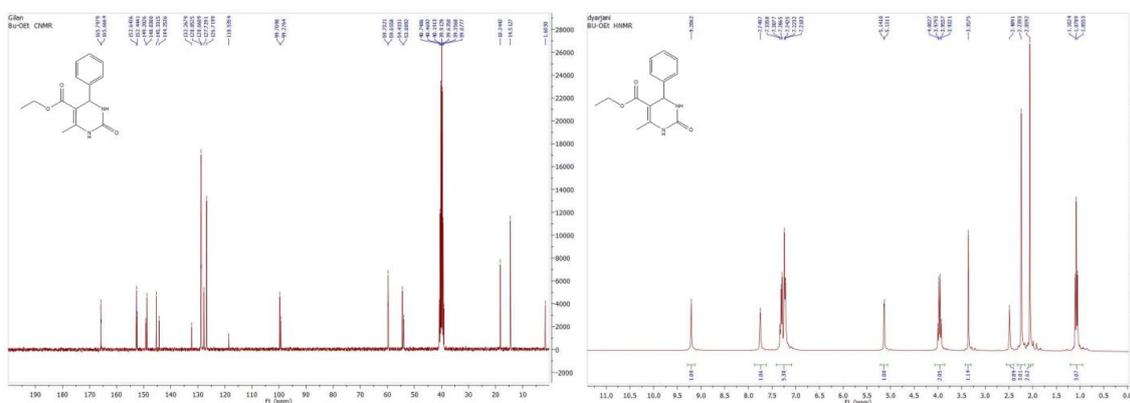
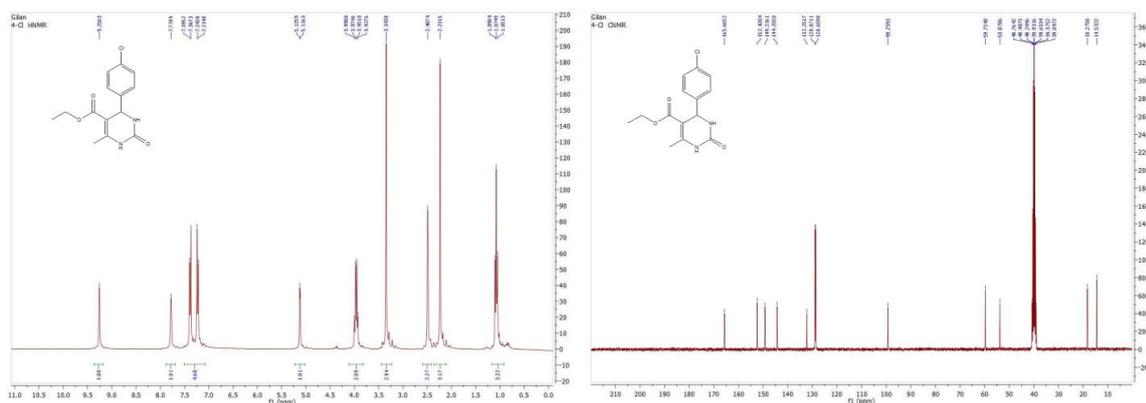


## Supplementary Information

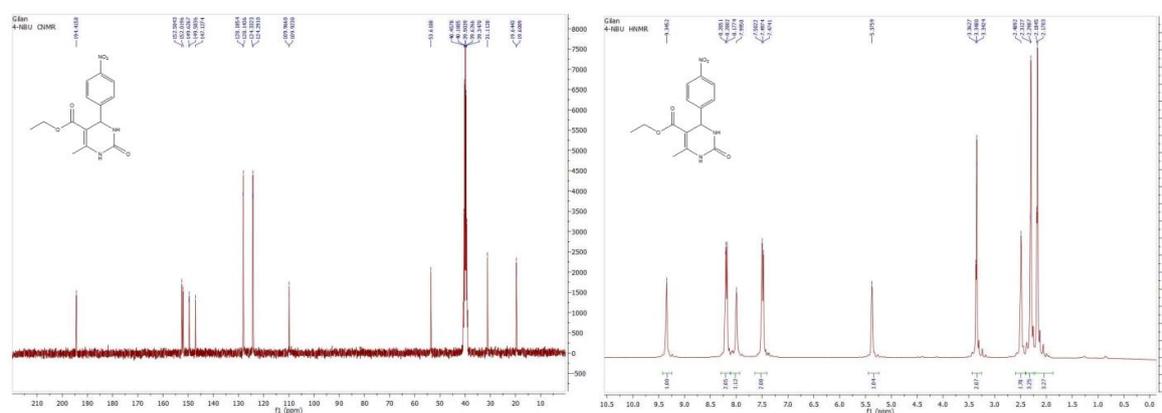
### $^1\text{H}$ NMR, $^{13}\text{C}$ NMR, and FTIR spectra



**Figure S1.**  $^1\text{H}$  NMR and  $^{13}\text{C}$  NMR spectra of 5-(ethoxycarbonyl)-6-methyl-4-phenyl-3,4-dihydropyrimidin-2(1H)-one.



**Figure S2.**  $^1\text{H}$  NMR and  $^{13}\text{C}$  NMR spectra of 5-(ethoxycarbonyl)-6-methyl-4-(4-nitrophenyl)-3,4-dihydropyrimidin-2(1H)-one.



**Figure S3.**  $^1\text{H}$  NMR and  $^{13}\text{C}$  NMR spectra of 3,4-dihydro-6-methyl-4-(4-nitrophenyl)-5-propionylpyrimidin-2(1H)-one.

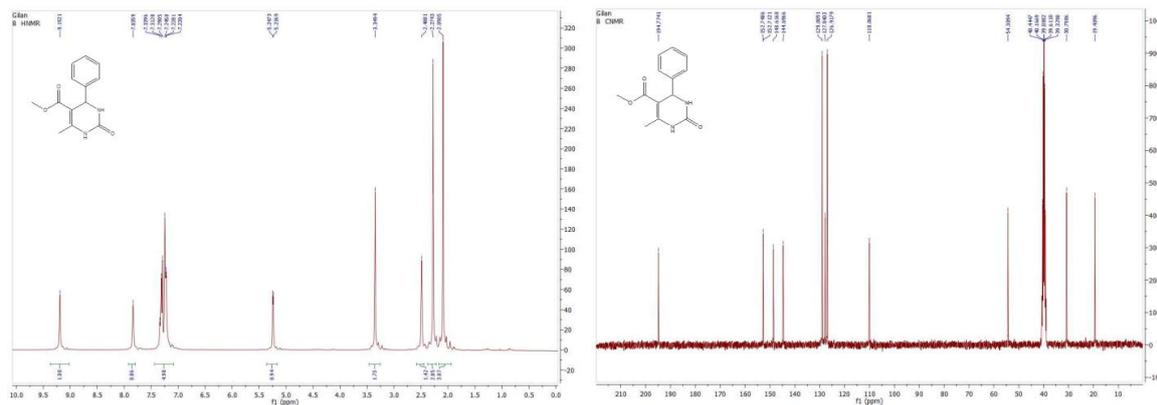


Figure S4. <sup>1</sup>H NMR and <sup>13</sup>C NMR spectra of 5-(methoxycarbonyl)-6-methyl-4-phenyl-3,4-dihydropyrimidin-2(1H)-one.

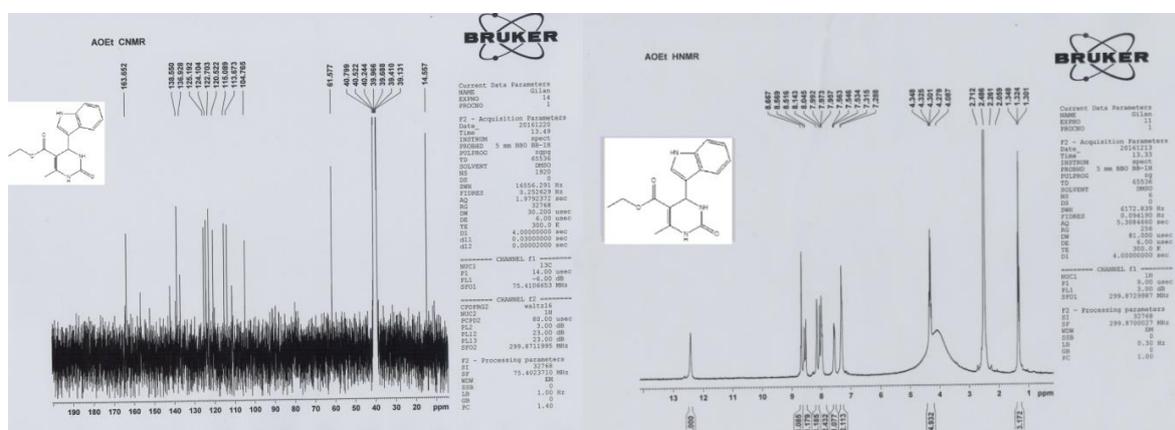


Figure S5. <sup>1</sup>H NMR and <sup>13</sup>C NMR spectra of 5-(ethoxycarbonyl)-4-(1H-indol-2-yl)-6-methyl-3,4-dihydropyrimidin-2(1H)-one.

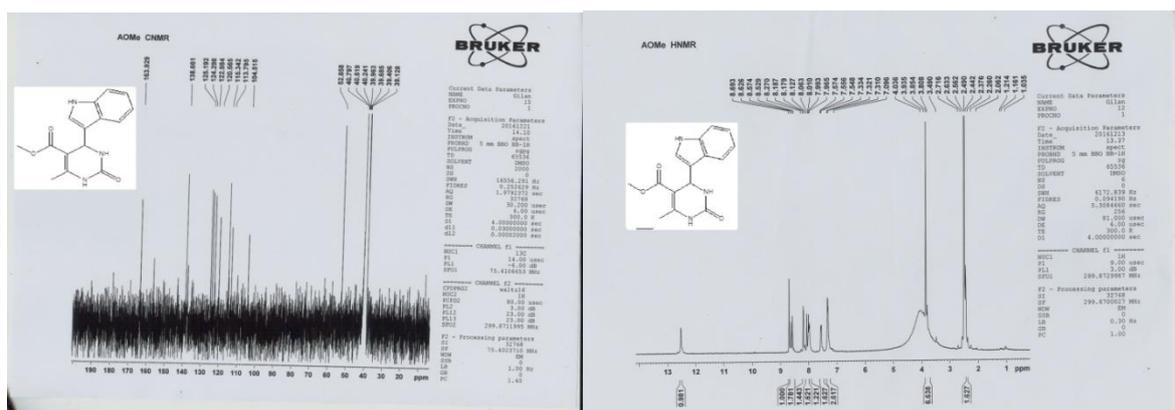
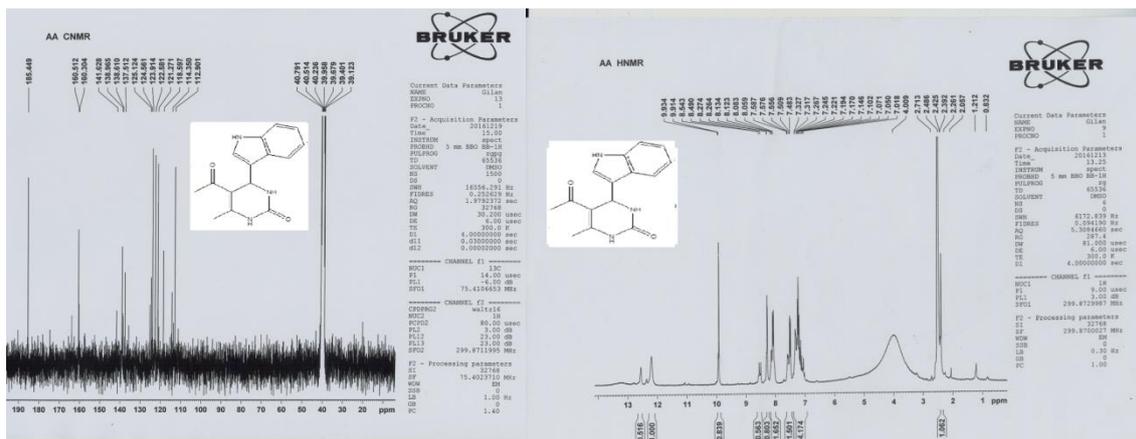
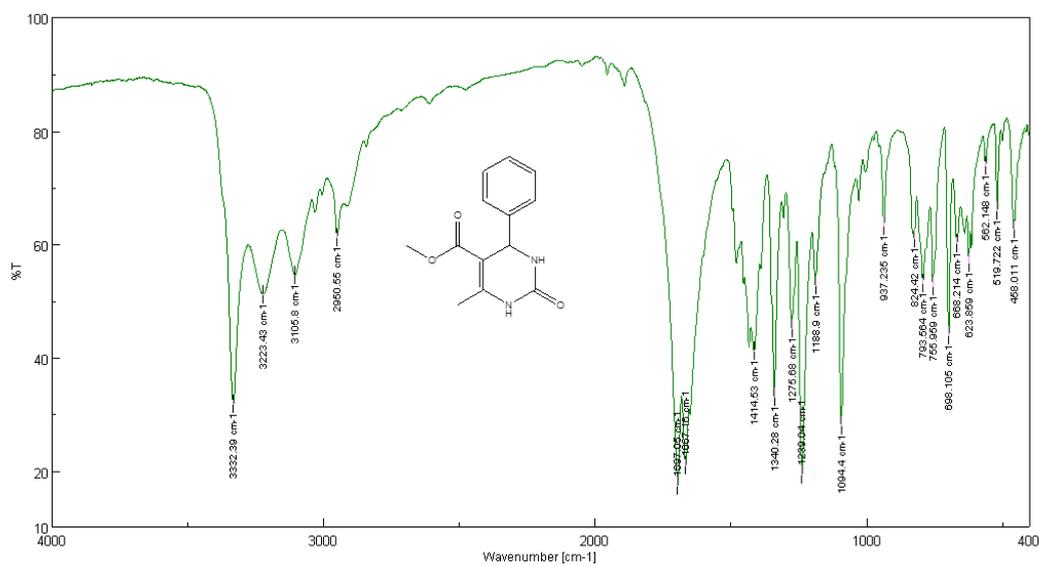


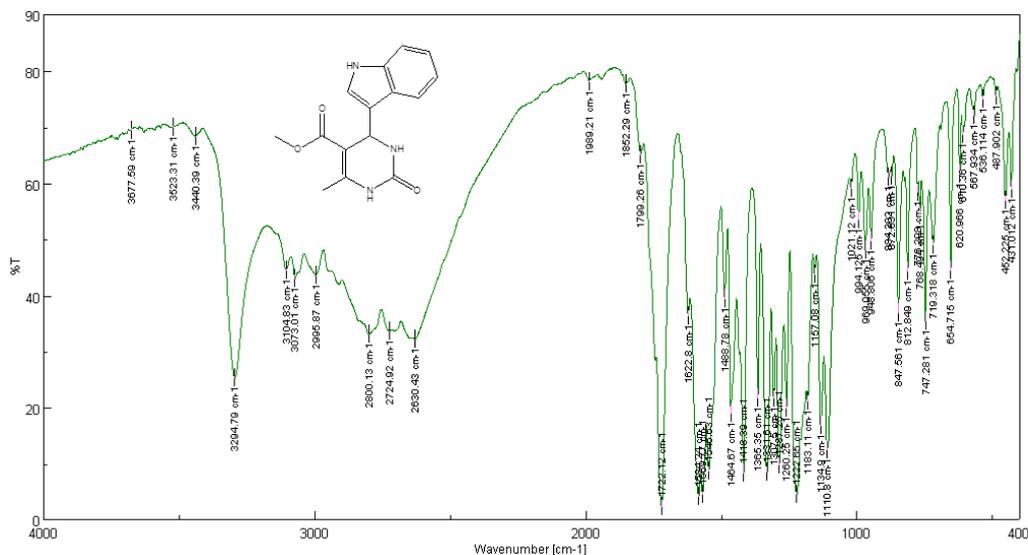
Figure S6. <sup>1</sup>H NMR and <sup>13</sup>C NMR spectra of 5-(methoxycarbonyl)-4-(1H-indol-2-yl)-6-methyl-3,4-dihydropyrimidin-2(1H)-one.



**Figure S7.**  $^1\text{H}$  NMR and  $^{13}\text{C}$  NMR spectra of 5-acetyl-6-methyl-4-(1H-indole-2-yl)-3,4-dihydropyrimidin-2(1H)-one.



**Figure S8.** FTIR of 5-(methoxycarbonyl)-6-methyl-4-phenyl-3,4-dihydropyrimidin-2(1H)-one.



**Figure S9.** FTIR of 5-(methoxycarbonyl)-4-(1H-indol-2-yl)-6-methyl-3,4-dihydropyrimidin-2(1H)-one.

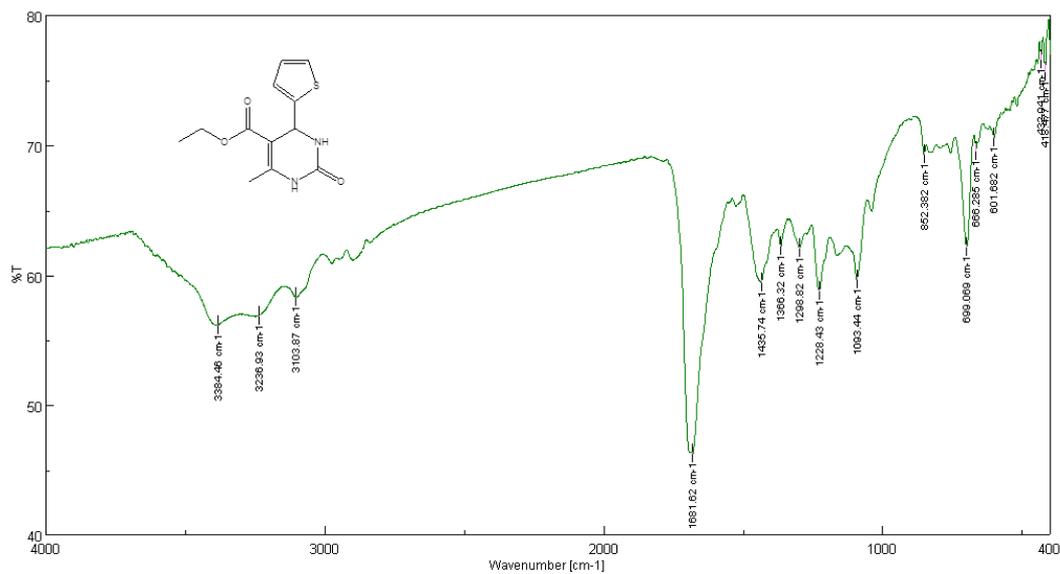


Figure S10. FTIR of 5-(ethoxycarbonyl)-4-(thiophen-2-yl)-6-methyl-3,4 dihydropyrimidin-2(1H)-one.

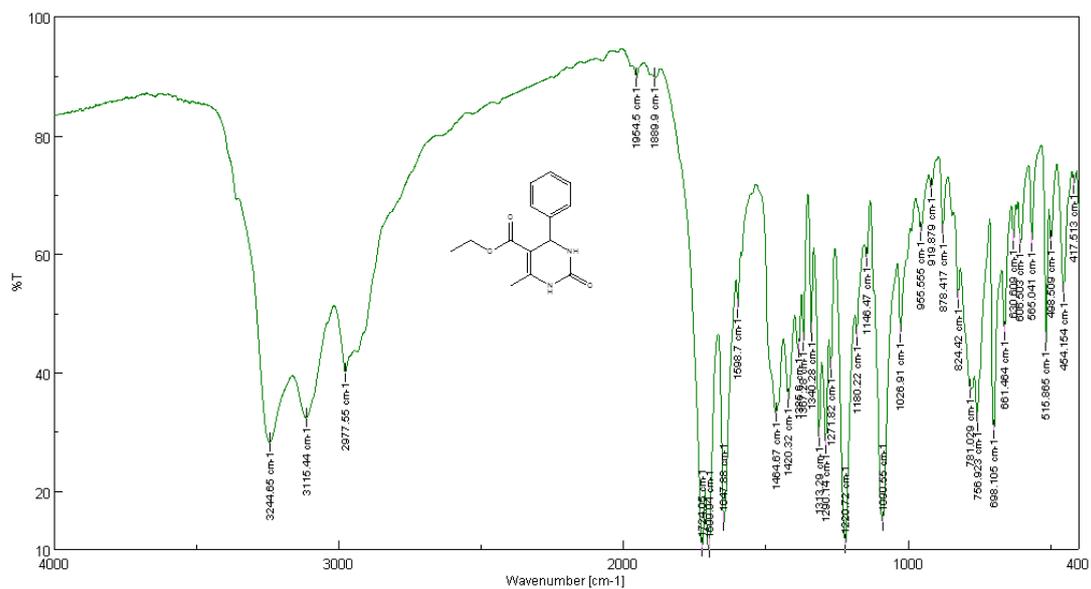
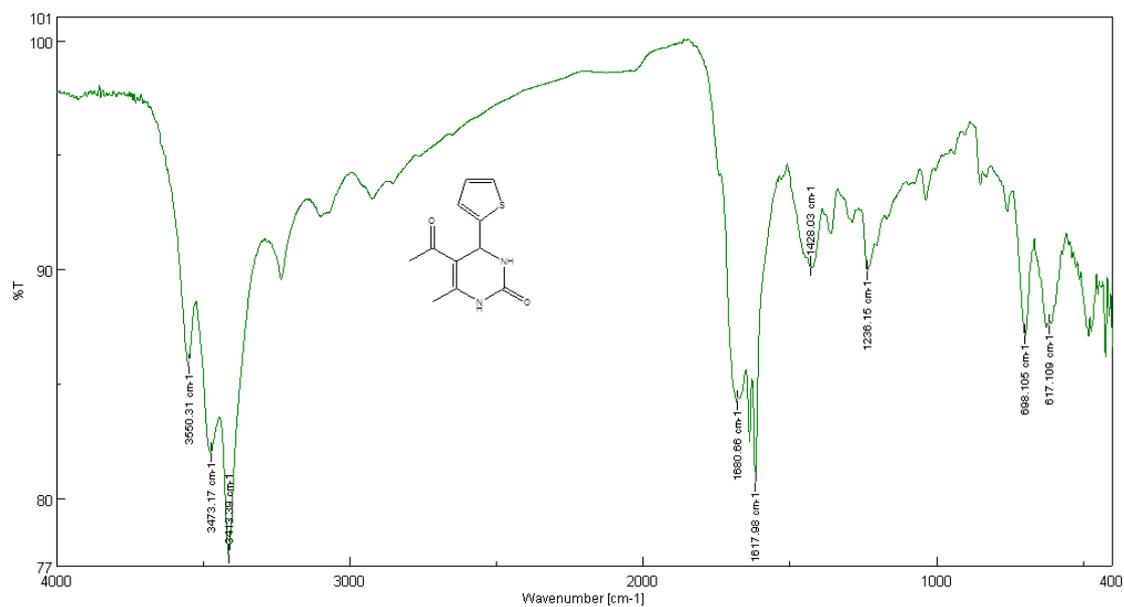
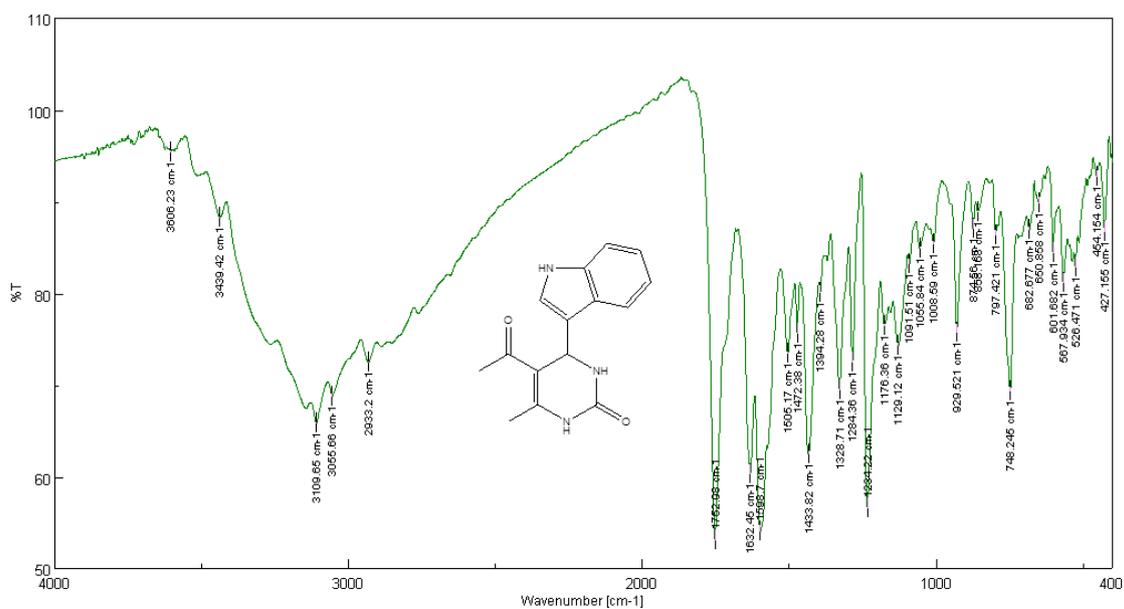


Figure S11. FTIR of 5-(ethoxycarbonyl)-6-methyl-4-phenyl-3,4-dihydropyrimidin-2(1H)-one.



**Figure S12.** FTIR of 5-acetyl-6-methyl-4-(thiophen-2-yl)-3,4-dihydropyrimidin-2(1H)-one.



**Figure S13.** FTIR of 5-acetyl-6-methyl-4-(1-H-indole-2-yl)-3,4-dihydropyrimidin-2(1H)-one.

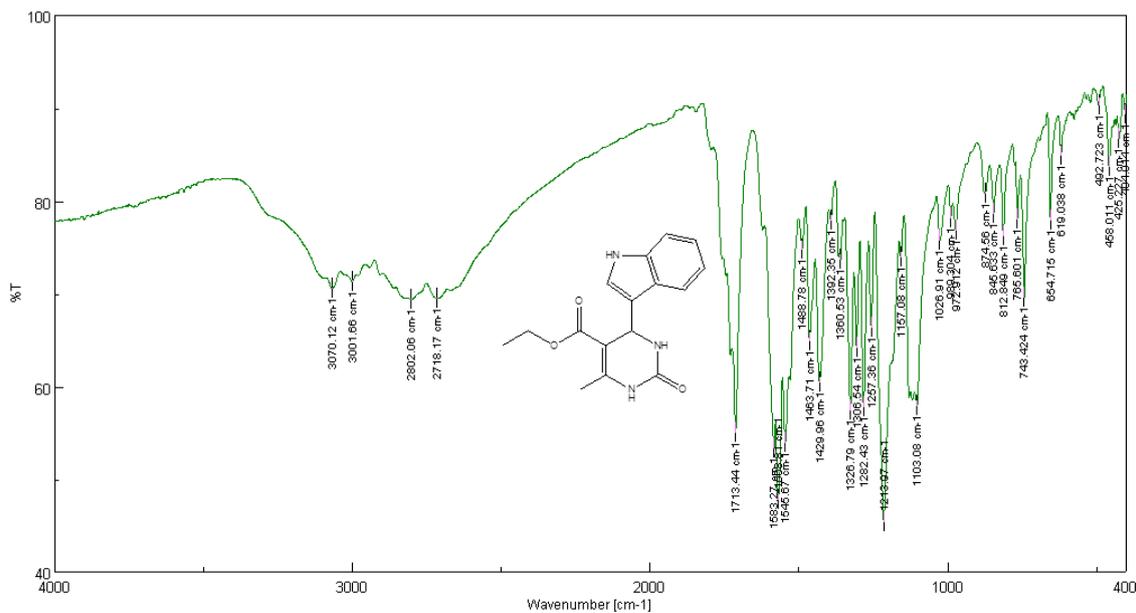


Figure S14. FTIR of 5-(ethoxycarbonyl)-4-(1H-indol-2-yl)-6-methyl-3,4-dihydropyrimidin-2(1H)-one.

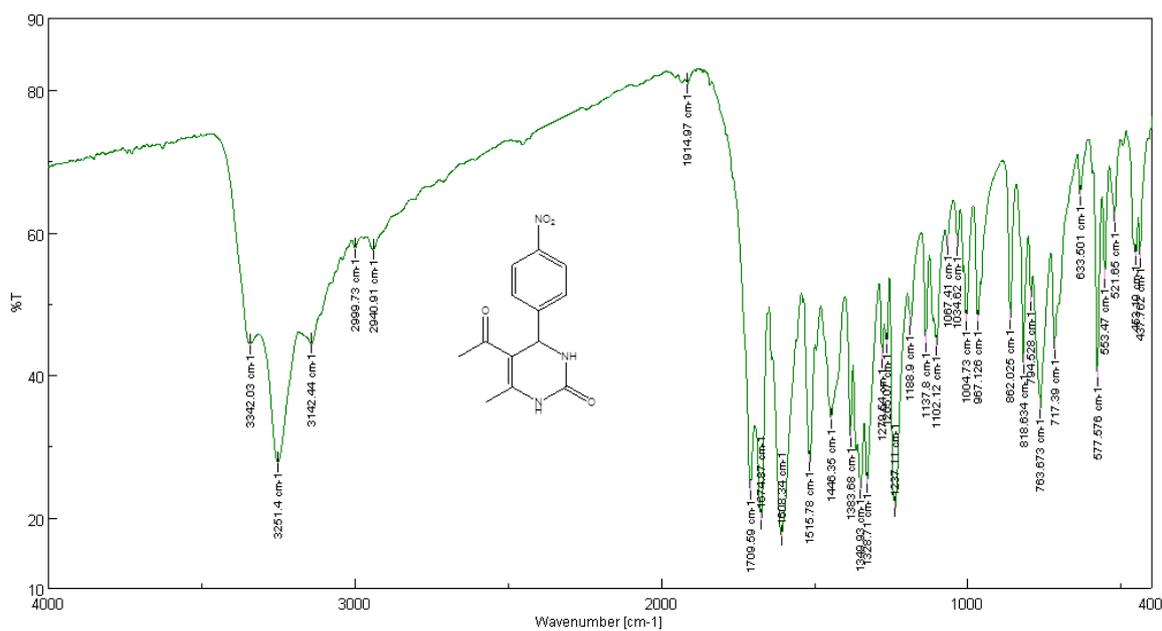


Figure S15. FTIR of 5-acetyl-6-methyl-4-(4-nitrophenyl)-3,4-dihydropyrimidin-2(1H)-one.

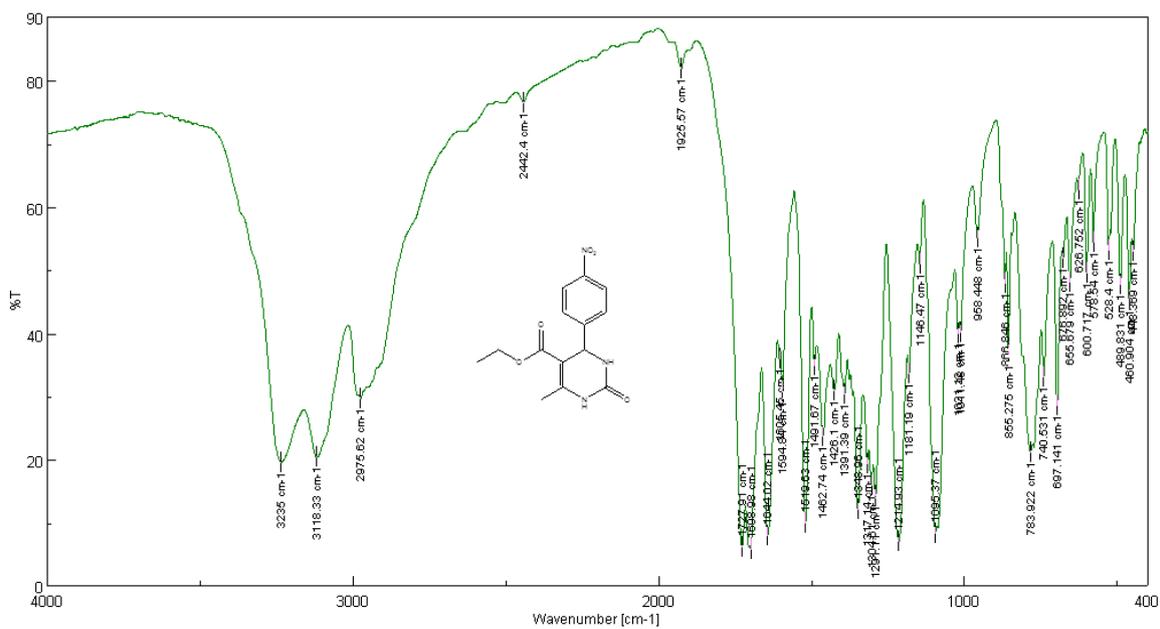


Figure S16. FTIR of 5-(ethoxycarbonyl)-6-methyl-4-(4-nitrophenyl)-3,4-dihydropyrimidin-2(1H)-one.

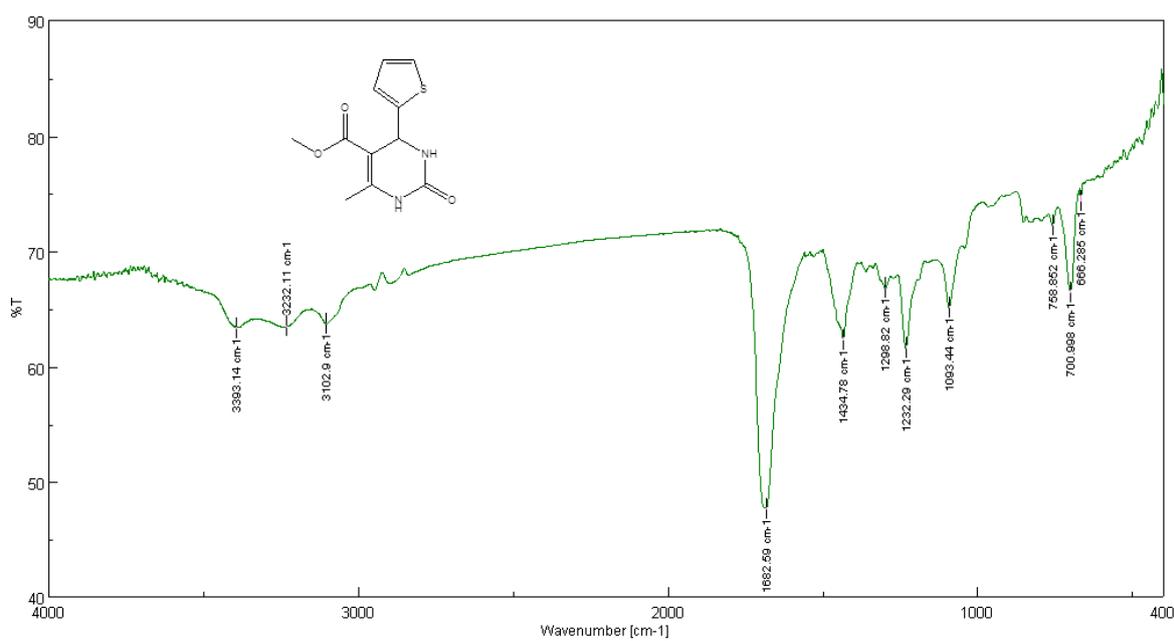
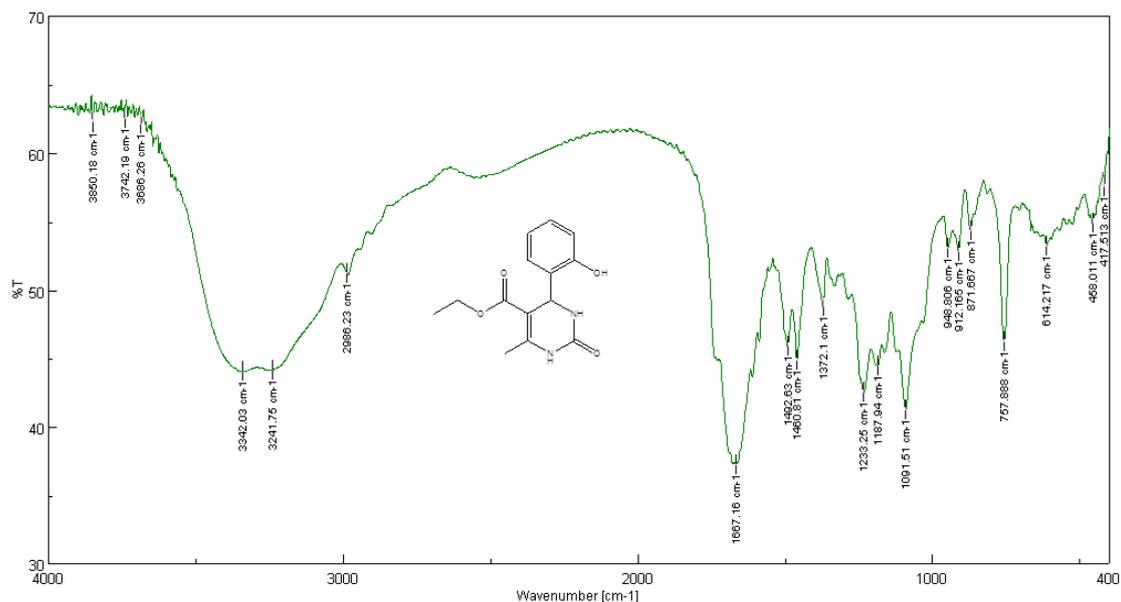
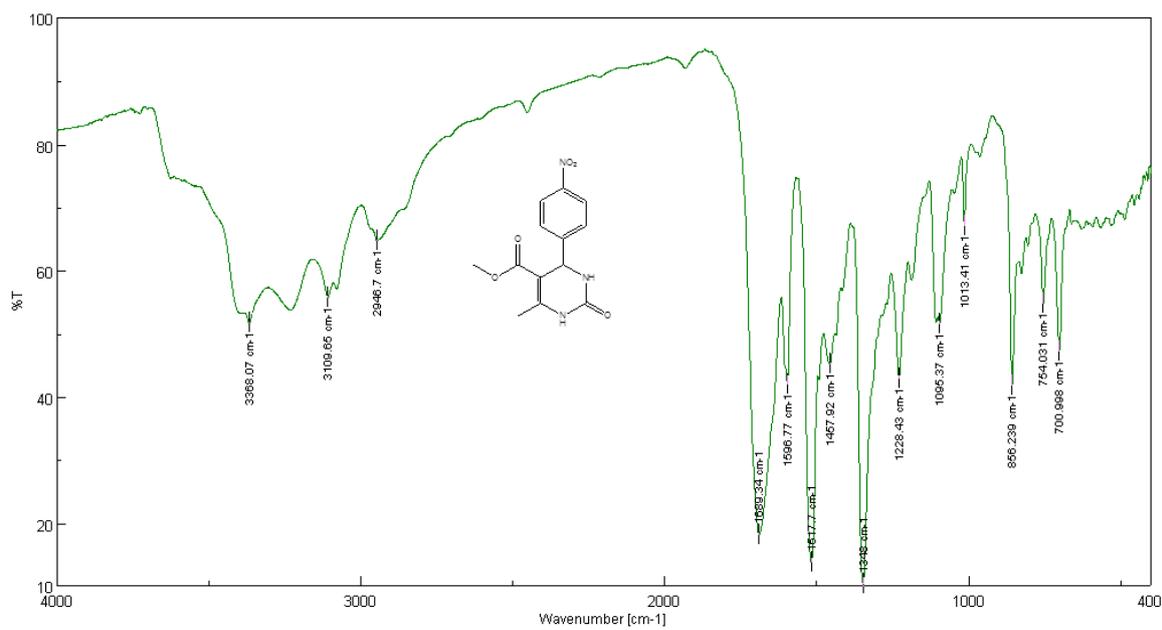


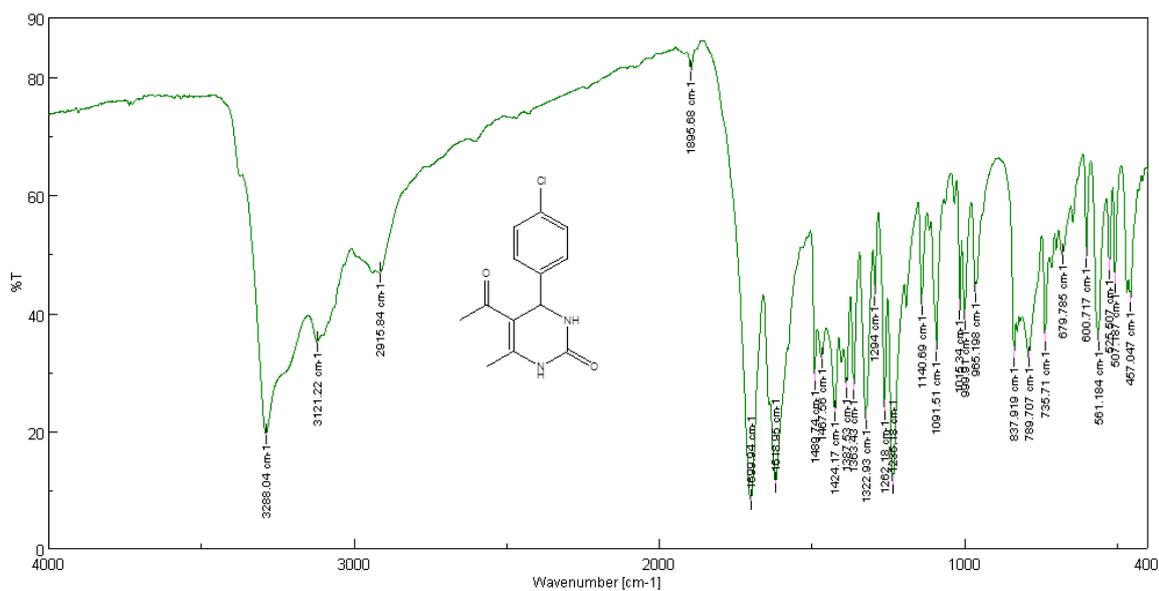
Figure S17. FTIR of 5-methoxycarbonyl-6-methyl-4-(thiophen-2-yl)-3,4-dihydropyrimidin-2(1H)-one.



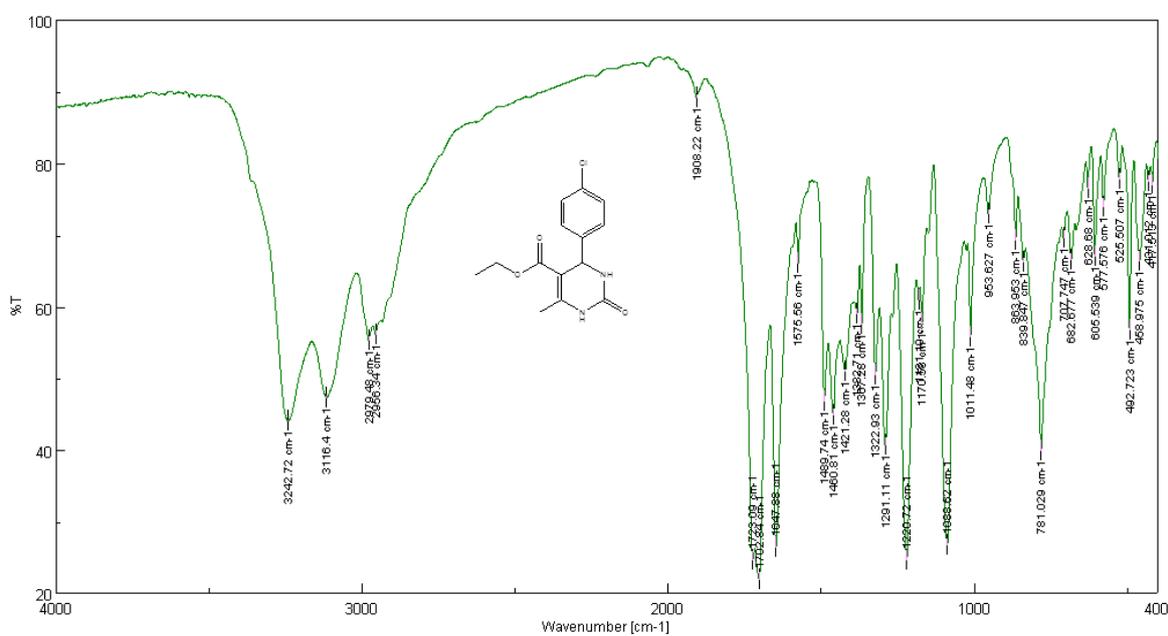
**Figure S18.** FTIR of 5-(ethoxycarbonyl)-6-methyl-4-(2-hydroxyphenyl)-3,4-dihydropyrimidin-2(1H)-one.



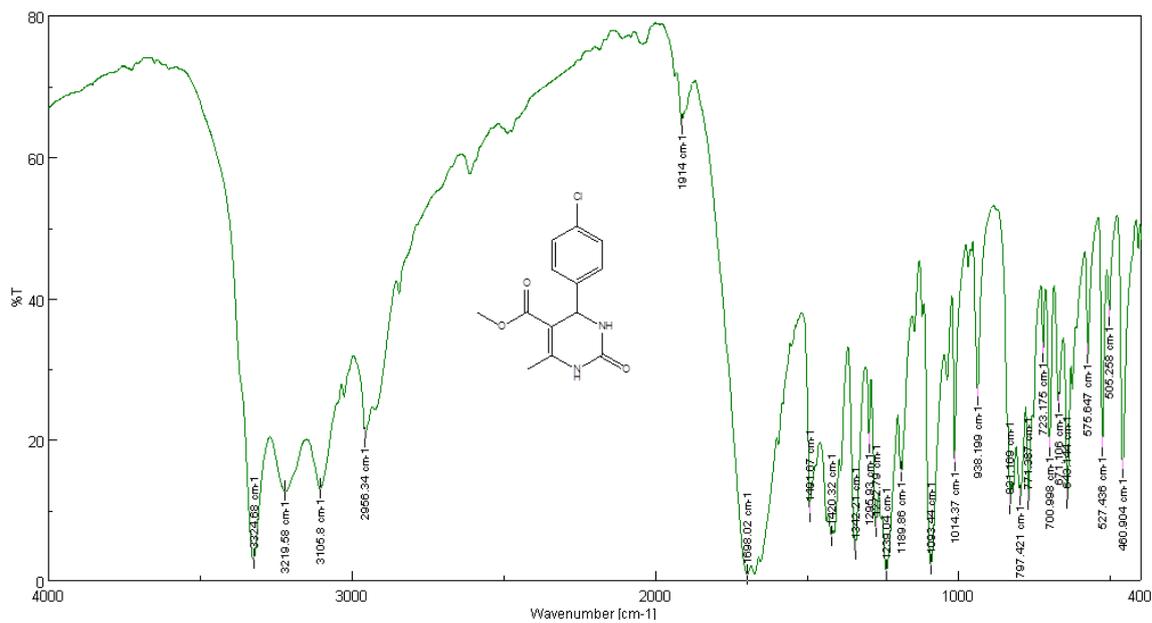
**Figure S19.** FTIR of 5-(methoxycarbonyl)-6-methyl-4-(4-nitrophenyl)-3,4-dihydropyrimidin-2(1H)-one.



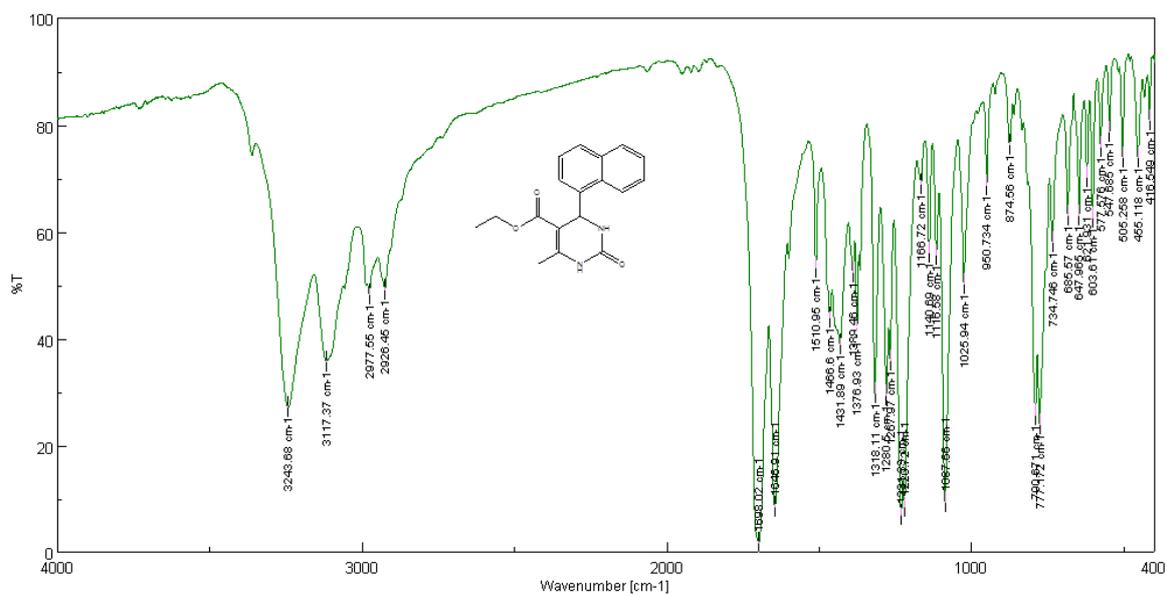
**Figure S20.** FTIR of 5-acetyl-6-methyl-4-(4-chlorophenyl)-3,4-dihydropyrimidin-2(1H)-one.



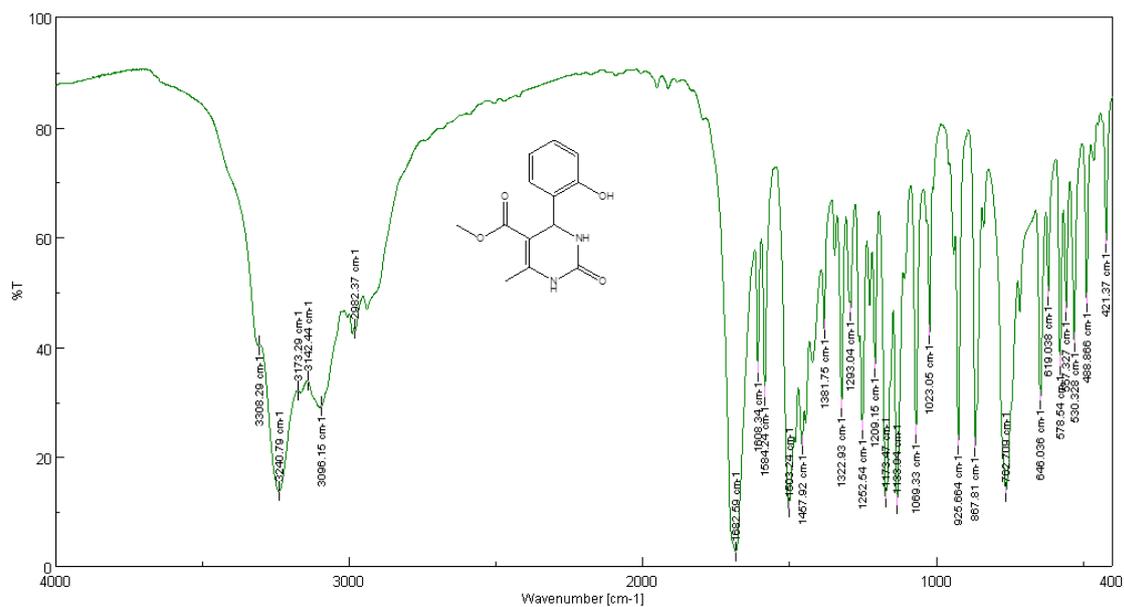
**Figure S21.** FTIR of 5-(ethoxycarbonyl)-4-(4-chlorophenyl)-6-methyl-3,4-dihydropyrimidin-2(1H)-one.



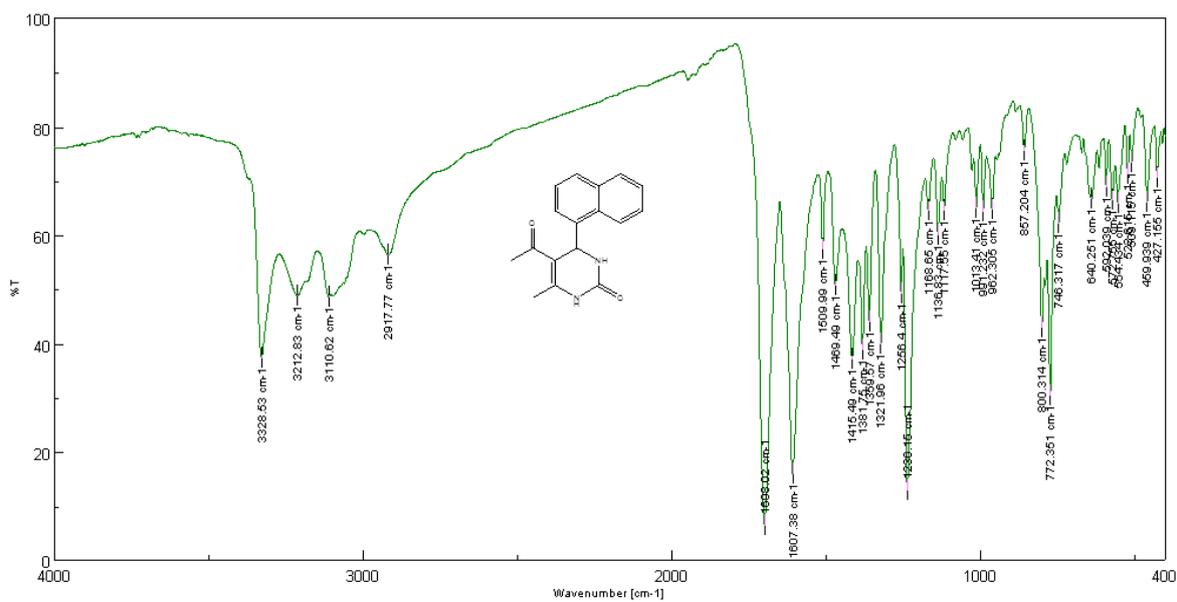
**Figure S22.** FTIR of 5-(methoxycarbonyl)-4-(4-chlorophenyl)-6-methyl-3,4-dihydropyrimidin-2(1H)-one.



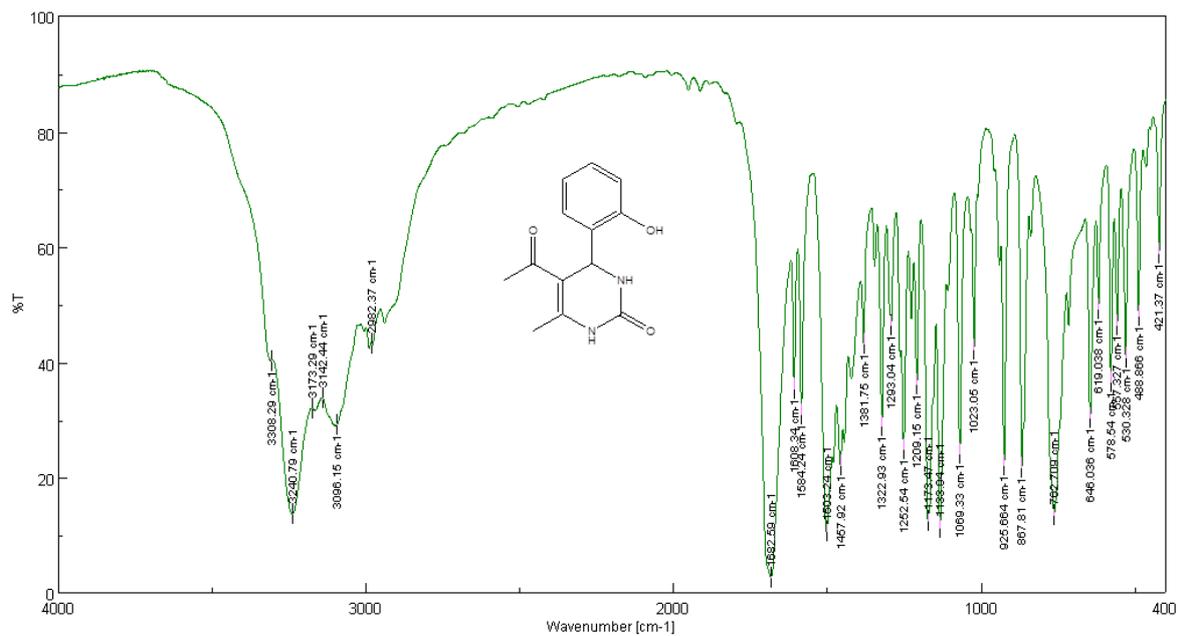
**Figure S23.** FTIR of 5-(ethoxycarbonyl)-4-(4-naphthalene-1-yl)-6-methyl-3,4-dihydropyrimidin-2(1H)-one.



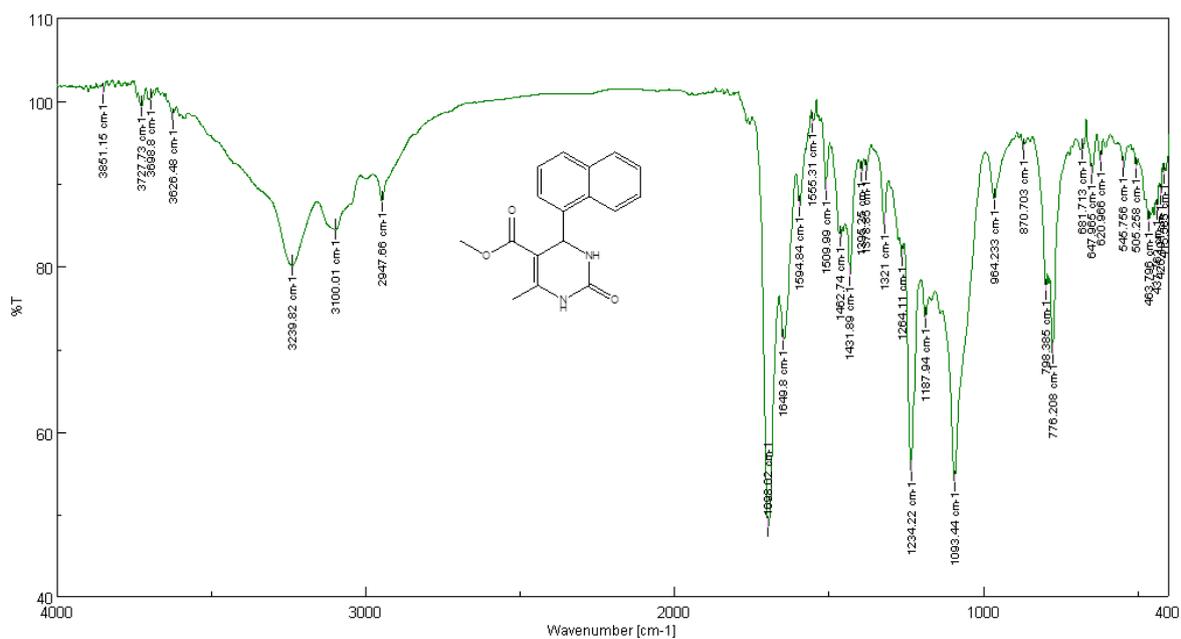
**Figure S24.** FTIR of 5-(methoxycarbonyl)-6-methyl-4-(2-hydroxyphenyl)-3,4-dihydropyrimidin-2(1H)-one.



**Figure S25.** FTIR of 5-acetyl-6-methyl-4-(4-naphthalene-1-yl)-3,4-dihydropyrimidin-2(1H)-one.



**Figure S26.** FTIR of 5-acetyl-6-methyl-4-(2-hydroxyphenyl)-3,4-dihydropyrimidin-2(1H)-one.



**Figure S27.** FTIR of 5-methoxycarbonyl-6-methyl-4-(4-naphthalene-1-yl)-3,4-dihydropyrimidin-2(1H)-one.

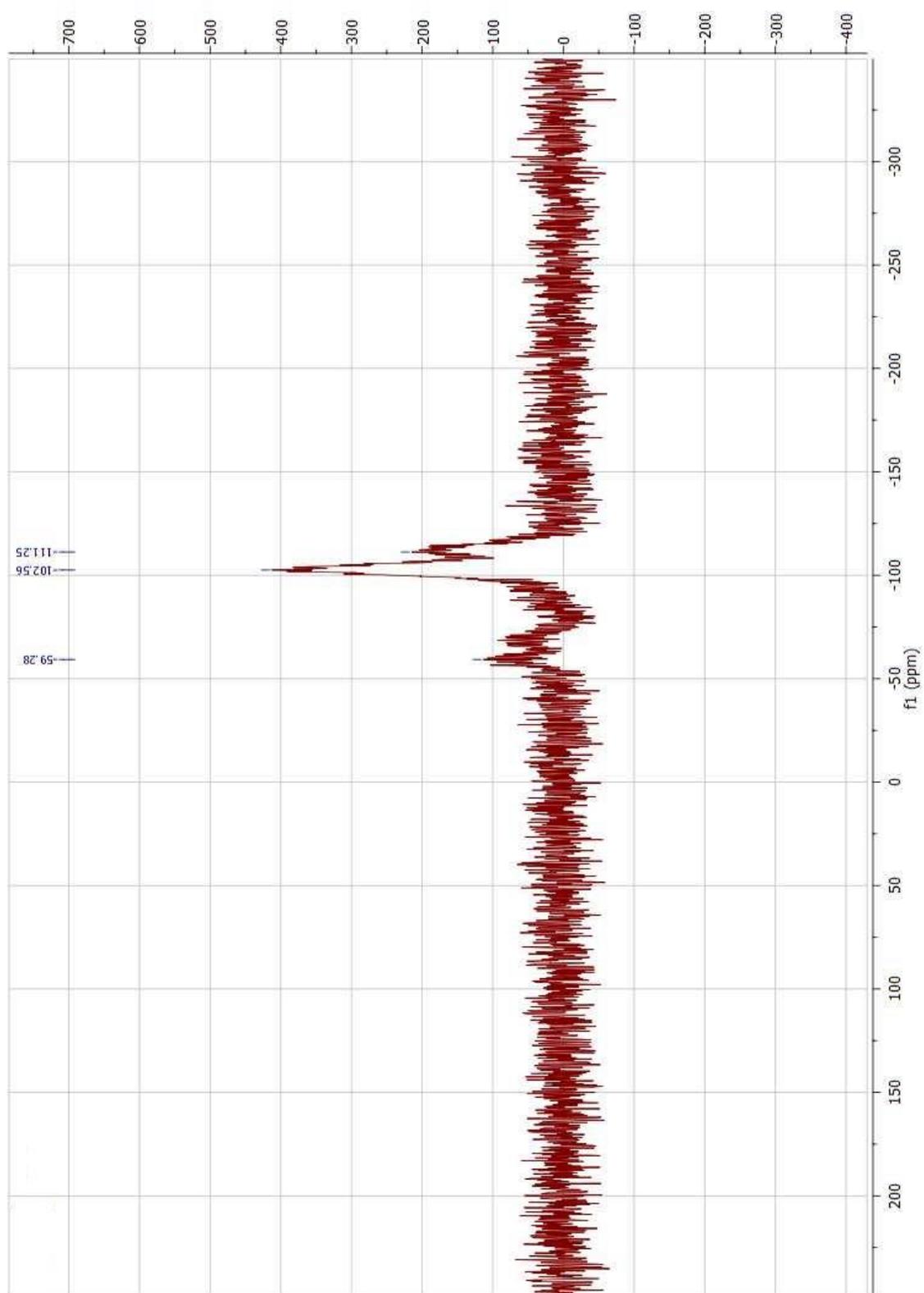
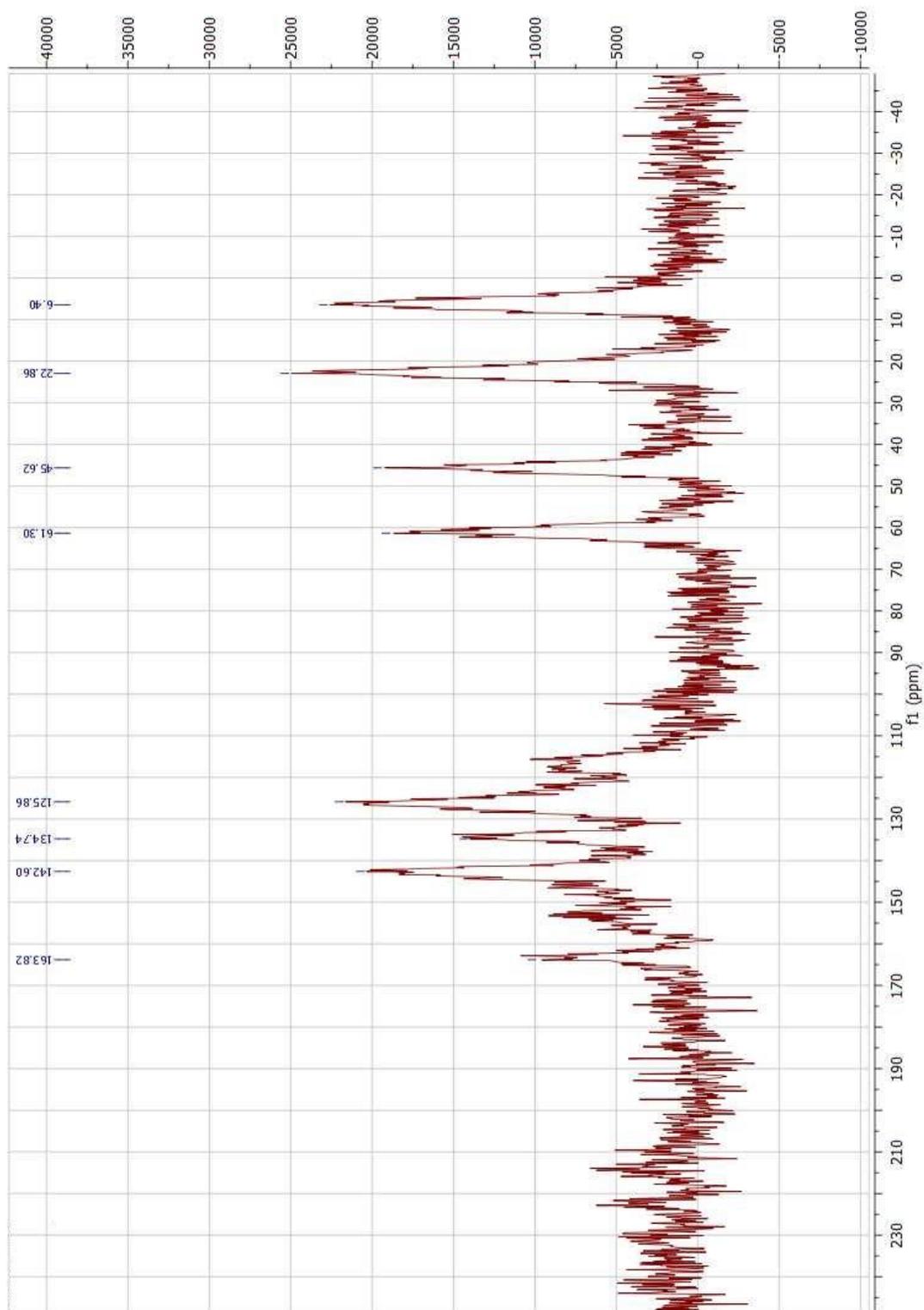


Figure S28.  $^{29}\text{Si}$  NMR of Cu@SBA-15 nanostructures.



**Figure S29.**  $^{13}\text{C}$  NMR of Cu@SBA-15 nanostructures.