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Supplementary Information

$Zr(HSO_4)_4$ as an Efficient Catalyst for the Preparation of 10-Aryl-6,8-dimethyl-6,10-dihydro-5-oxa-6,8-diazaanthra[2,3-*d*][1,3]dioxole-7,9-diones under Solvent-Free Conditions

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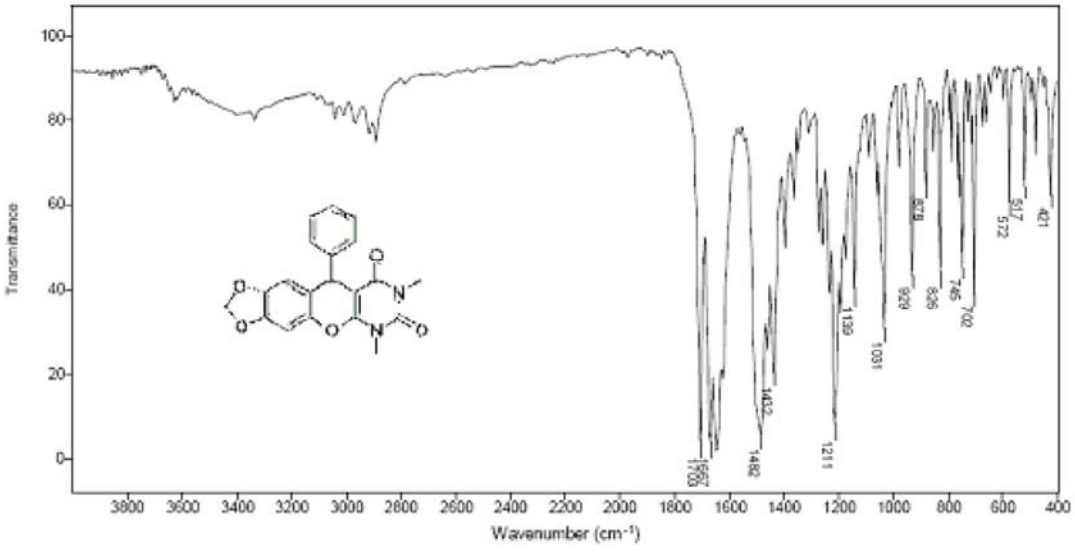

Figure S1. IR (KBr) of **4a**.

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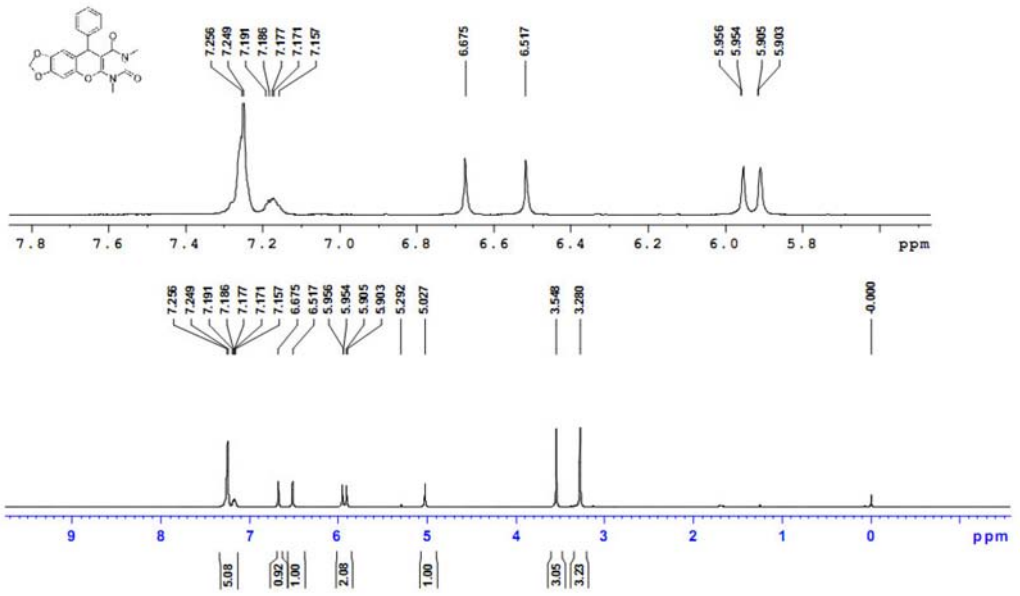

Figure S2. ^{1}H NMR of **4a** (400 MHz, $CDCl_3$).

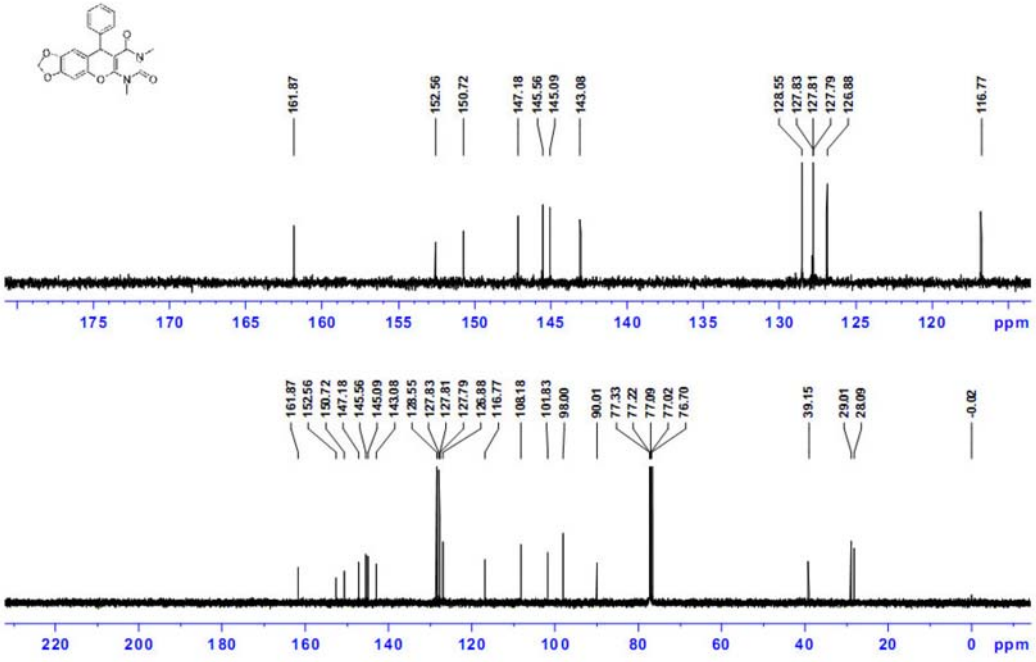

Figure S3. ^{13}C NMR of **4a** (100 MHz, $CDCl_3$).

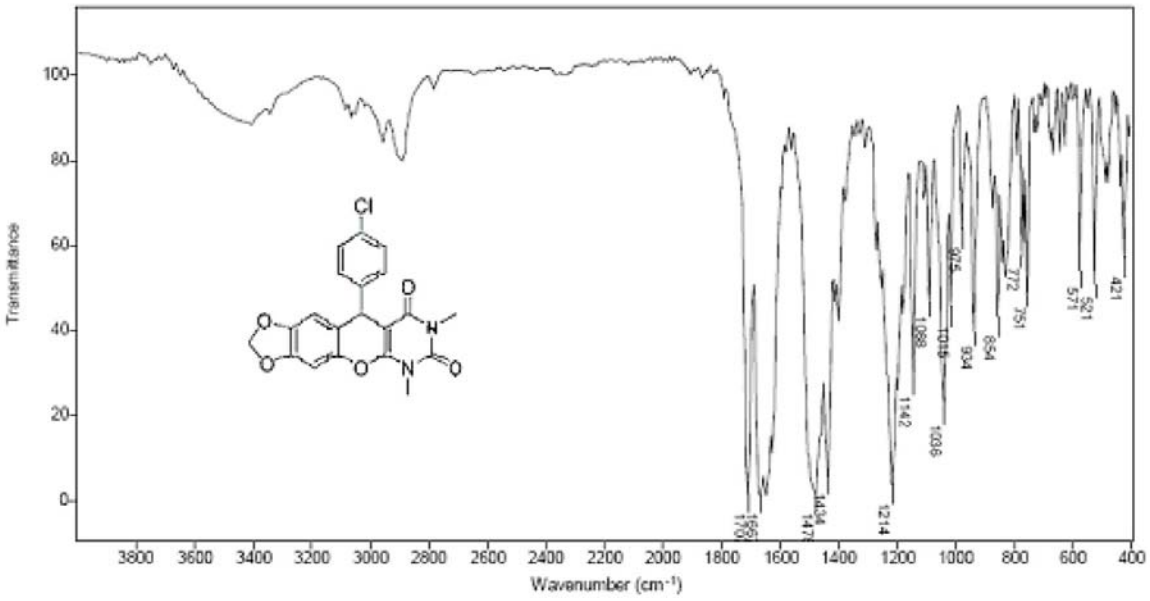

Figure S4. IR (KBr) of **4b.**

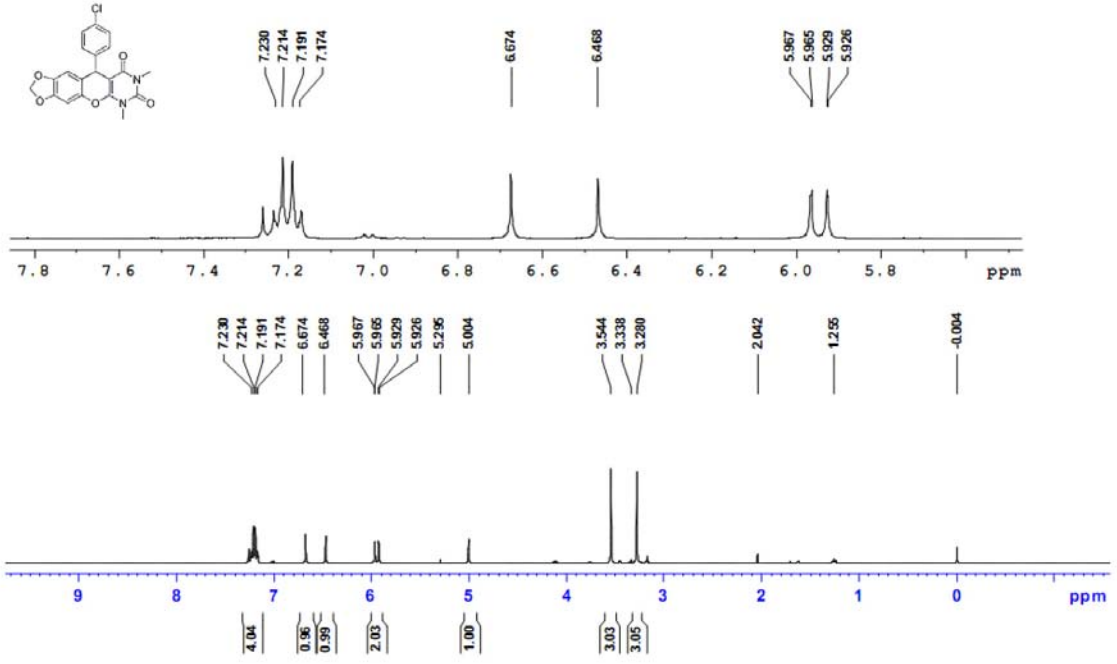

Figure S5. ^{1}H NMR of **4b** (400 MHz, $CDCl_3$).

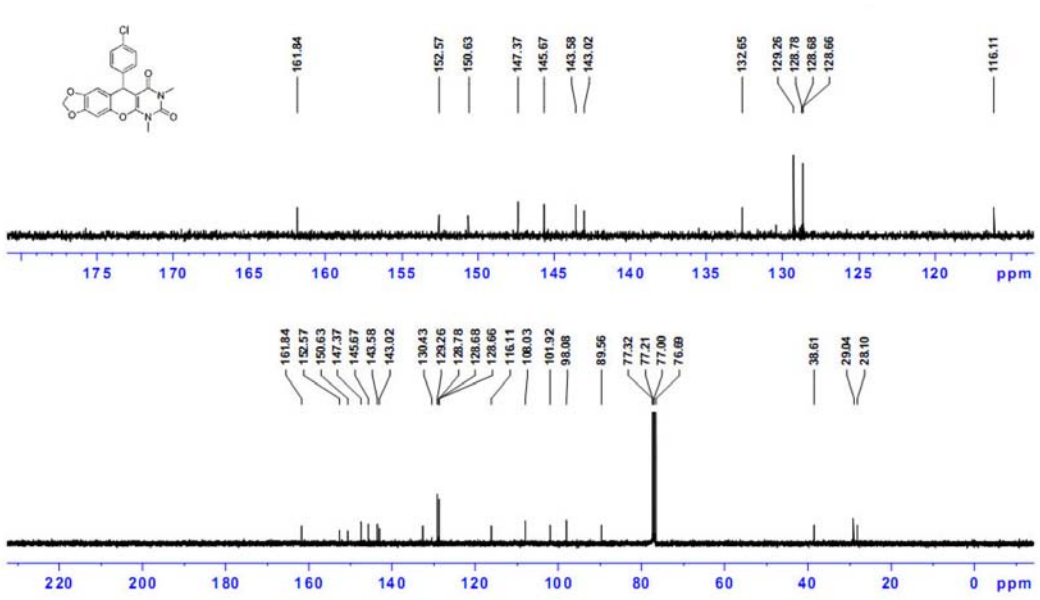

Figure S6. ^{13}C NMR of **4b** (100 MHz, $CDCl_3$).

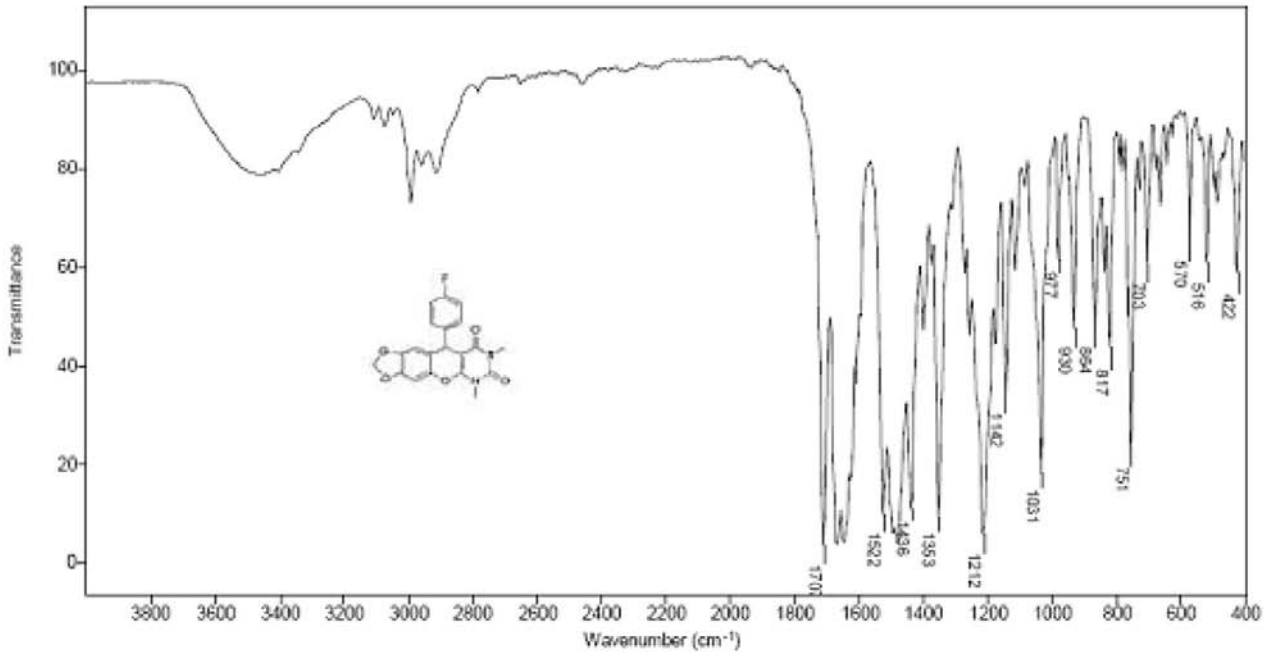

Figure S7. IR (KBr) of **4c**.

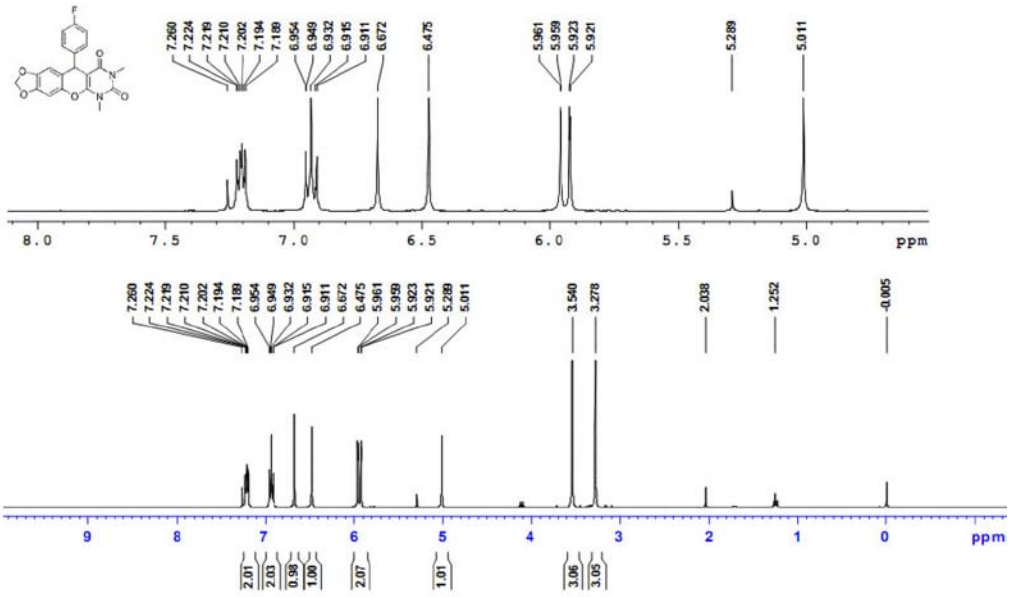

Figure S8. ^{1}H NMR of **4c** (400 MHz, $CDCl_3$).

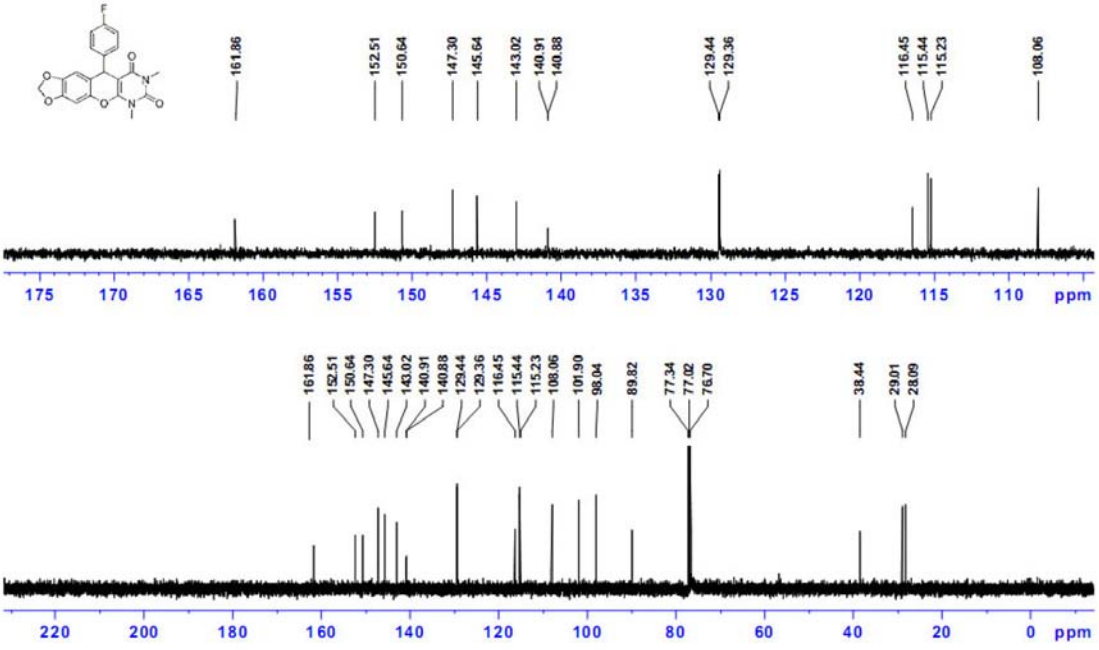

Figure S9. ^{13}C NMR of **4c** (100 MHz, $CDCl_3$).

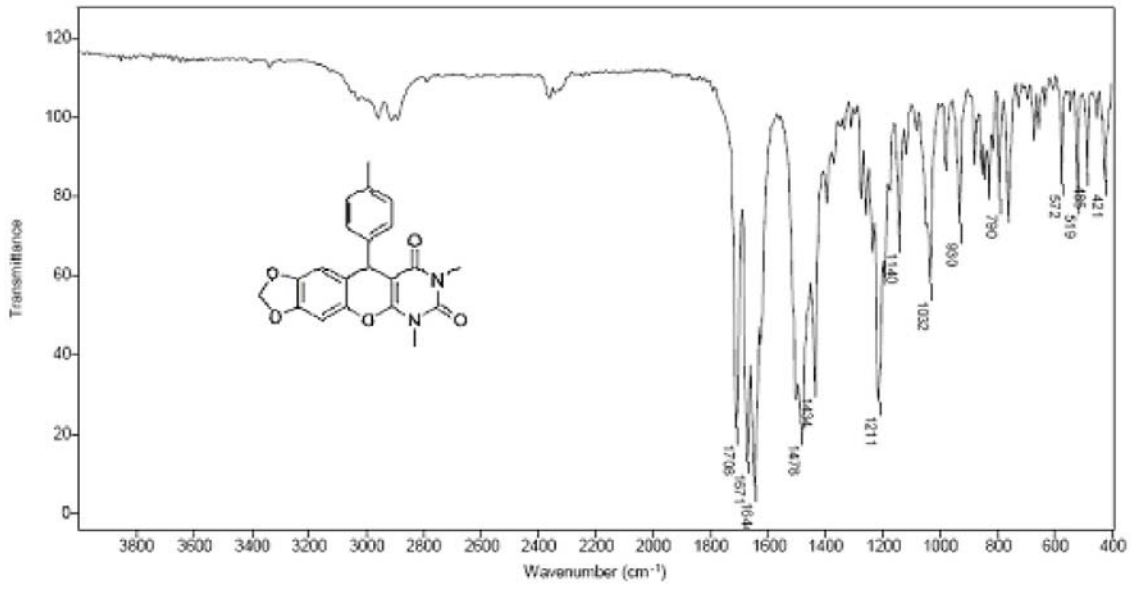

Figure S10. IR (KBr) of **4d.**

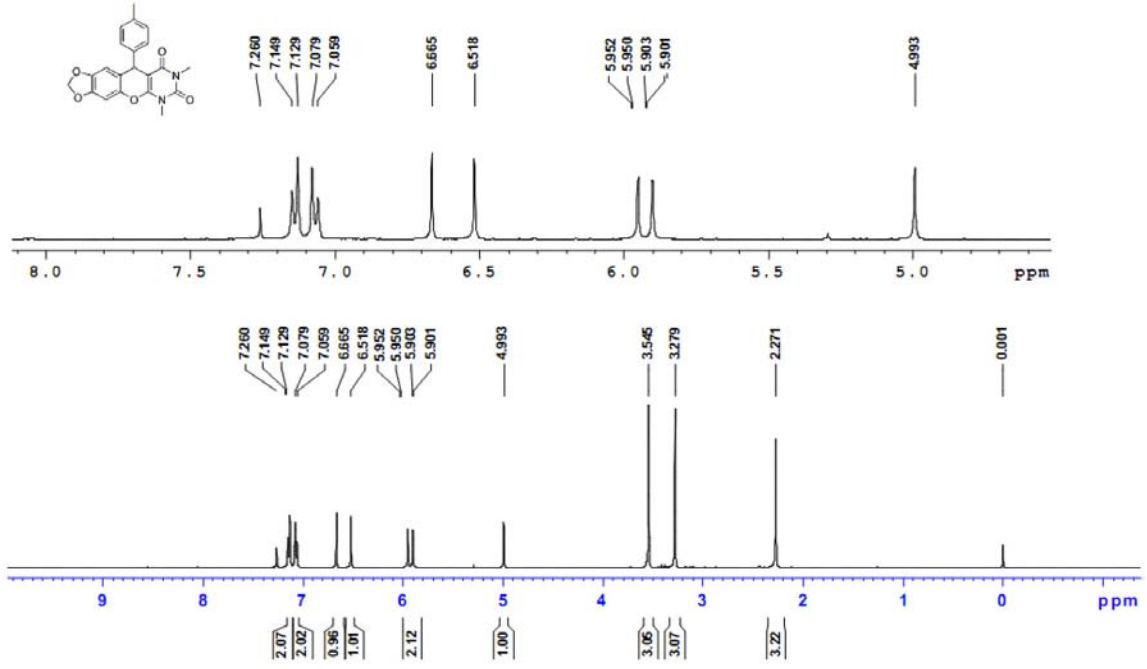

Figure S11. ^{1}H NMR of **4d** (400 MHz, $CDCl_3$).

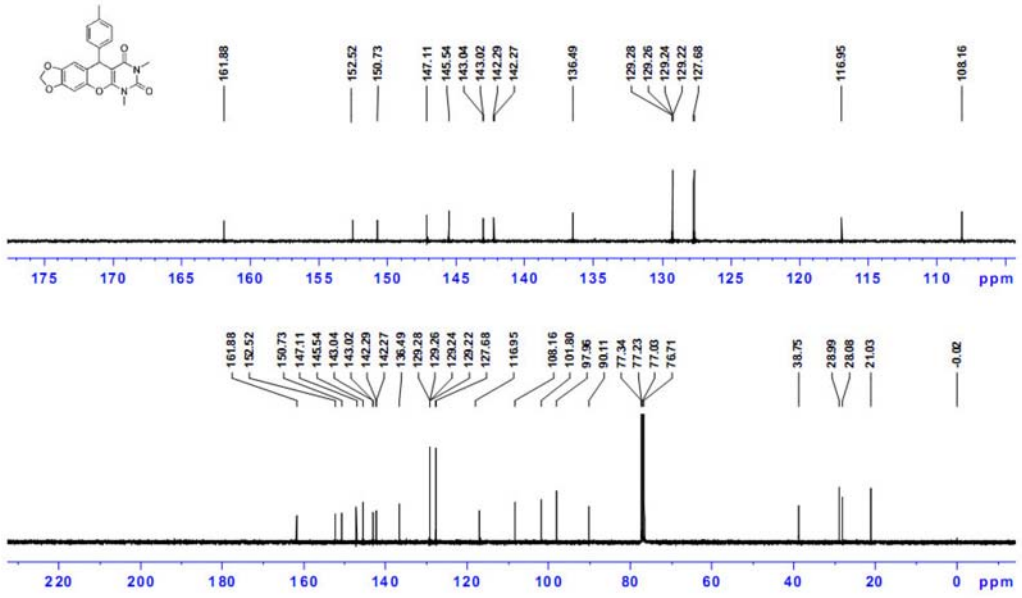

Figure S12. ^{13}C NMR of **4d** (100 MHz, $CDCl_3$).

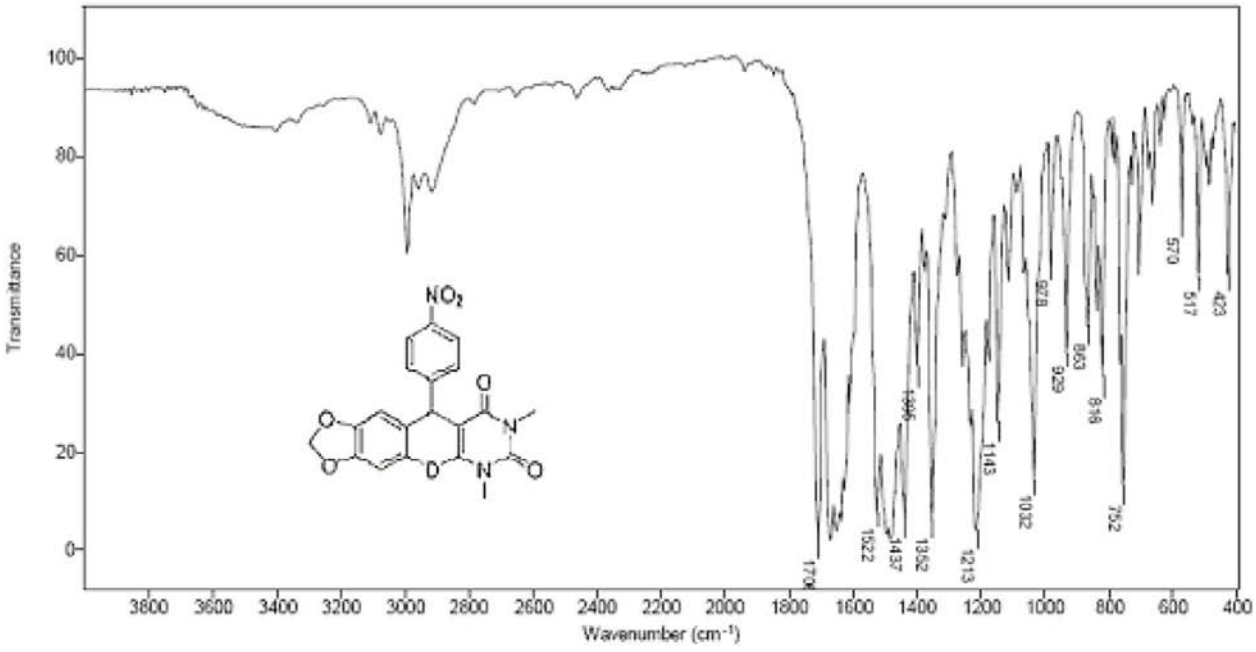

Figure S13 IR (KBr) of **4e**.

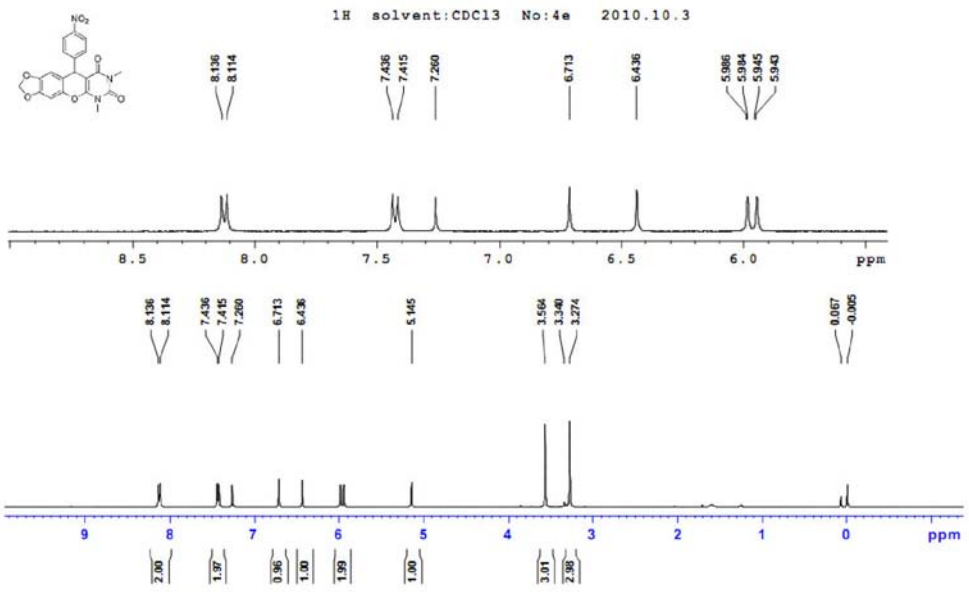

Figure S14. ^{1}H NMR of **4e** (400 MHz, $CDCl_3$).

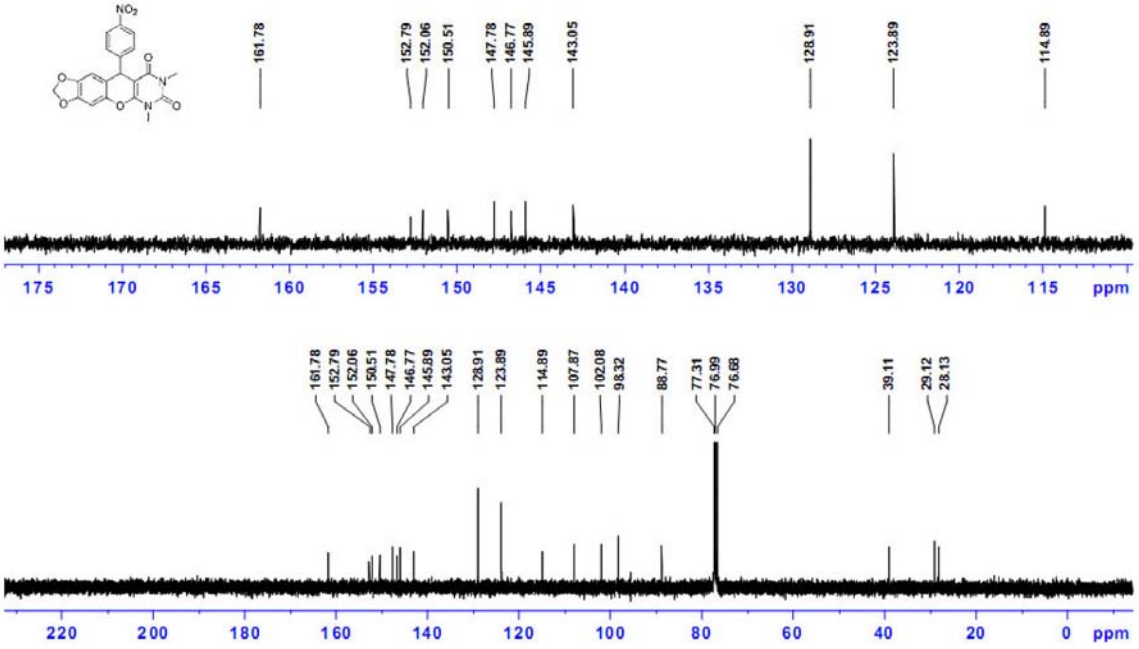

Figure S15. ^{13}C NMR of **4e** (100 MHz, $CDCl_3$).

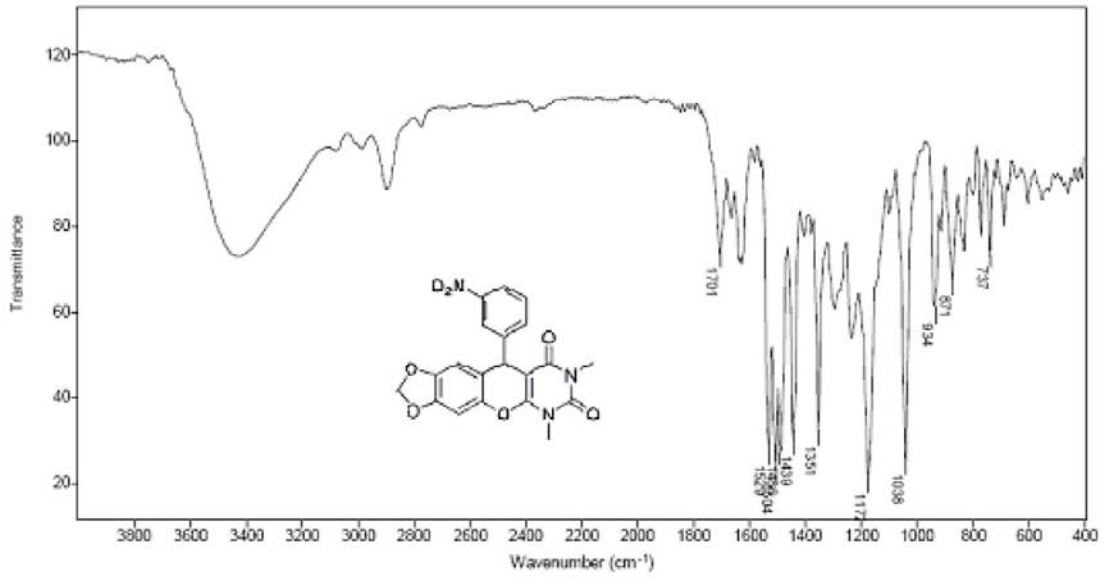

Figure S16. IR (KBr) of **4f.**

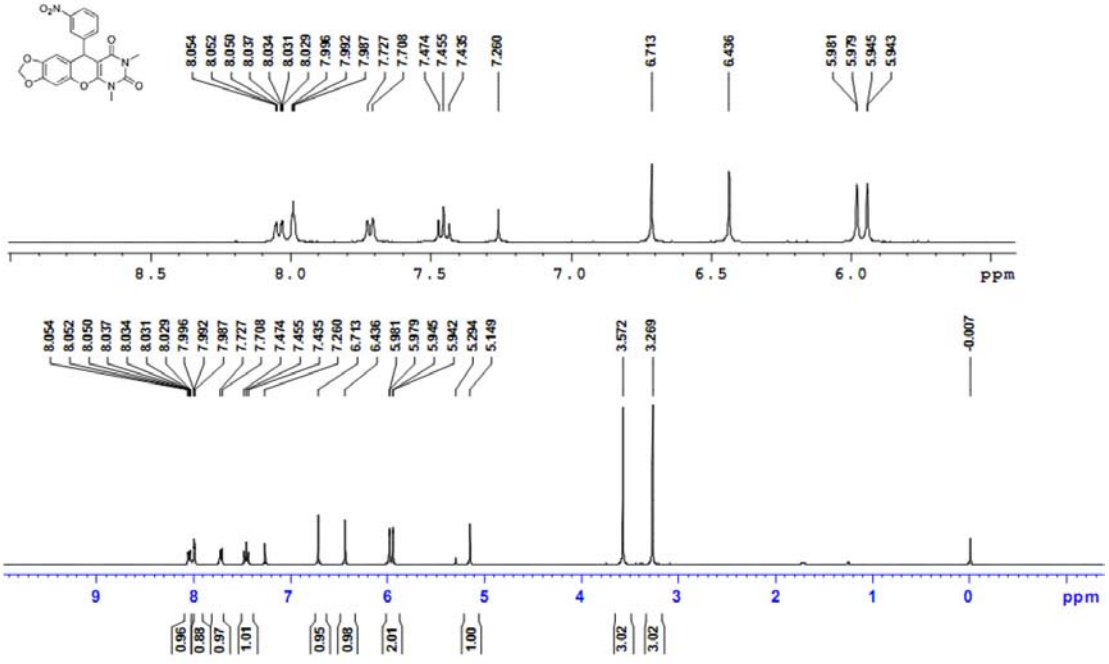

Figure S17. ^{1}H NMR of **4f** (400 MHz, $CDCl_3$).

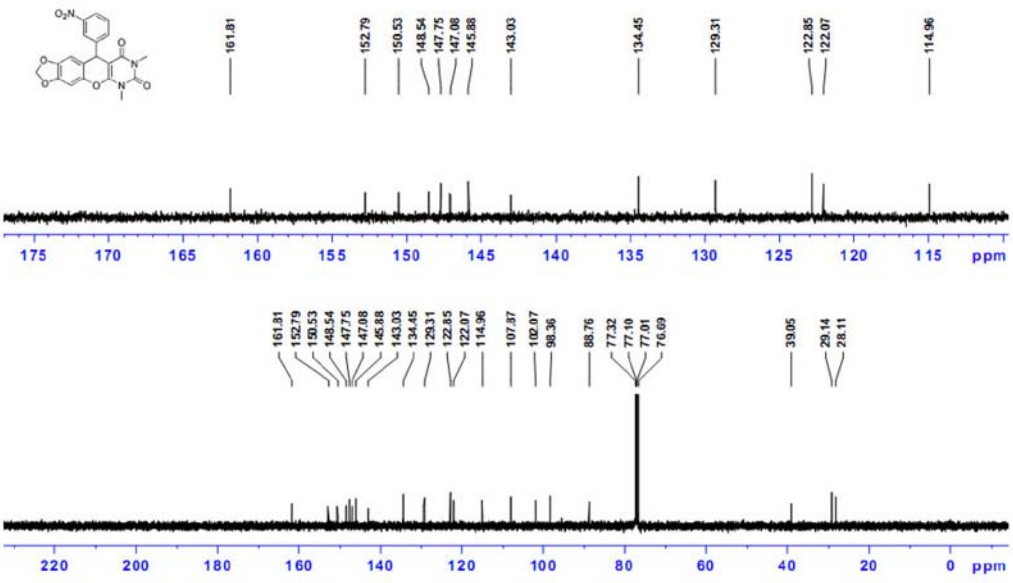

Figure S18. ^{13}C NMR of **4f** (100 MHz, $CDCl_3$).

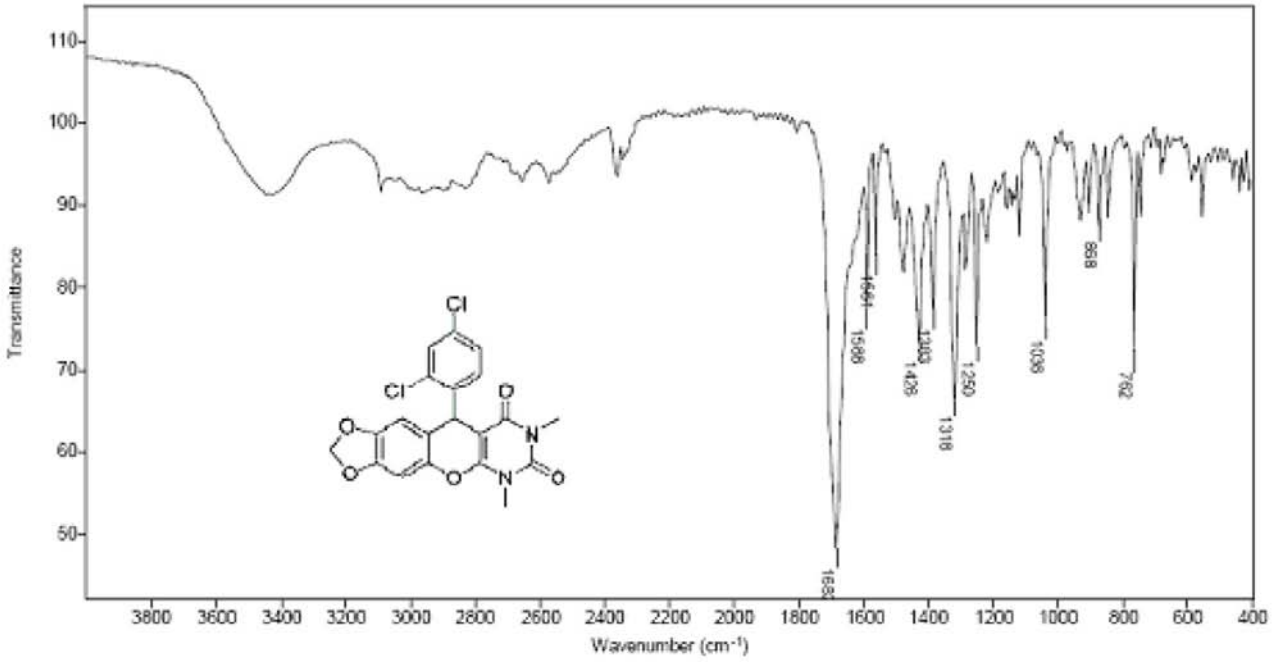

Figure S19. IR (KBr) of **4g.**

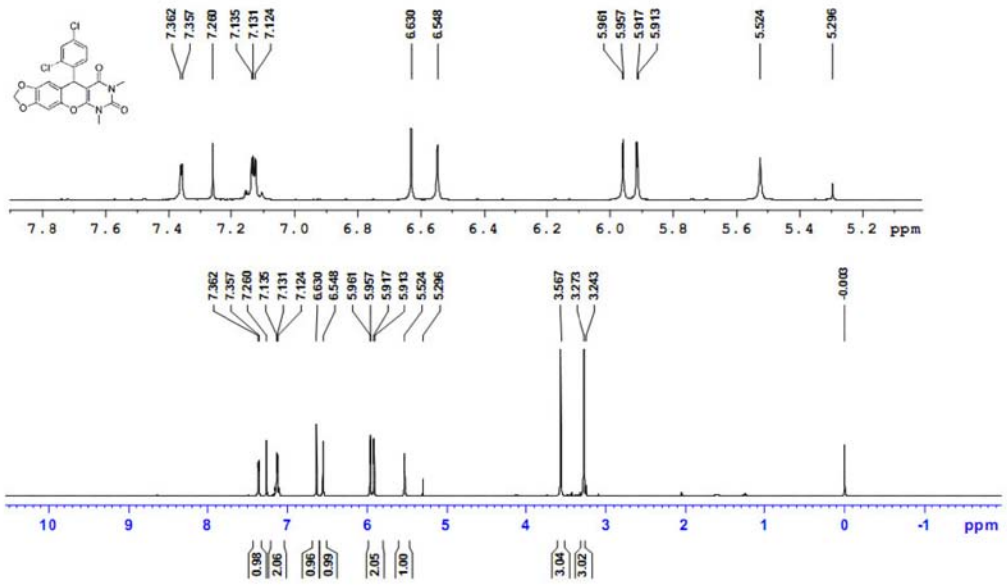

Figure S20. ^{1}H NMR of **4g** (400 MHz, $CDCl_3$).

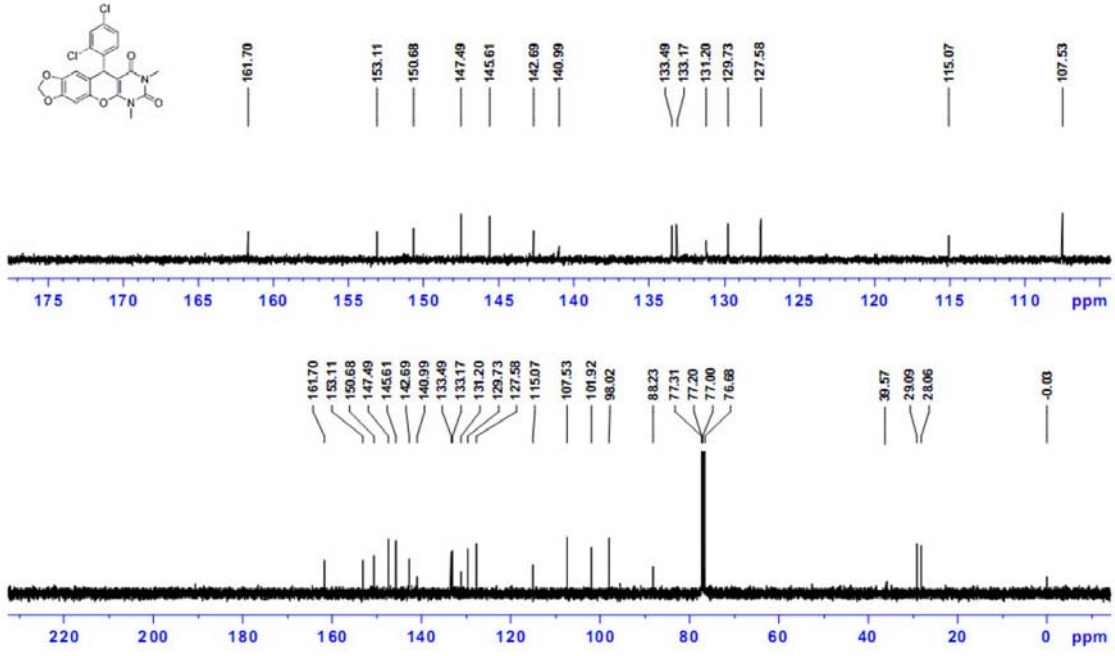

Figure S21. ^{13}C NMR of **4g** (100 MHz, $CDCl_3$).

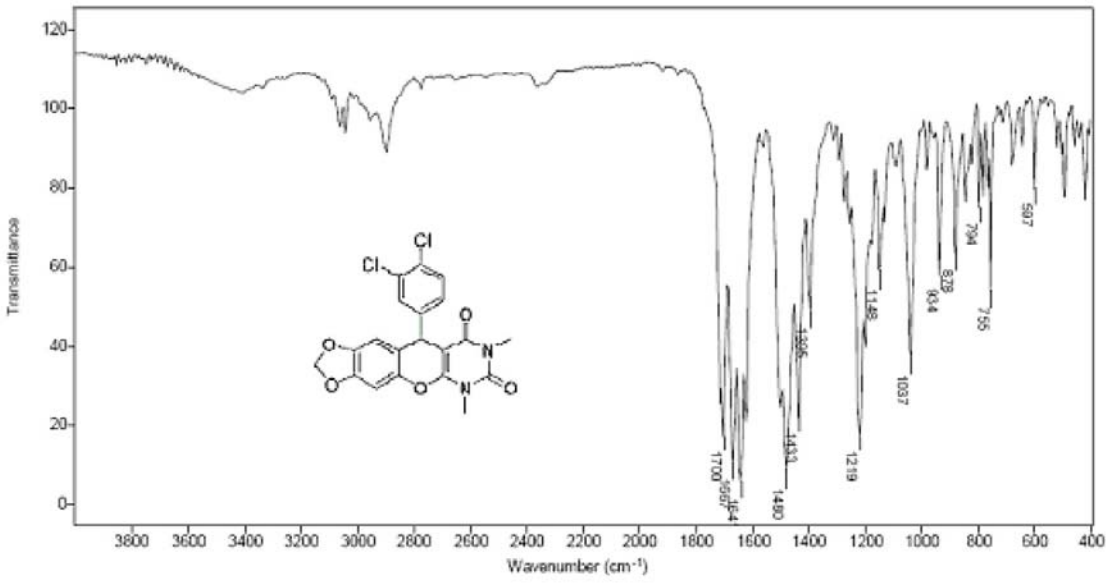

Figure S22. IR (KBr) of **4h.**

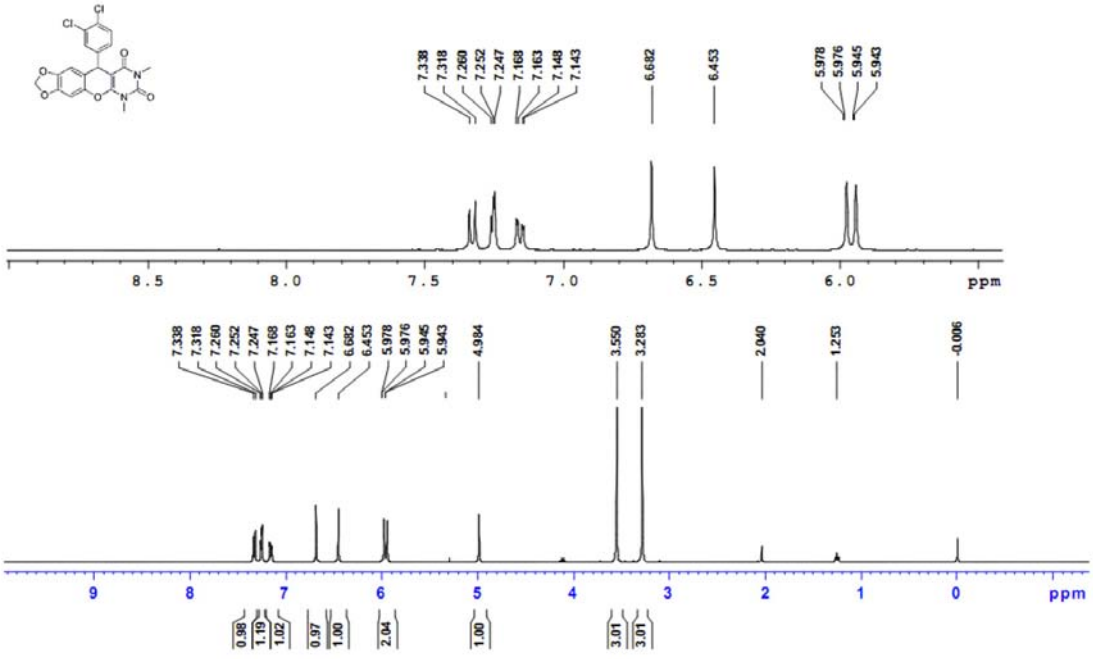

Figure S23. ^{1}H NMR of **4h** (400 MHz, $CDCl_3$).

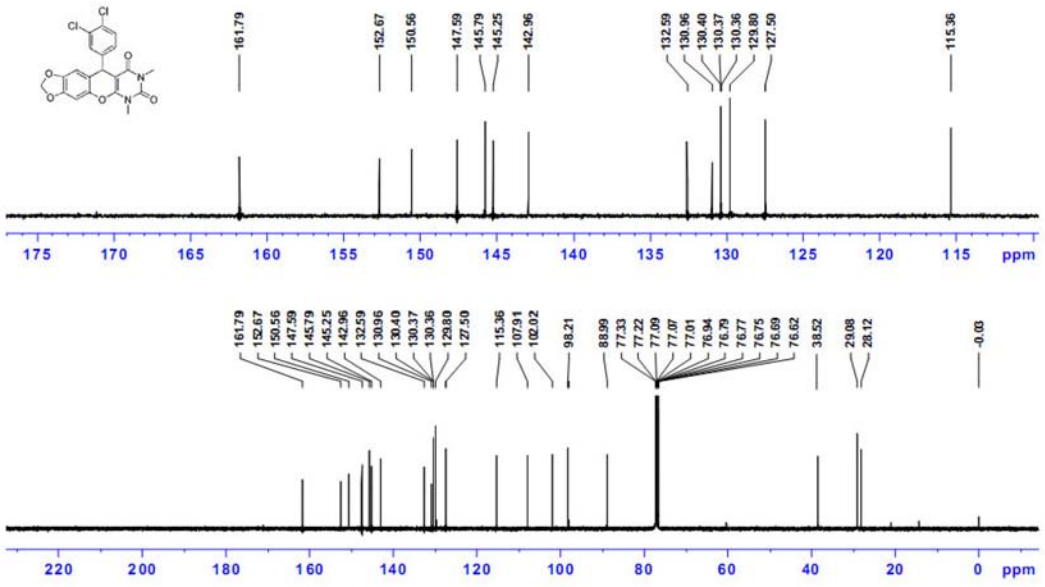

Figure S24. ^{13}C NMR of **4h** (100 MHz, $CDCl_3$).

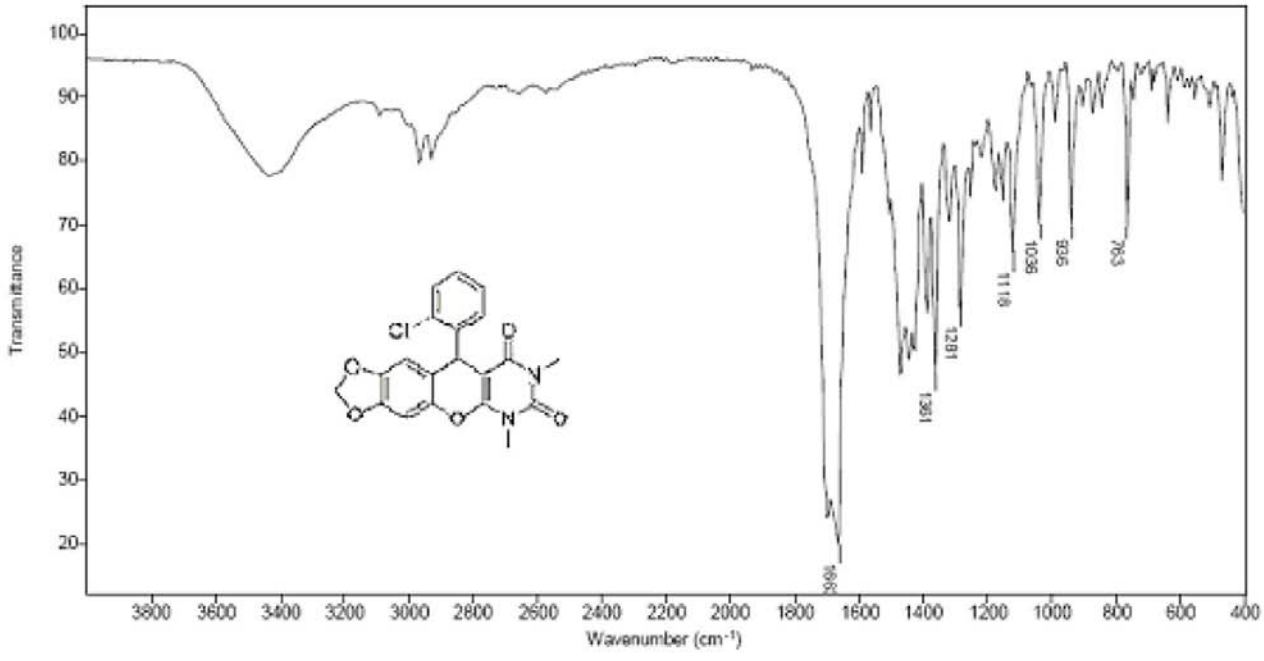

Figure S25. IR (KBr) of **4i**.

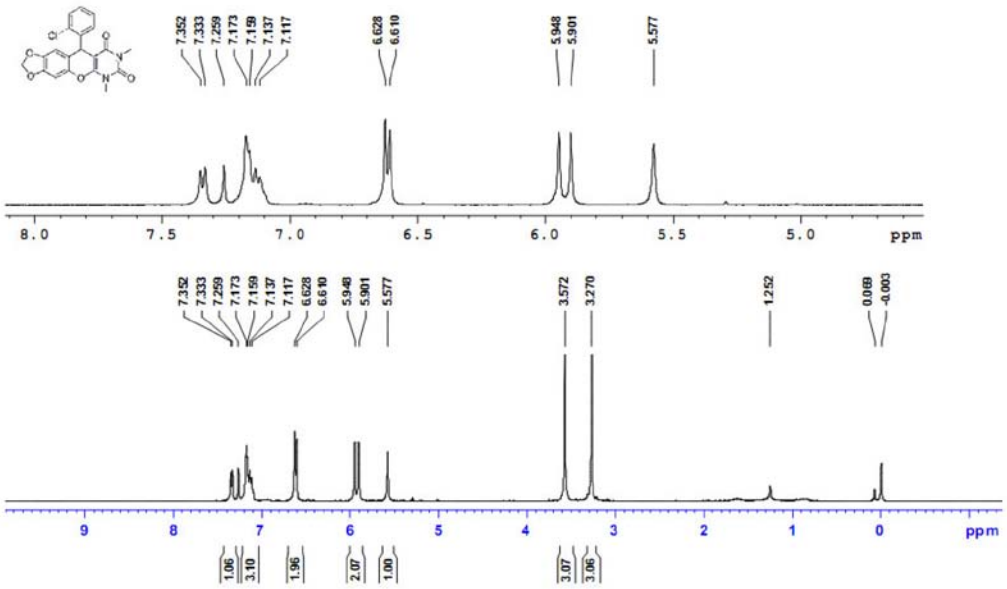

Figure S26. ^{1}H NMR of **4i** (400 MHz, $CDCl_3$).

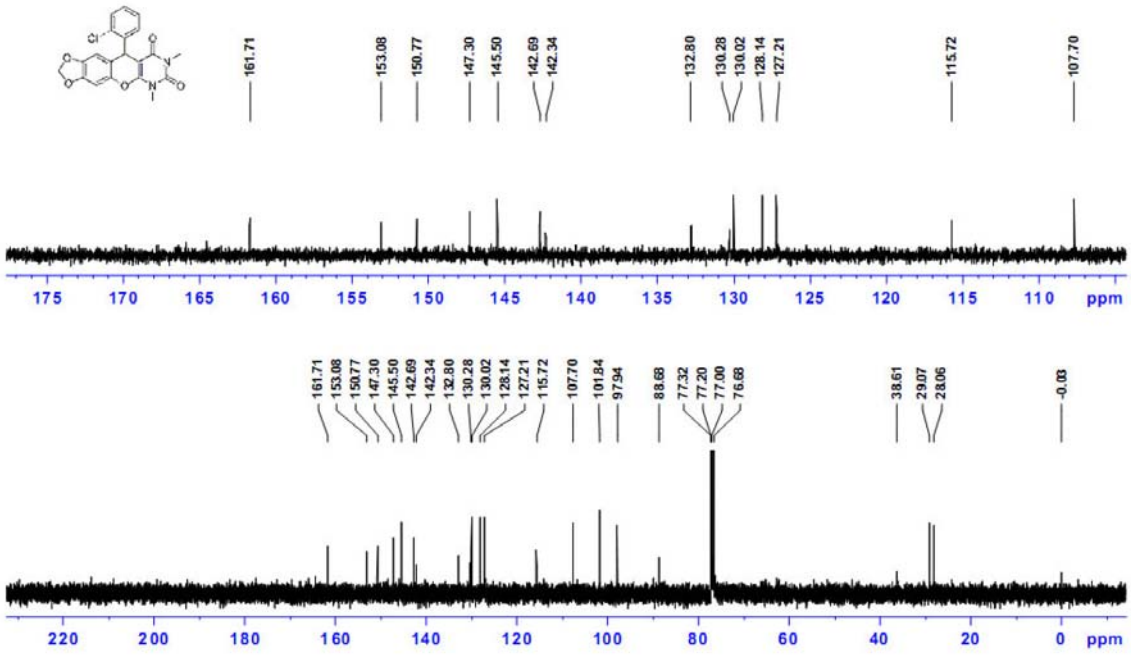

Figure S27. ^{13}C NMR of **4i** (100 MHz, $CDCl_3$).