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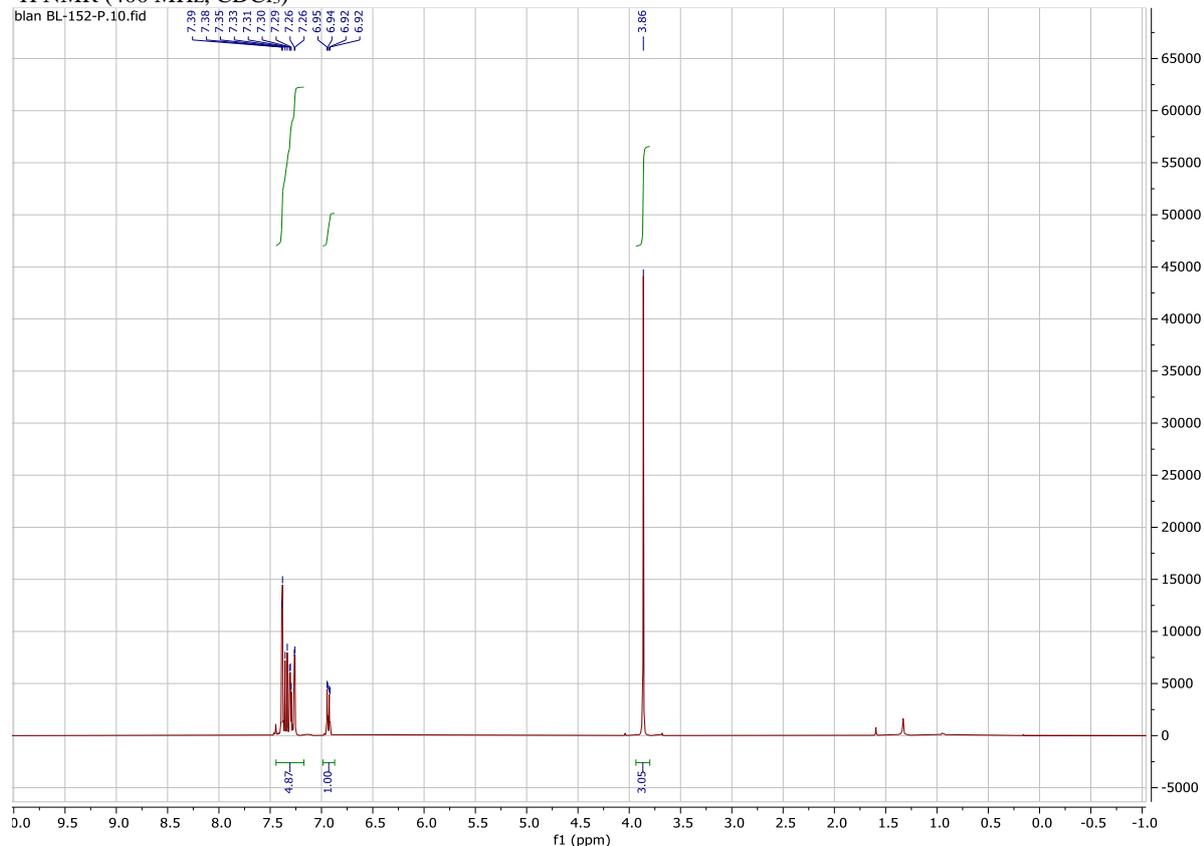
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Copy of IR Spectra	S64-S87

# Copy of NMR Spectra

## 3-(2-Bromo-4-methoxyphenyl)thiophene (1b)

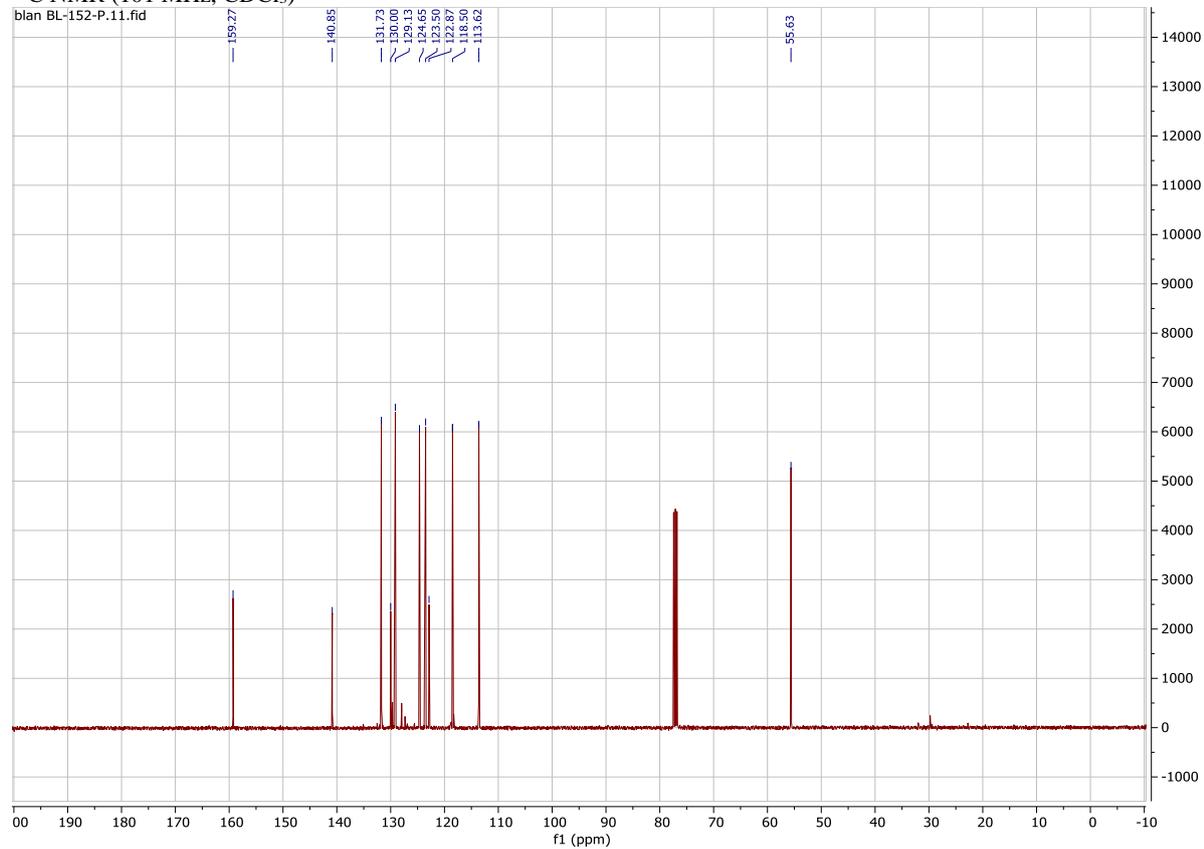
<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

blan BL-152-P.10.fid



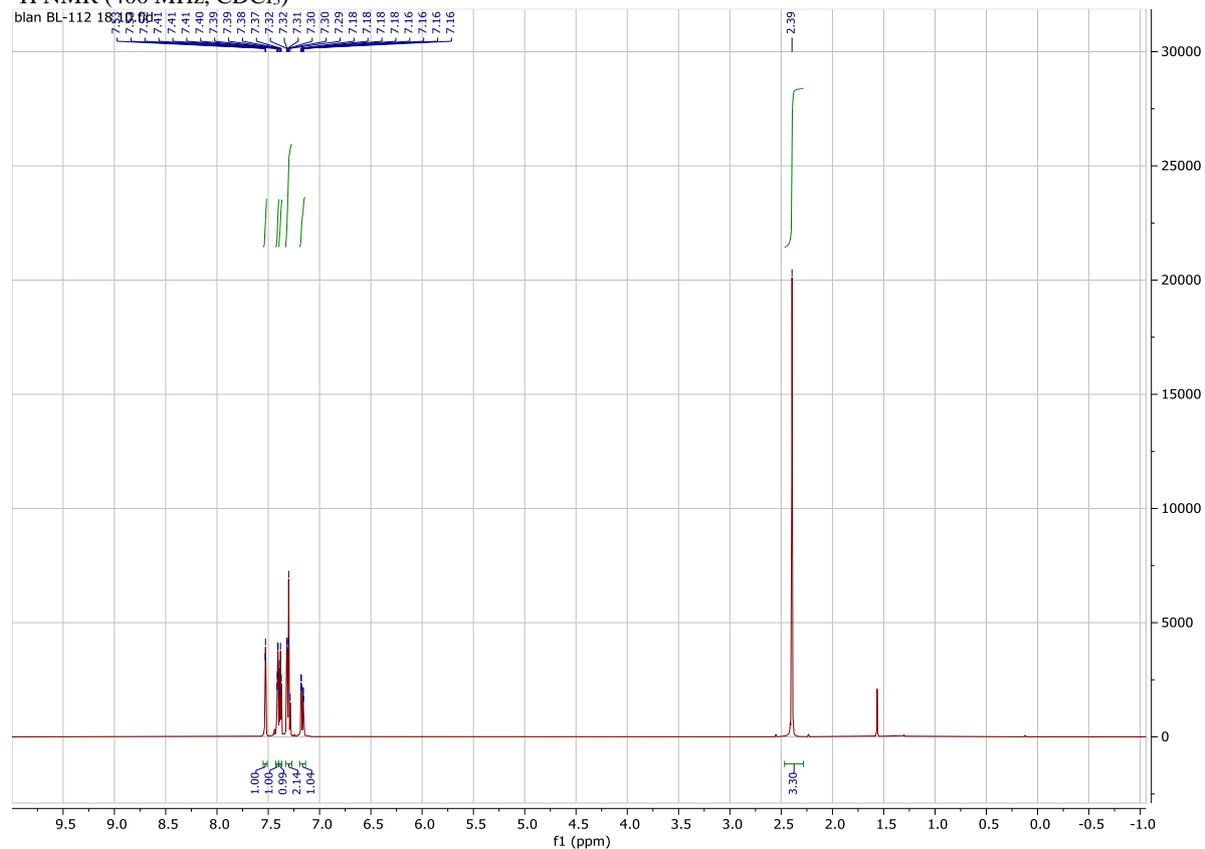
<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

blan BL-152-P.11.fid

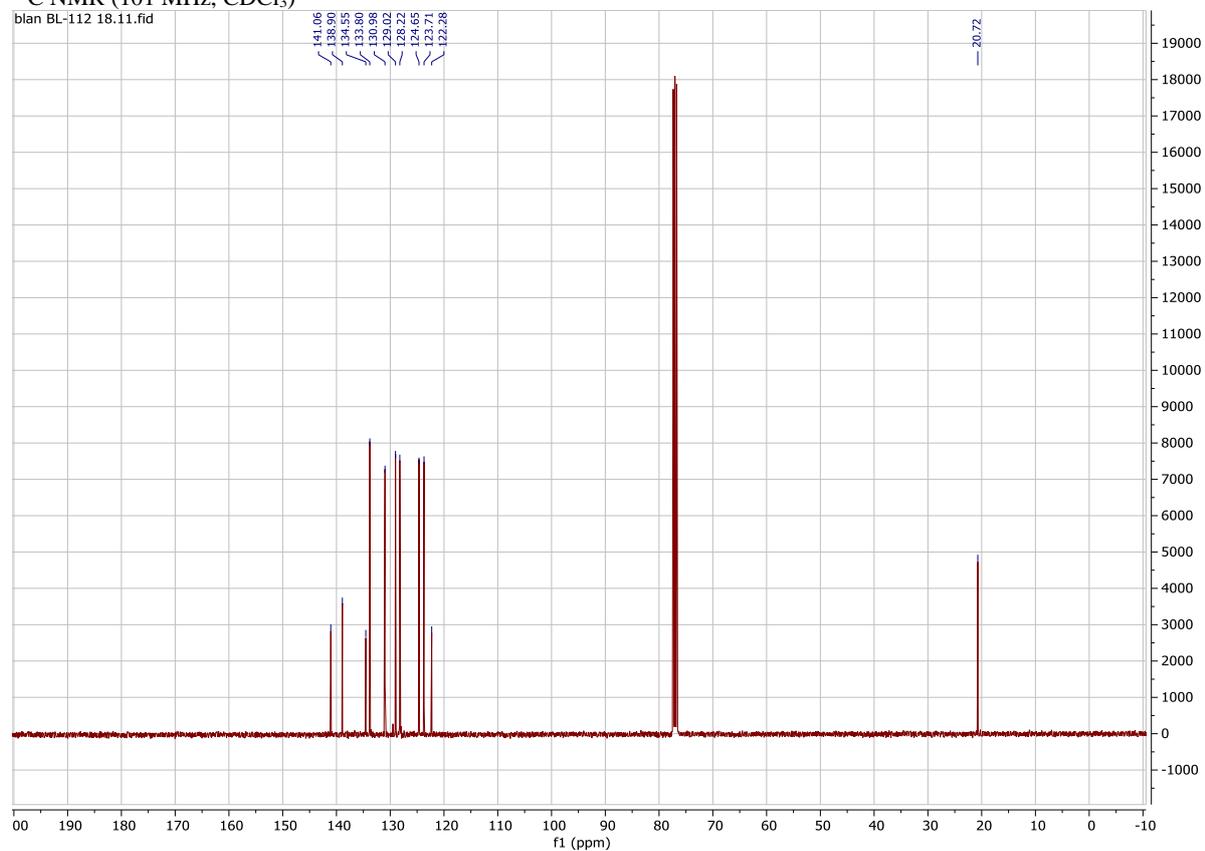


### 3-(2-Bromo-4-methylphenyl)thiophene (1c)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

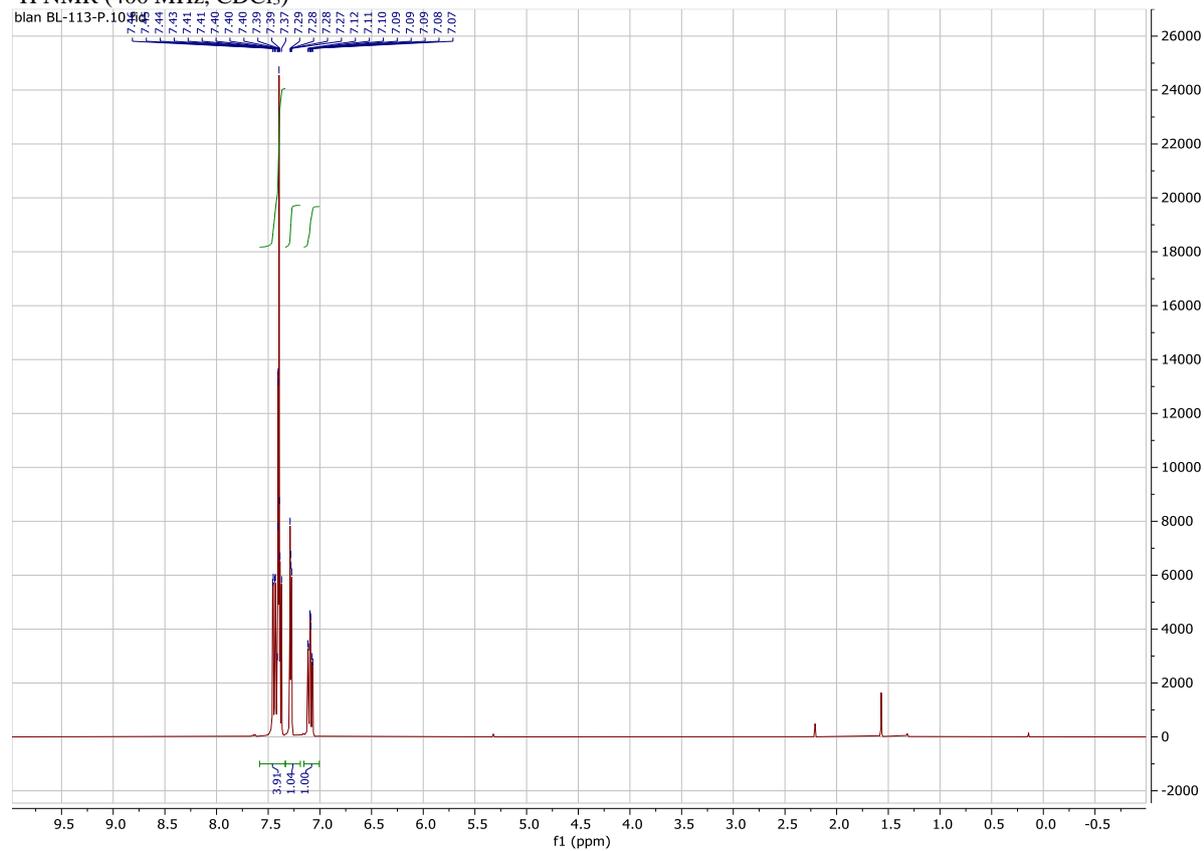


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

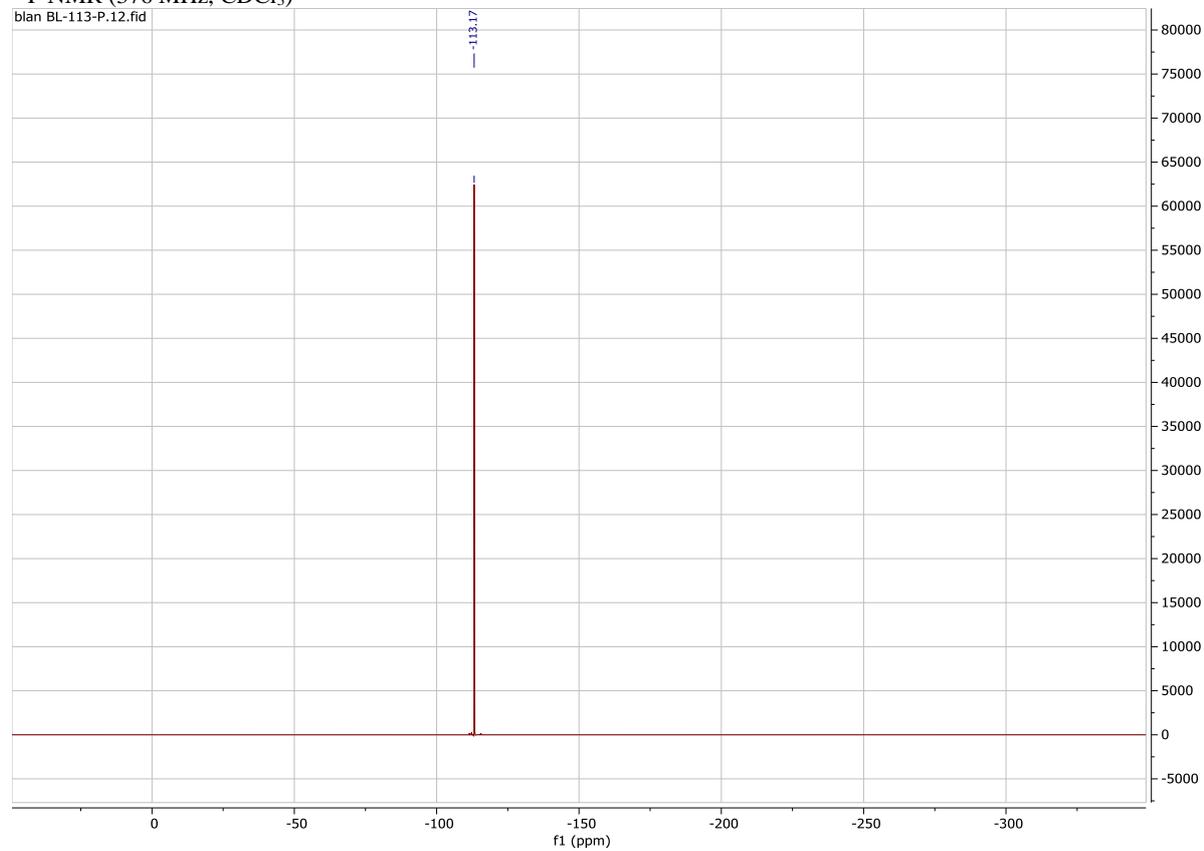


### 3-(2-Bromo-4-fluorophenyl)thiophene (1d)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

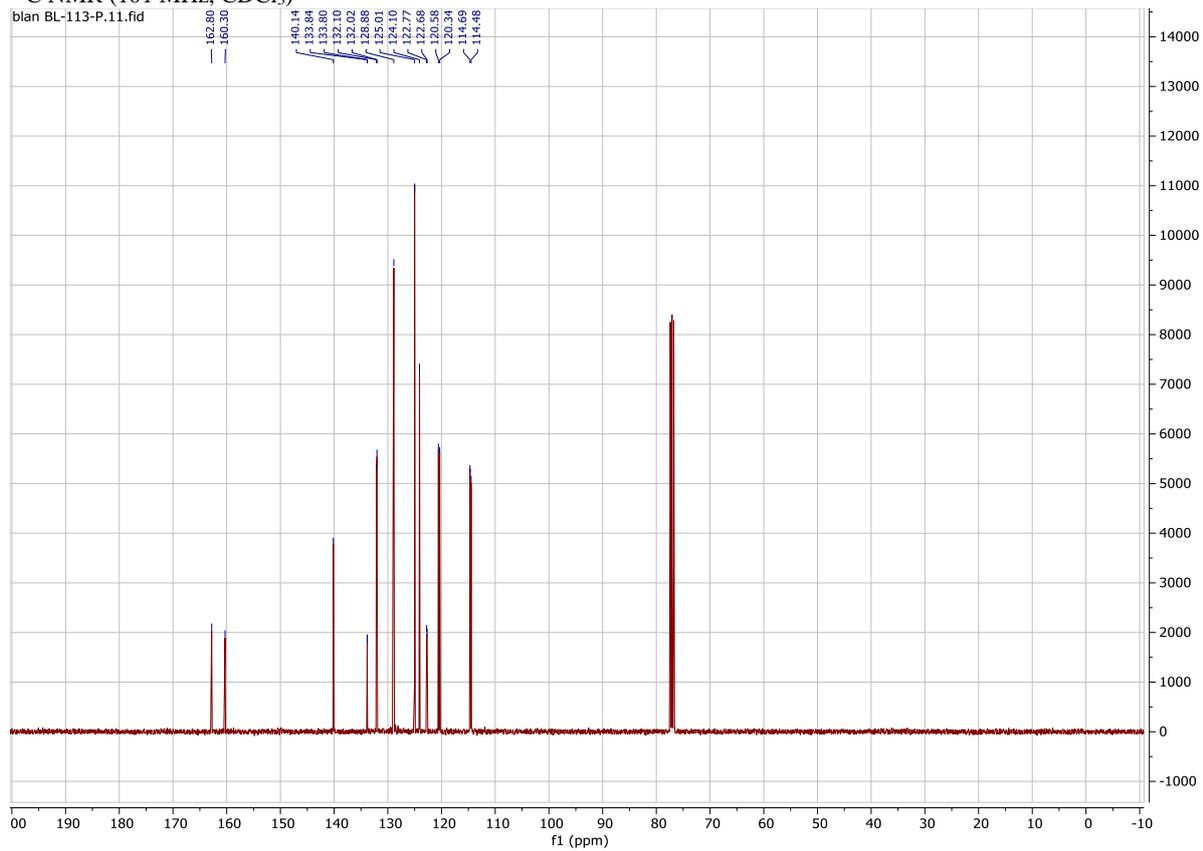


<sup>19</sup>F NMR (376 MHz, CDCl<sub>3</sub>)



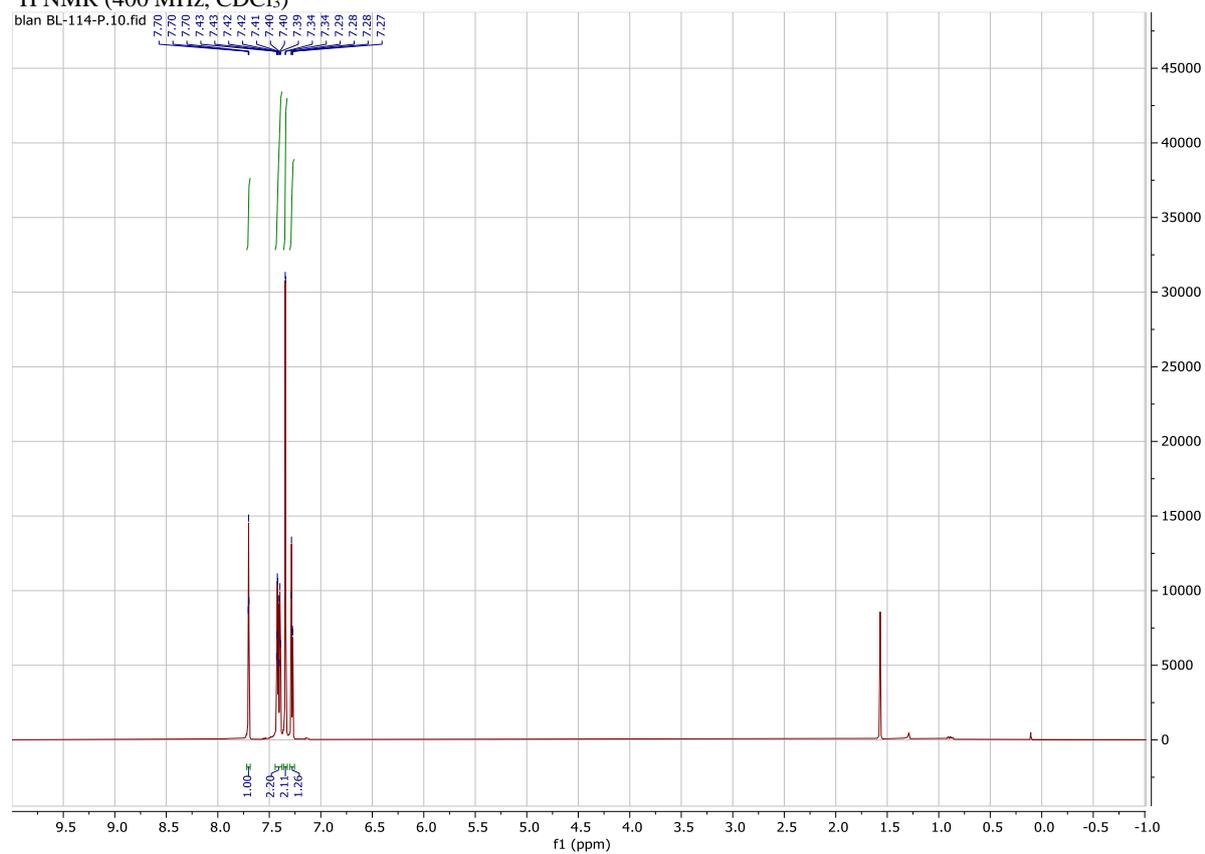
<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

blan BL-113-P.11.fid

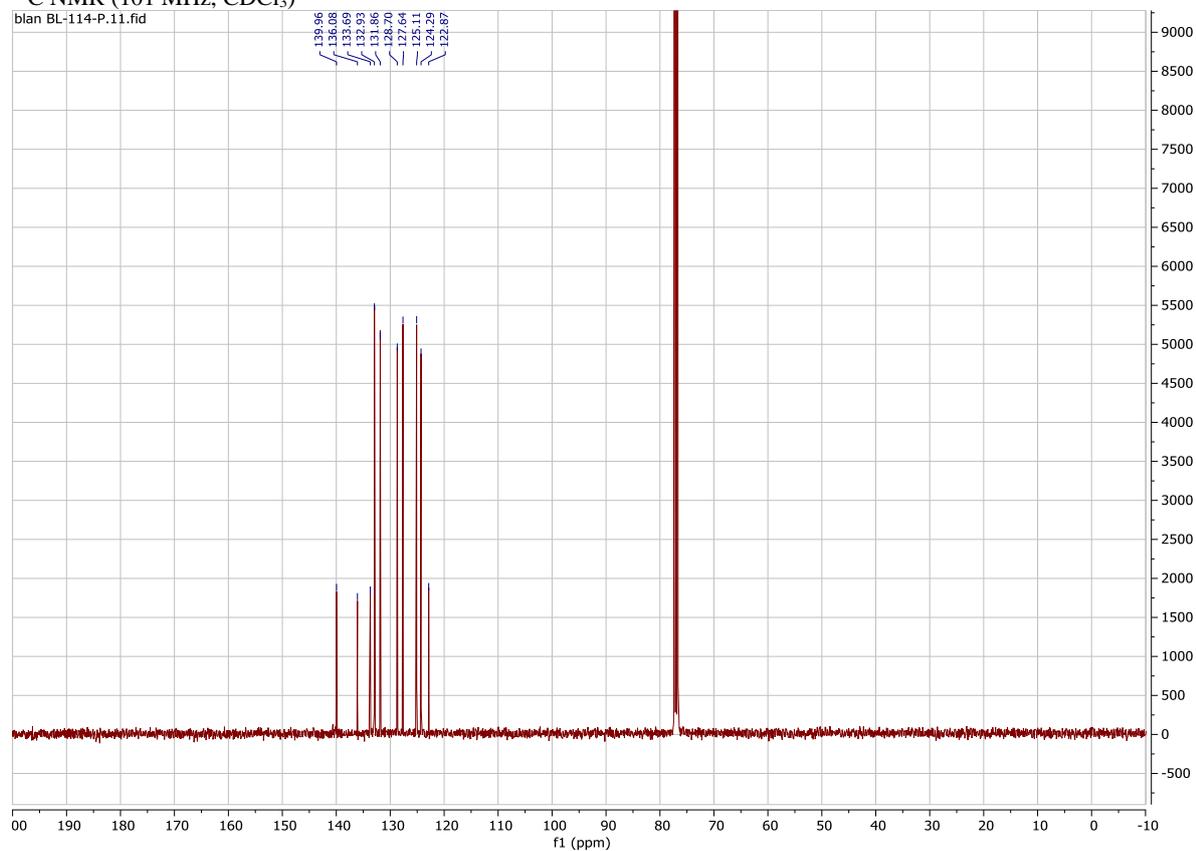


### 3-(2-Bromo-4-chlorophenyl)thiophene (1e)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

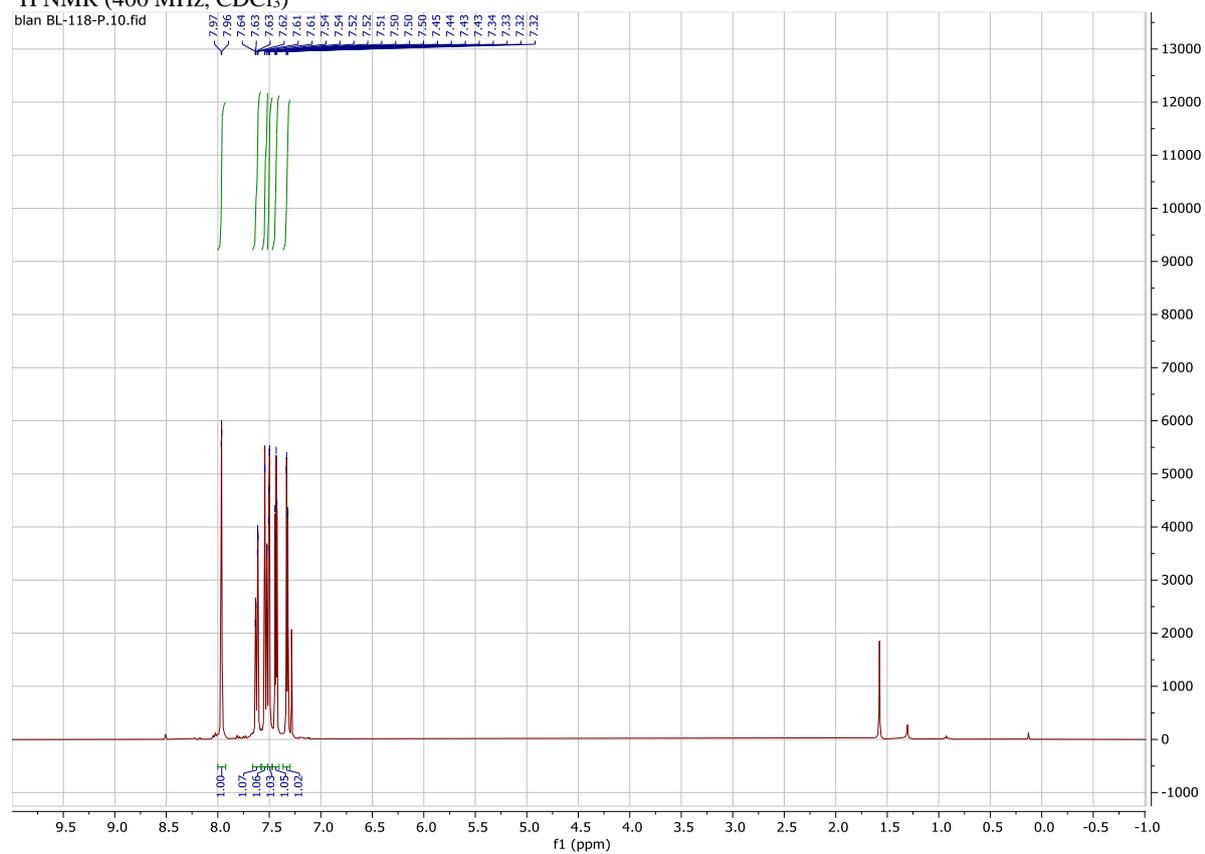


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

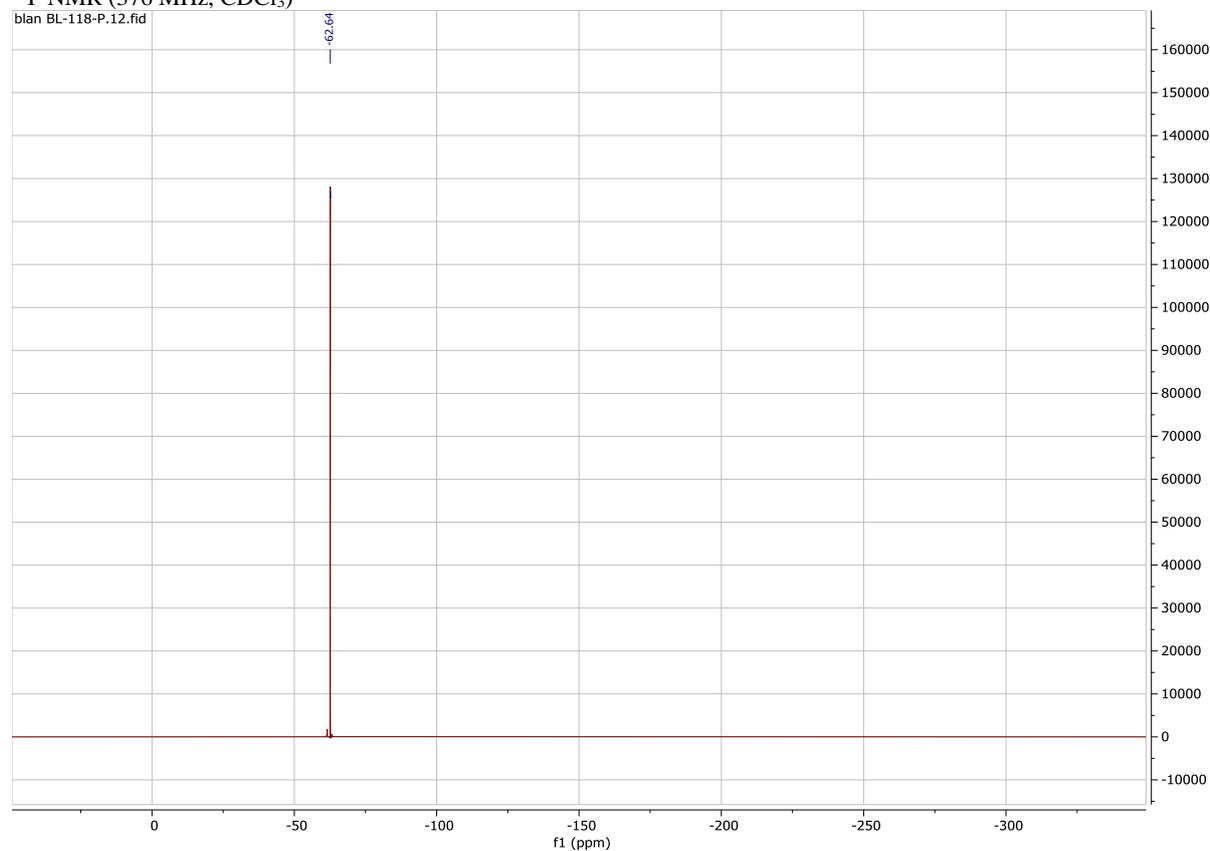


### 3-(2-Bromo-4-(trifluoromethyl)phenyl)thiophene (1f)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

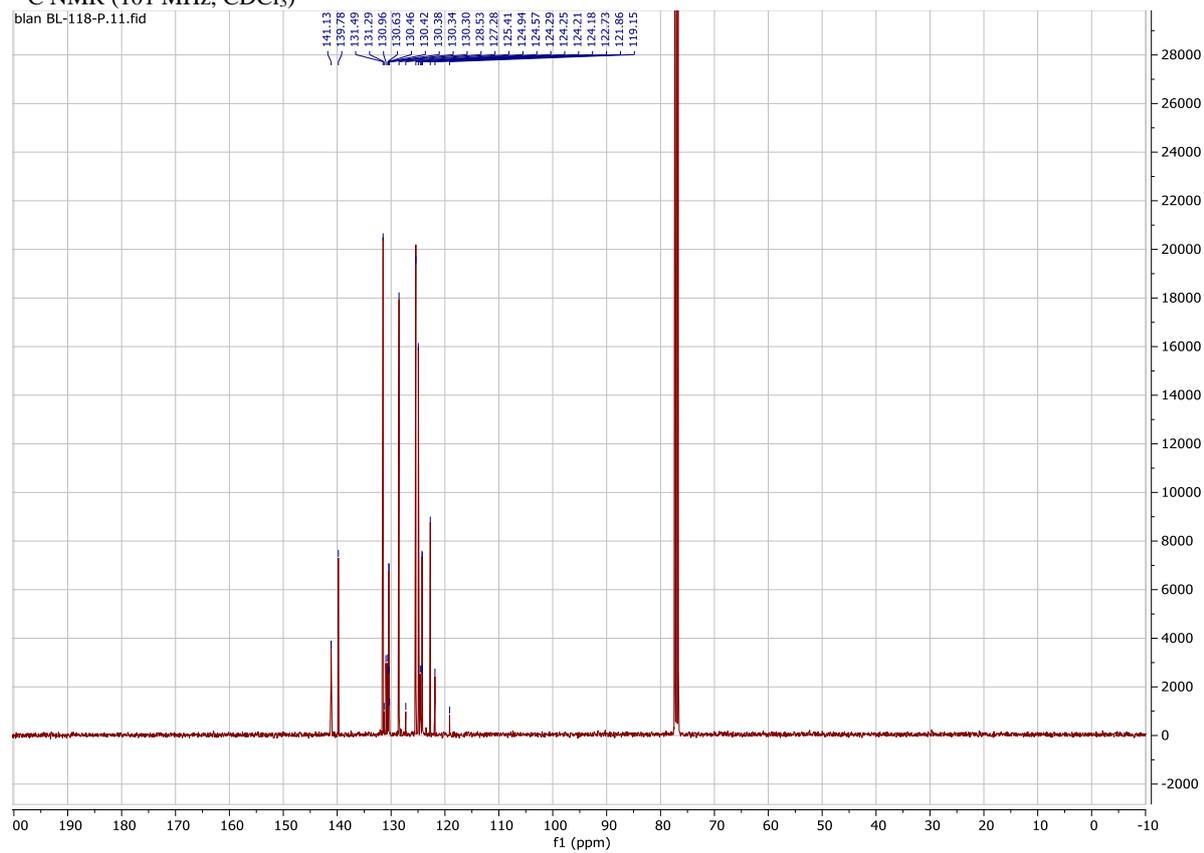


<sup>19</sup>F NMR (376 MHz, CDCl<sub>3</sub>)



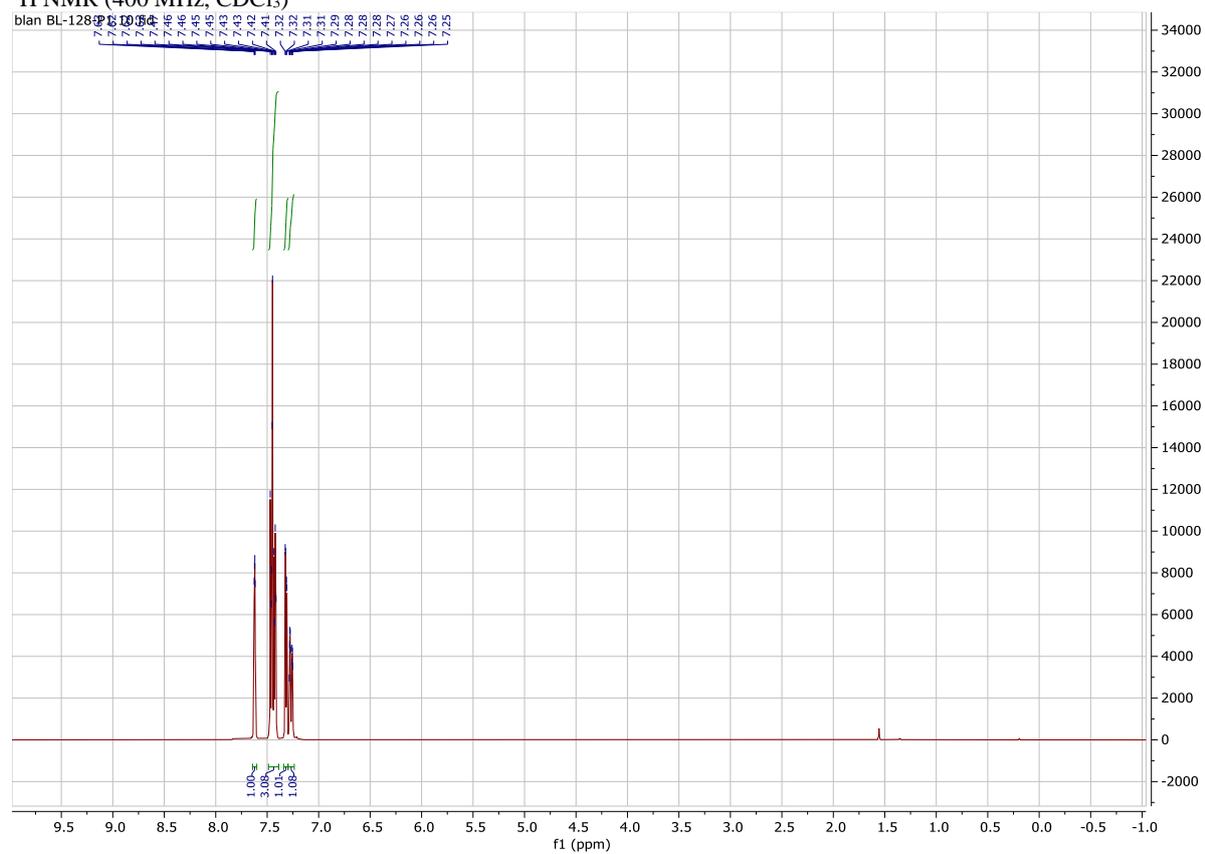
<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

blan BL-118-P.11.fid

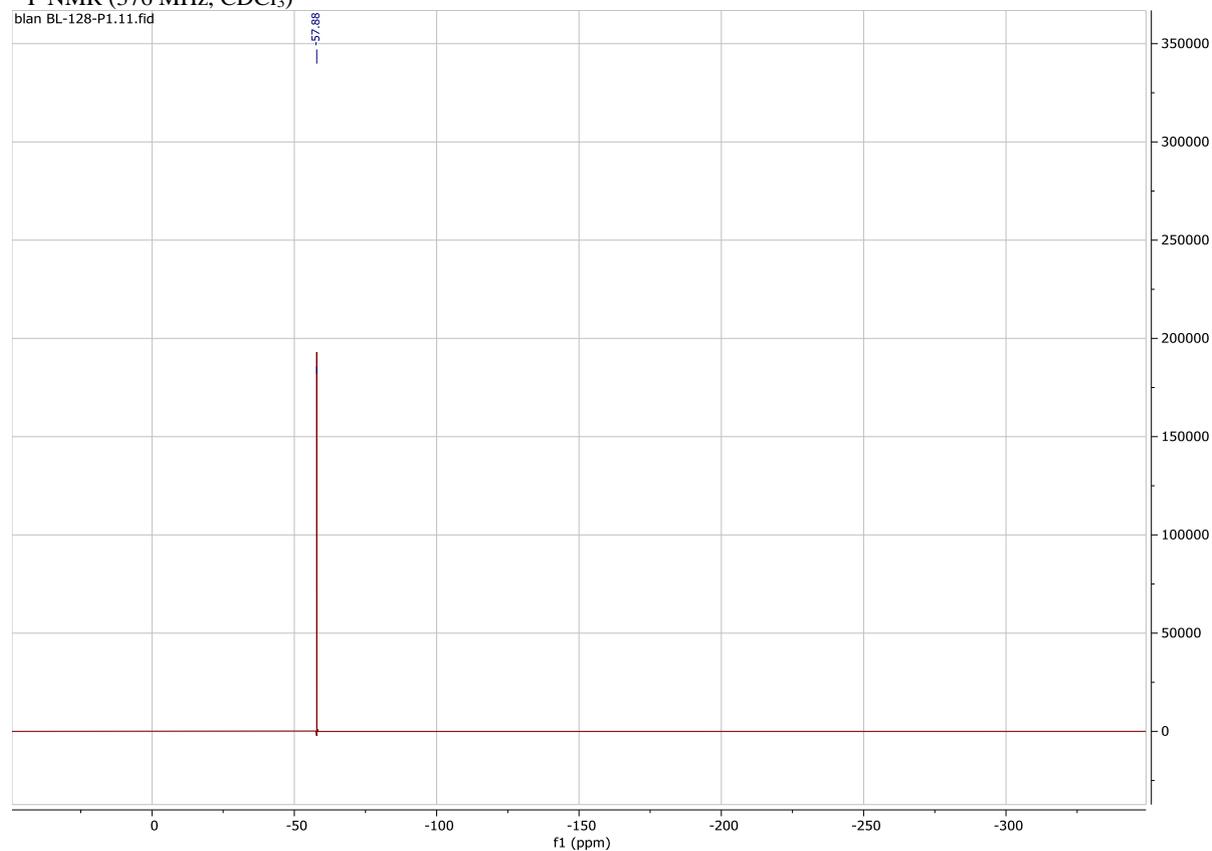


### 3-(2-Bromo-4-(trifluoromethoxy)phenyl)thiophene (1g)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

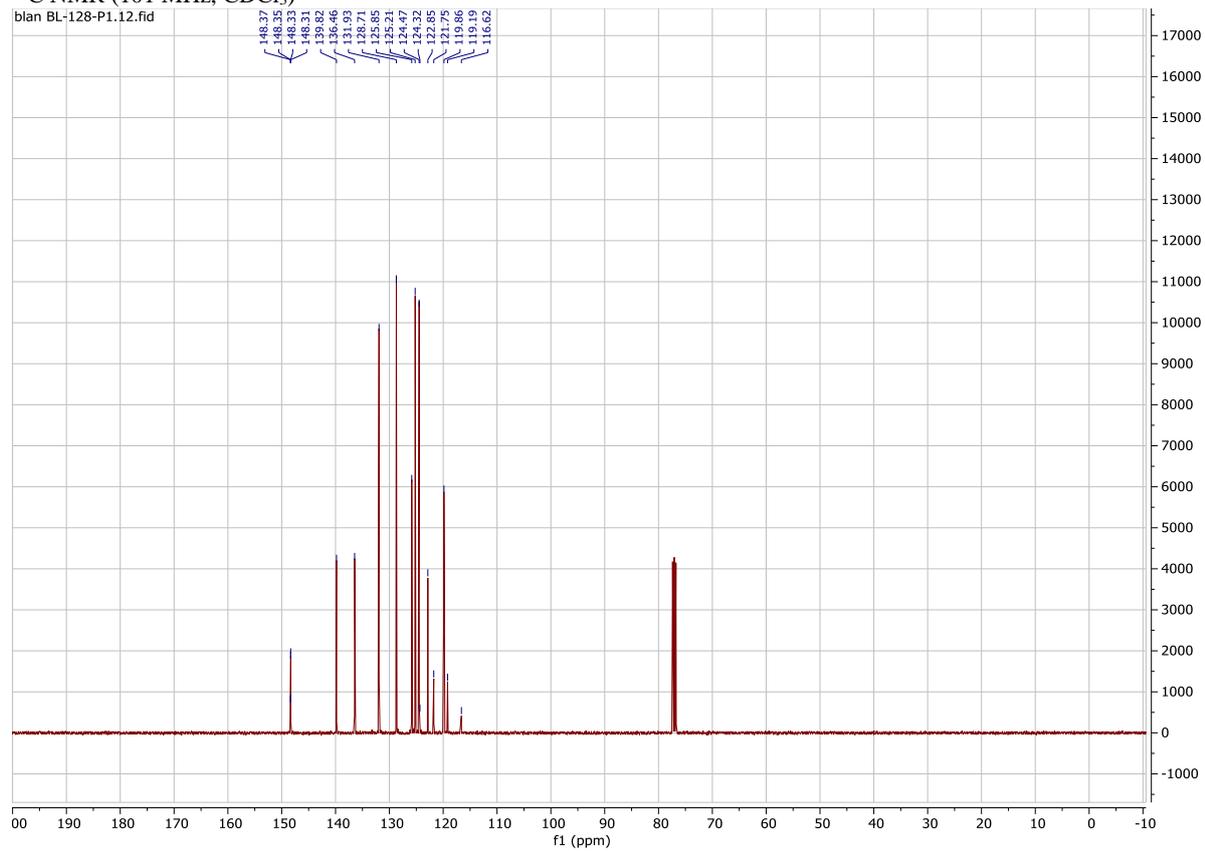


<sup>19</sup>F NMR (376 MHz, CDCl<sub>3</sub>)



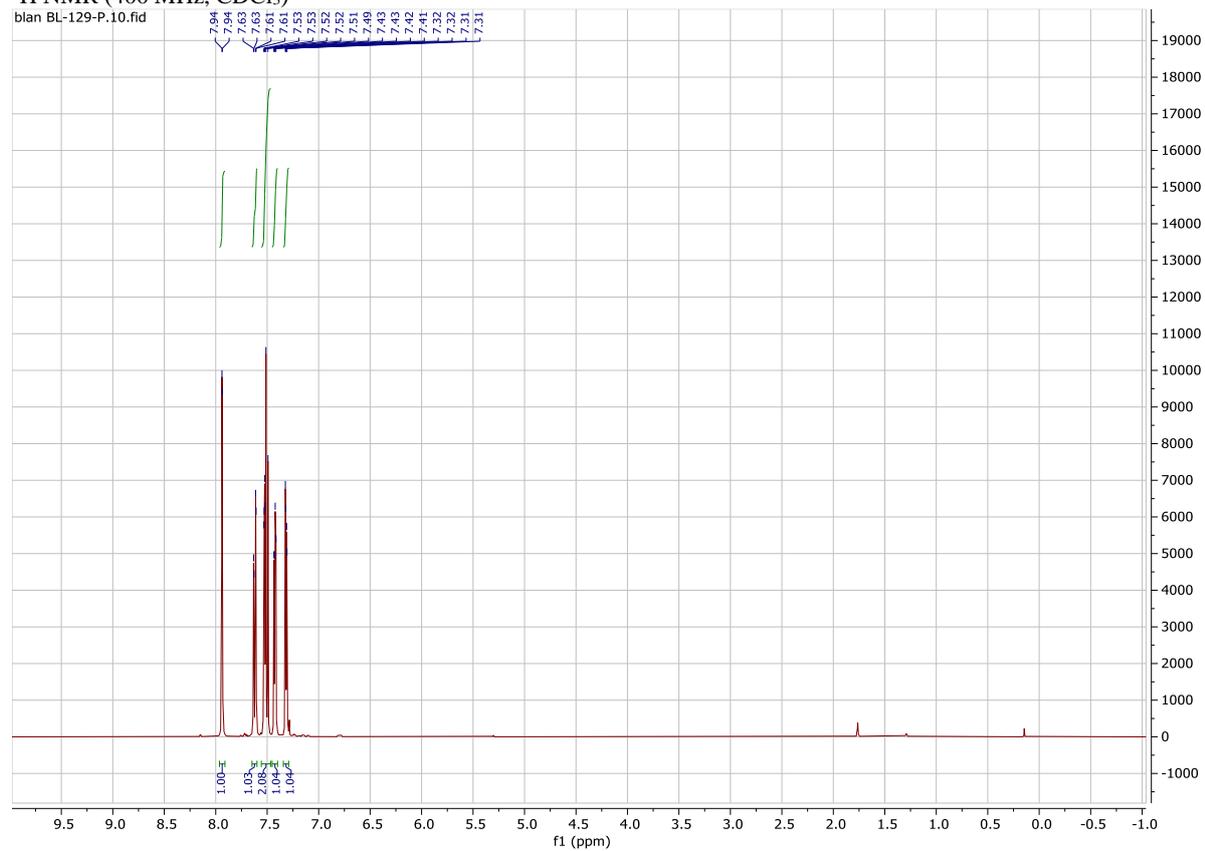
<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

blan BL-128-P1.12.fid

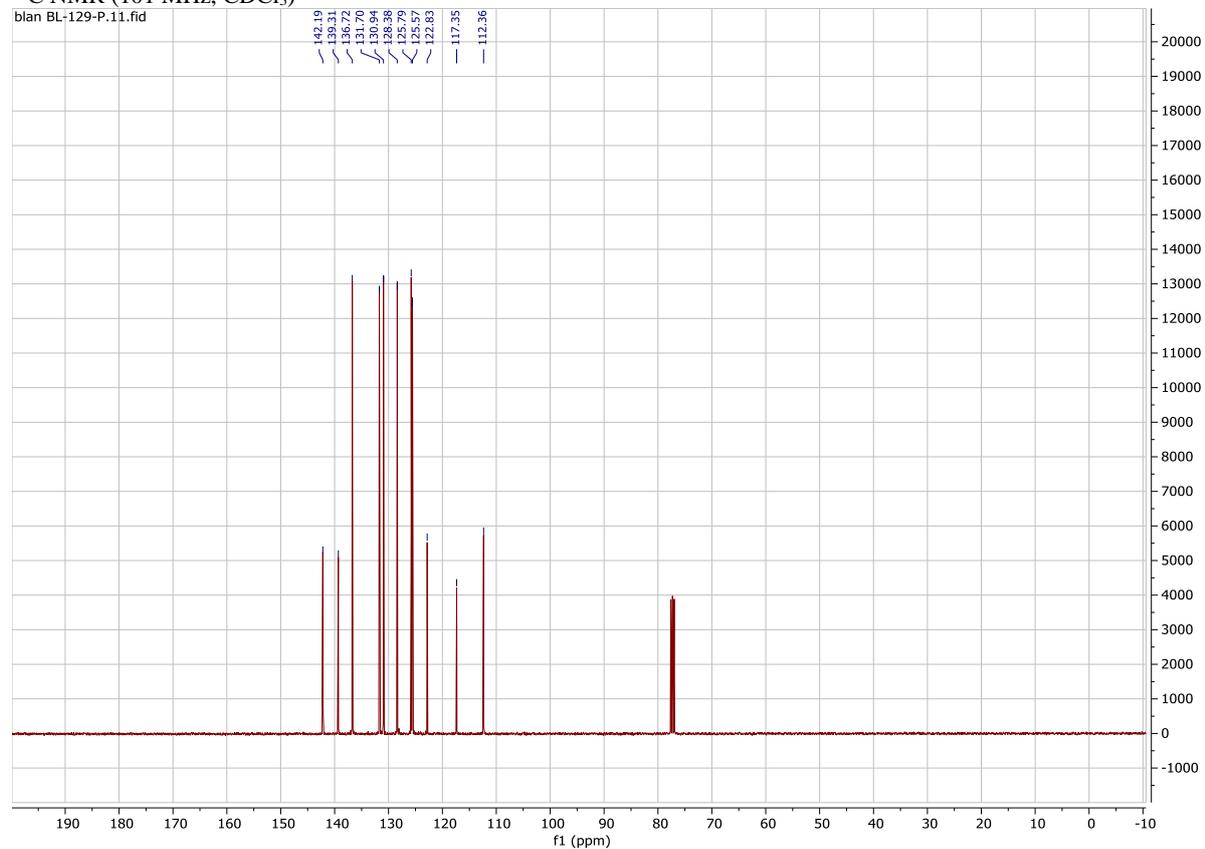


### 3-Bromo-4-(thiophen-3-yl)benzotrile (1h)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

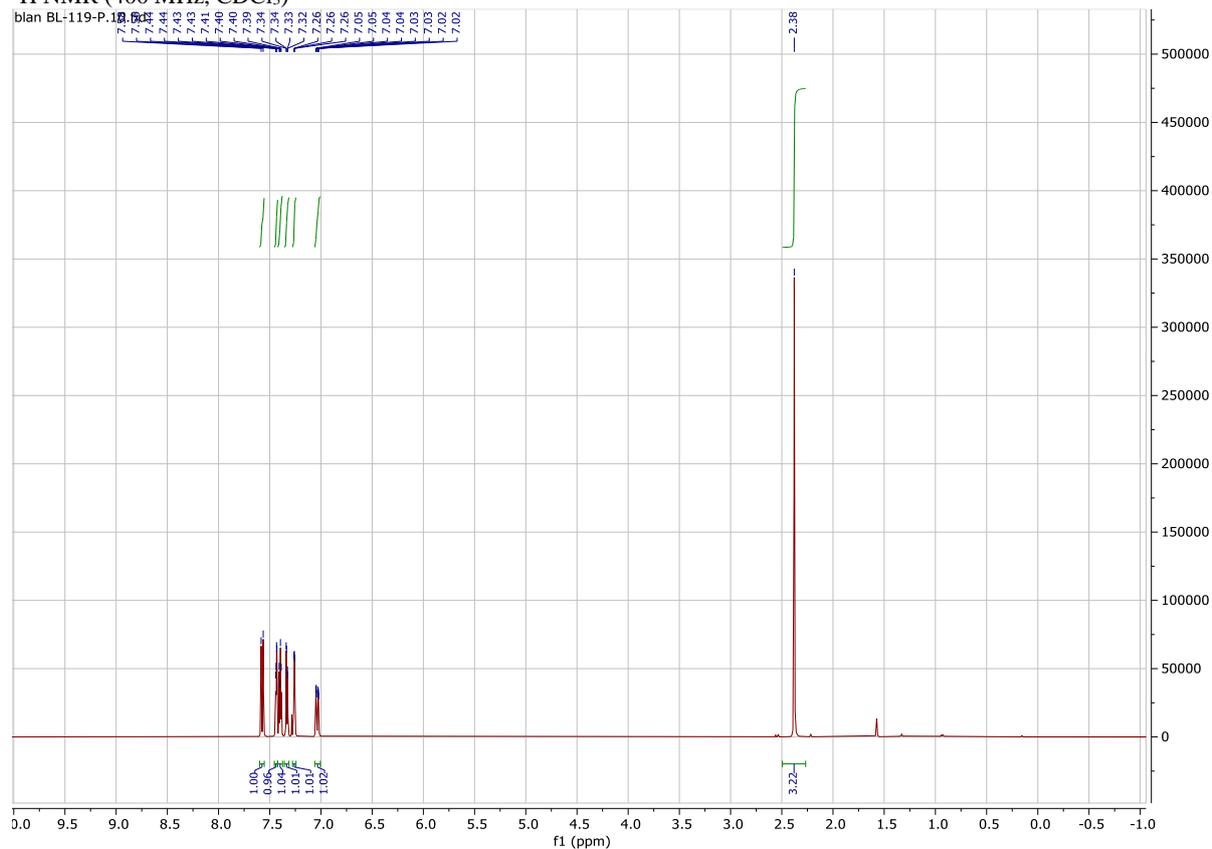


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

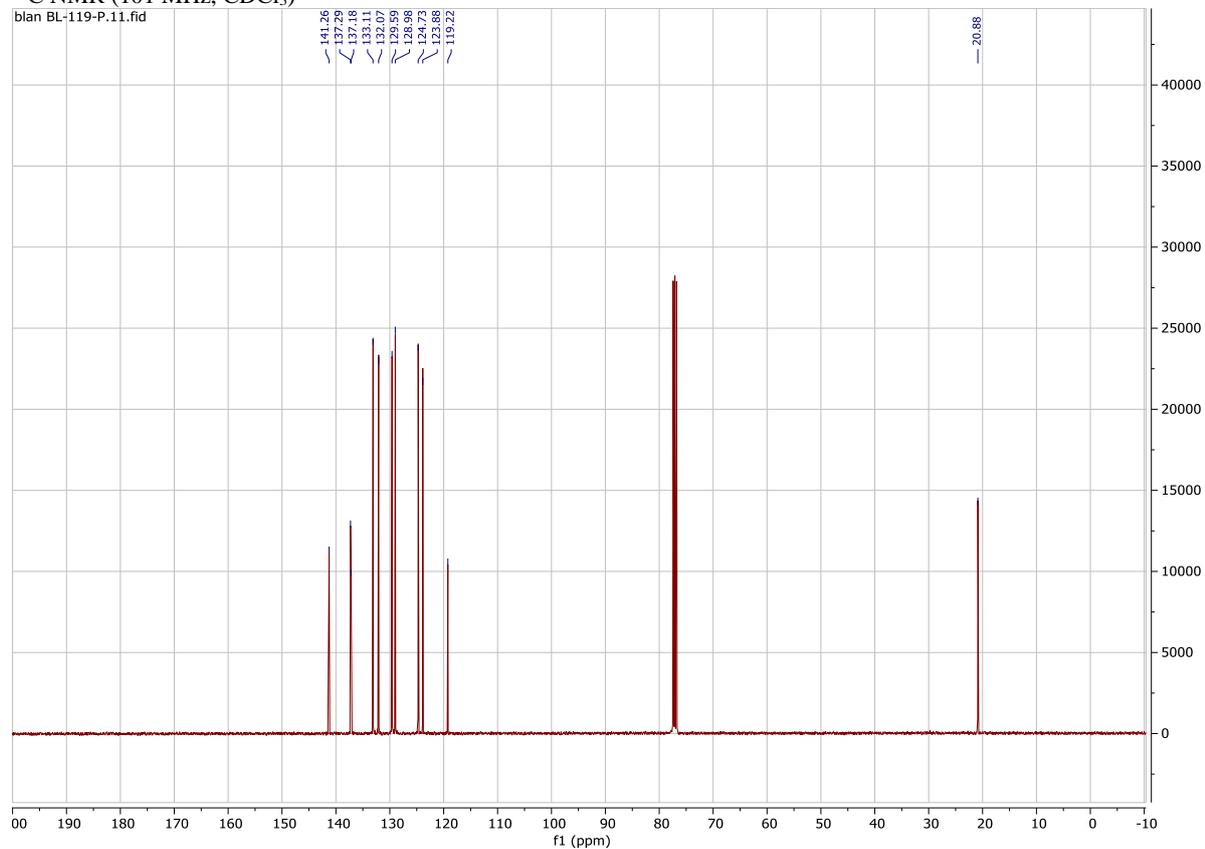


### 3-(2-Bromo-5-methylphenyl)thiophene (1i)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)



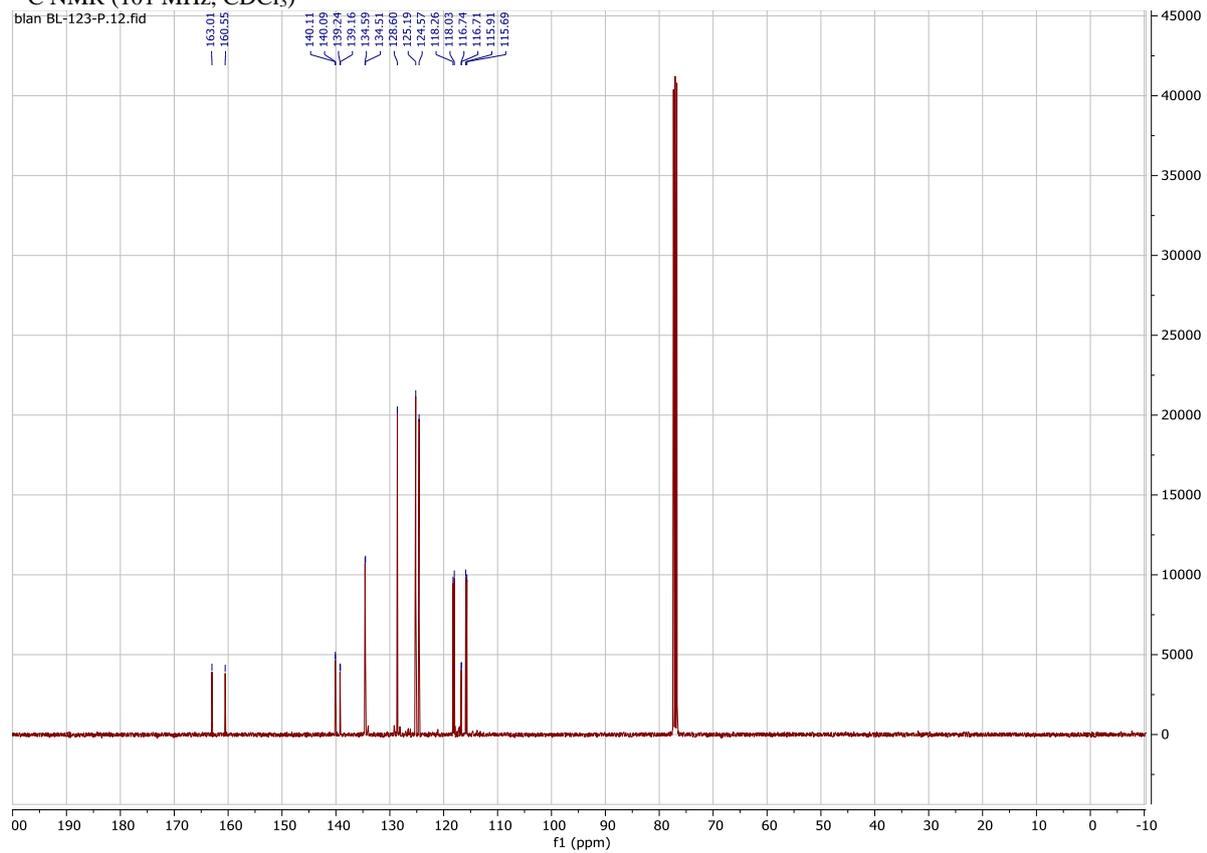
<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)





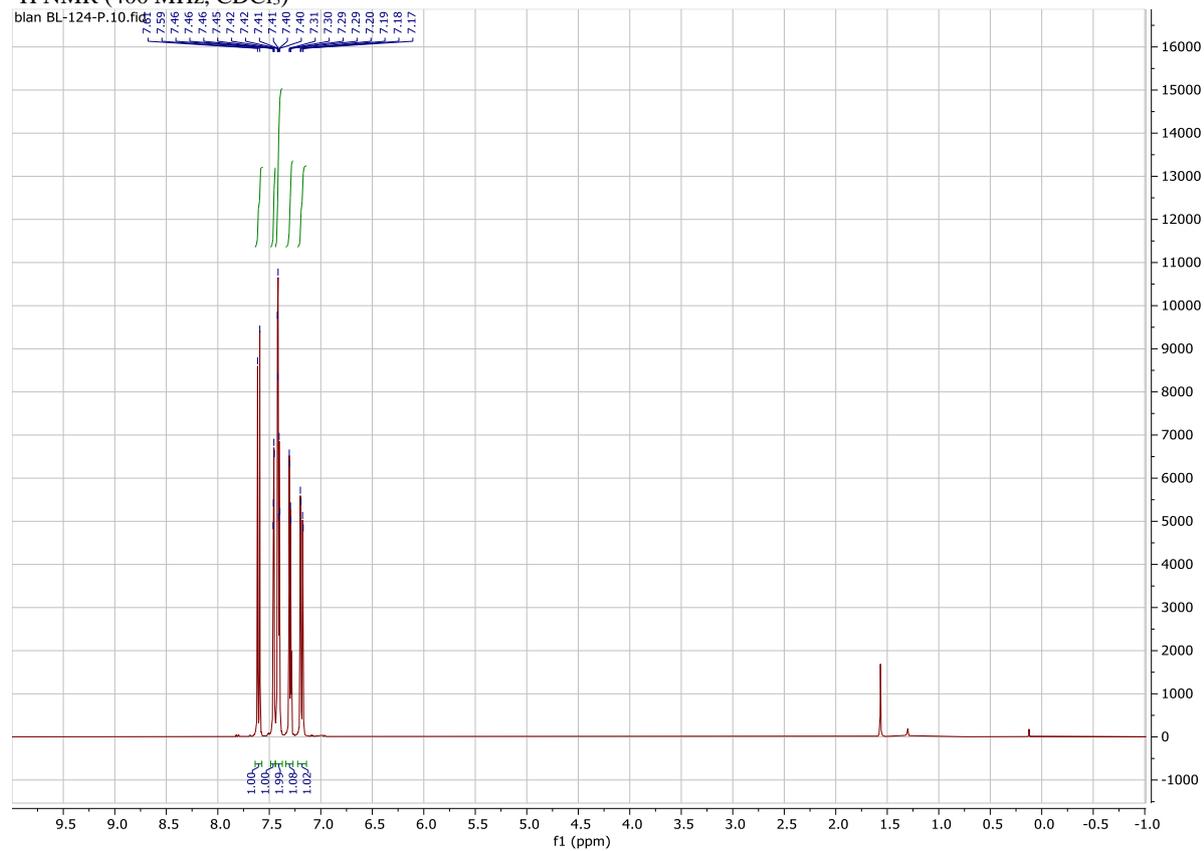
<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

blan BL-123-P.12.fid

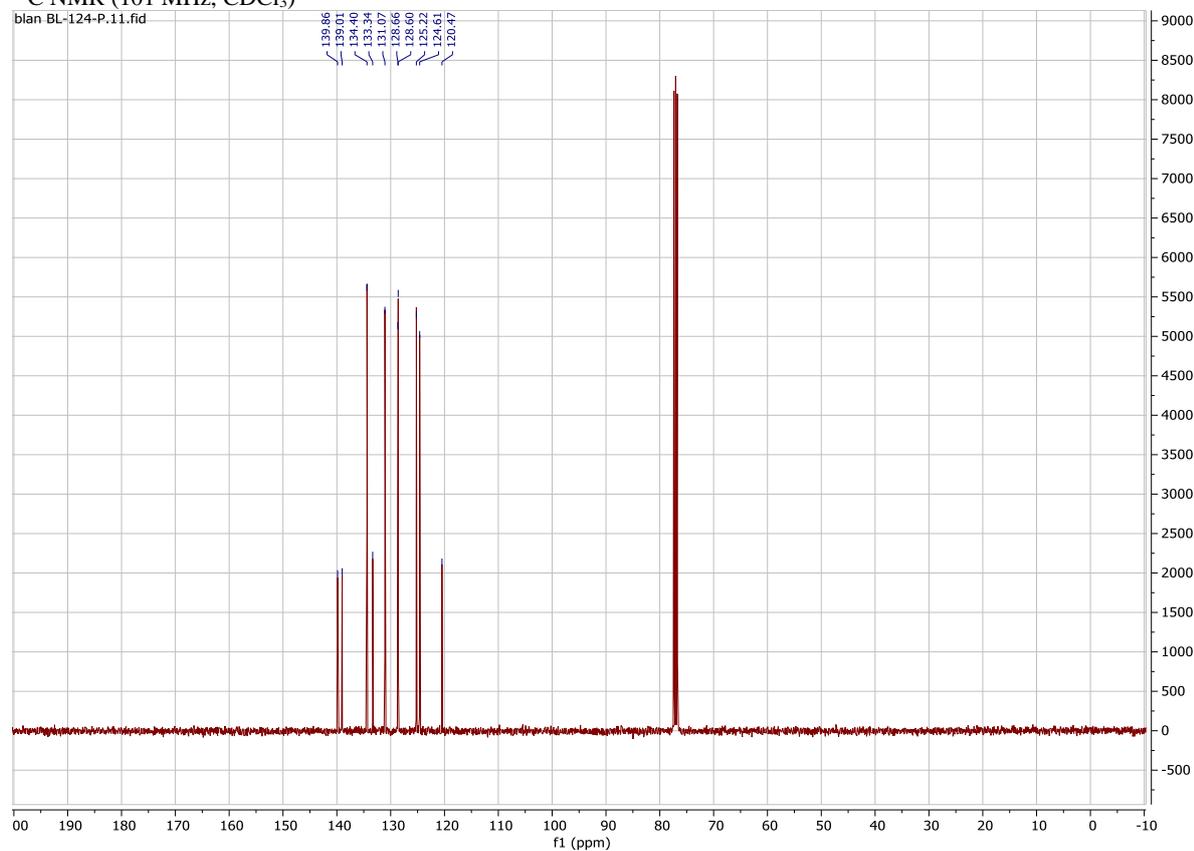


### 3-(2-Bromo-5-chlorophenyl)thiophene (1k)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

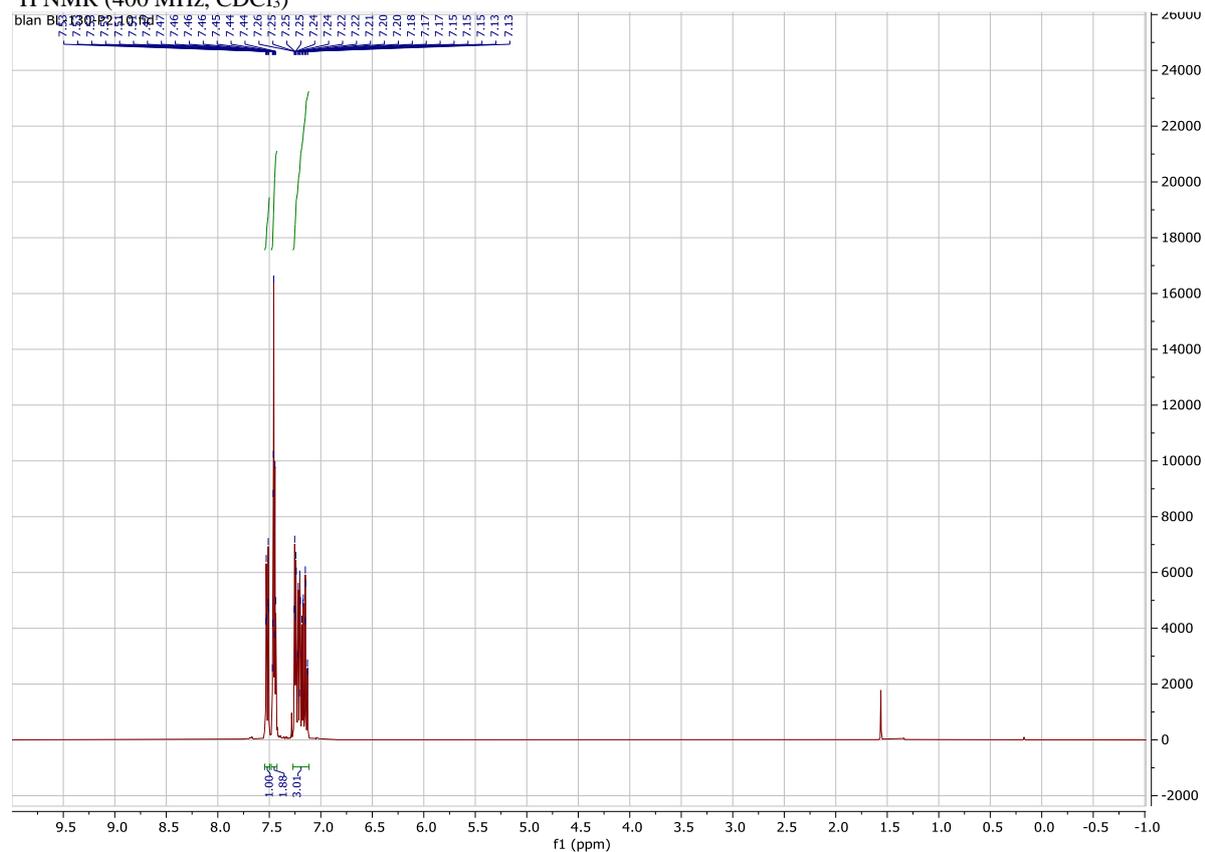


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

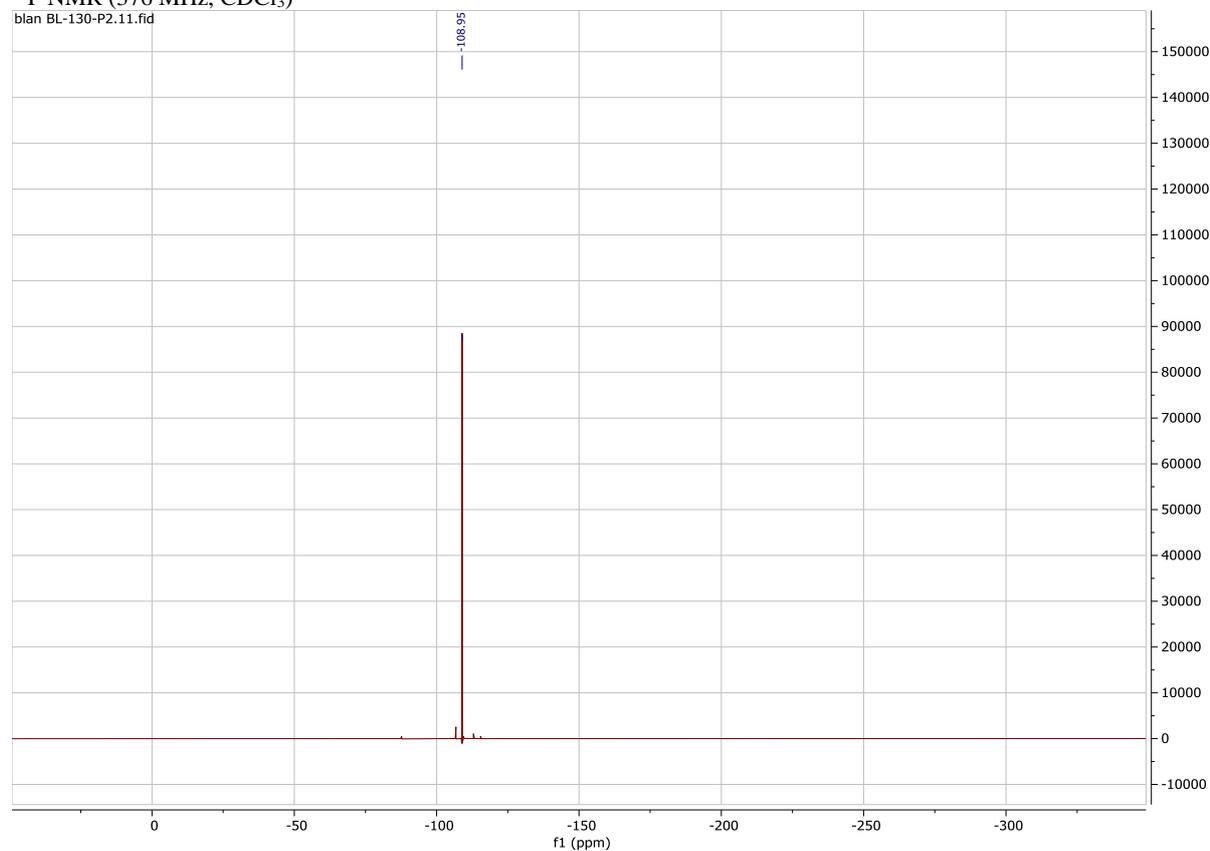


### 3-(2-Bromo-6-fluorophenyl)thiophene (11)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

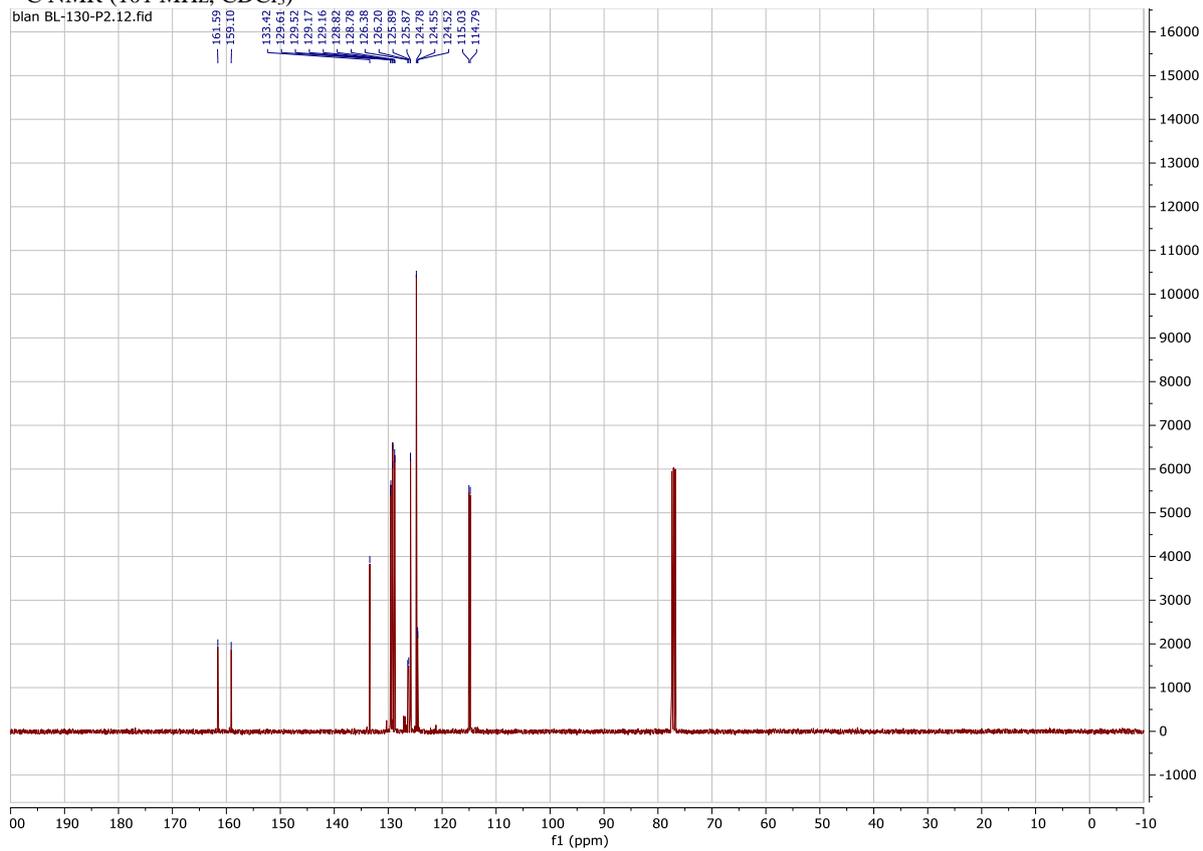


<sup>19</sup>F NMR (376 MHz, CDCl<sub>3</sub>)



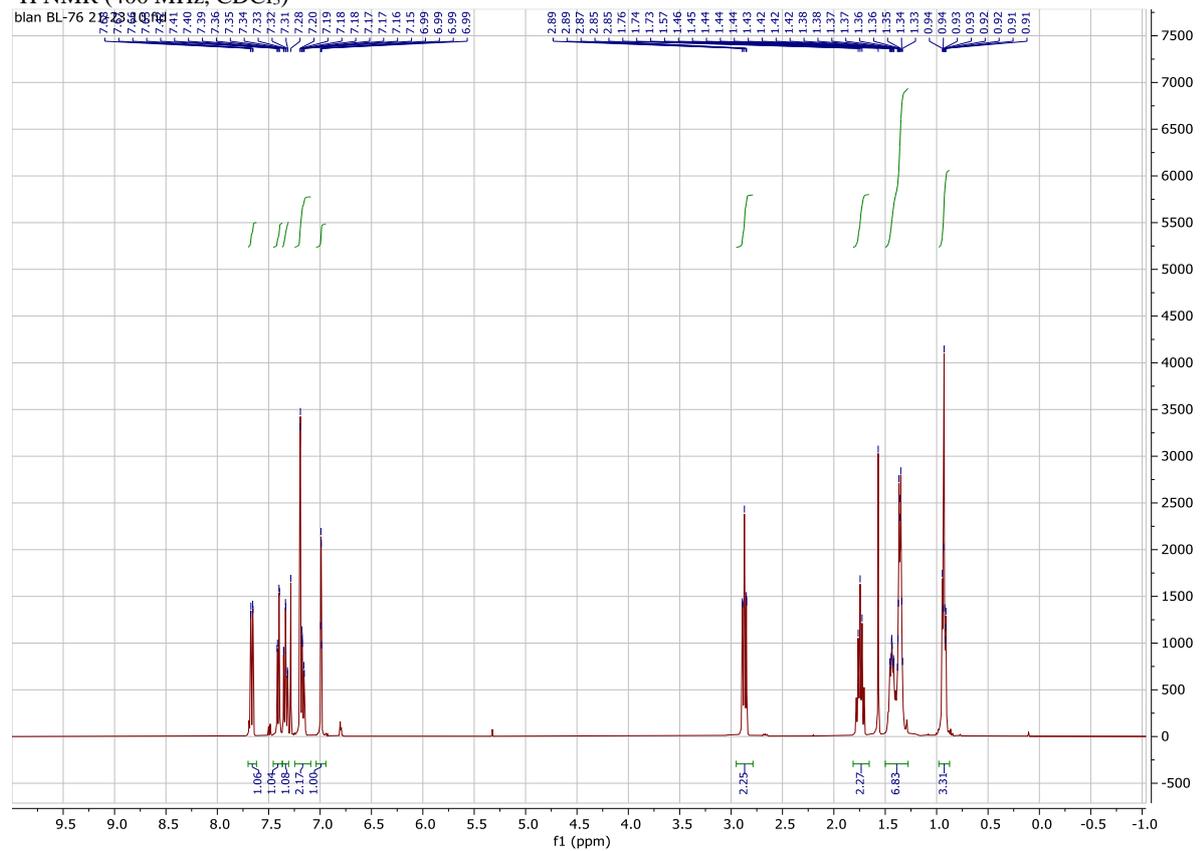
<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

blan BL-130-P2.12.fid

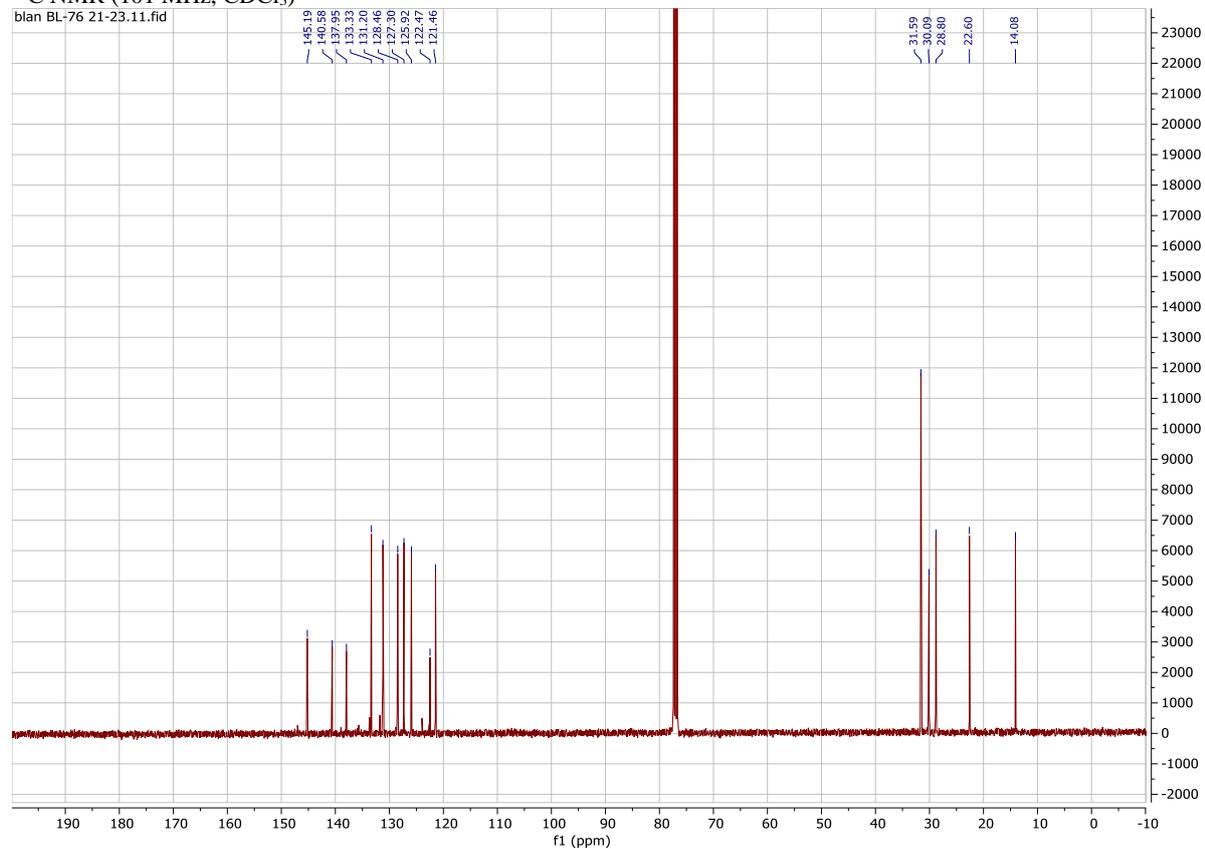


# 4-(2-Bromophenyl)-2-hexylthiophene (1n)

$^1\text{H NMR}$  (400 MHz,  $\text{CDCl}_3$ )

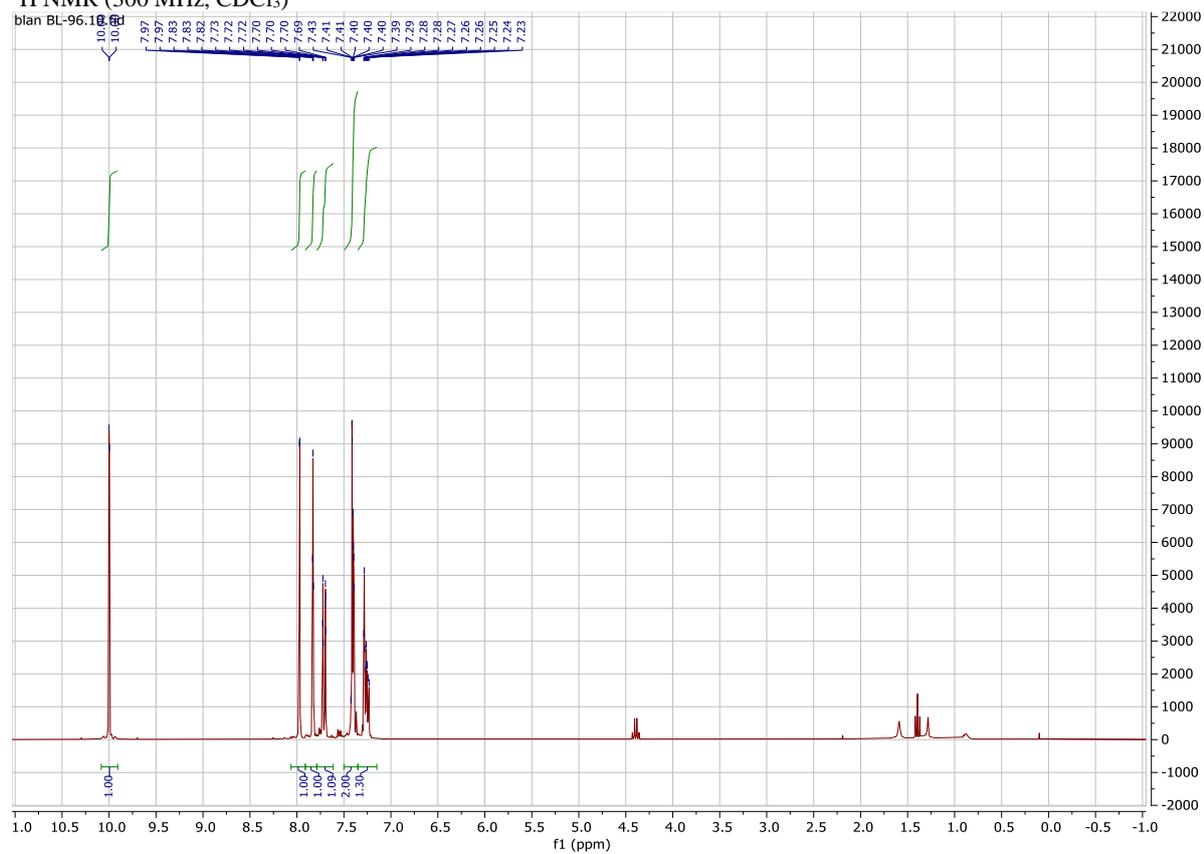


$^{13}\text{C NMR}$  (101 MHz,  $\text{CDCl}_3$ )

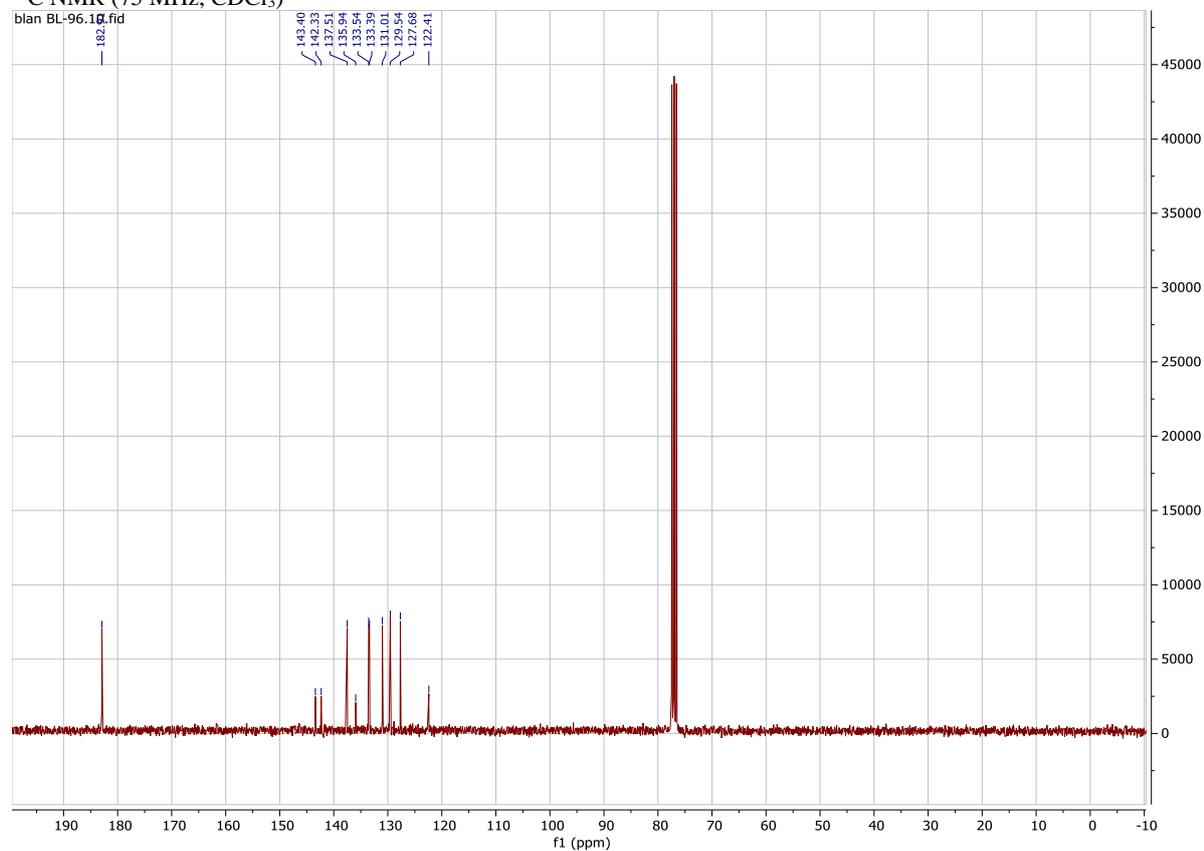


# 4-(2-Bromophenyl)thiophene-2-carbaldehyde (1o)

$^1\text{H}$  NMR (300 MHz,  $\text{CDCl}_3$ )

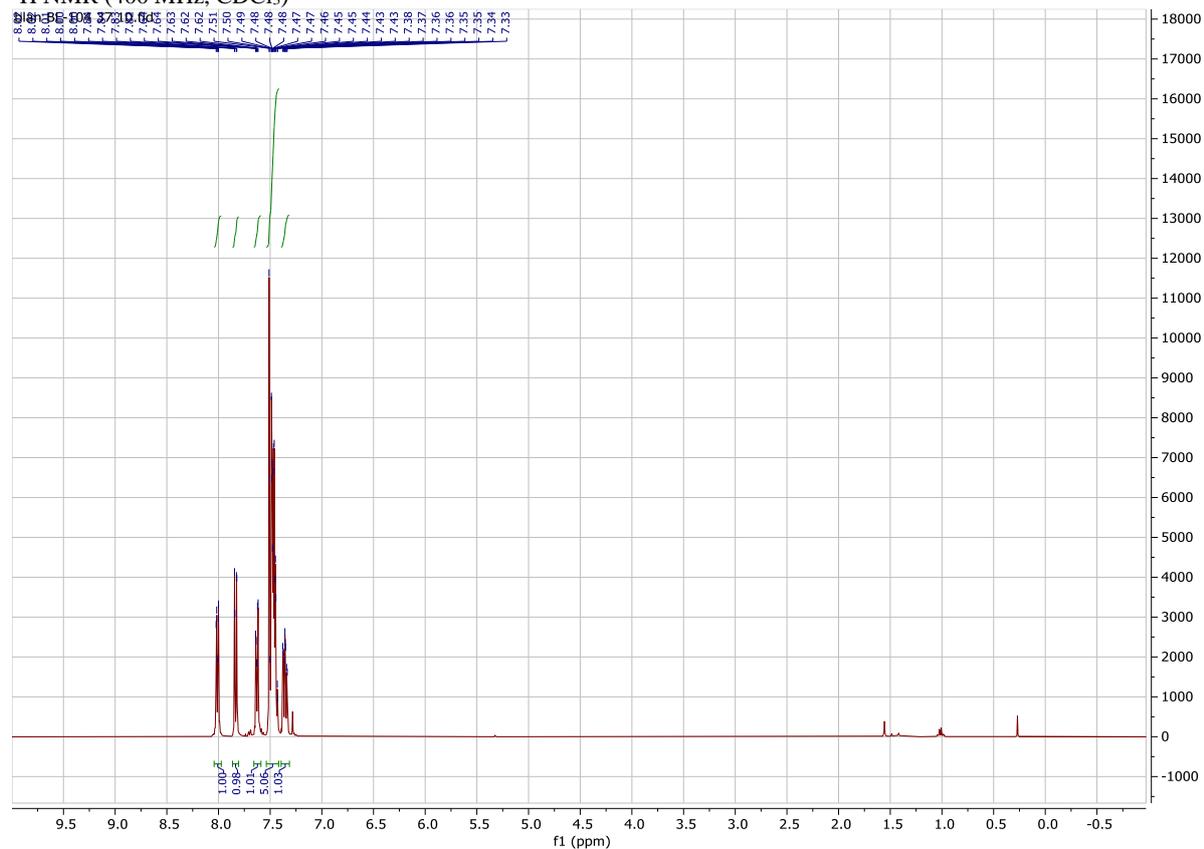


$^{13}\text{C}$  NMR (75 MHz,  $\text{CDCl}_3$ )

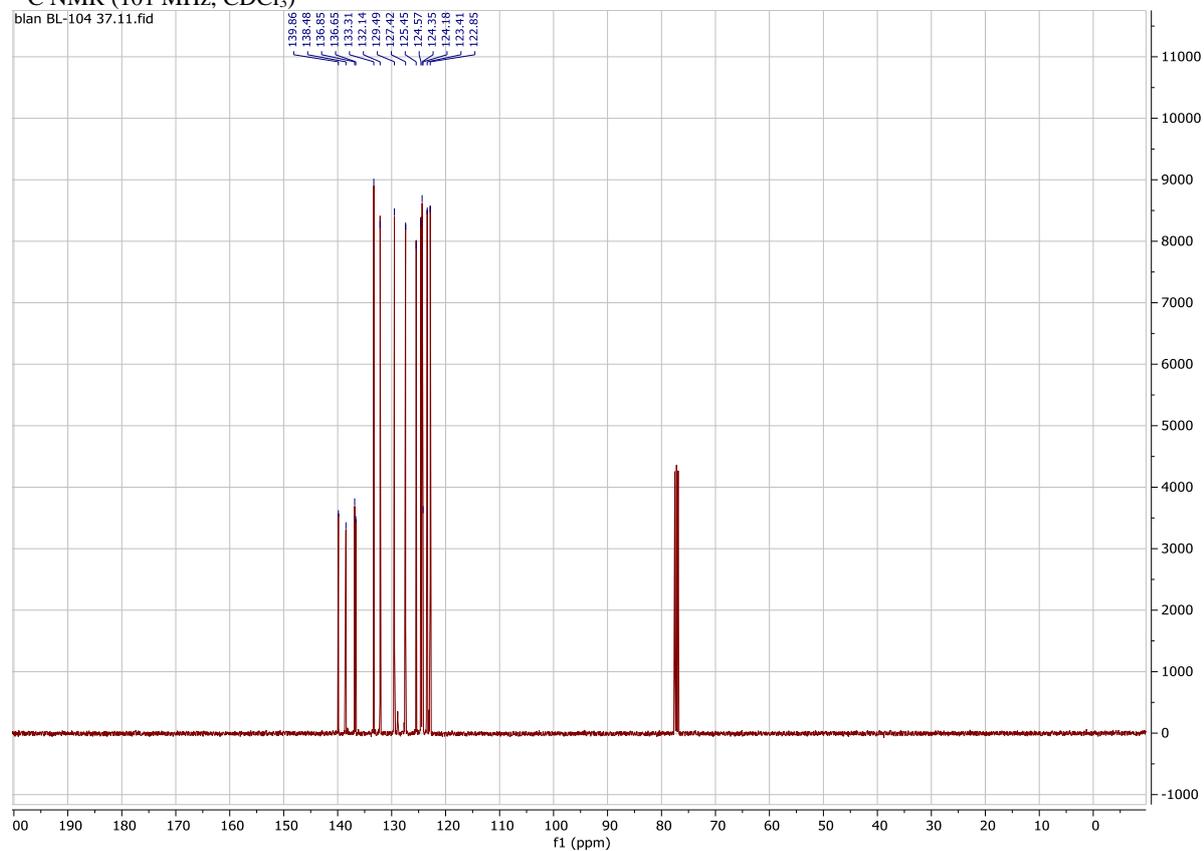


# 3-(2-Bromophenyl)benzo[*b*]thiophene (1p)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

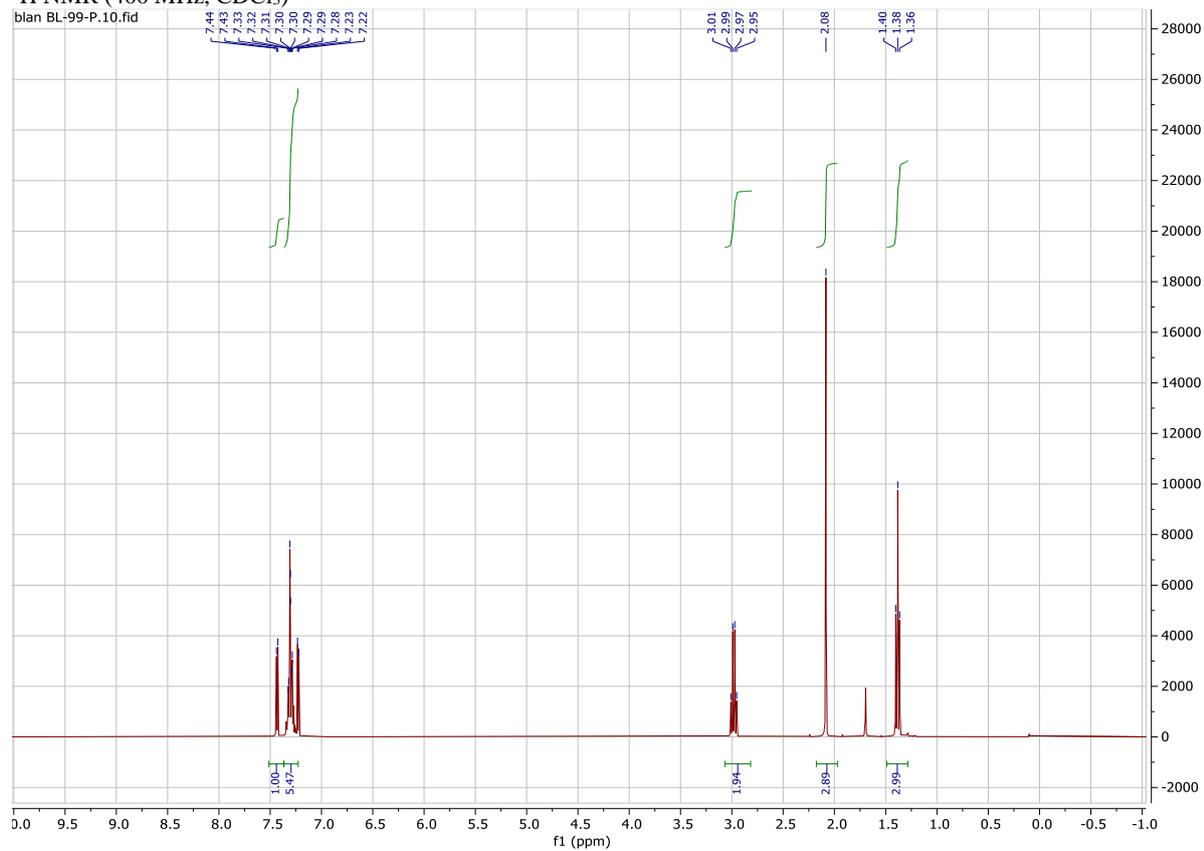


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

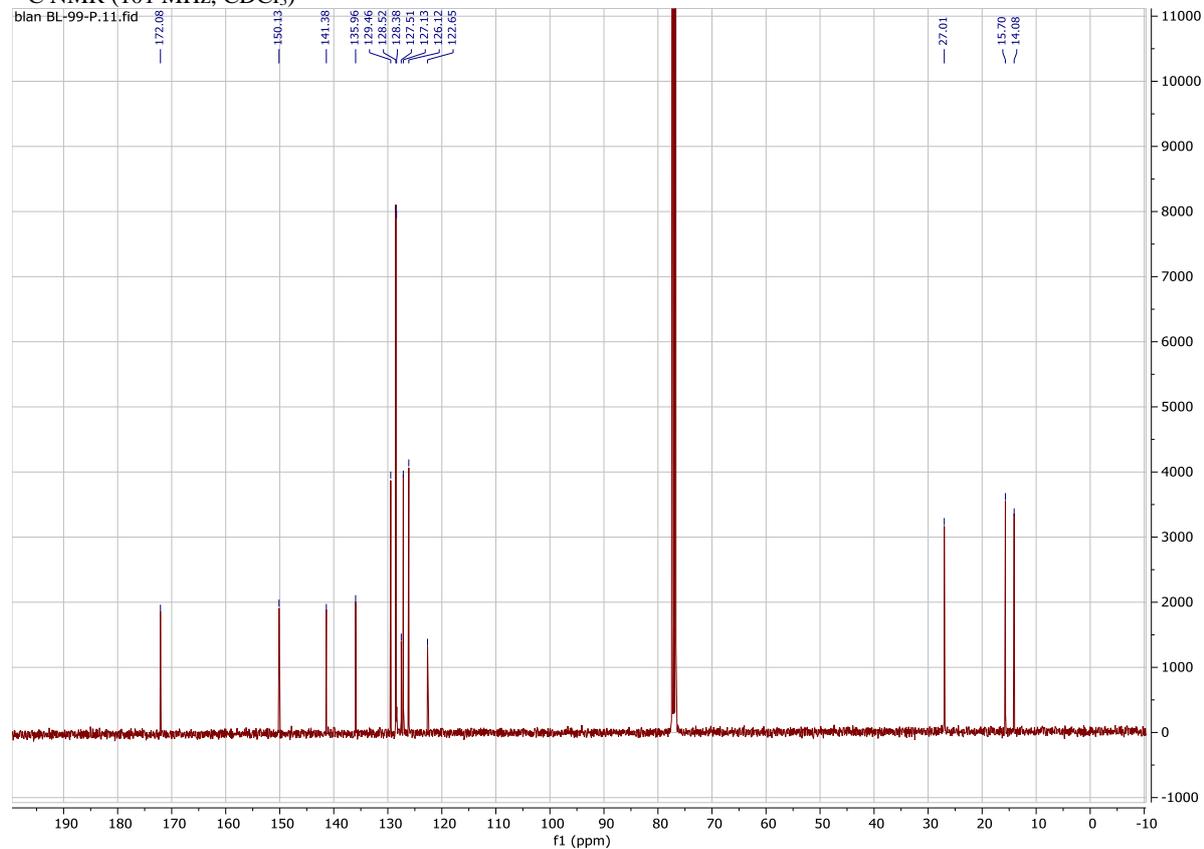


# 2-Ethyl-4-methyl-5-(3-phenylthiophen-2-yl)thiazole (2b)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

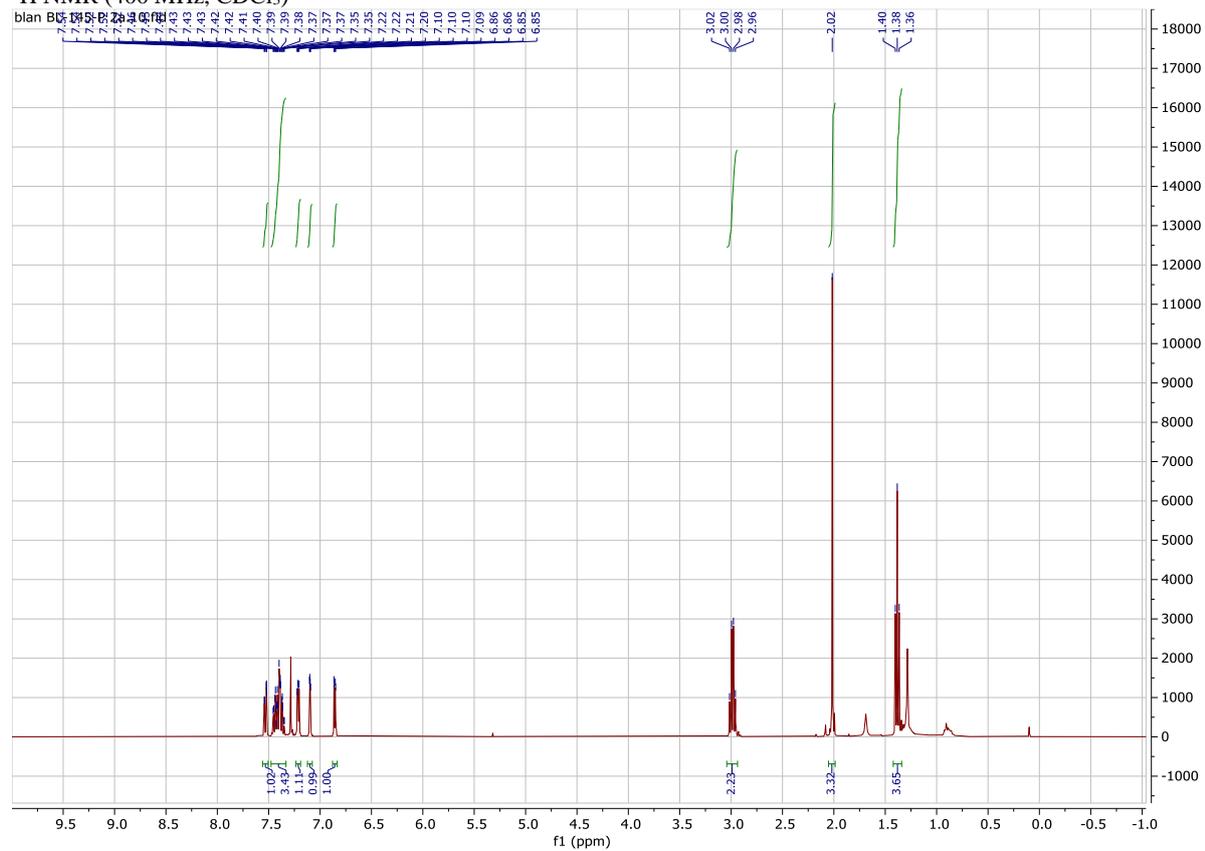


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

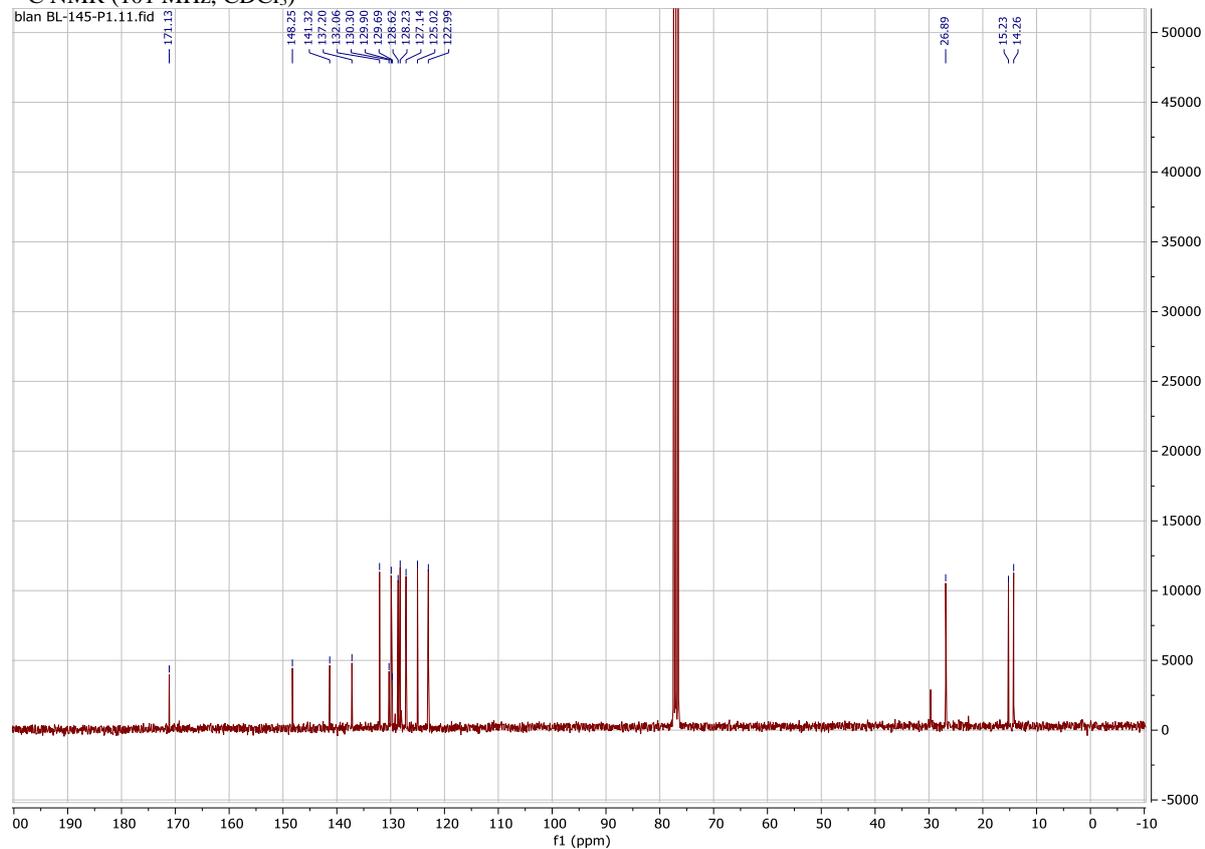


# 2-Ethyl-4-methyl-5-(2-(thiophen-3-yl)phenyl)thiazole (2a)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

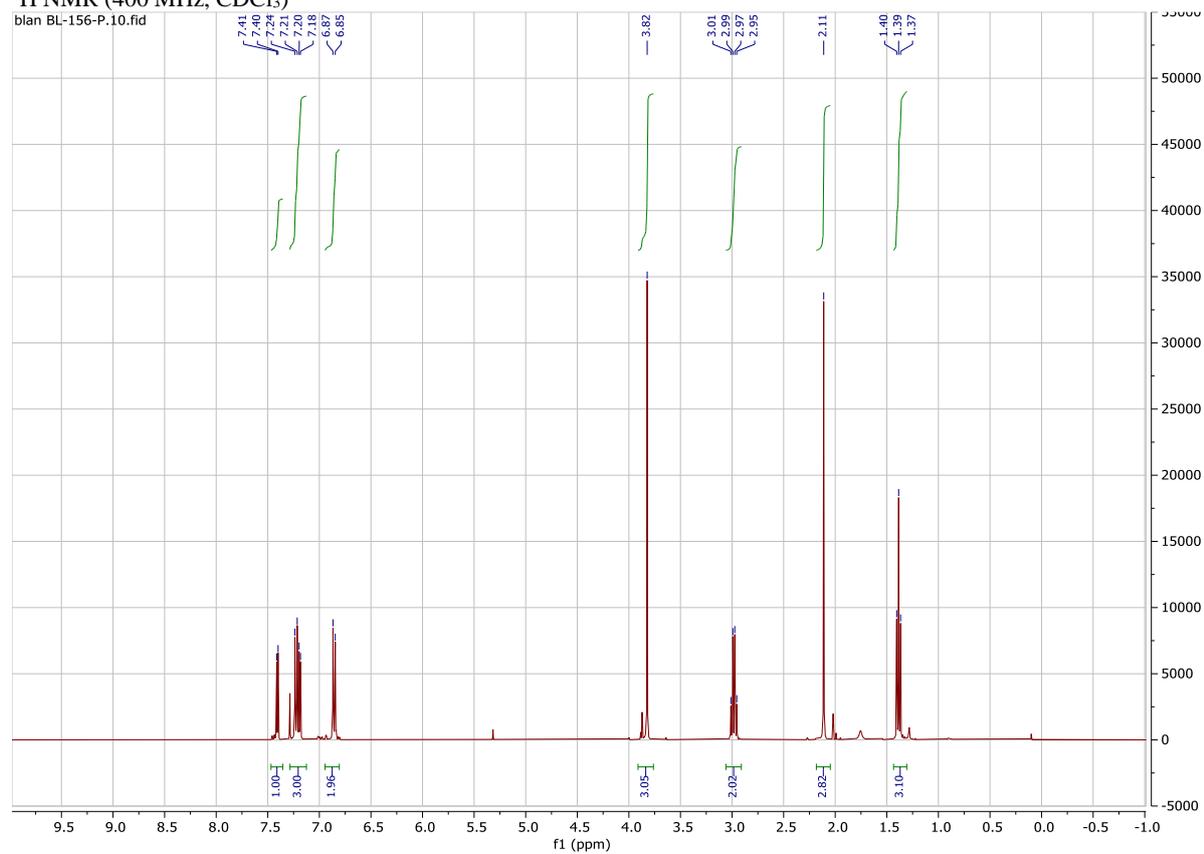


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

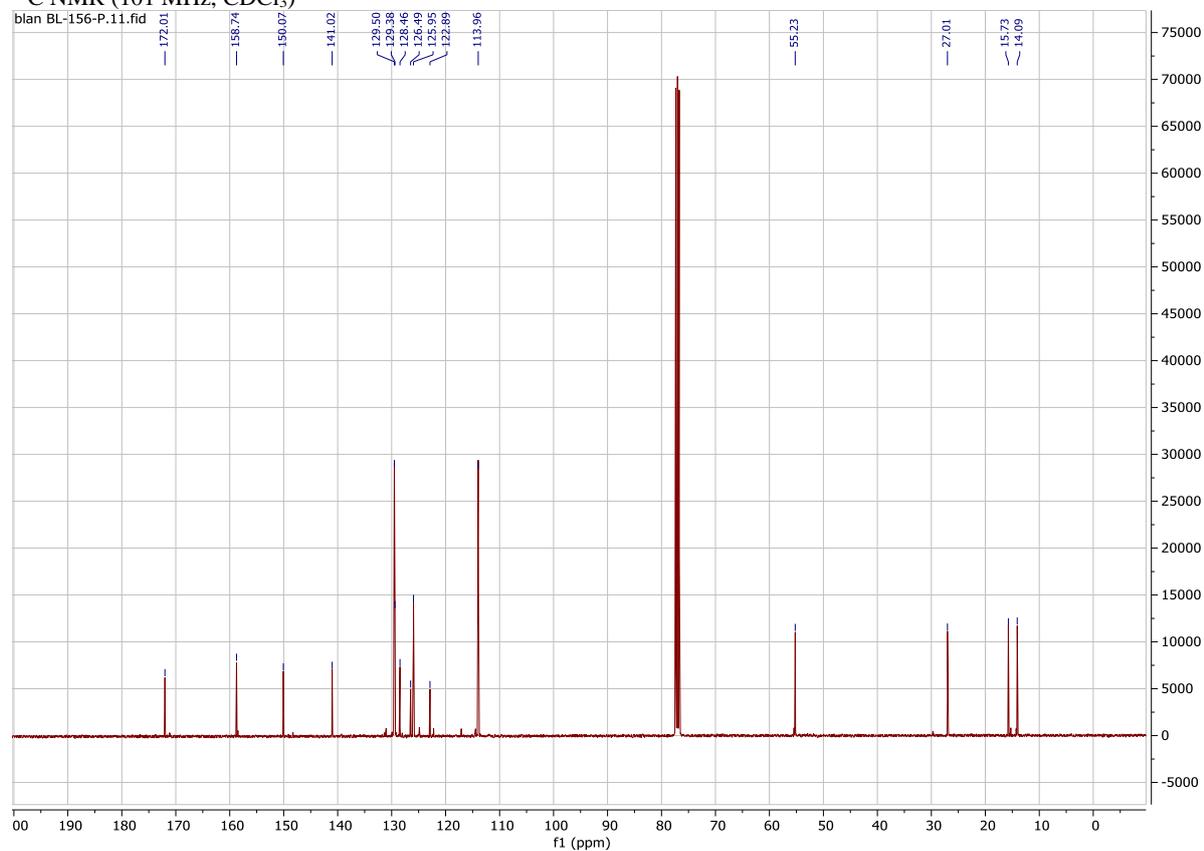


# 2-Ethyl-5-(3-(4-methoxyphenyl)thiophen-2-yl)-4-methylthiazole (3b)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

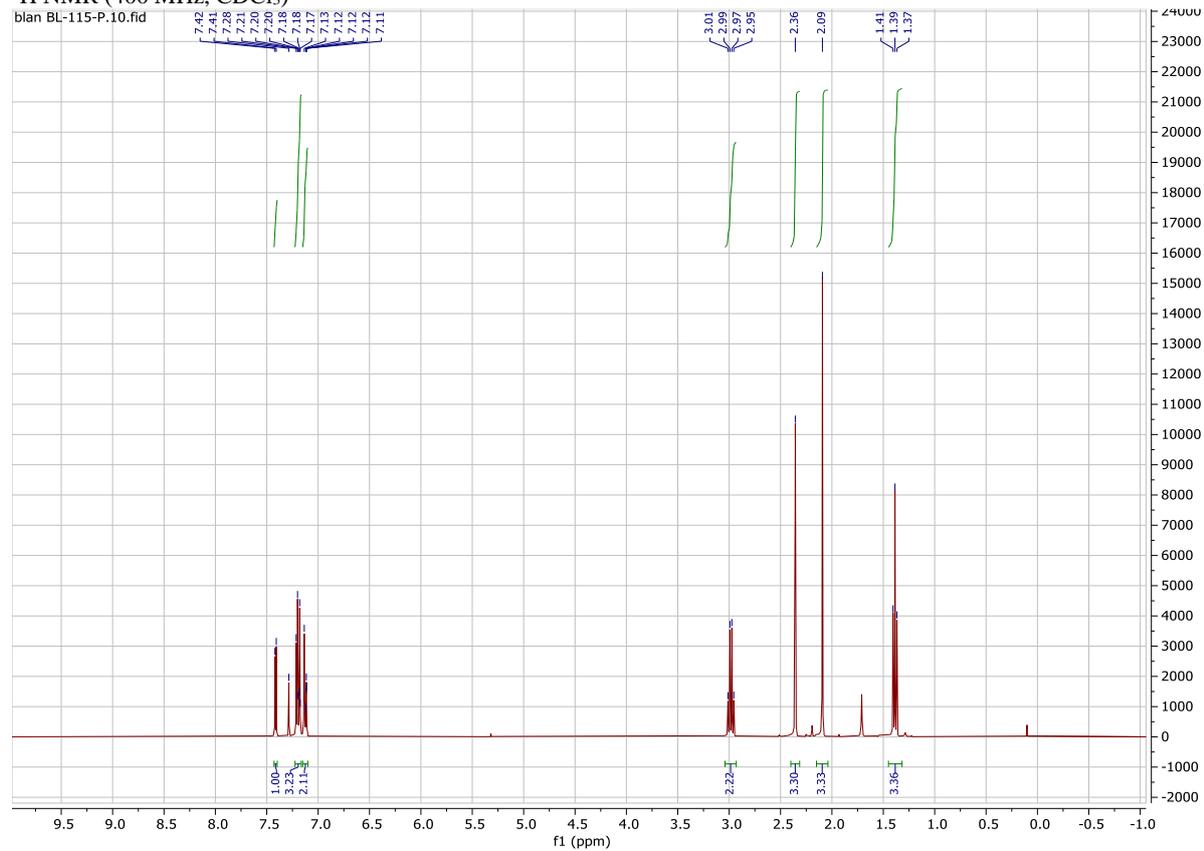


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

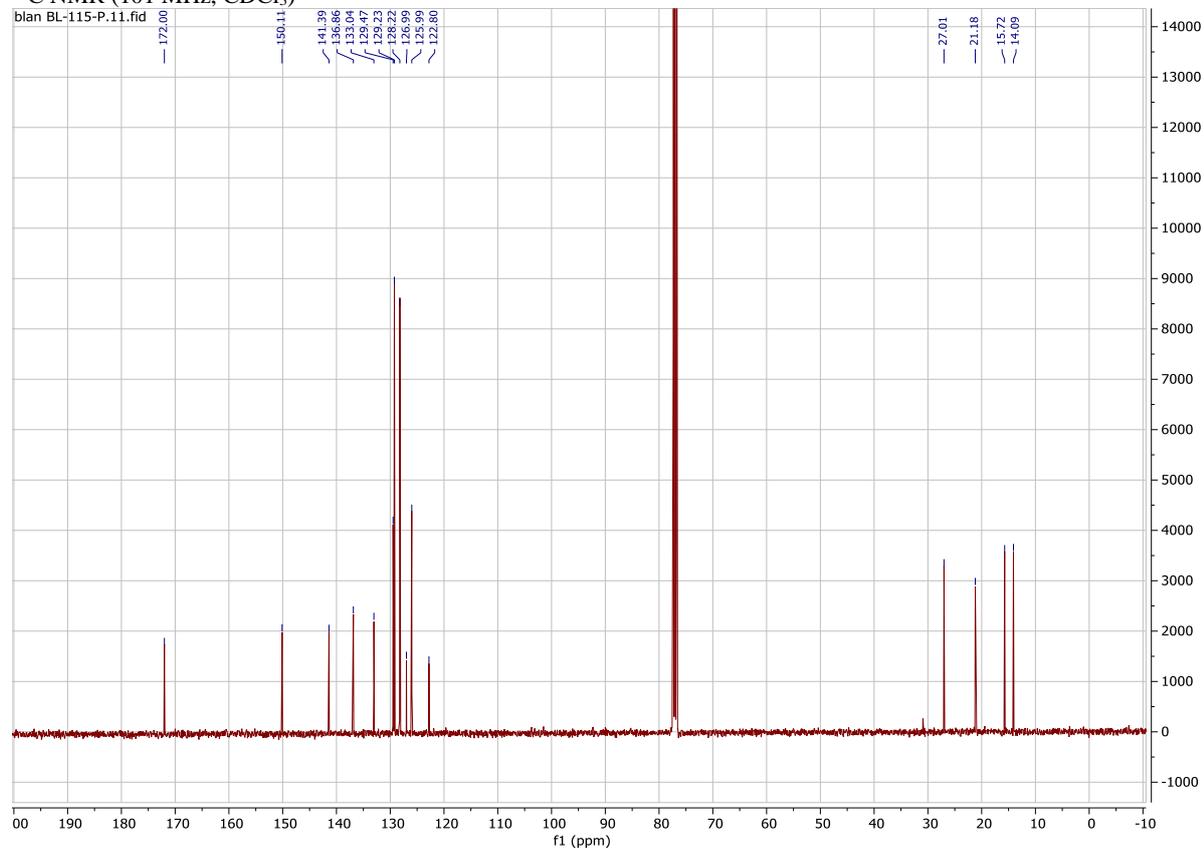


# 2-Ethyl-4-methyl-5-(3-(*p*-tolyl)thiophen-2-yl)thiazole (4b)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

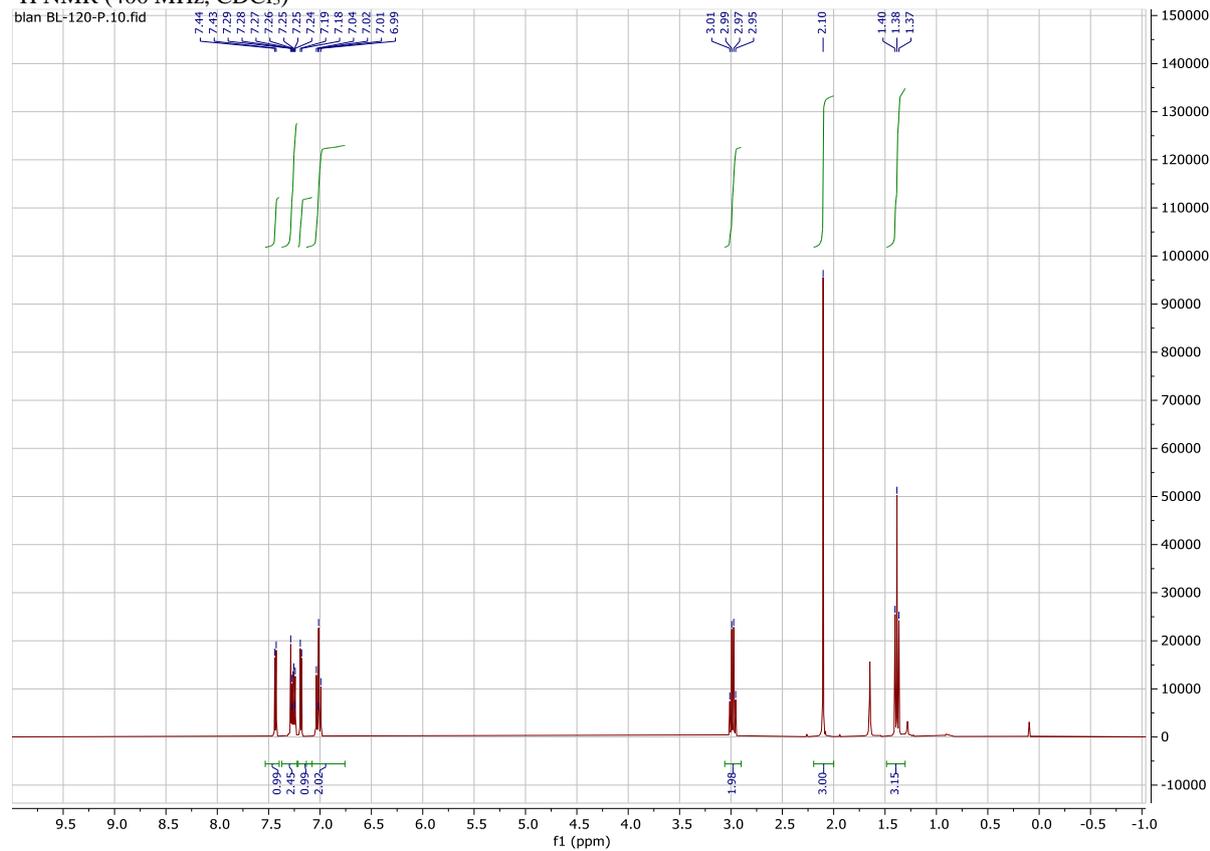


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

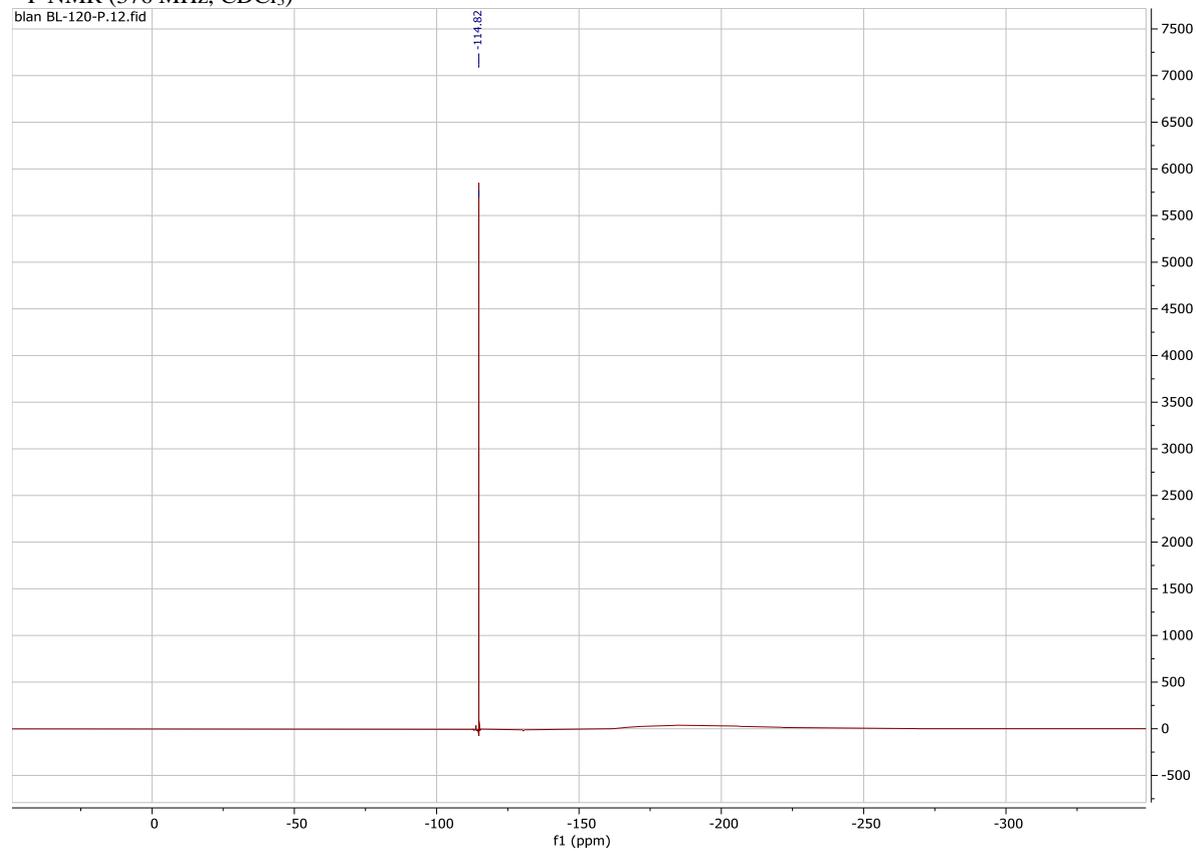


# 2-Ethyl-5-(3-(4-fluorophenyl)thiophen-2-yl)-4-methylthiazole (5b)

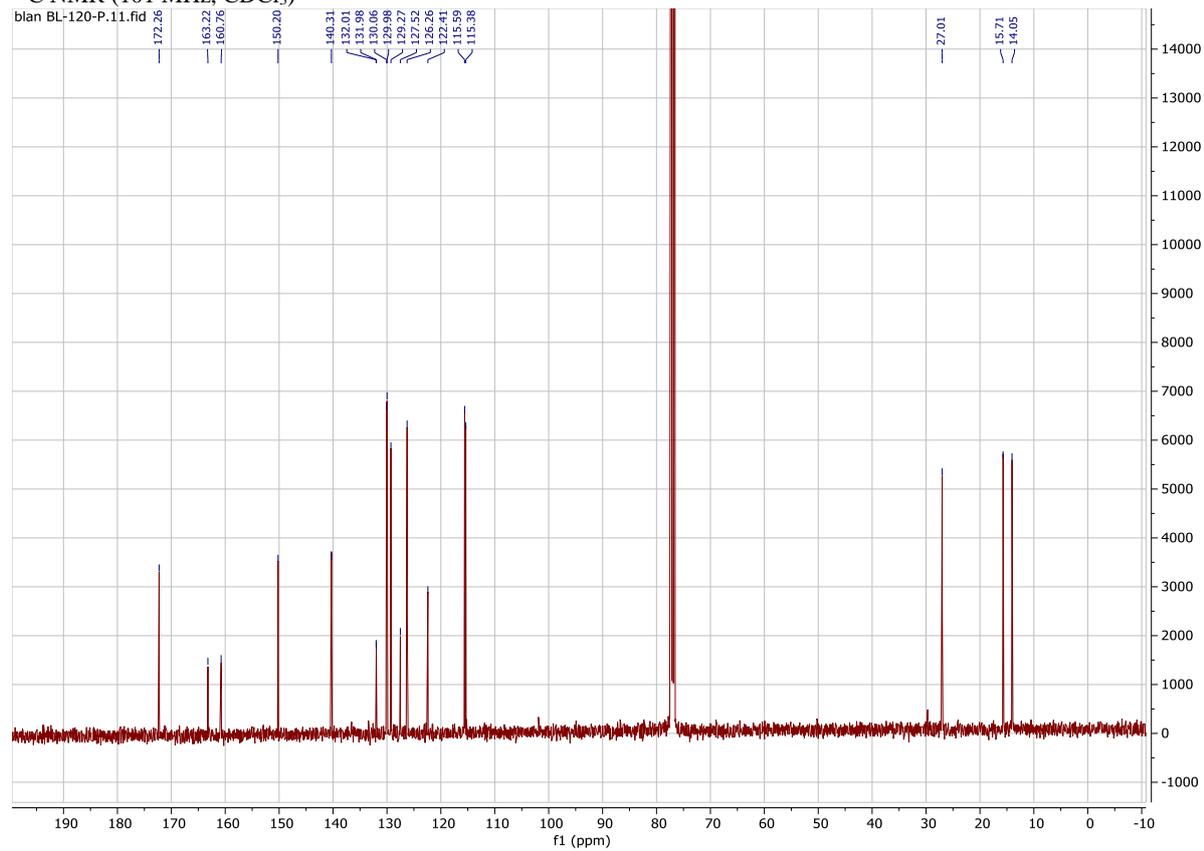
<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)



<sup>19</sup>F NMR (376 MHz, CDCl<sub>3</sub>)

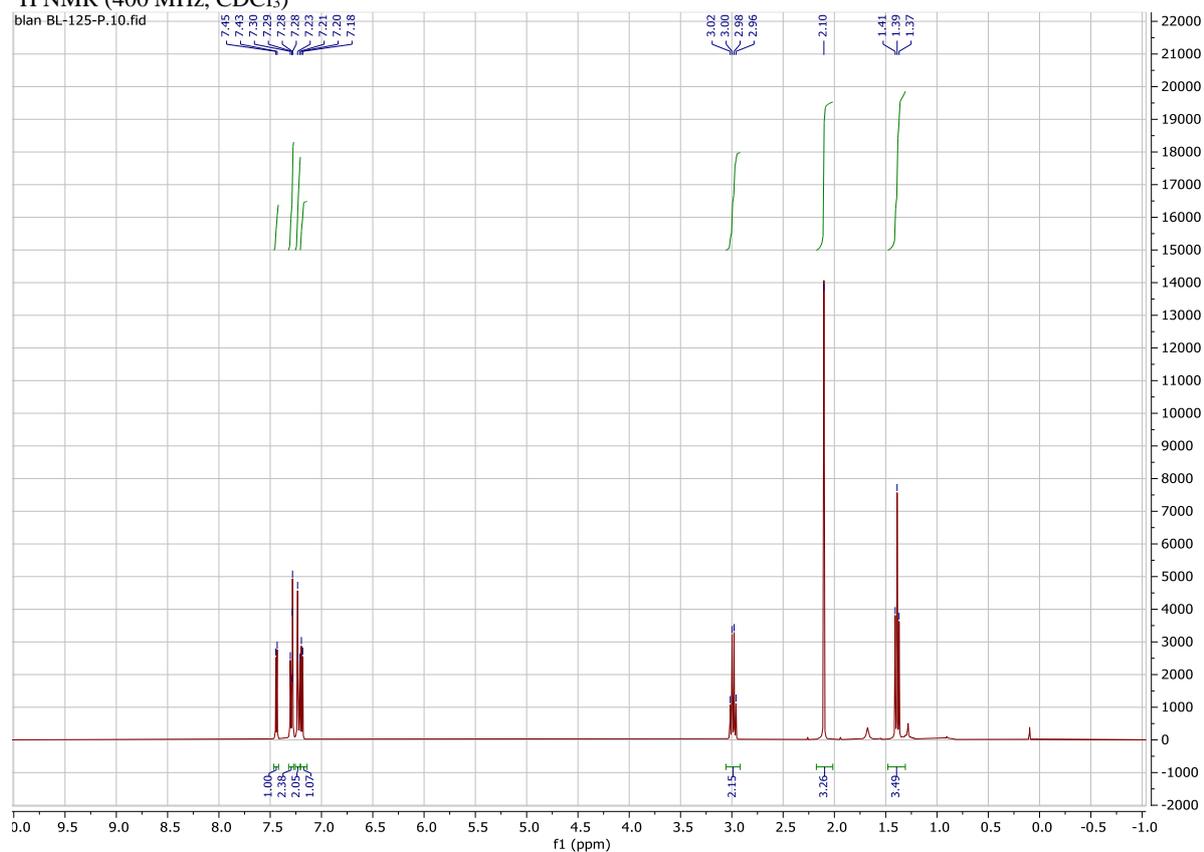


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

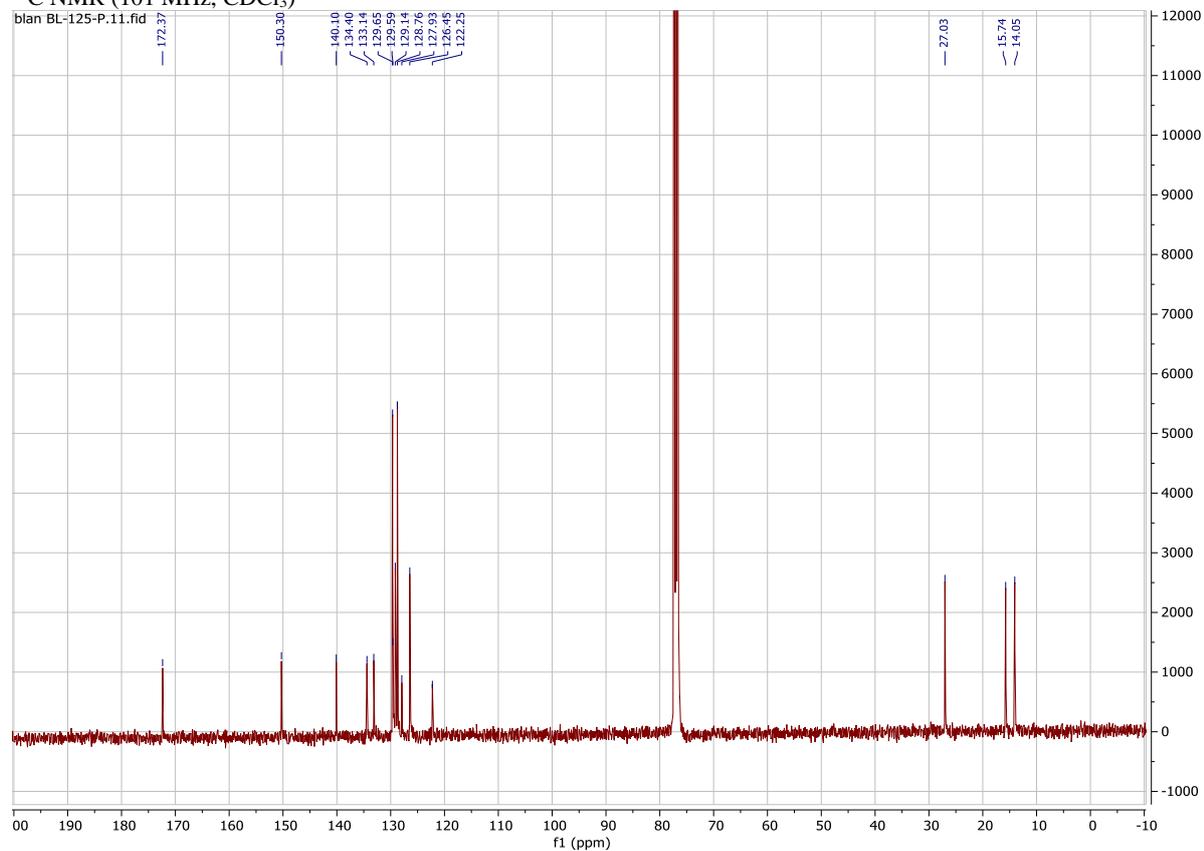


# 5-(3-(4-Chlorophenyl)thiophen-2-yl)-2-ethyl-4-methylthiazole (6b)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

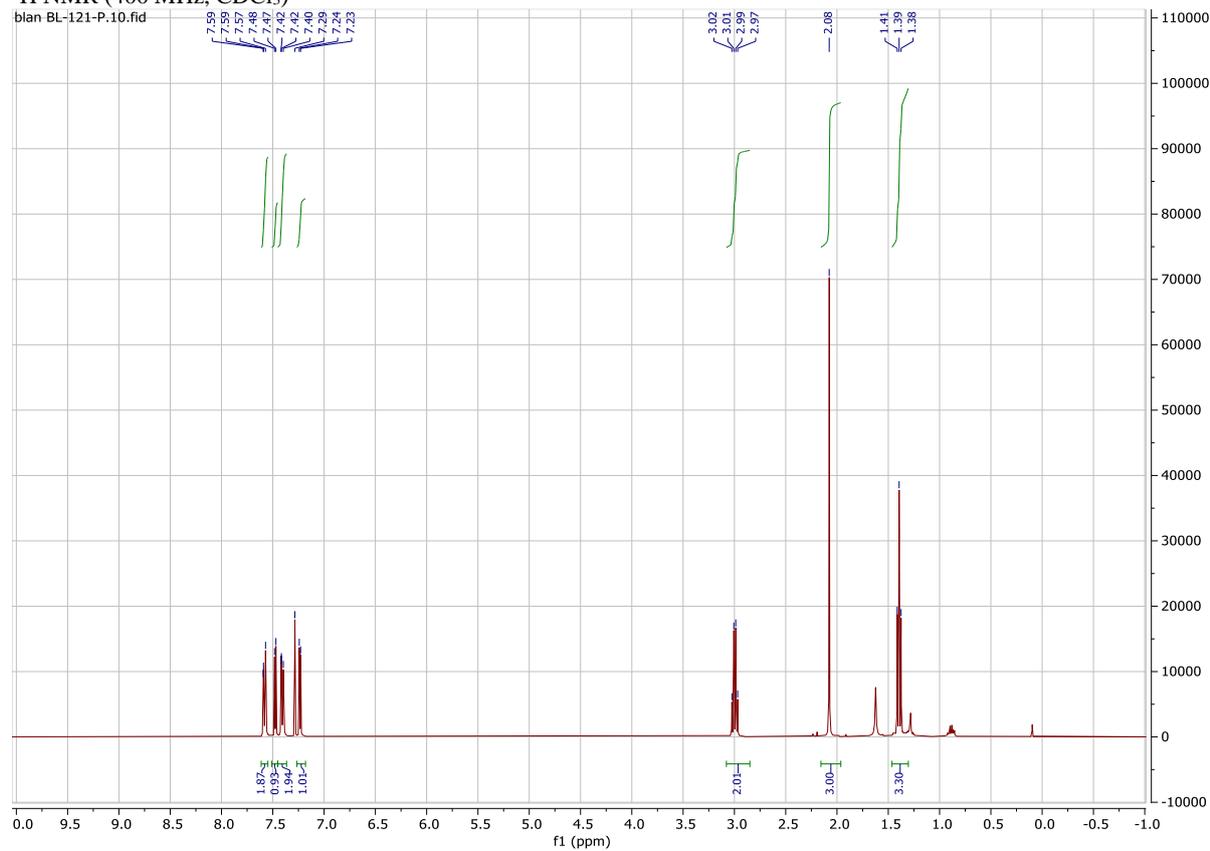


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

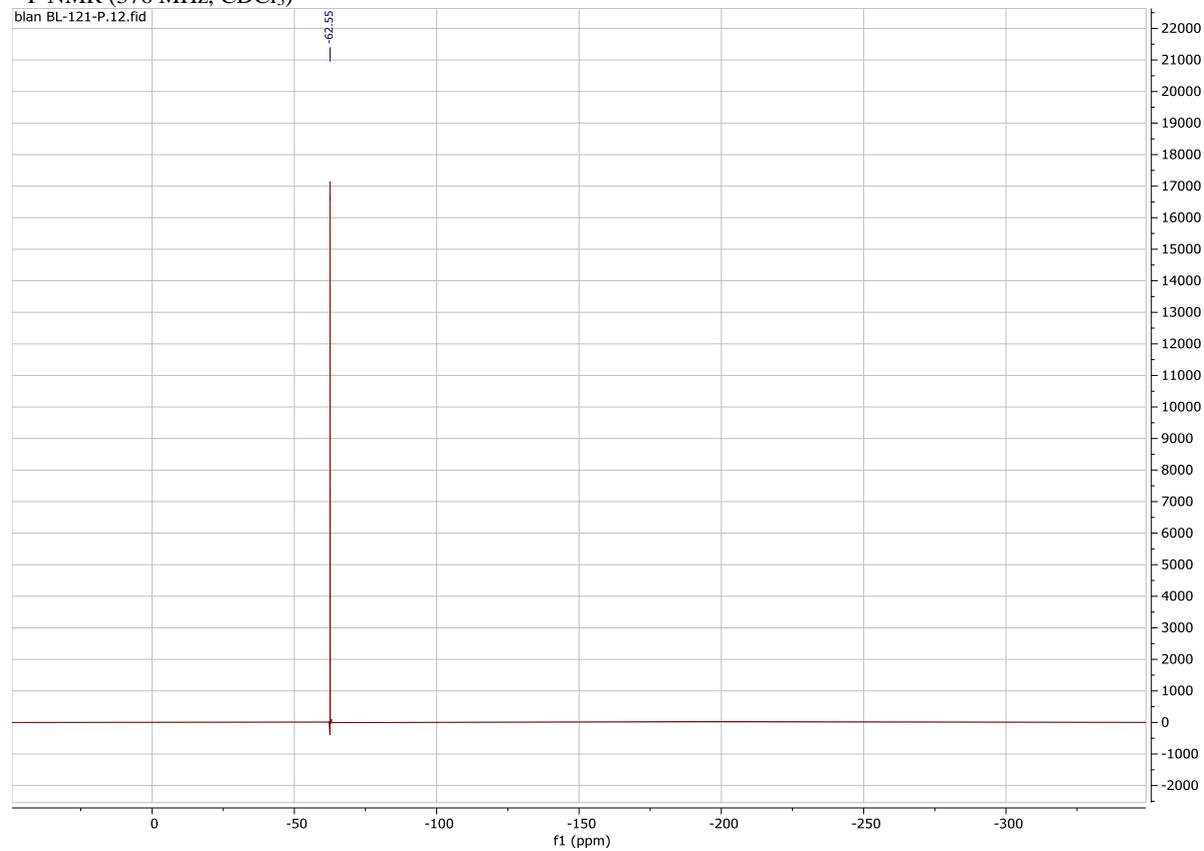


# 2-Ethyl-4-methyl-5-(3-(4-(trifluoromethyl)phenyl)thiophen-2-yl)thiazole (7b)

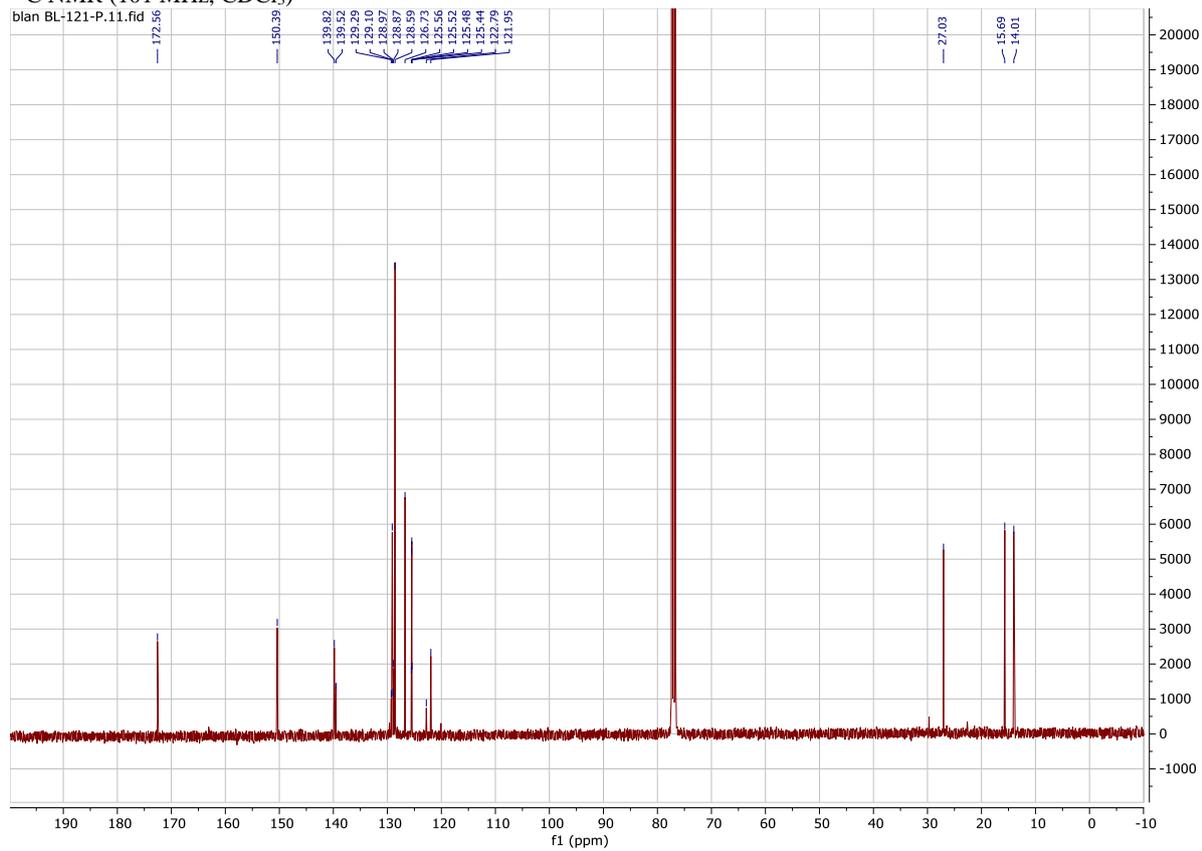
<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)



<sup>19</sup>F NMR (376 MHz, CDCl<sub>3</sub>)

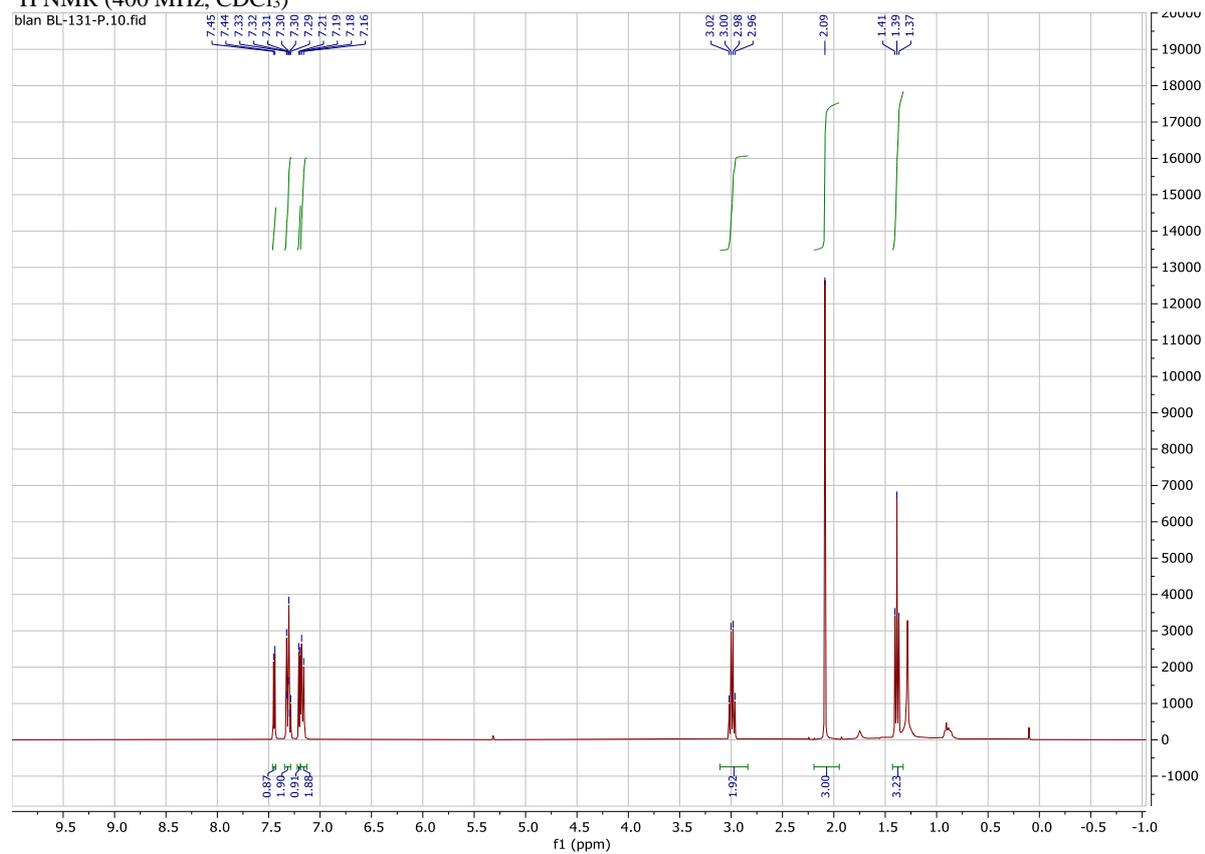


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

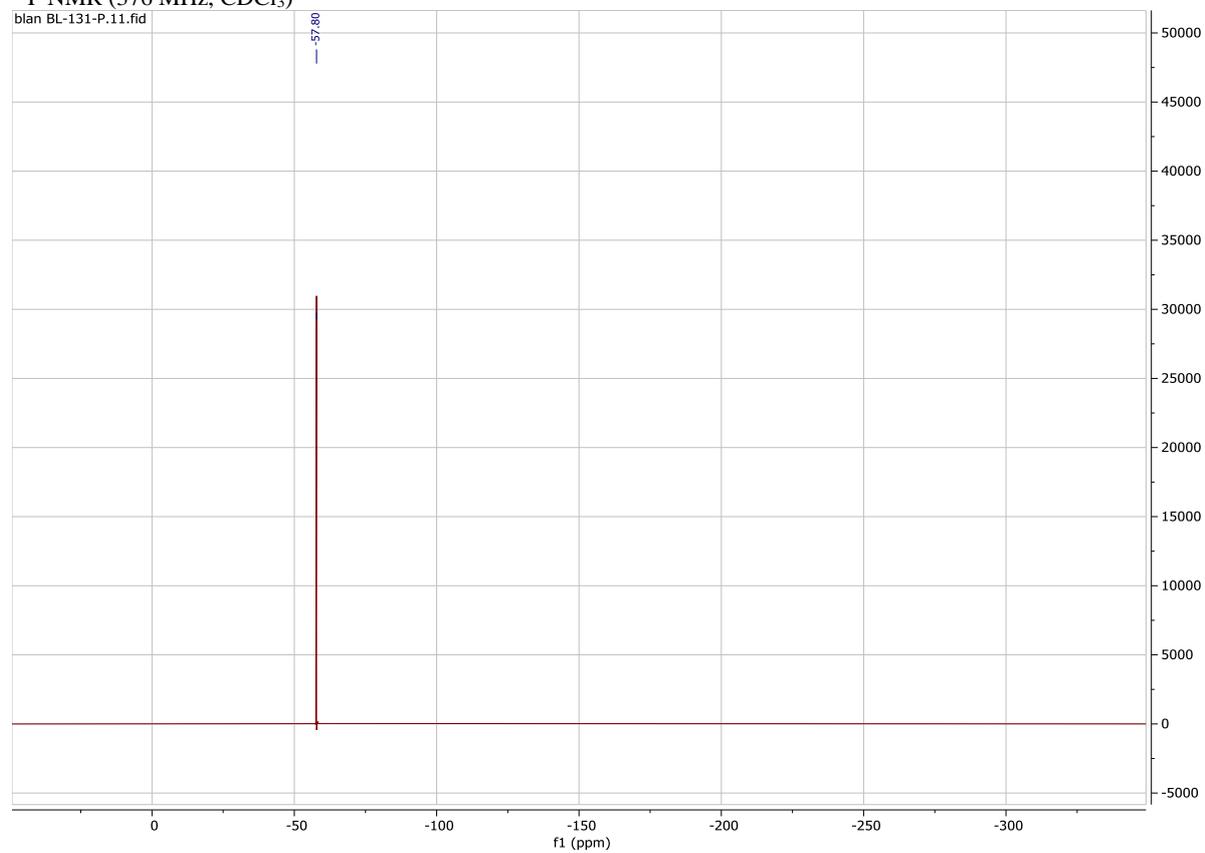


# 2-Ethyl-4-methyl-5-(3-(4-(trifluoromethoxy)phenyl)thiophen-2-yl)thiazole (8b)

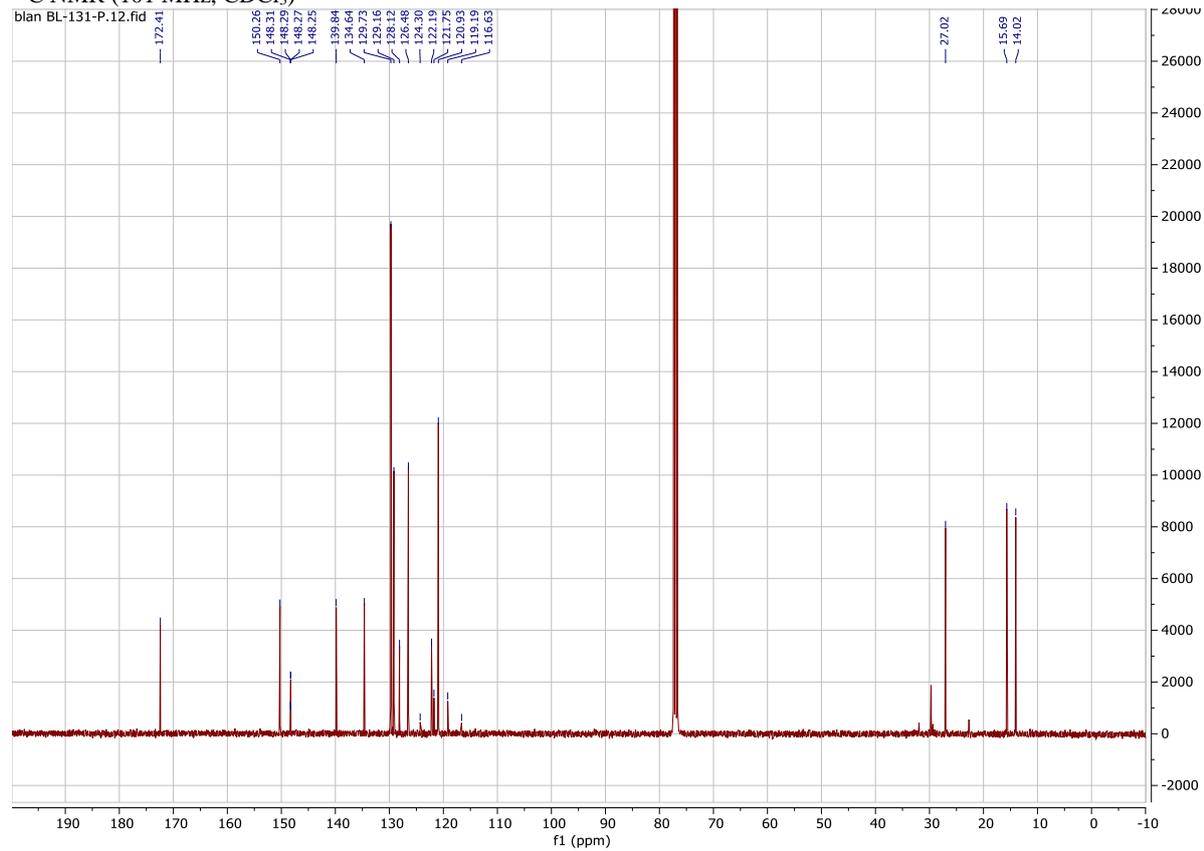
<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)



<sup>19</sup>F NMR (376 MHz, CDCl<sub>3</sub>)

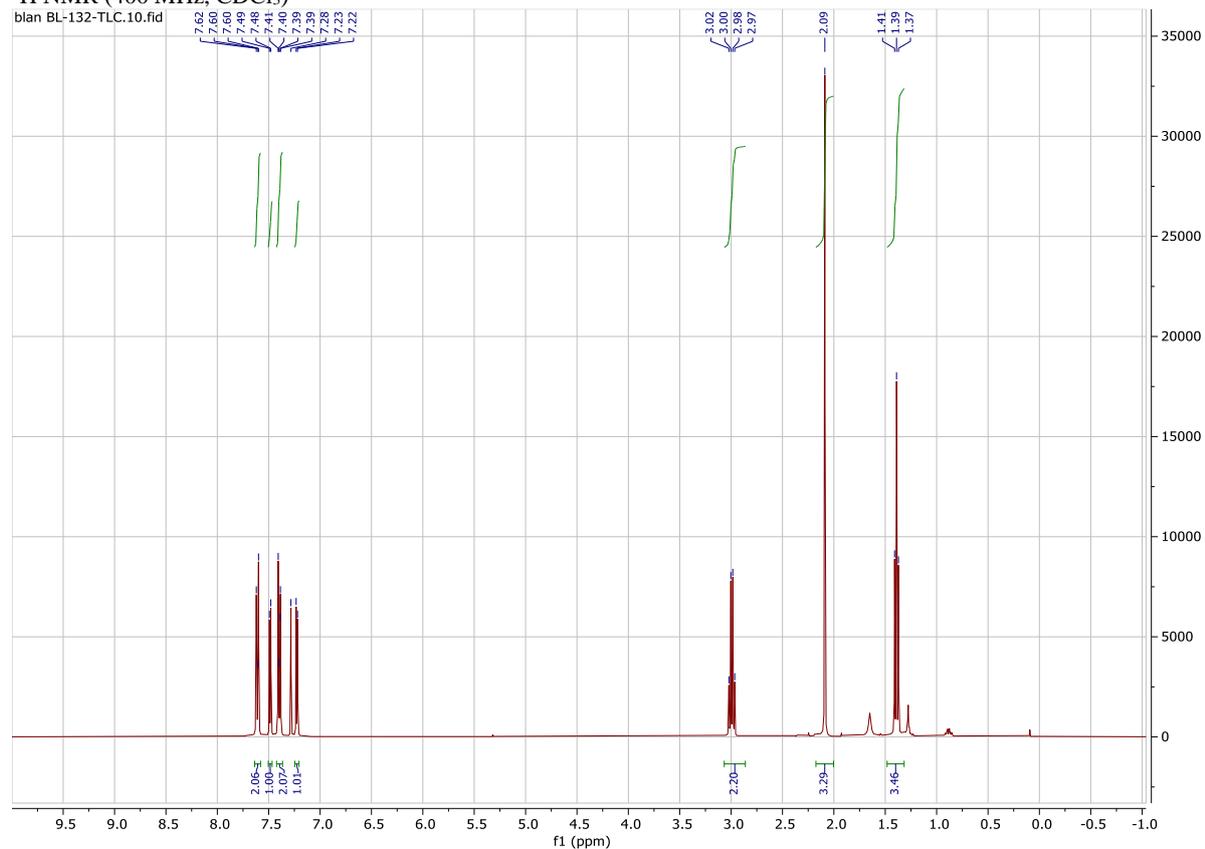


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

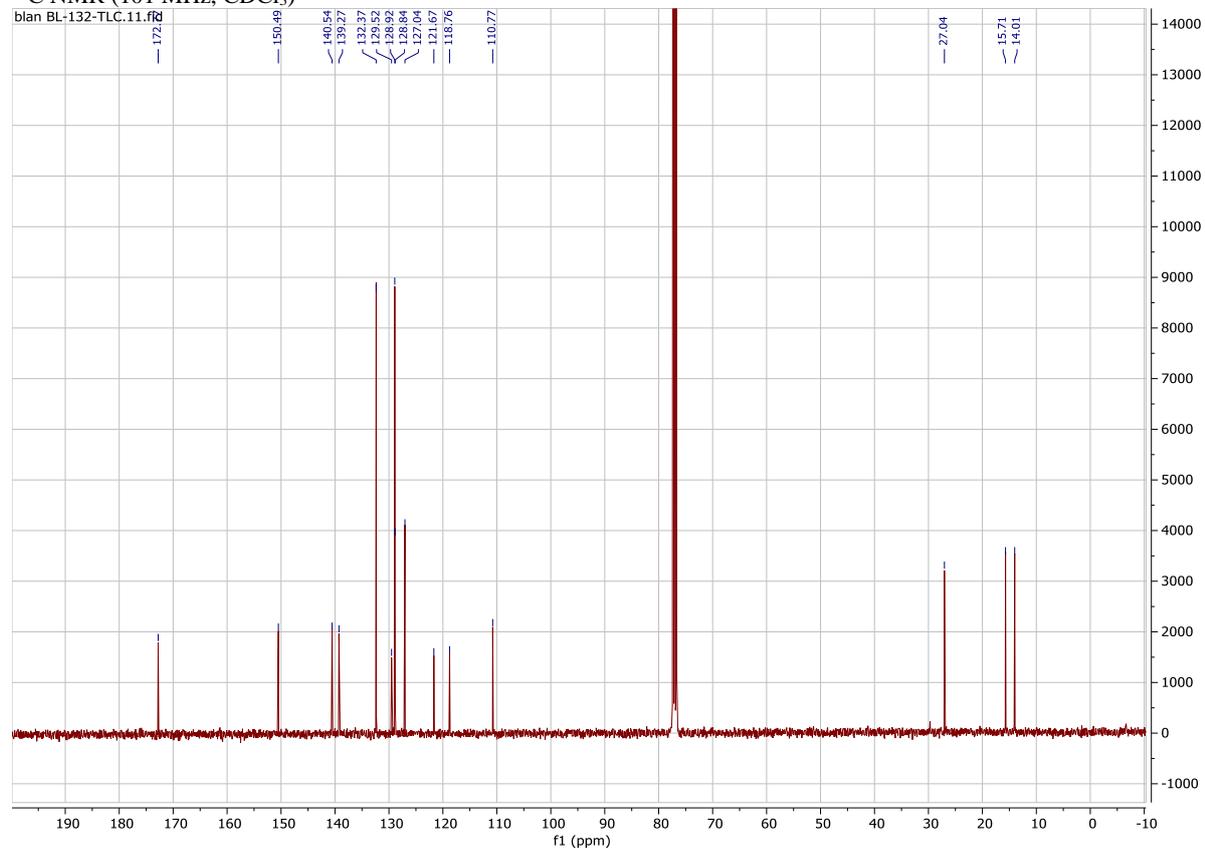


# 4-(2-(2-Ethyl-4-methylthiazol-5-yl)thiophen-3-yl)benzotrile (9b)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

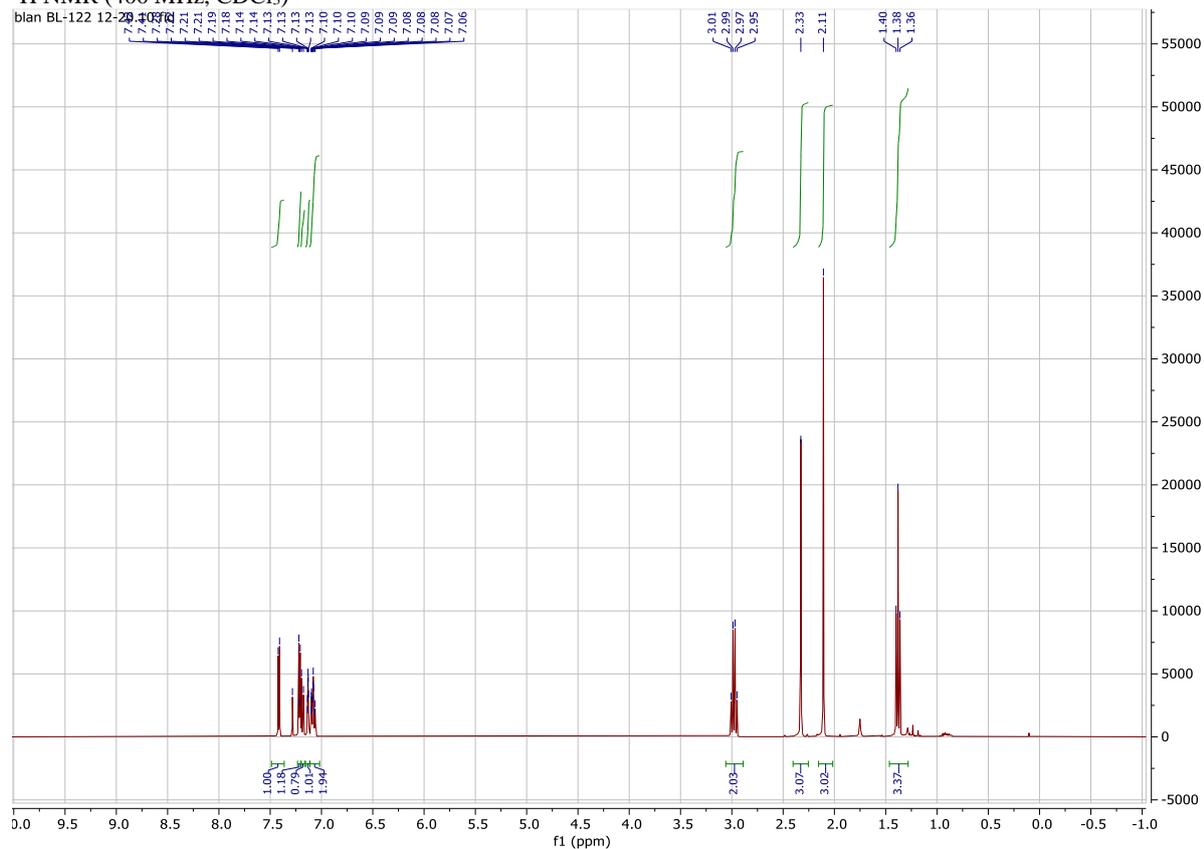


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

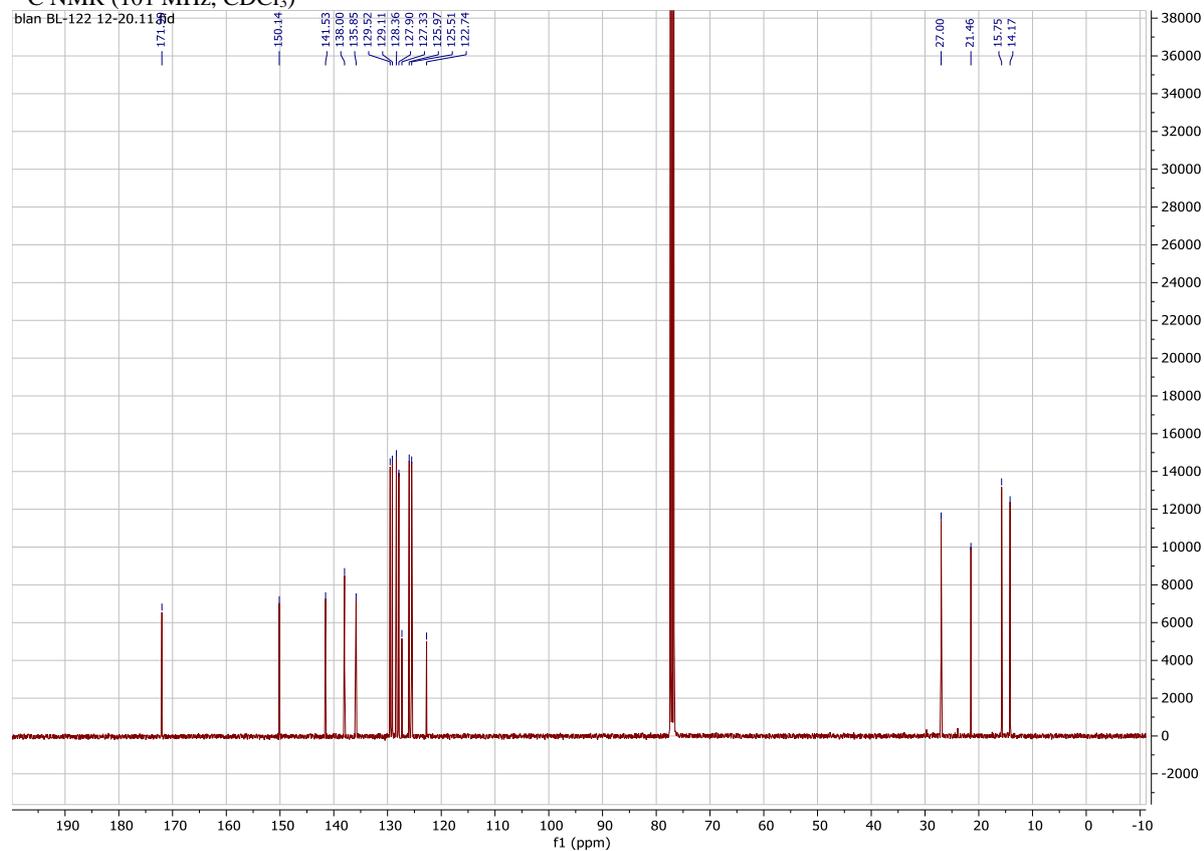


# 2-Ethyl-4-methyl-5-(3-(*m*-tolyl)thiophen-2-yl)thiazole (10b)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

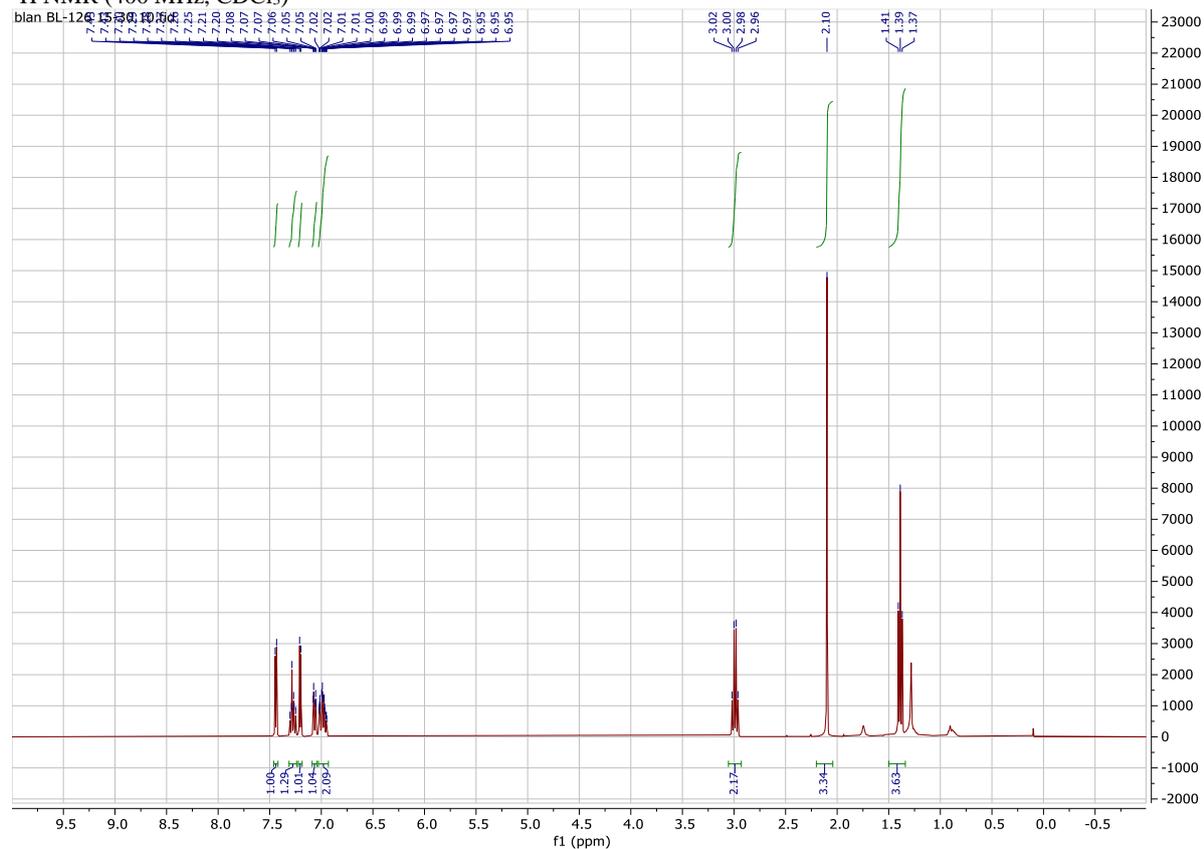


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

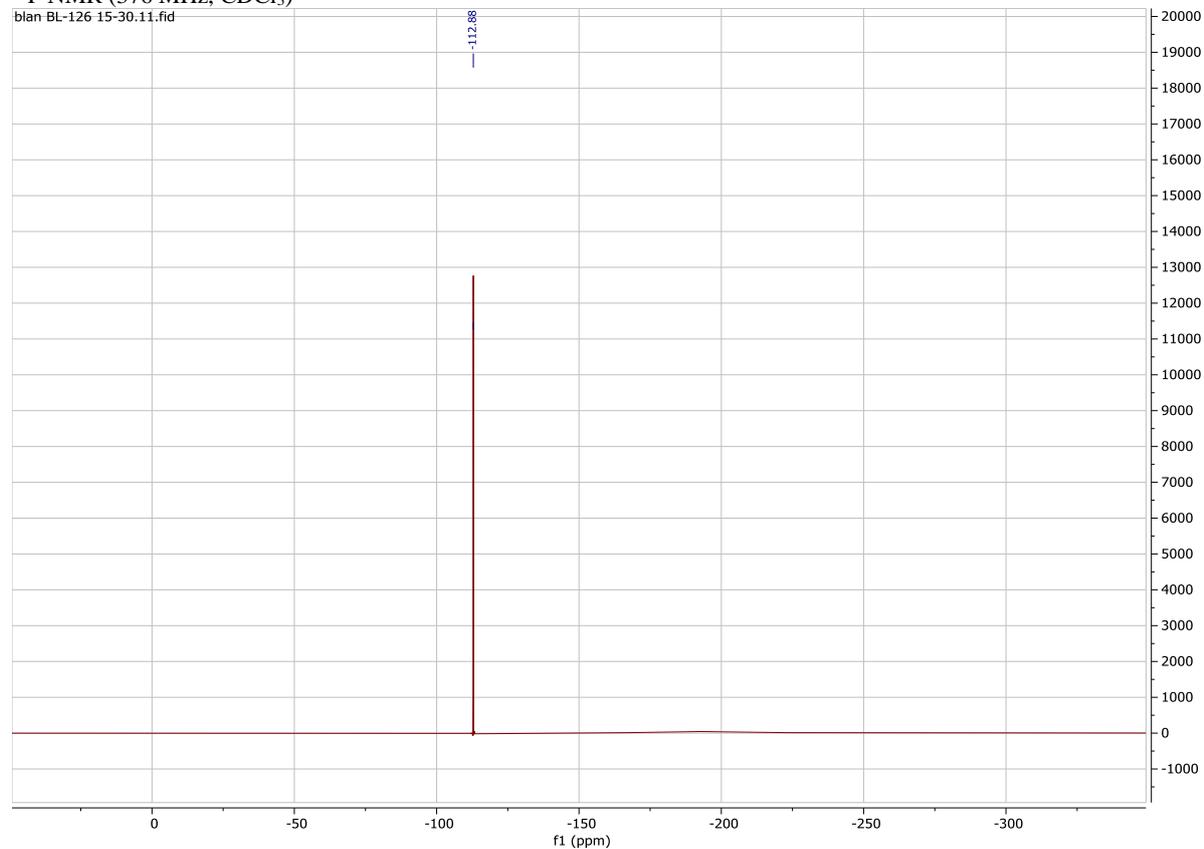


# 2-Ethyl-5-(3-(3-fluorophenyl)thiophen-2-yl)-4-methylthiazole (11b)

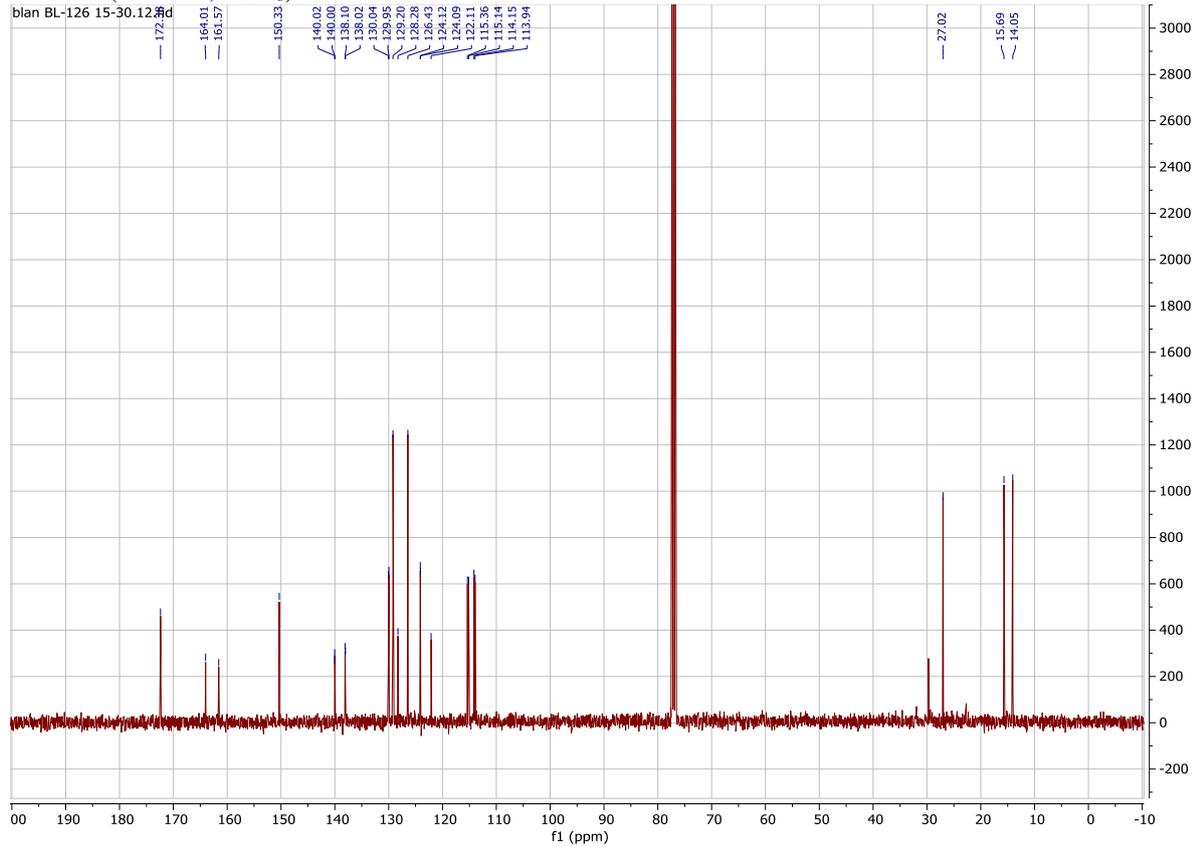
<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)



<sup>19</sup>F NMR (376 MHz, CDCl<sub>3</sub>)

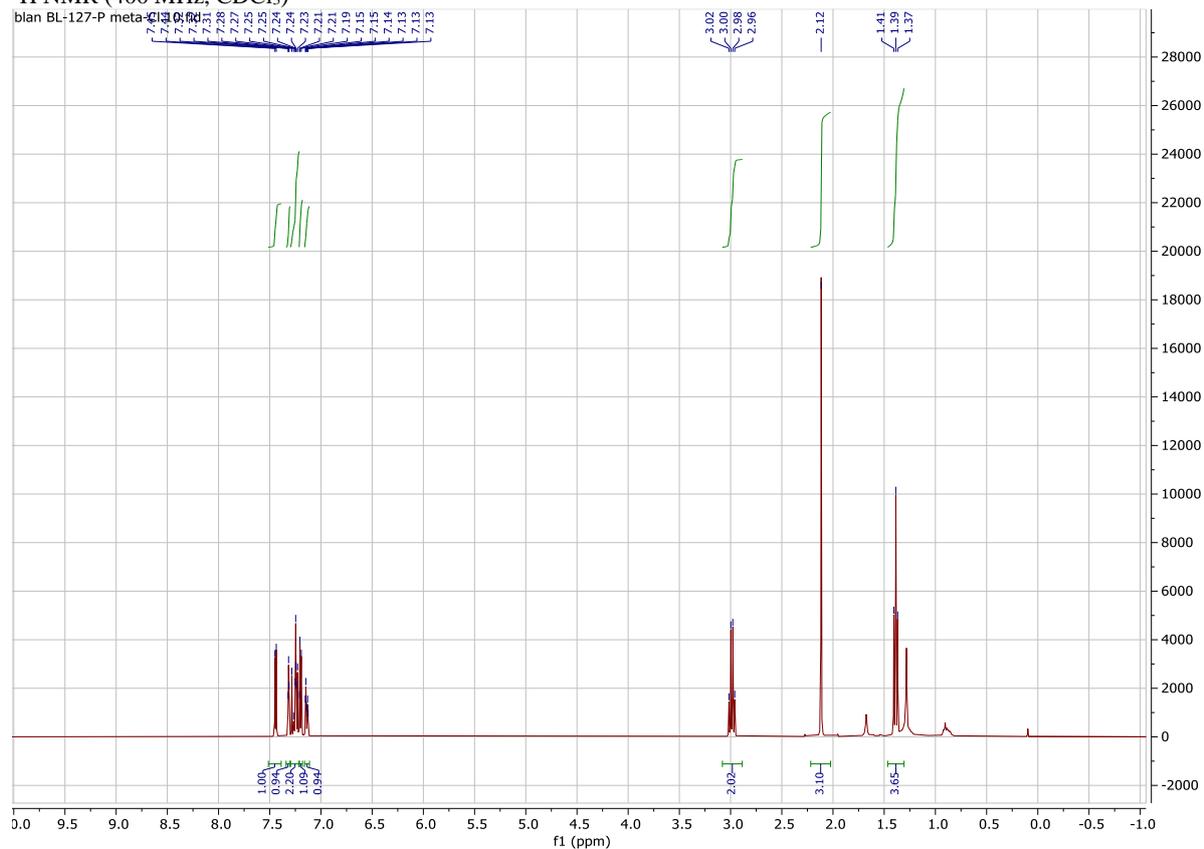


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

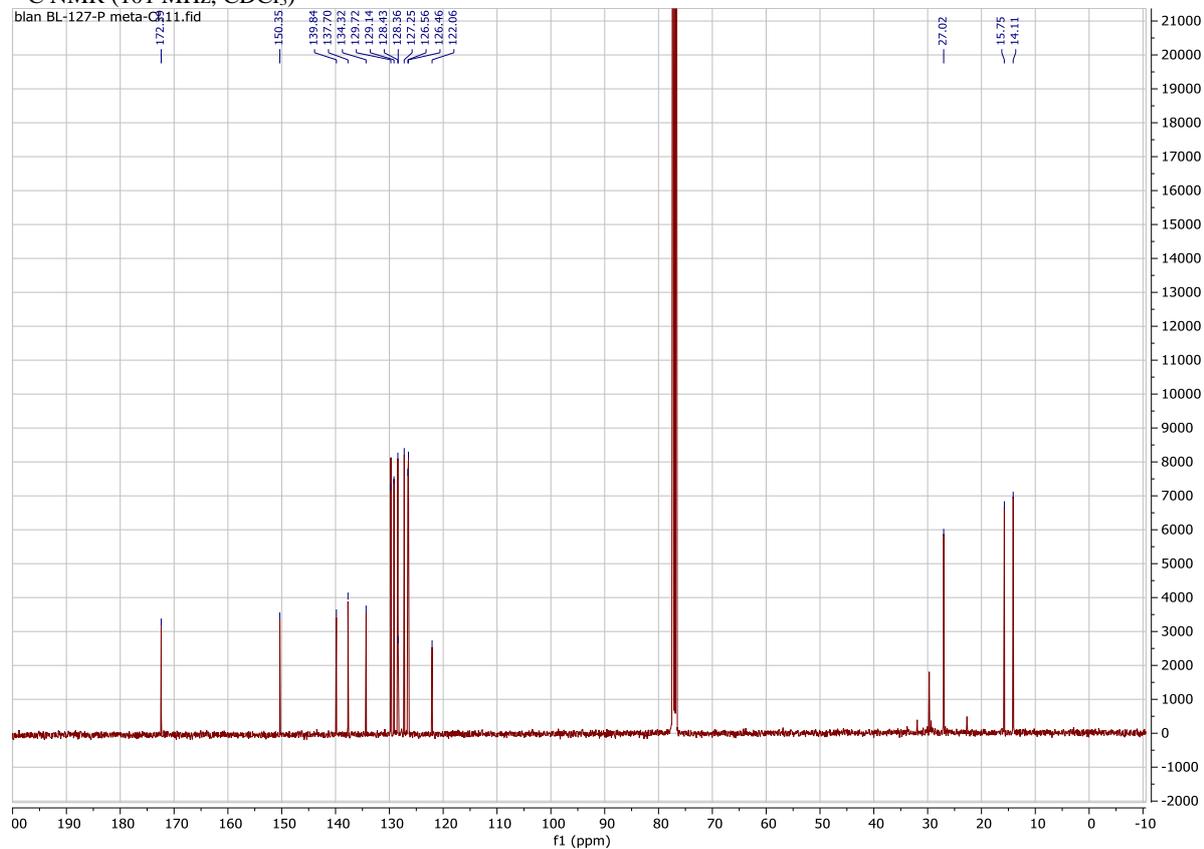


# 5-(3-(3-Chlorophenyl)thiophen-2-yl)-2-ethyl-4-methylthiazole (12b)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

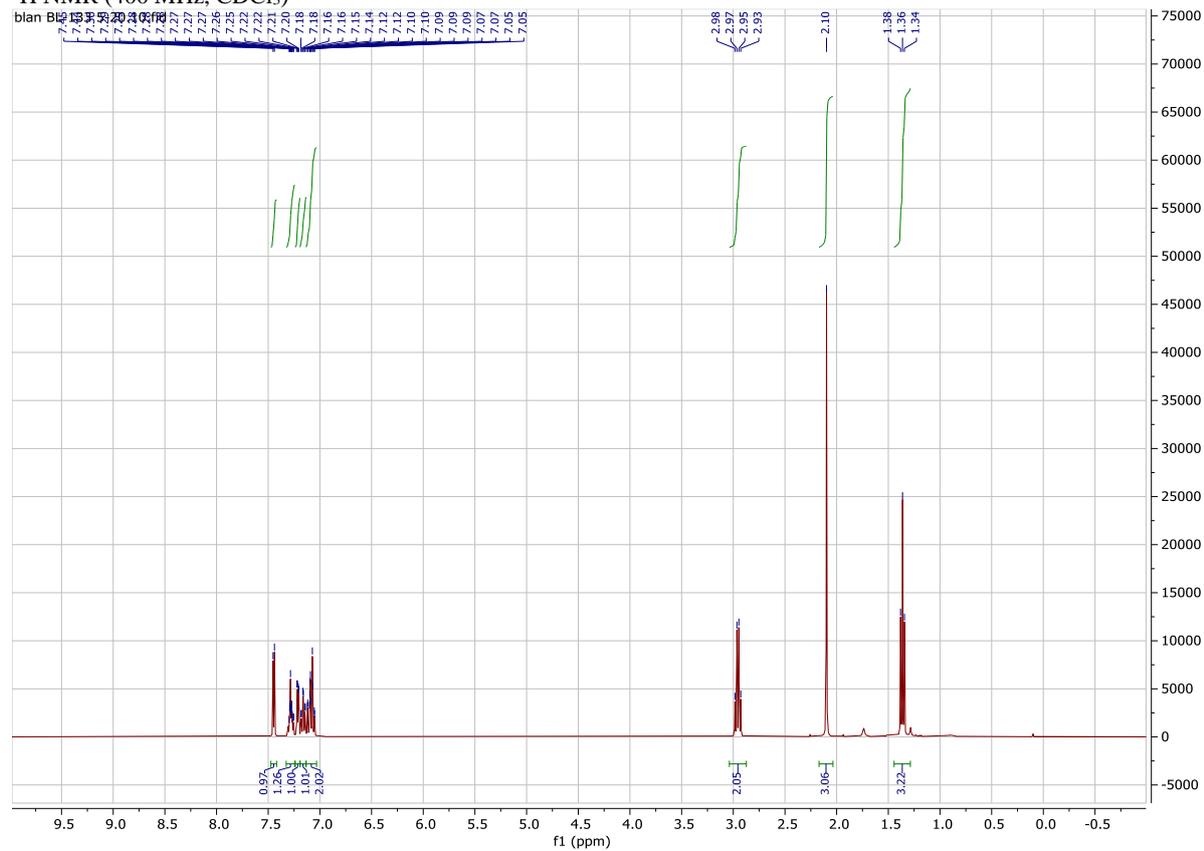


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

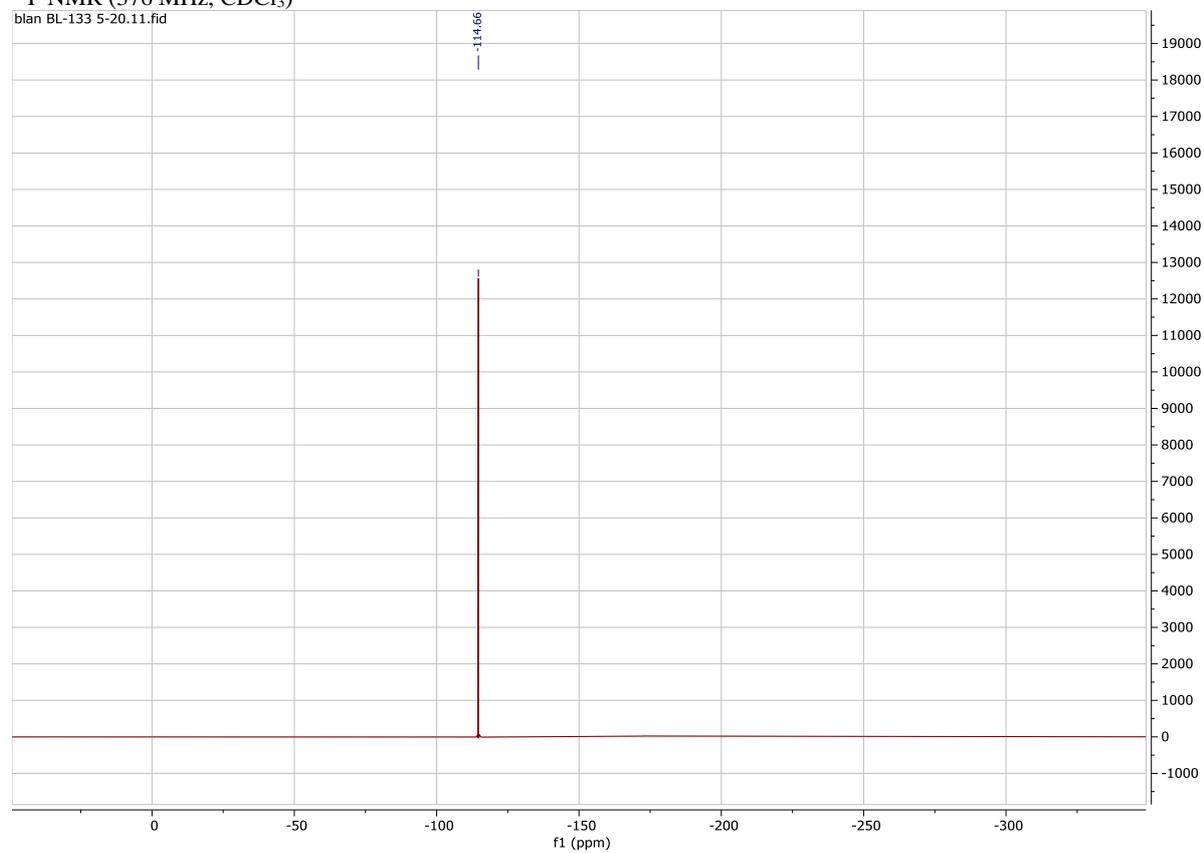


# 2-Ethyl-5-(3-(2-fluorophenyl)thiophen-2-yl)-4-methylthiazole (13b)

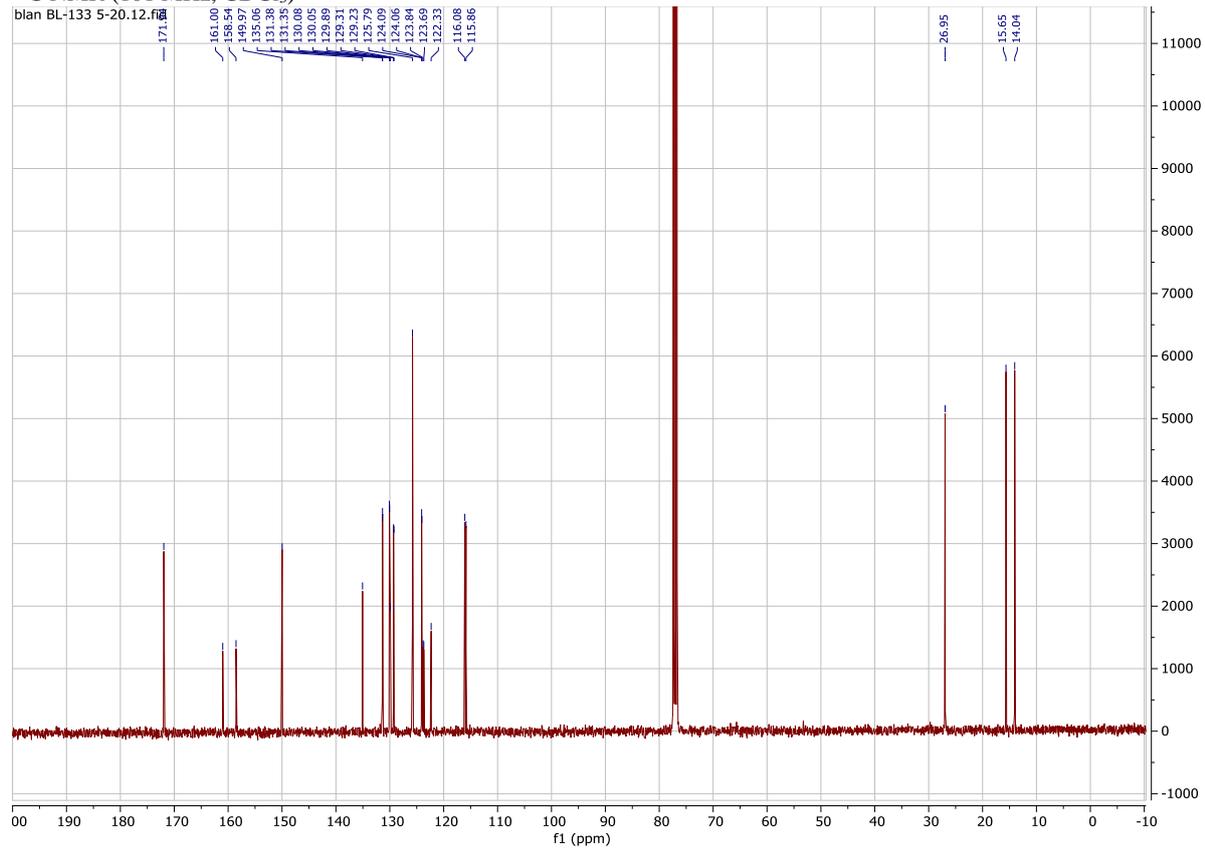
<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)



<sup>19</sup>F NMR (376 MHz, CDCl<sub>3</sub>)

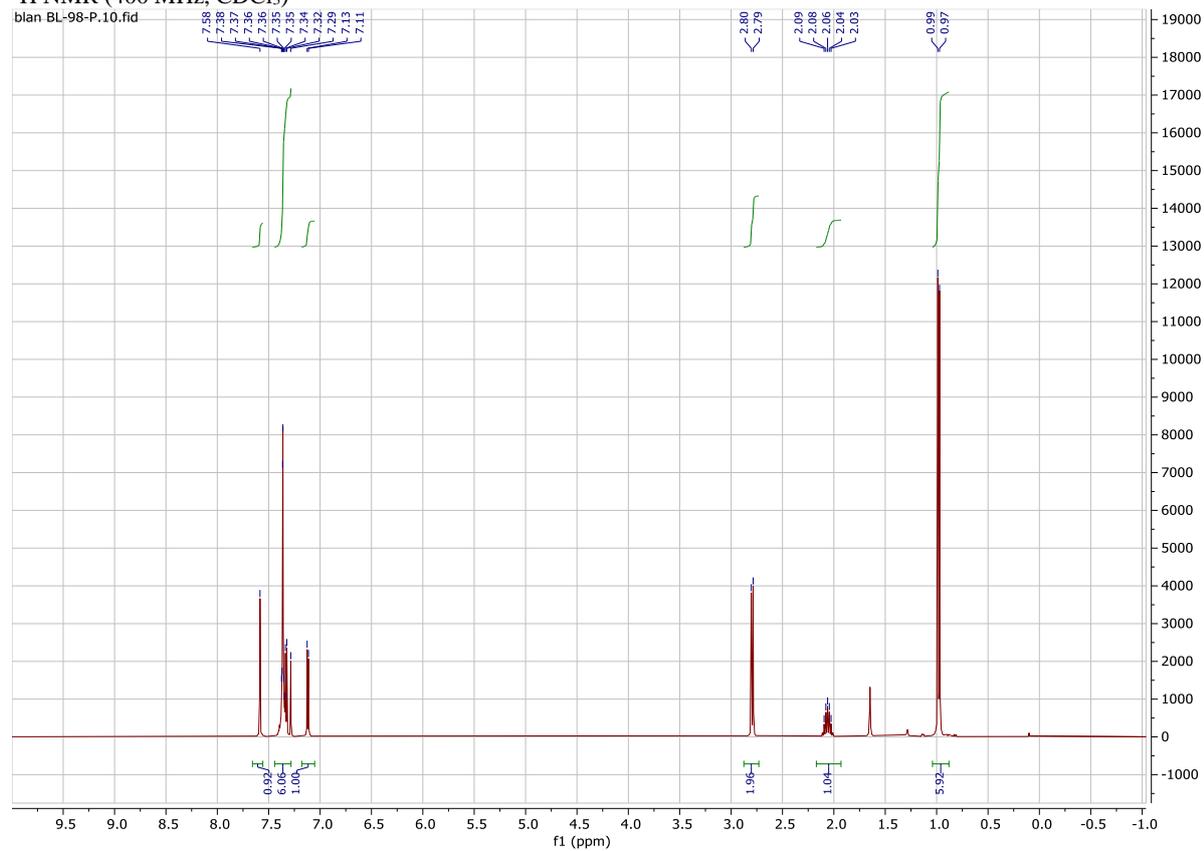


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

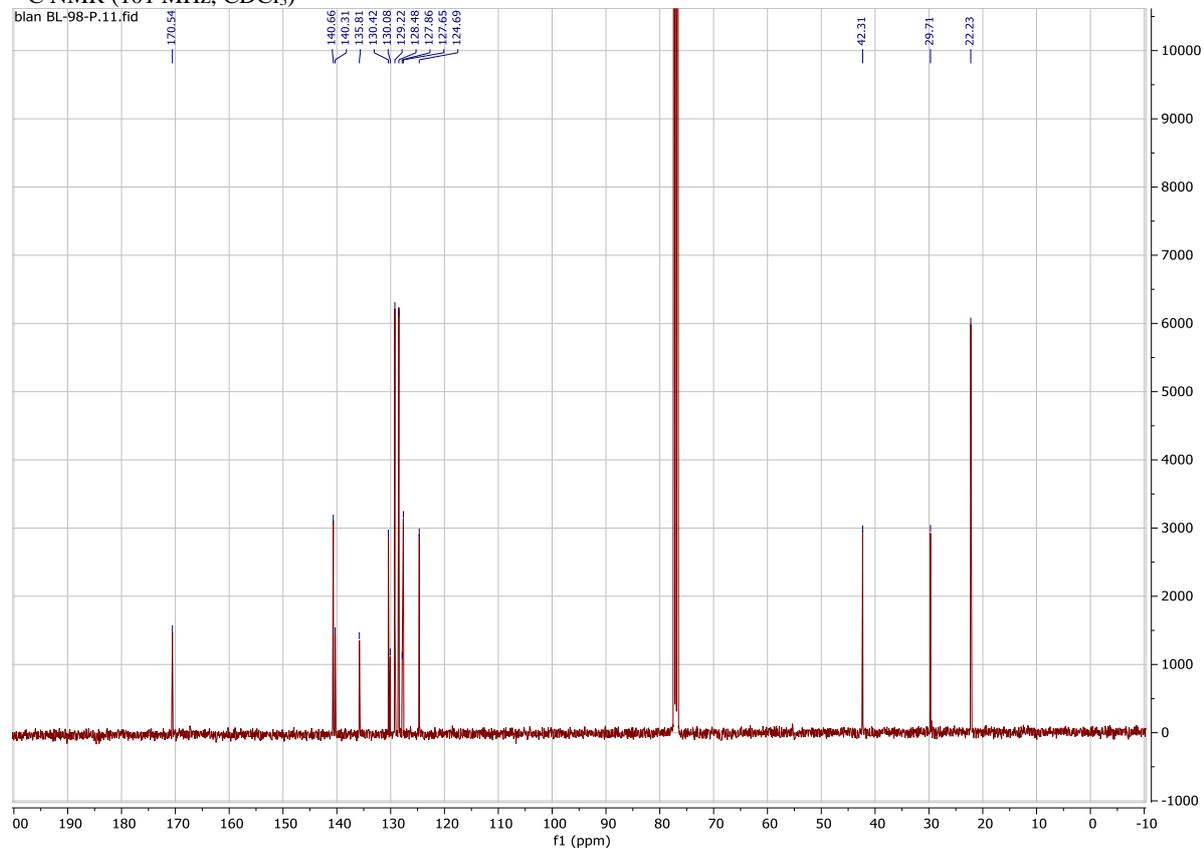


# 2-Isobutyl-5-(3-phenylthiophen-2-yl)thiazole (14b)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

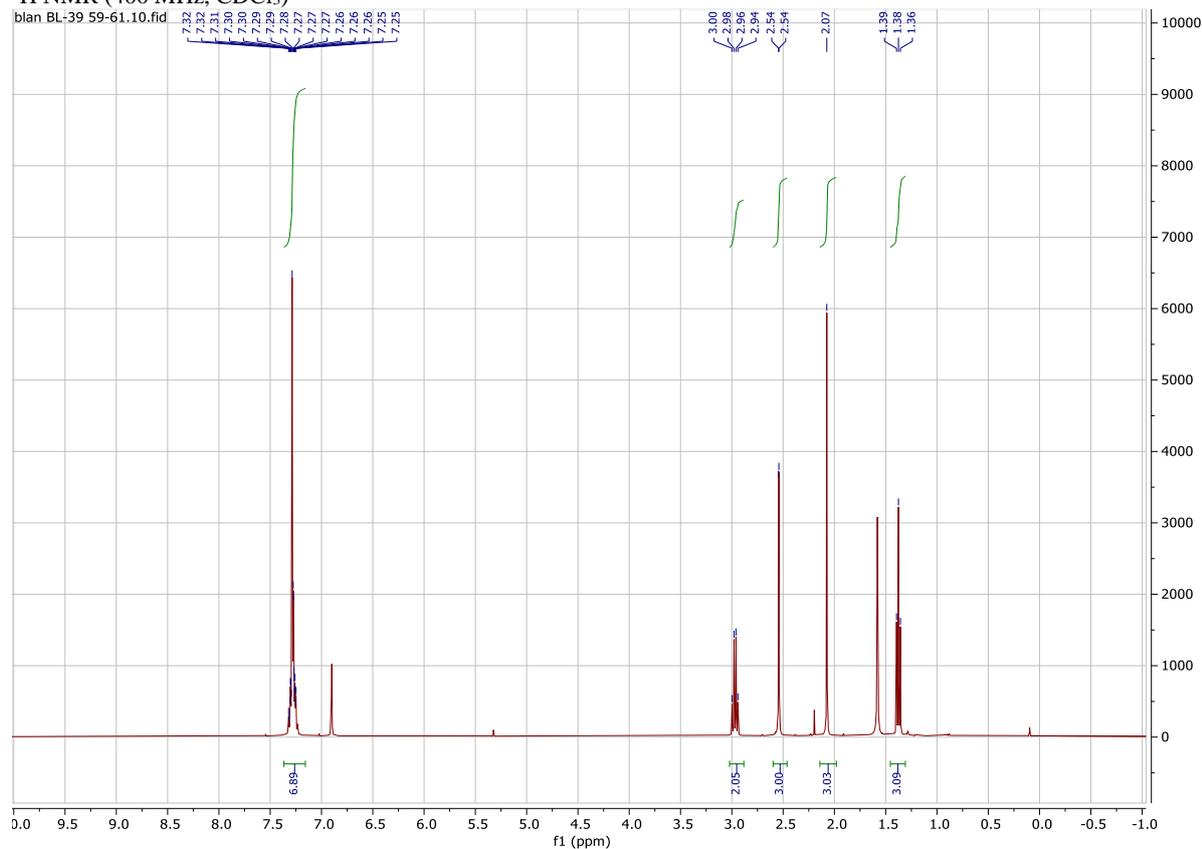


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

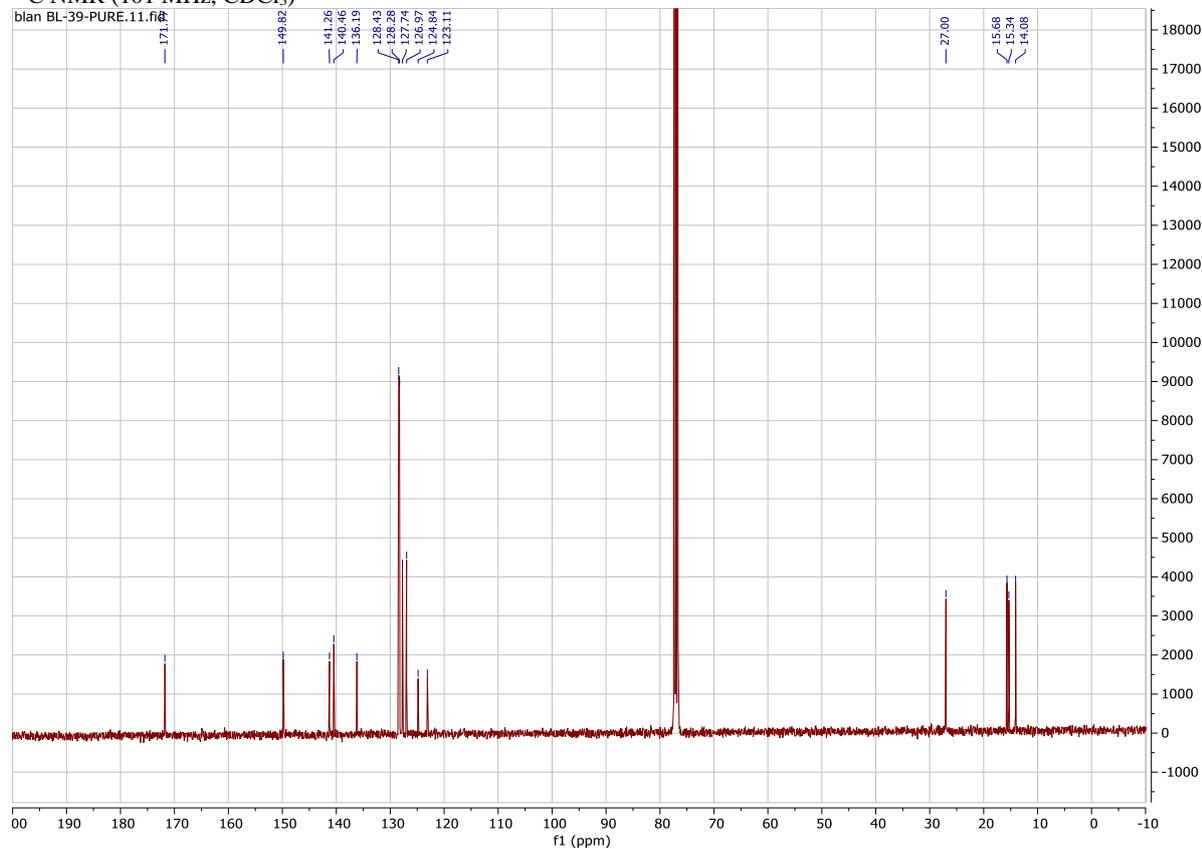


# 2-Ethyl-4-methyl-5-(5-methyl-3-phenylthiophen-2-yl)thiazole (15b)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

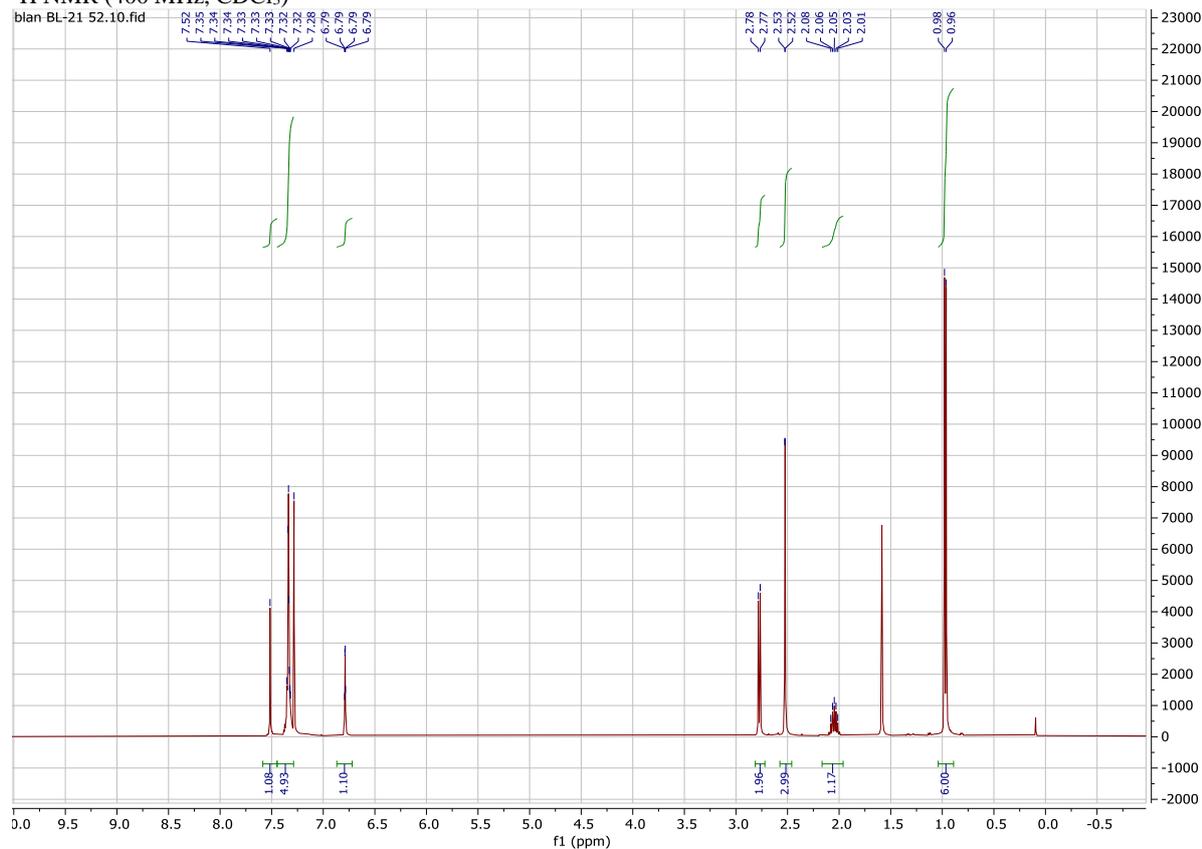


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

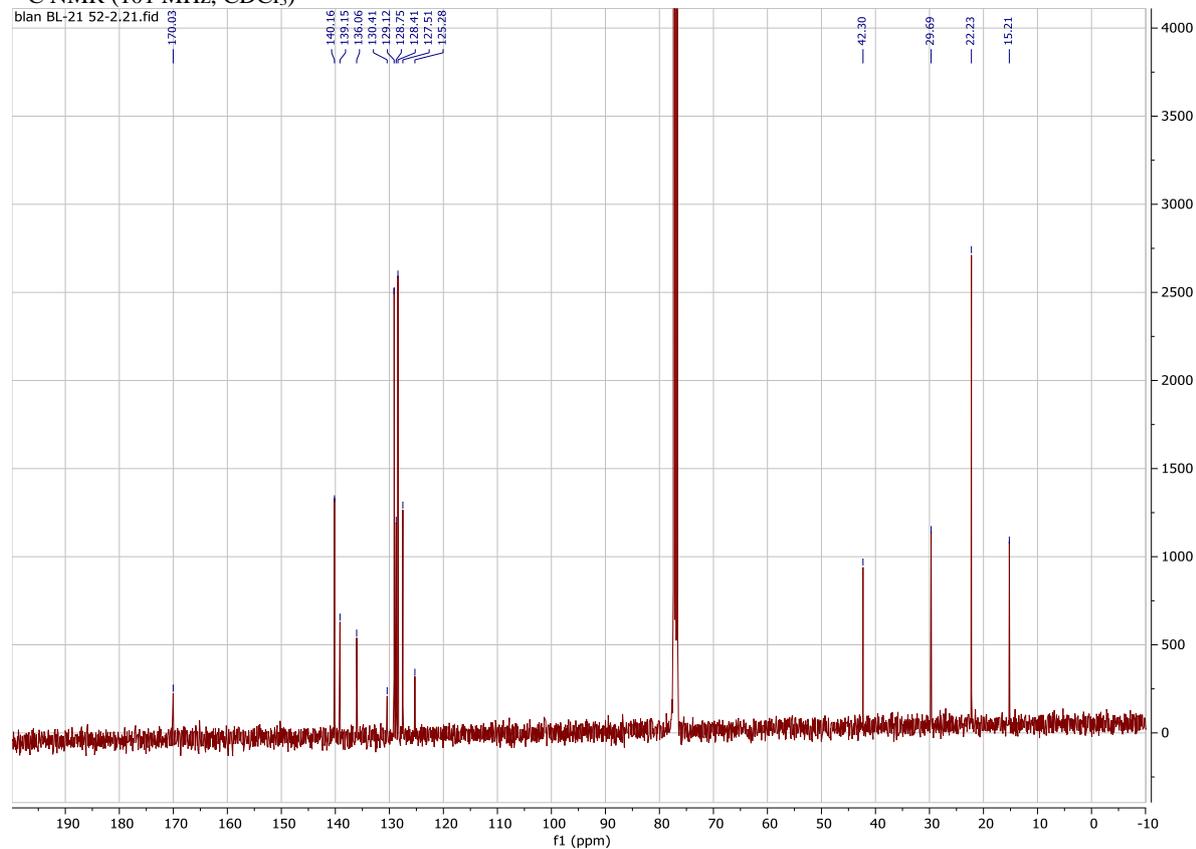


# 2-Isobutyl-5-(5-methyl-3-phenylthiophen-2-yl)thiazole (16b)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

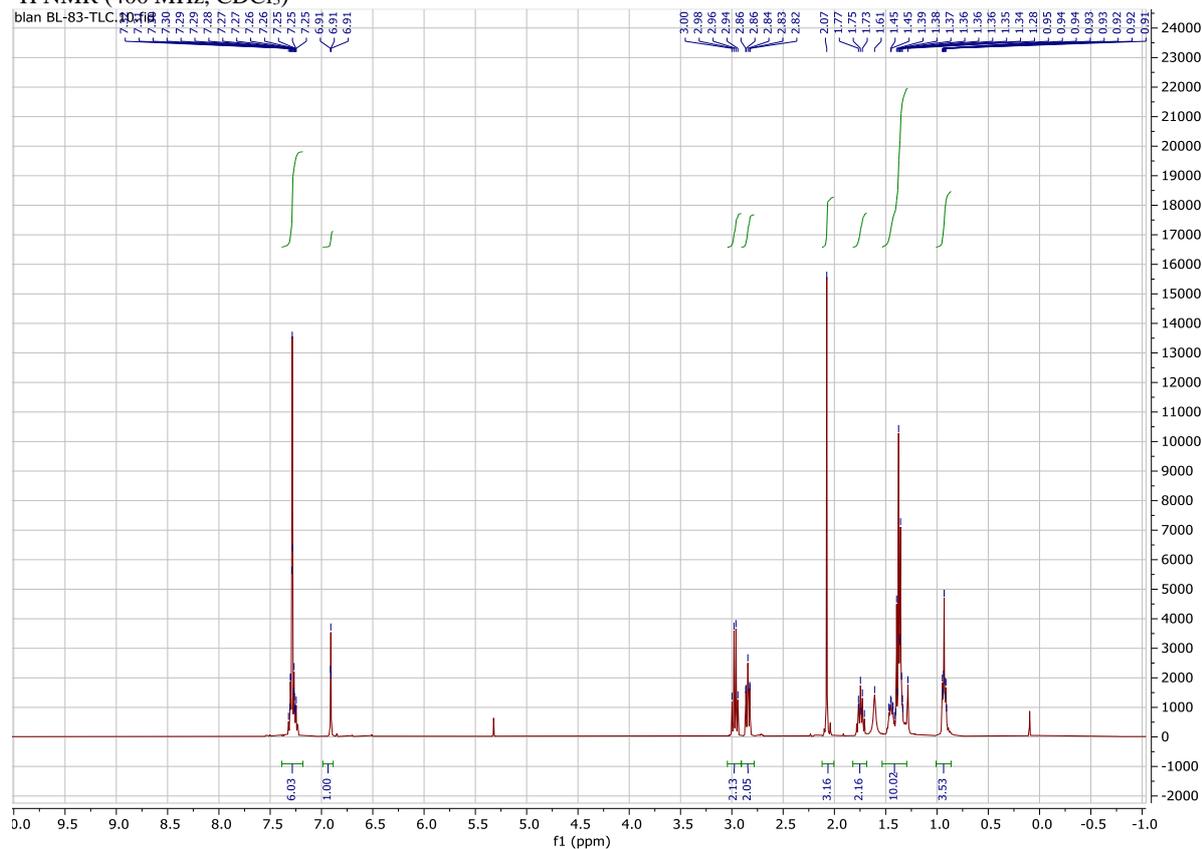


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

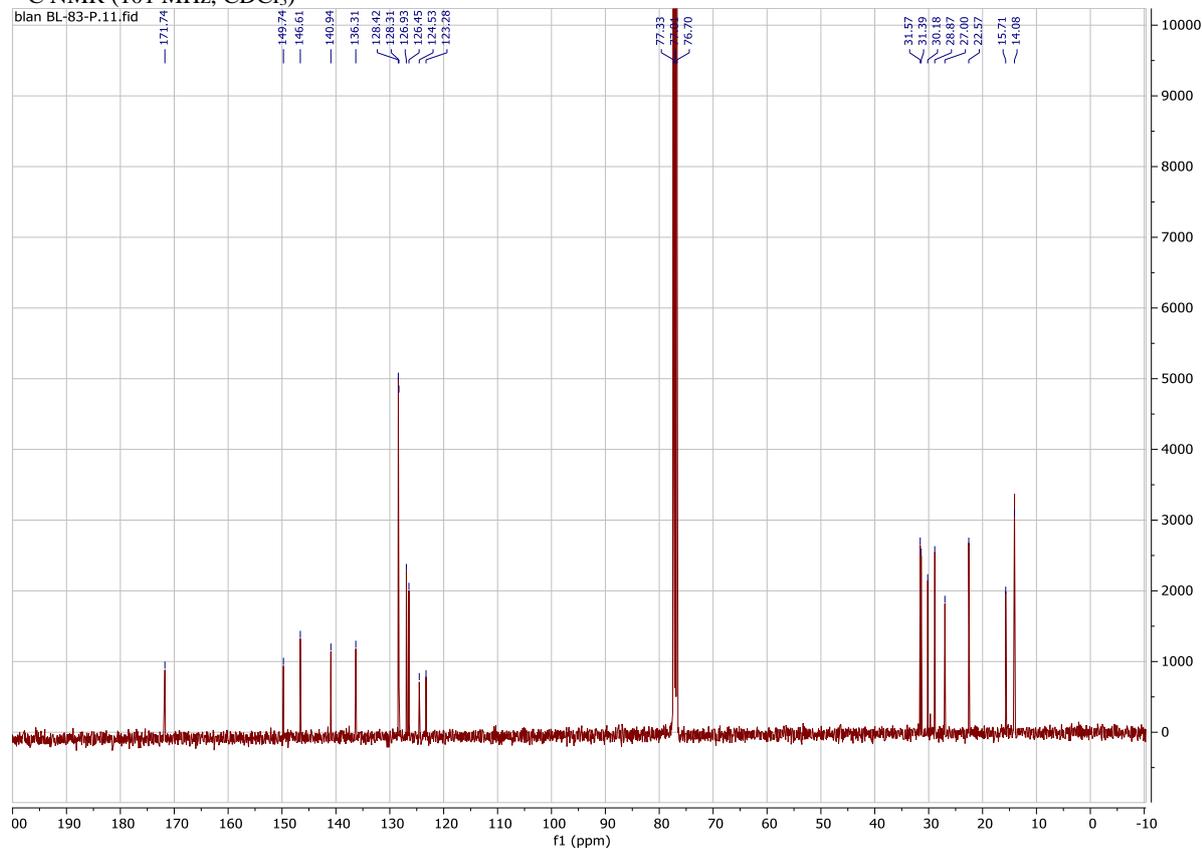


# 2-Ethyl-5-(5-hexyl-3-phenylthiophen-2-yl)-4-methylthiazole (17b)

$^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ )

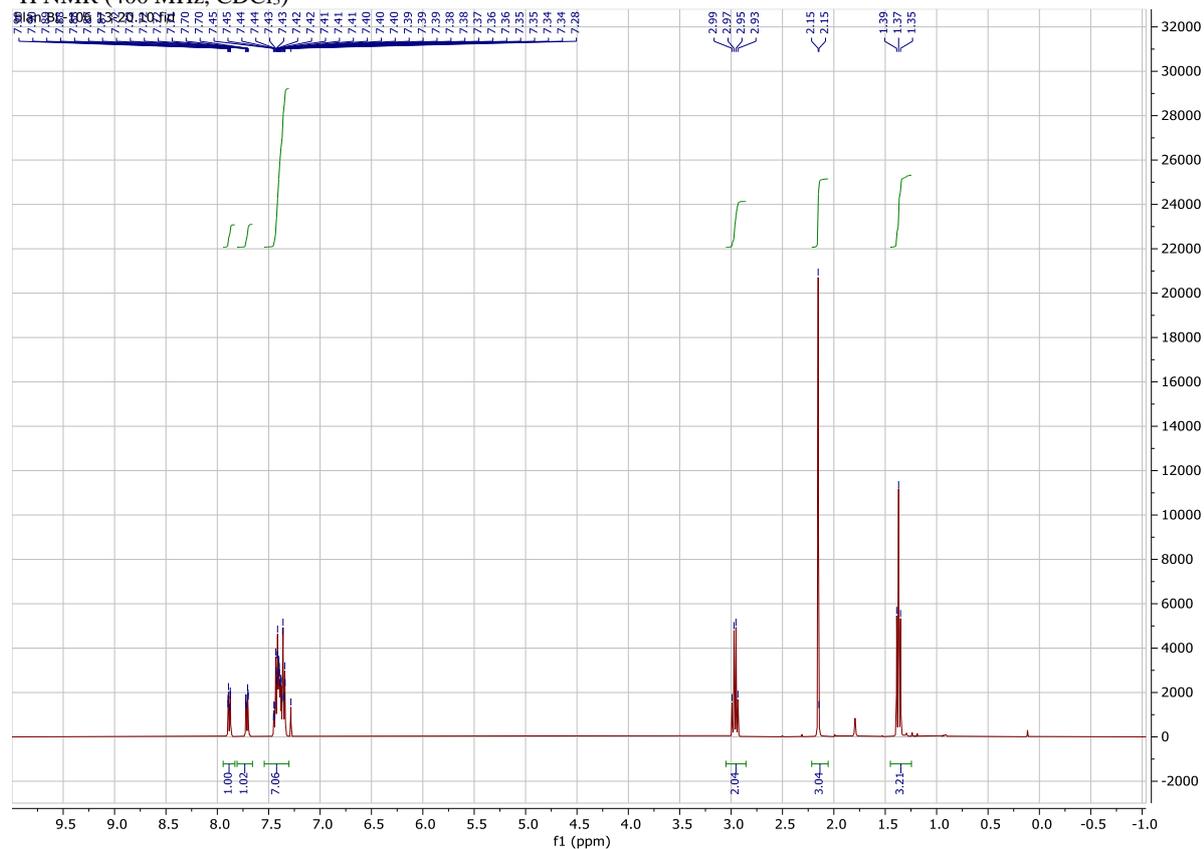


$^{13}\text{C}$  NMR (101 MHz,  $\text{CDCl}_3$ )

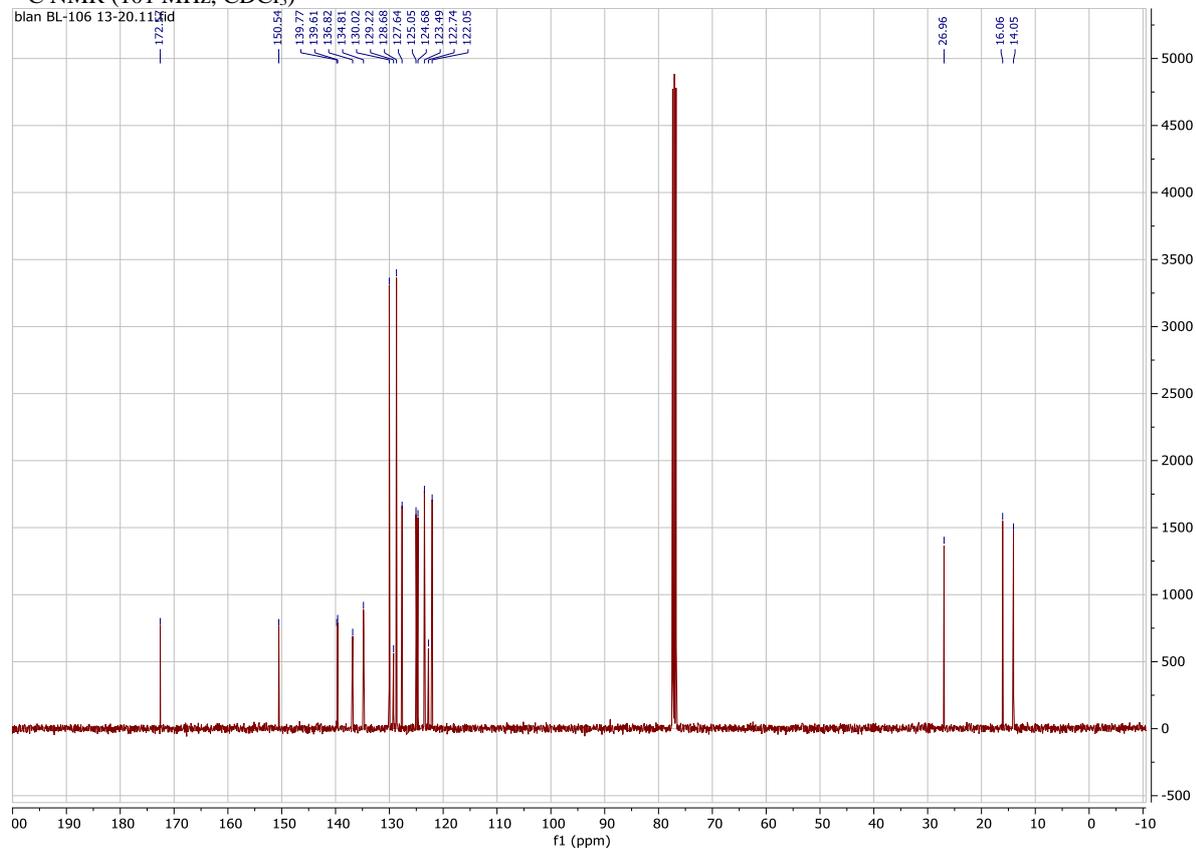


# 2-Ethyl-4-methyl-5-(3-phenylbenzo[*b*]thiophen-2-yl)thiazole (18b)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

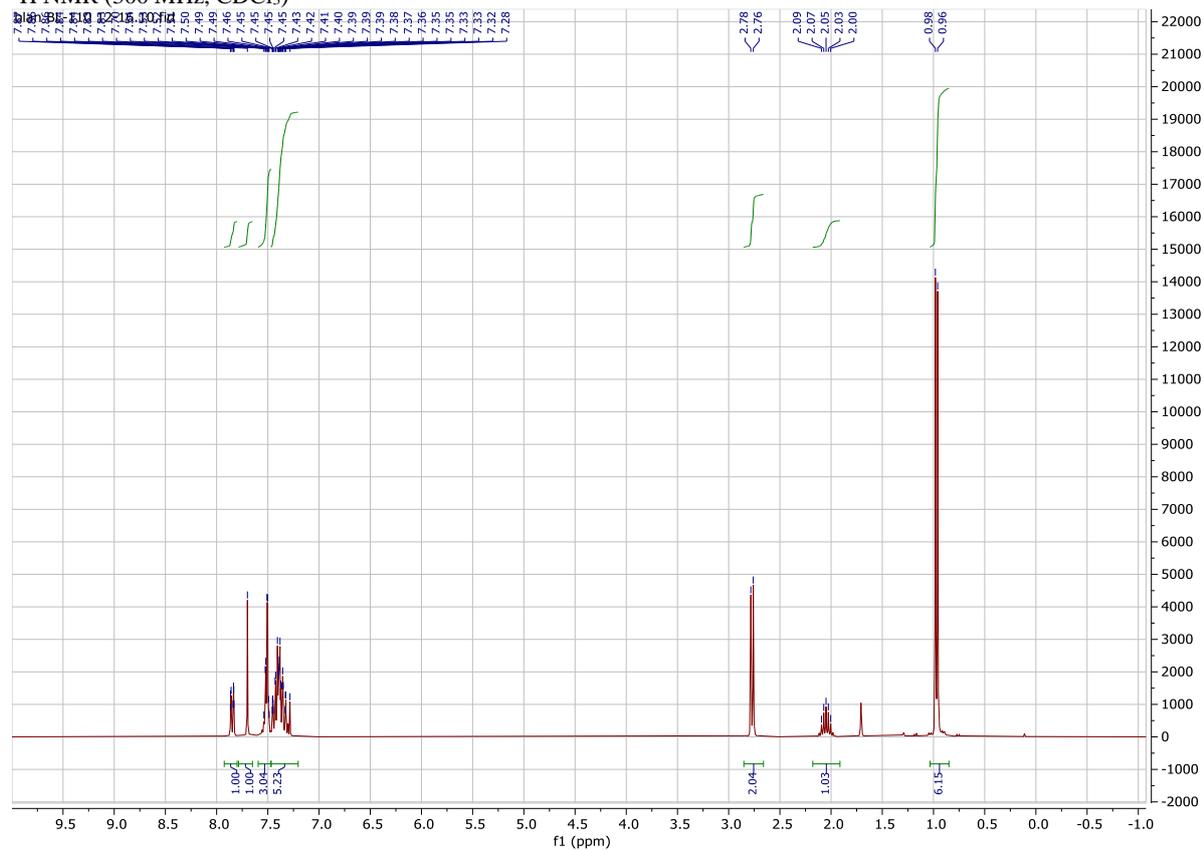


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

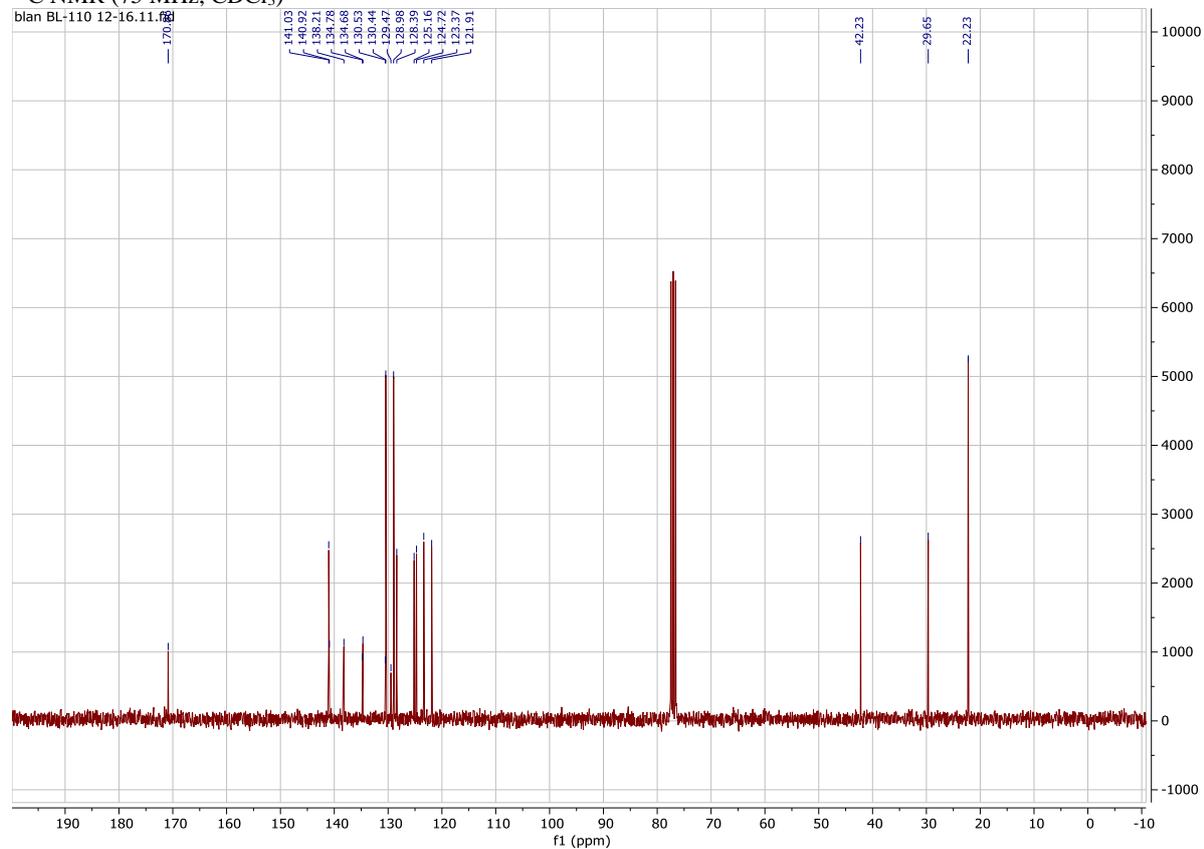


# 2-Isobutyl-5-(3-phenylbenzo[*b*]thiophen-2-yl)thiazole (19b)

<sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>)

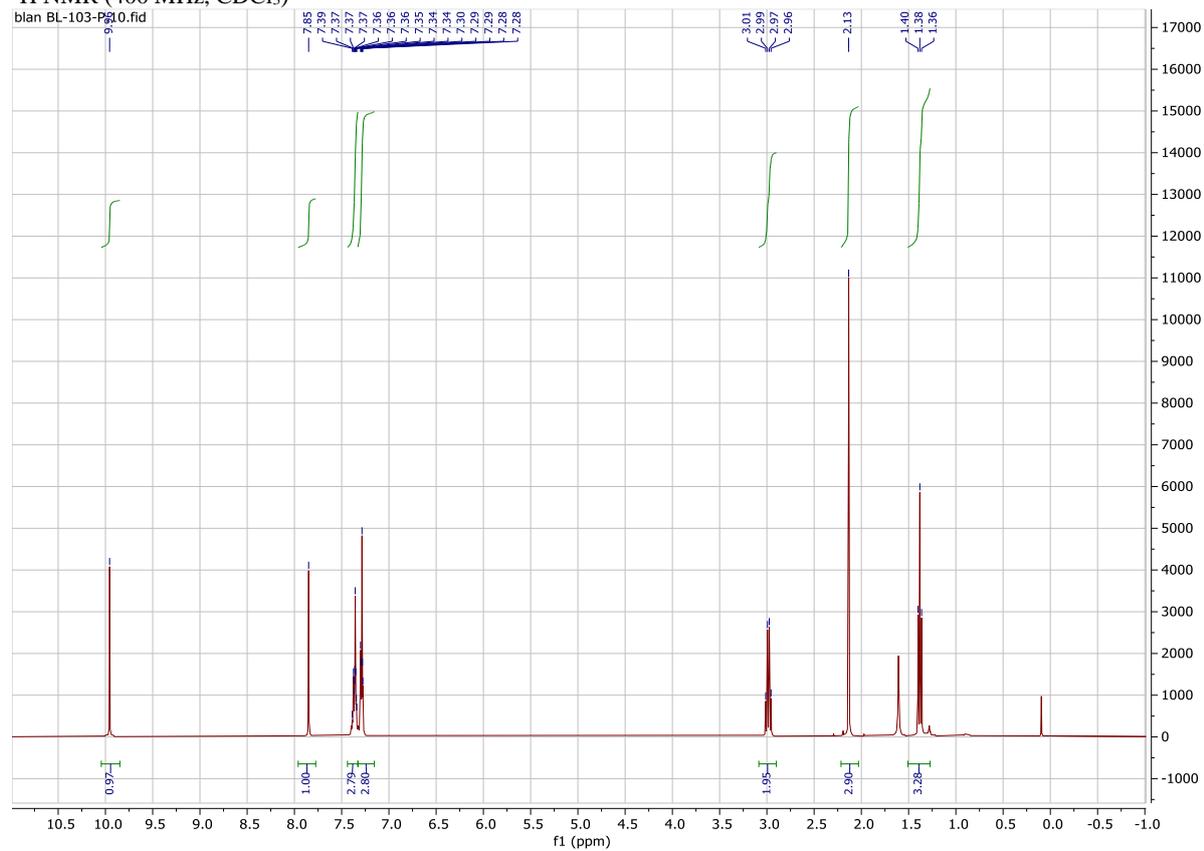


<sup>13</sup>C NMR (75 MHz, CDCl<sub>3</sub>)

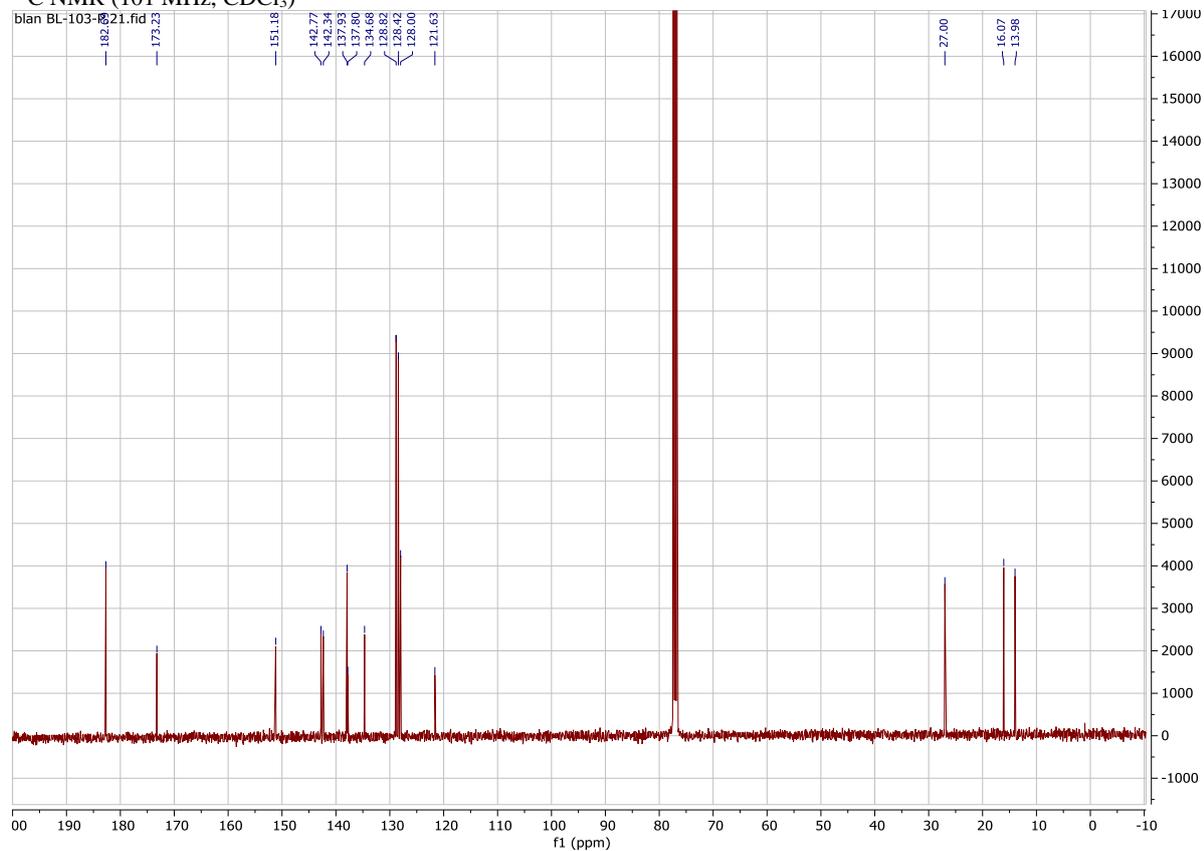


# 5-(2-Ethyl-4-methylthiazol-5-yl)-4-phenylthiophene-2-carbaldehyde (20b)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

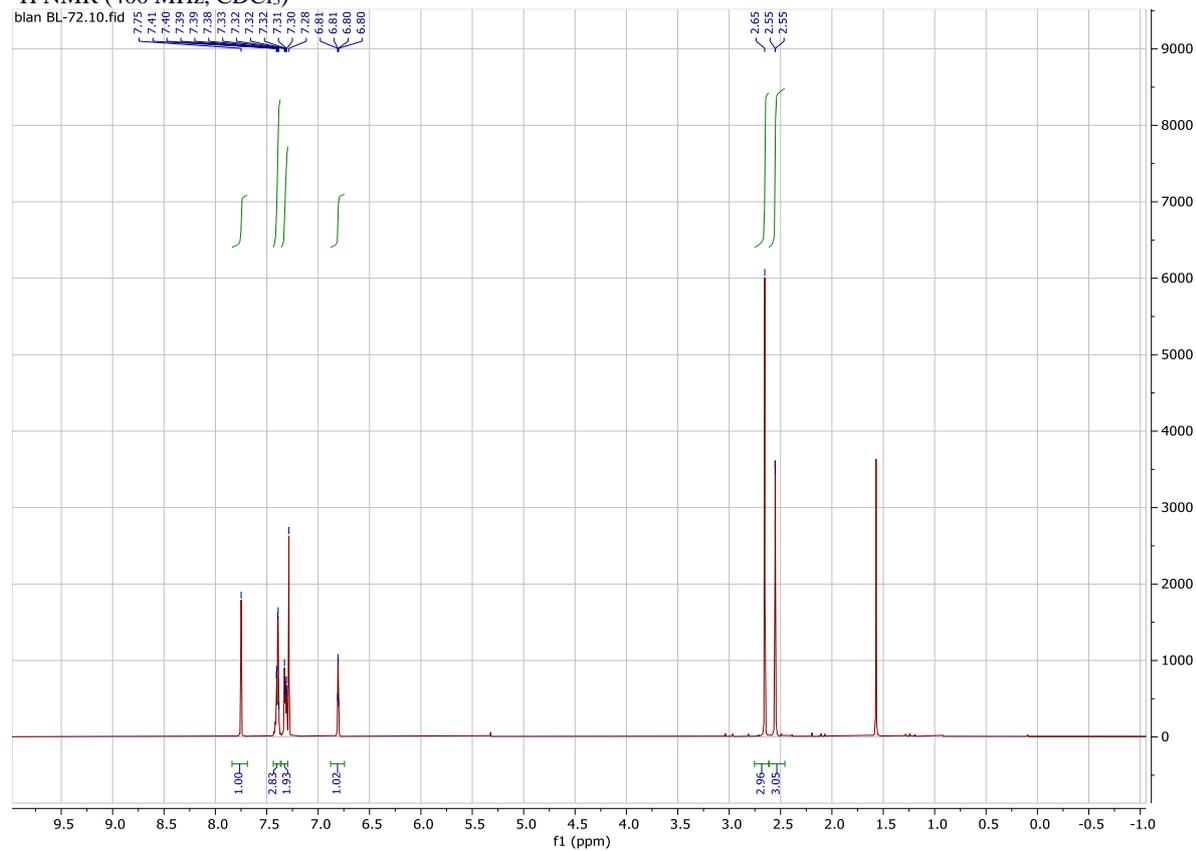


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

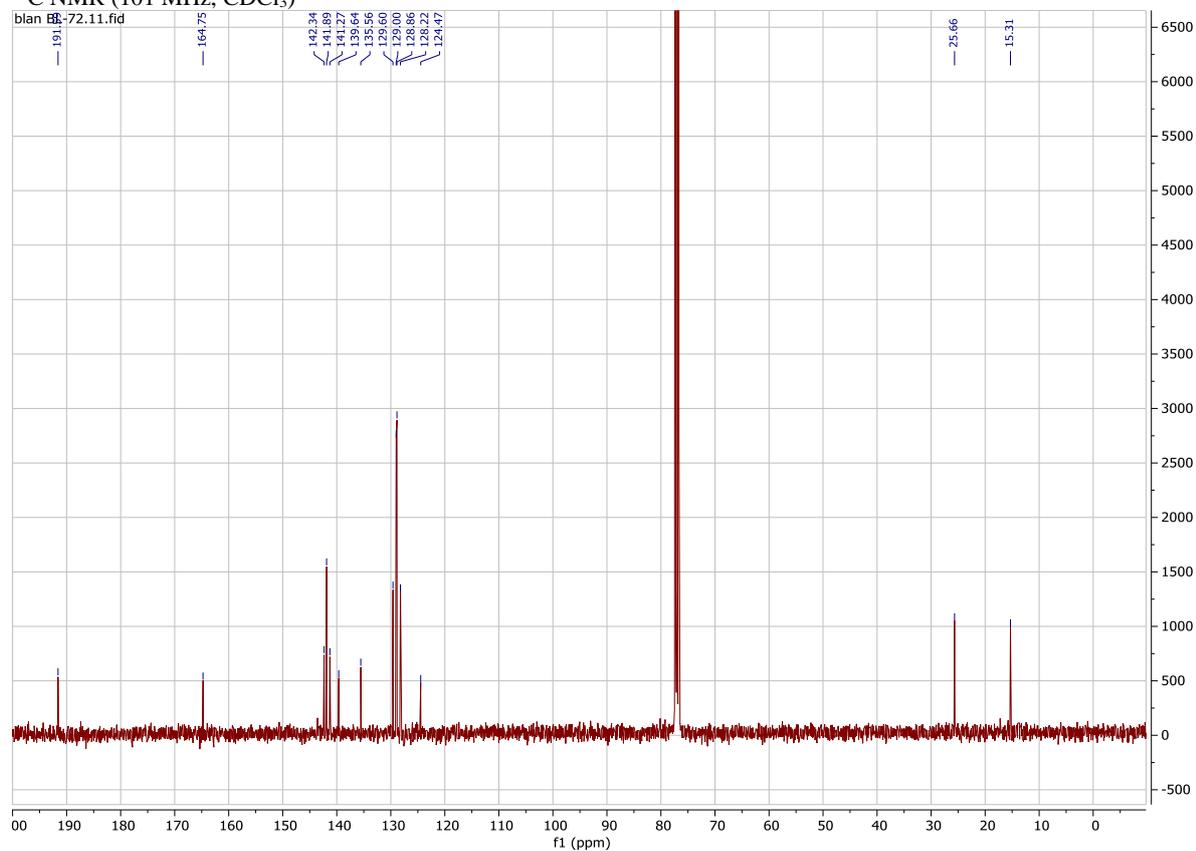


# 1-(5-(5-Methyl-3-phenylthiophen-2-yl)thiazol-2-yl)ethan-1-one (21b)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

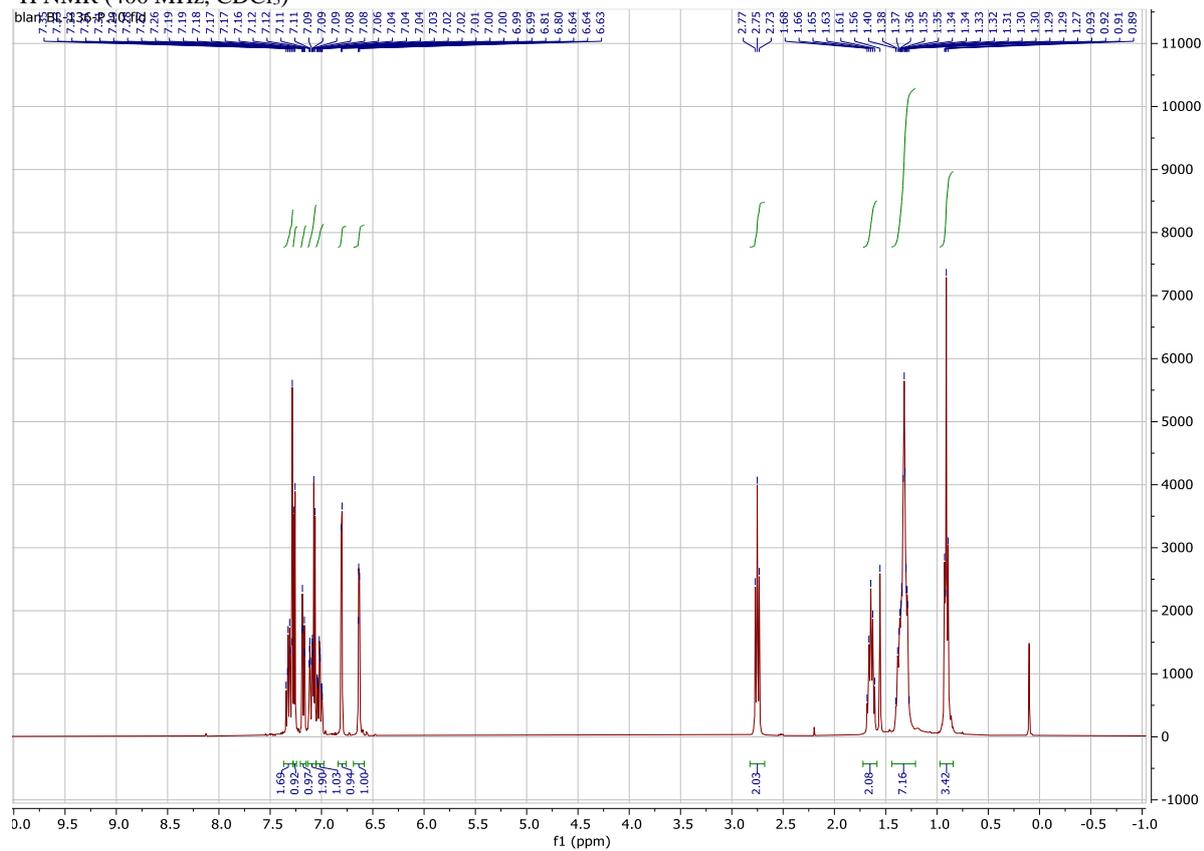


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

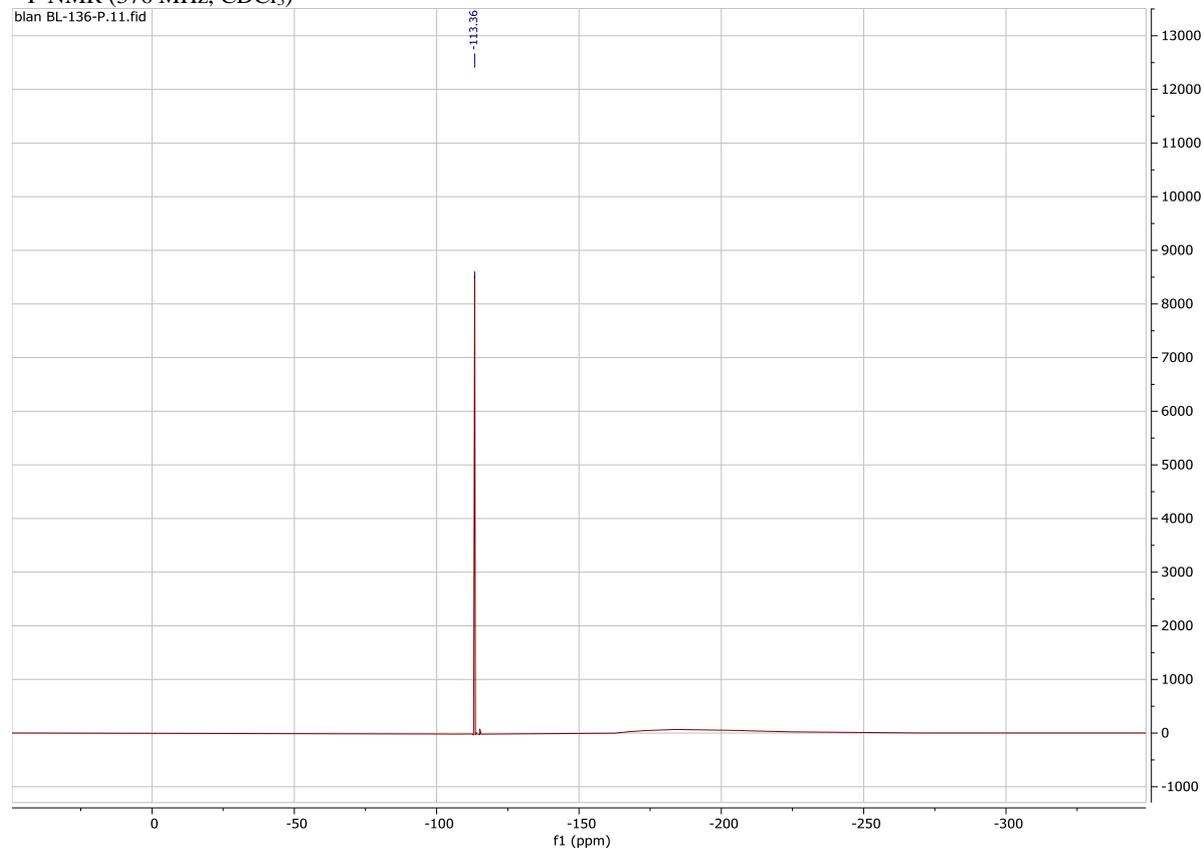


### 3-(3-Fluorophenyl)-5'-hexyl-2,2'-bithiophene (22b)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

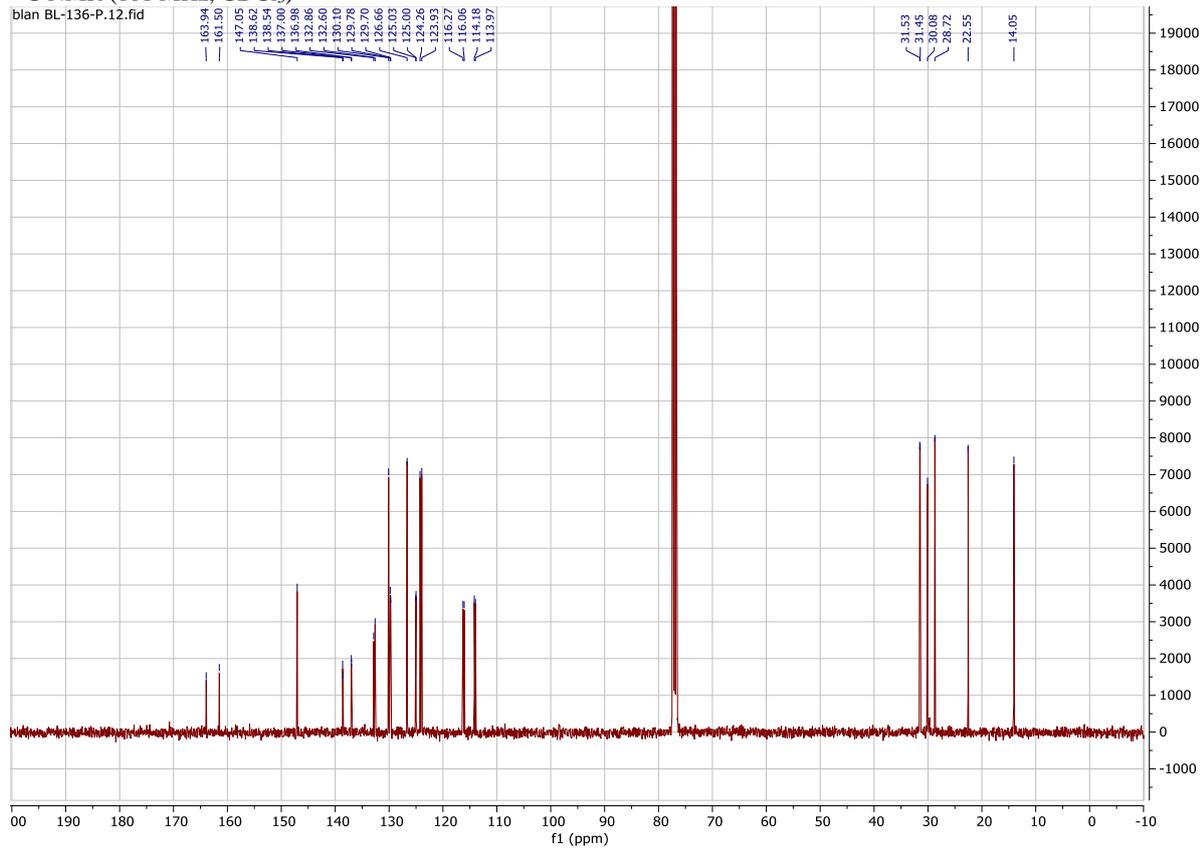


<sup>19</sup>F NMR (376 MHz, CDCl<sub>3</sub>)



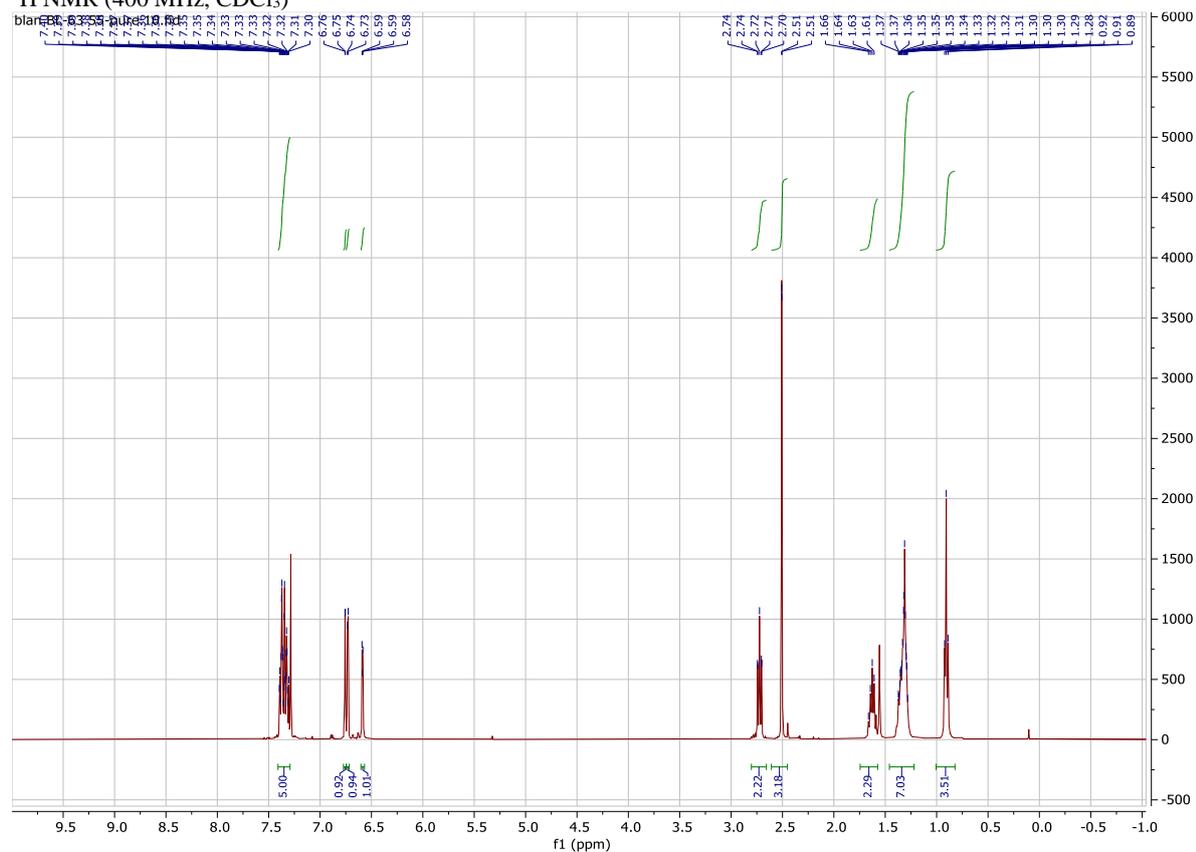
<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

blan BL-136-P.12.fid

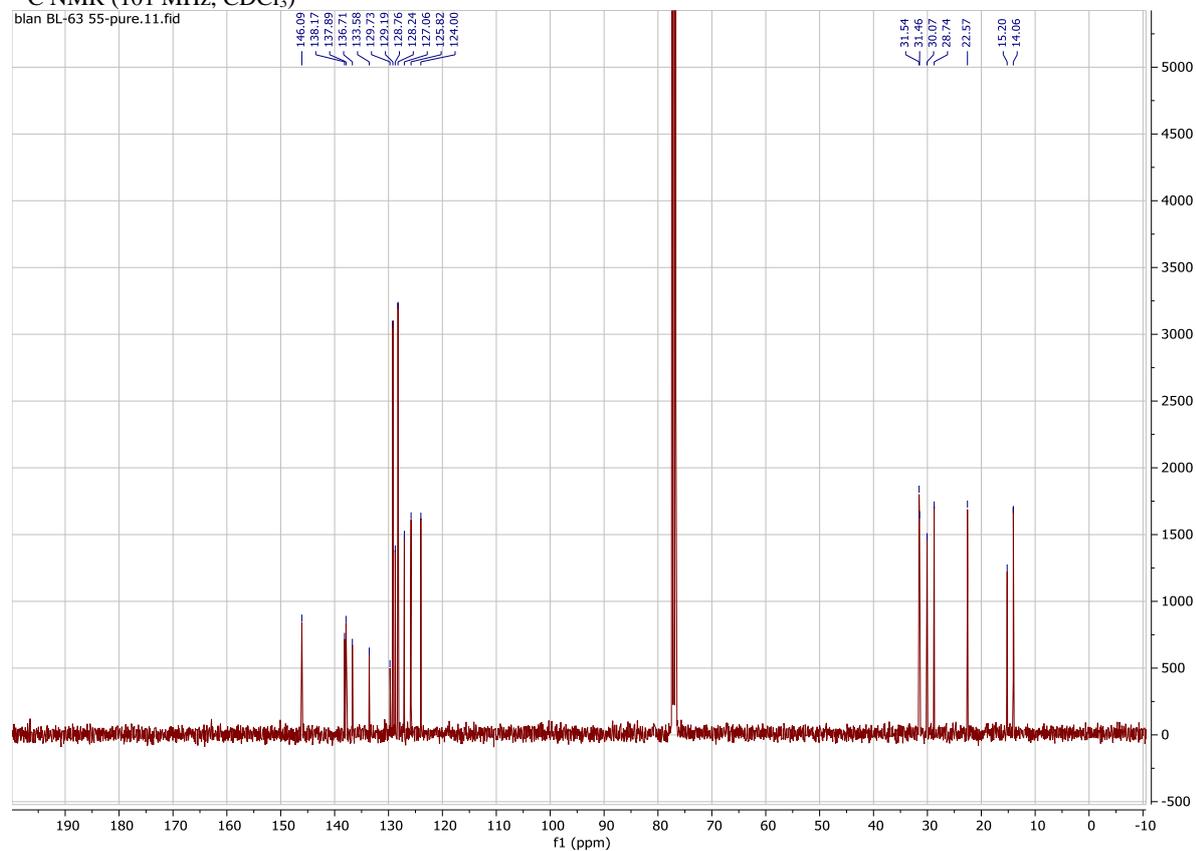


# 5'-Hexyl-5-methyl-3-phenyl-2,2'-bithiophene (23b)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)



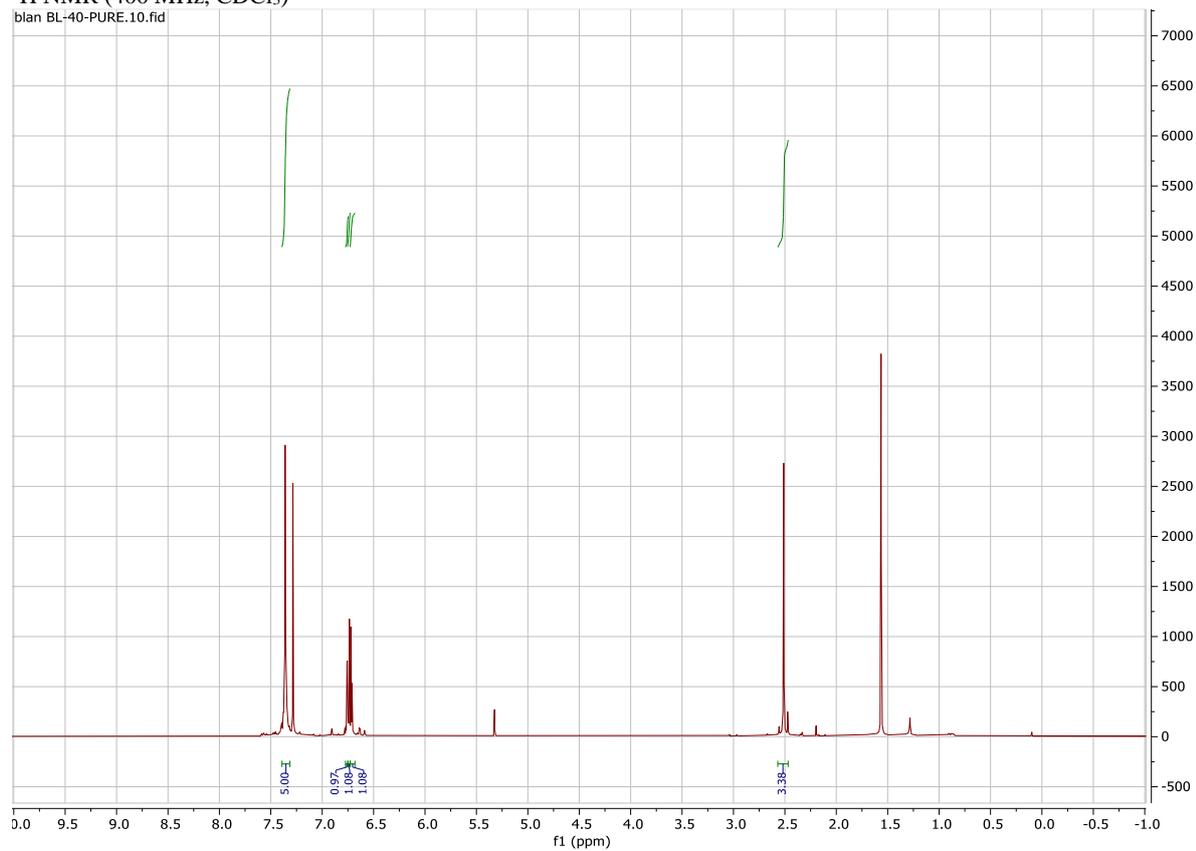
<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)



# 5'-Chloro-5-methyl-3-phenyl-2,2'-bithiophene (24b)

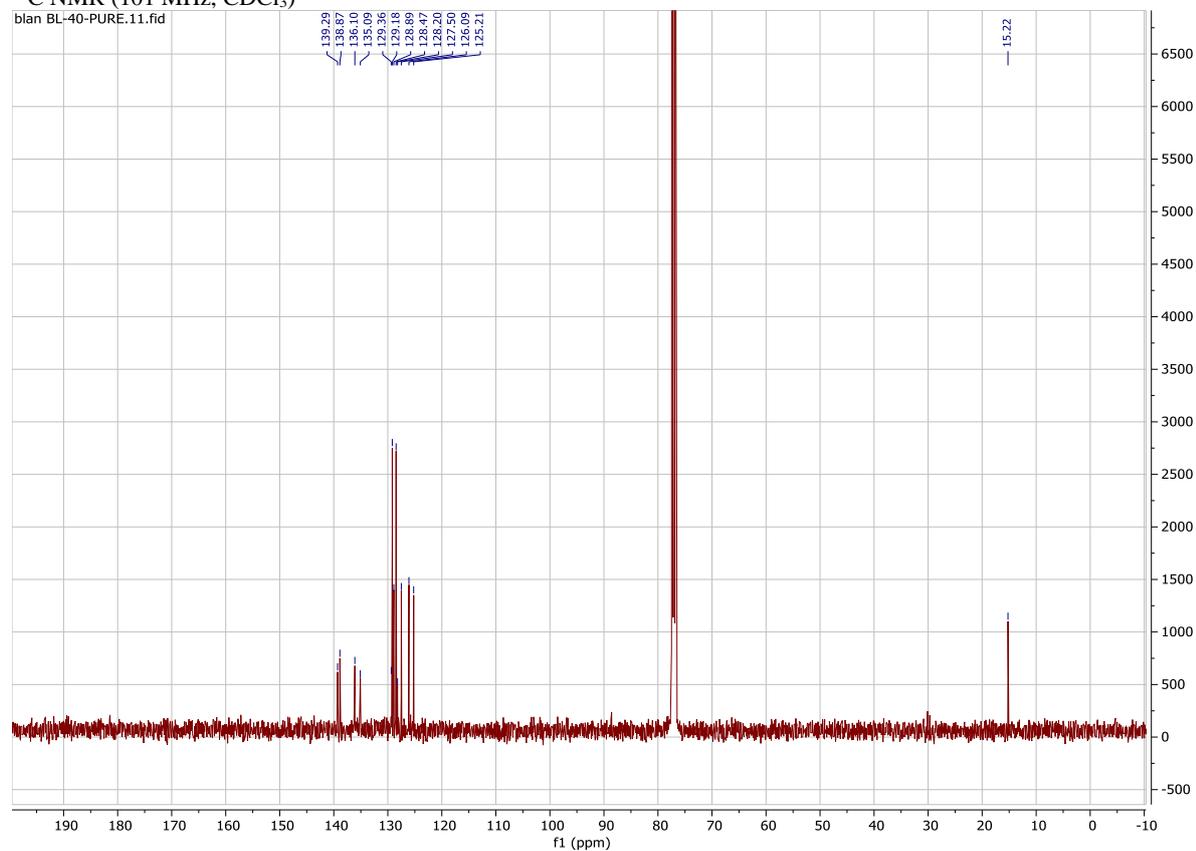
$^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ )

blan BL-40-PURE.10.fid



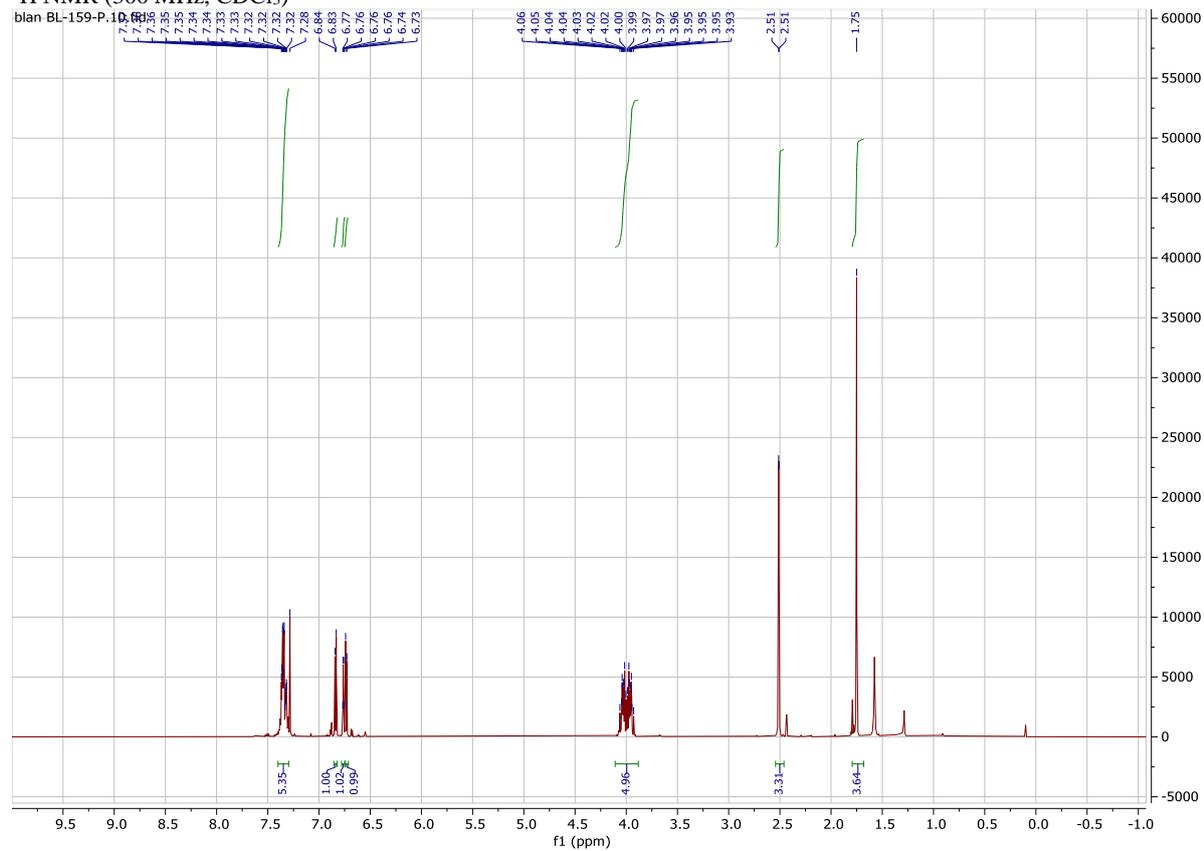
$^{13}\text{C}$  NMR (101 MHz,  $\text{CDCl}_3$ )

blan BL-40-PURE.11.fid

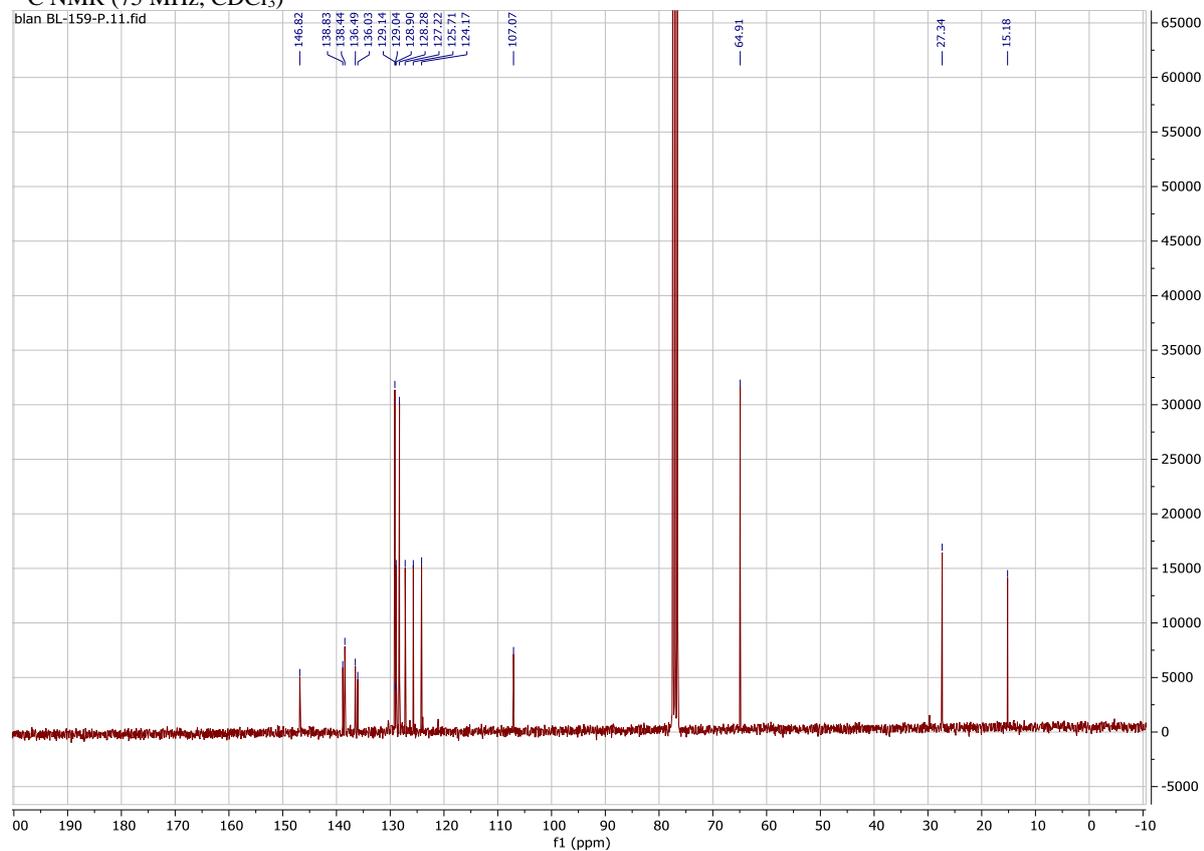


# 2-Methyl-2-(5'-methyl-3'-phenyl-[2,2'-bithiophen]-5-yl)-1,3-dioxolane (25b)

<sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>)

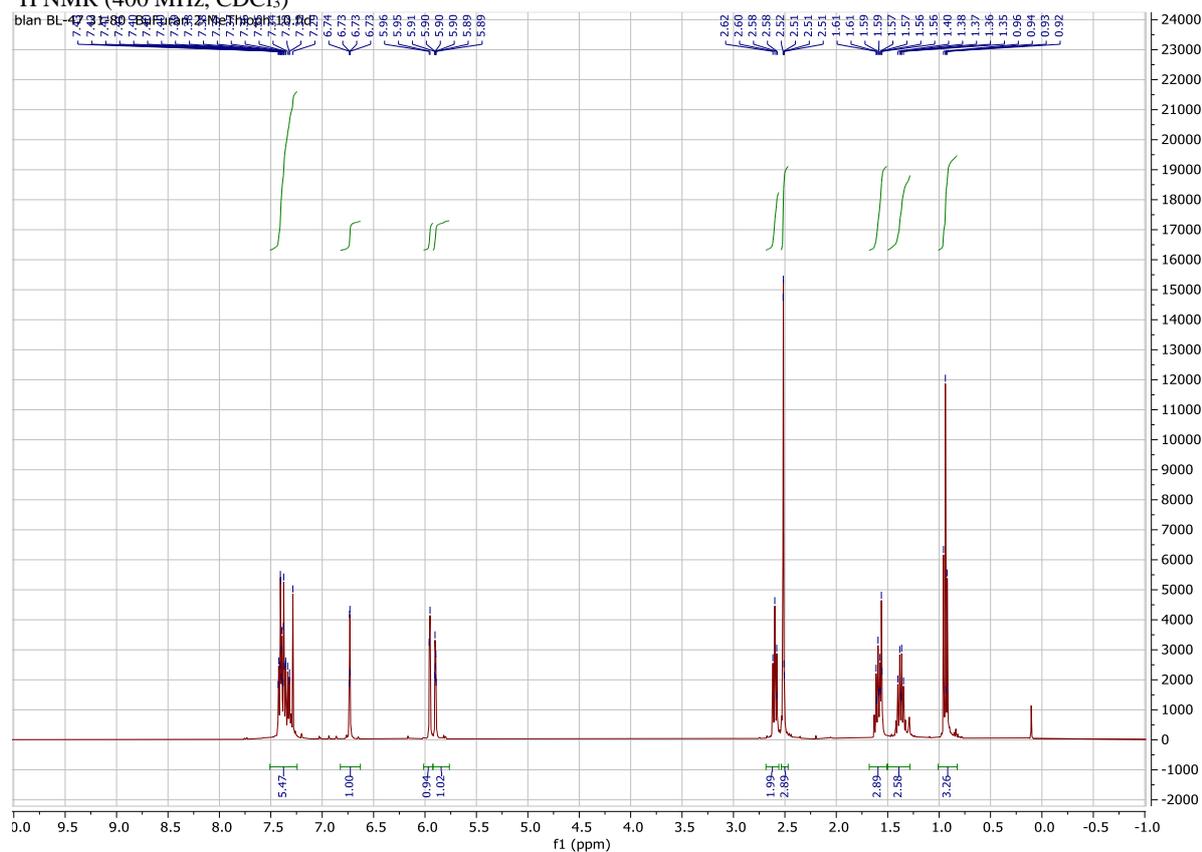


<sup>13</sup>C NMR (75 MHz, CDCl<sub>3</sub>)

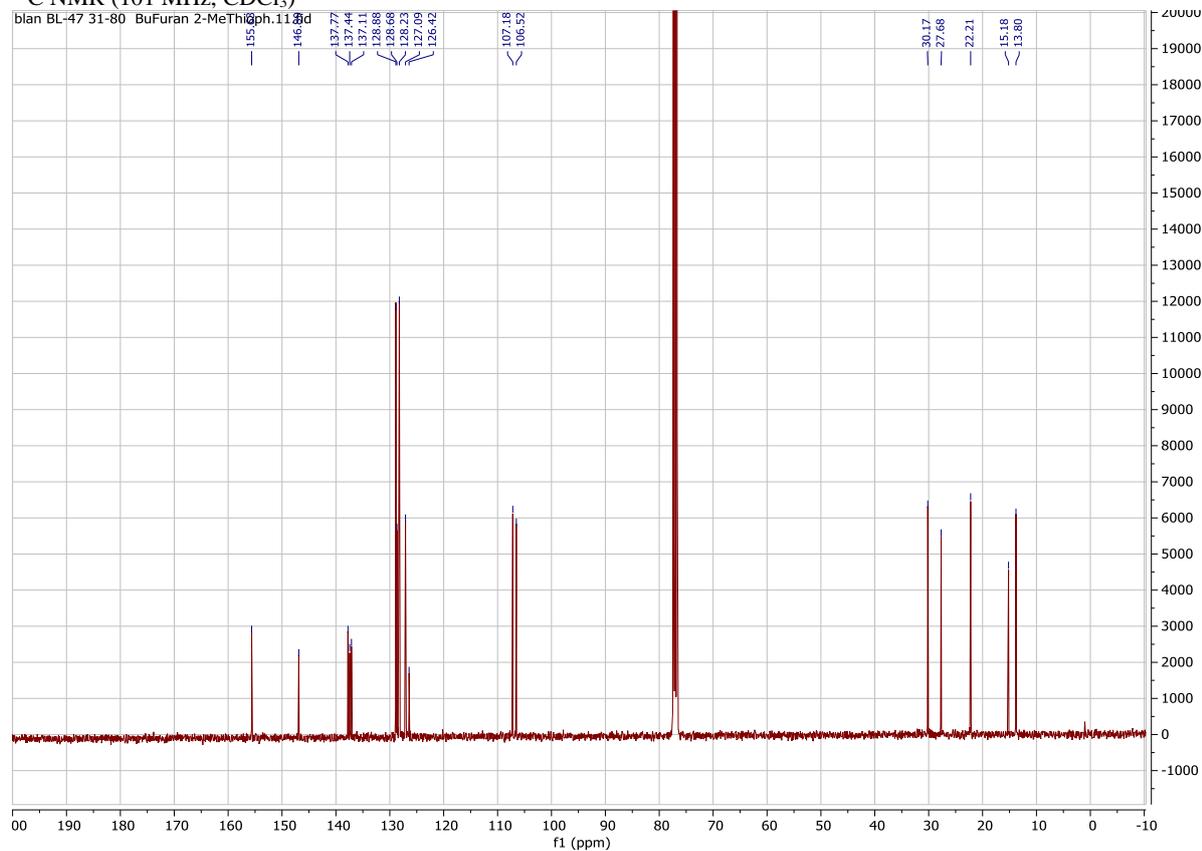


# 2-Butyl-5-(5-methyl-3-phenylthiophen-2-yl)furan (26b)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)



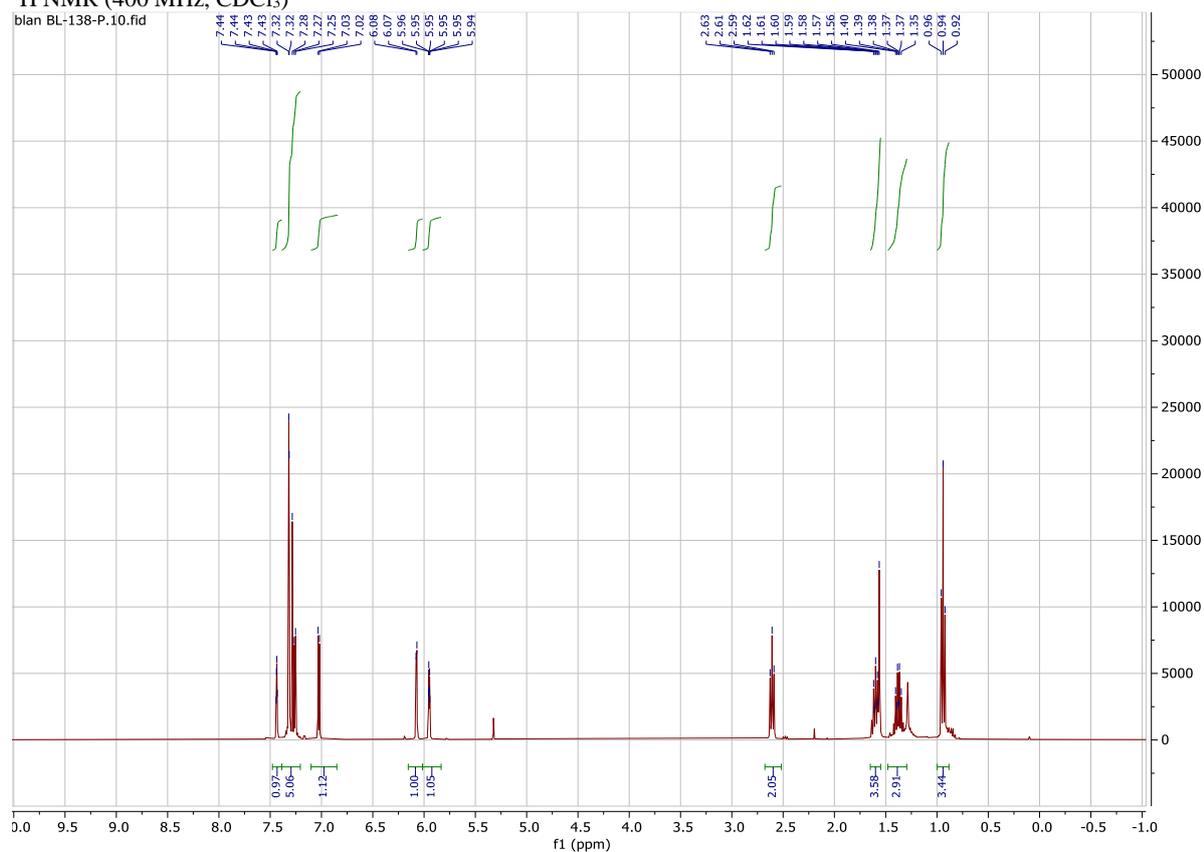
<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)



# 2-Butyl-5-(3-(3-chlorophenyl)thiophen-2-yl)furan (27b)

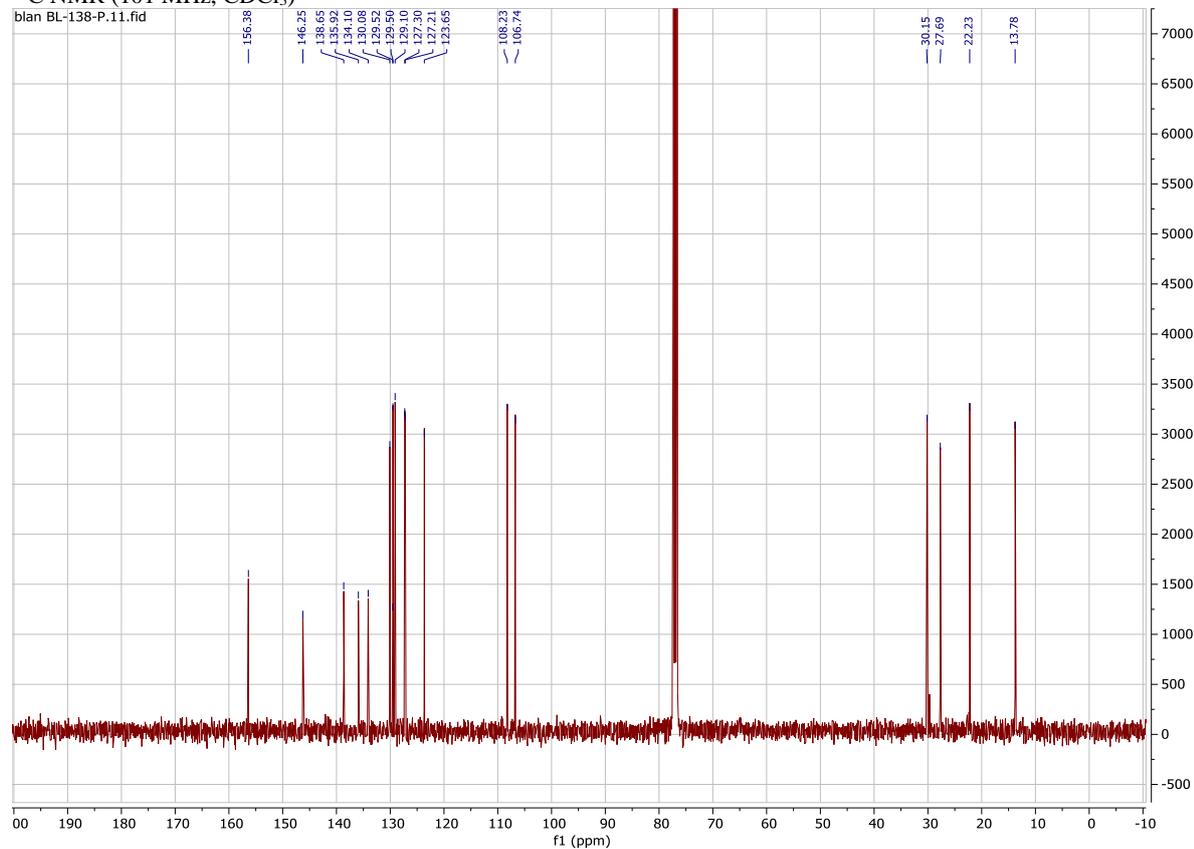
<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

blan BL-138-P.10.fid



<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

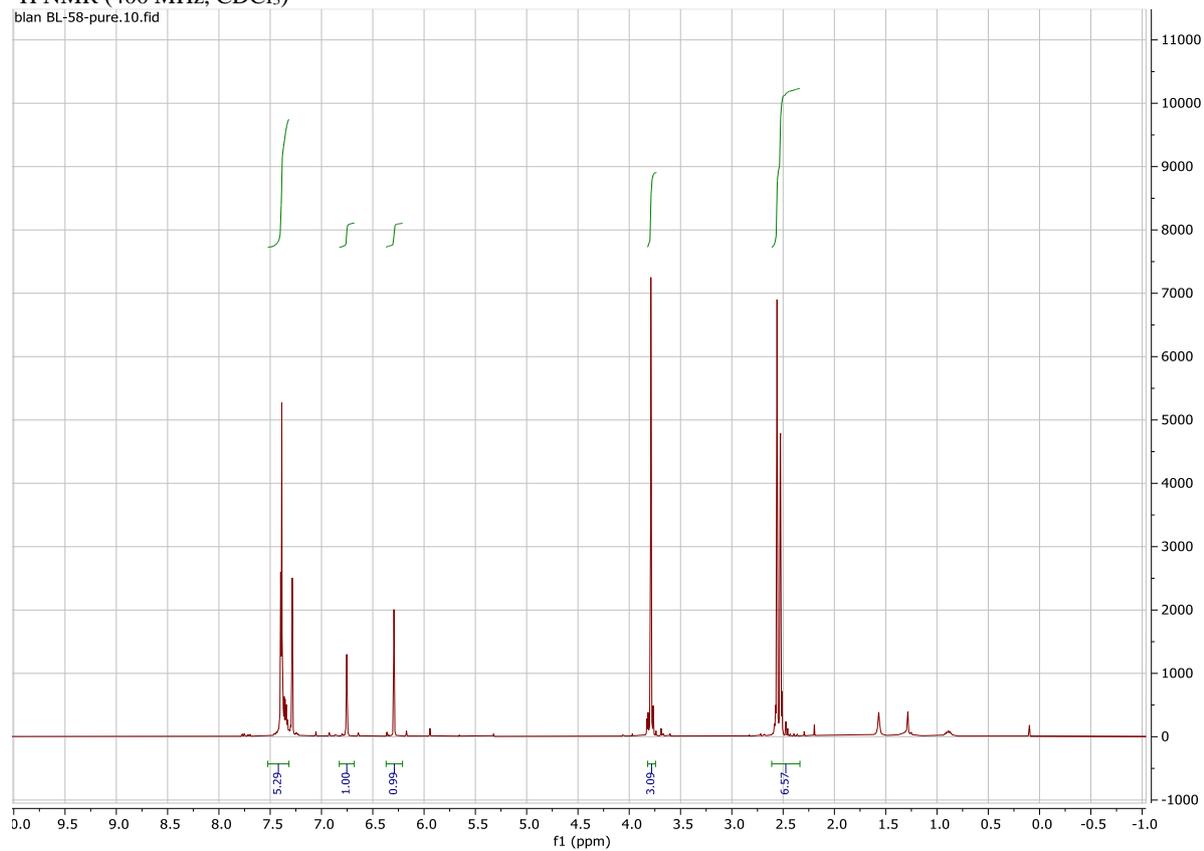
blan BL-138-P.11.fid



# Methyl 2-methyl-5-(5-methyl-3-phenylthiophen-2-yl)furan-3-carboxylate (28b)

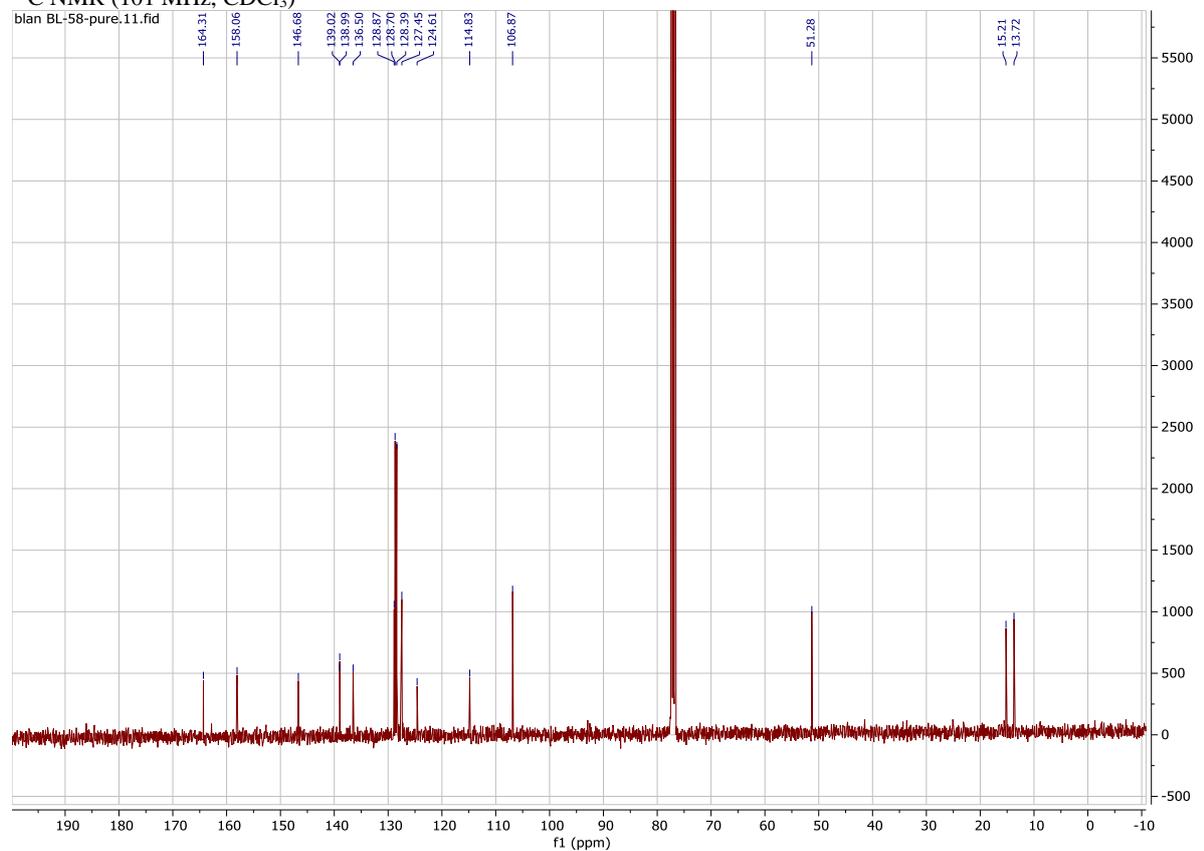
$^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ )

blan BL-58-pure.10.fid



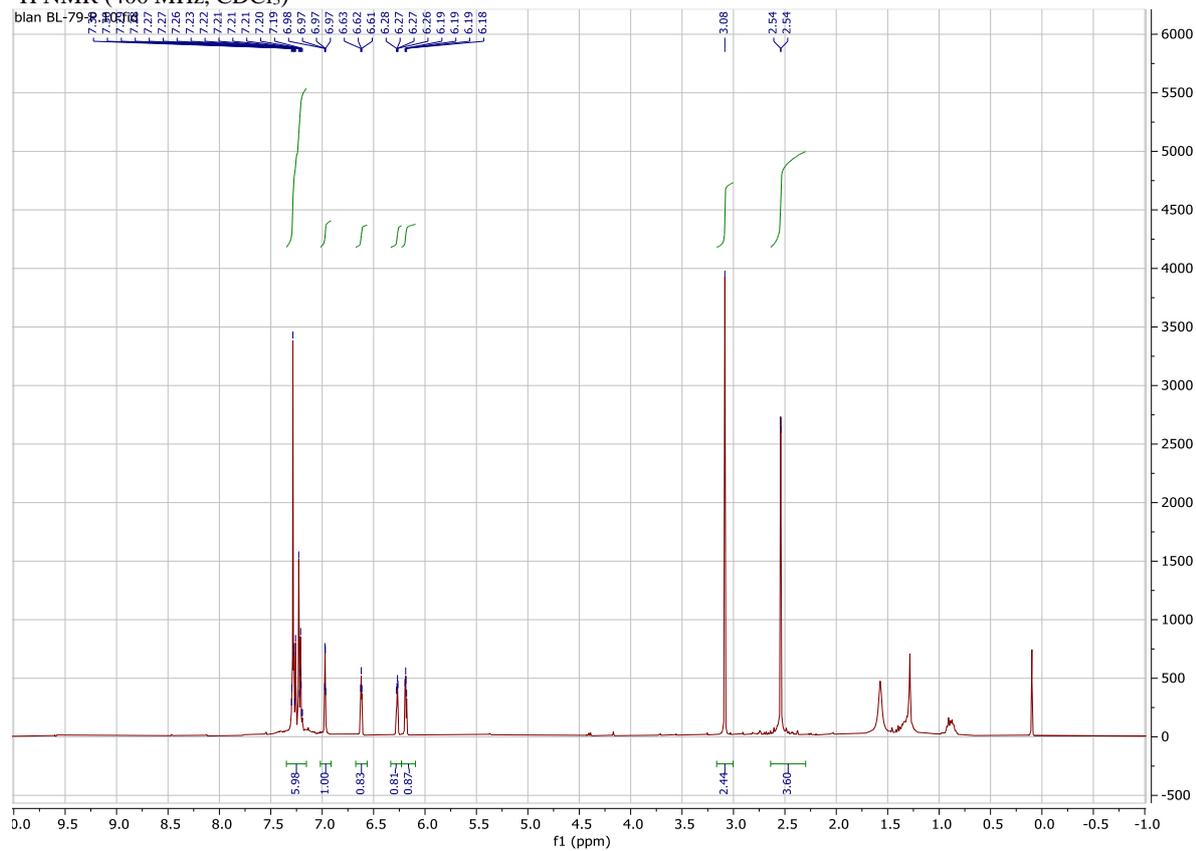
$^{13}\text{C}$  NMR (101 MHz,  $\text{CDCl}_3$ )

blan BL-58-pure.11.fid

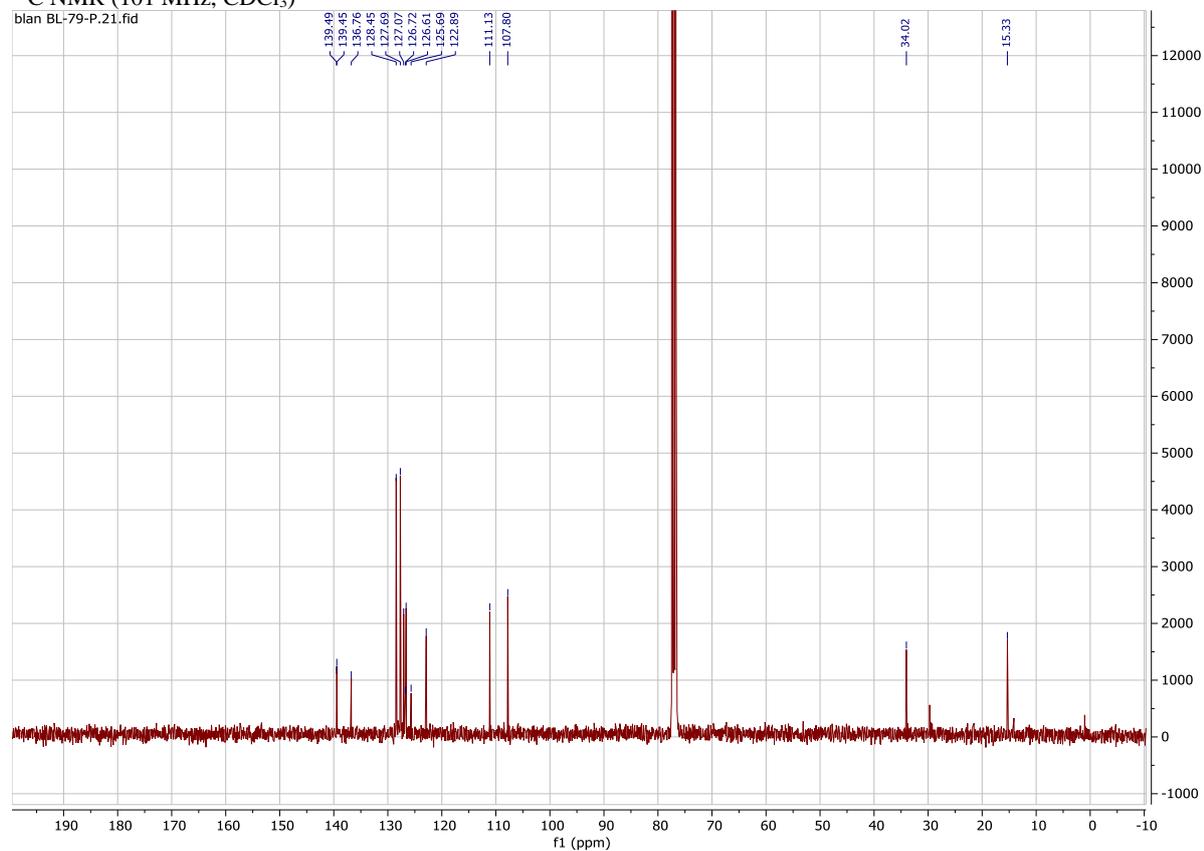


# 1-Methyl-2-(5-methyl-3-phenylthiophen-2-yl)pyrrole (29b)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

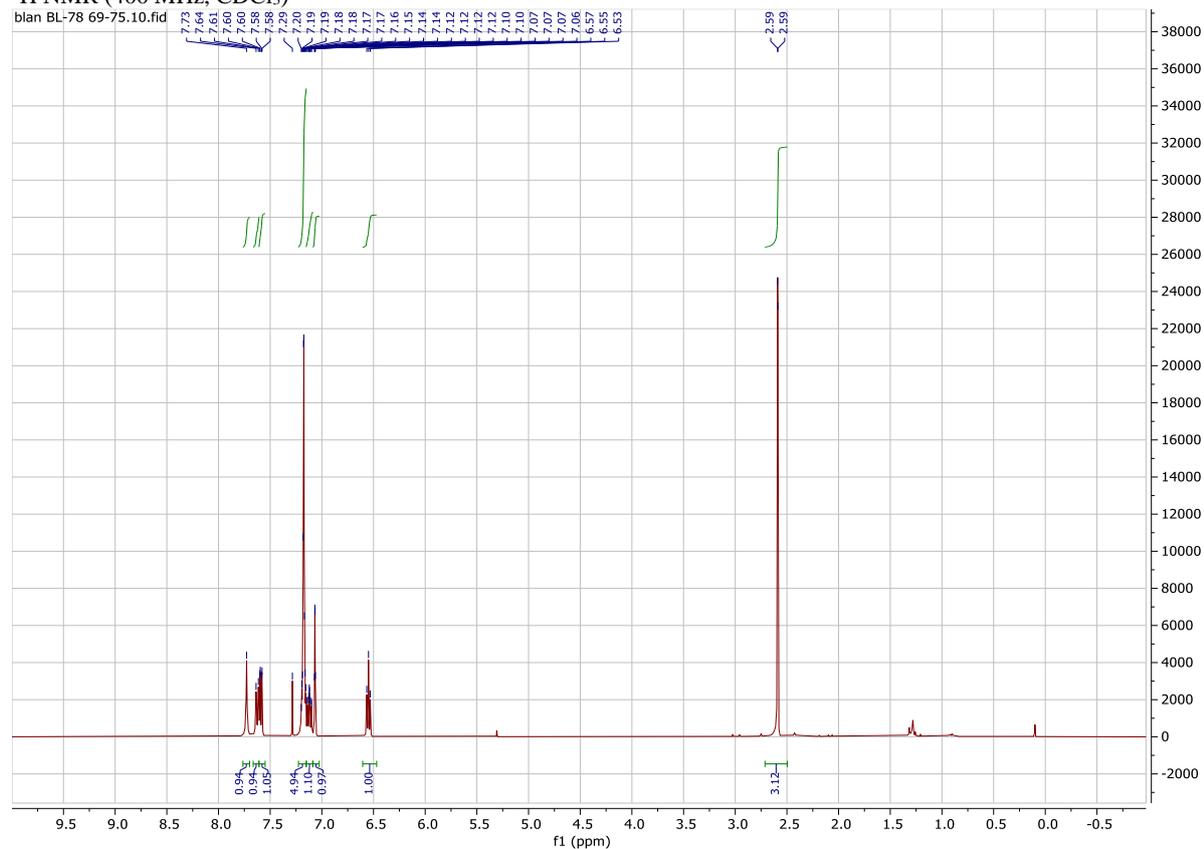


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

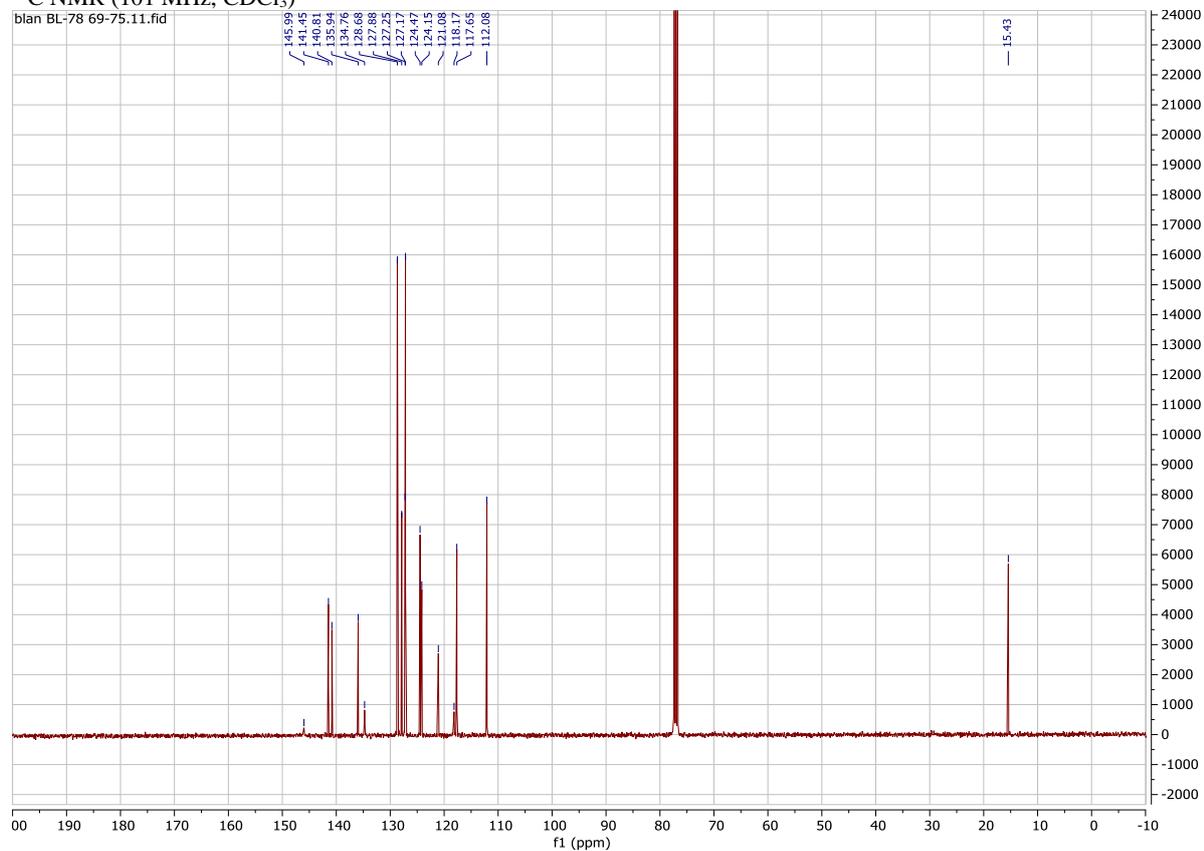


### 3-(5-Methyl-3-phenylthiophen-2-yl)imidazo[1,2-a]pyridine (30b)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

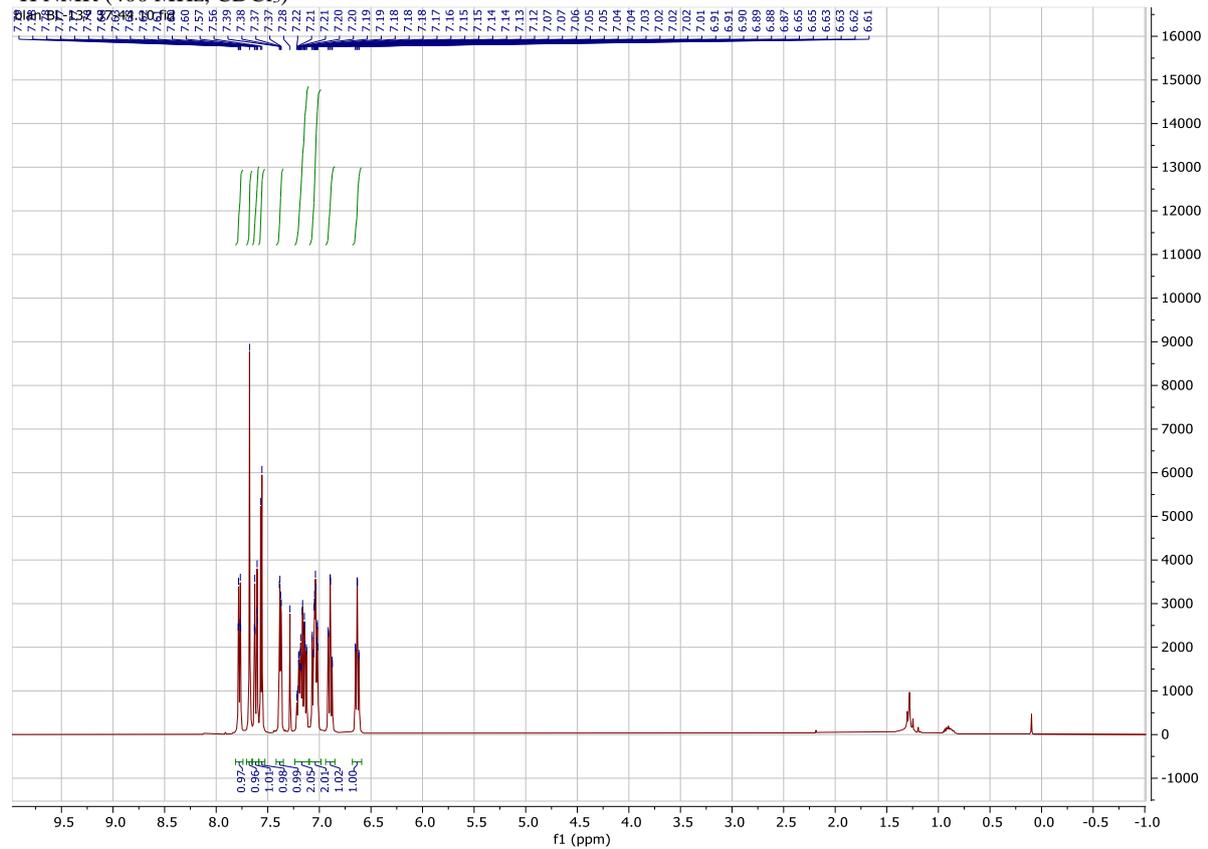


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

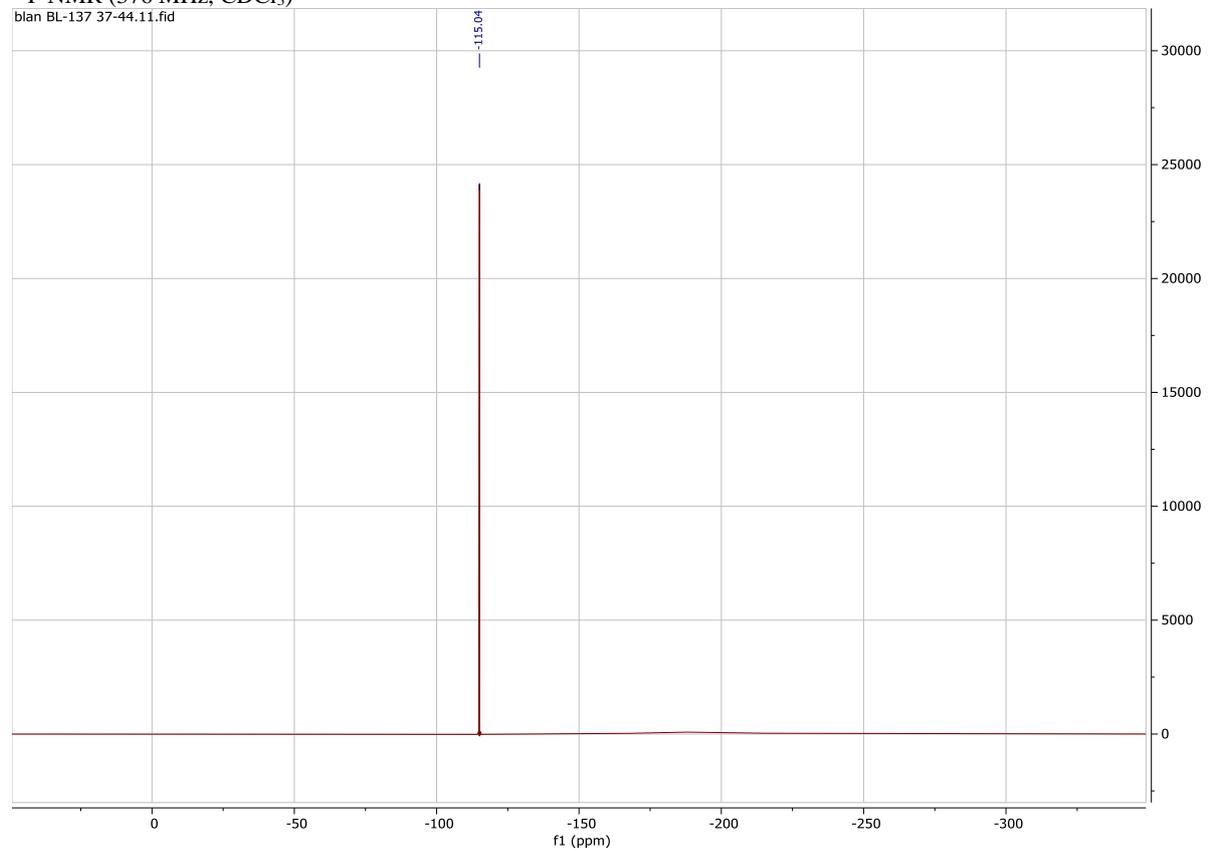


### 3-(3-(2-Fluorophenyl)thiophen-2-yl)imidazo[1,2-a]pyridine (31b)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

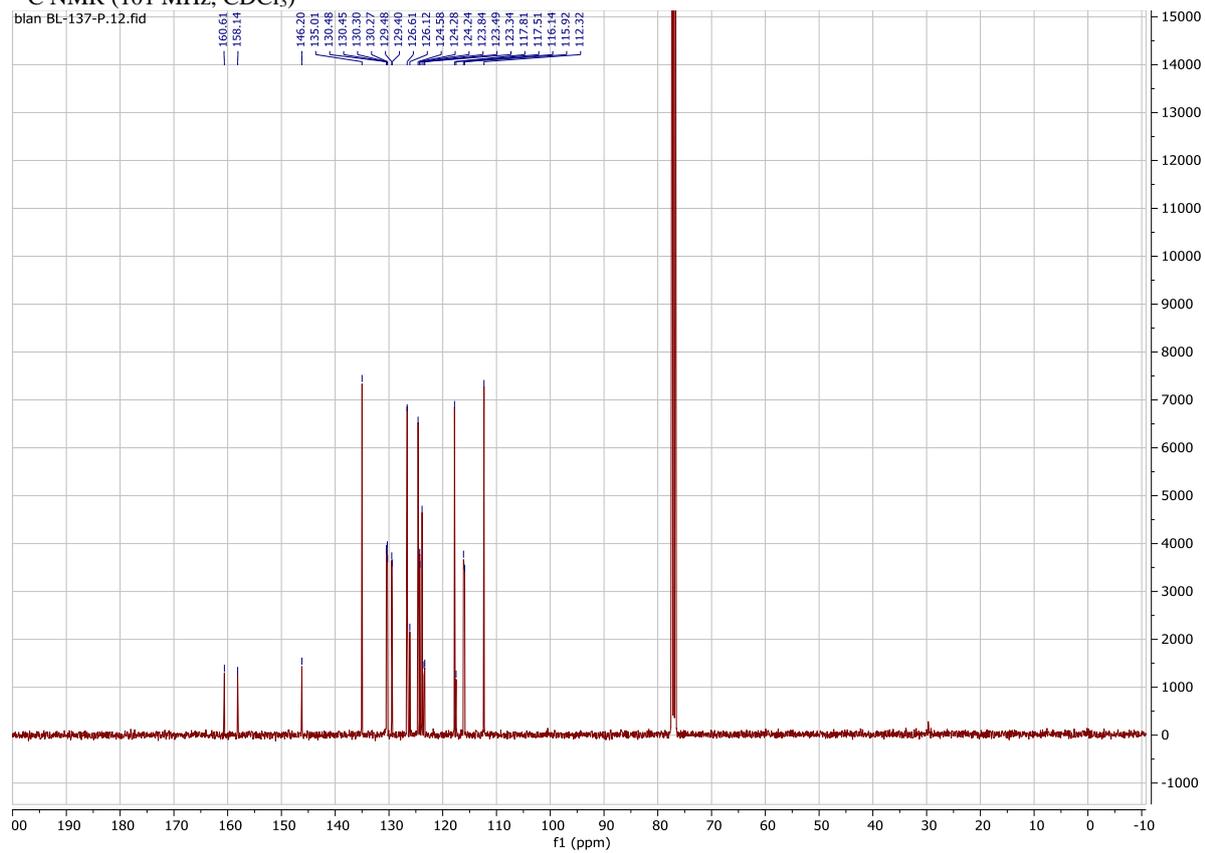


<sup>19</sup>F NMR (376 MHz, CDCl<sub>3</sub>)



<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

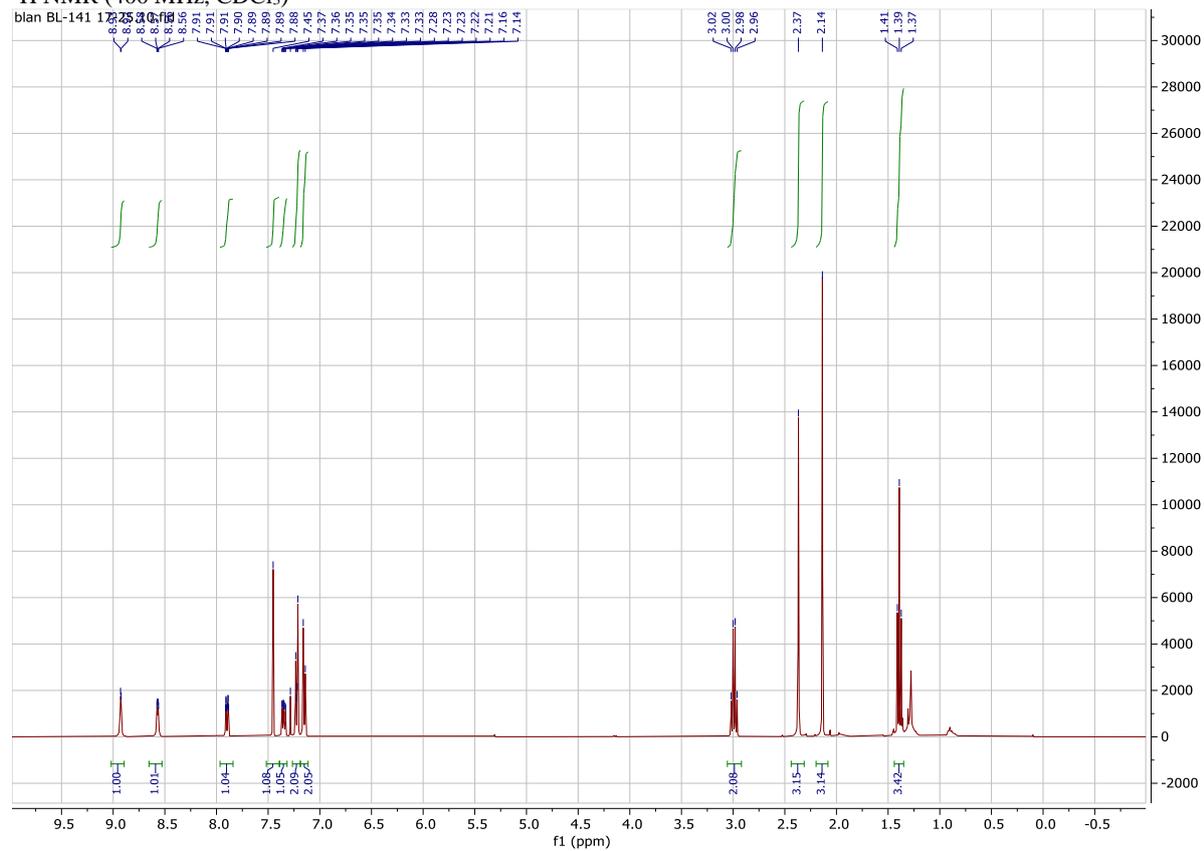
blan BL-137-P.12.fid



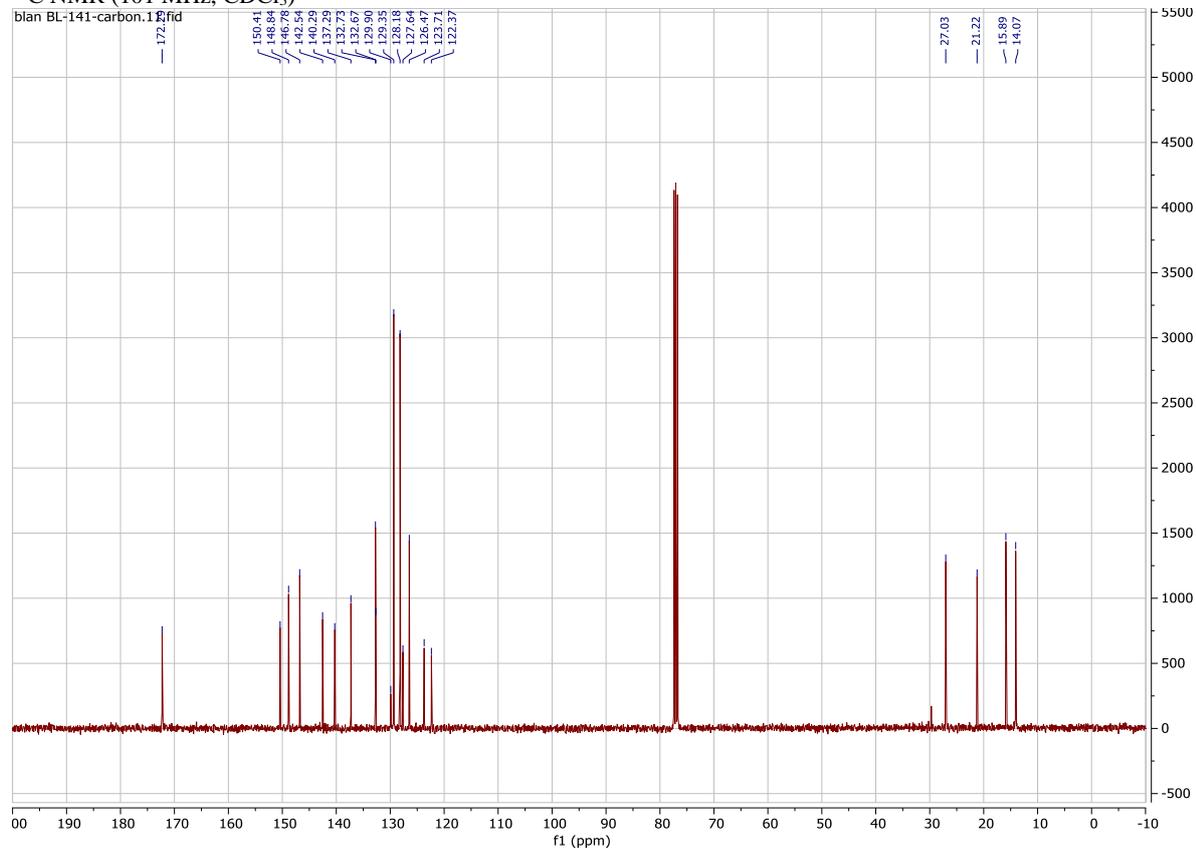


# 2-Ethyl-4-methyl-5-(5-(pyridin-3-yl)-3-(p-tolyl)thiophen-2-yl)thiazole (33)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

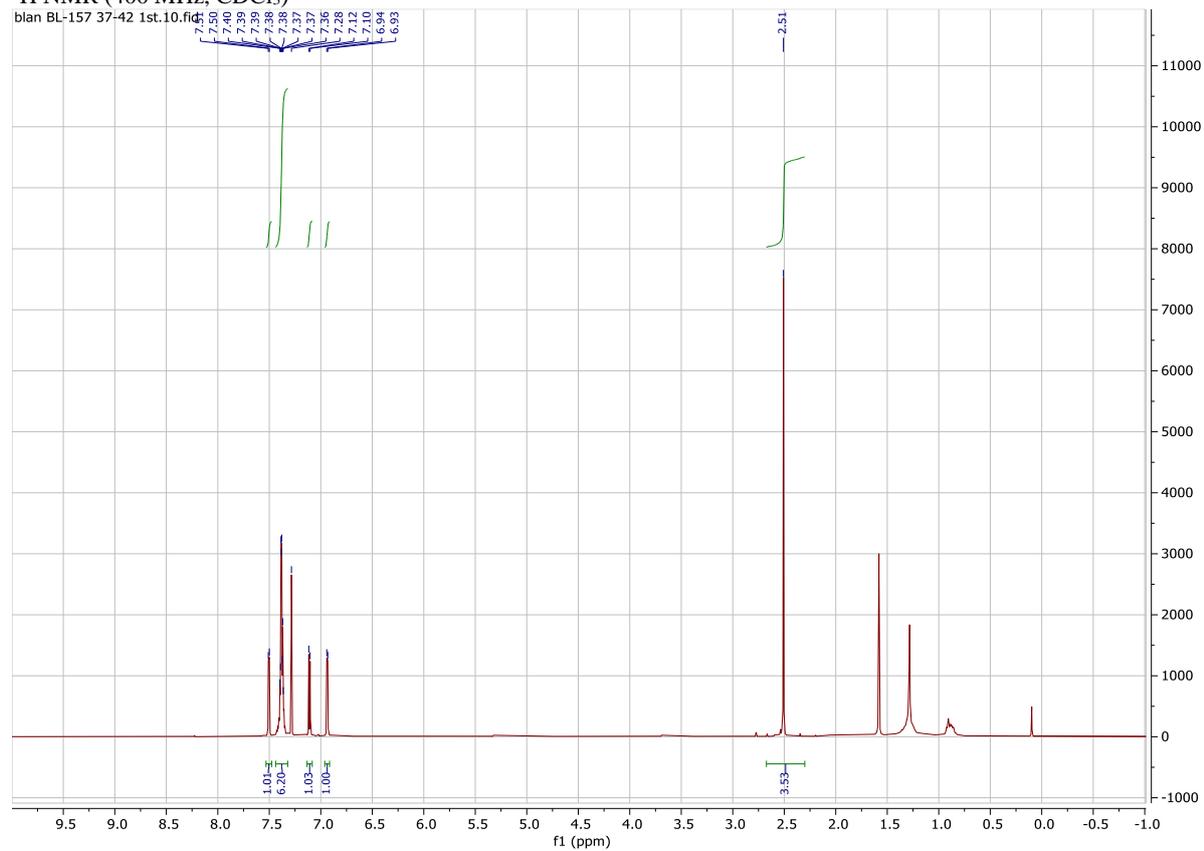


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

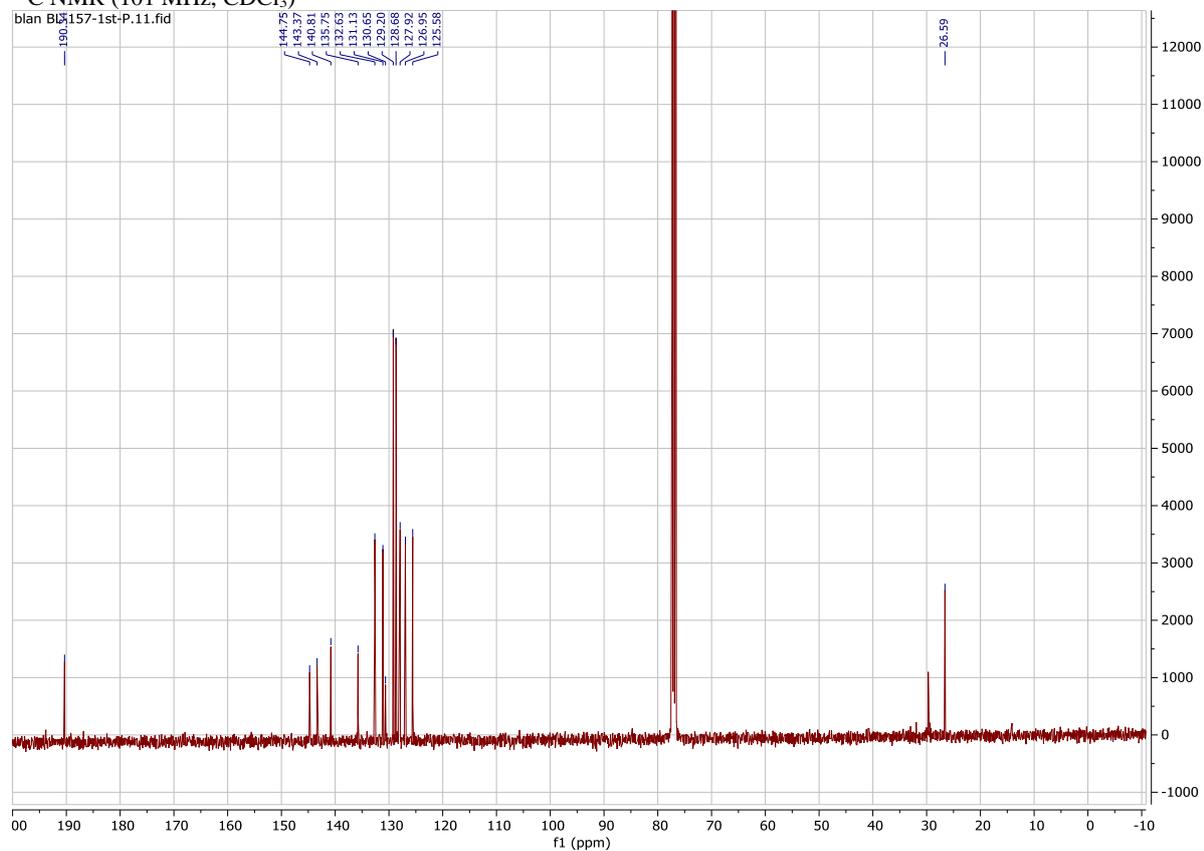


# 1-(3'-Phenyl-[2,2'-bithiophen]-5-yl)ethan-1-one (34b)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

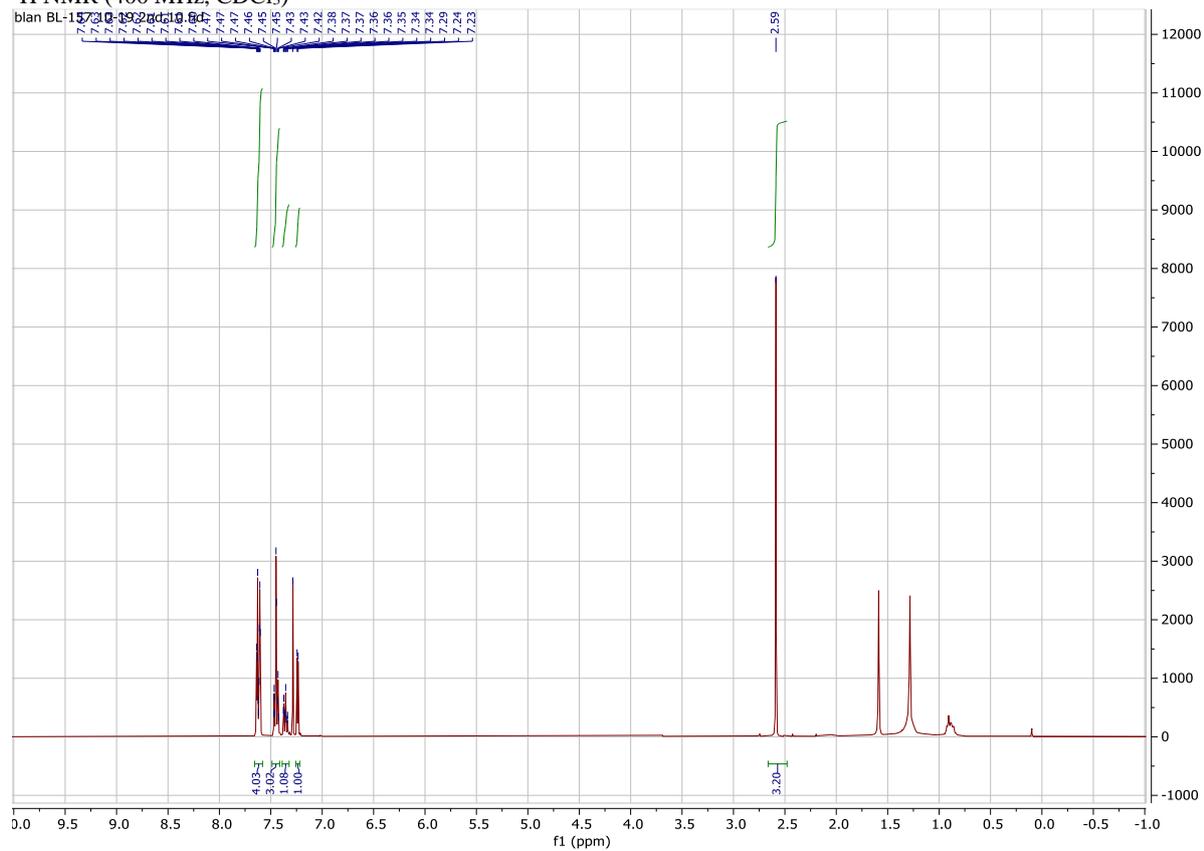


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

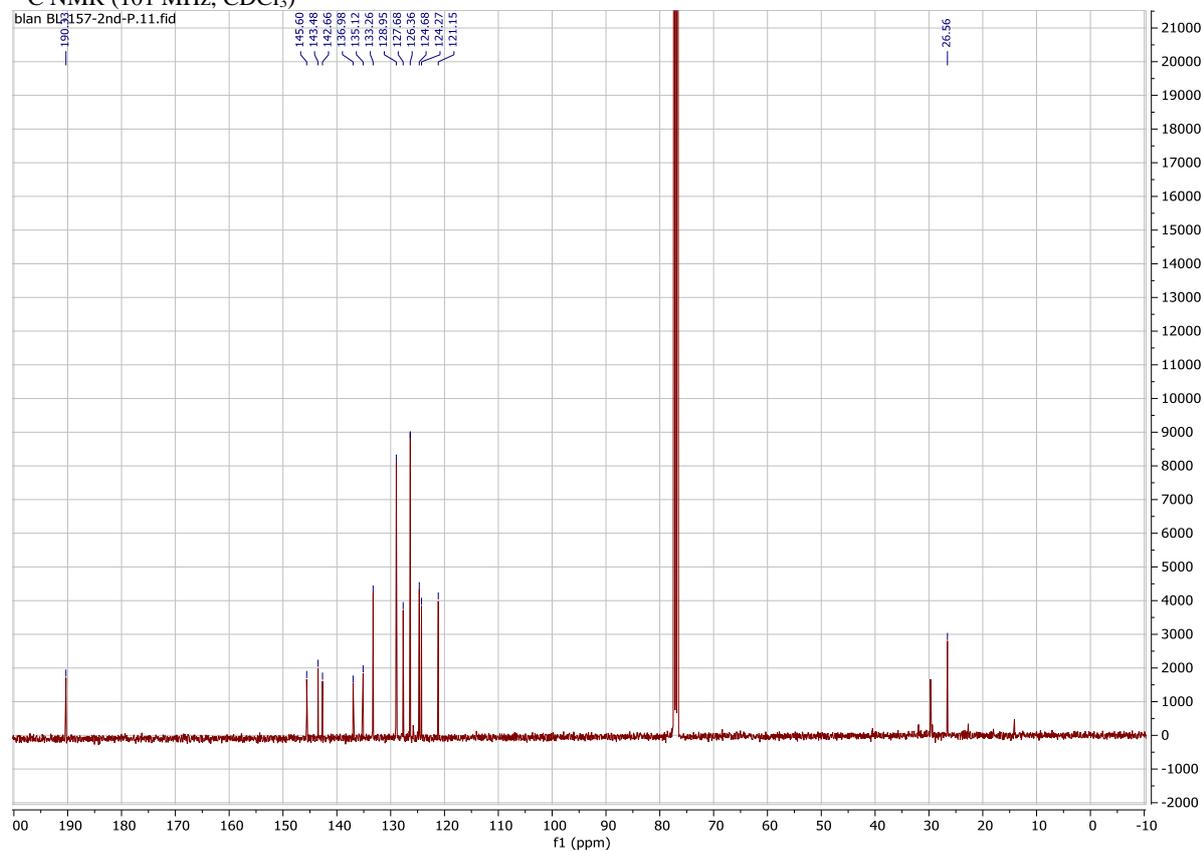


# 1-(4'-Phenyl-[2,2'-bithiophen]-5-yl)ethan-1-one (34c)

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>)

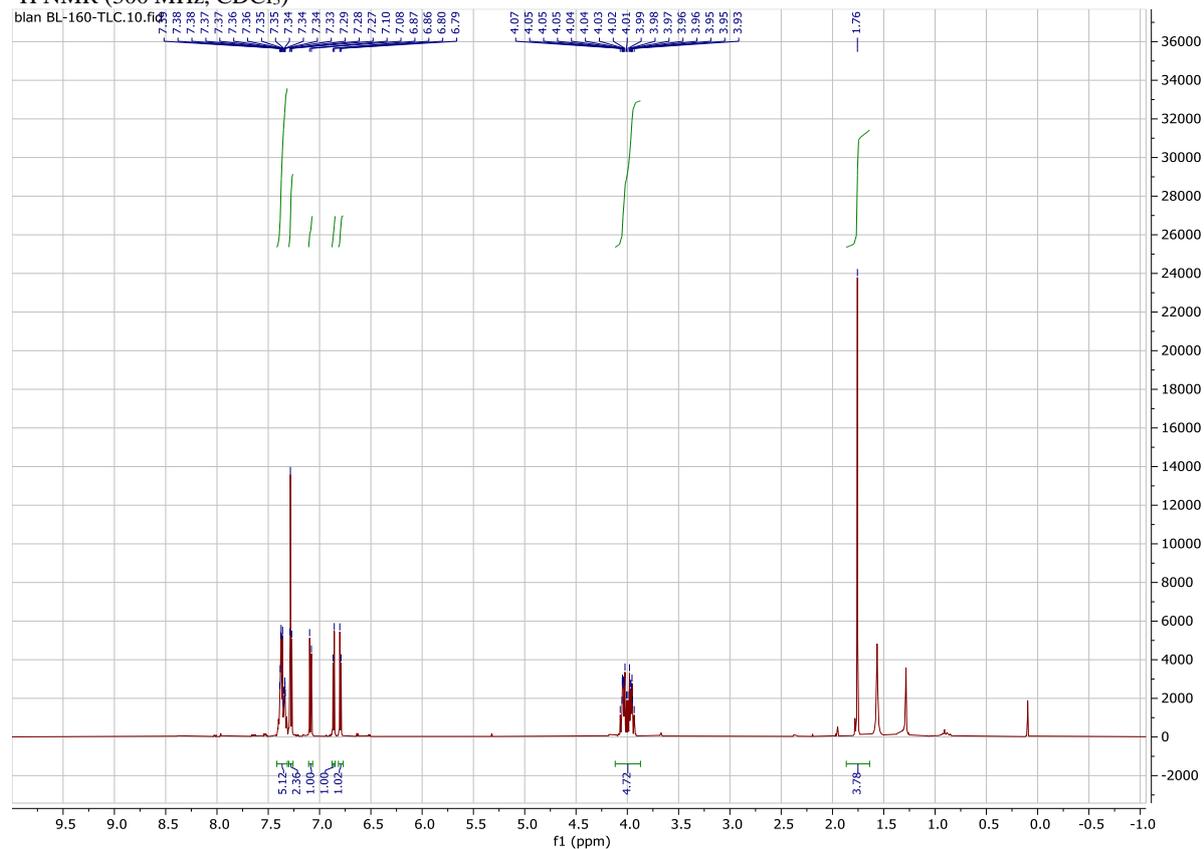


<sup>13</sup>C NMR (101 MHz, CDCl<sub>3</sub>)

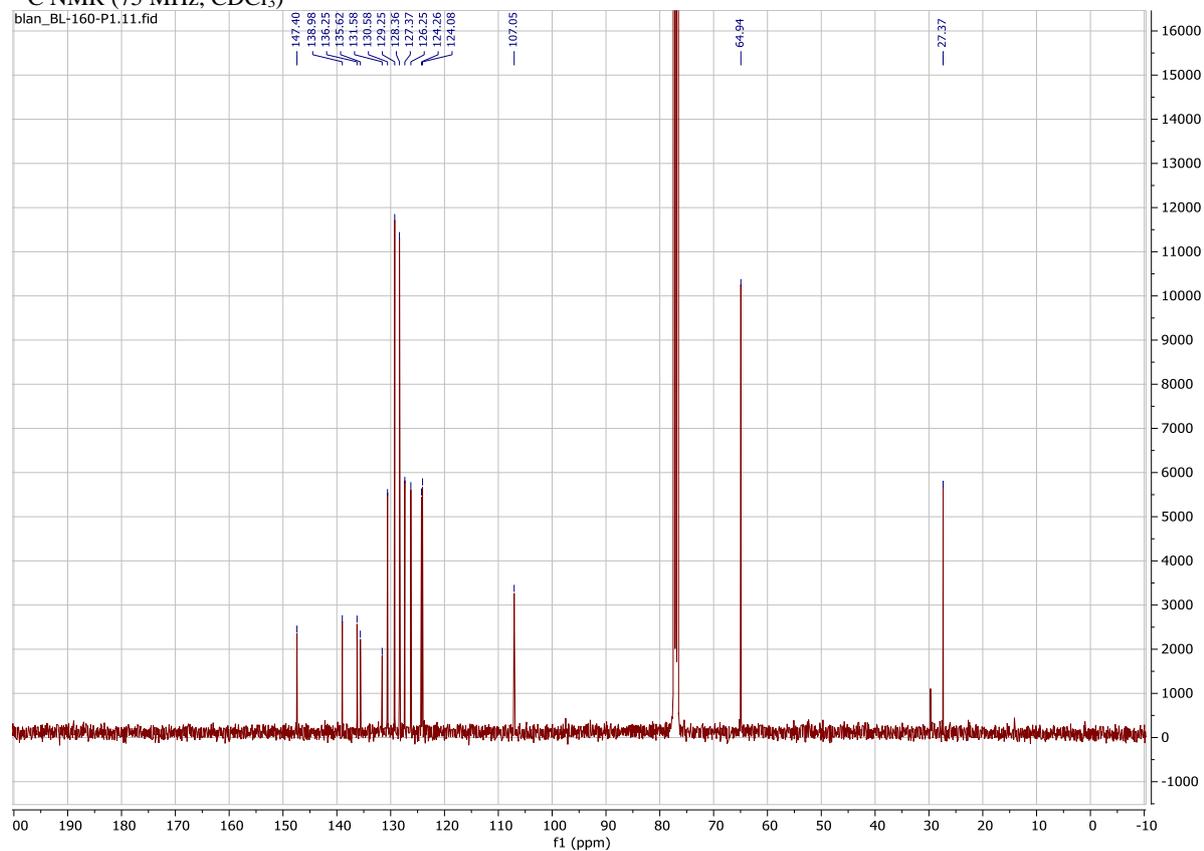


# 2-Methyl-2-(3'-phenyl-[2,2'-bithiophen]-5-yl)-1,3-dioxolane (35b)

<sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>)

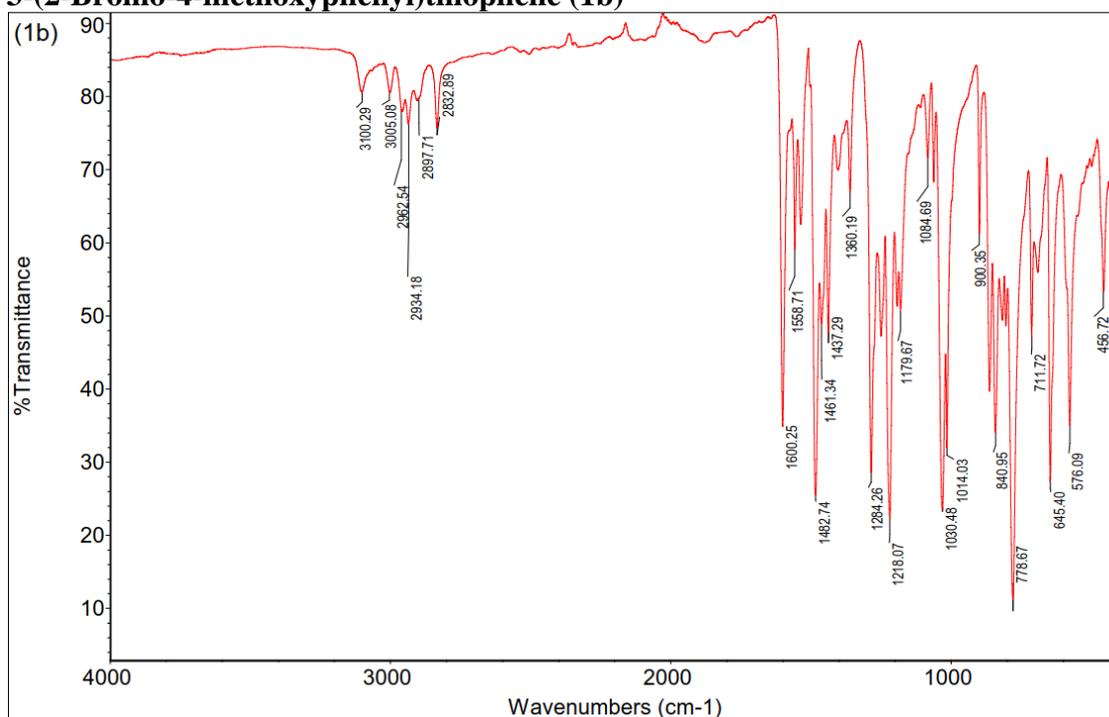


<sup>13</sup>C NMR (75 MHz, CDCl<sub>3</sub>)

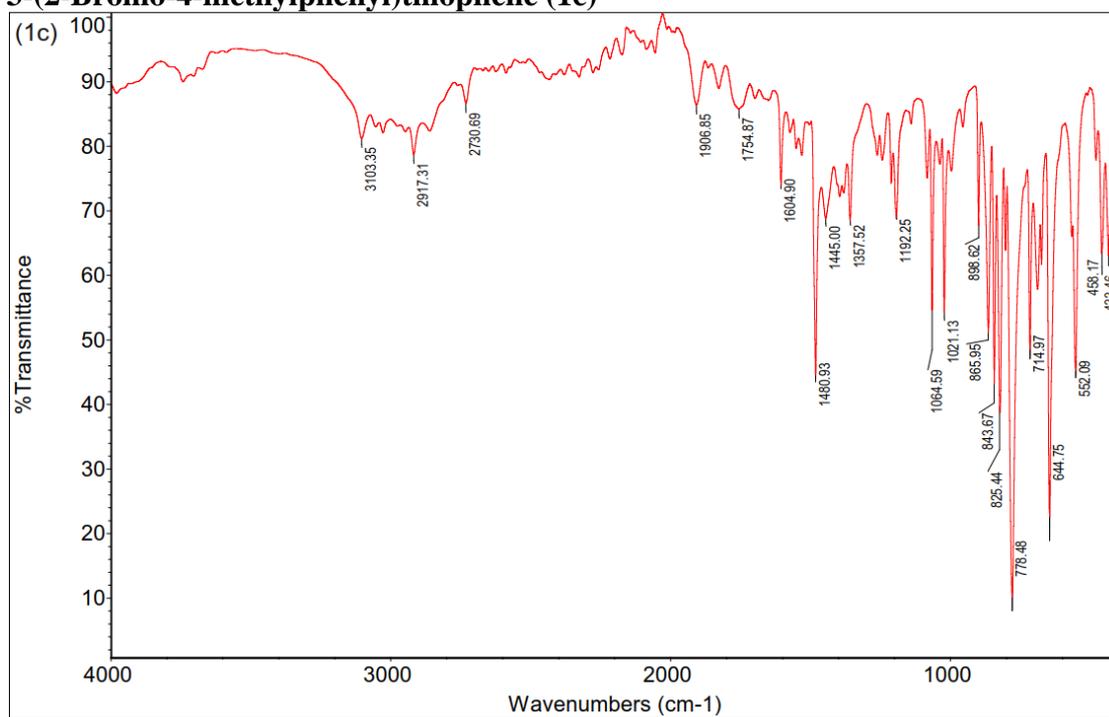


## Copy of IR Spectra

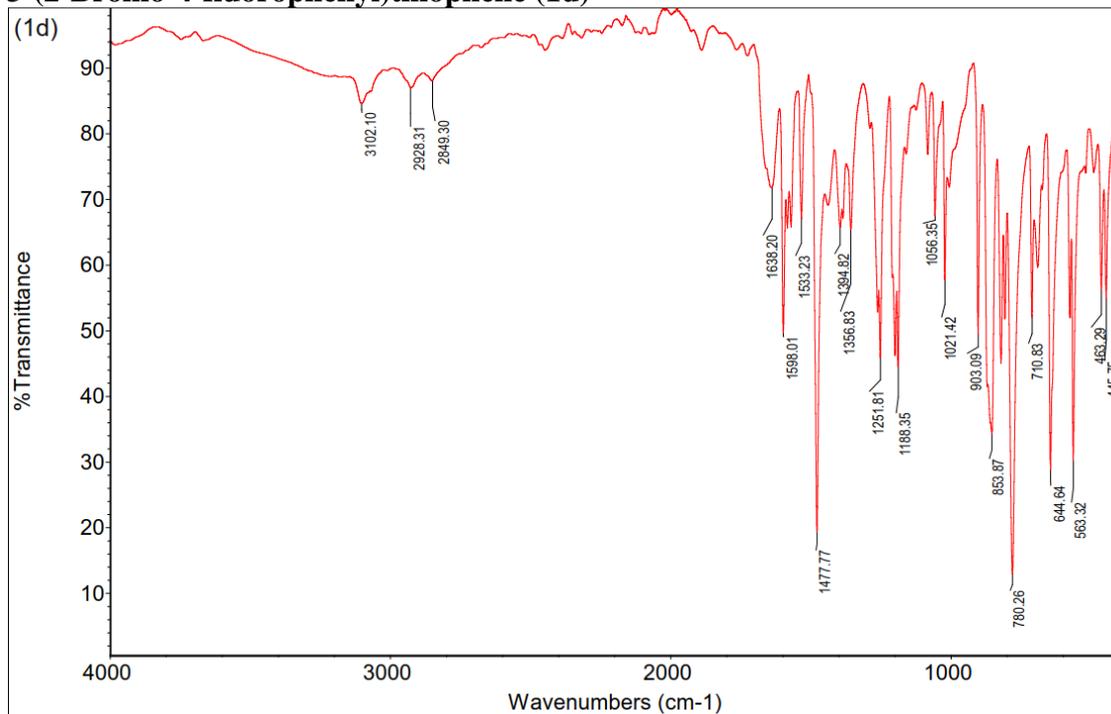
### 3-(2-Bromo-4-methoxyphenyl)thiophene (1b)



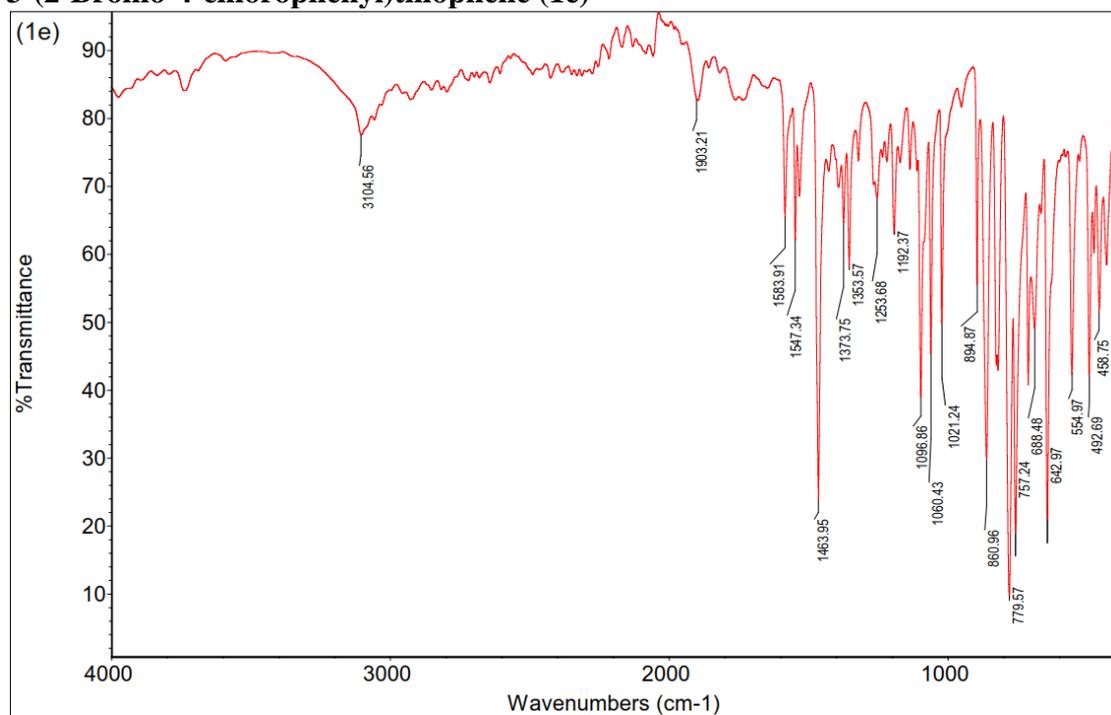
### 3-(2-Bromo-4-methylphenyl)thiophene (1c)



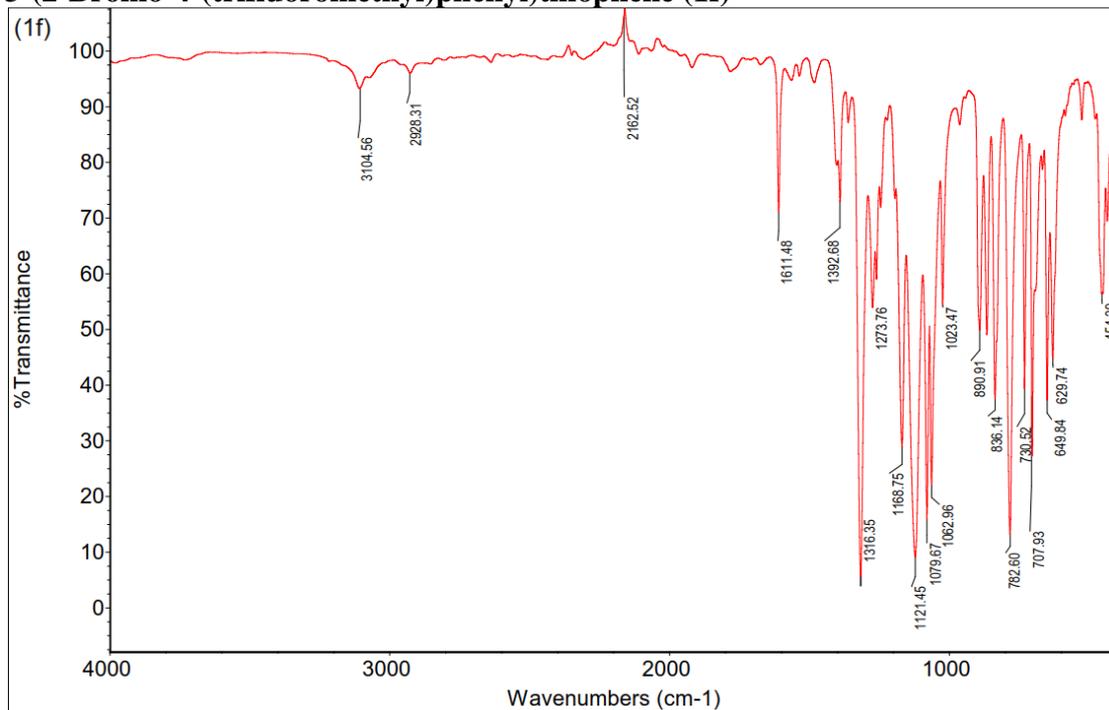
### 3-(2-Bromo-4-fluorophenyl)thiophene (1d)



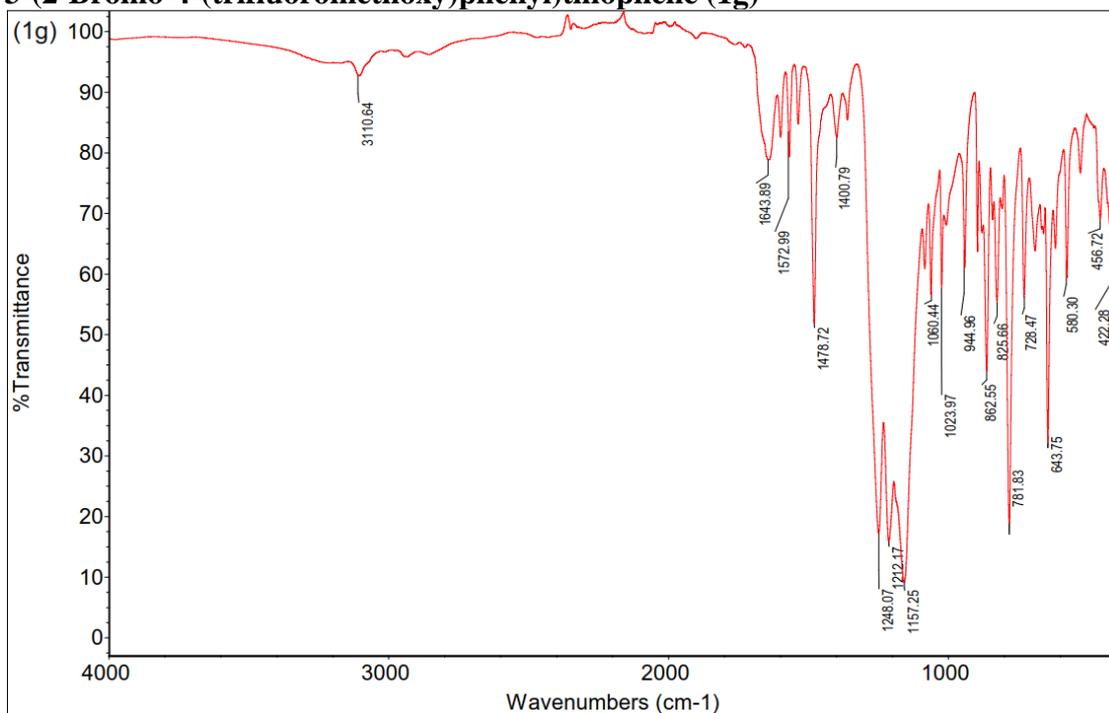
### 3-(2-Bromo-4-chlorophenyl)thiophene (1e)



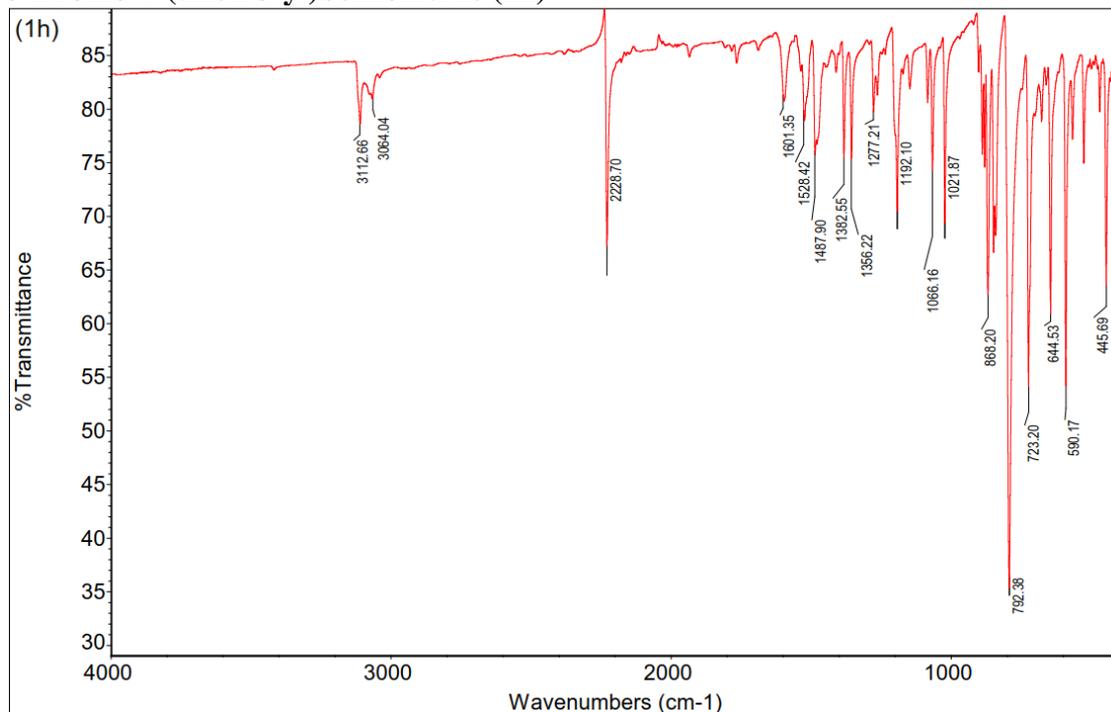
### 3-(2-Bromo-4-(trifluoromethyl)phenyl)thiophene (1f)



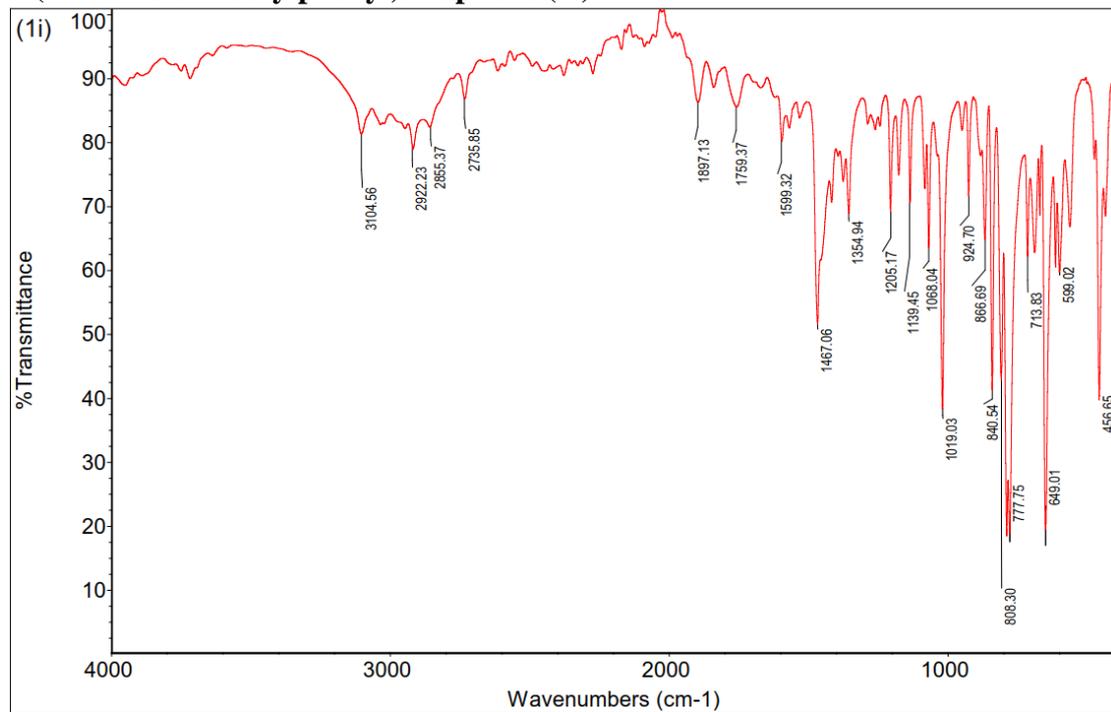
### 3-(2-Bromo-4-(trifluoromethoxy)phenyl)thiophene (1g)



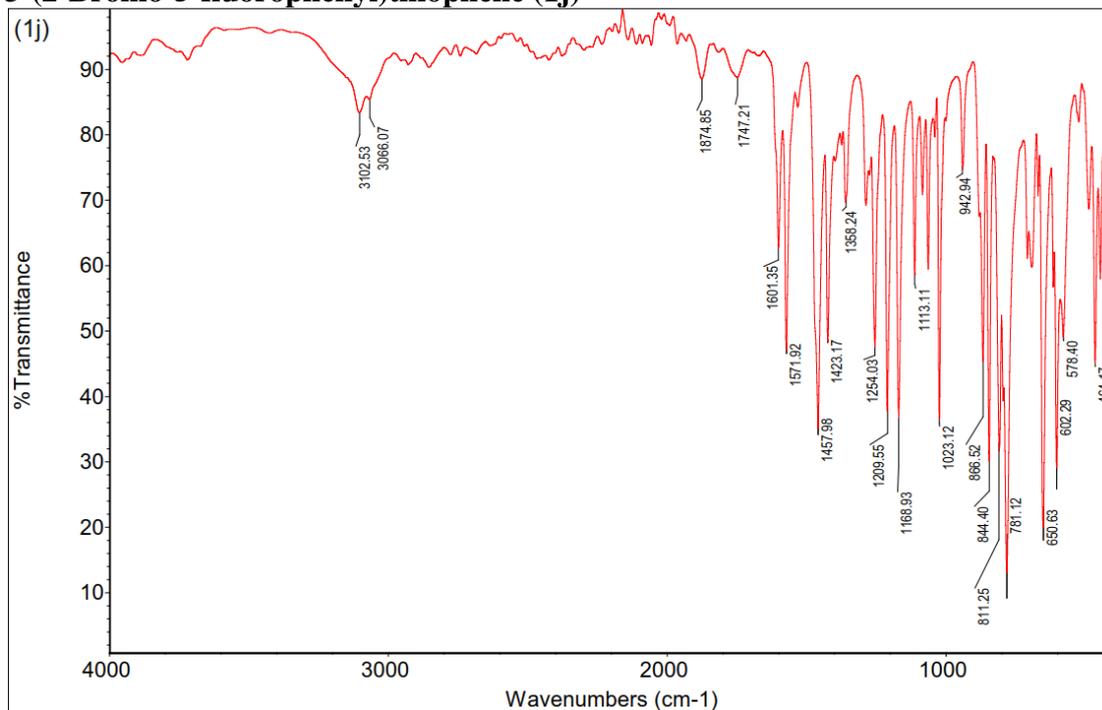
### 3-Bromo-4-(thien-3-yl)benzonitrile (1h)



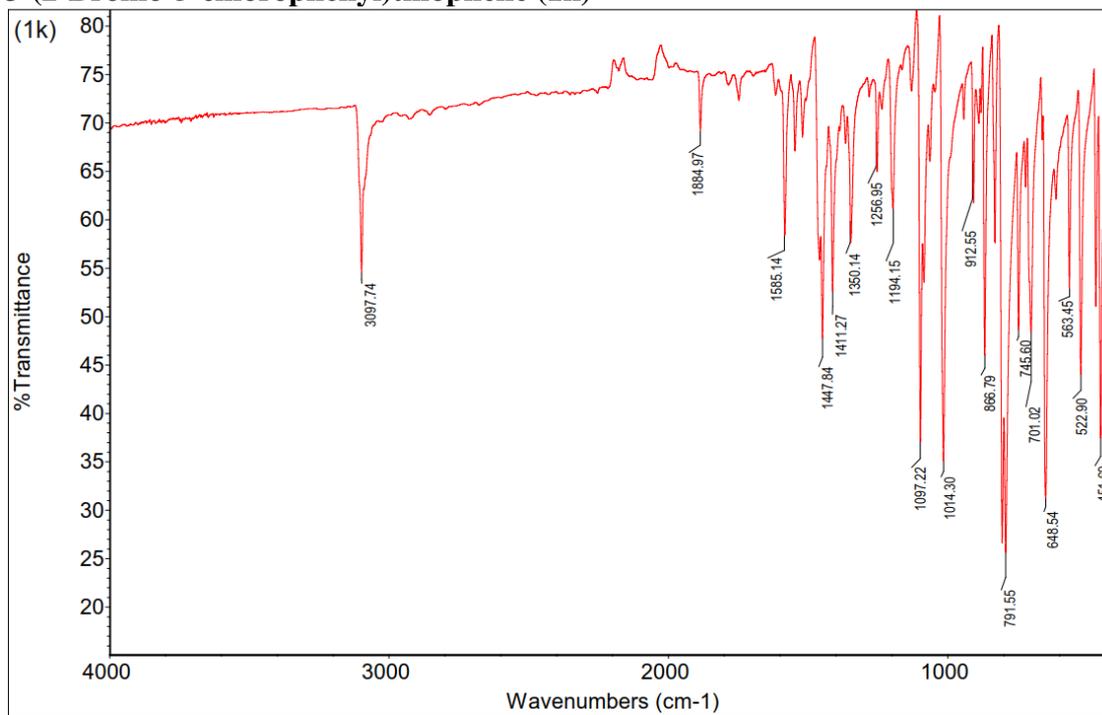
### 3-(2-Bromo-5-methylphenyl)thiophene (1i)



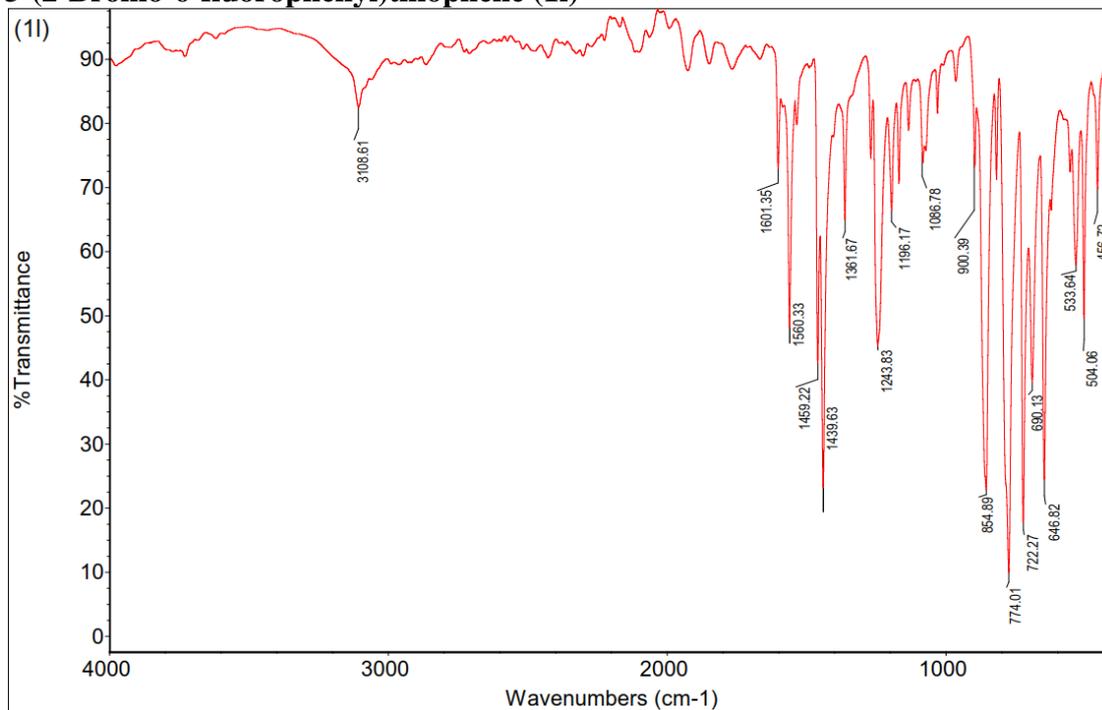
### 3-(2-Bromo-5-fluorophenyl)thiophene (1j)



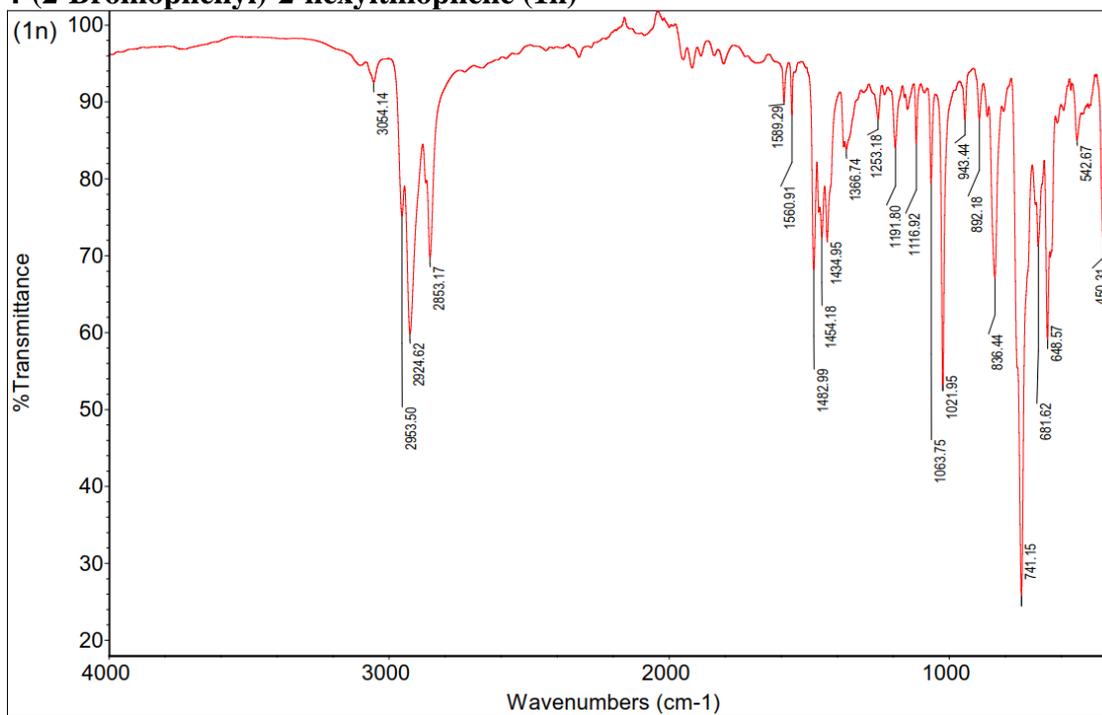
### 3-(2-Bromo-5-chlorophenyl)thiophene (1k)



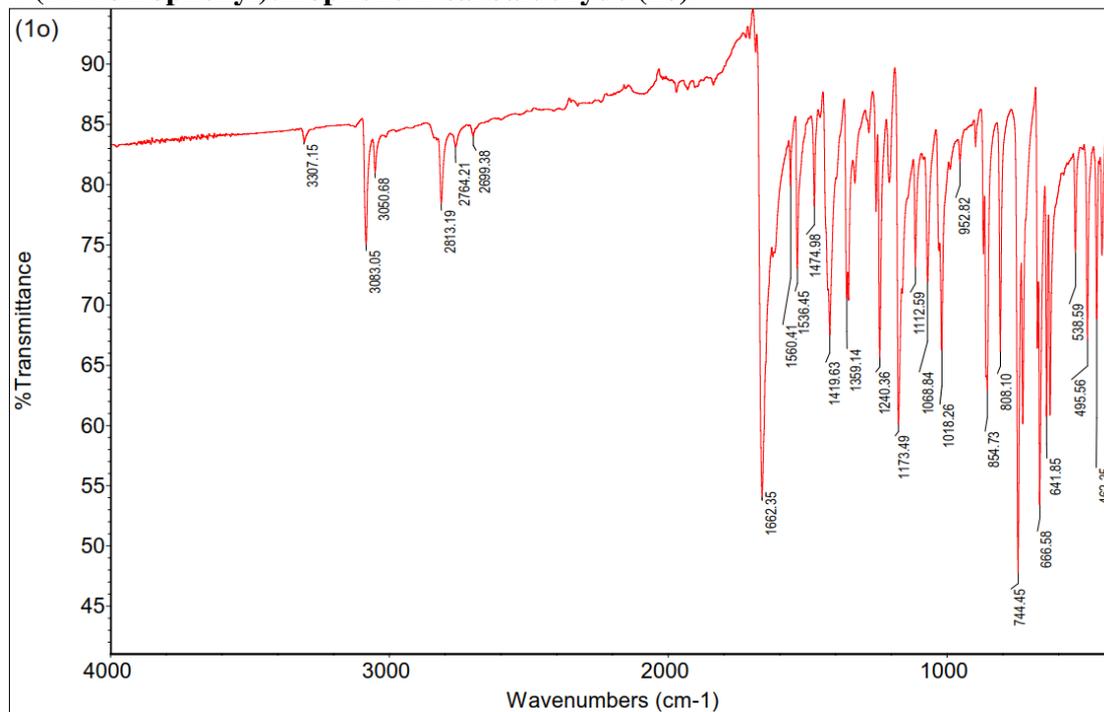
### 3-(2-Bromo-6-fluorophenyl)thiophene (1l)



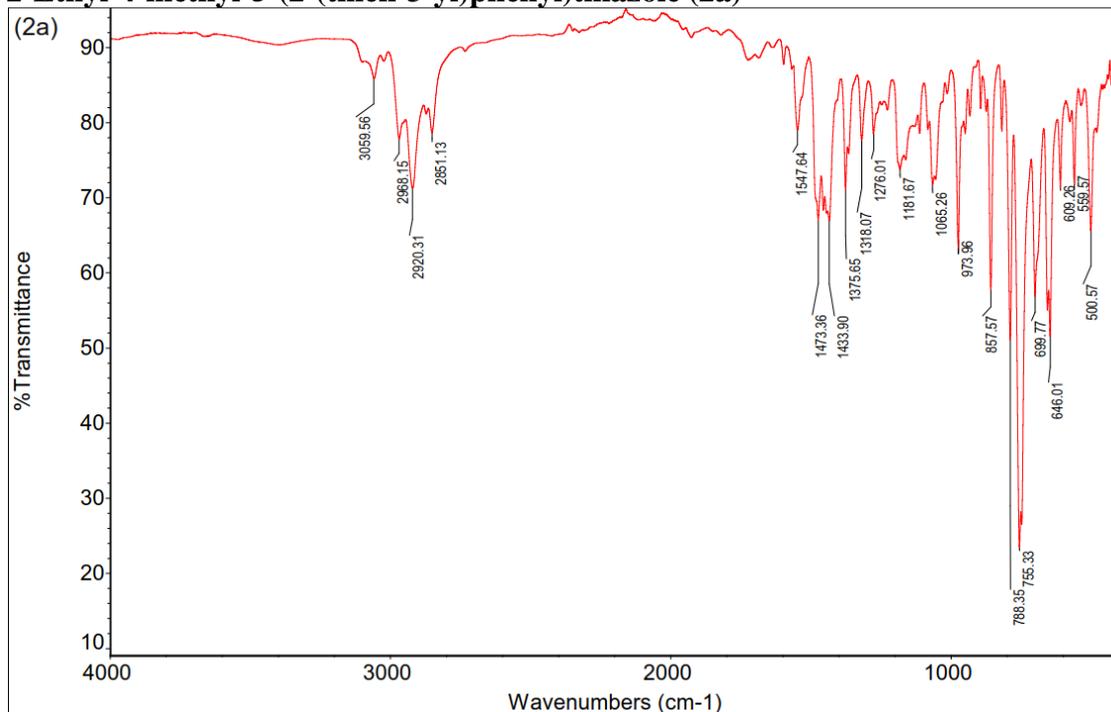
### 4-(2-Bromophenyl)-2-hexylthiophene (1n)



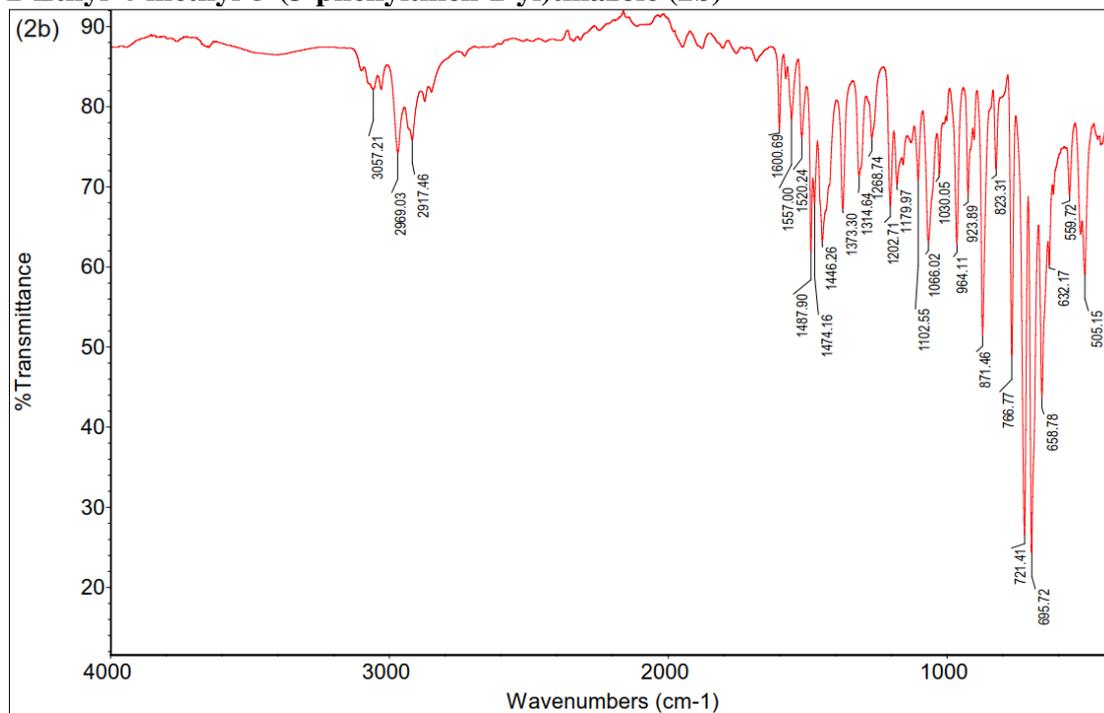
### 4-(2-Bromophenyl)thiophene-2-carbaldehyde (1o)



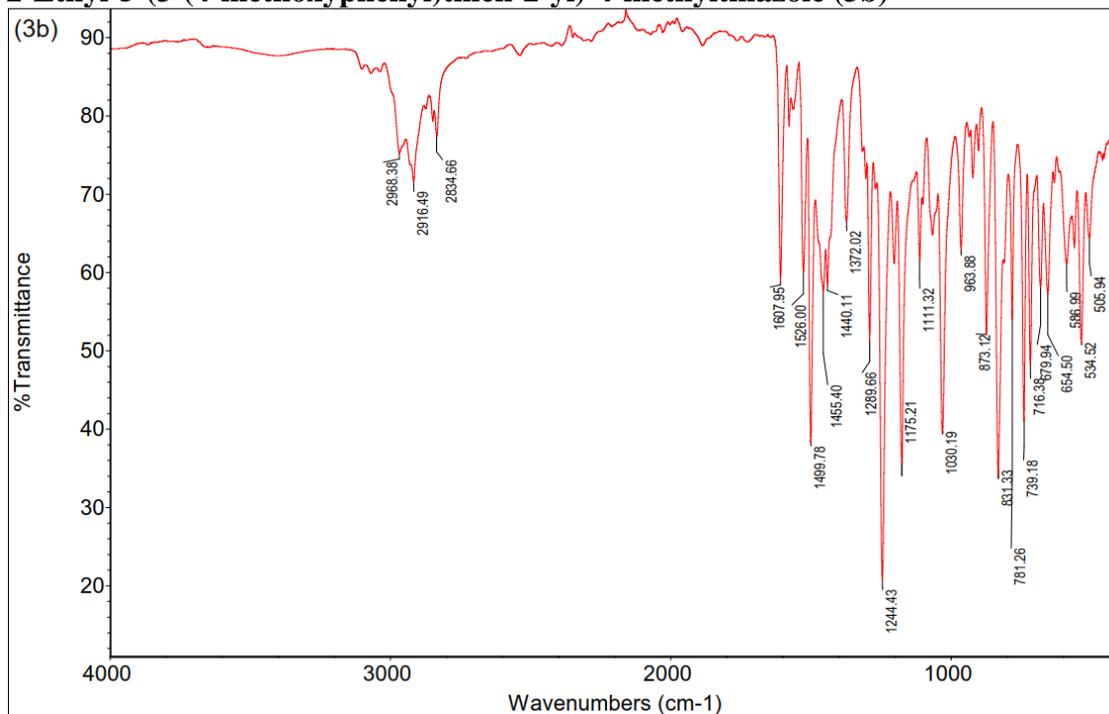
### 2-Ethyl-4-methyl-5-(2-(thien-3-yl)phenyl)thiazole (2a)



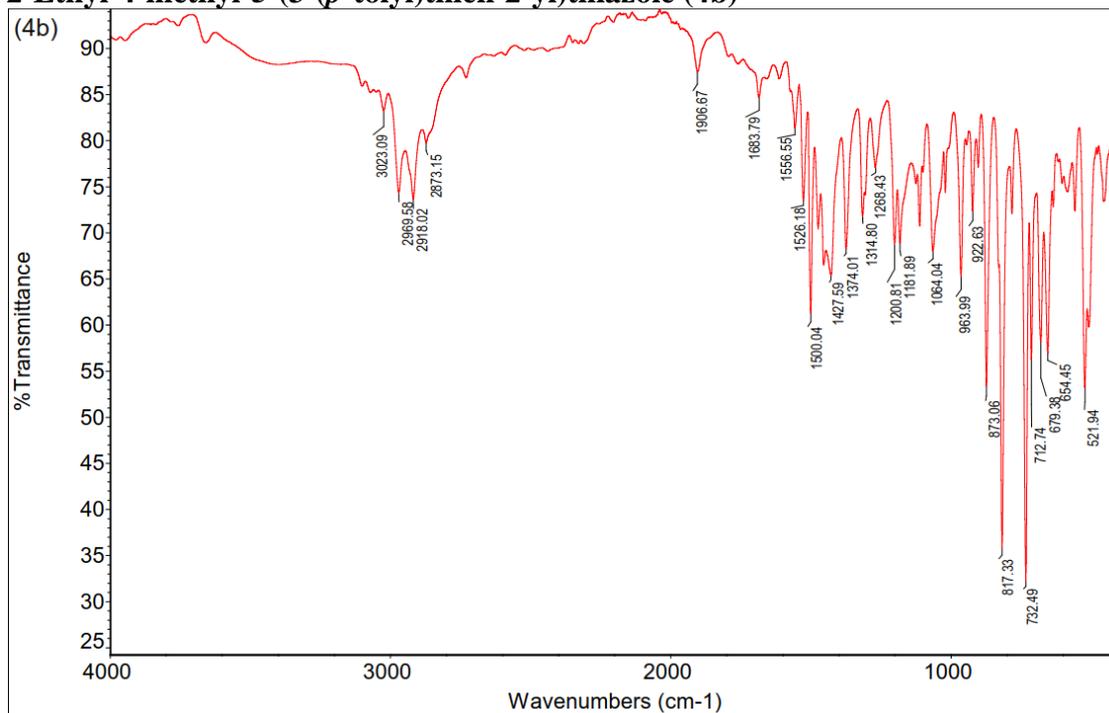
### 2-Ethyl-4-methyl-5-(3-phenylthien-2-yl)thiazole (2b)



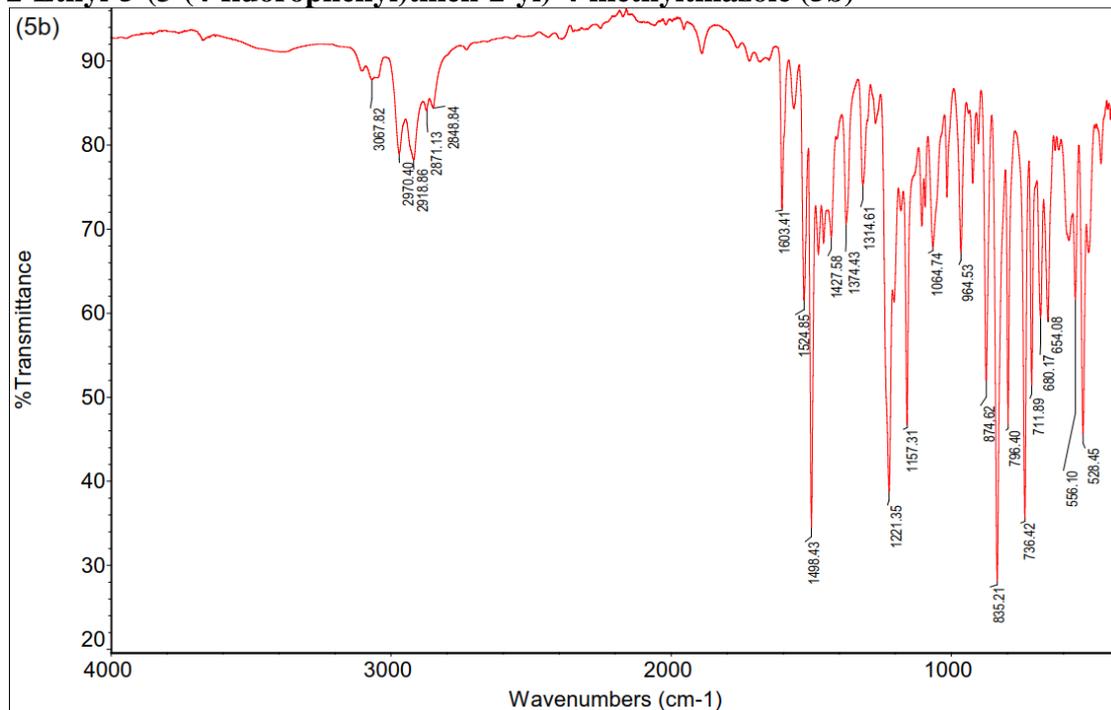
### 2-Ethyl-5-(3-(4-methoxyphenyl)thien-2-yl)-4-methylthiazole (3b)



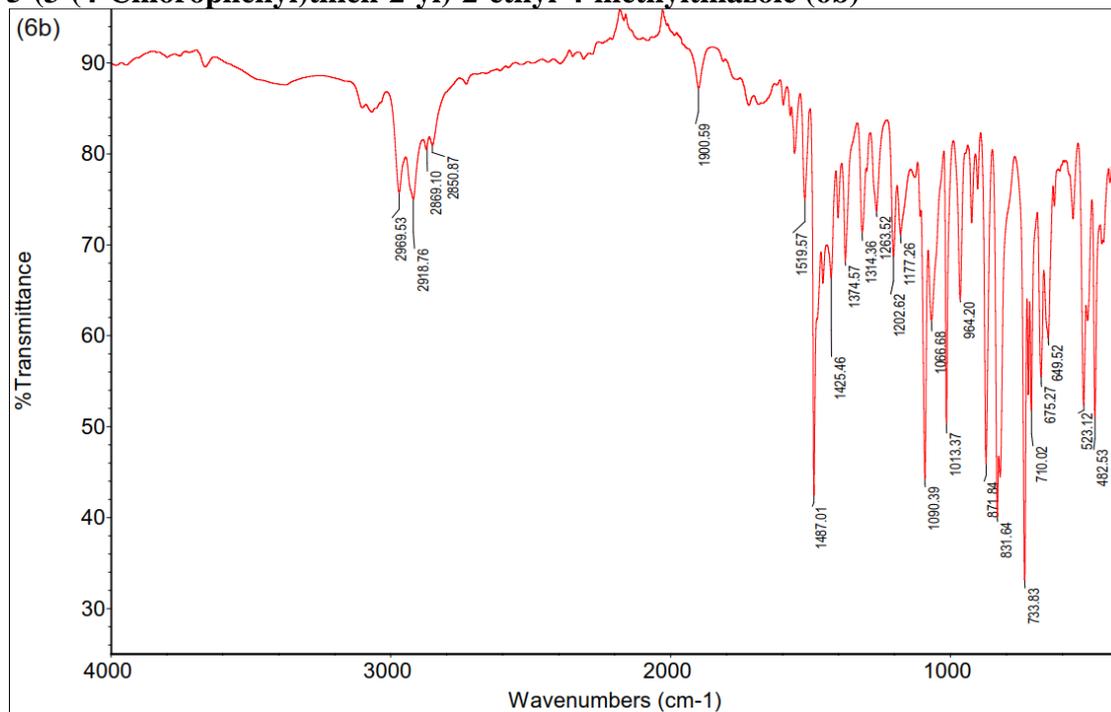
### 2-Ethyl-4-methyl-5-(3-(*p*-tolyl)thien-2-yl)thiazole (4b)



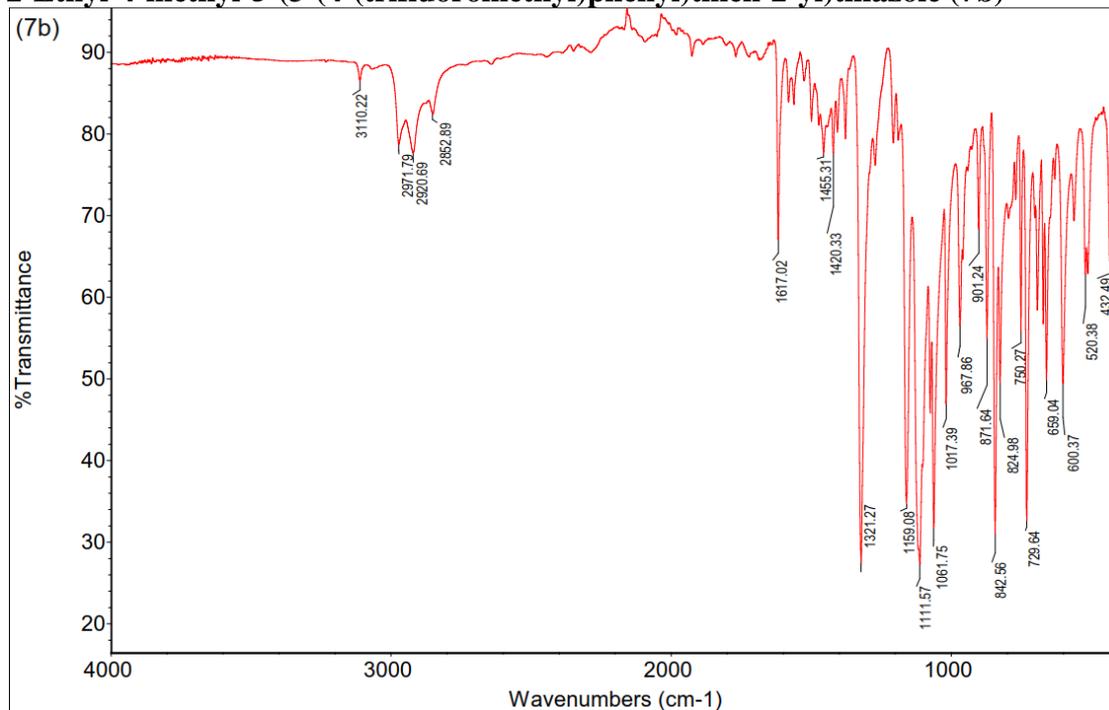
### 2-Ethyl-5-(3-(4-fluorophenyl)thien-2-yl)-4-methylthiazole (5b)



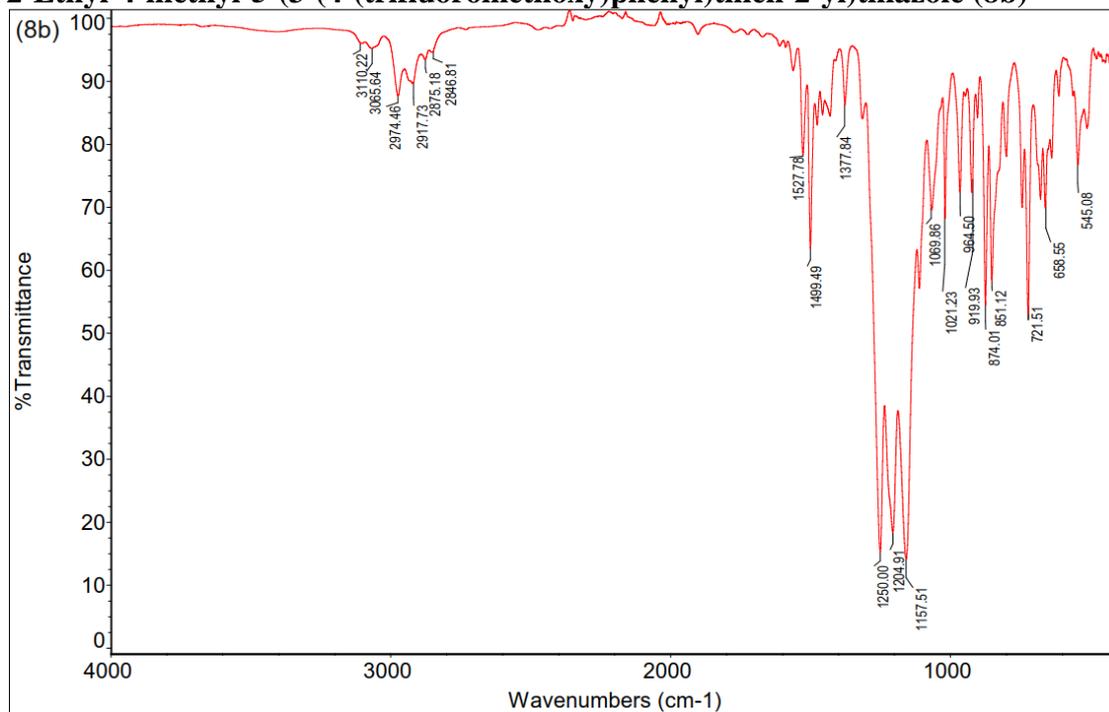
### 5-(3-(4-Chlorophenyl)thien-2-yl)-2-ethyl-4-methylthiazole (6b)



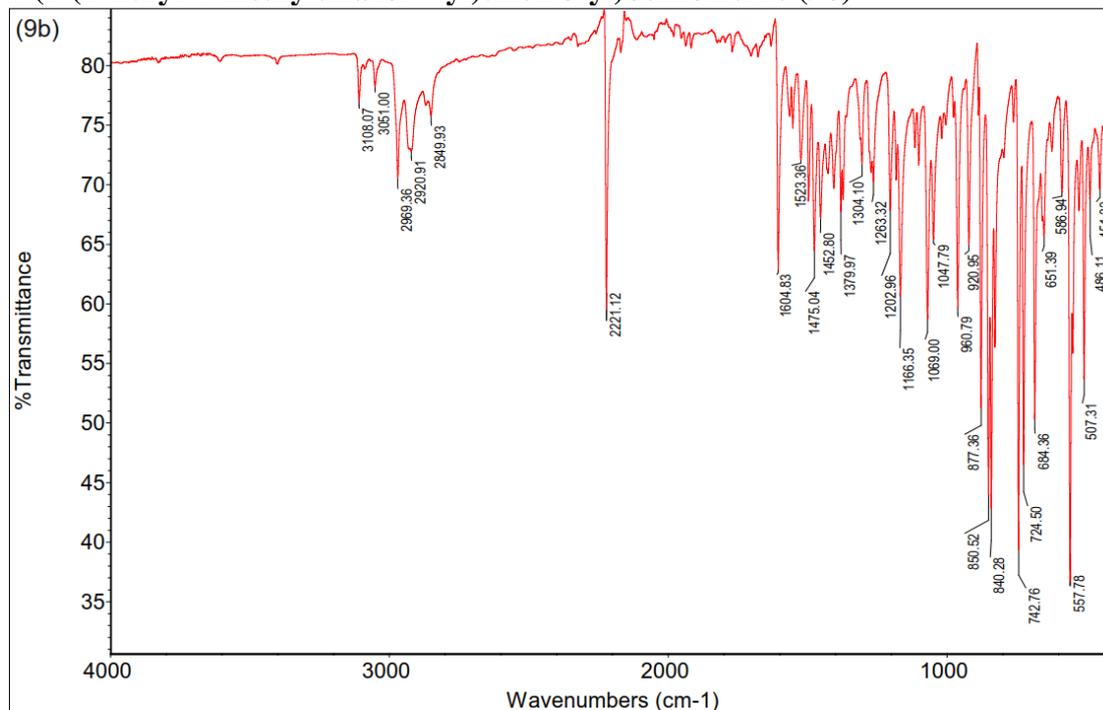
### 2-Ethyl-4-methyl-5-(3-(4-(trifluoromethyl)phenyl)thien-2-yl)thiazole (7b)



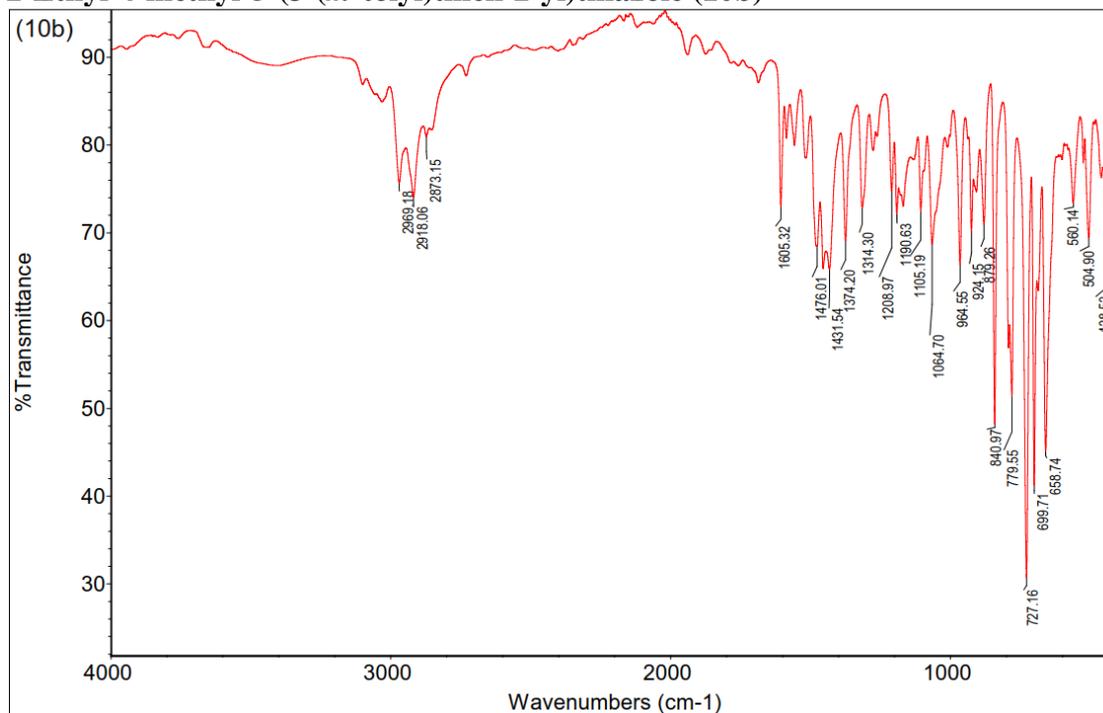
### 2-Ethyl-4-methyl-5-(3-(4-(trifluoromethoxy)phenyl)thien-2-yl)thiazole (8b)



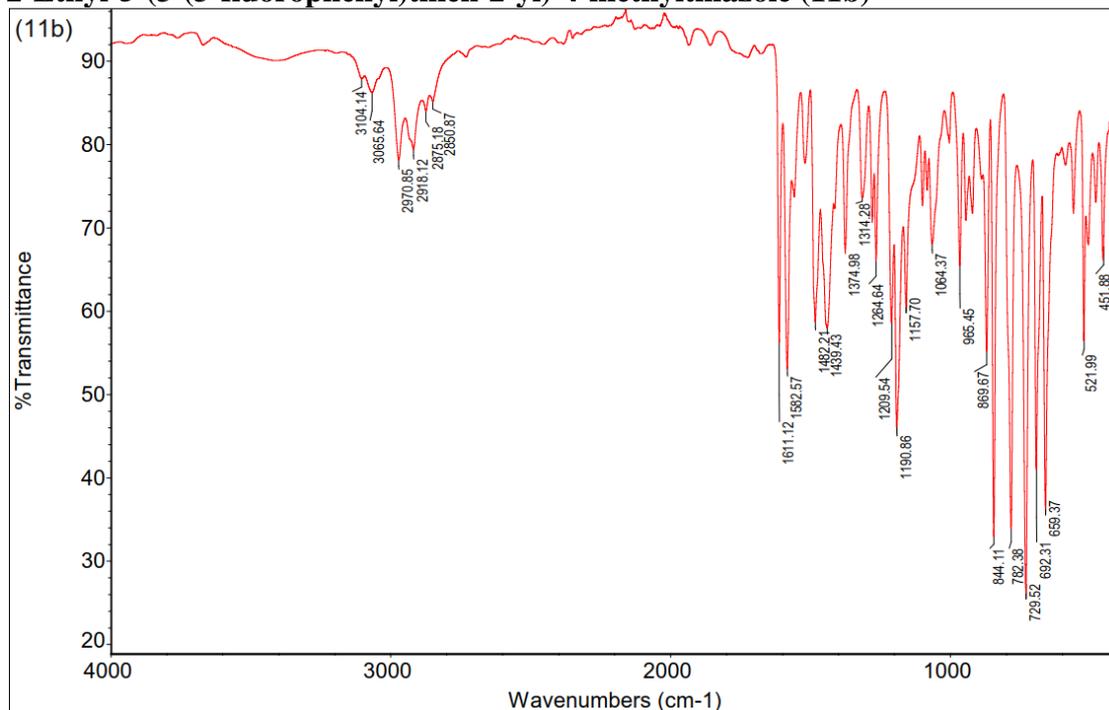
### 4-(2-(2-Ethyl-4-methylthiazol-5-yl)thien-3-yl)benzotrile (9b)



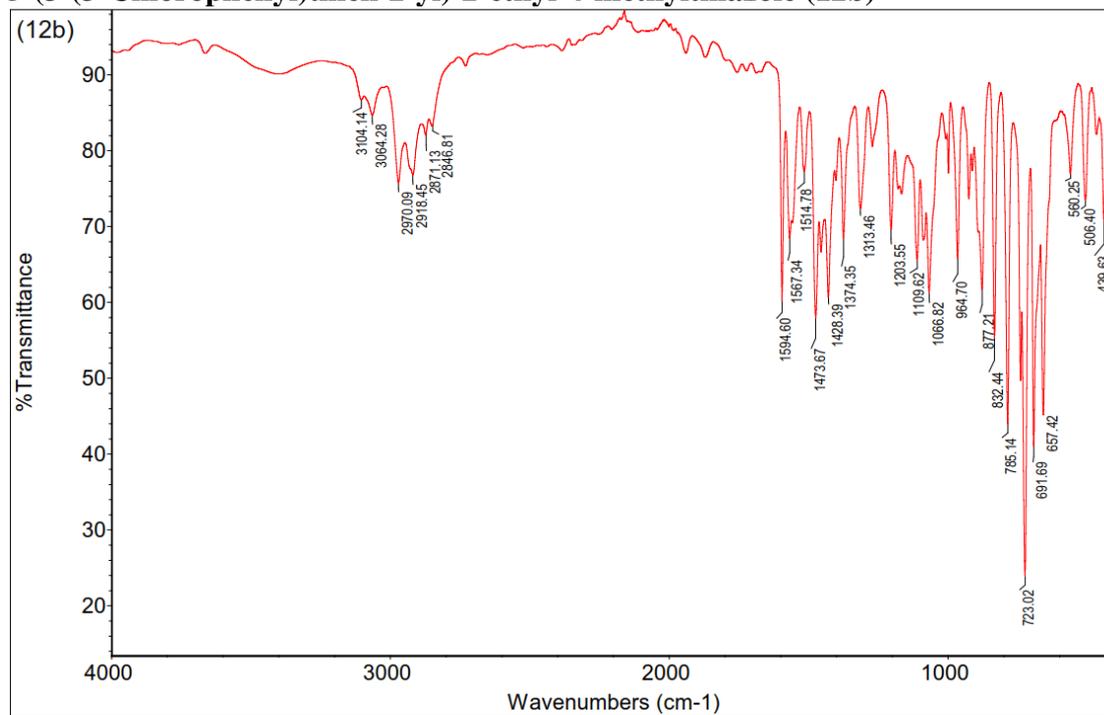
### 2-Ethyl-4-methyl-5-(3-(*m*-tolyl)thien-2-yl)thiazole (10b)



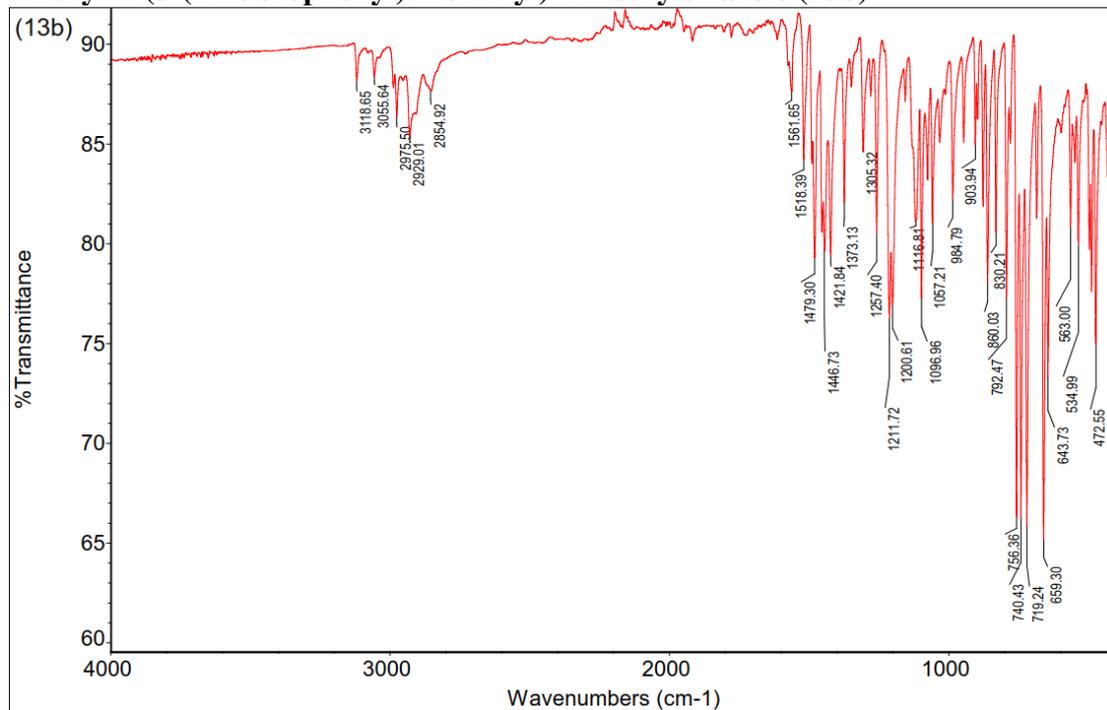
### 2-Ethyl-5-(3-(3-fluorophenyl)thien-2-yl)-4-methylthiazole (11b)



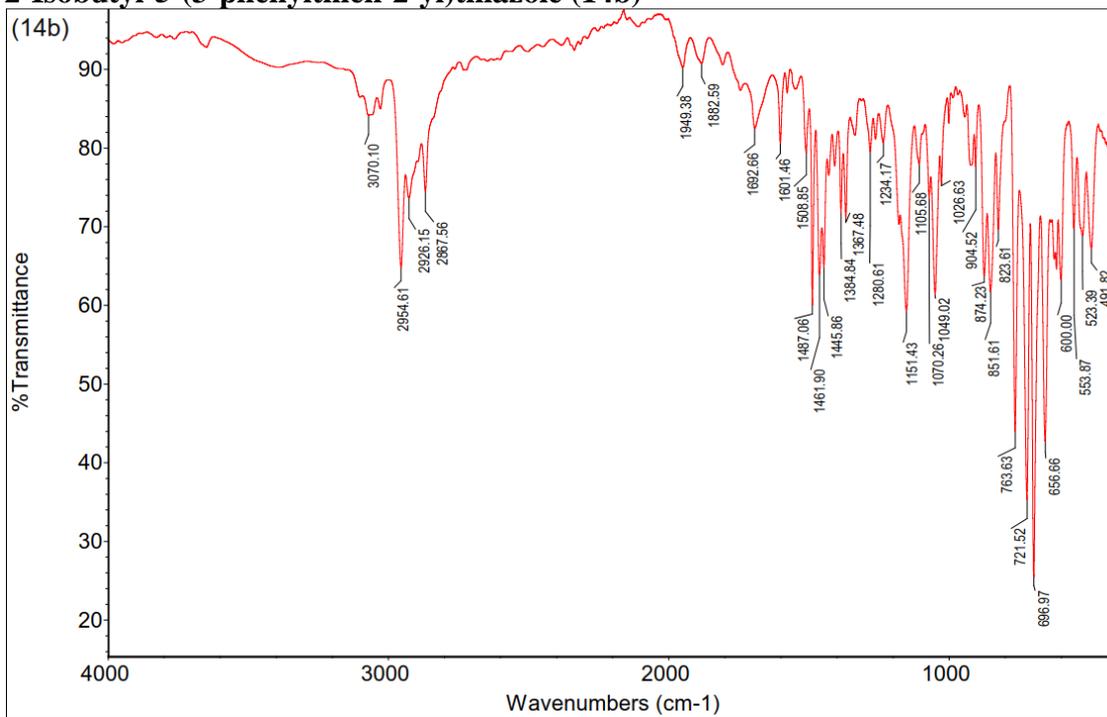
### 5-(3-(3-Chlorophenyl)thien-2-yl)-2-ethyl-4-methylthiazole (12b)



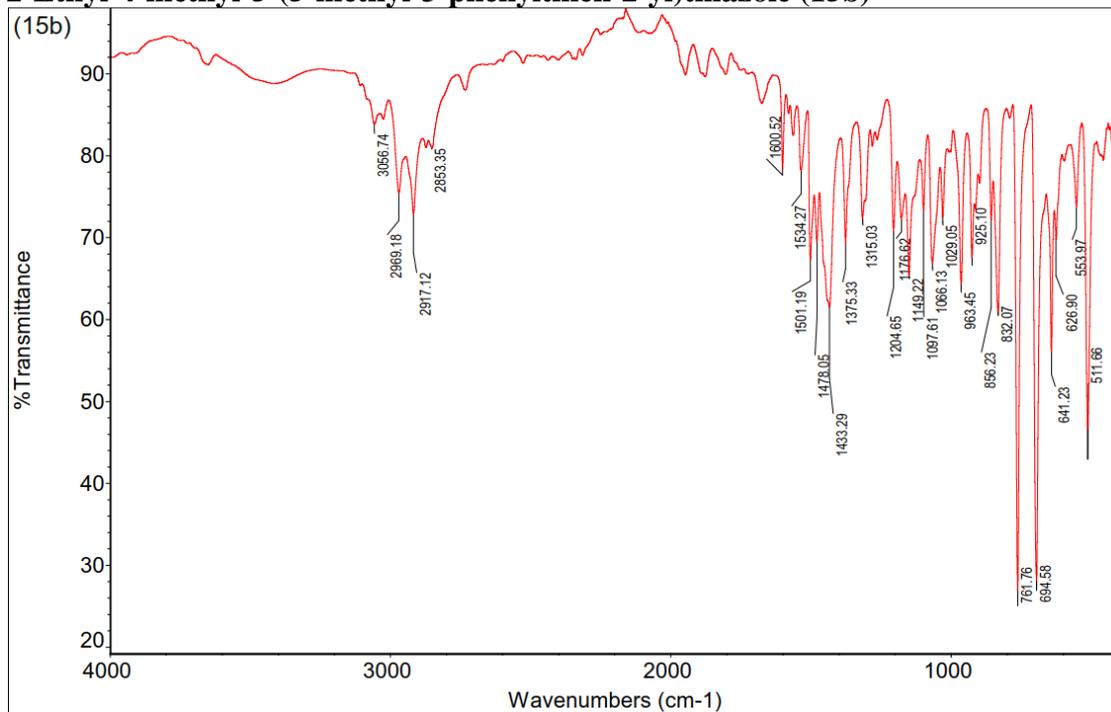
### 2-Ethyl-5-(3-(2-fluorophenyl)thien-2-yl)-4-methylthiazole (13b)



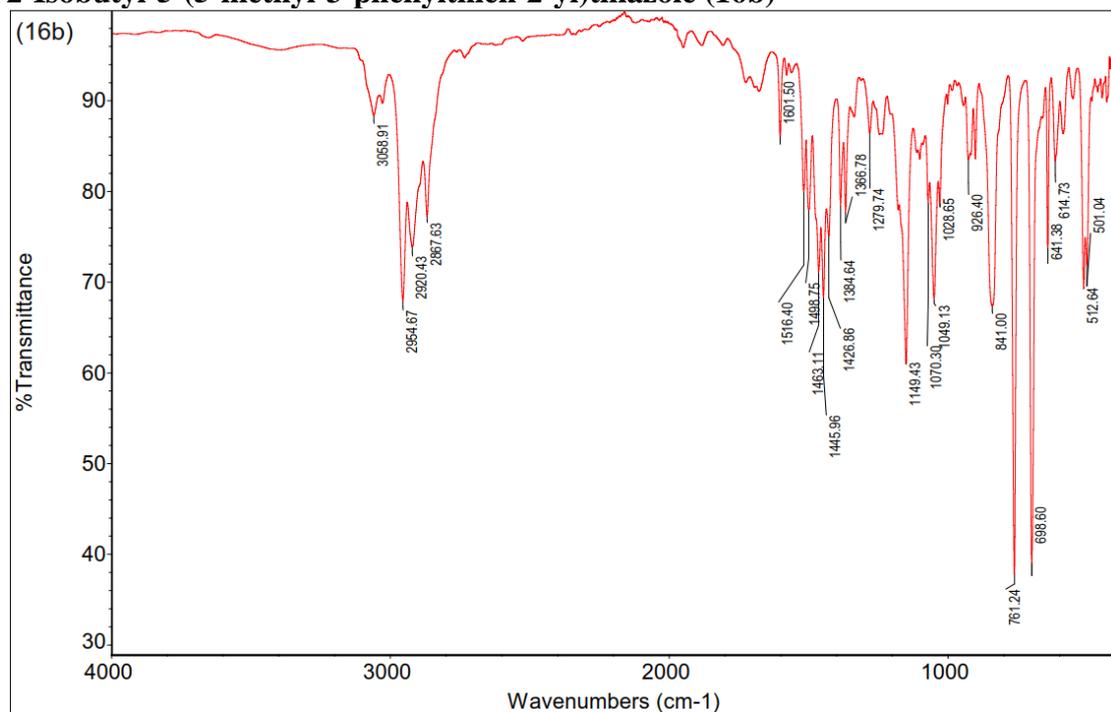
### 2-Isobutyl-5-(3-phenylthien-2-yl)thiazole (14b)



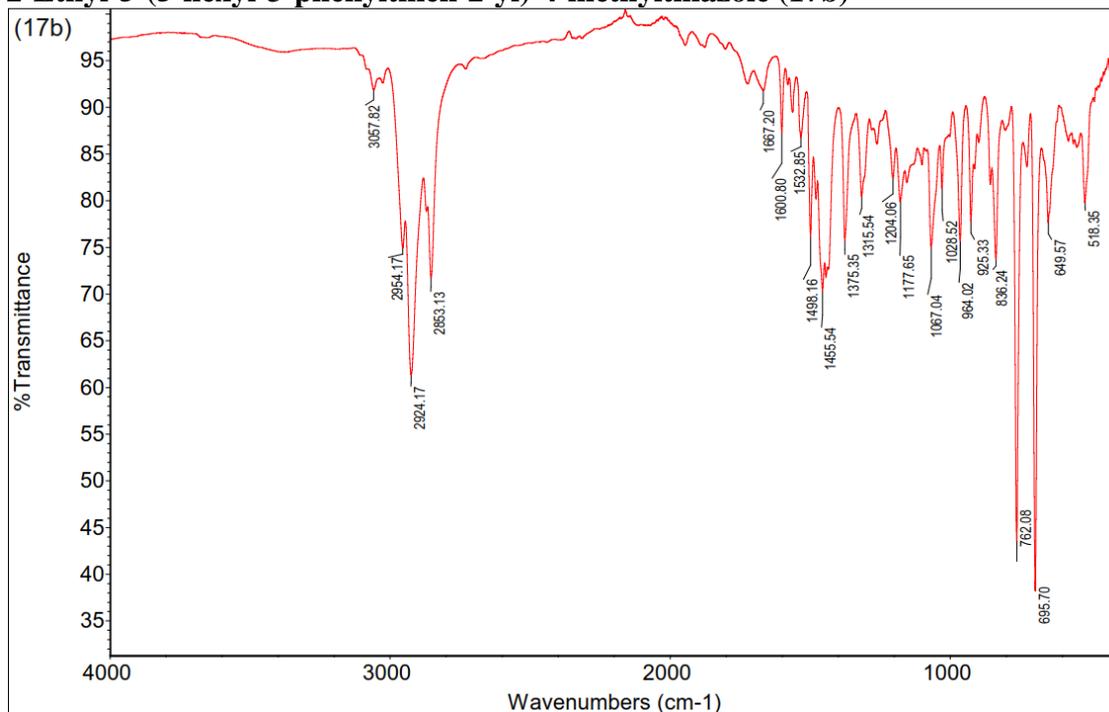
### 2-Ethyl-4-methyl-5-(5-methyl-3-phenylthien-2-yl)thiazole (15b)



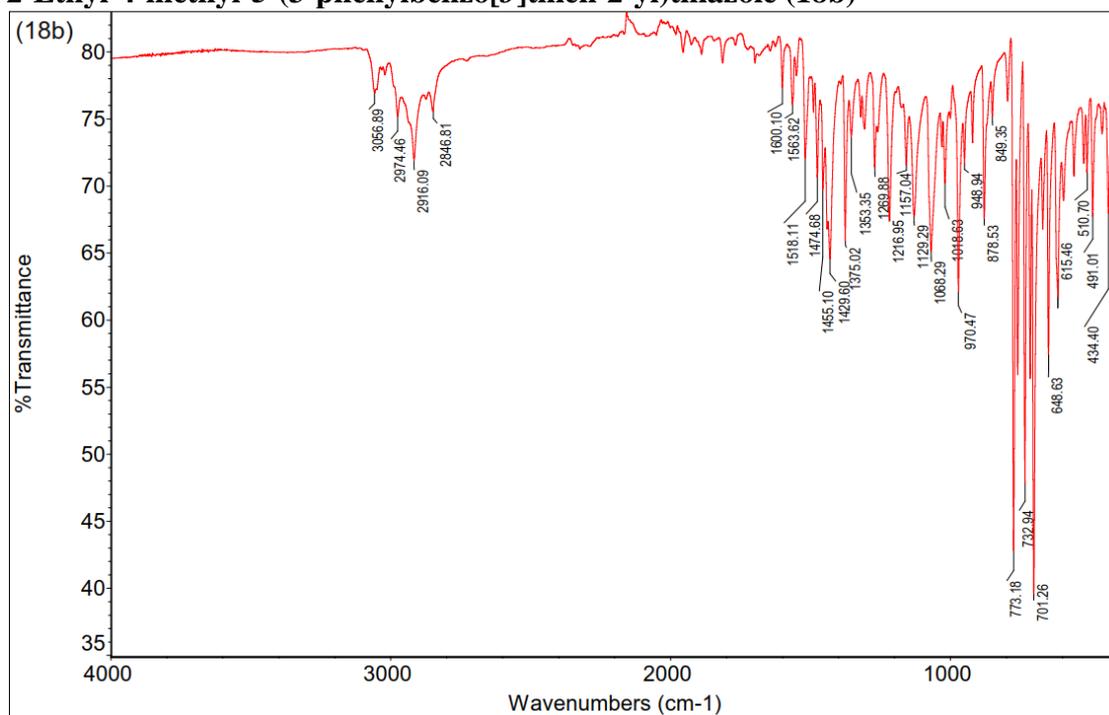
### 2-Isobutyl-5-(5-methyl-3-phenylthien-2-yl)thiazole (16b)



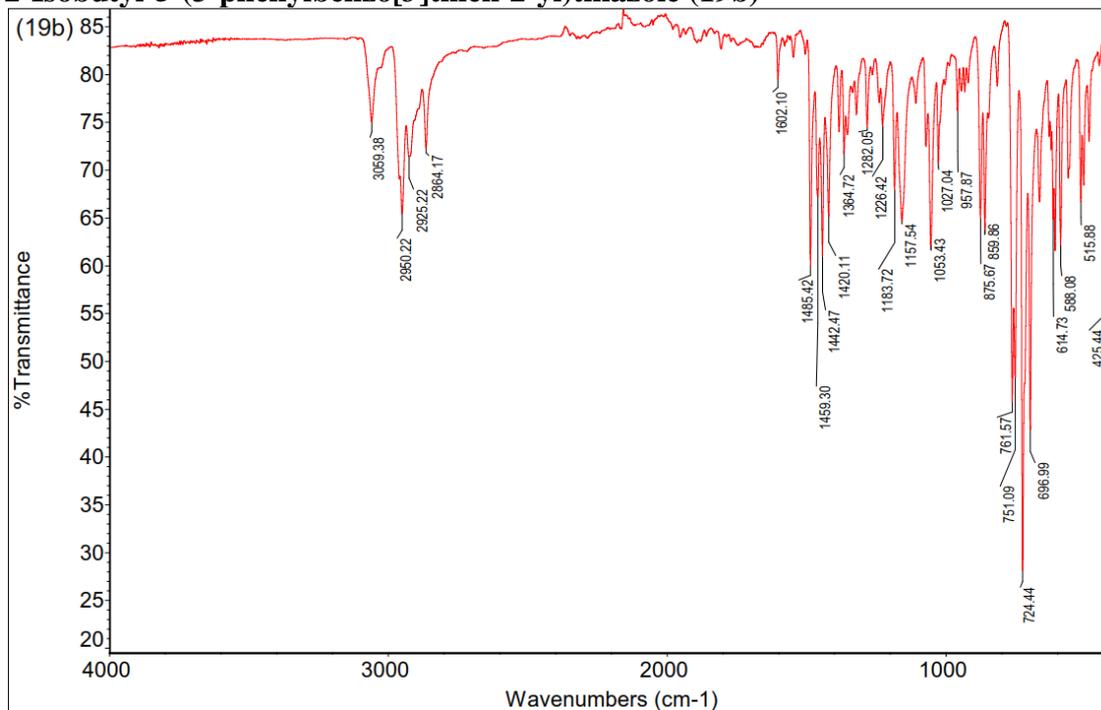
### 2-Ethyl-5-(5-hexyl-3-phenylthien-2-yl)-4-methylthiazole (17b)



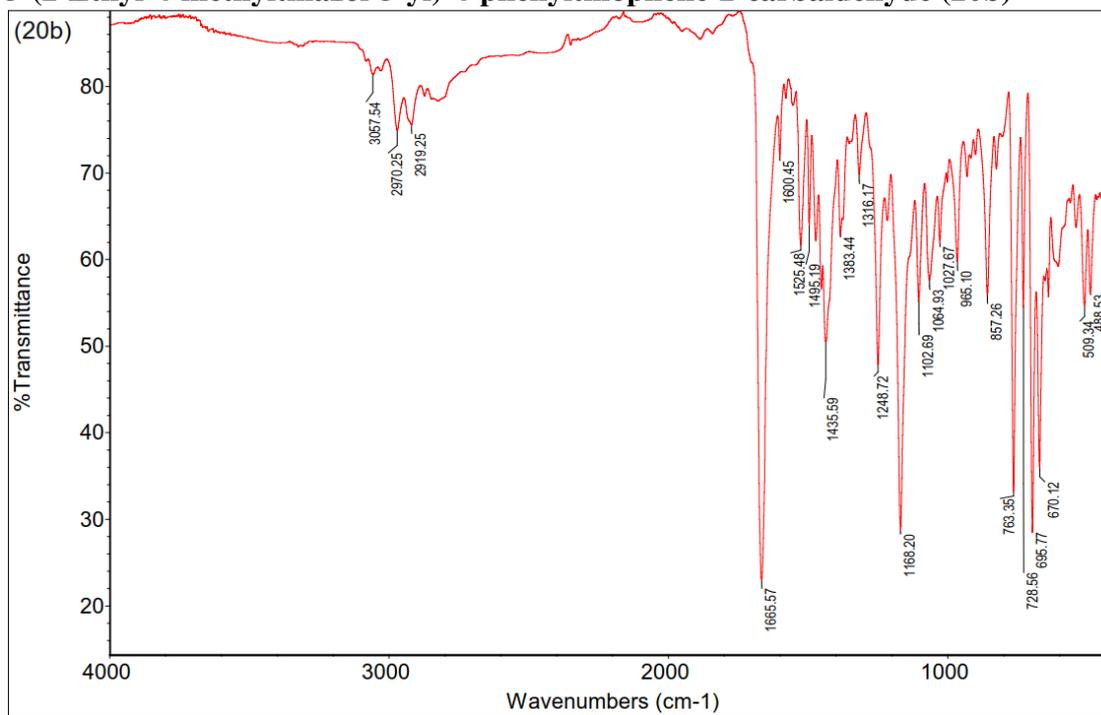
### 2-Ethyl-4-methyl-5-(3-phenylbenzo[*b*]thien-2-yl)thiazole (18b)



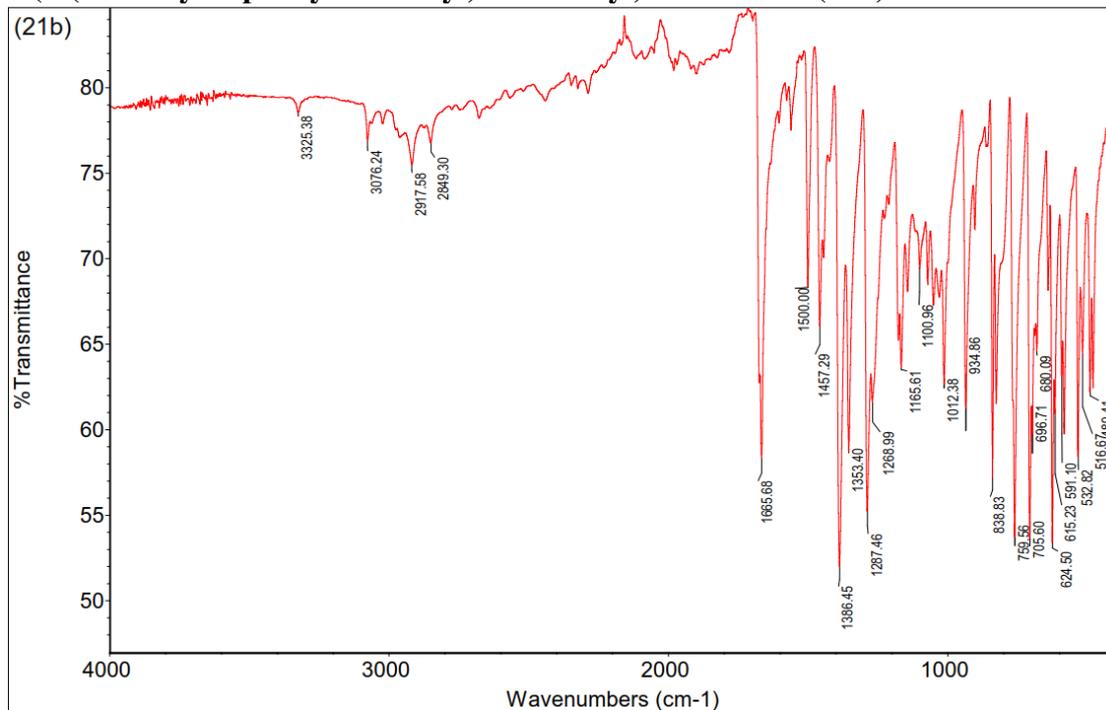
## 2-Isobutyl-5-(3-phenylbenzo[*b*]thien-2-yl)thiazole (19b)



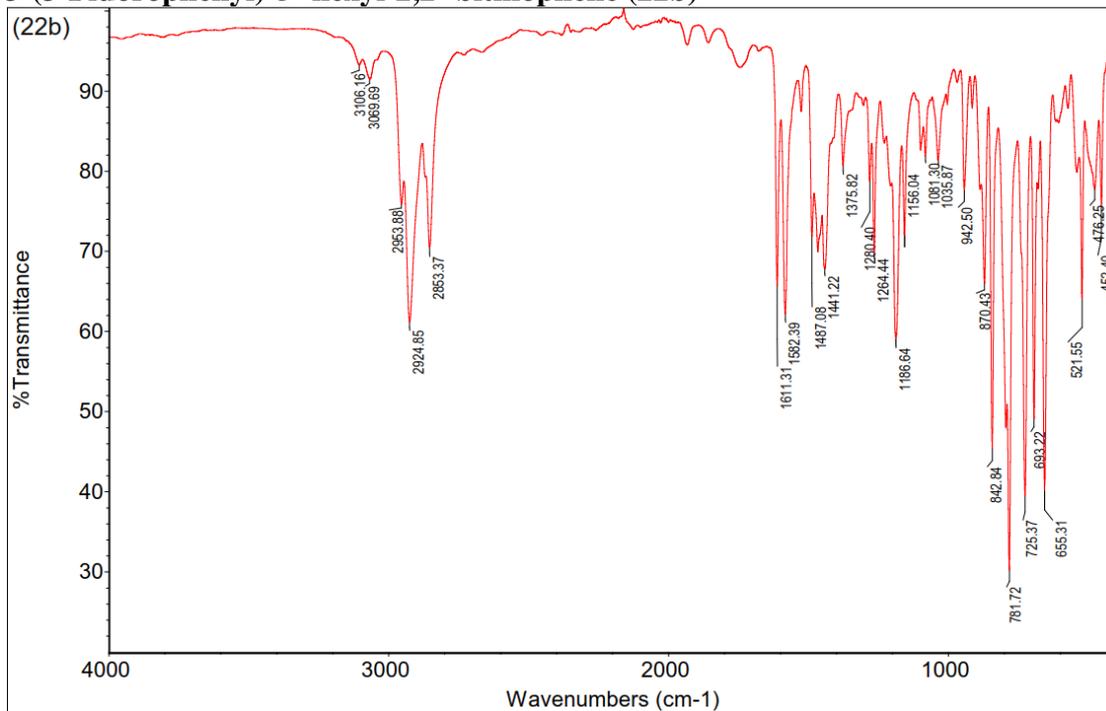
## 5-(2-Ethyl-4-methylthiazol-5-yl)-4-phenylthiophene-2-carbaldehyde (20b)



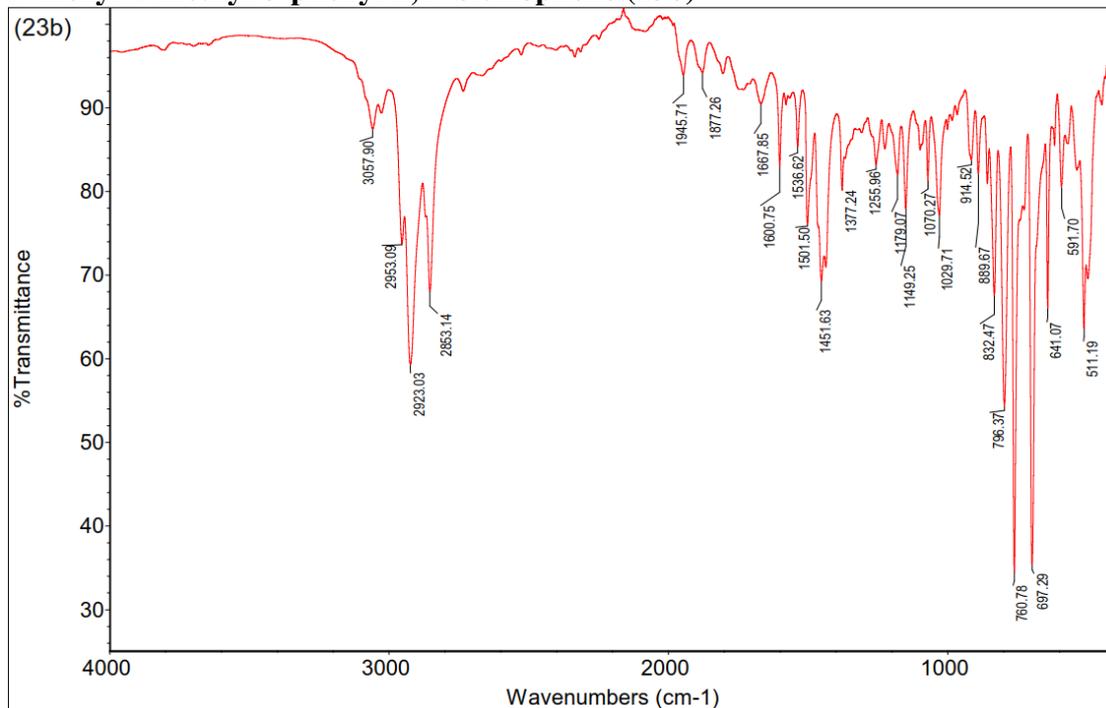
### 1-(5-(5-Methyl-3-phenylthien-2-yl)thiazol-2-yl)ethan-1-one (21b)



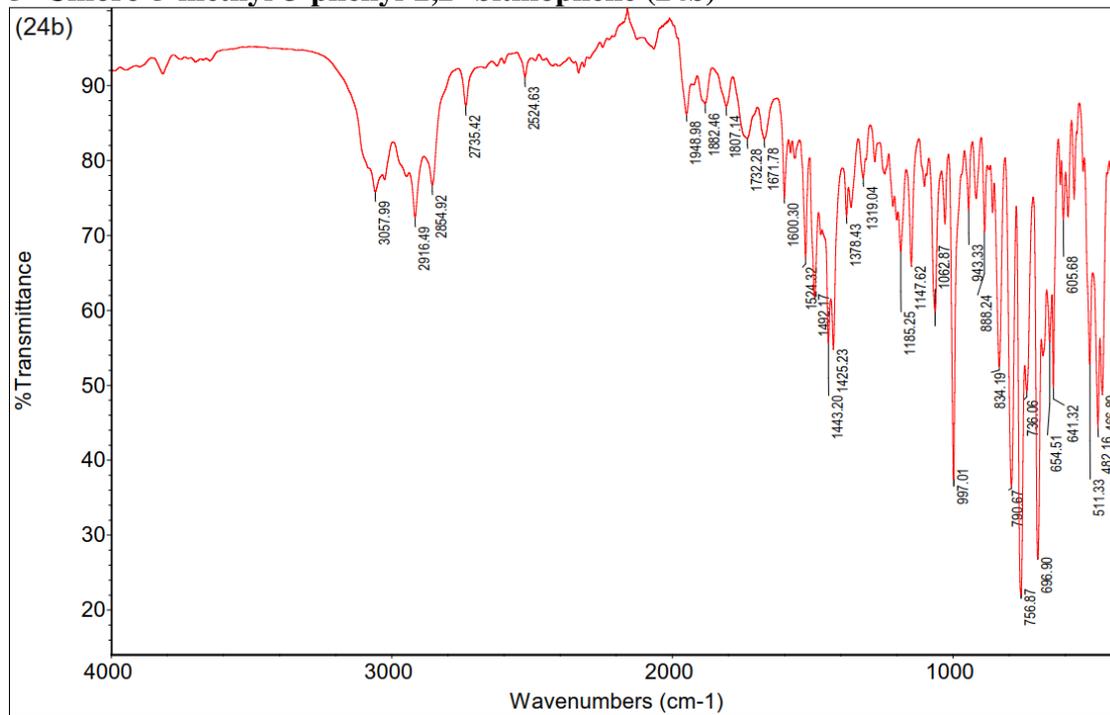
### 3-(3-Fluorophenyl)-5'-hexyl-2,2'-bithiophene (22b)



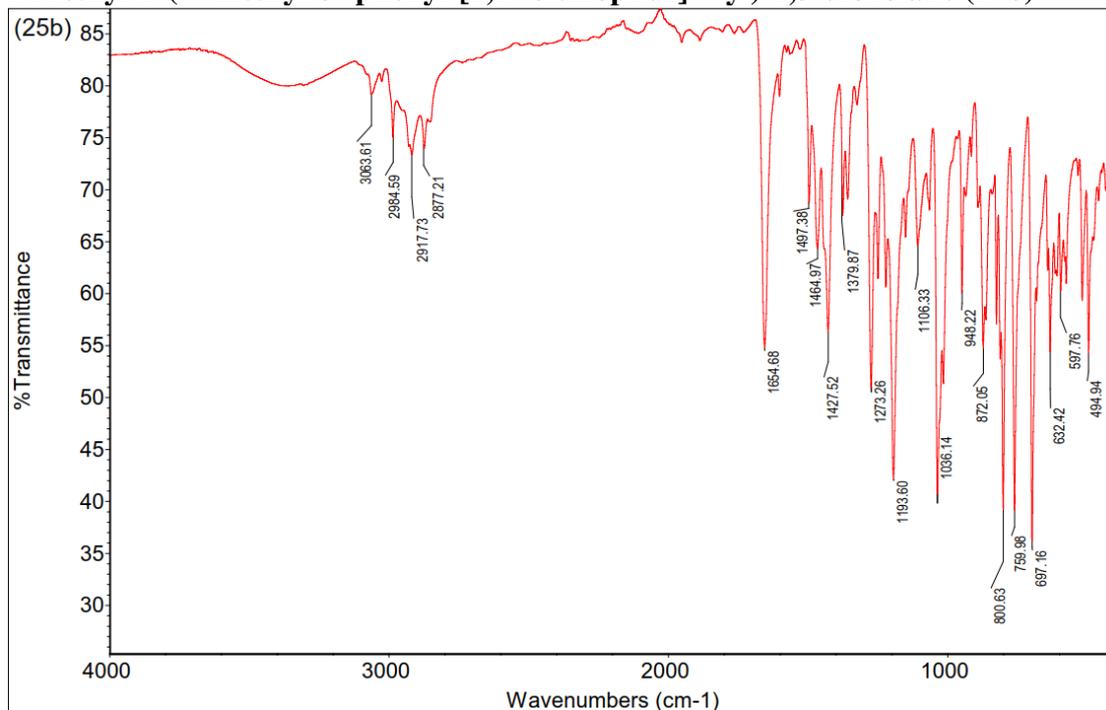
### 5'-Hexyl-5-methyl-3-phenyl-2,2'-bithiophene (23b)



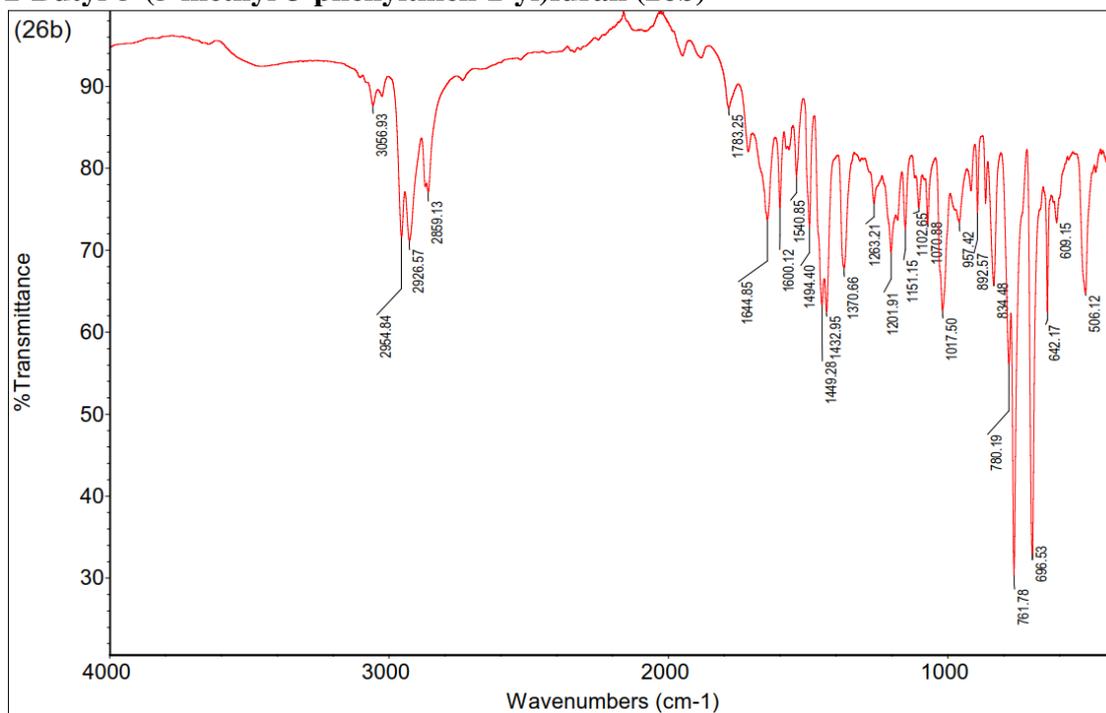
### 5'-Chloro-5-methyl-3-phenyl-2,2'-bithiophene (24b)



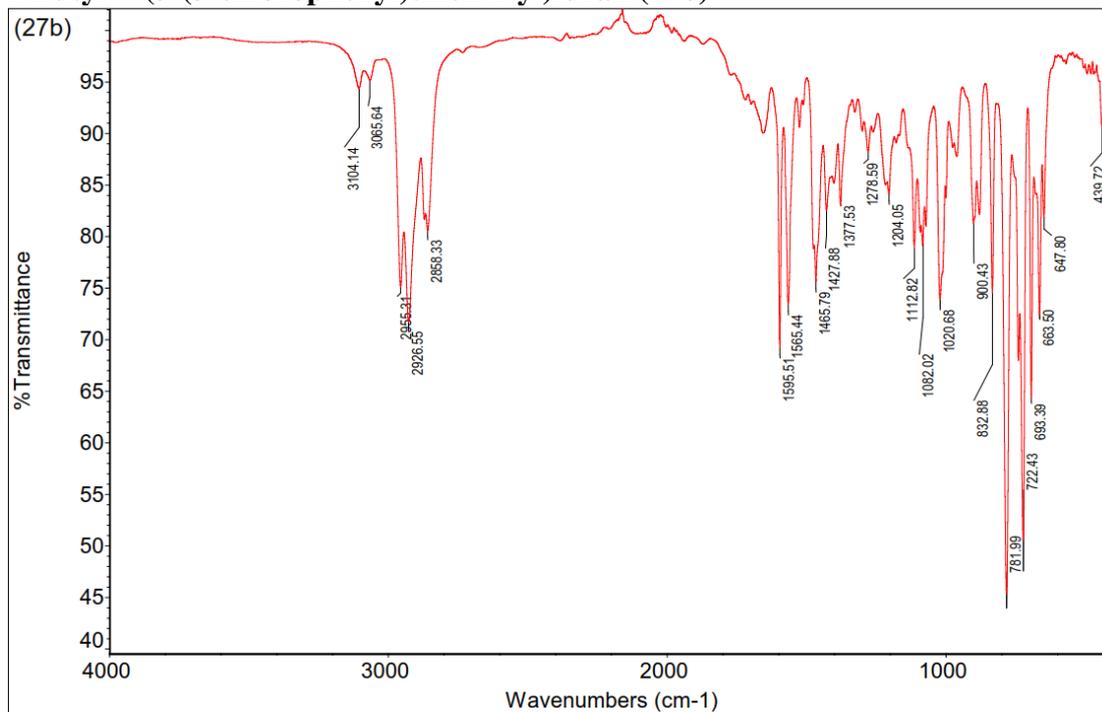
### 2-Methyl-2-(5'-methyl-3'-phenyl-[2,2'-bithiophen]-5-yl)-1,3-dioxolane (25b)



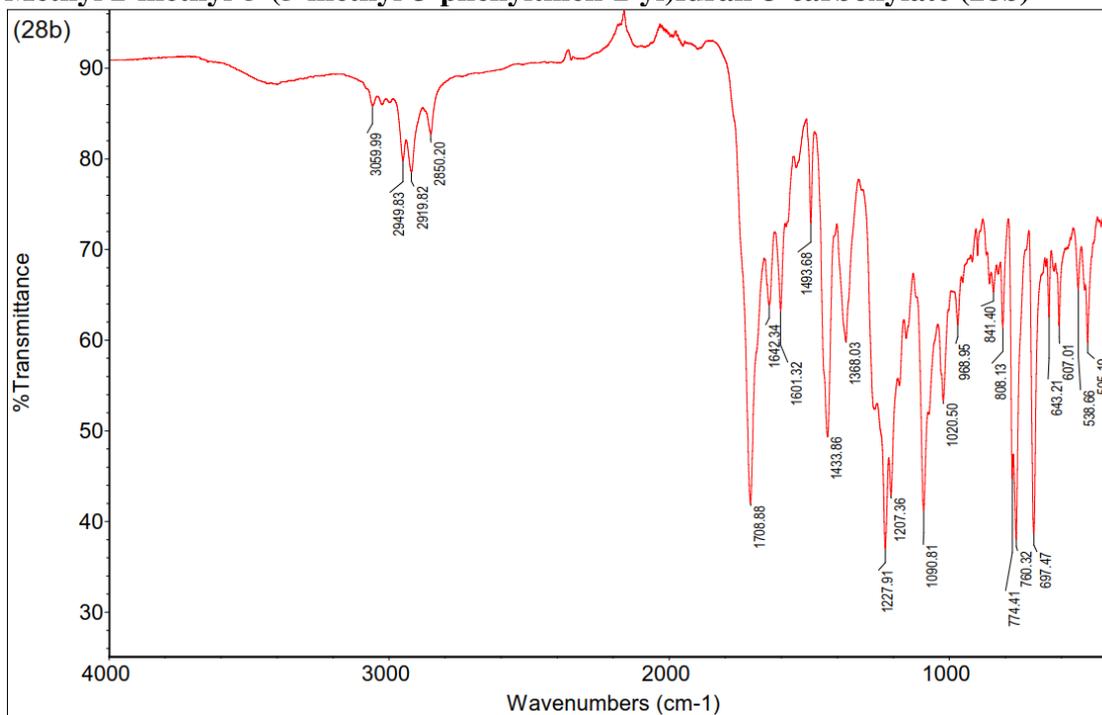
### 2-Butyl-5-(5-methyl-3-phenylthien-2-yl)furan (26b)



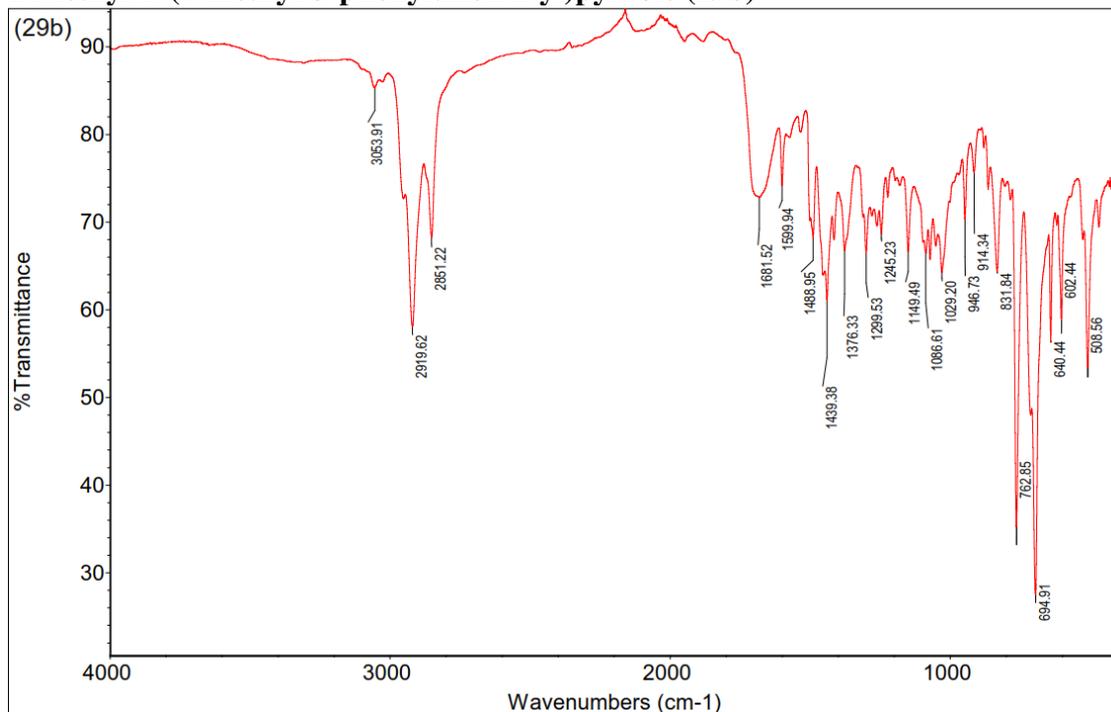
### 2-Butyl-5-(3-(3-chlorophenyl)thien-2-yl)furan (27b)



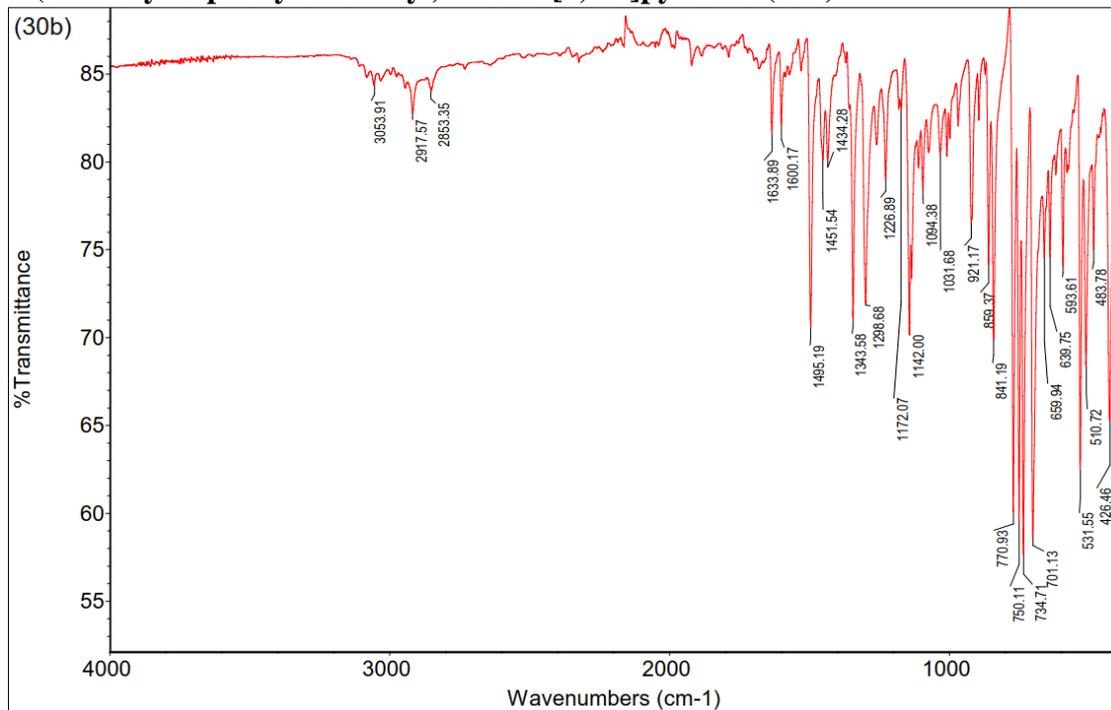
### Methyl 2-methyl-5-(5-methyl-3-phenylthien-2-yl)furan-3-carboxylate (28b)



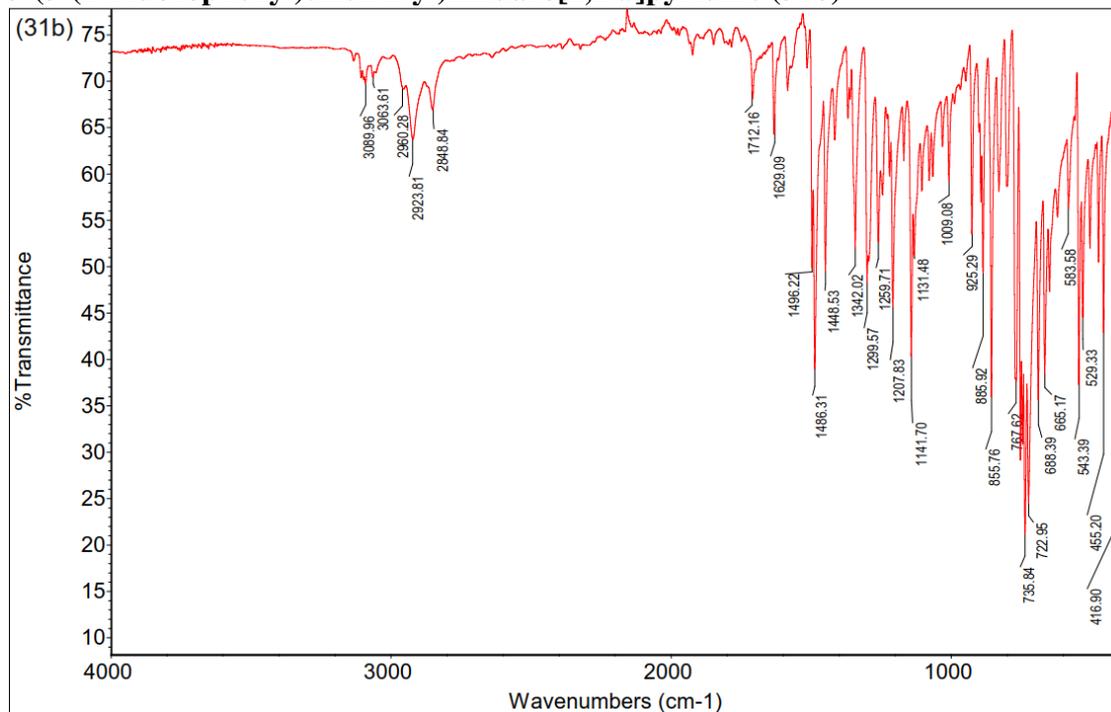
### 1-Methyl-2-(5-methyl-3-phenylthien-2-yl)pyrrole (29b)



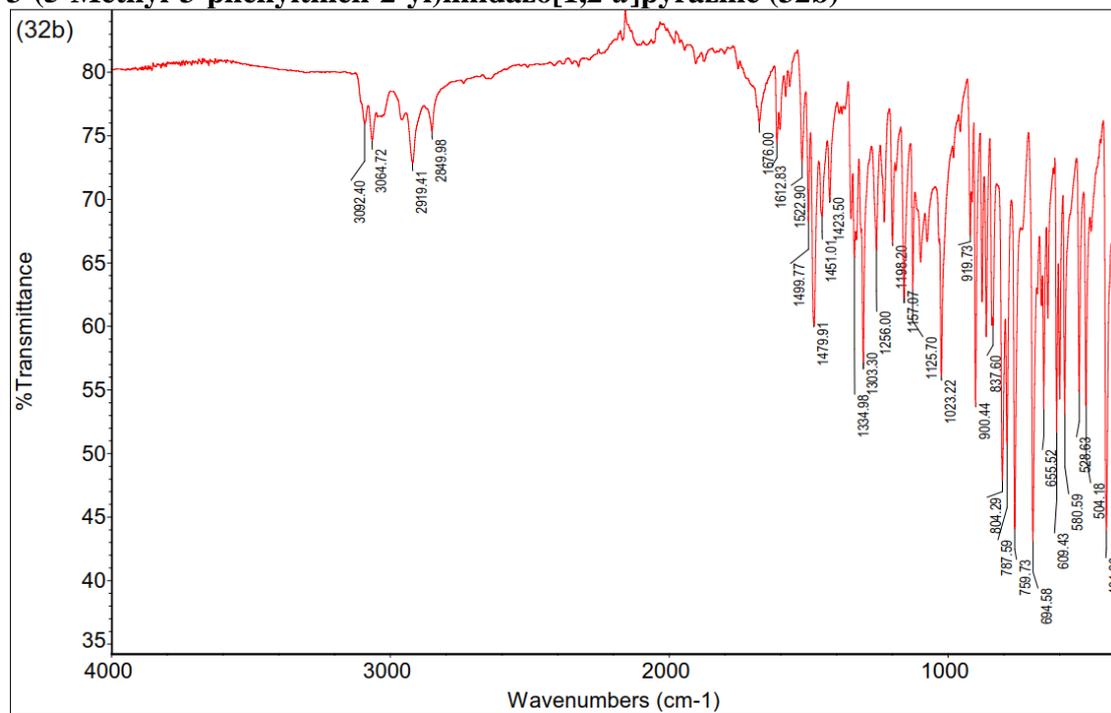
### 3-(5-Methyl-3-phenylthien-2-yl)imidazo[1,2-a]pyridine (30b)



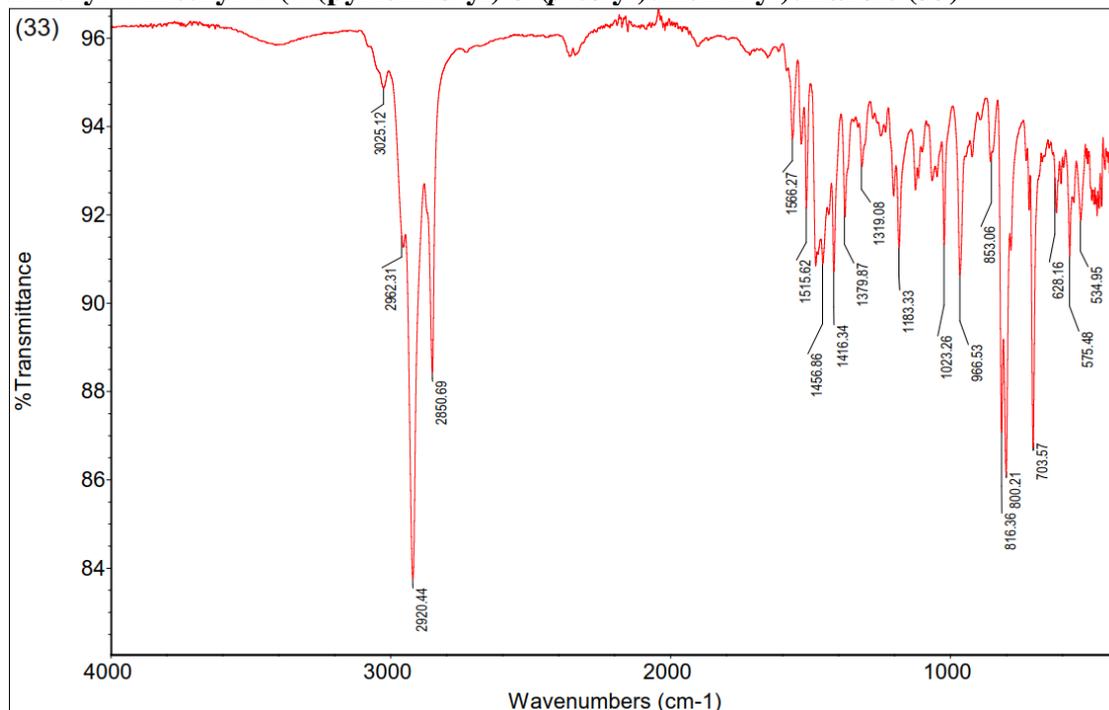
### 3-(3-(2-Fluorophenyl)thien-2-yl)imidazo[1,2-a]pyridine (31b)



### 3-(5-Methyl-3-phenylthien-2-yl)imidazo[1,2-a]pyrazine (32b)



### 2-Ethyl-4-methyl-5-(5-(pyridin-3-yl)-3-(*p*-tolyl)thien-2-yl)thiazole (33)



### 1-(3'-Phenyl-[2,2'-bithiophen]-5-yl)ethan-1-one (34b)

