

# CuCl/Air-mediated Oxidative Coupling Reaction of Imidazoheterocycles with Glycine Esters

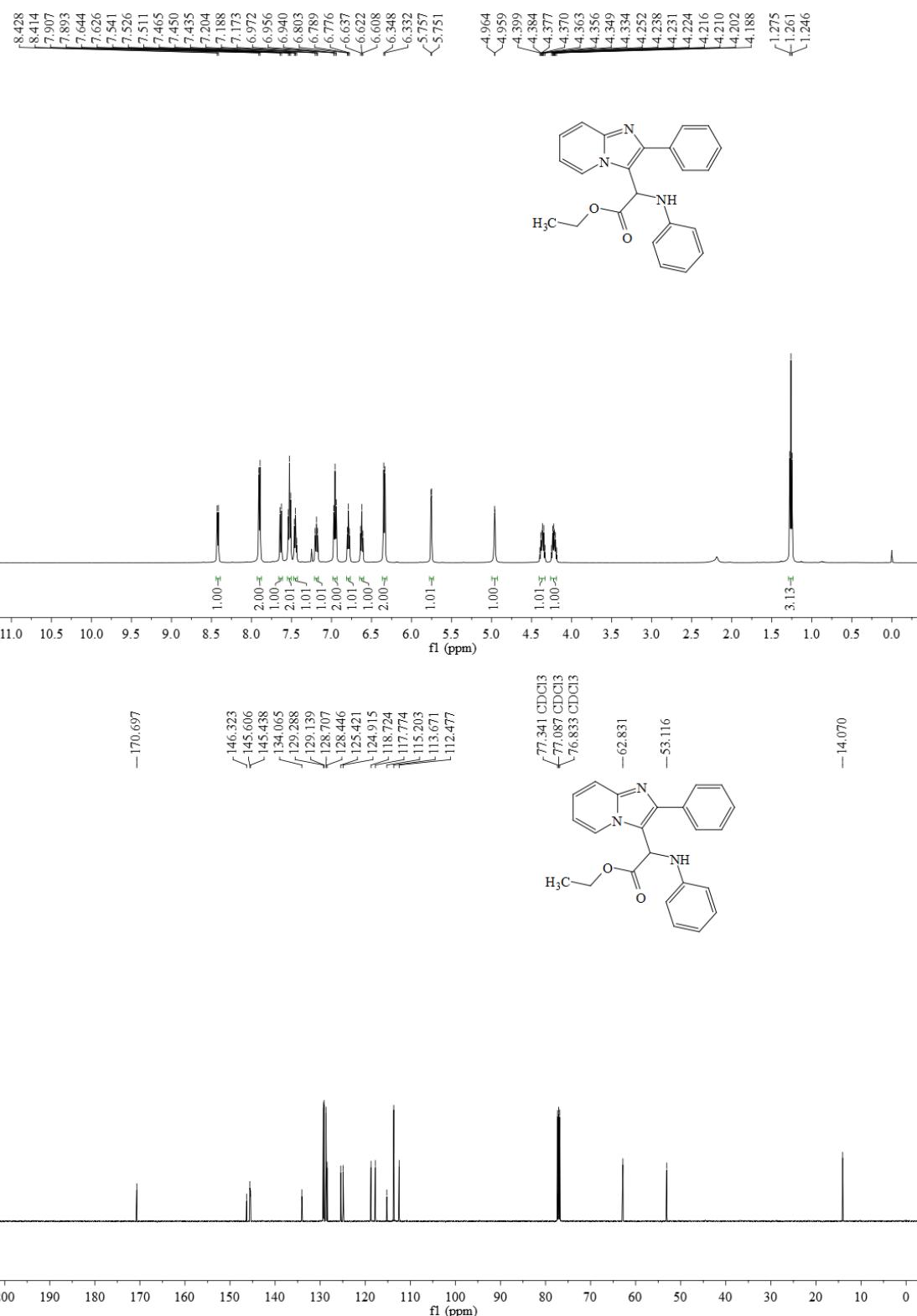
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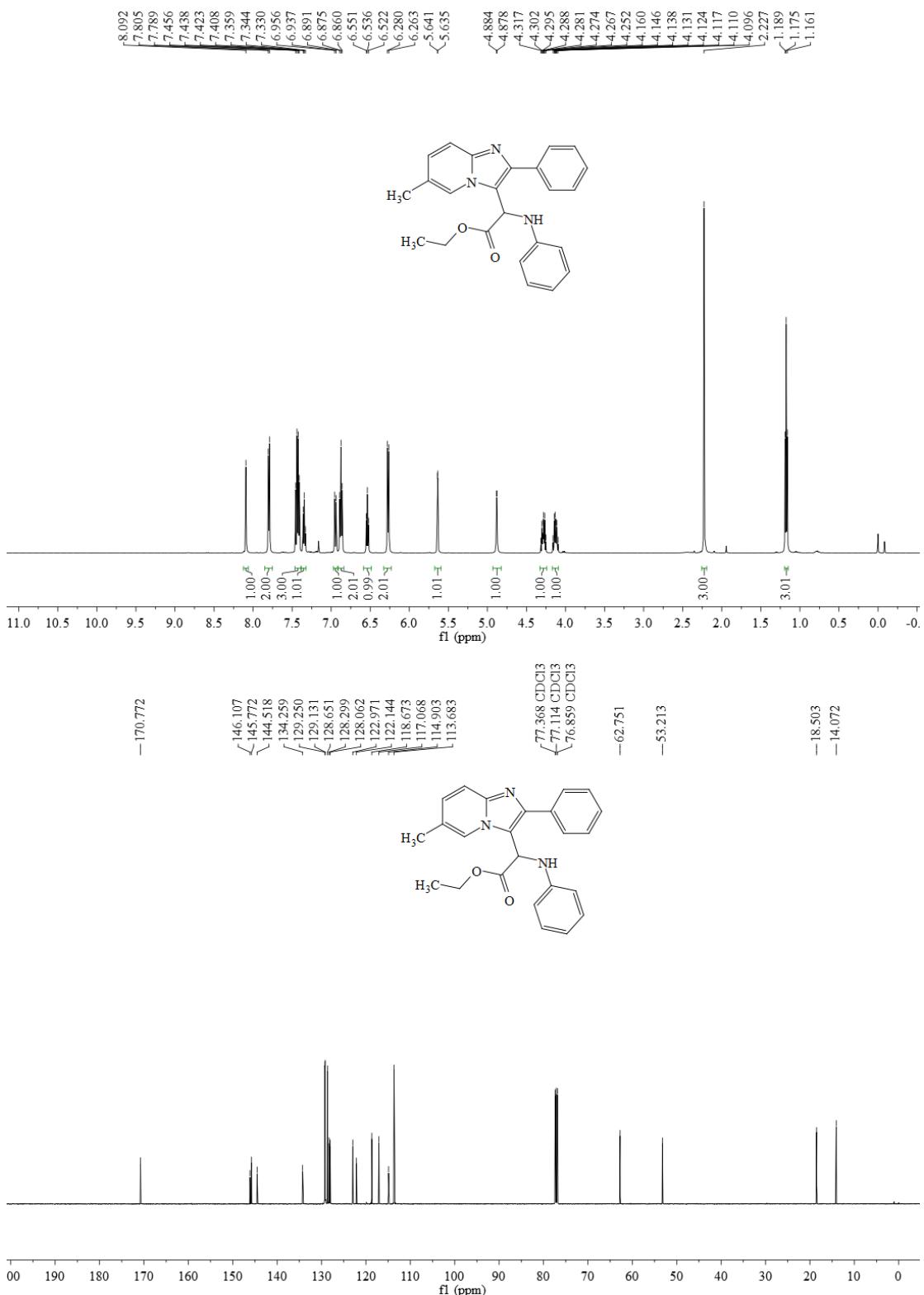
<sup>b</sup> College of Chemistry and Materials Engineering, Wenzhou University, Wenzhou 325035, China  
E-mail: [maolin@wzu.edu.cn](mailto:maolin@wzu.edu.cn)

## NMR Spectra for products

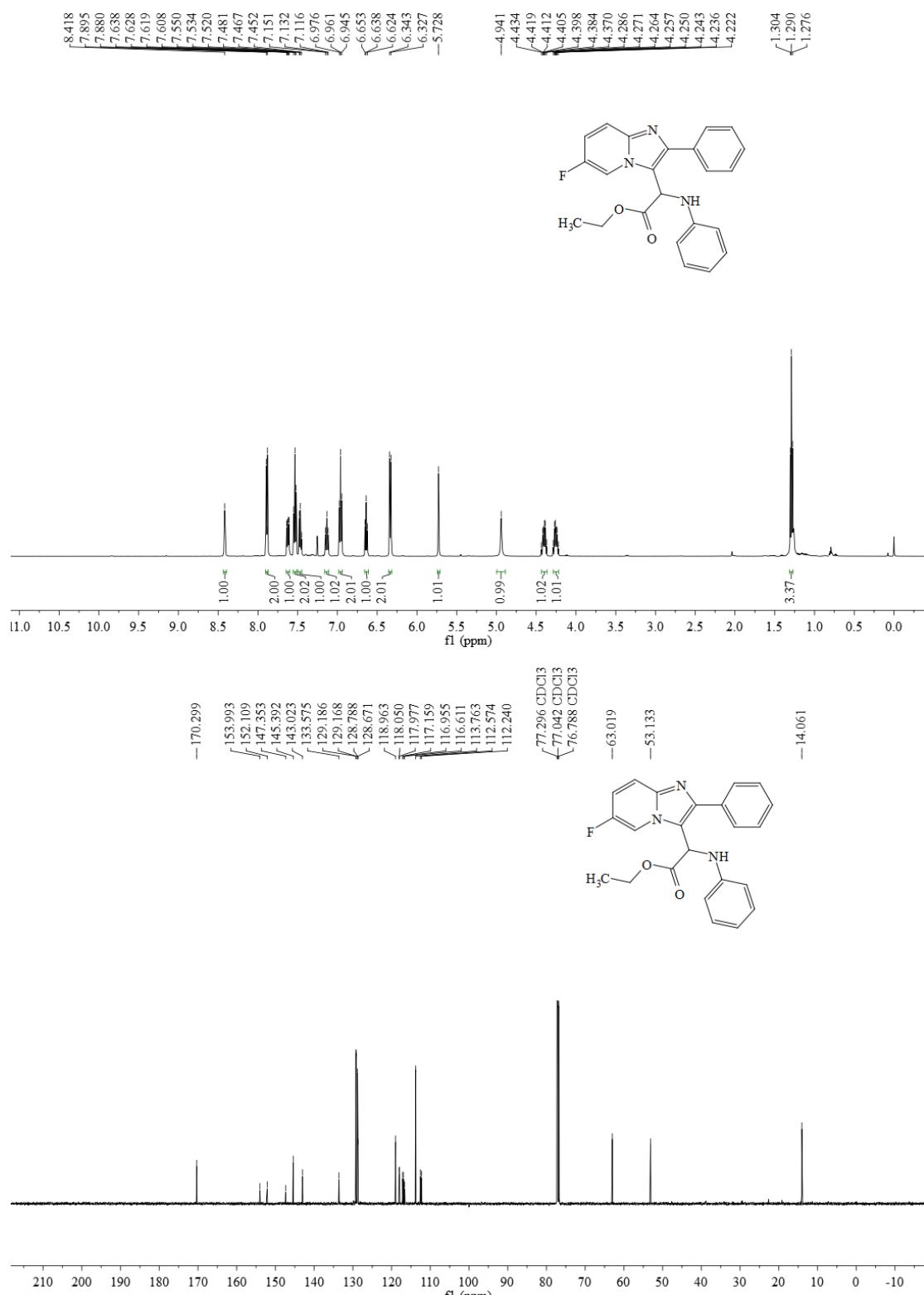
**ethyl 2-(phenylamino)-2-(2-phenylimidazo[1,2-a]pyridin-3-yl)acetate(3)**



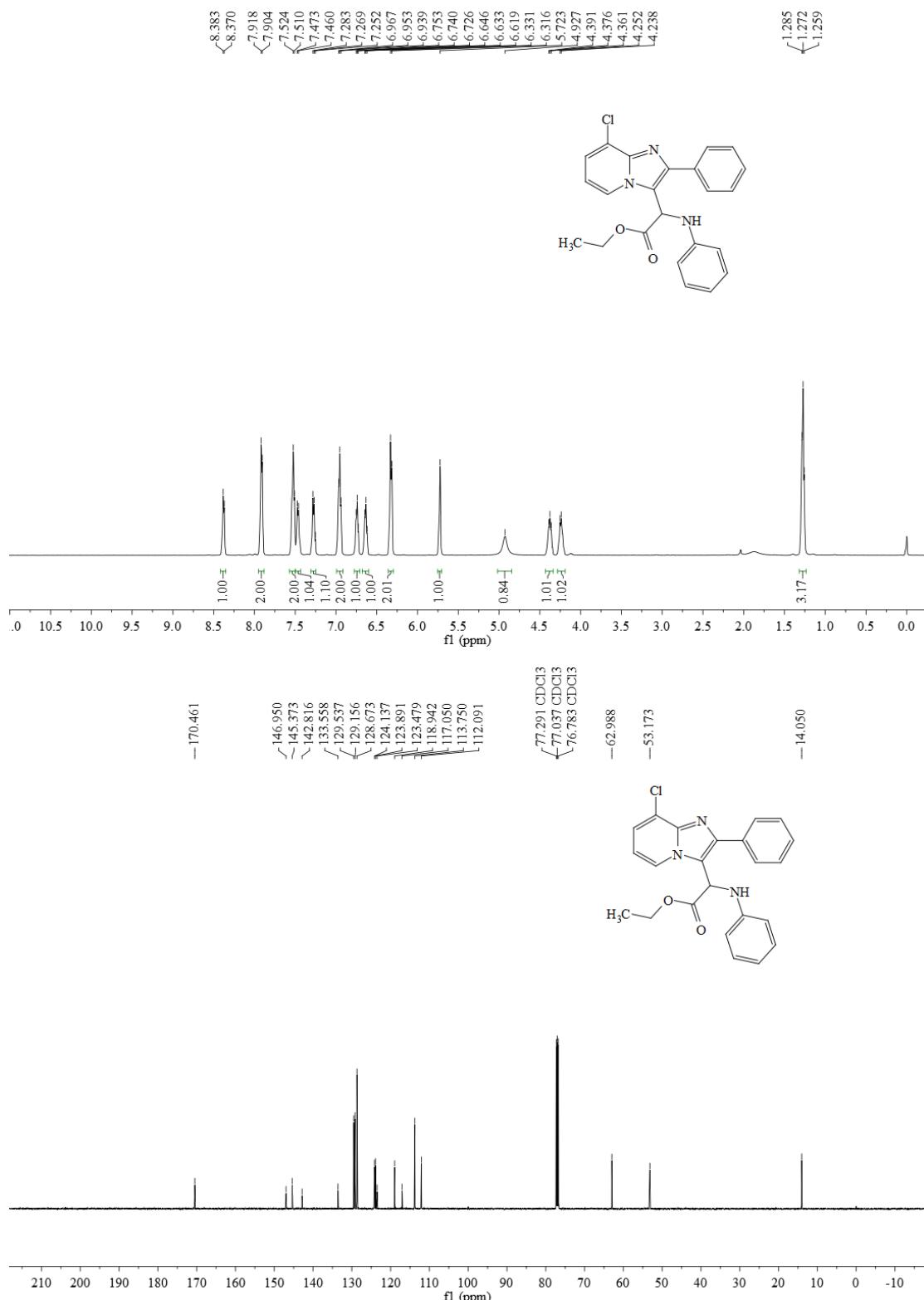
**ethyl 2-(6-methyl-2-phenylimidazo[1,2-a]pyridin-3-yl)-2-(phenylamino)acetate (4)**



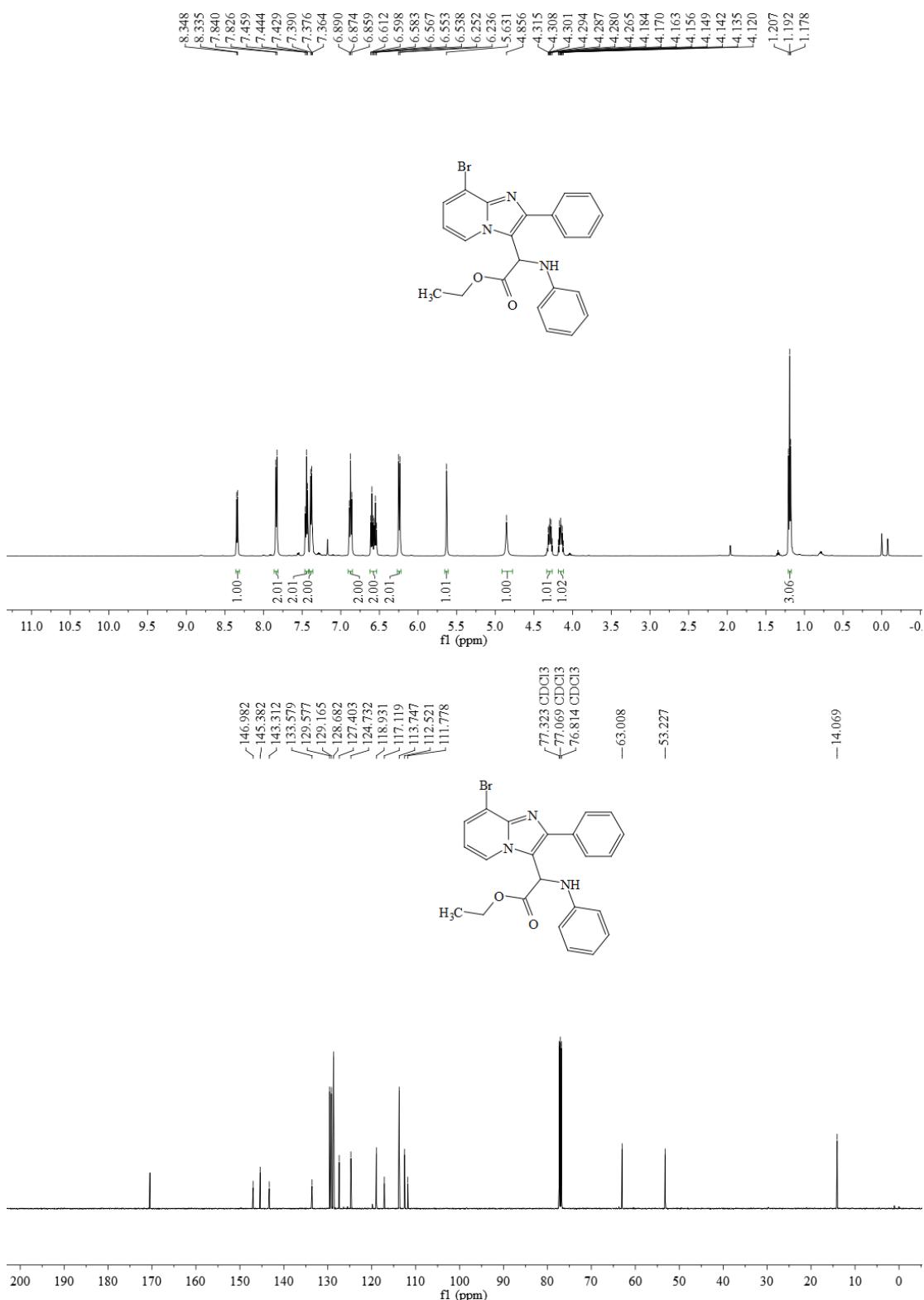
**ethyl 2-(6-fluoro-2-phenylimidazo[1,2-a]pyridin-3-yl)-2-(phenylamino)acetate (5)**



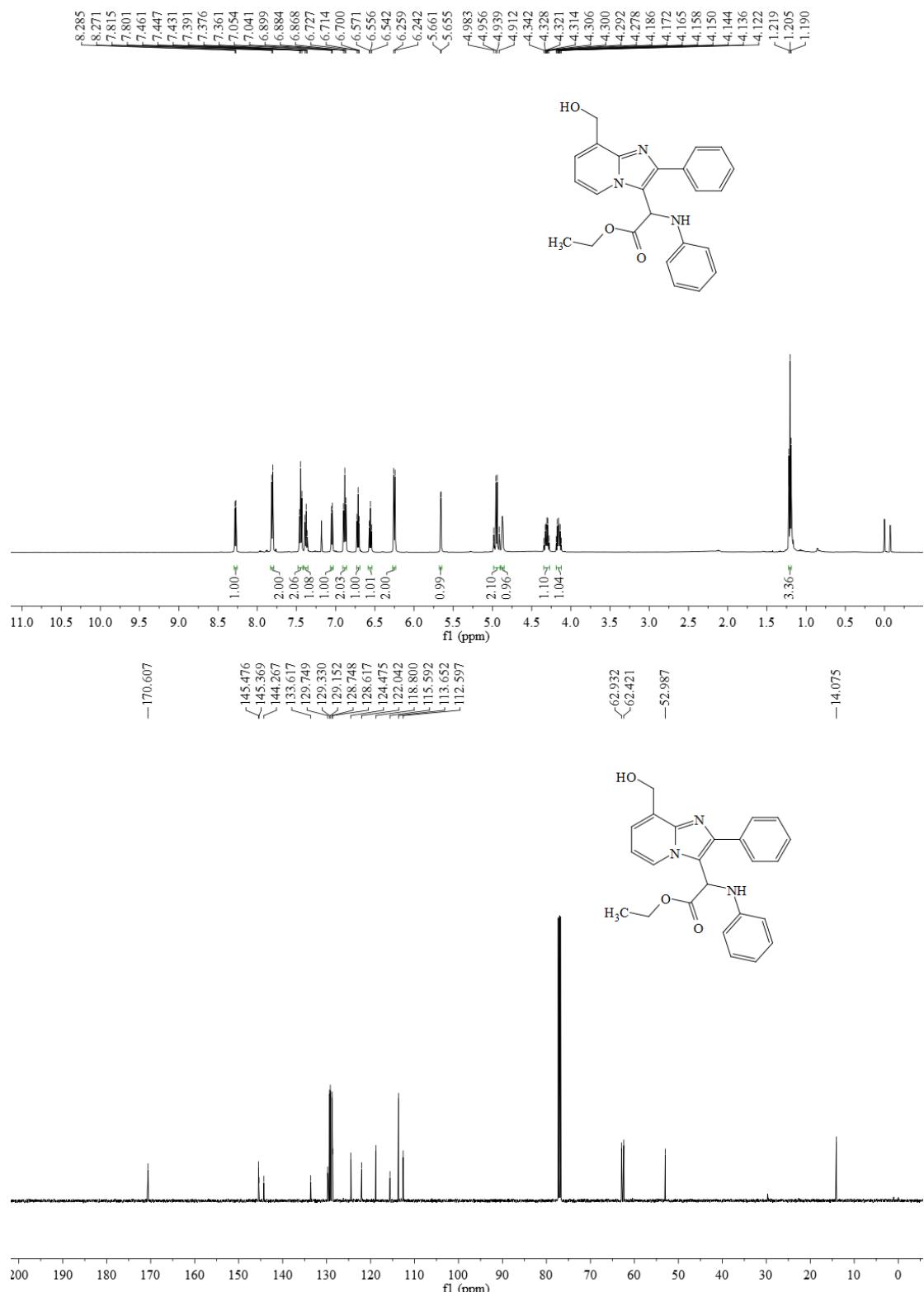
**ethyl 2-(8-chloro-2-phenylimidazo[1,2-a]pyridin-3-yl)-2-(phenylamino)acetate (6)**



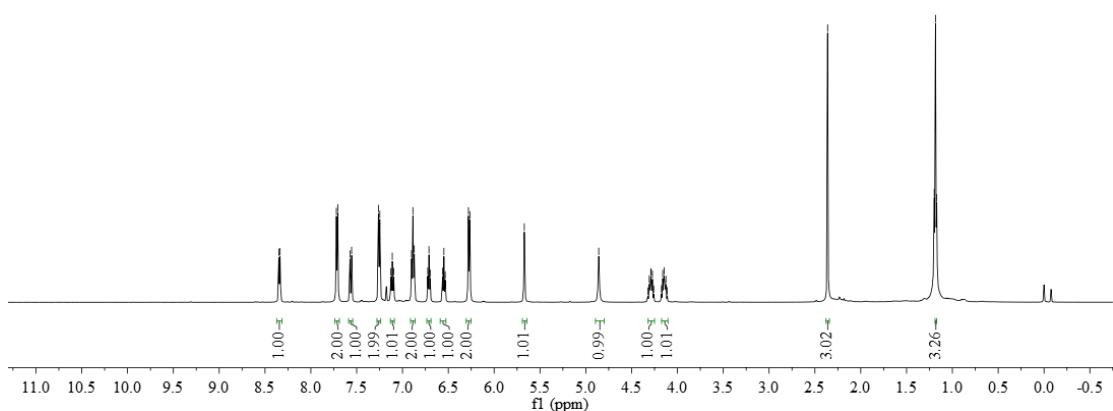
**ethyl 2-(8-bromo-2-phenylimidazo[1,2-a]pyridin-3-yl)-2-(phenylamino)acetate (7)**



**ethyl 2-(8-(hydroxymethyl)-2-phenylimidazo[1,2-a]pyridin-3-yl)-2-(phenylamino)acetate (8)**



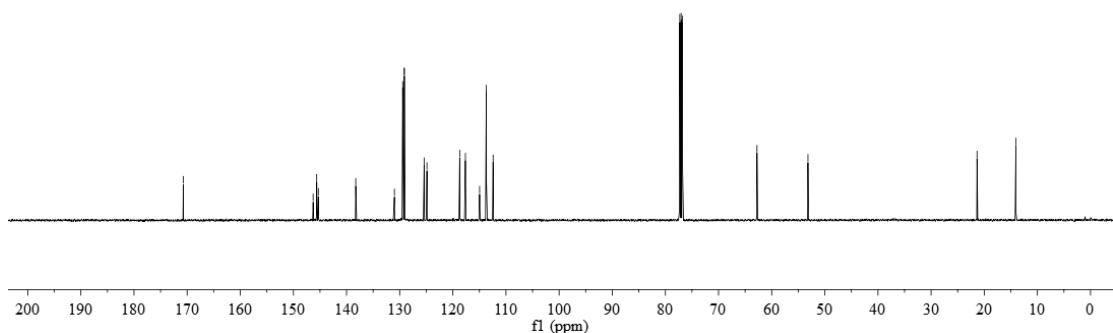
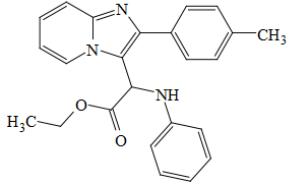
**ethyl 2-(phenylamino)-2-(2-(p-tolyl)imidazo[1,2-a]pyridin-3-yl)acetate (9)**



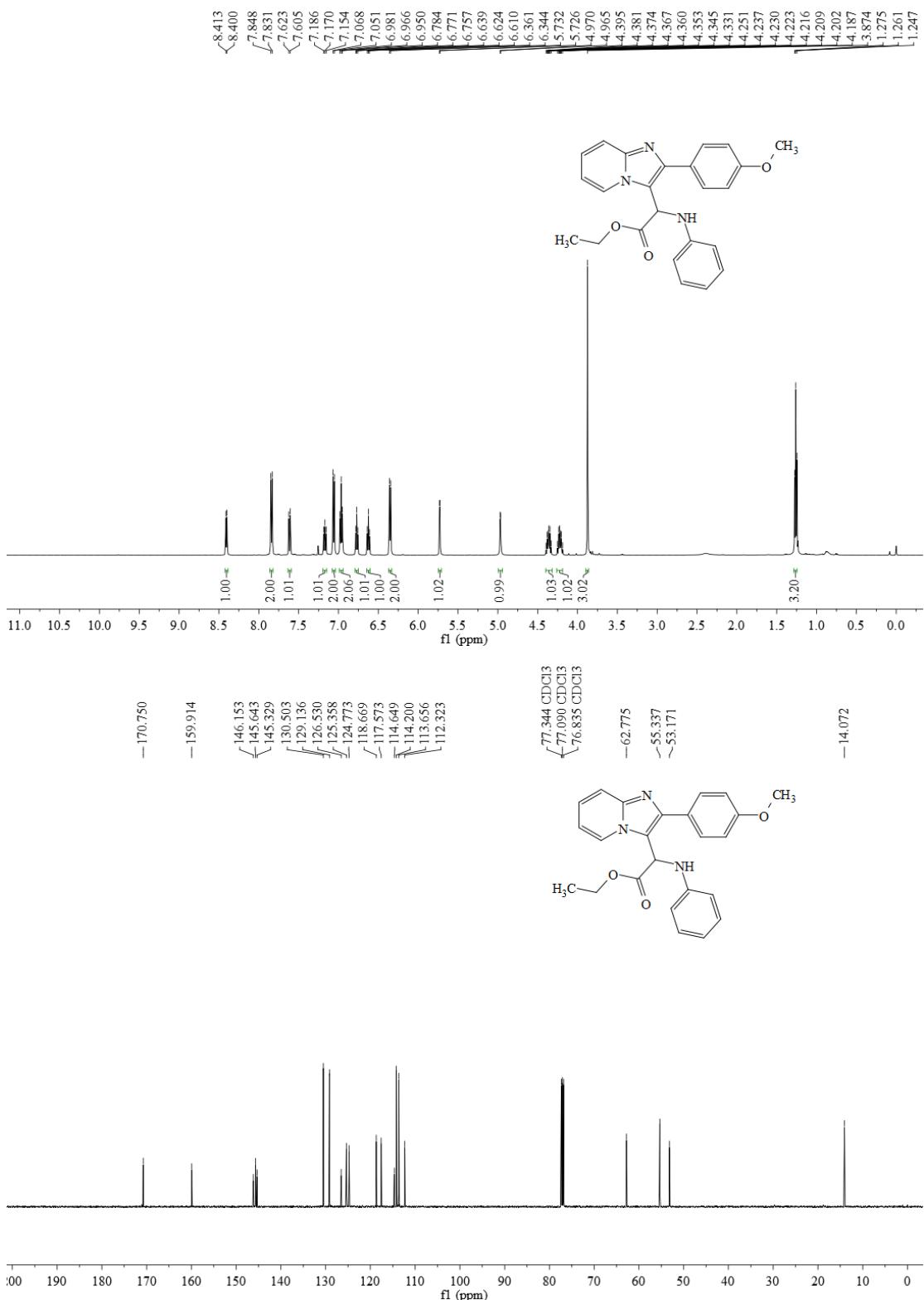
-170.726

146.293  
145.309  
145.620  
138.274  
130.993  
129.438  
129.144  
129.126  
125.402  
124.875  
118.705  
117.638  
114.966  
113.698  
112.421

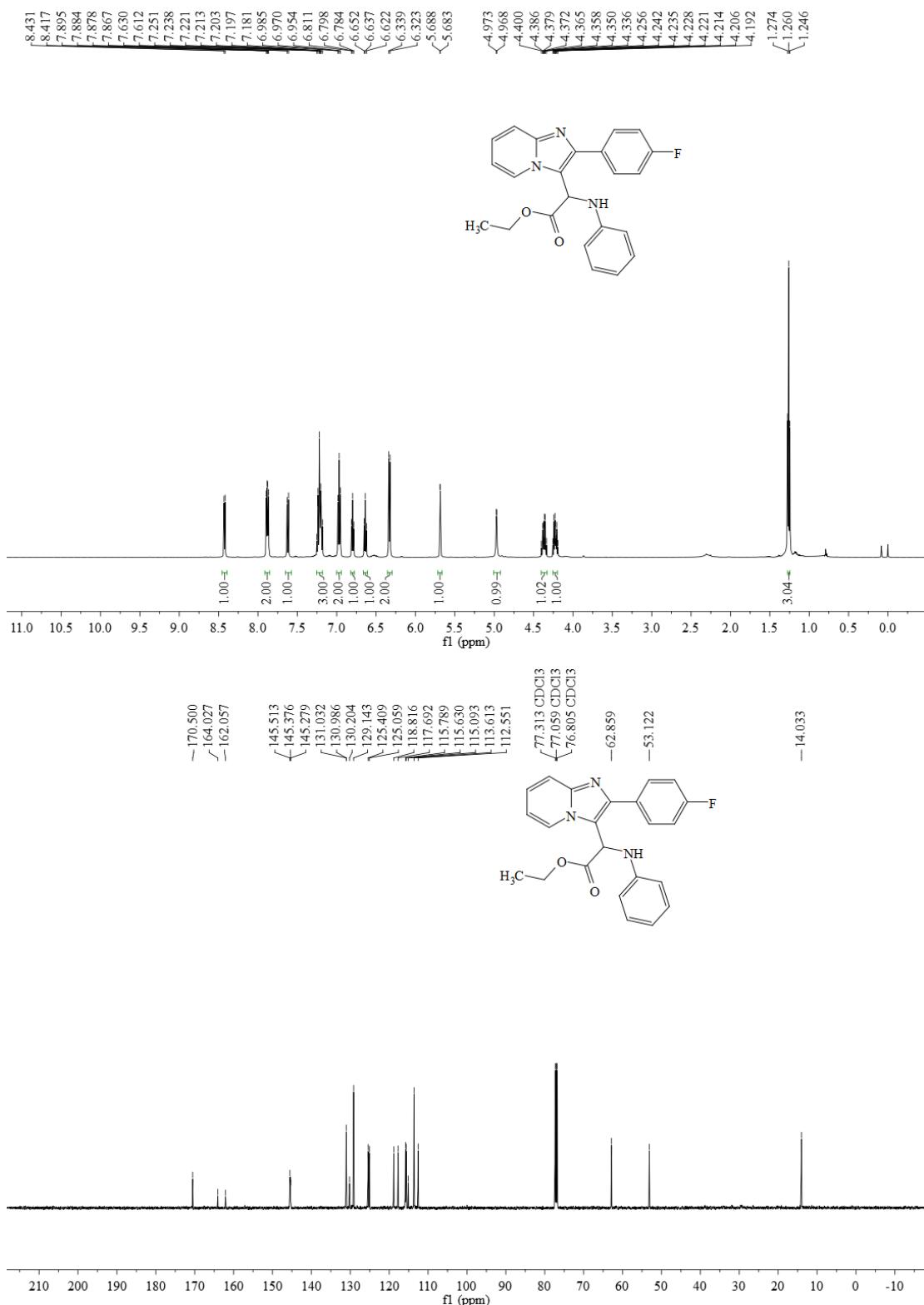
77.297 CDCl<sub>3</sub>  
77.043 CDCl<sub>3</sub>  
76.788 CDCl<sub>3</sub>  
-62.770  
-53.172  
-21.358  
-14.043



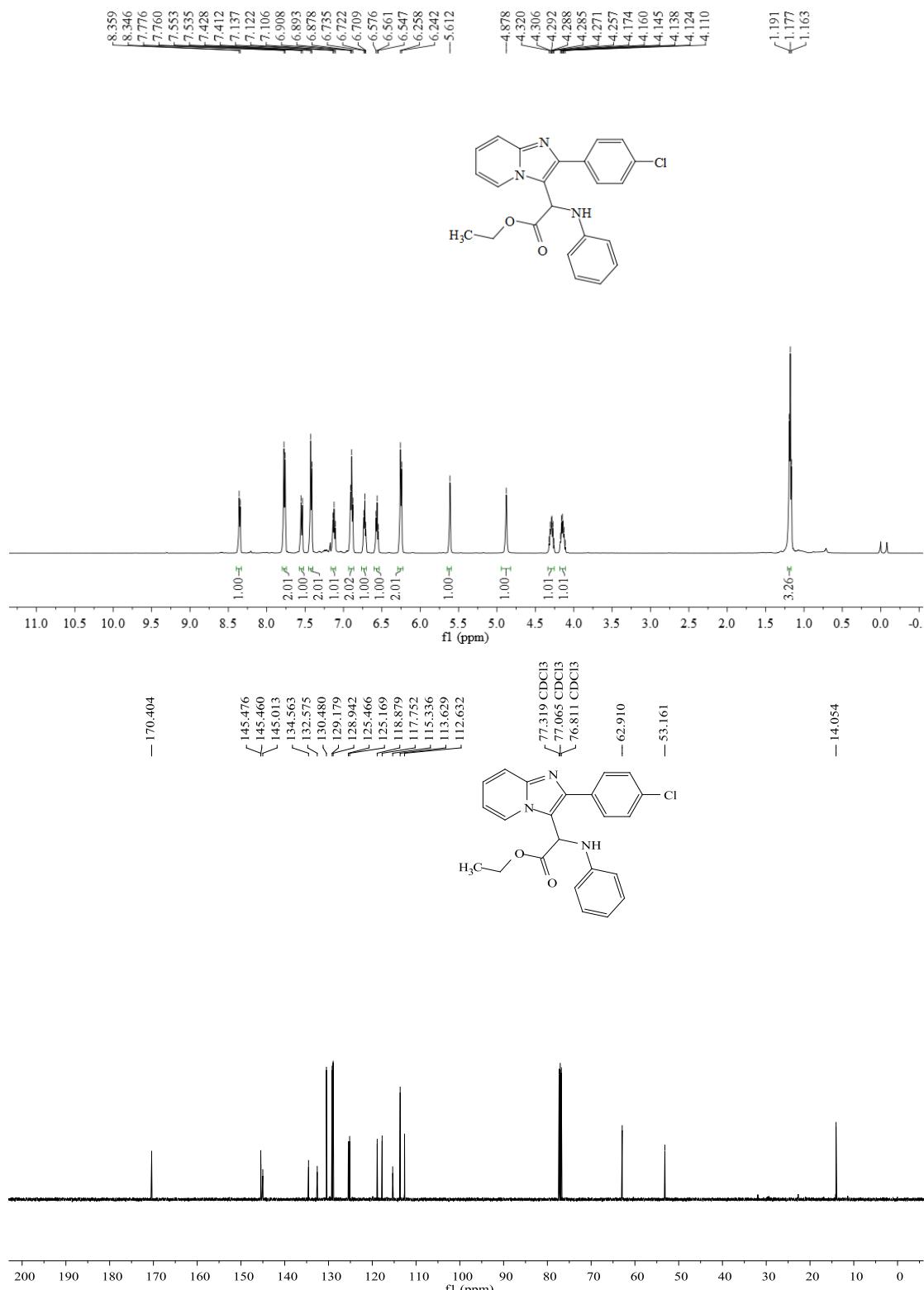
**ethyl 2-(2-(4-methoxyphenyl)imidazo[1,2-a]pyridin-3-yl)-2-(phenylamino)acetate (10)**



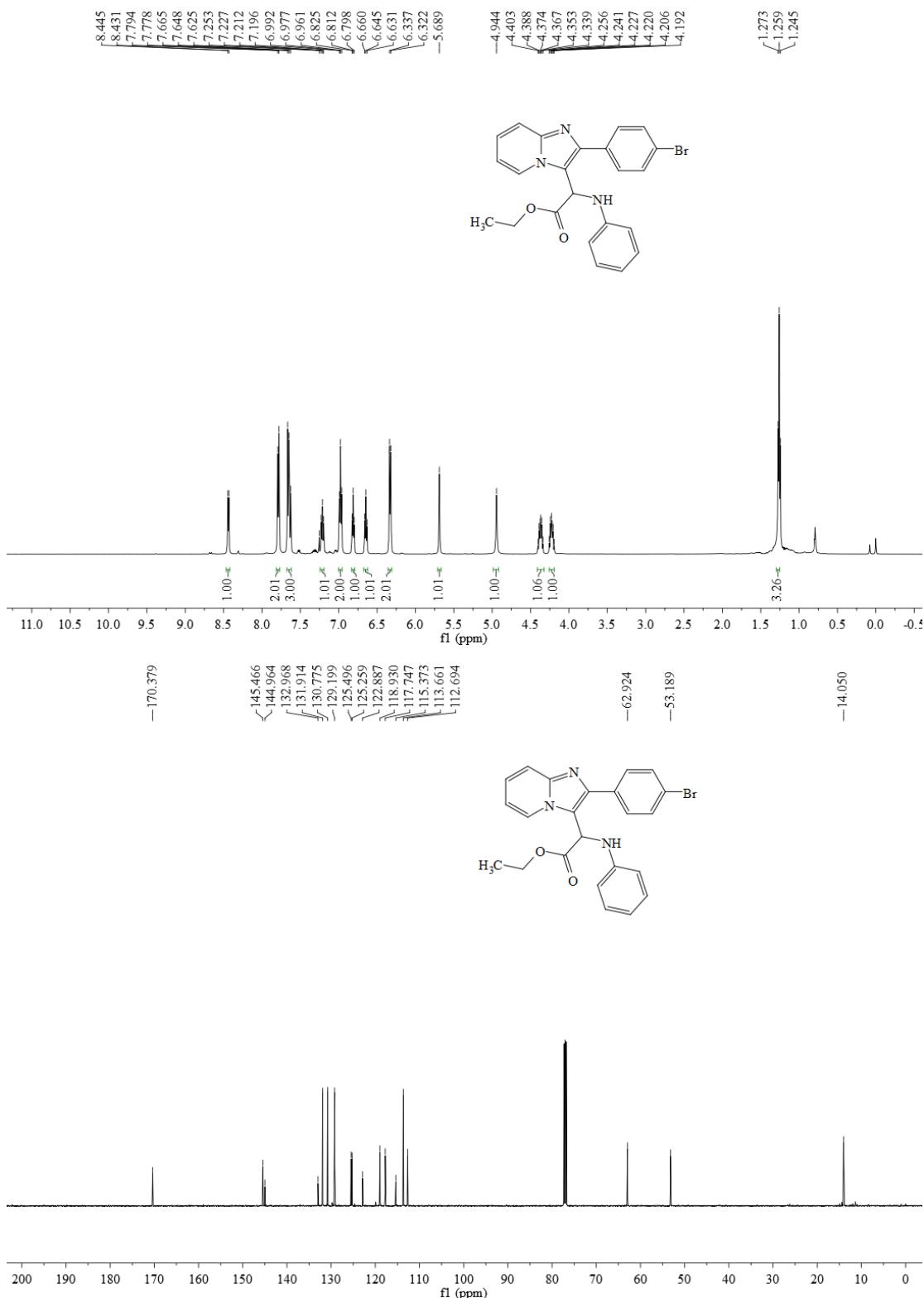
**ethyl 2-(2-(4-fluorophenyl)imidazo[1,2-a]pyridin-3-yl)-2-(phenylamino)acetate (11)**



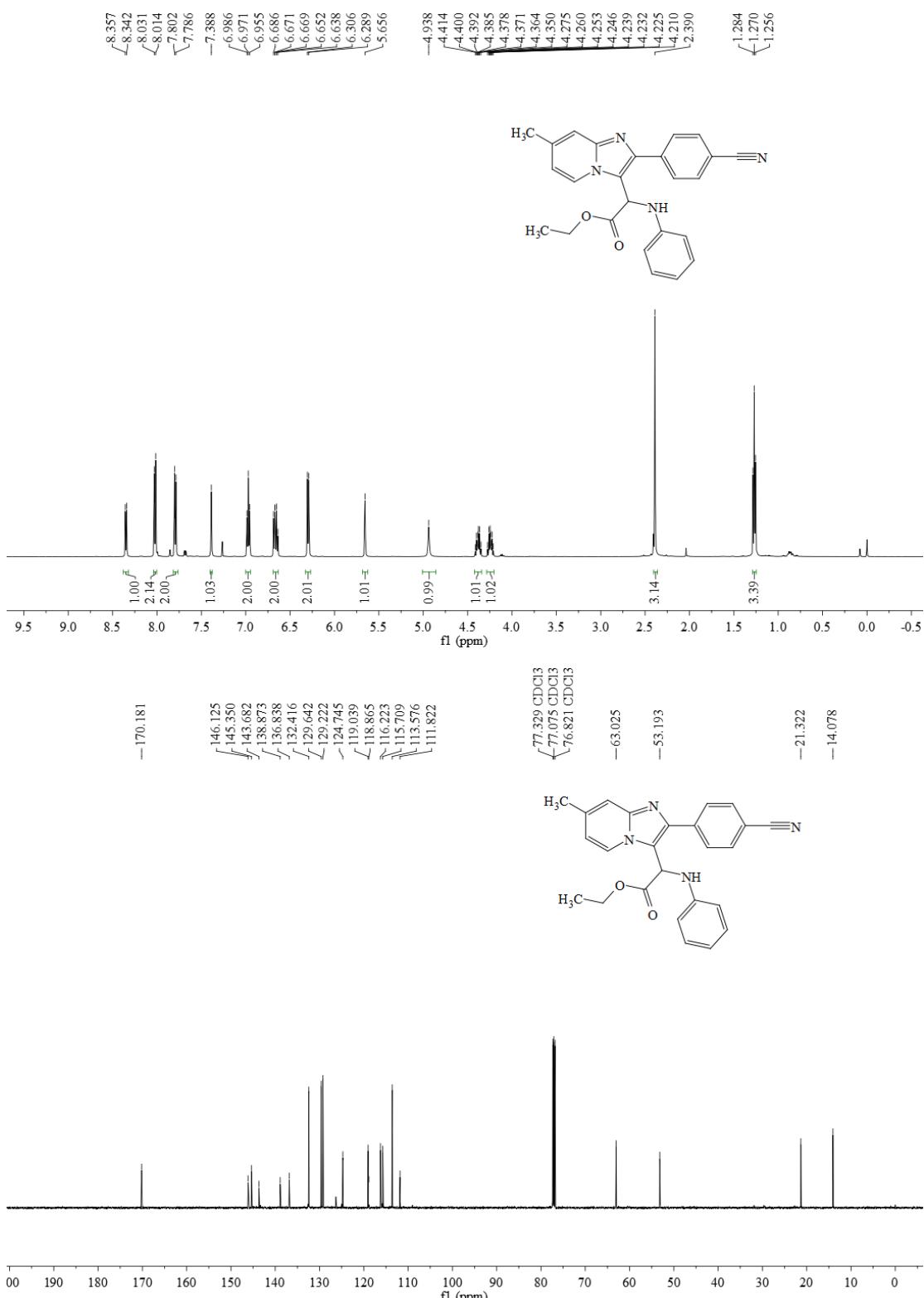
**ethyl 2-(2-(4-chlorophenyl)imidazo[1,2-a]pyridin-3-yl)-2-(phenylamino)acetate (12)**



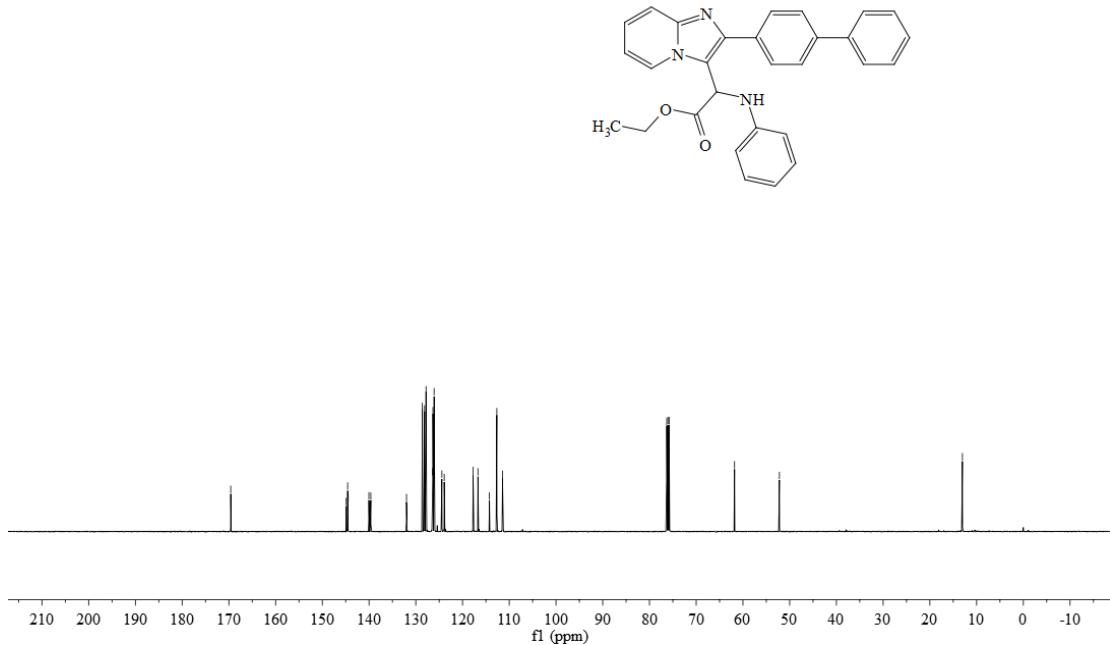
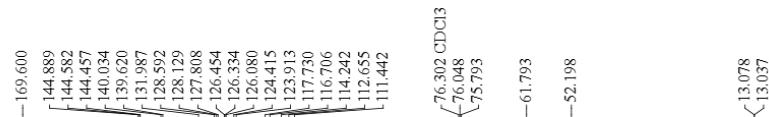
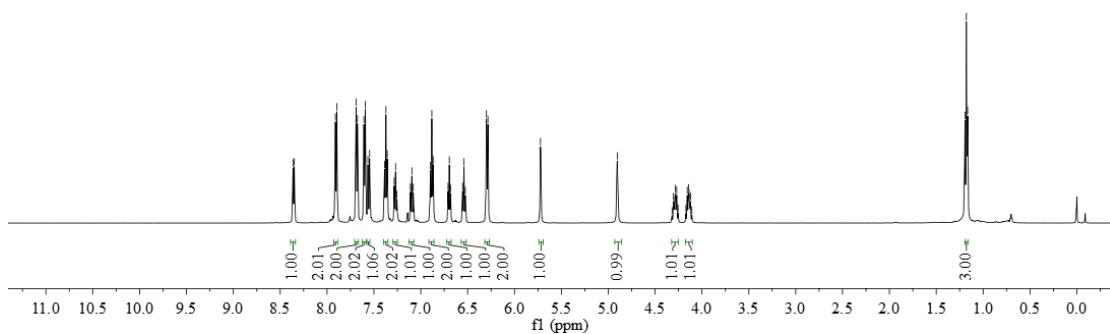
**ethyl 2-(2-(4-bromophenyl)imidazo[1,2-a]pyridin-3-yl)-2-(phenylamino)acetate (13)**



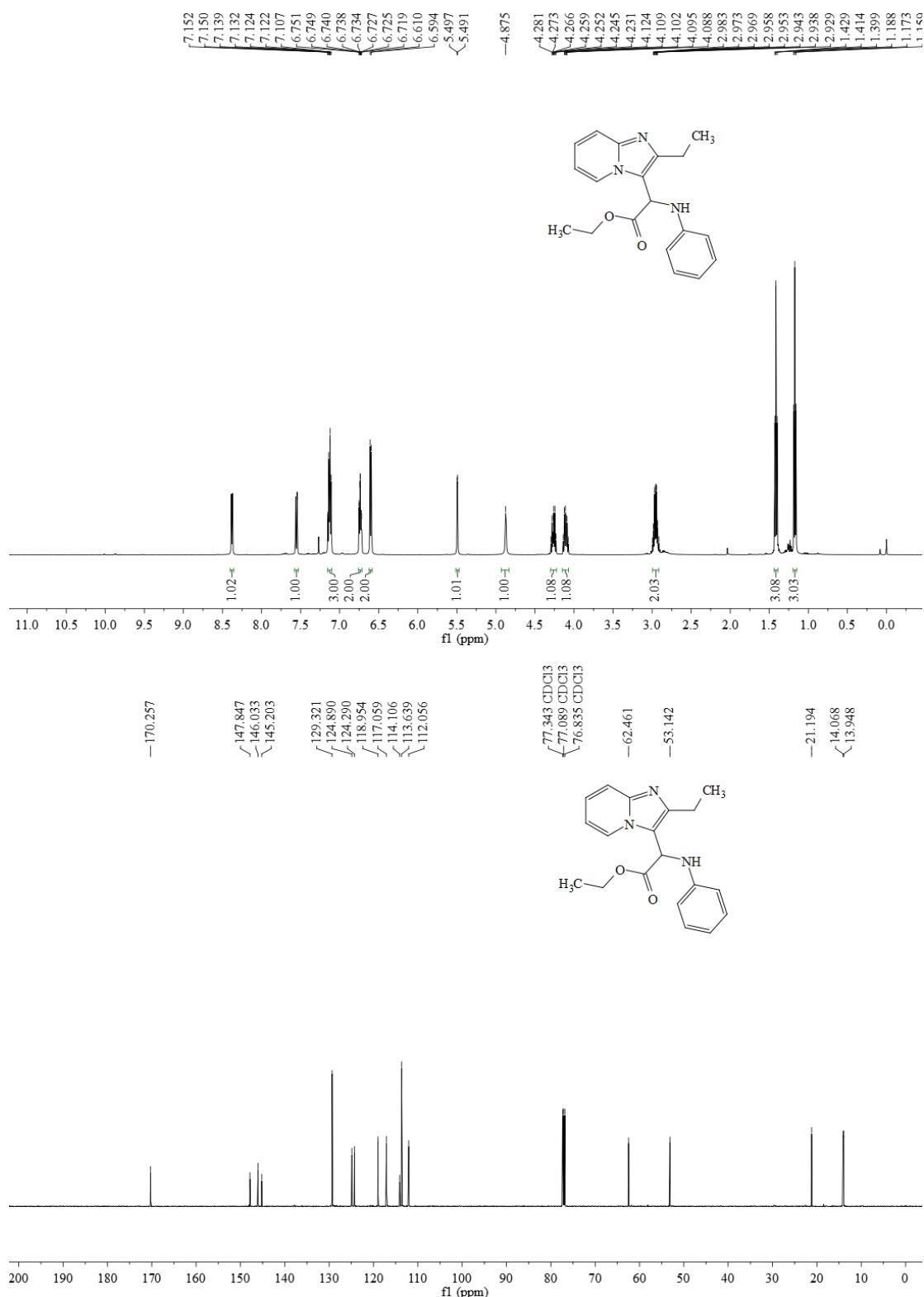
**ethyl 2-(2-(4-cyanophenyl)-7-methylimidazo[1,2-a]pyridin-3-yl)-2-(phenylamino)acetate (14)**



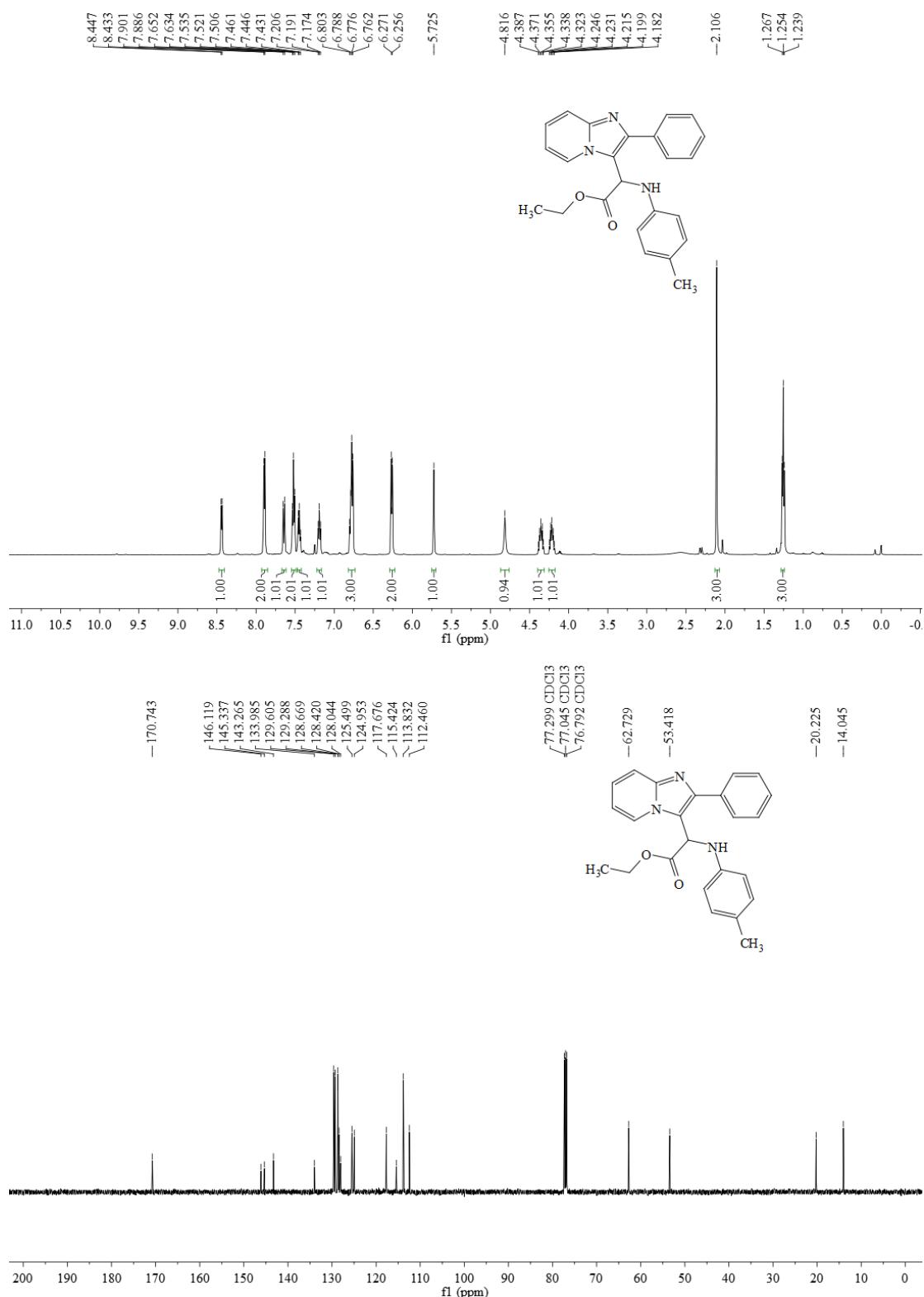
**ethyl 2-(2-([1,1'-biphenyl]-4-yl)imidazo[1,2-a]pyridin-3-yl)-2-(phenylamino)acetate (15)**



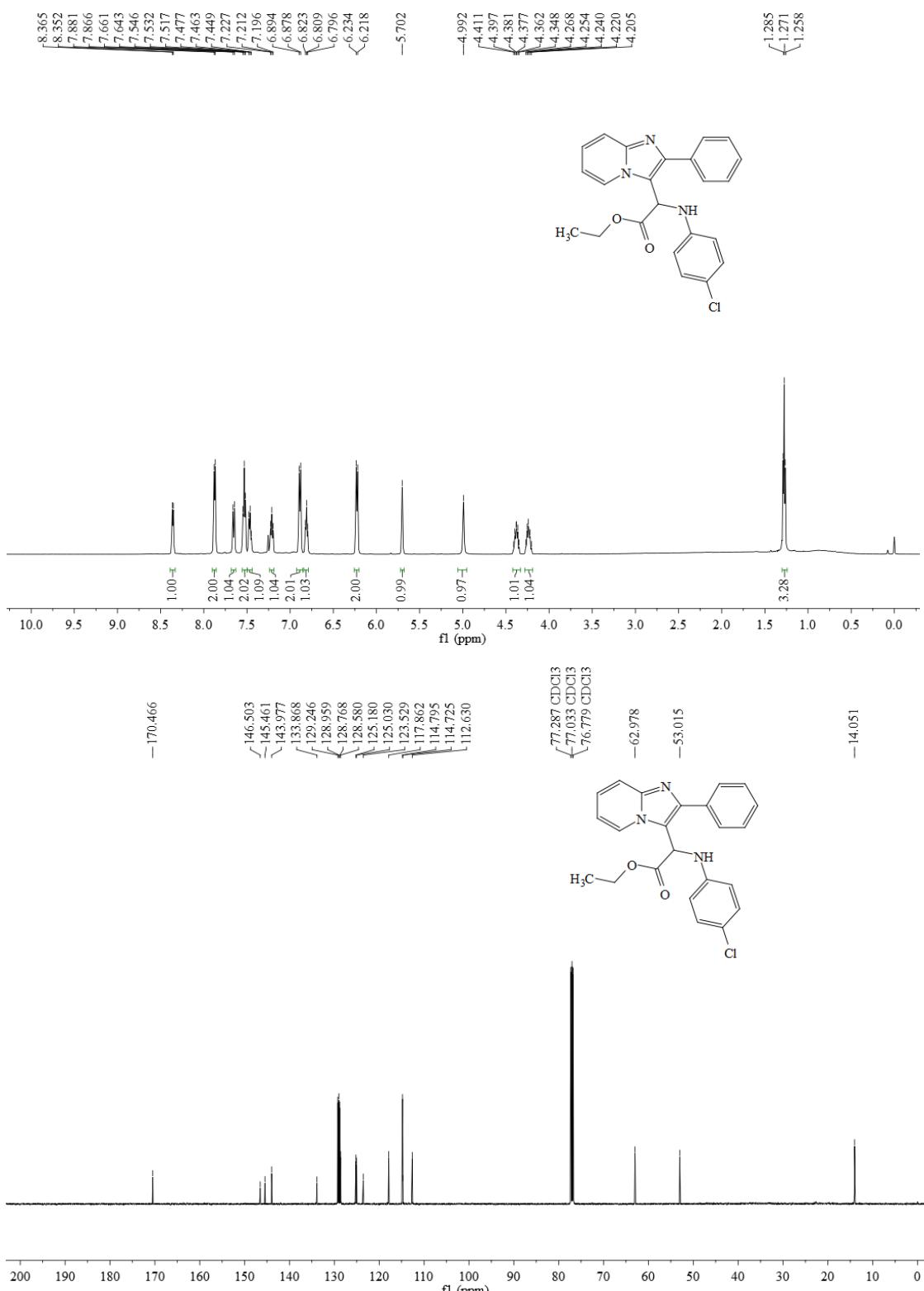
**ethyl 2-(2-ethylimidazo[1,2-a]pyridin-3-yl)-2-(phenylamino)acetate (16)**



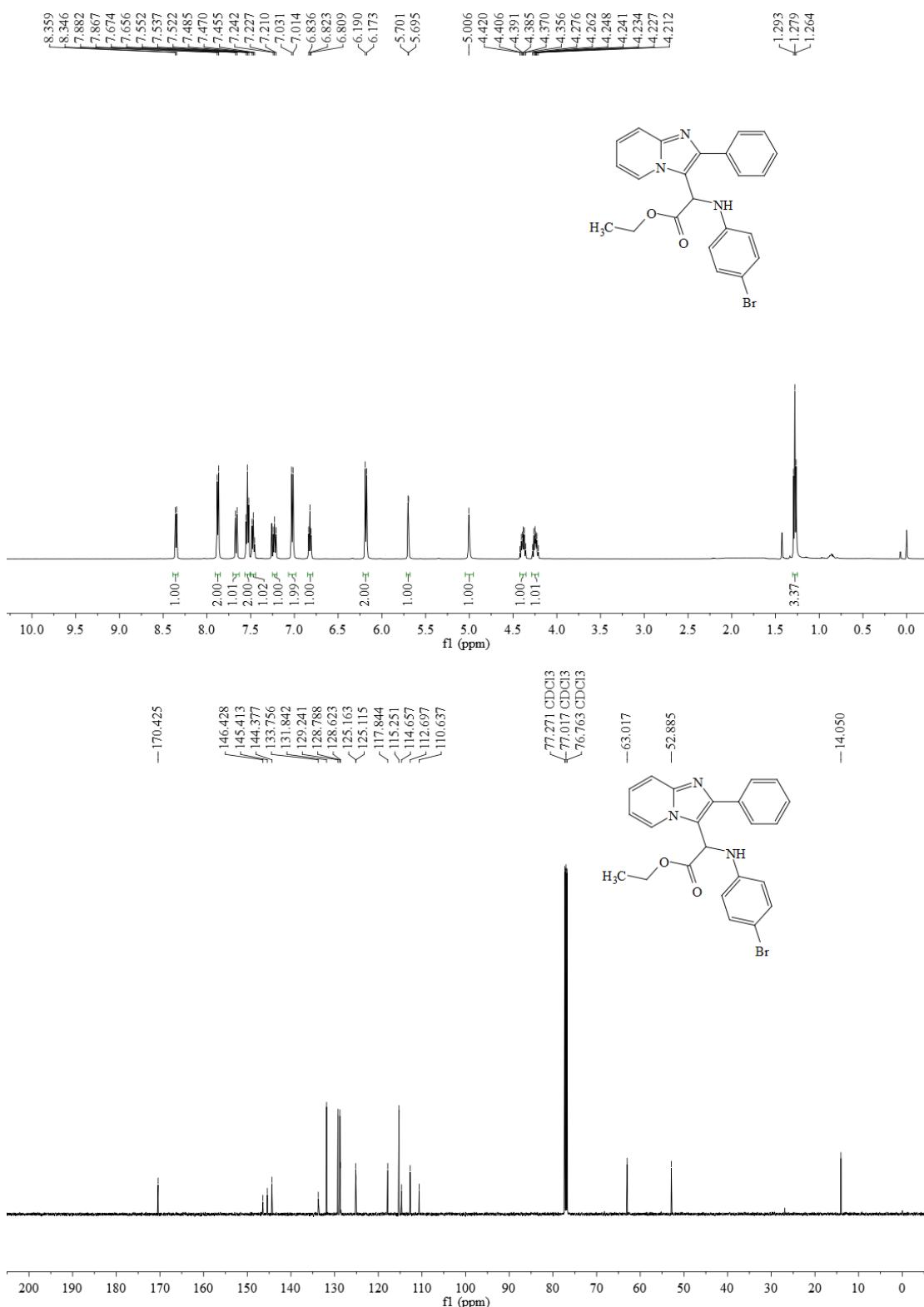
**ethyl 2-(2-phenylimidazo[1,2-a]pyridin-3-yl)-2-(p-tolylamino)acetate (17).**



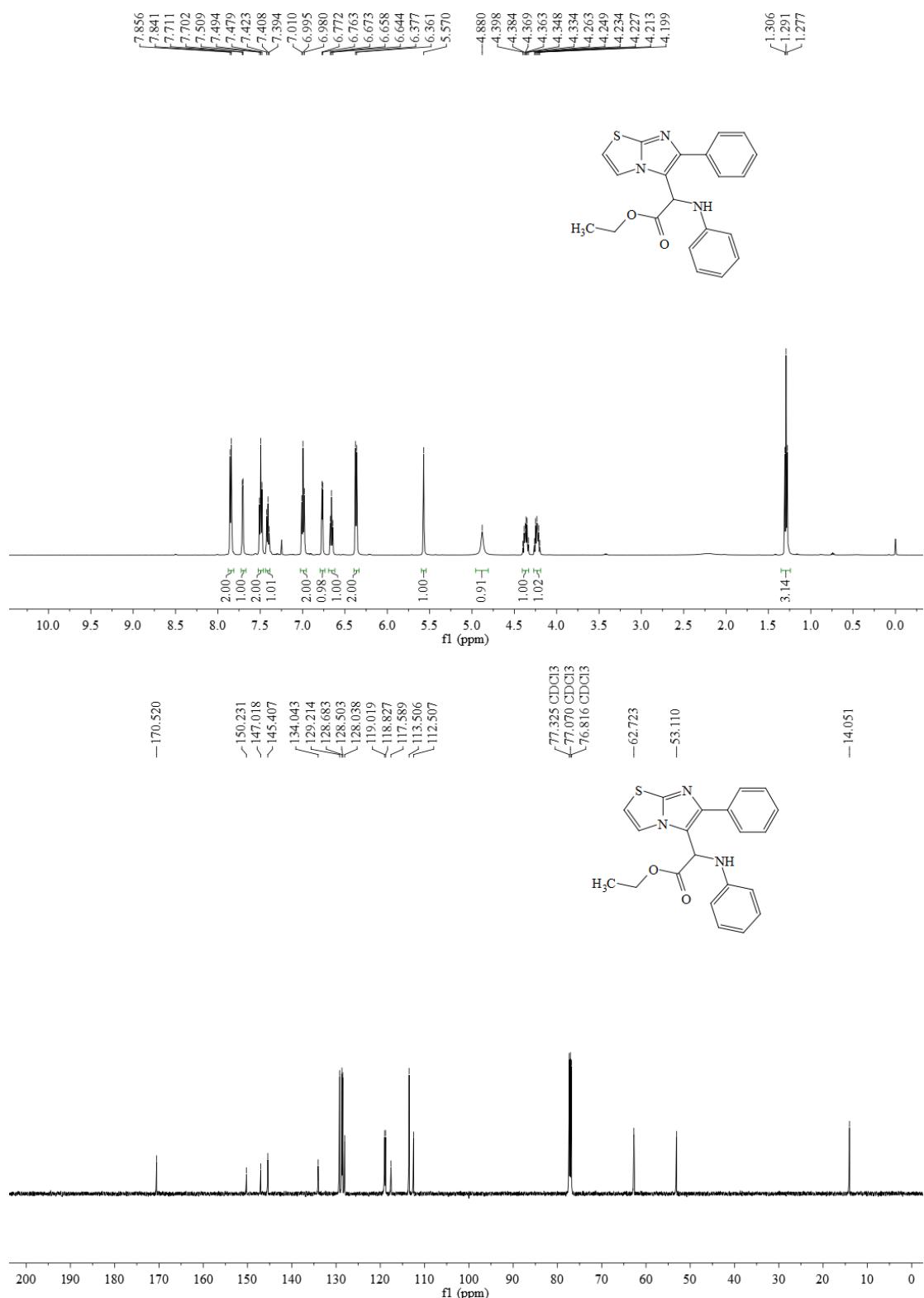
**ethyl 2-((4-chlorophenyl)amino)-2-(2-phenylimidazo[1,2-a]pyridin-3-yl)acetate (18).**



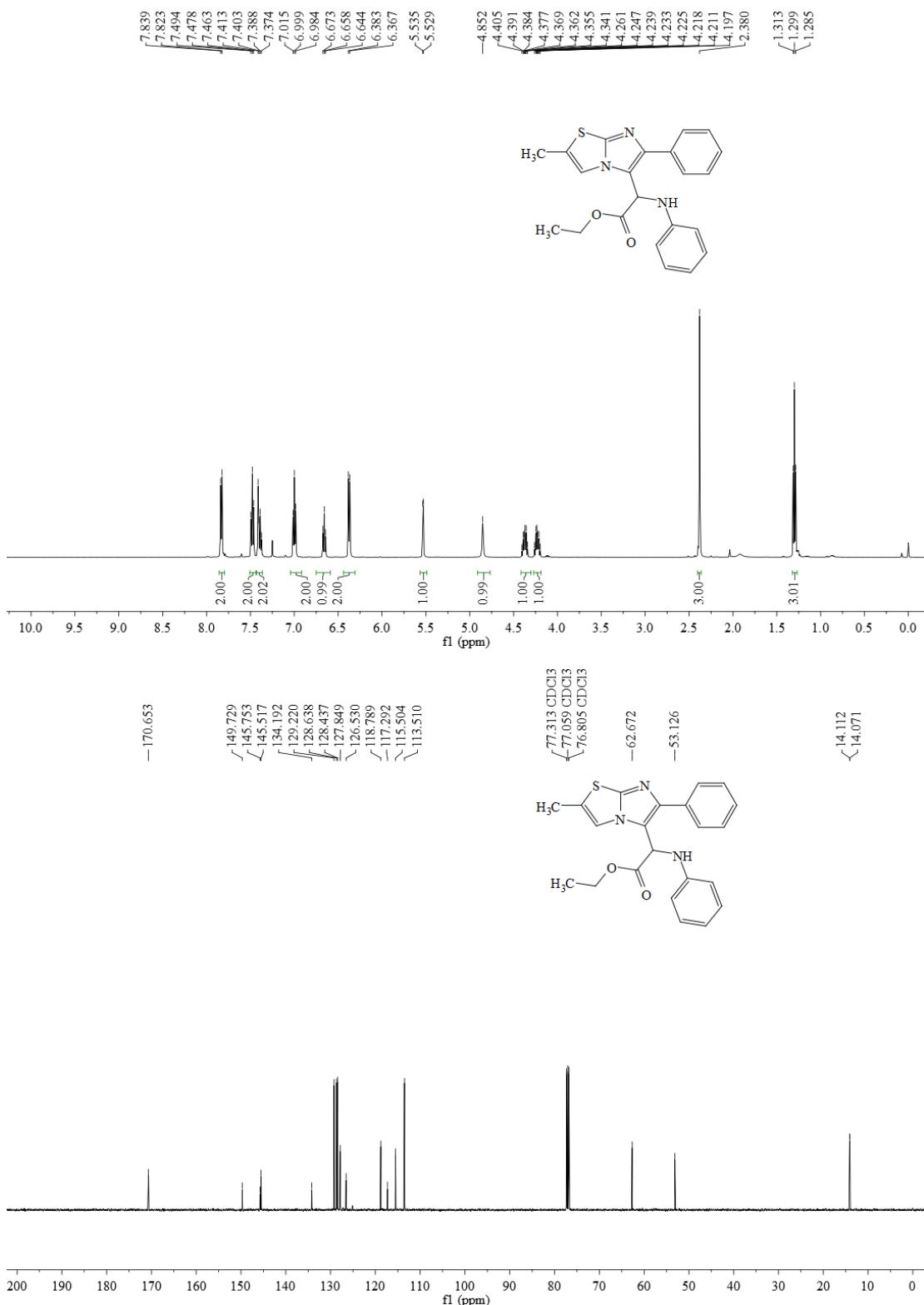
**ethyl 2-((4-bromophenyl)amino)-2-(2-phenylimidazo[1,2-a]pyridin-3-yl)acetate (19).**



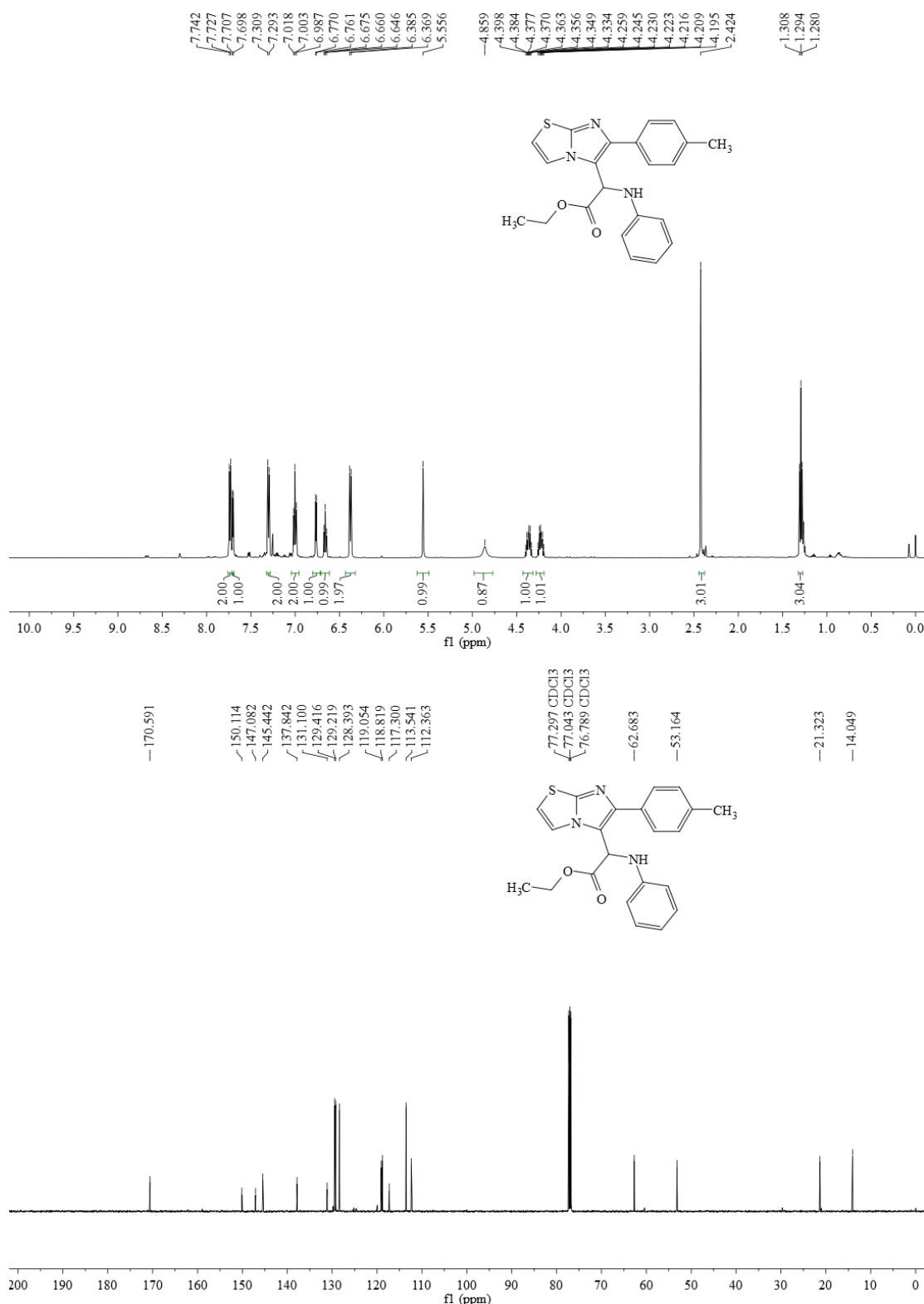
**ethyl 2-(phenylamino)-2-(6-phenylimidazo[2,1-b]thiazol-5-yl)acetate (20).**



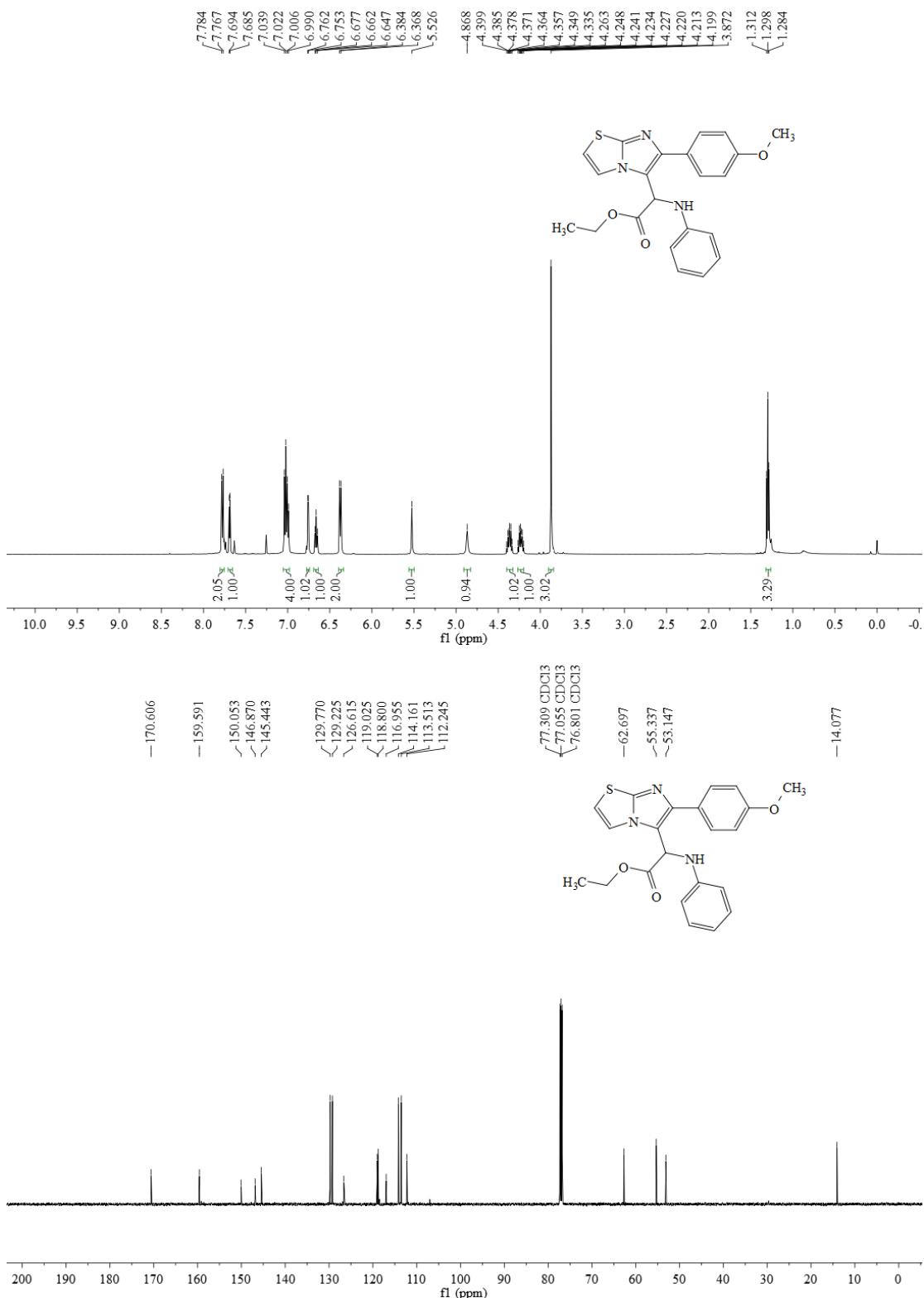
**ethyl 2-(2-methyl-6-phenylimidazo[2,1-b]thiazol-5-yl)-2-(phenylamino)acetate (21).**



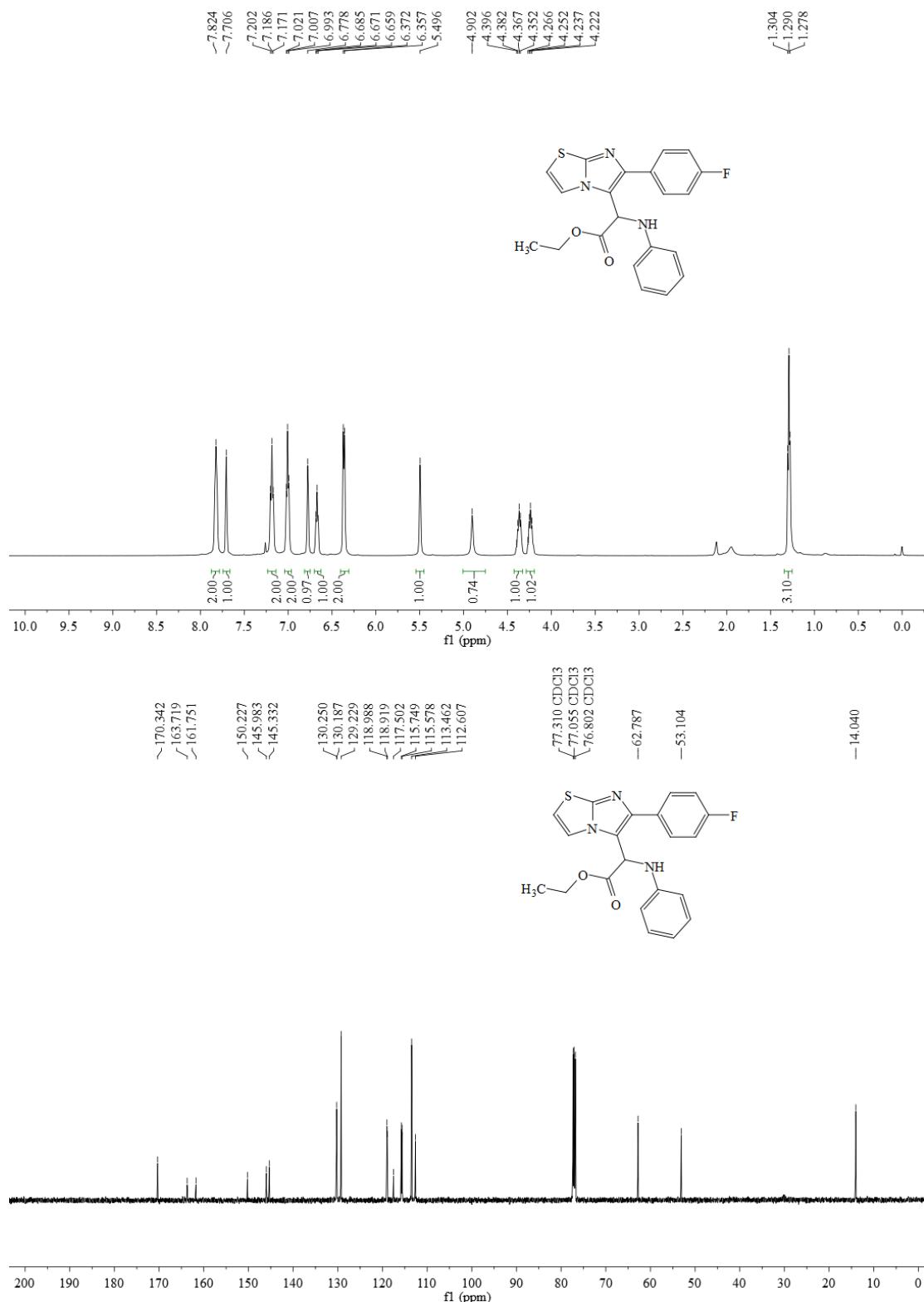
**ethyl 2-(phenylamino)-2-(6-(p-tolyl)imidazo[2,1-b]thiazol-5-yl)acetate (22)**



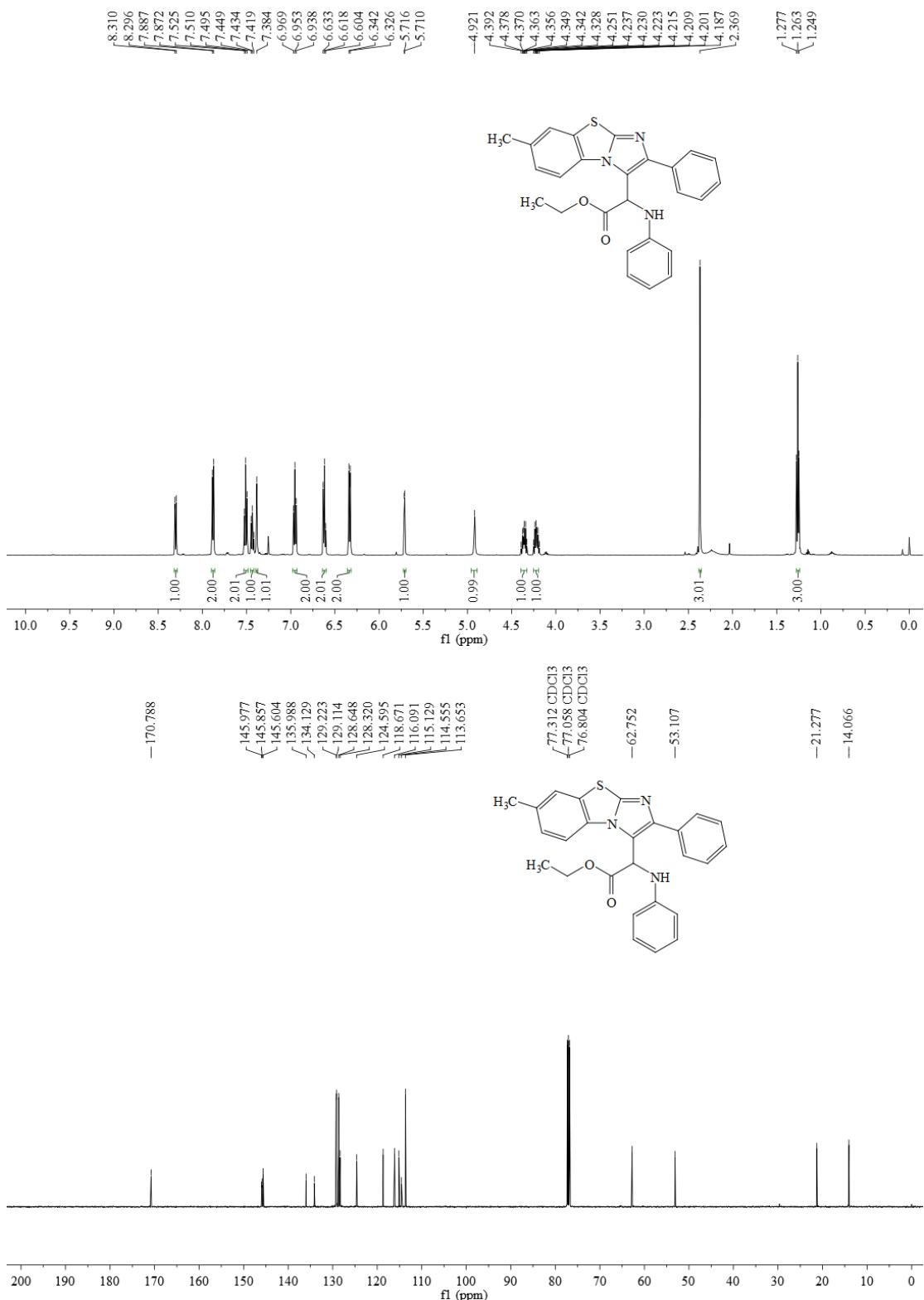
**ethyl 2-(6-(4-methoxyphenyl)imidazo[2,1-b]thiazol-5-yl)-2-(phenylamino)acetate (23).**



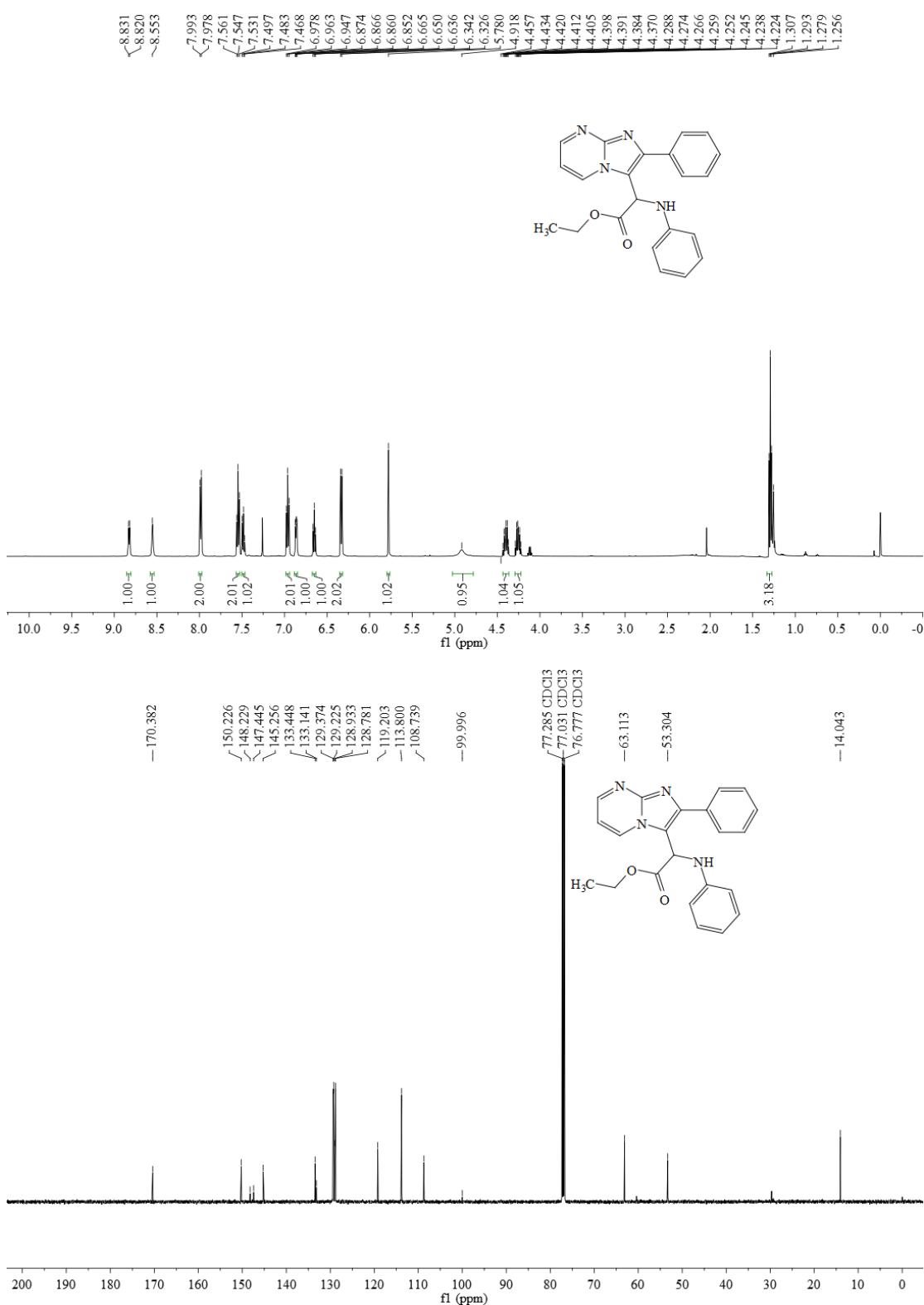
**ethyl 2-(6-(4-fluorophenyl)imidazo[2,1-b]thiazol-5-yl)-2-(phenylamino)acetate (24).**



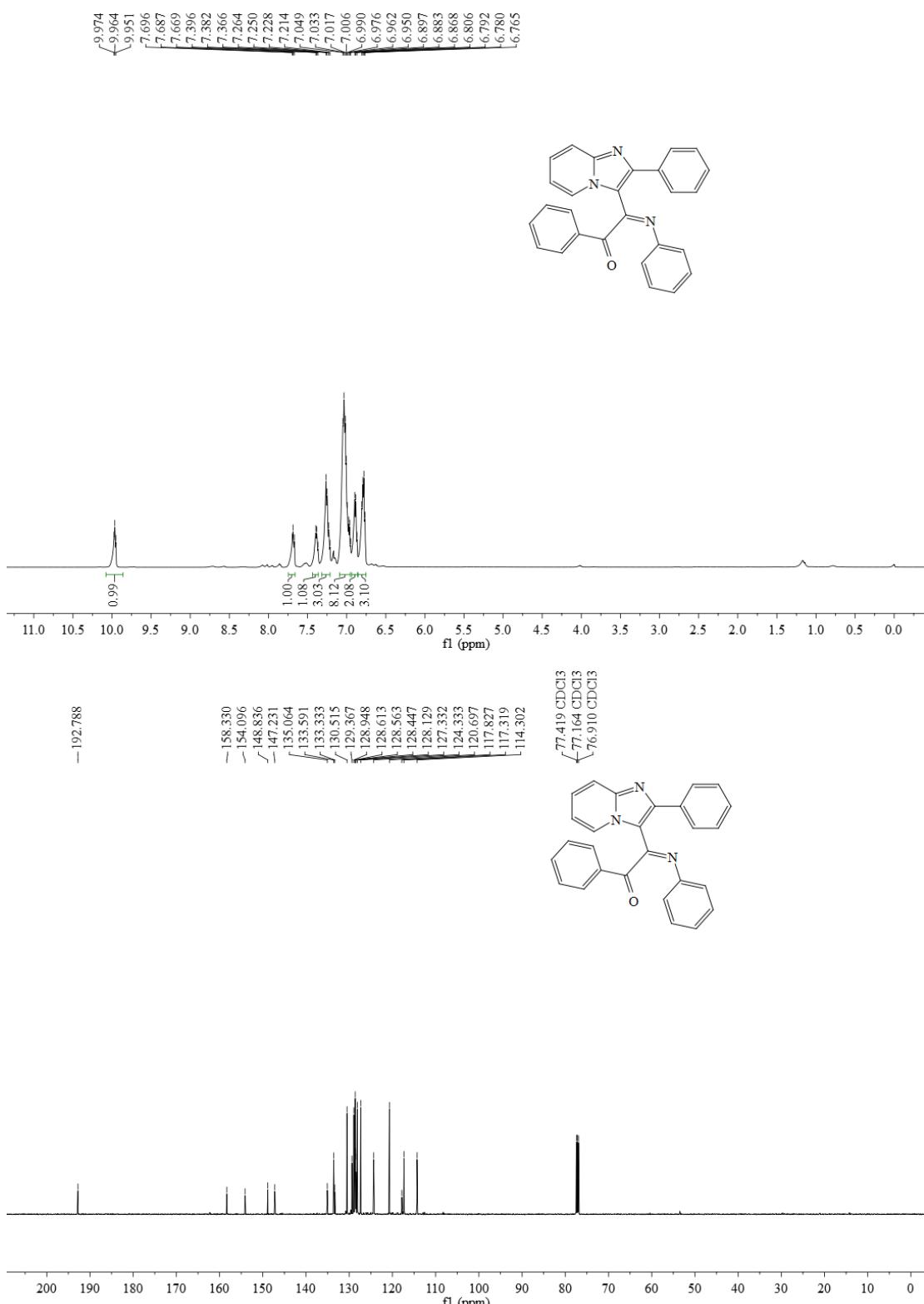
**ethyl 2-(7-methyl-2-phenylbenzo[d]imidazo[2,1-b]thiazol-3-yl)-2-(phenylamino)acetate (25).**



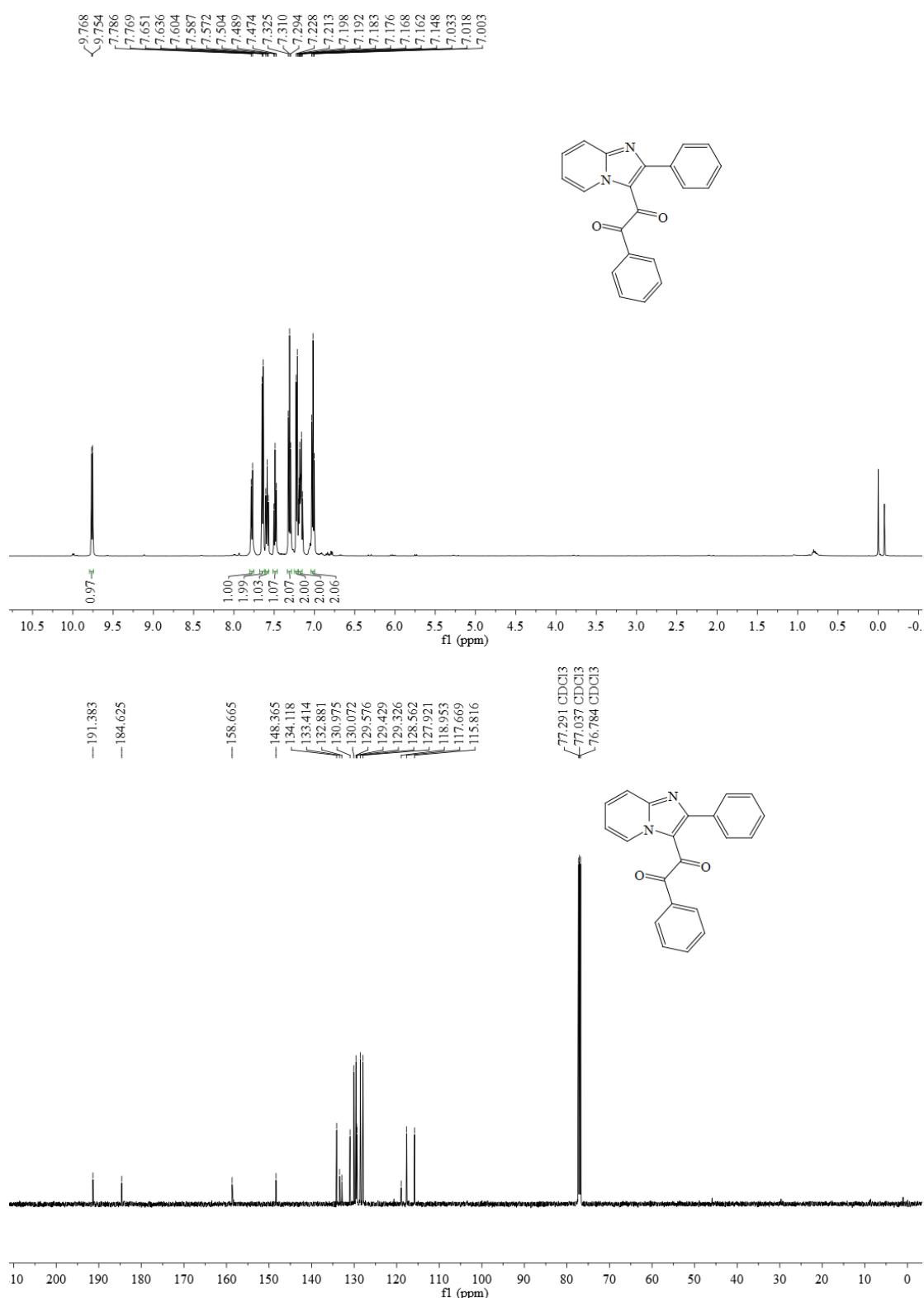
**ethyl 2-(phenylamino)-2-(2-phenylimidazo[1,2-a]pyrimidin-3-yl)acetate (26).**



**(Z)-1-phenyl-2-(2-phenylimidazo[1,2-a]pyridin-3-yl)-2-(phenylimino)ethanone (27).**



**phenyl-2-(2-phenylimidazo[1,2-a]pyridin-3-yl)ethane-1,2-dione (28).**



**2-(phenylamino)-2-(2-phenylimidazo[1,2-a]pyridin-3-yl)acetic acid (29).**

