

# Supplementary material

## Direct Heteroarylation of a 5-Bromothiophen-2-ylpyridine and of 8-Bromoquinoline via Palladium-Catalysed C-H bond Activation: A Simpler Access to Heteroarylated Nitrogen-Based Derivatives

Jenny Laroche,<sup>a</sup> Kassem Beydoun,<sup>a</sup> Véronique Guerchais,<sup>a\*</sup> Henri Doucet<sup>a\*</sup>

<sup>a</sup> J. Laroche, Dr. K. Beydoun, Dr. V. Guerchais\*, Dr. H. Doucet\*  
Institut Sciences Chimiques de Rennes, UMR 6226 CNRS-Université de Rennes 1  
"Organométalliques: Matériaux et Catalyse"

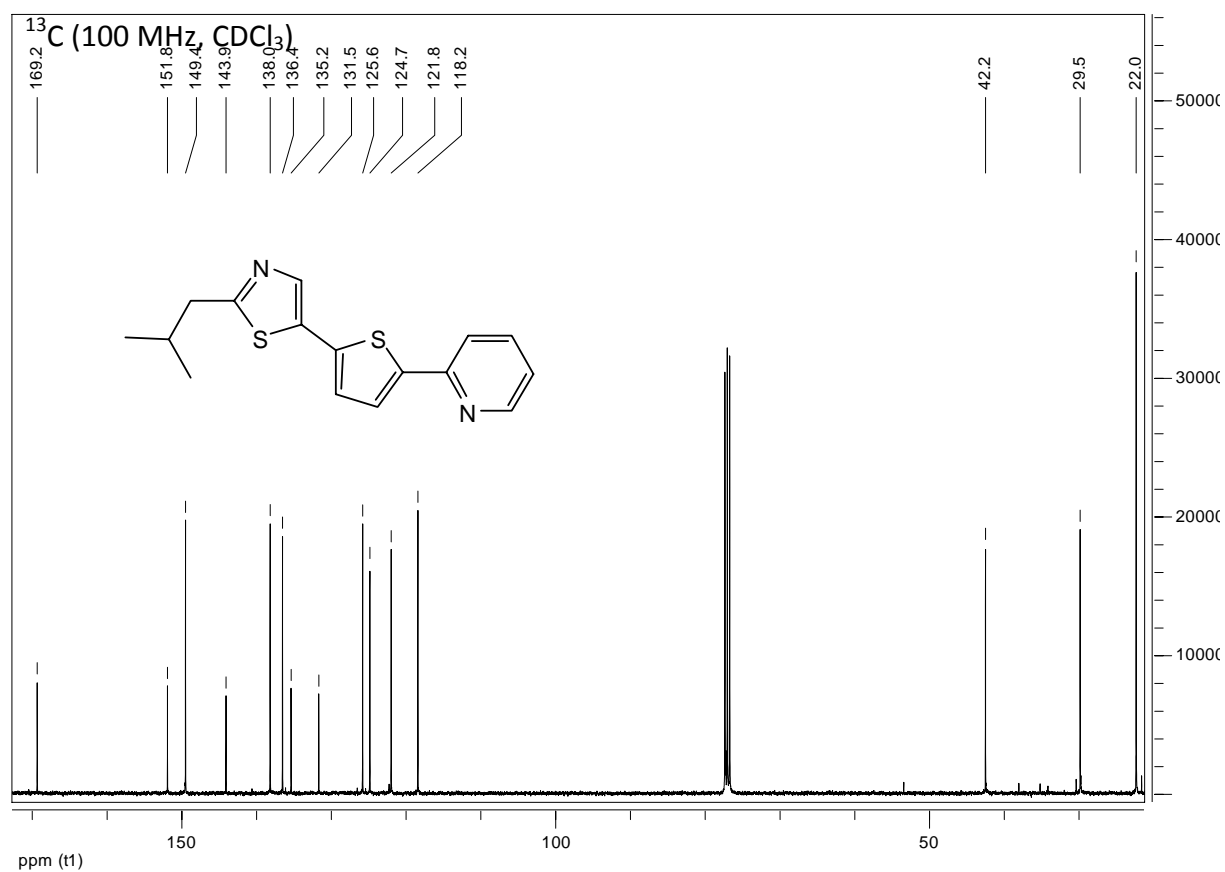
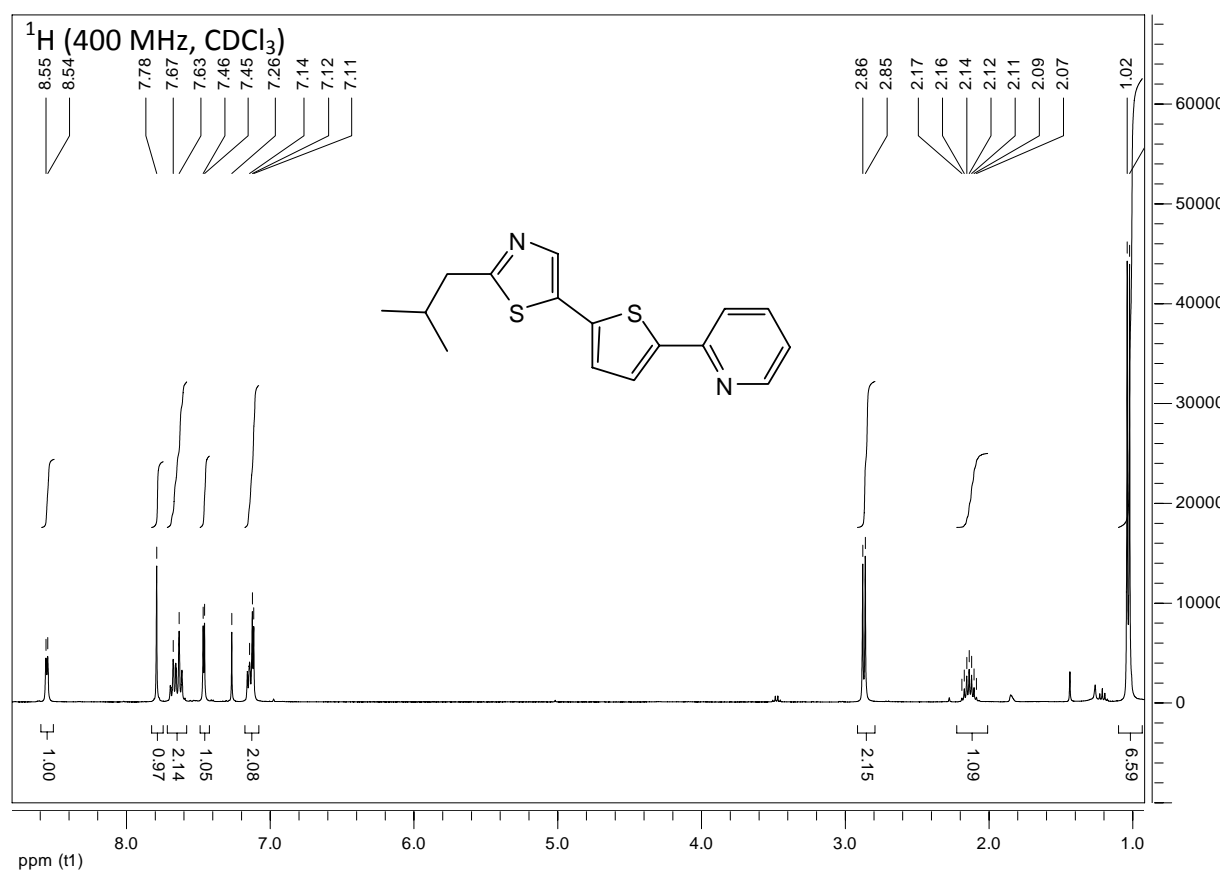
Campus de Beaulieu 35042 Rennes (France)  
Tel: (+) (33) 0223236384, Fax: (+) (33) 0223236939

E-mail: veronique.guerchais@univ-rennes1.fr , henri.doucet@univ-rennes1.fr

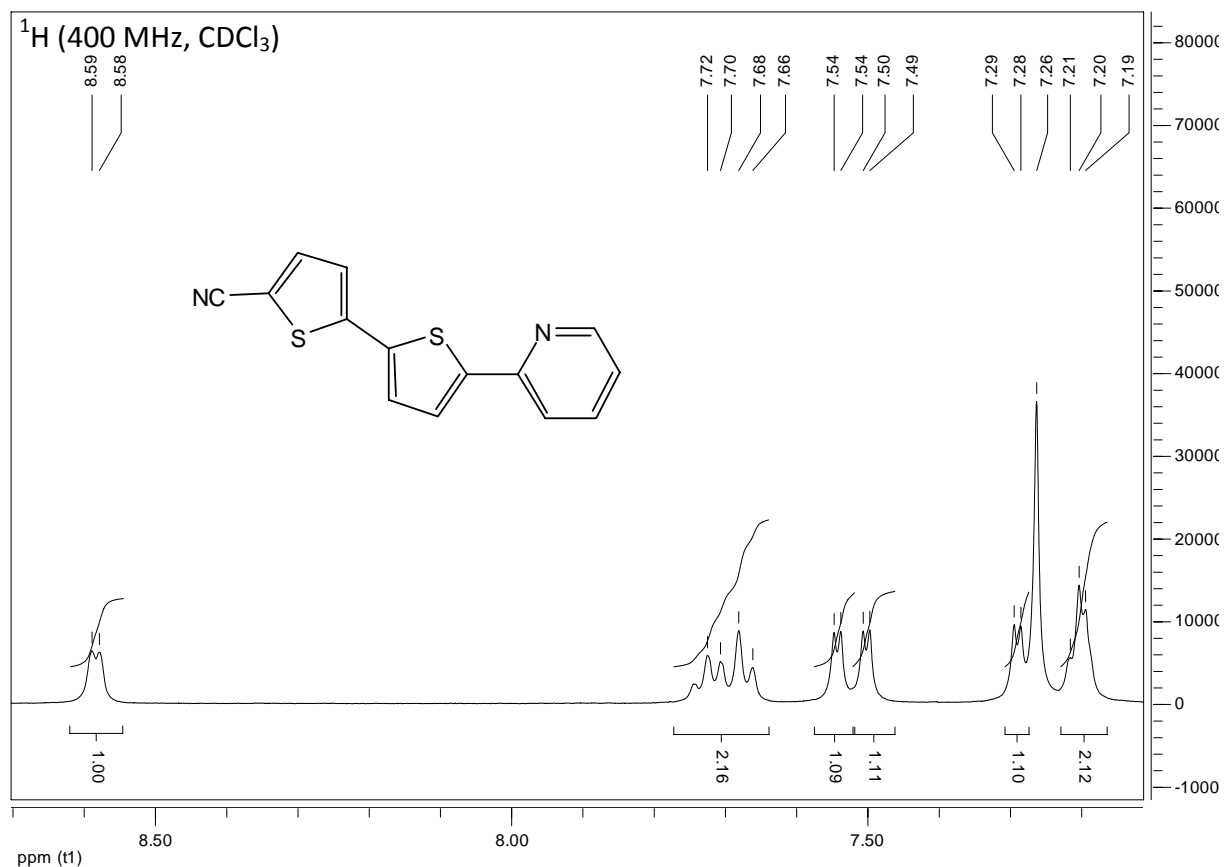
### Contents

<sup>1</sup>H and <sup>13</sup>C NMR spectra of products **3-13**, **17a**, **17b**, **18a**, and **19-28**

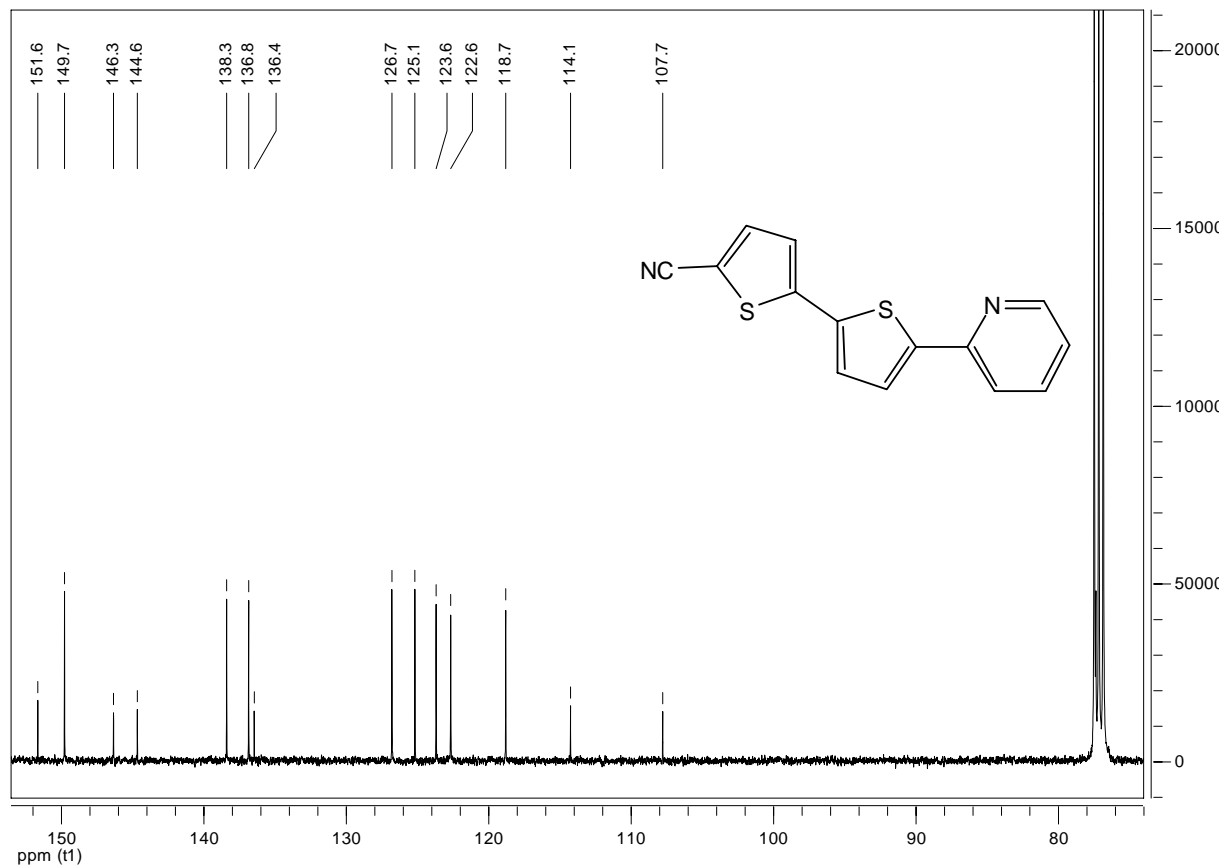
2-[5-(2-Isobutylthiazol-5-yl)-thiophen-2-yl]-pyridine (3)



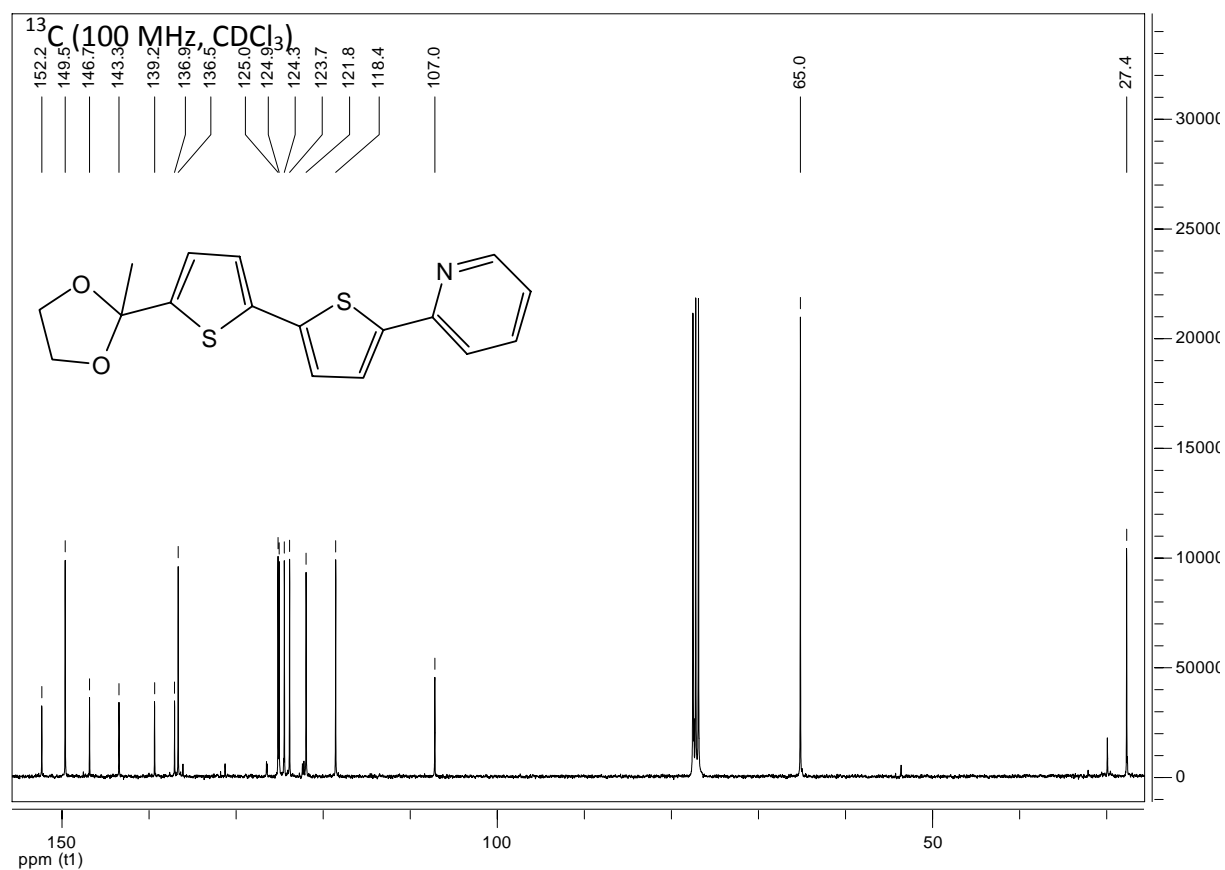
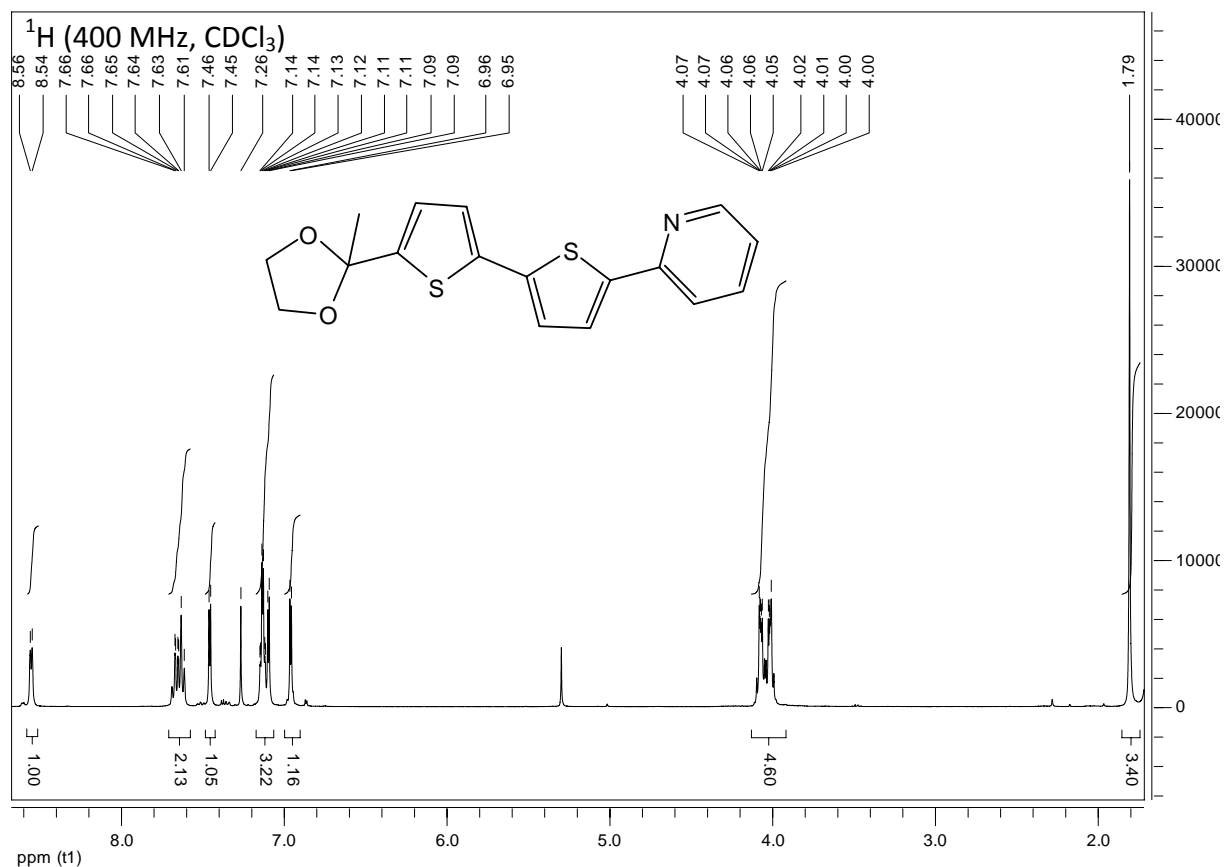
5'-Pyridin-2-yl-[2,2']bithiophenyl-5-carbonitrile (4)



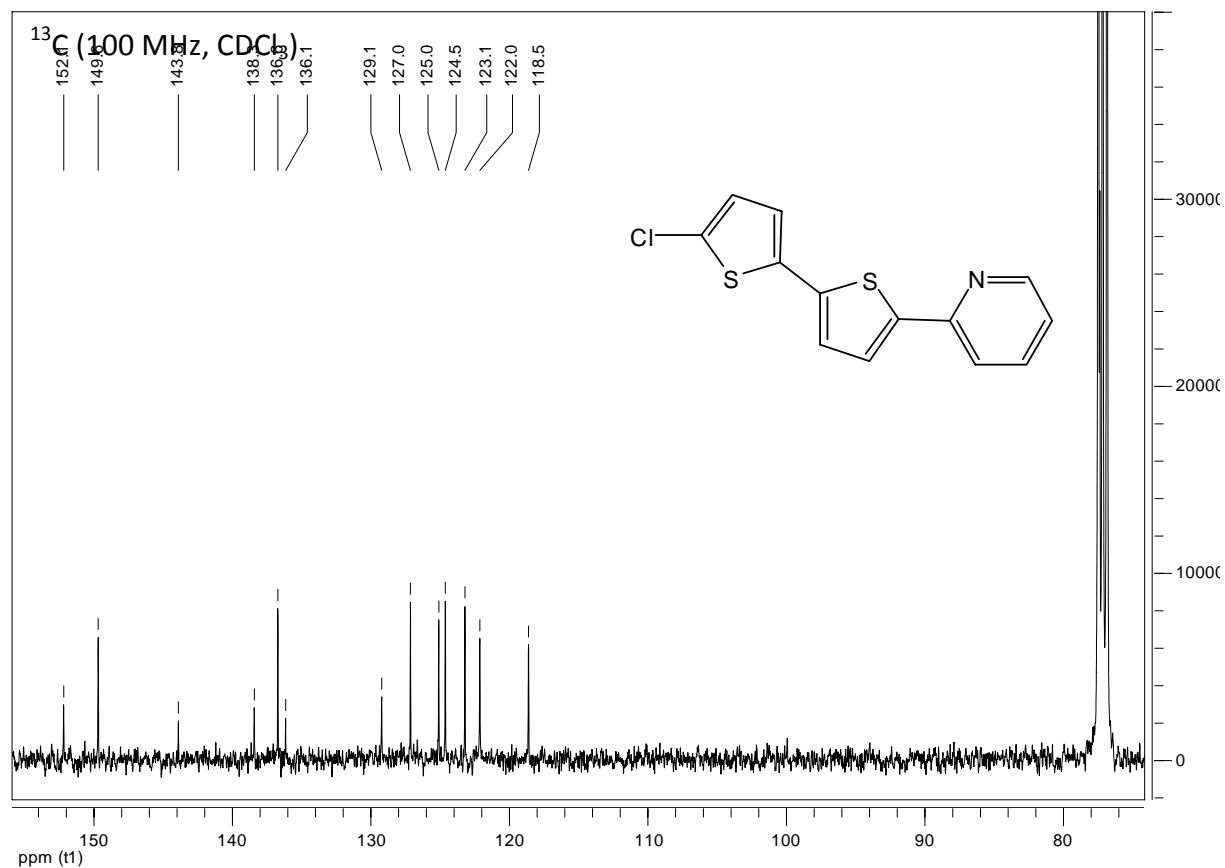
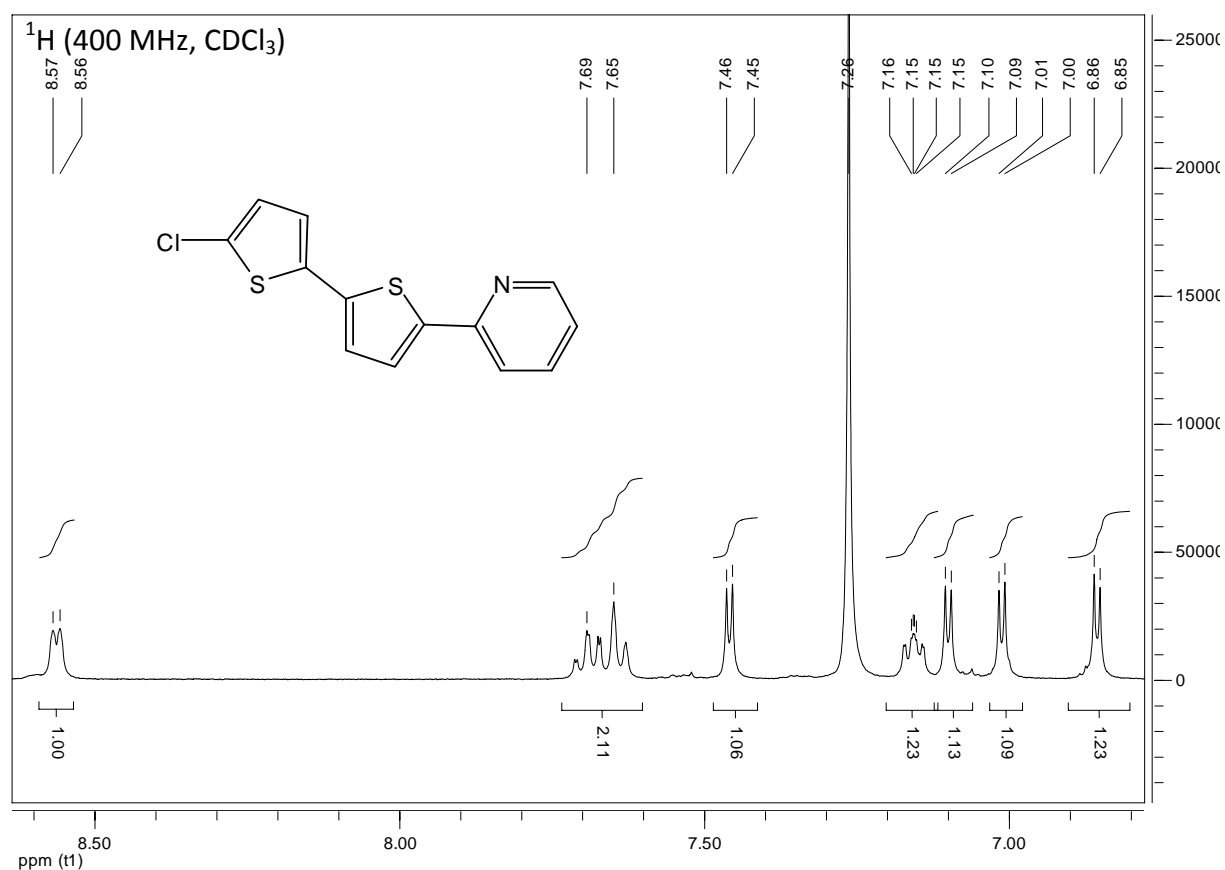
<sup>13</sup>C (100 MHz, CDCl<sub>3</sub>)



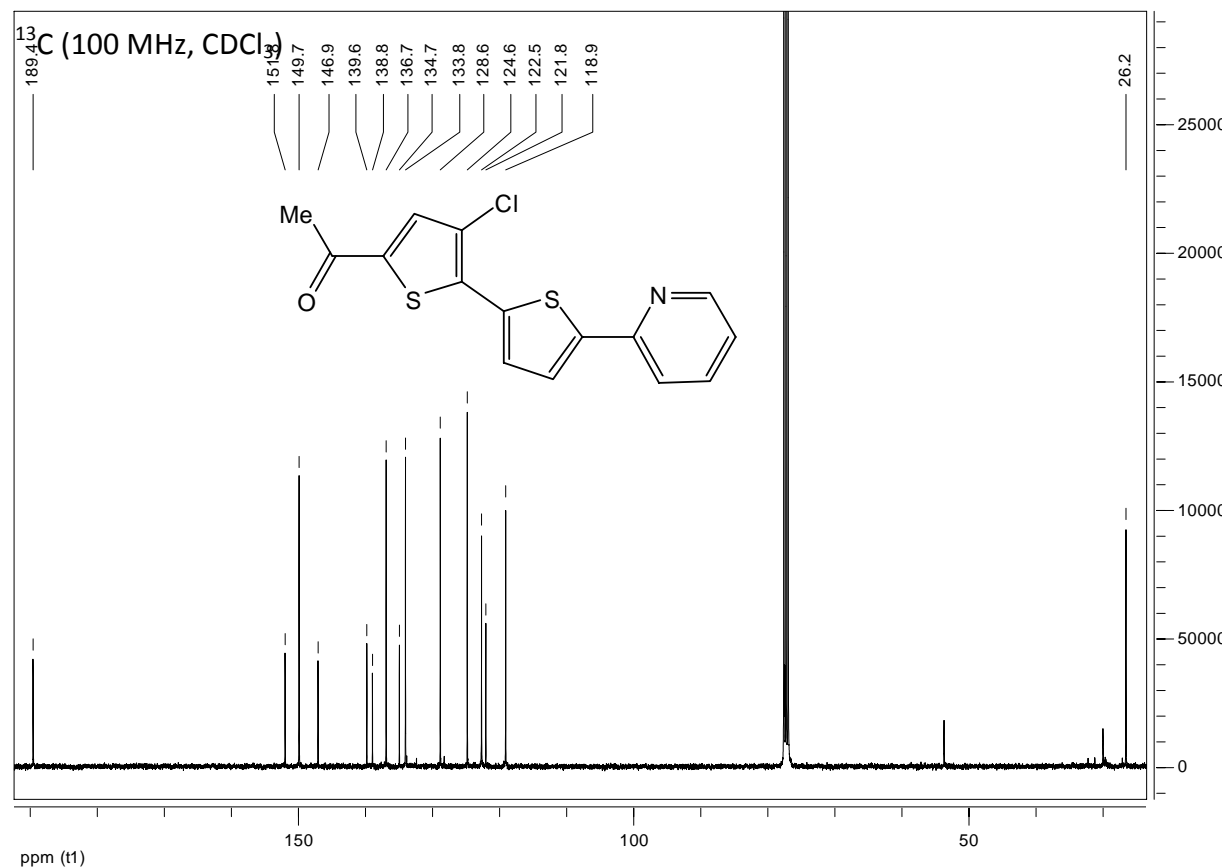
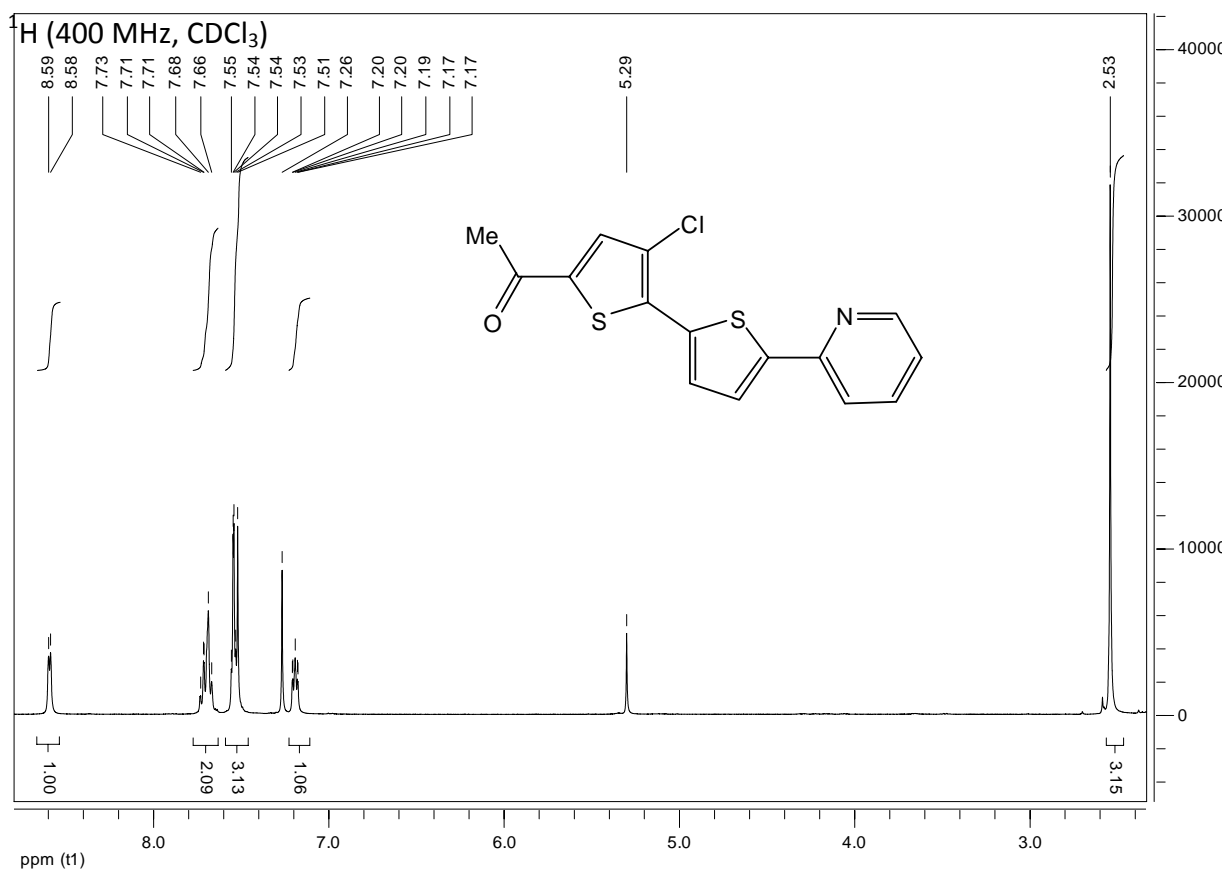
2-[5'-(2-Methyl-[1,3]dioxolan-2-yl)-[2,2']bithiophenyl-5-yl]-pyridine (5)



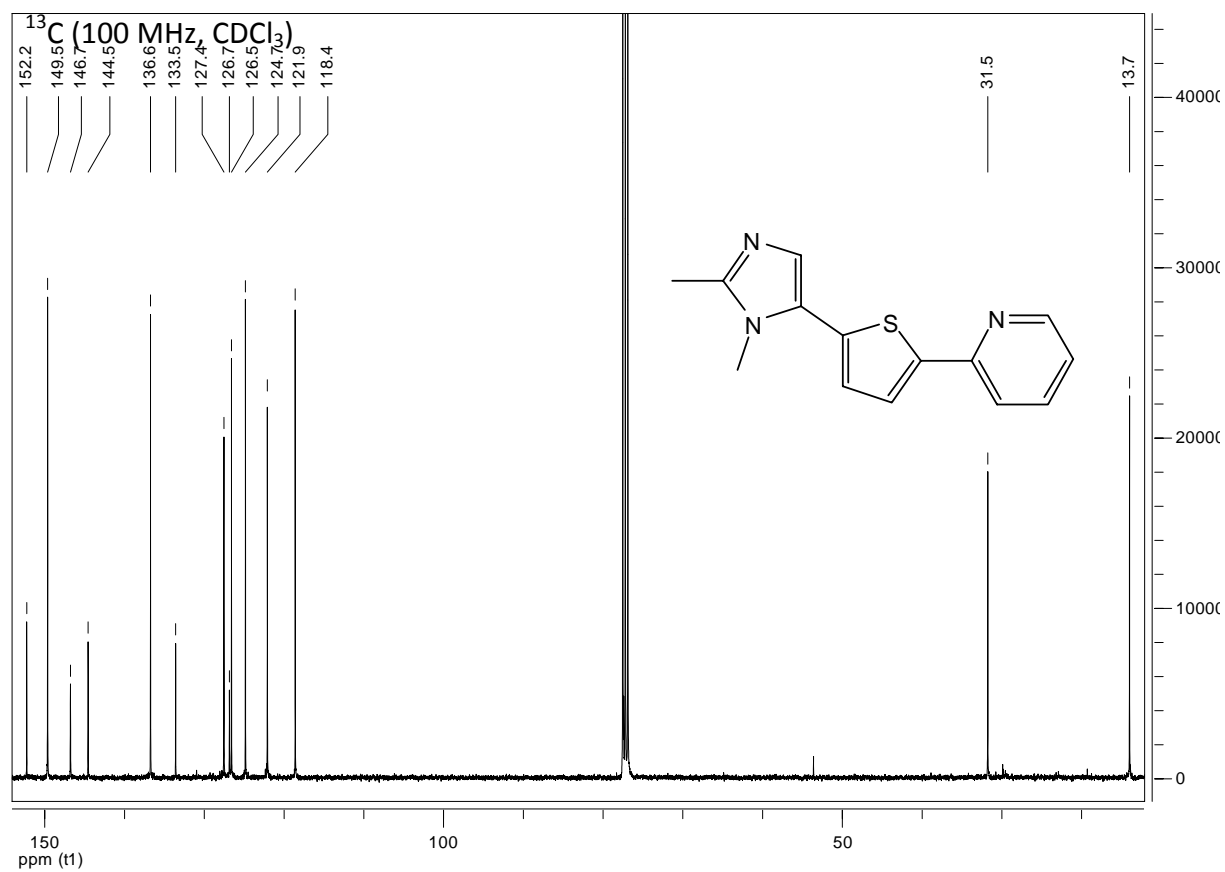
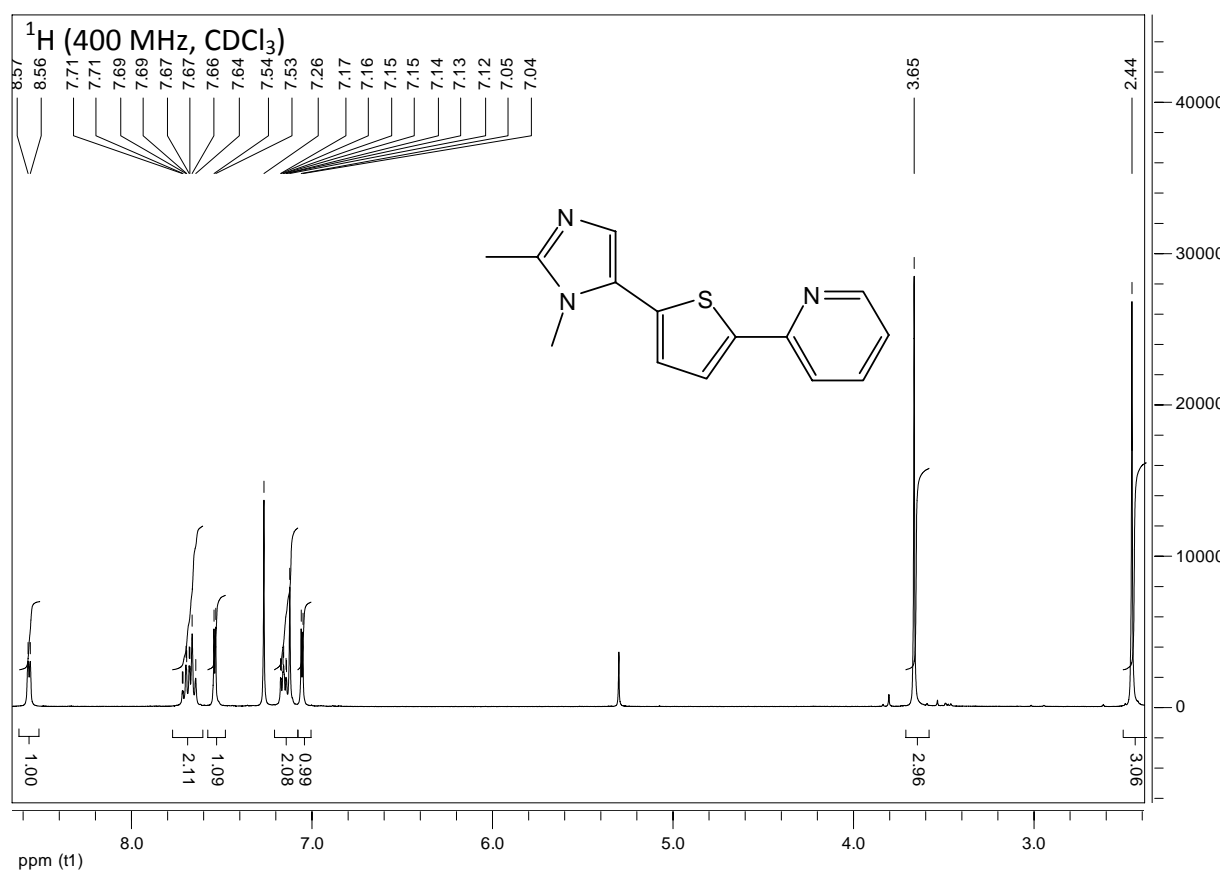
2-(5'-Chloro-[2,2']bithiophenyl-5-yl)-pyridine (6)



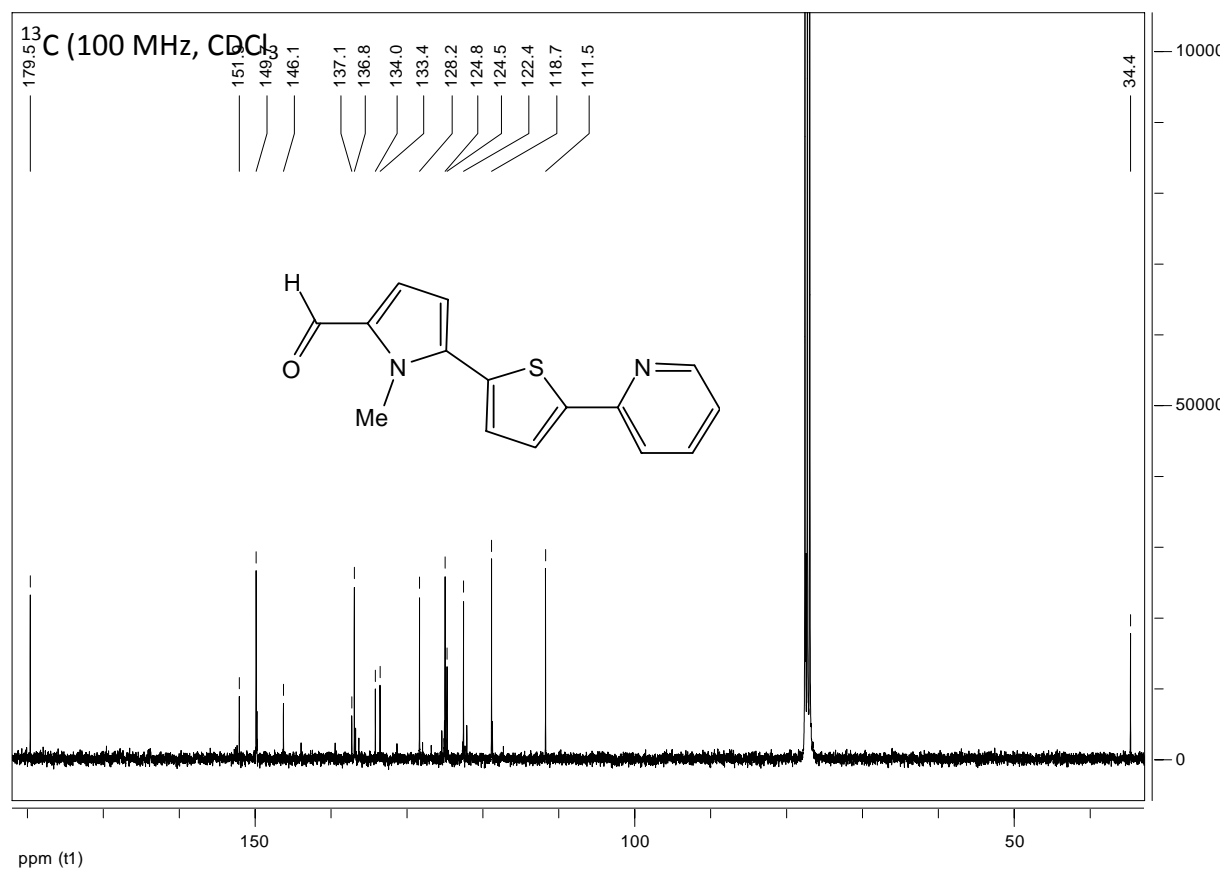
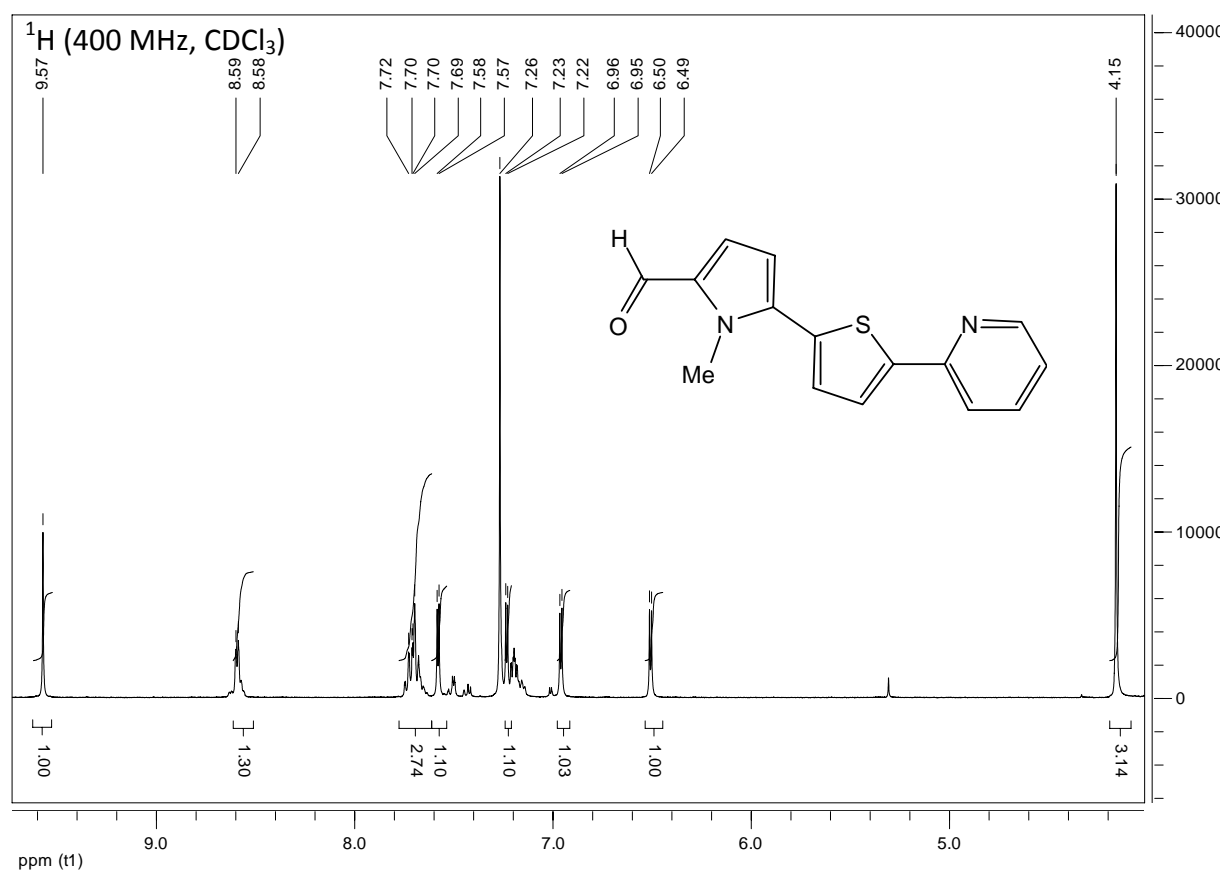
1-(3-Chloro-5'-pyridin-2-yl-[2,2']bithiophenyl-5-yl)-ethanone (7)



2-[5-(2,3-Dimethylimidazol-4-yl)-thiophen-2-yl]-pyridine (8)

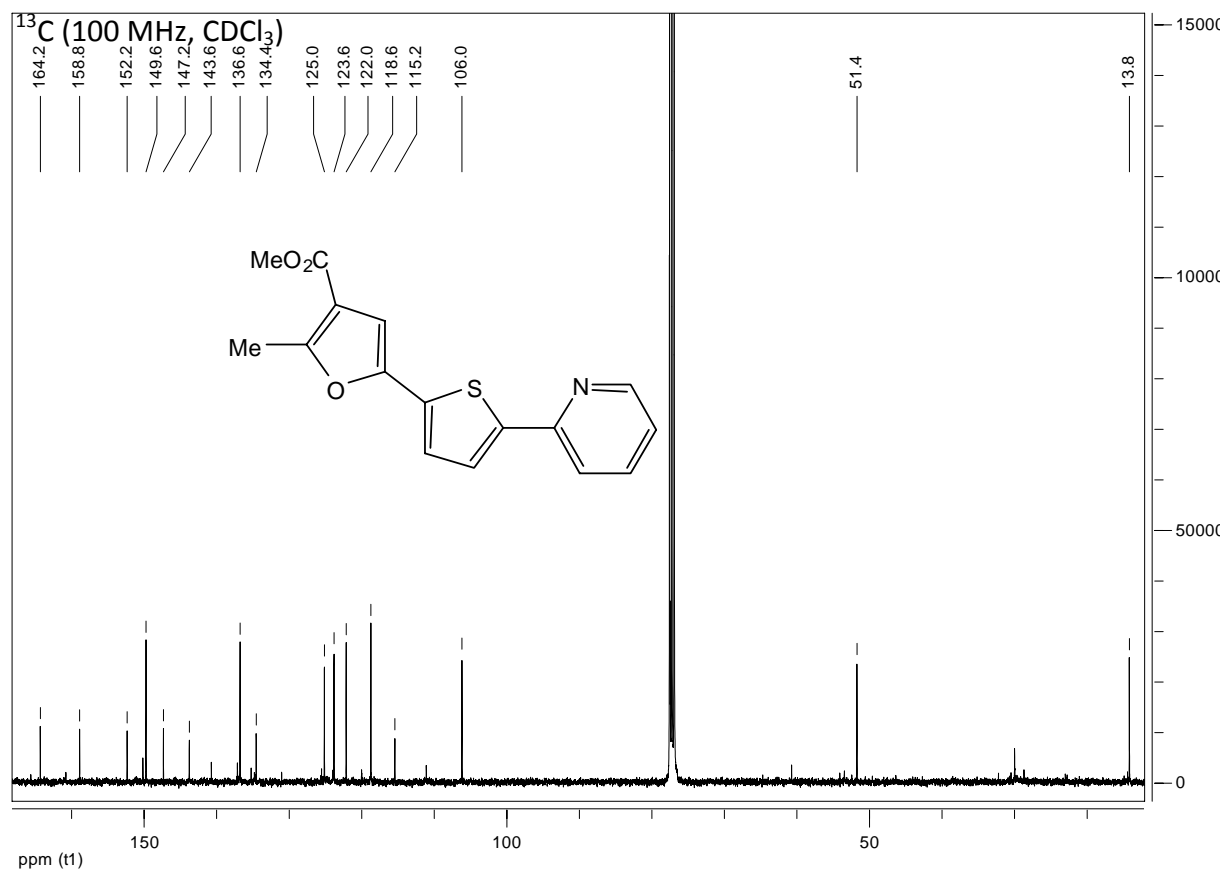
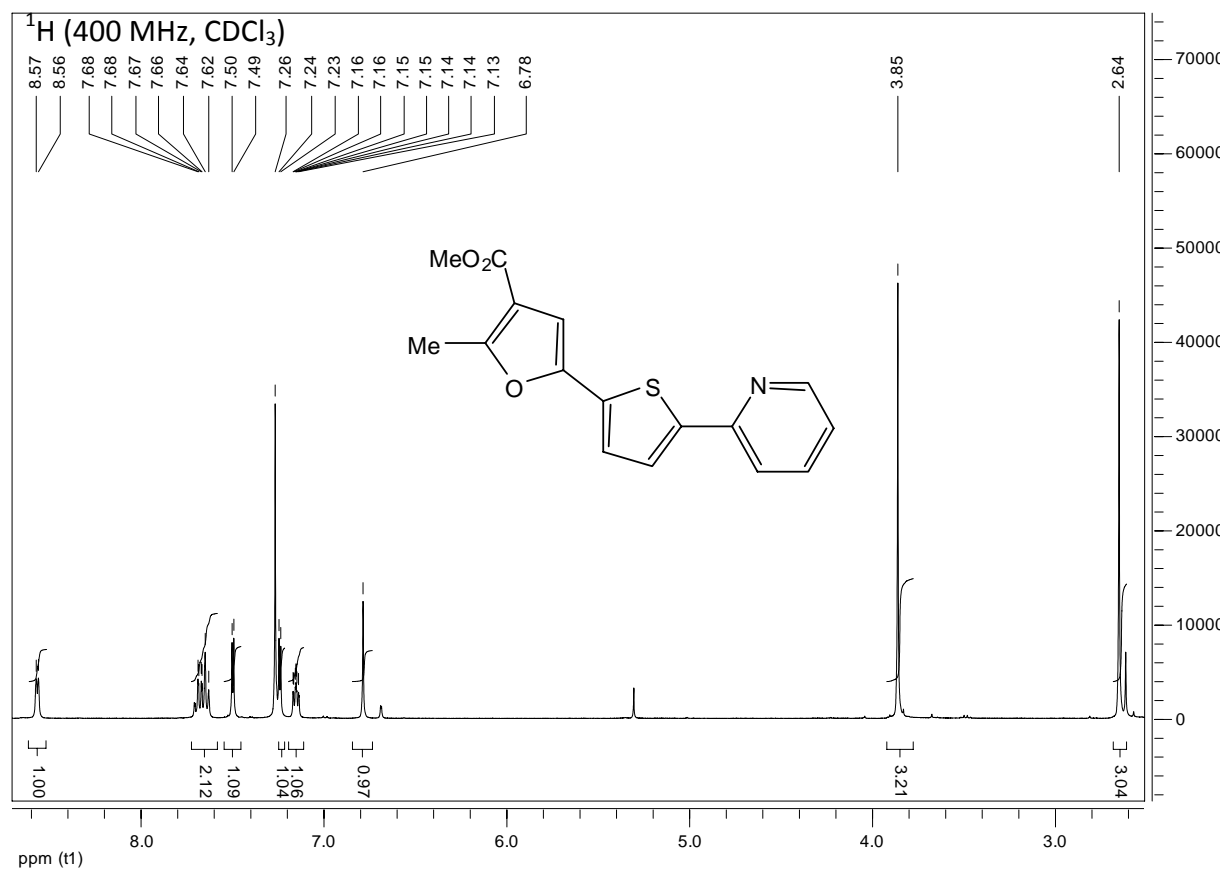


1-Methyl-5-(5-pyridin-2-ylthiophen-2-yl)-pyrrole-2-carbaldehyde (9)

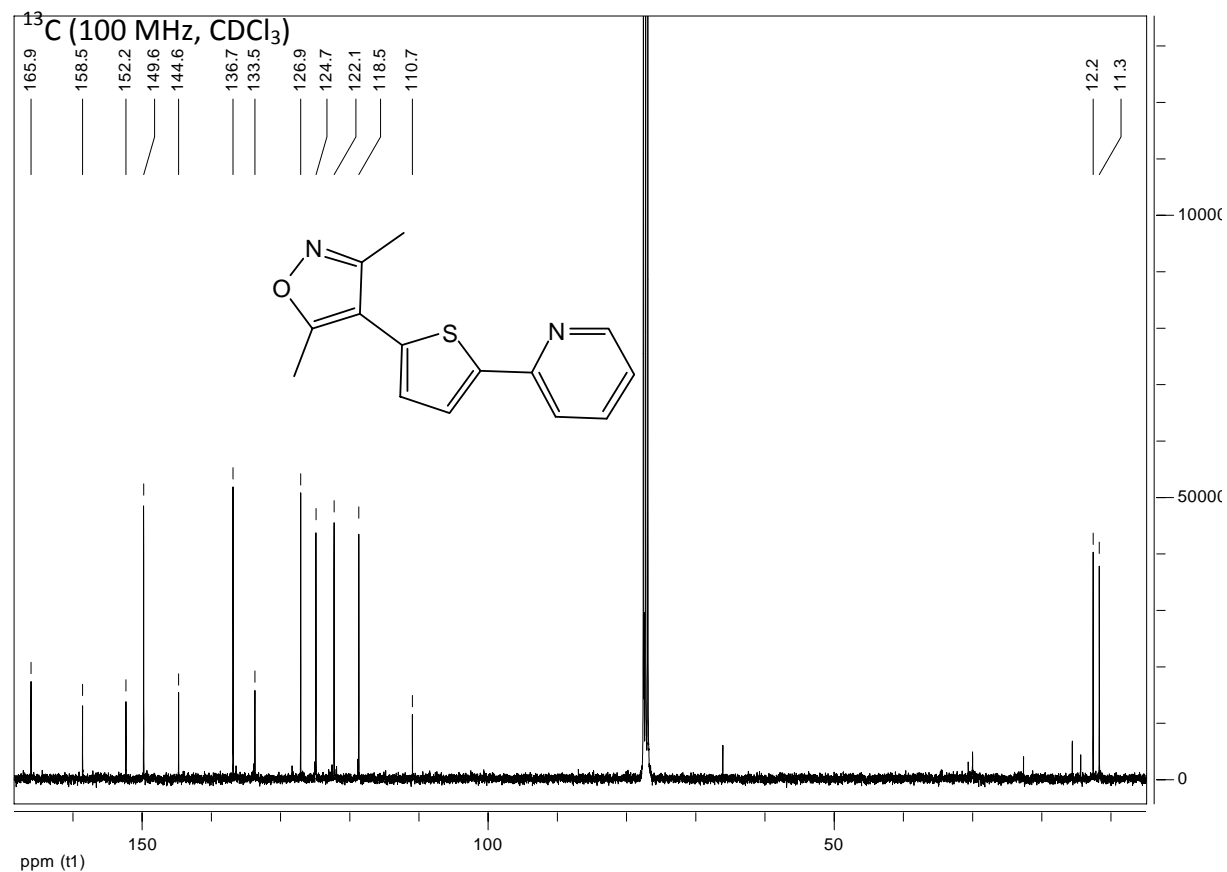
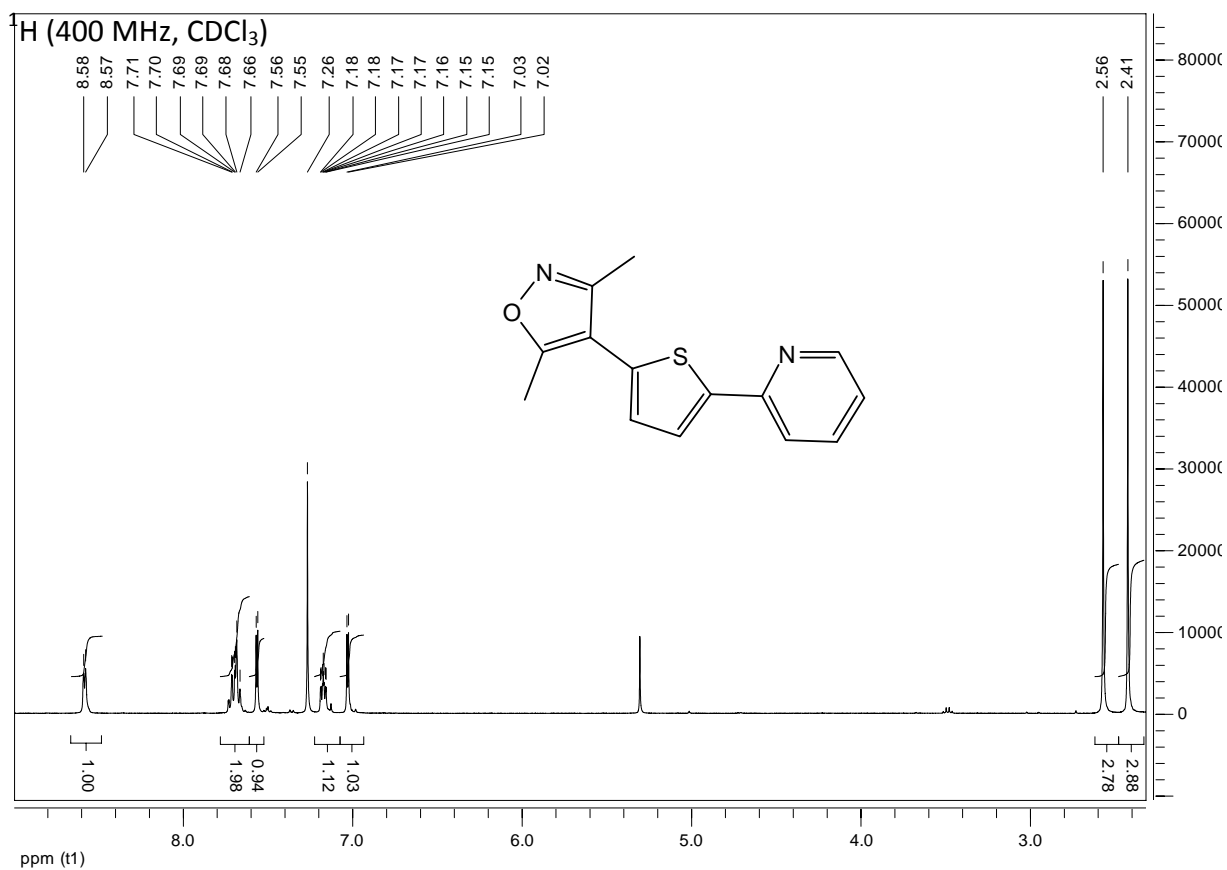




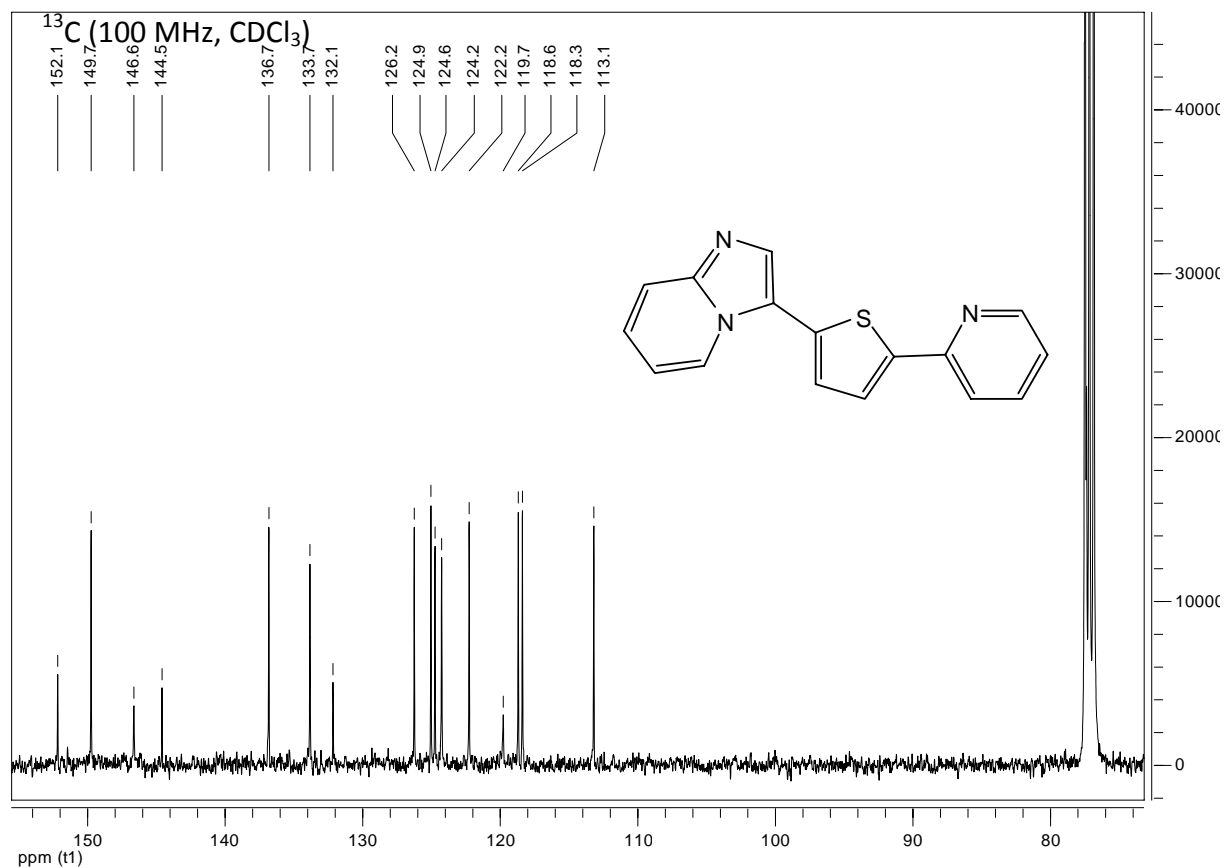
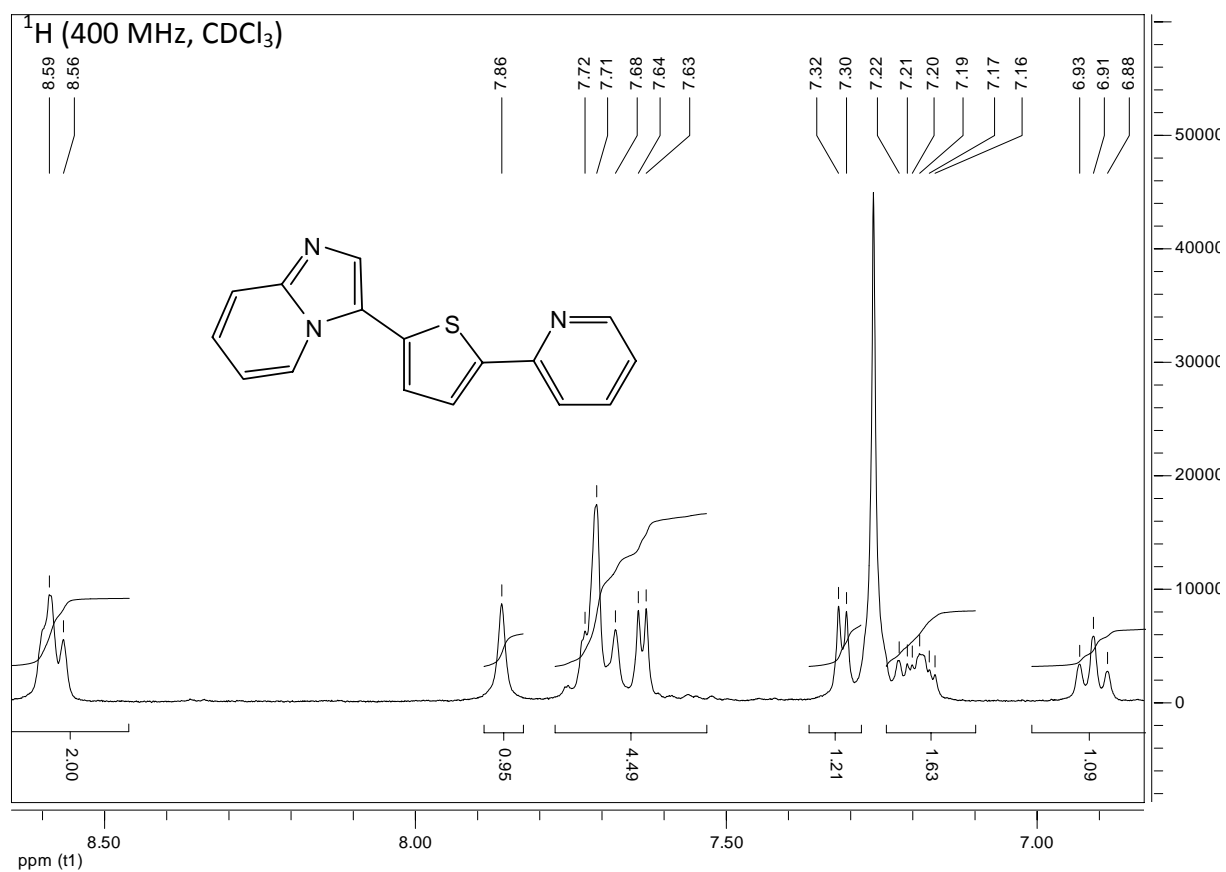
Methyl 2-methyl-5-(5-pyridin-2-yl-thiophen-2-yl)-furan-3-carboxylate (10)



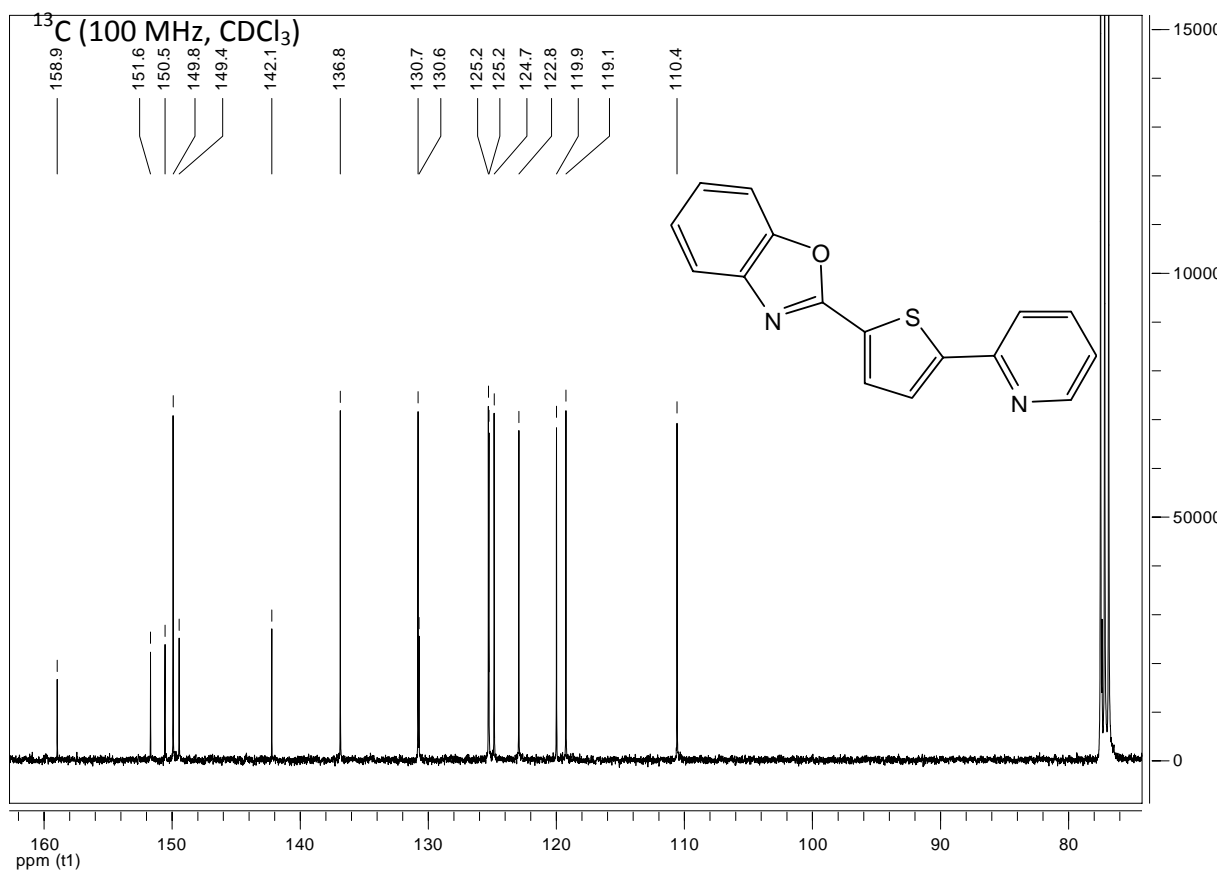
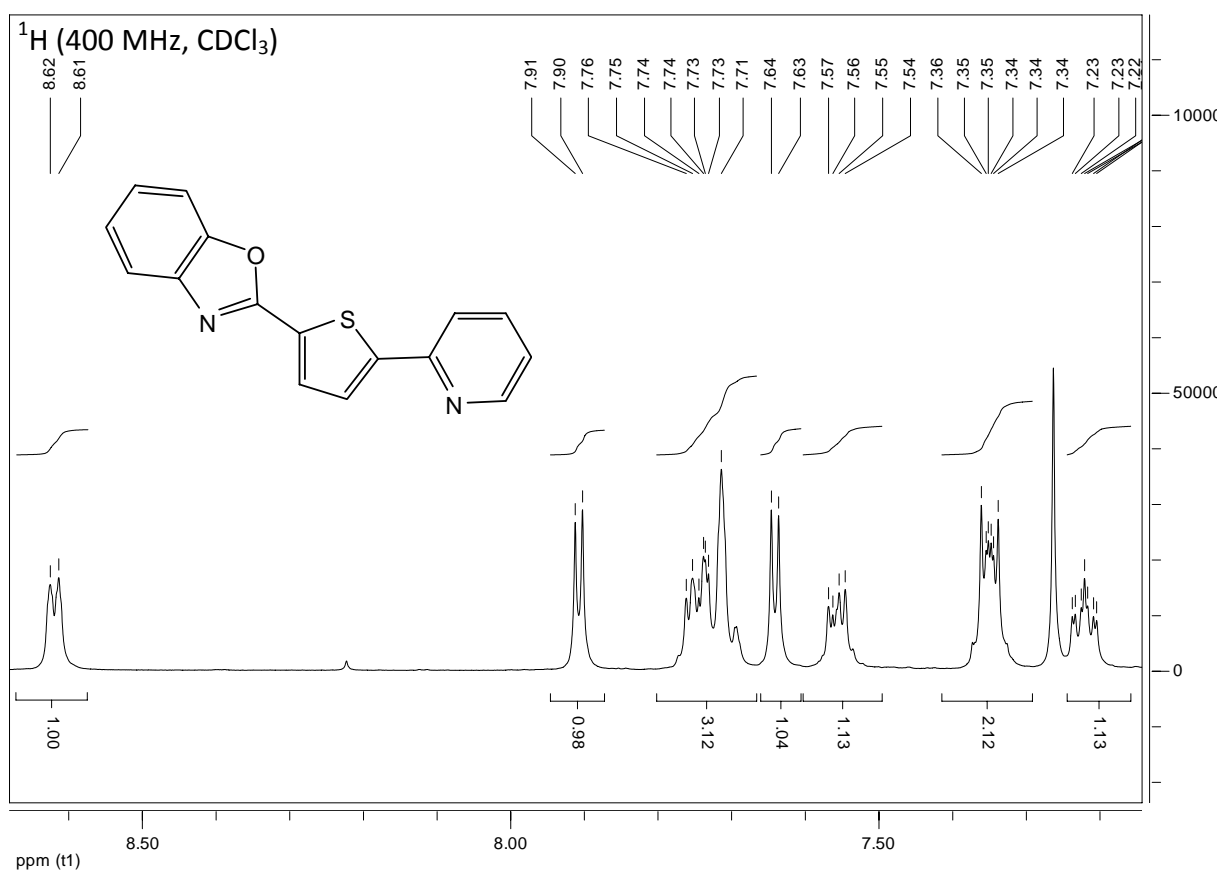
2-[5-(3,5-Dimethylisoxazol-4-yl)-thiophen-2-yl]-pyridine (11)



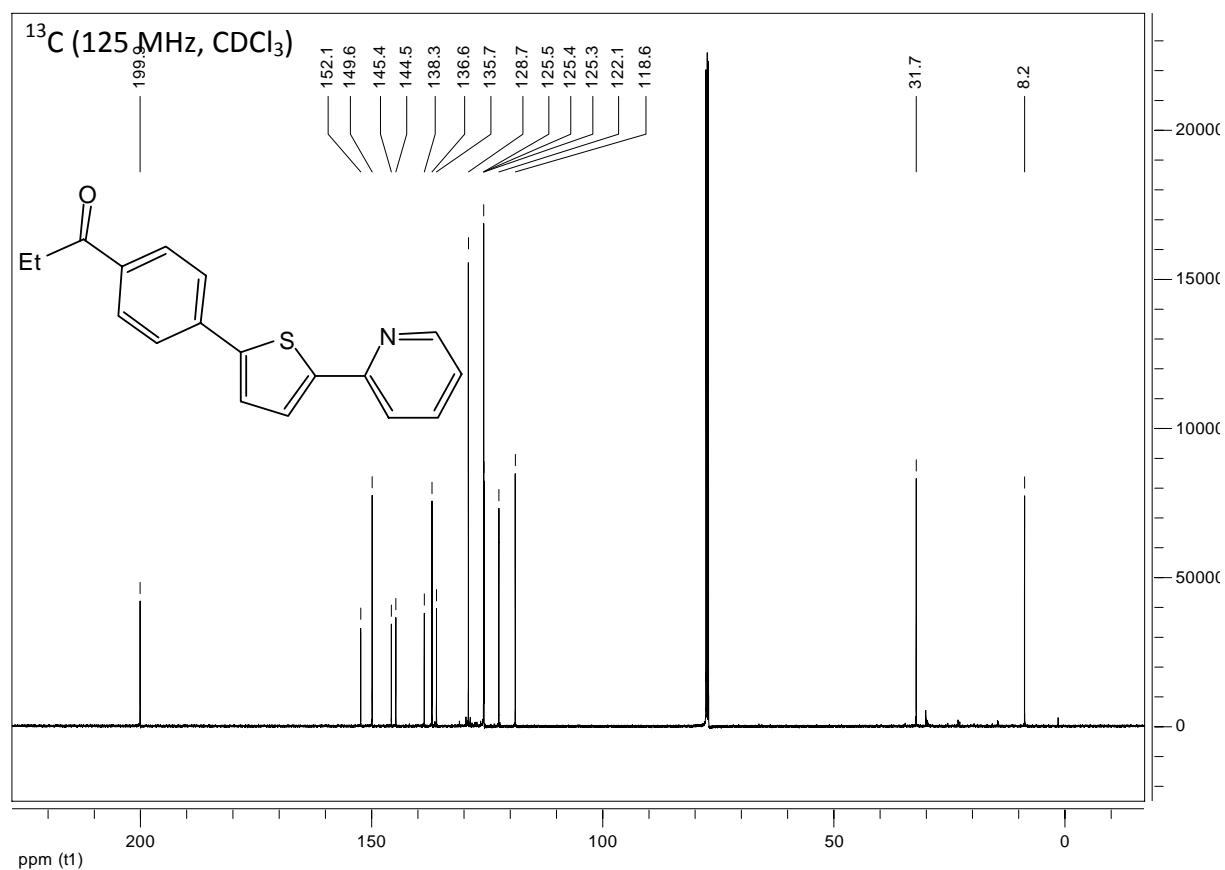
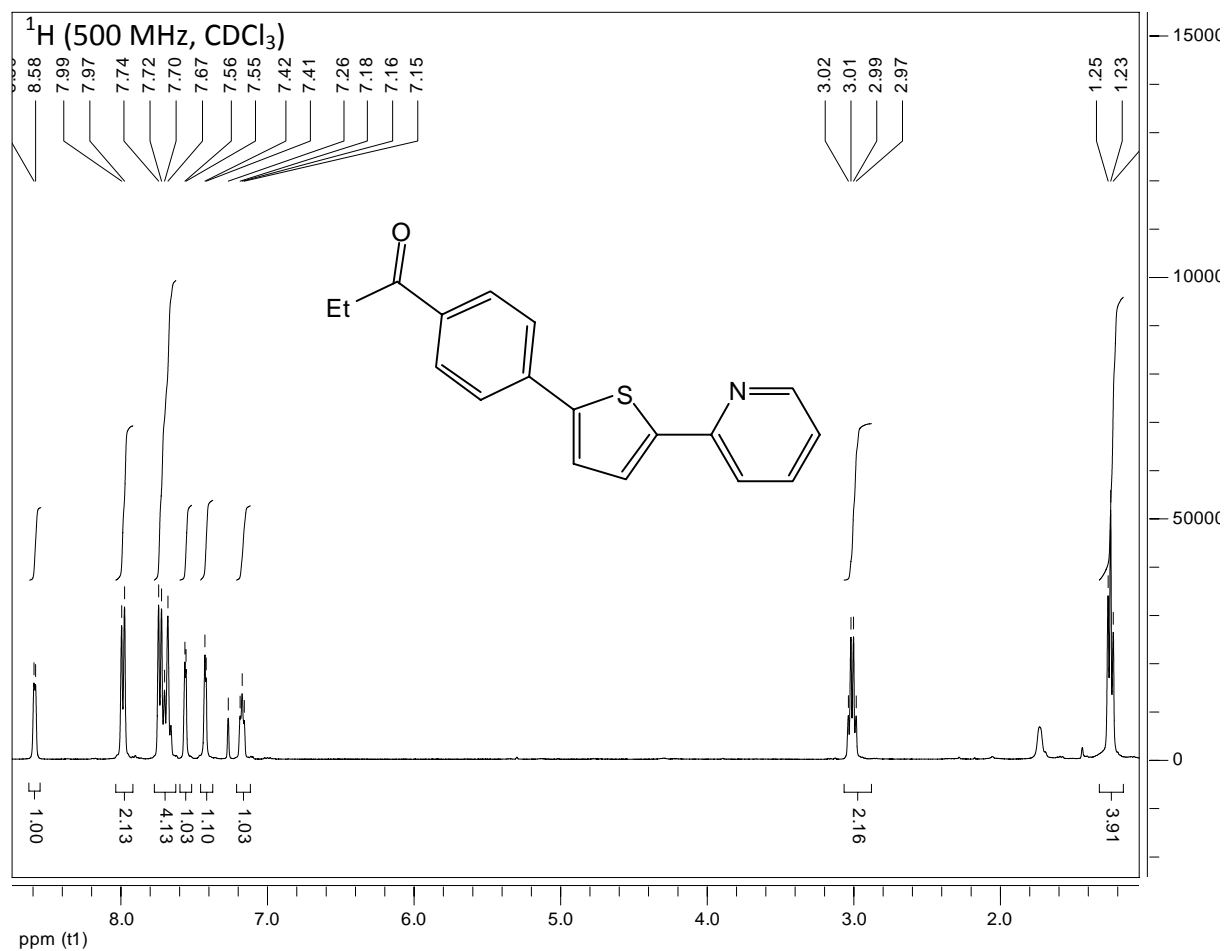
### 3-(5-Pyridin-2-ylthiophen-2-yl)-imidazo[1,2-a]pyridine (12)



### 2-(5-Pyridin-2-ylthiophen-2-yl)-benzoxazole (13)

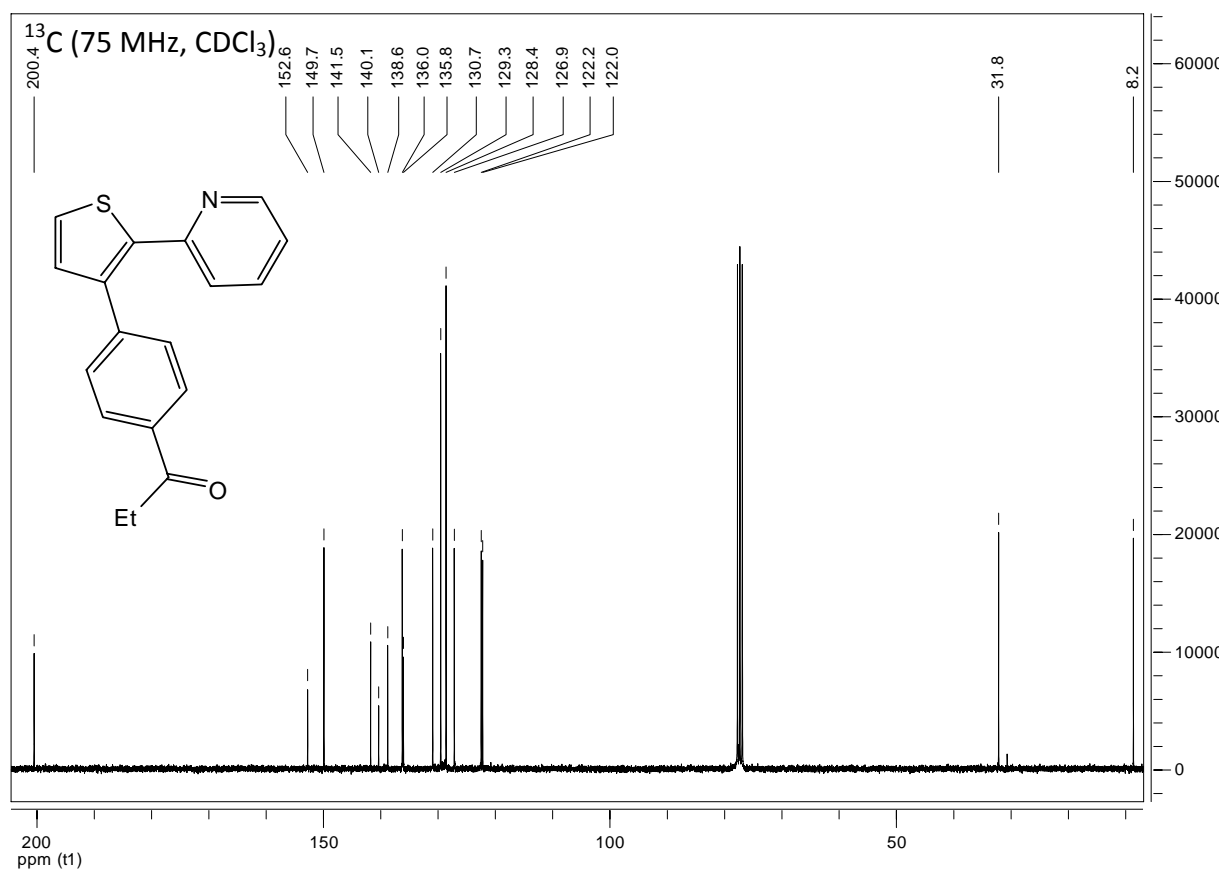
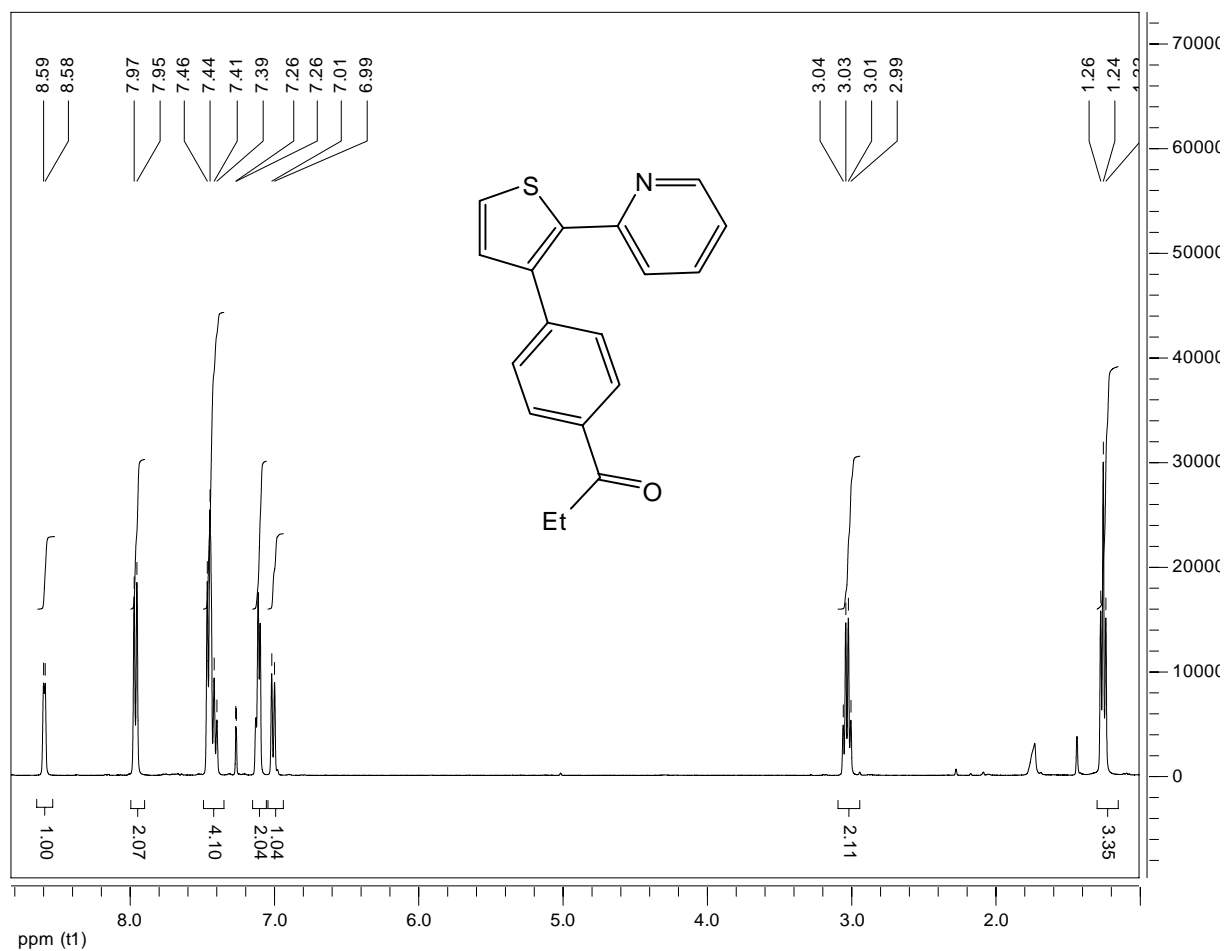


1-[4-(5-Pyridin-2-ylthiophen-2-yl)-phenyl]-propan-1-one (17a)

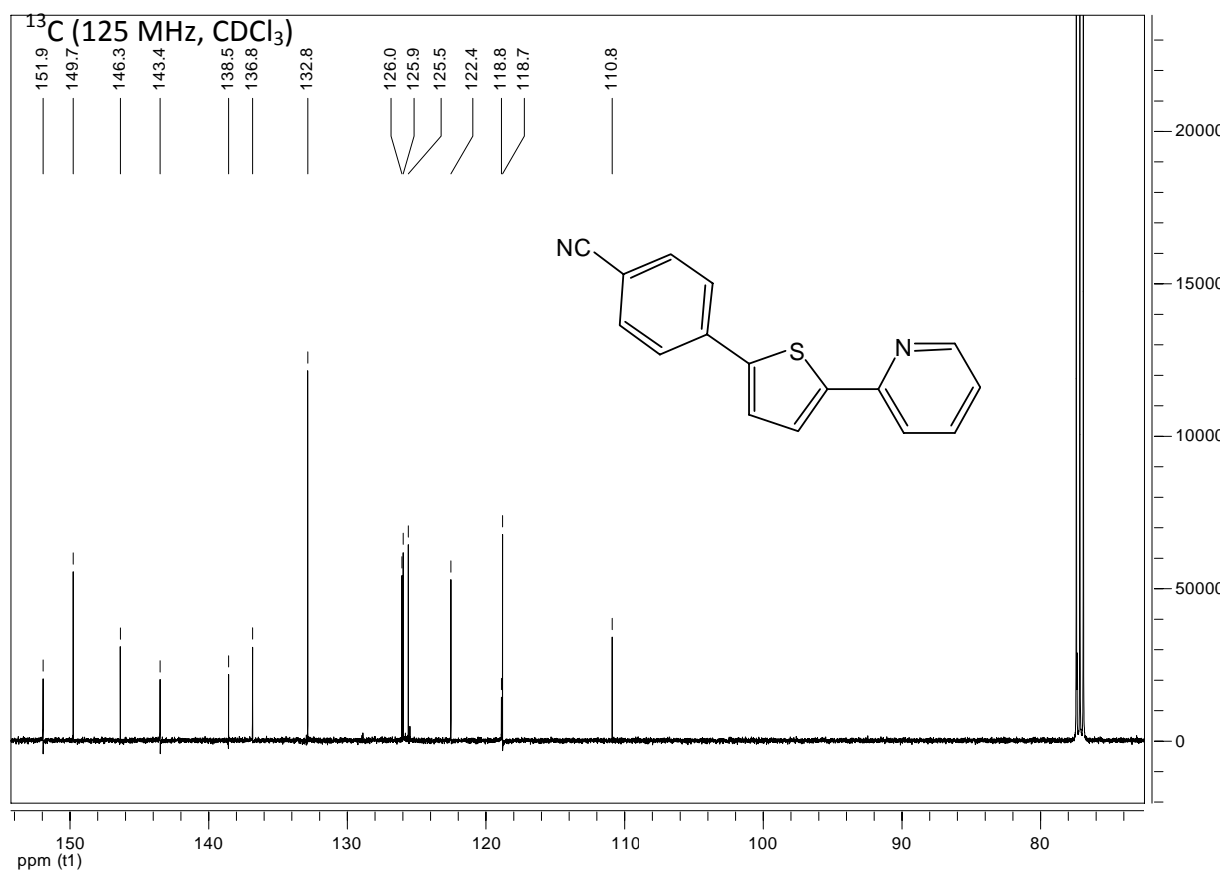
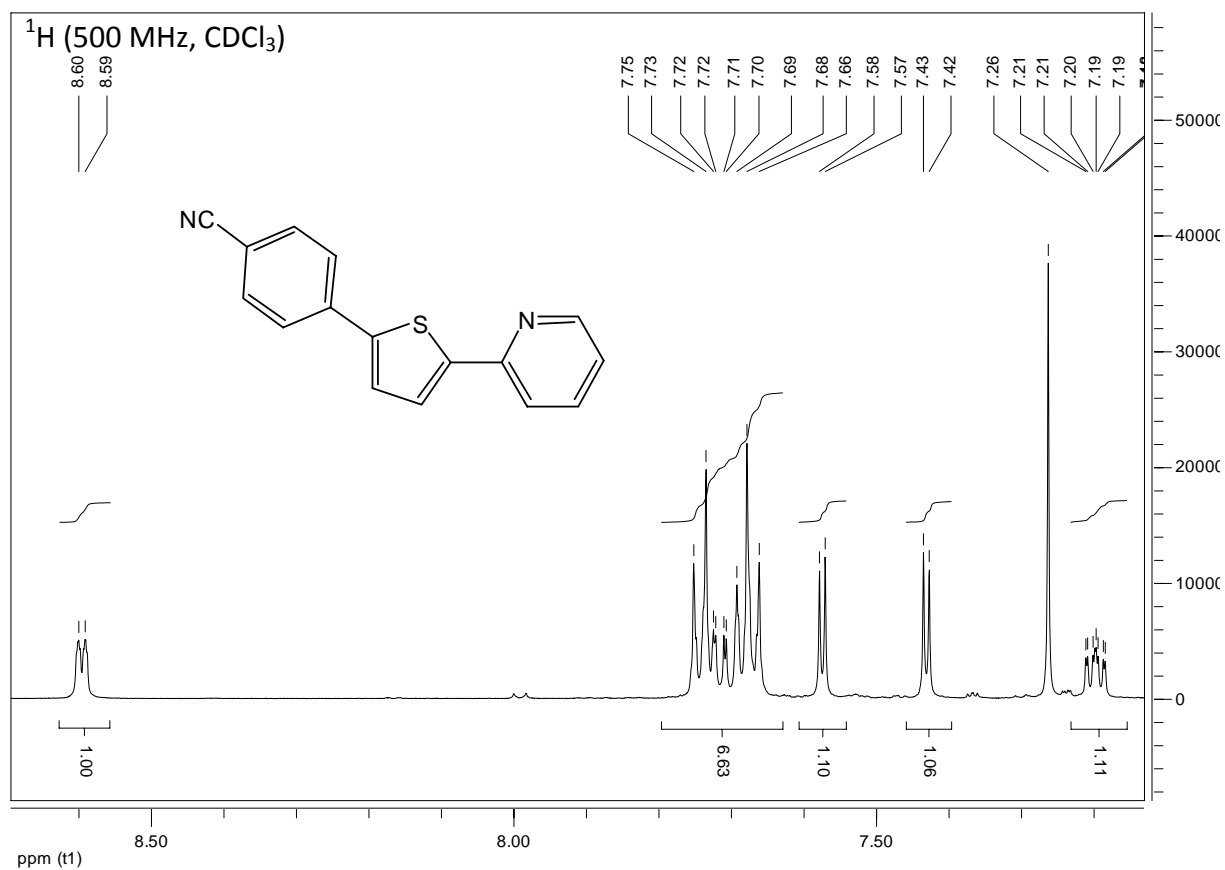


1-[4-(2-pyridin-2-ylthiophen-3-yl)-phenyl]-propan-1-one (17b)

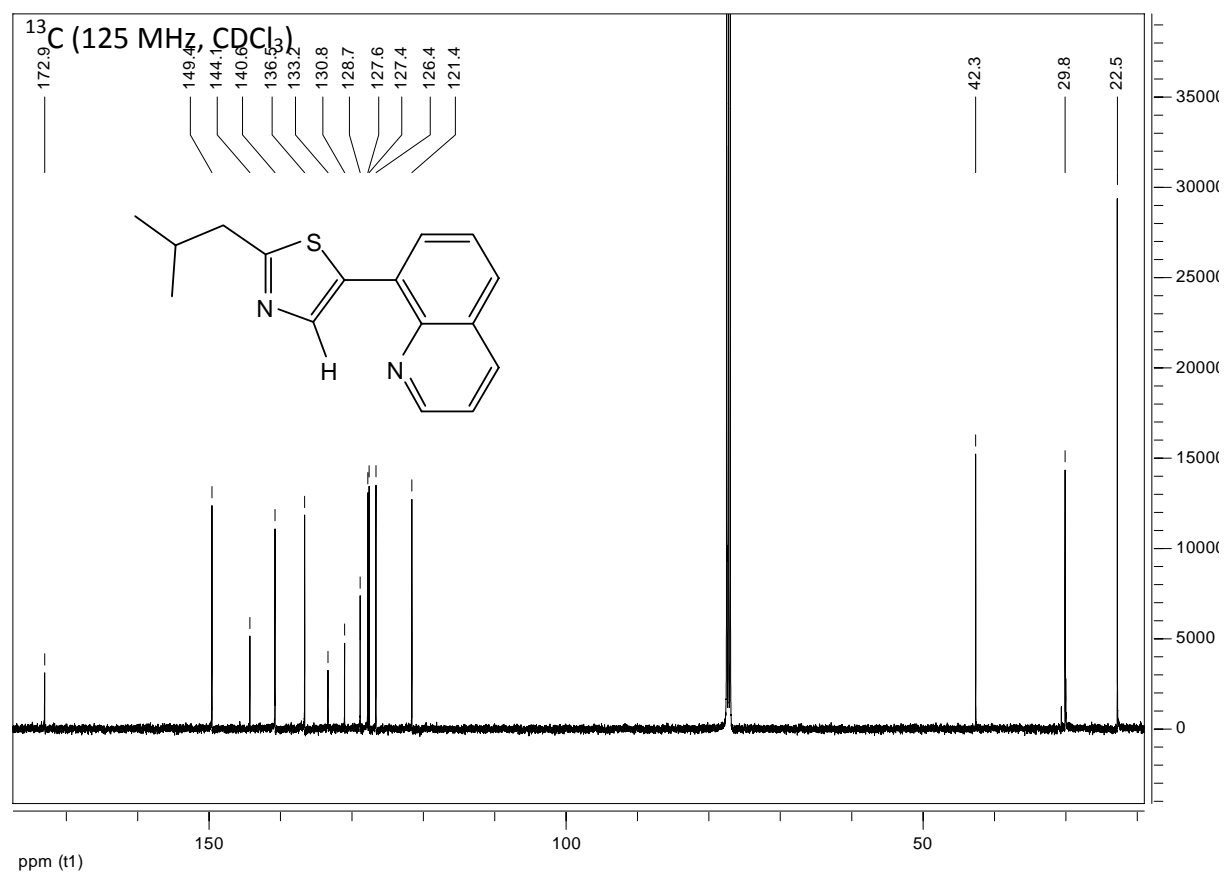
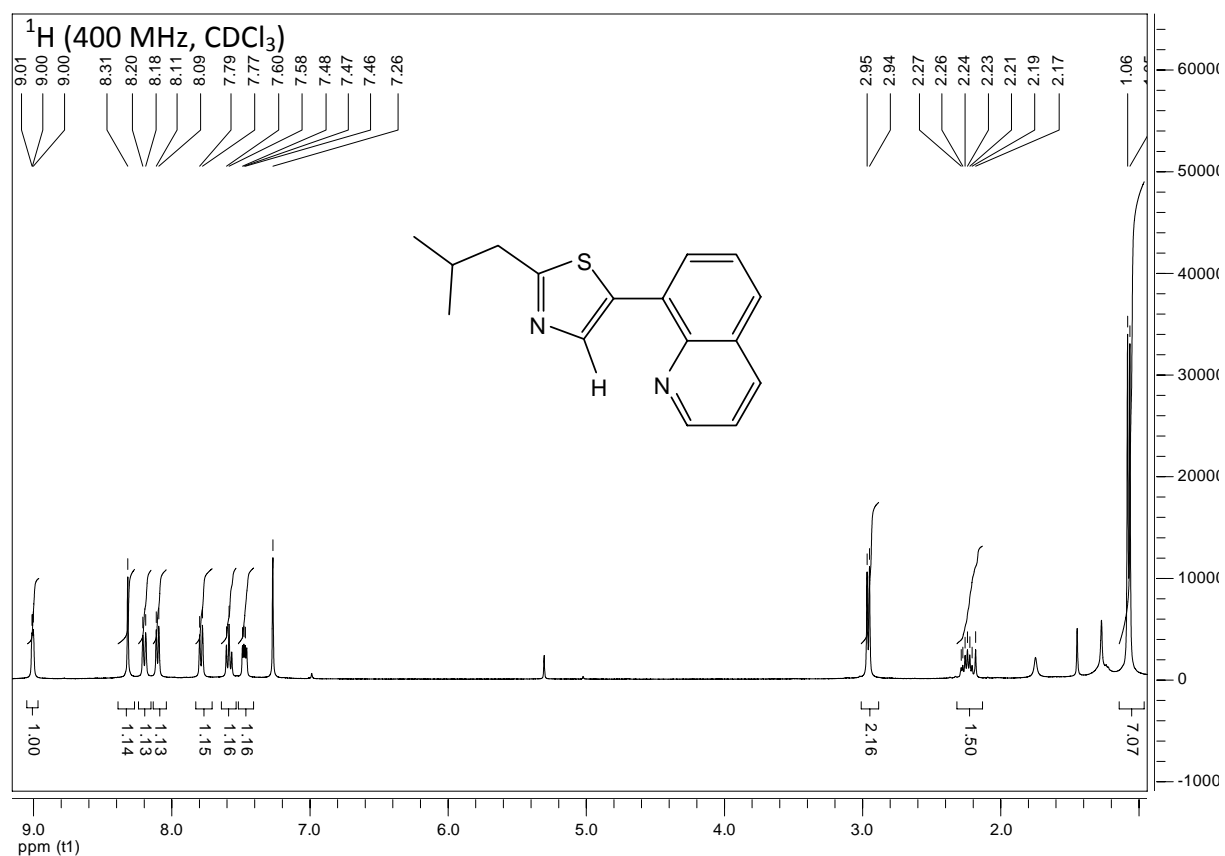
$^1\text{H}$  (500 MHz,  $\text{CDCl}_3$ )



### 4-(5-(Pyridin-2-yl)thiophen-2-yl)benzonitrile (18a)

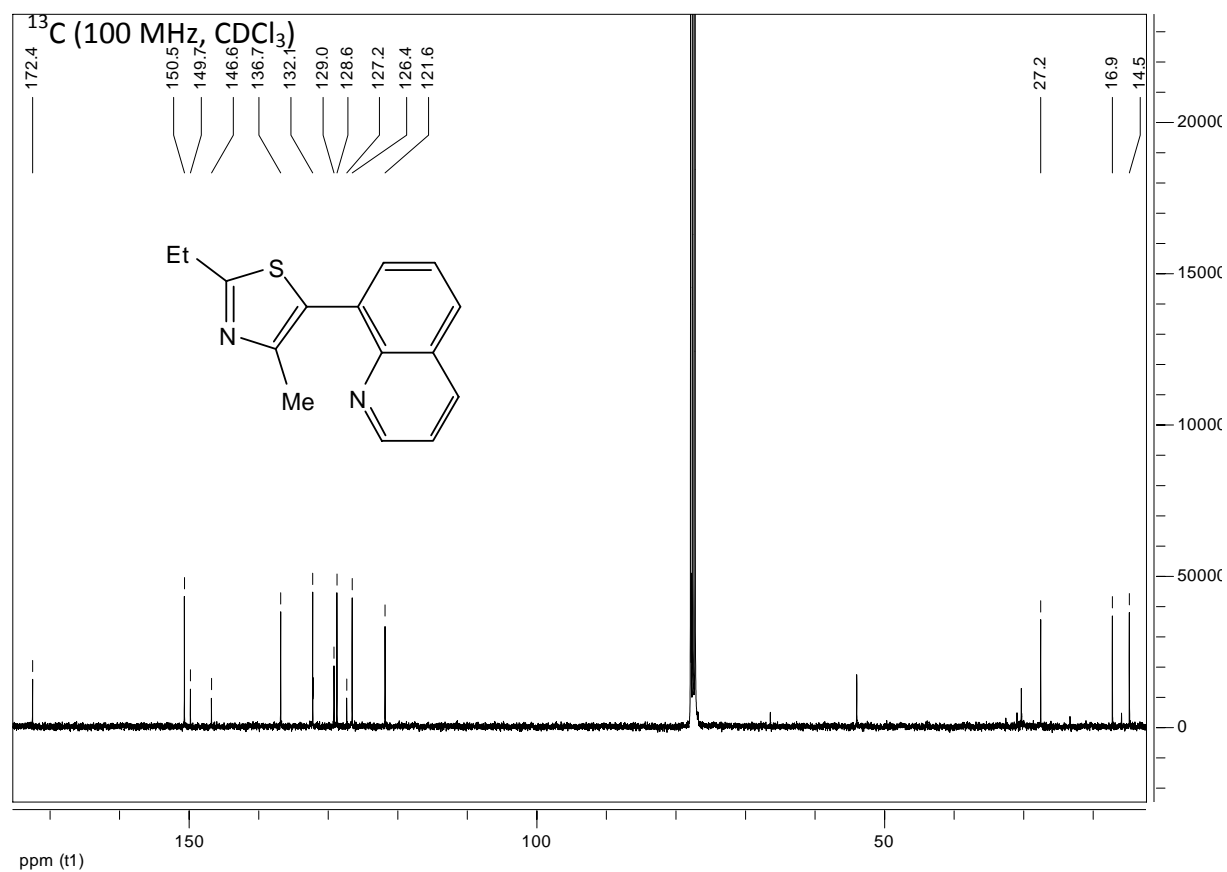
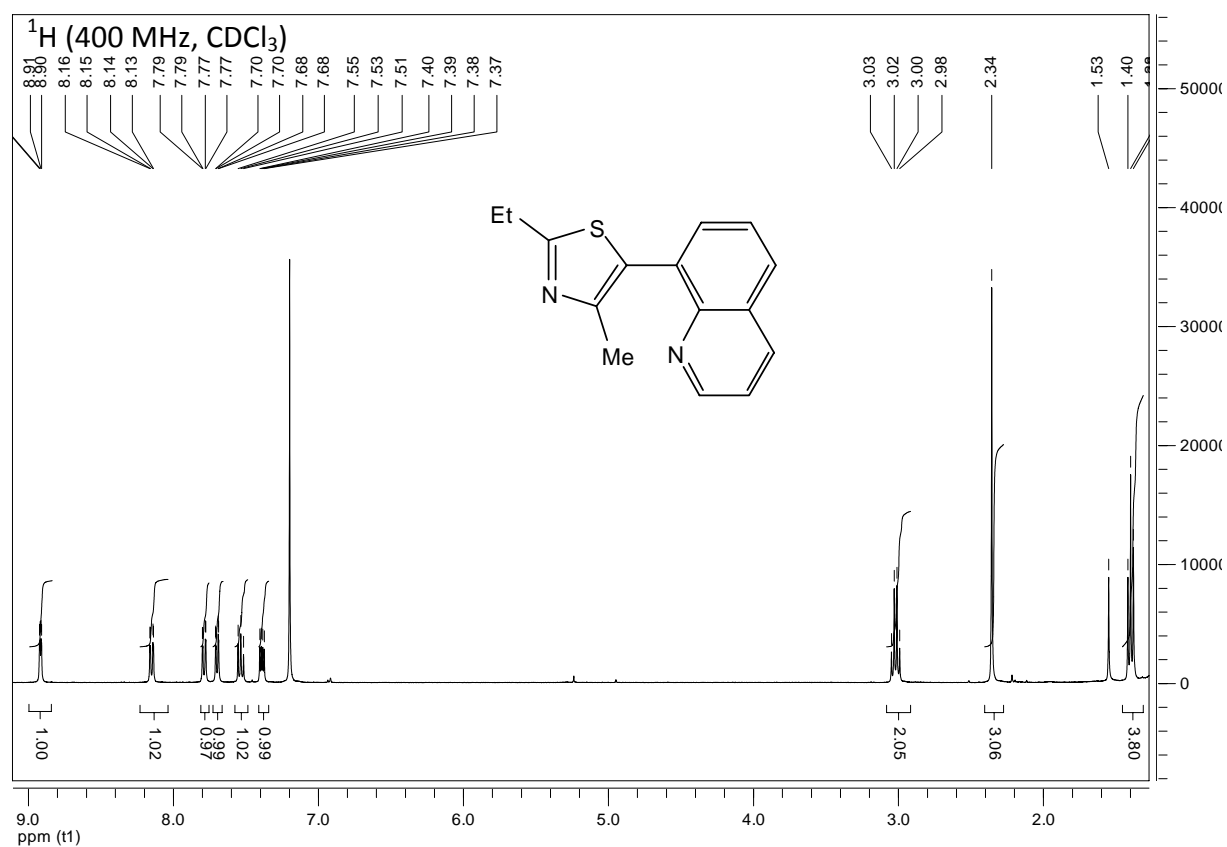


### 8-(2-Isobutylthiazol-5-yl)-quinoline (19)

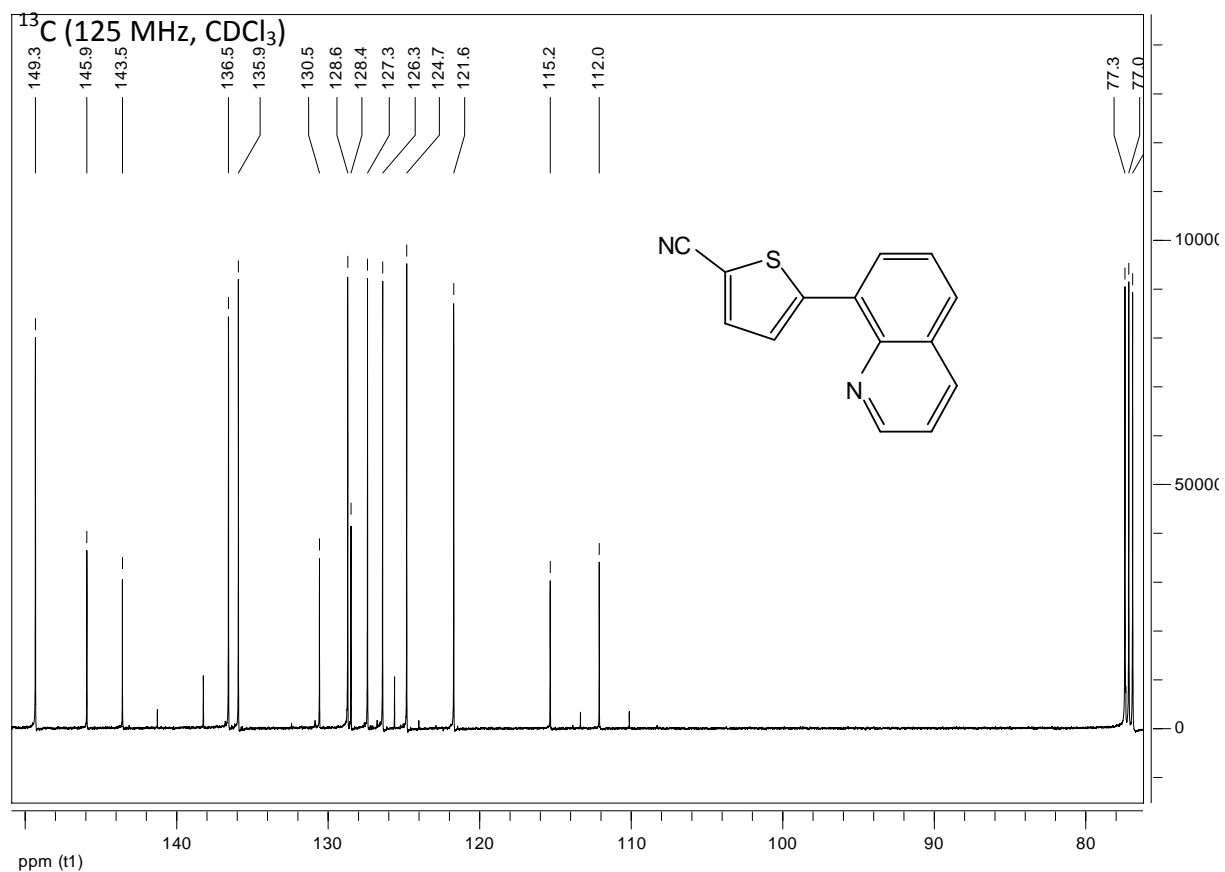
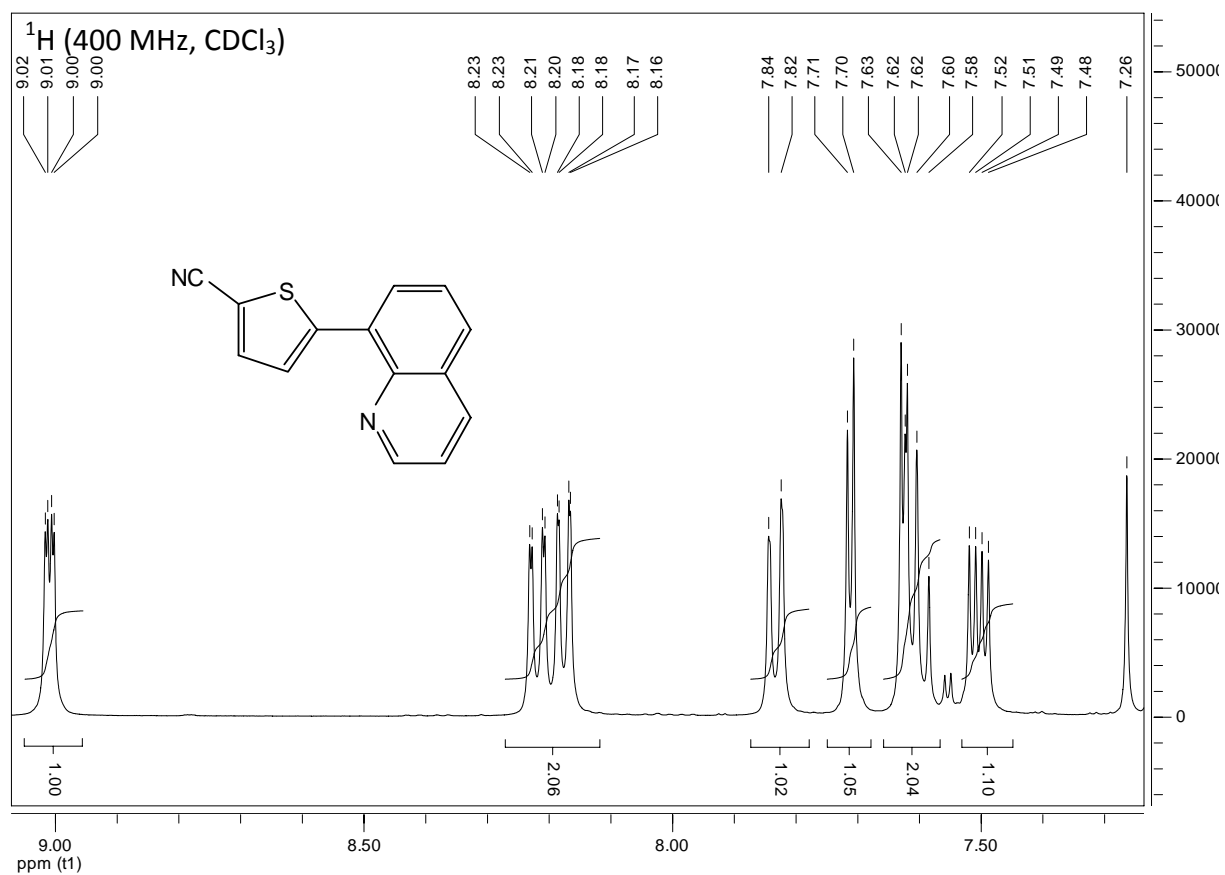




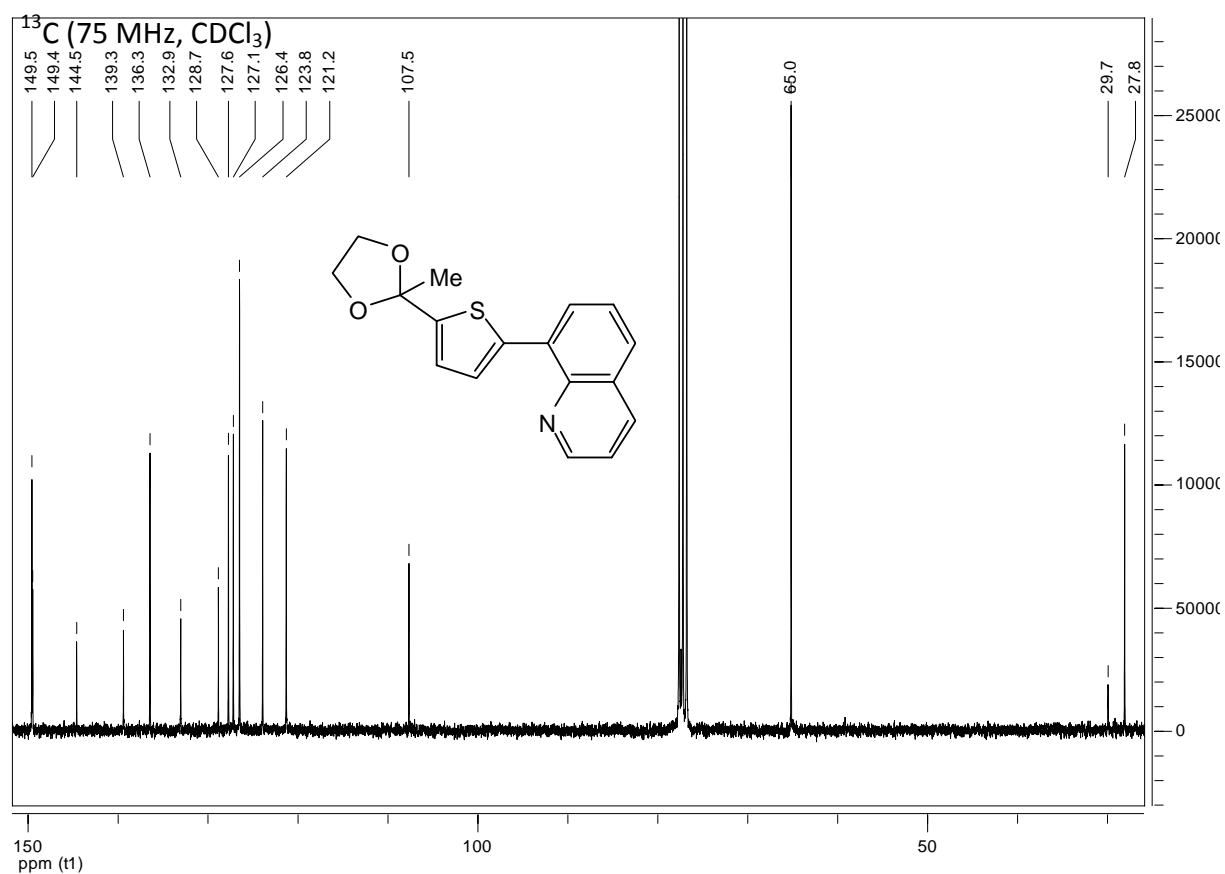
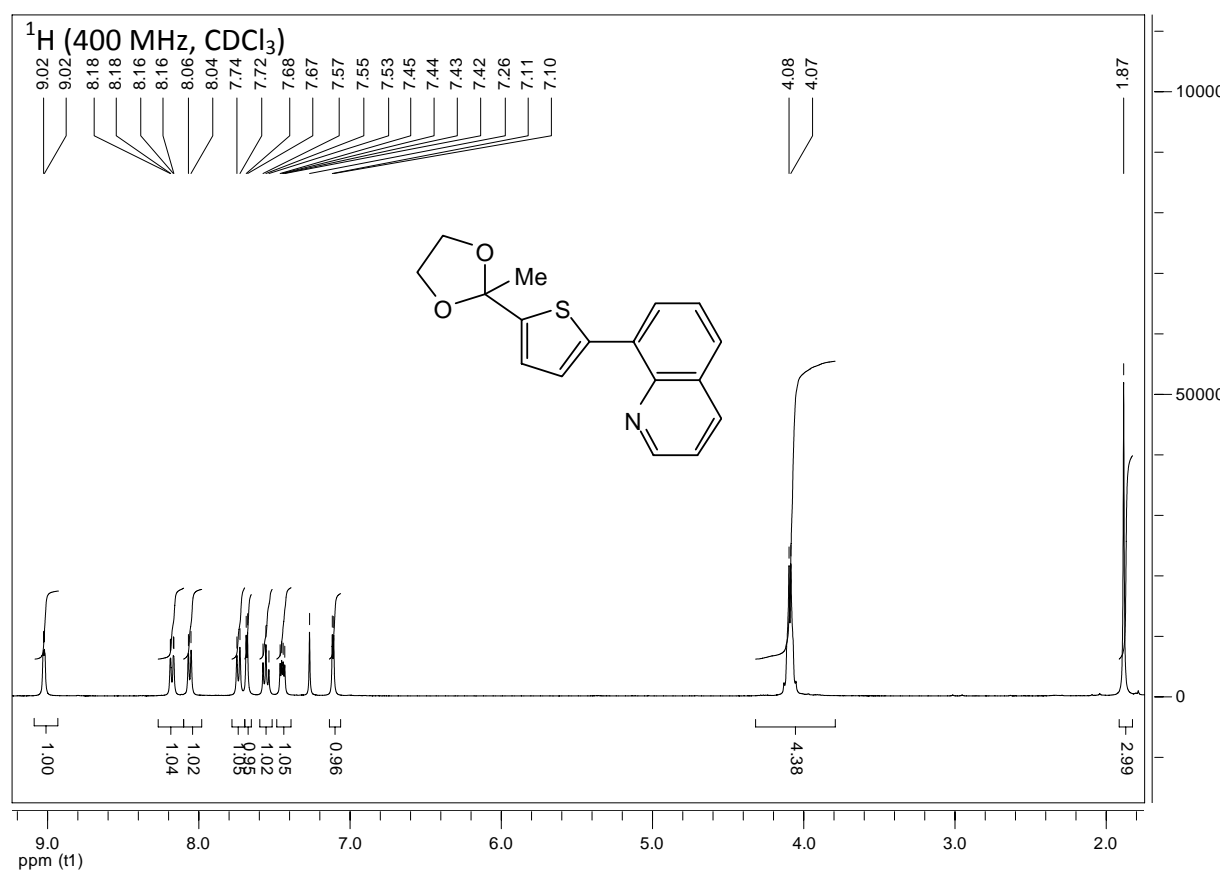
### 8-(2-Ethyl-4-methylthiazol-5-yl)-quinoline (20)



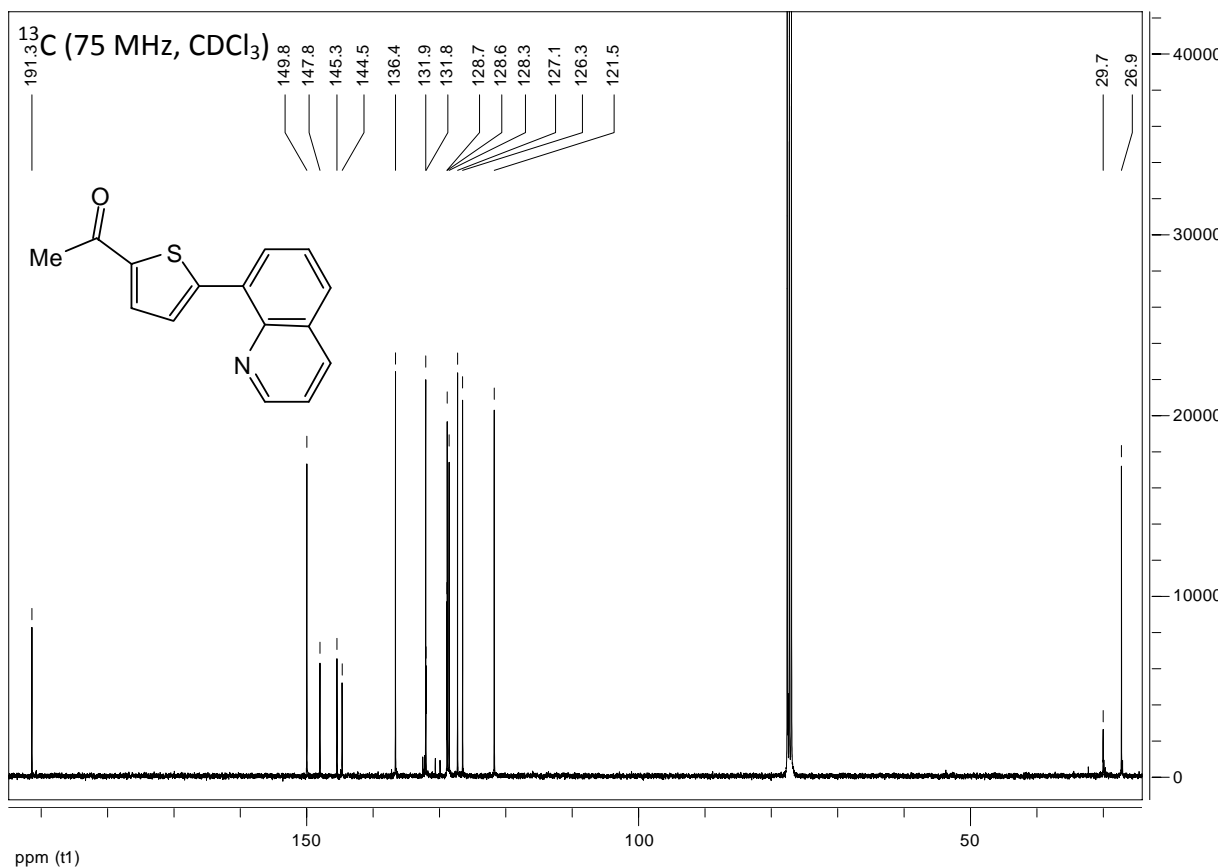
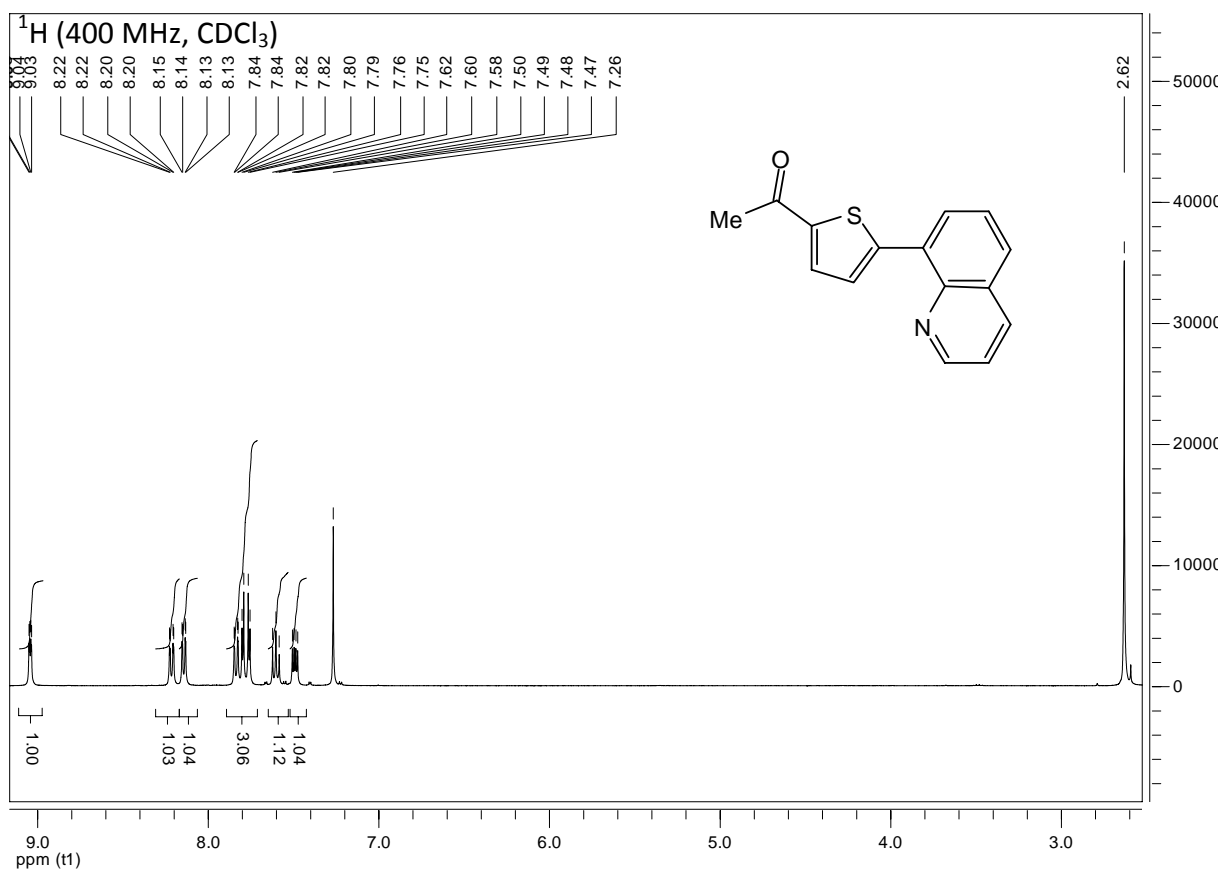
### 5-Quinolin-8-ylthiophene-2-carbonitrile (21)



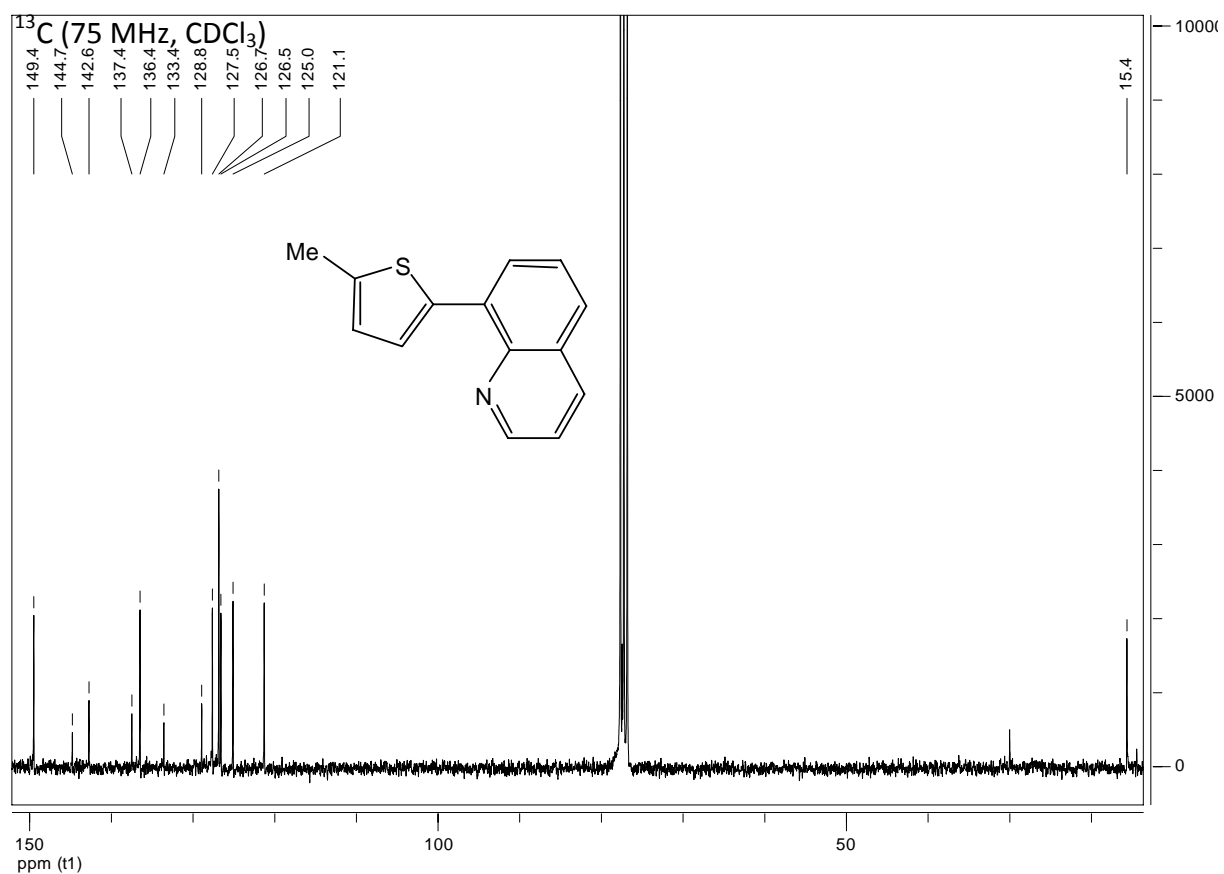
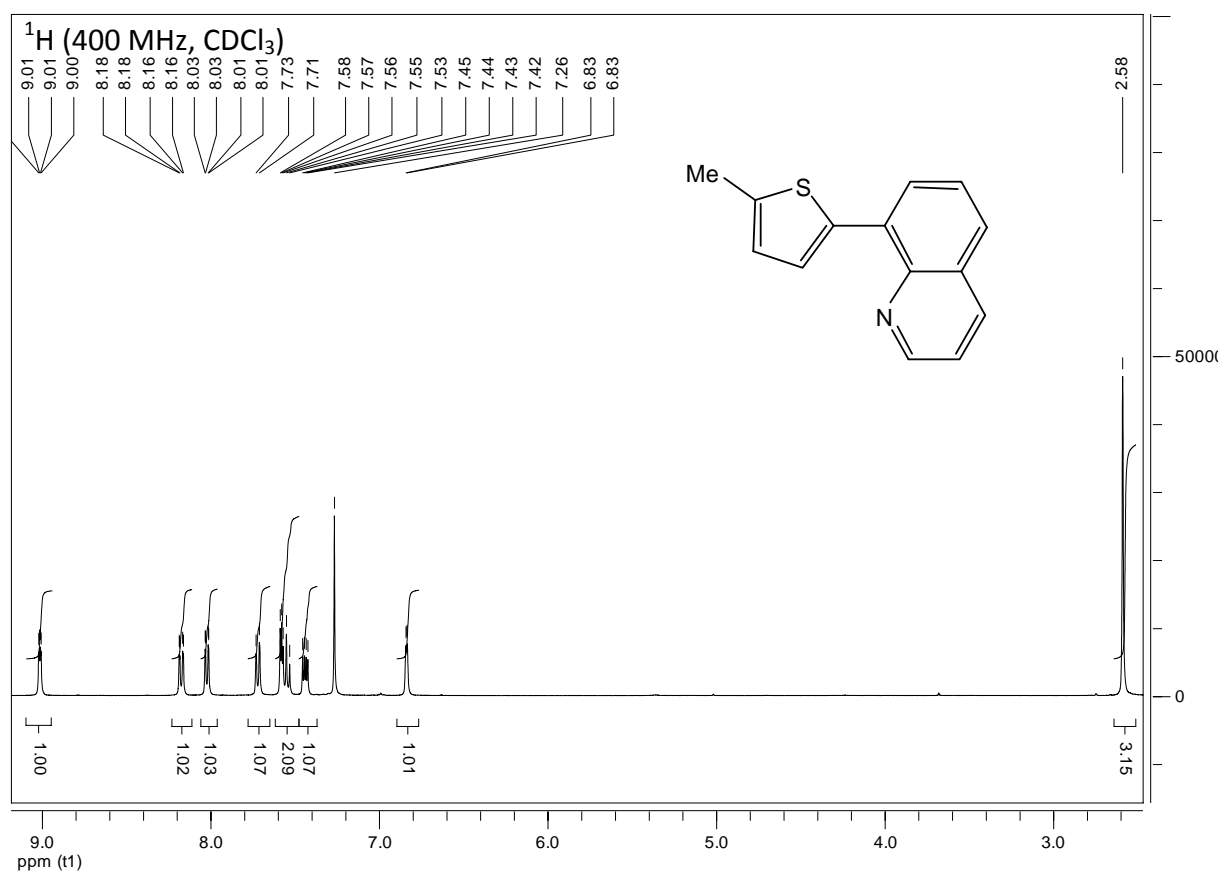
8-[5-(2-Methyl-[1,3]dioxolan-2-yl)-thiophen-2-yl]-quinoline (22)



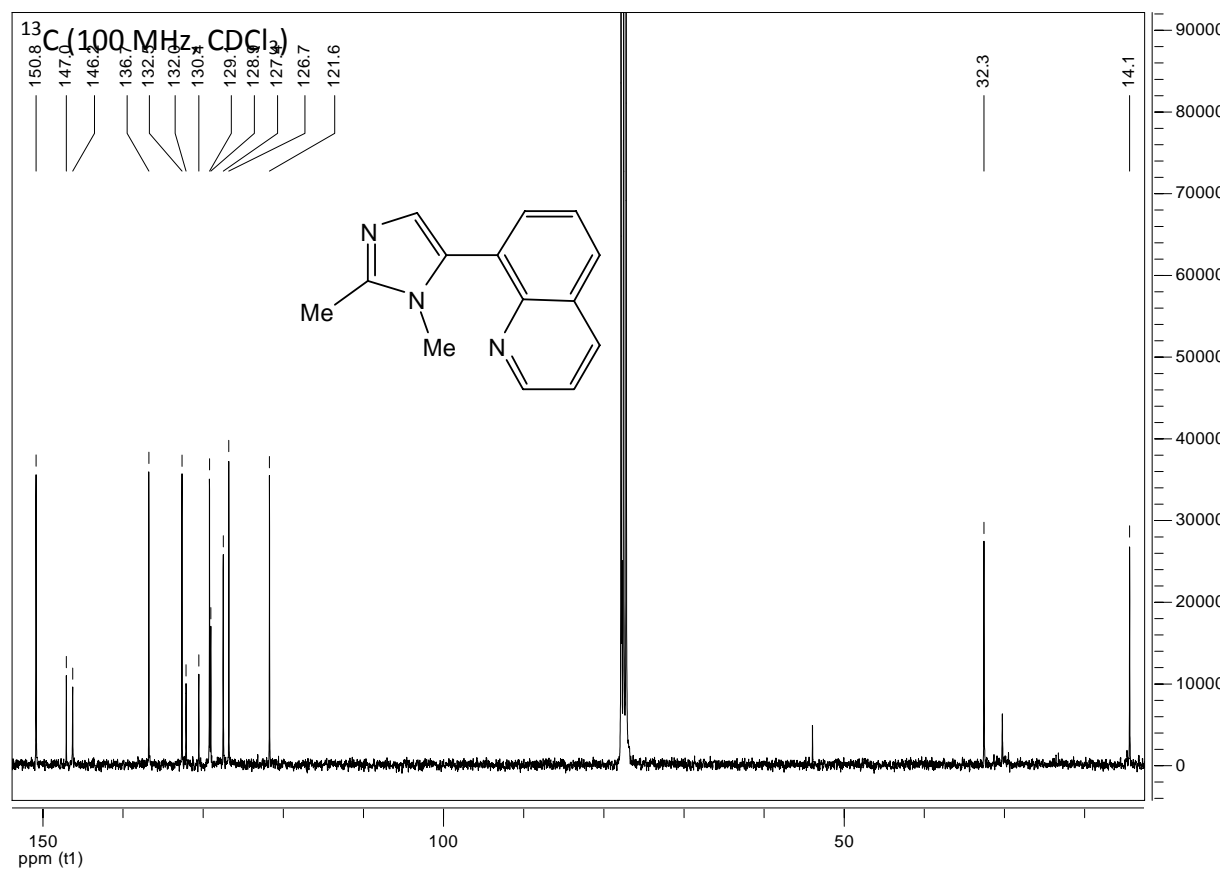
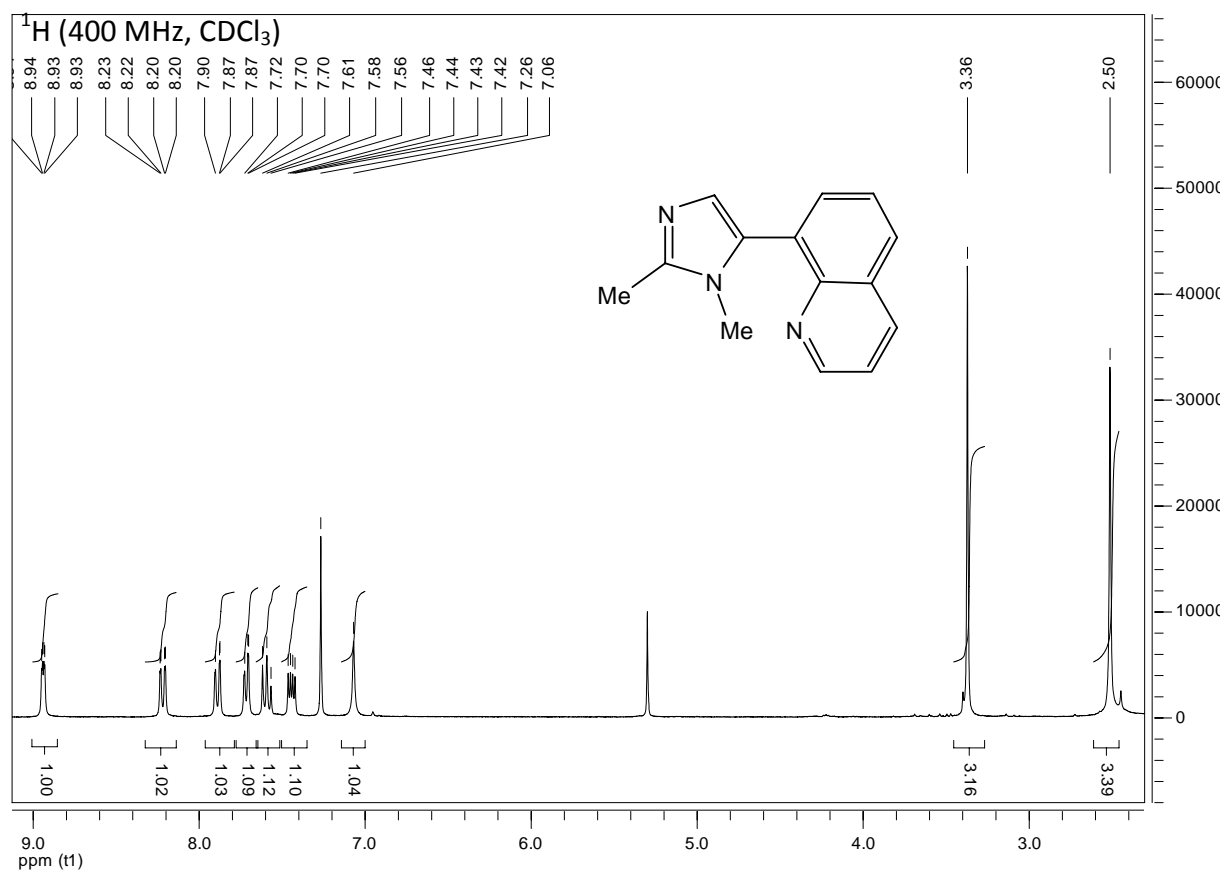
### 1-(5-Quinolin-8-ylthiophen-2-yl)-ethanone (23)



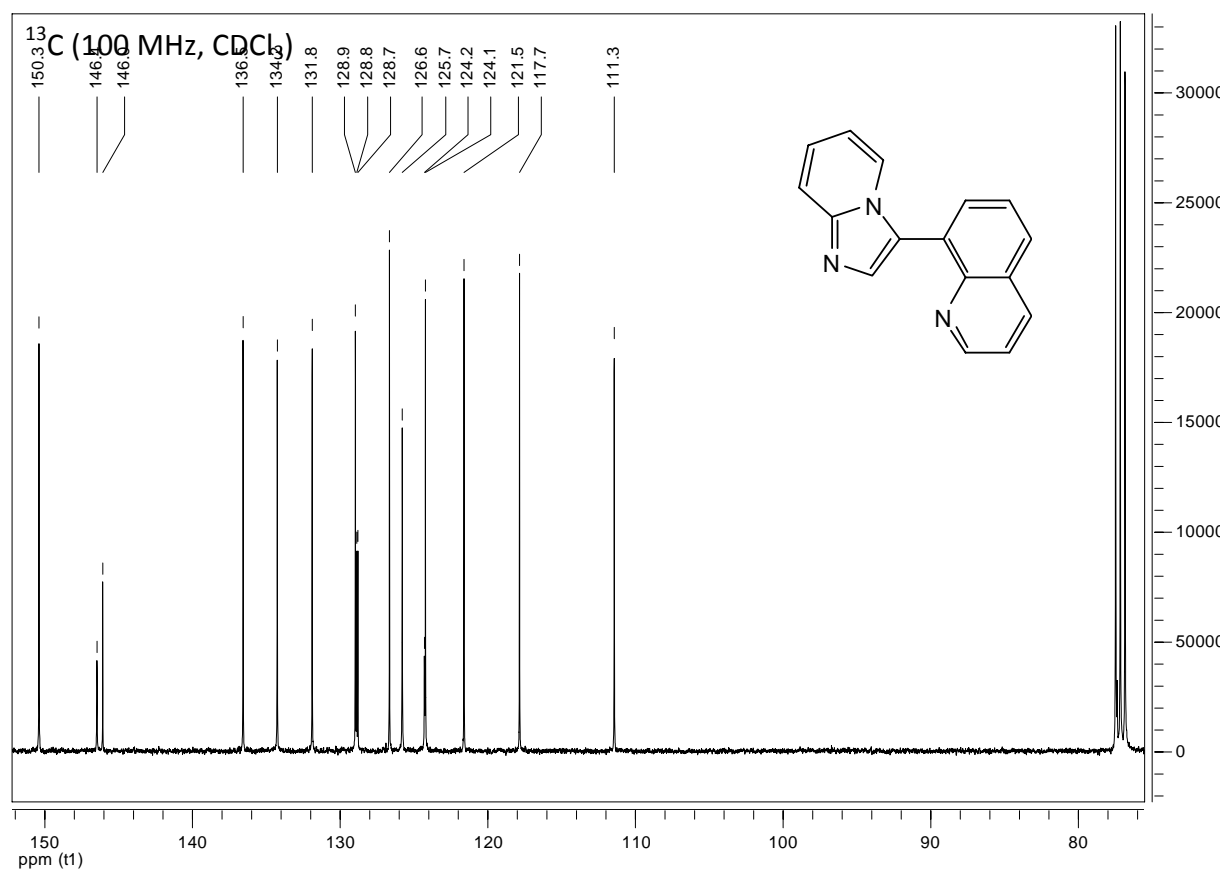
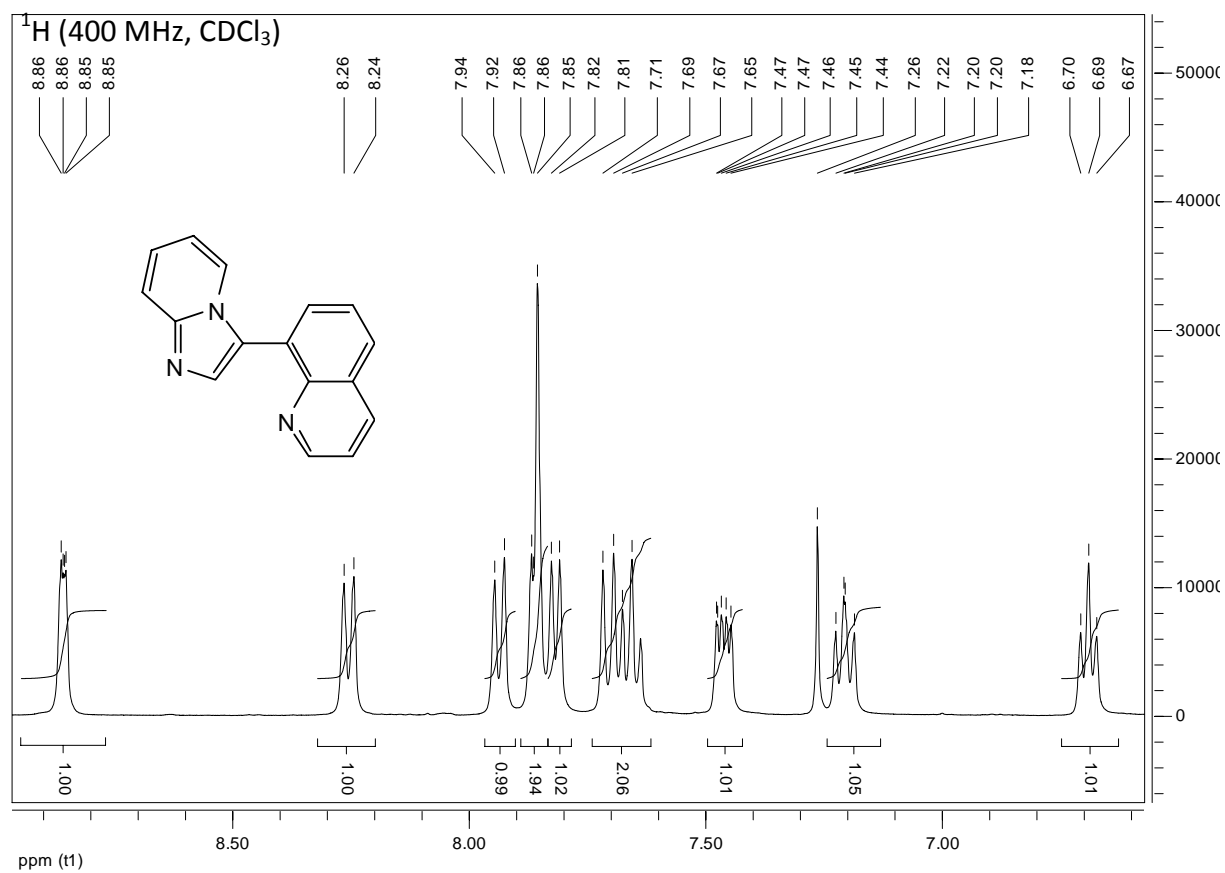
### 8-(5-Methylthiophen-2-yl)-quinoline (24)



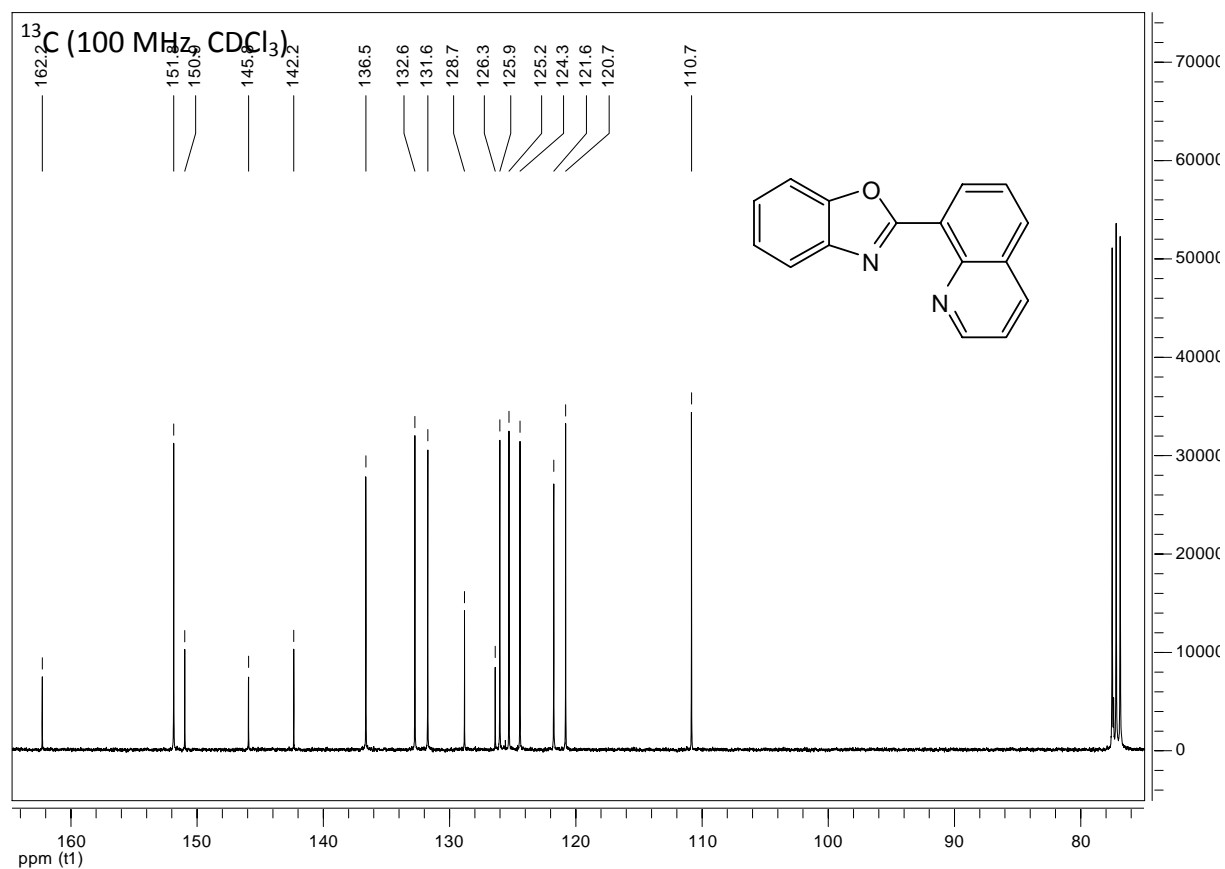
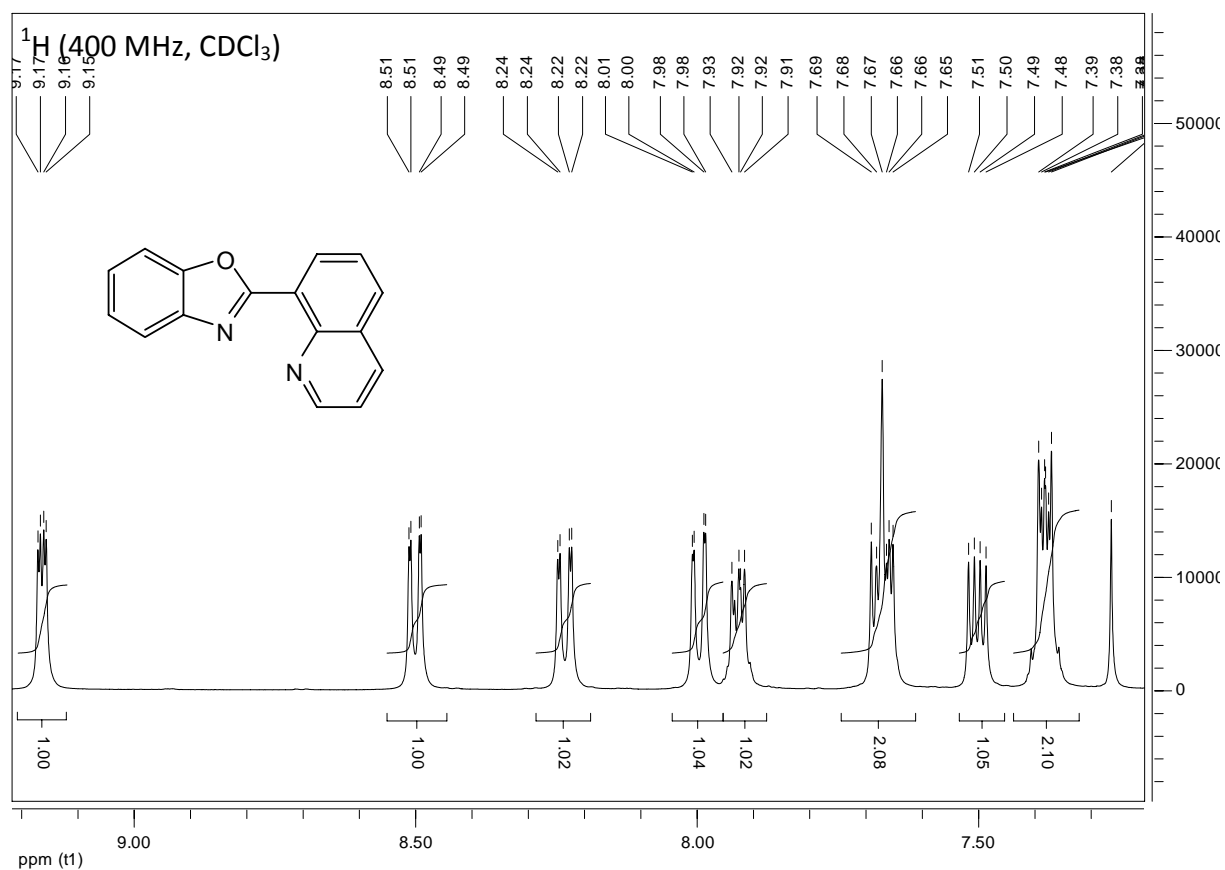
### 8-(2,3-Dimethylimidazol-4-yl)-quinoline (25)



### 8-Imidazo[1,2-a]pyridin-3-ylquinoline (26)



### 8-Benzooxazol-2-ylquinoline (27)





### 8-Benzothiazol-2-ylquinoline (28)

