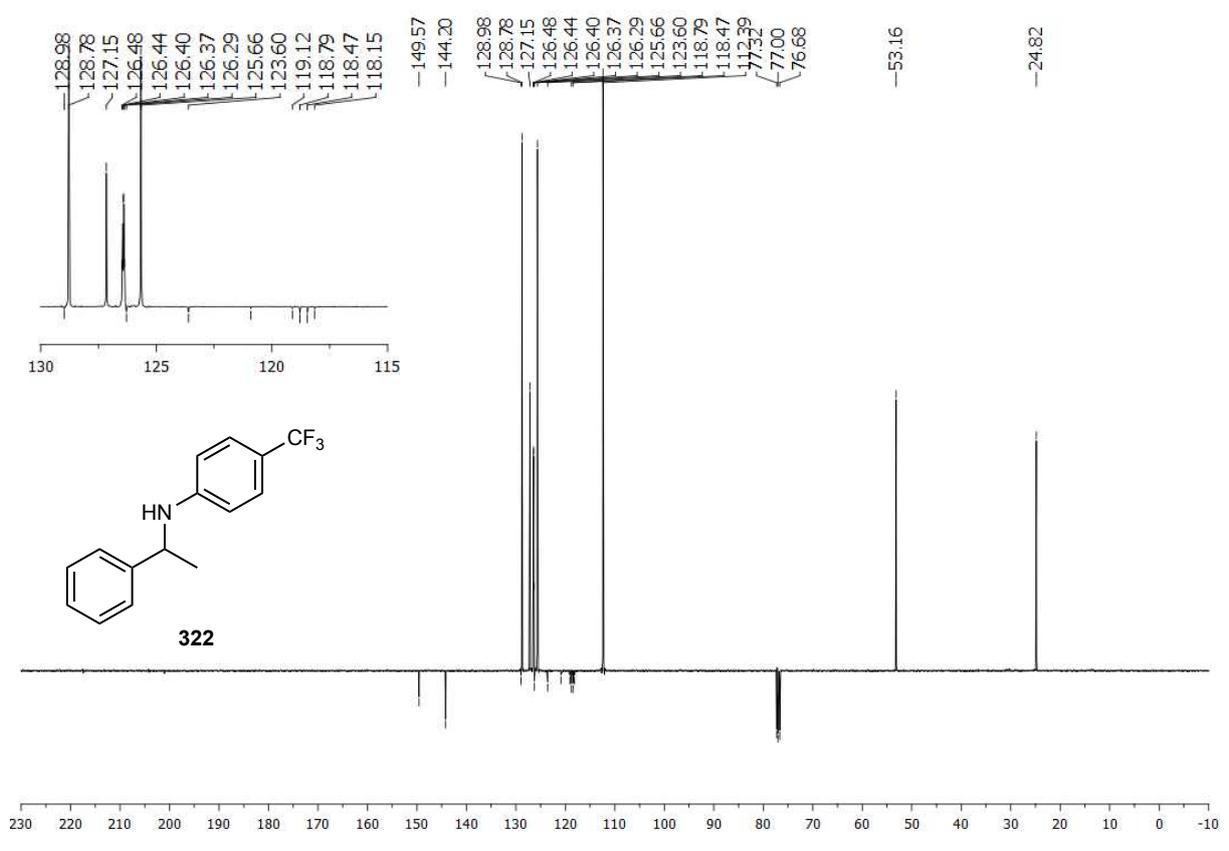
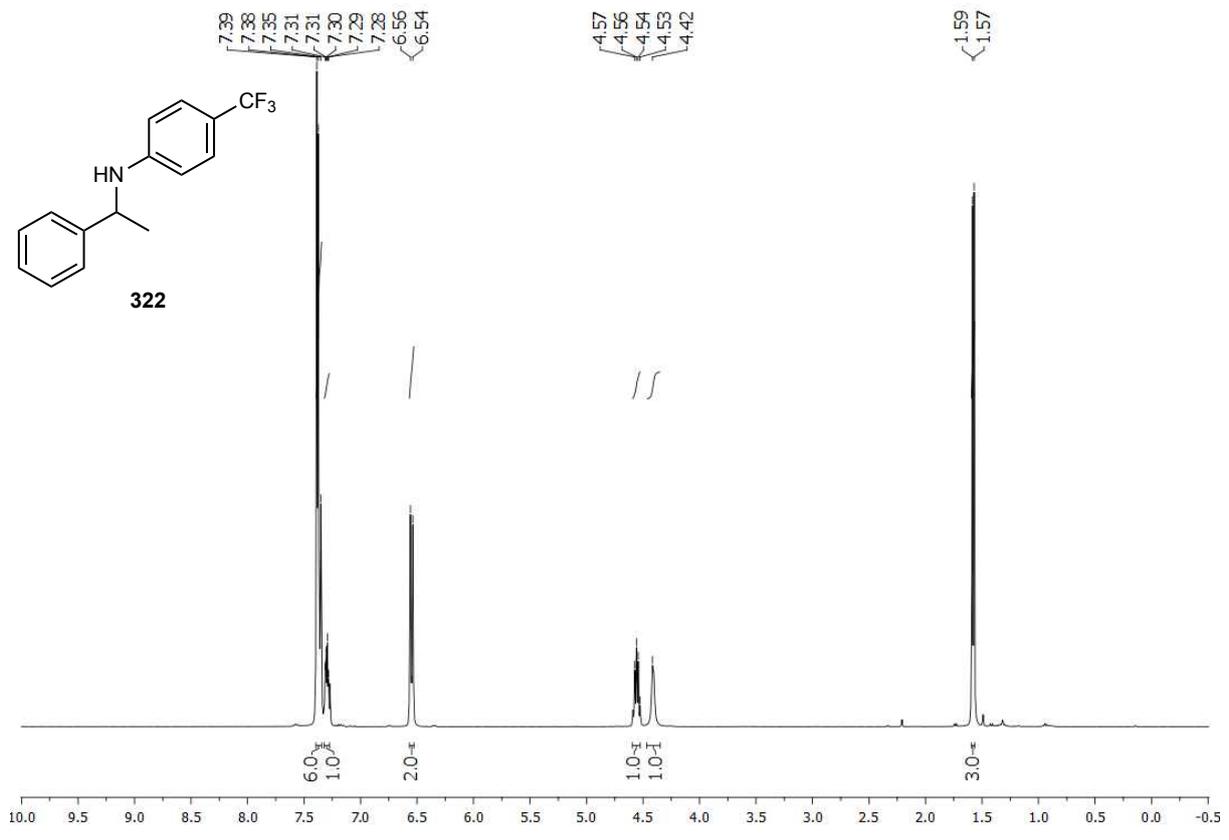


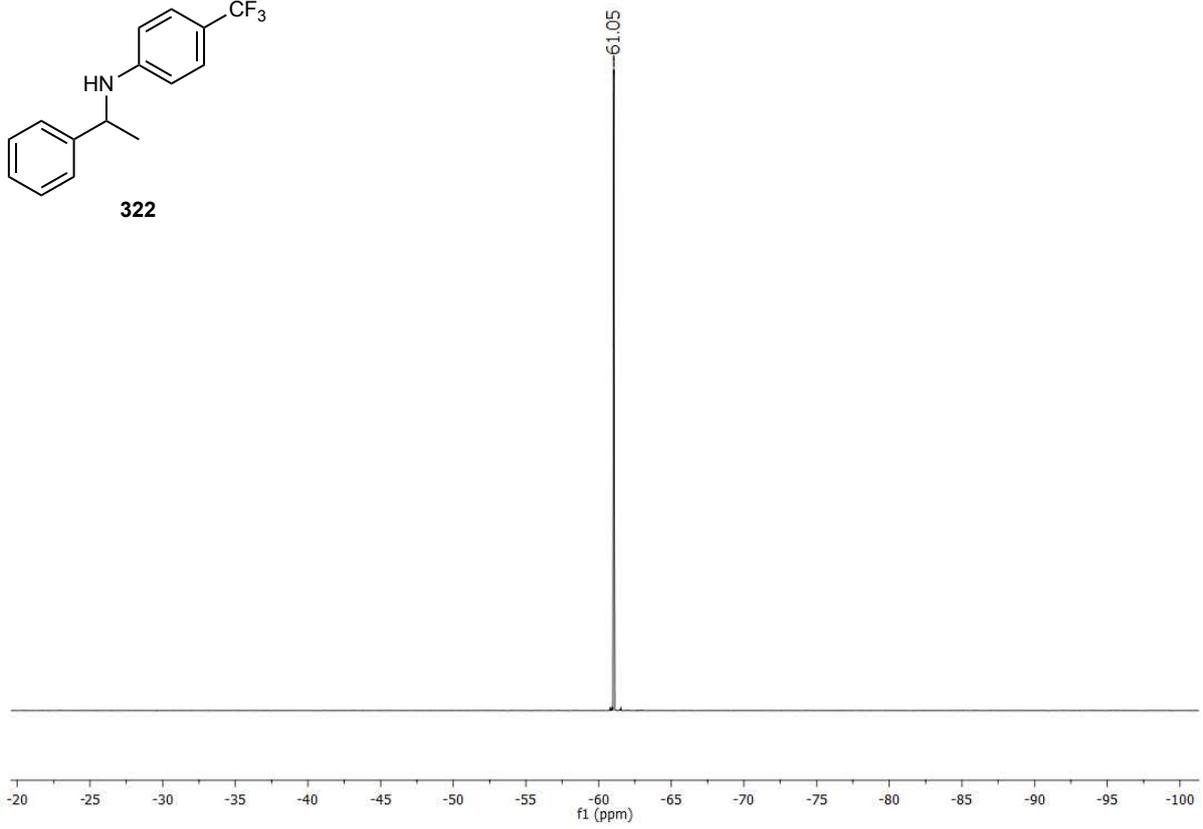
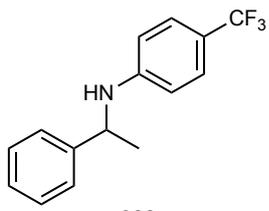


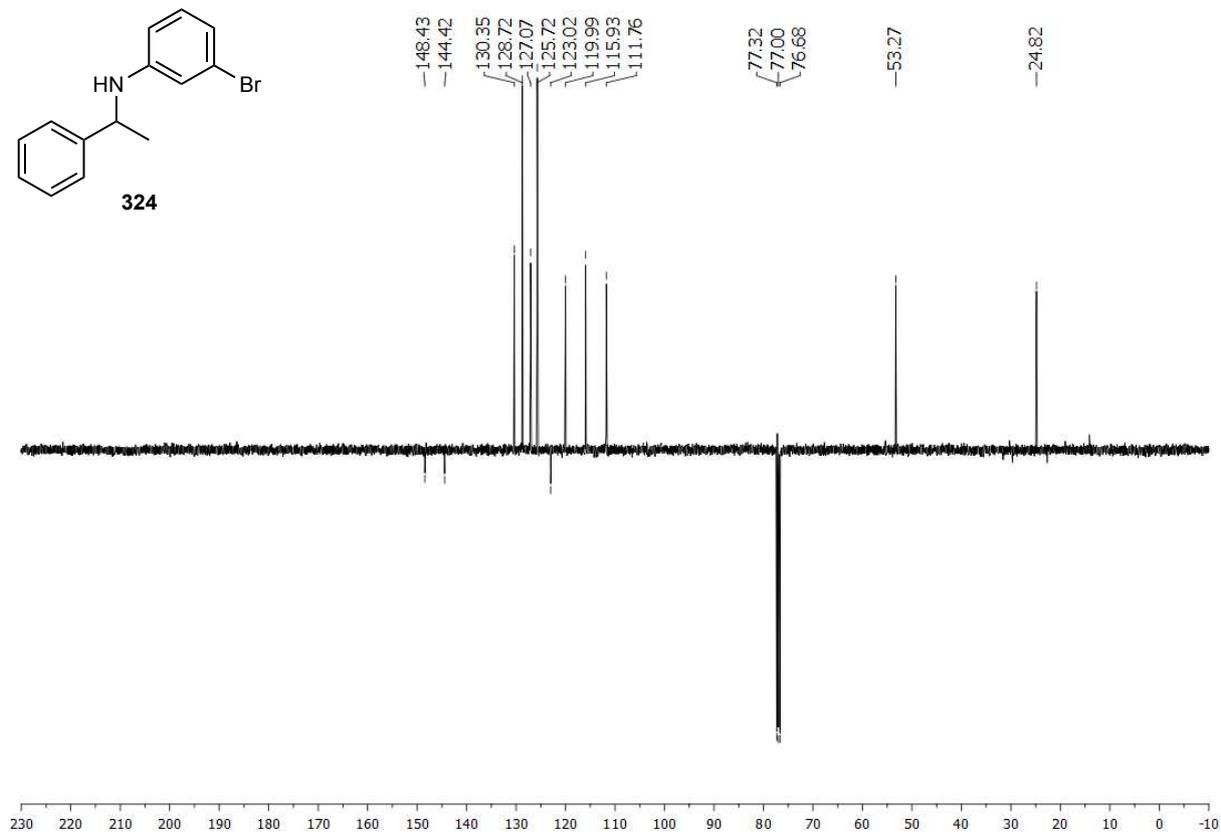
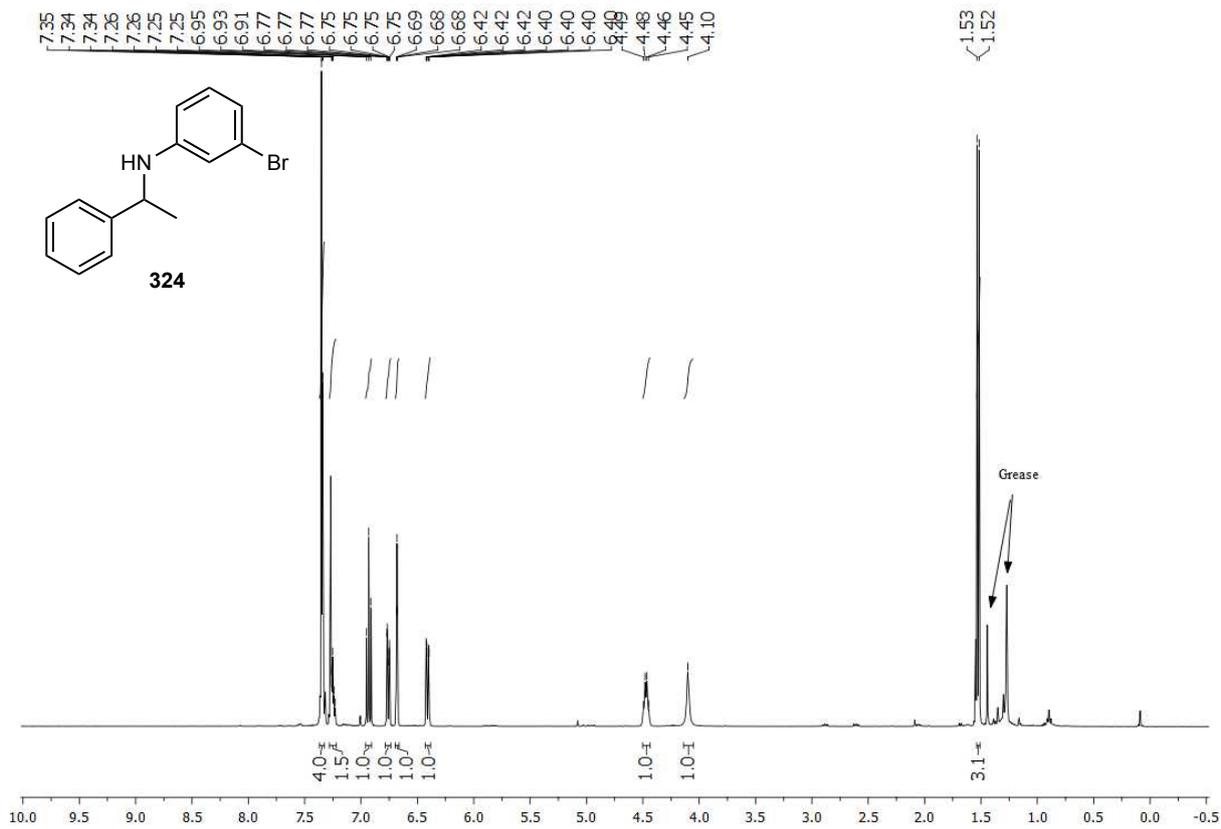


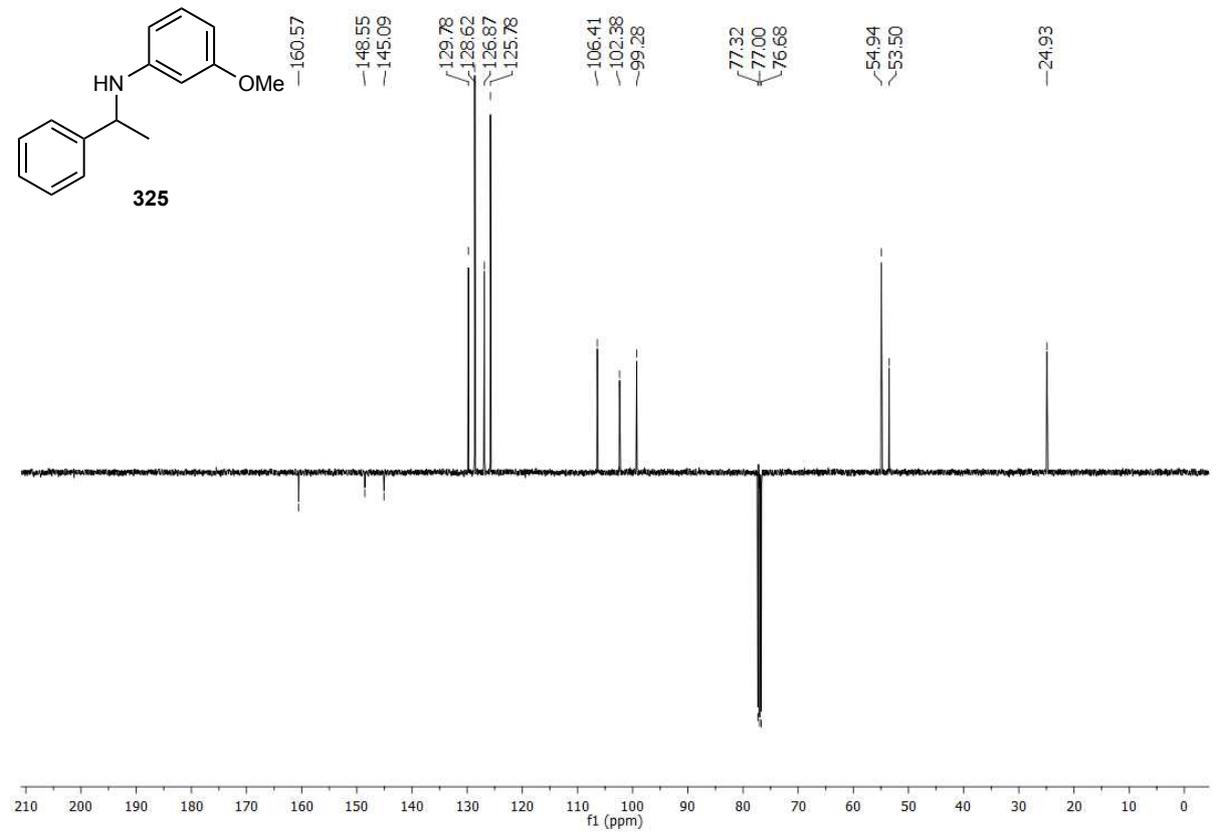
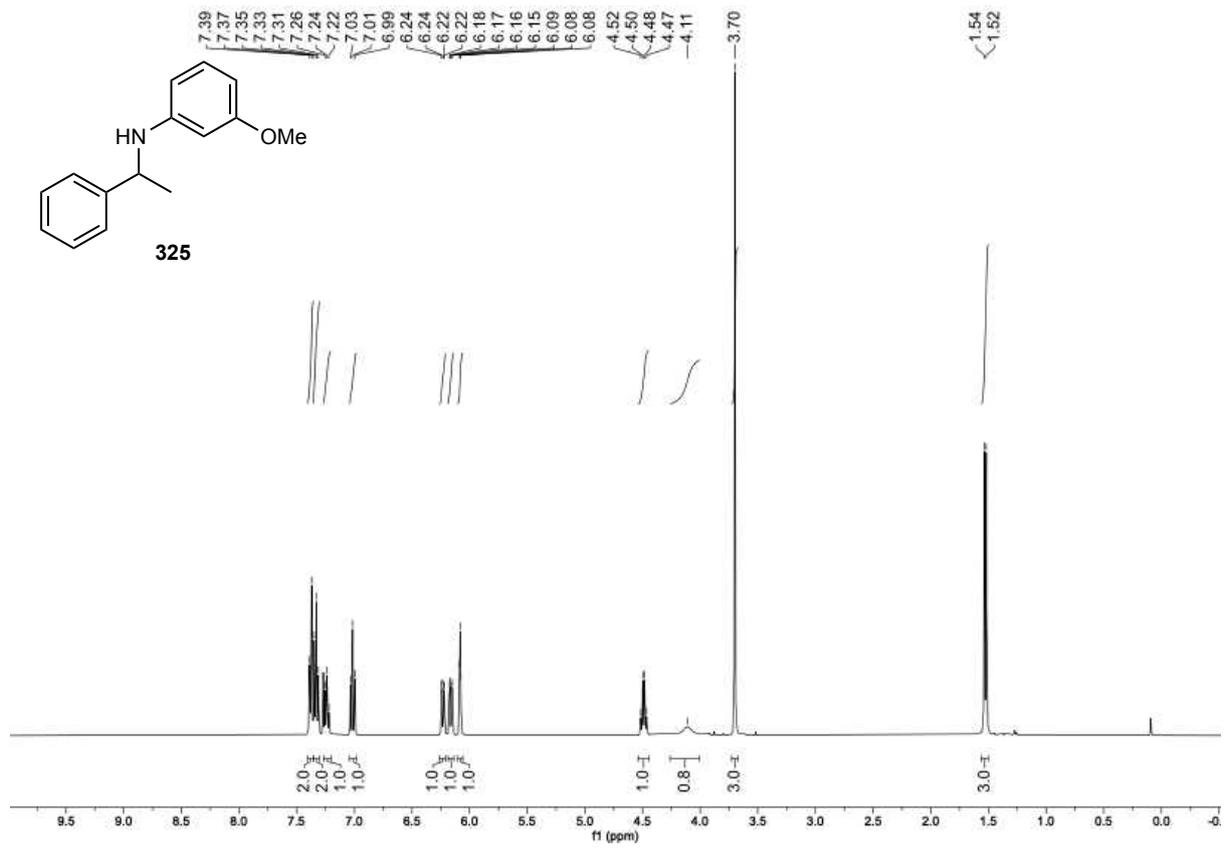


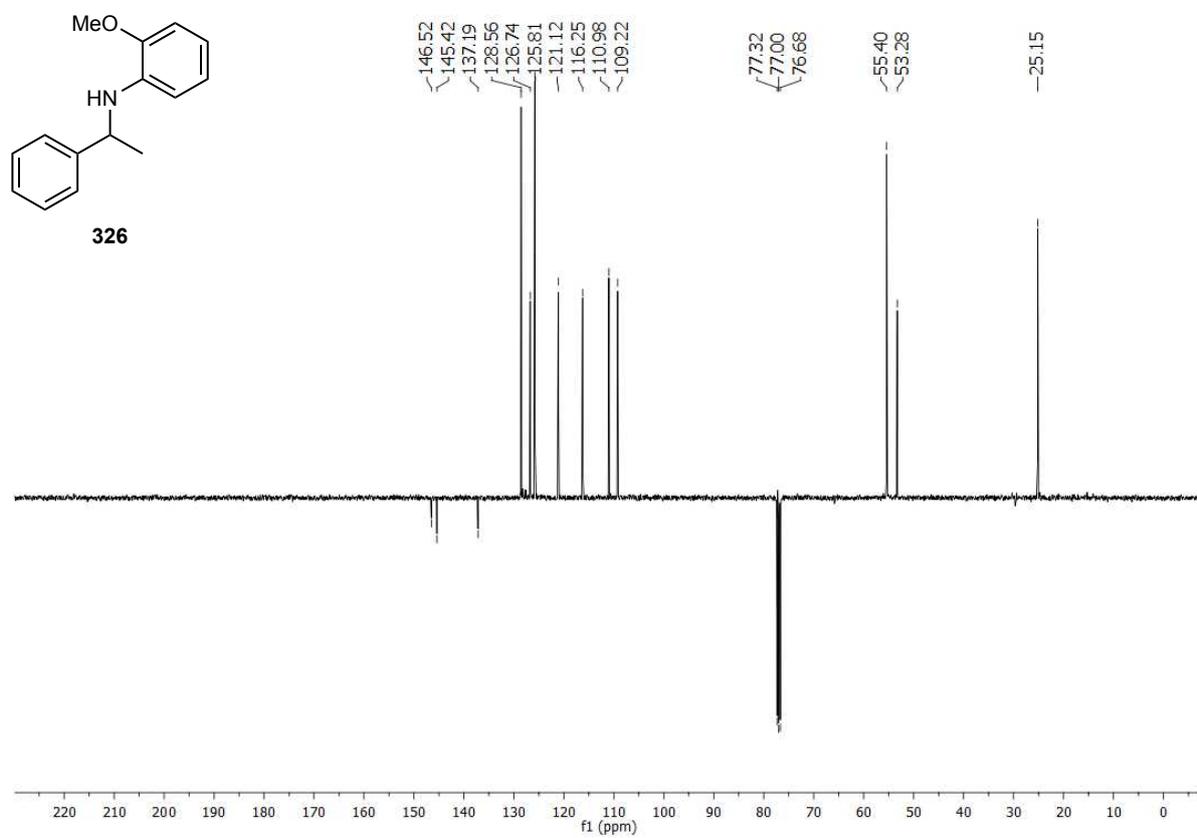
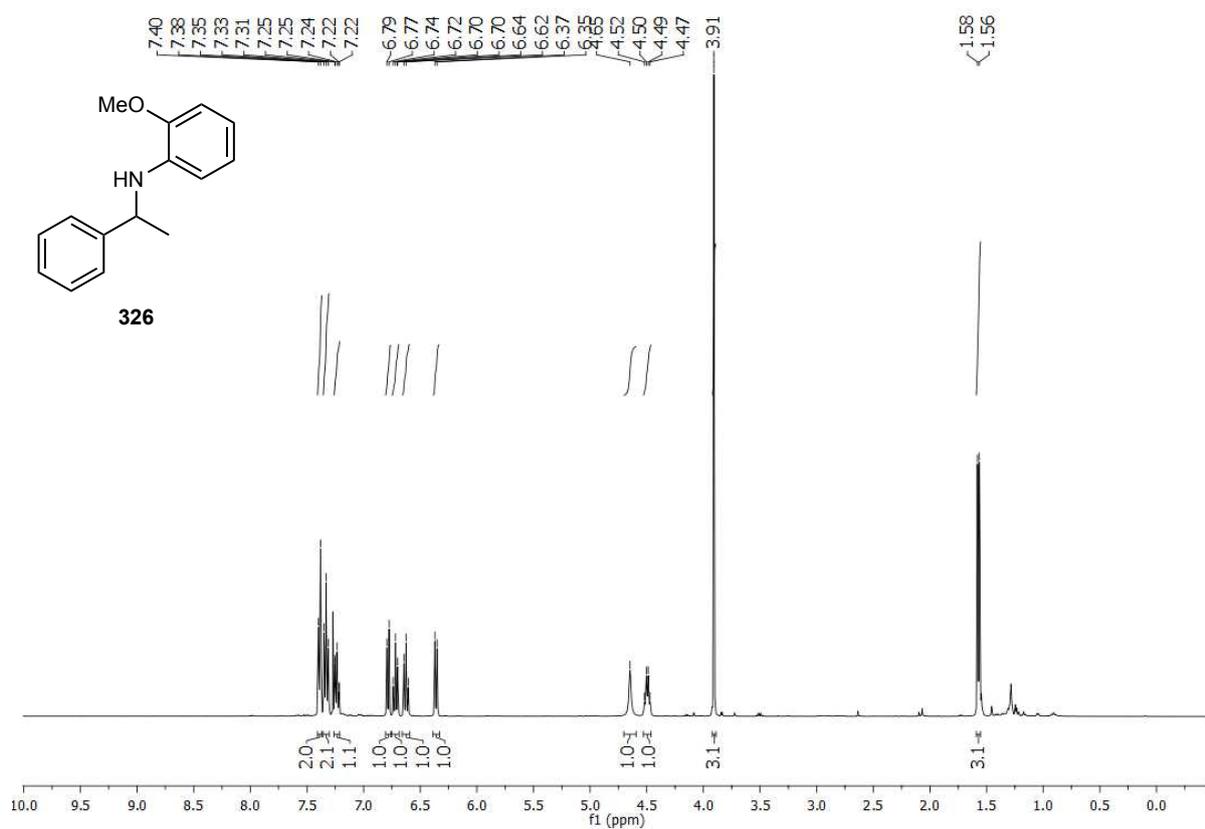


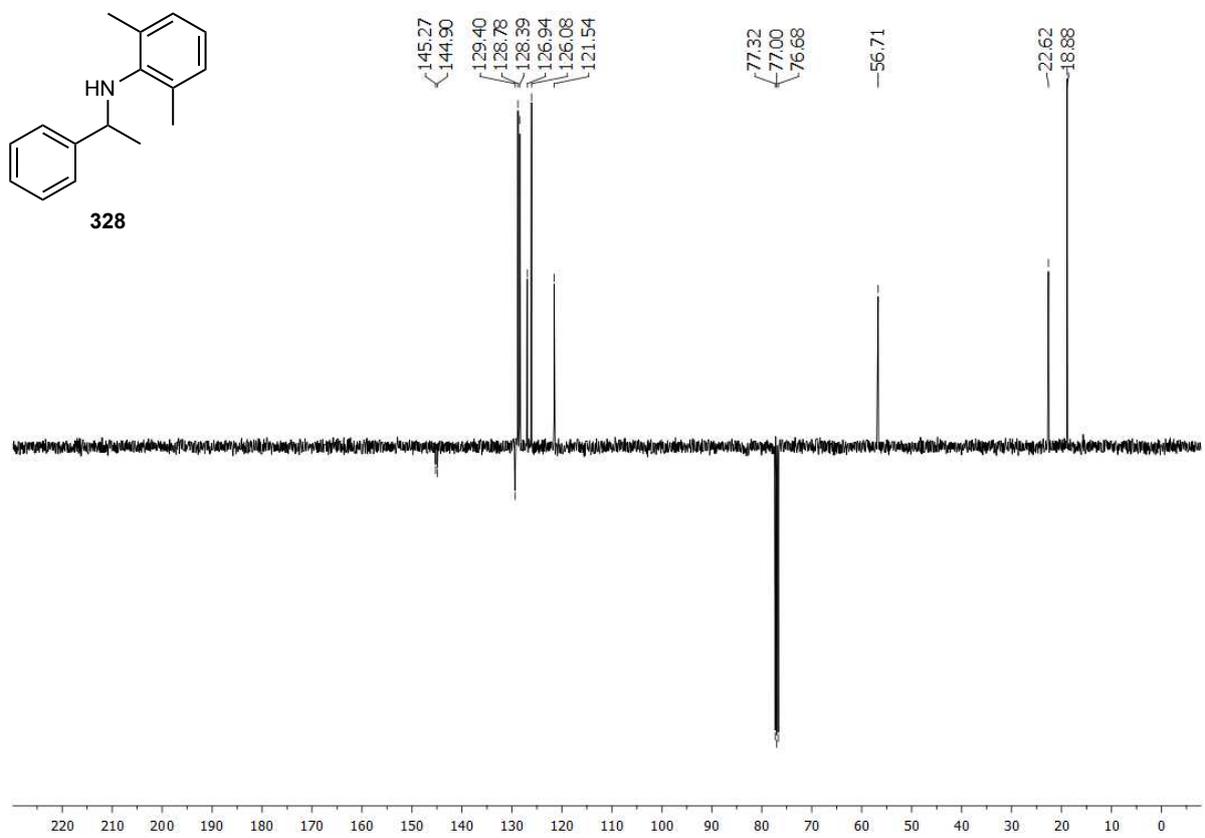
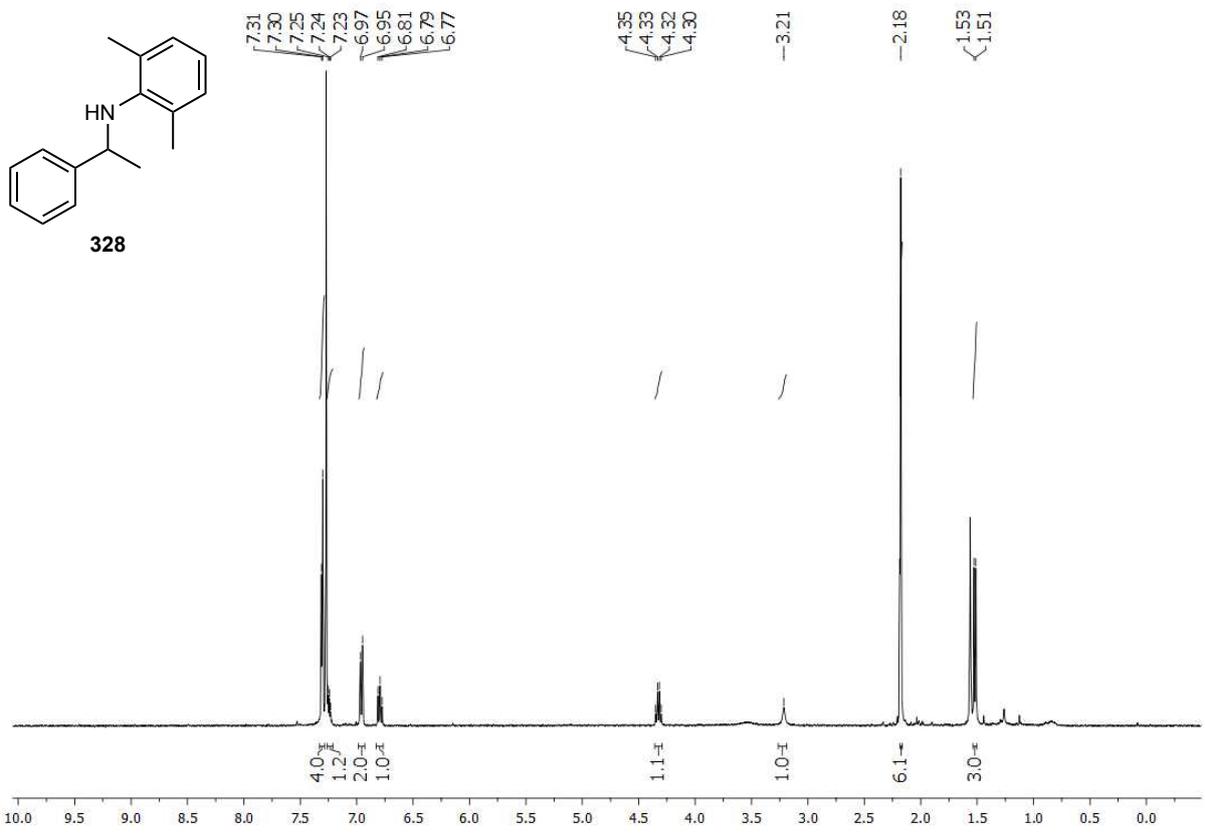


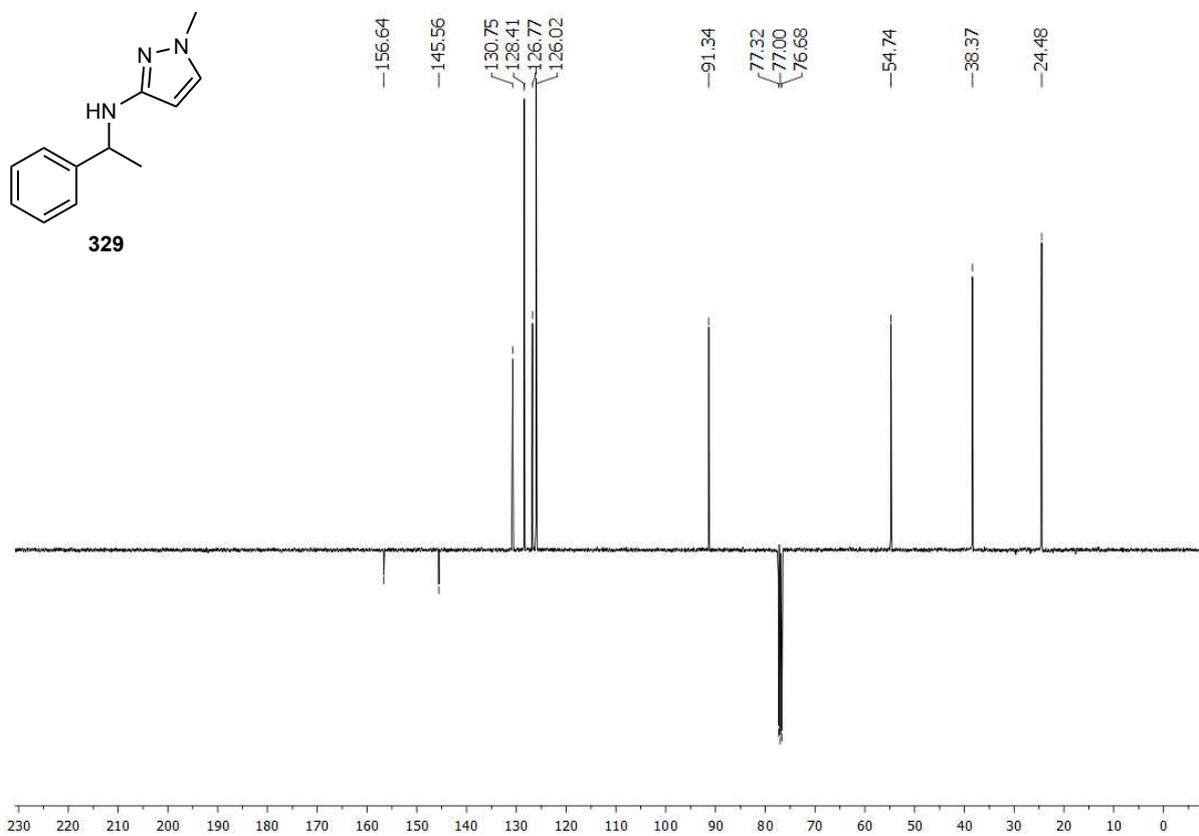
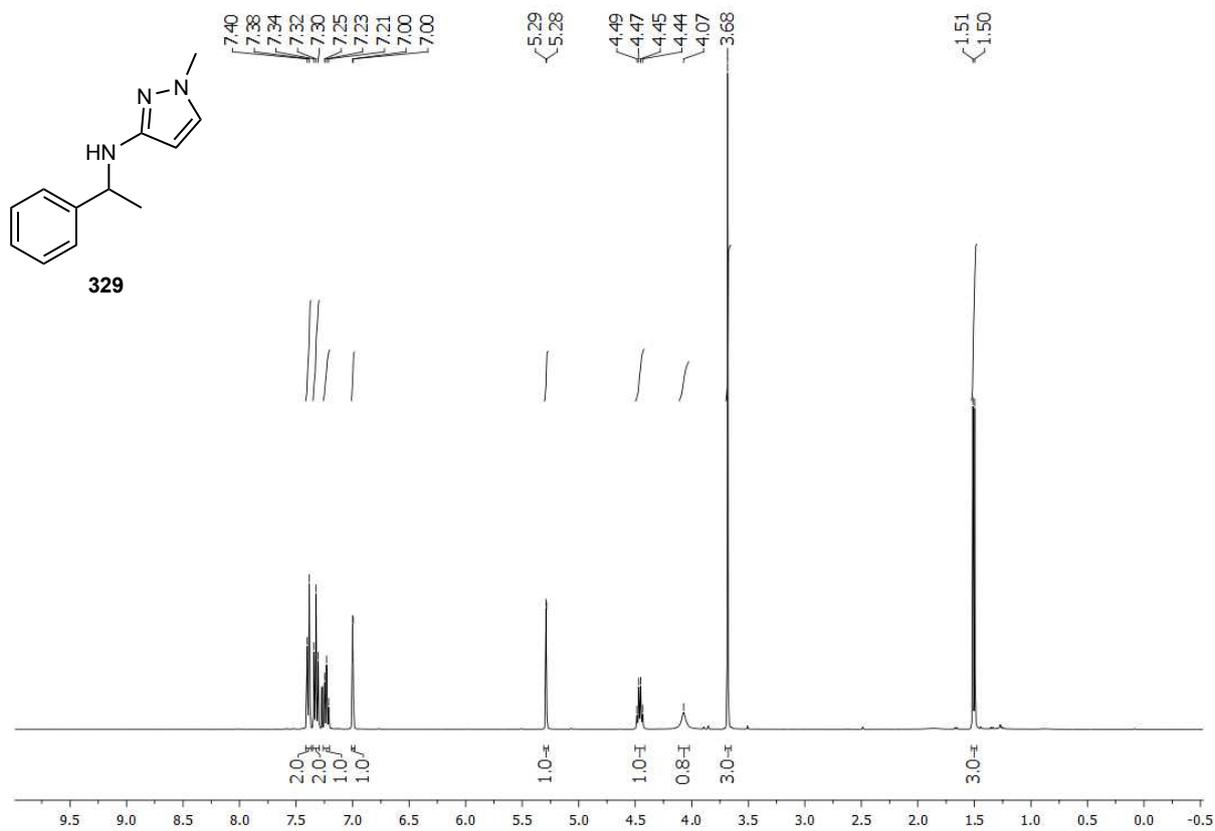


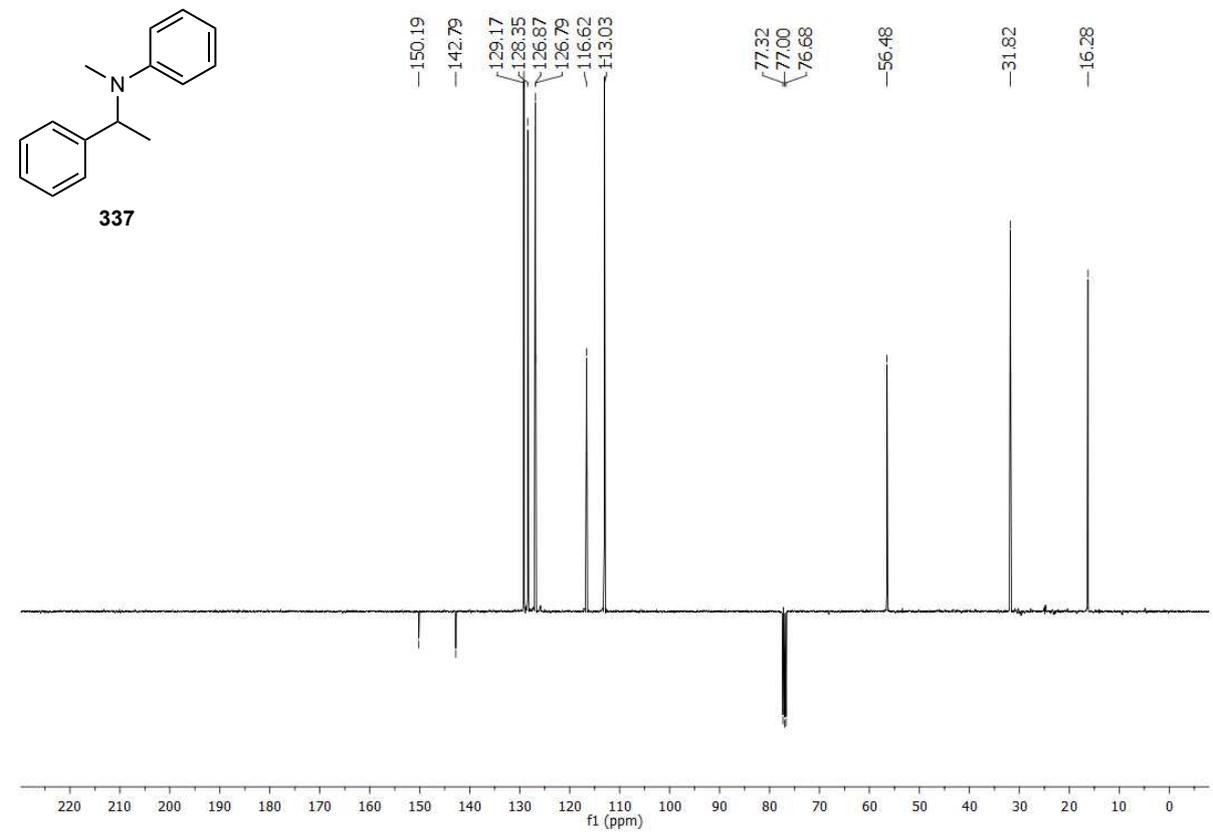
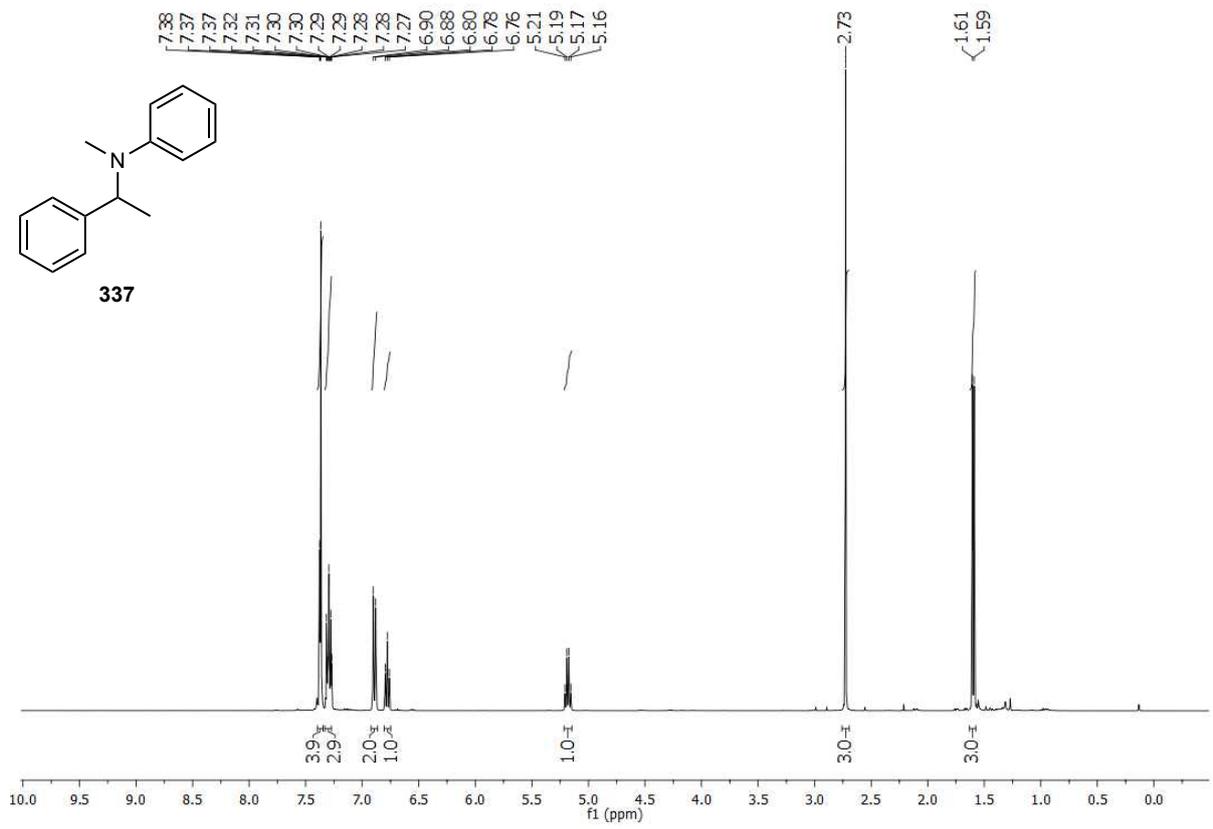


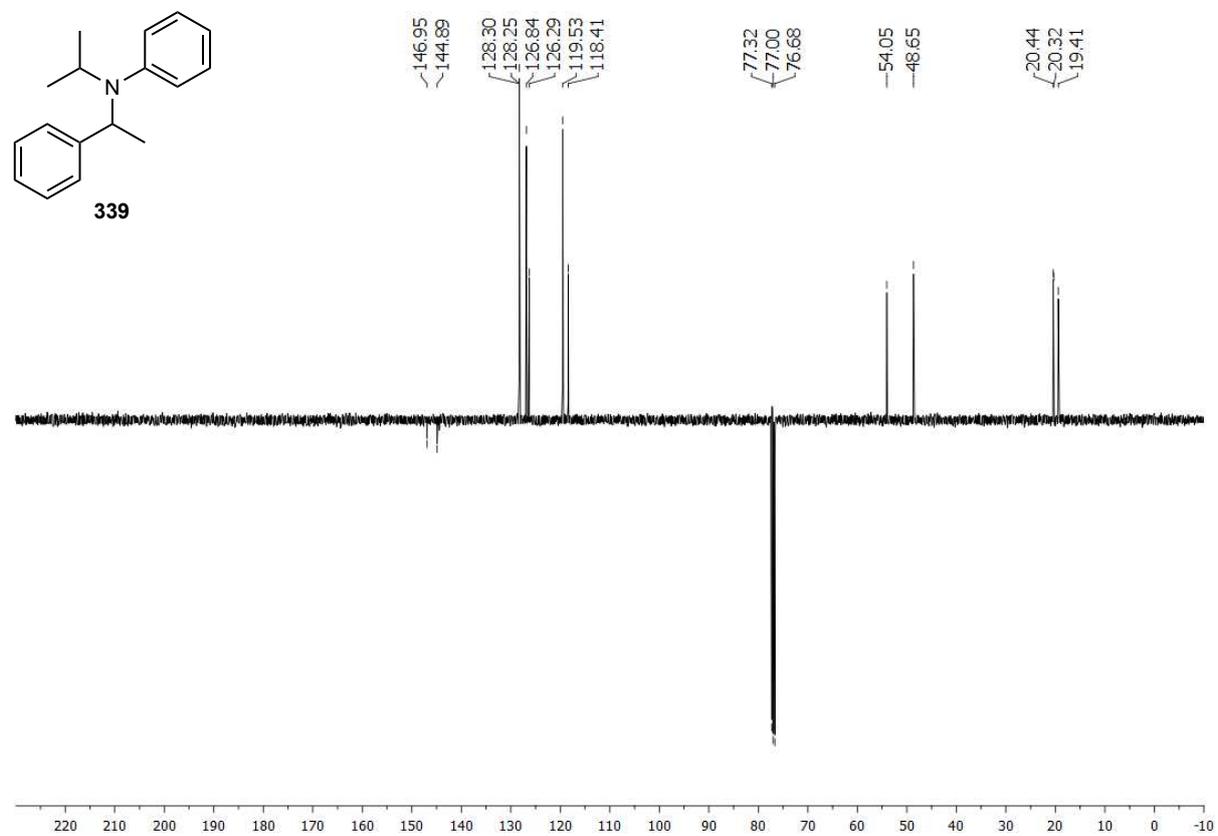
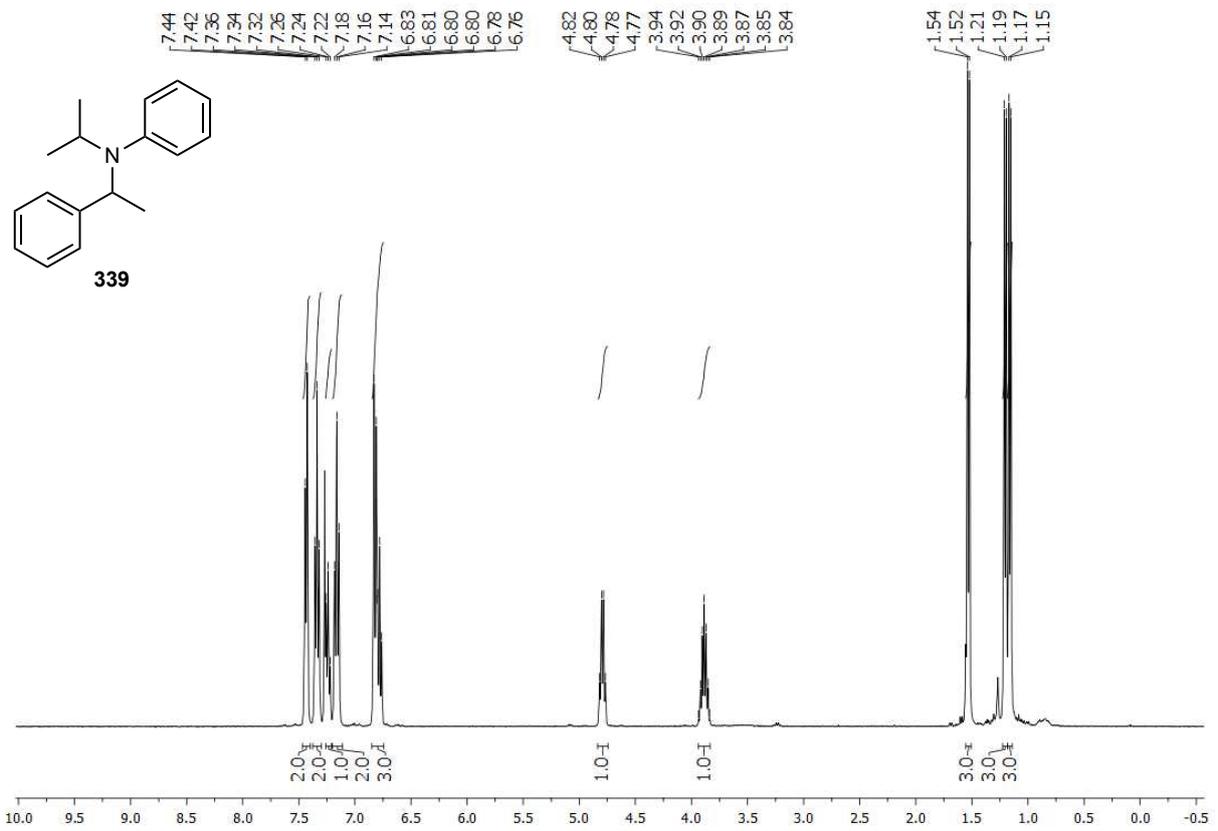


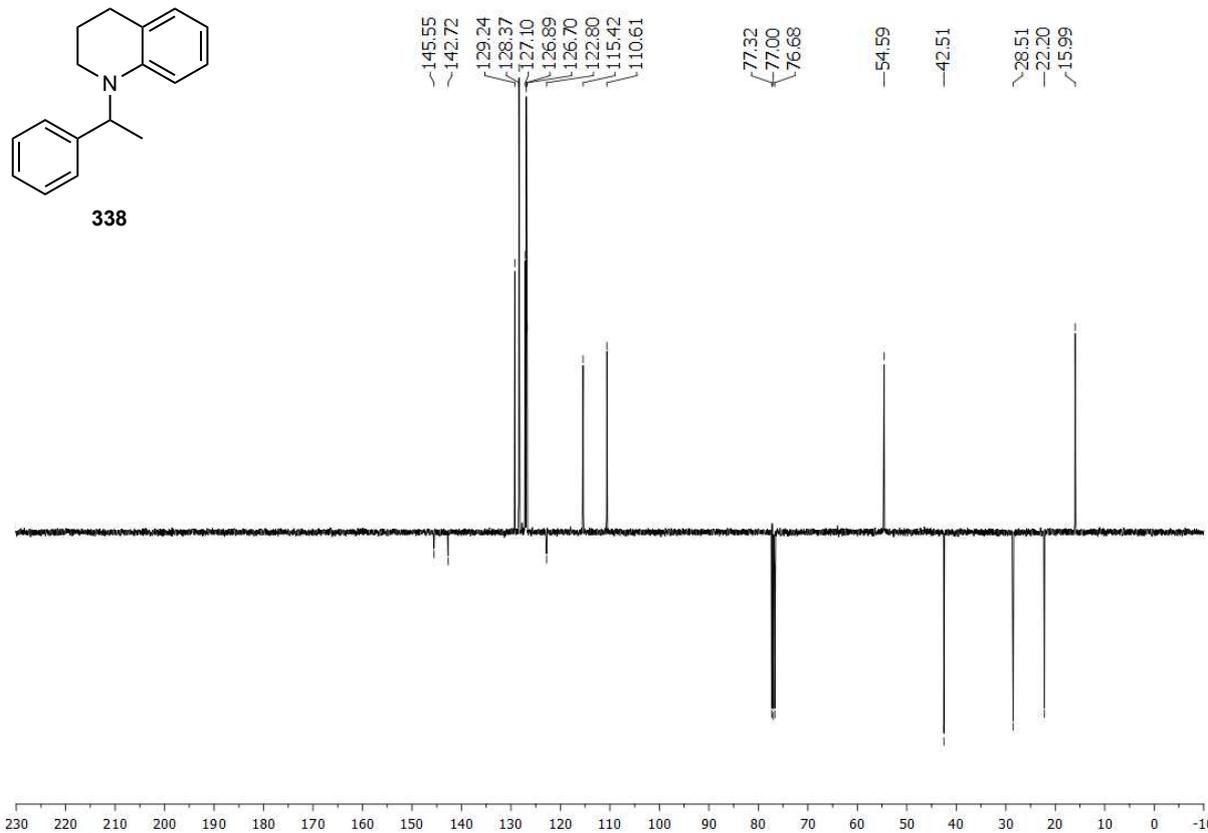
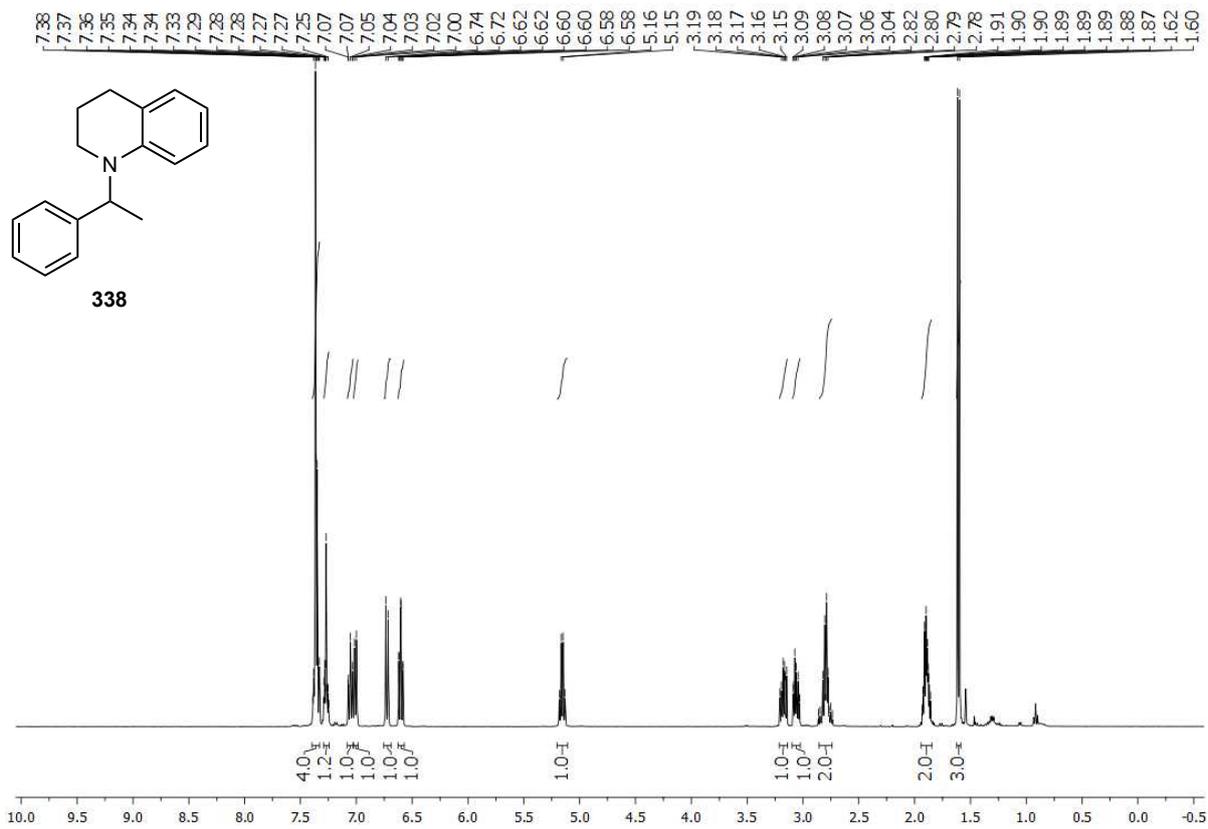


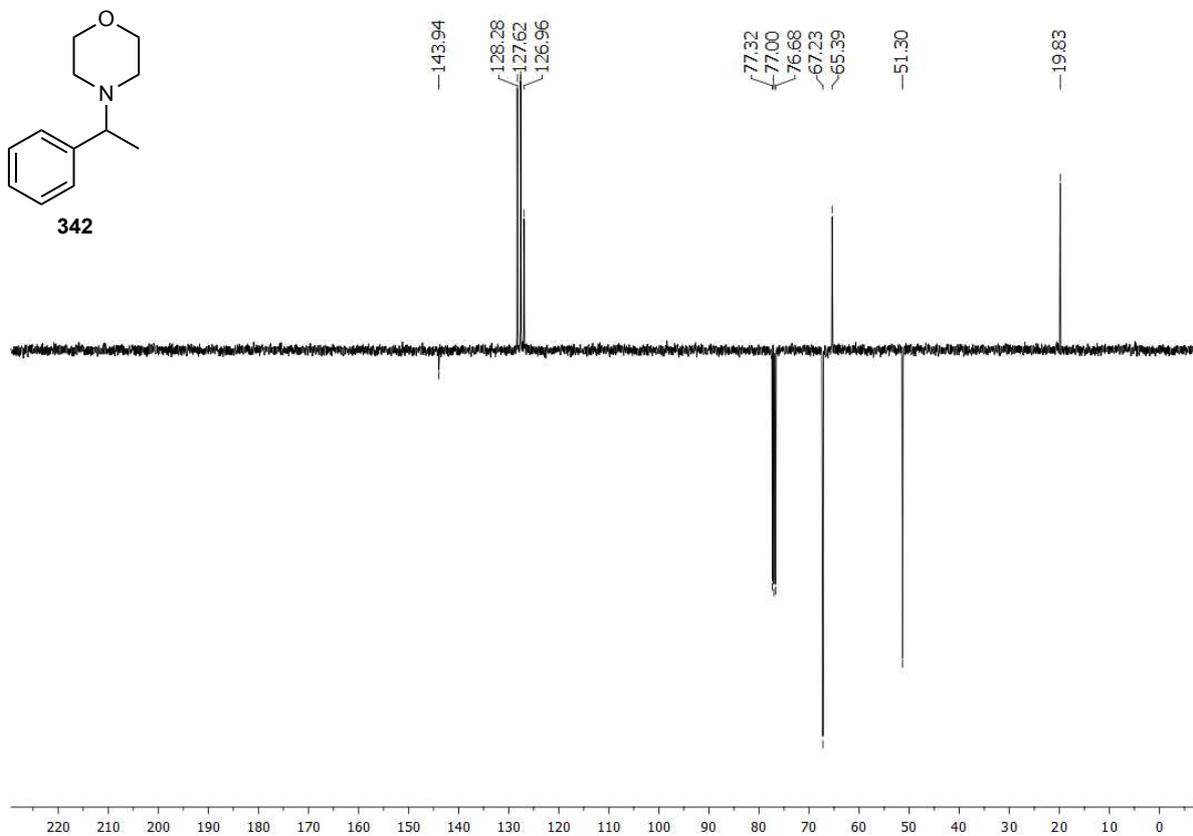
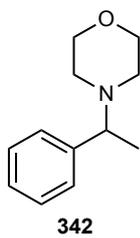
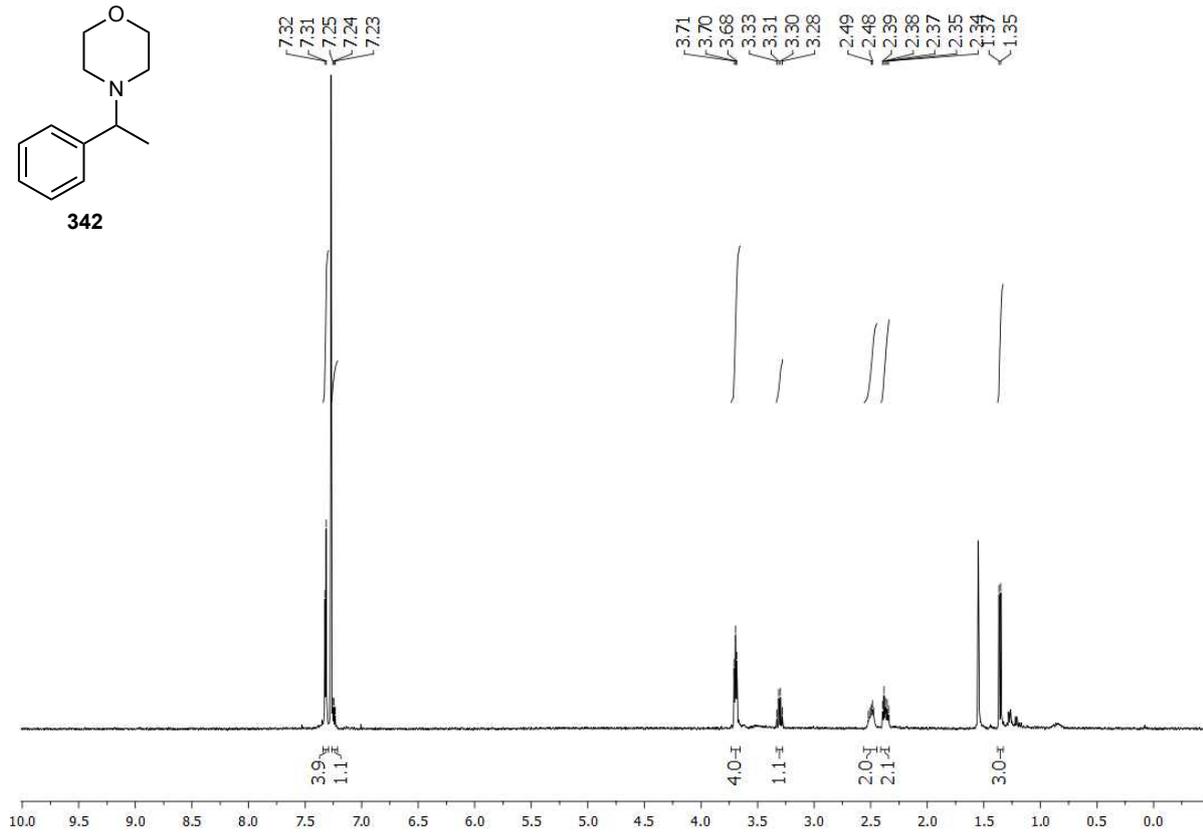
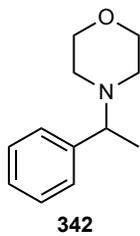


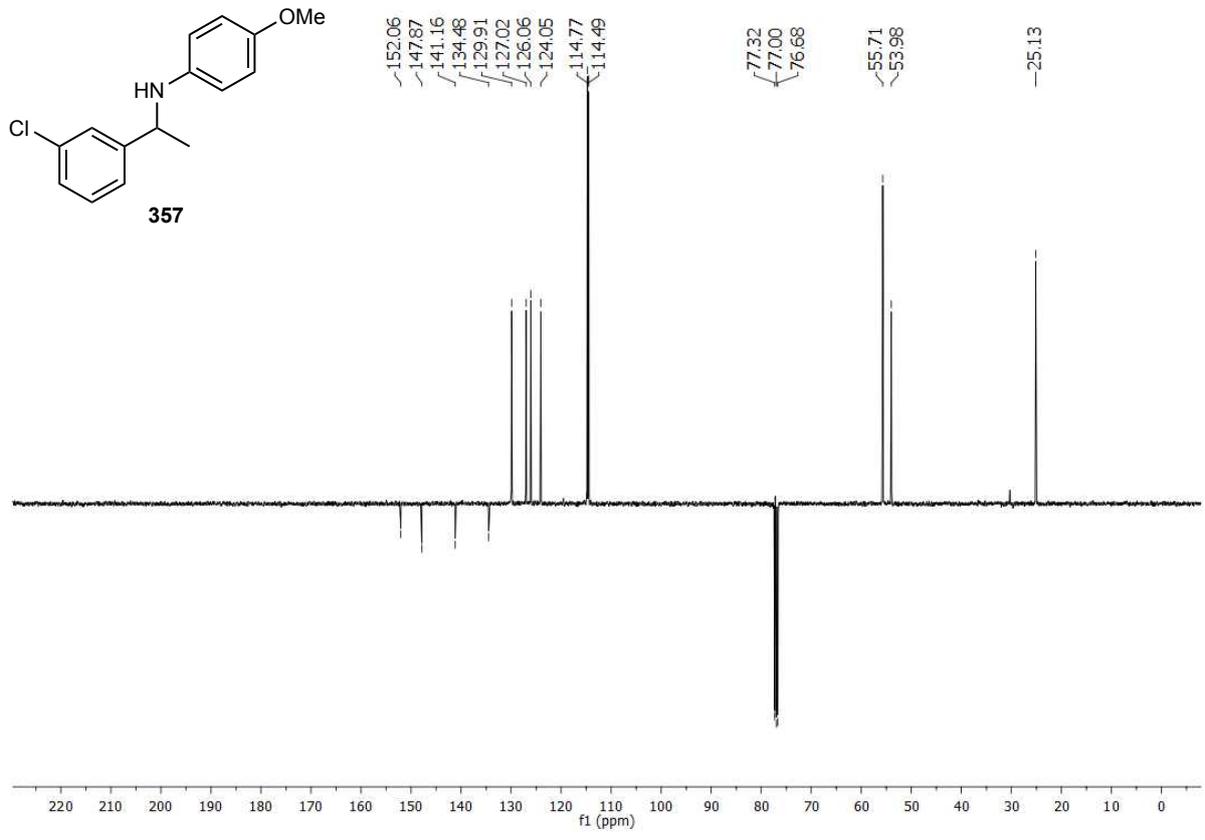
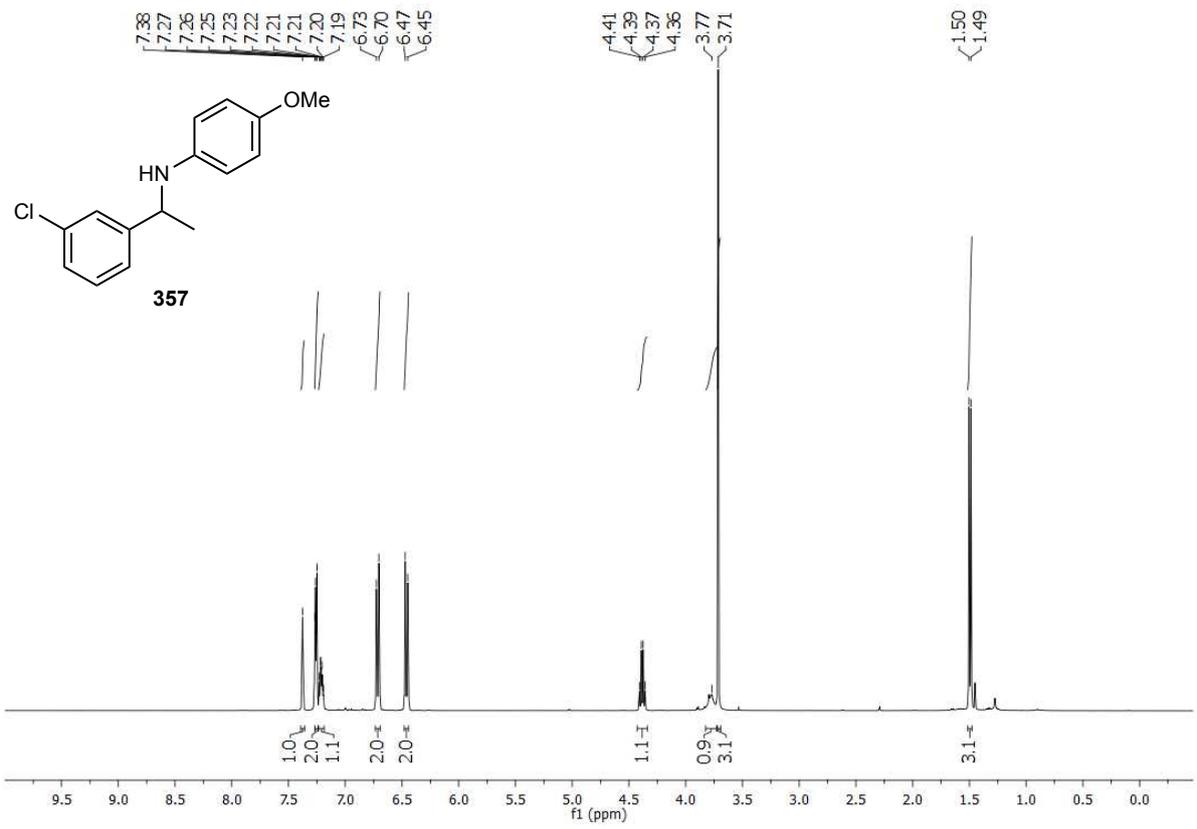


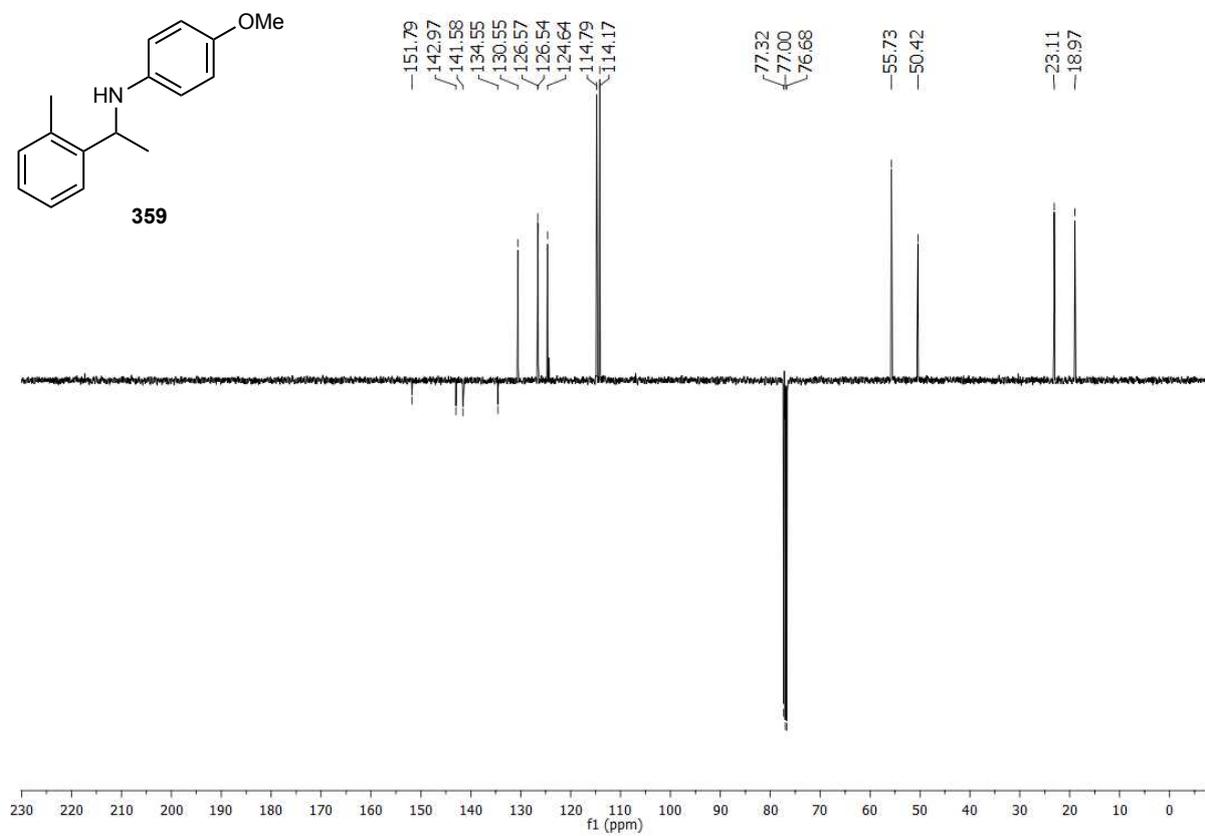
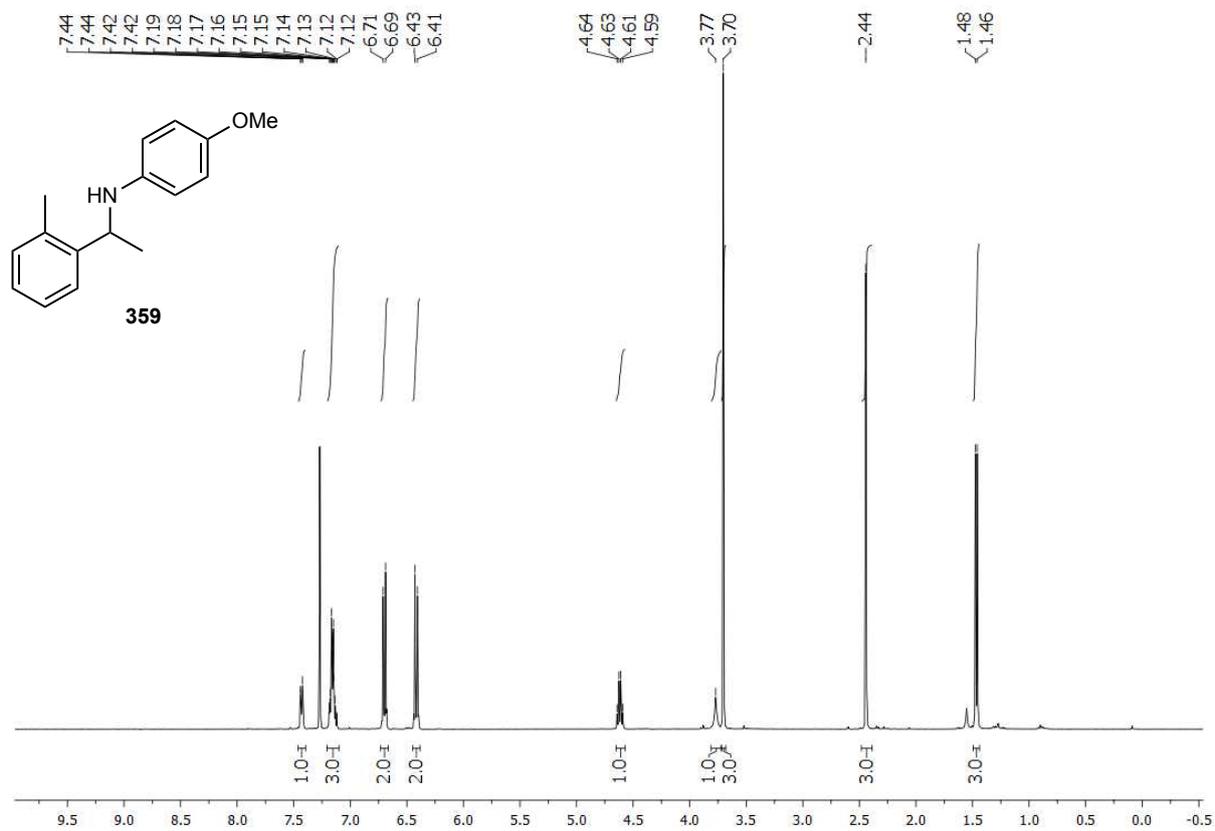


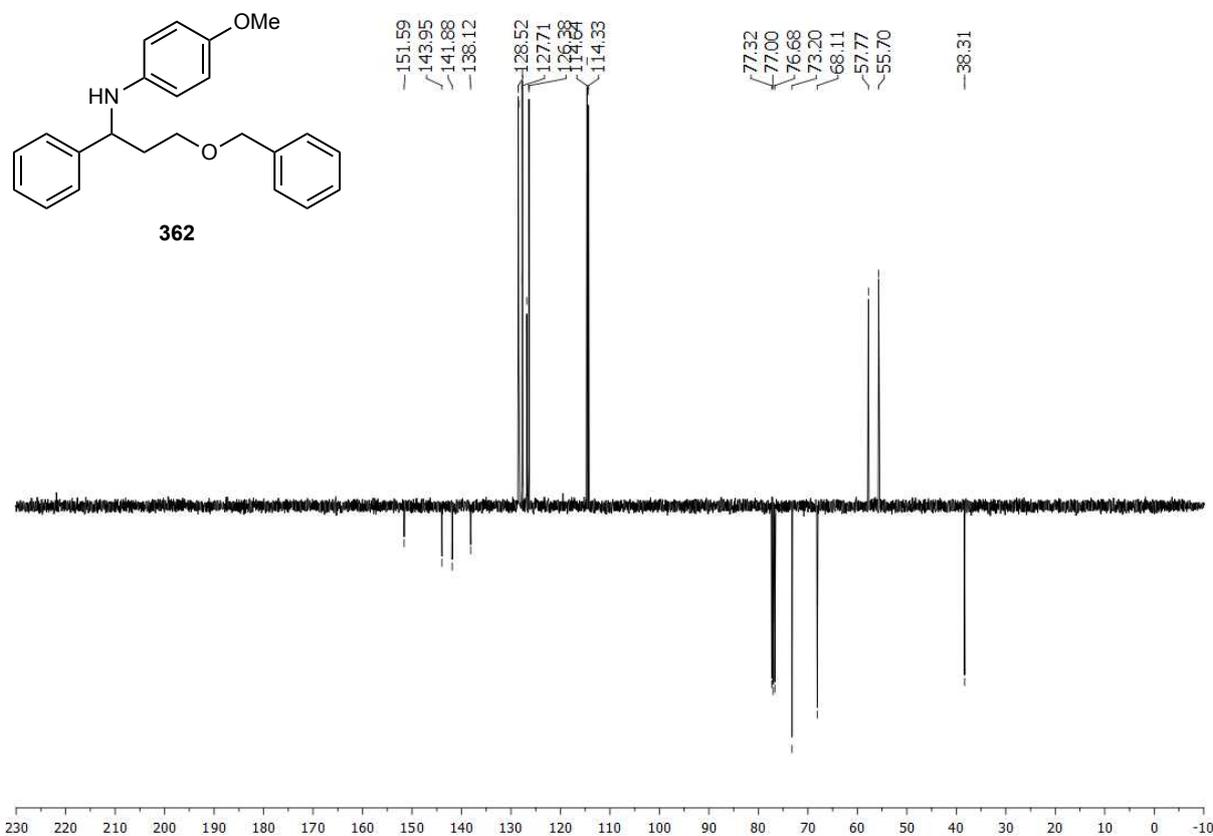
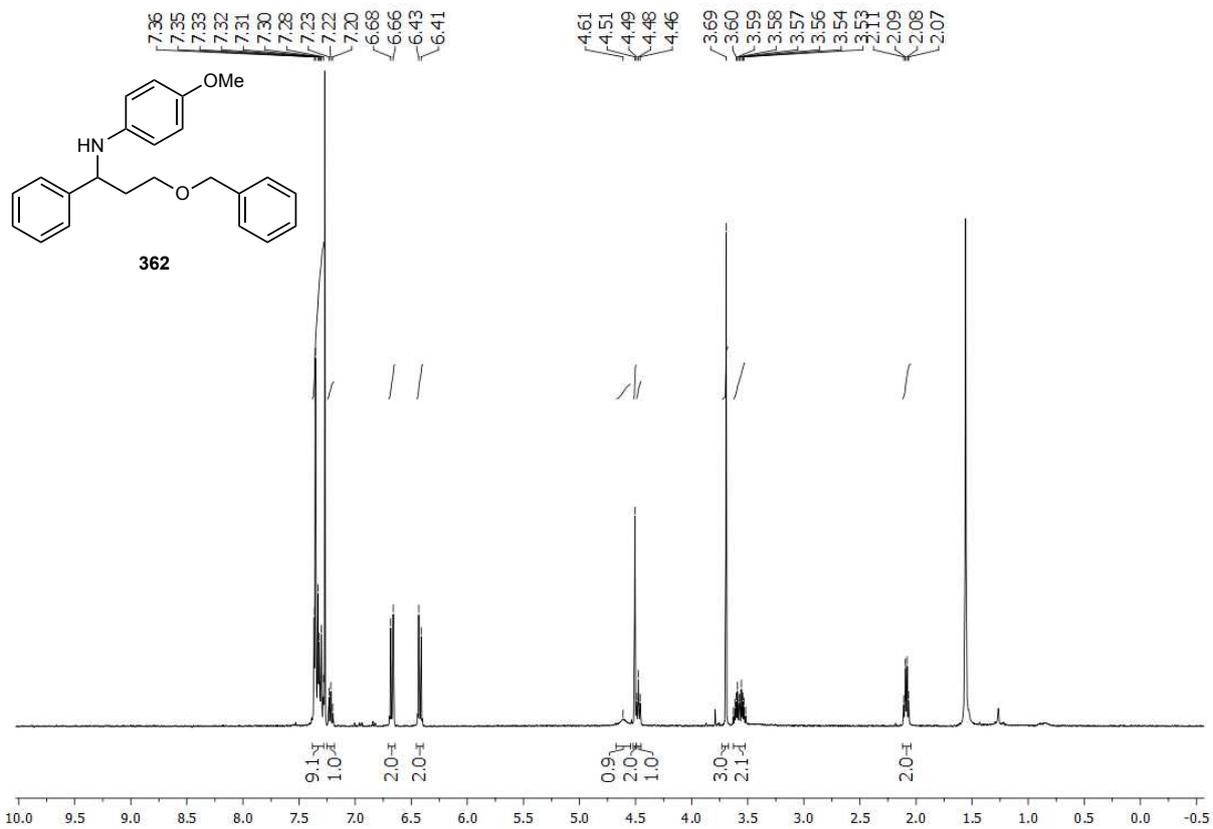


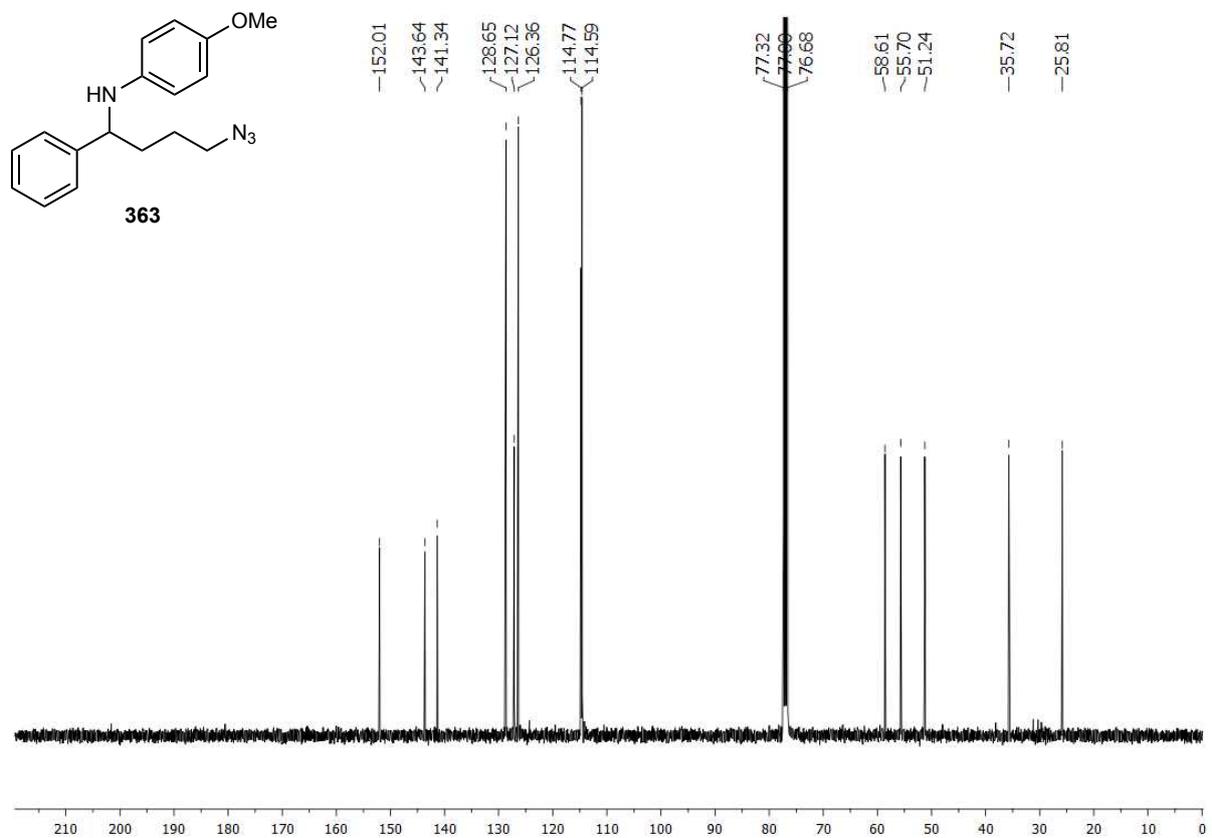
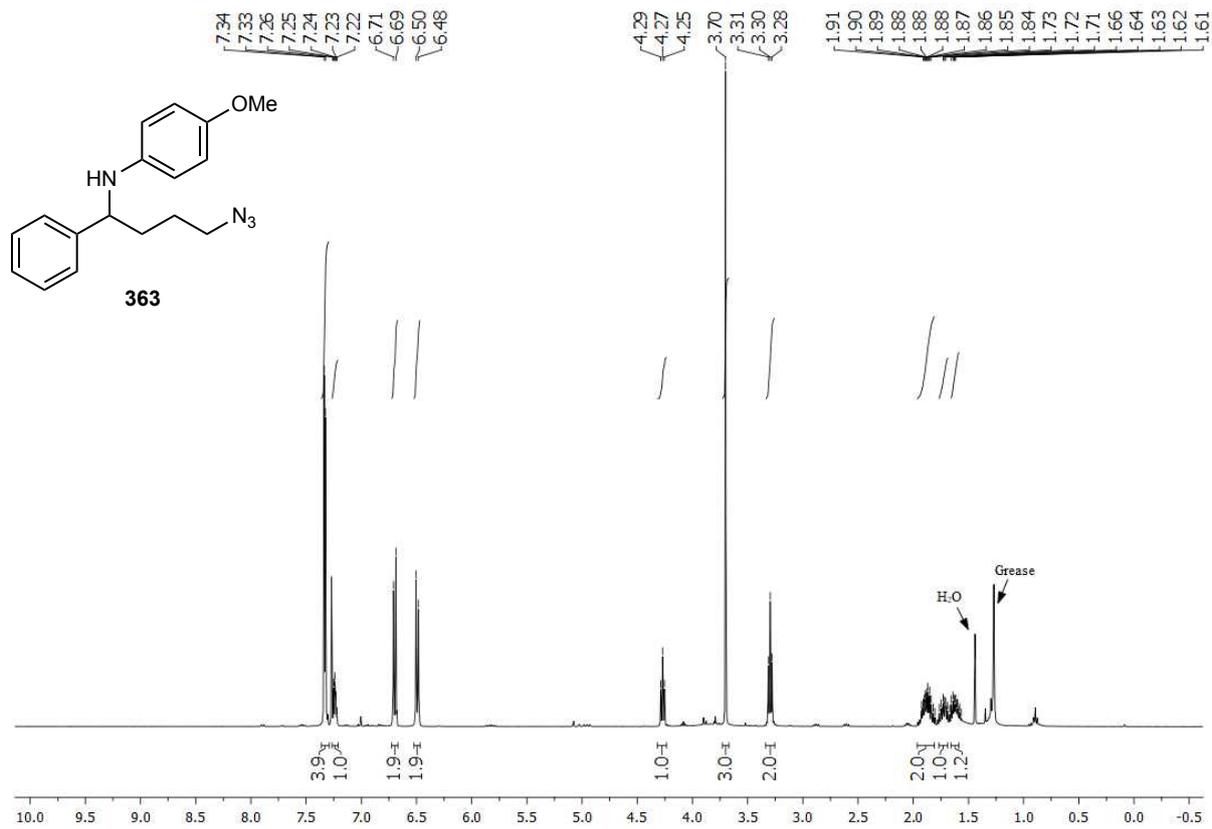


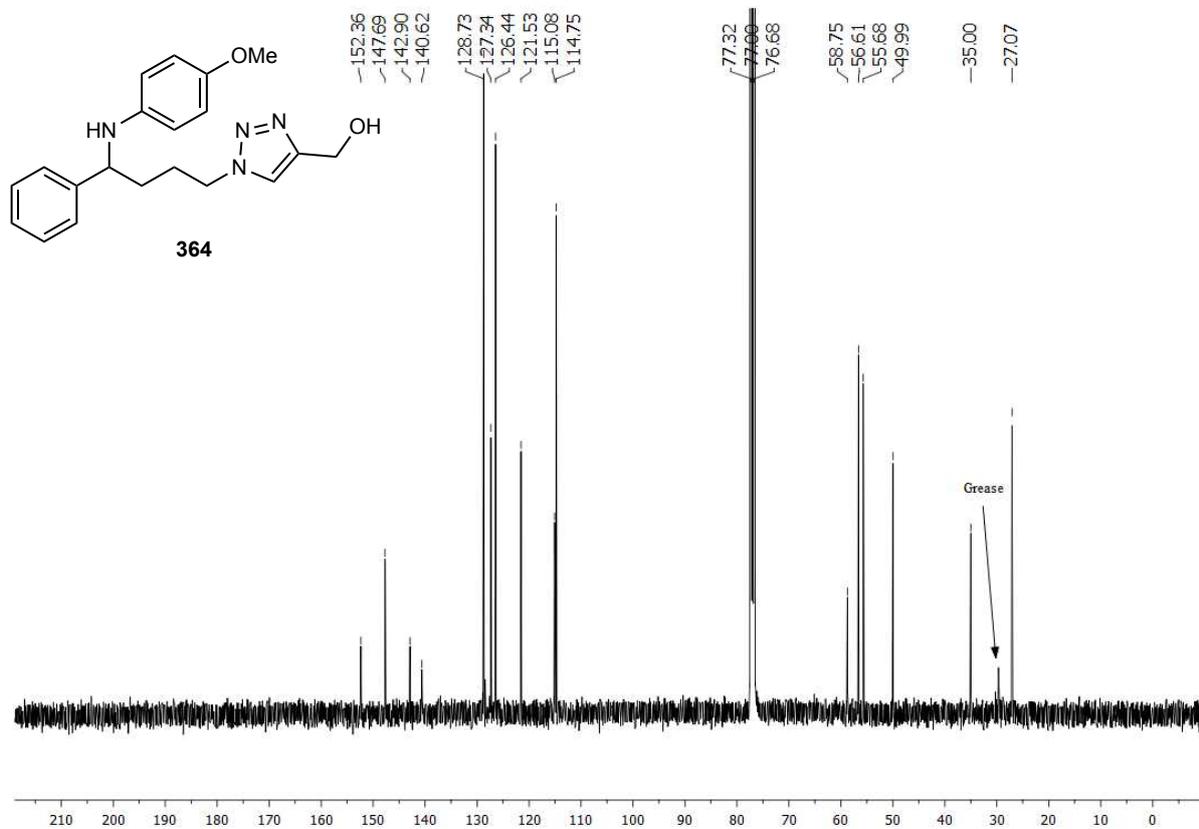
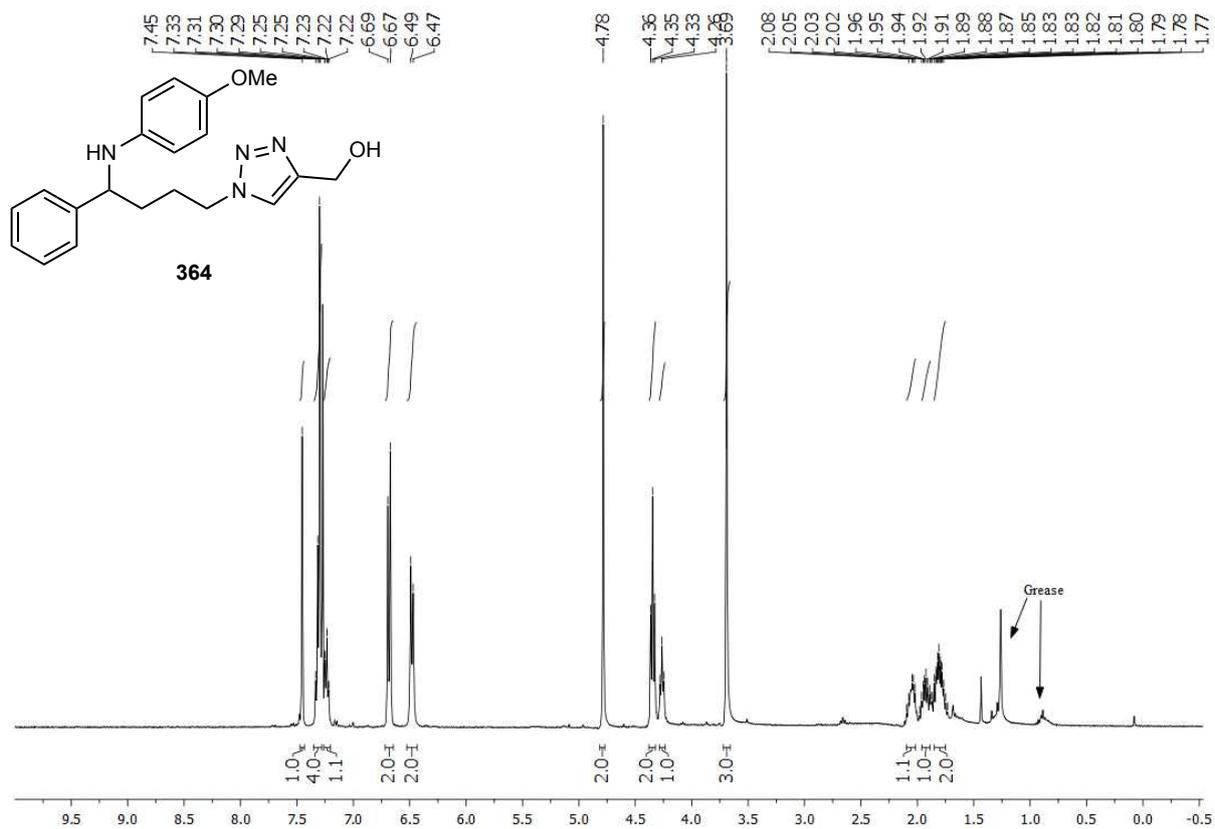


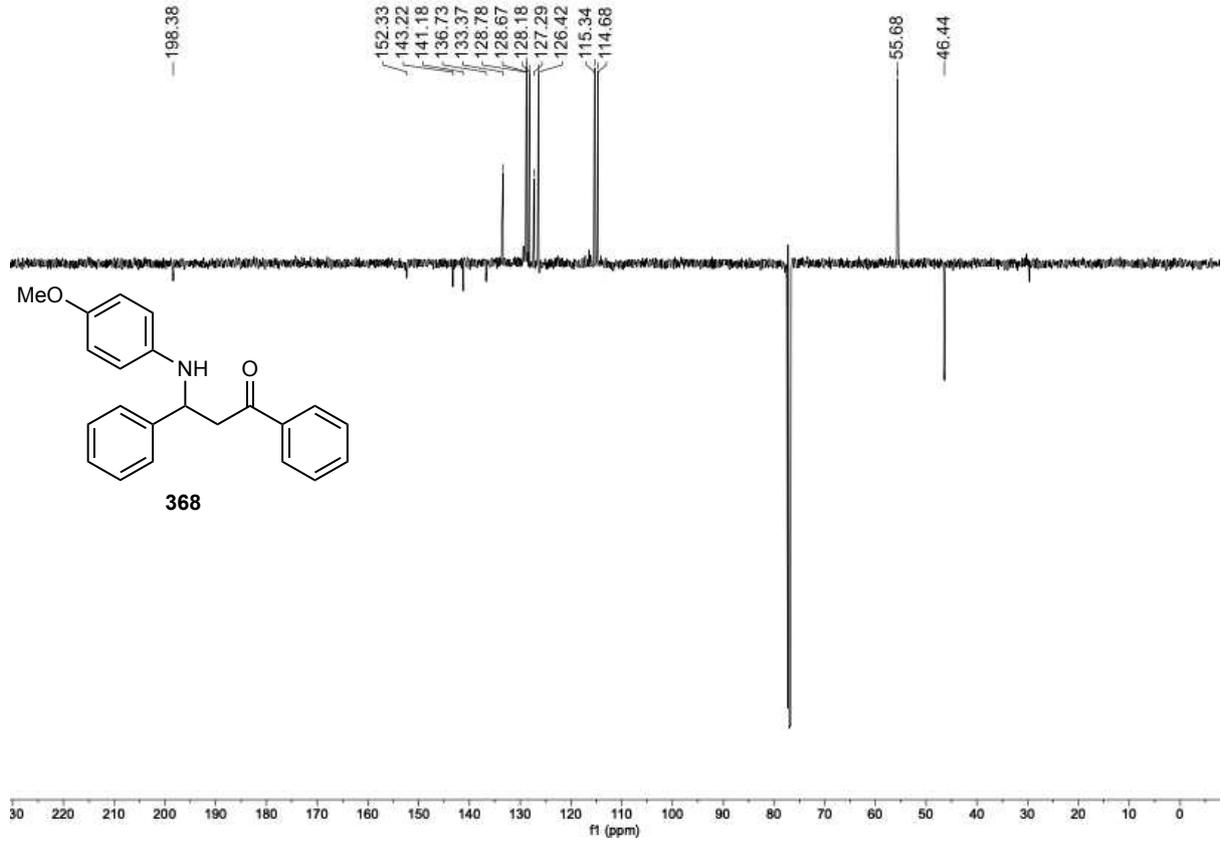
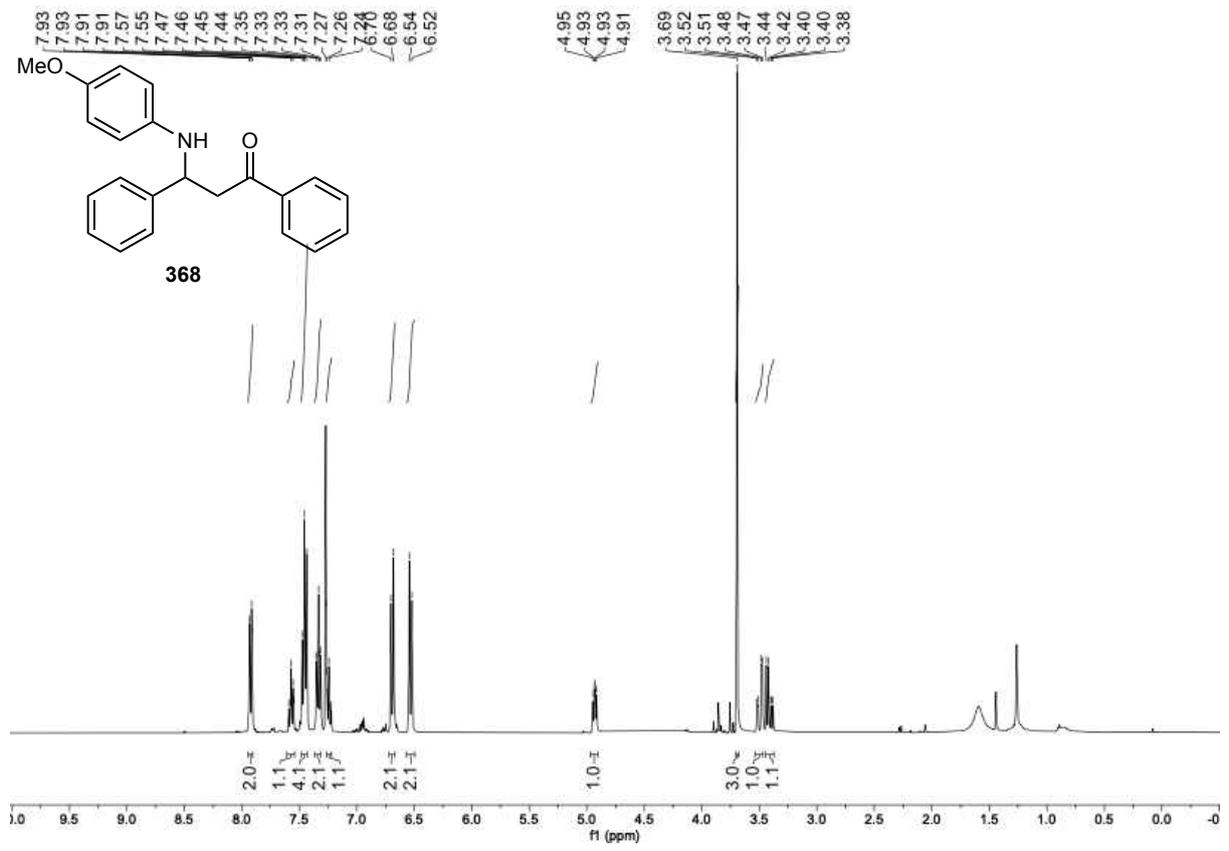


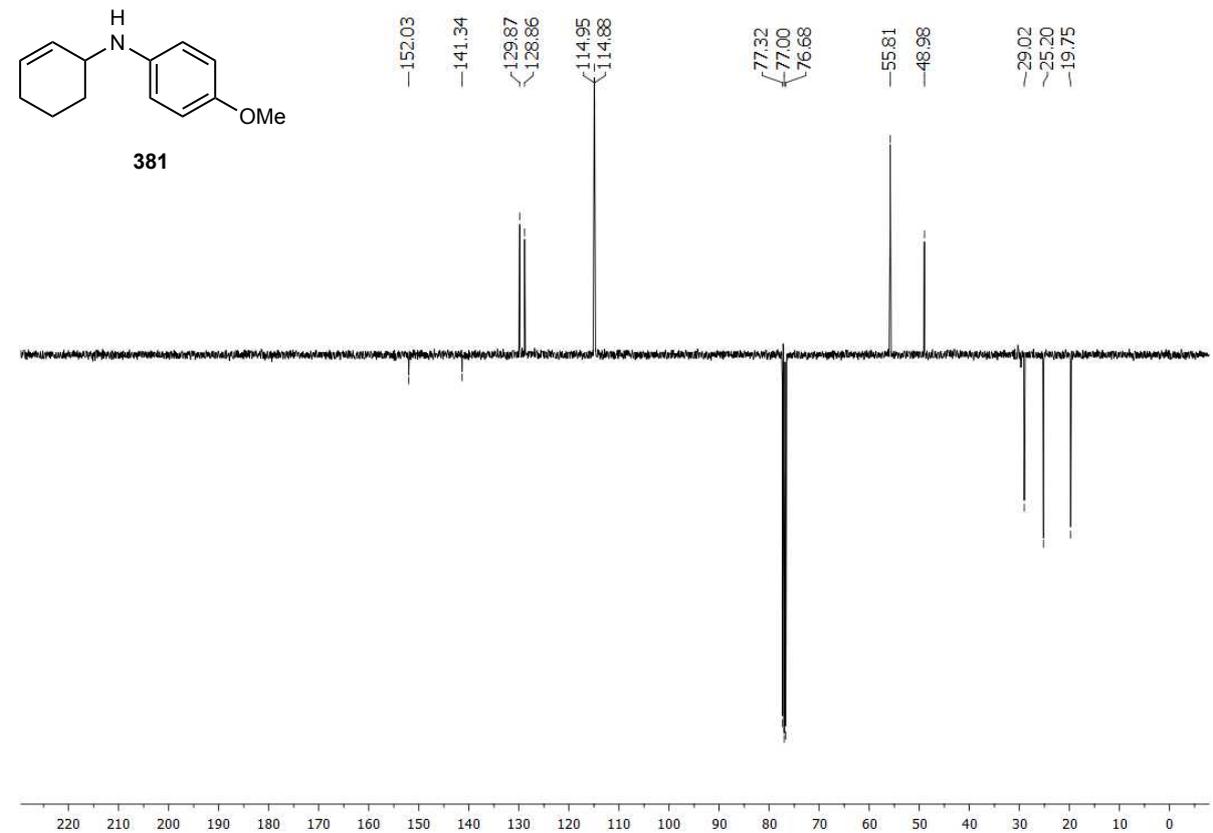
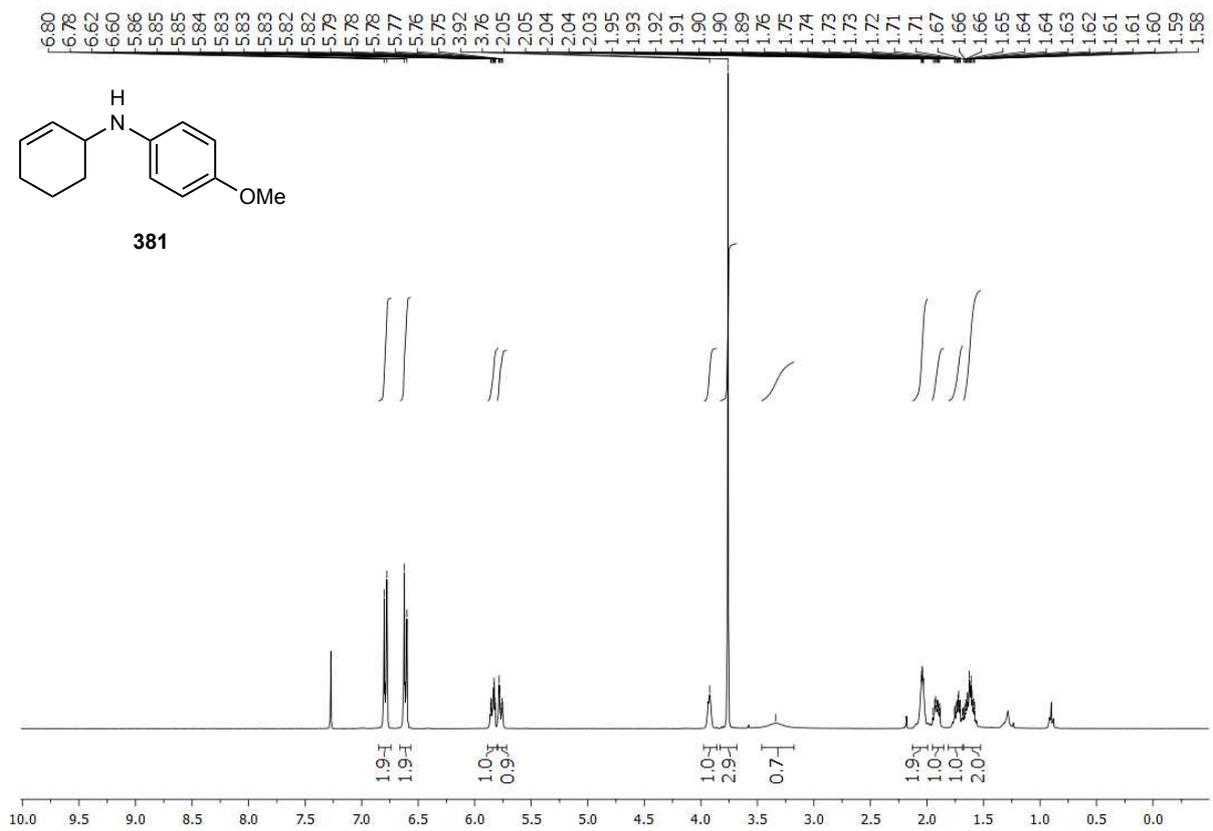


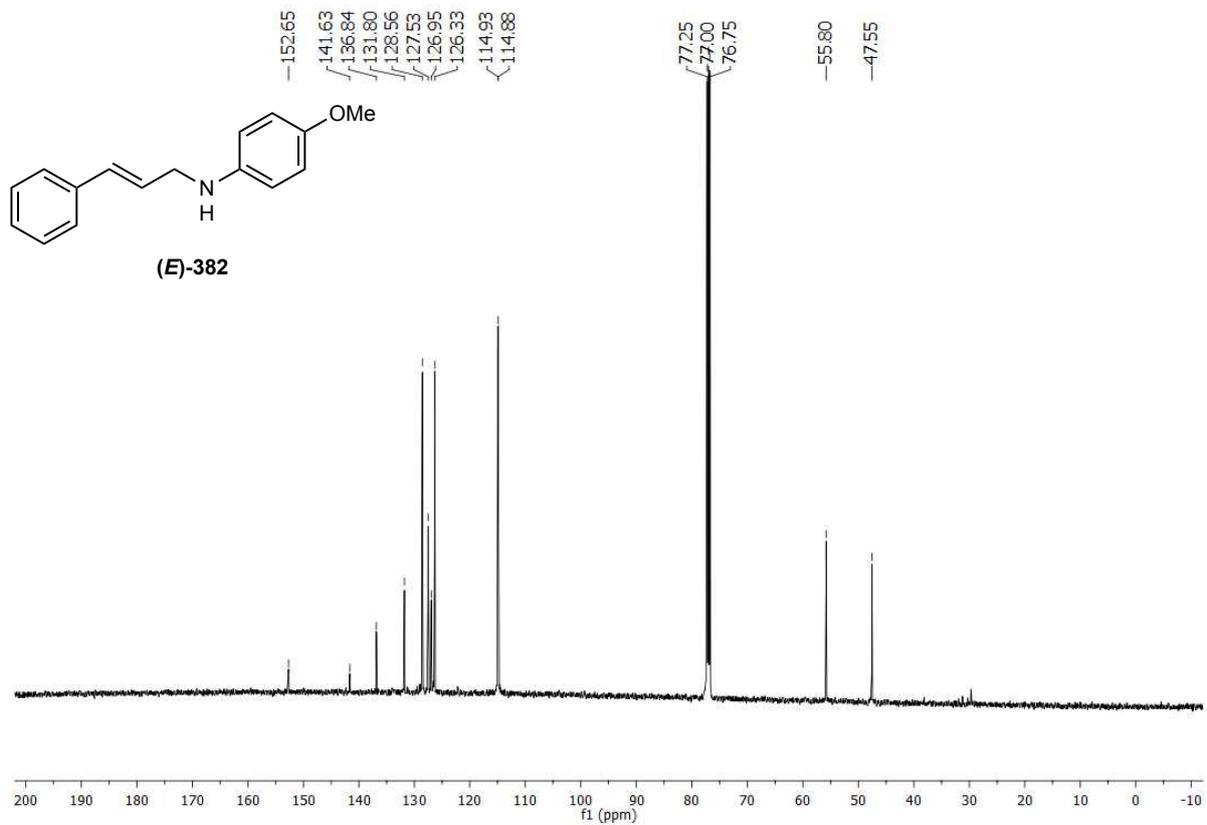
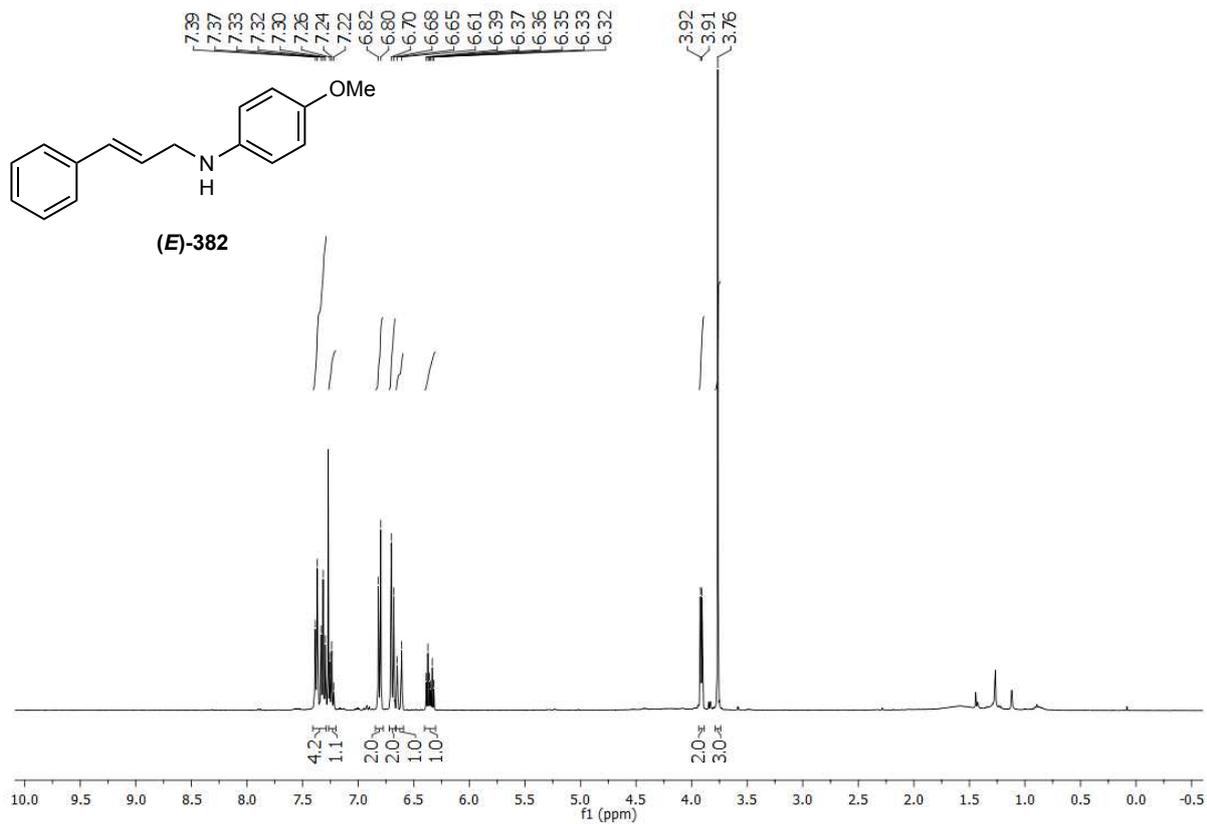


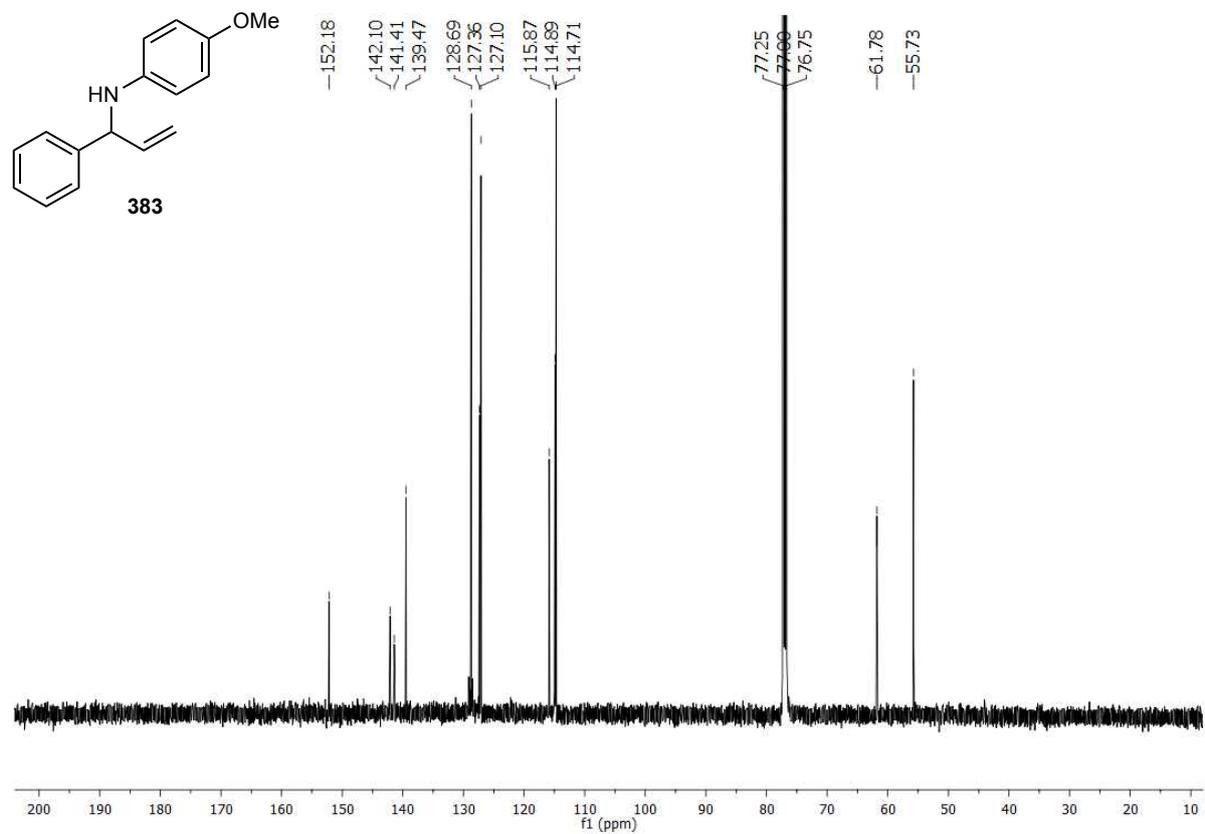
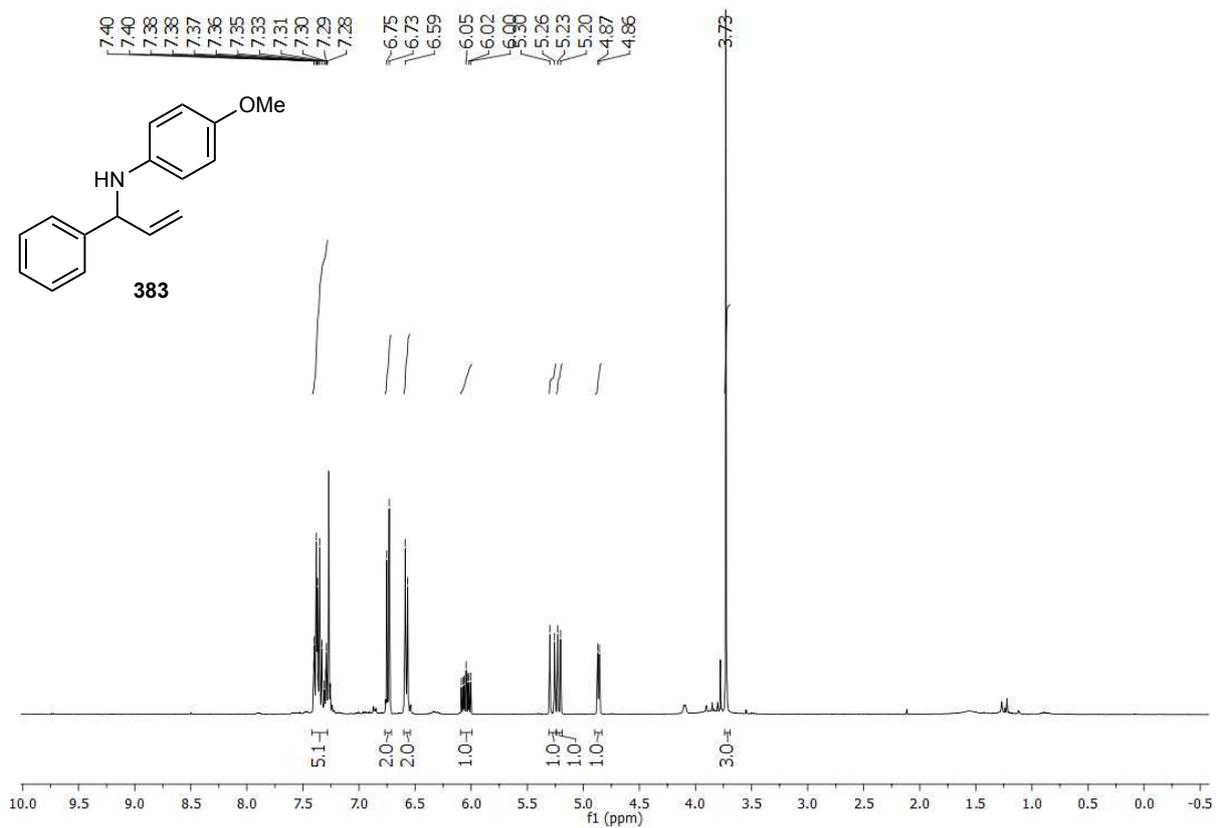


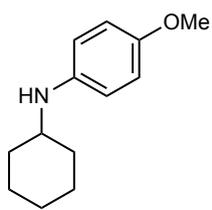




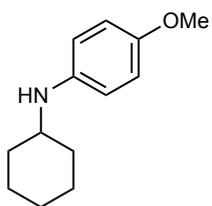
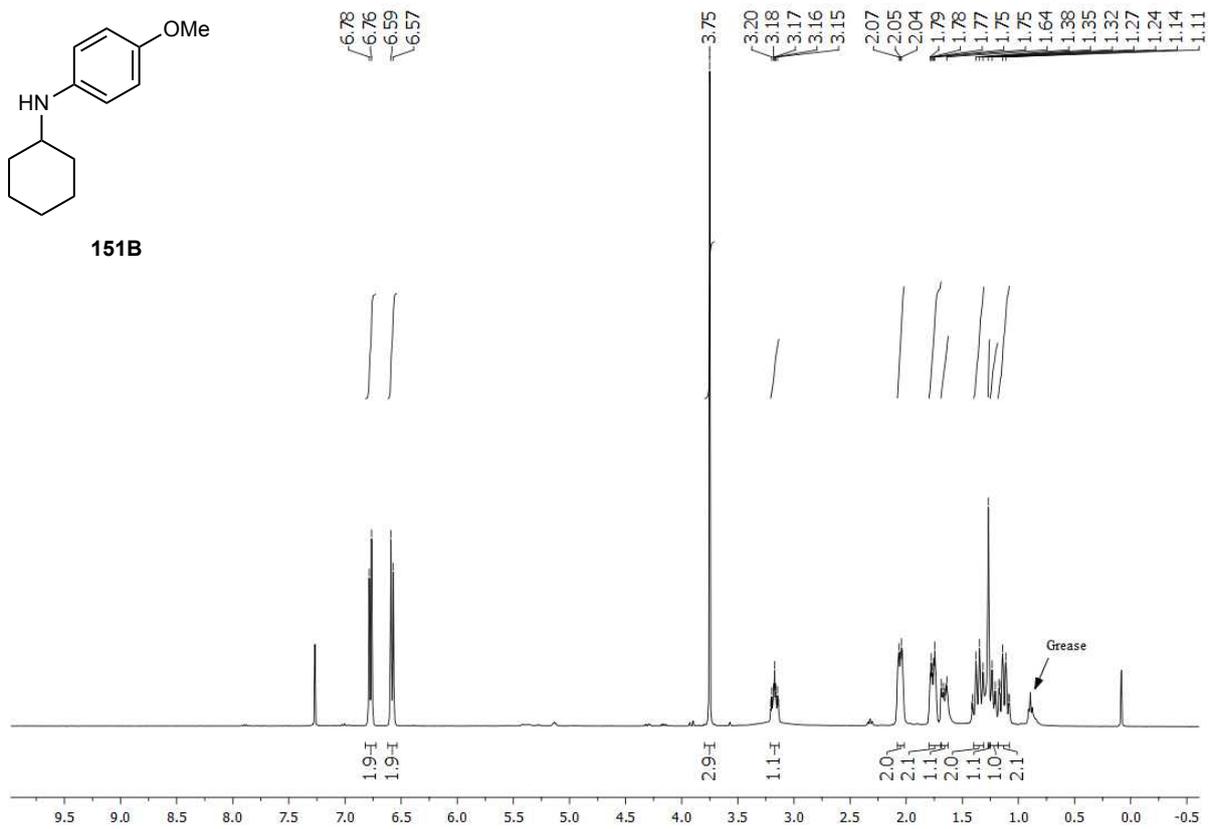




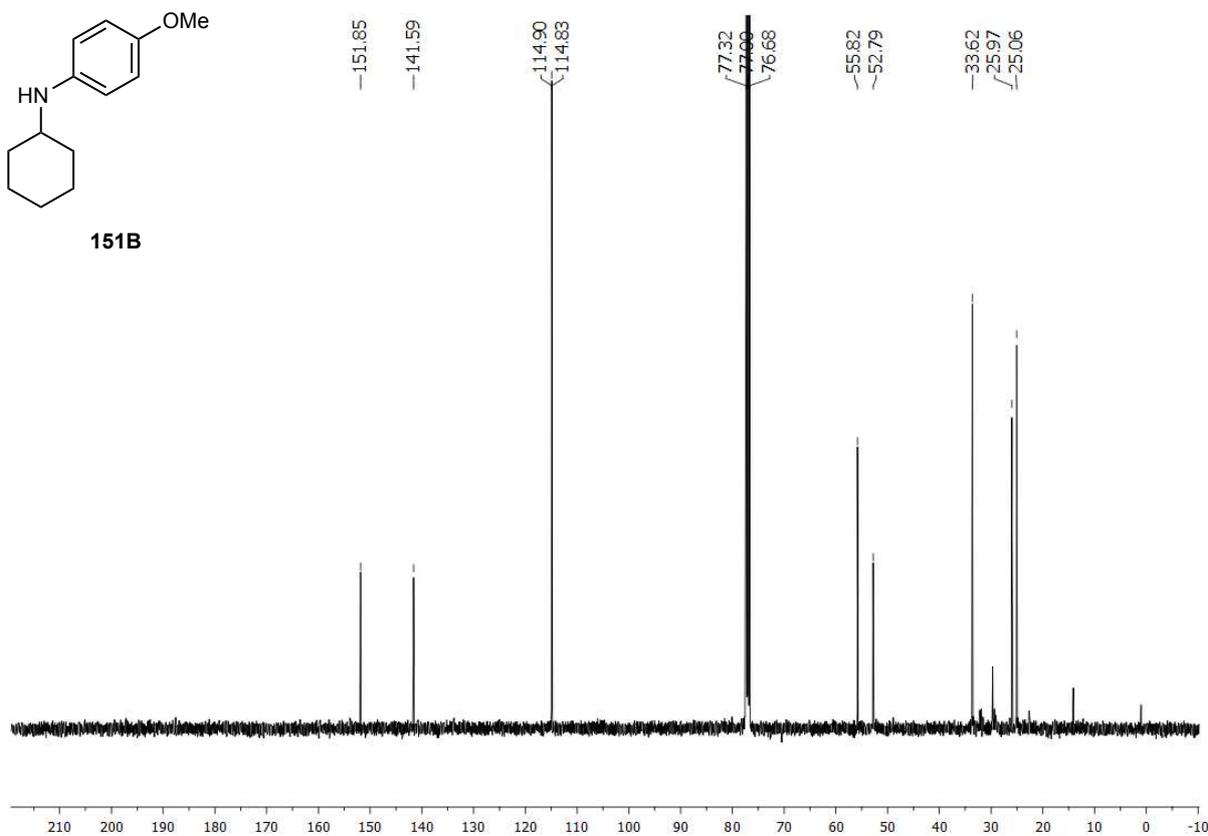


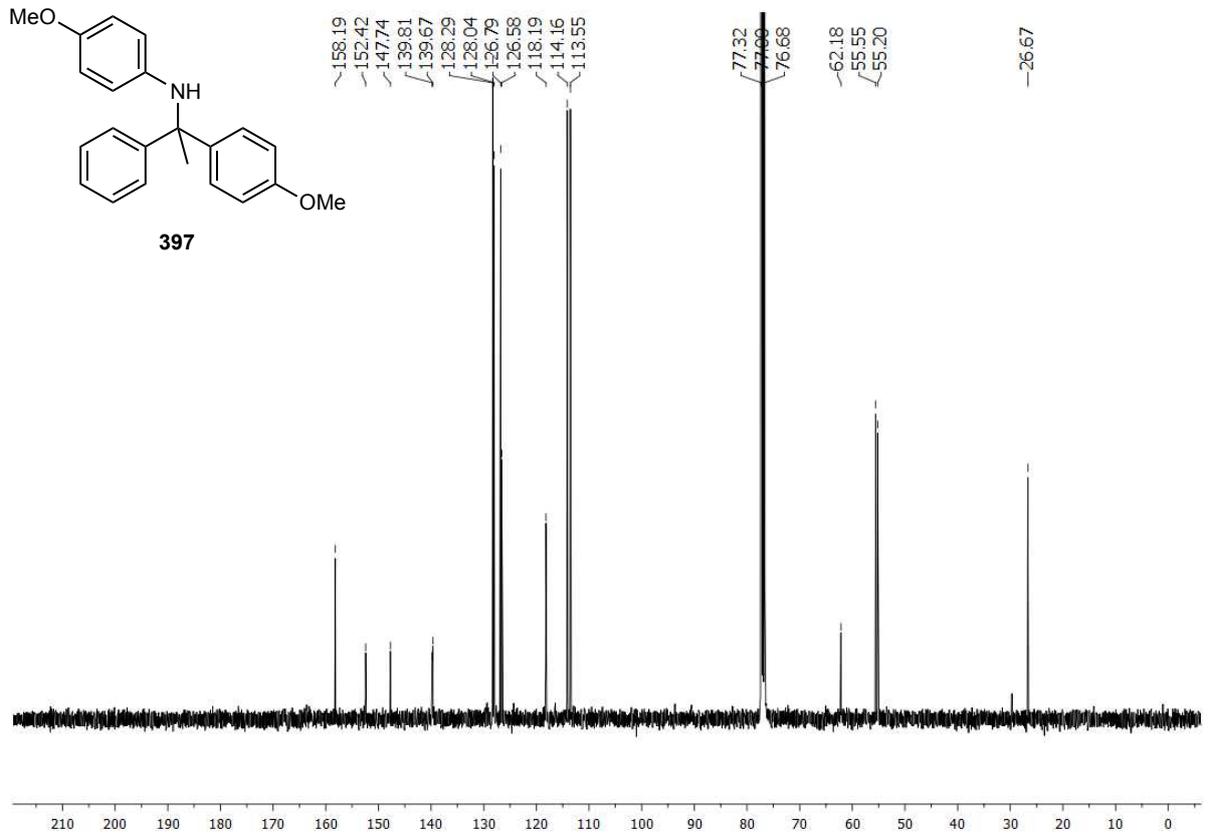
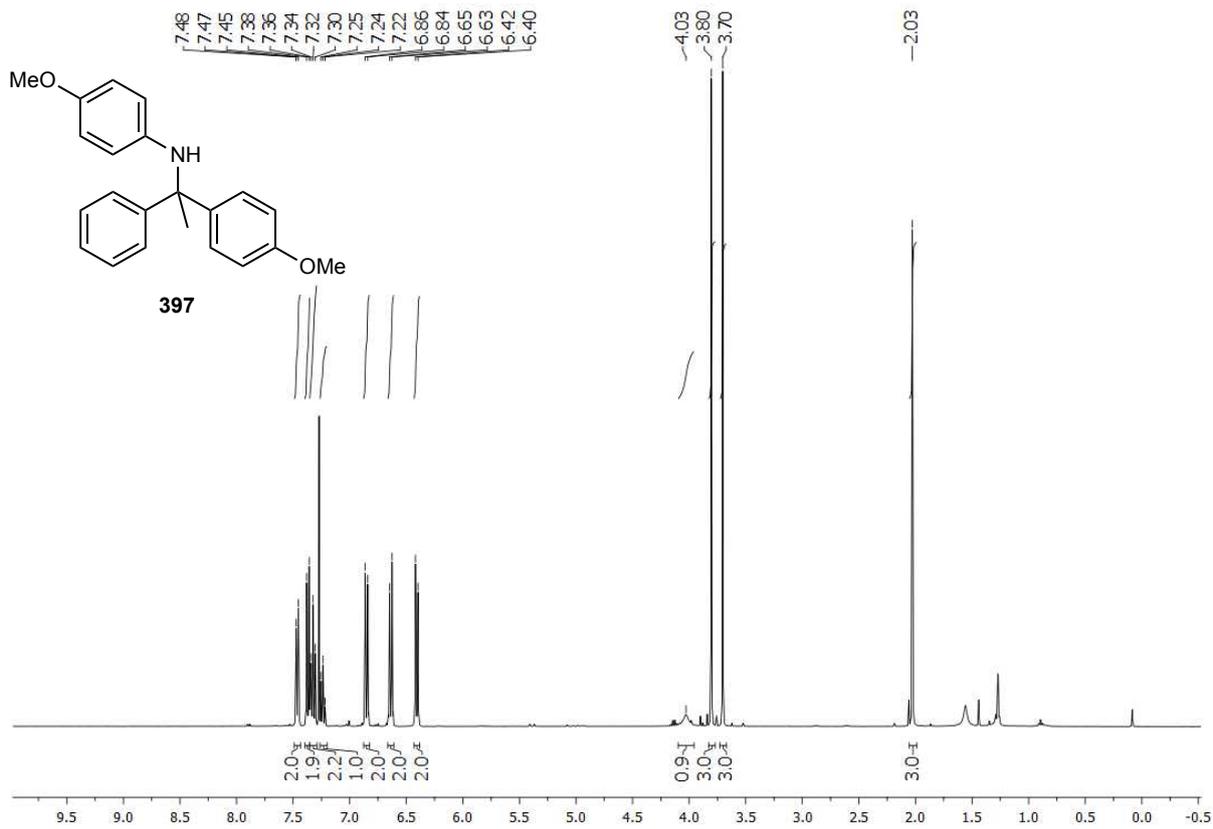


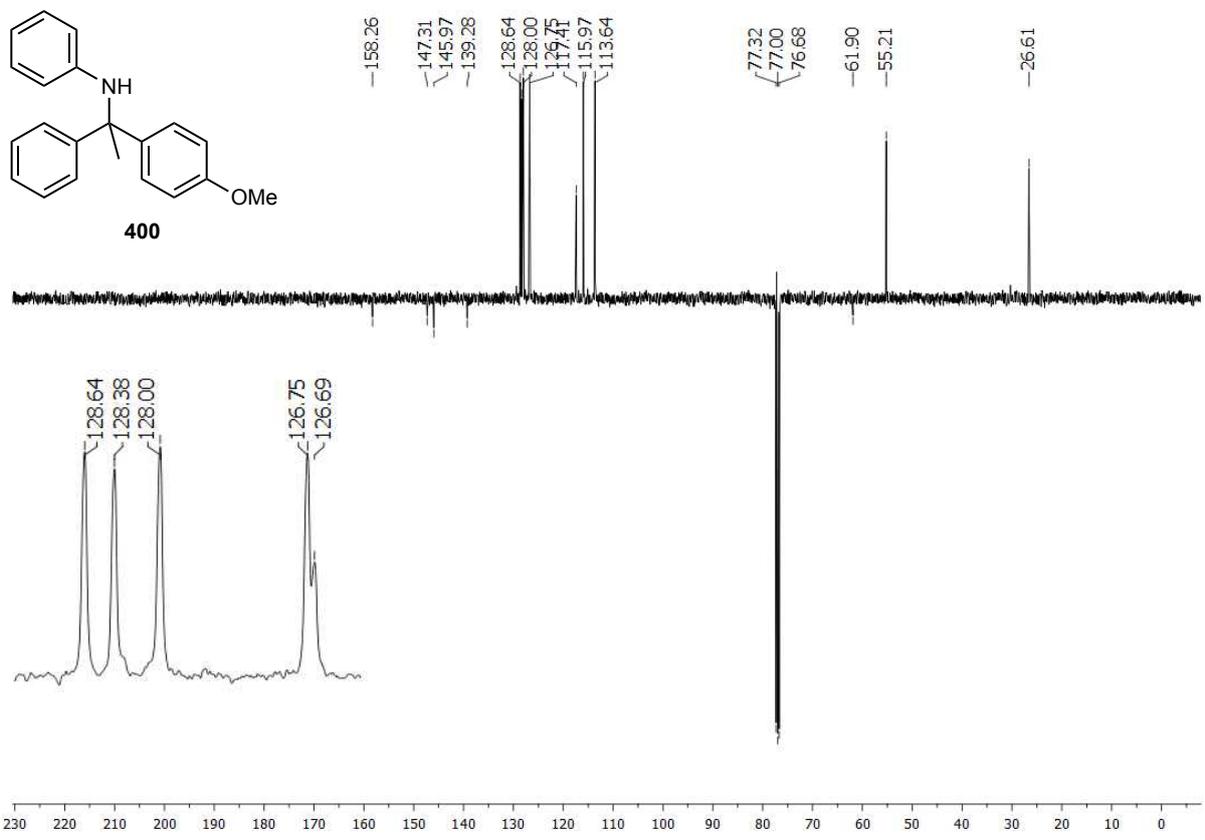
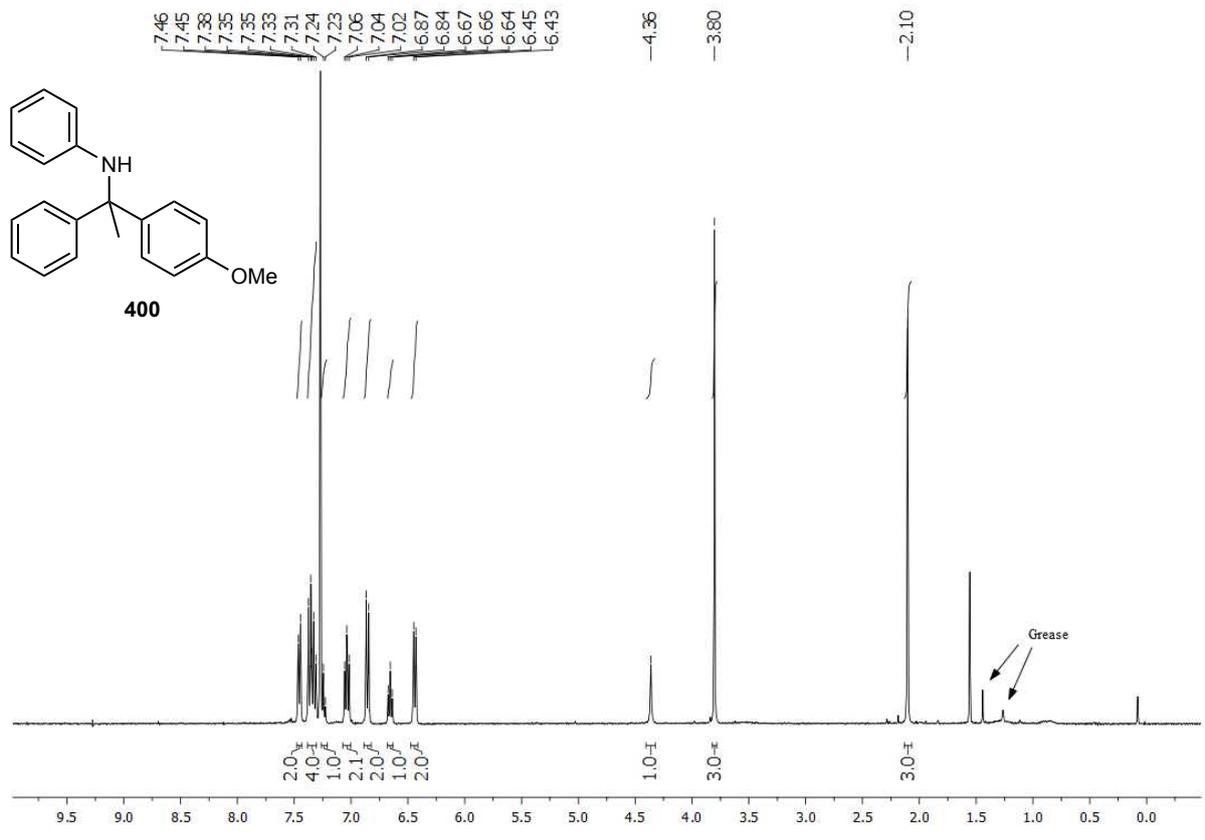
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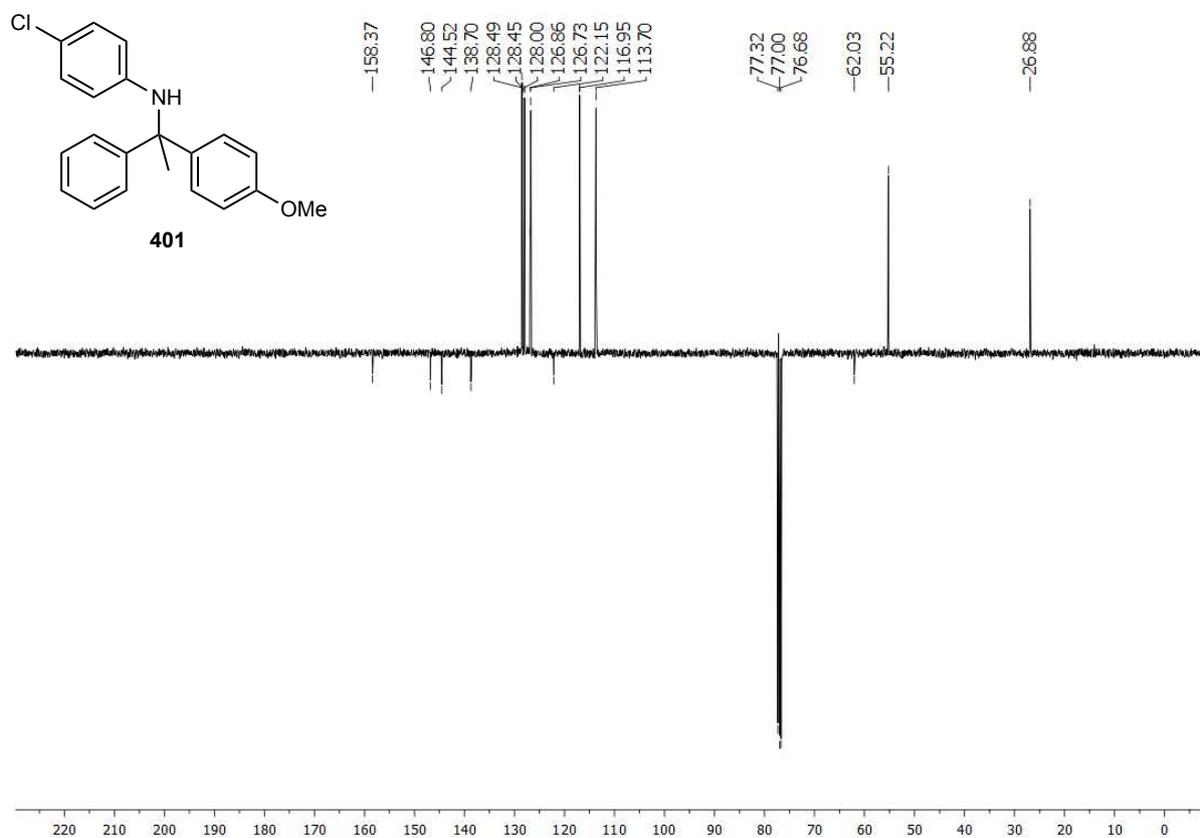
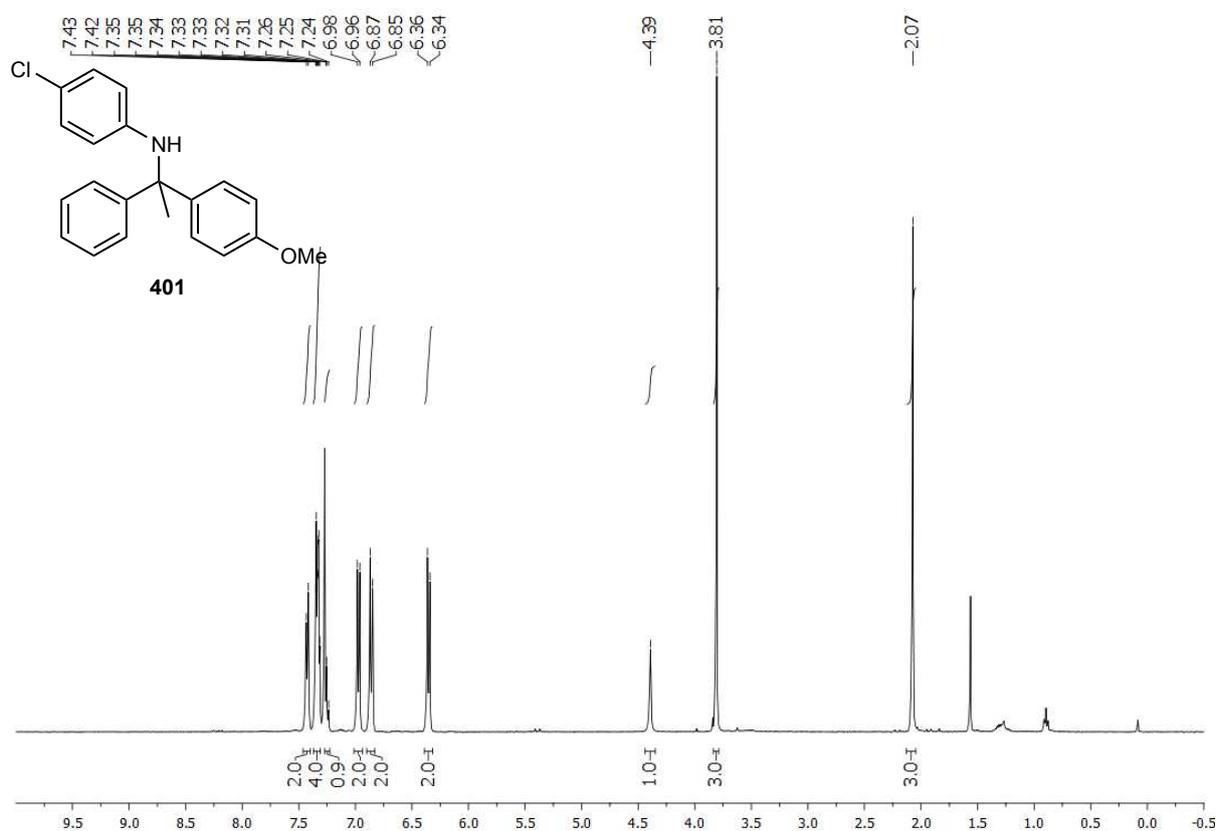


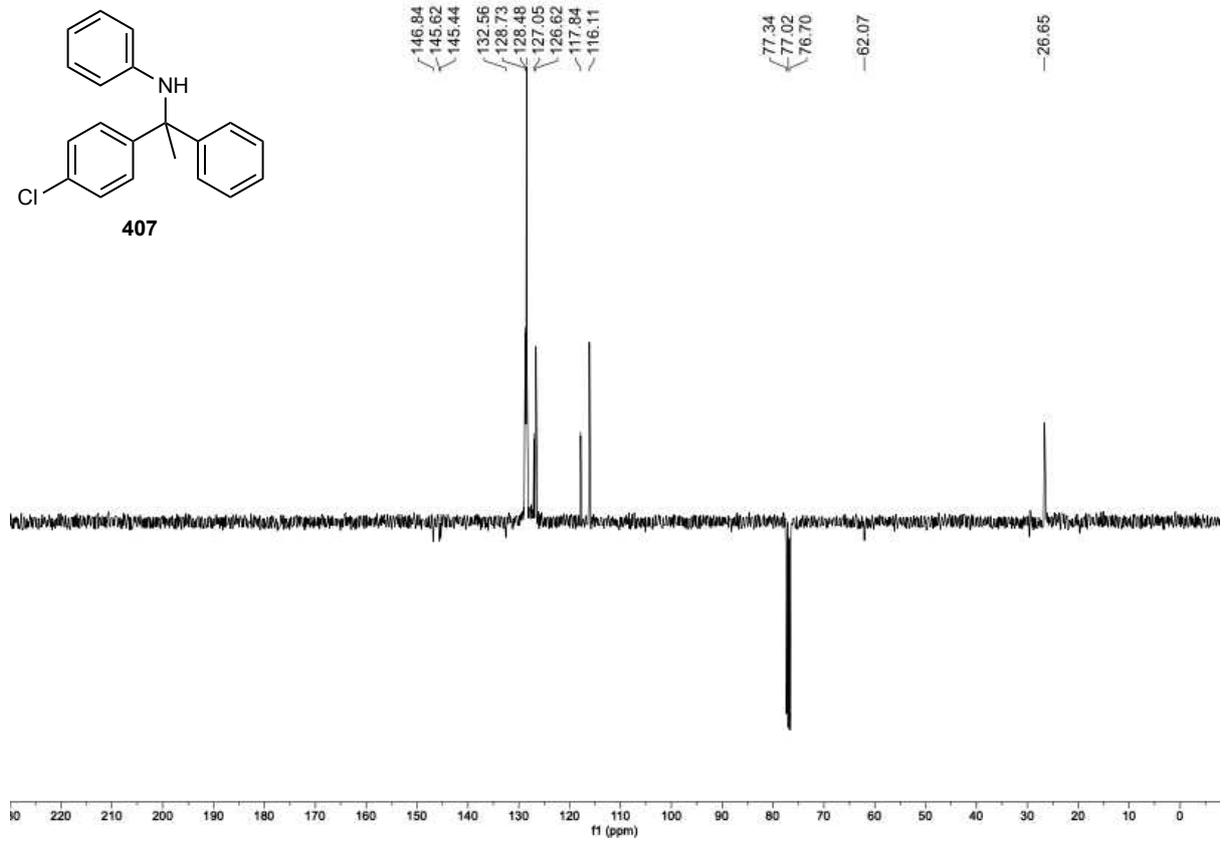
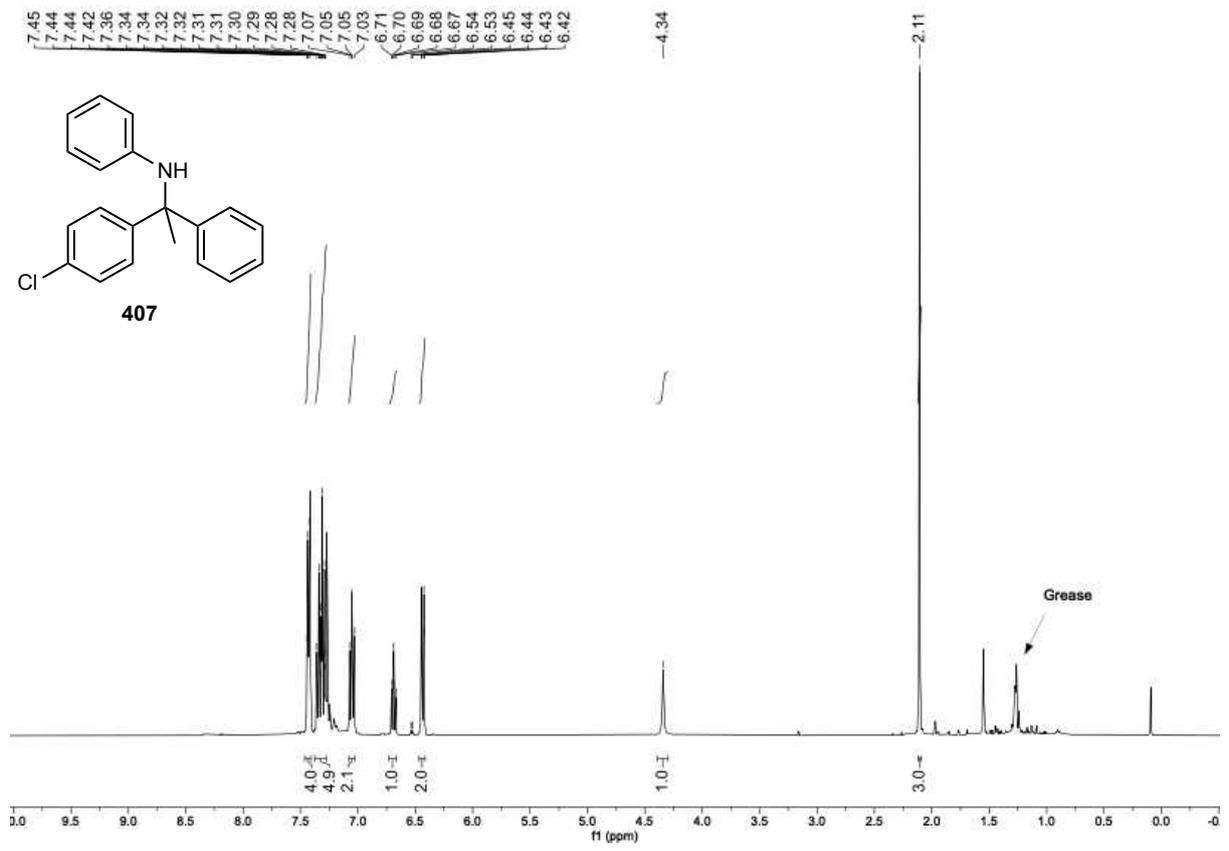
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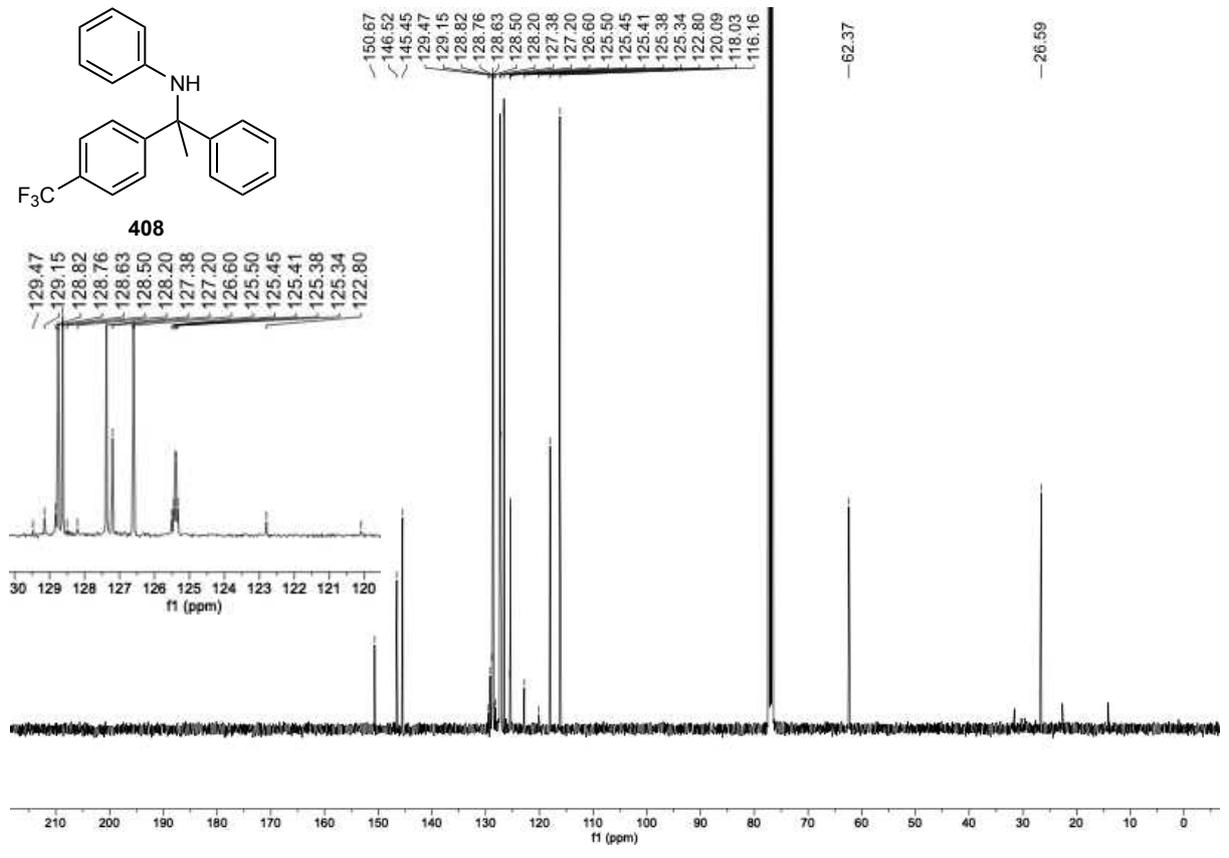
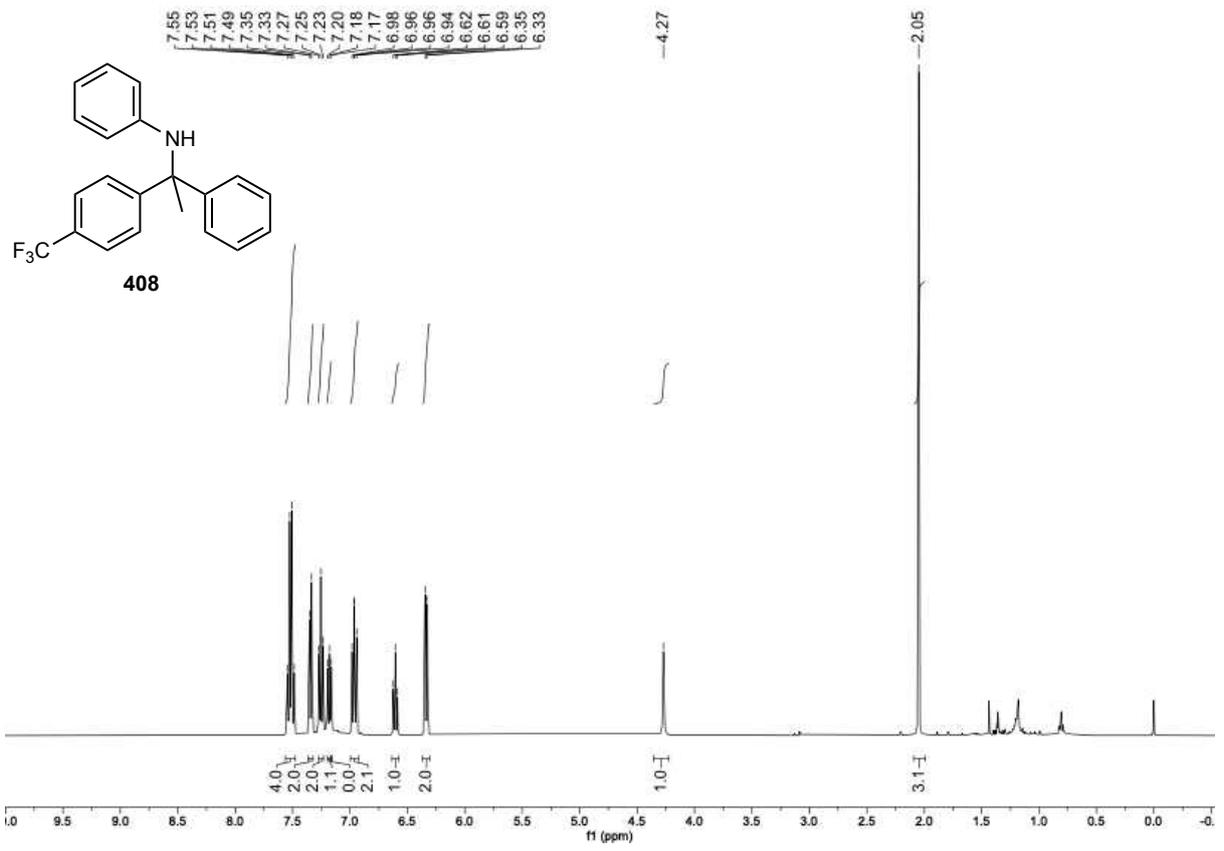


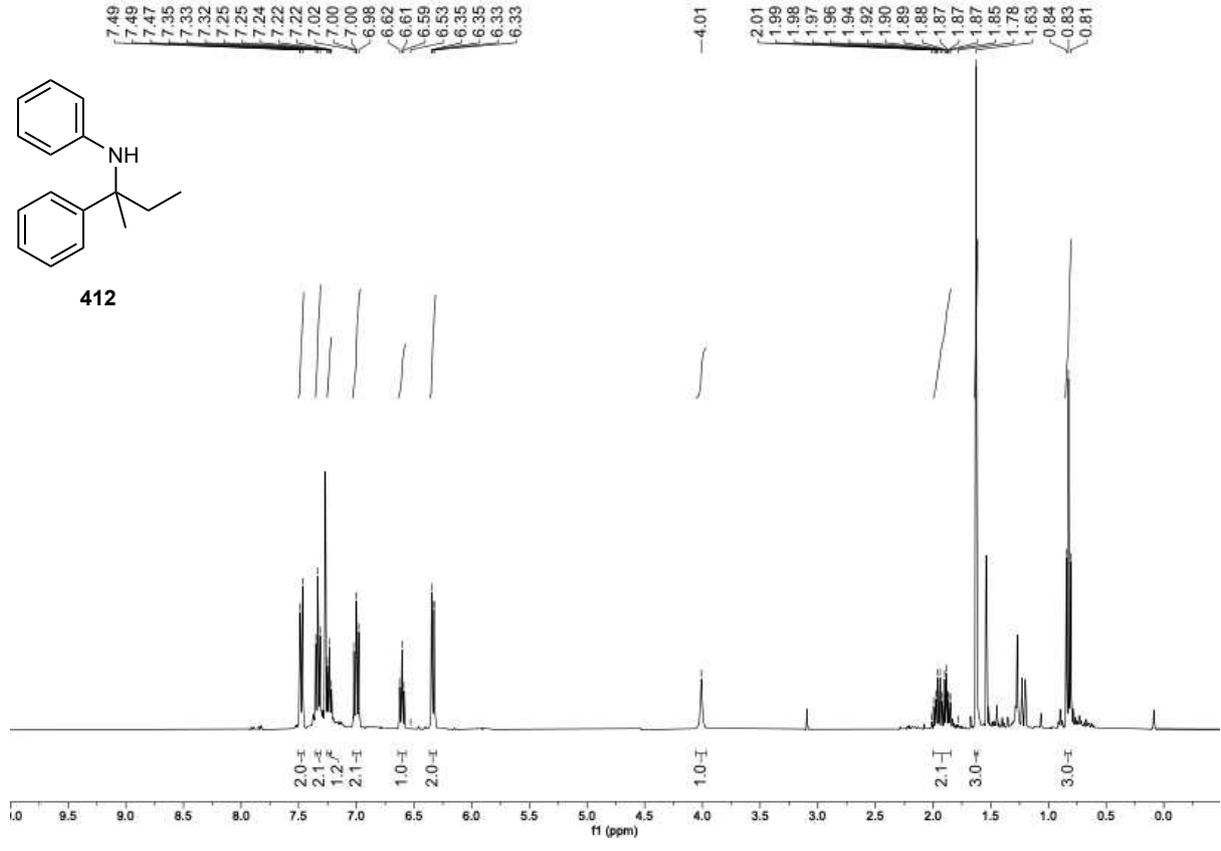
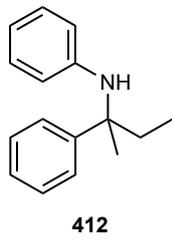
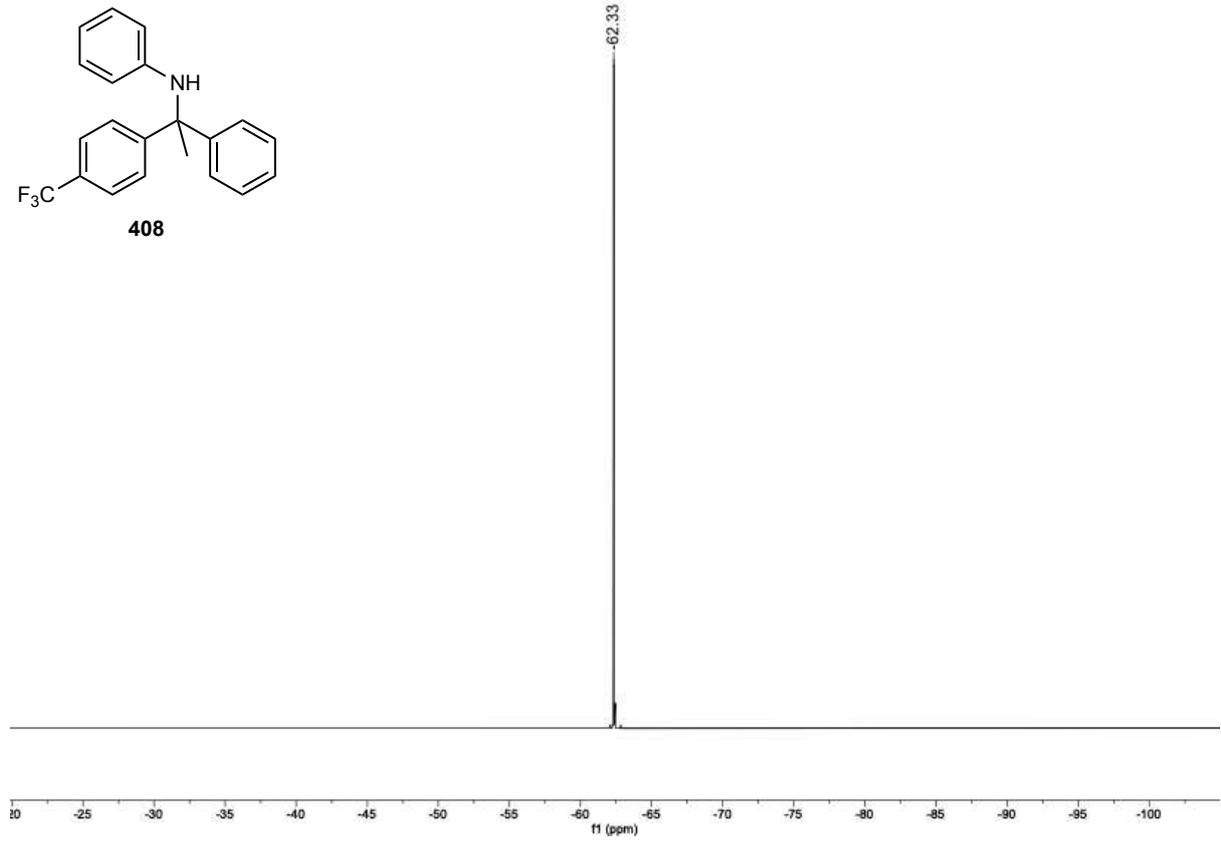
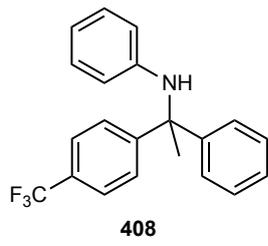


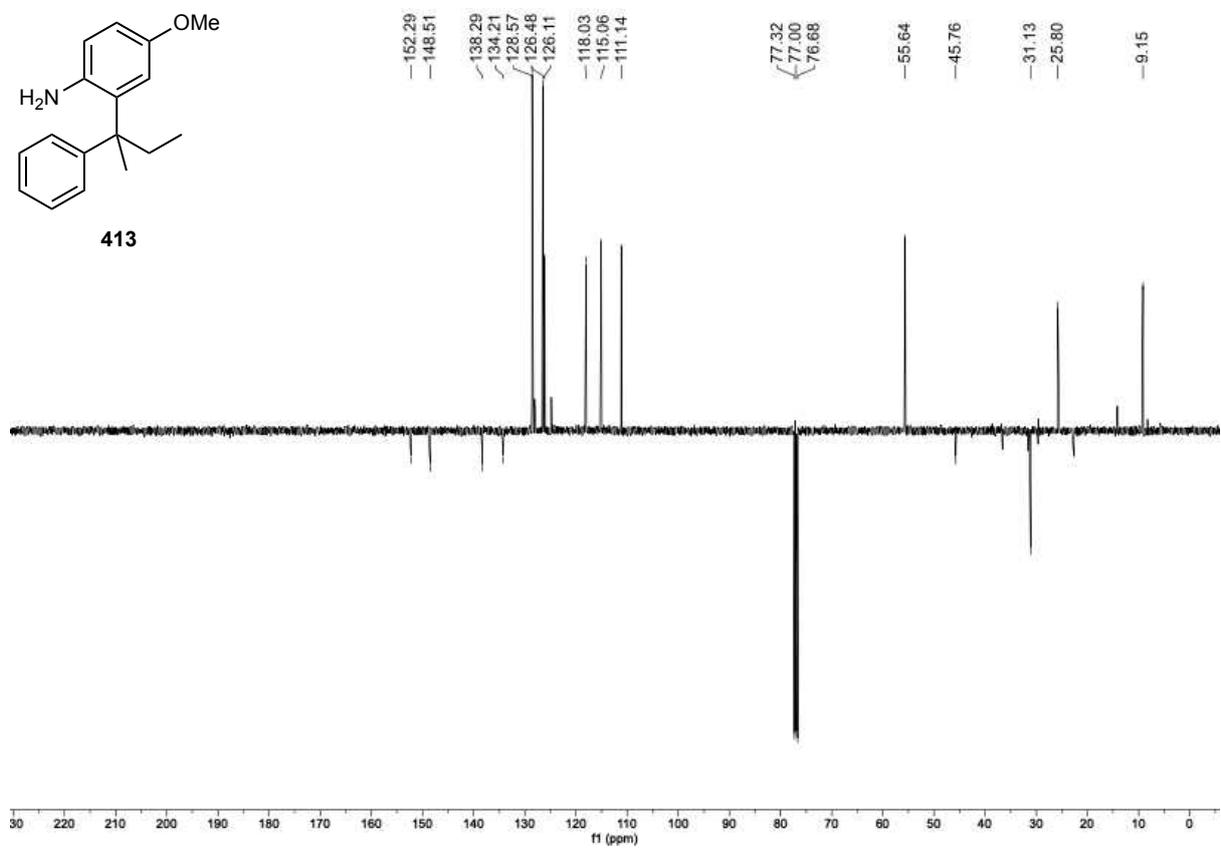
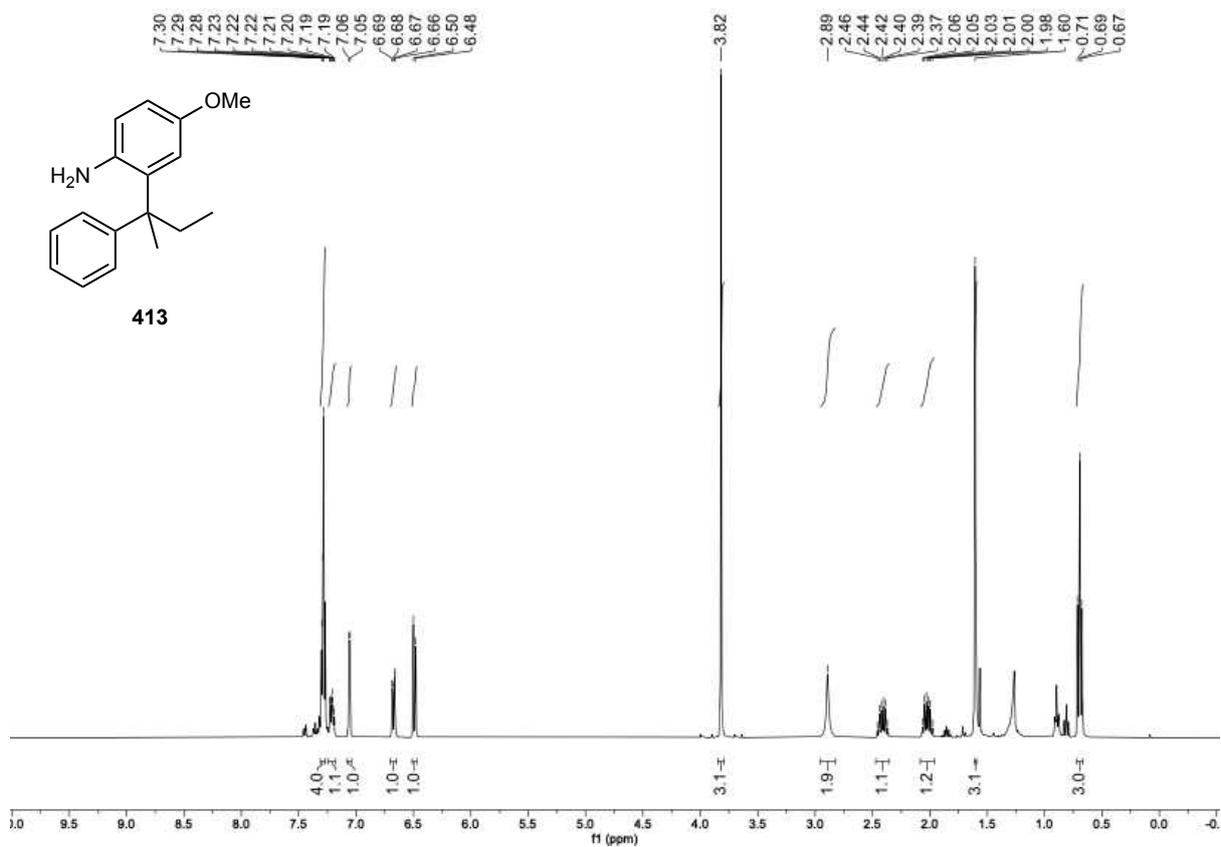


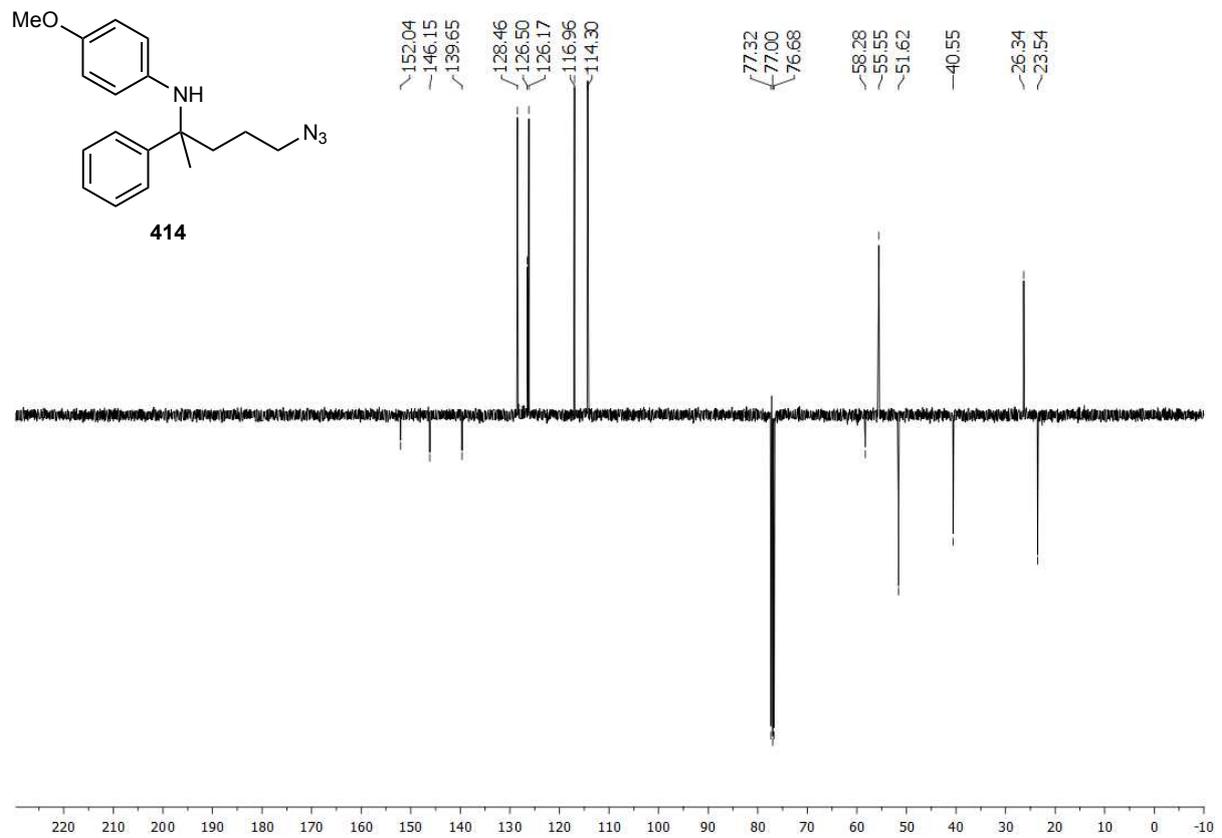
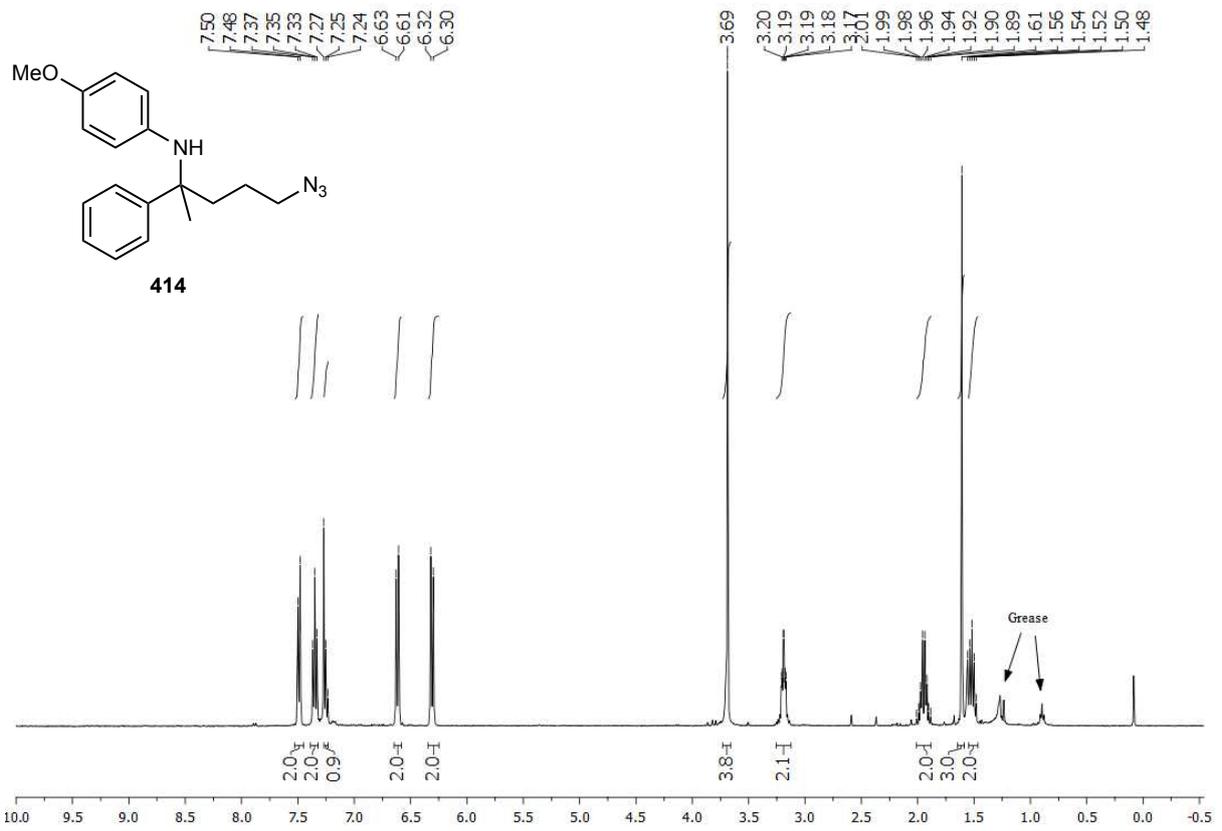


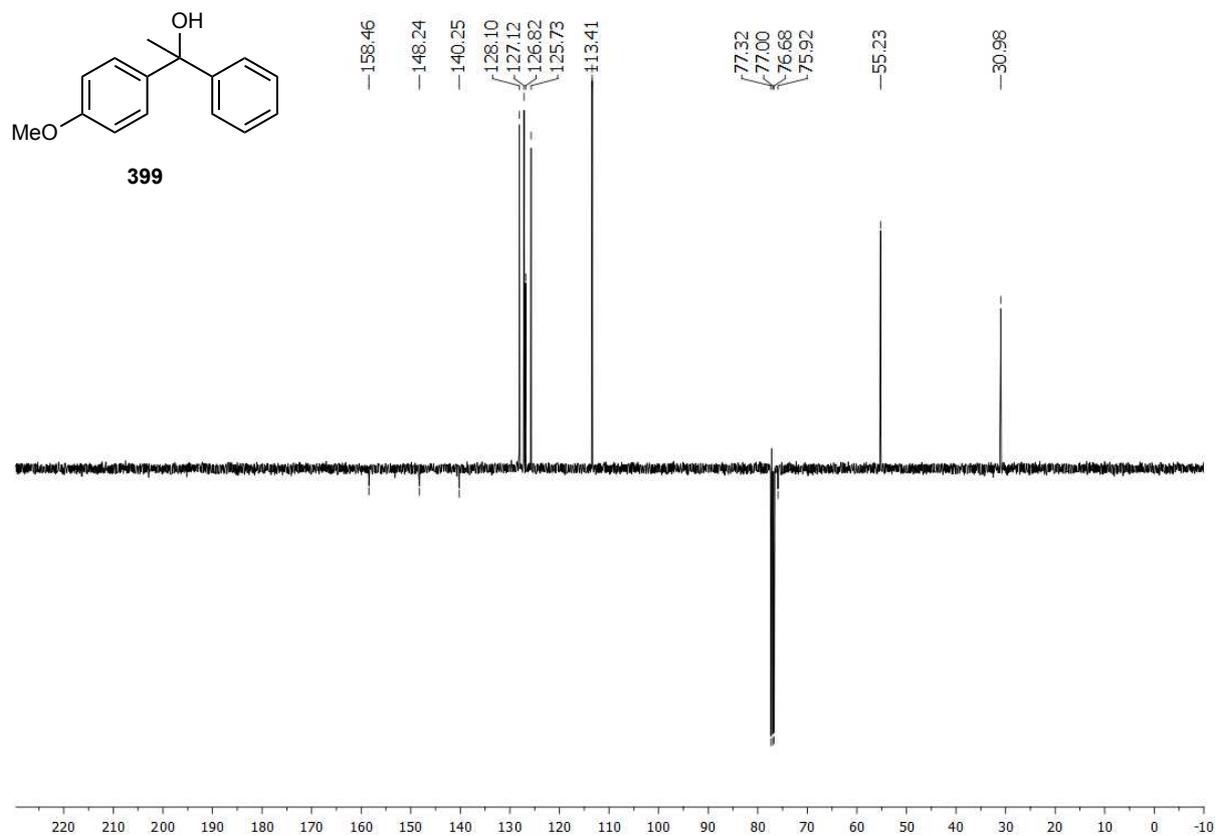
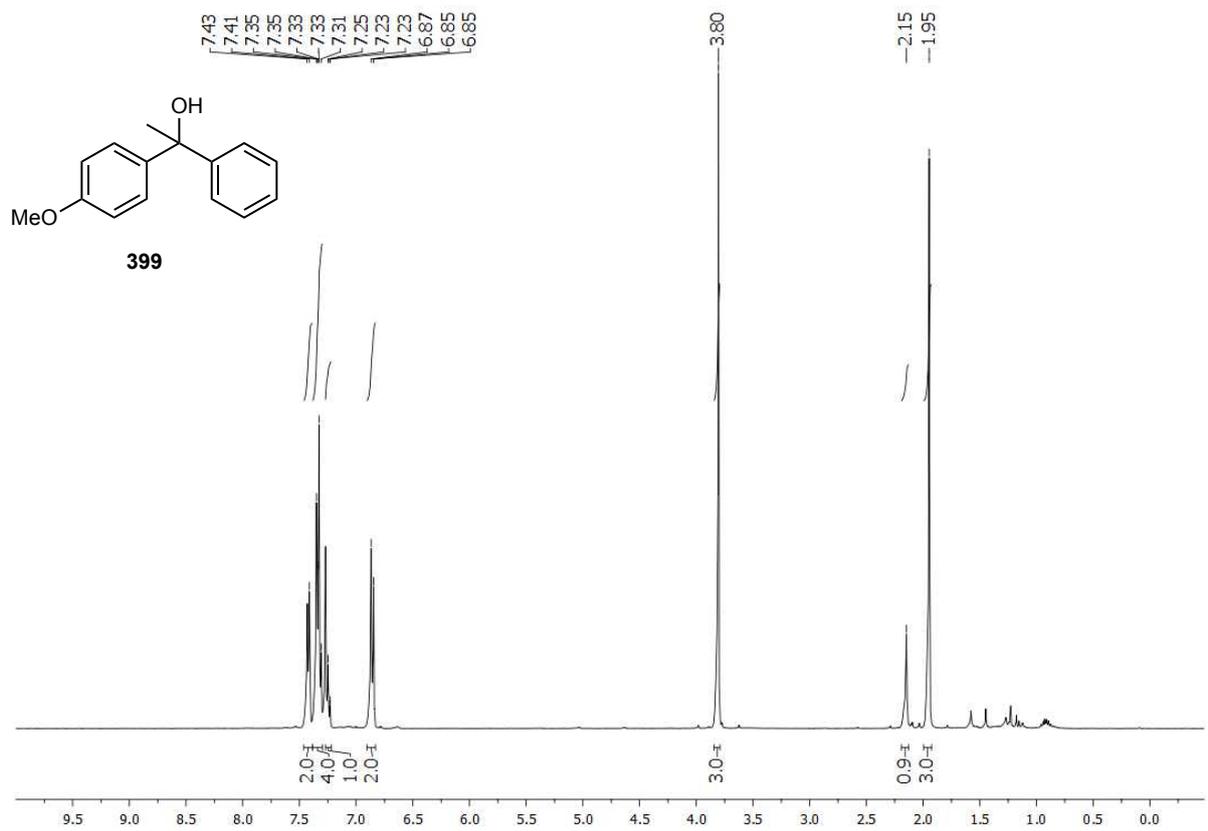


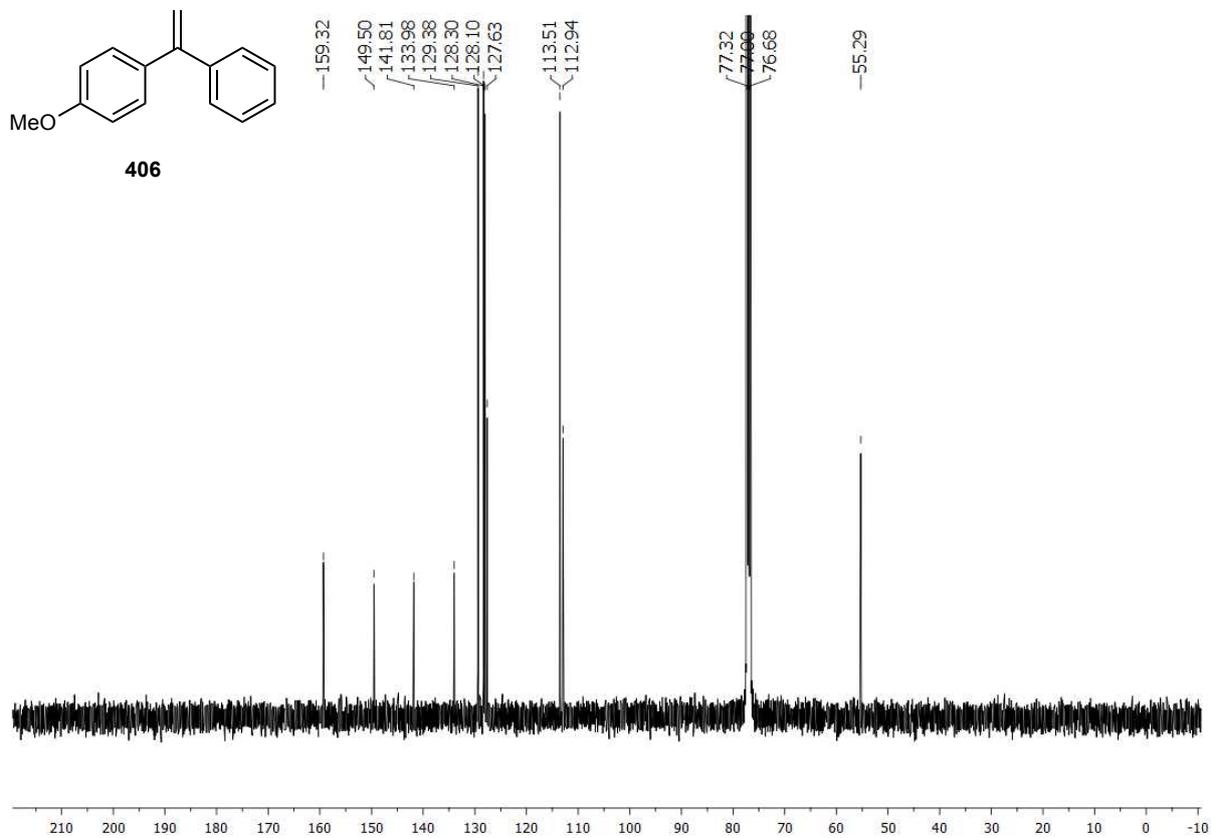
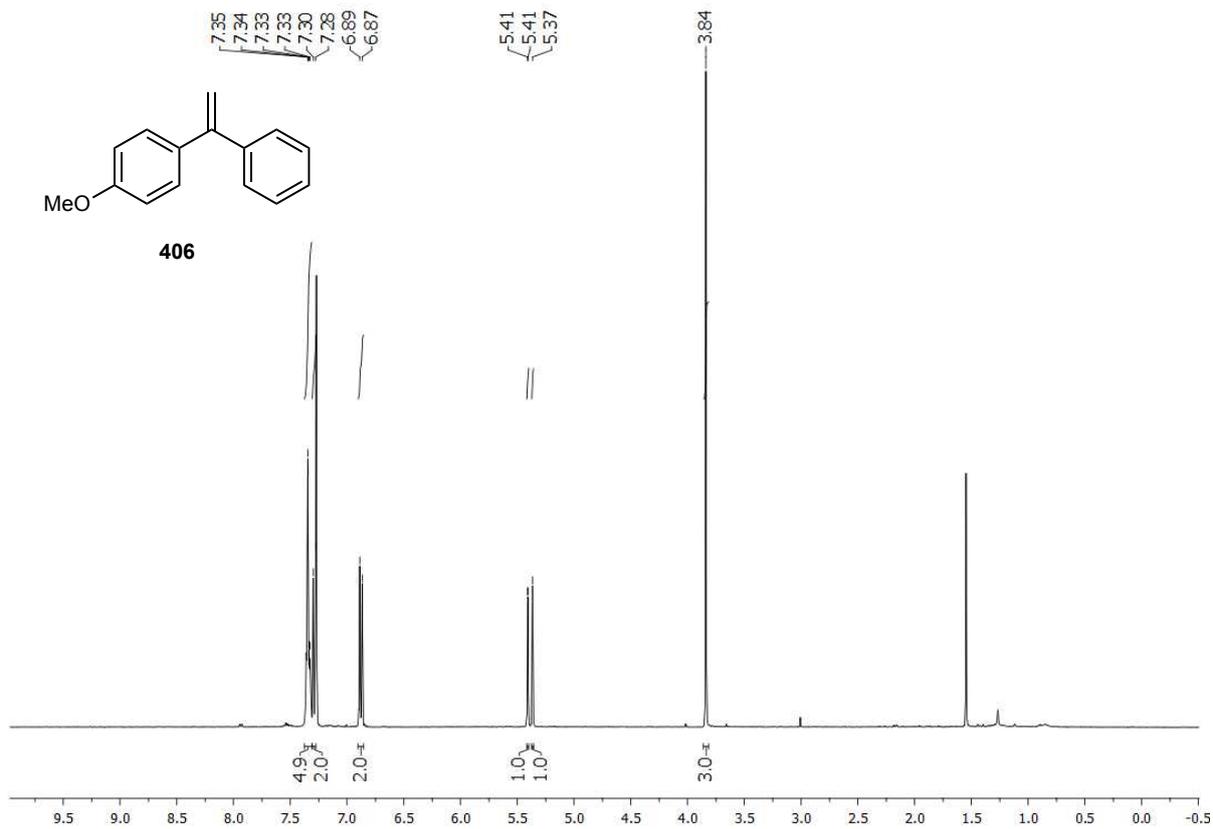




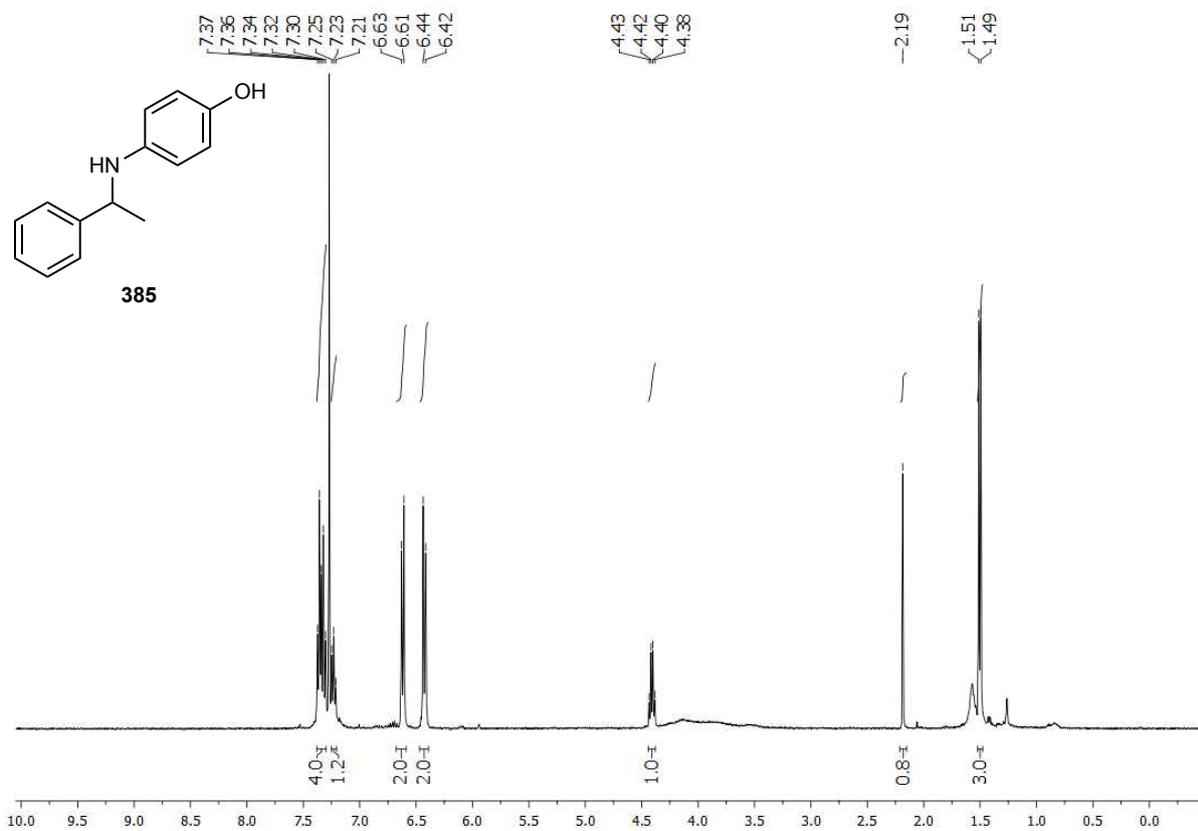


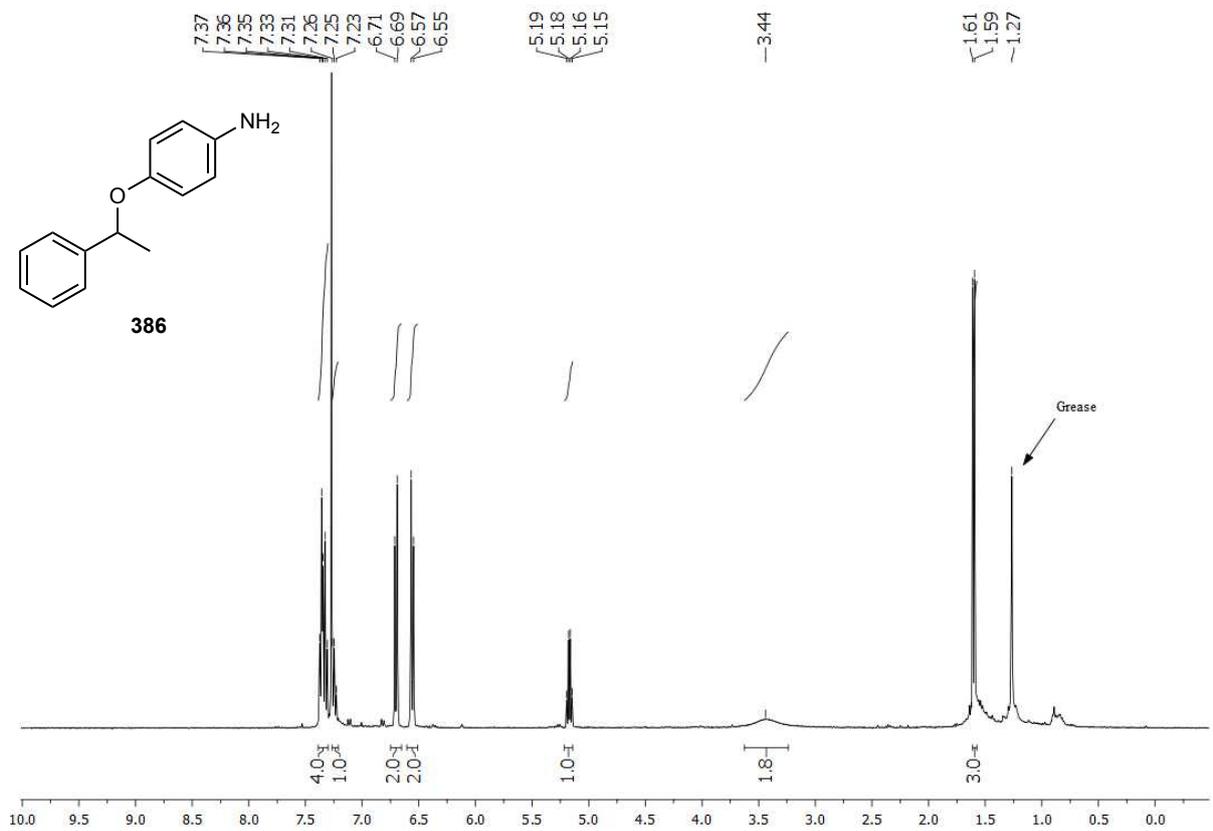
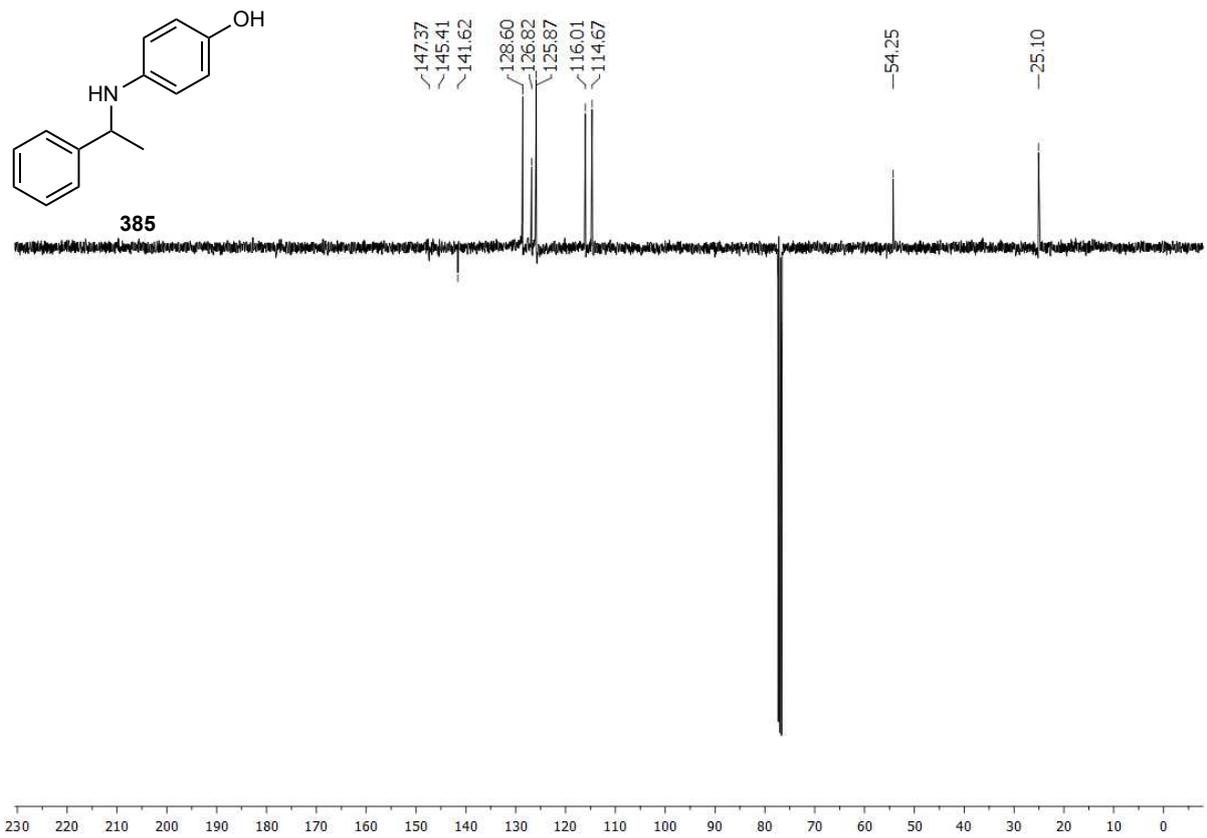


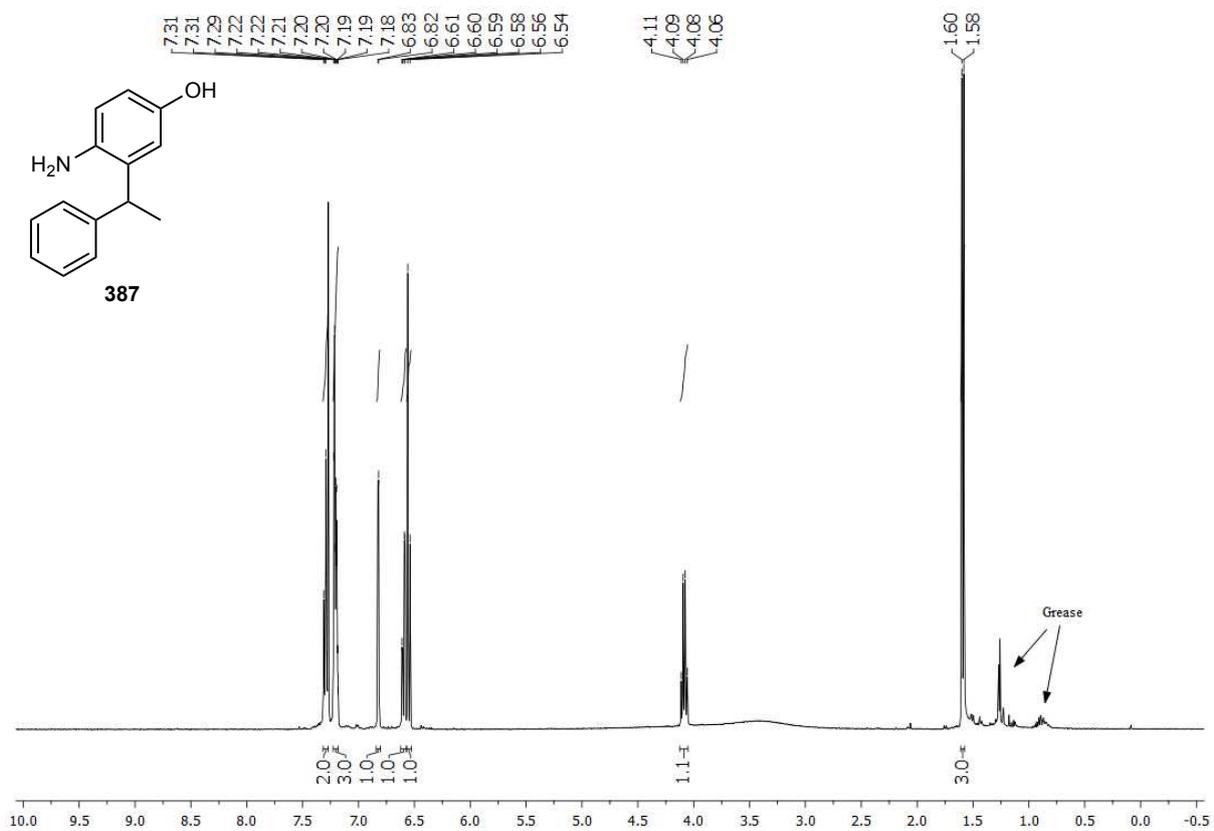
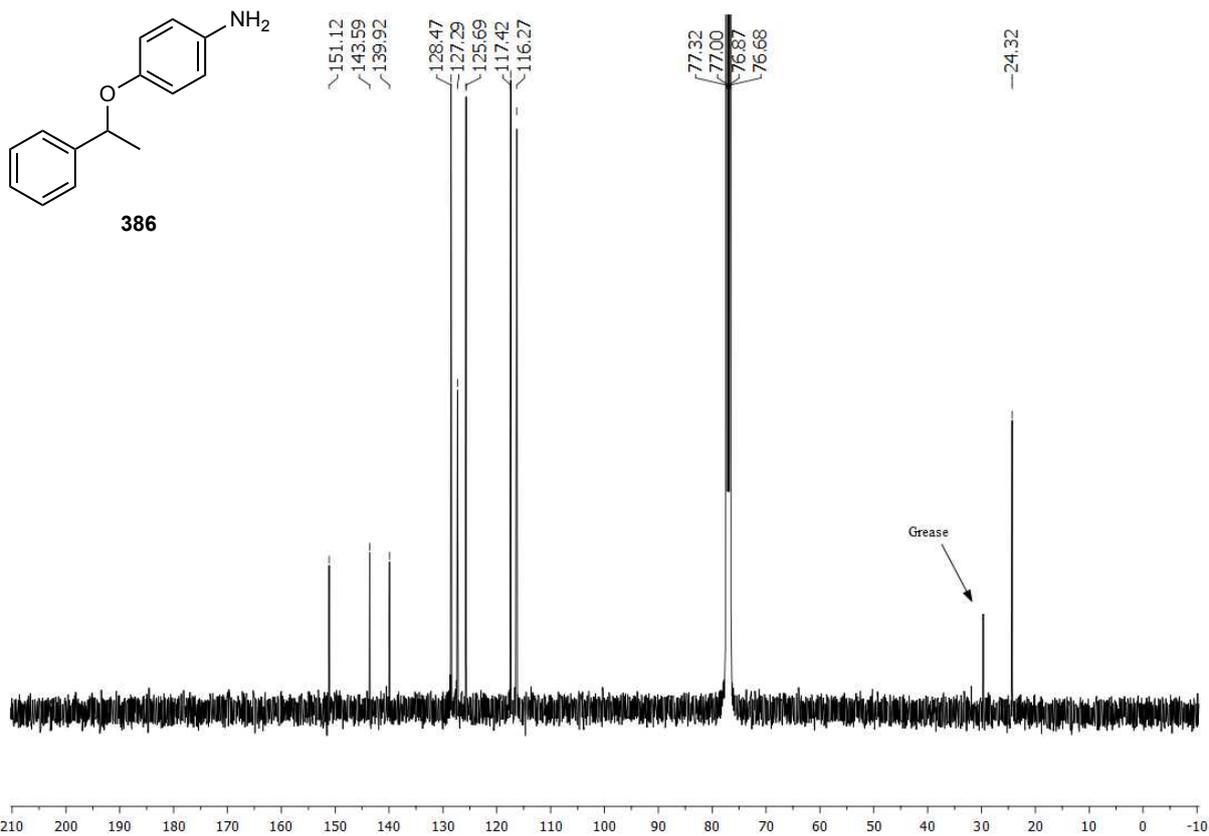


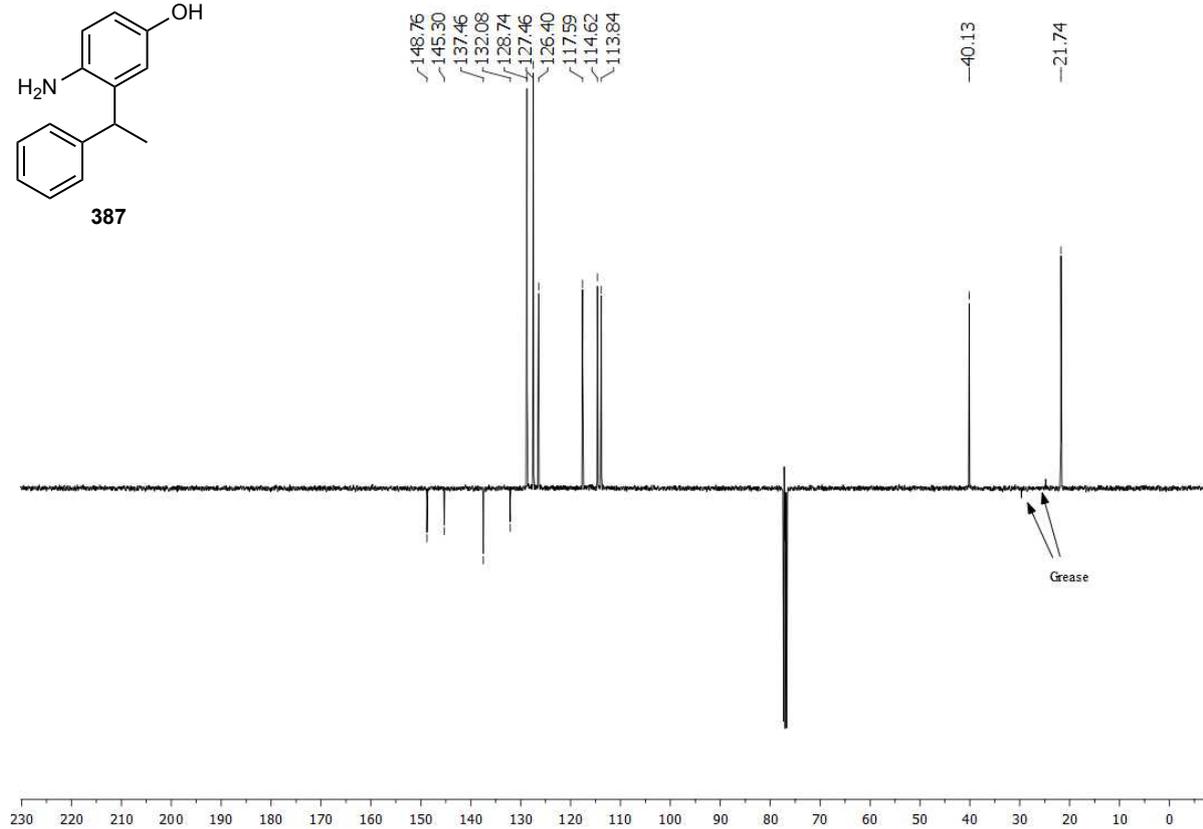
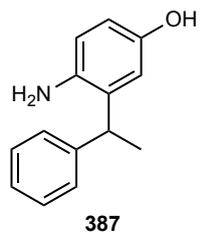


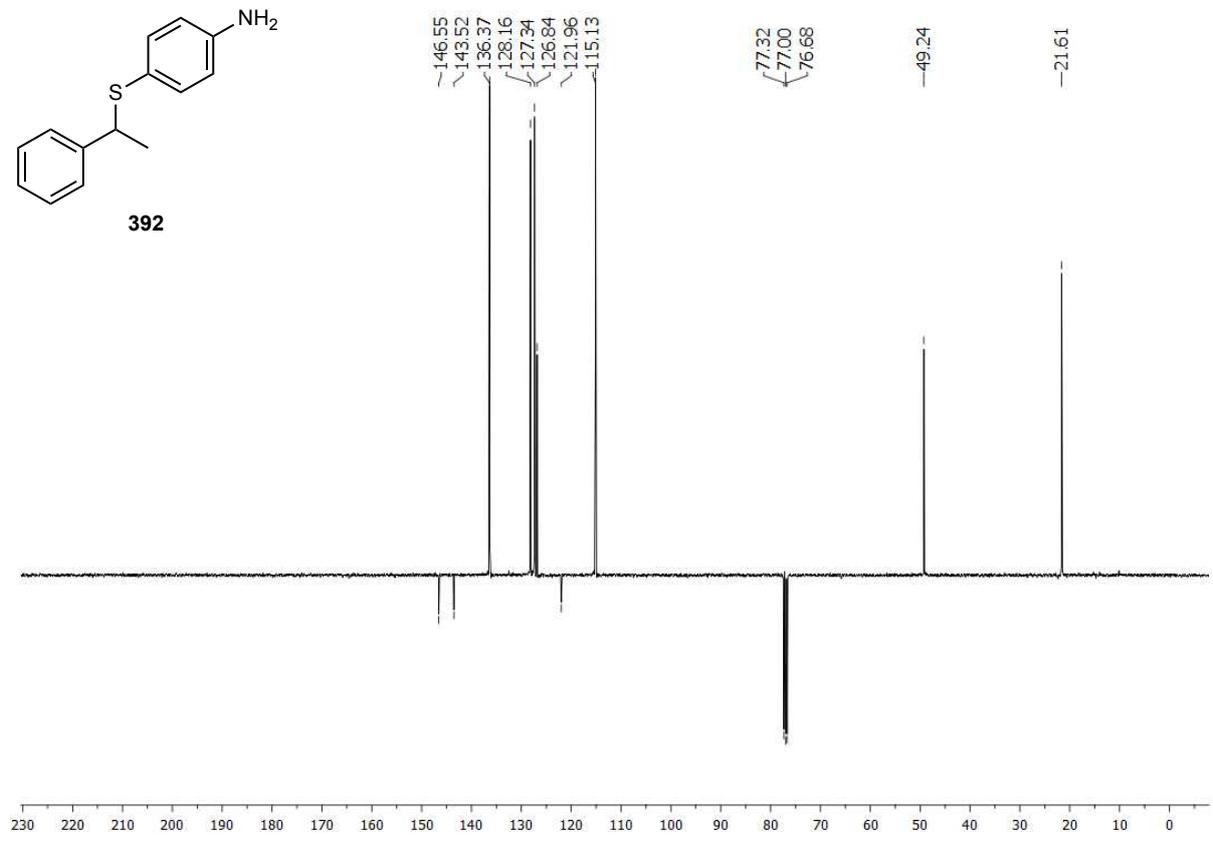
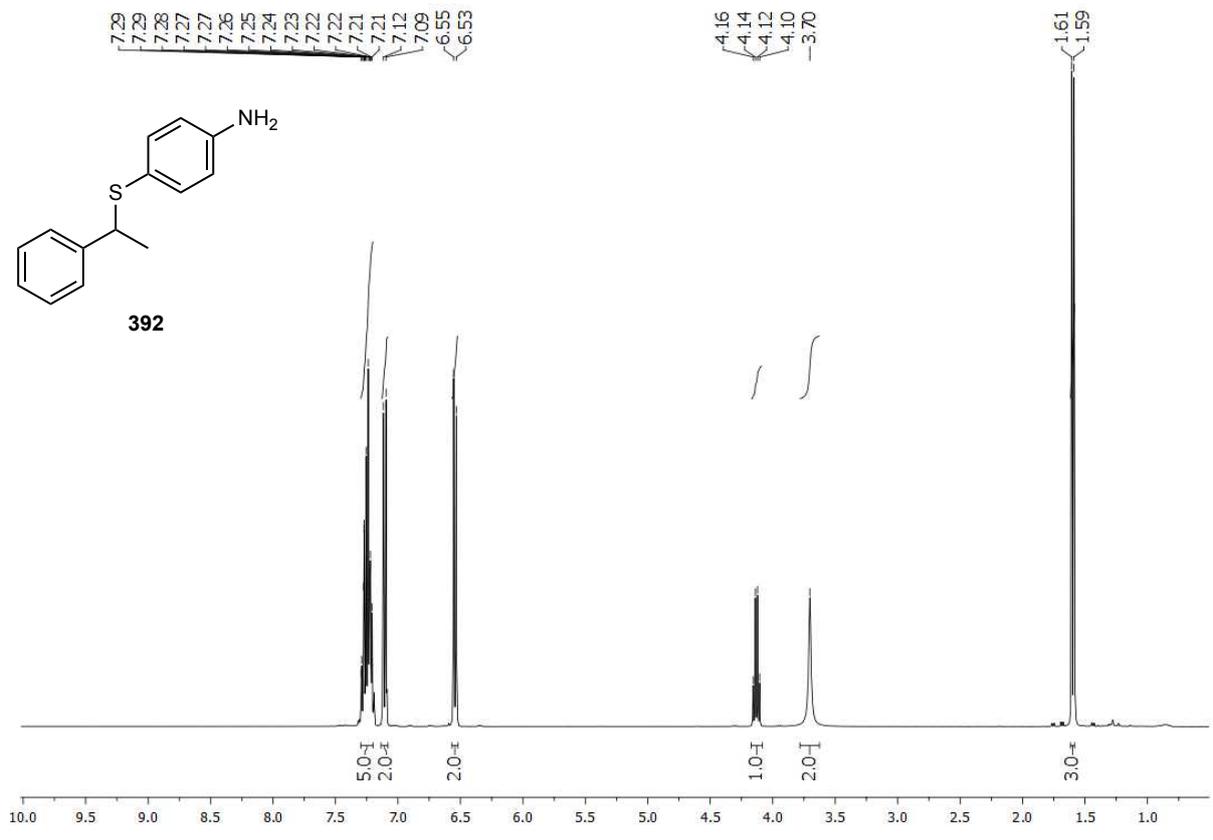
4 C-O and C-S Coupling



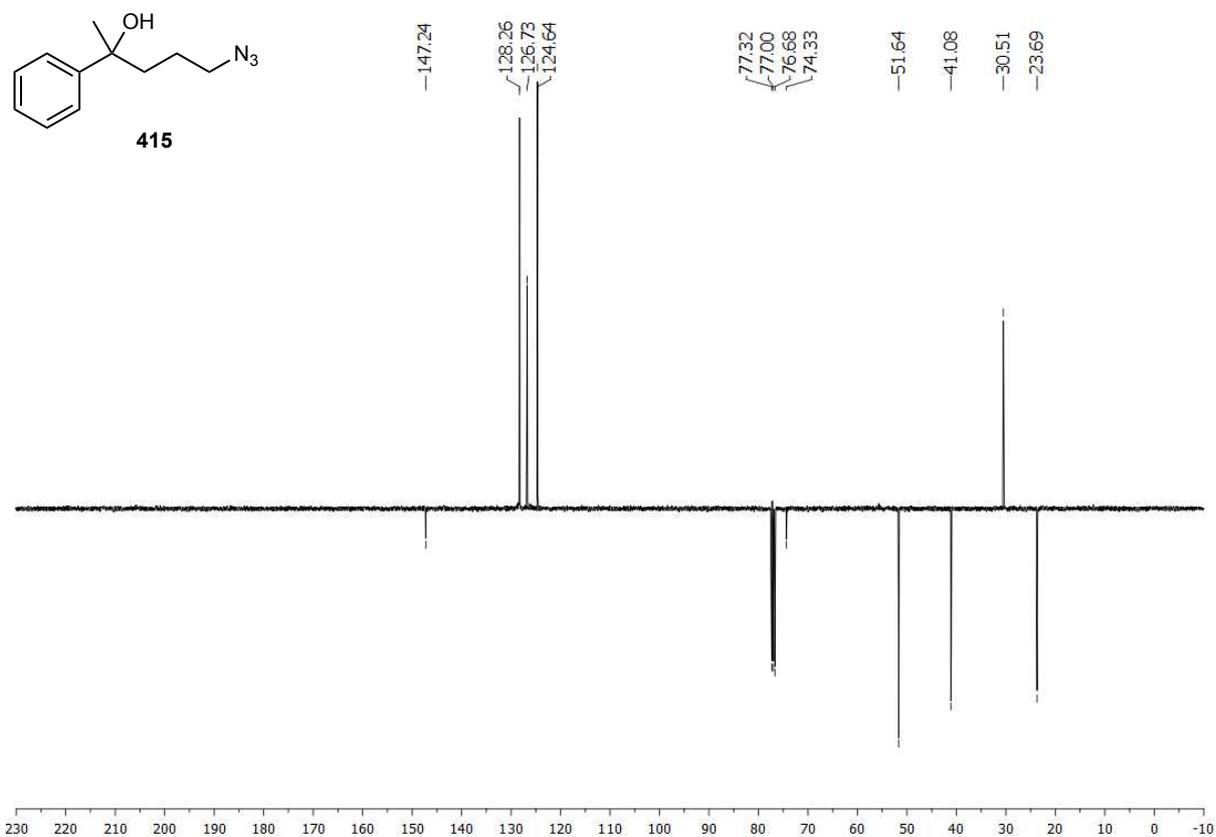
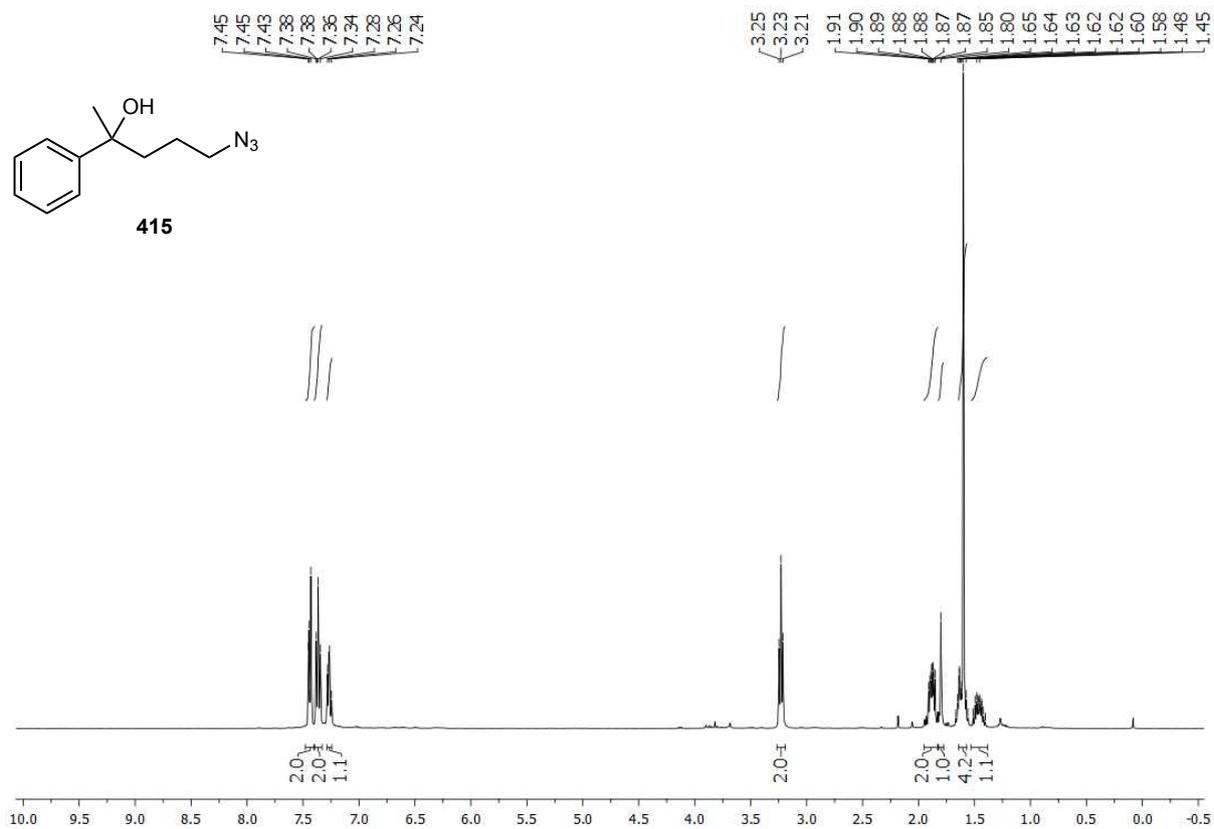


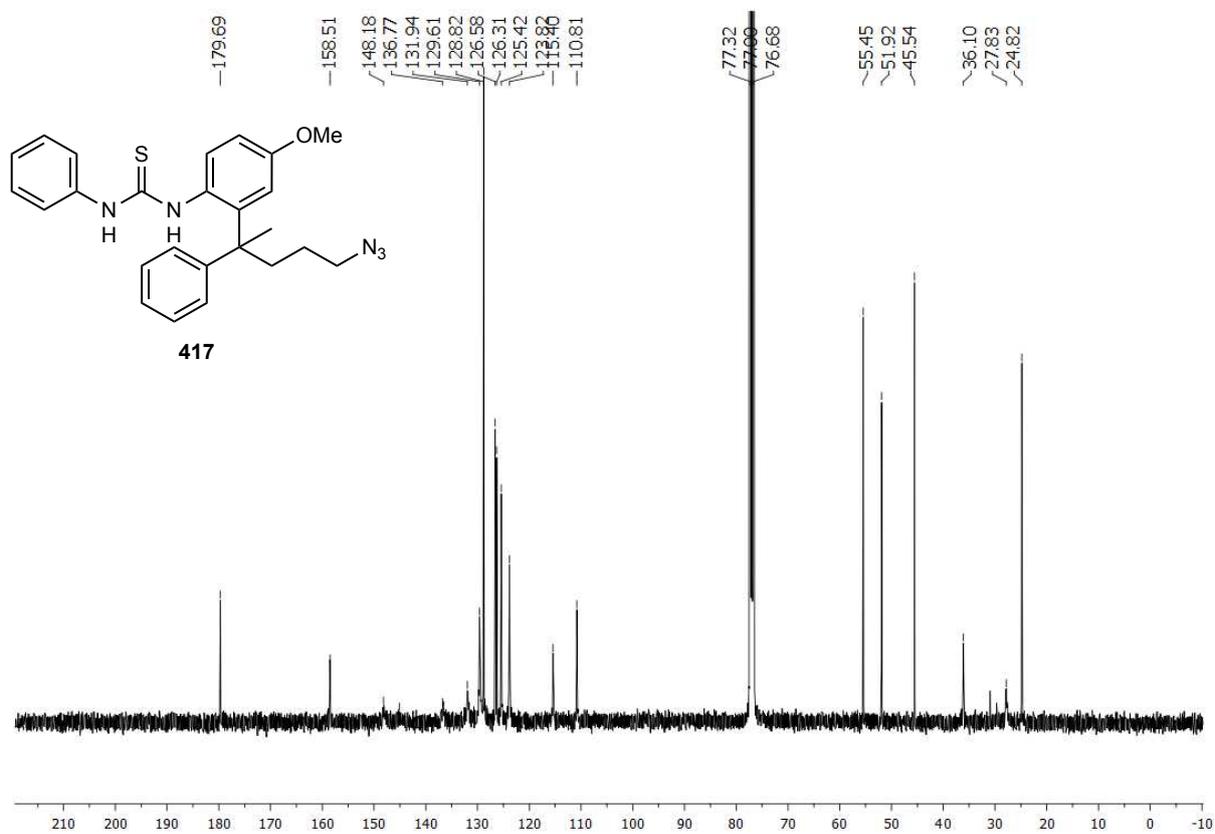
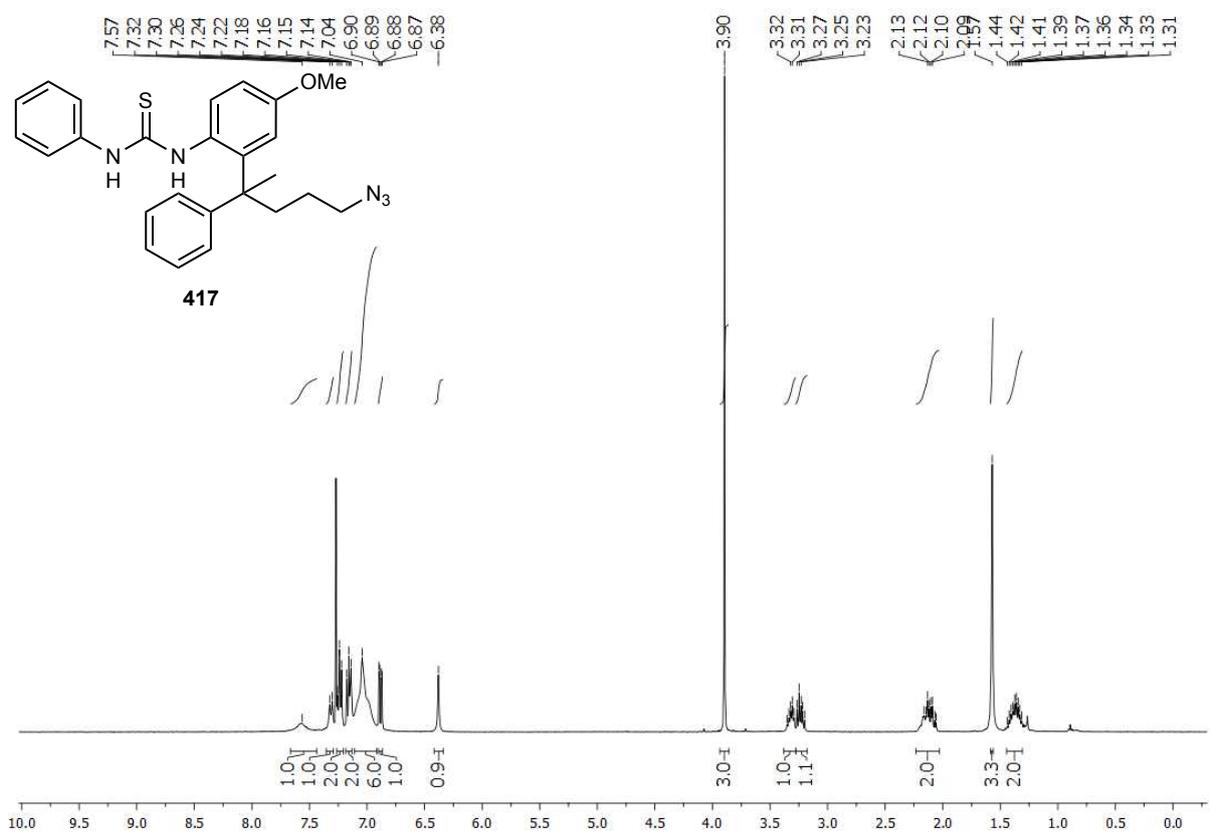


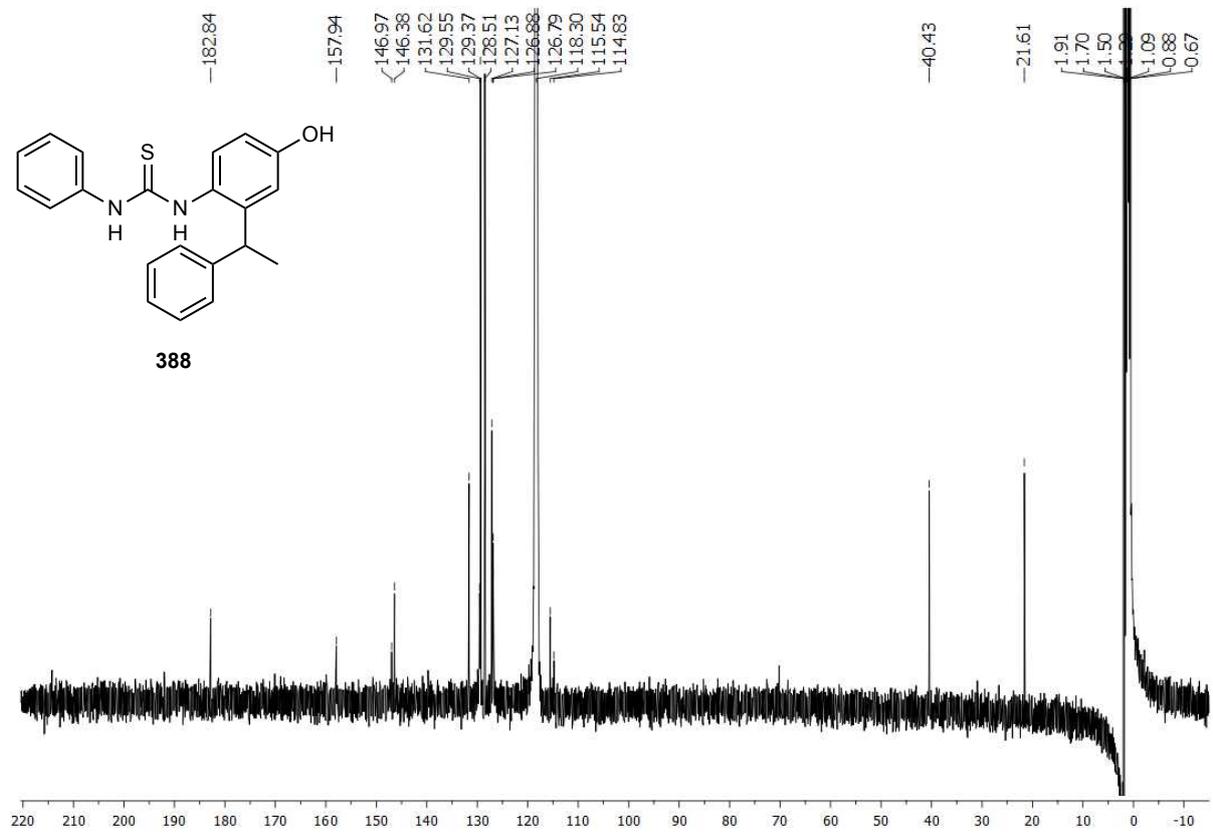
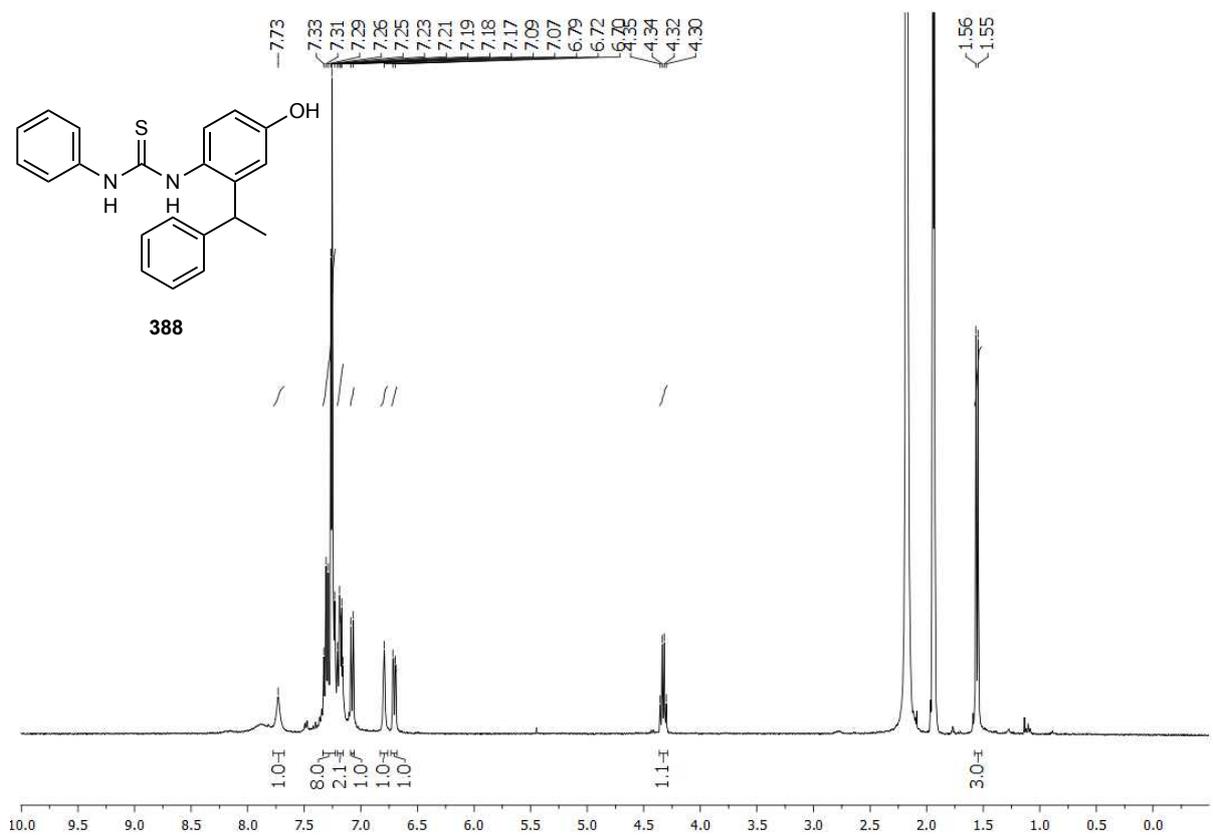




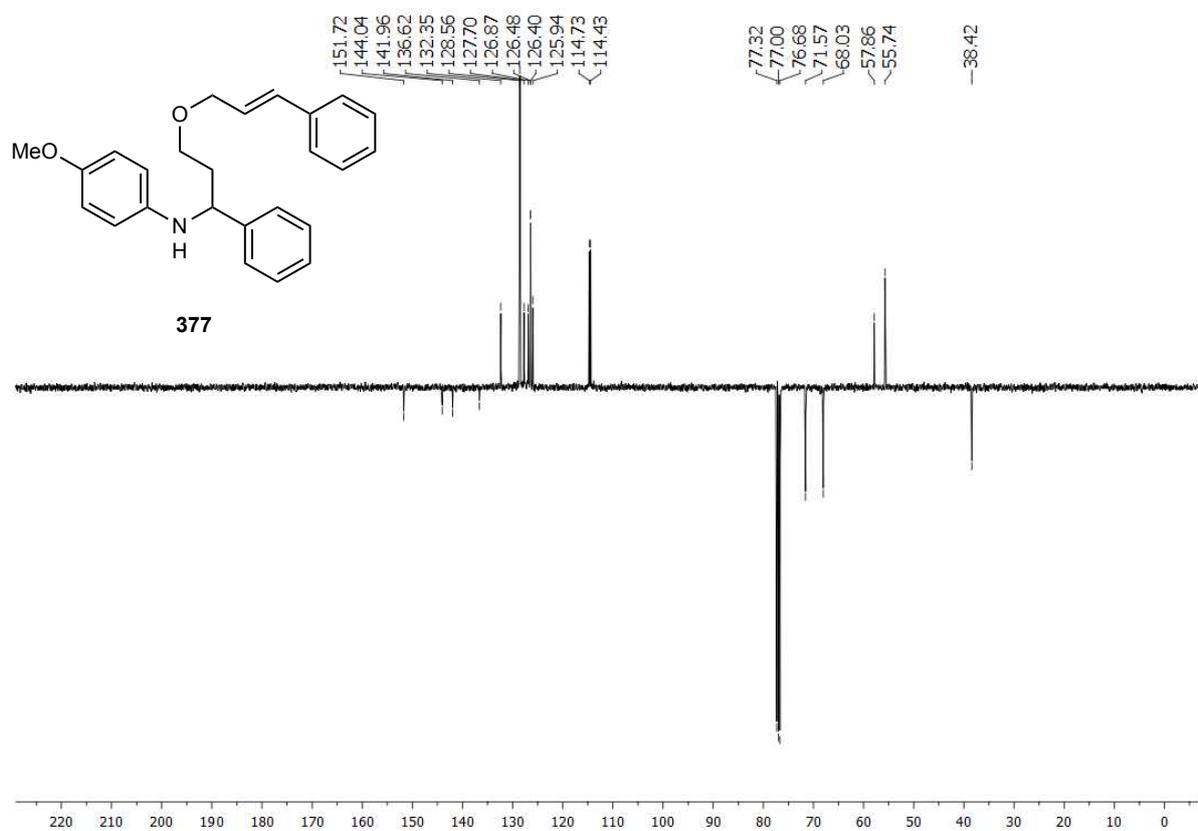
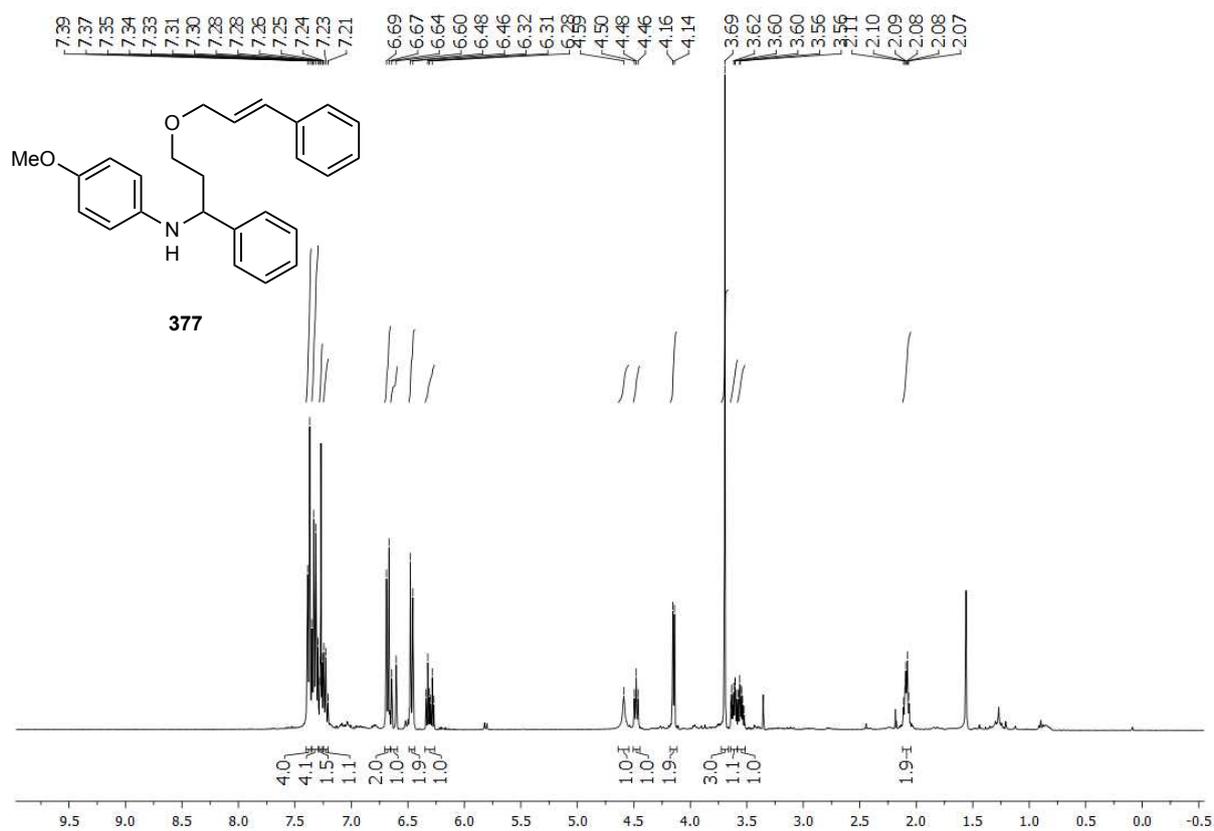
5 Preparation of Thioureas

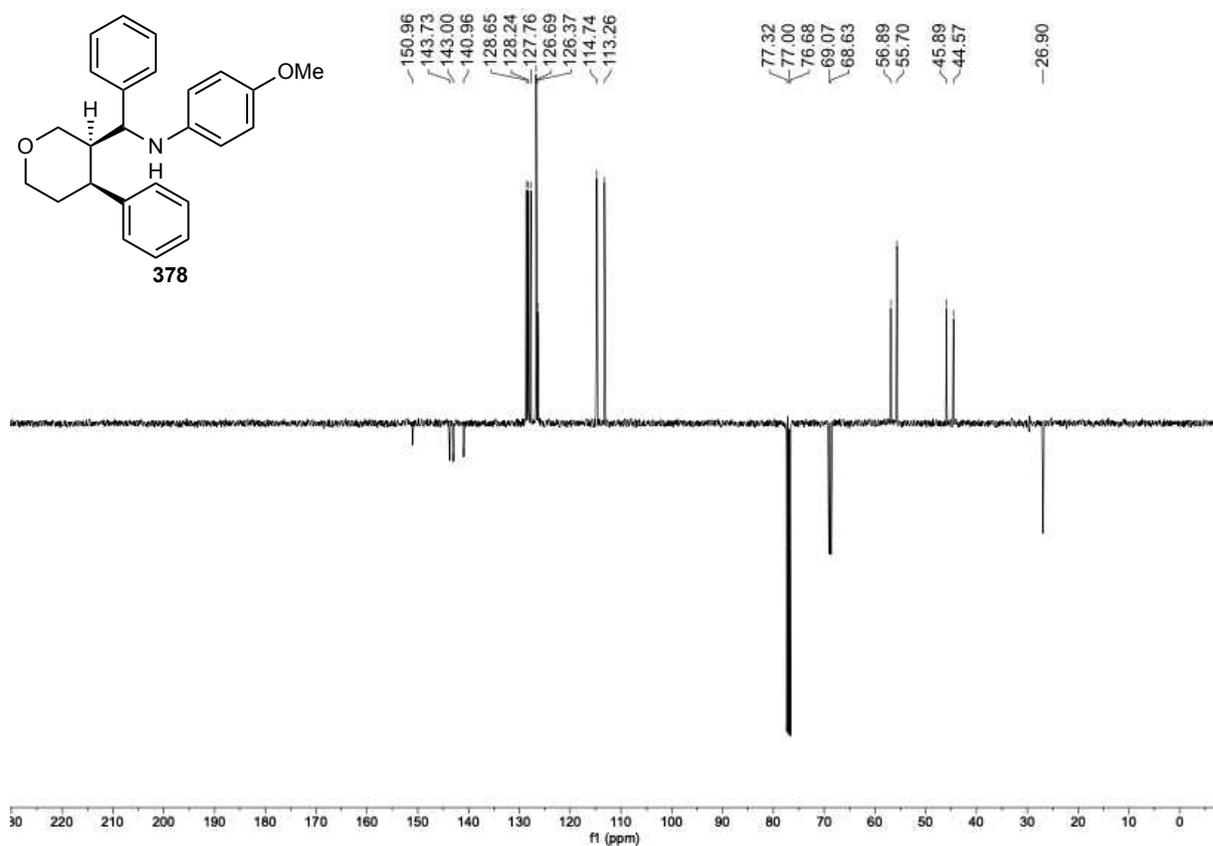
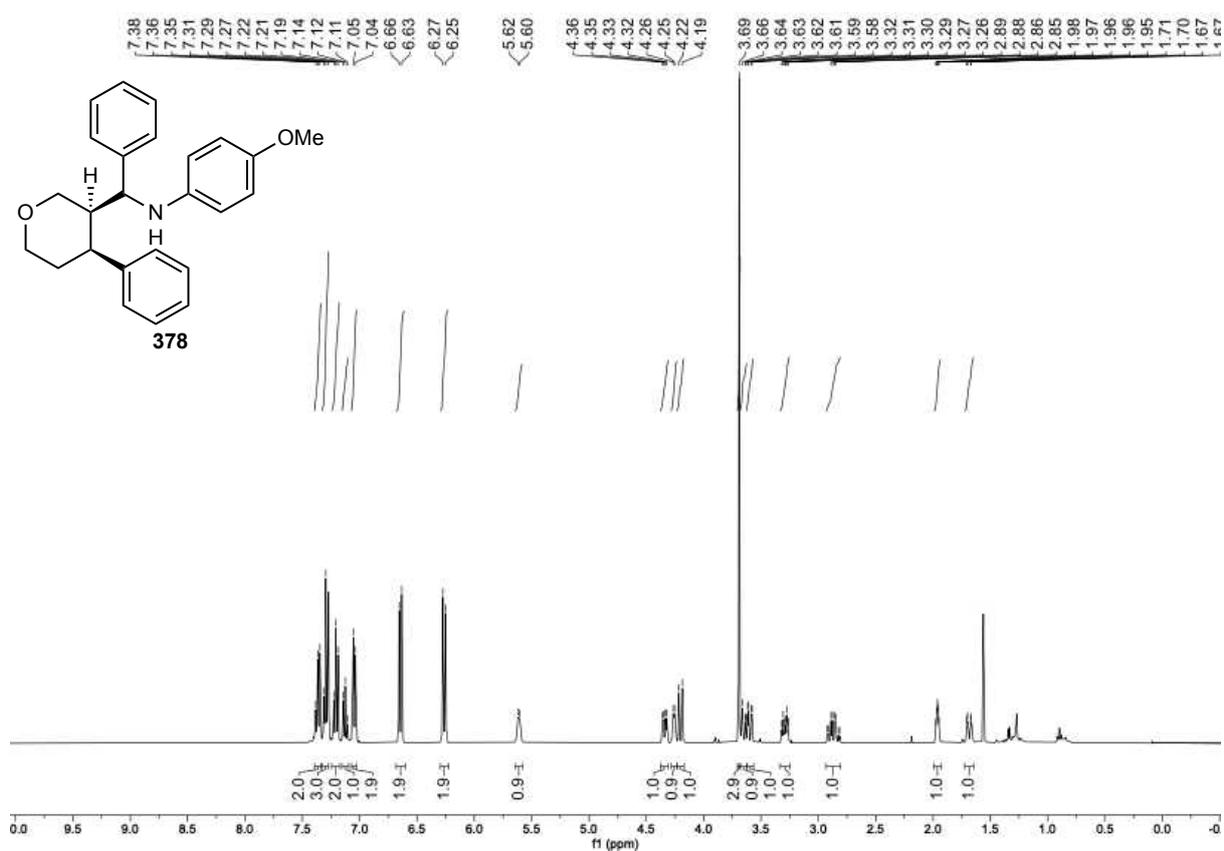






6 Exploring the Mechanism of Amination





7 Cu Catalysed Oxidation of Boronic Esters

