

Supporting Information

(Nanoscale Advances)

A new mesoporous Ce-Mn-LDH-based Co-MOF nano-composite for the green synthesis of tetrazoloquinazolines

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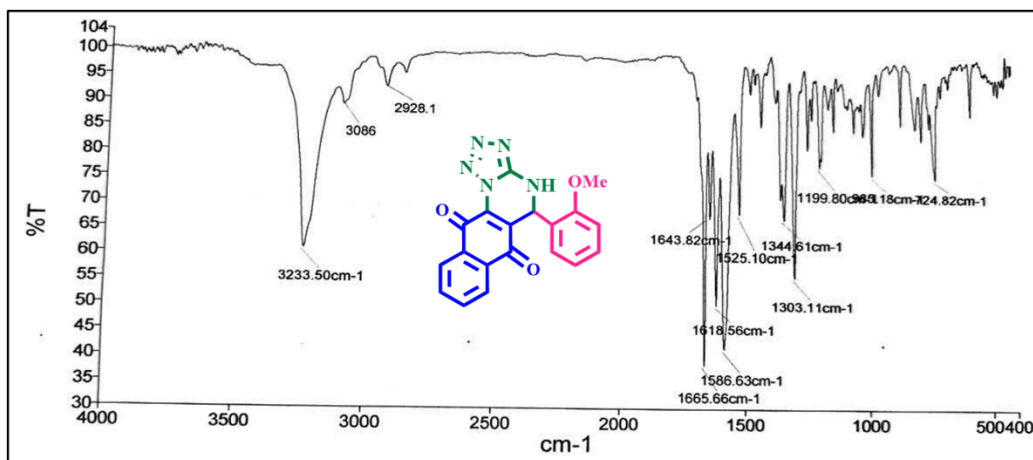
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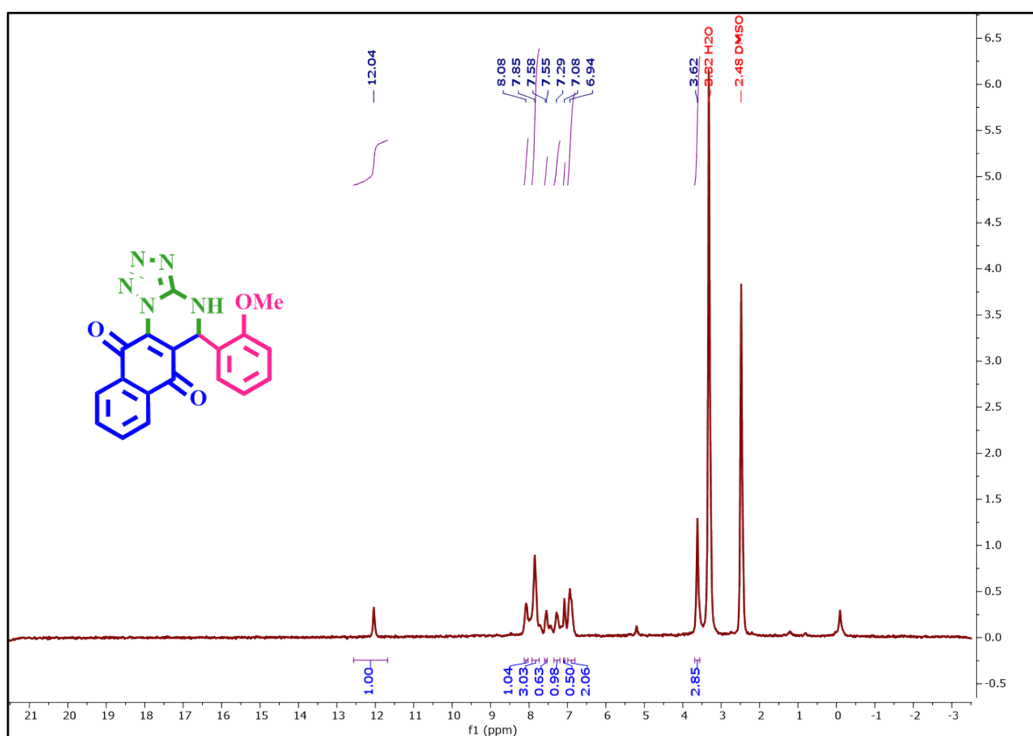
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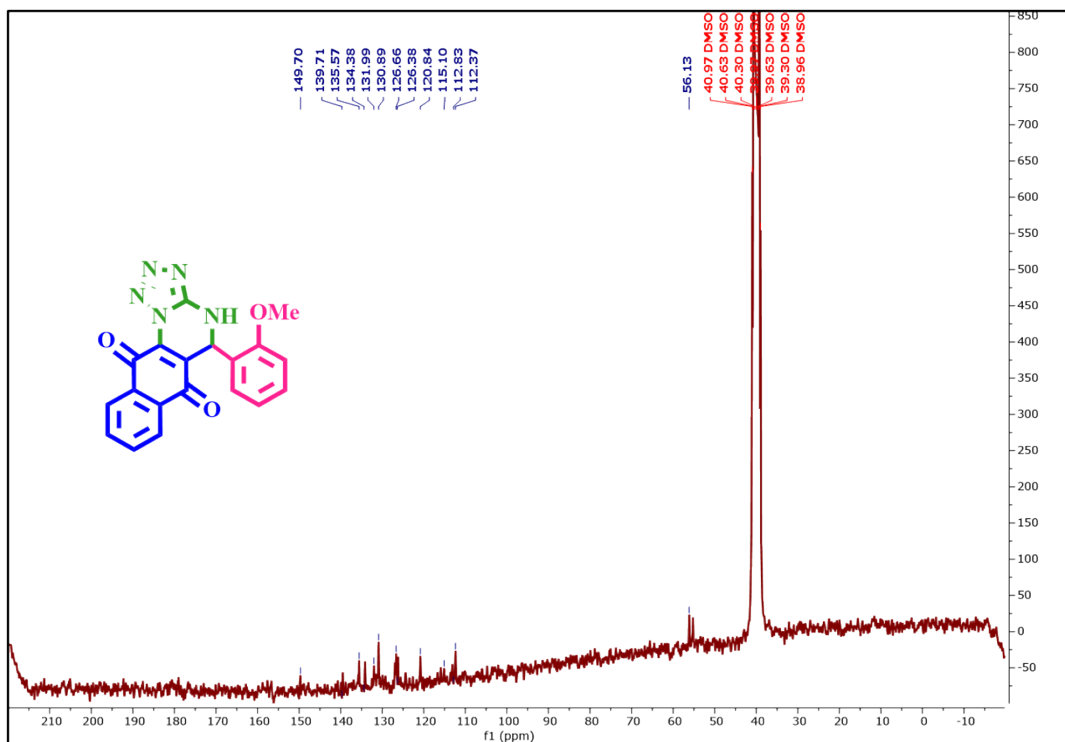
Spectral data
5-(2-methoxyphenyl)-4,5-dihydrobenzo[g]tetrazolo[1,5-*a*]quinazoline-6,11-dione (**1a**)



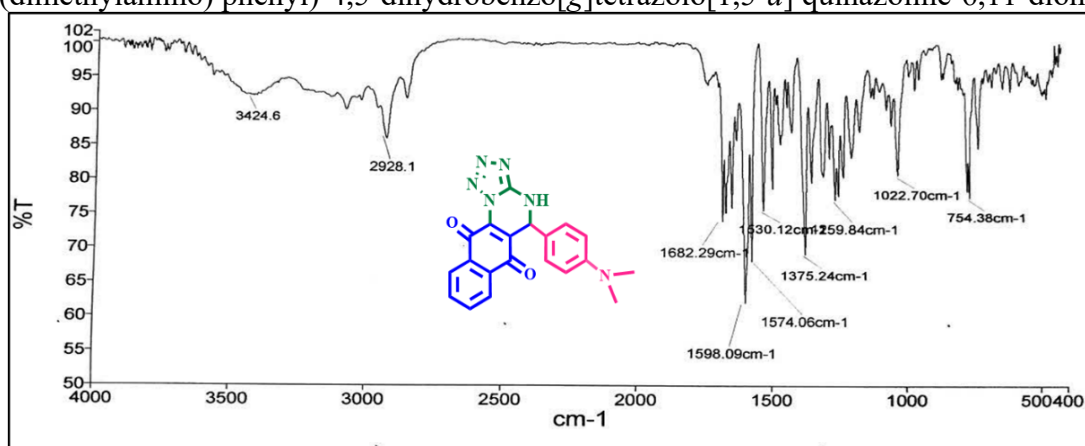
IR Spectrum of 1a

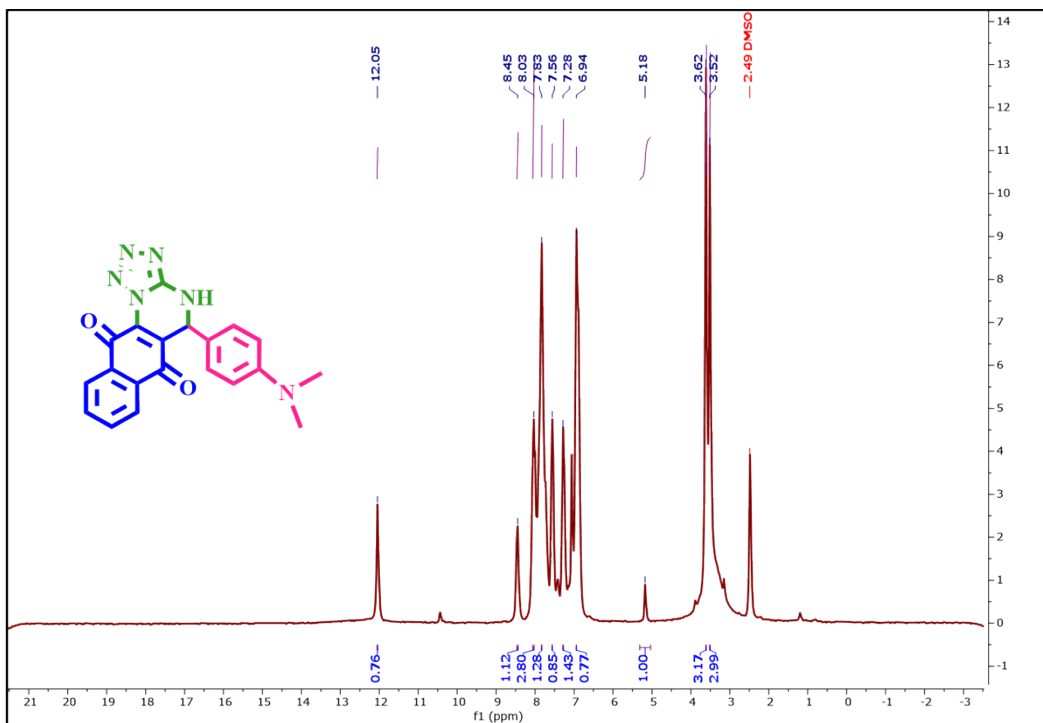


¹H NMR Spectrum of 1a

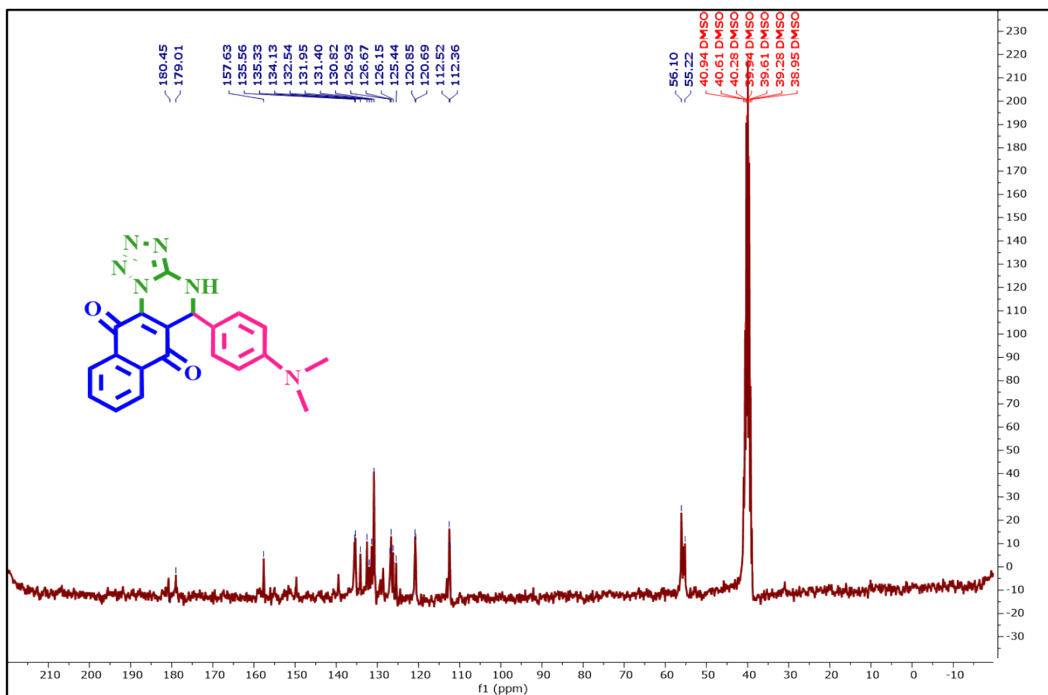


5-(4-(dimethylamino) phenyl)-4,5-dihydrobenzo[g]tetrazolo[1,5-a] quinazoline-6,11-dione (2a)



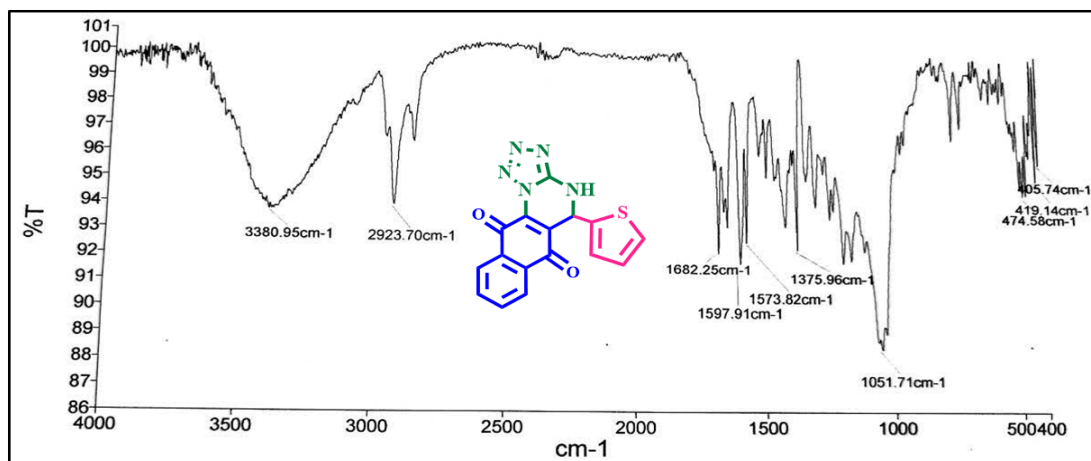


¹H NMR Spectrum of 2a

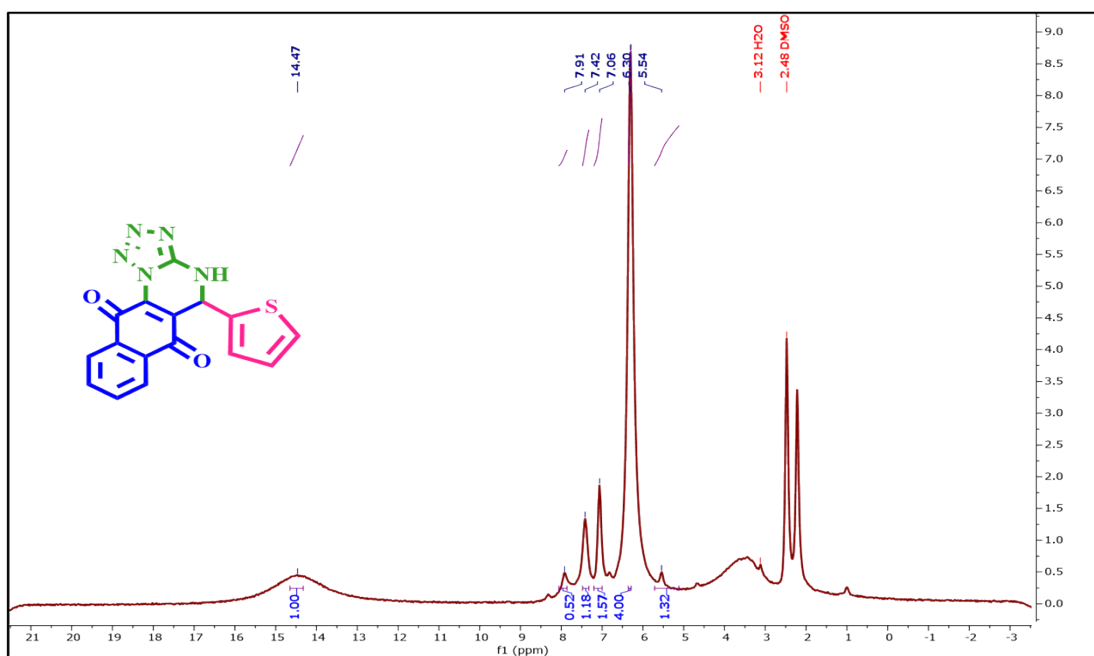


¹³C NMR Spectrum of 2a

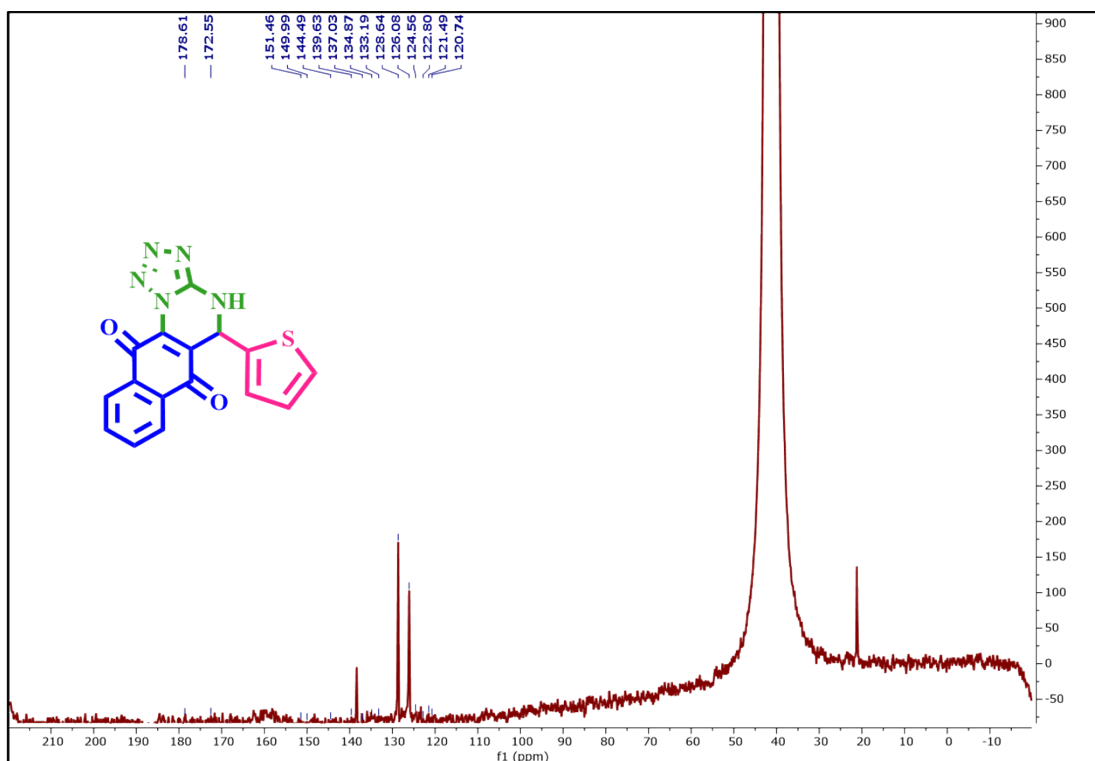
5-(thiophen-2-yl)-4,5-dihydrobenzo[g]tetrazolo[1,5-a]quinazoline-6,11-dione (**3a**)



IR Spectrum of 3a

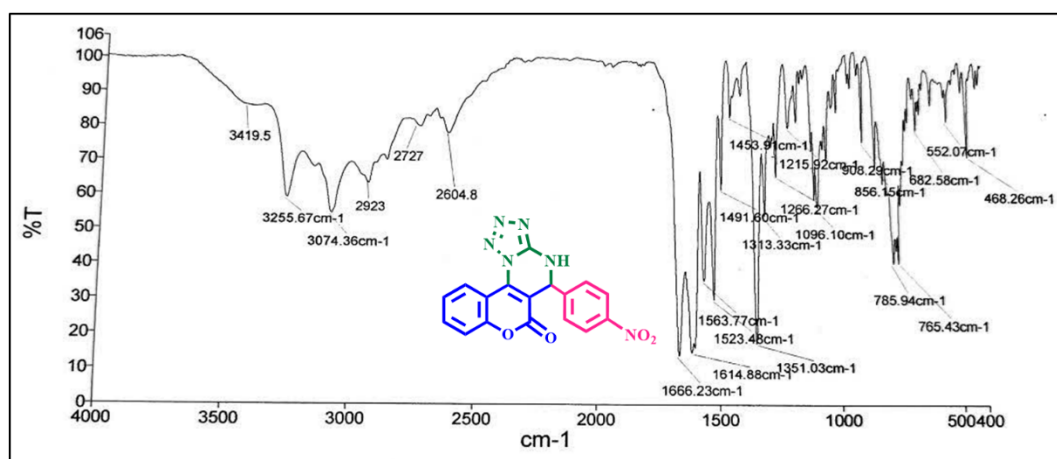


¹H NMR Spectrum of 3a

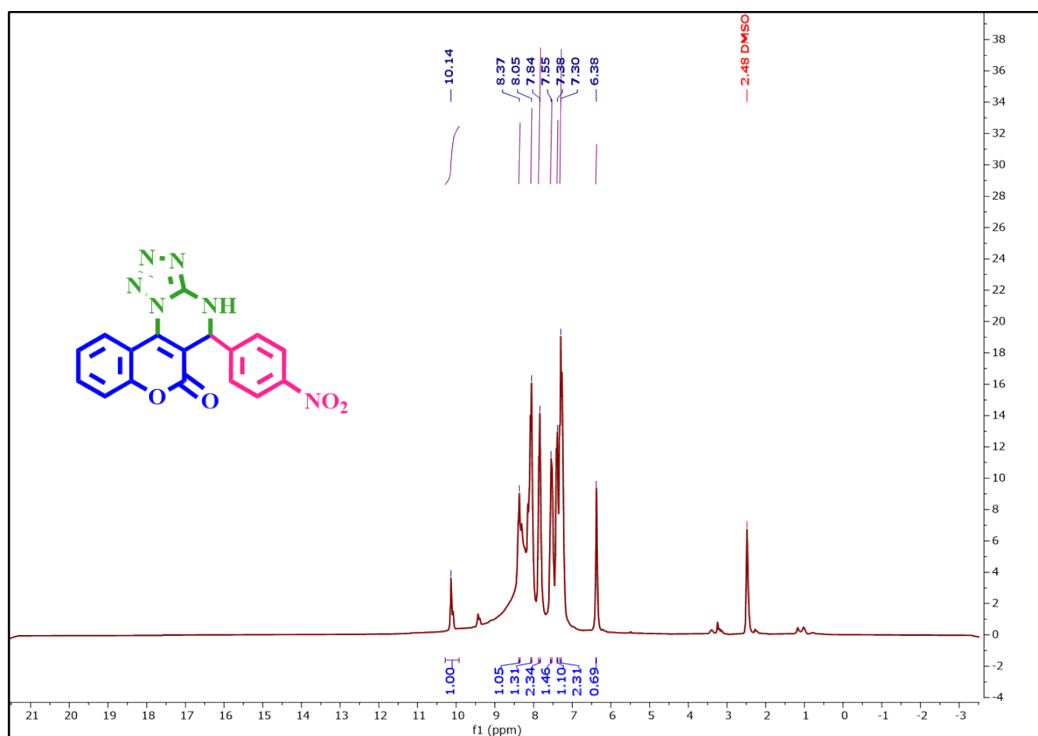


^{13}C NMR Spectrum of 3a

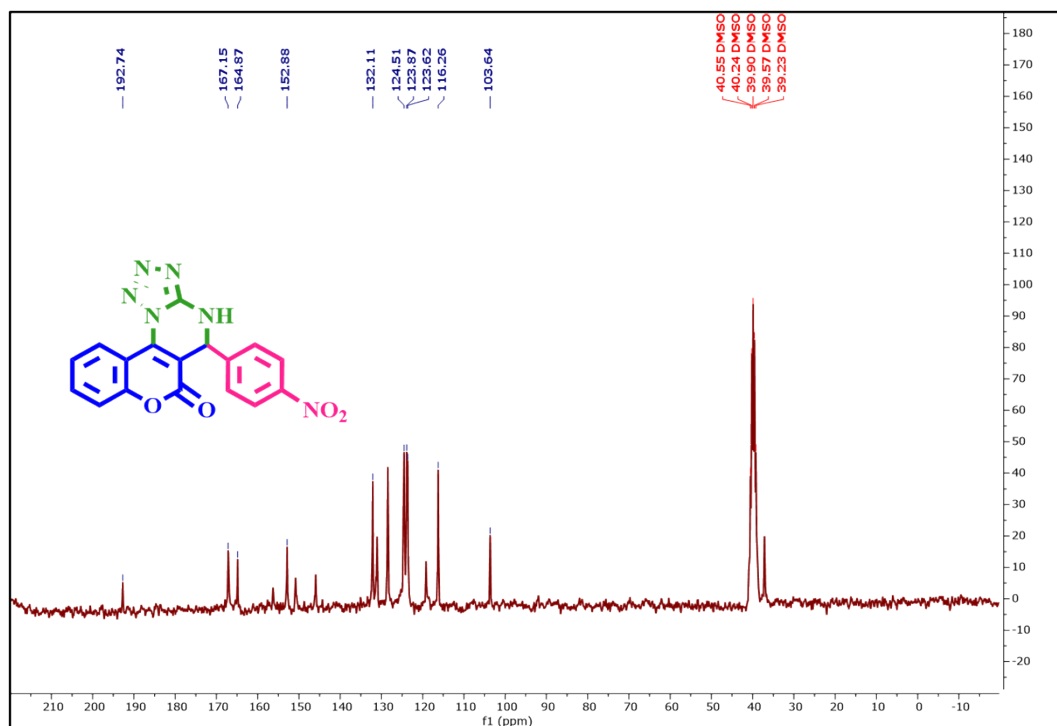
5-(4-nitrophenyl)-4,5-dihydro-6*H*-chromeno[3,4-*e*]tetrazolo[1,5-*a*]pyrimidin-6-one (**4a**)



IR Spectrum of 4a

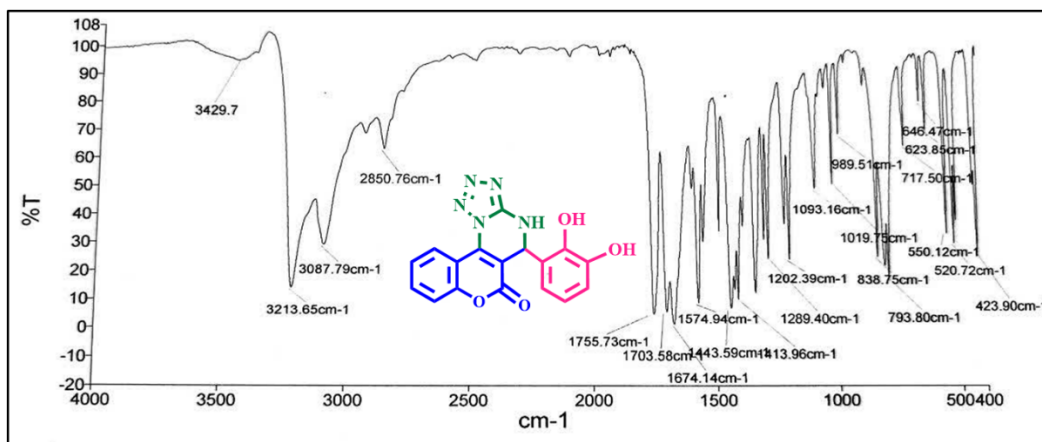


$^1\text{H NMR}$ Spectrum of 4a

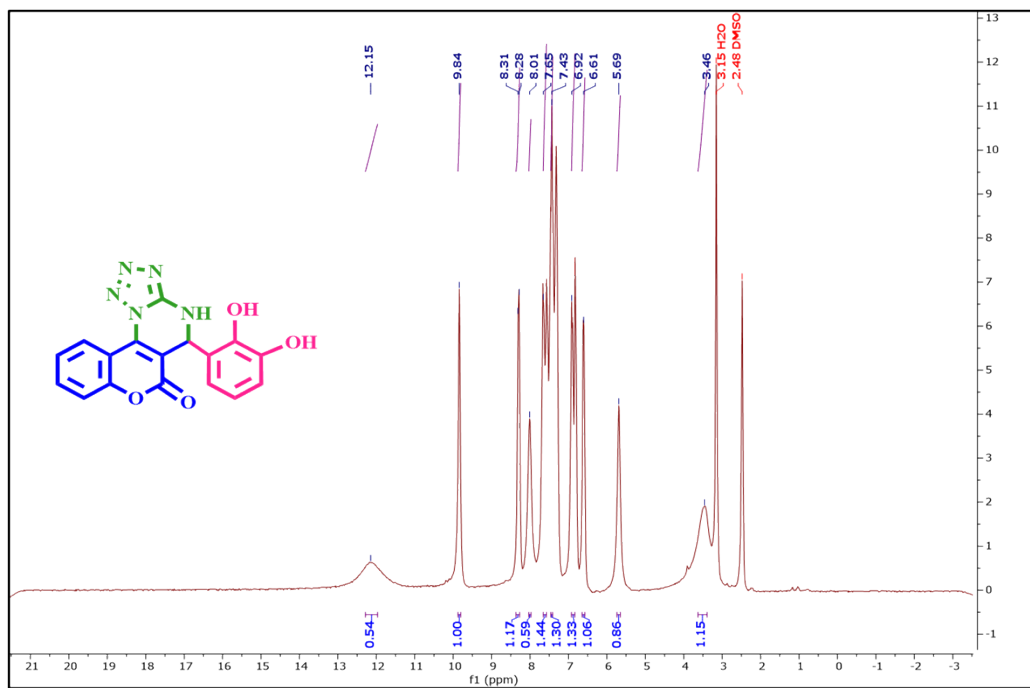


$^{13}\text{C NMR}$ Spectrum of 4a

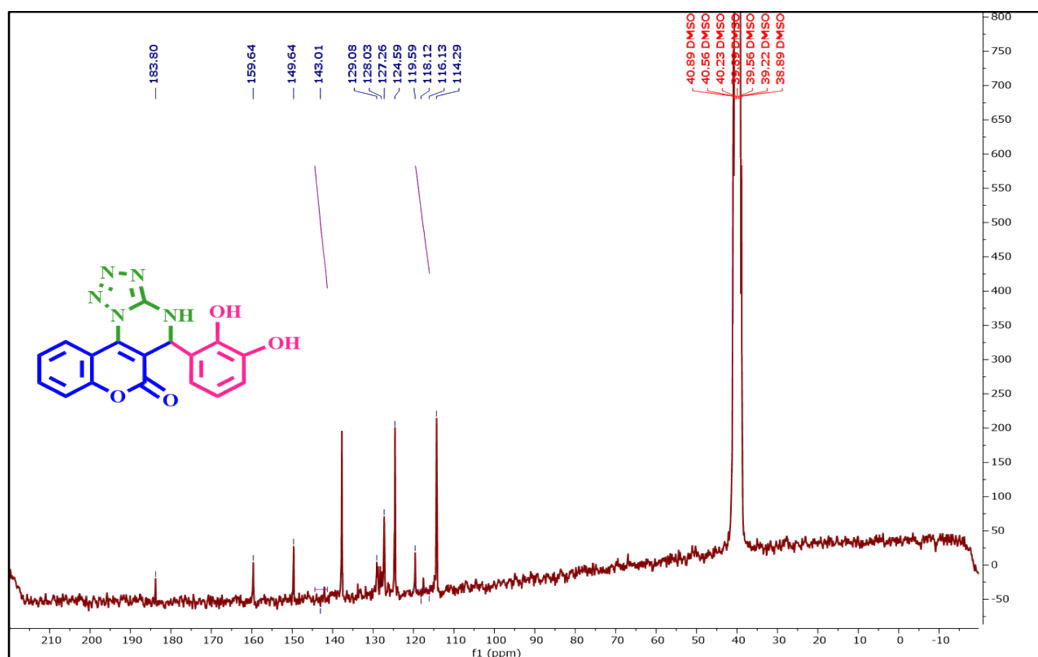
5-(2,3-dihydroxyphenyl)-4,5-dihydro-6H-chromeno[3,4-e] tetrazolo[1,5-a] pyrimidin-6-one (**5a**)



IR Spectrum of **5a**

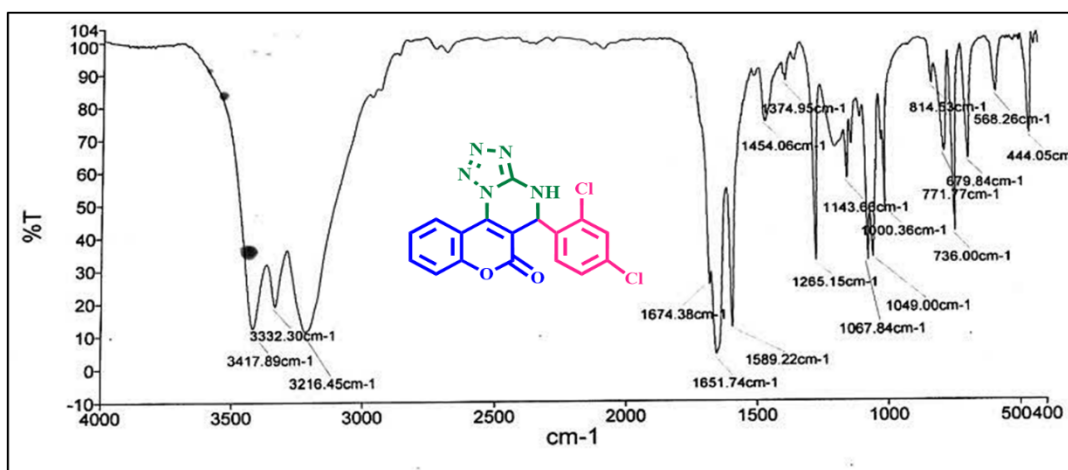


¹H NMR Spectrum of **5a**

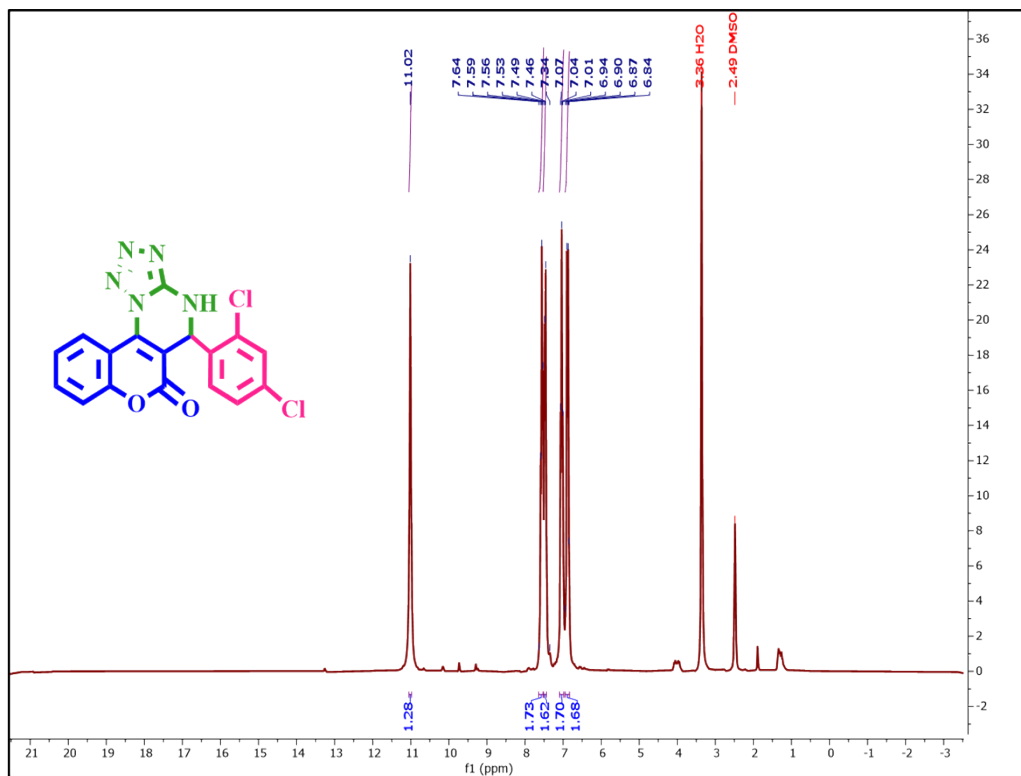


^{13}C NMR Spectrum of 5a

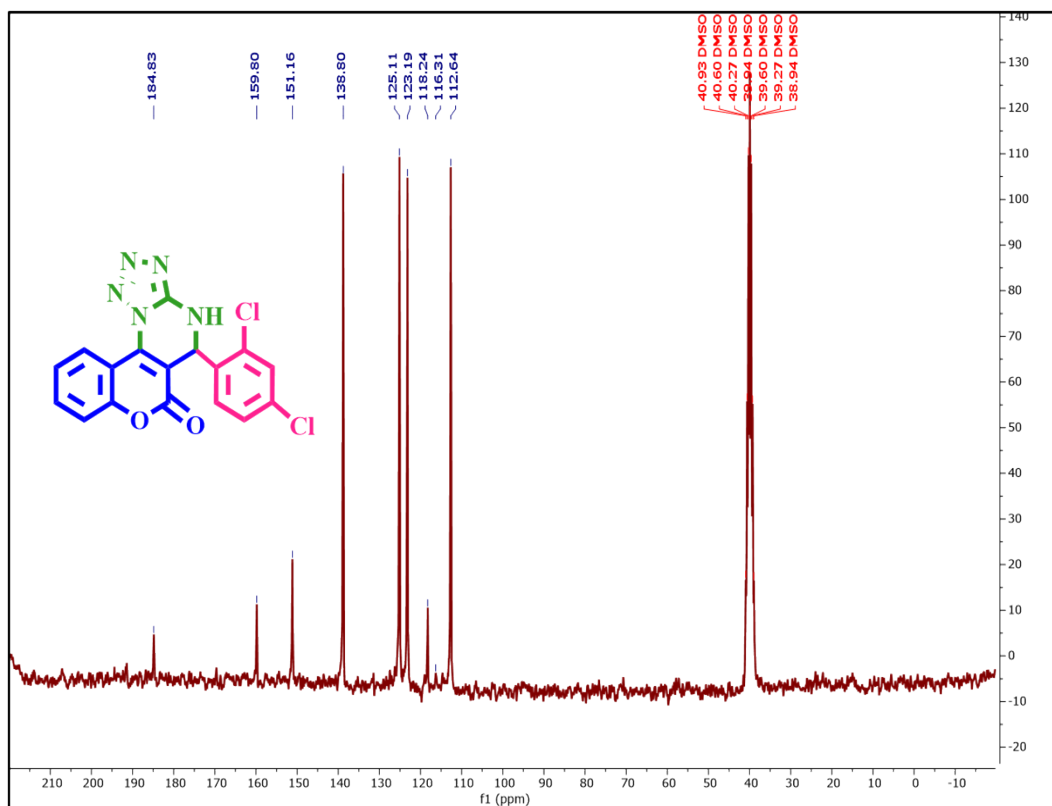
5-(2,4-dichlorophenyl)-4,5-dihydro-6H-chromeno[3,4-e] tetrazolo[1,5-a] pyrimidin-6-one (**6a**)



IR Spectrum of 6a

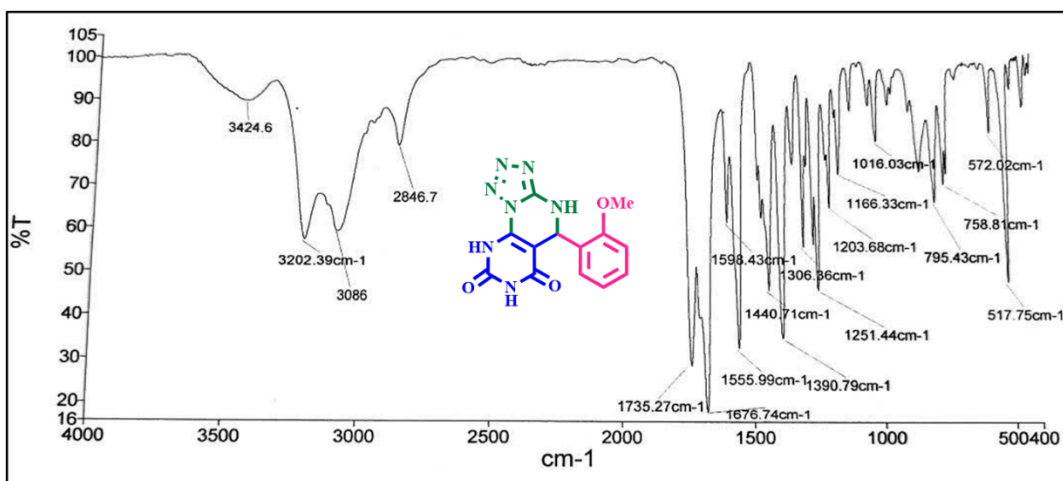


¹H NMR Spectrum of 6a

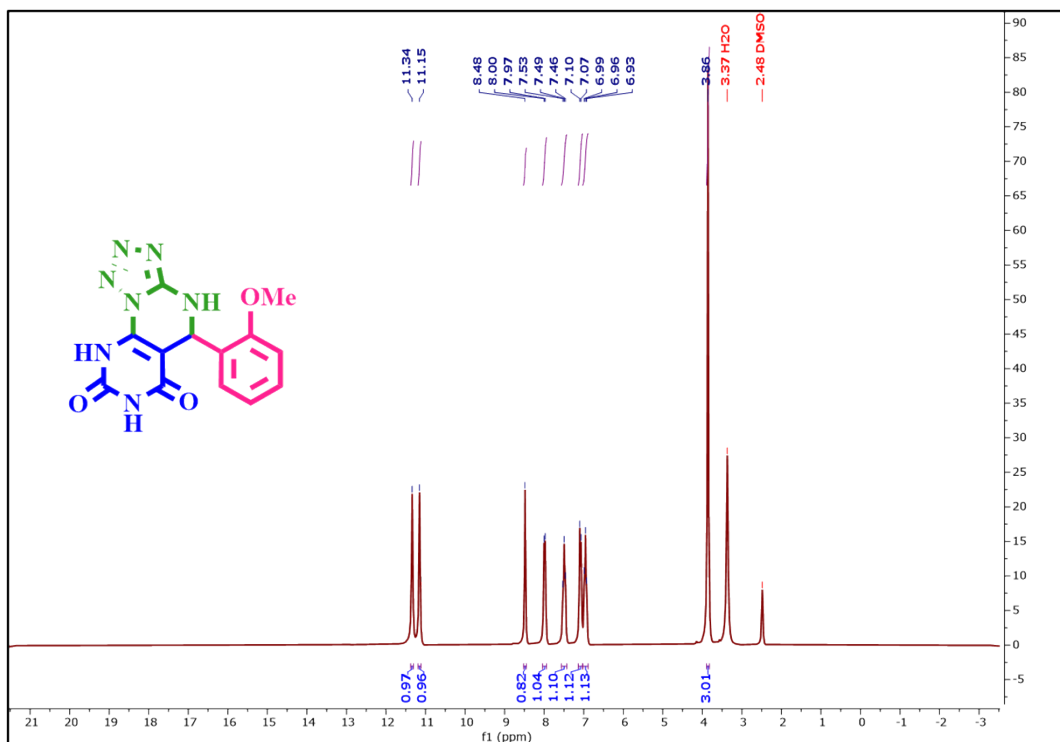


¹³C NMR Spectrum of 6a

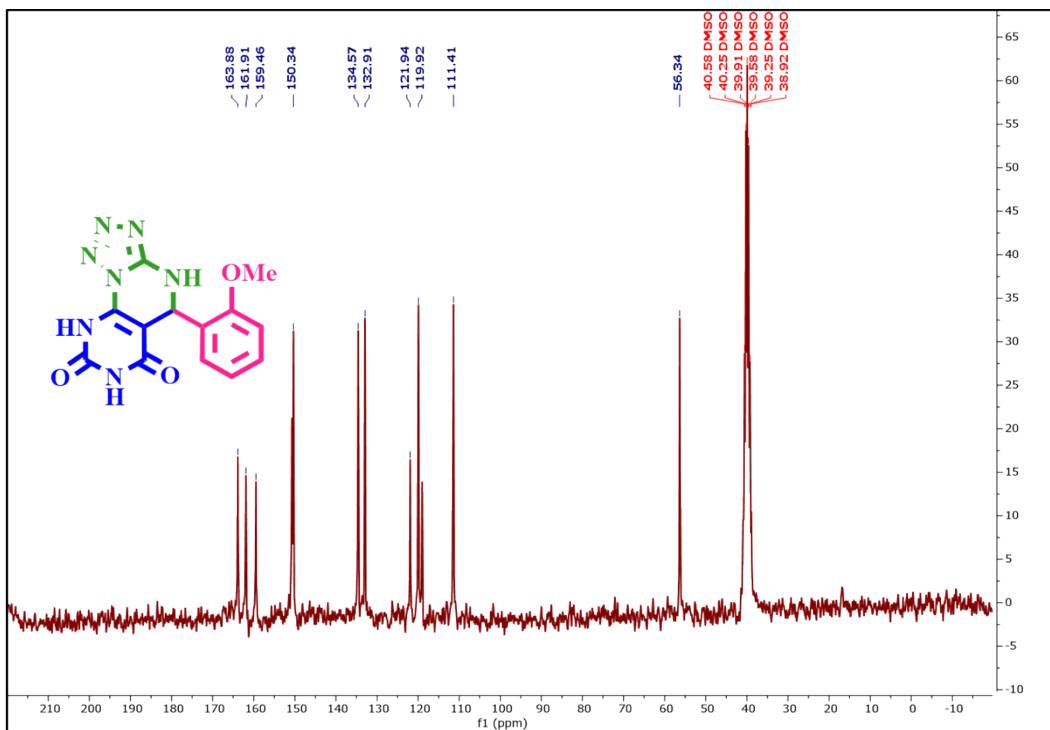
5-(2-methoxyphenyl)-5,9-dihydropyrimido[5,4-*e*]tetrazolo[1,5-*a*]pyrimidine-6,8(4*H*,7*H*)-dione
(7a)



IR Spectrum of 7a

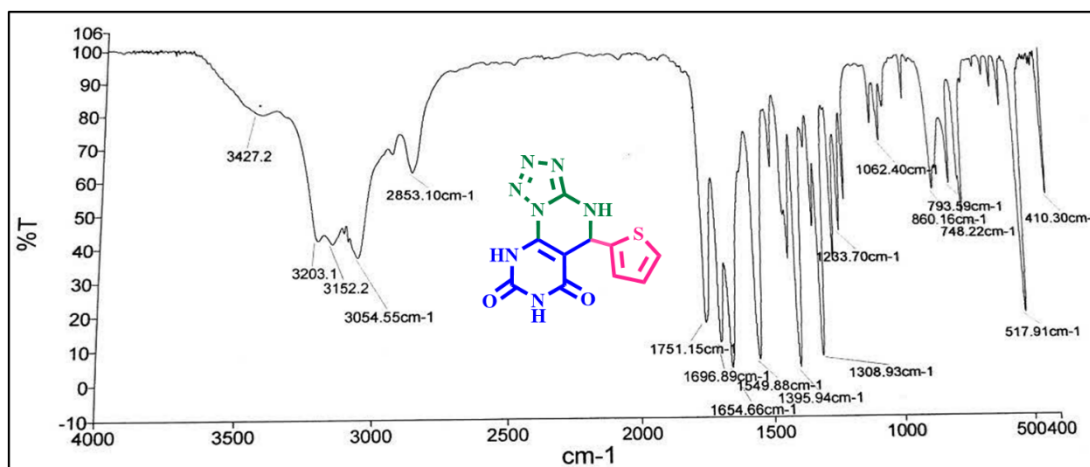


¹H NMR Spectrum of 7a

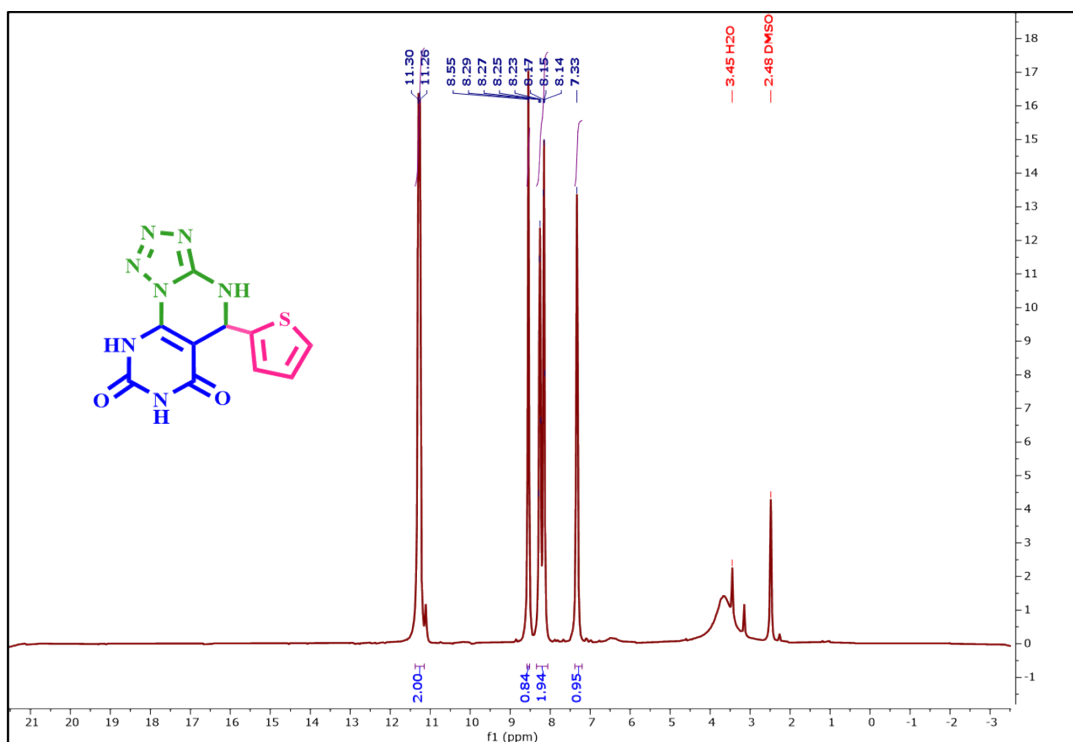


^{13}C NMR Spectrum of 7a

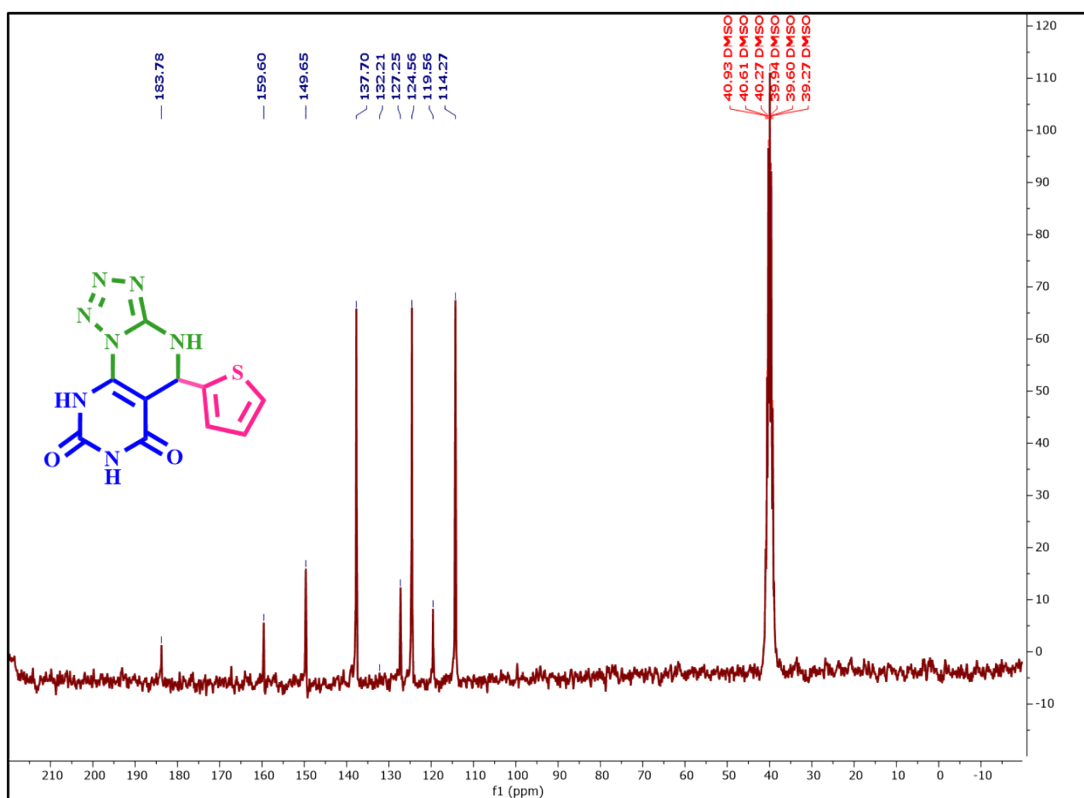
5-(thiophen-2-yl)-5,9-dihydropyrimido[5,4-*e*] tetrazolo[1,5-*a*] pyrimidine-6,8(4*H*,7*H*)-dione (**8a**)



IR Spectrum of 8a

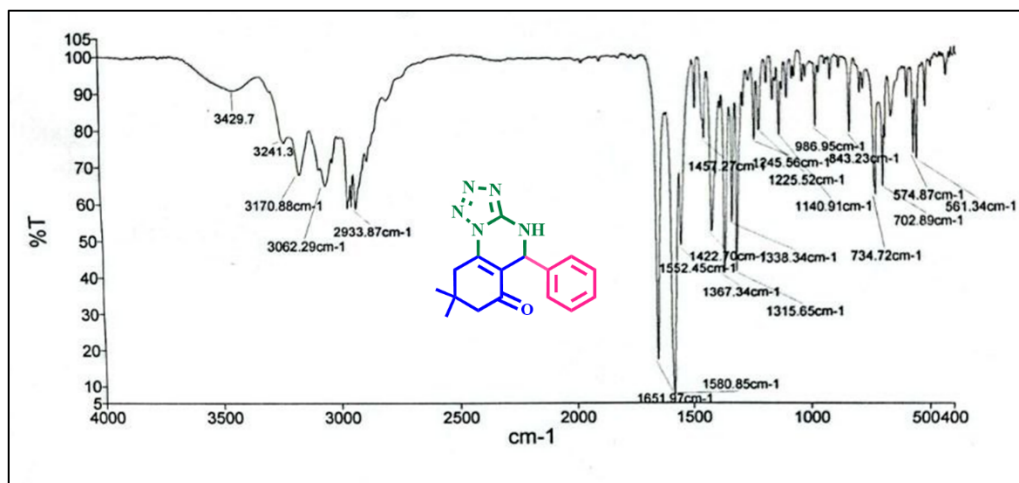


¹H NMR Spectrum of 8a

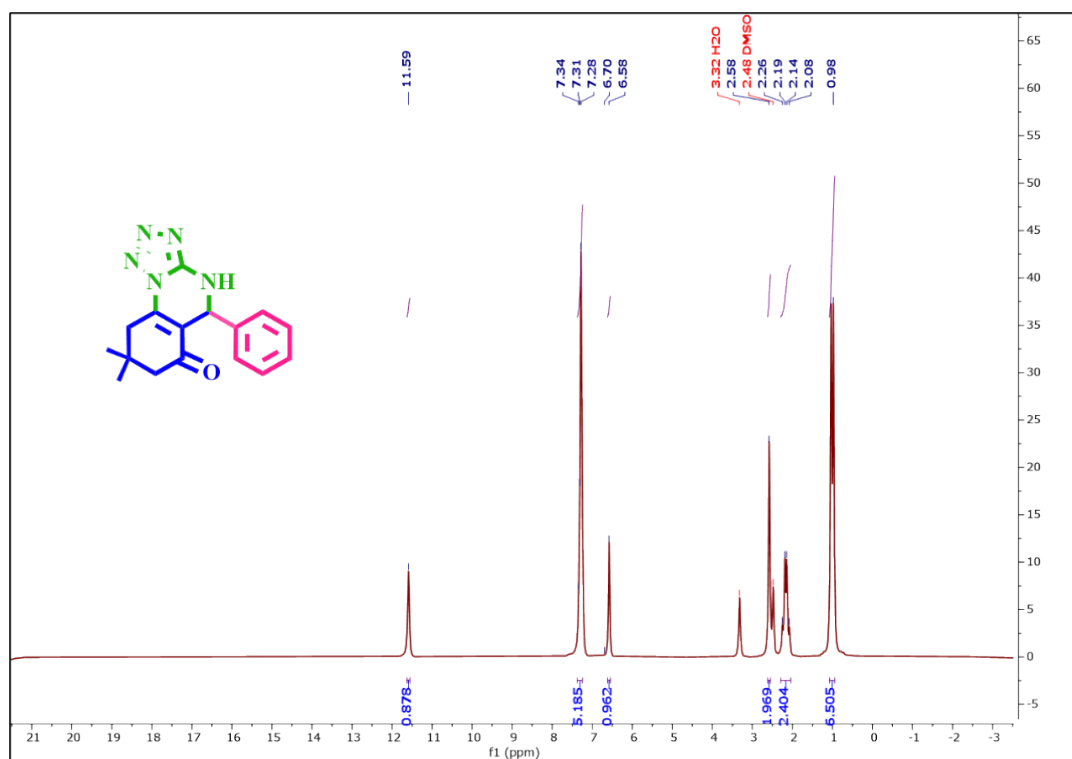


¹³C NMR Spectrum of 8a

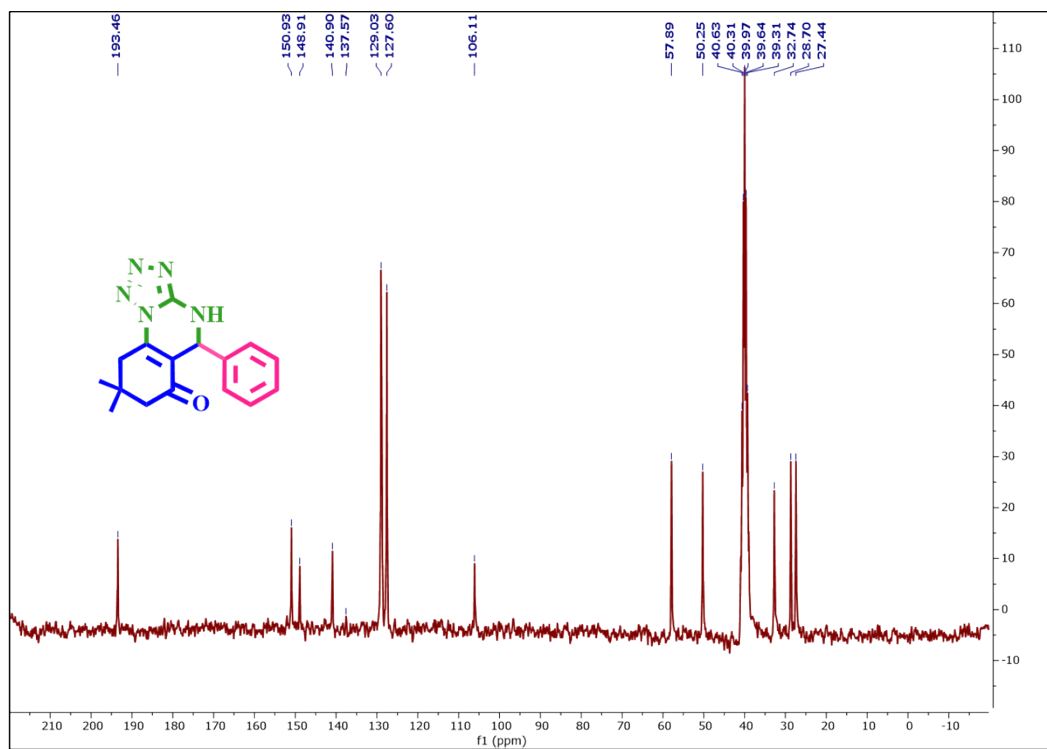
8,8-dimethyl-5-phenyl-5,7,8,9-tetrahydro-1,2,4-triazolo[1,5-a]quinazolin-6(4H)-one (**9a**)



IR Spectrum of **9a**

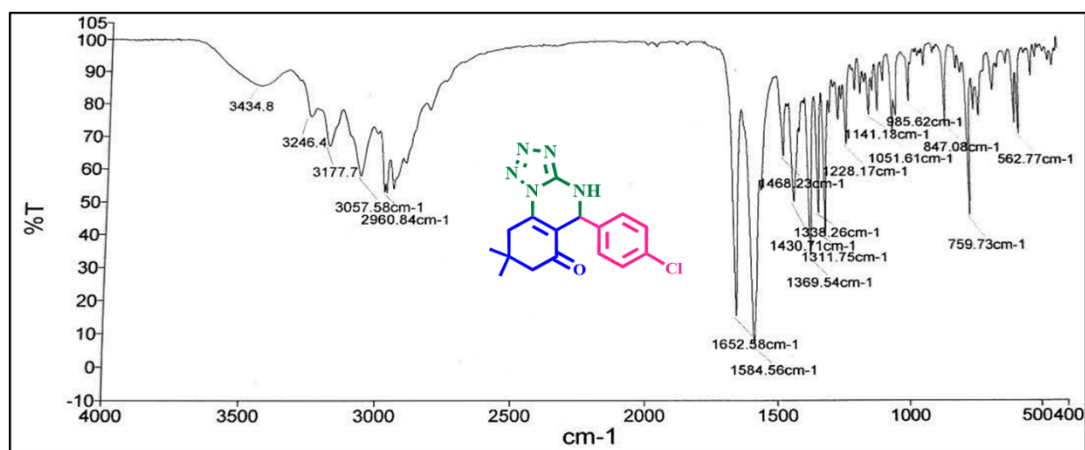


¹H NMR Spectrum of **9a**

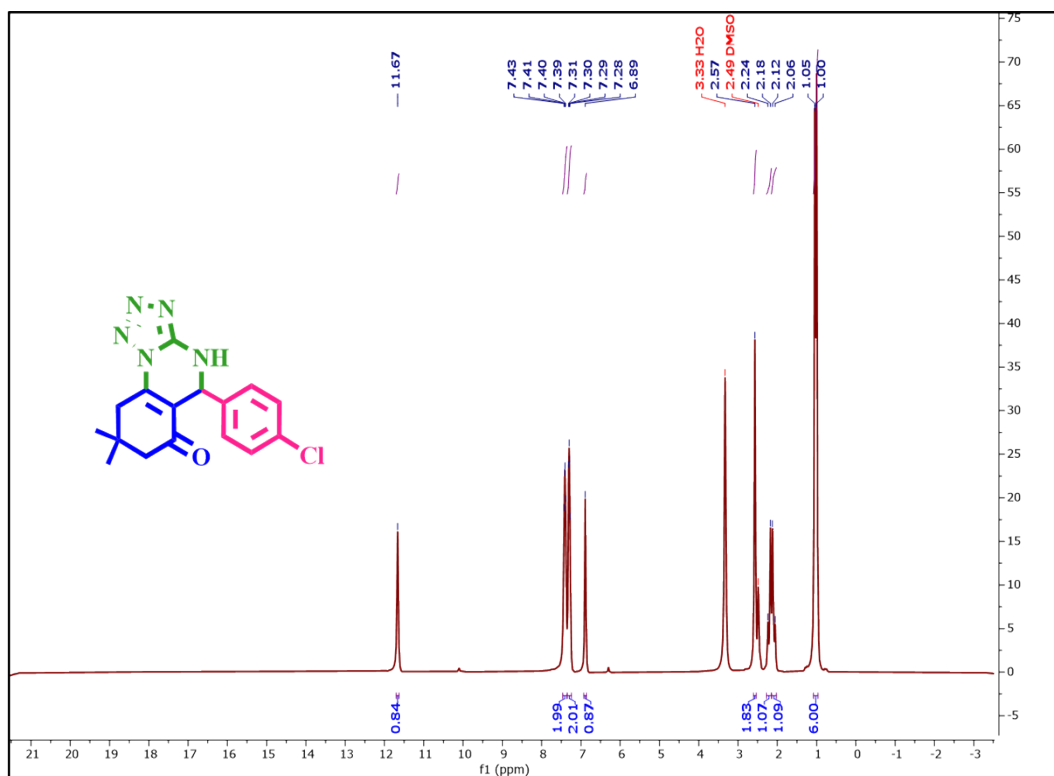


^{13}C NMR Spectrum of 9a

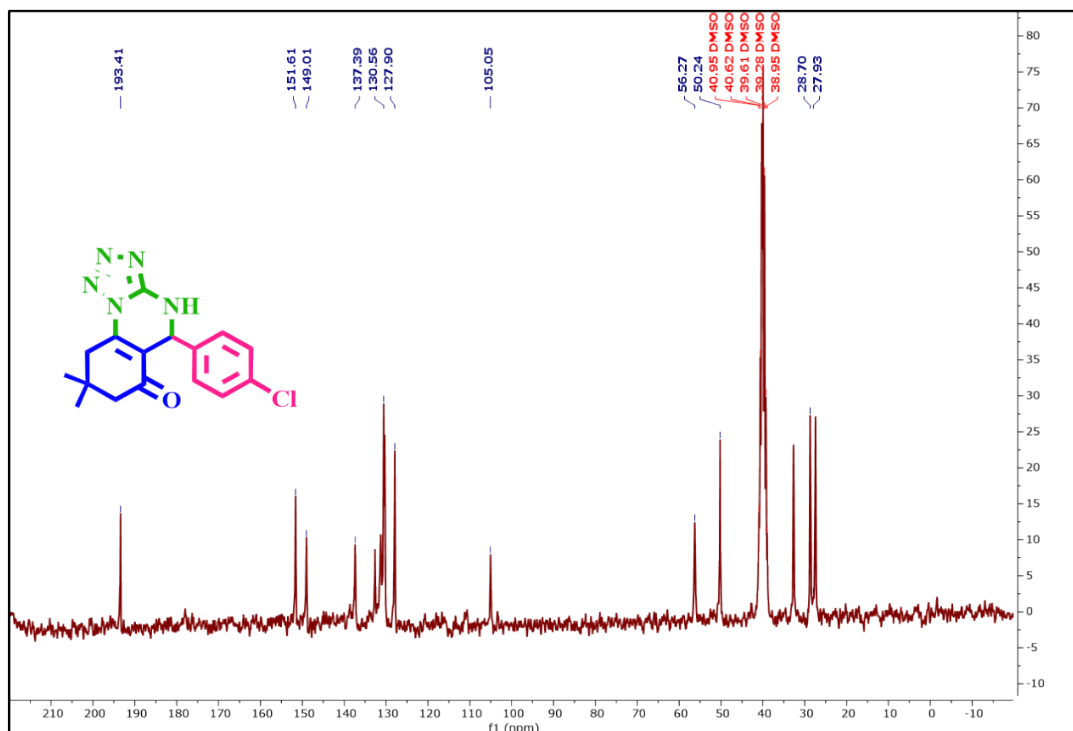
5-(4-chlorophenyl)-8,8-dimethyl-5,7,8,9-tetrahydro-1H-tetrazolo[1,5-a]quinazolin-6-one
(10a)



IR Spectrum of 10a

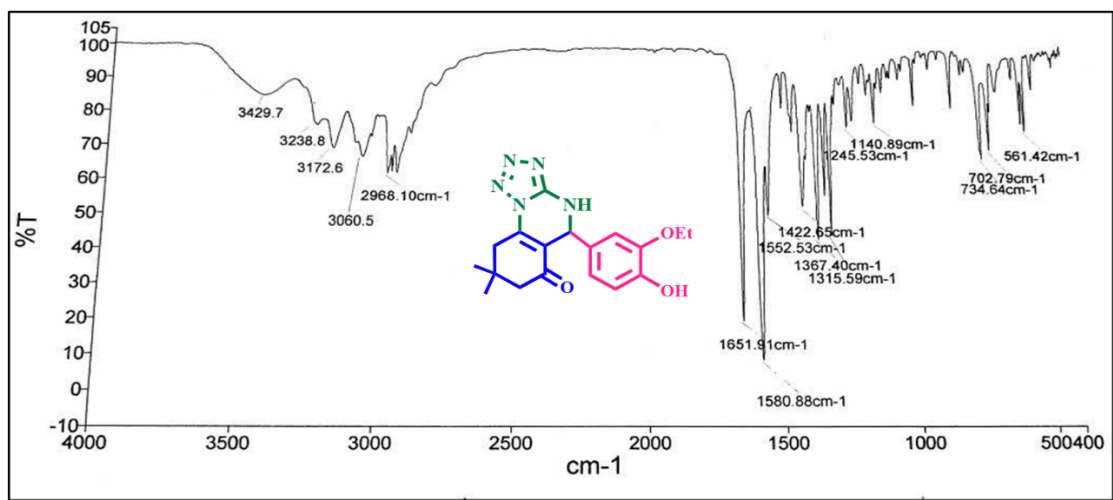


¹H NMR Spectrum of 10a



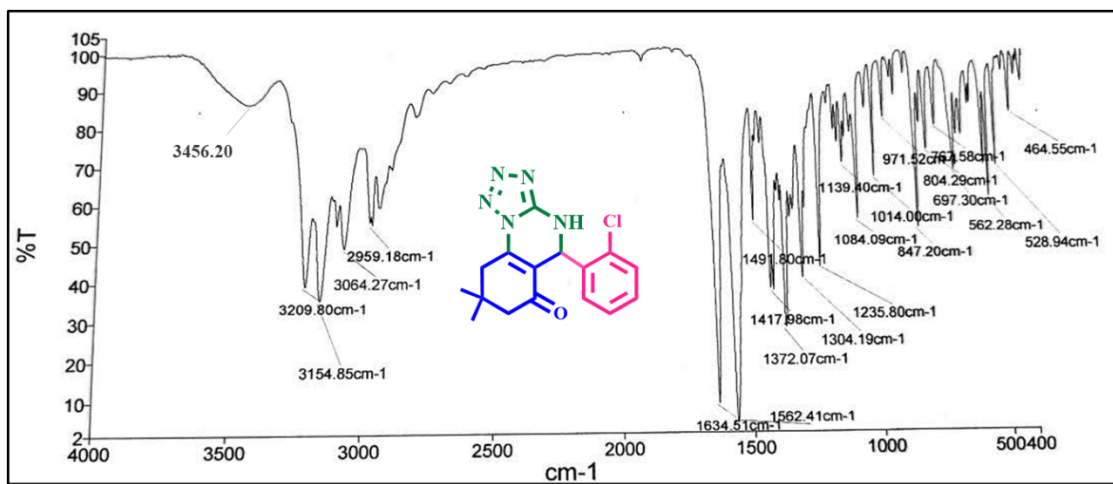
¹³C NMR Spectrum of 10a

5-(3-ethoxy-4-hydroxyphenyl)-8,8-dimethyl-5,7,8,9-tetrahydro-tetrazolo[1,5-*a*]quinazolin-6(4*H*)-one (**11a**)



IR Spectrum of 11a

5-(2-chlorophenyl)-8,8-dimethyl-5,7,8,9-tetrahydro-tetrazolo[1,5-*a*]quinazolin-6(4*H*)-one (**12a**)



IR Spectrum of 12a