

## ELECTRONIC SUPPORTING INFORMATION

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## **<sup>1</sup>H and <sup>13</sup>C-NMR Spectra of Biaryls 1a-i**

**1-(4-Biphenylyl)ethanone (1a):** Elution with AcOEt / cyclohexane 5:95 as eluant afforded **1a** as a white solid (192 mg, 98% yield). <sup>1</sup>H-NMR (400 MHz, CDCl<sub>3</sub>) δ (ppm): 2.65 (s, 3H), 7.45 (m, 3H), 7.64 (d, <sup>3</sup>J(H,H) = 7.0 Hz, 2H), 7.70 (d, <sup>3</sup>J(H,H) = 6.7 Hz, 2H), 8.05 (d, <sup>3</sup>J(H,H) = 6.7 Hz, 2H).<sup>[1]</sup> <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) δ (ppm): 26.6, 127.2, 128.0, 128.8, 135.8, 139.8, 145.7, 197.7.

**1-(4-(4'-Methyl)biphenylyl)ethanone (1b):** Elution with AcOEt / cyclohexane 5:95 afforded **1b** as a white solid (206 mg, 98% yield). <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) δ (ppm): 2.30 (s, 3H), 2.52 (s, 3H), 7.17 (d, <sup>3</sup>J(H,H) = 8.1 Hz, 2H), 7.42 (d, <sup>3</sup>J(H,H) = 8.1 Hz, 2H), 7.56 (d, <sup>3</sup>J(H,H) = 8.3 Hz, 2H), 7.90 (d, <sup>3</sup>J(H,H) = 8.3 Hz, 2H).<sup>[2]</sup> <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) δ (ppm): 21.0, 26.5, 126.8, 126.9, 128.8, 129.6, 136.8, 137.6, 145.6, 197.6.

**1-(4-(3'-Methyl)biphenylyl)ethanone (1c):** Elution with AcOEt / cyclohexane 5:95 afforded **1c** as a white solid (206 mg, 98% yield). <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) δ (ppm): 2.43 (s, 3H), 2.61 (s, 3H), 7.21 (m, 1H), 7.42 (d, m, 3H), 7.65 (d, <sup>3</sup>J(H,H) = 9 Hz, 2H), 8.01 (d, <sup>3</sup>J(H,H) = 9 Hz, 2H).<sup>[4]</sup> <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) δ (ppm): 21.3, 26.4, 124.2, 127.0, 127.1, 128.7, 128.8, 135.6, 138.4, 139.8, 145.6, 197.4.

**1-(4-(4'-Methoxy)biphenylyl)ethanone (1d):** Elution with AcOEt / cyclohexane 5:95 afforded **1d** as a white solid (186 mg, 82% yield). <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) δ (ppm): 2.62 (s, 3H), 3.86 (s, 3H), 7.00 (d, <sup>3</sup>J(H,H) = 8.8 Hz, 2H), 7.58 (d, <sup>3</sup>J(H,H) = 8.8 Hz, 2H), 7.64 (d, <sup>3</sup>J(H,H) = 8.3 Hz, 2H), 8.00 (d, <sup>3</sup>J(H,H) = 8.3 Hz, 2H).<sup>[5]</sup> <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) δ (ppm): 26.5, 55.3, 114.3, 126.5, 128.3, 128.9, 132.1, 135.2, 145.2, 159.8, 197.6.

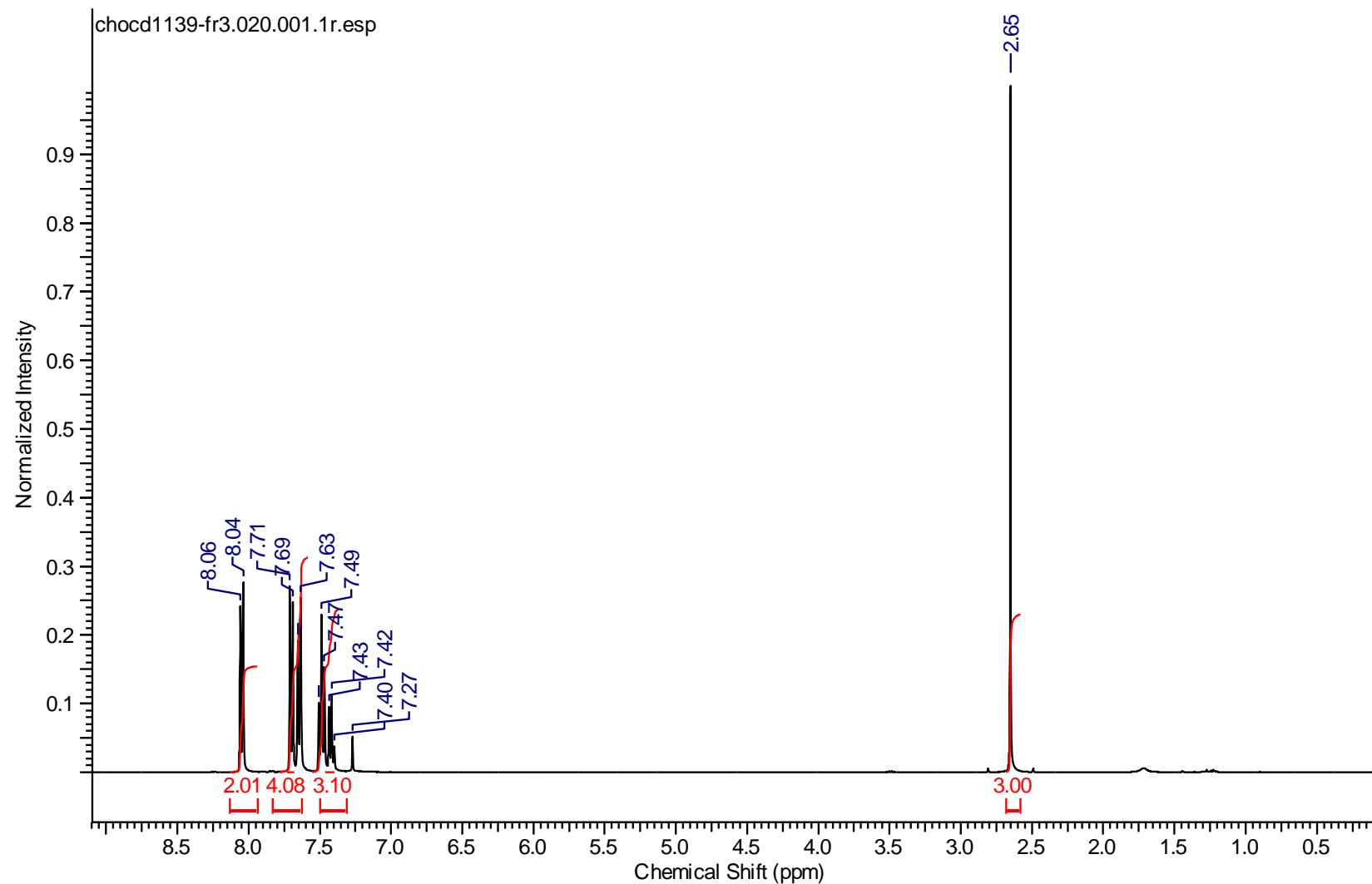
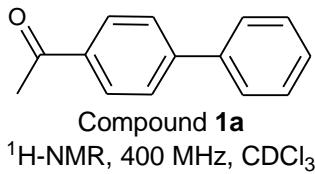
**1-(4-(3'-nitro)biphenylyl)ethanone (1e):** Elution with AcOEt / cyclohexane 1:9 afforded **1e** as a white solid (140 mg, 58% yield). <sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>) δ (ppm): 2.67 (s, 3H), 7.67 (t, <sup>3</sup>J(H,H) = 9.0 Hz, 1H), 7.73 (d, <sup>3</sup>J(H,H) = 9.0 Hz, 2H), 7.96 (m, 1H), 8.09 (t, <sup>3</sup>J(H,H) = 9.0 Hz, 2H), 8.26 (m, 1H), 8.49 (t, <sup>3</sup>J(H,H) = 3 Hz, 1H).<sup>[2]</sup> <sup>13</sup>C NMR (75 MHz, CDCl<sub>3</sub>) δ (ppm): 26.7, 122.1, 122.9, 127.4, 129.2, 130.0, 133.1, 136.8, 141.5, 143.0, 148.8, 197.4.

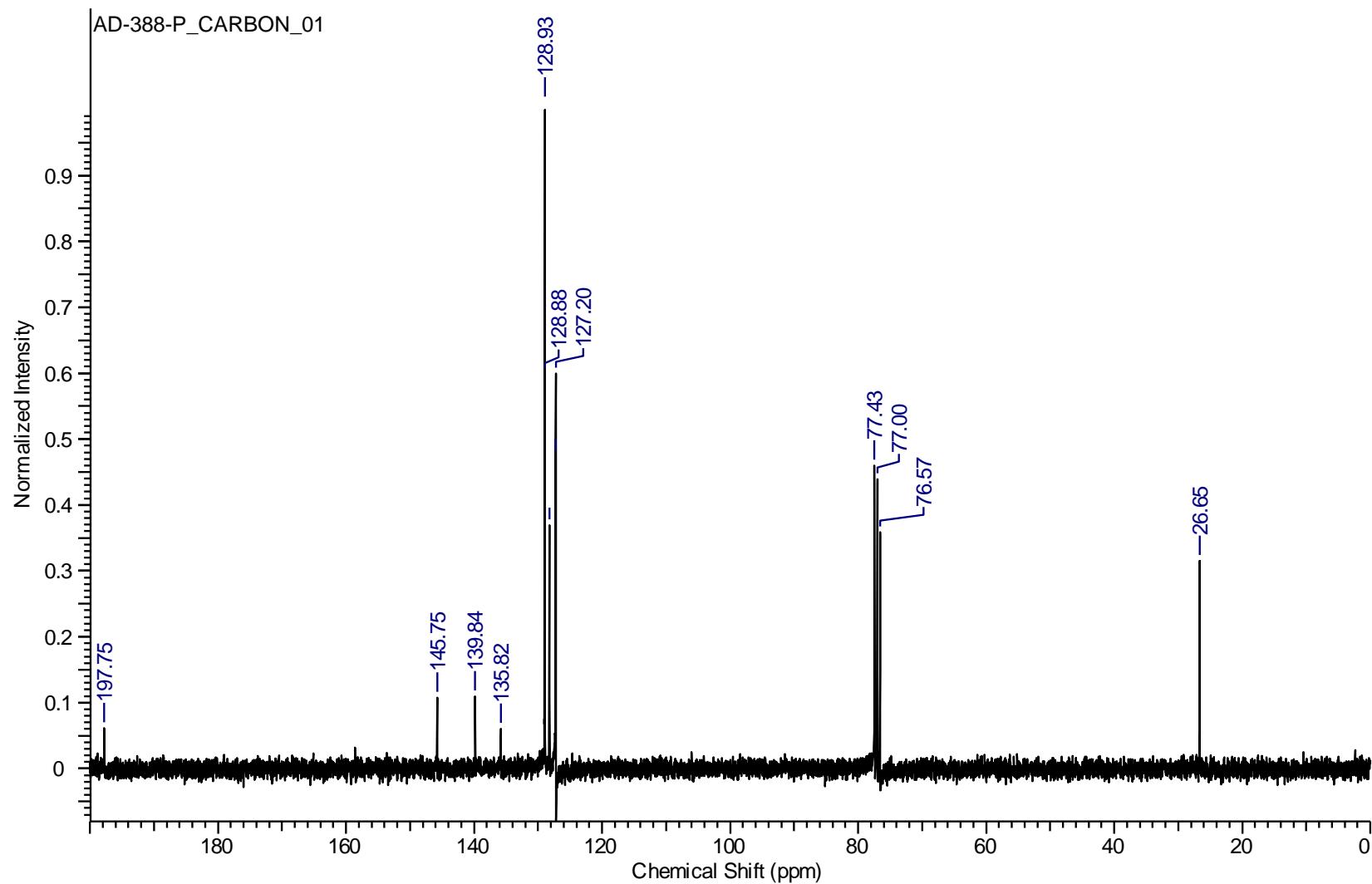
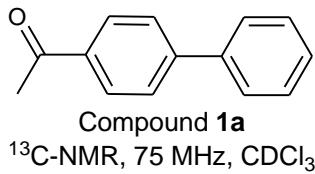
**1-(3-Biphenylyl)ethanone (1f):** Elution with AcOEt / cyclohexane 5:95 afforded **1e** as a white solid (169 mg, 86% yield). <sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>) δ (ppm): 2.65 (s, 3H), 7.50 (m, 6H), 7.79 (m, <sup>1</sup>H), 7.93 (m, 1H), 8.19 (t, <sup>4</sup>J(H,H) = 3 Hz, 1H).<sup>[3]</sup> <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) δ (ppm): 26.7, 126.9, 127.1, 127.2, 128.9, 131.6, 137.6, 140.3, 141.6, 198.0.

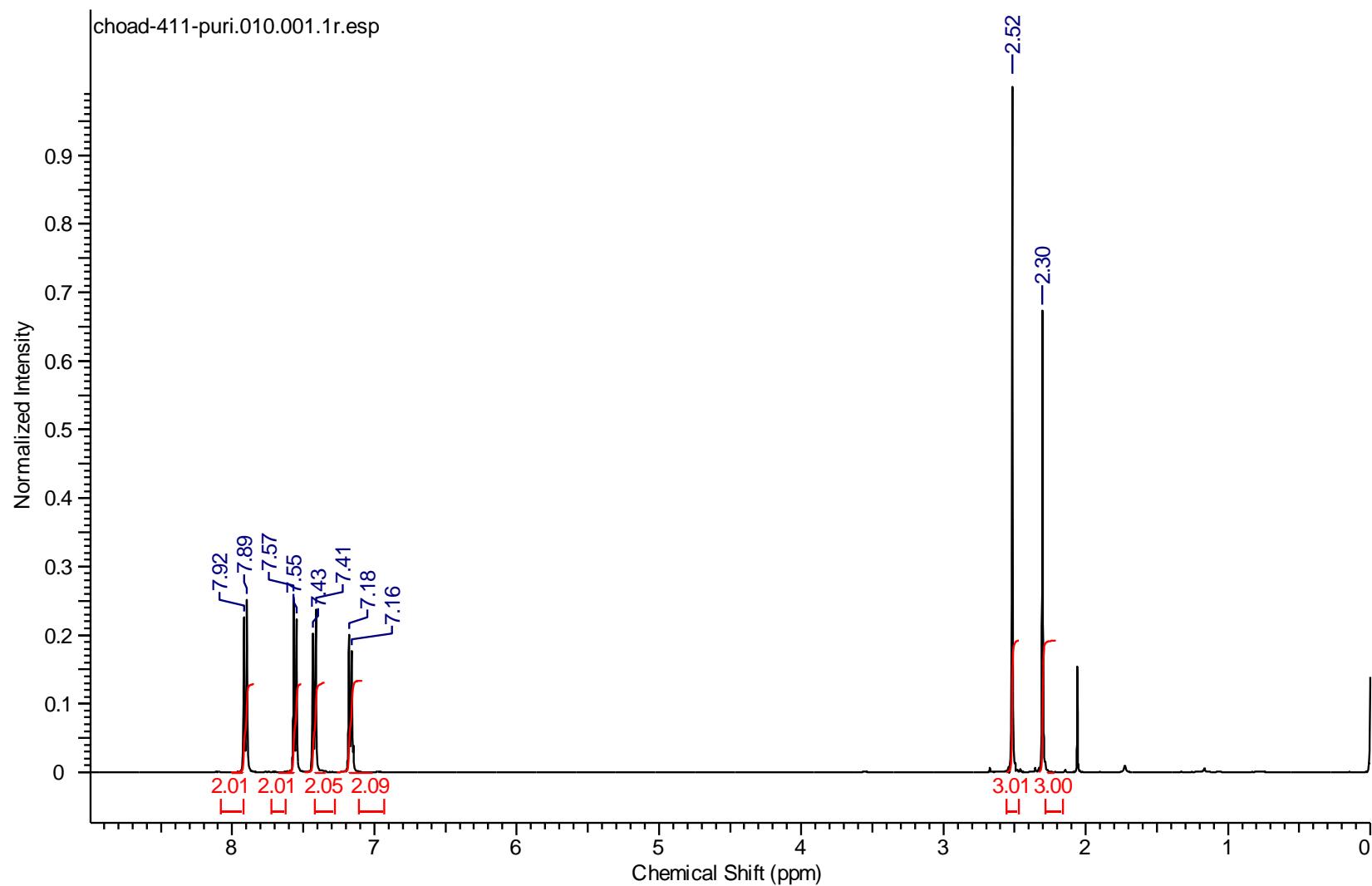
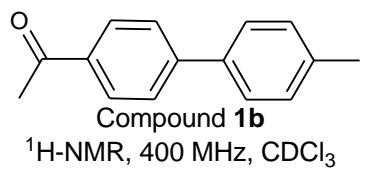
**4-Chlorobiphenyl (1g):** Elution with AcOEt / cyclohexane 2:98 as eluant afforded **1f** as a white solid (172 mg, 91% yield).  $^1\text{H}$ -NMR (400 MHz,  $\text{CDCl}_3$ )  $\delta$  (ppm): 7.61 (m, 9H).  $^{[3]} \text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ )  $\delta$  (ppm): 126.8, 127.6, 128.2, 128.8, 133.2, 139.4, 139.7.

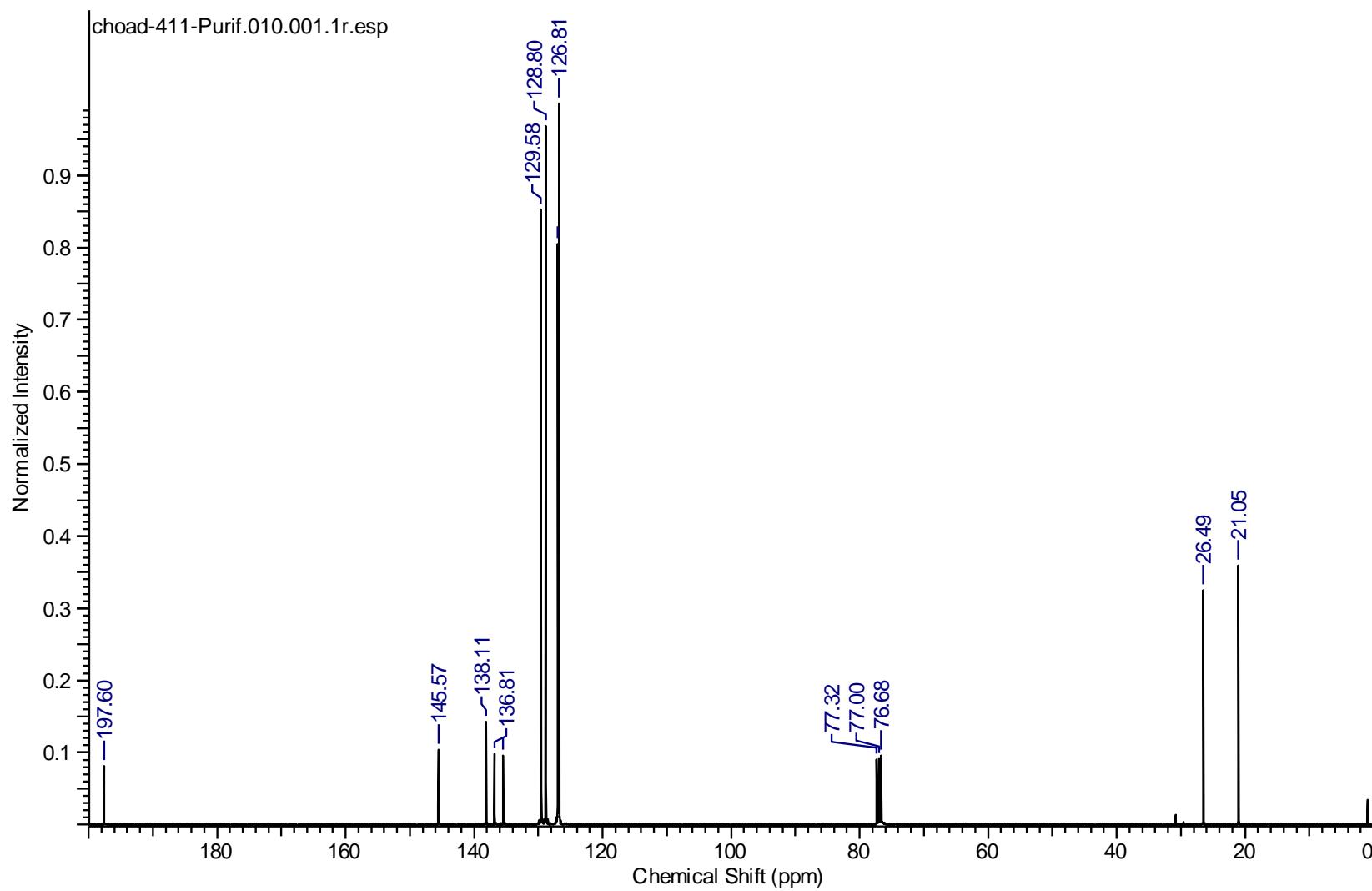
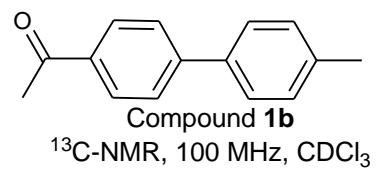
**4-Methoxybiphenyl (1h):** Elution with AcOEt / cyclohexane 5:95 afforded **1g** as a white solid (179 mg, 86% yield).  $^1\text{H}$  NMR (300 MHz,  $\text{CDCl}_3$ )  $\delta$  (ppm): 3.88 (s, 3H), 7.01 (d,  $^3J(\text{H},\text{H}) = 8.8$  Hz, 2H), 7.33 (t,  $^3J(\text{H},\text{H}) = 7.3$  Hz, 1H), 7.44 (m, 2H), 7.58 (m, 4H).  $^{[3]} \text{C}$  NMR (75 MHz,  $\text{CDCl}_3$ )  $\delta$  (ppm): 55.3, 114.2, 126.7, 128.1, 128.7, 133.7, 140.8, 159.1.

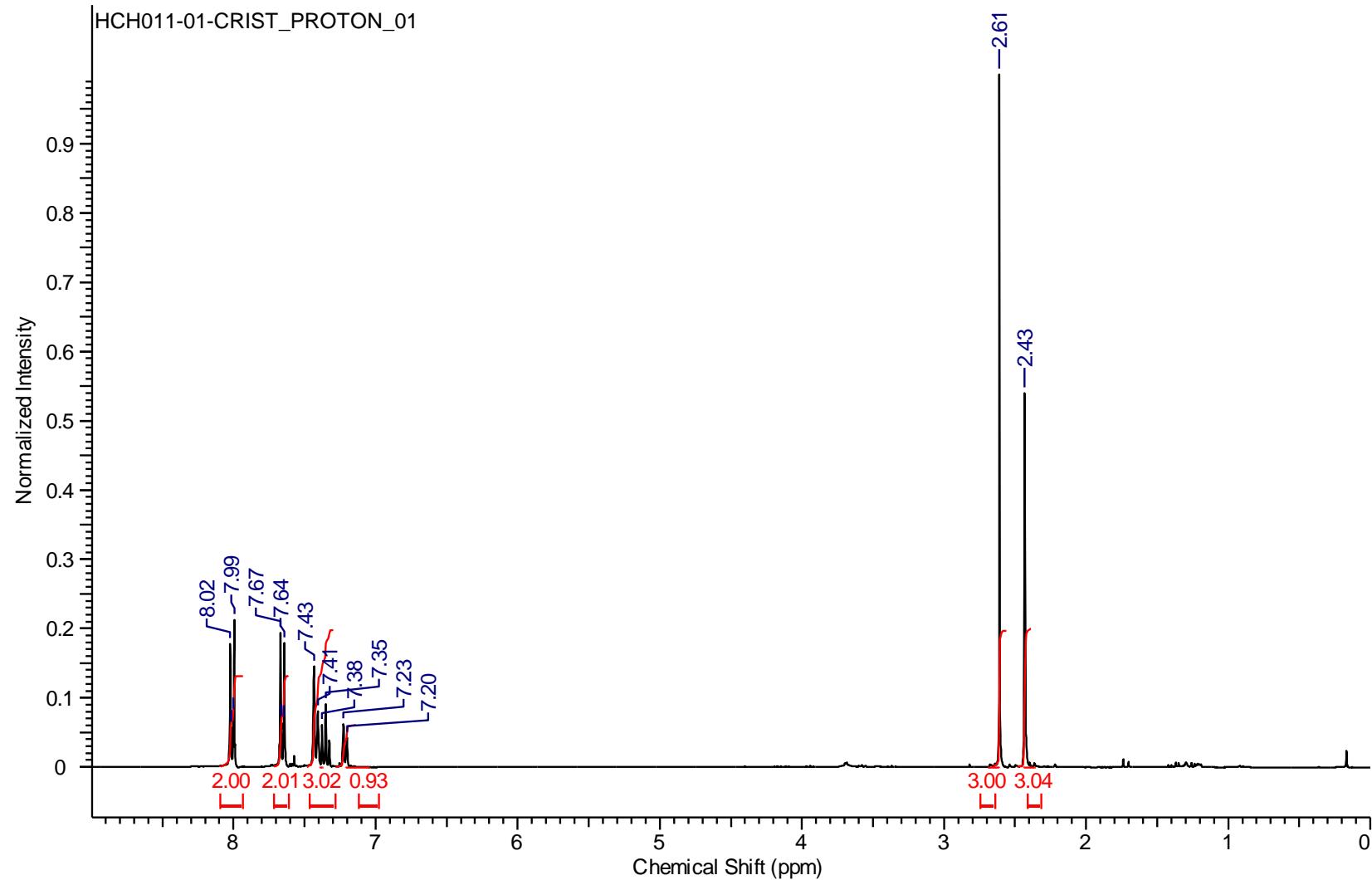
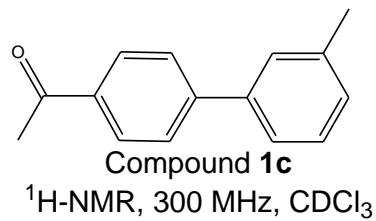
**4-Methylbiphenyl (1i):** Elution with AcOEt / cyclohexane 1:99 afforded **1h** as a white solid (155 mg, 92% yield).  $^1\text{H}$  NMR (300 MHz,  $\text{CDCl}_3$ )  $\delta$  (ppm): 2.30 (s, 3H), 7.17 (m, 3H), 7.33 (t,  $^3J(\text{H},\text{H}) = 7.6$  Hz, 2H), 7.40 (d,  $^3J(\text{H},\text{H}) = 8.4$  Hz, 2H), 7.49 (d,  $^3J(\text{H},\text{H}) = 8.4$  Hz, 2H).  $^{[5]} \text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ )  $\delta$  (ppm): 21.1, 127.0, 129.3, 129.5, 137.0, 138.4, 141.2.

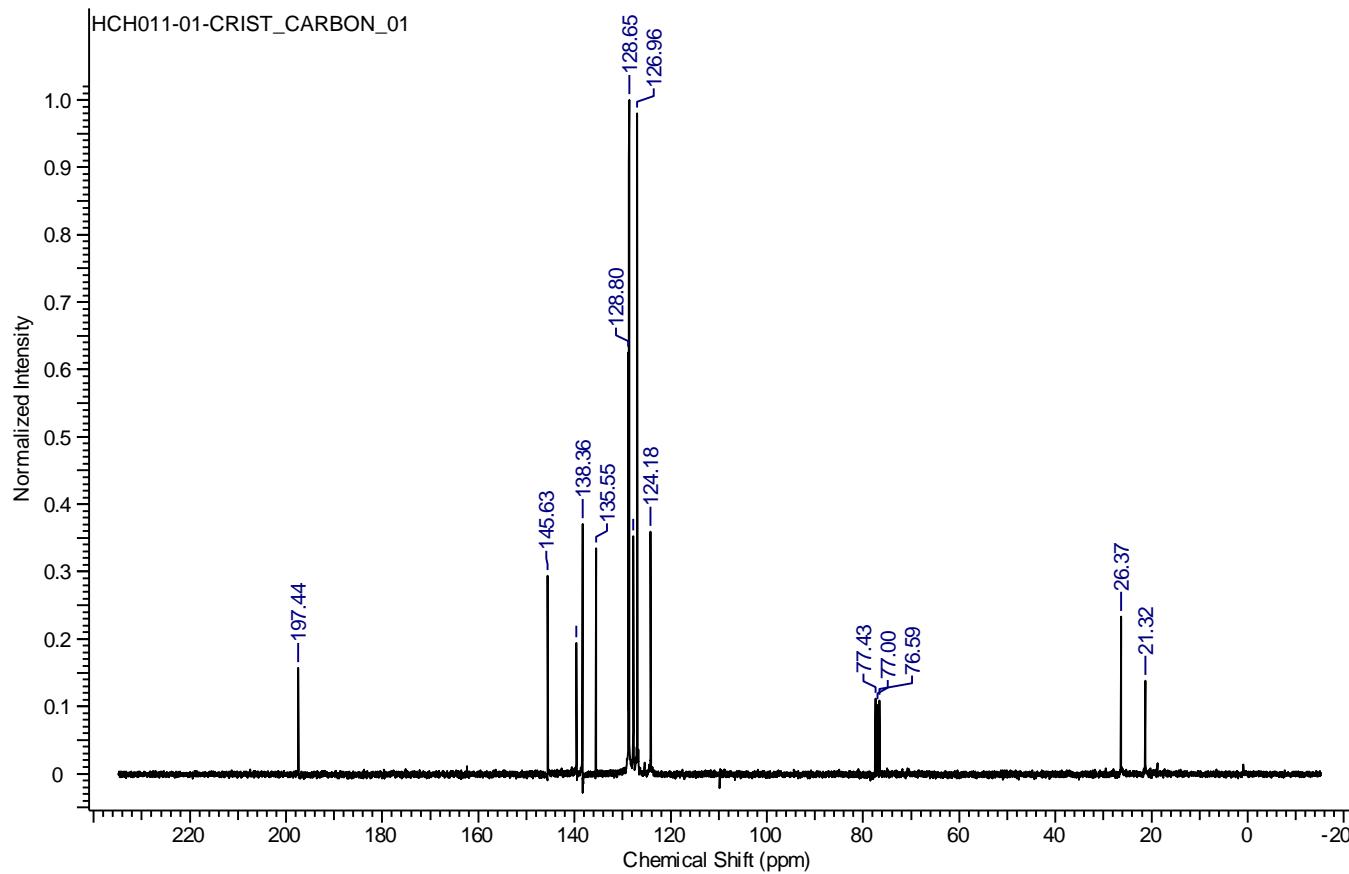
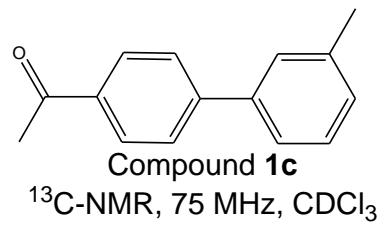


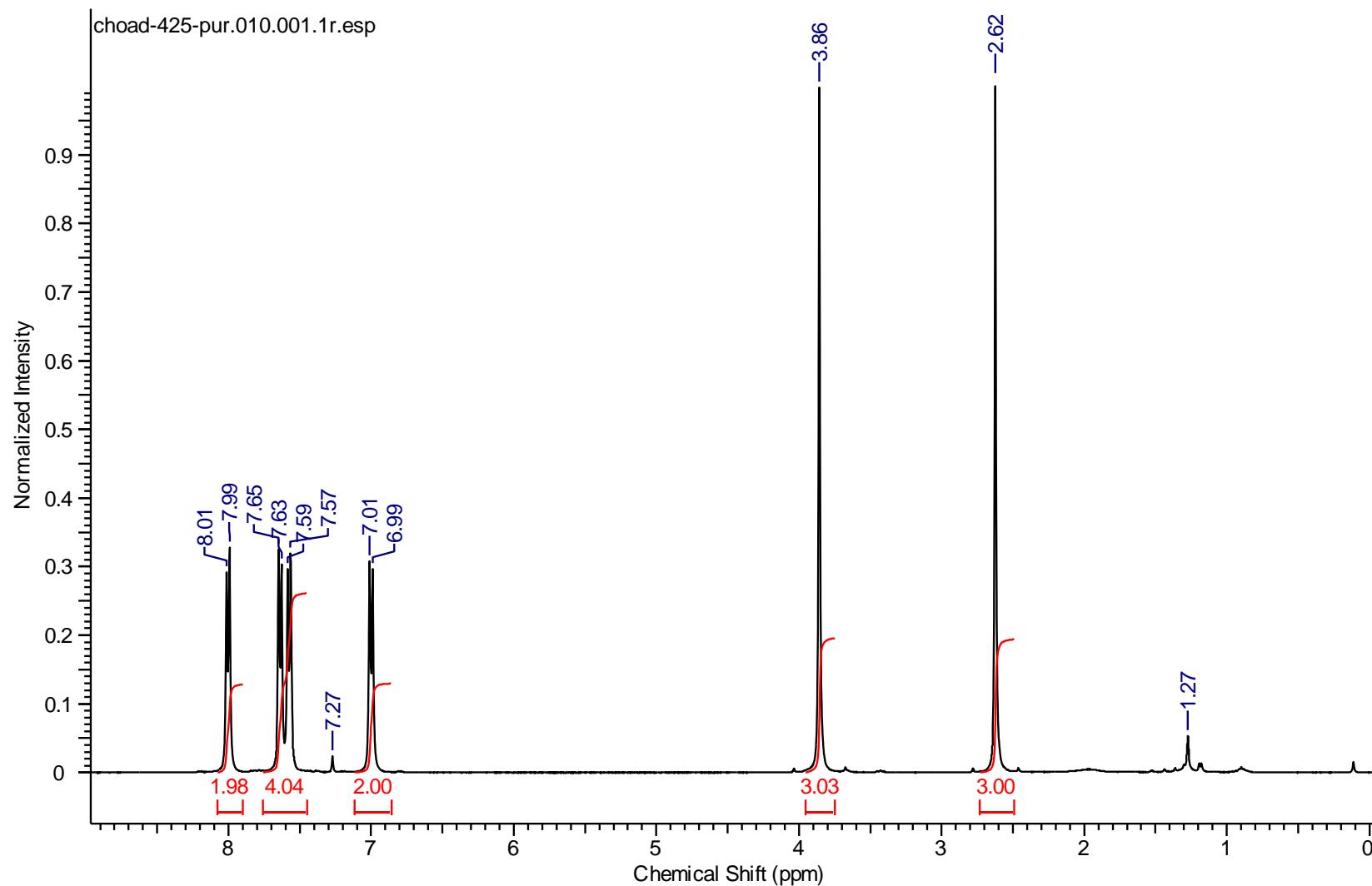
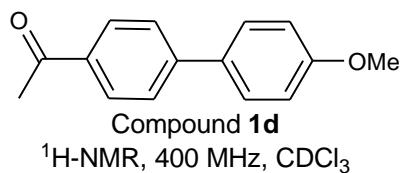


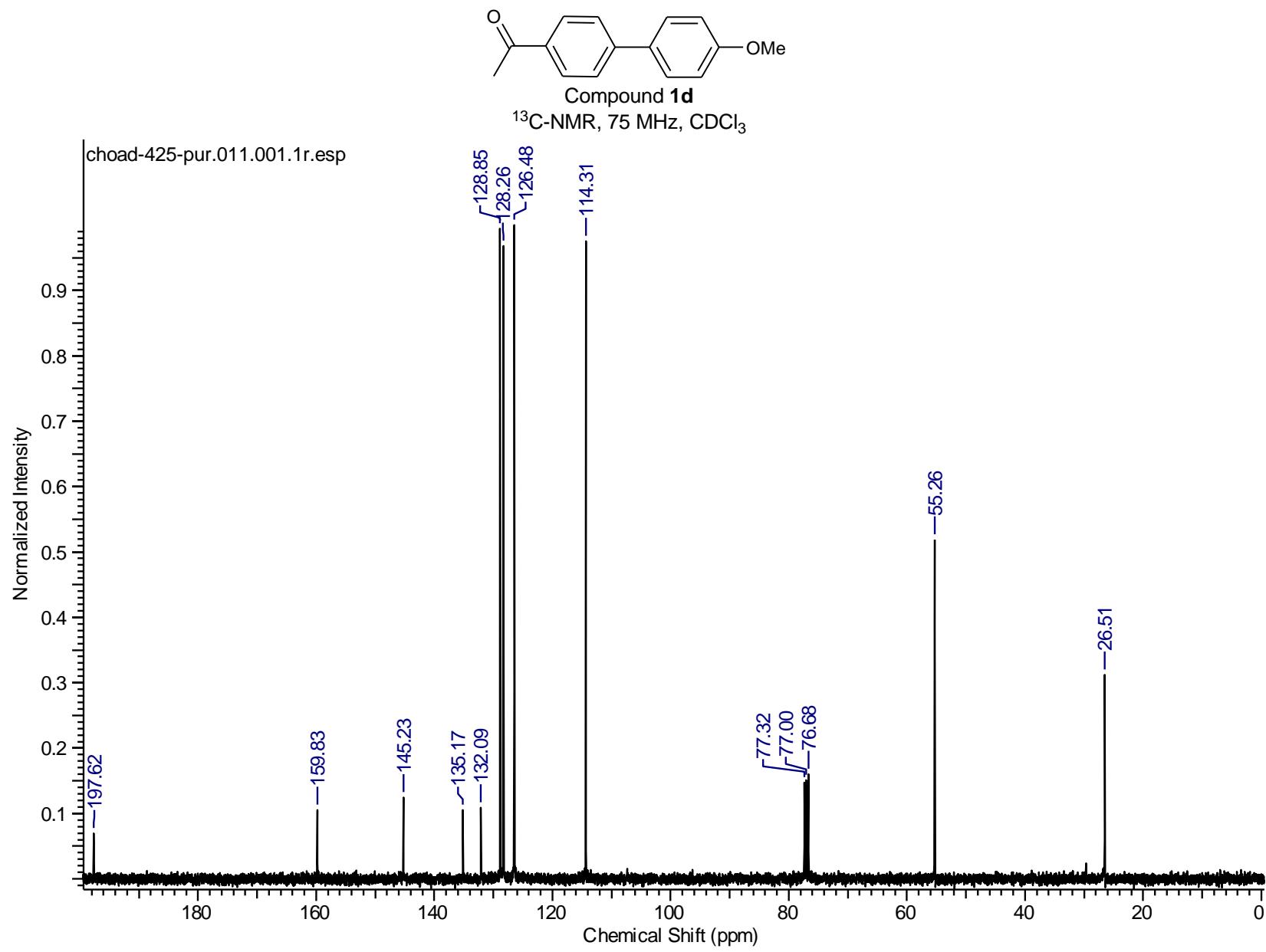


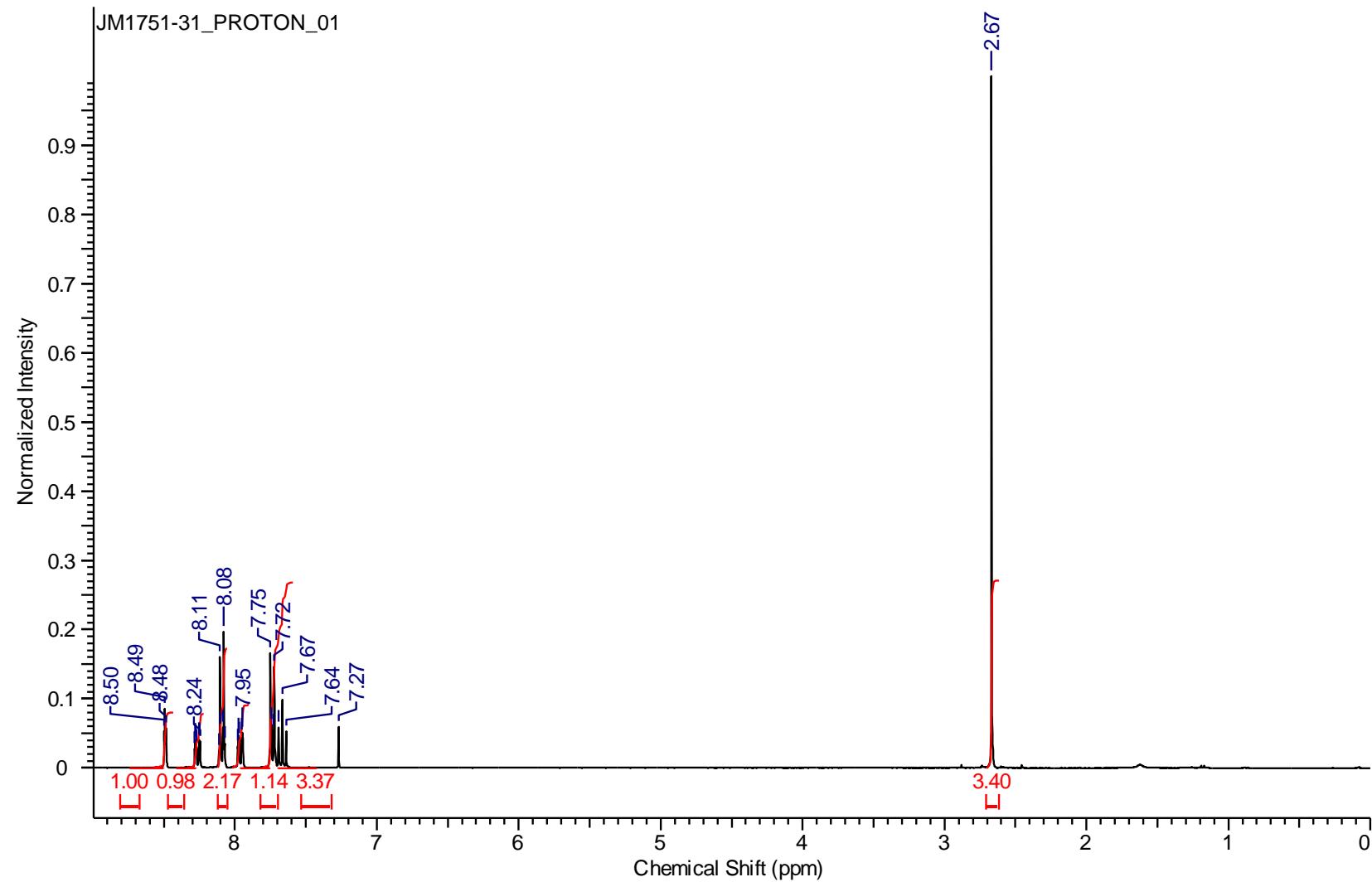
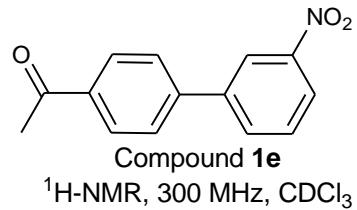


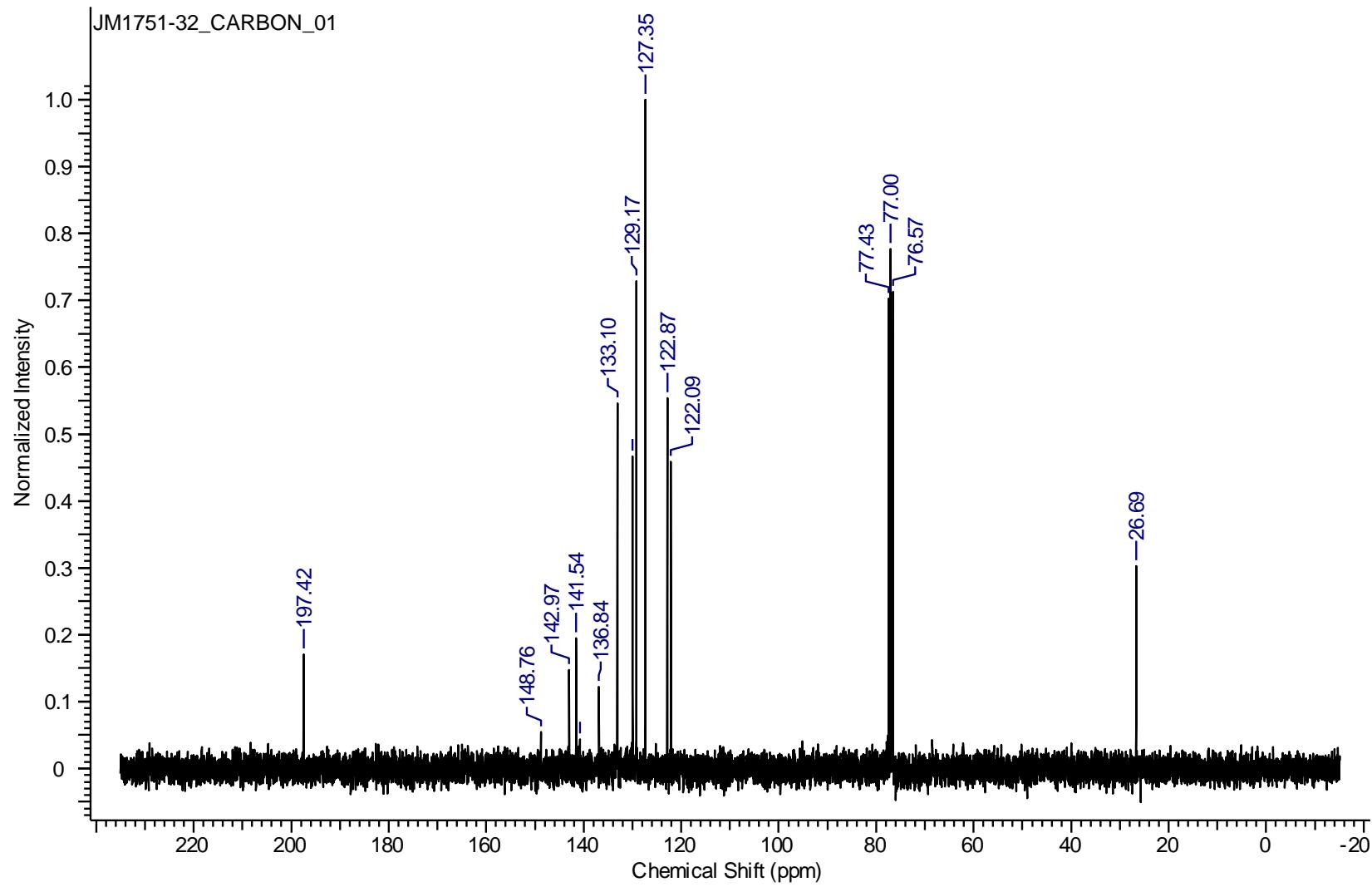
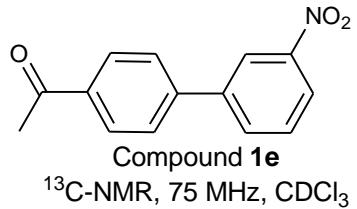


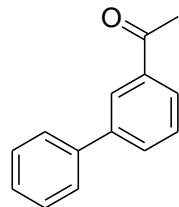




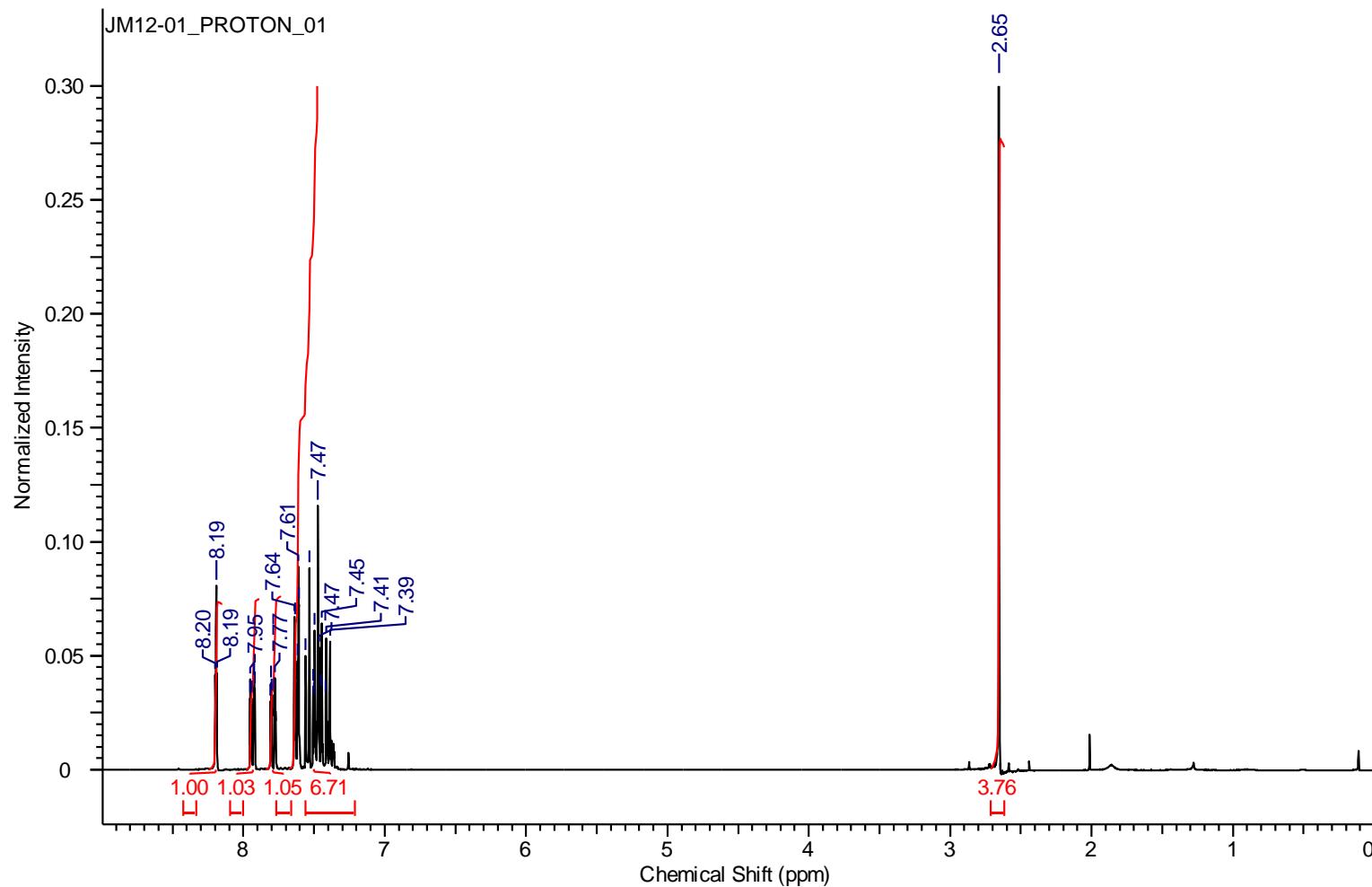


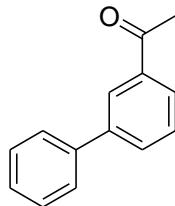






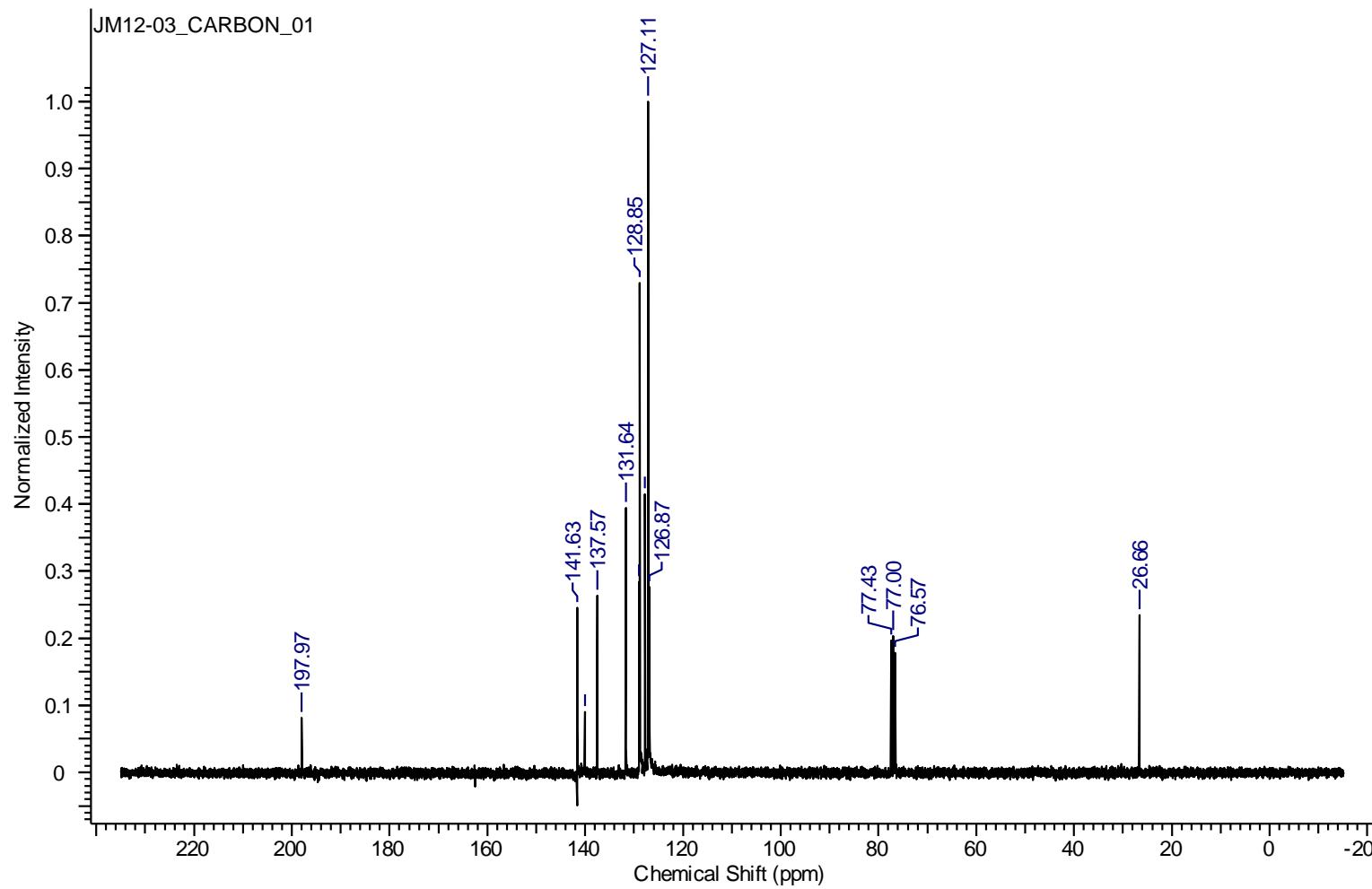
Compound **1f**  
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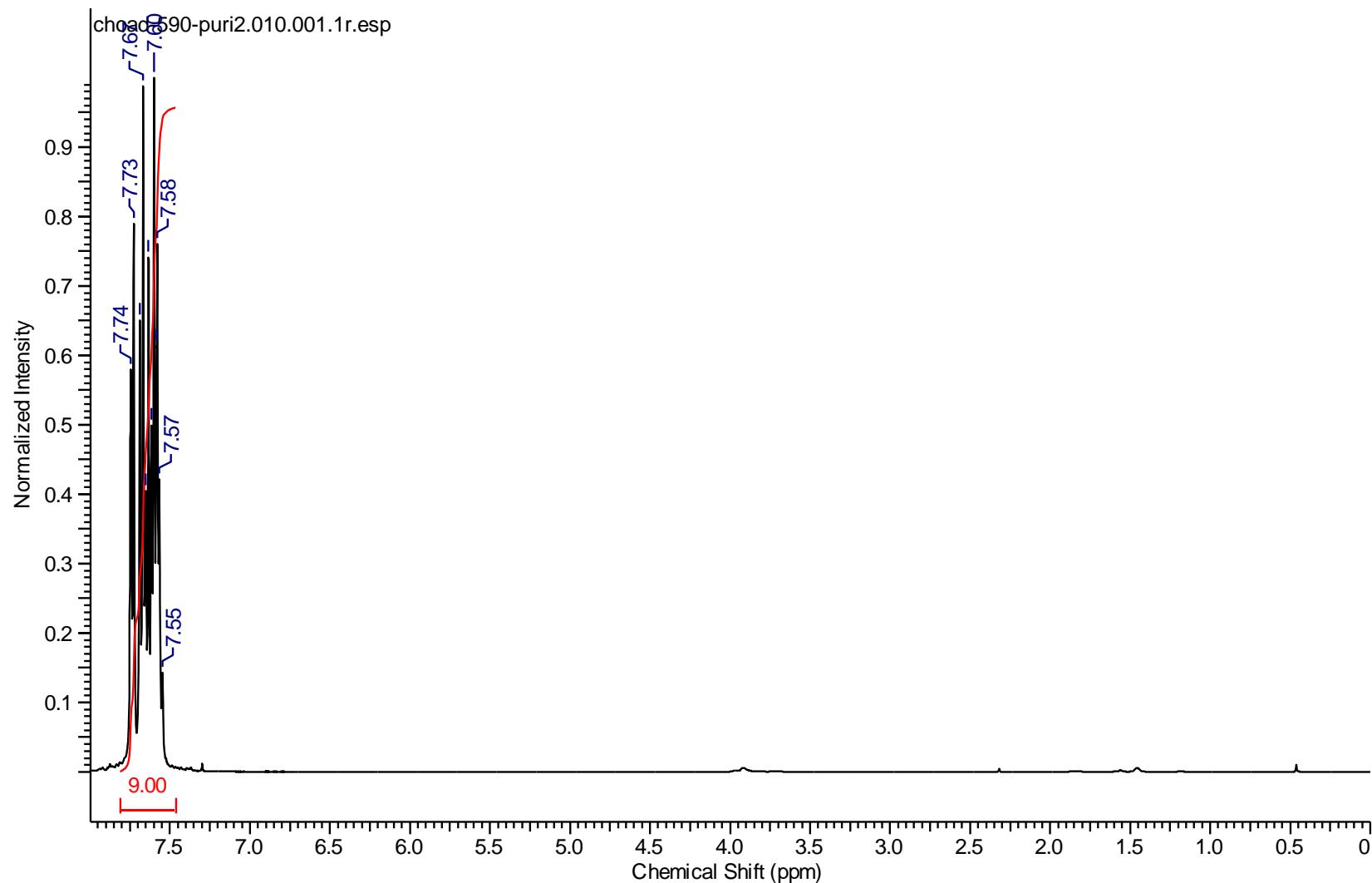
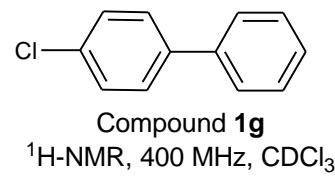


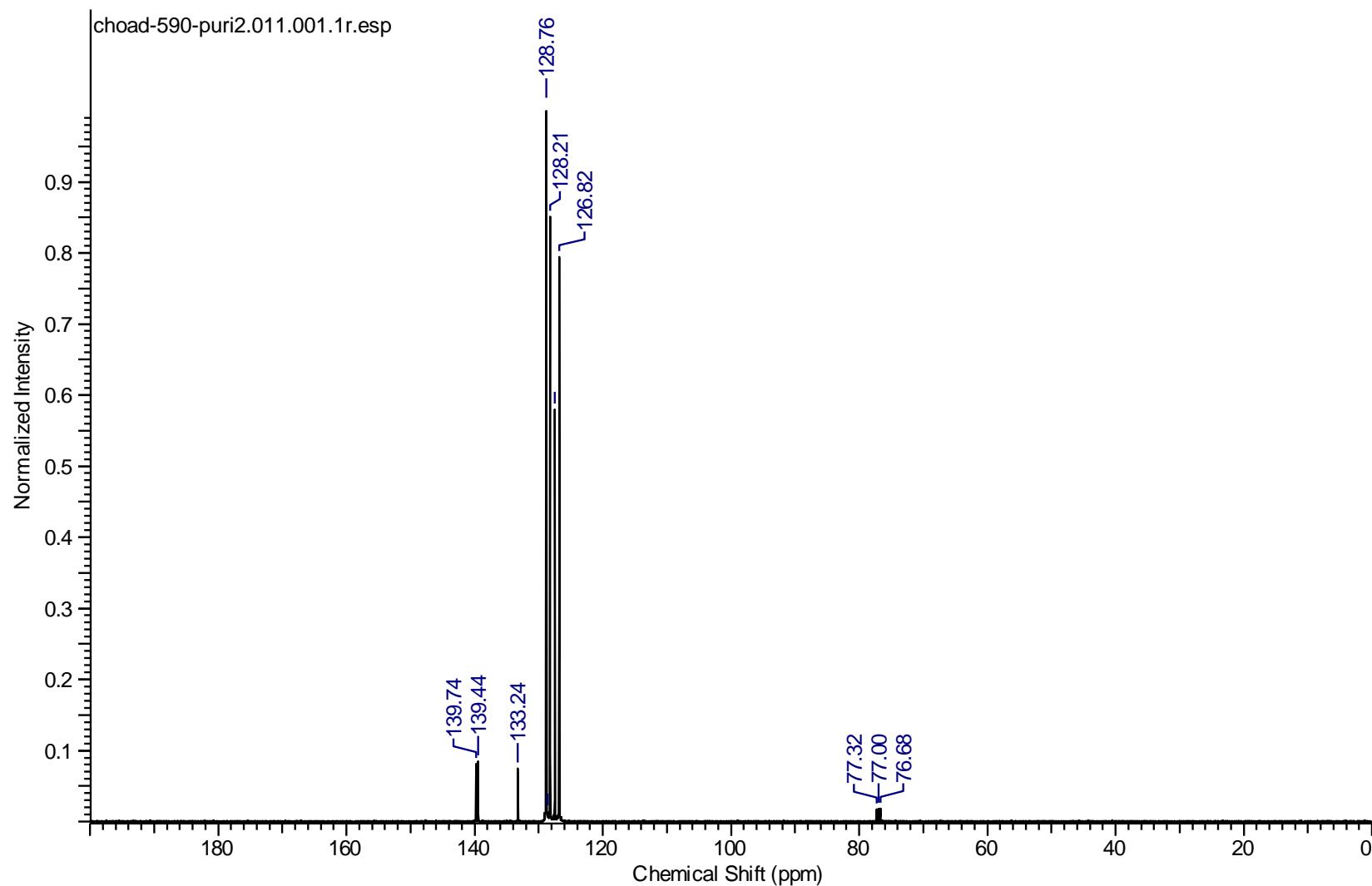
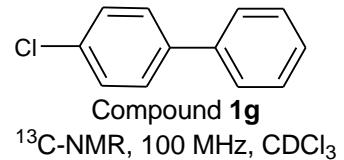


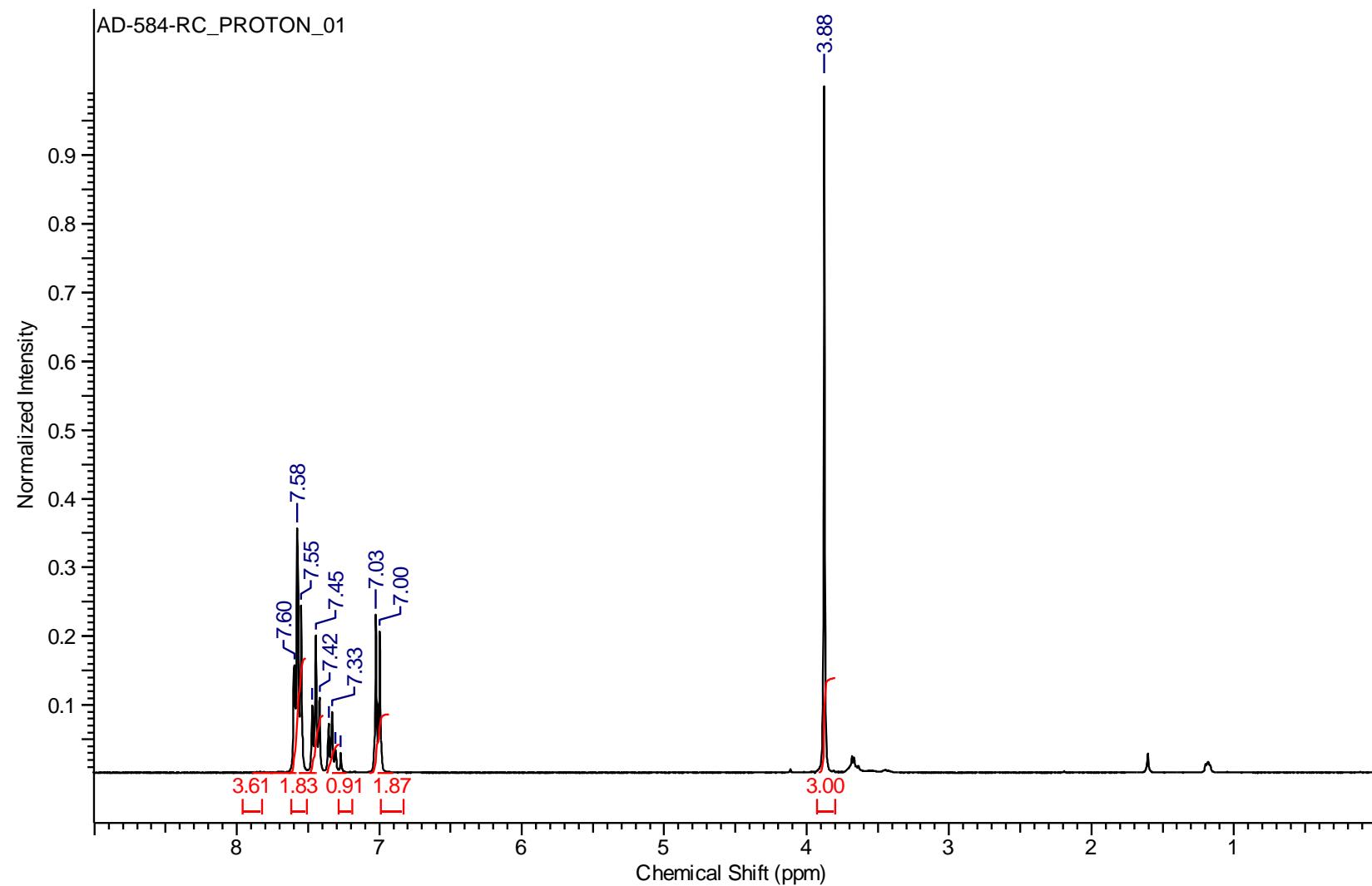
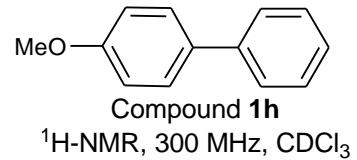
Compound **1f**

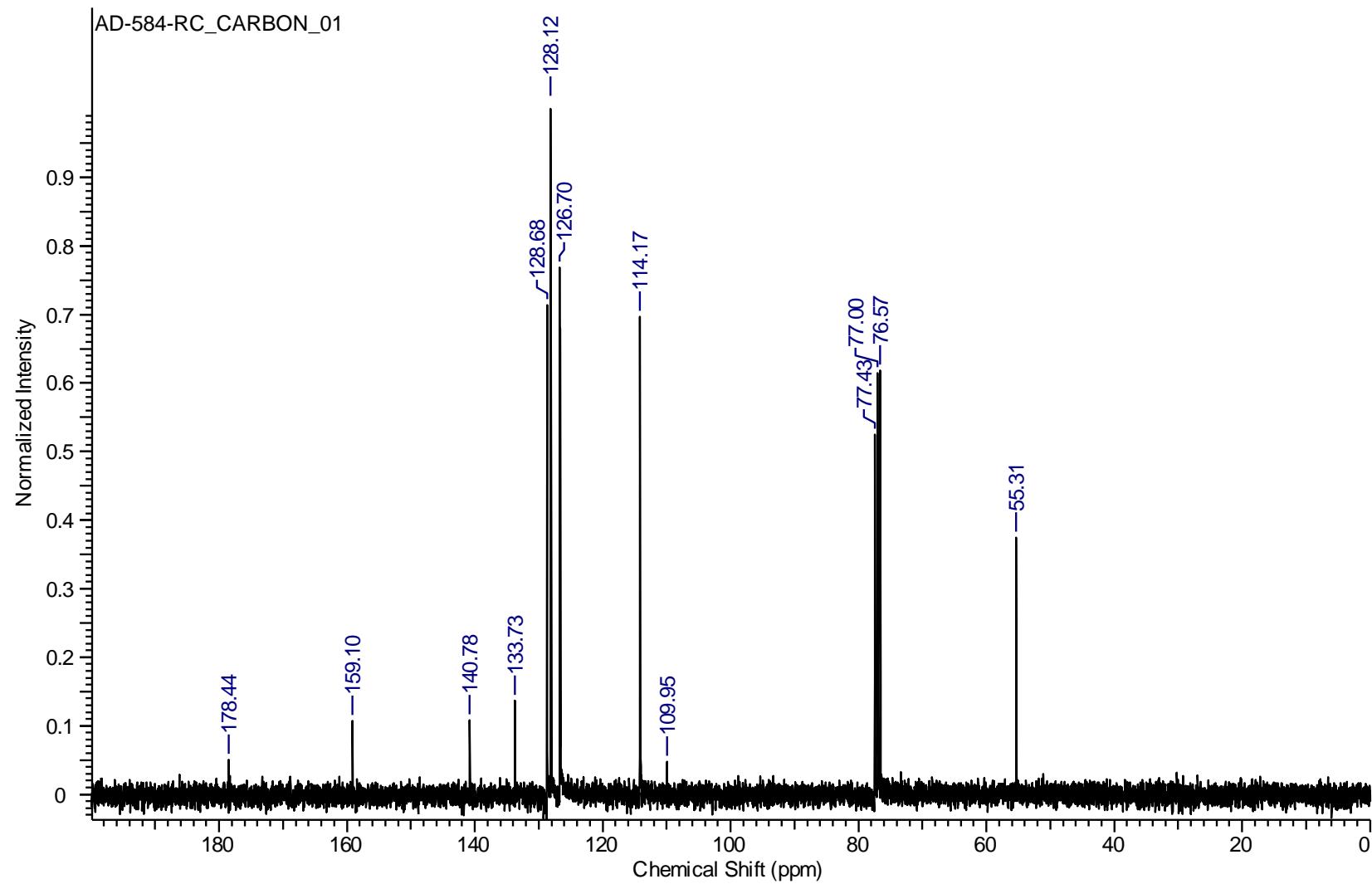
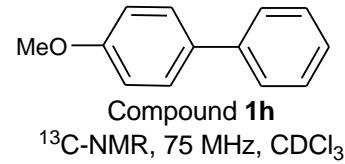
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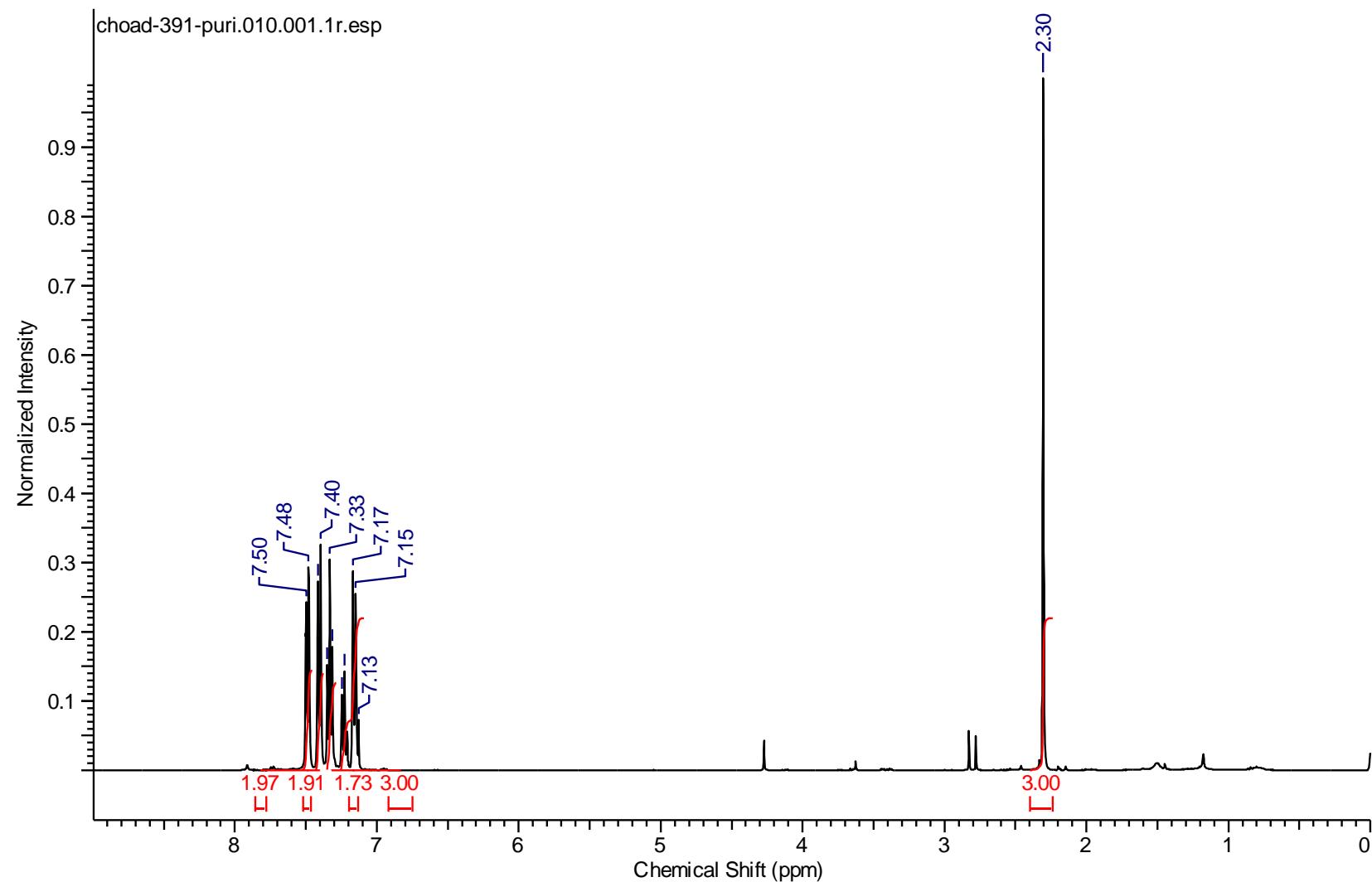
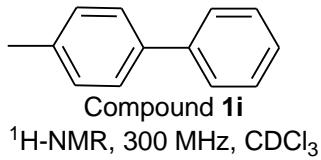


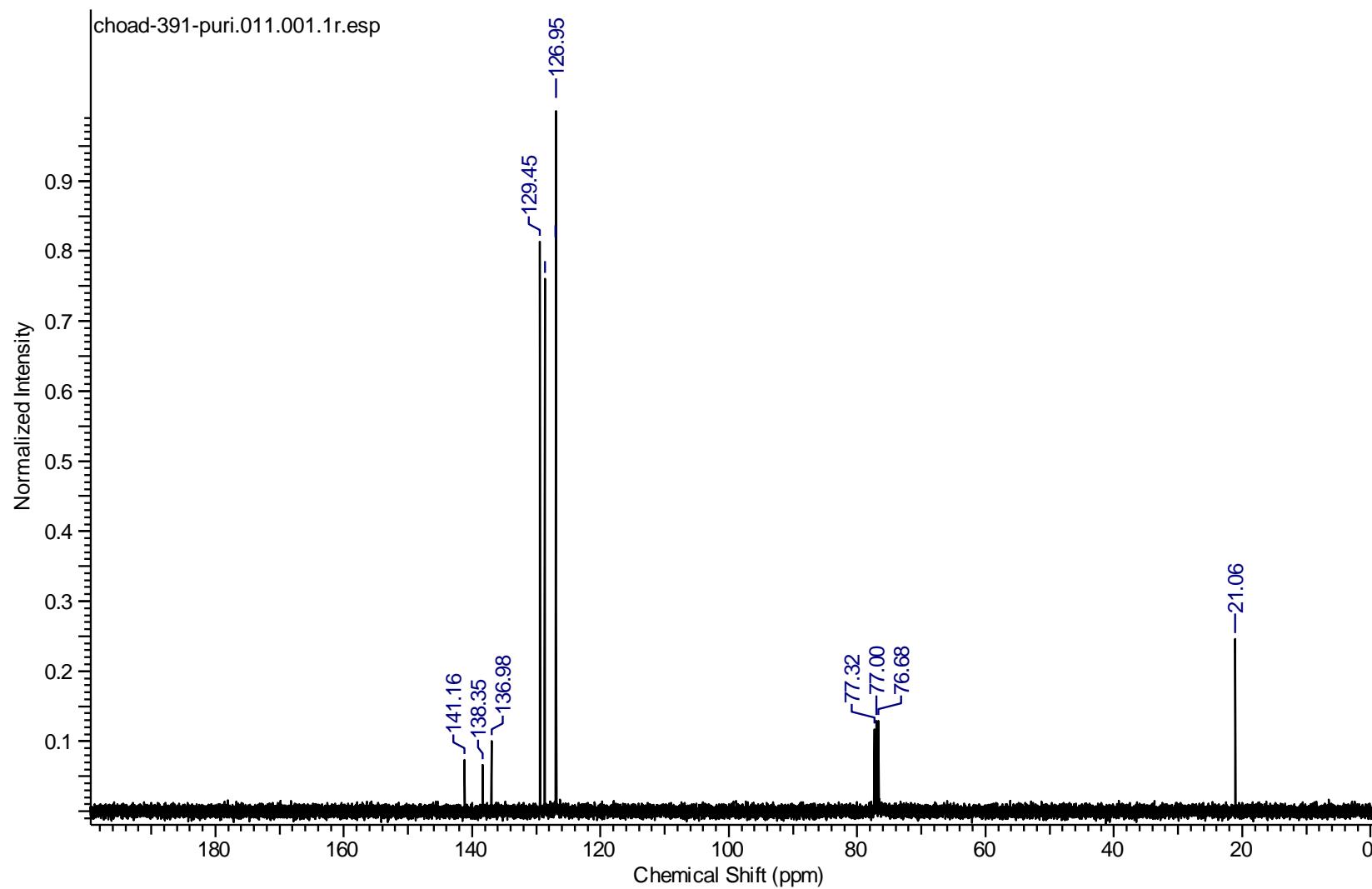
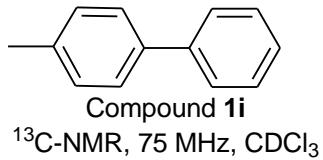












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  - [2] S. Schweizer, J.-M. Becht, C. Le Drian, *Org. Lett.* **2007**, 9, 3777.
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  - [5] A. Derible, C. Diebold, J. Dentzer, R. Gadiou, J.-M. Becht, C. Le Drian, *Eur. J. Org. Chem.* **2014**, 7699.