

Supporting information

Palladium Catalysed Carbonylation of Aryl Halides: An Efficient, Heterogeneous and Phosphine-Free Catalytic System for Aminocarbonylation and Alkoxy carbonylation Employing Mo(CO)₆ as a Solid Carbon Monoxide Source

Abdol-Reza Hajipour,^{a,b} Zeinab Tavangar-Rizi^a and Nasser Iranpoor^c

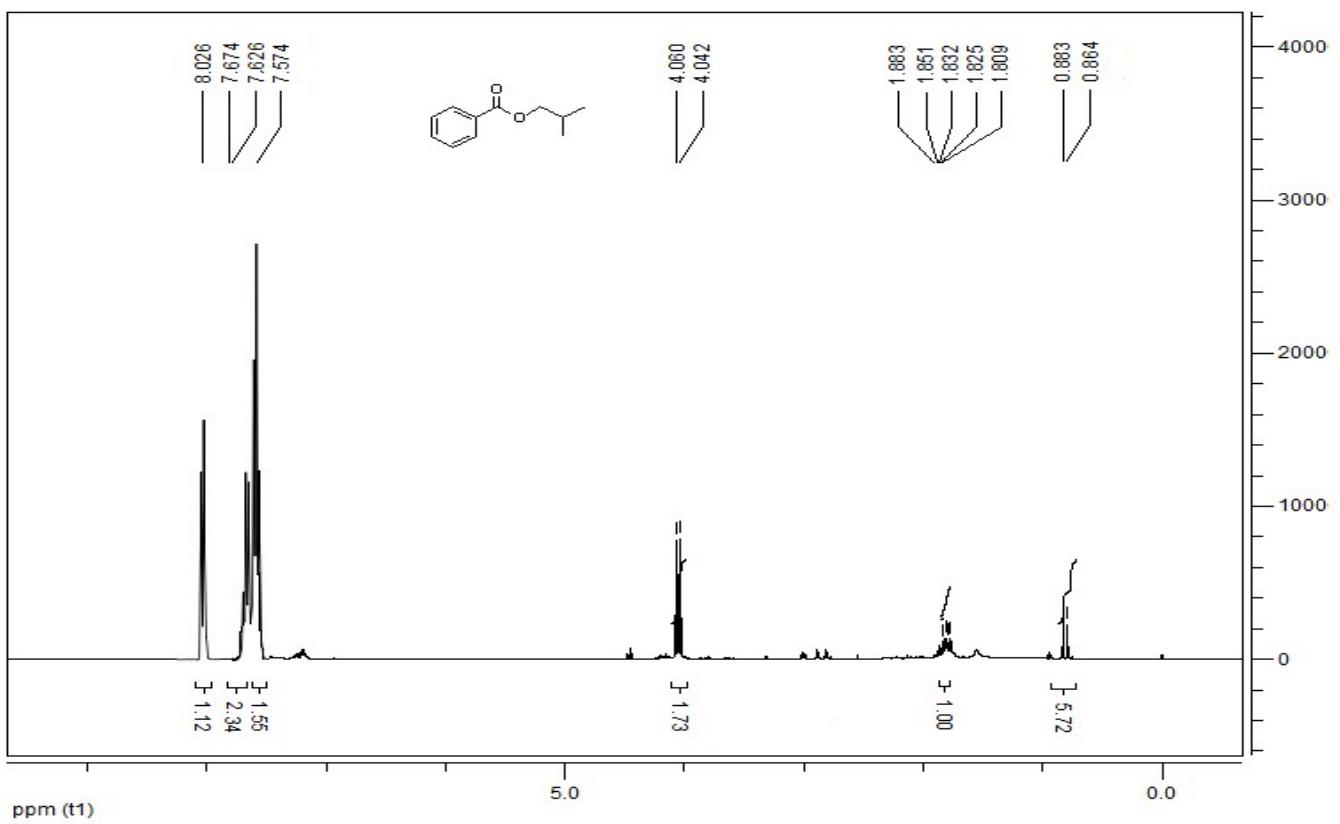
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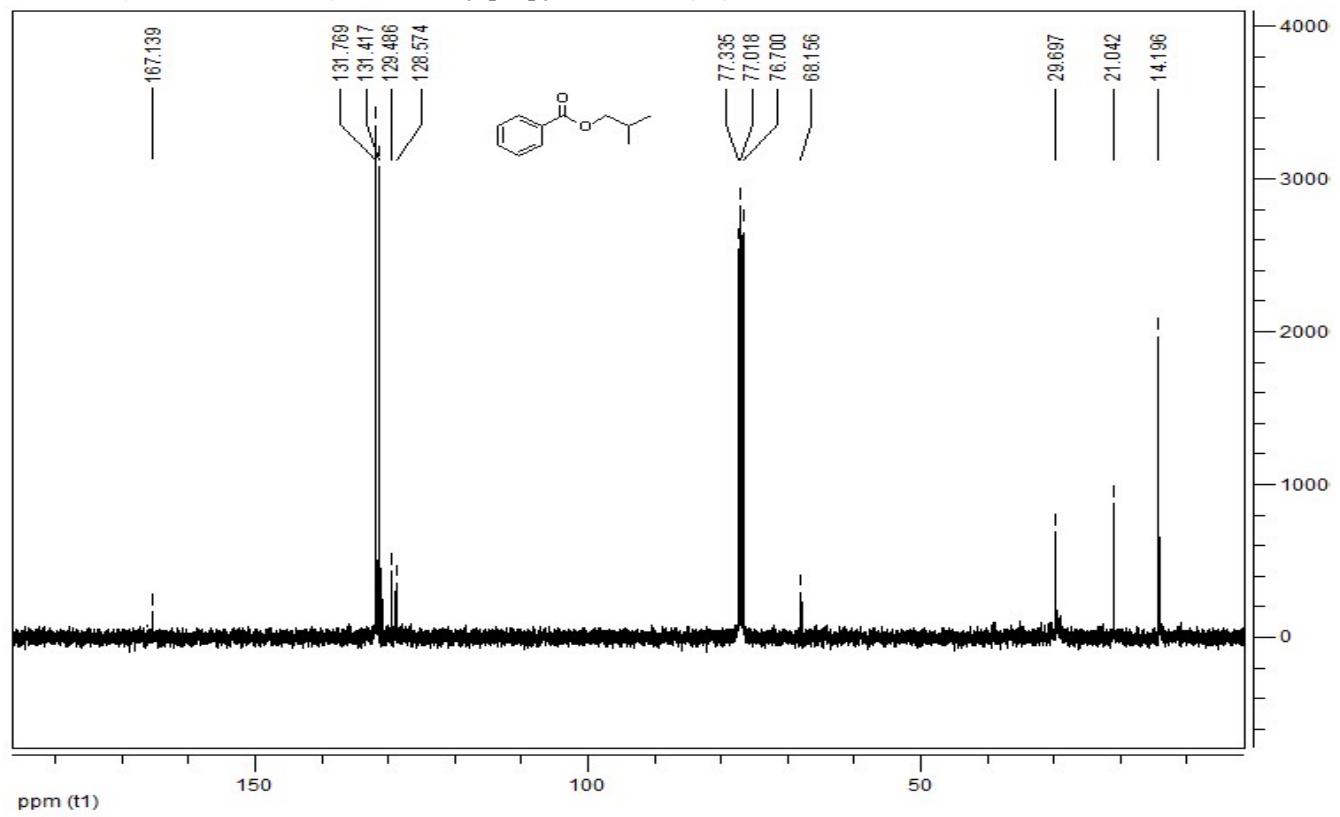
^cDepartment of Chemistry, College of Sciences, Shiraz University, Shiraz 71454, Iran.

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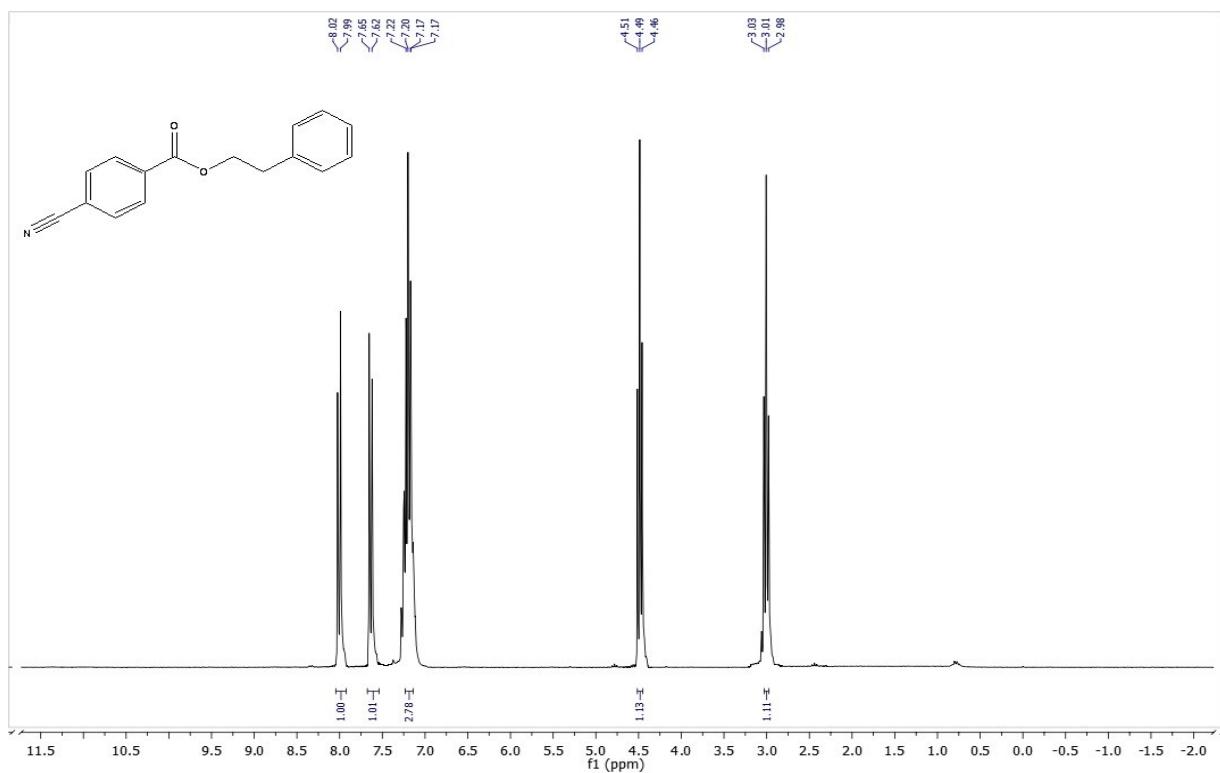
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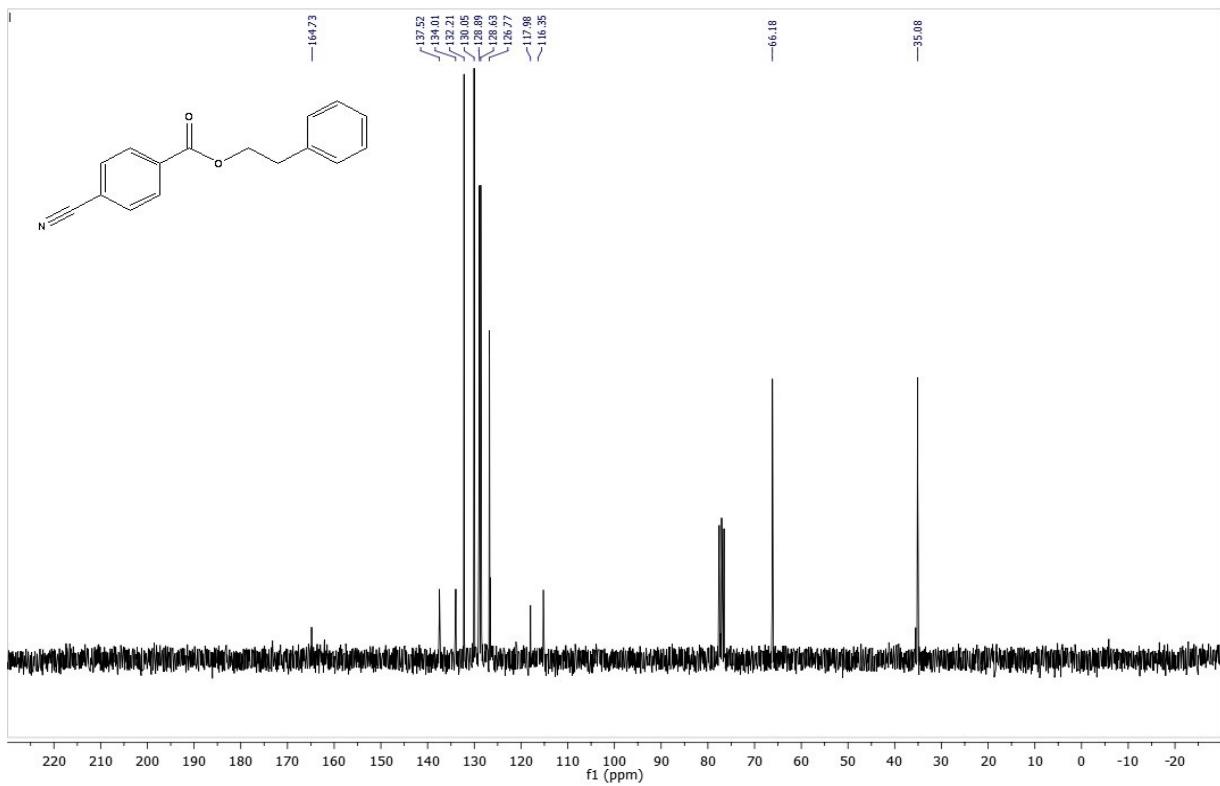
¹H-NMR (400 MHz, CDCl₃) of 2-Methylpropyl benzoate (2b)



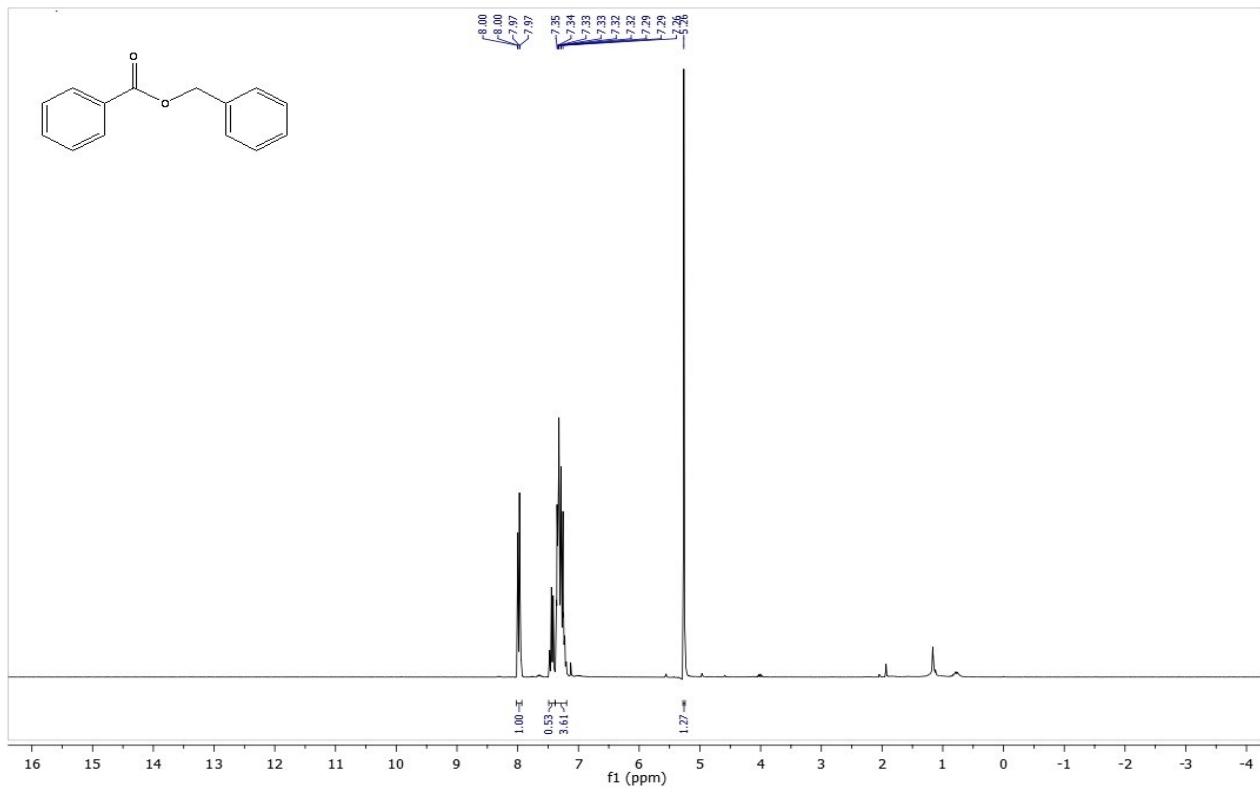
¹³C-NMR (100 MHz, CDCl₃) of 2-Methylpropyl benzoate (2b)



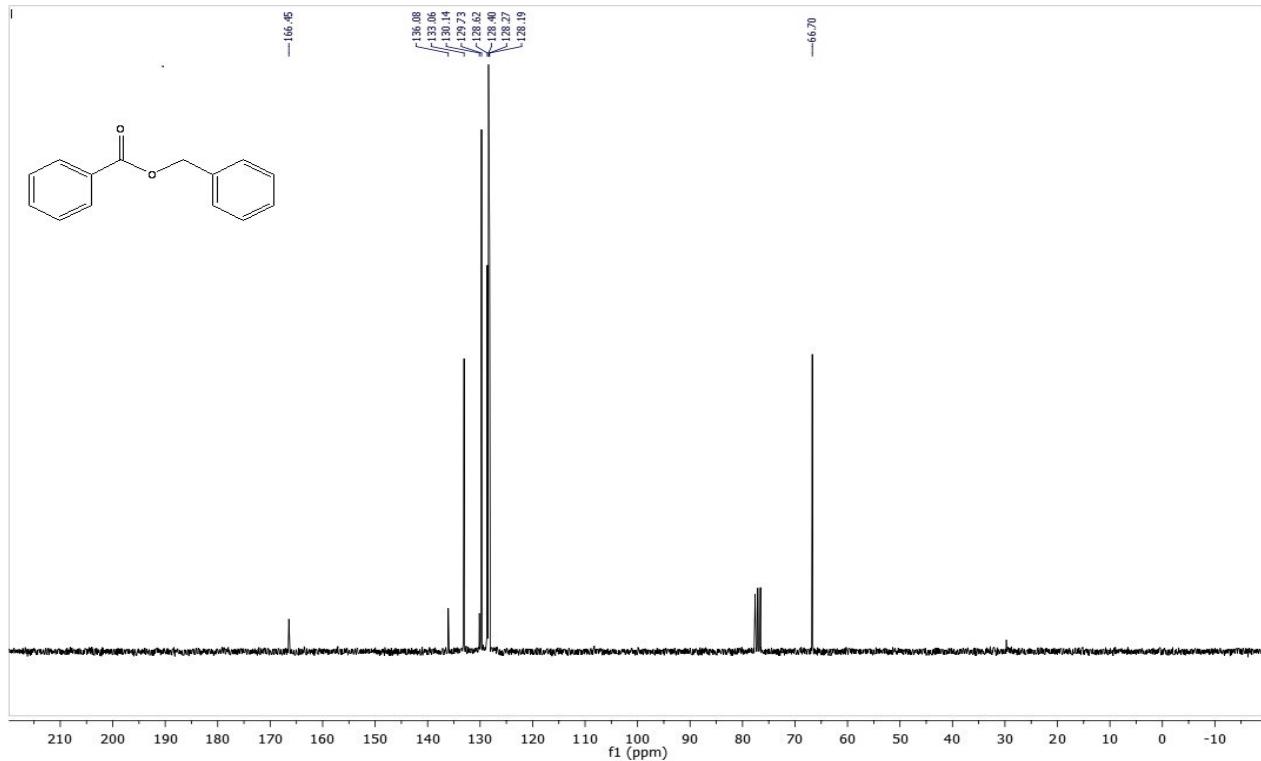
¹H-NMR (250 MHz, CDCl₃) of phenethyl 4-cyanobenzoate (**2h**)



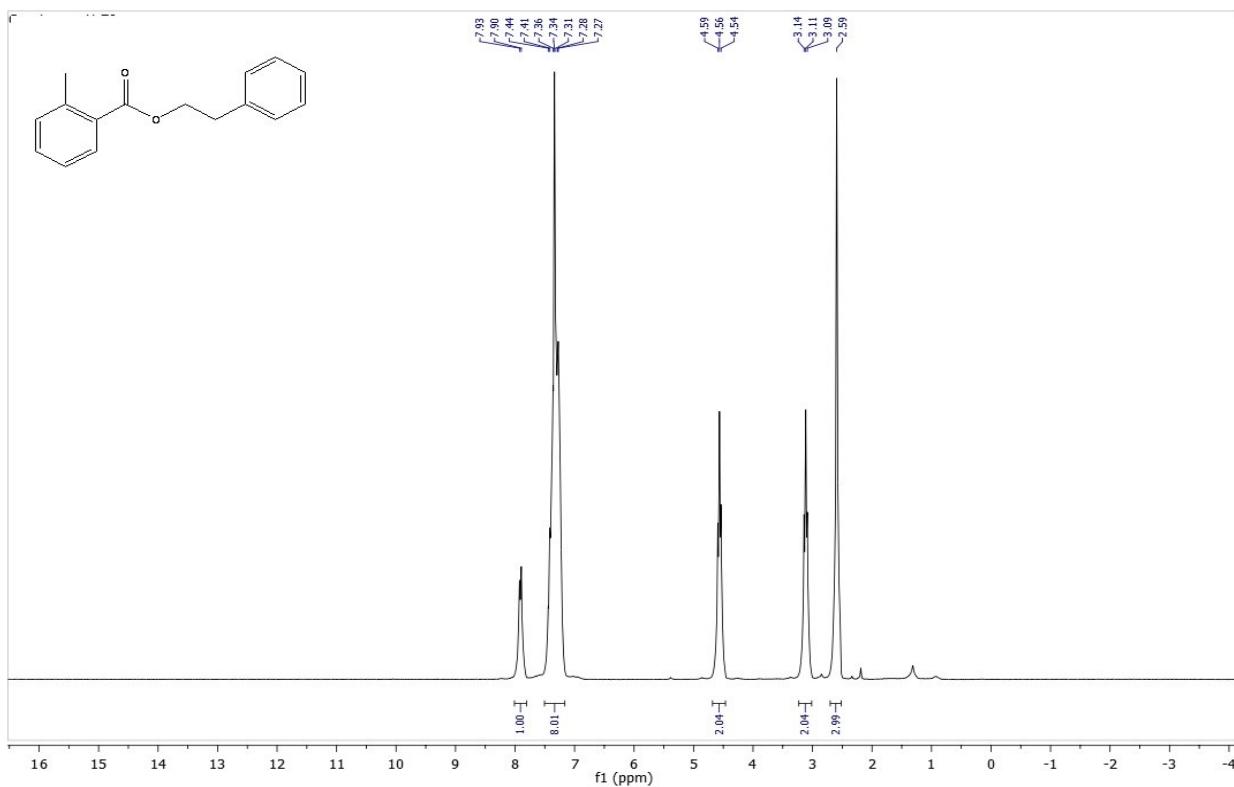
¹³C-NMR (62.9 MHz, CDCl₃) of phenethyl 4-cyanobenzoate (**2h**)



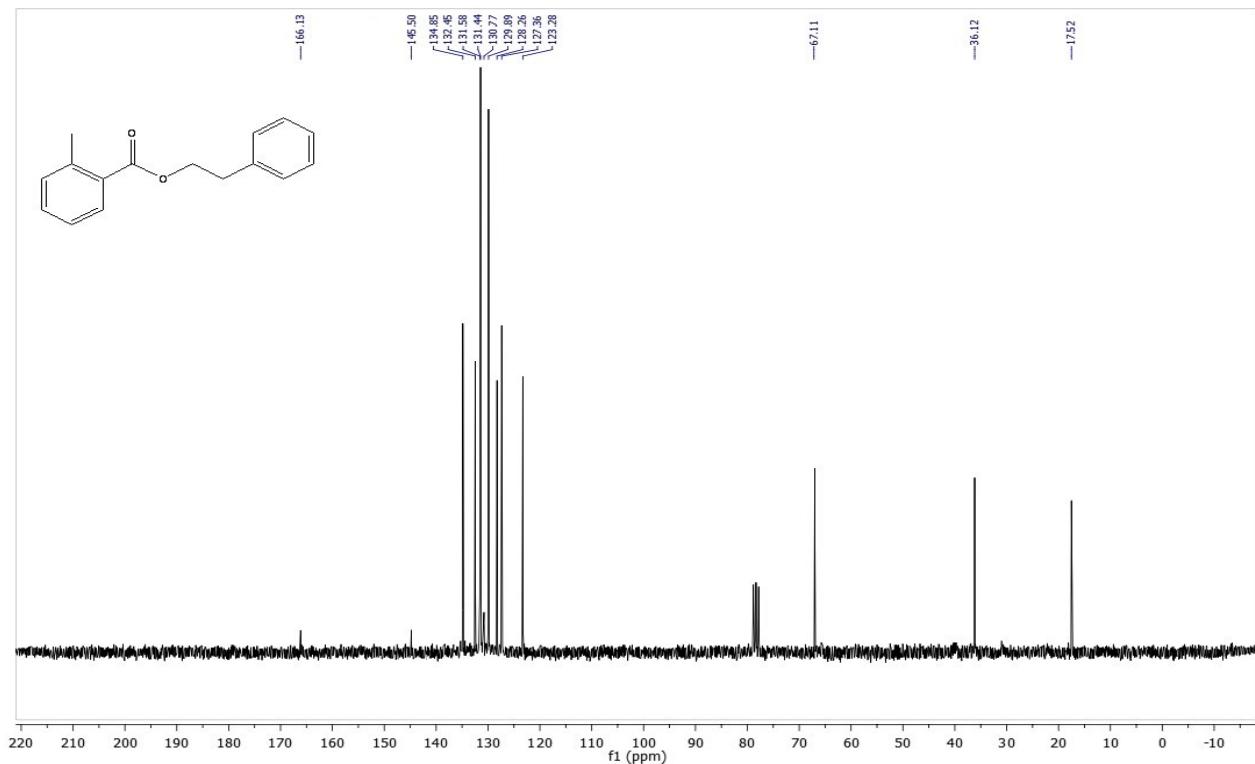
¹H-NMR (250 MHz, CDCl₃) of benzyl benzoate (**2k**)



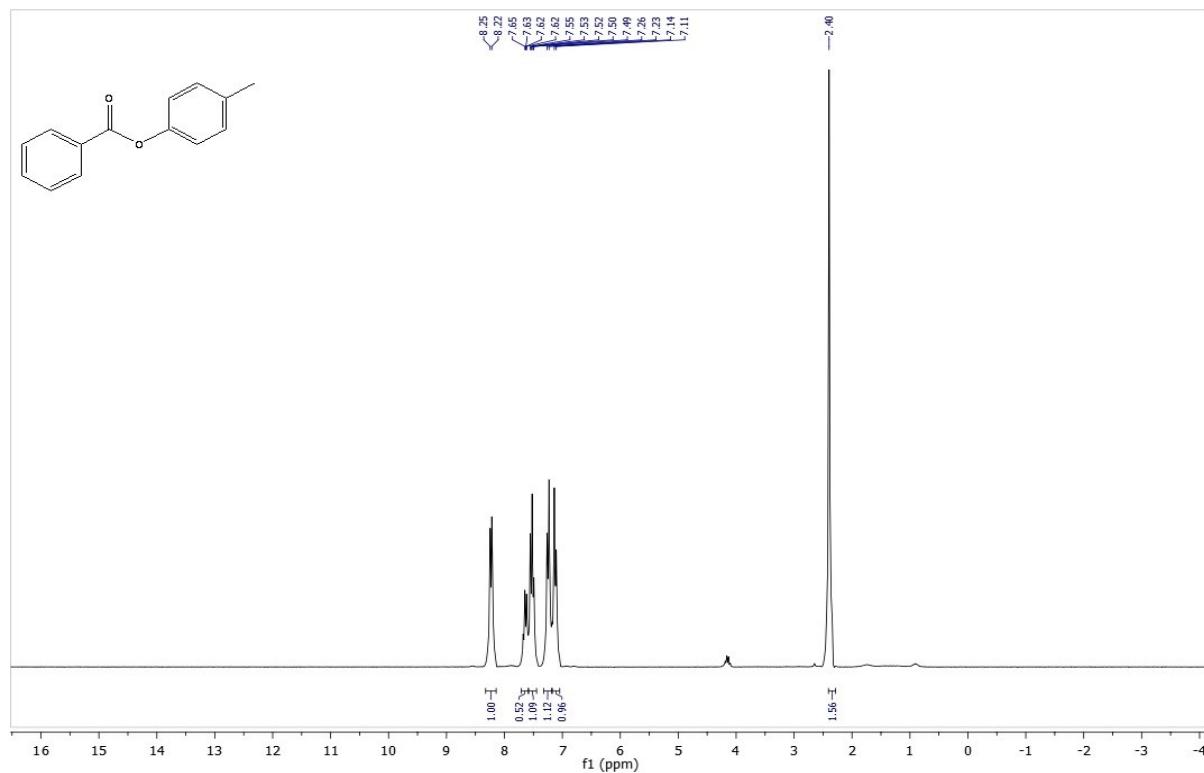
¹³C-NMR (62.9 MHz, CDCl₃) of benzyl benzoate (**2k**)



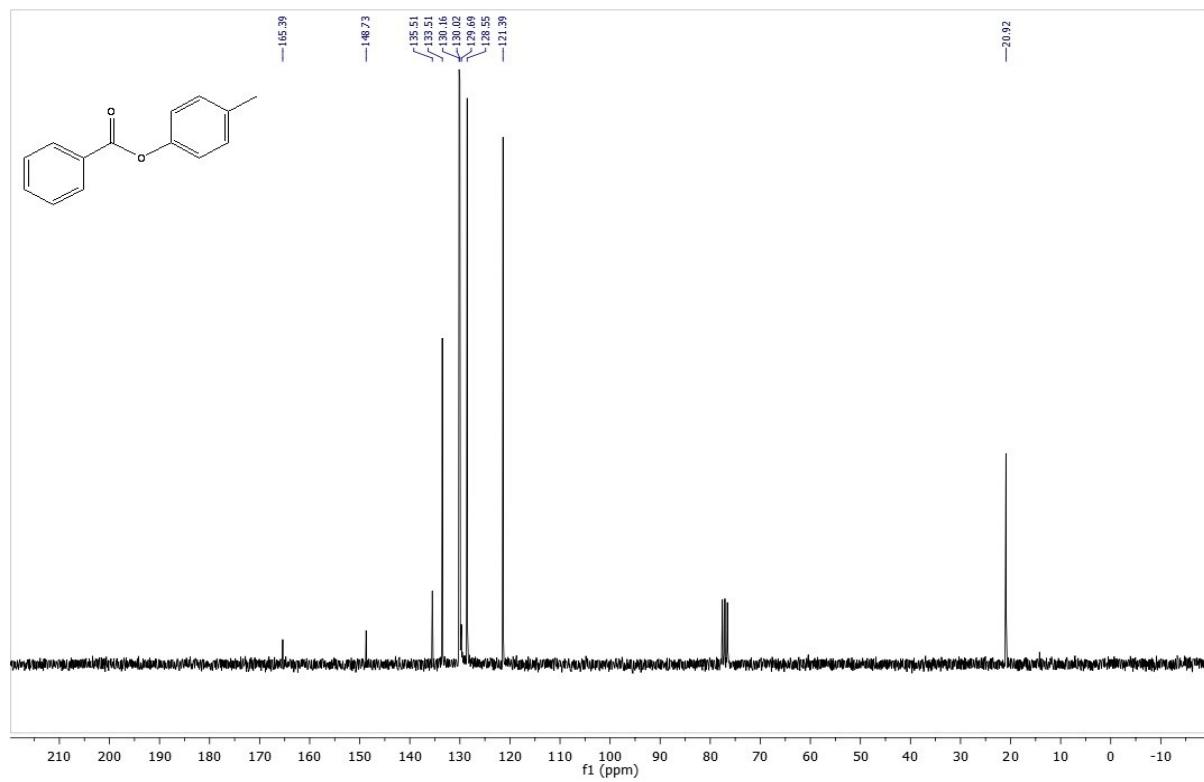
¹H-NMR (250 MHz, CDCl₃) of phenethyl 2-methylbenzoate (**2g**)



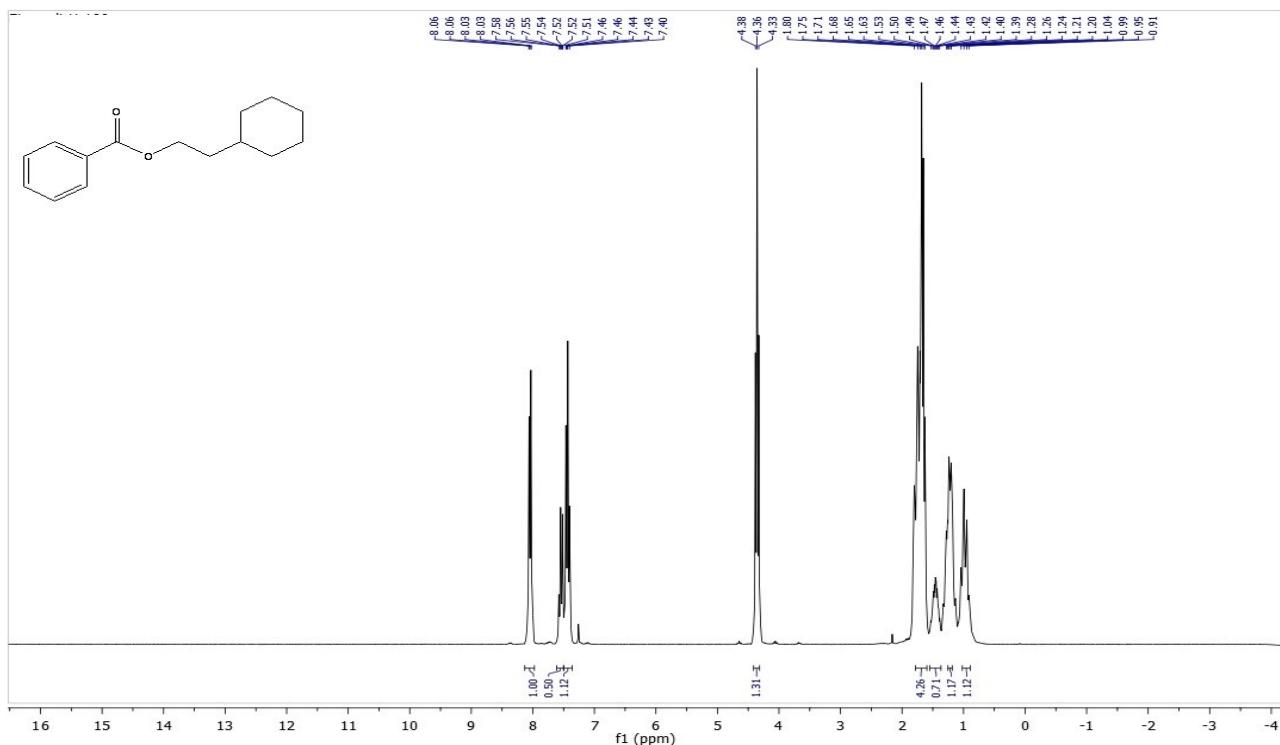
¹³C-NMR (62.9 MHz, CDCl₃) of phenethyl 2-methylbenzoate (**2g**)



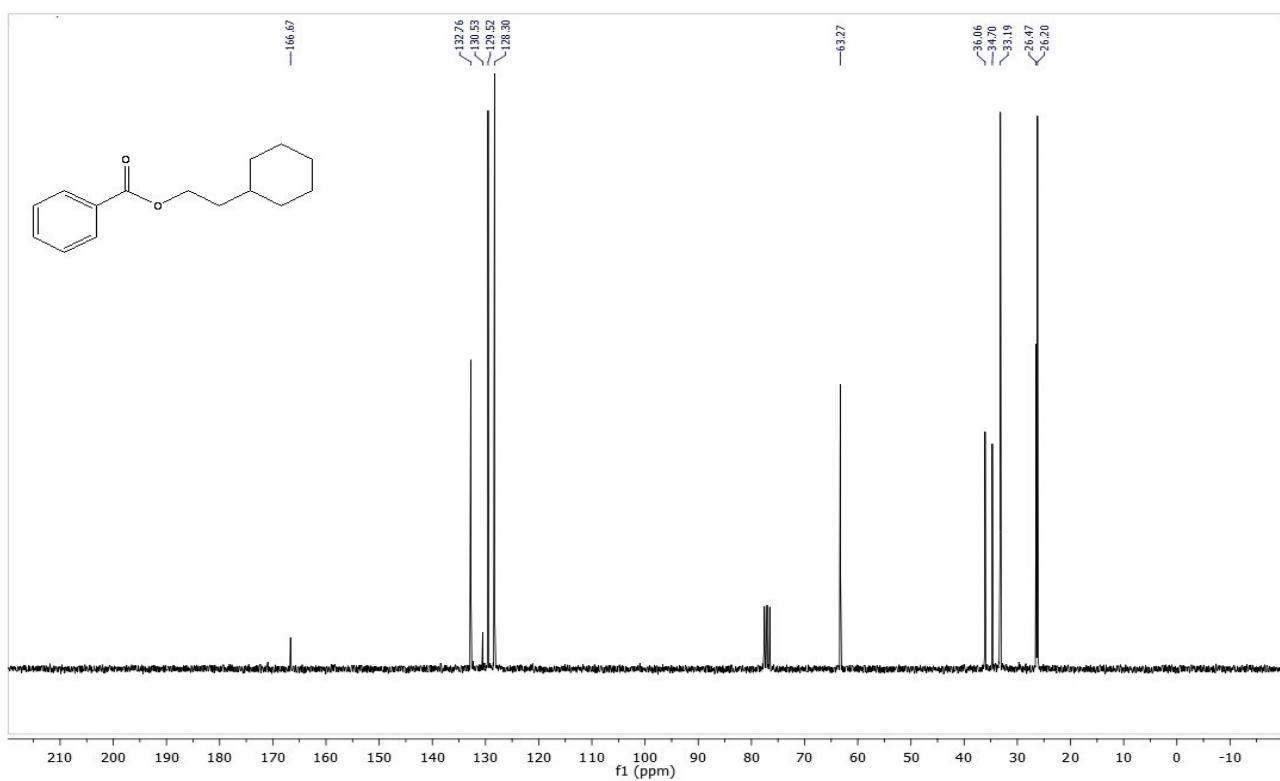
¹H-NMR (250 MHz, CDCl₃) of *p*-tolyl benzoate (**2l**)



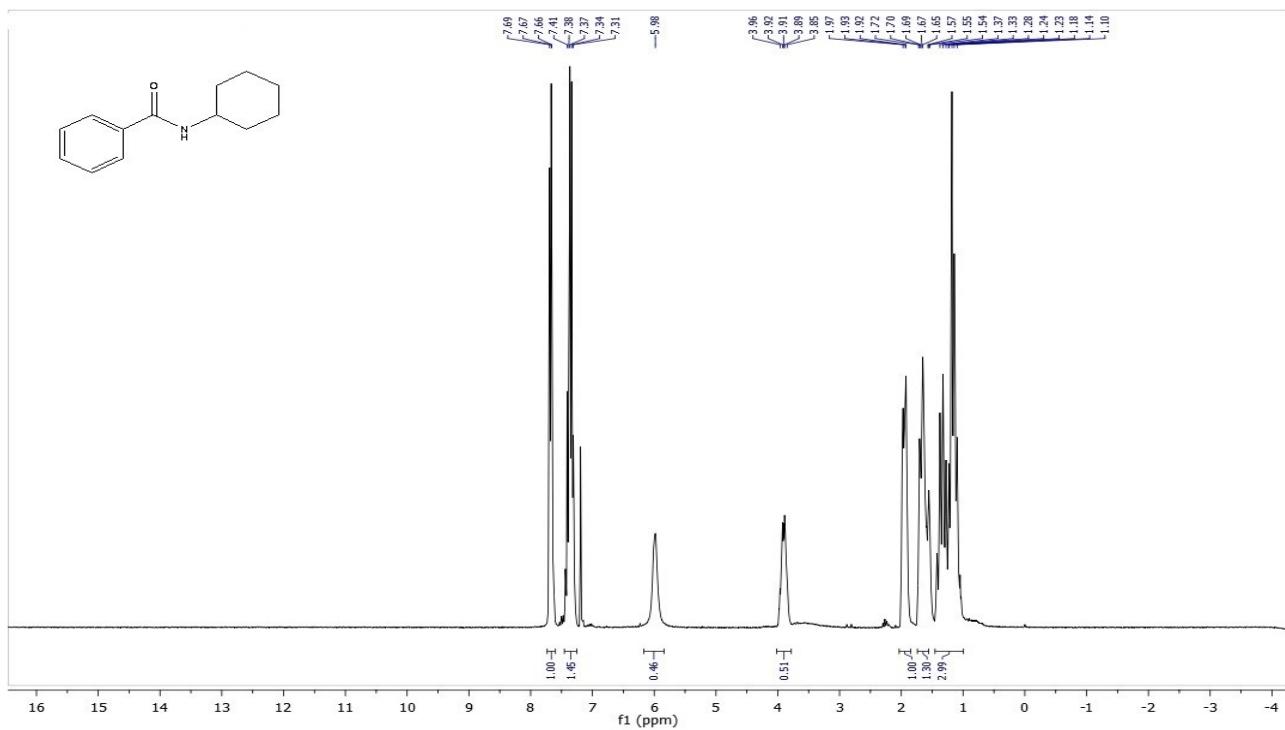
¹³C-NMR (62.9 MHz, CDCl₃) of *p*-tolyl benzoate (**2l**)



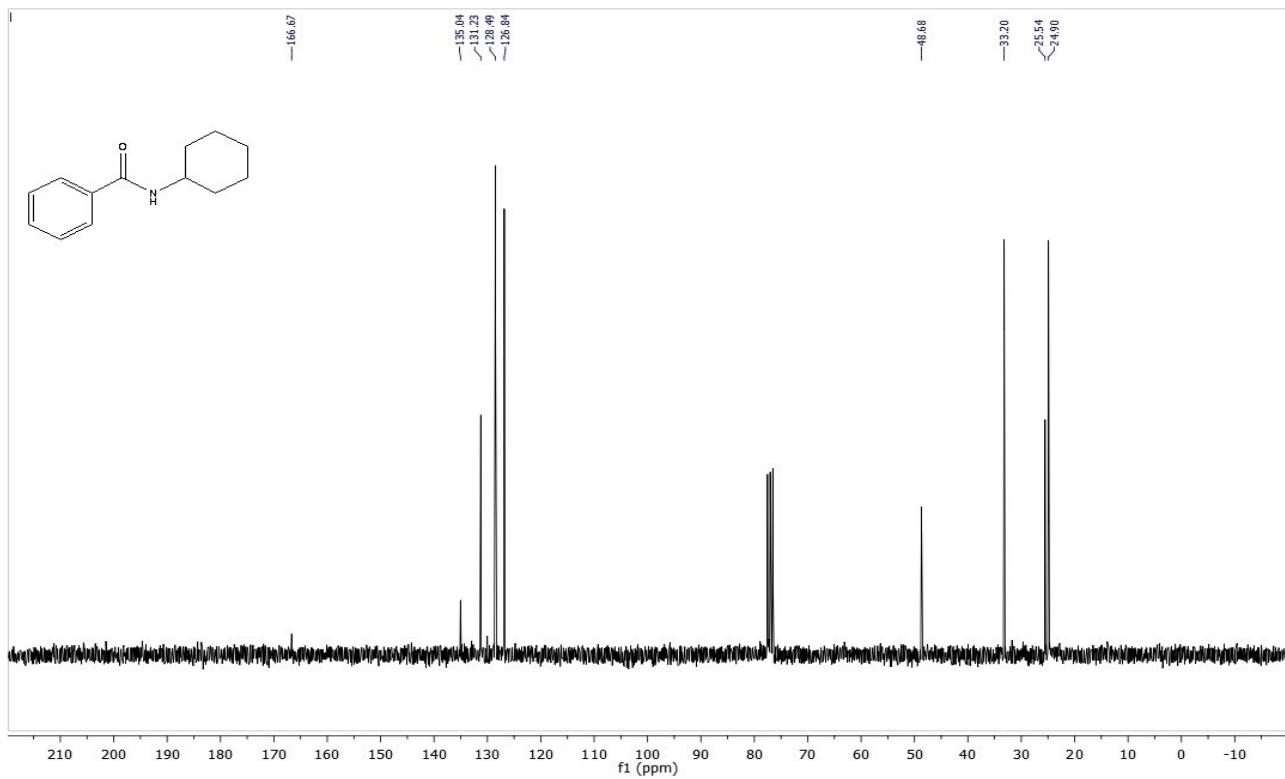
¹H-NMR (250 MHz, CDCl₃) of 2-cyclohexylethyl benzoate (**2c**)



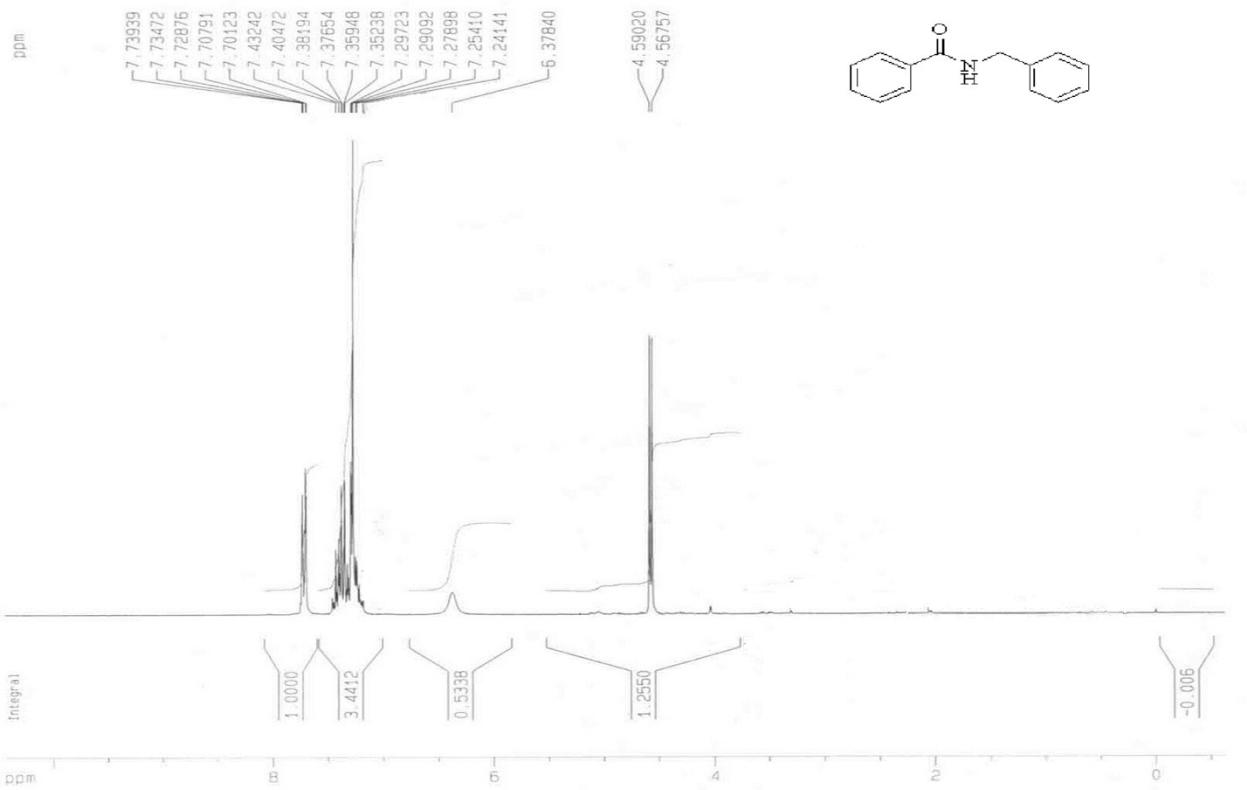
¹³C-NMR (62.9 MHz, CDCl₃) of 2-cyclohexylethyl benzoate (**2c**)



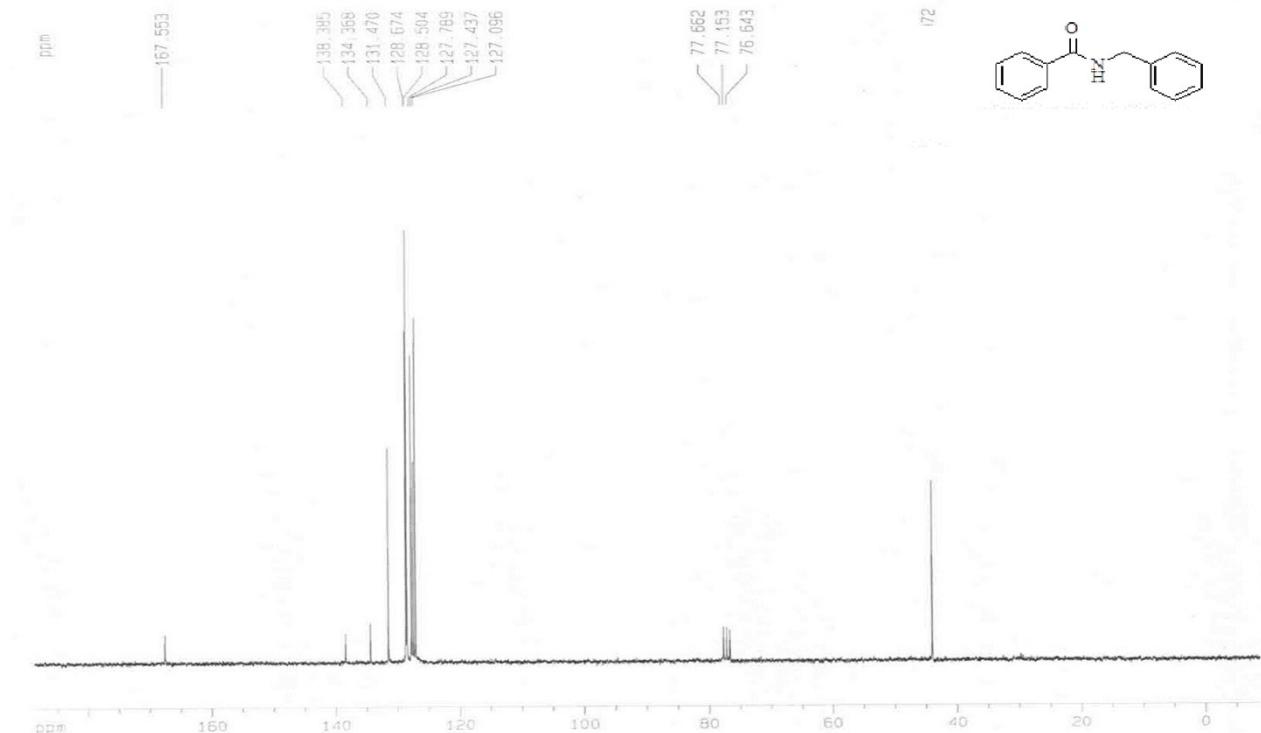
¹H-NMR (250 MHz, CDCl₃) of *N*-cyclohexyl benzamide (**4b**)



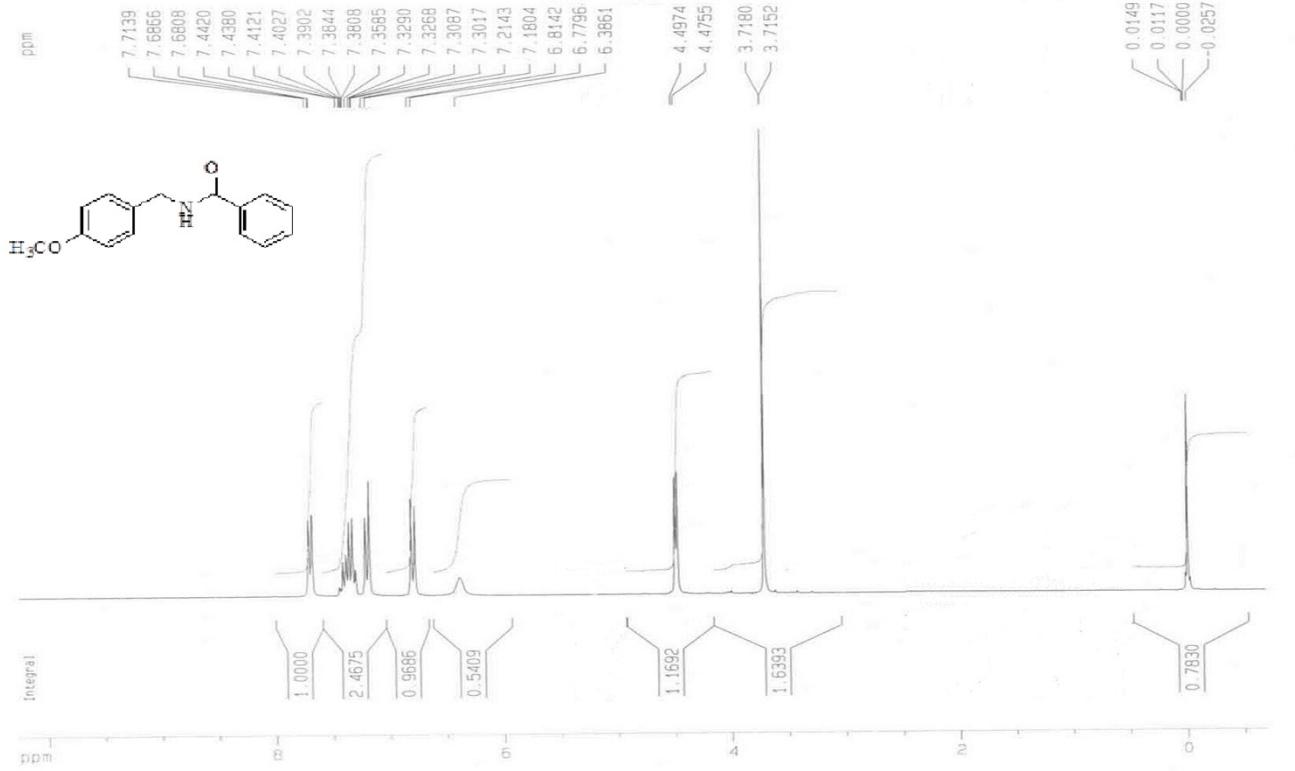
¹³C-NMR (62.9 MHz, CDCl₃) of *N*-cyclohexyl benzamide (**4b**)



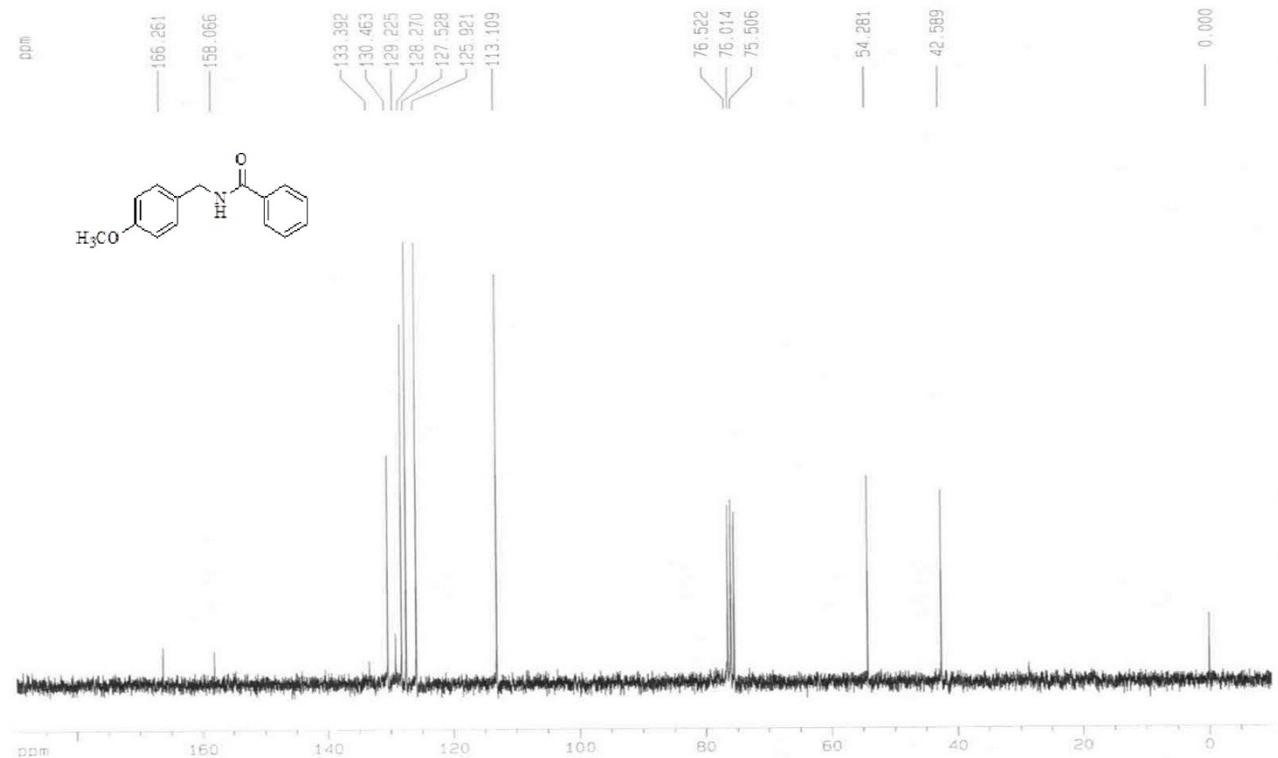
¹H-NMR (250 MHz, CDCl₃) of *N*-Benzylbenzamide (**4d**).



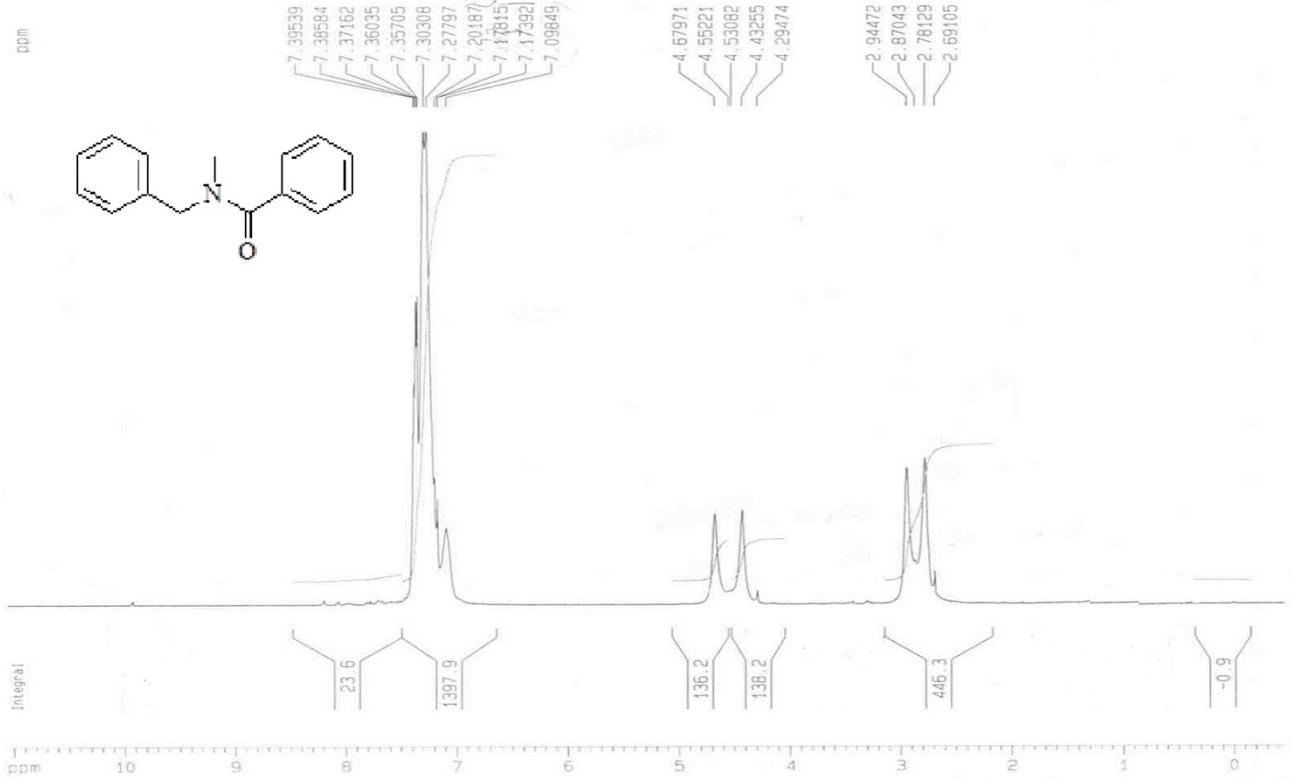
¹³C-NMR (62.9 MHz, CDCl₃) of *N*-Benzylbenzamide (**4d**).



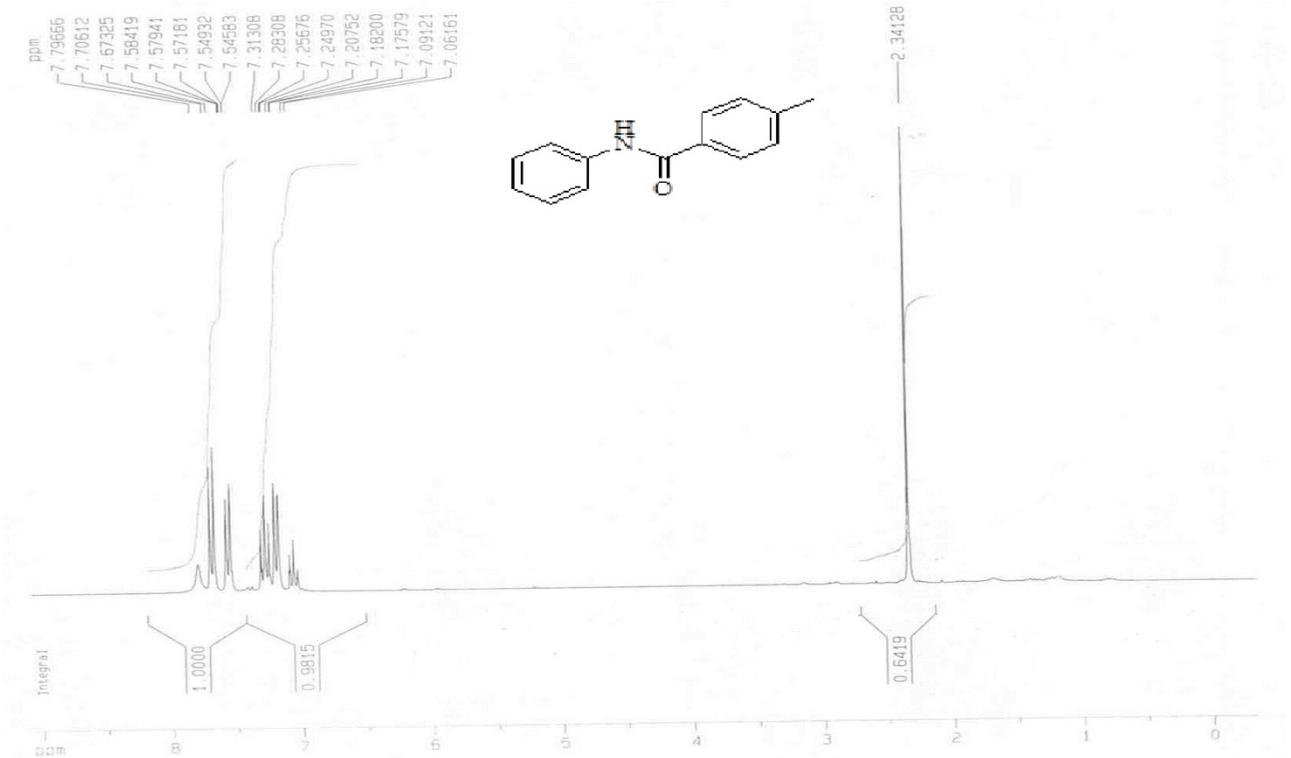
¹H-NMR (250 MHz, CDCl₃) of *N*-(4-methoxybenzyl) benzamide (**4j**)



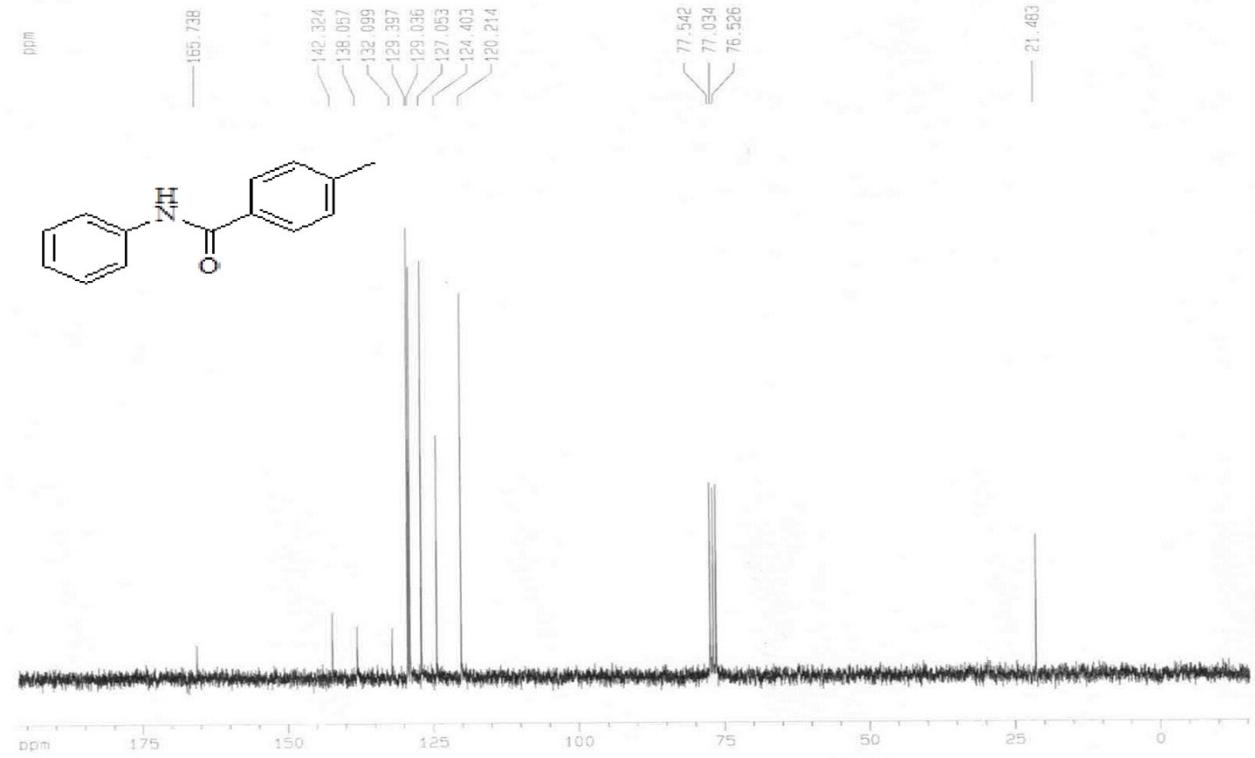
¹³C-NMR (250 MHz, CDCl₃) of *N*-(4-methoxybenzyl) benzamide (**4j**)



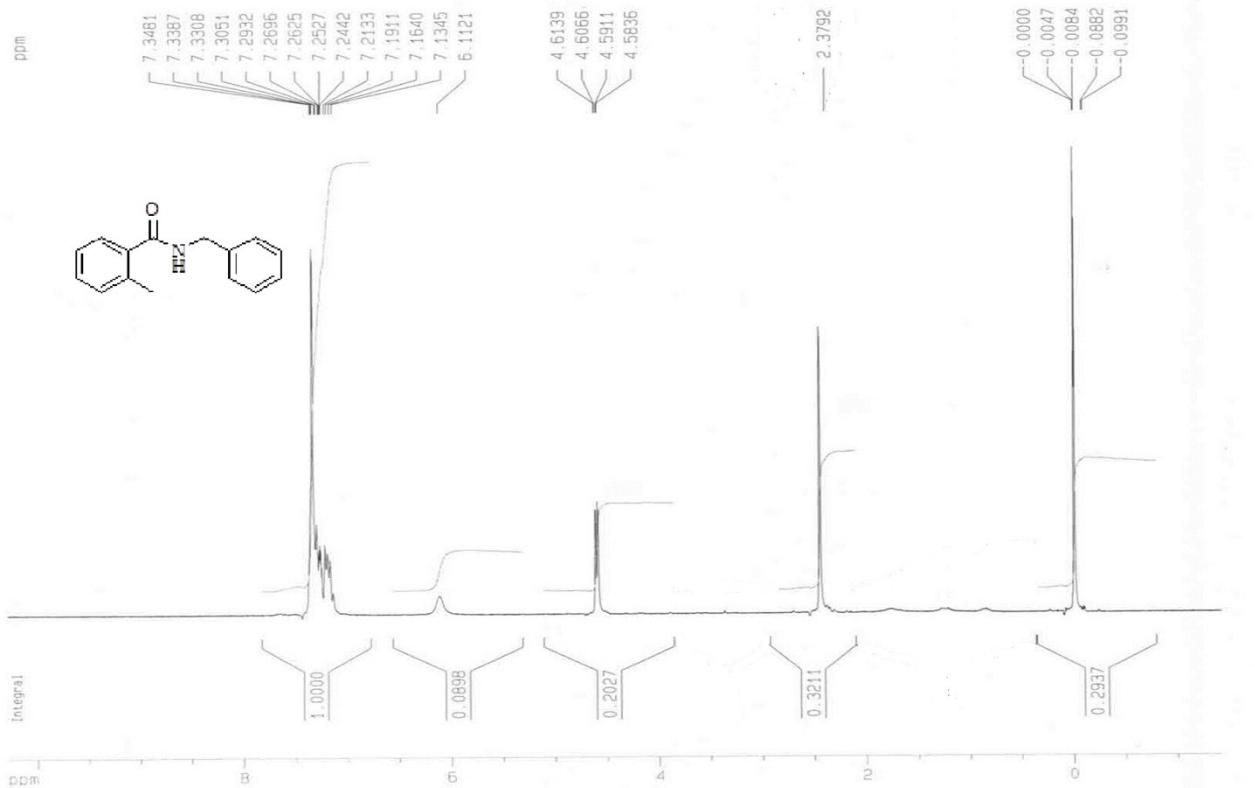
¹H-NMR (250 MHz, CDCl₃) of *N*-Benzyl-*N*-methylbenzamide (4e)



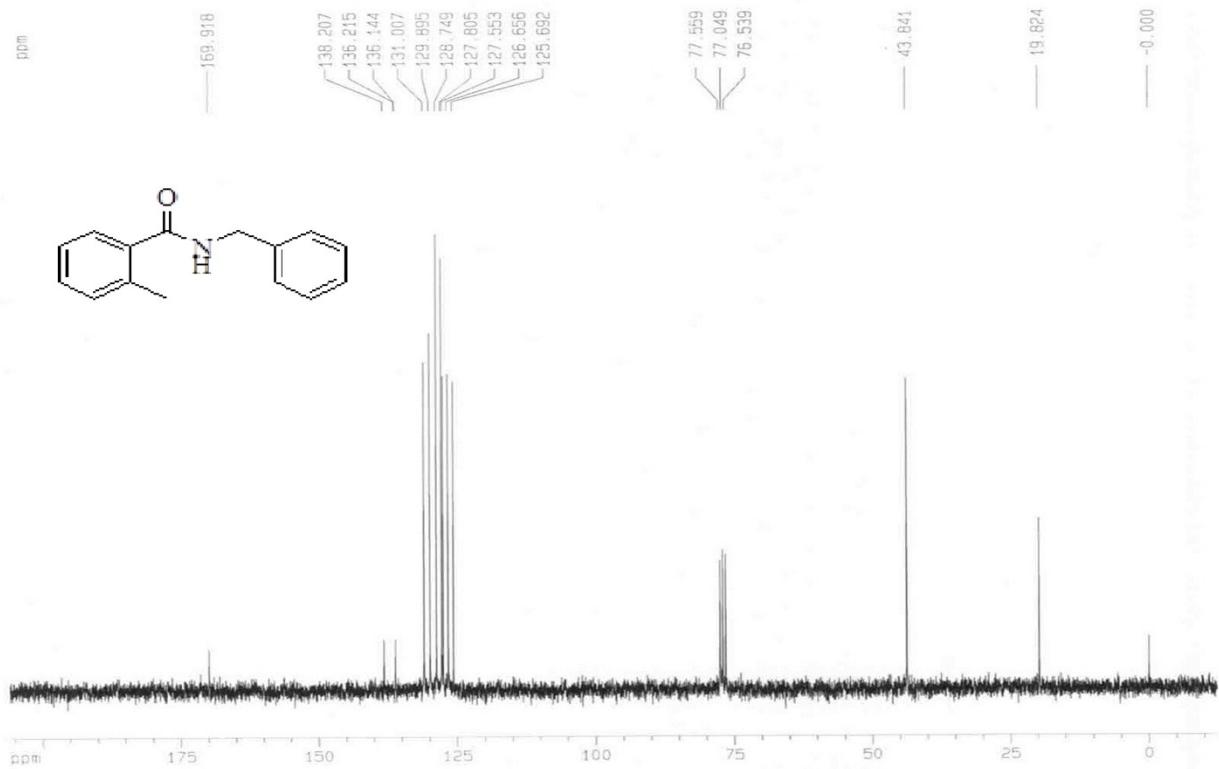
¹H-NMR (250 MHz, CDCl₃) of *N*-Phenyl-4-methylbenzamide (4l)



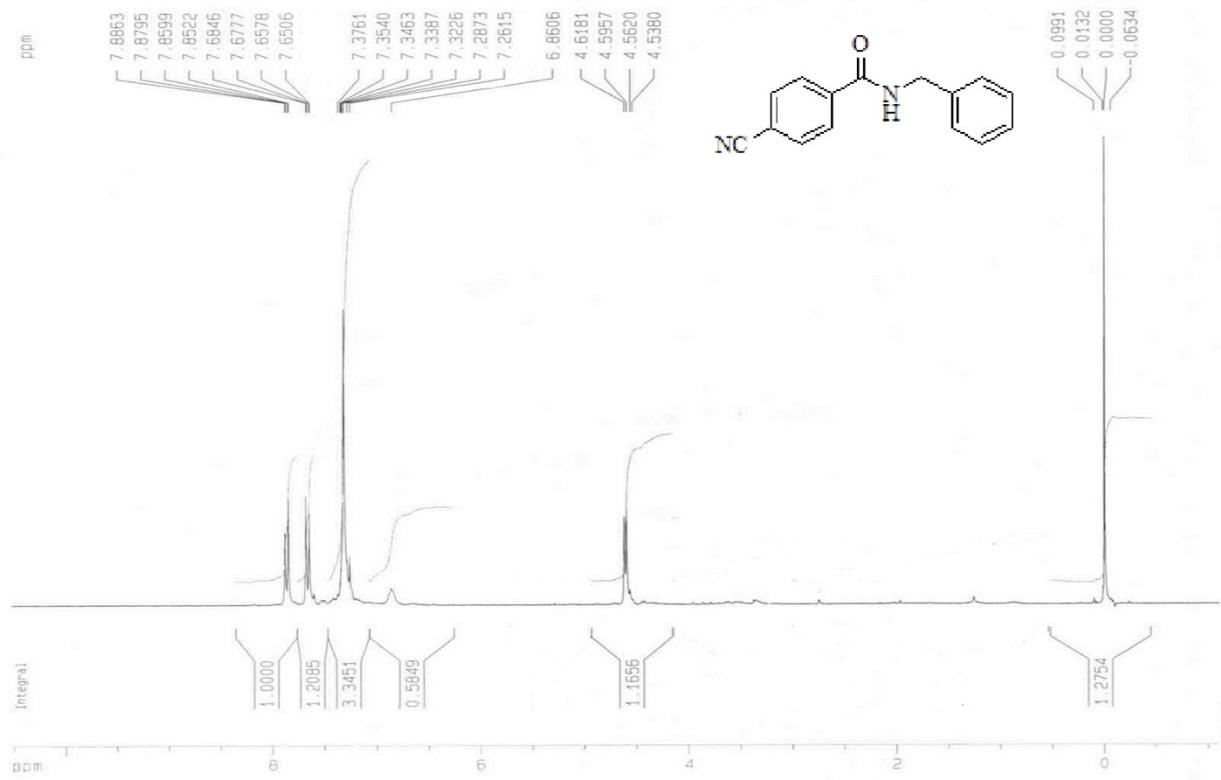
¹³C-NMR (250 MHz, CDCl₃) of *N*-phenyl-4-methylbenzamide (4l)



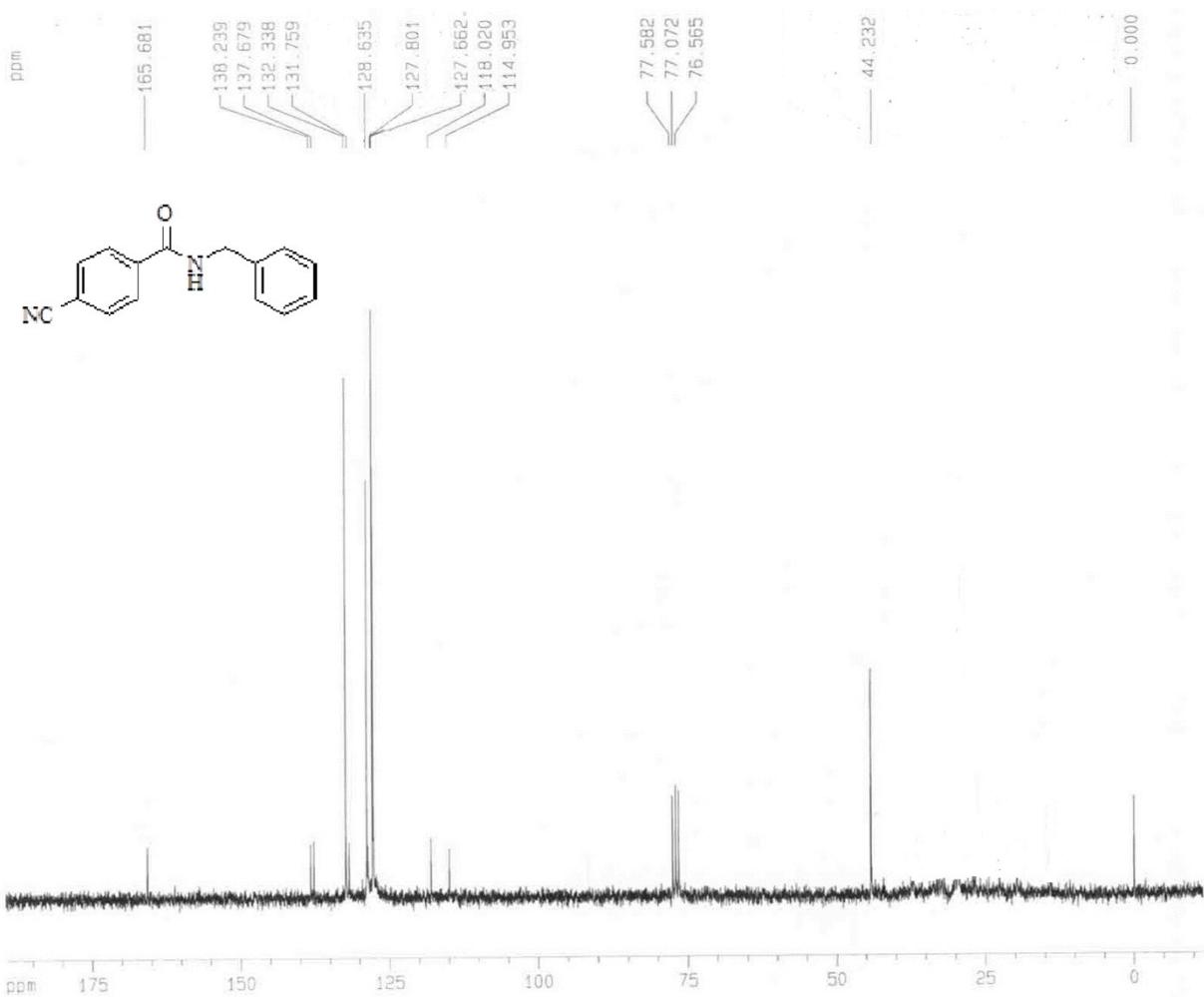
¹H-NMR (250 MHz, CDCl₃) of *N*-benzyl-2-methylbenzamide (4g)



¹³C-NMR (250 MHz, CDCl₃) of *N*-benzyl-2-methylbenzamide (4g)



¹H-NMR (250 MHz, CDCl₃) of *N*-benzyl-4-cyanobenzamide (4h)



¹³C-NMR (250 MHz, CDCl₃) of *N*-benzyl-4-cyanobenzamide (4h)

