

Pyrazolylphenanthroimidazole heterocycles: Synthesis, biological and molecular docking studies

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Supplementary Information

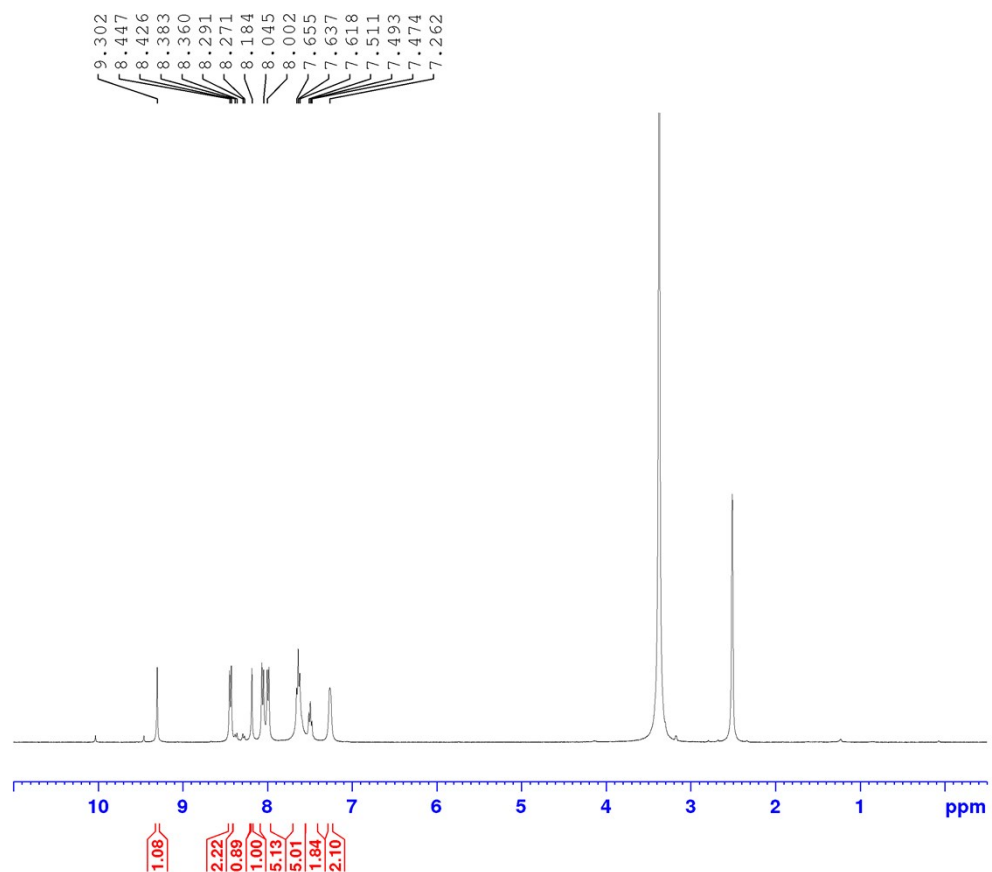


Fig. S1. ¹H NMR Spectrum of 2-(1,3-diphenyl-1H-pyrazol-4-yl)-1H-phenanthro[9,10-d]imidazole (6a)

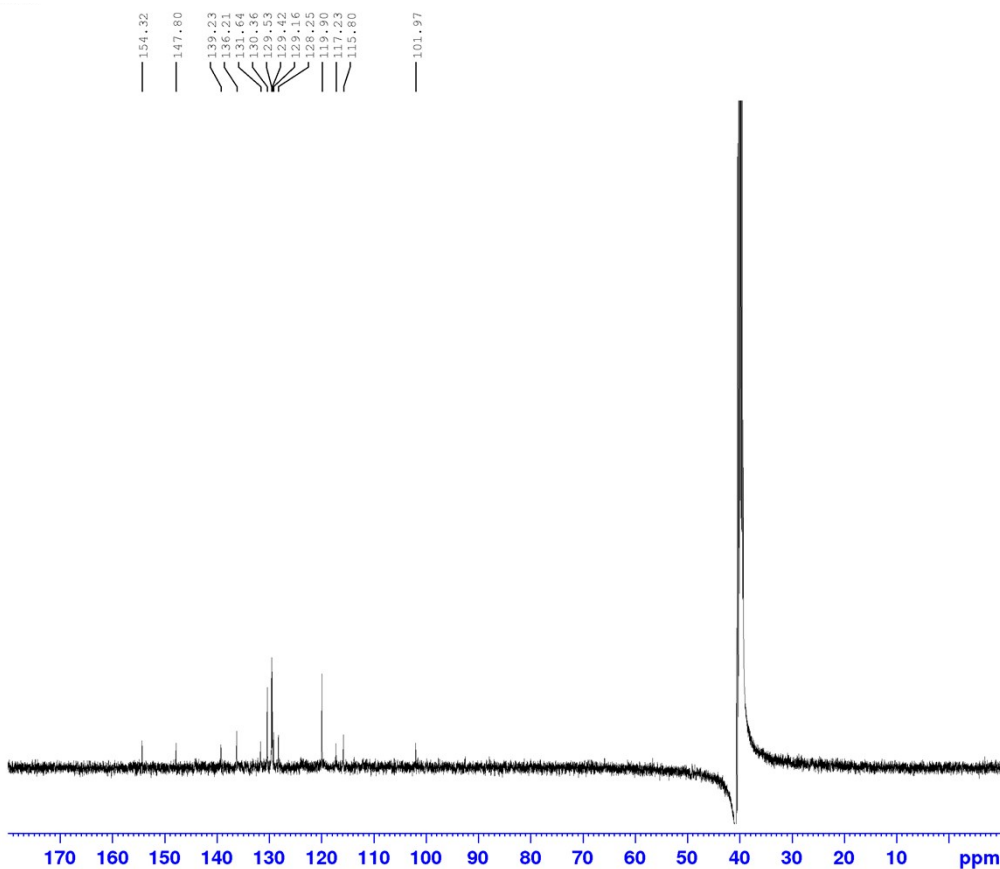


Fig. S2. ¹³C NMR Spectrum of 2-(1,3-diphenyl-1H-pyrazol-4-yl)-1H-phenanthro[9,10-d]imidazole (6a)

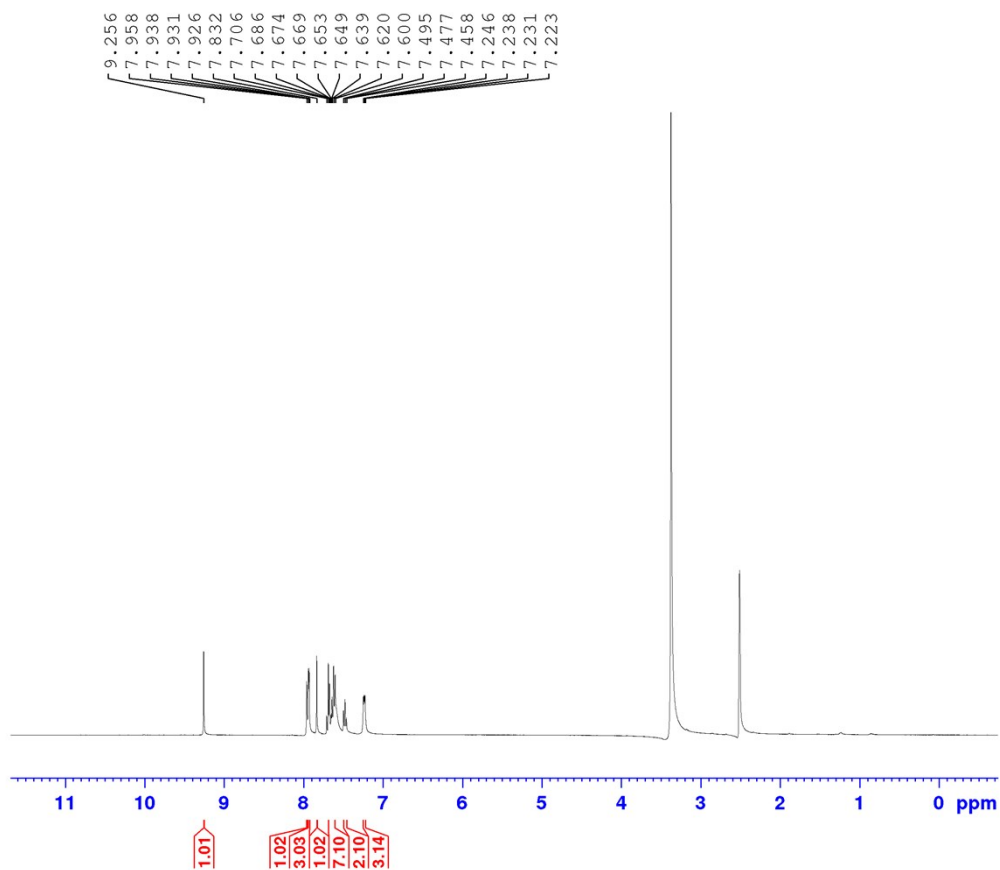


Fig. S3. ¹H NMR Spectrum of 2-(3-(4-chlorophenyl)-1-phenyl-1H-pyrazol-4-yl)-1H-phenanthro[9,10-d] imidazole (6b)

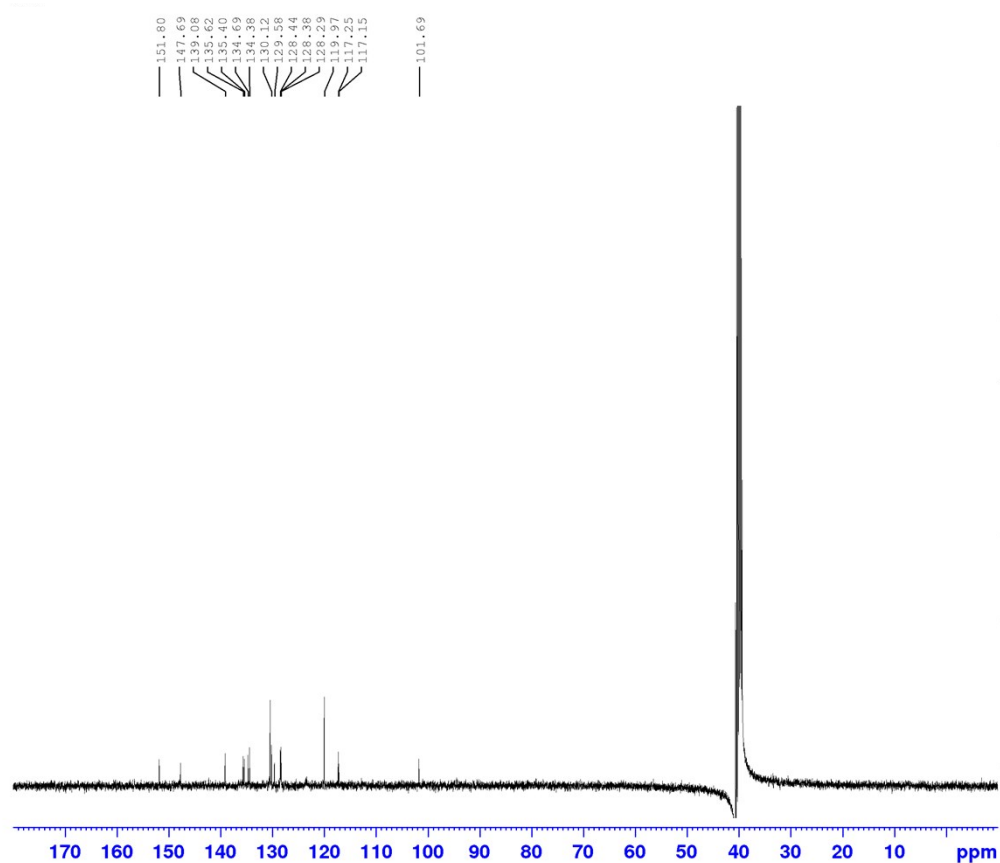


Fig. S4. ¹³C NMR Spectrum of 2-(3-(4-chlorophenyl)-1-phenyl-1H-pyrazol-4-yl)-1H-phenanthro[9,10-d] imidazole (6b)

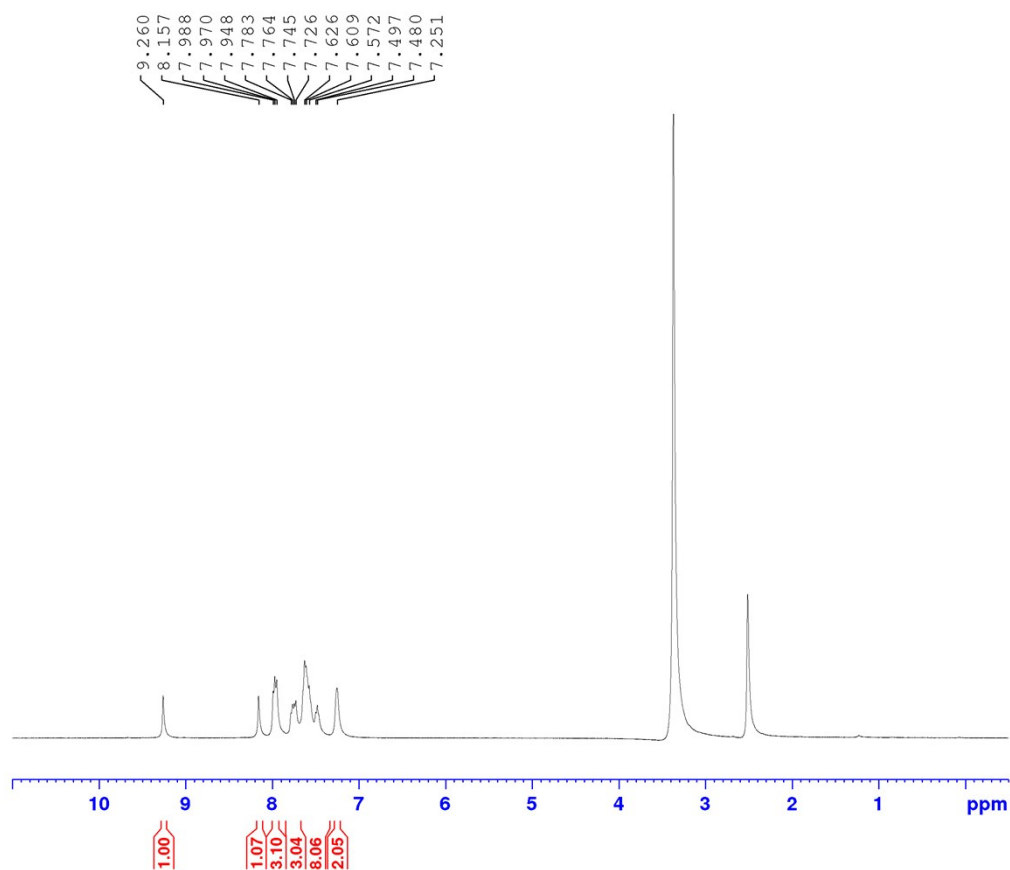


Fig. S5. ¹H NMR Spectrum of 2-(3-(4-fluorophenyl)-1-phenyl-1H-pyrazol-4-yl)-1H-phenanthro[9,10-d] imidazole (6c)

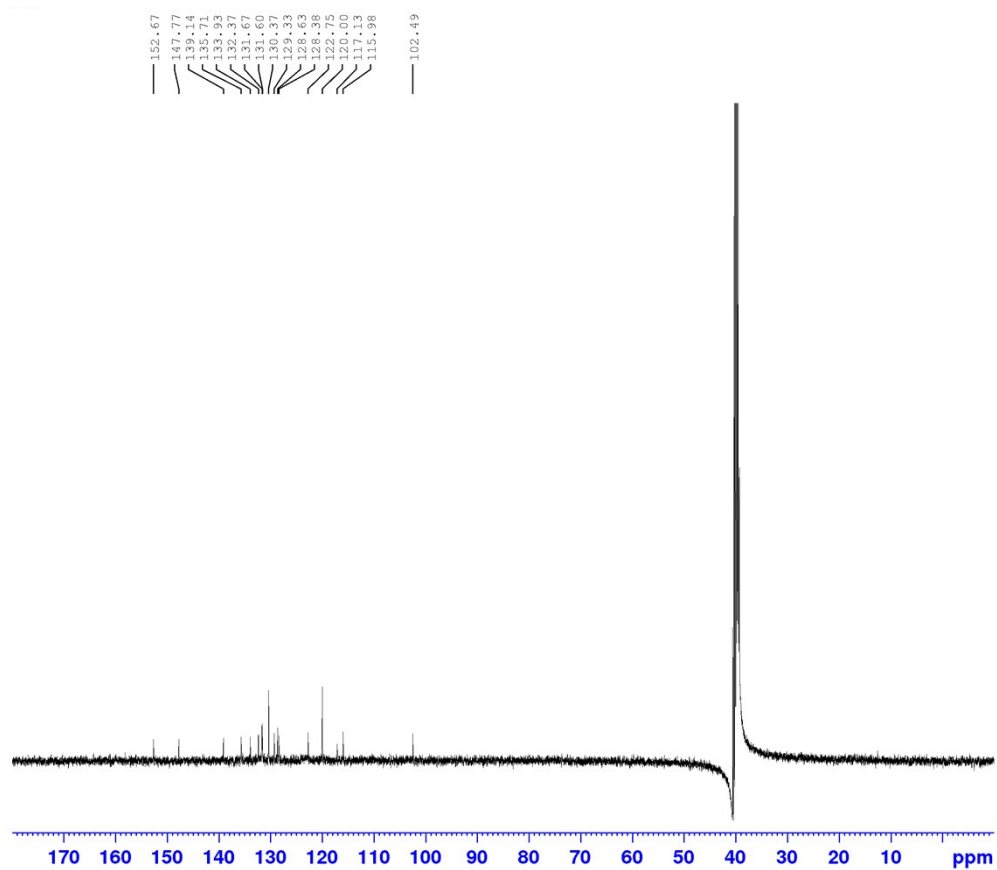


Fig. S6. ^{13}C NMR Spectrum of 2-(3-(4-fluorophenyl)-1-phenyl-1H-pyrazol-4-yl)-1H-phenanthro[9,10-d] imidazole (6c)

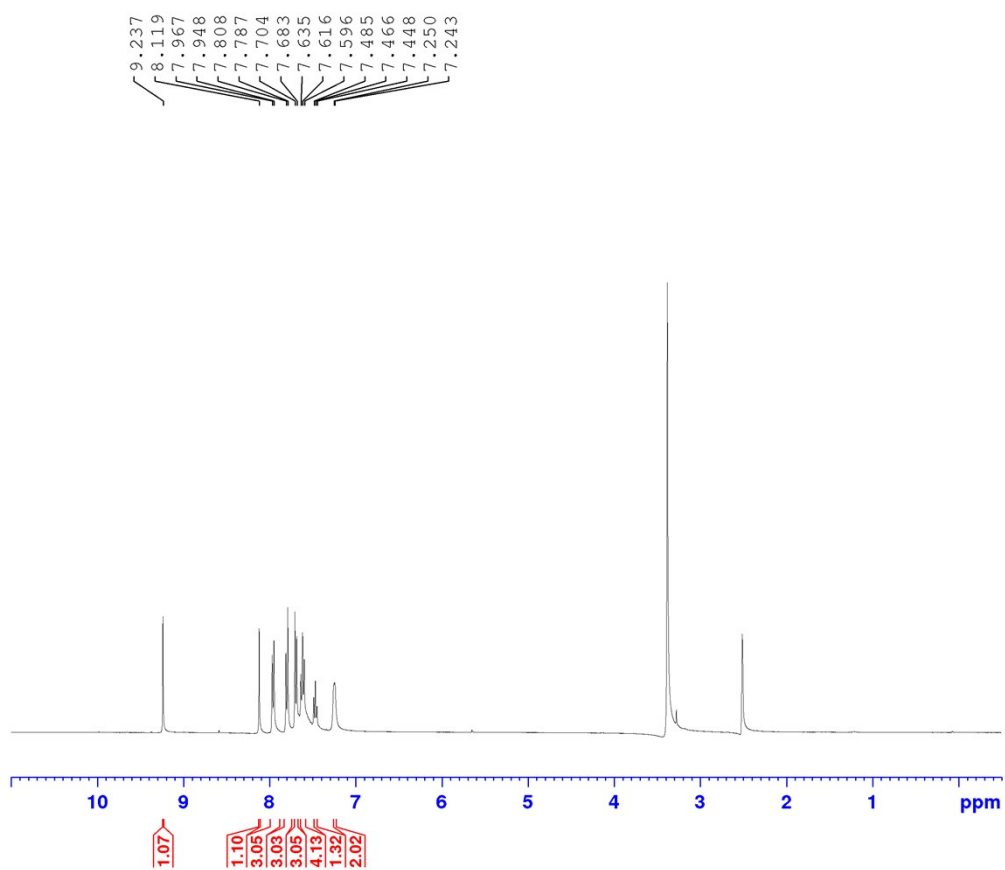


Fig. S7. ^1H NMR Spectrum of 2-(3-(4-bromophenyl)-1-phenyl-1H-pyrazol-4-yl)-1H-phenanthro[9,10-d] imidazole (6d)



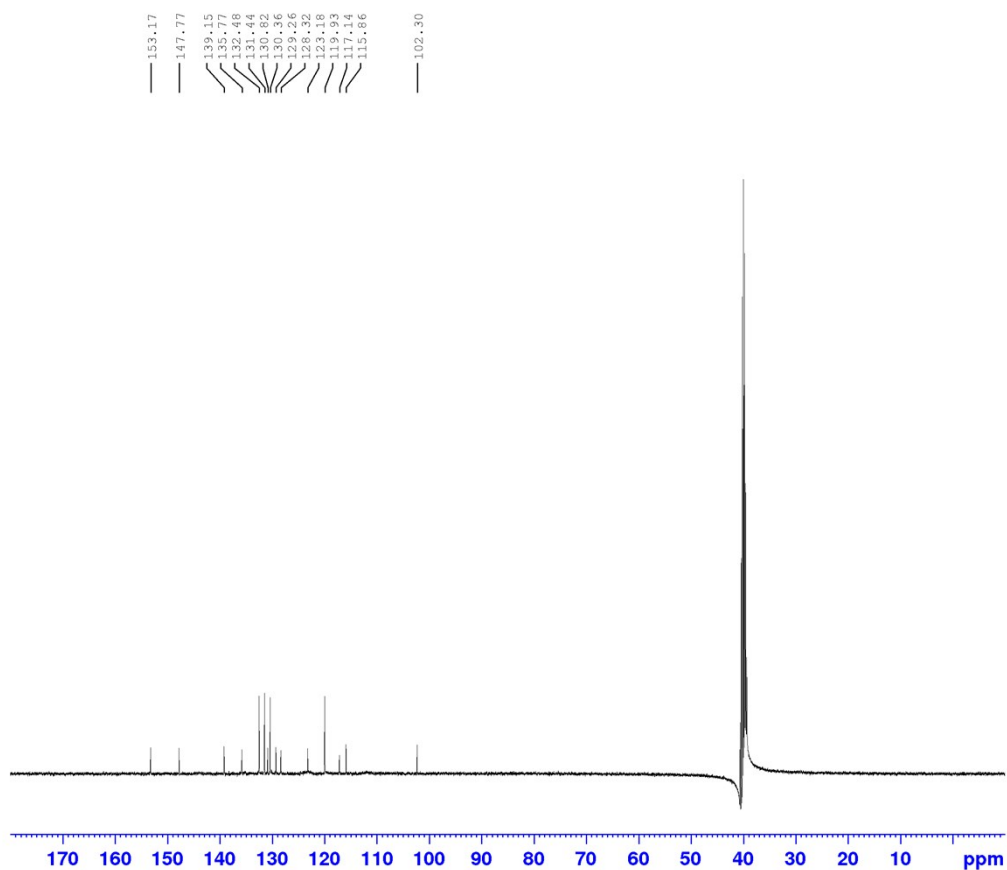


Fig. S8. ^{13}C NMR Spectrum of 2-(3-(4-bromophenyl)-1-phenyl-1H-pyrazol-4-yl)-1H-phenanthro[9,10-d]imidazole (6d)

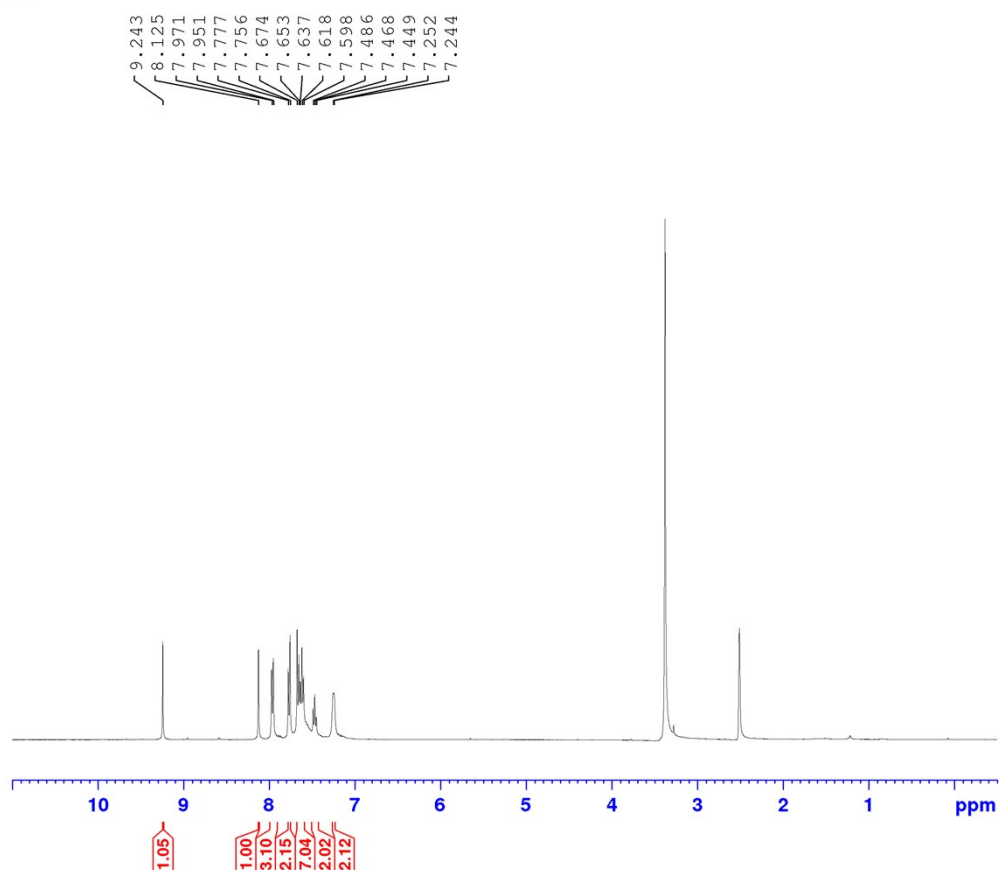


Fig. S9. ^1H NMR Spectrum of 2-(3-(3-fluorophenyl)-1-phenyl-1H-pyrazol-4-yl)-1H-phenanthro[9,10-d]imidazole (6e)

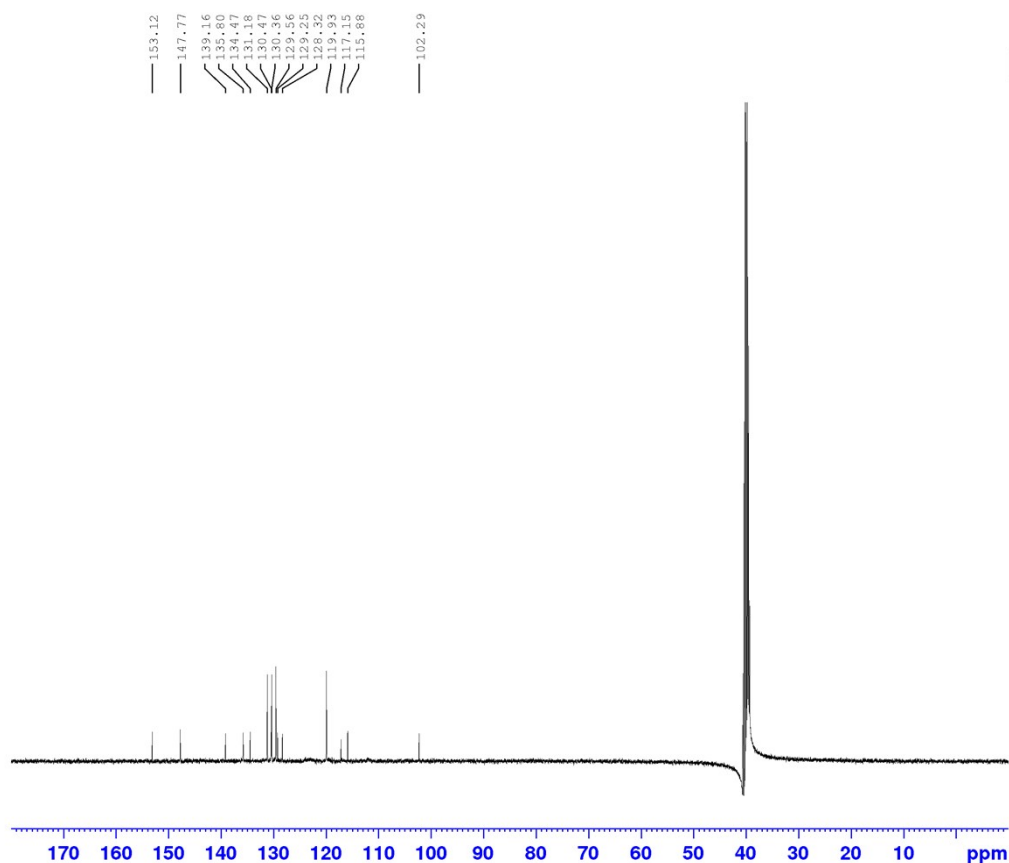


Fig. S10. ¹³C NMR Spectrum of 2-(3-(3-fluorophenyl)-1-phenyl-1H-pyrazol-4-yl)-1H-phenanthro[9,10-d]imidazole (6e)

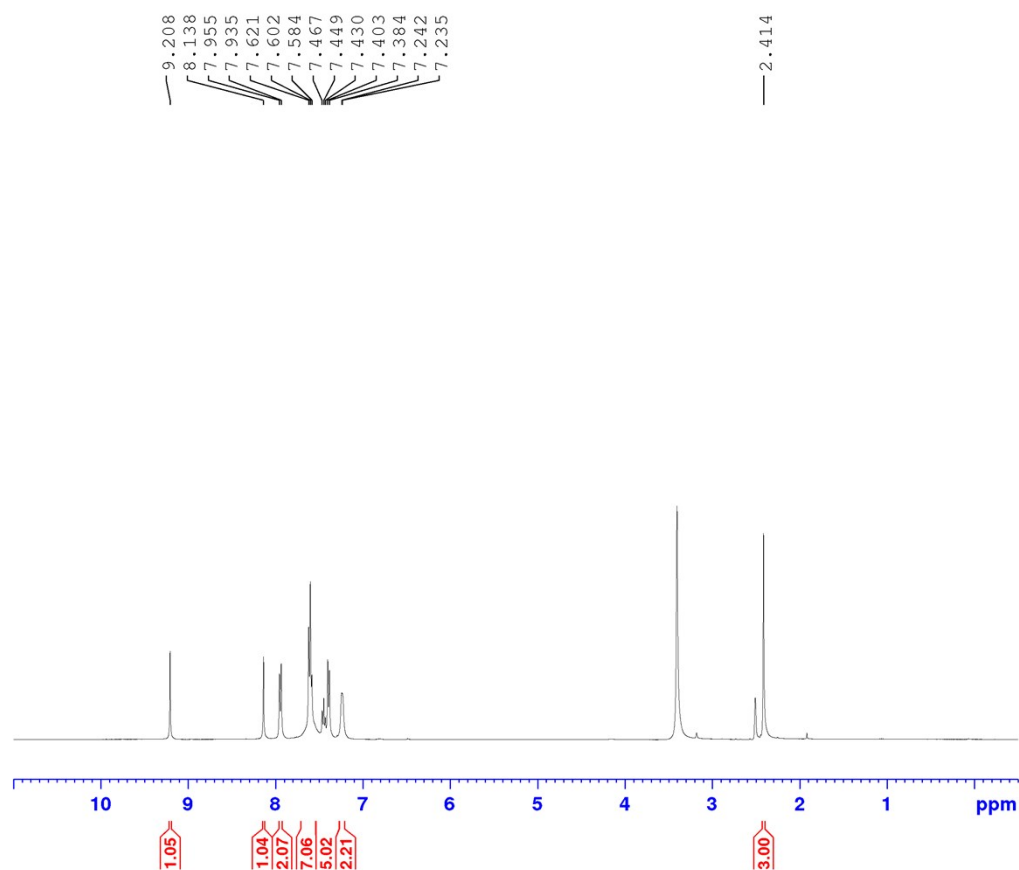


Fig. S11. ^1H NMR Spectrum of 2-(1-phenyl-3-(p-tolyl)-1H-pyrazol-4-yl)-1H-phenanthro[9,10-d]imidazole (6f)

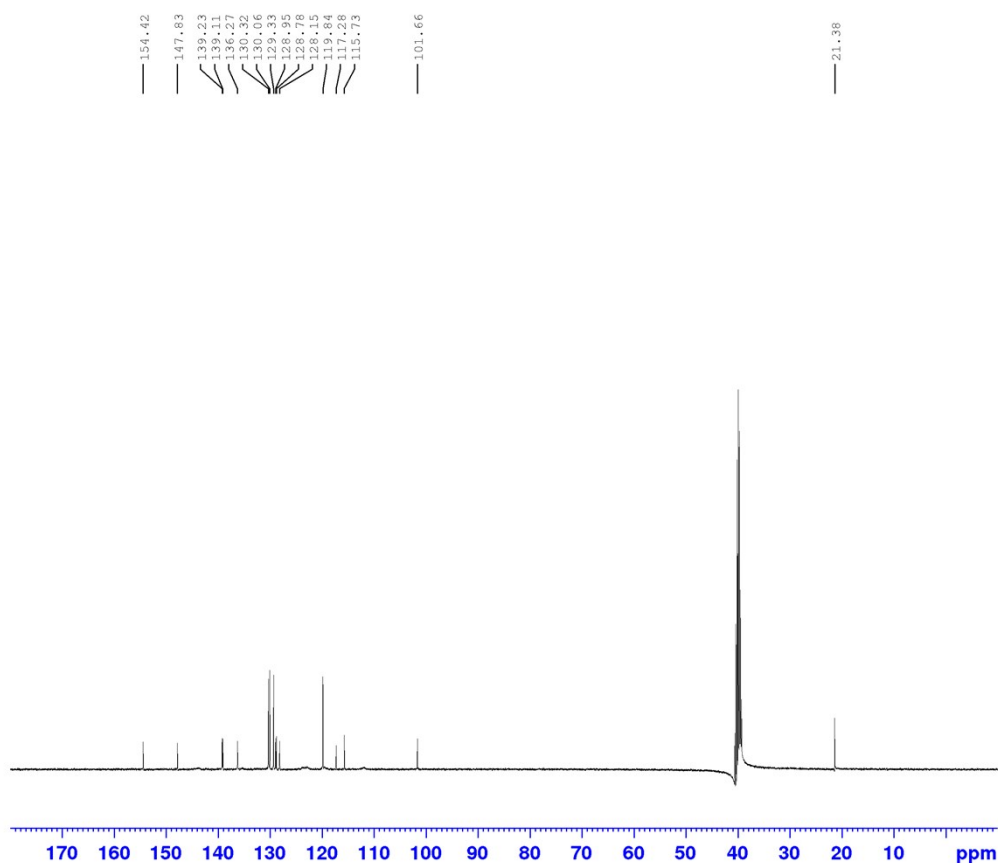


Fig. S12. ^{13}C NMR Spectrum of 2-(1-phenyl-3-(p-tolyl)-1H-pyrazol-4-yl)-1H-phenanthro[9,10-d]imidazole (6f)

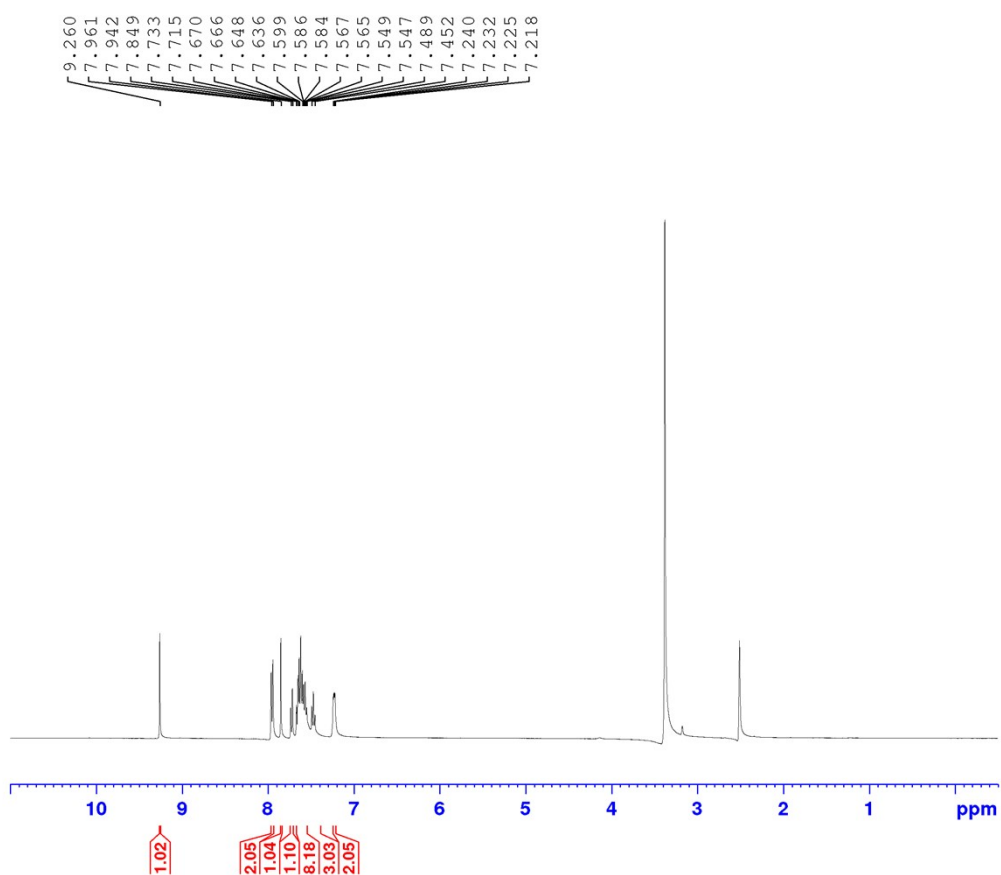


Fig. S13. ^1H NMR Spectrum of 2-(3-(2-chlorophenyl)-1-phenyl-1H-pyrazol-4-yl)-1H-phenanthro[9,10-d]imidazole (6g)

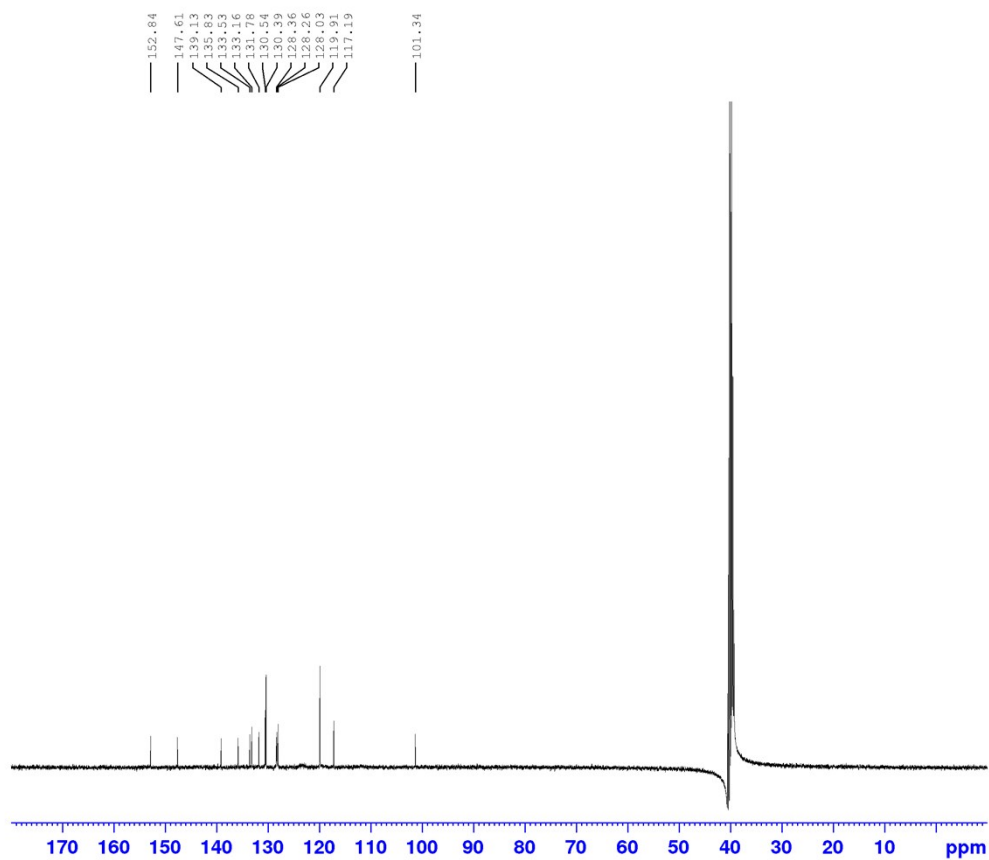


Fig. S14. ^{13}C NMR Spectrum of 2-(3-(2-chlorophenyl)-1-phenyl-1H-pyrazol-4-yl)-1H-phenanthro[9,10-d]imidazole (6g)

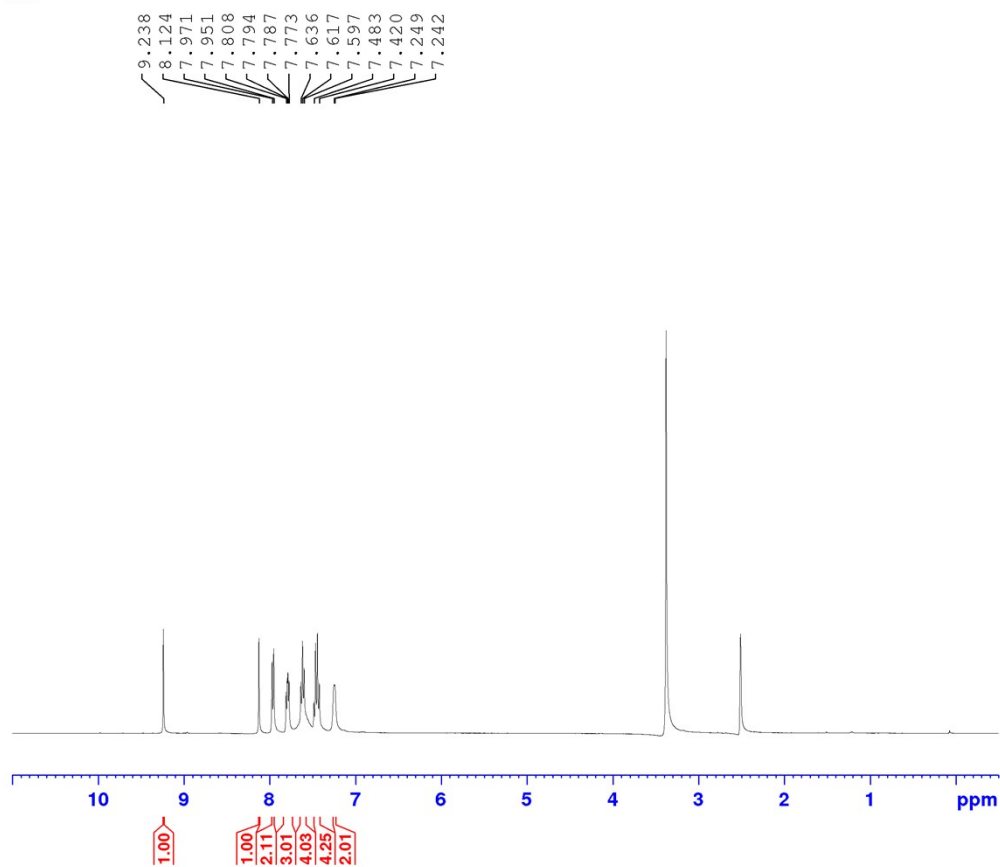


Fig. S15. ¹H NMR Spectrum of 2-(3-(2,4-dichlorophenyl)-1-phenyl-1H-pyrazol-4-yl)-1H-phenanthro[9,10-d]imidazole (6h)

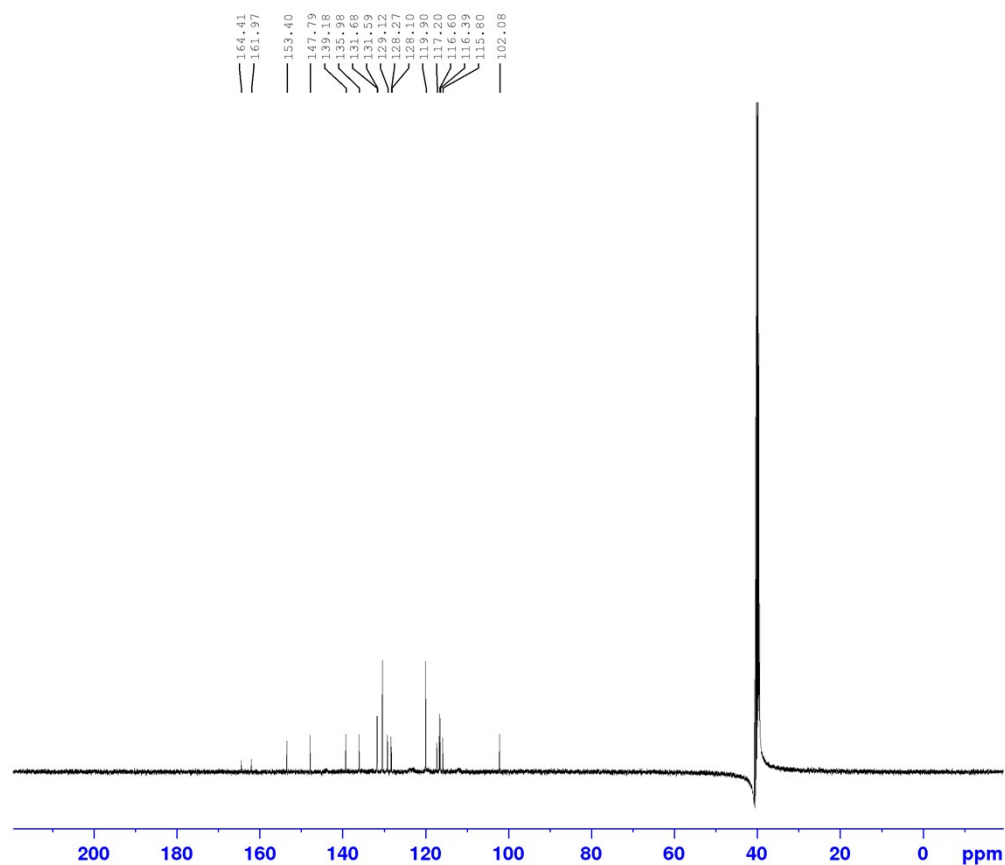


Fig. S16. ¹³C NMR Spectrum of 2-(3-(2,4-dichlorophenyl)-1-phenyl-1H-pyrazol-4-yl)-1H-phenanthro[9,10-d]imidazole (6h)

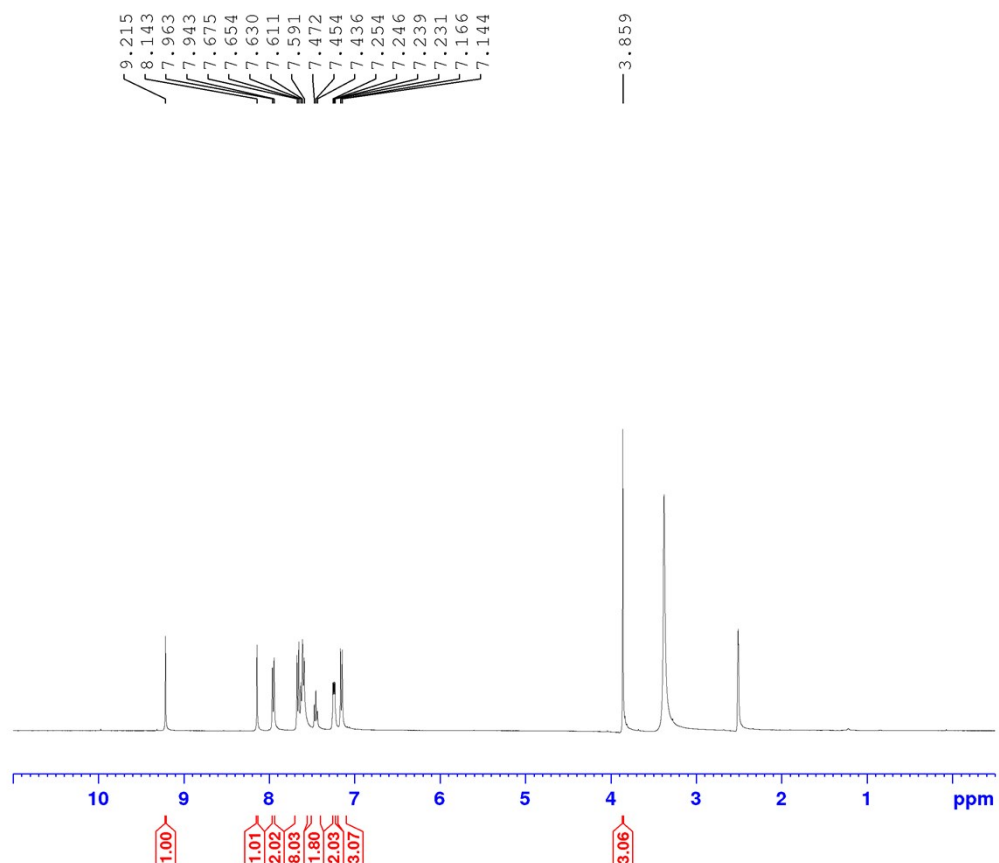


Fig. S17. ^1H NMR Spectrum of 2-(3-(4-methoxyphenyl)-1-phenyl-1H-pyrazol-4-yl)-1H-phenanthro[9,10-d]imidazole (6i)

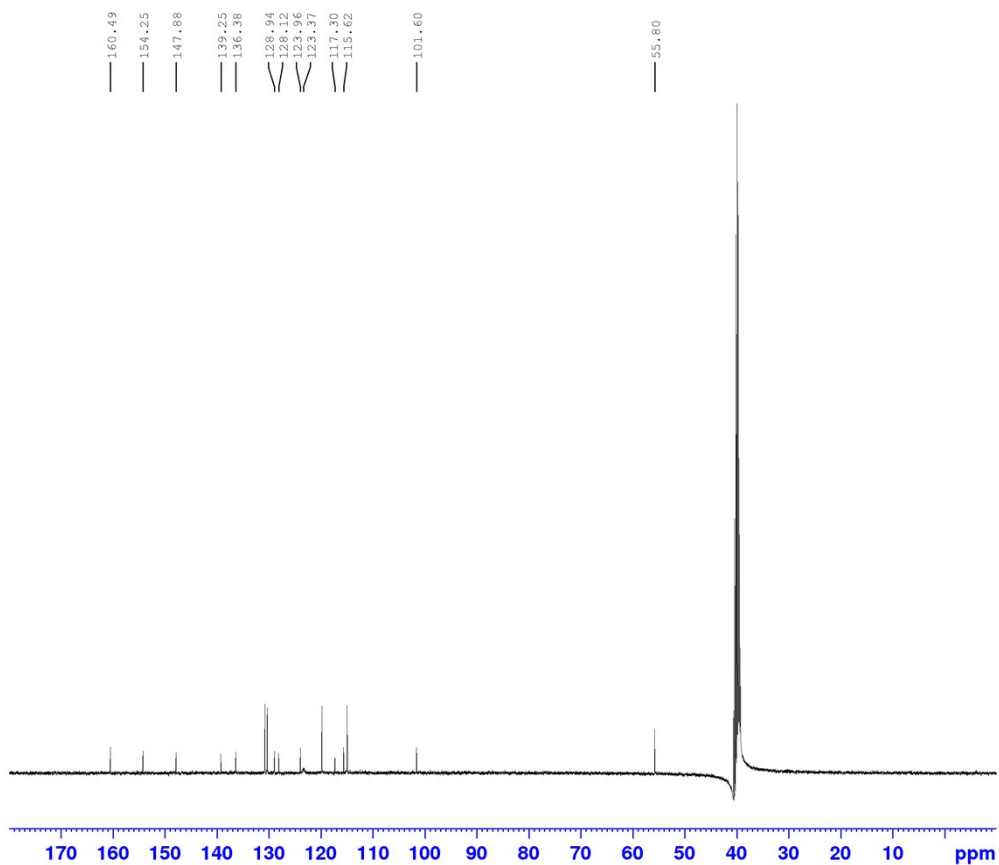


Fig. S18. ^{13}C NMR Spectrum of 2-(3-(4-methoxyphenyl)-1-phenyl-1H-pyrazol-4-yl)-1H-phenanthro[9,10-d]imidazole (6i)

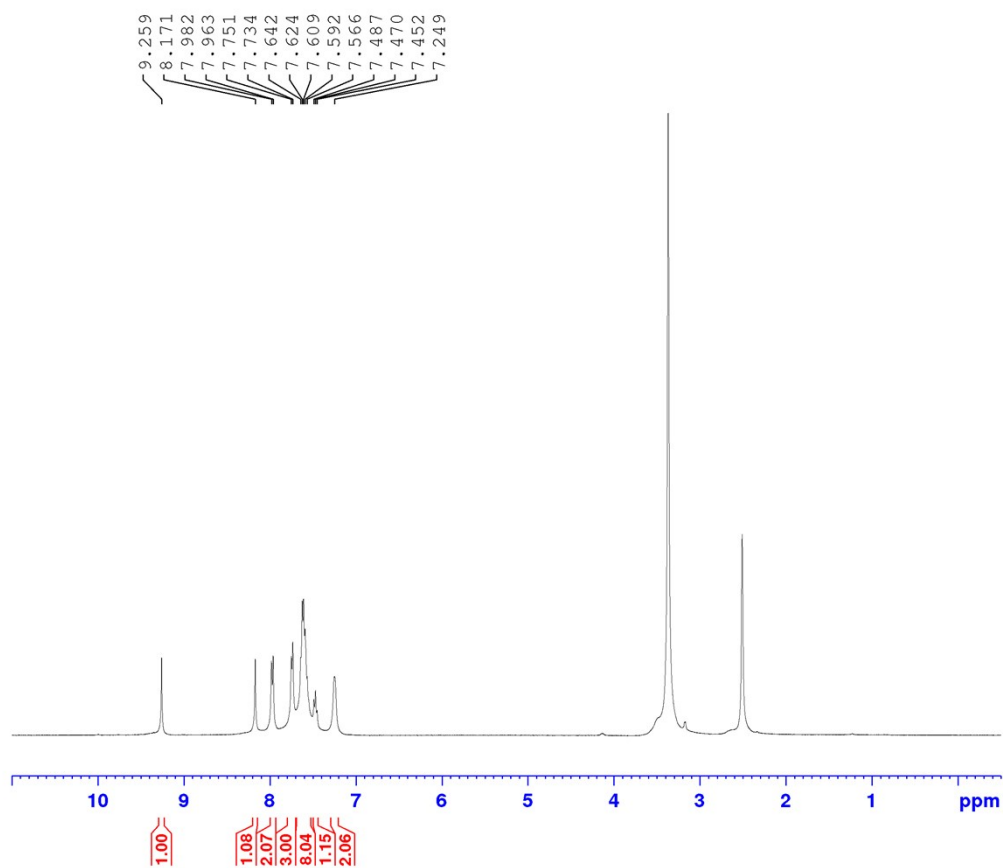


Fig. S19. ^1H NMR Spectrum of 2-(3-(4-nitrophenyl)-1-phenyl-1H-pyrazol-4-yl)-1H-phenanthro[9,10-d]imidazole (6j)

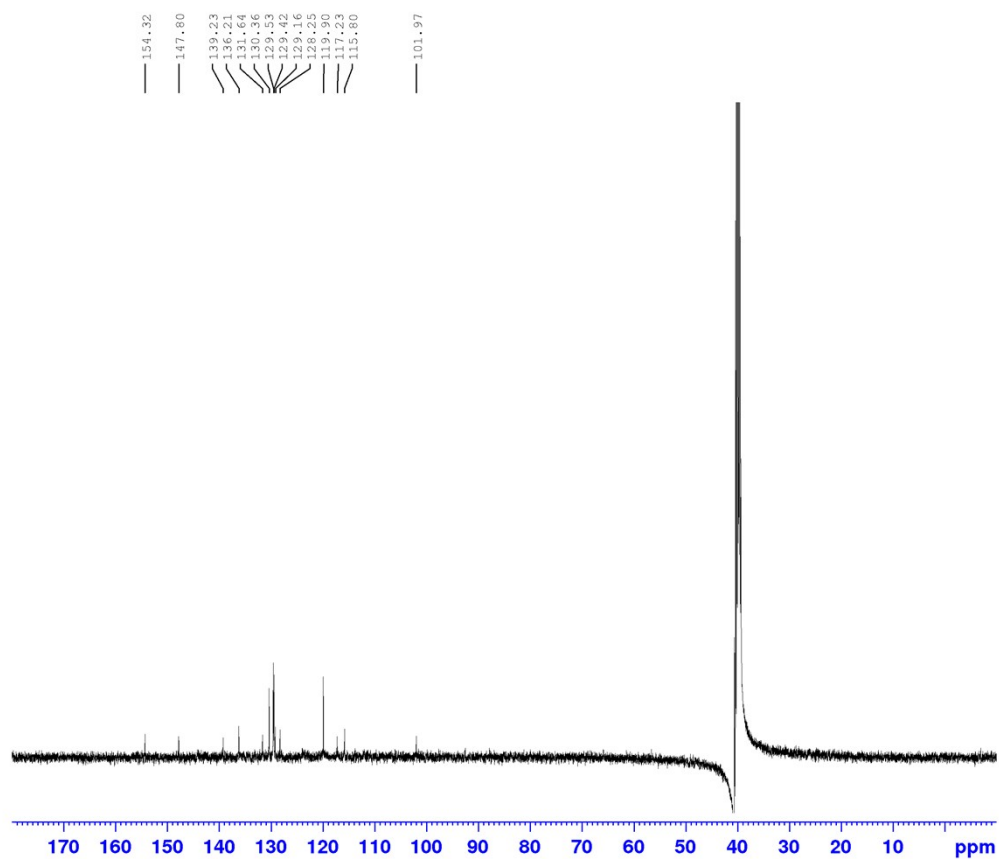


Fig. S20. ^{13}C NMR Spectrum of 2-(3-(4-nitrophenyl)-1-phenyl-1H-pyrazol-4-yl)-1H-phenanthro[9,10-d]imidazole (6j)