

Supporting information for publication

Synthesis of 2,4,5-triarylimidazoles in aqueous solution, under microwave irradiation.

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Régis Mercier**

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France*

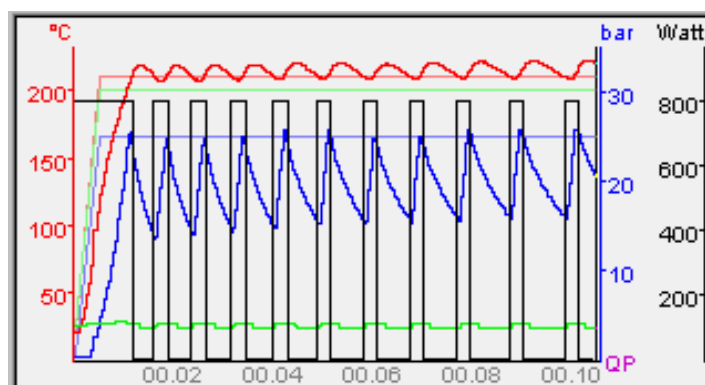
marestin@lmops.cnrs.fr

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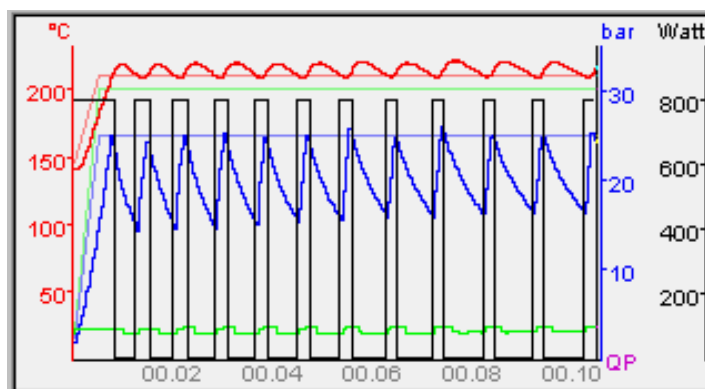
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Temperature and pressure profiles during the reaction for the different syntheses

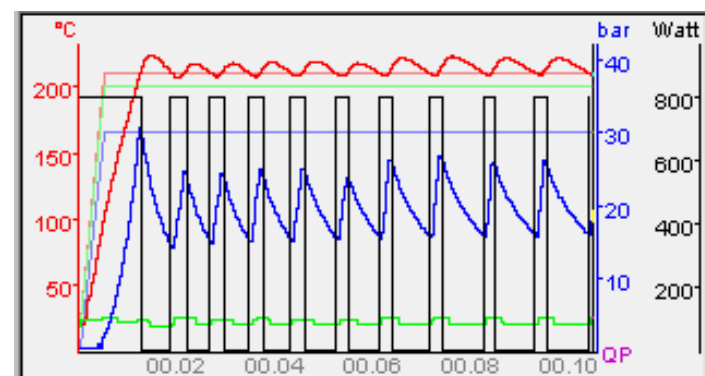
2-(4-methoxyphenyl)-4,5-diphenyl-1H-imidazole



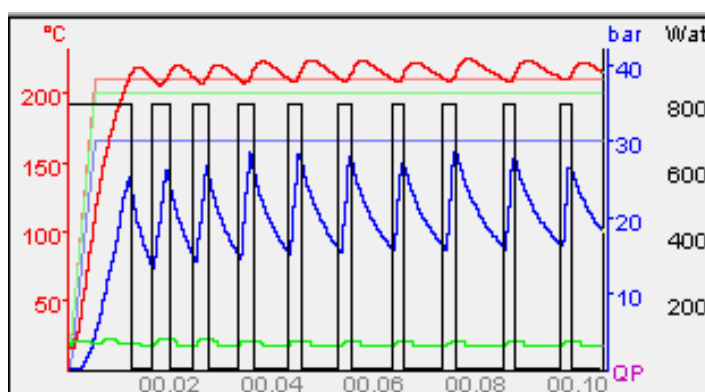
2-phenyl-4,5-diphenyl-1H-imidazole



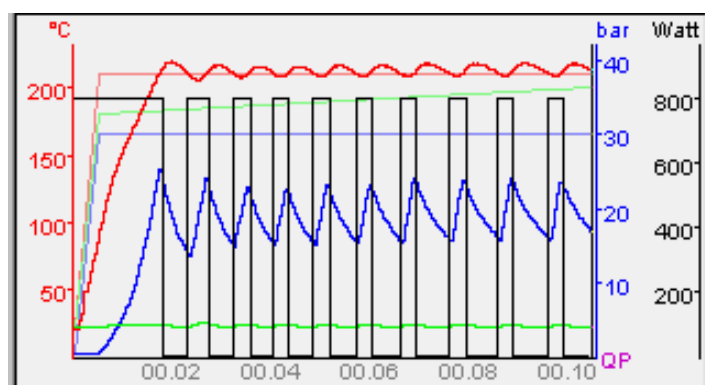
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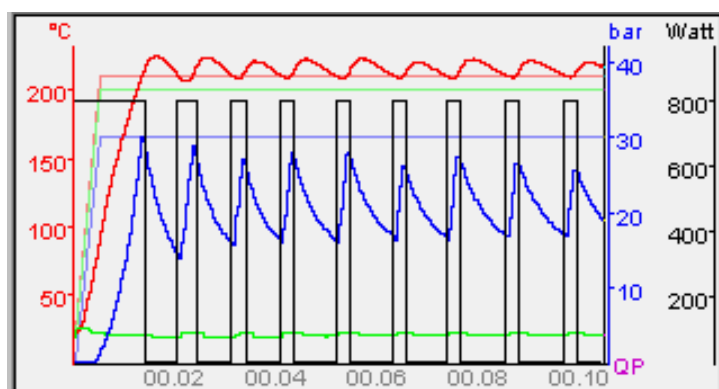
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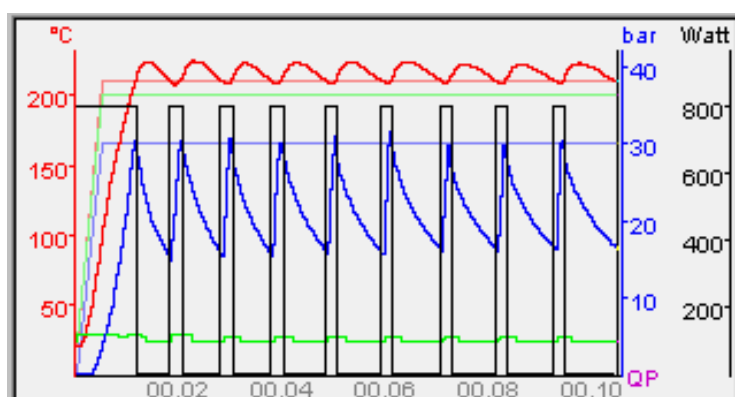
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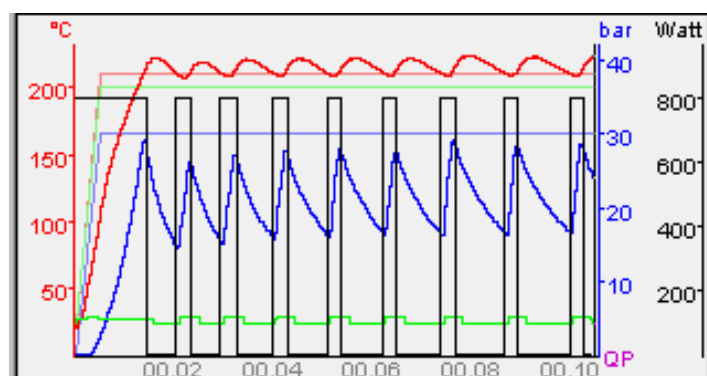
2-(3,4,5-trimethoxyphenyl)-4,5-diphenyl-1H-imidazole



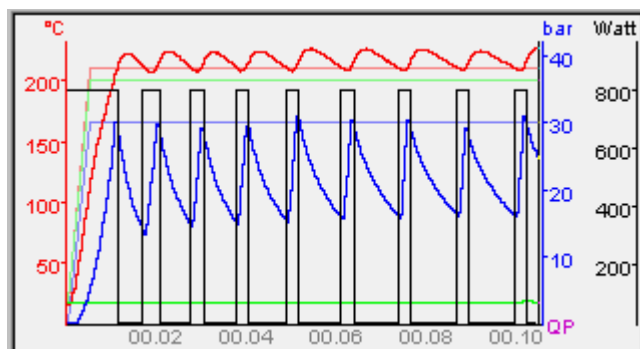
2-(naphthalene)-4,5-diphenyl-1H-imidazole



2-(anthracene)-4,5-diphenyl-1H-imidazole



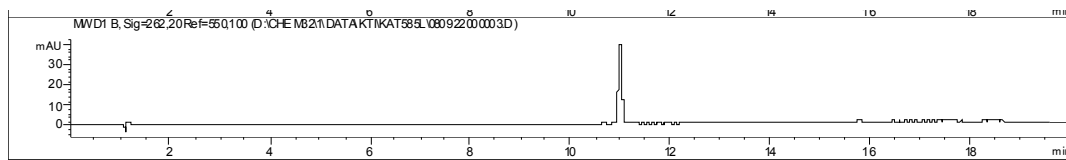
2-(3-methoxy, 4-hydroxyphenyl)-4,5-diphenyl-1H-imidazole



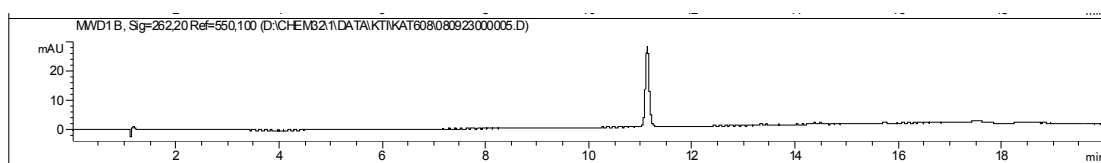
HPLC Chromatograms

HPLC UV traces of the analytically pure compound (at 262nm).

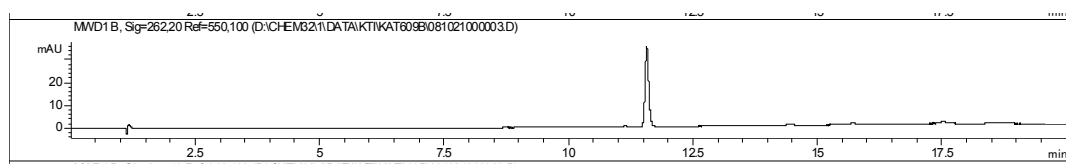
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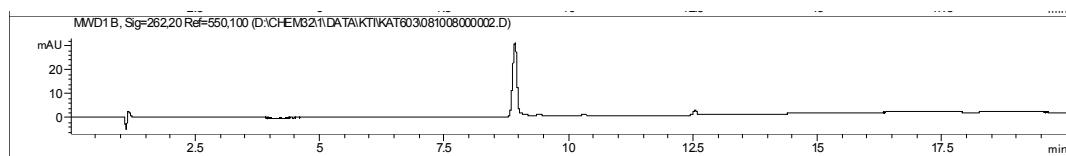
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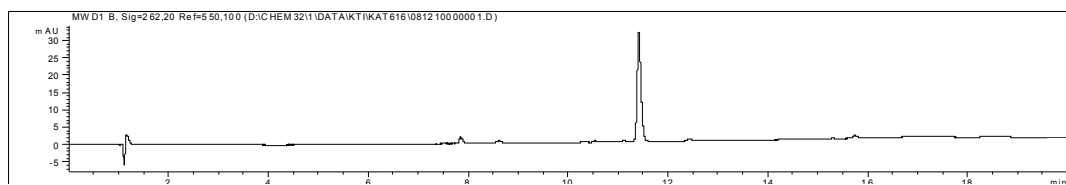
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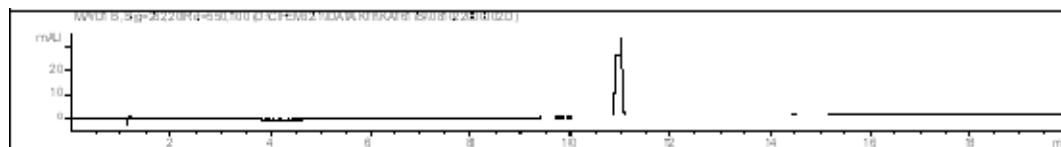
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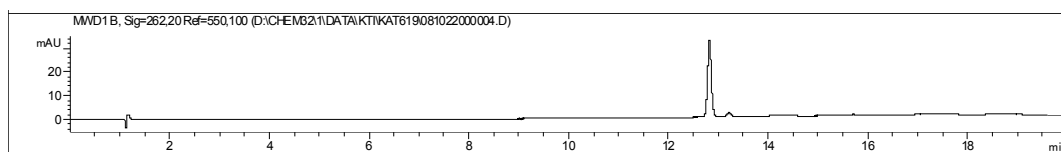
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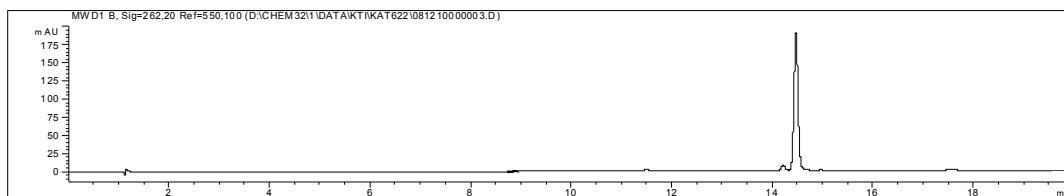
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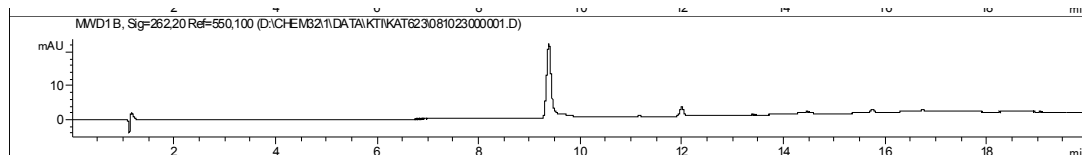
2-(naphthalene)-4,5-diphenyl-1H-imidazole :



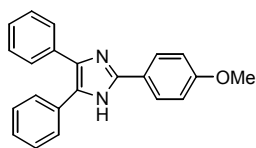
2-(anthracene)-4,5-diphenyl-1H-imidazole



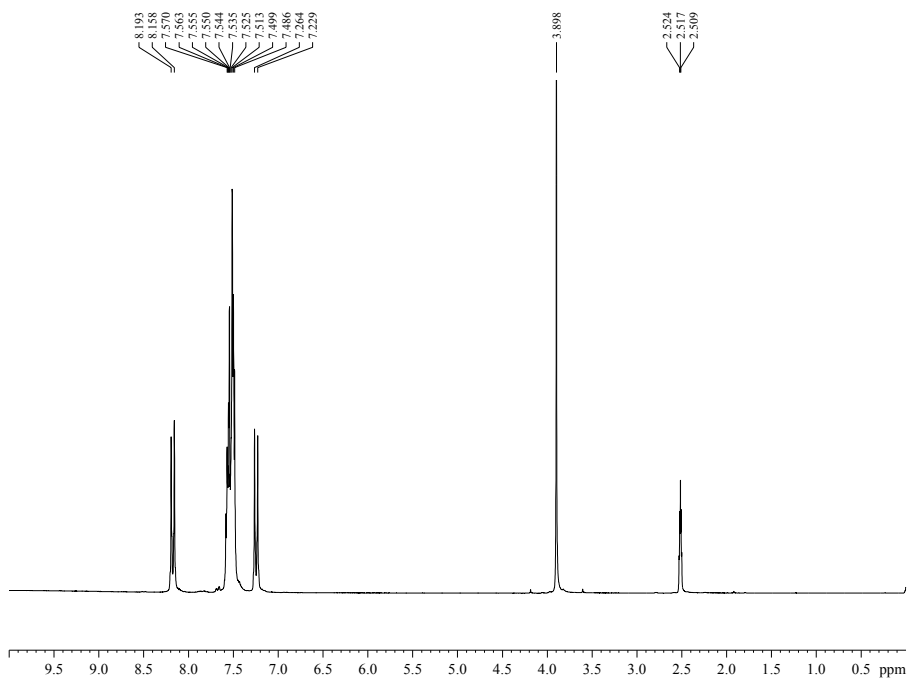
2-(3-methoxy, 4-hydroxyphenyl)-4,5-diphenyl-1H-imidazole



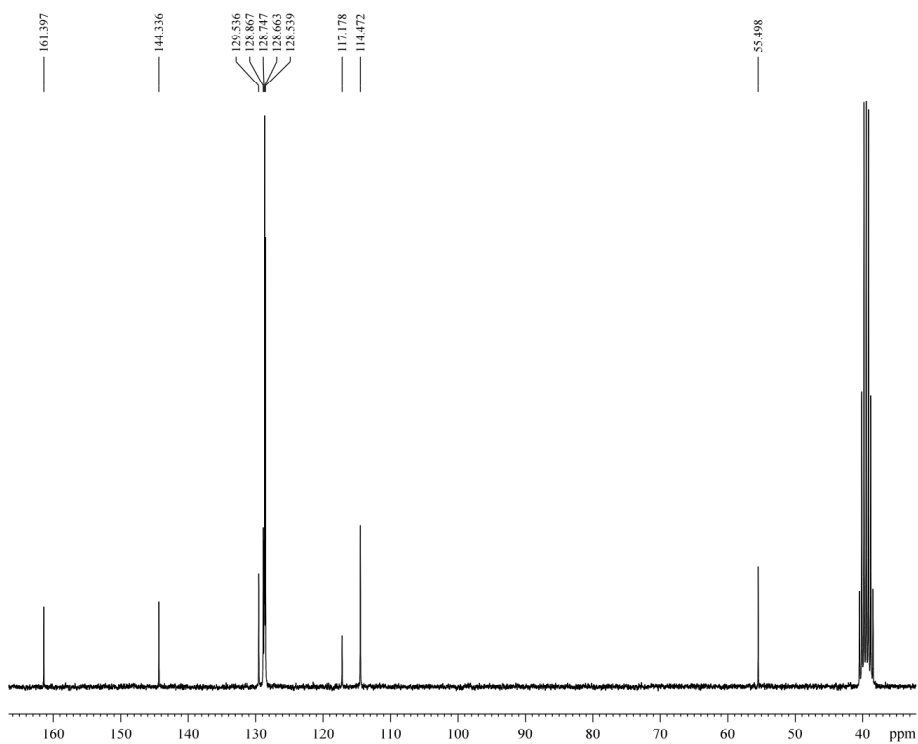
^1H and ^{13}C NMR characterizations

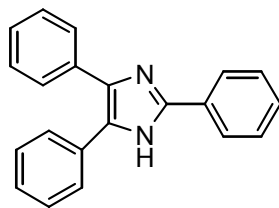


^1H NMR

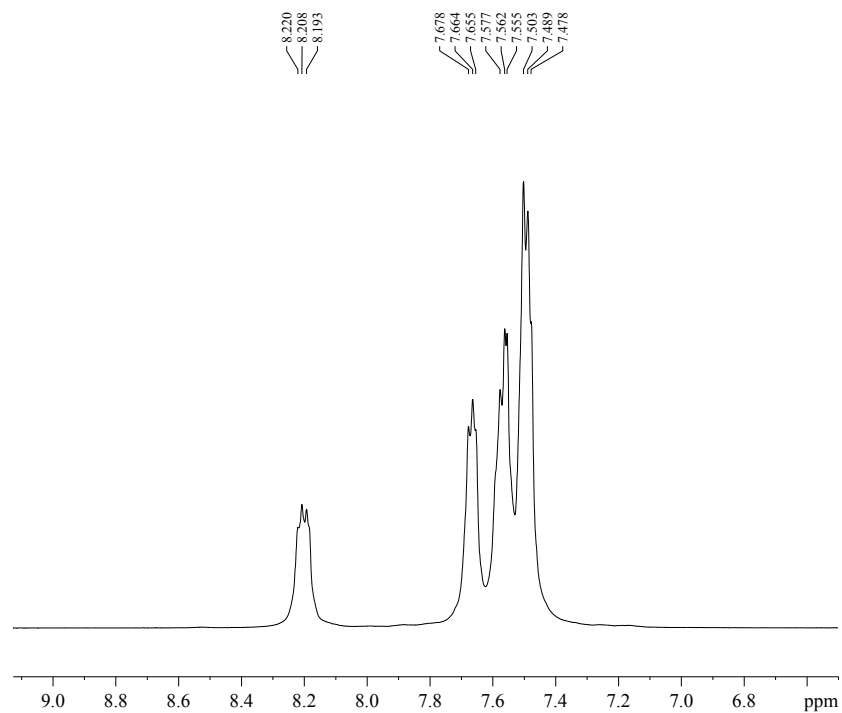


^{13}C NMR

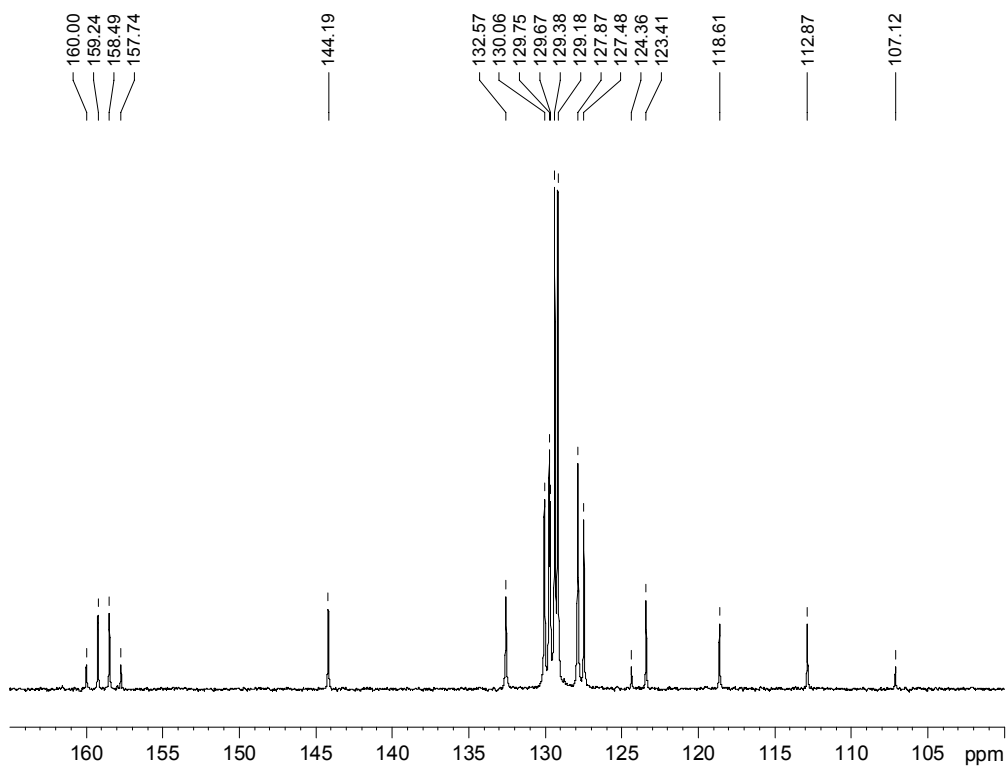


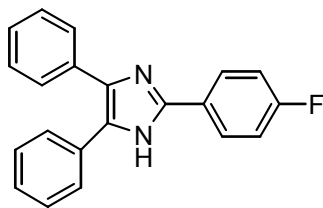


¹H NMR

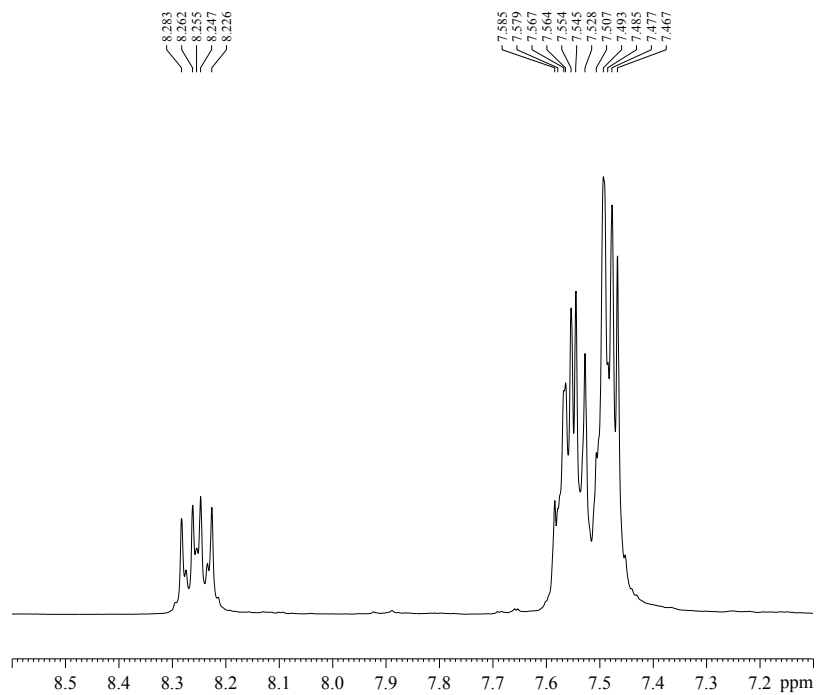


¹³C NMR

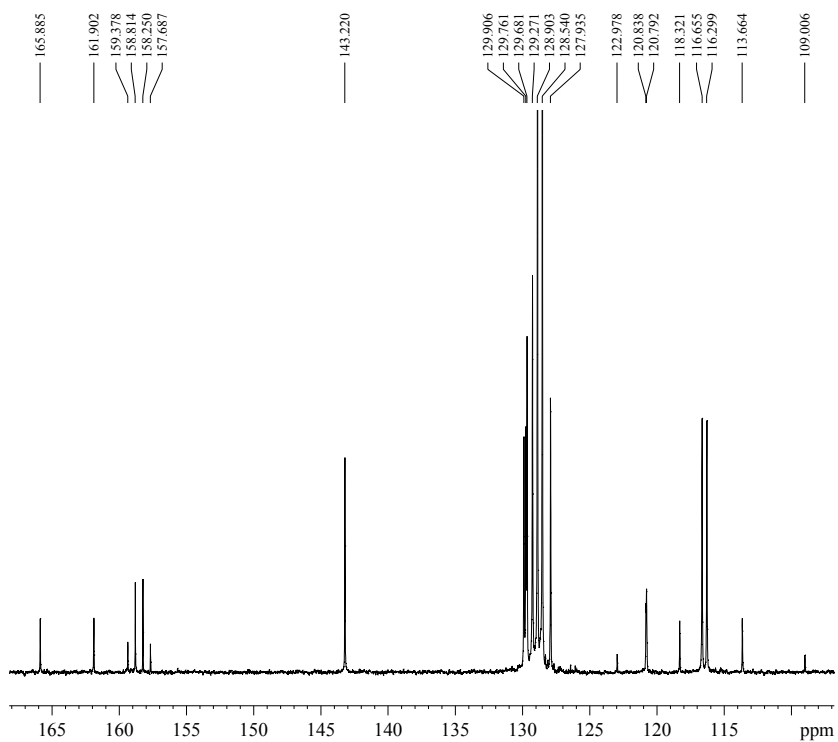




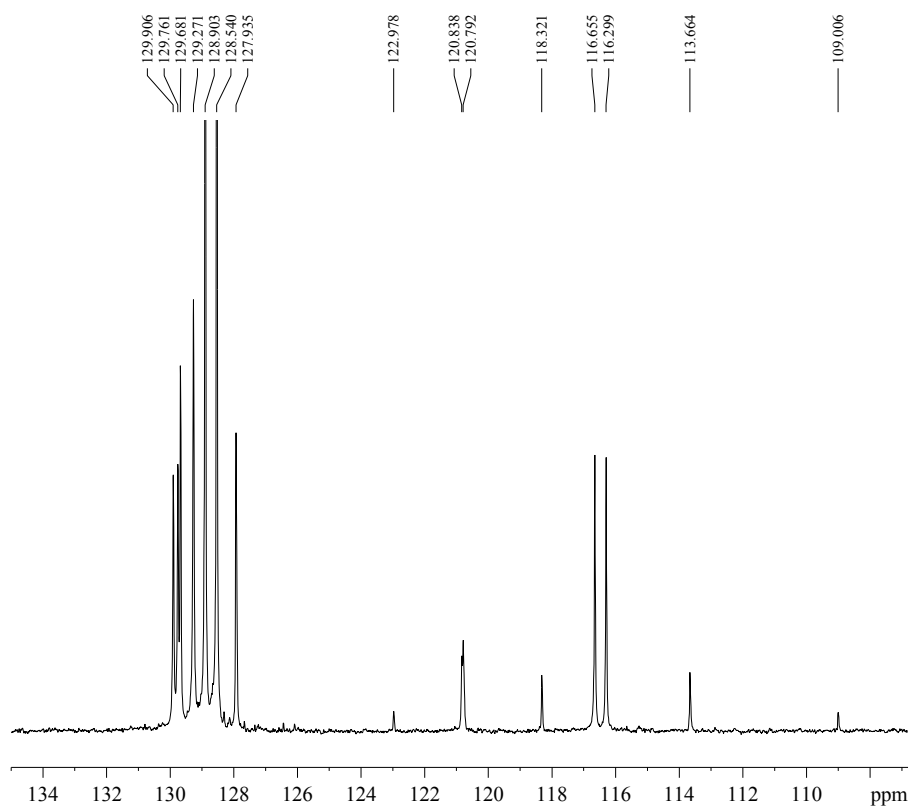
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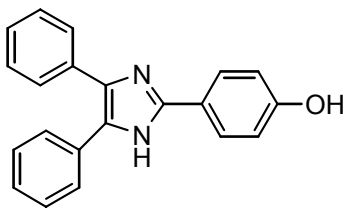


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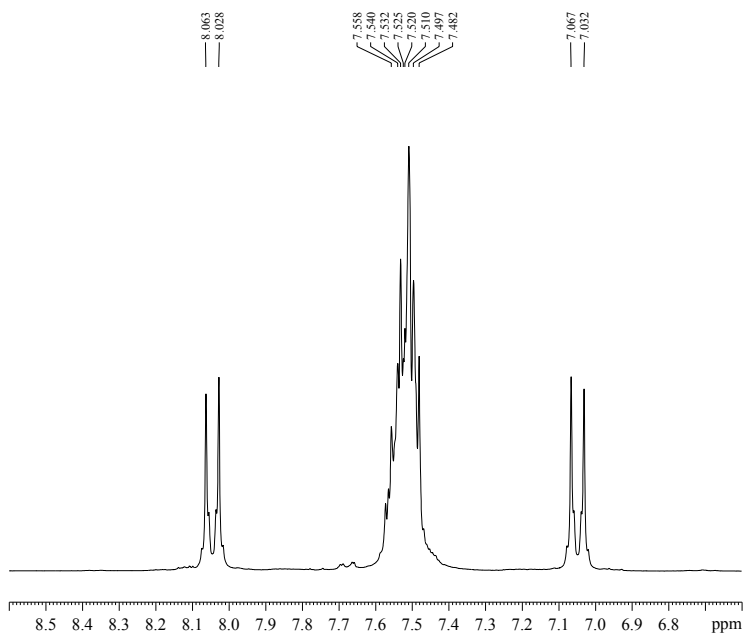


Zoom :

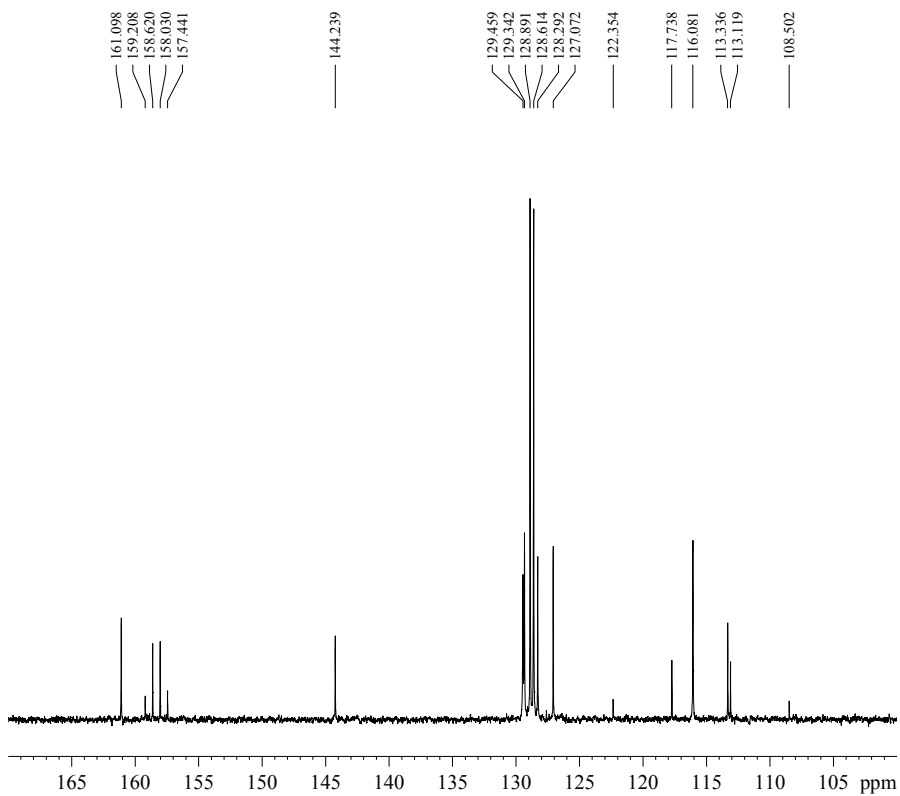


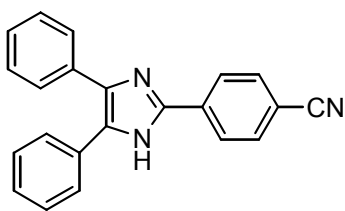


¹H NMR

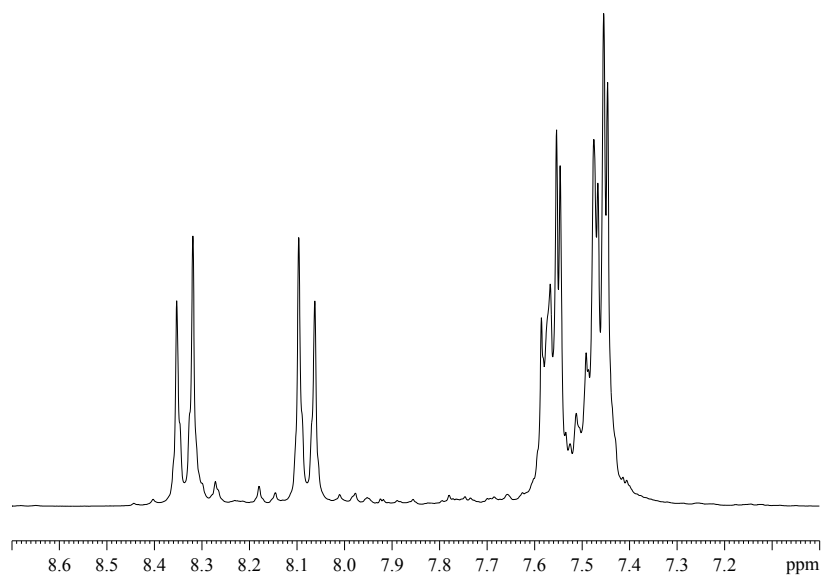


¹³C NMR

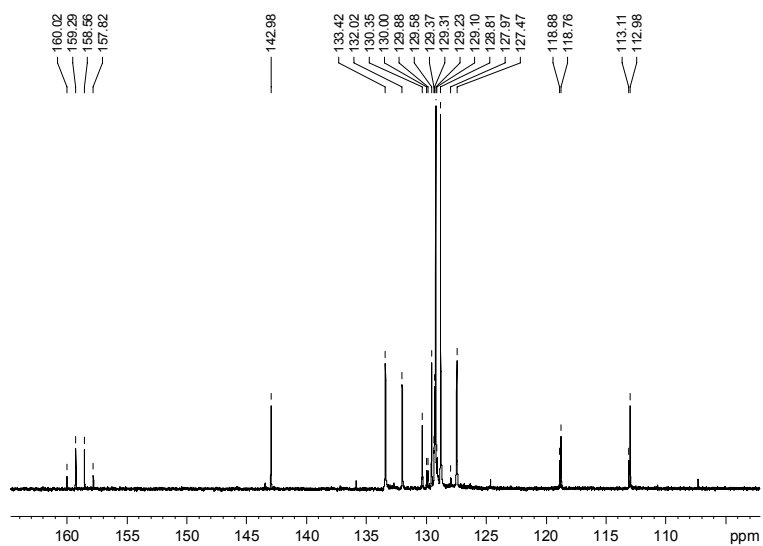


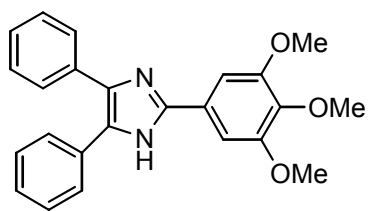


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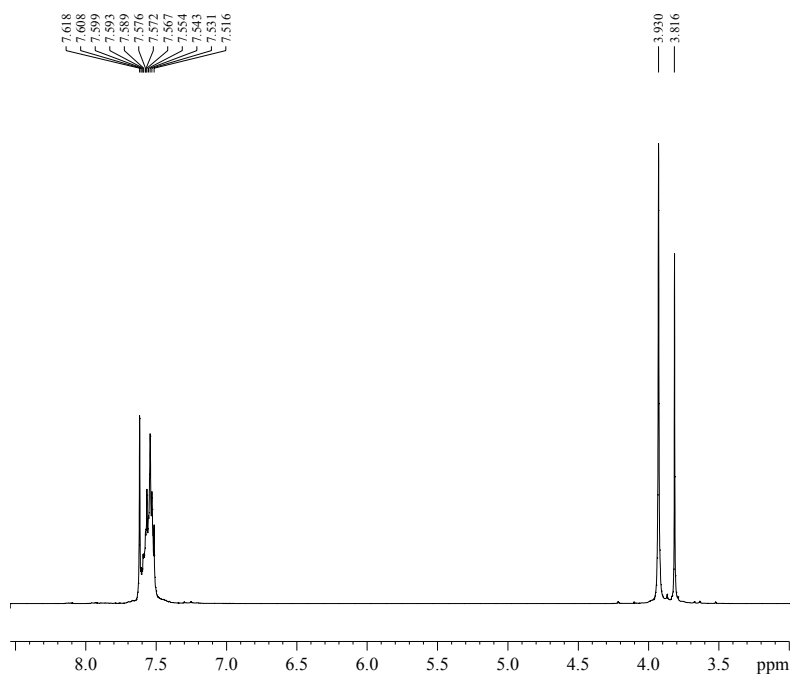


¹³C NMR

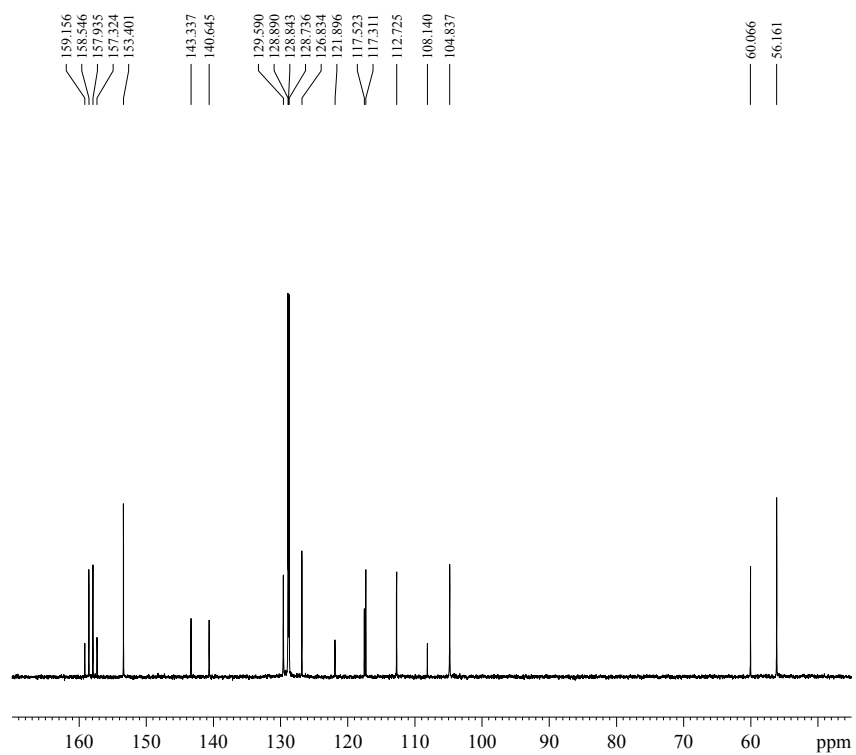


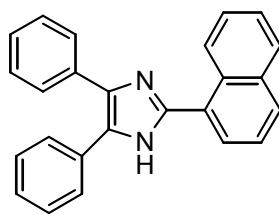


¹H NMR

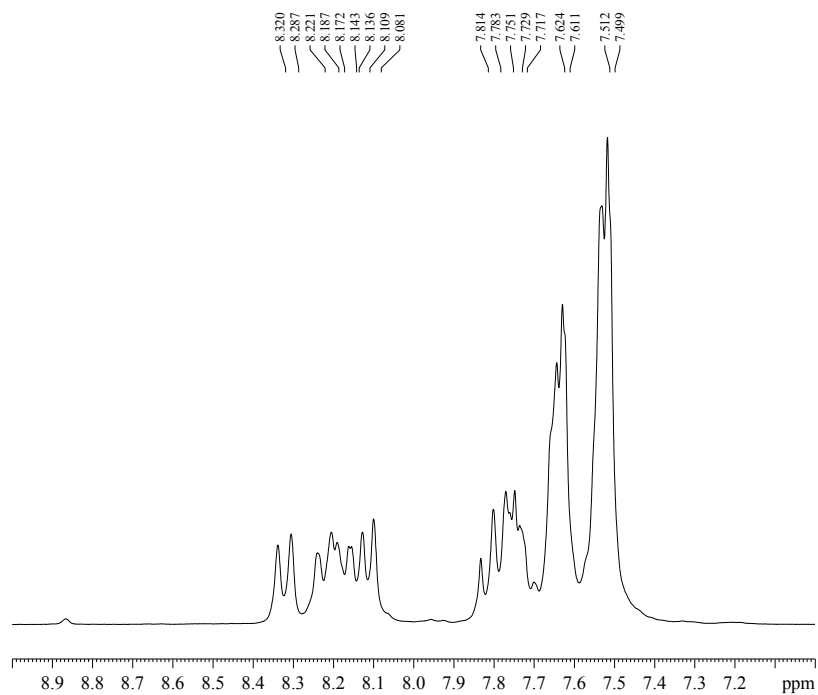


¹³C NMR

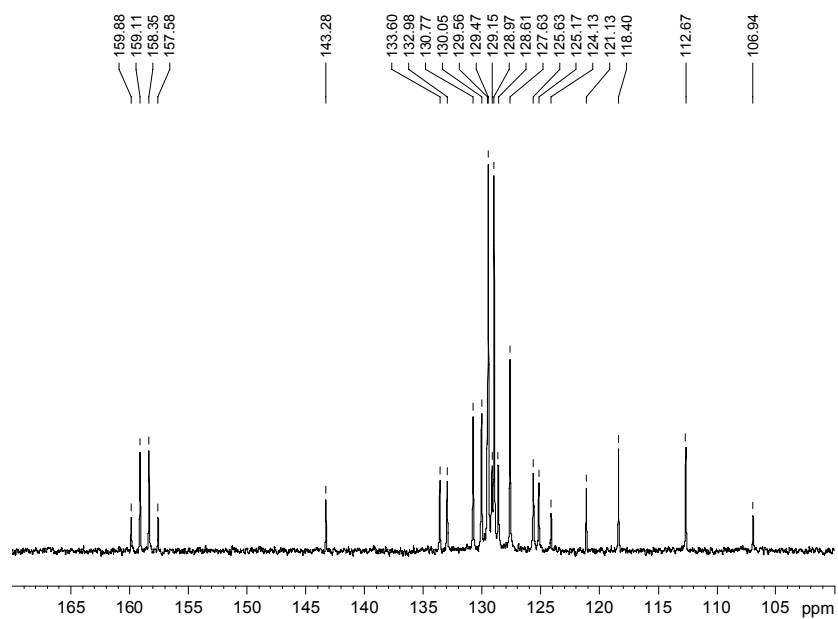


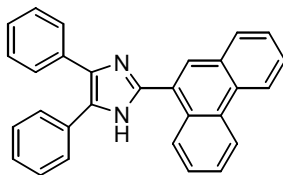


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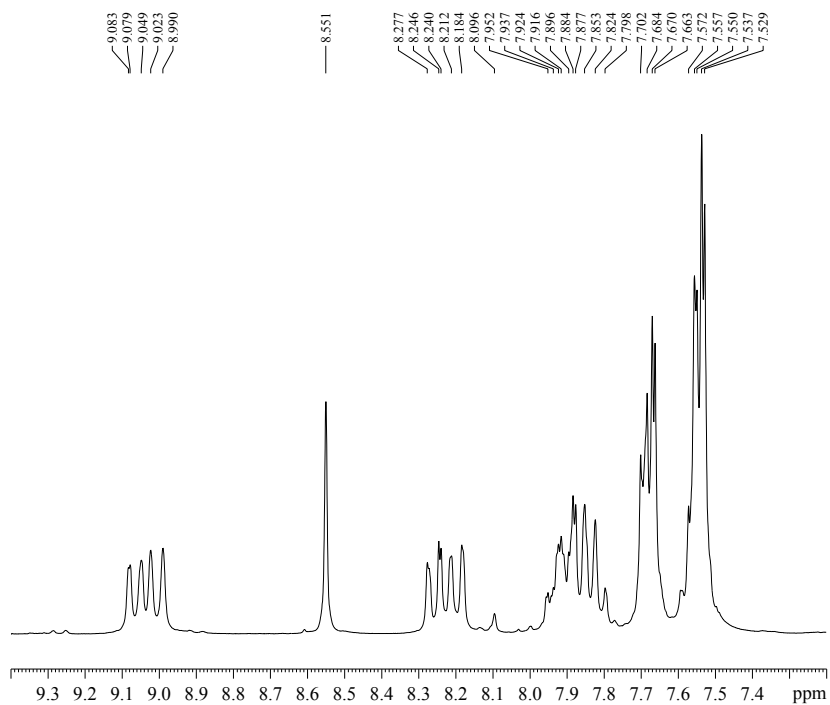


¹³C NMR

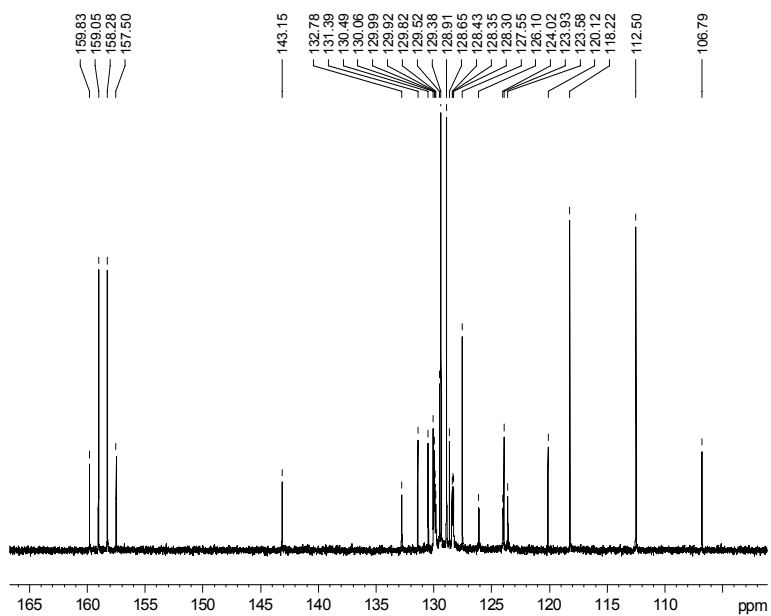


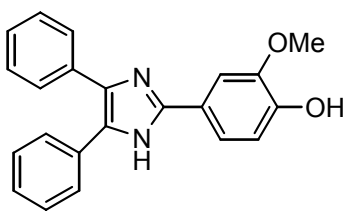


¹H NMR

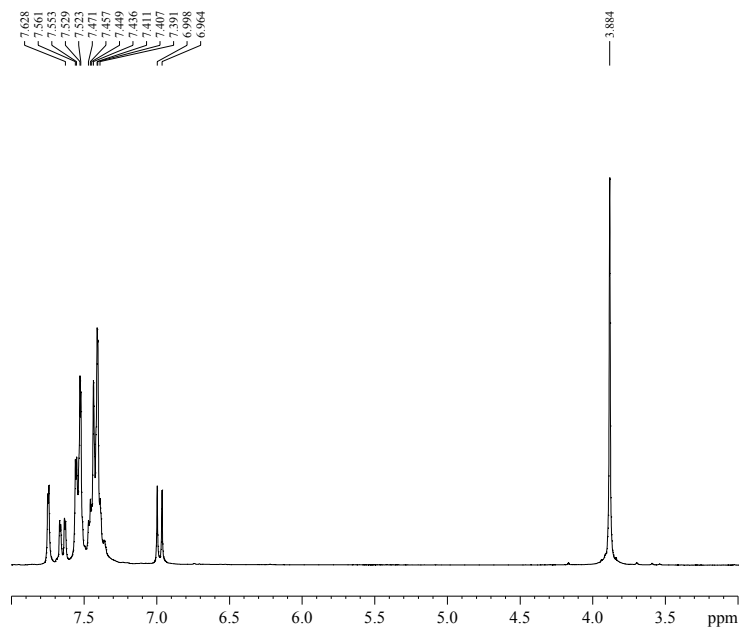


¹³C NMR

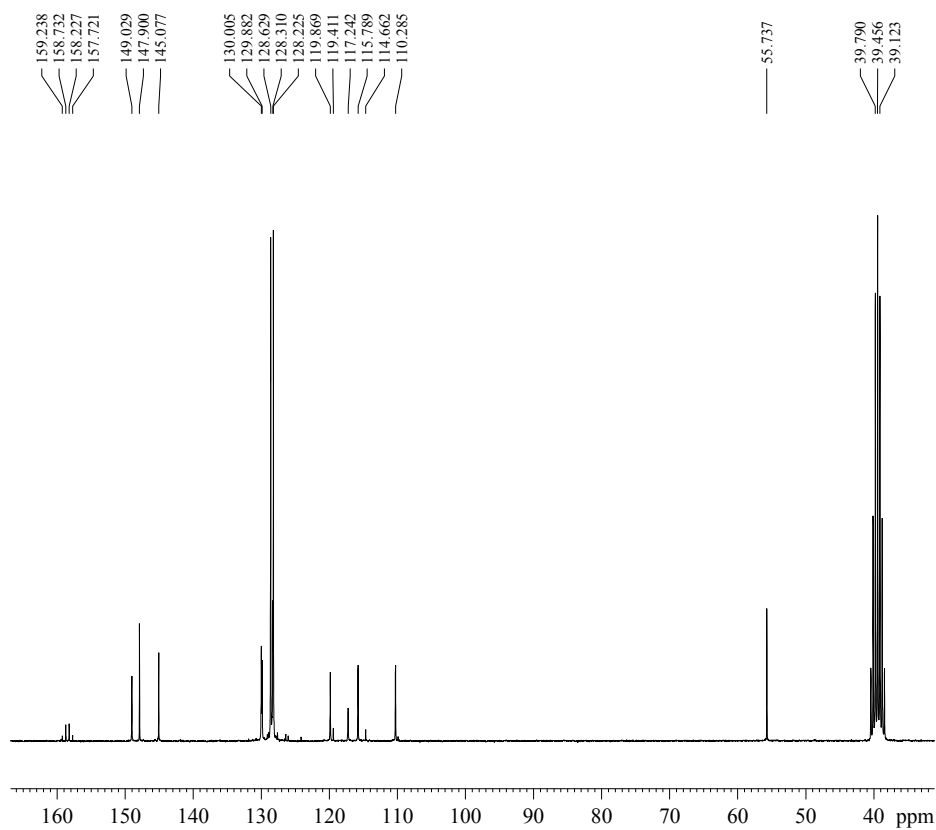




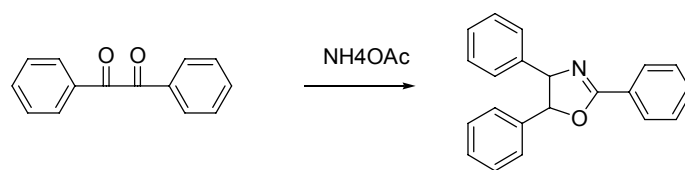
¹H NMR



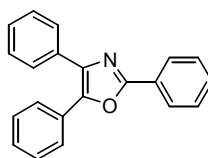
¹³C NMR



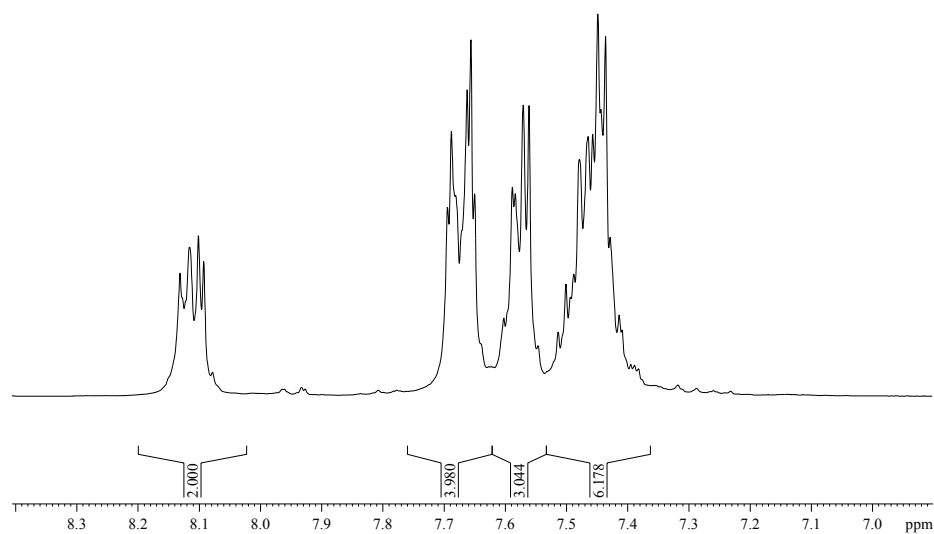
Synthesis and characterization of a benzoxazole compound



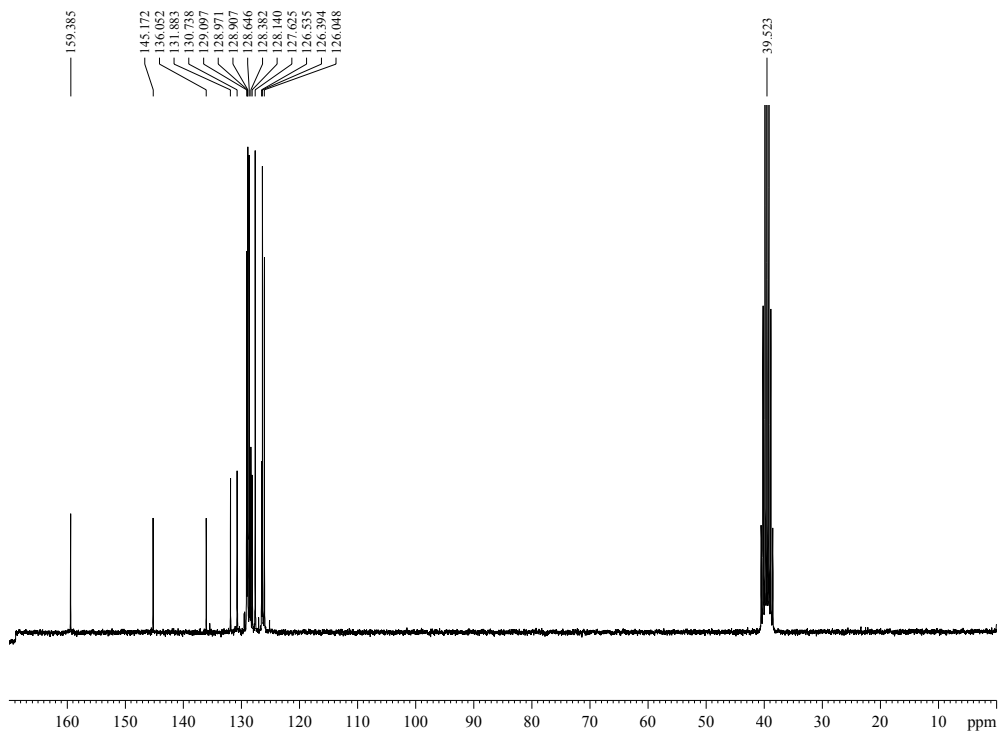
Benzil (1,8 g, 8,5 mmol) and ammonium acetate (6,6 g, 85 mmol) were suspended in 7,5 mL of water in a High pressure Teflon reactor equipped with a magnetic stir bar, a pressure sensor and an optical fibre. The reaction mixture was submitted to microwave irradiation in a Milestone Ethos multi-mode cavity at 800 W for 10 minutes. For security reasons, the maximum temperature allowed was set to 210°C and the maximum pressure was 25bars. After cooling, the crude product was isolated by simple filtration. This compound was further rinsed with ethanol and methanol. The different characterizations of this product are consistent with the following benzoxazole structure:



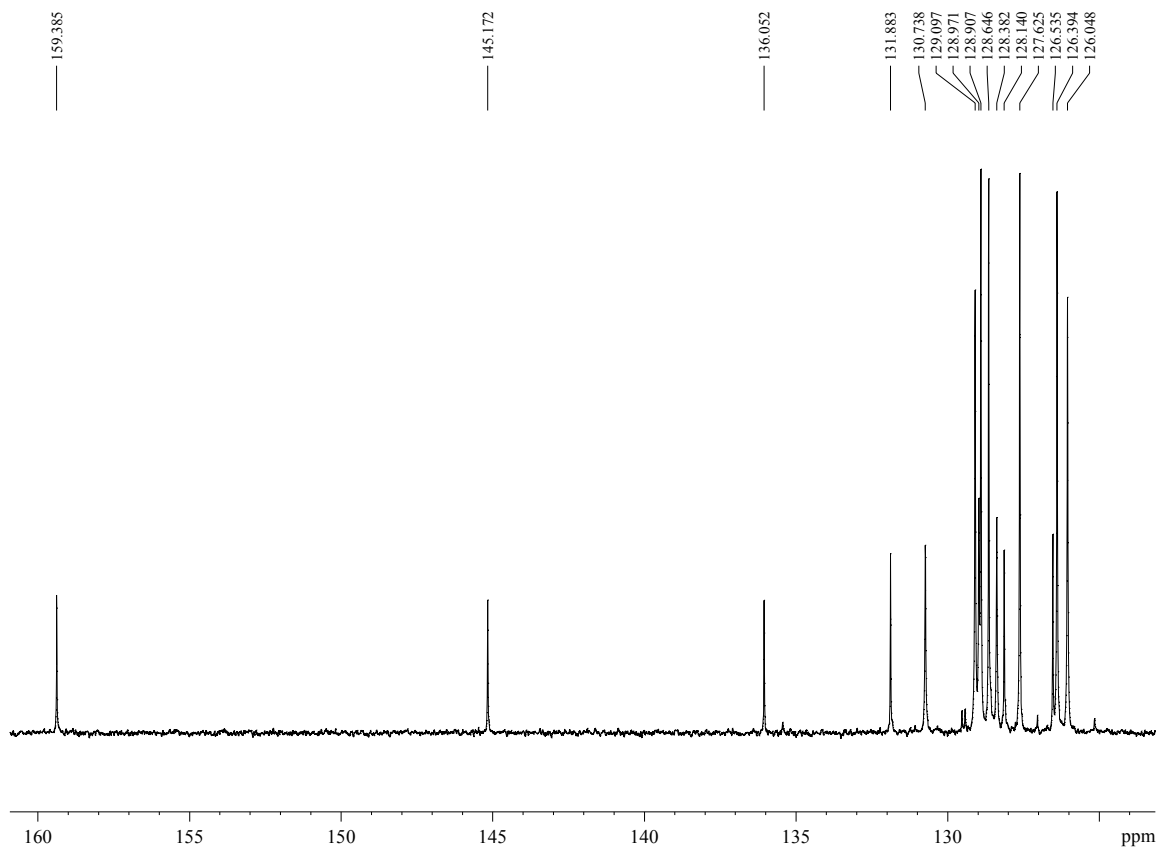
¹H NMR



^{13}C NMR

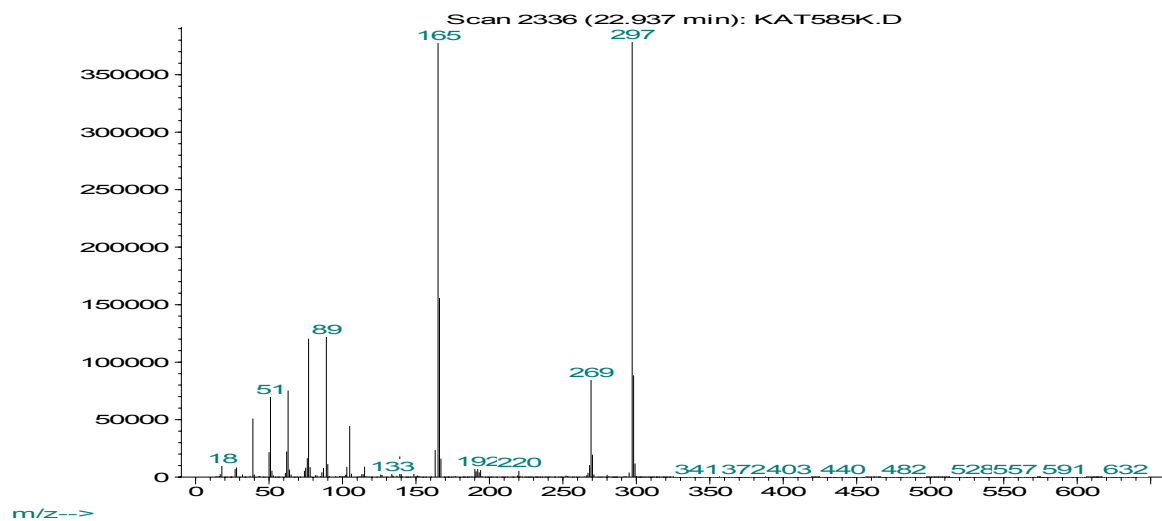


Zoom (120ppm -160 ppm) :



Mass Spectrum

Abundance



HPLC UV trace (262 nm, 254 nm, 2880 nm)

