

Multicomponent synthesis of new curcumin-based pyrano[2,3-d]pyrimidine derivatives using a nano-magnetic solid acid catalyst

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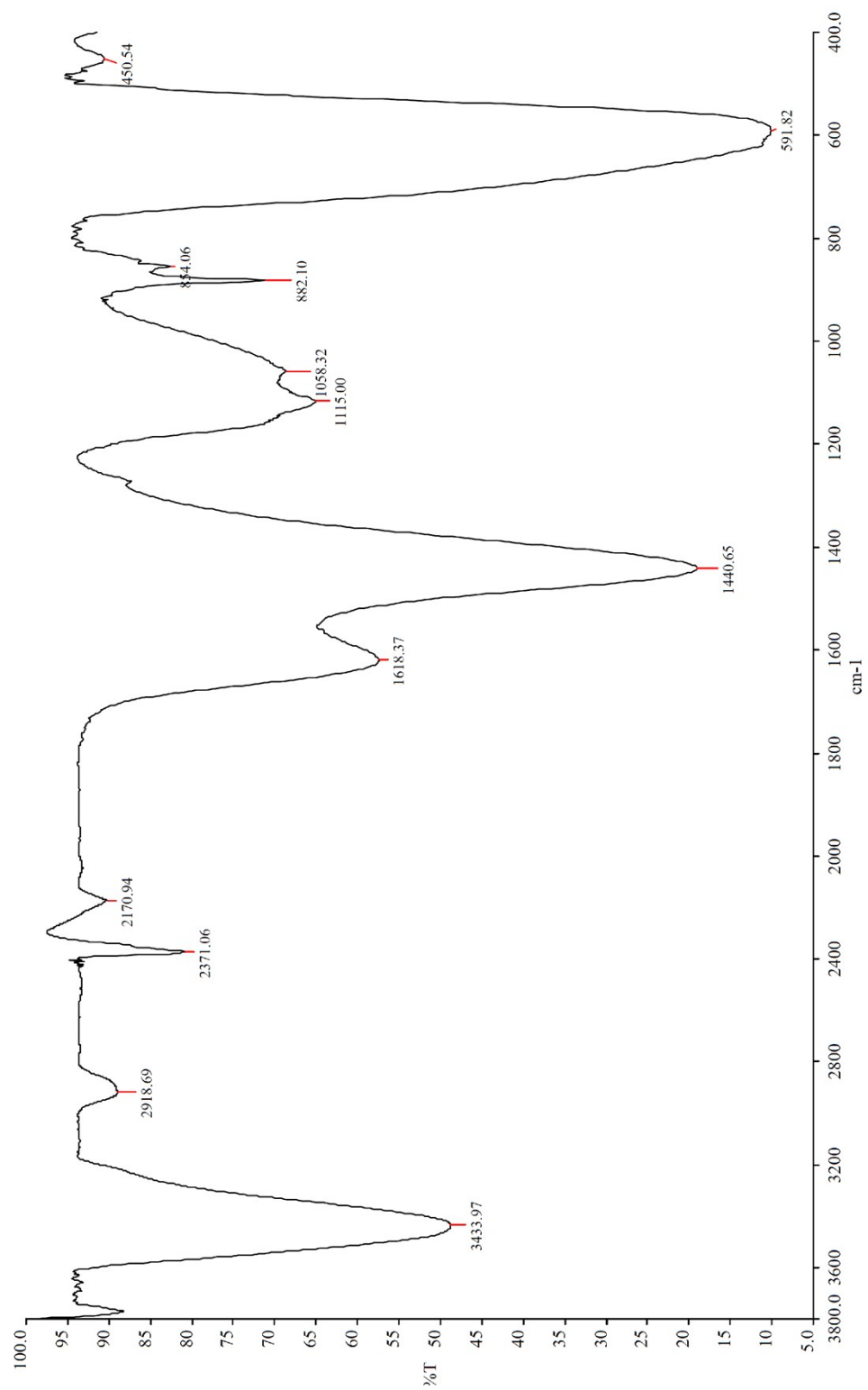
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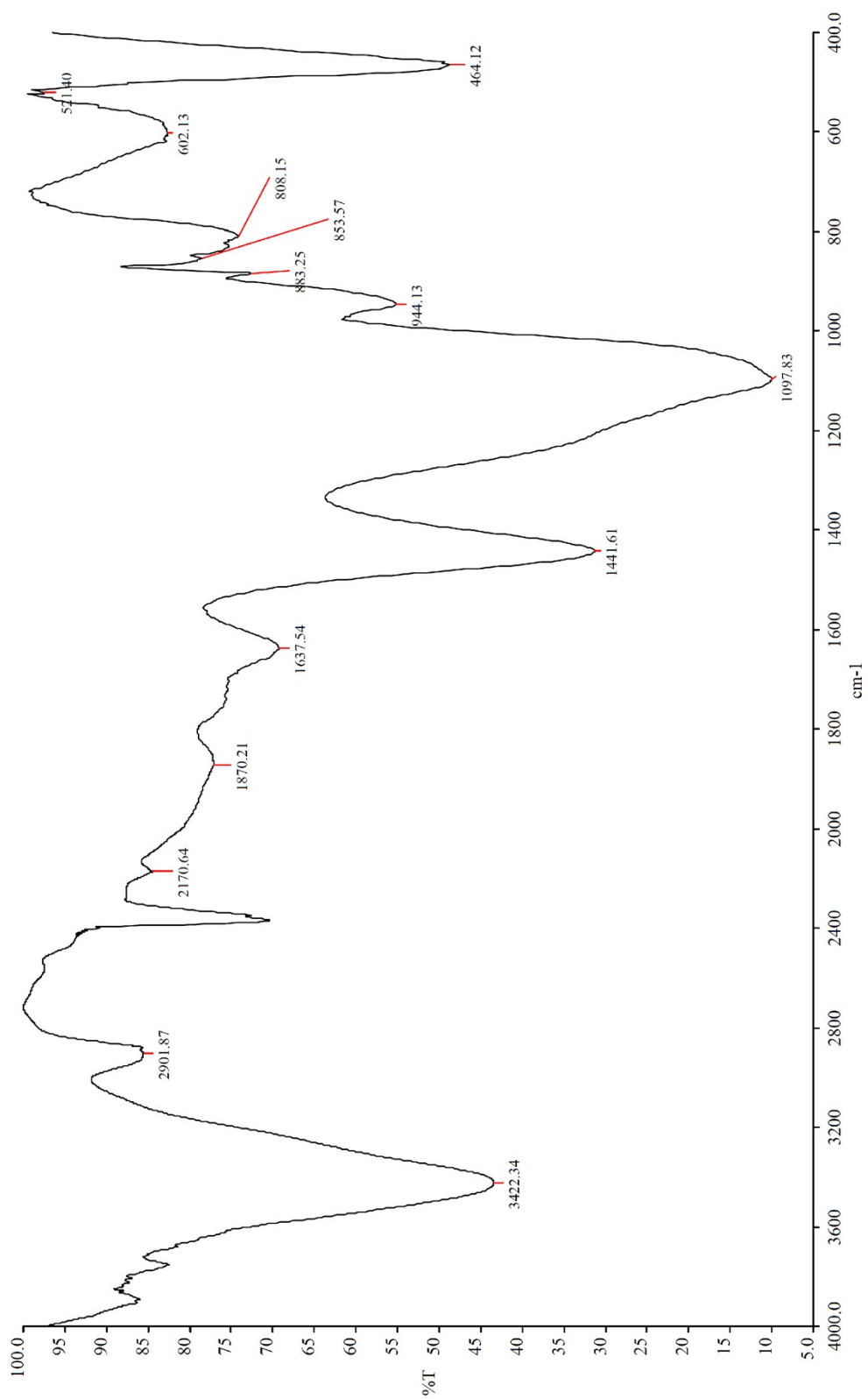
FT-IR of Fe₃O₄, Fe₃O₄@SiO₂, VMNP, MNPO, catalyst and Sulfanilic acid

Copy of ¹H NMR, ¹³C NMR & IR Spectra of synthesized compounds

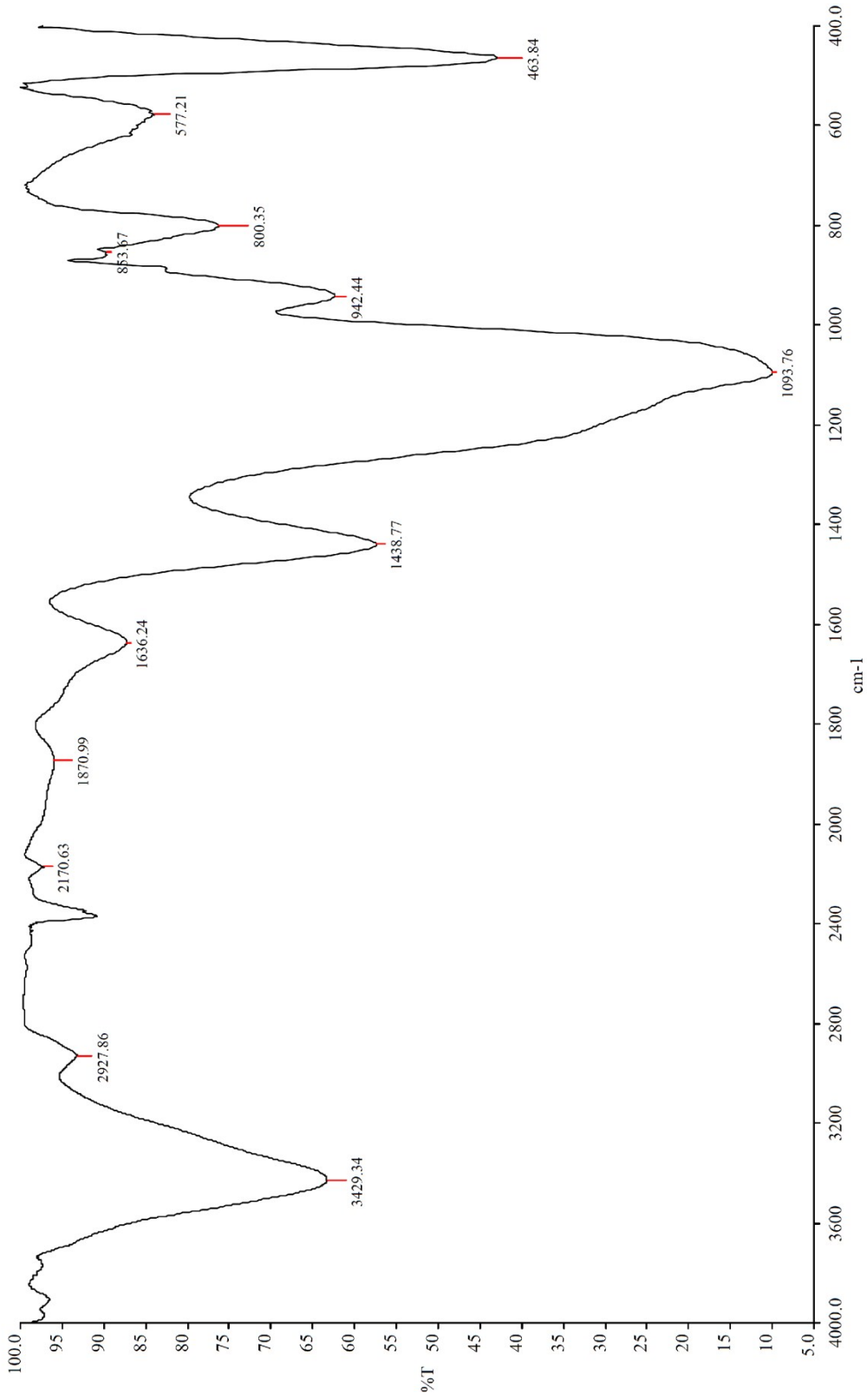
FT-IR of Fe₃O₄



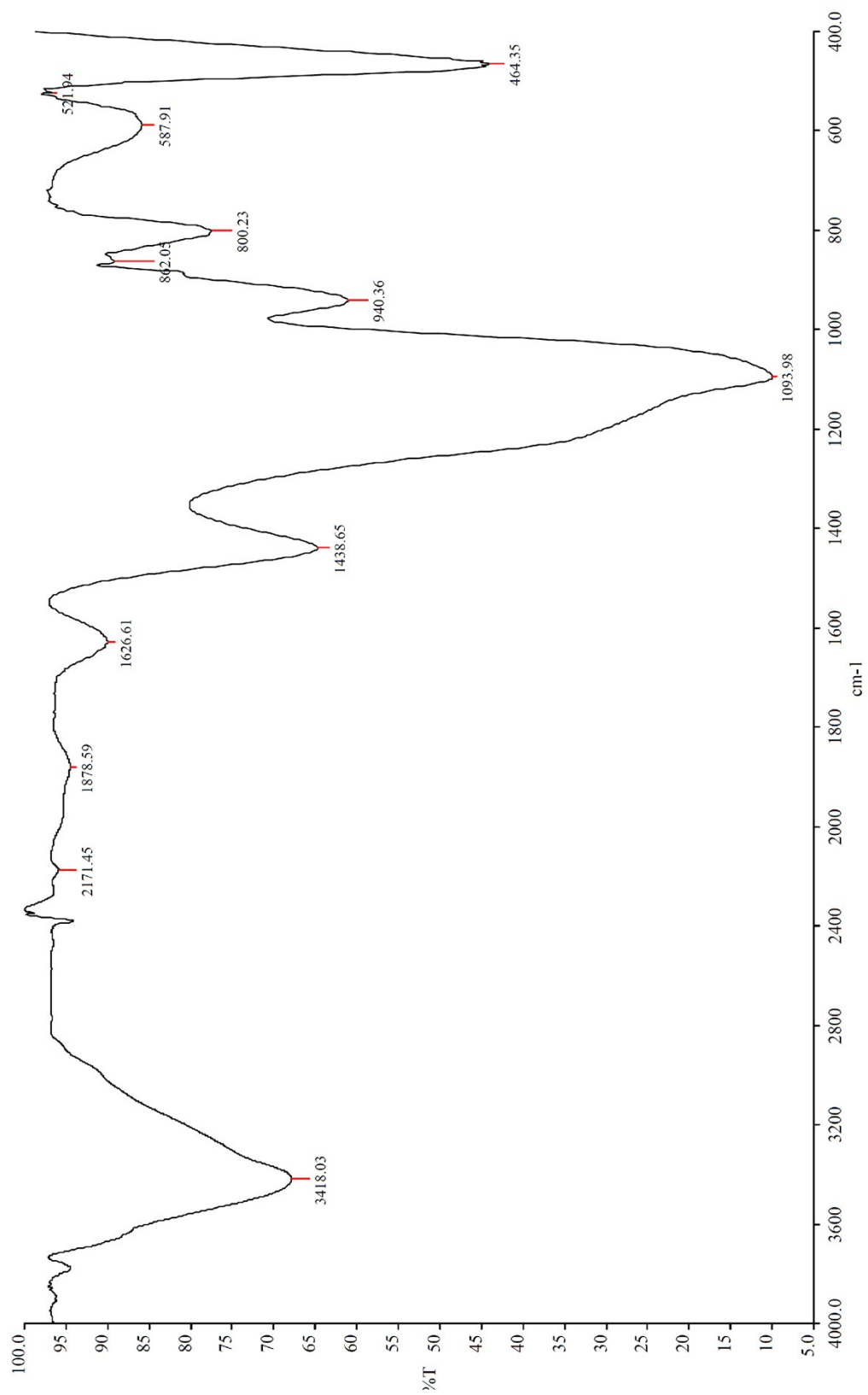
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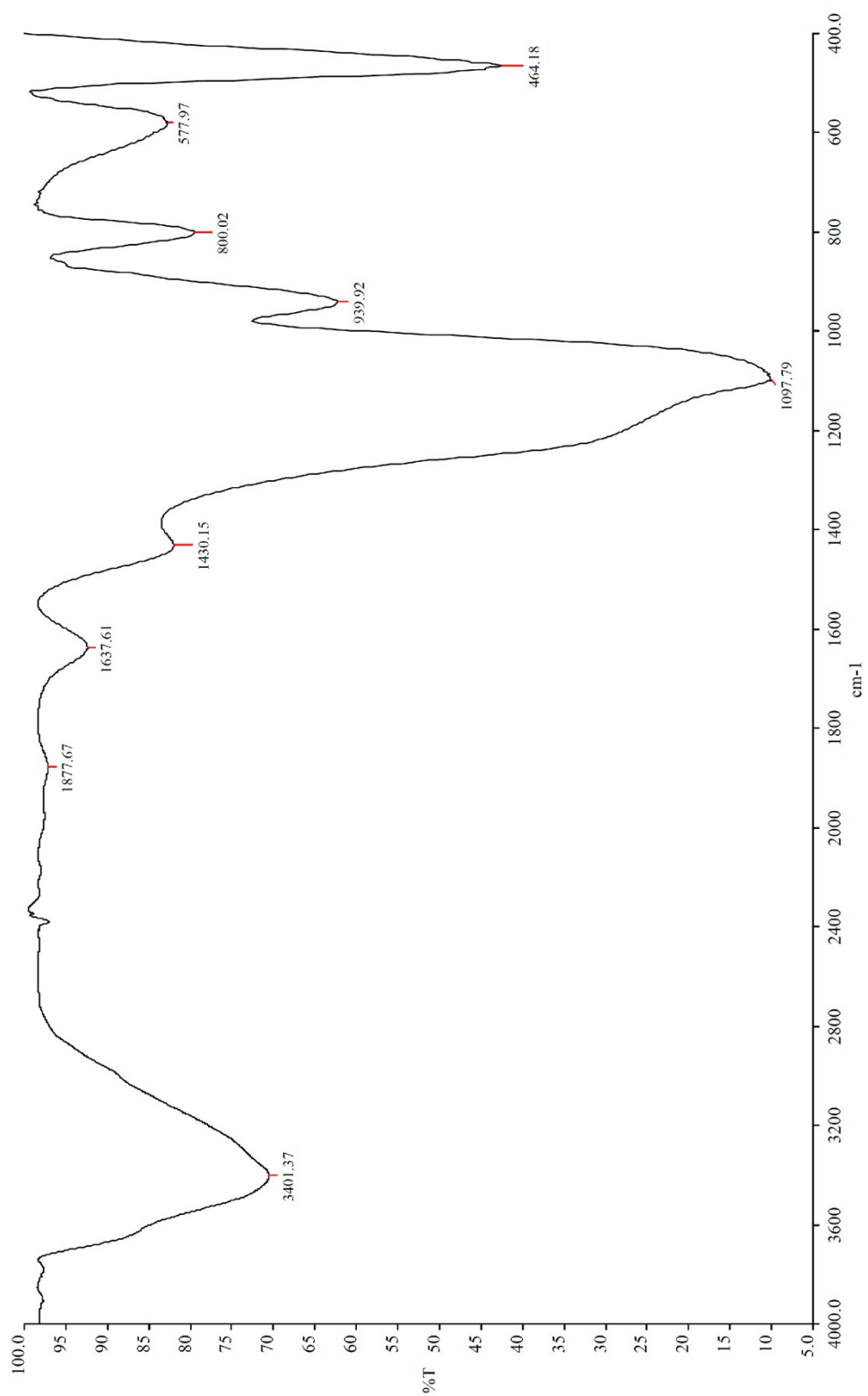
FT-IR of VMNP



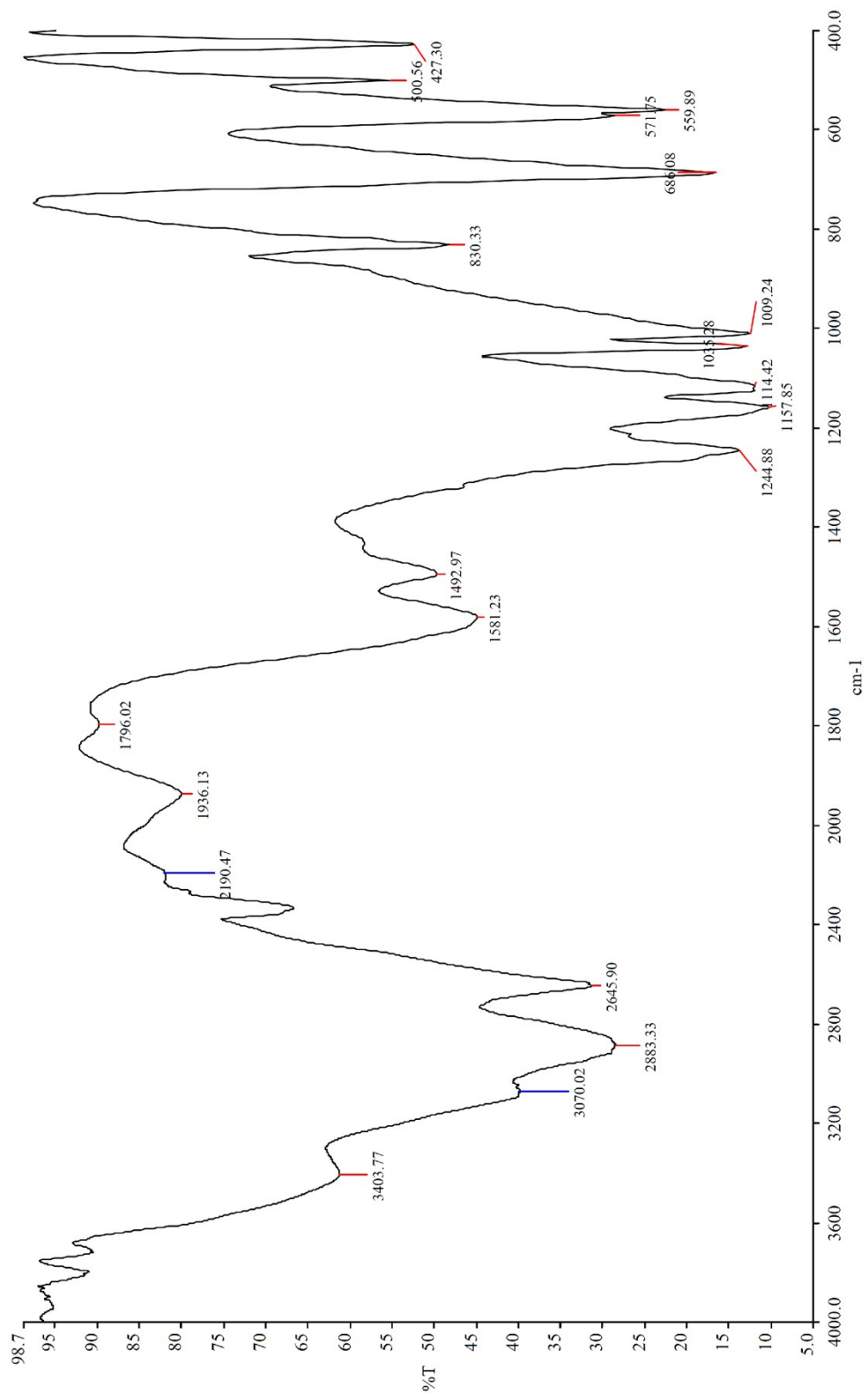
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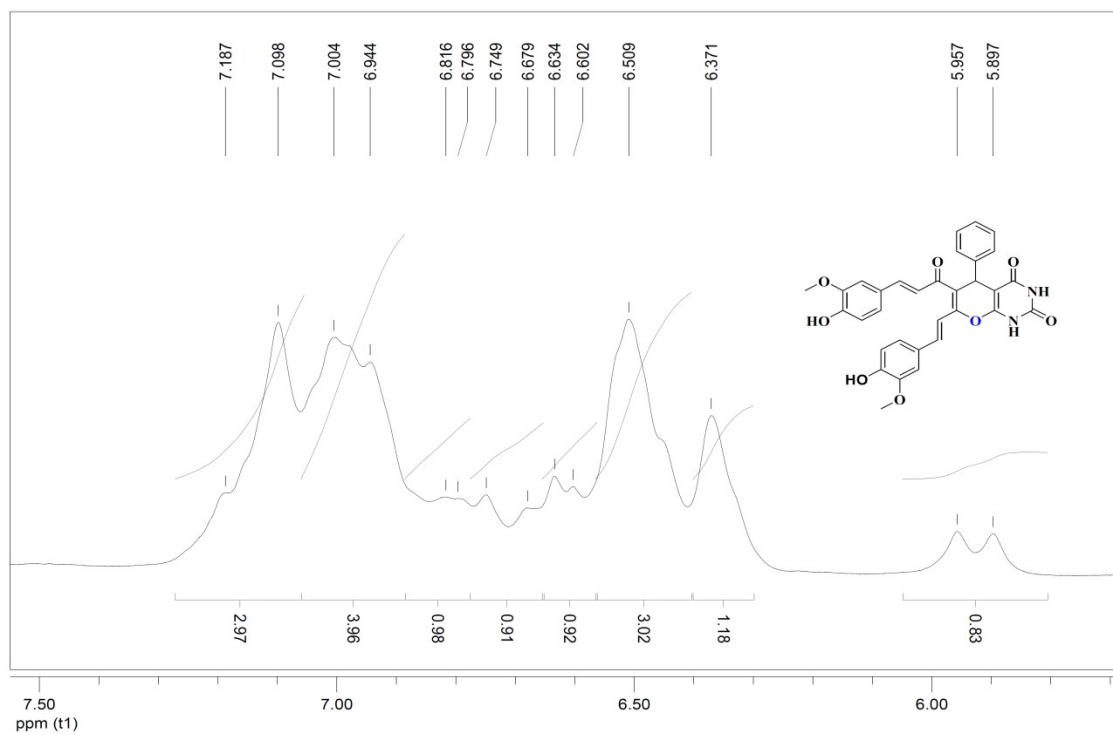
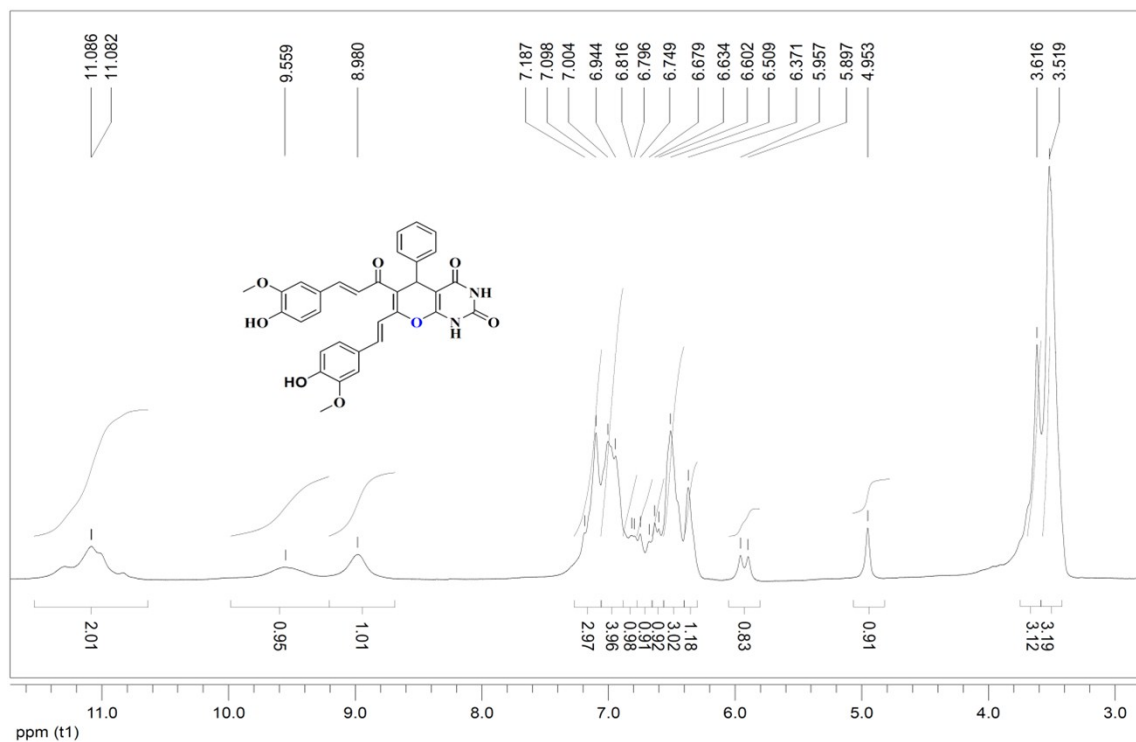
FT-IR of MNP-SAA catalyst

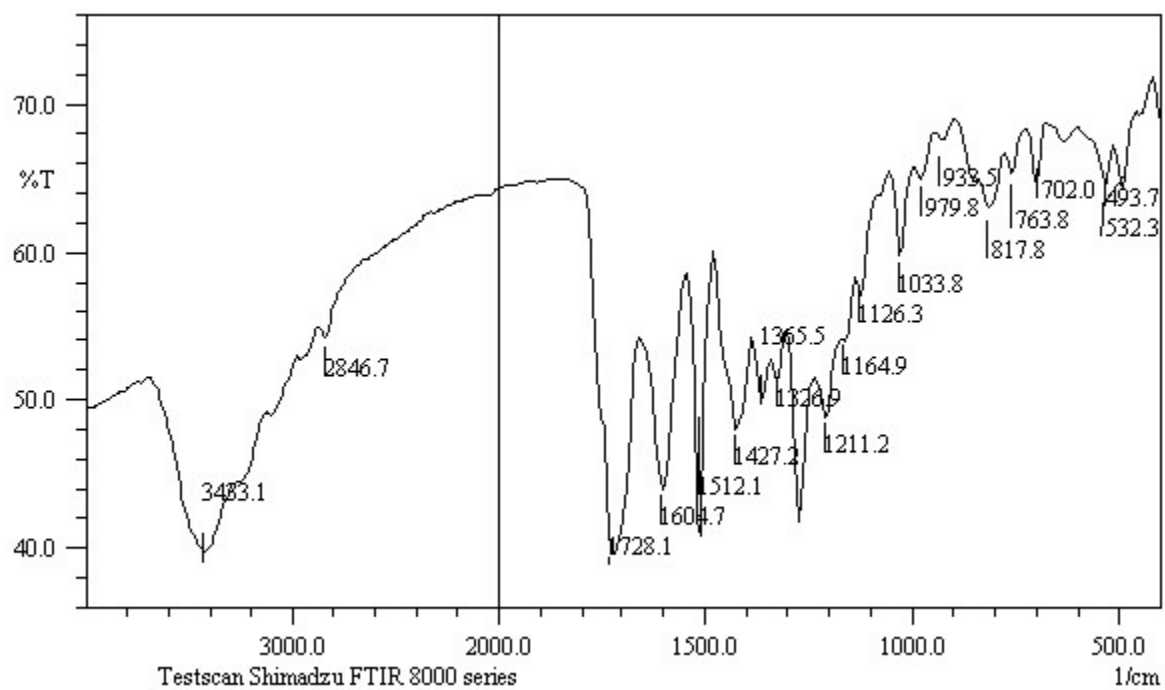
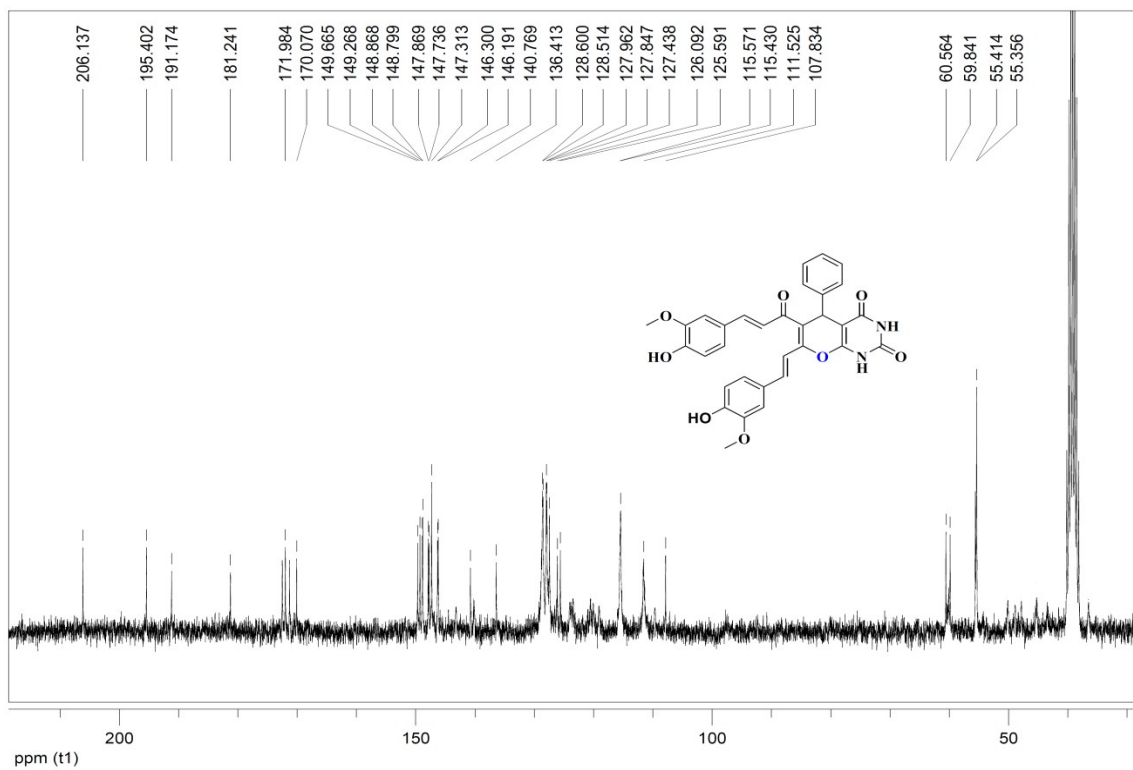


FT-IR of Sulfanilic acid

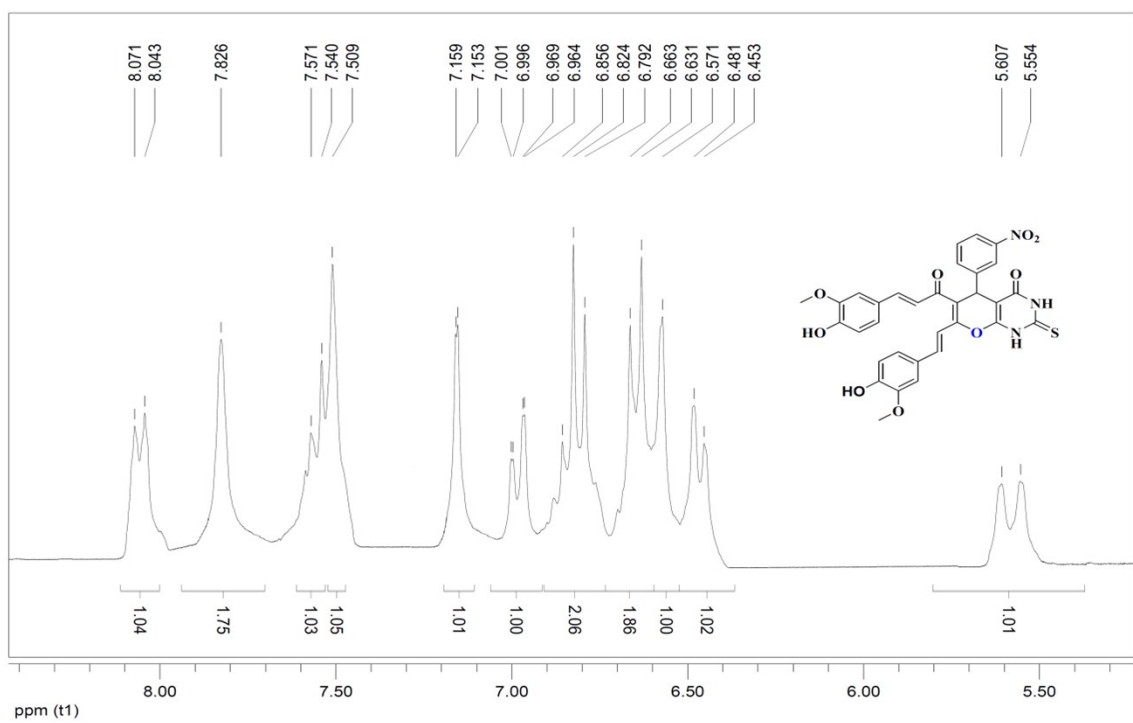
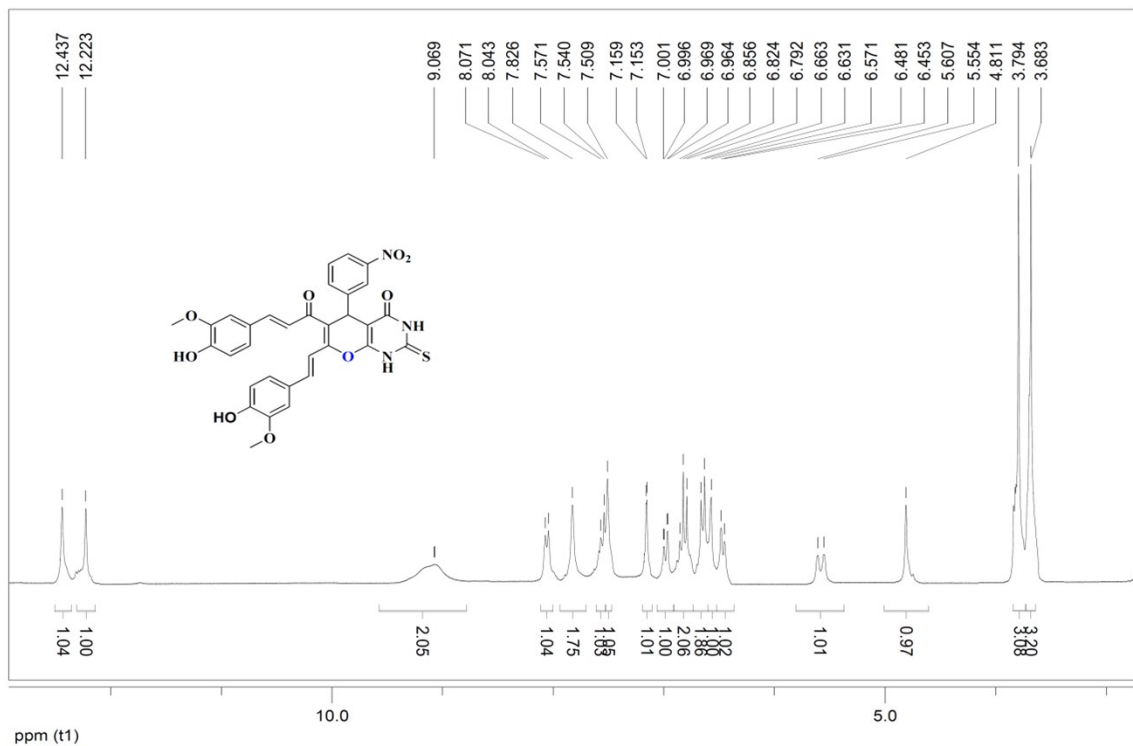


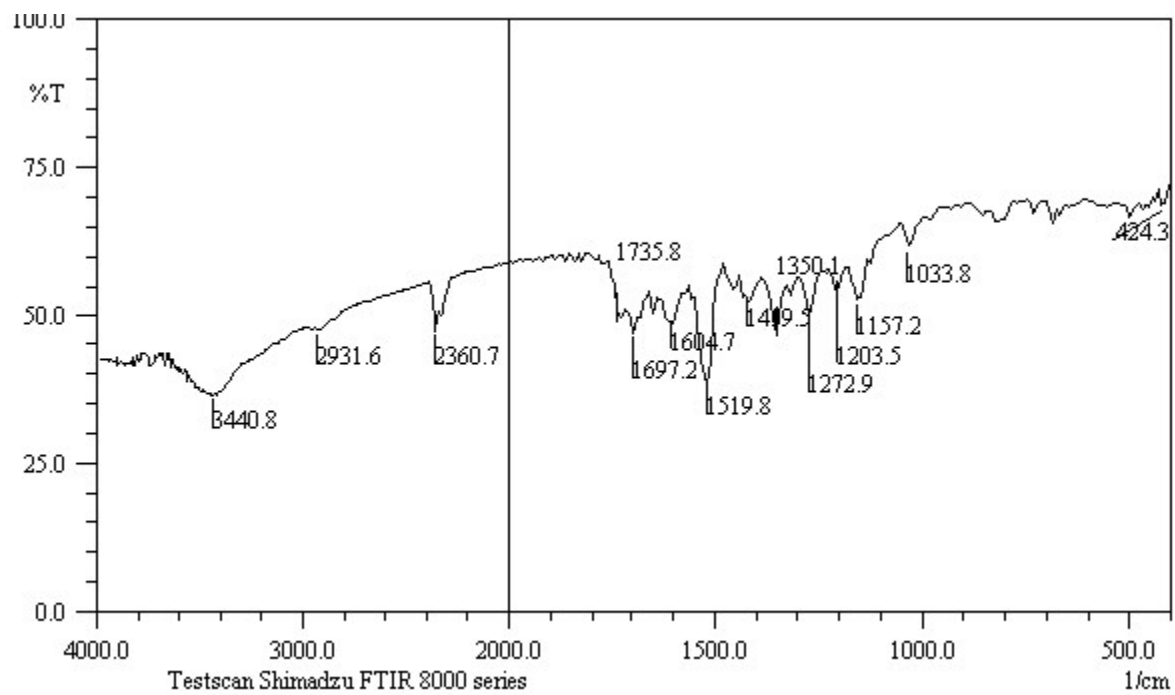
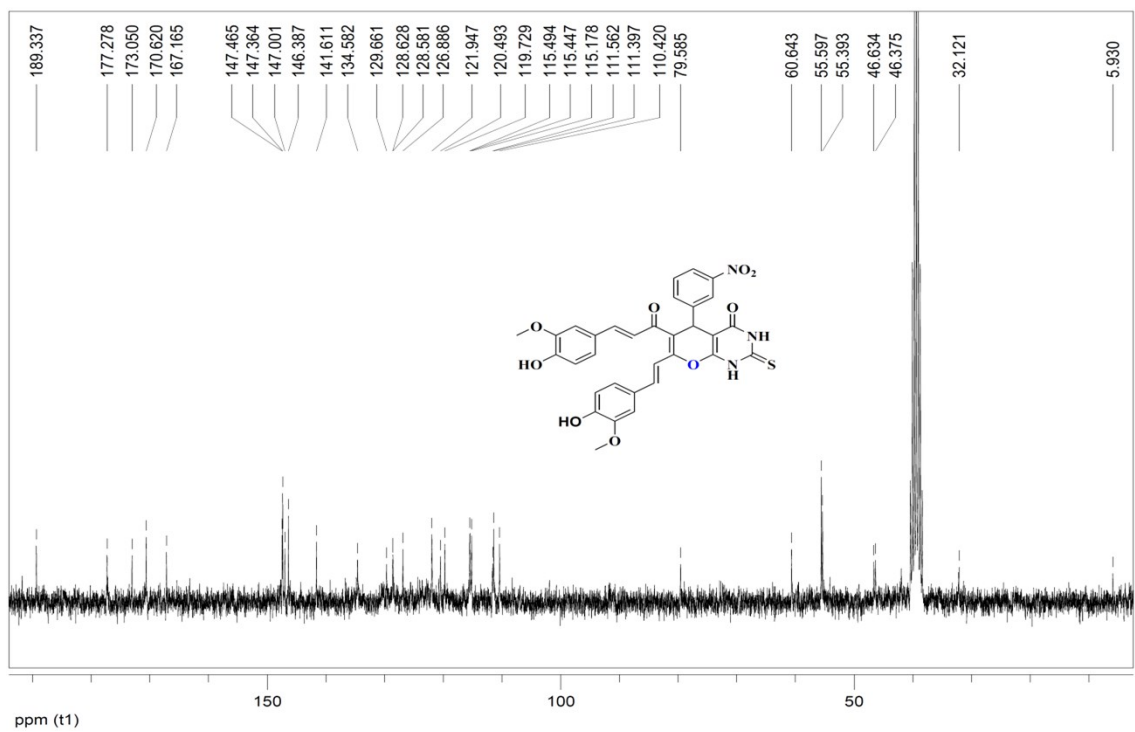
1. ^1H NMR, ^{13}C NMR & IR of Compound 4a



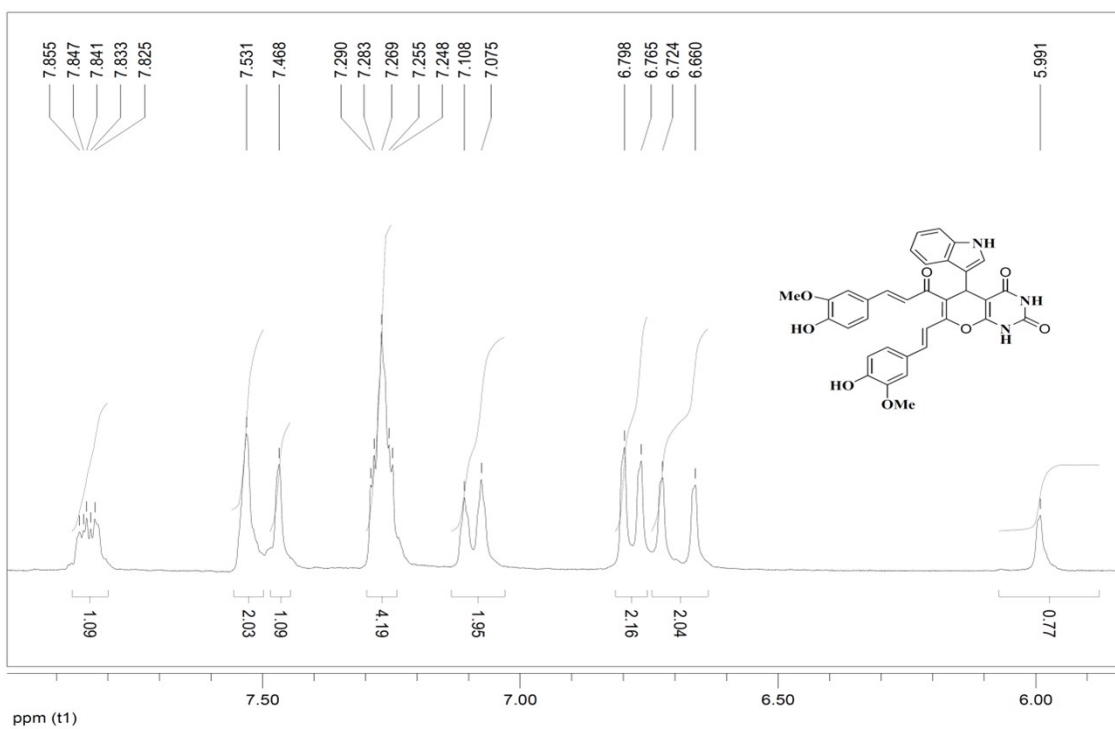
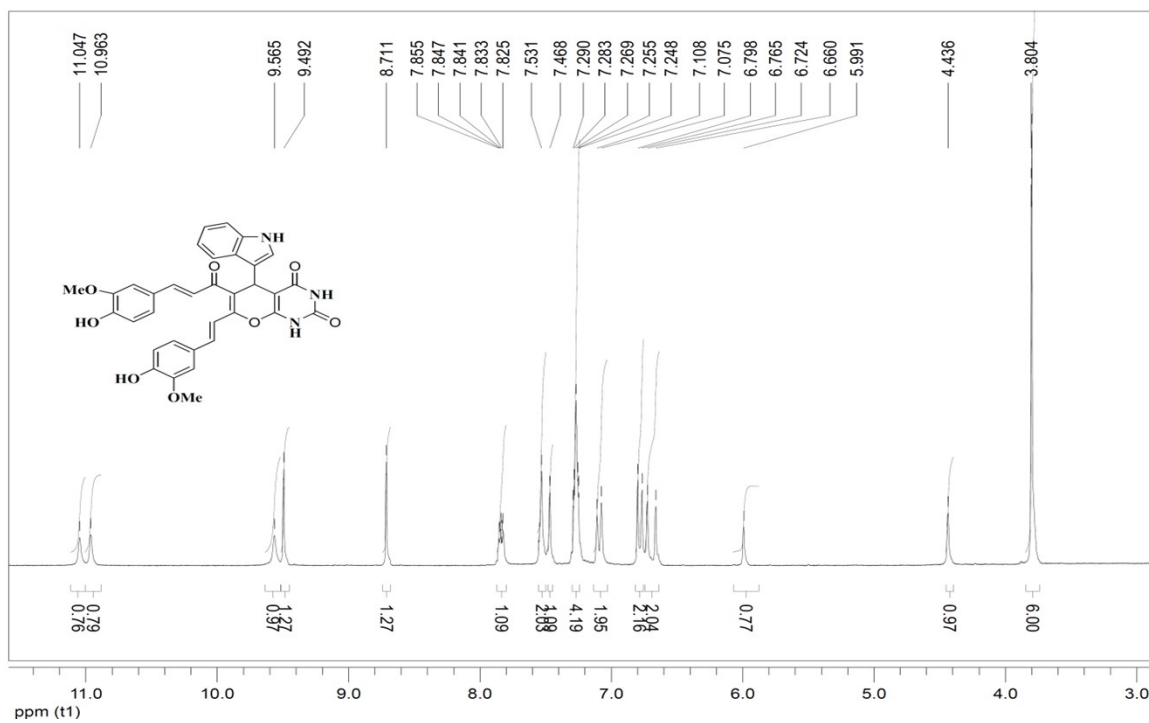


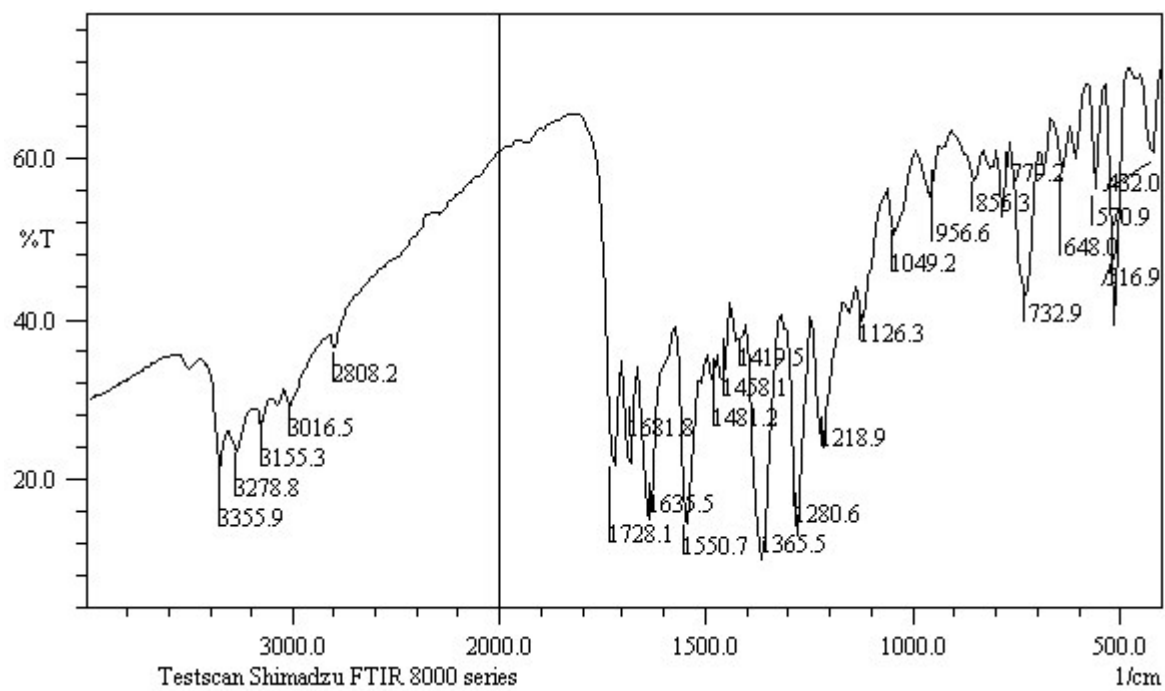
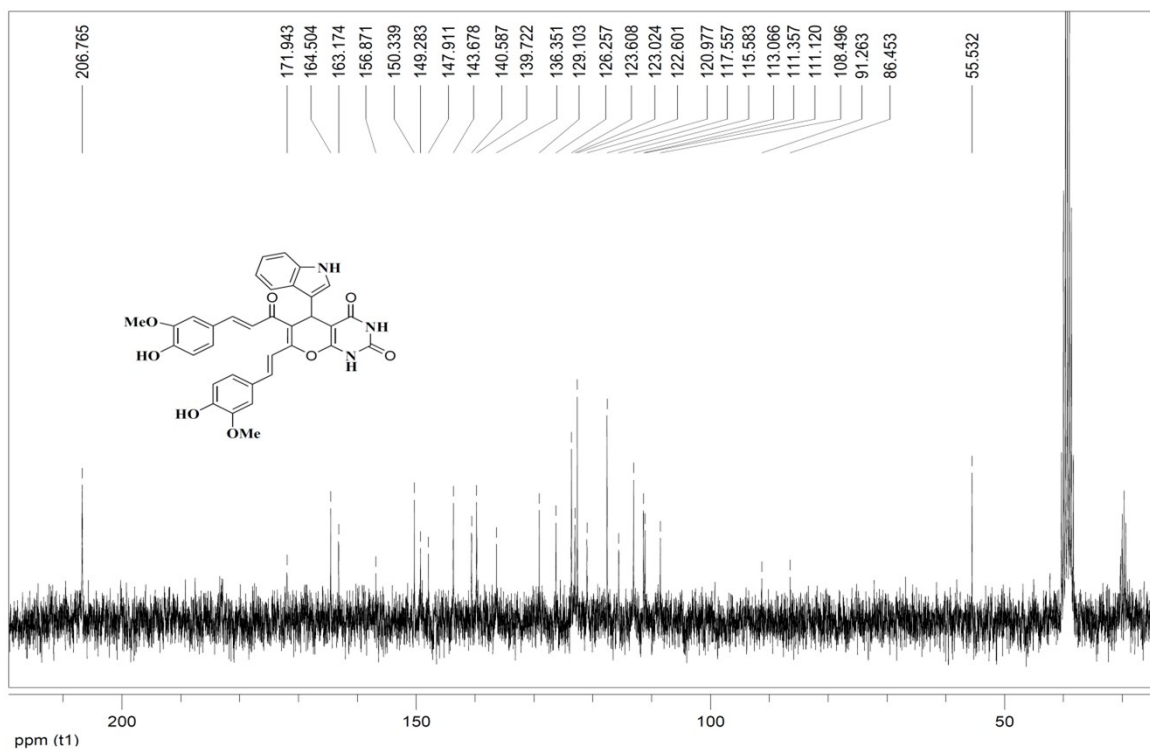
2. ^1H NMR, ^{13}C NMR & IR of Compound **4b**



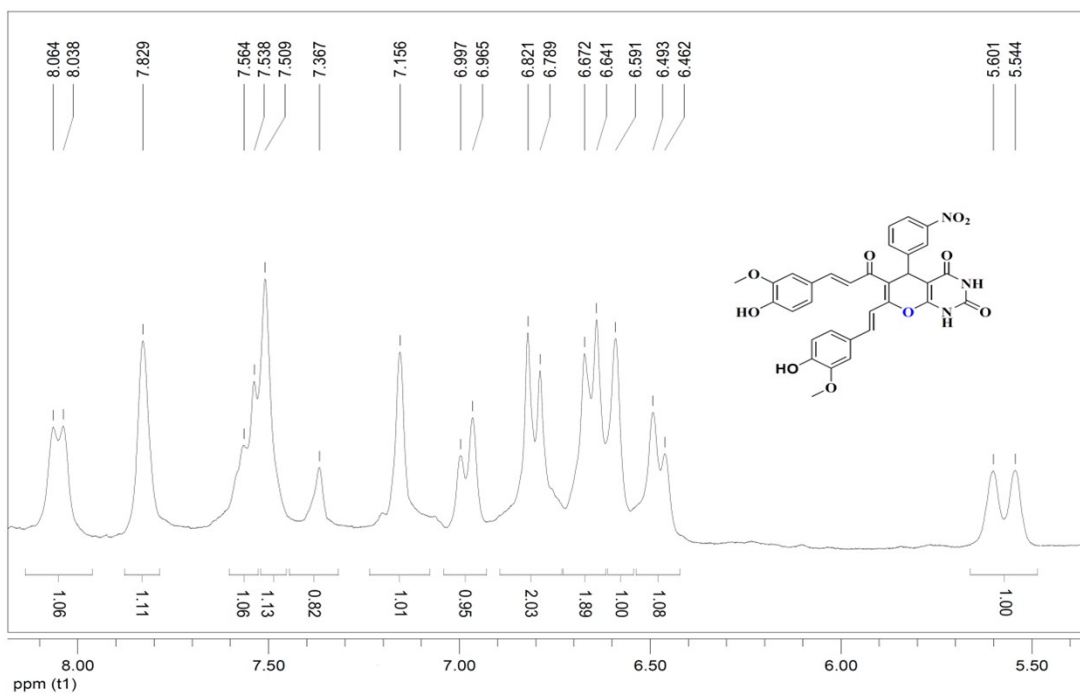
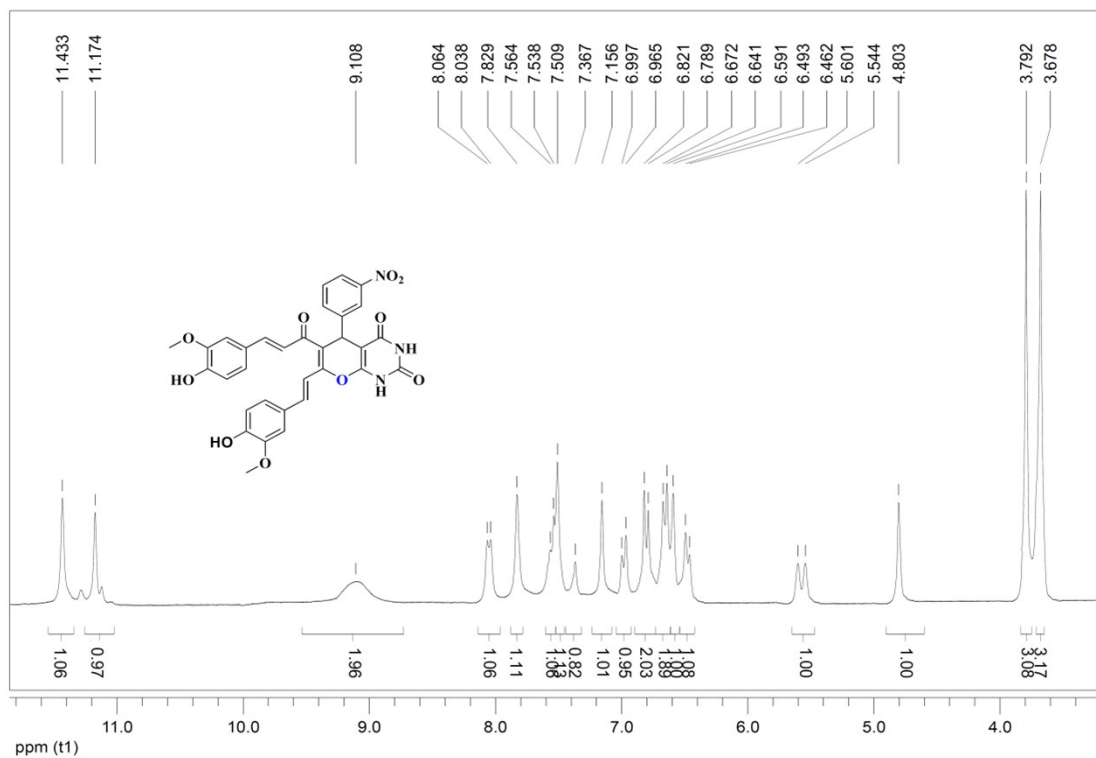


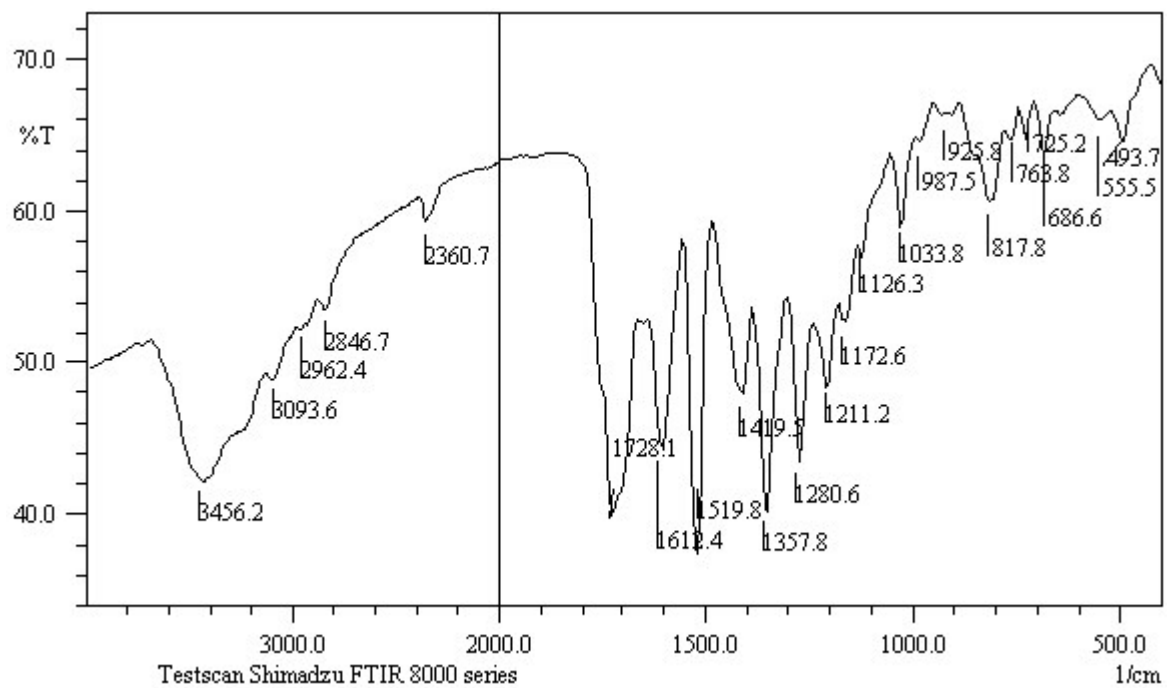
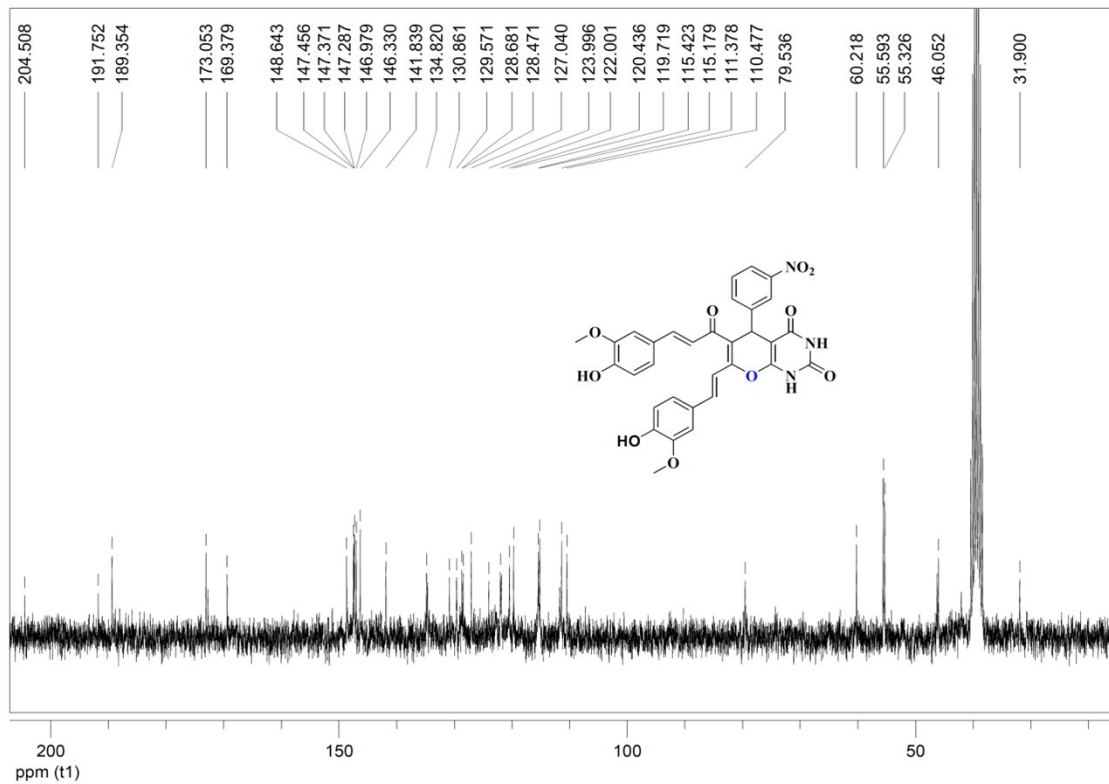
3. ^1H NMR, ^{13}C NMR & IR of Compound 4e



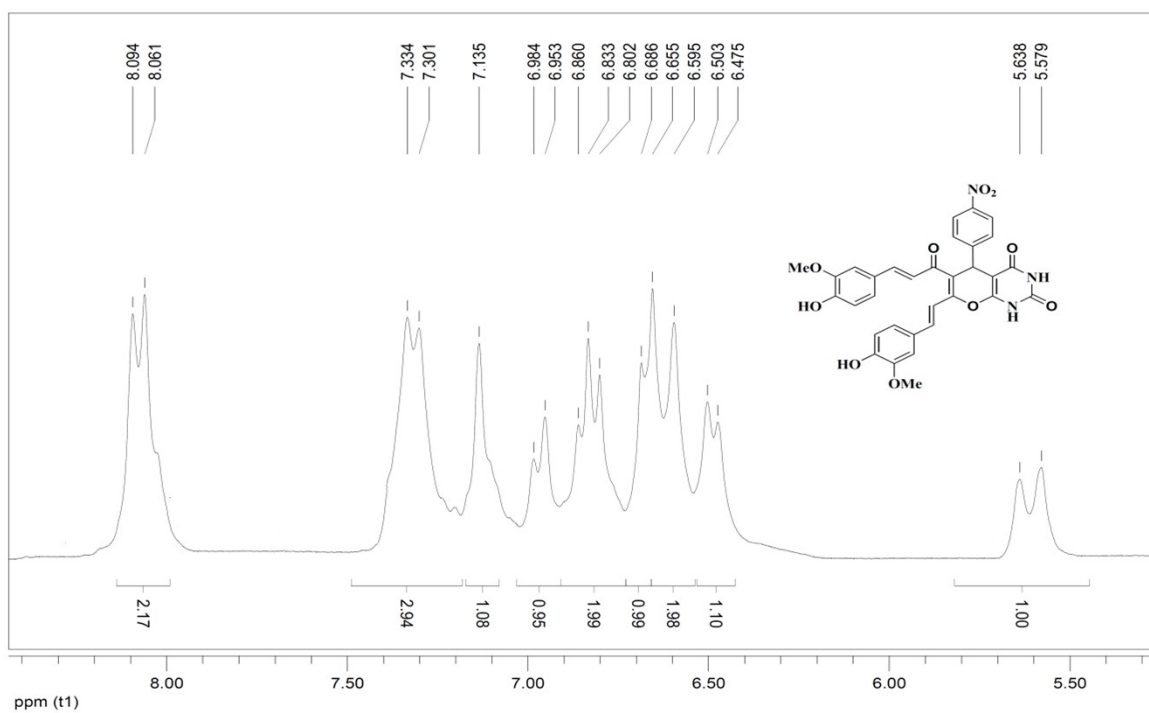
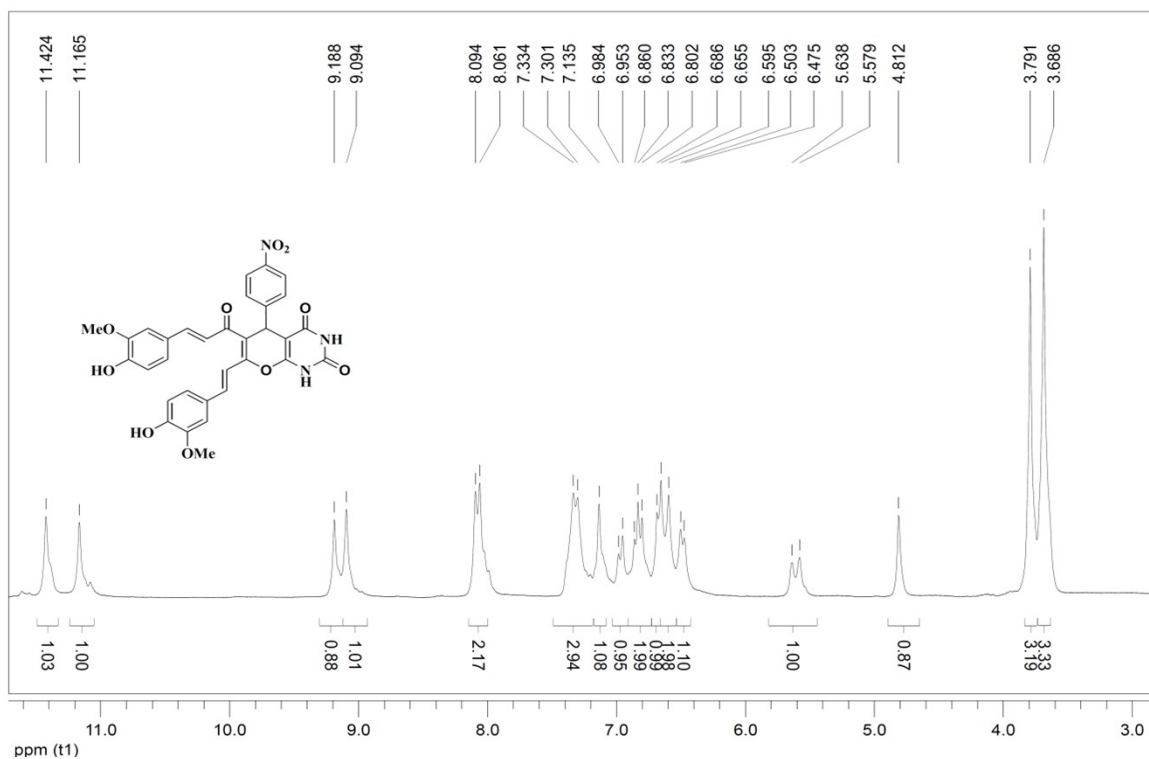


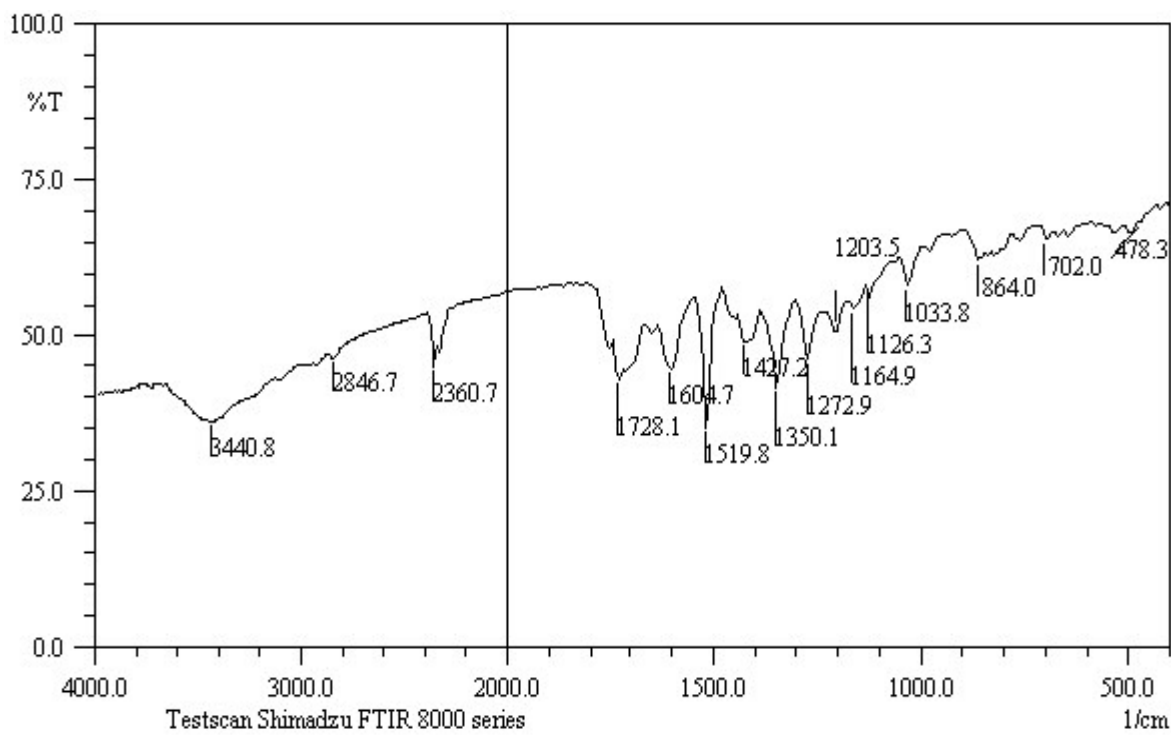
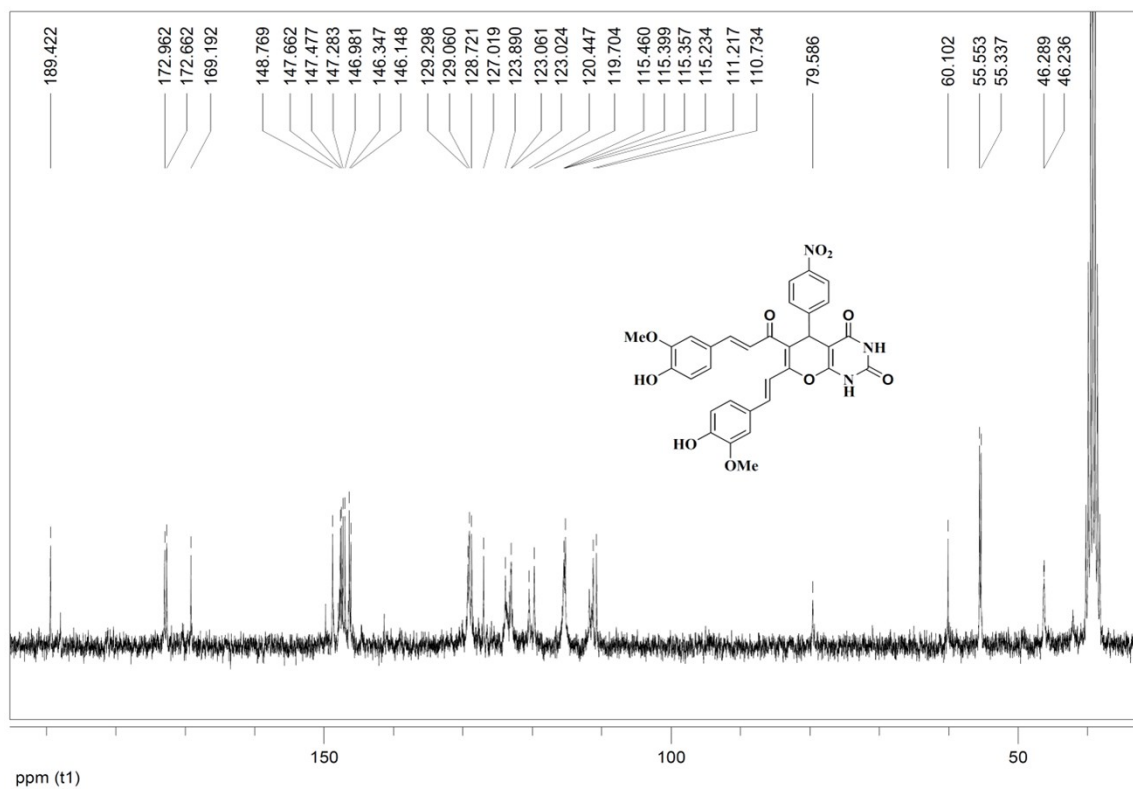
4. ^1H NMR, ^{13}C NMR & IR of Compound 4d



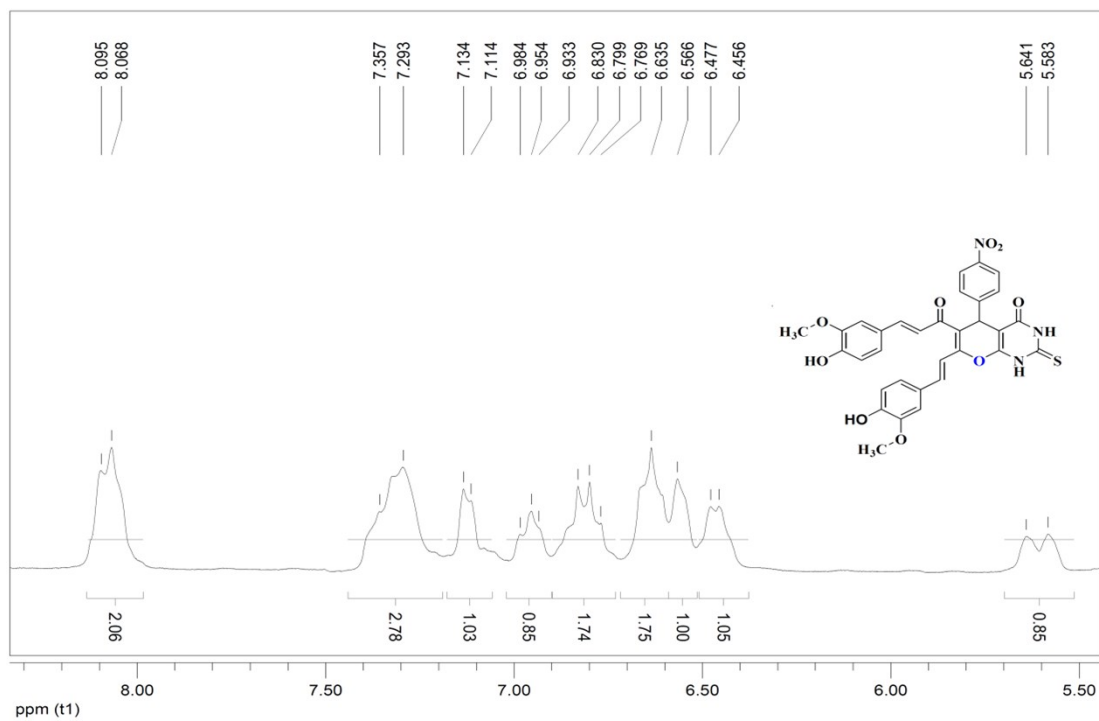
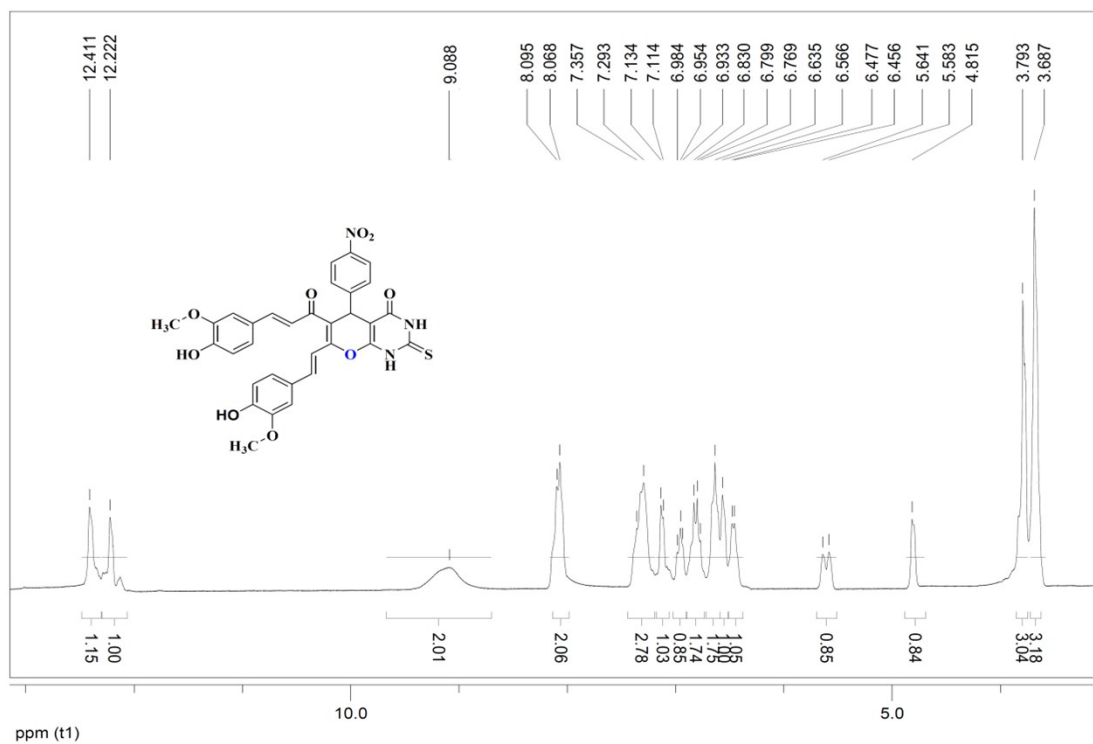


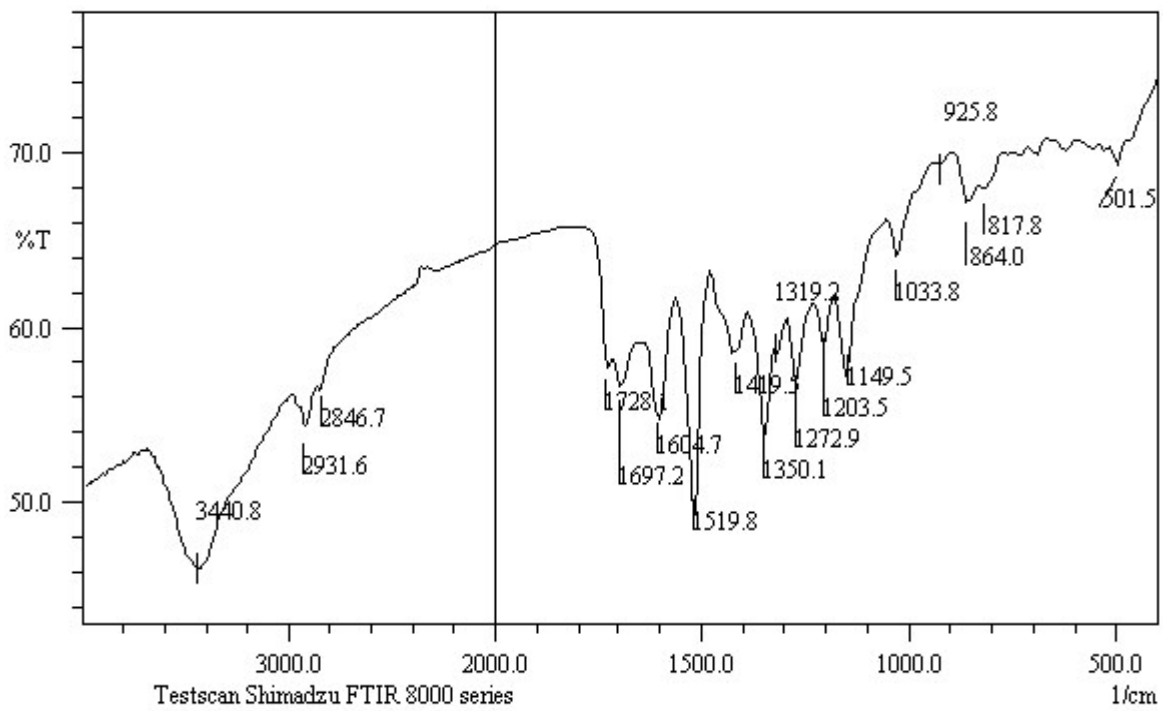
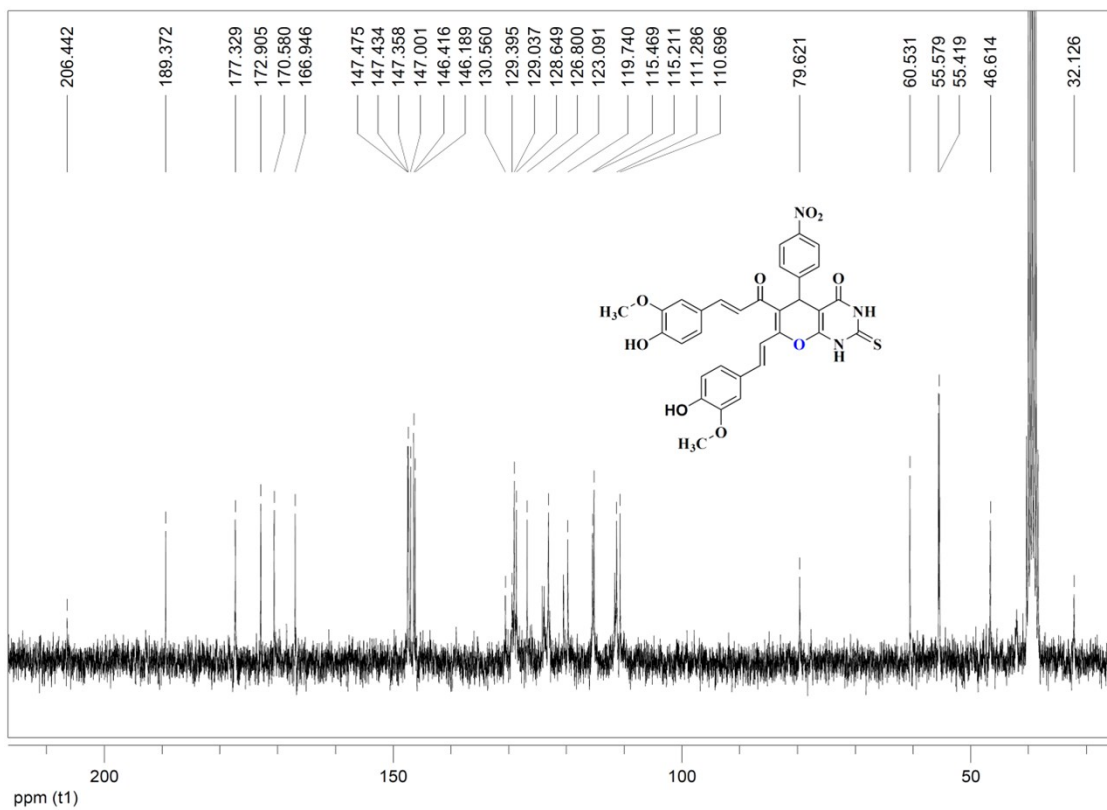
5. ^1H NMR, ^{13}C NMR & IR of Compound 4e



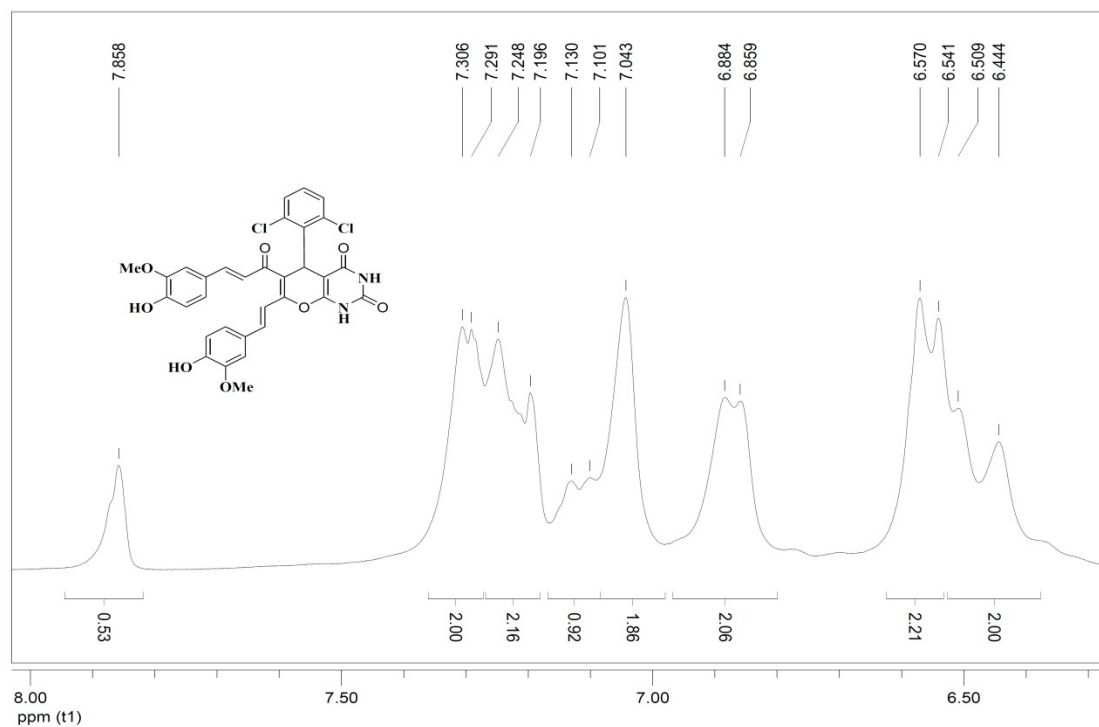
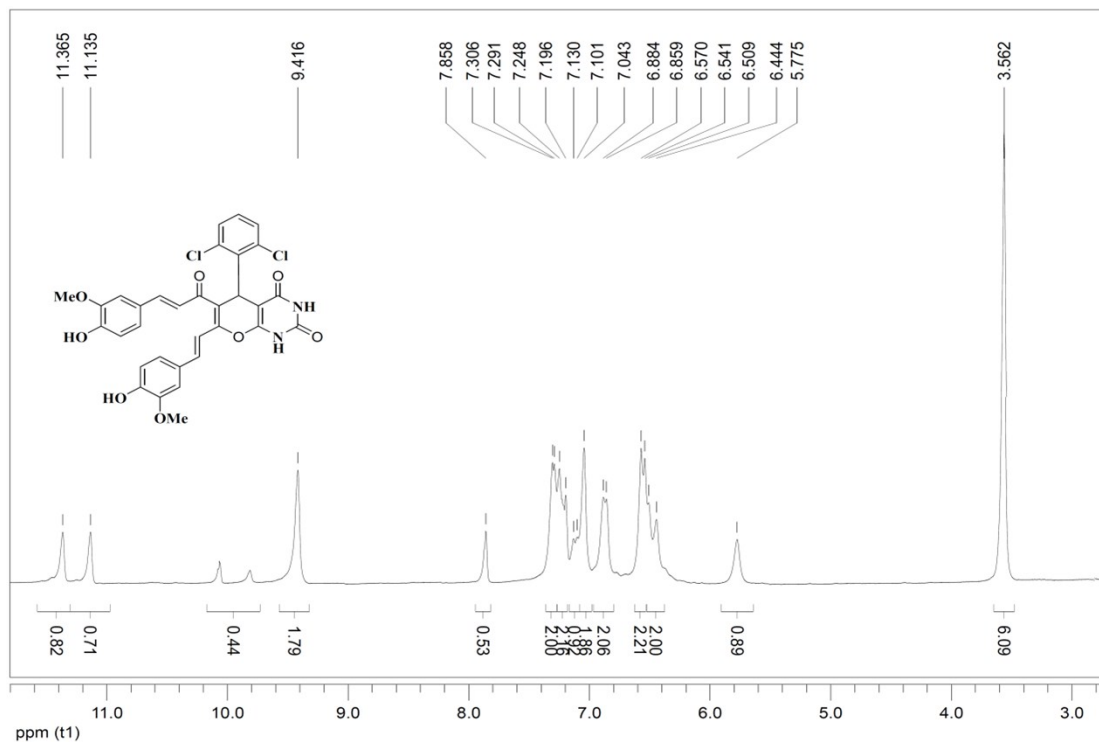


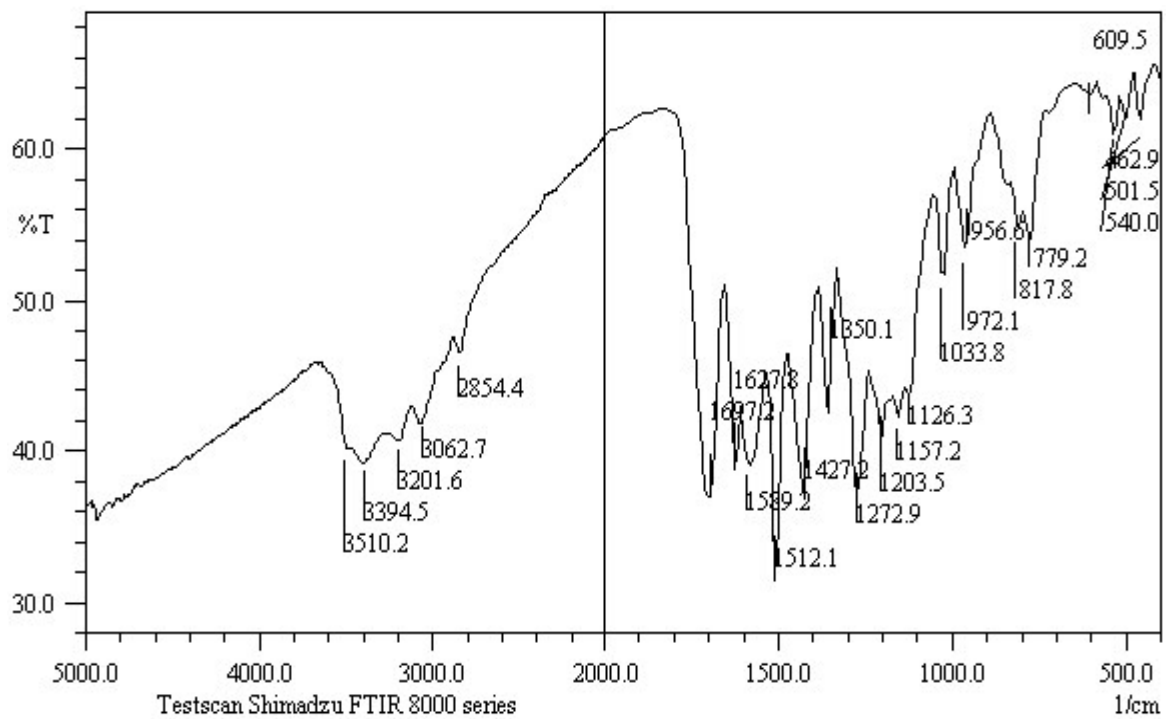
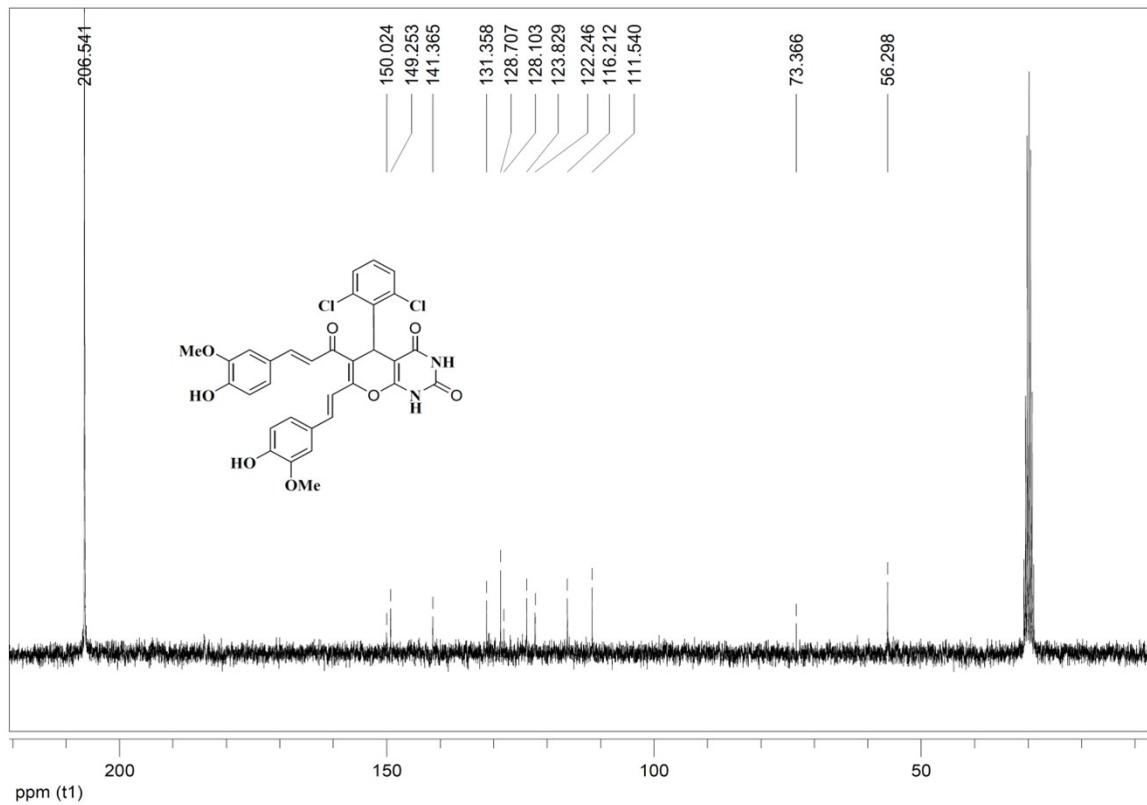
6. ^1H NMR, ^{13}C NMR & IR of Compound **4f**



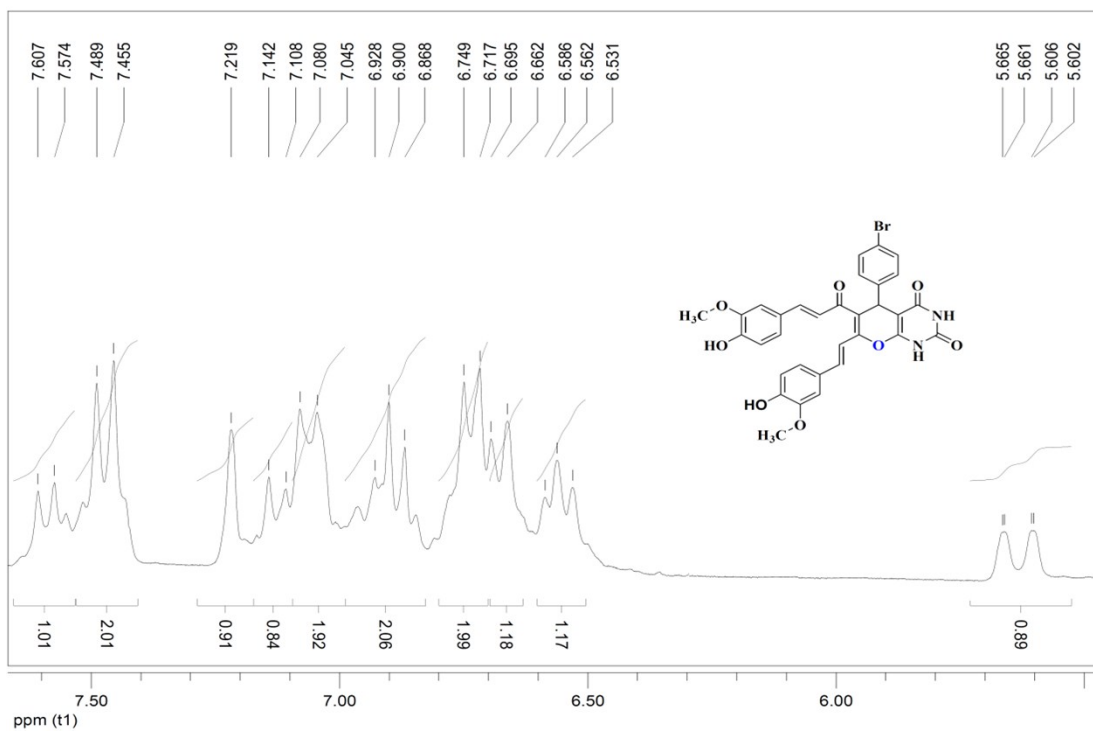
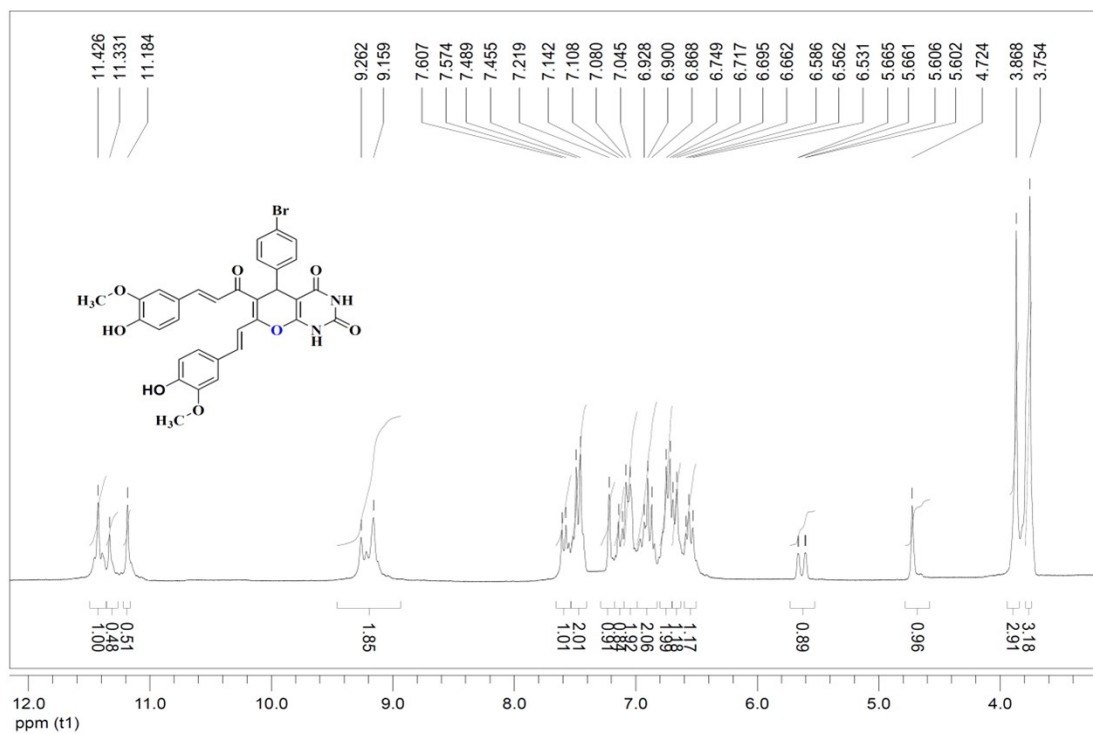


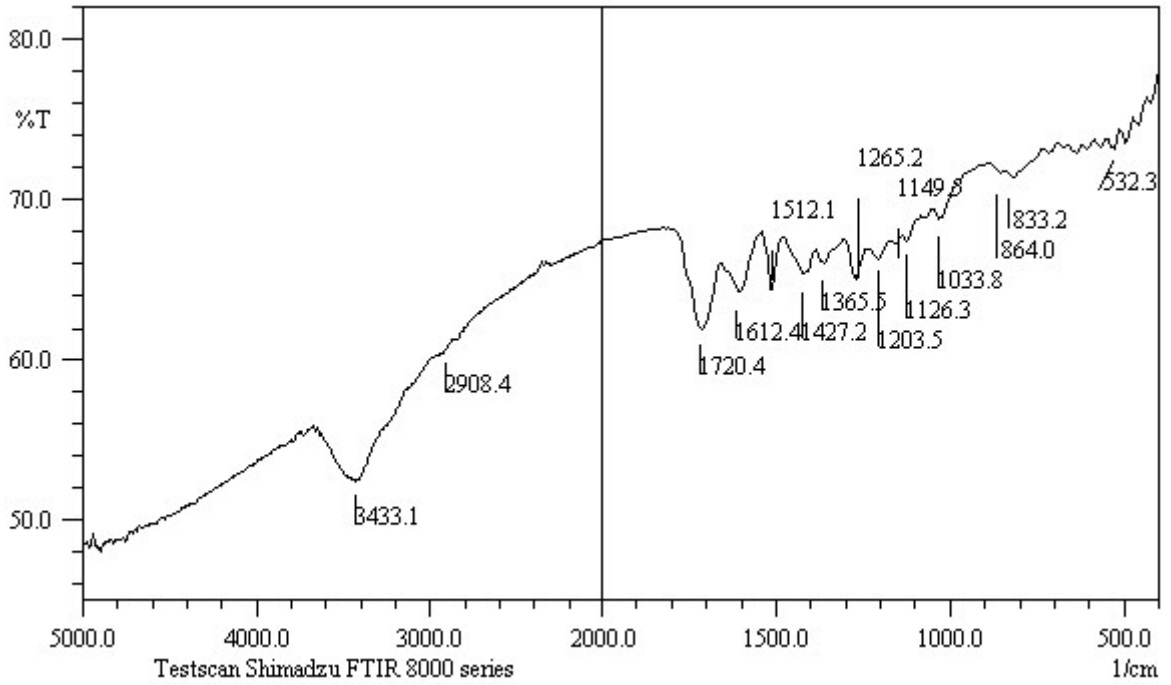
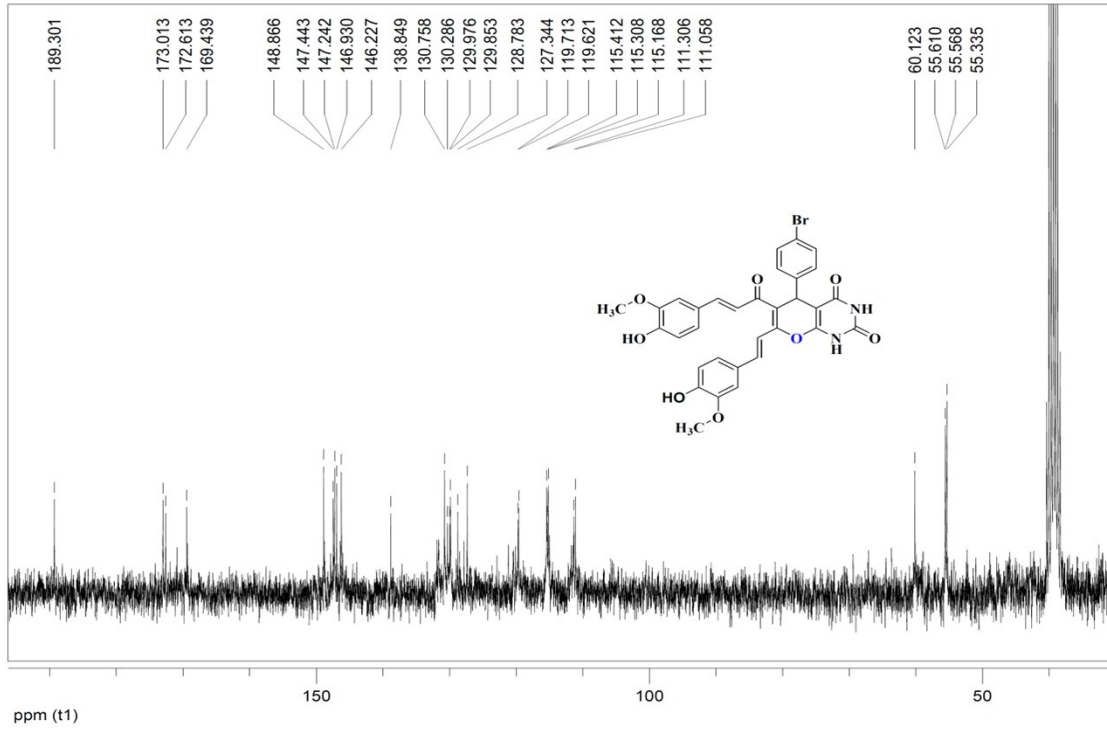
7. ¹H NMR, ¹³C NMR & IR of Compound 4g



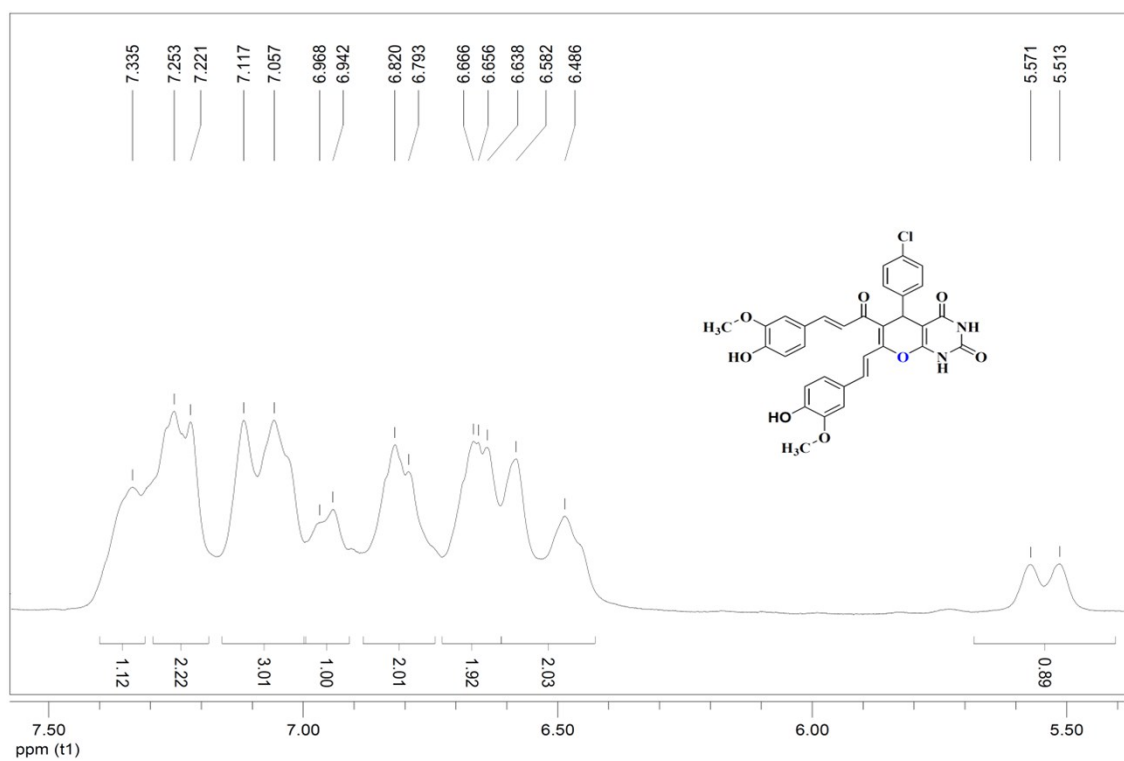
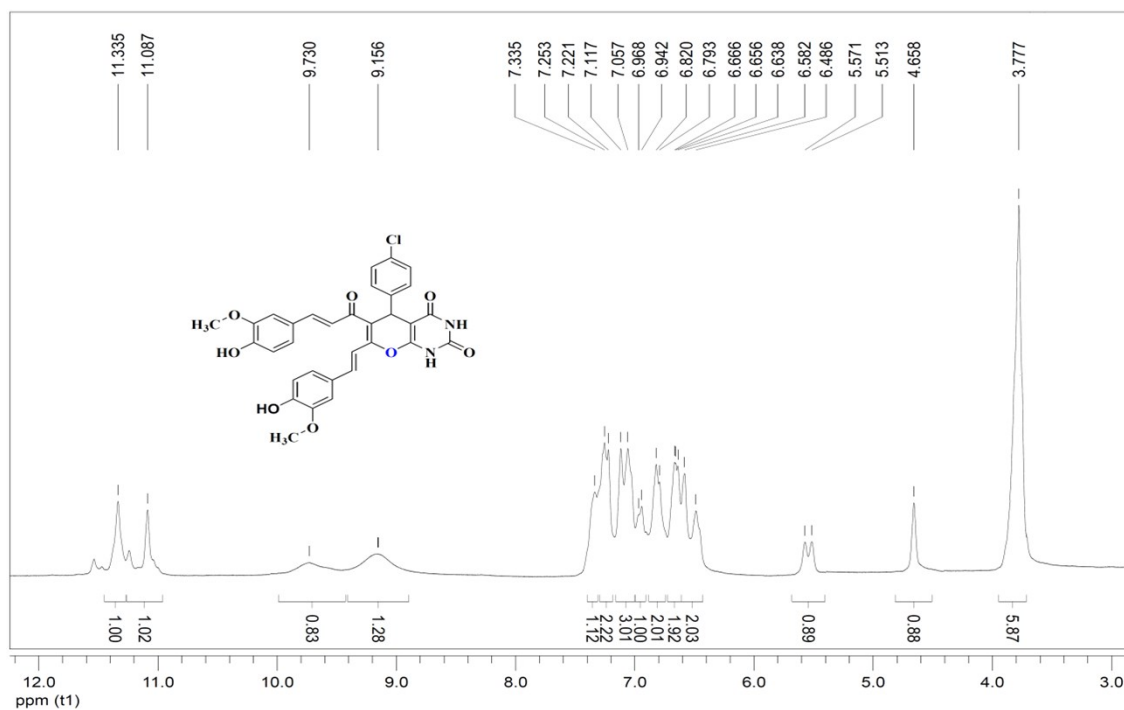


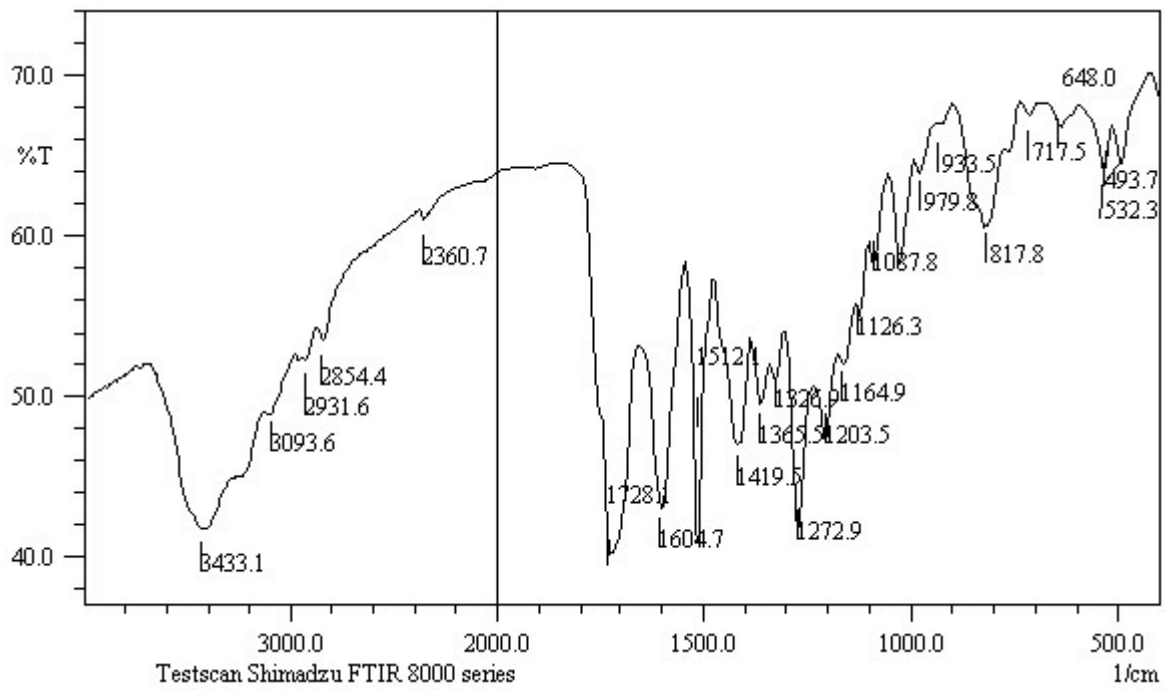
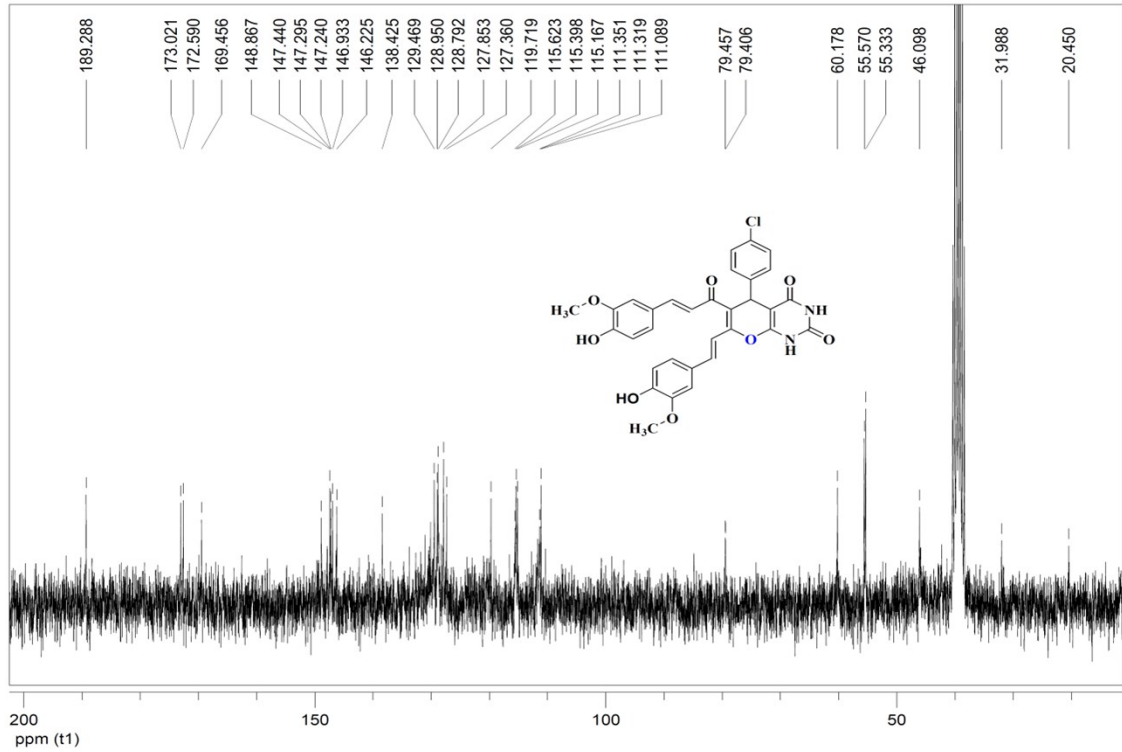
8. ^1H NMR, ^{13}C NMR & IR of Compound **4h**



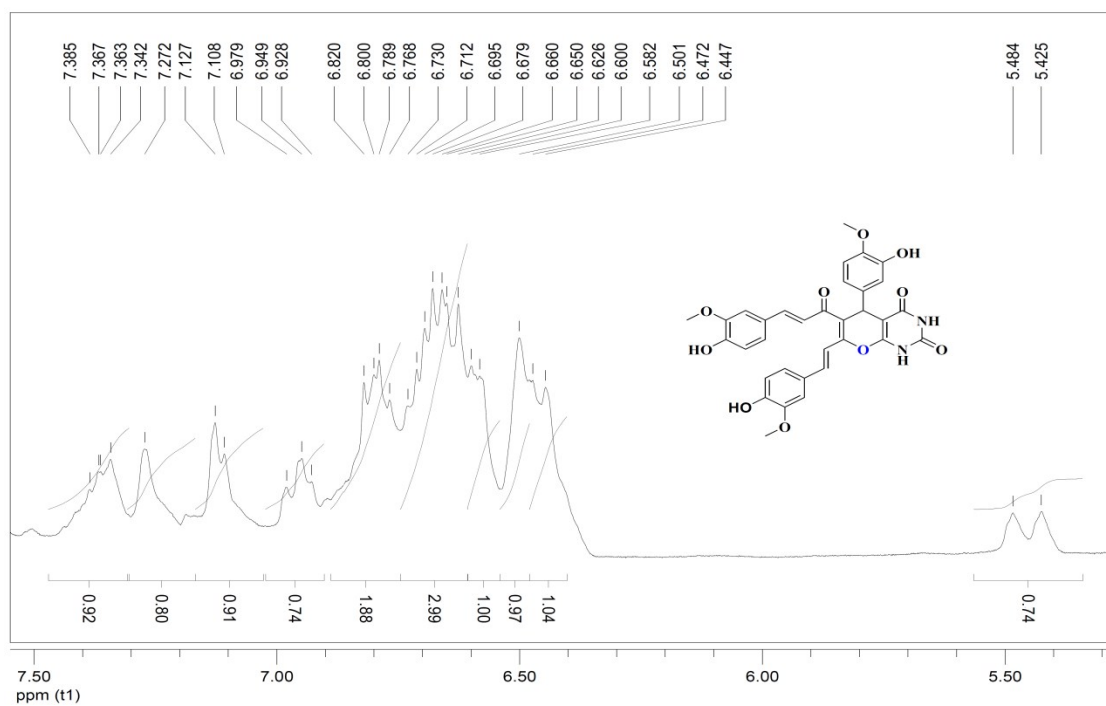
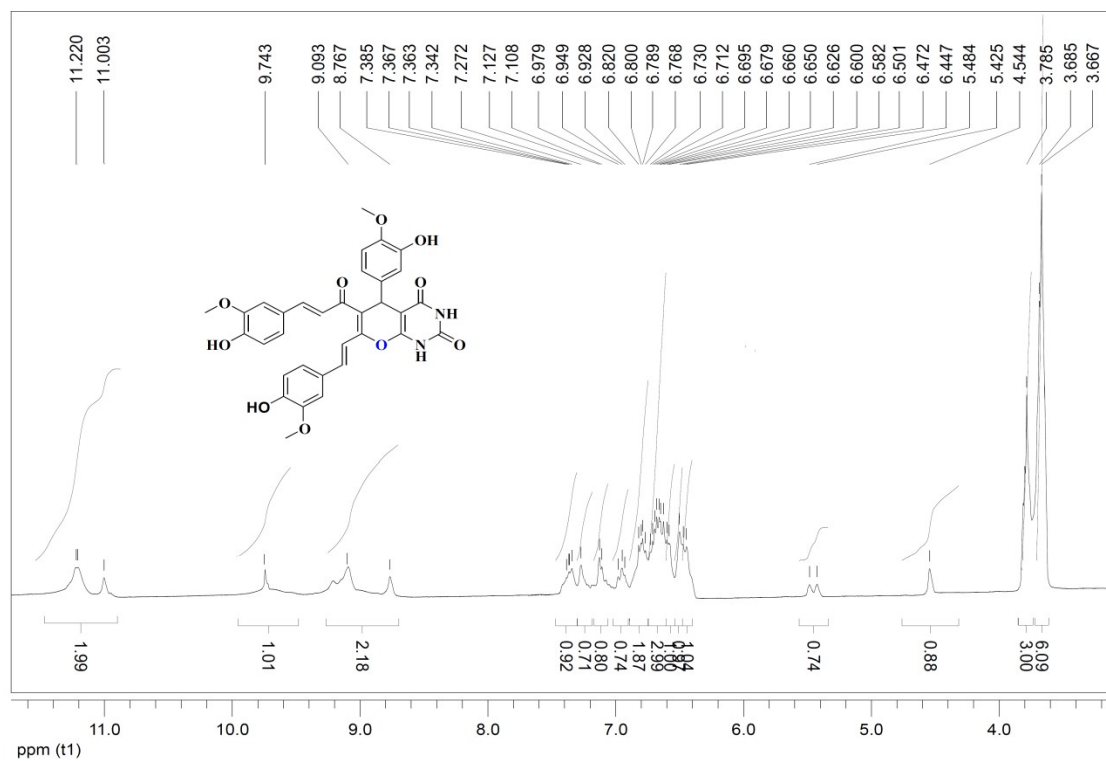


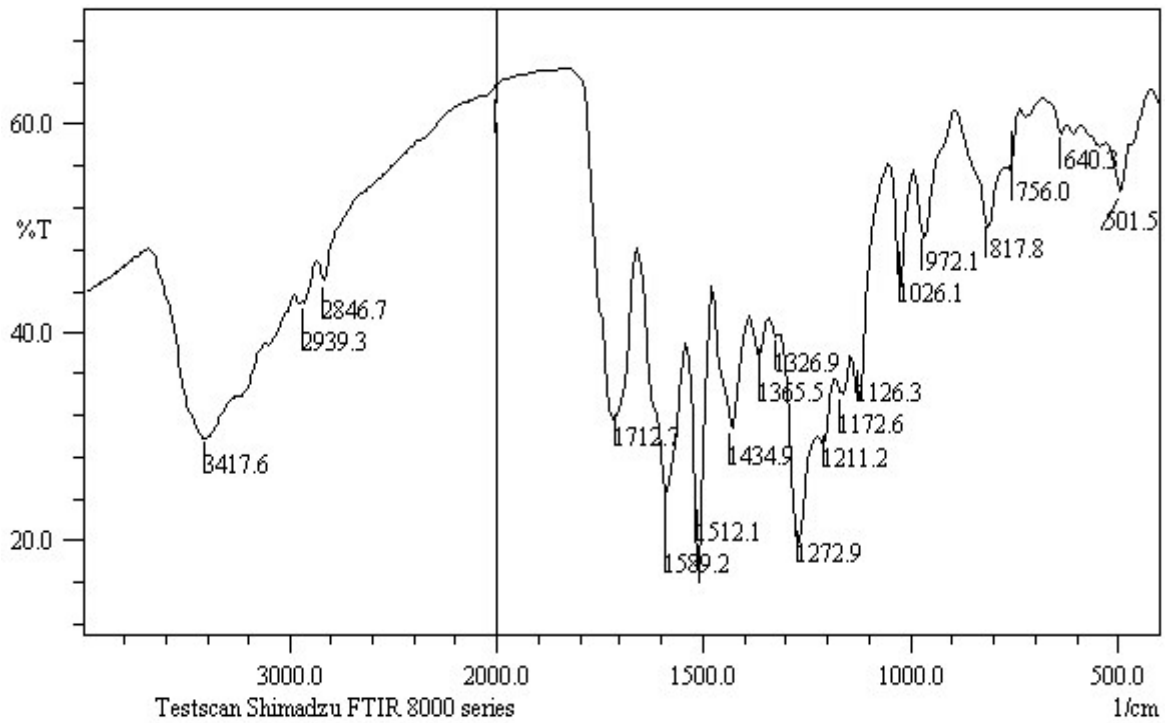
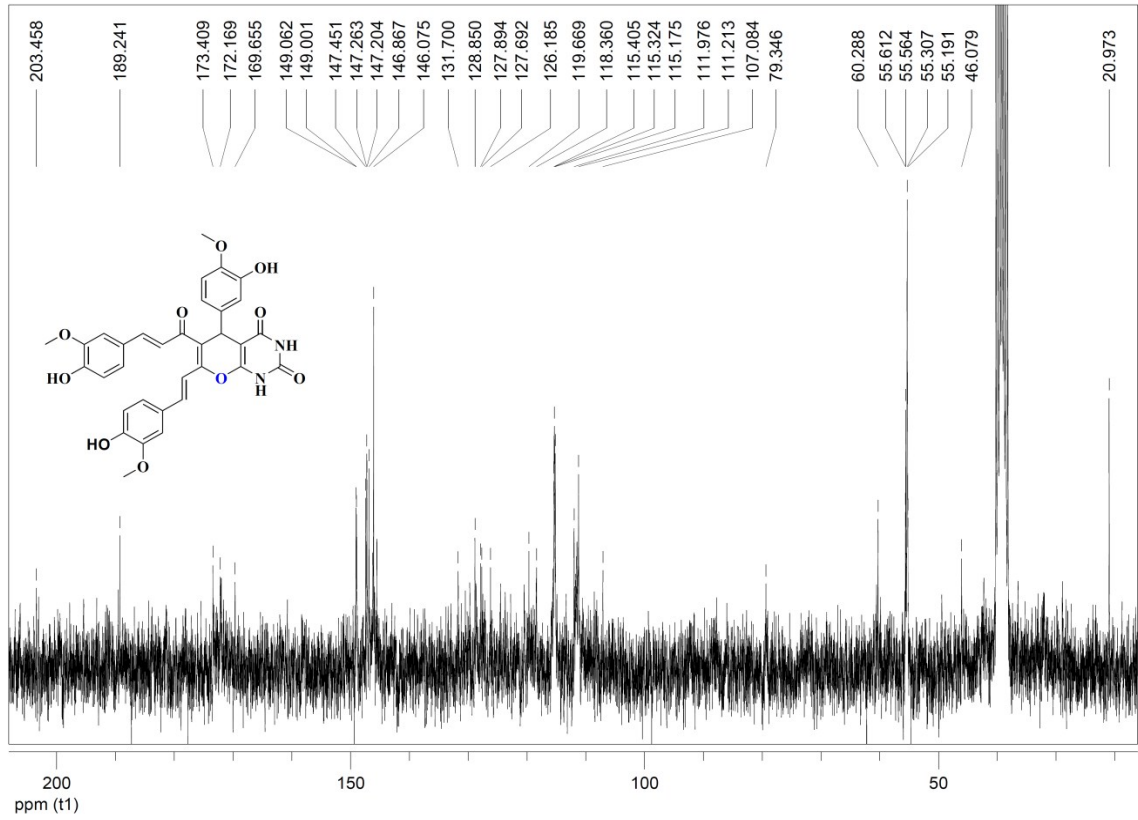
9. ^1H NMR, ^{13}C NMR & IR of Compound **4i**



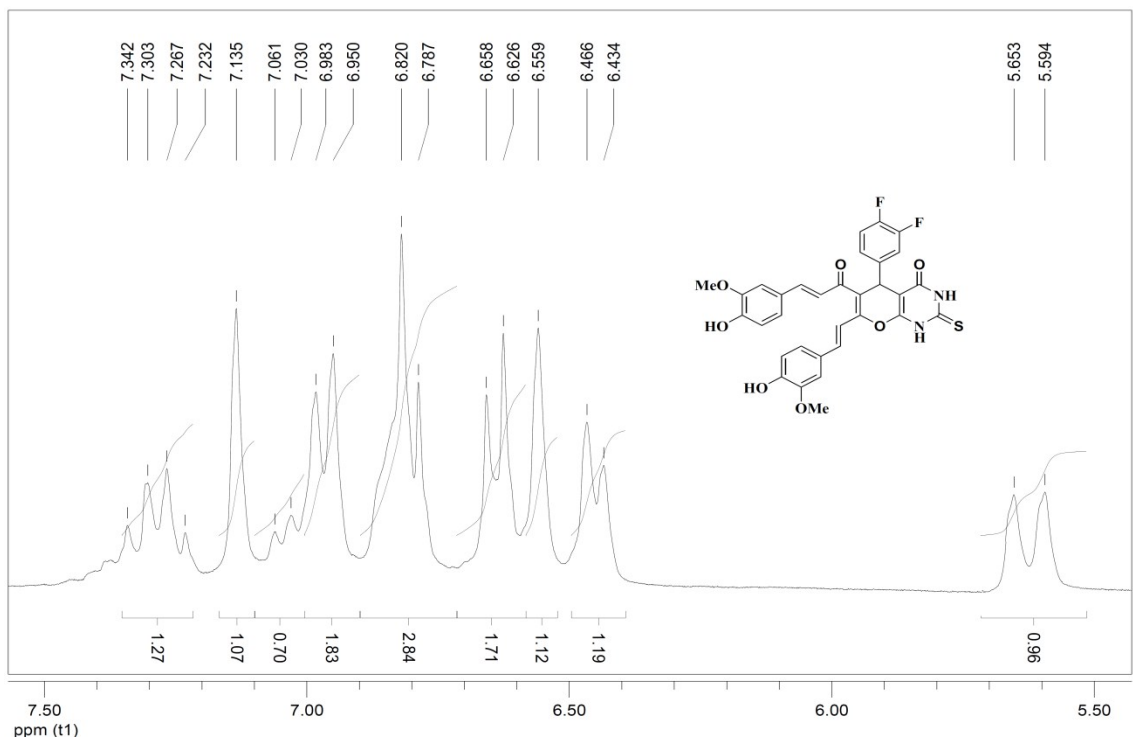
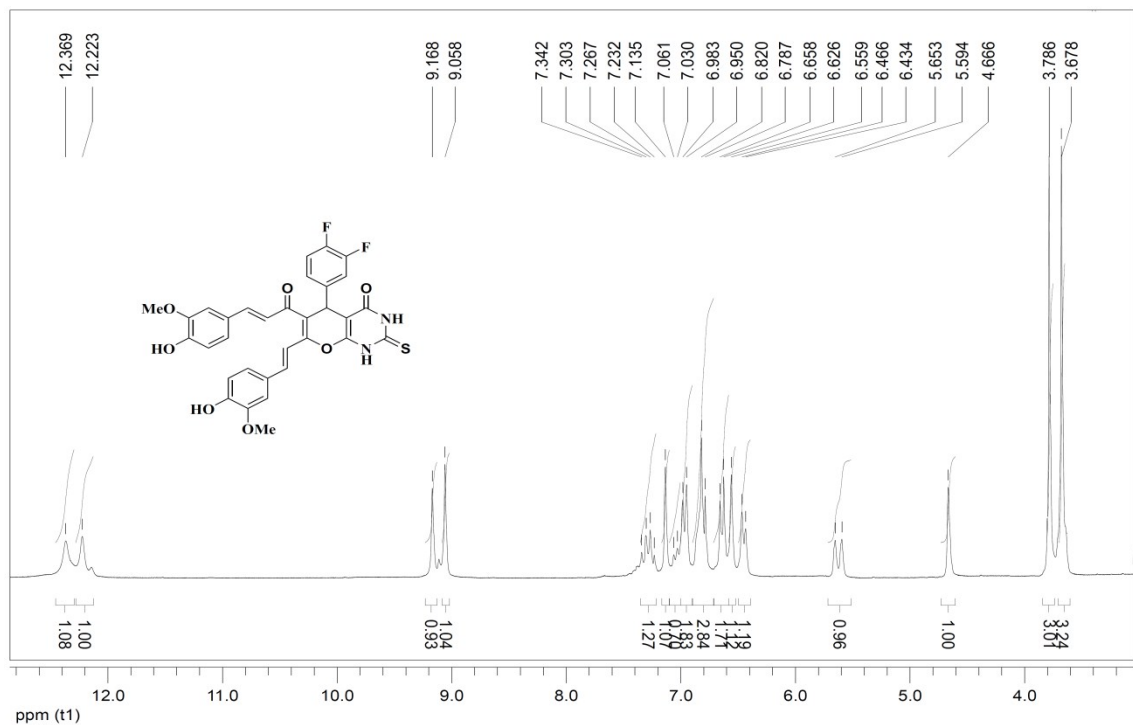


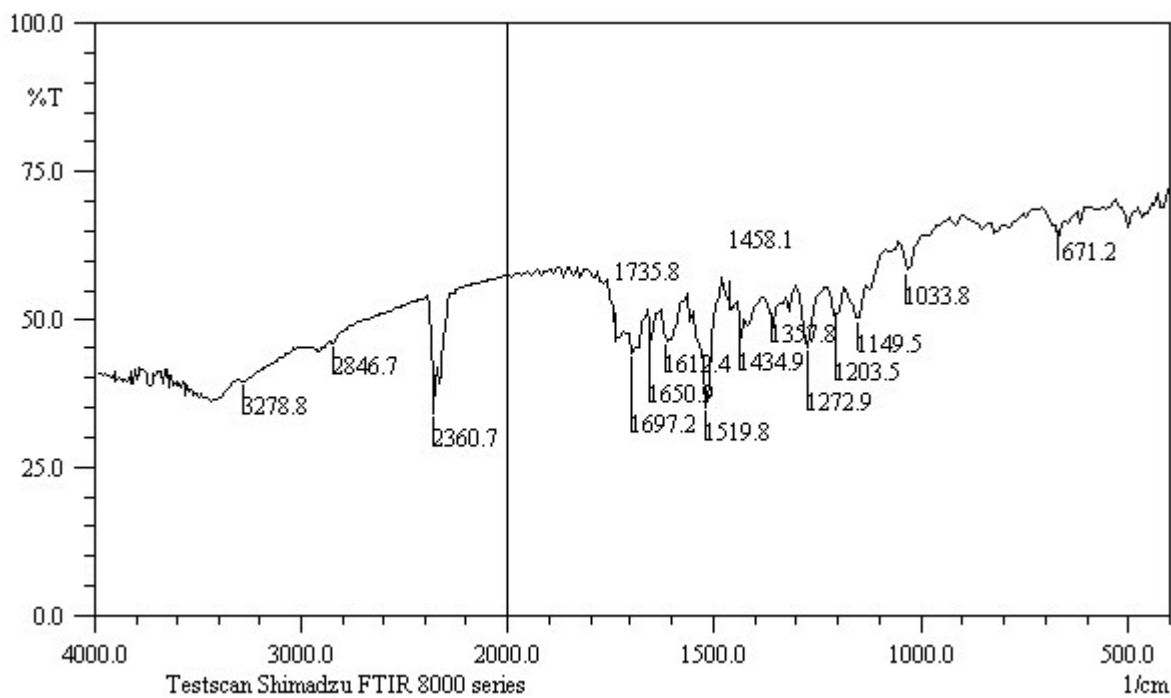
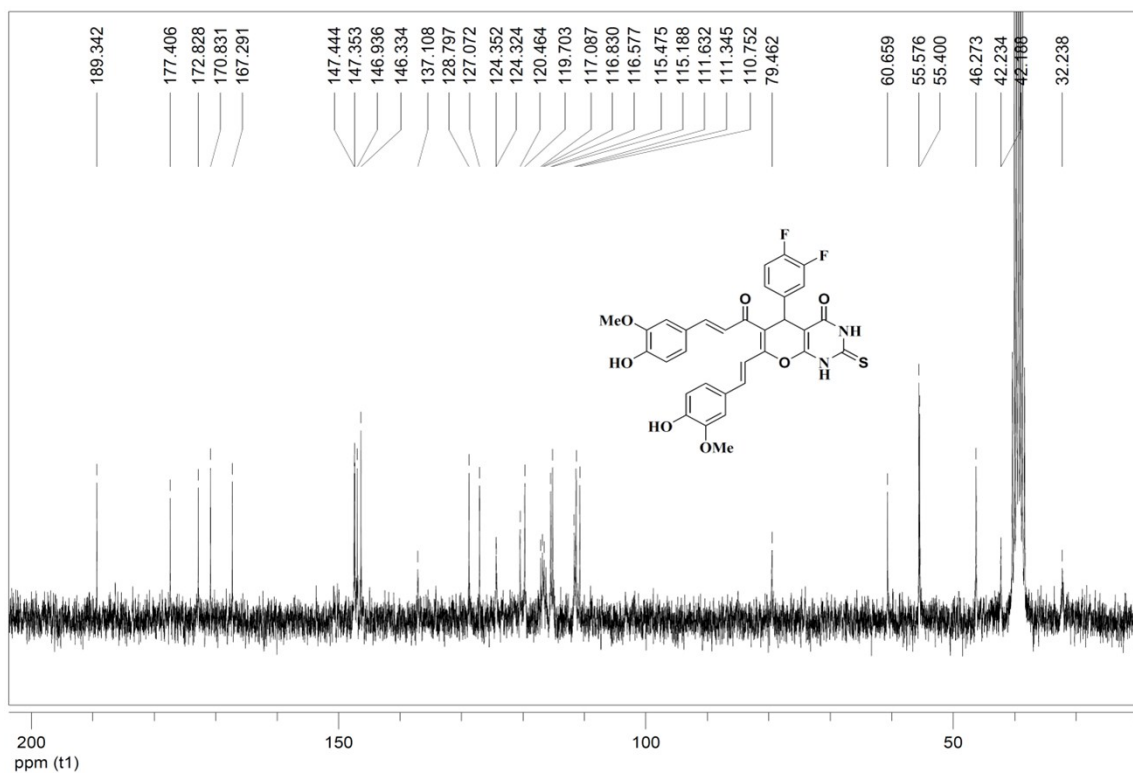
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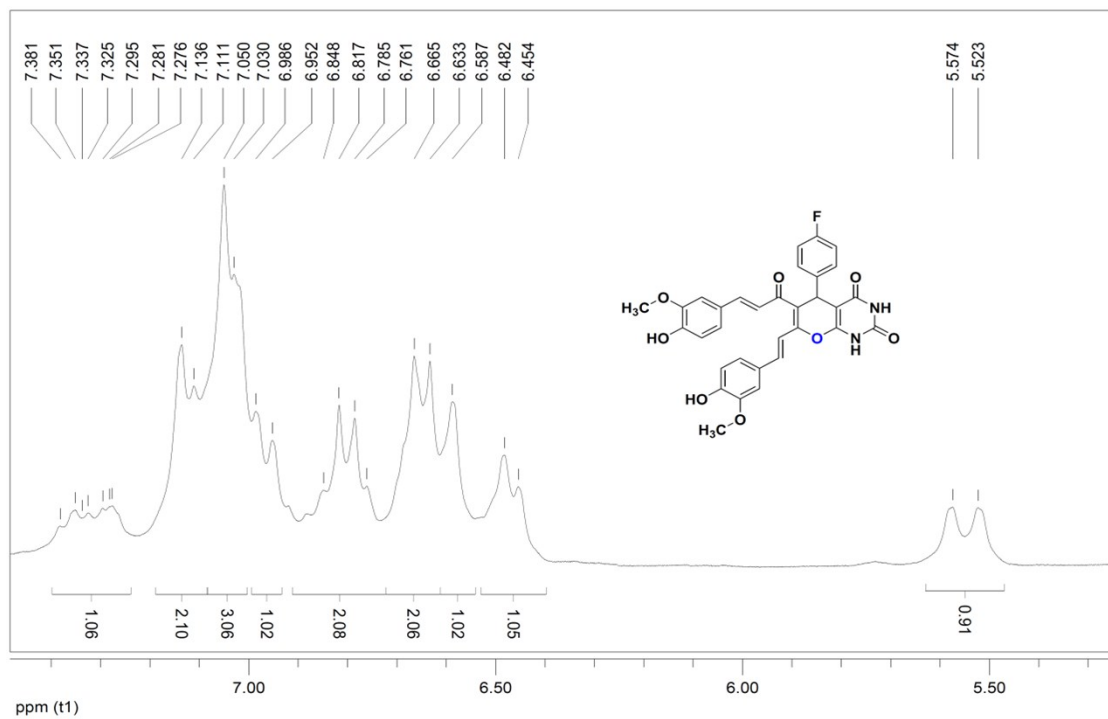
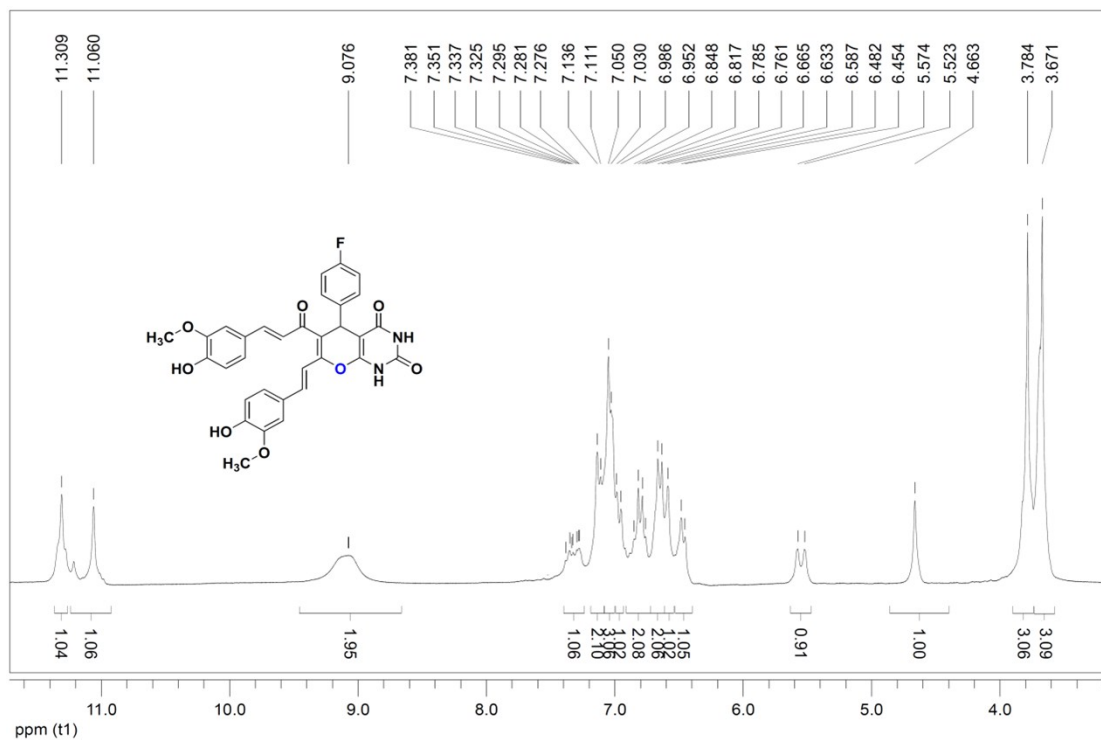


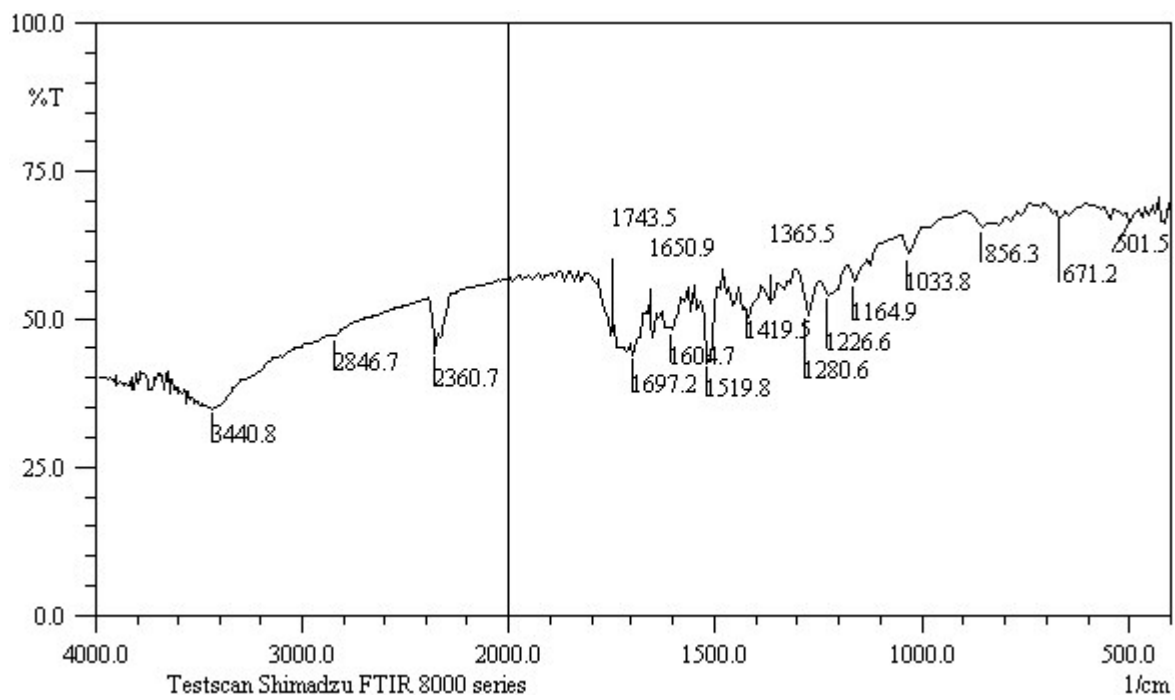
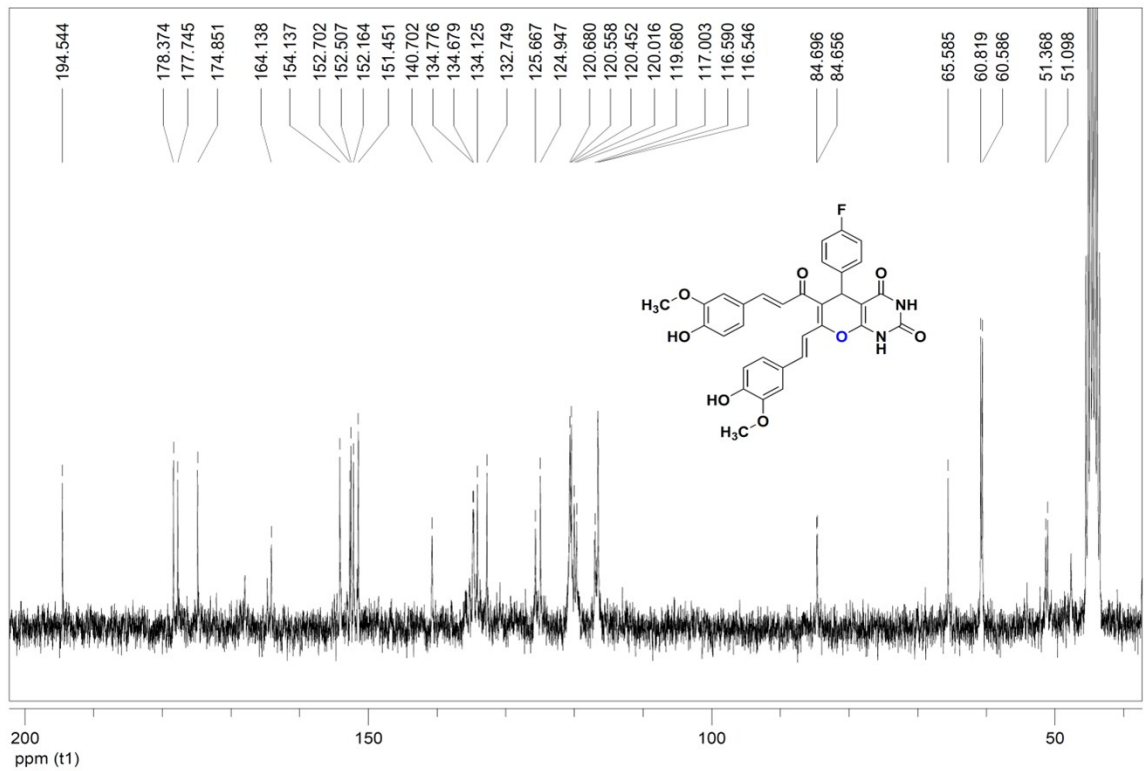
11. ^1H NMR, ^{13}C NMR & IR of Compound **4k**



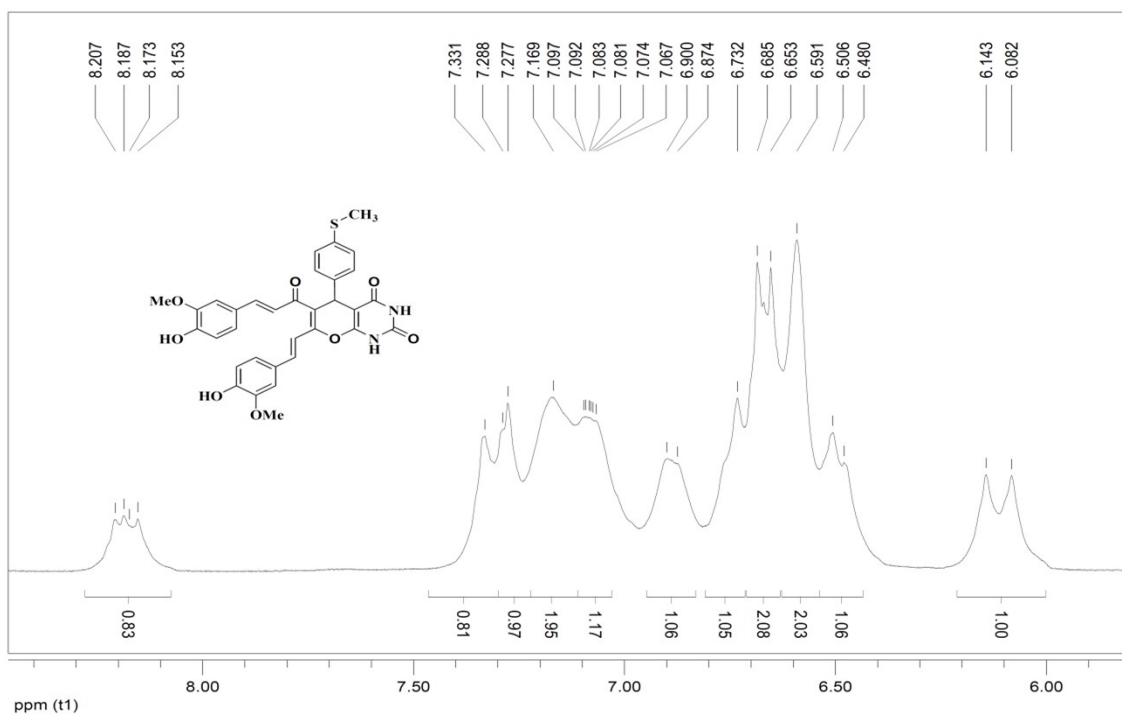
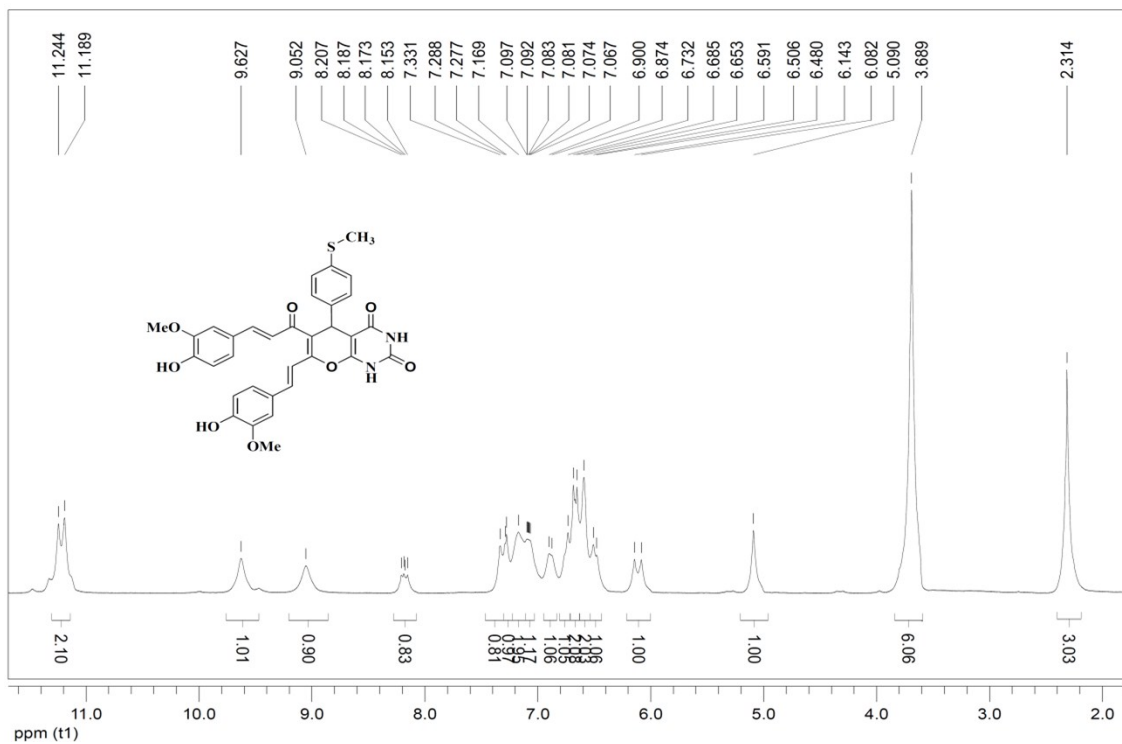


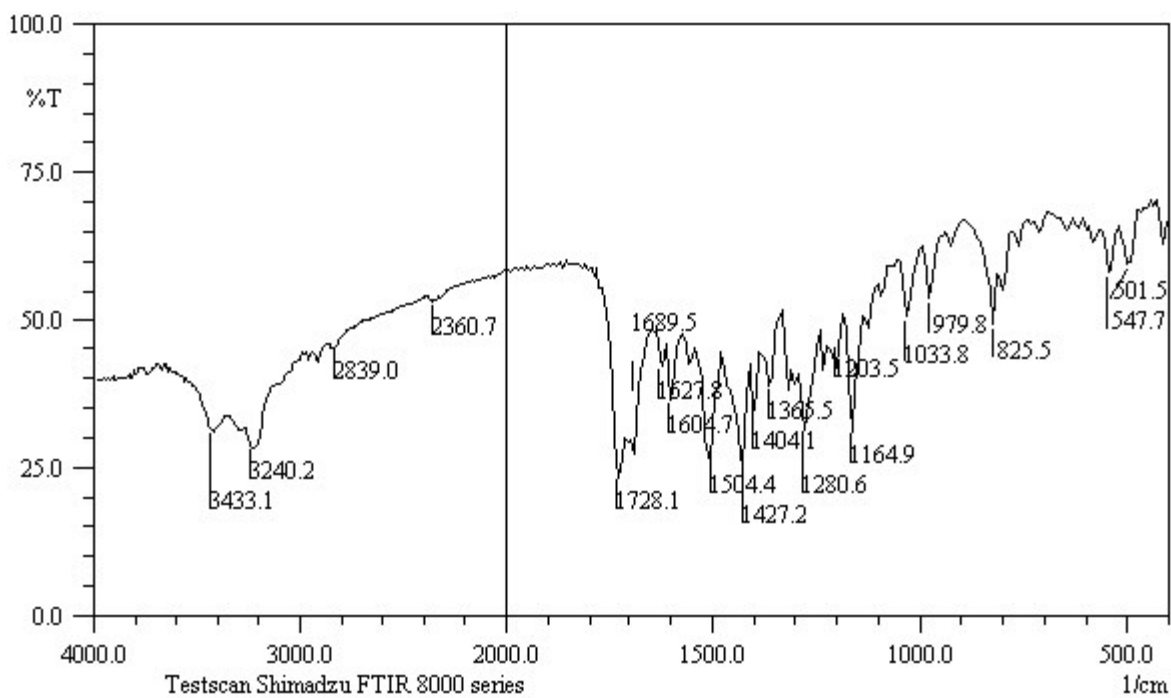
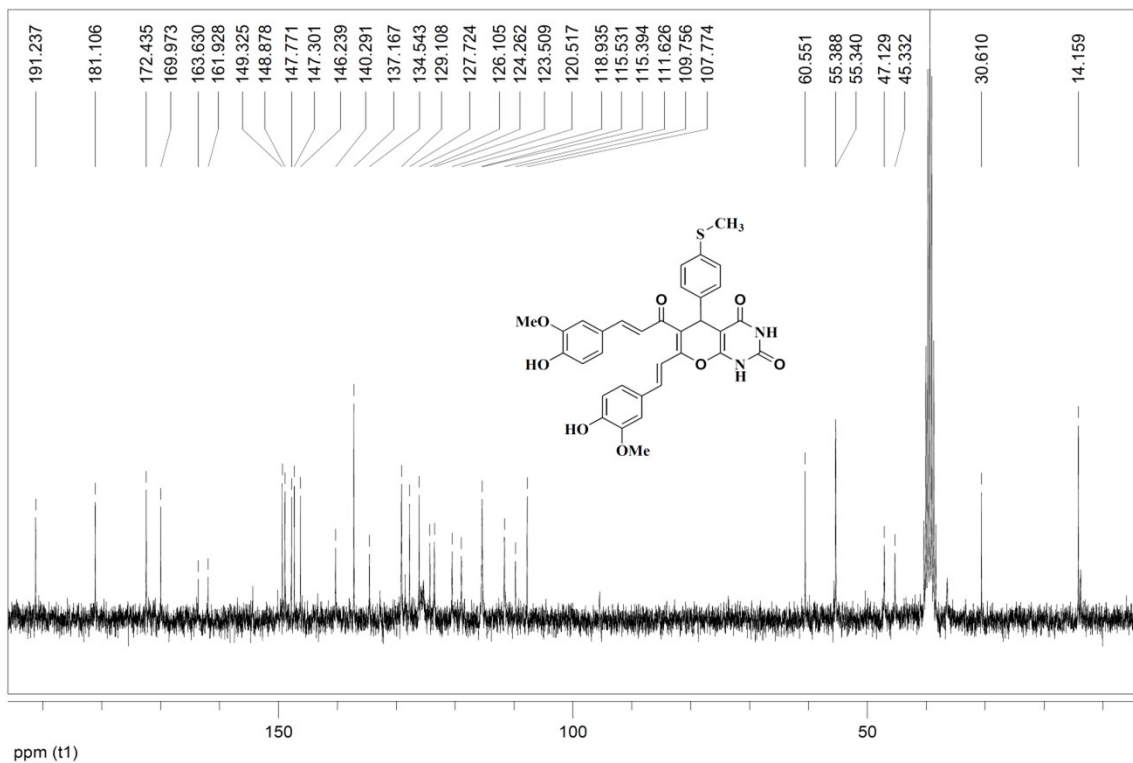
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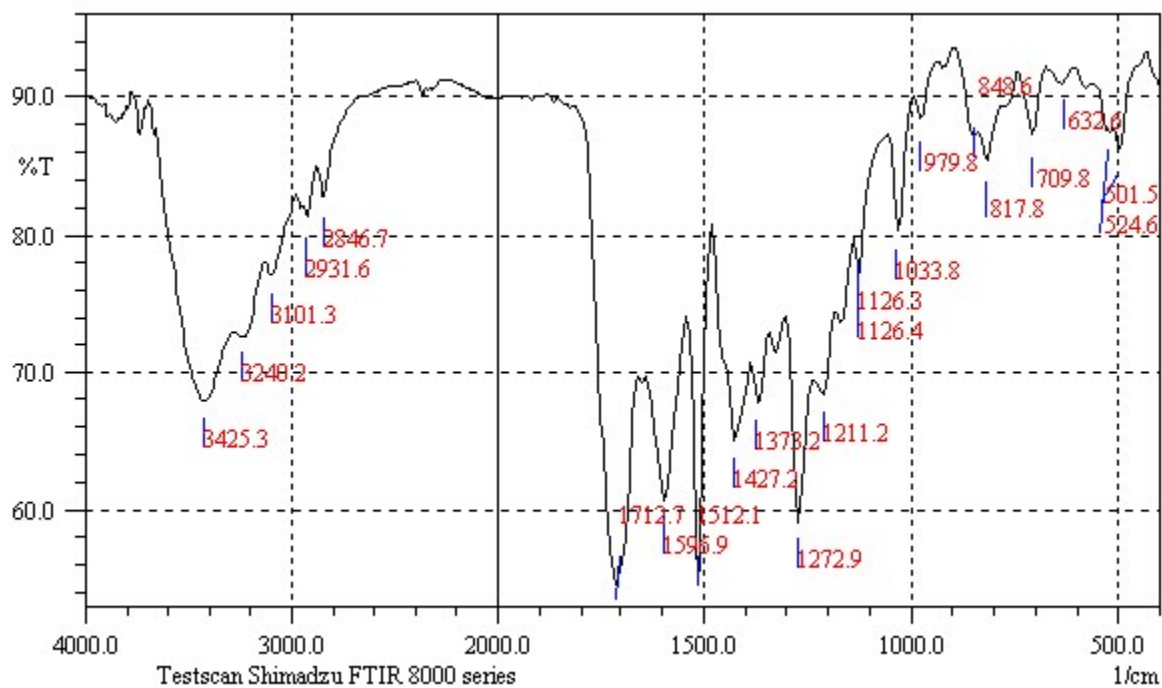
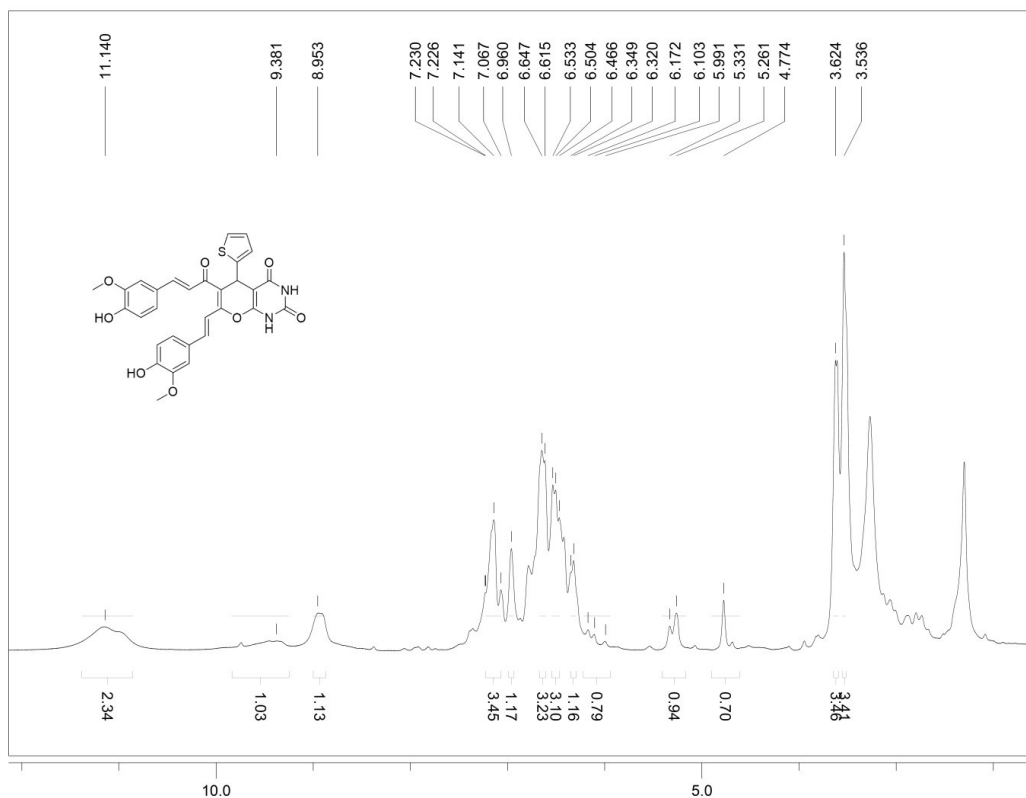


13. ¹H NMR, ¹³C NMR & IR of Compound **4m**





14. ¹H NMR and IR of Compound **4n**



15. ^1H NMR and IR of Compound **4o**

