

L-Proline catalyzed three-component synthesis of *para*-naphthoquinone- 4- aza-podophyllotoxin hybrids as potent antitumor agents

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Content

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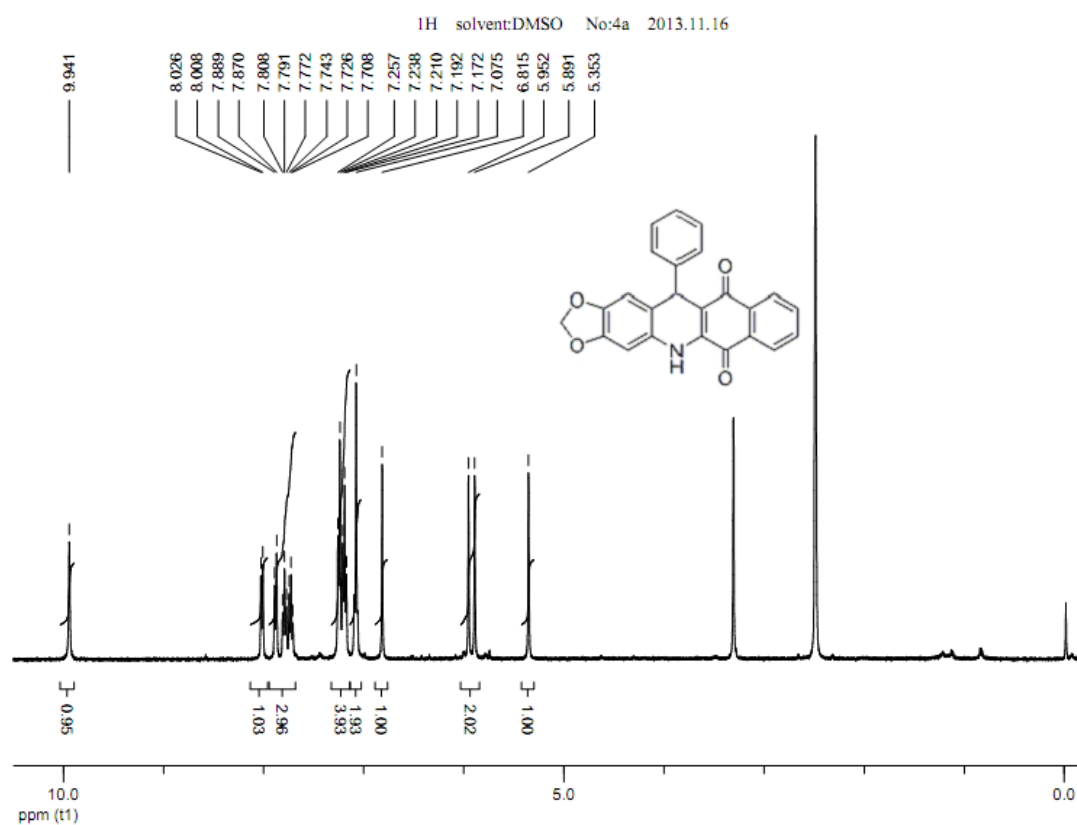


Figure 1. ¹H NMR of 4a

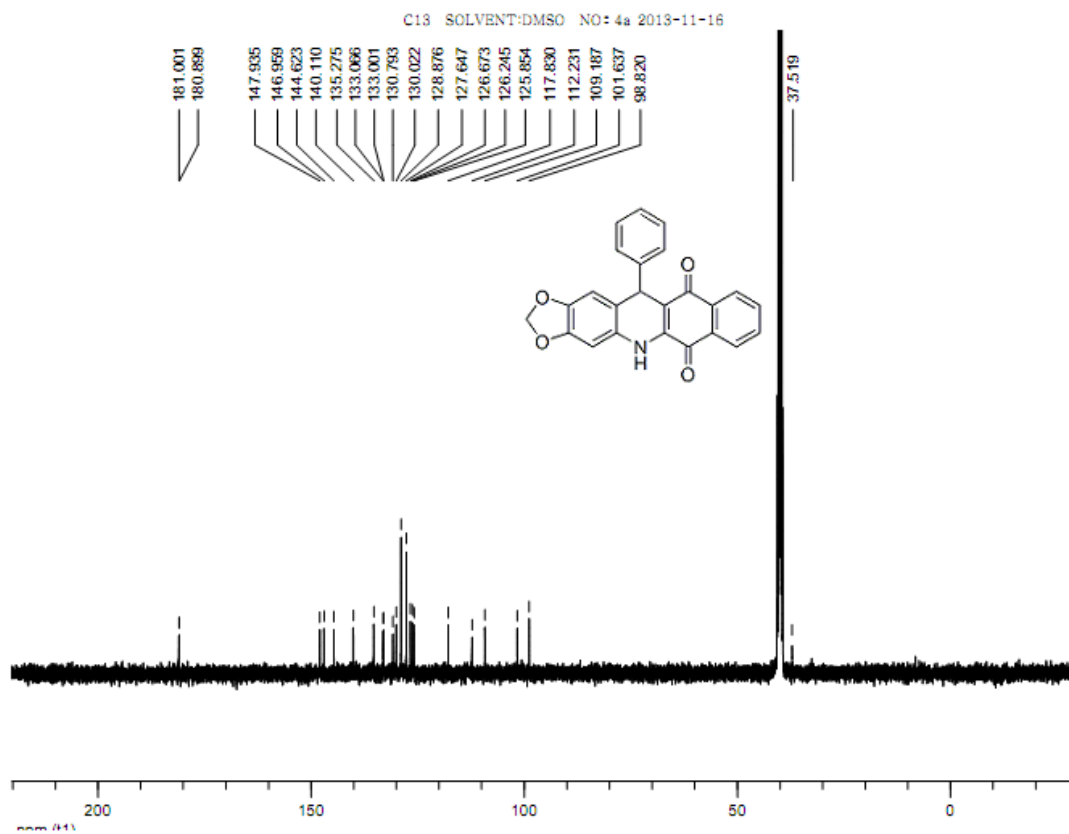


Figure 2. ^{13}C NMR of 4a

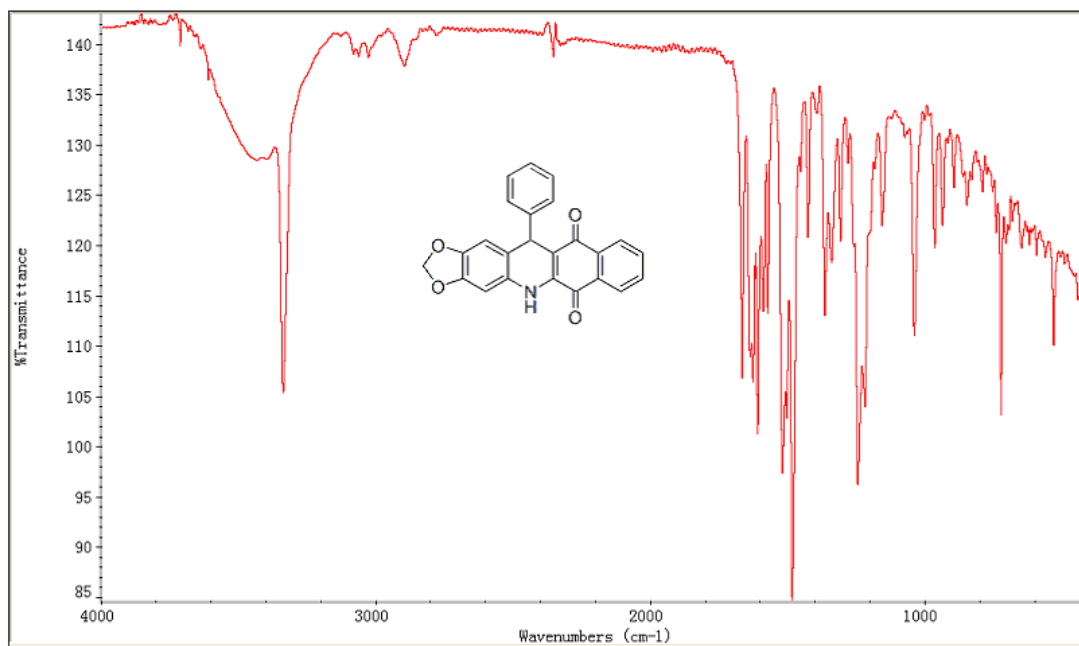


Figure 3. IR of 4a

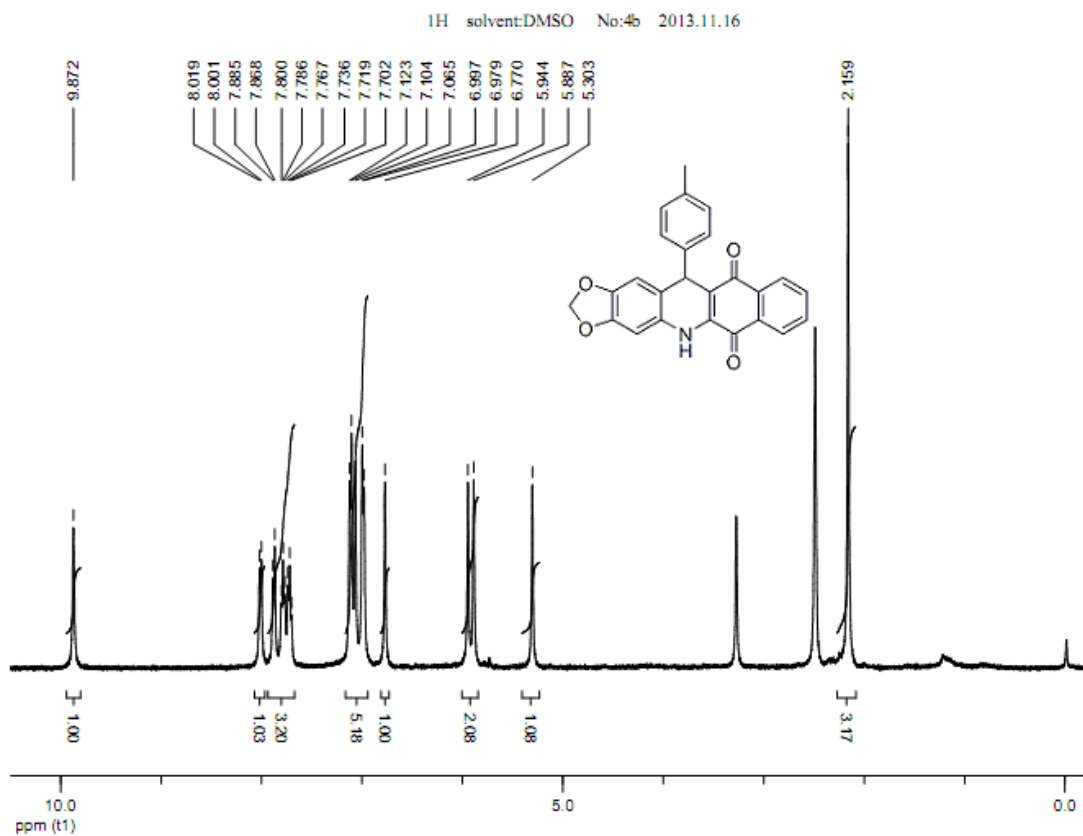


Figure 4. ^1H NMR of 4b

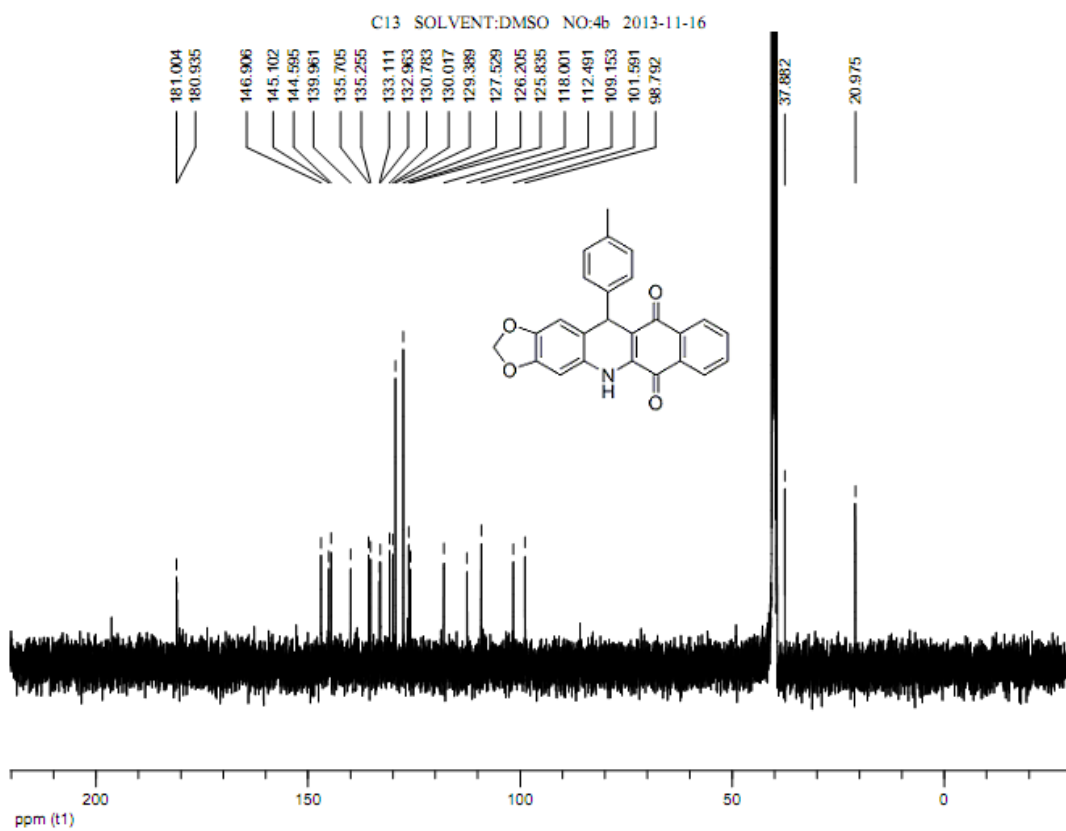


Figure 5. ^{13}C NMR of 4b

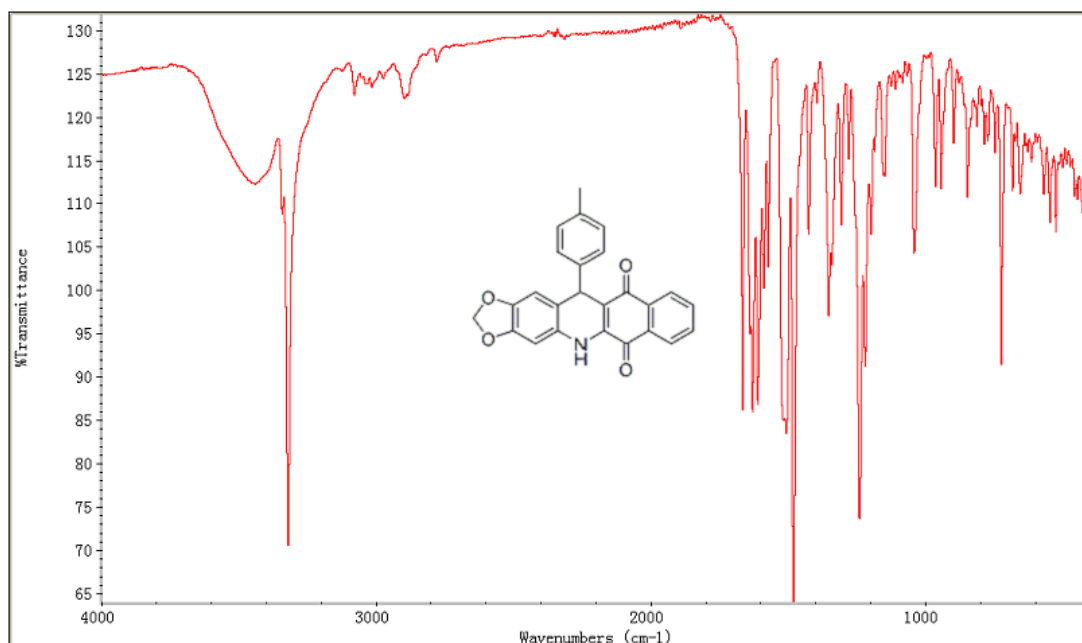


Figure 6. IR of 4b

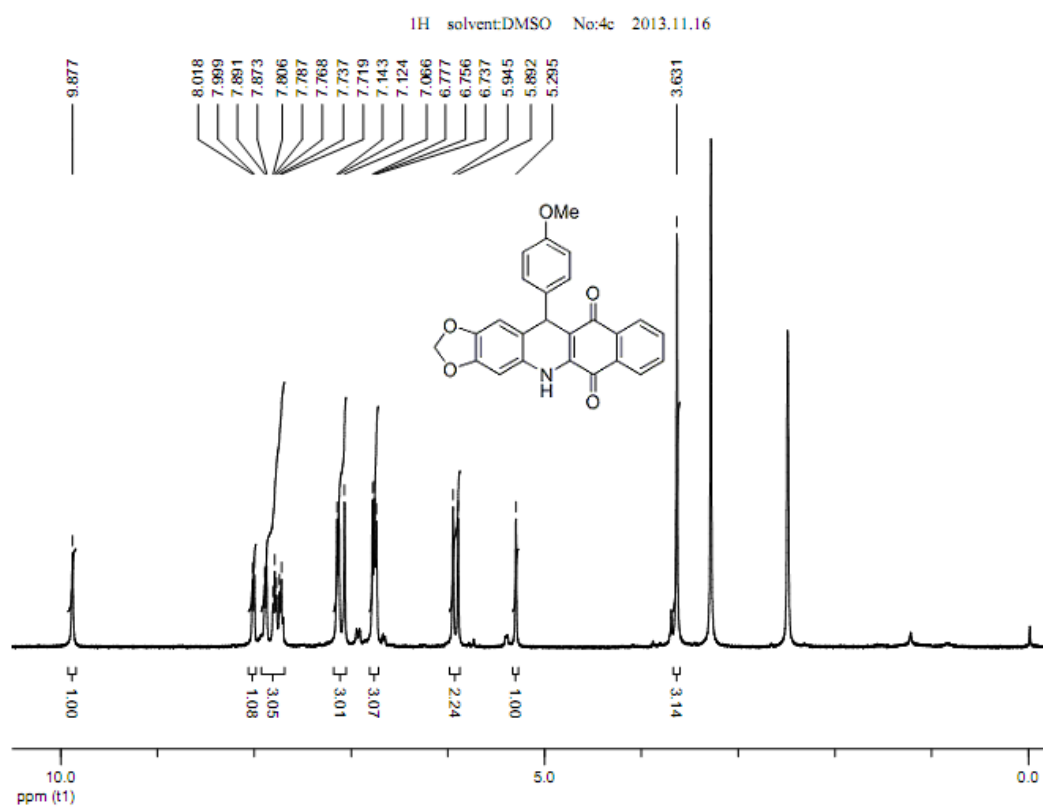


Figure 7. ¹H NMR of 4c

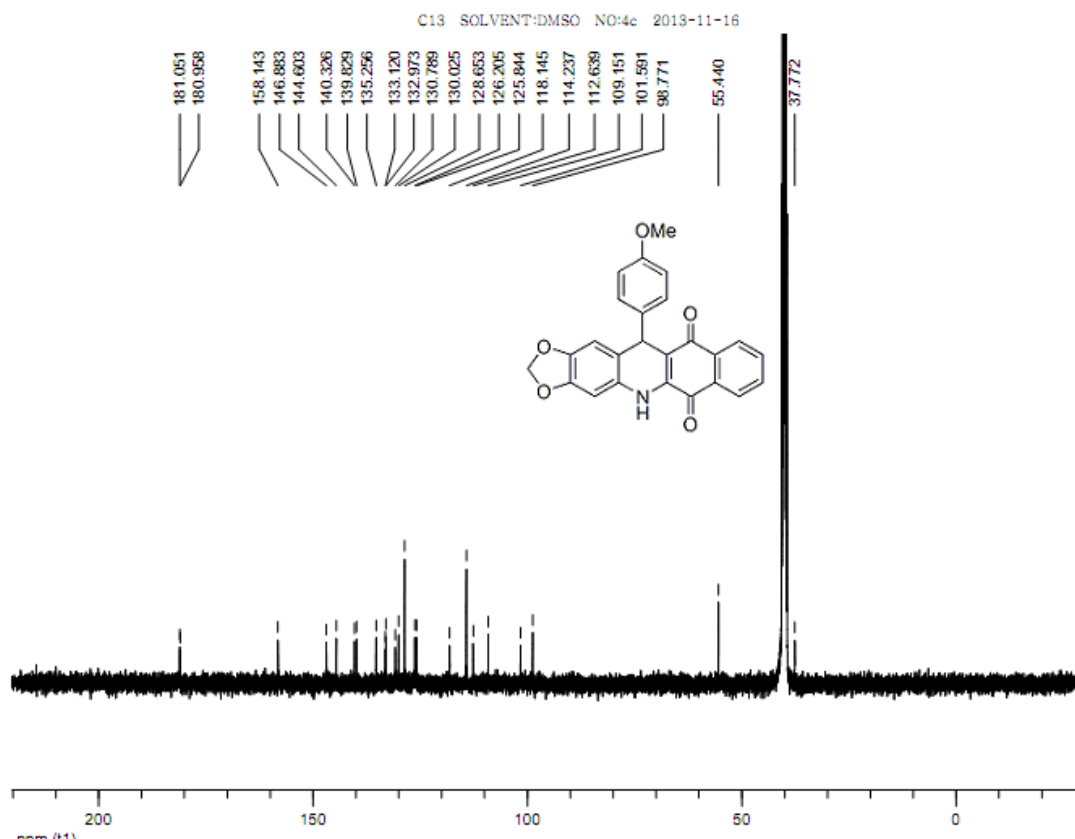


Figure 8. 13 HNMR of **4c**

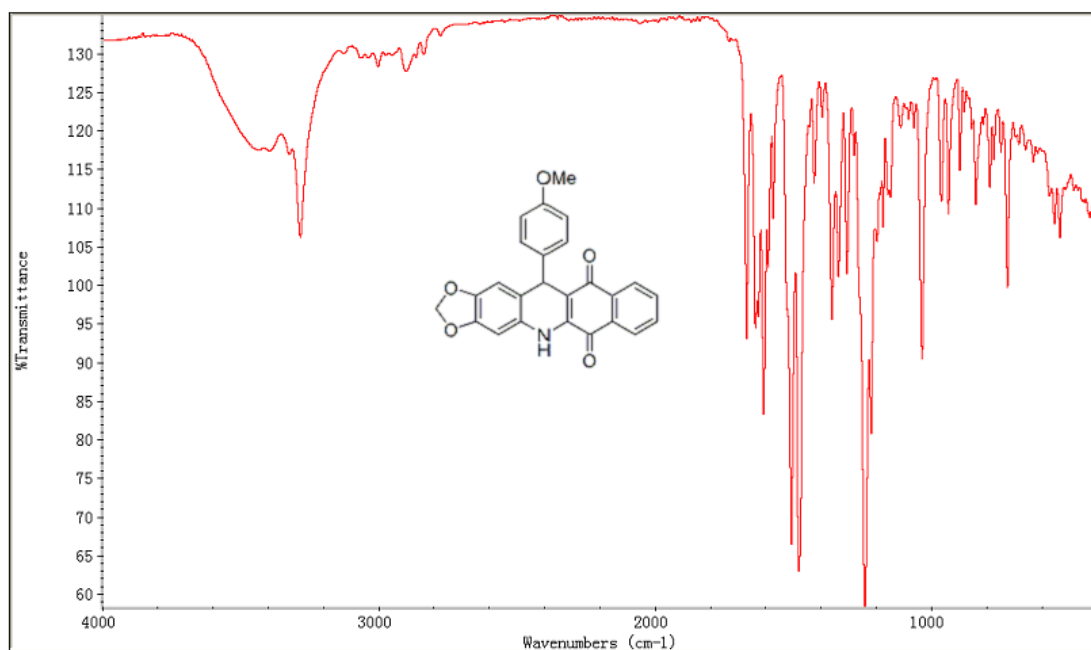


Figure 9. IR of **4c**

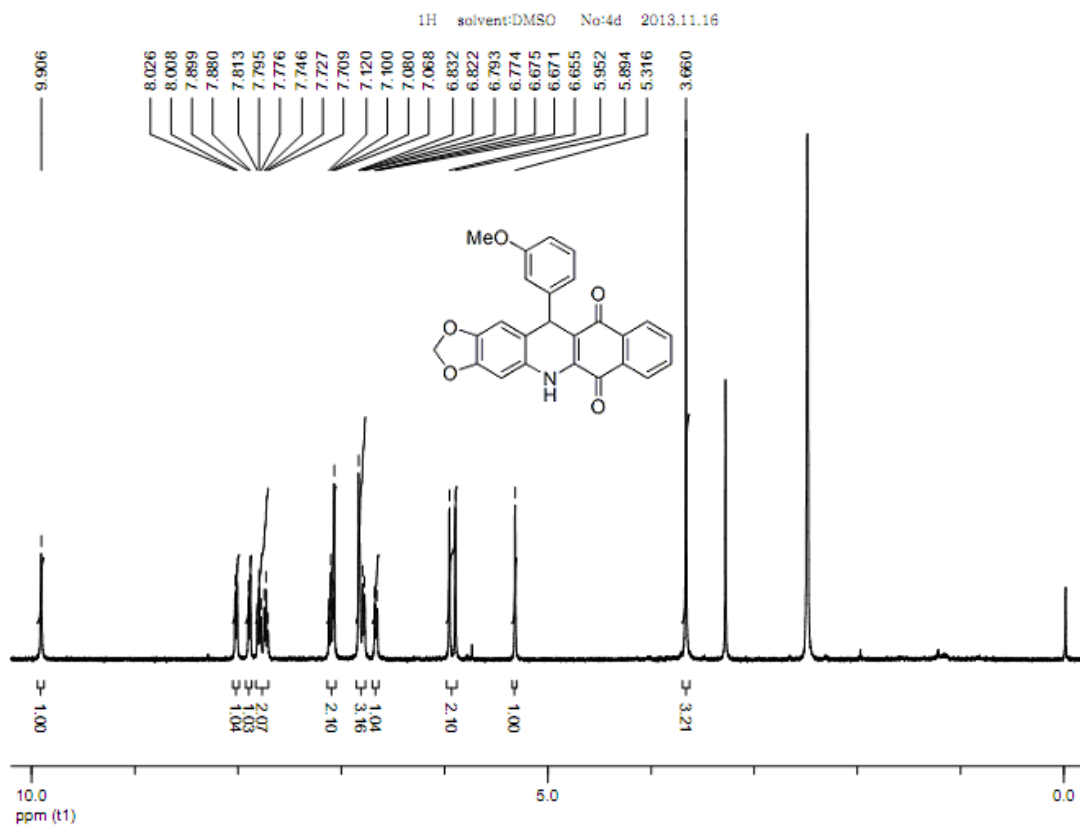


Figure 10. ¹H NMR of 4d

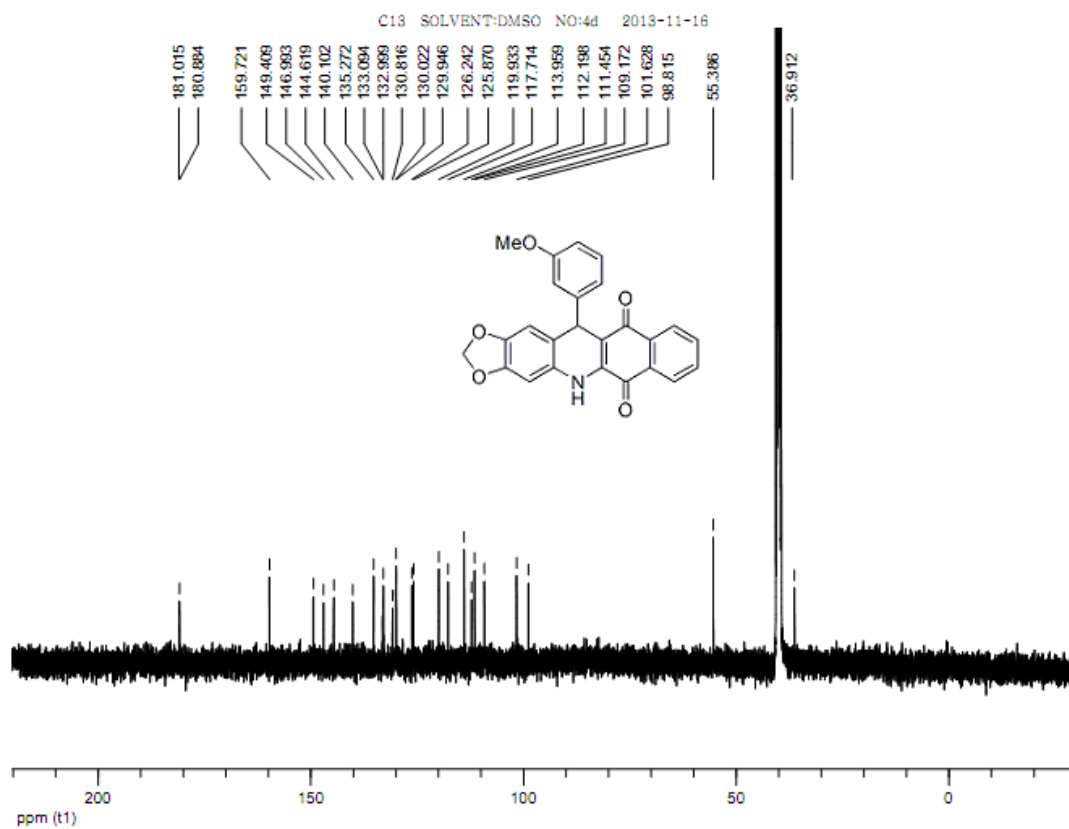


Figure 11. ^{13}C NMR of 4d

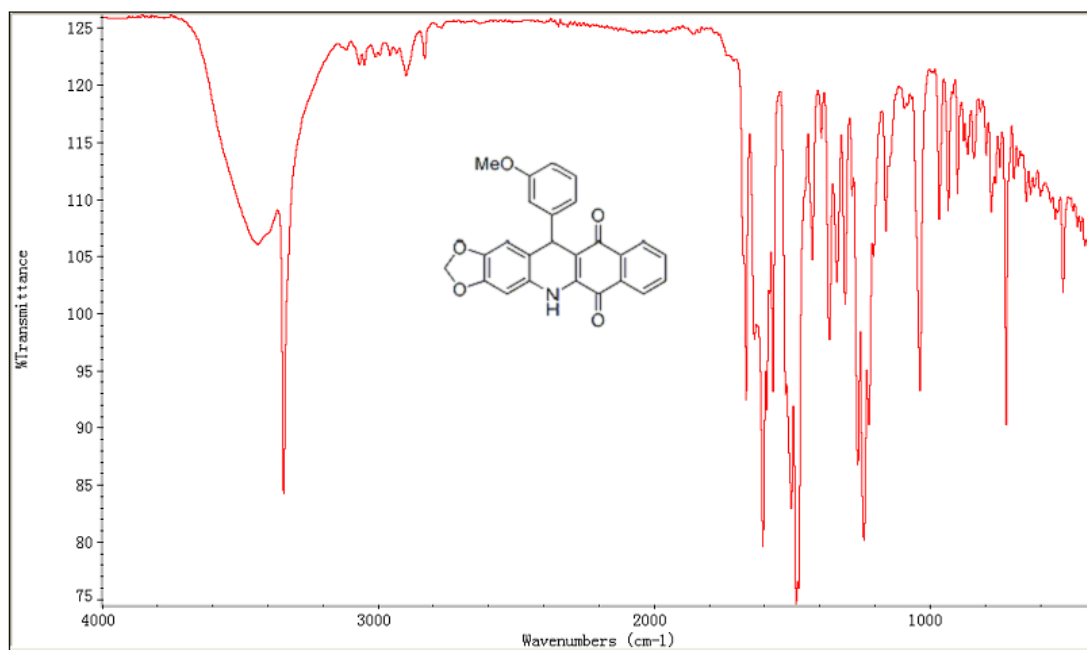


Figure 12. IR of 4d

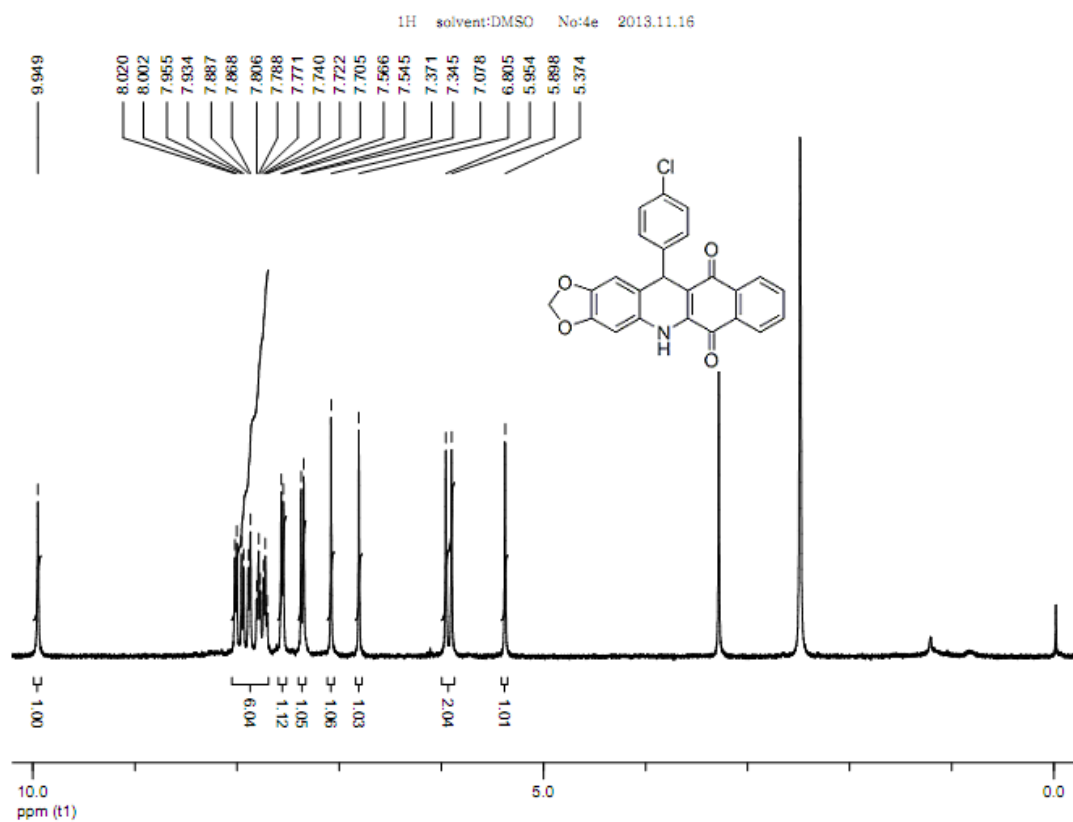


Figure 13. ^1H NMR of 4e

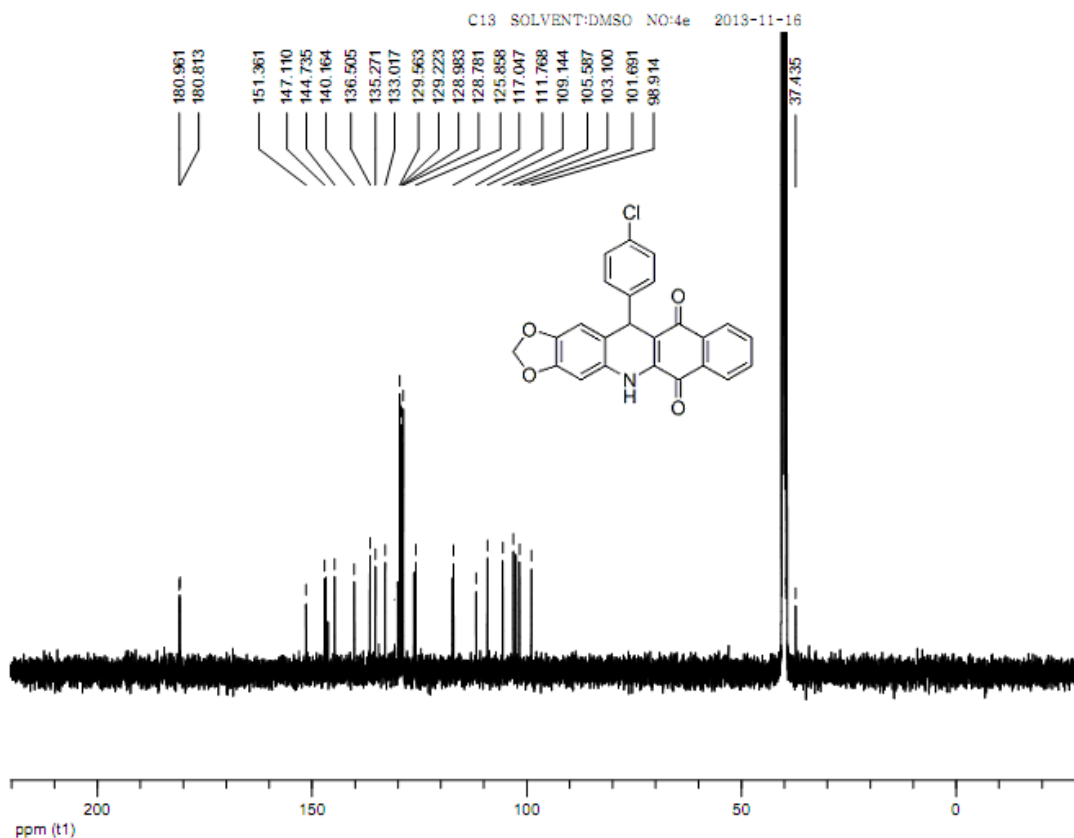


Figure 14. ^{13}C NMR of 4e

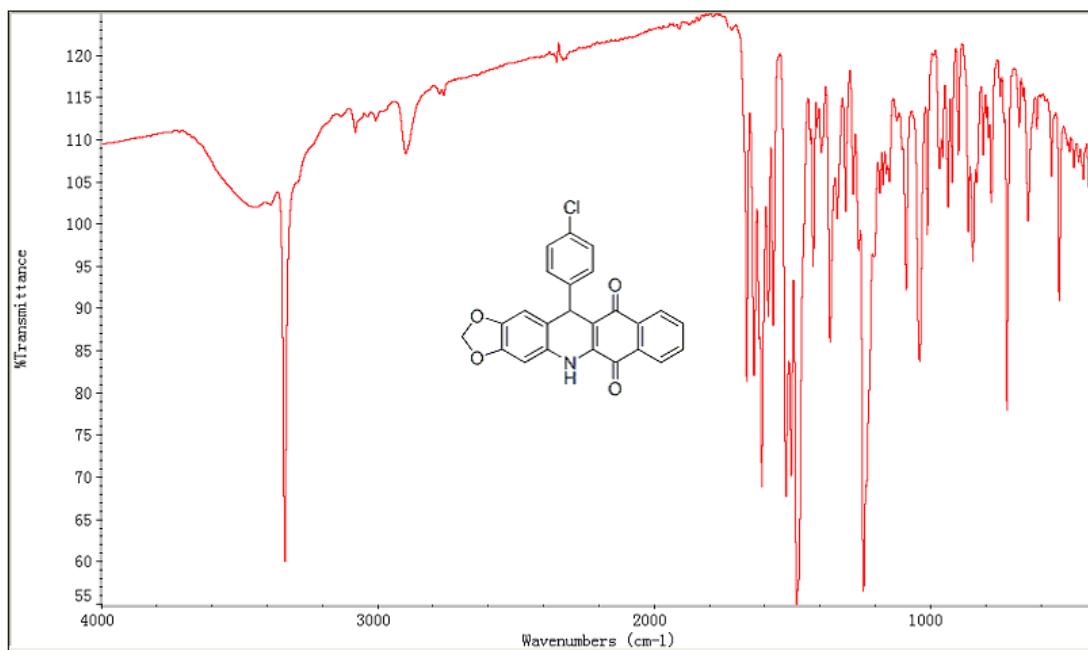


Figure 15. IR of 4e

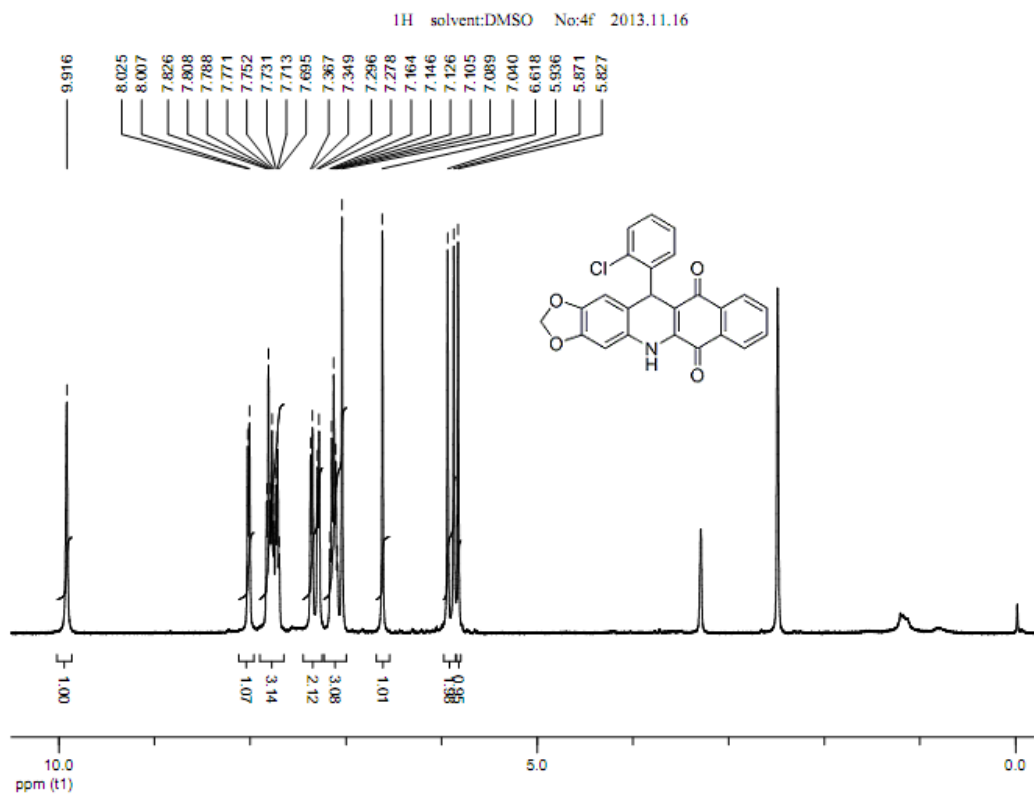


Figure 16. ^1H NMR of 4f

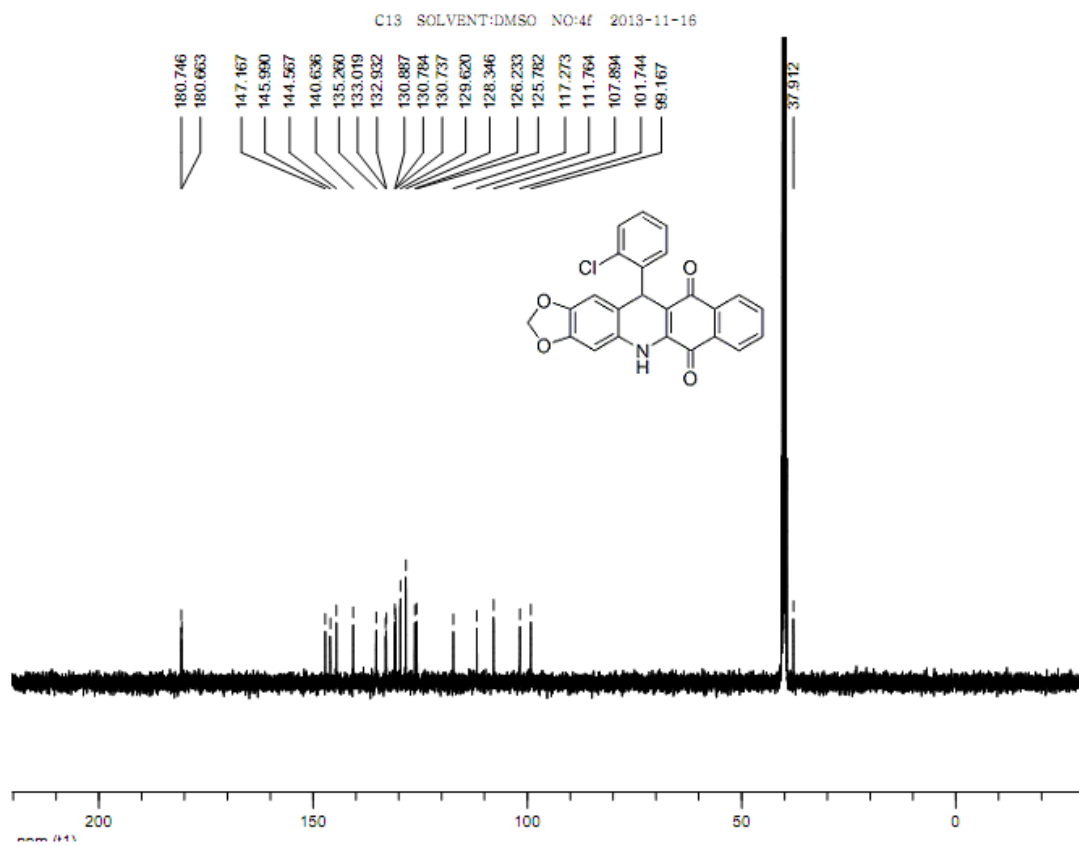


Figure 17. ^{13}C NMR of 4f

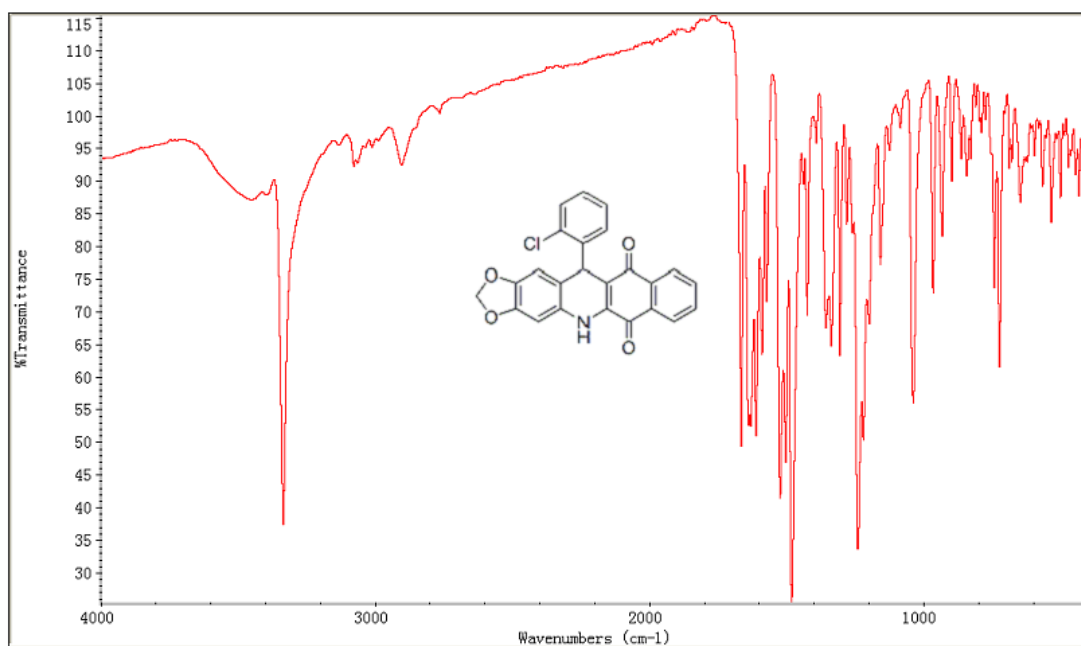


Figure 18. IR of 4f

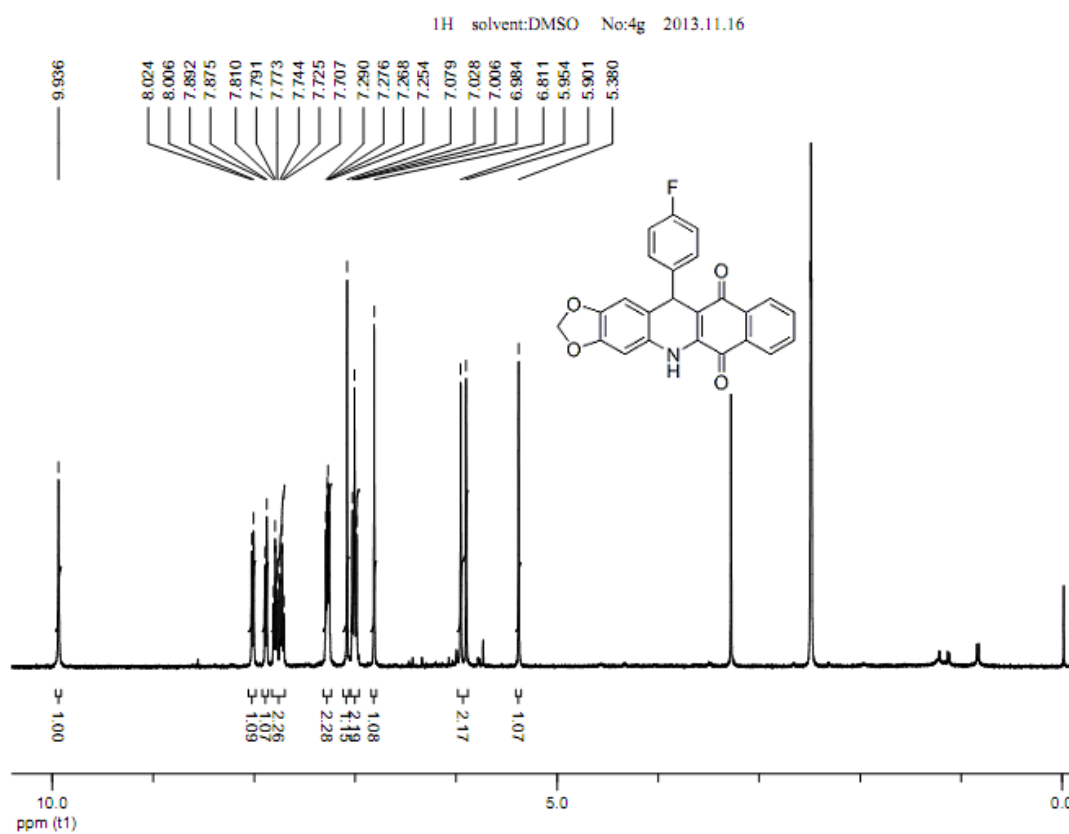


Figure 19. ¹H NMR of 4g

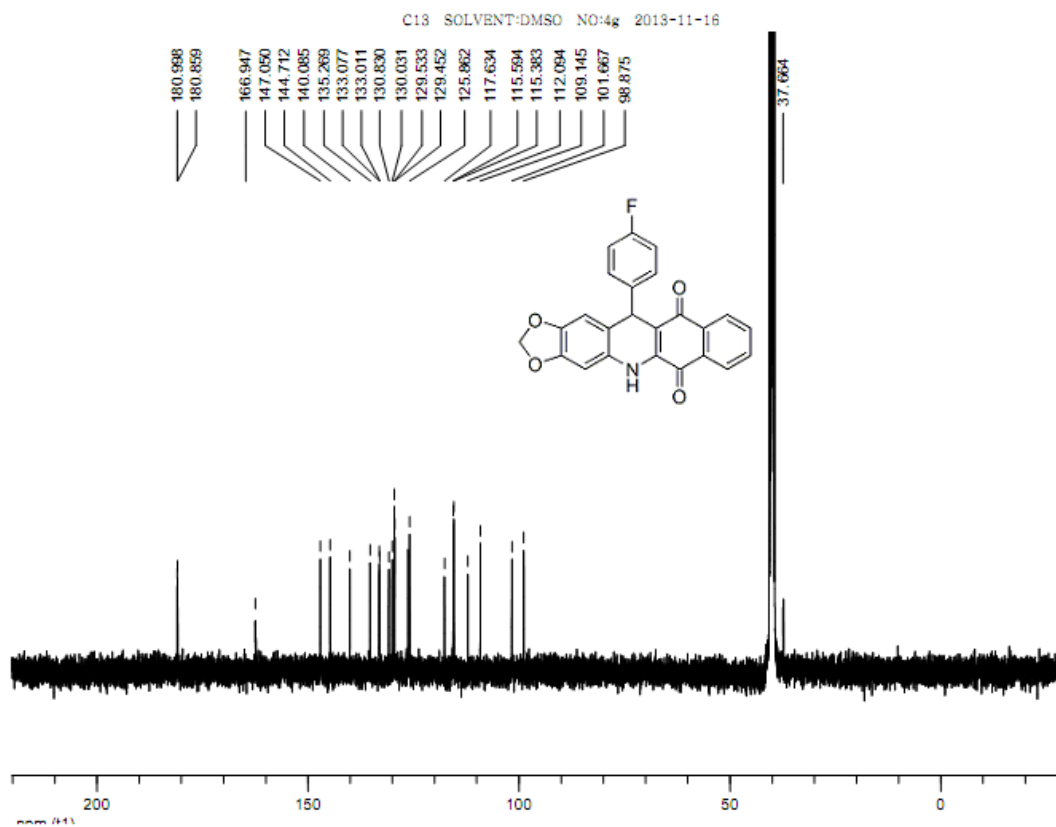


Figure 20. ^{13}C NMR of 4g

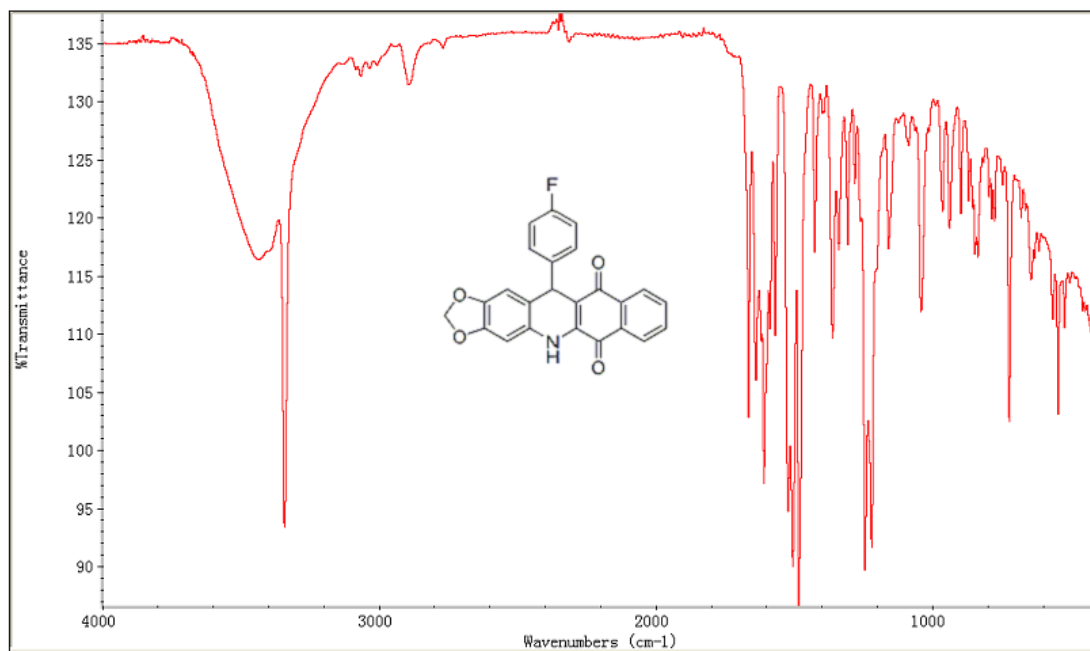


Figure 21. IR of 4g

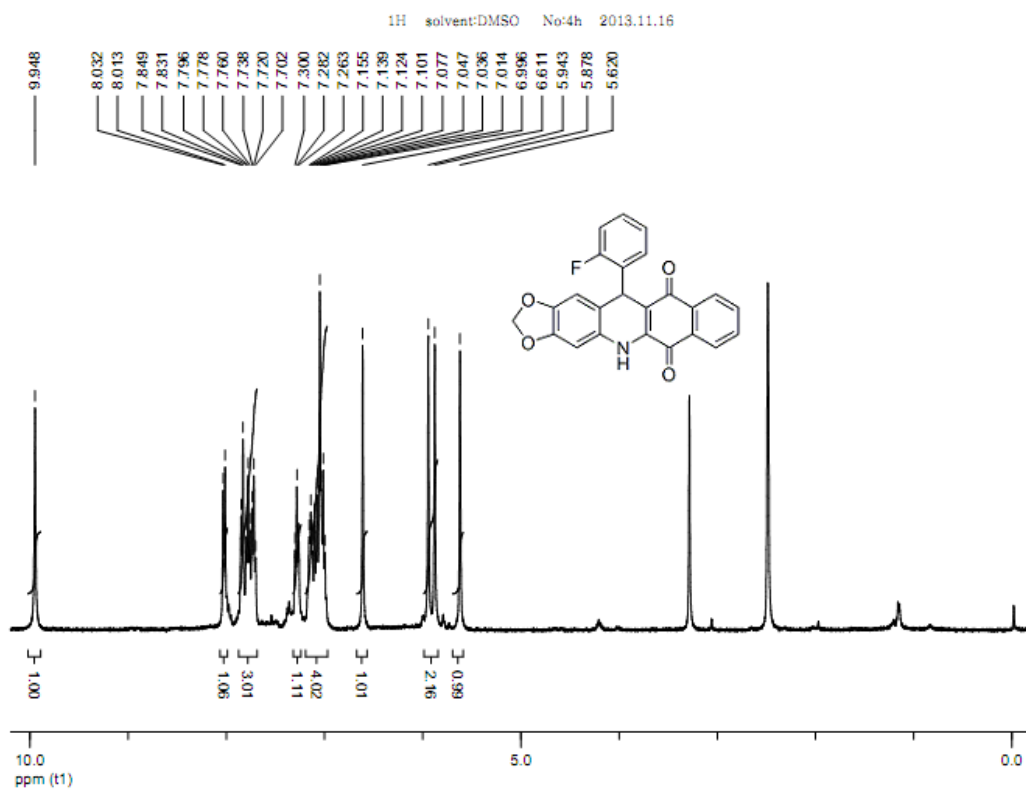


Figure 22. ^1H NMR of 4h

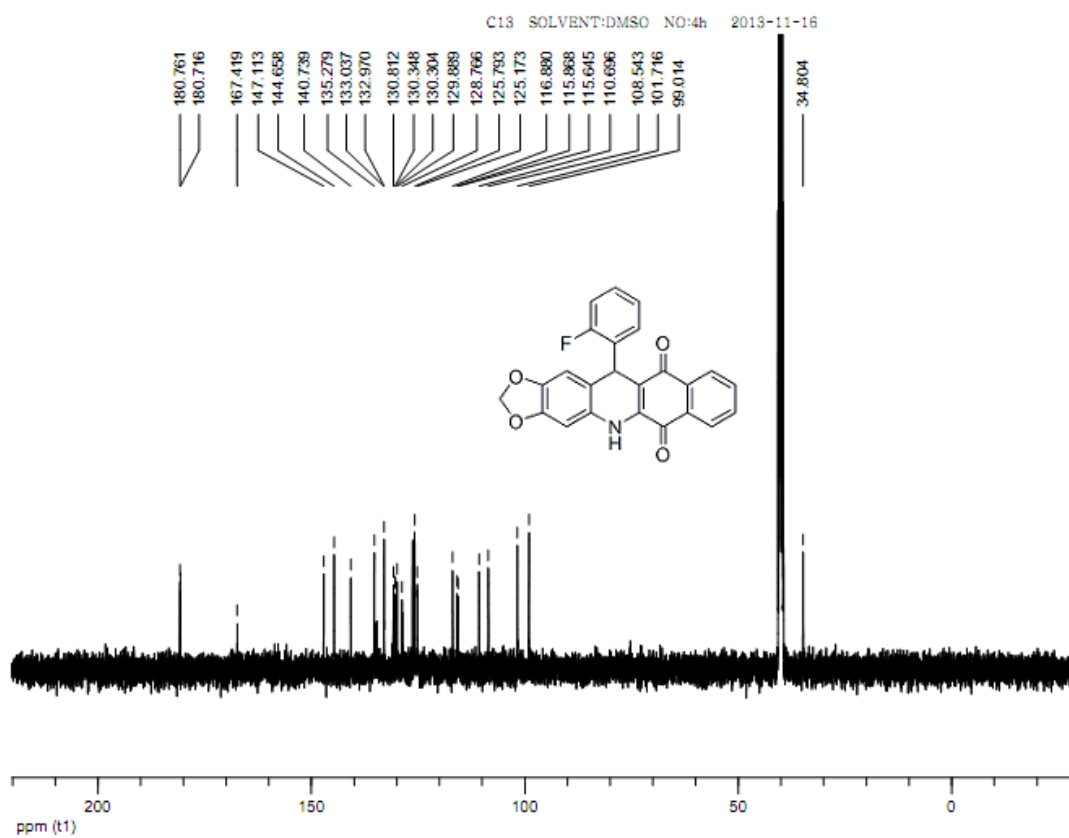


Figure 23. ^{13}C NMR of 4h

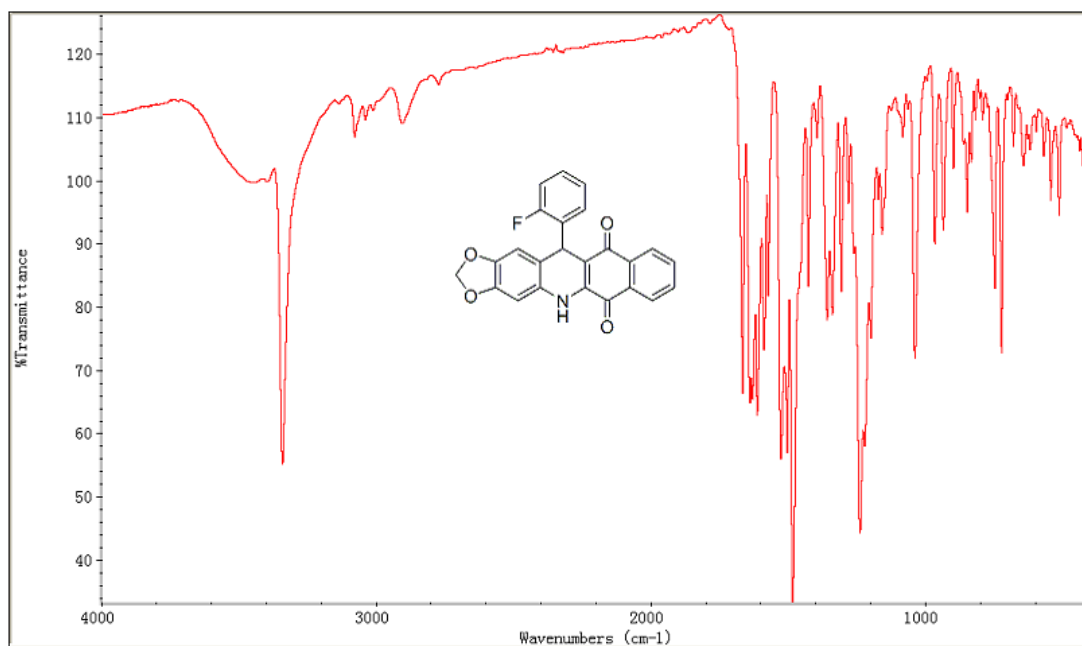


Figure 24. IR of 4h

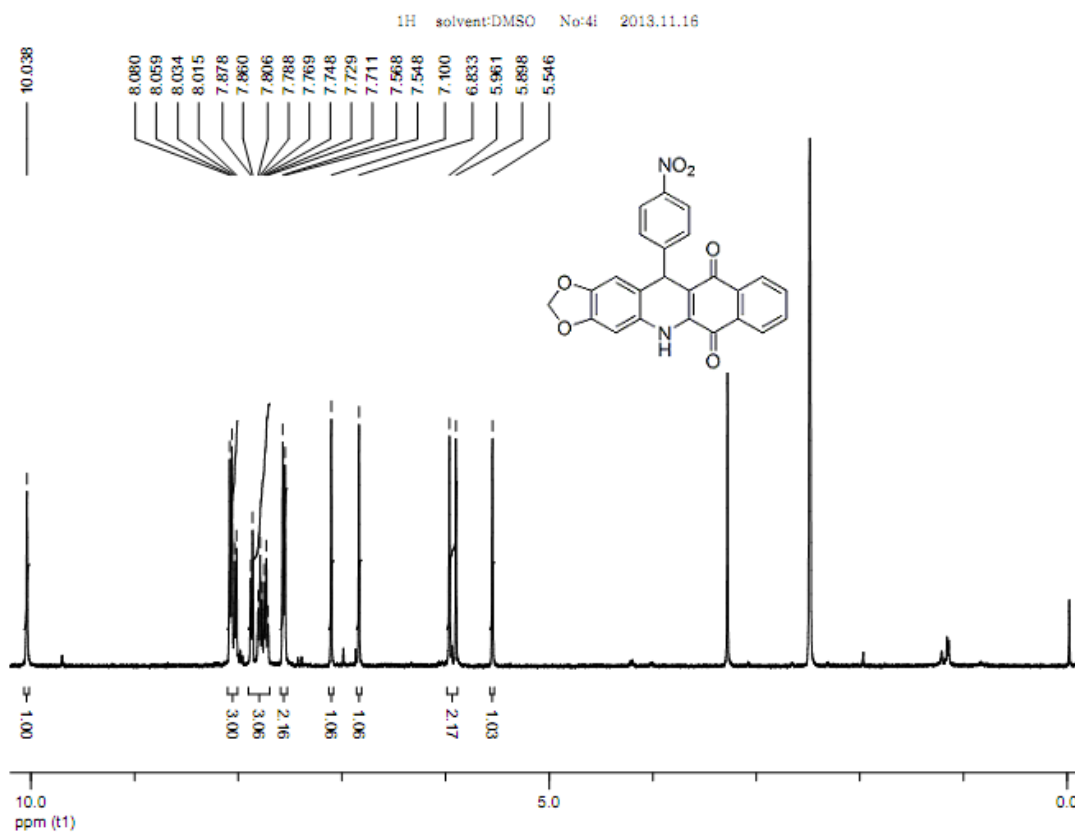


Figure 25. ¹H NMR of 4i

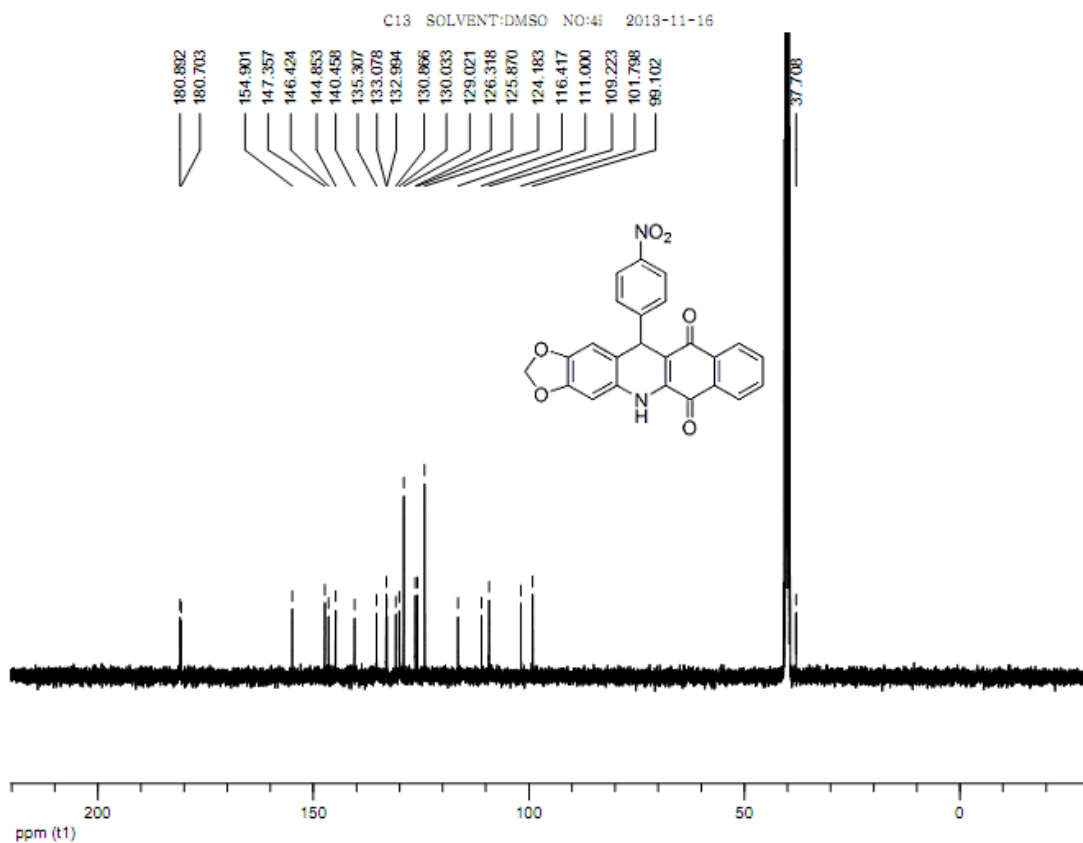


Figure 26. ^{13}C NMR of 4i

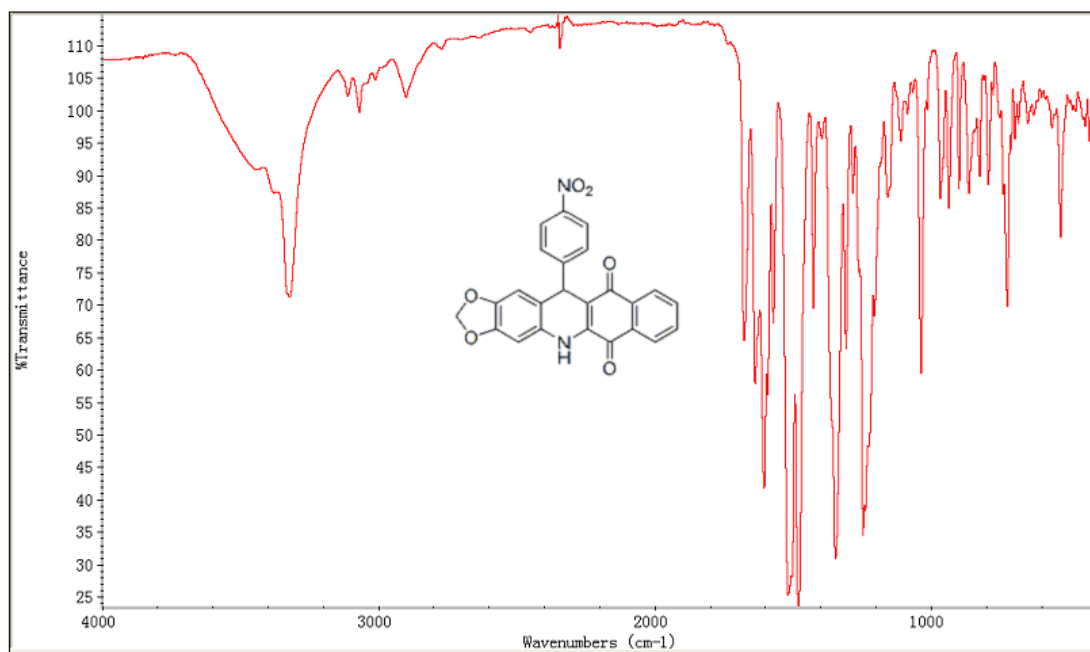


Figure 27. IR of 4i

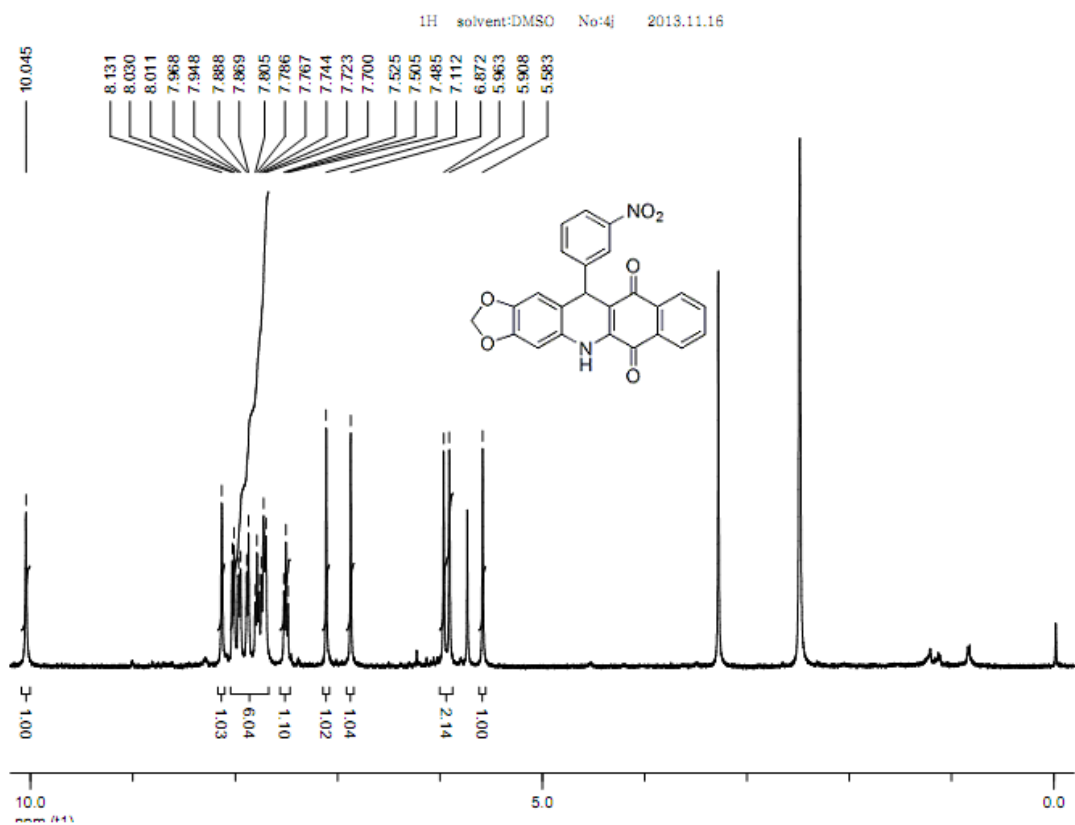


Figure 28. ¹H NMR of 4j

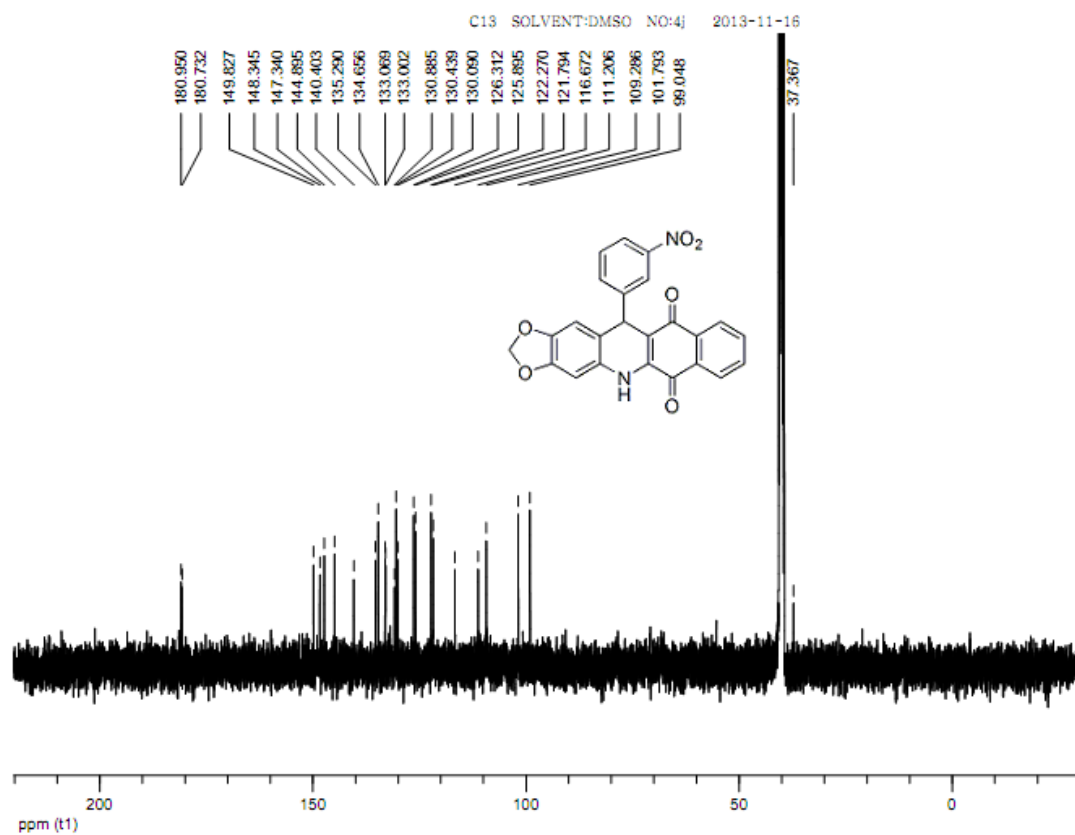


Figure 29. ¹³C NMR of 4j

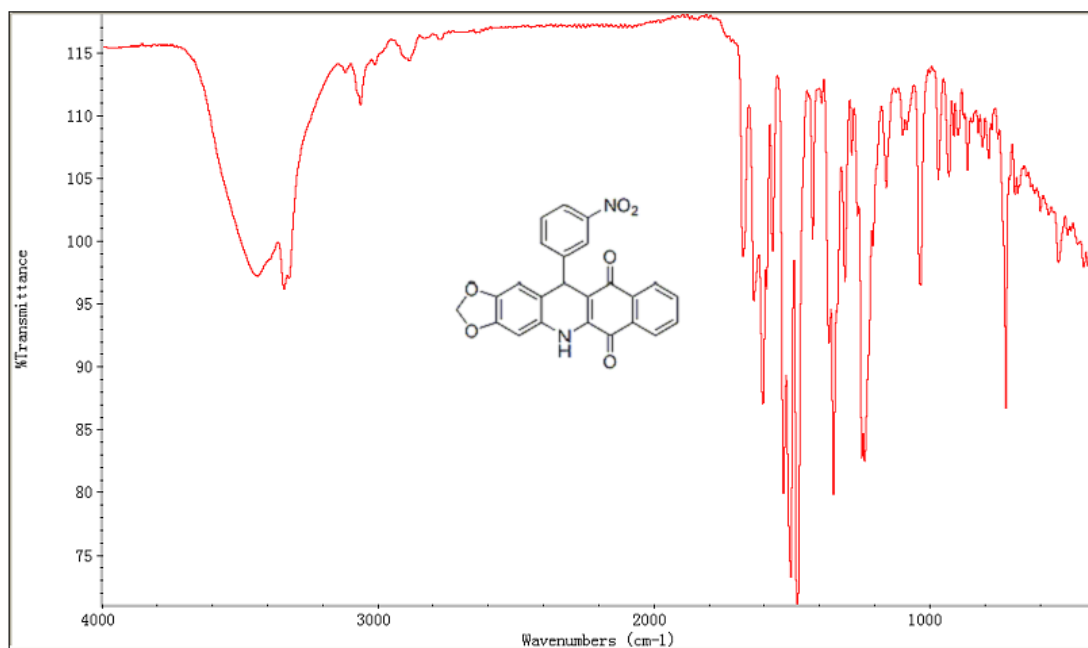


Figure 30. IR of 4j

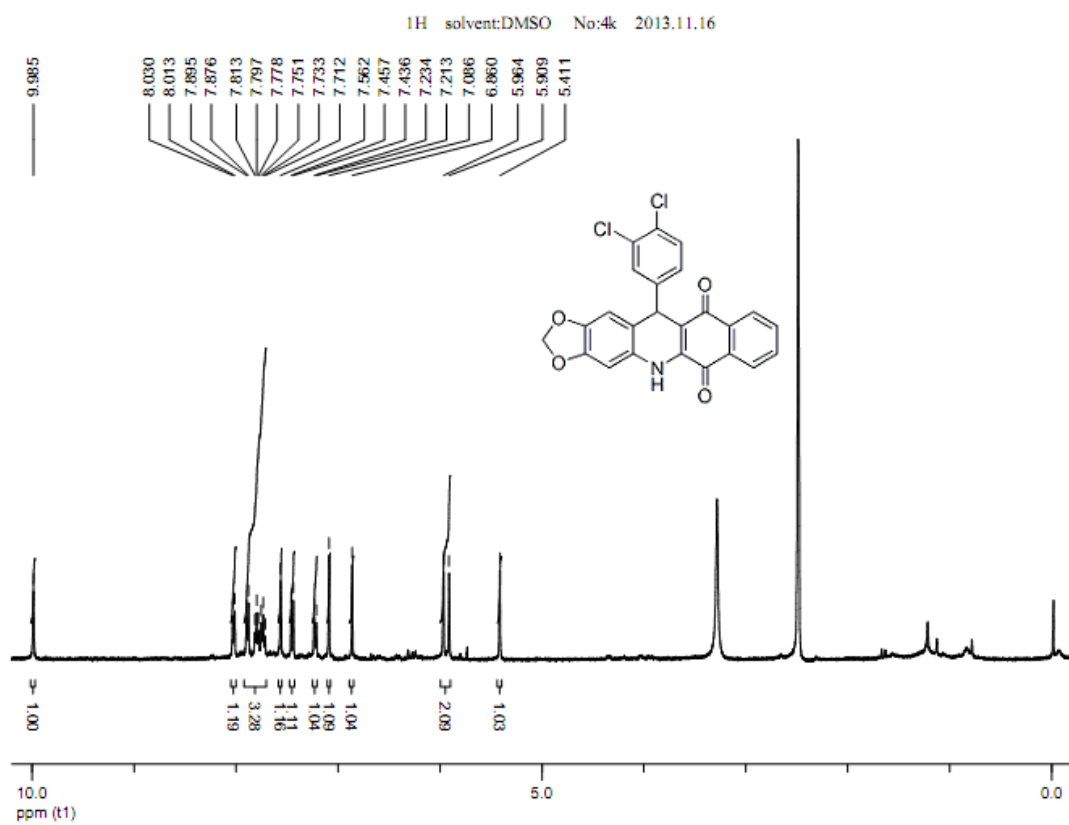


Figure 31. ¹H NMR of 4k

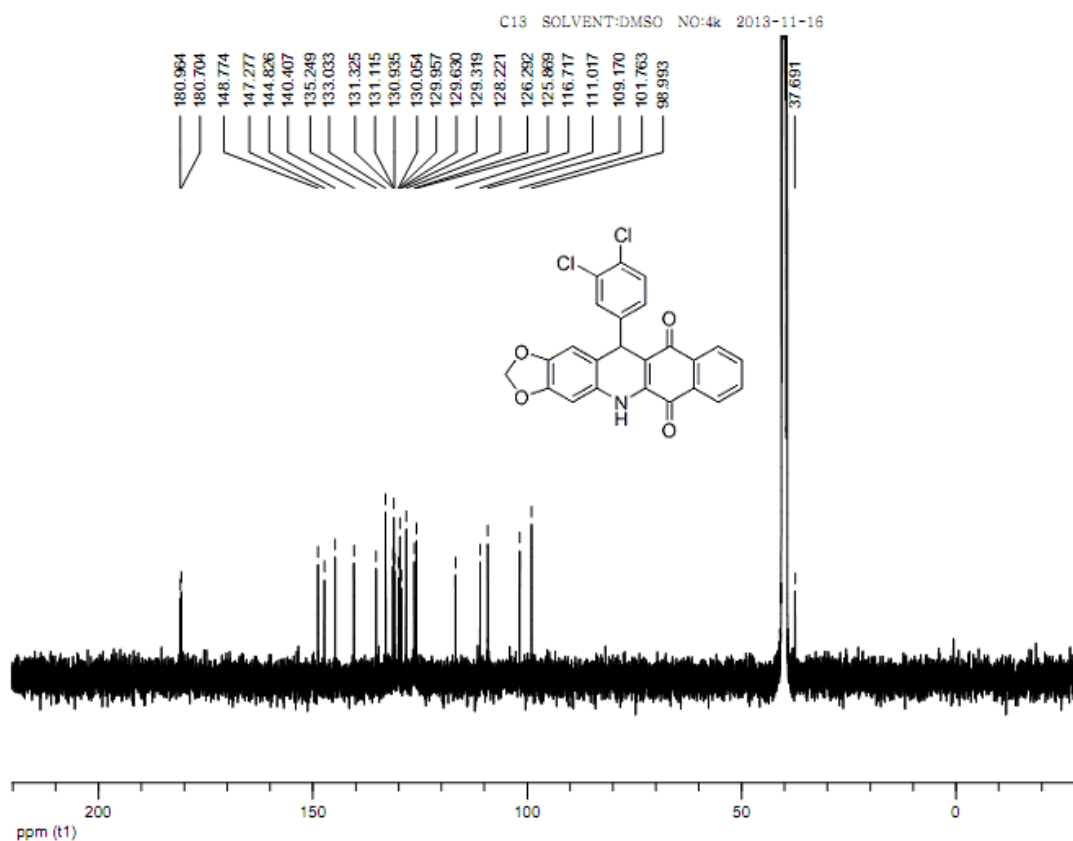


Figure 32. ^{13}C NMR of 4k

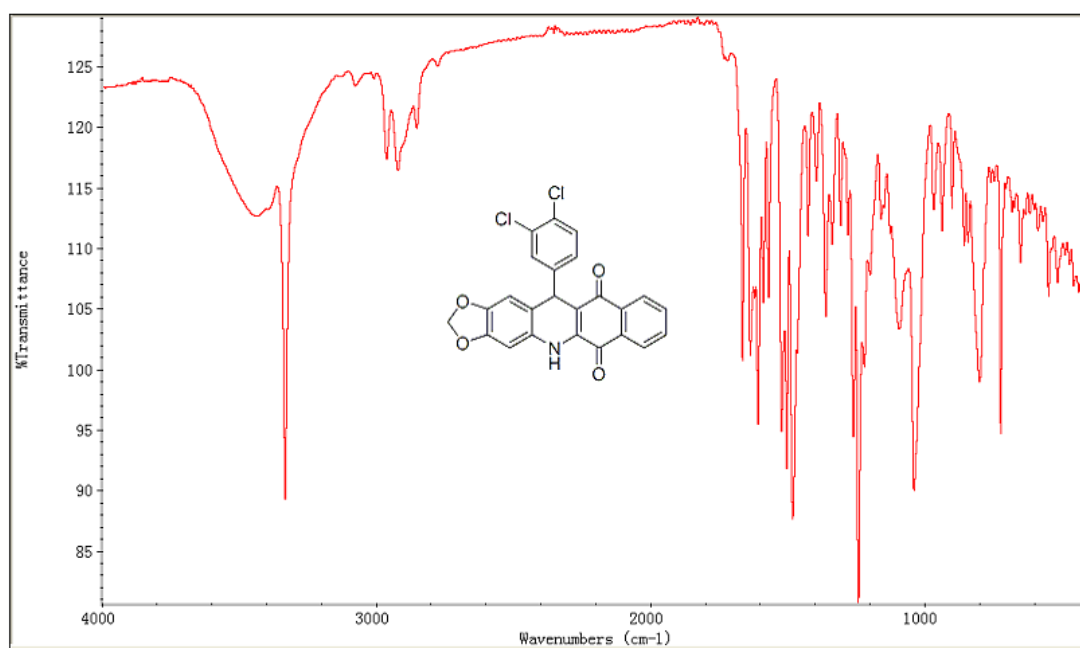


Figure 33. IR of 4k

Figure 35. ¹³C NMR of 4l

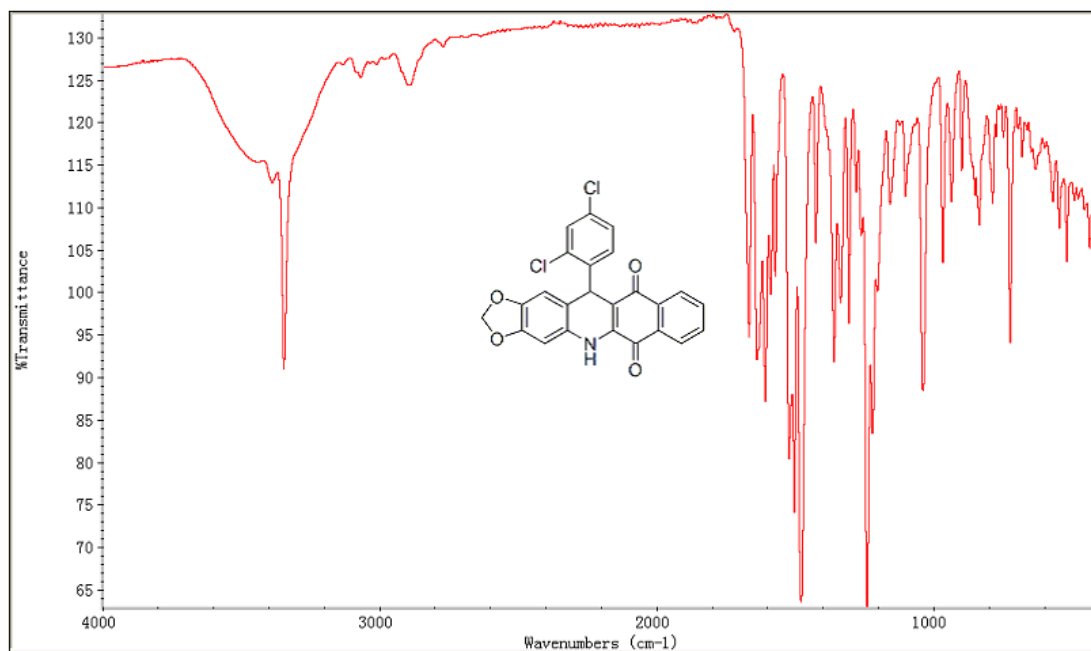


Figure 36. IR of 4l

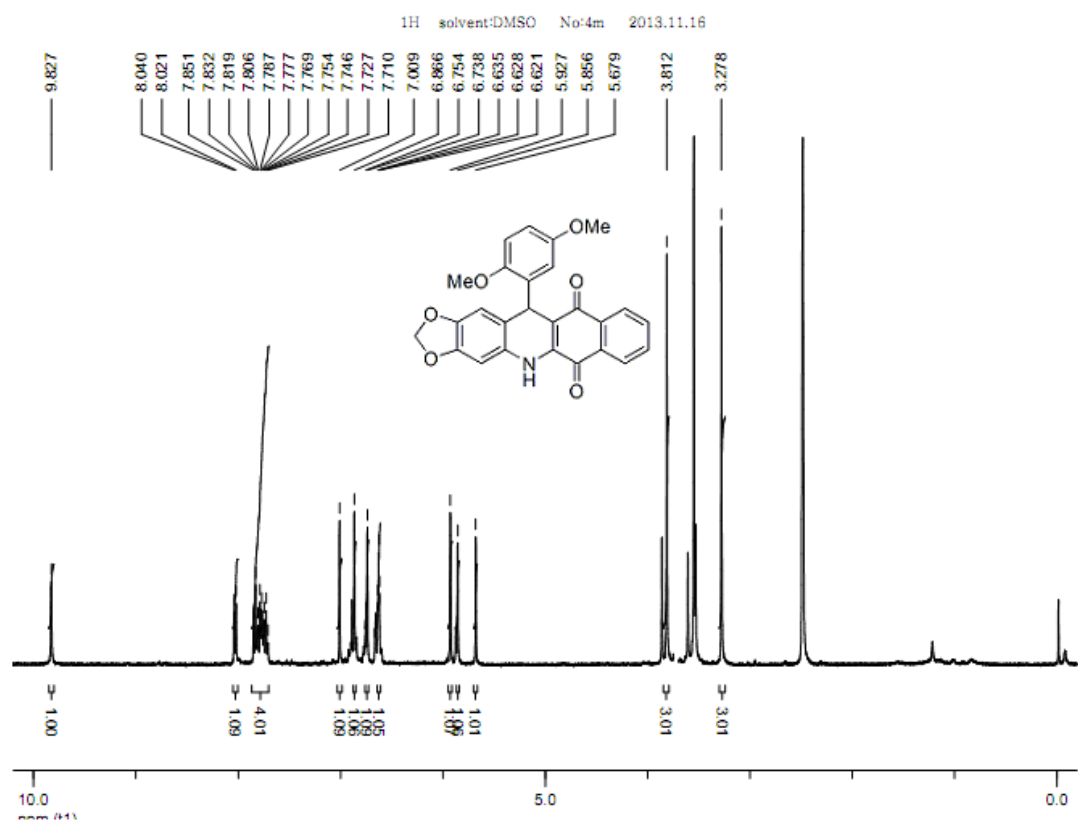


Figure 37. ¹H NMR of 4m

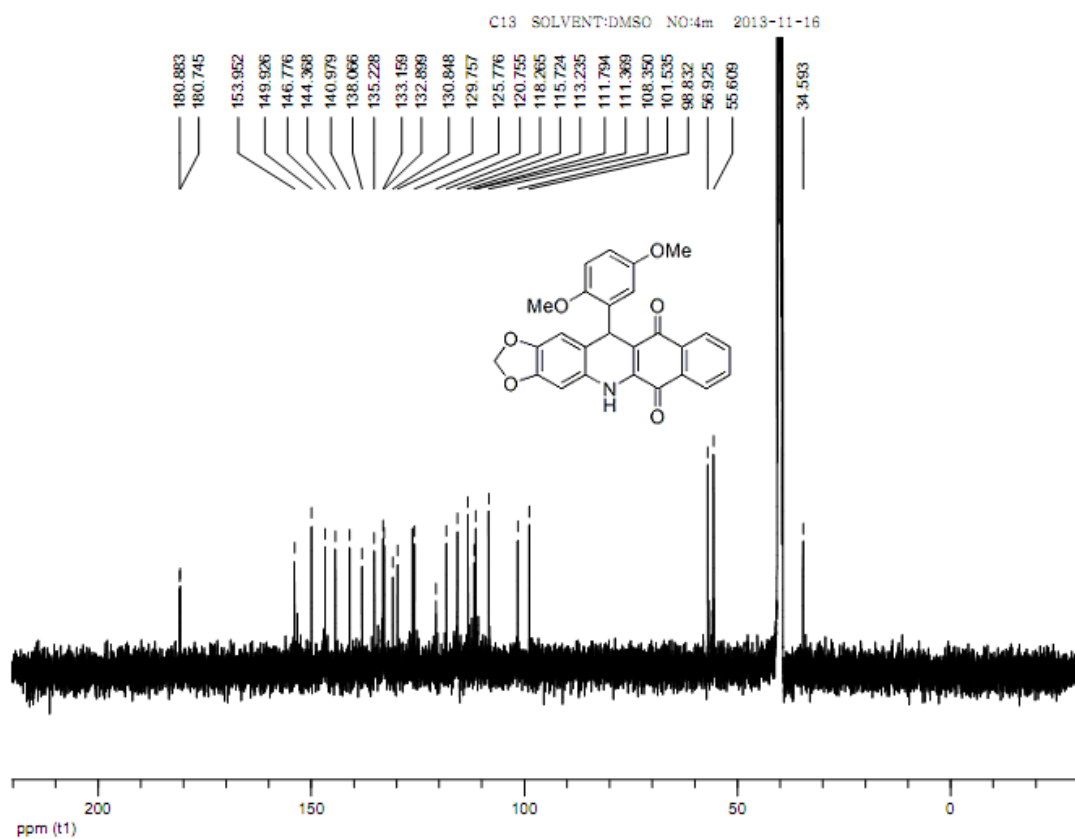


Figure 38. ^{13}C NMR of 4m

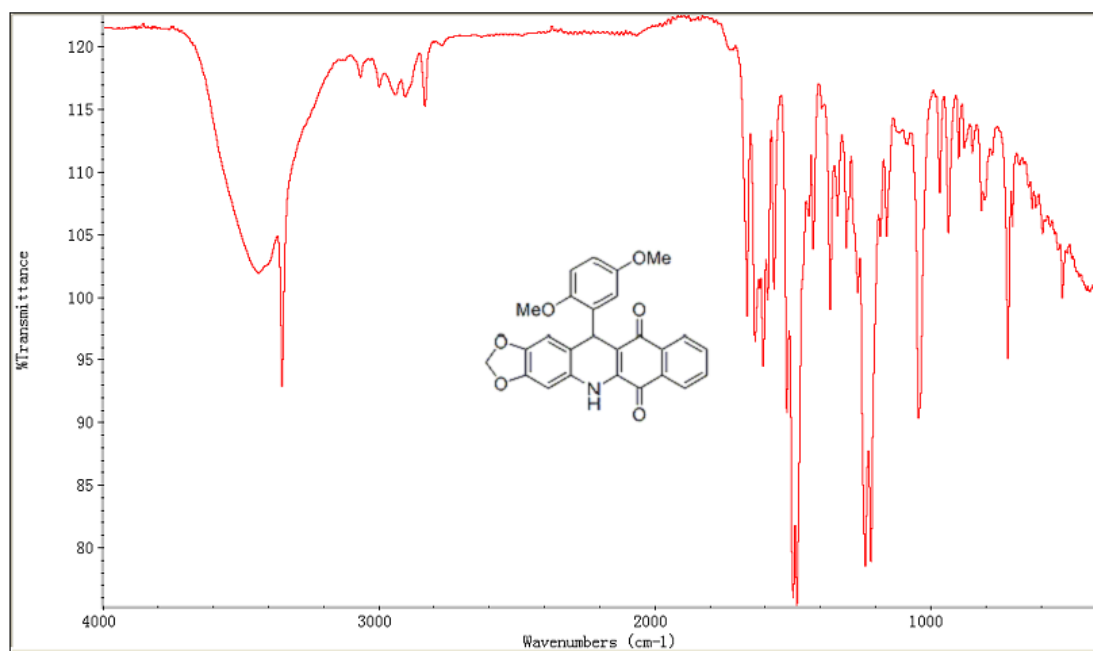


Figure 39. IR of 4m

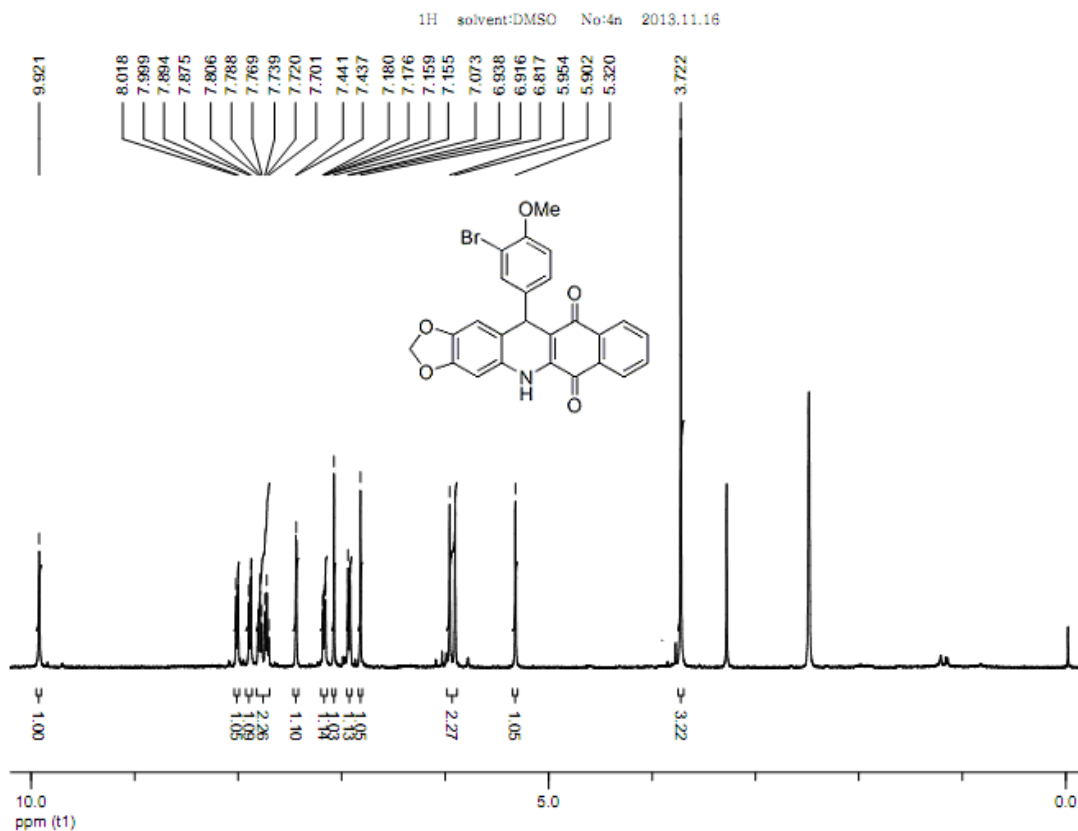


Figure 40. ¹H NMR of 4n

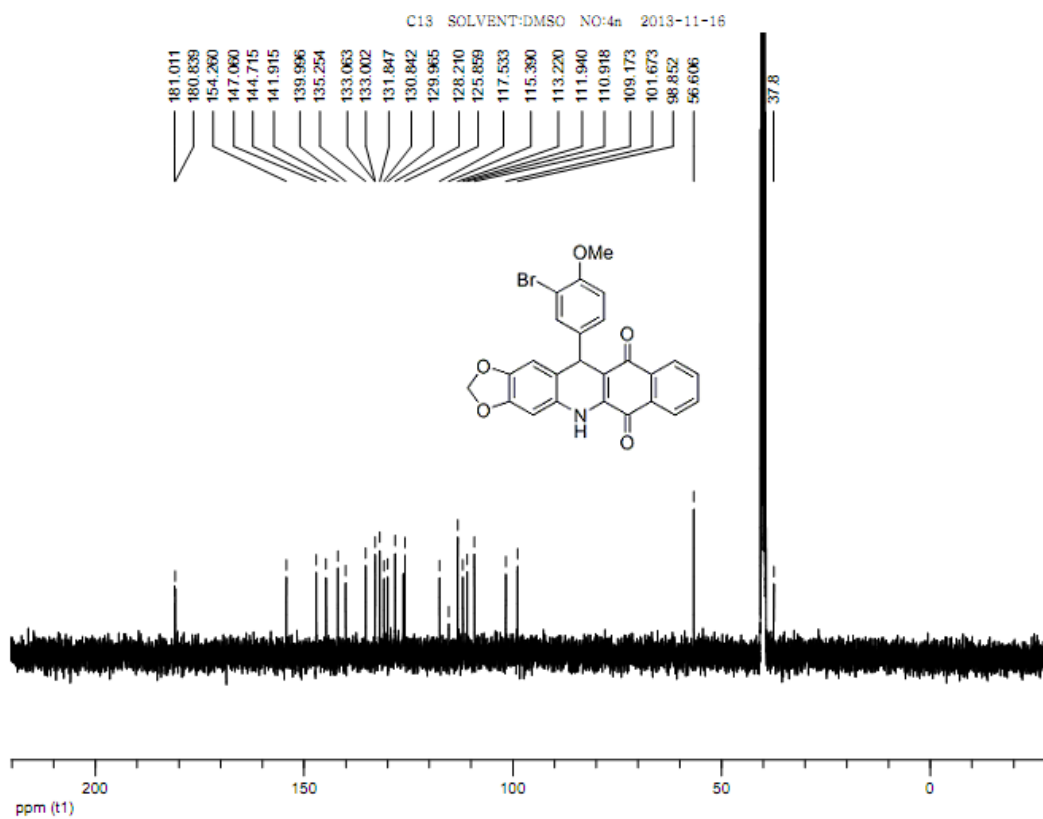


Figure 41. ¹³C NMR of 4n

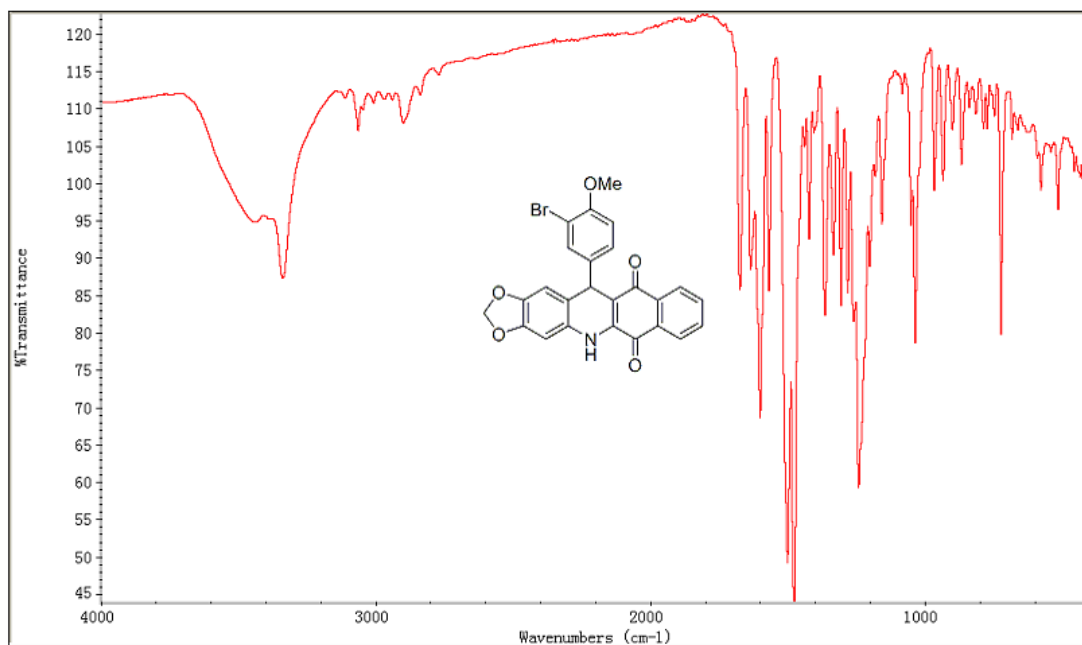


Figure 42. IR of 4n

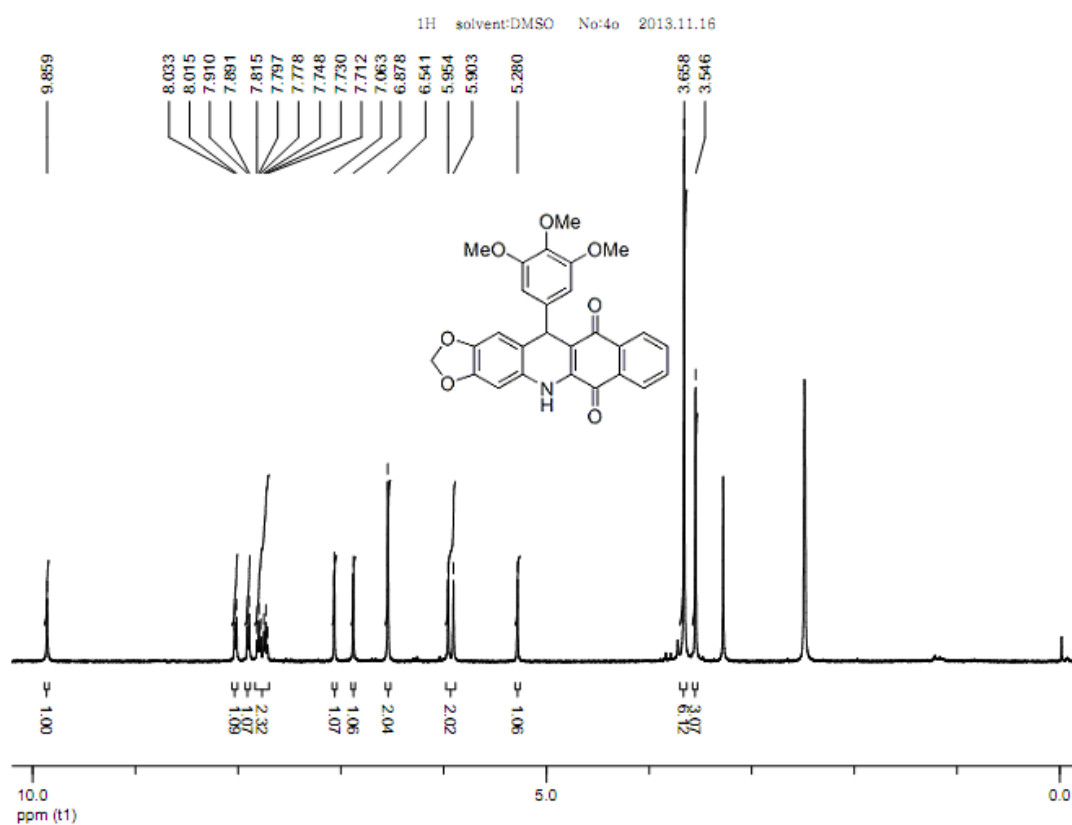


Figure 43. ¹H NMR of 4o

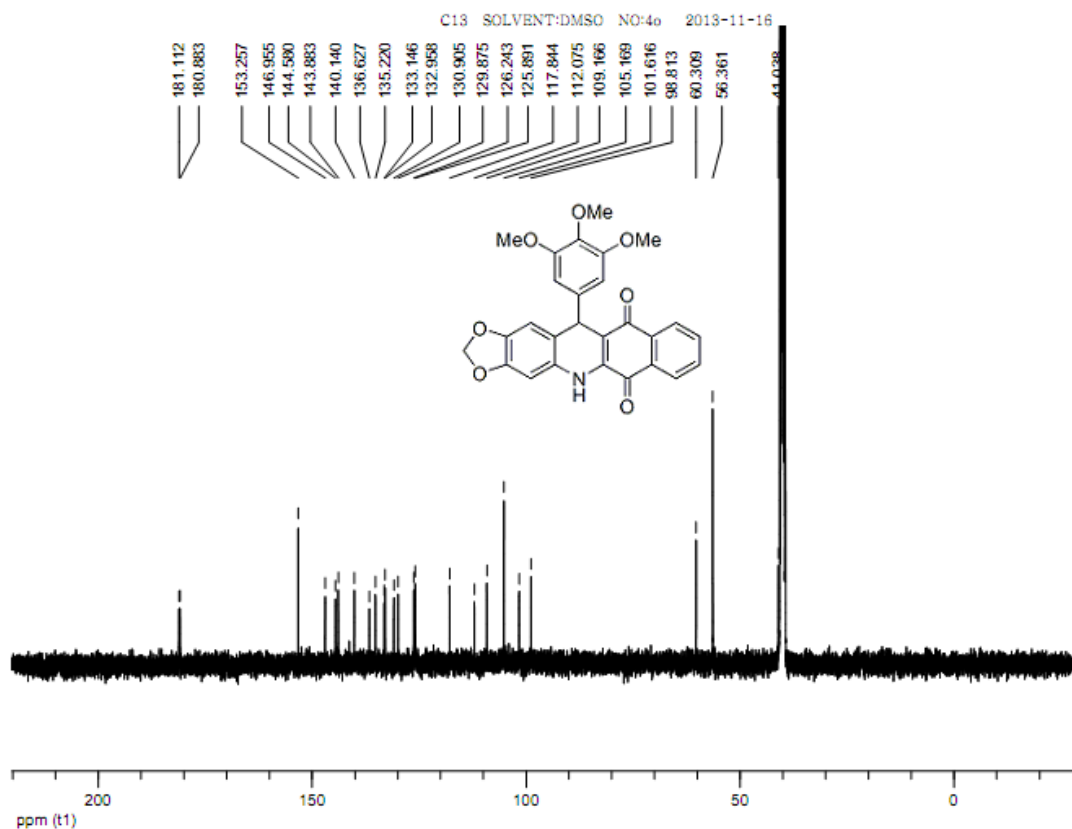


Figure 44. ^{13}C NMR of 4o

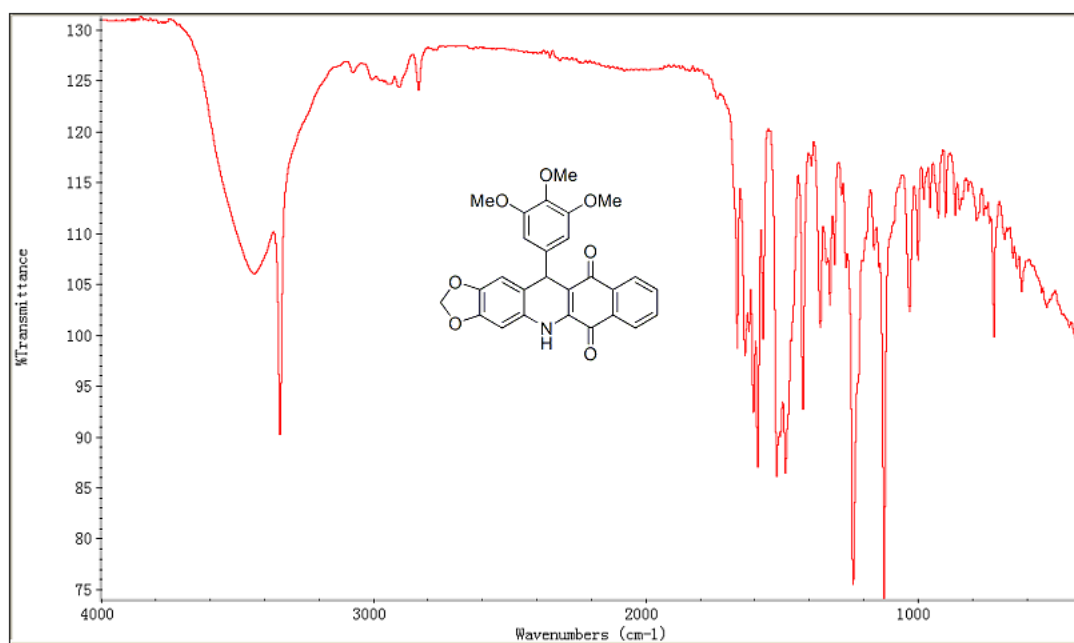


Figure 45. IR of 4o

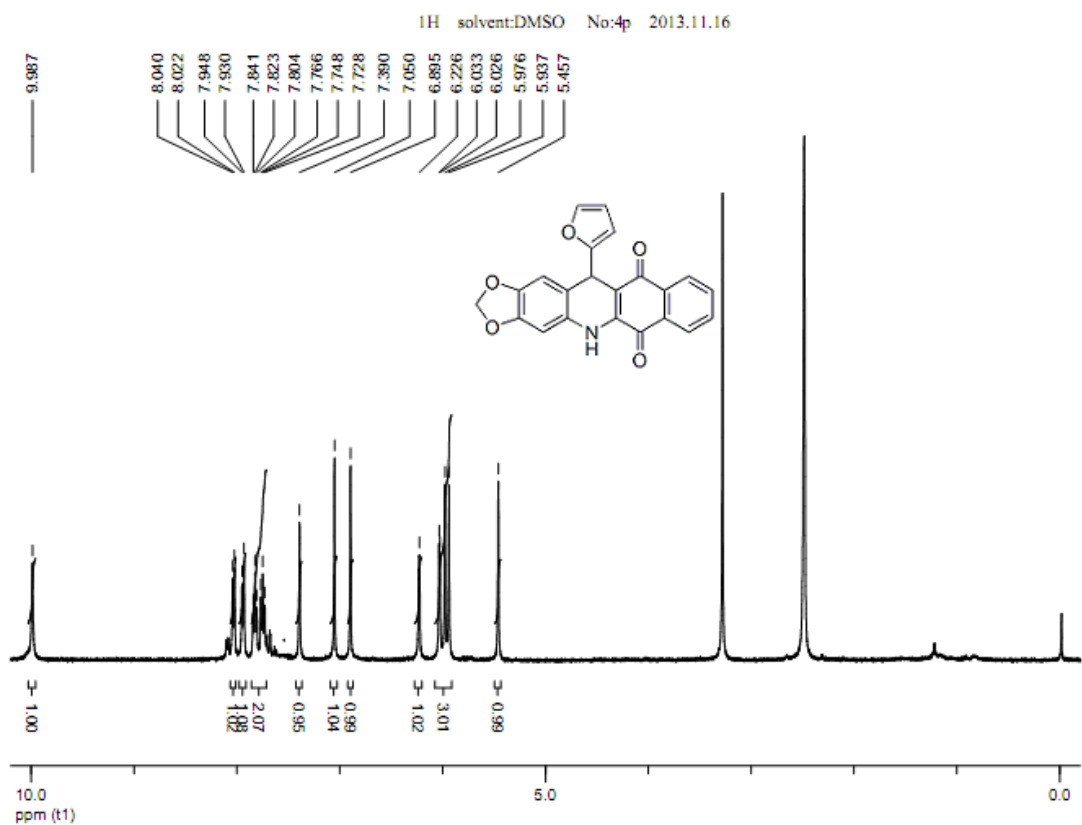


Figure 46. ¹H NMR of 4p

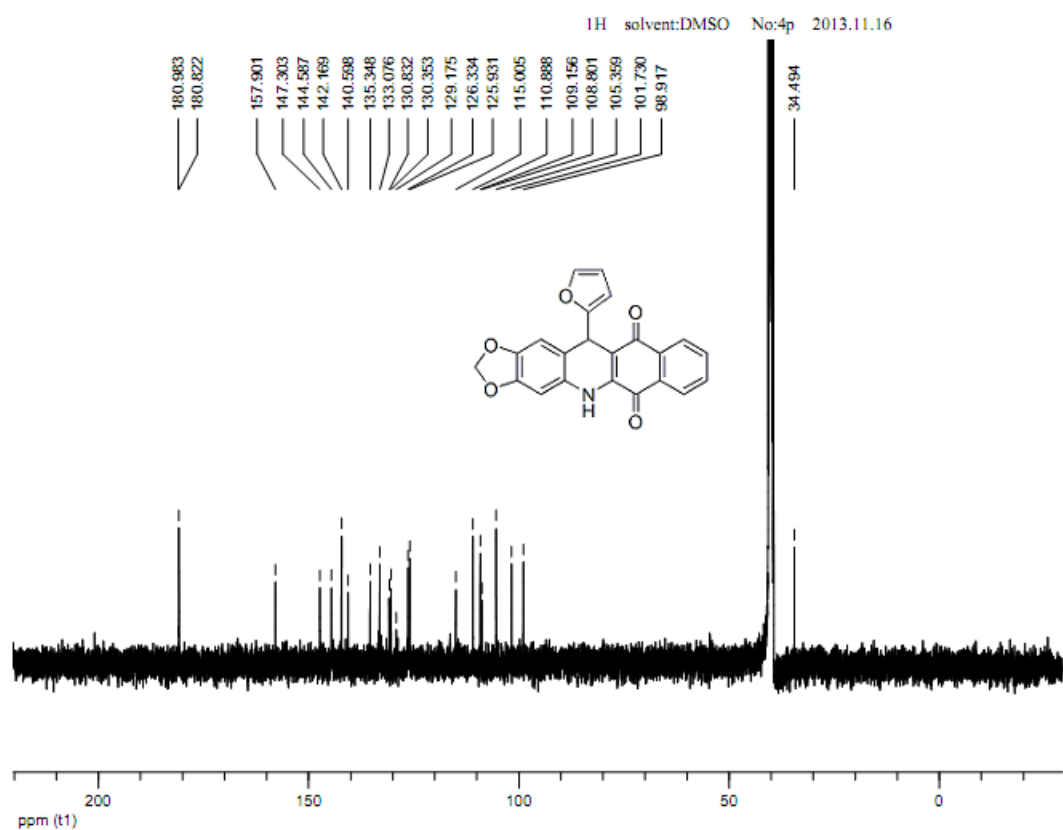


Figure 47. ¹³C NMR of 4p

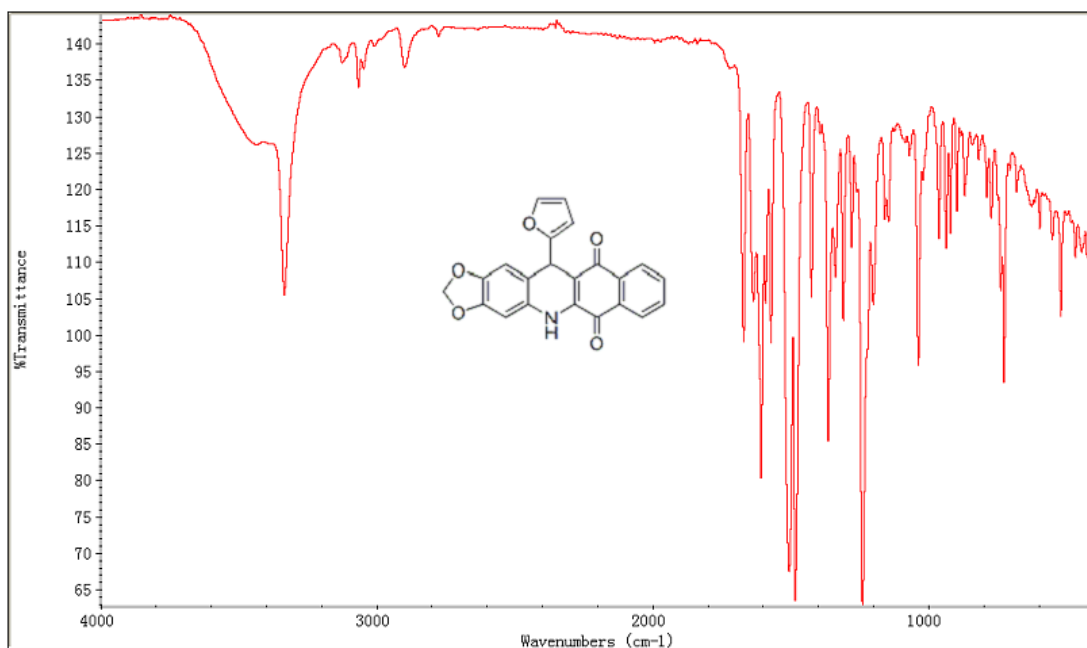


Figure 48. IR of 4p

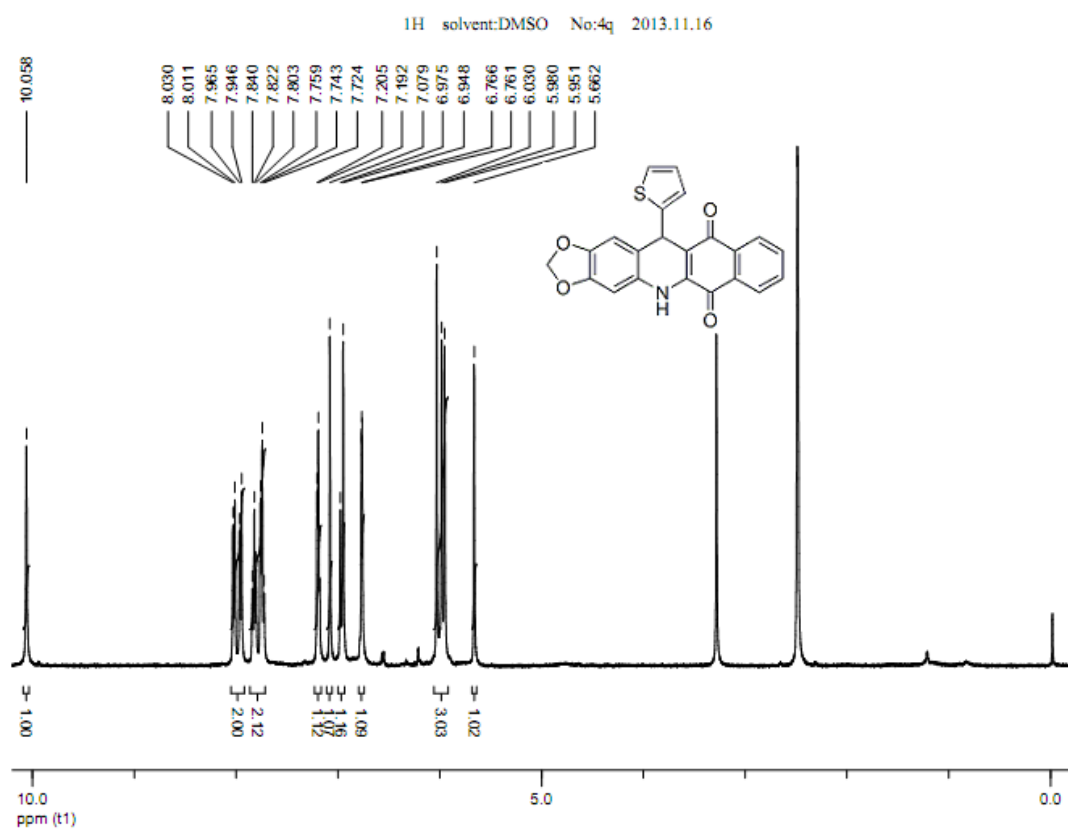


Figure 49. ¹H NMR of 4q

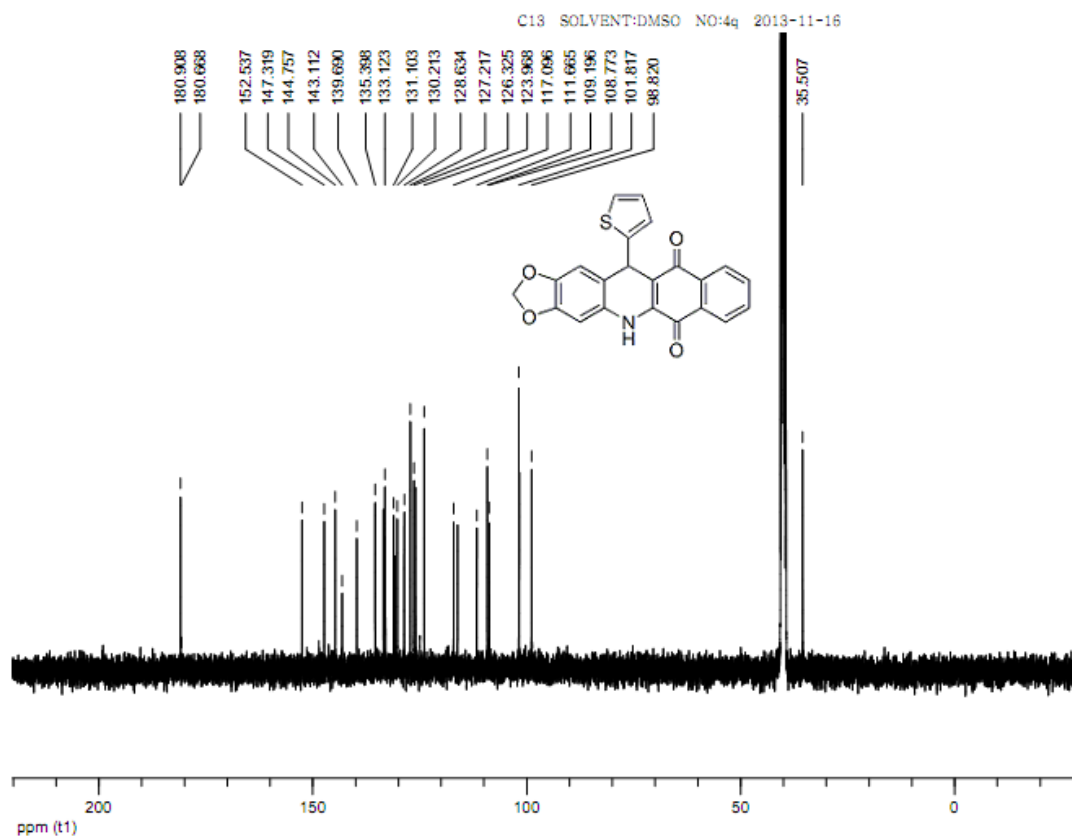


Figure 50. ^{13}C NMR of 4q

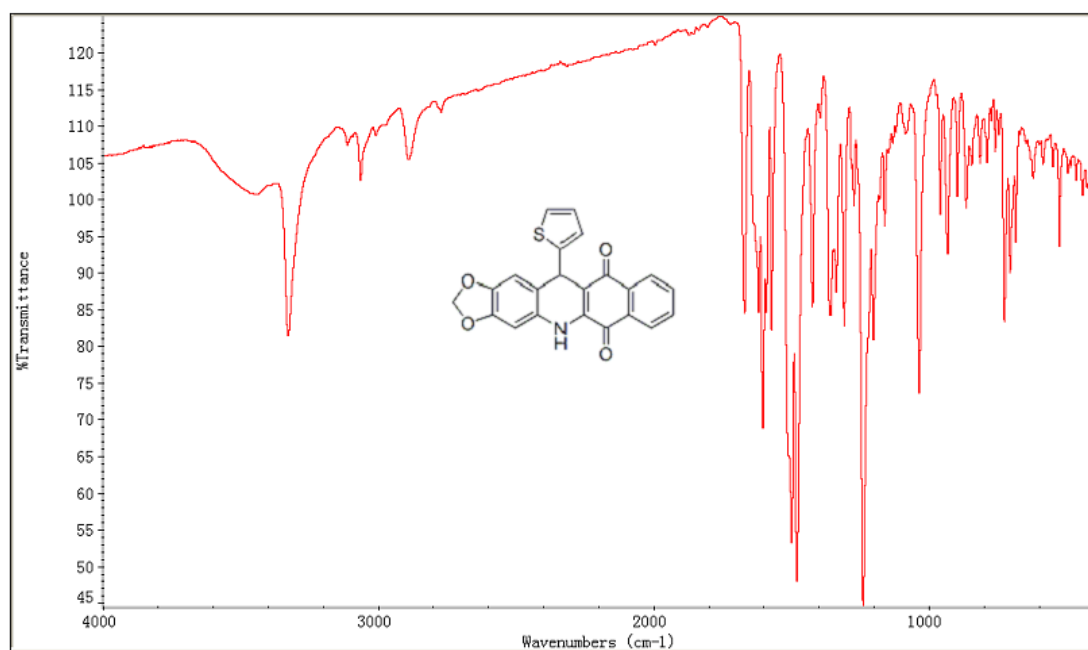


Figure 51. IR of 4q

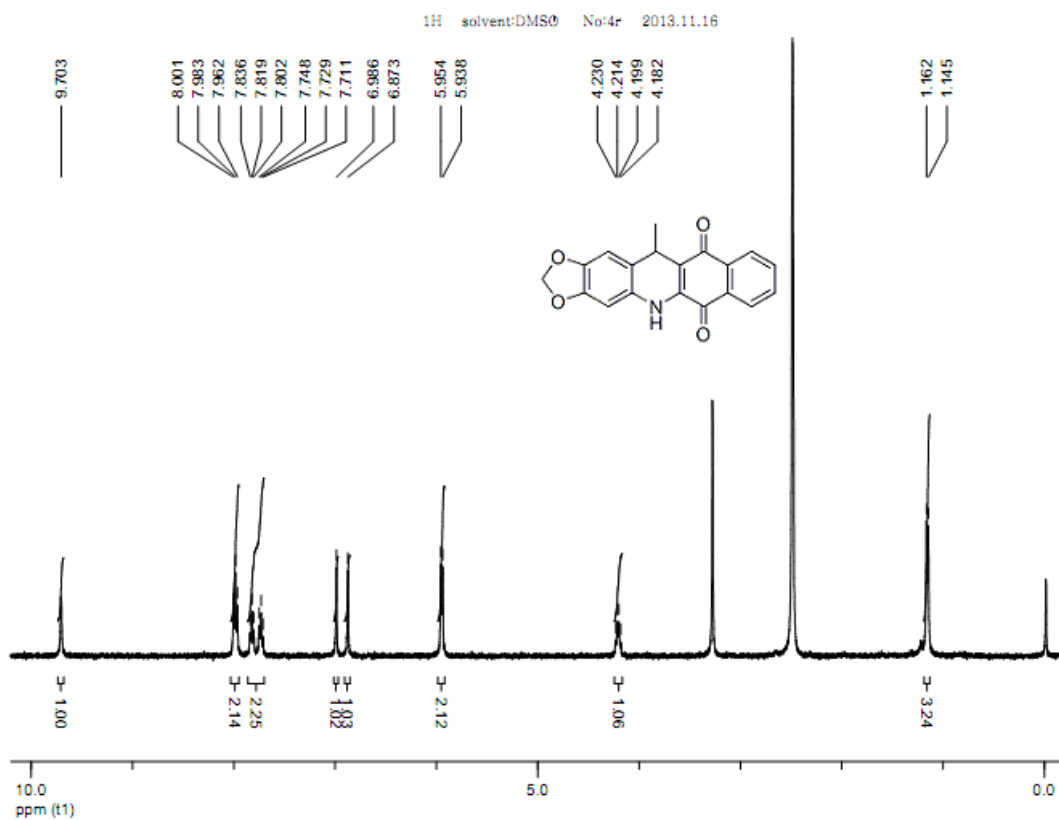


Figure 52. ^1H NMR of 4r

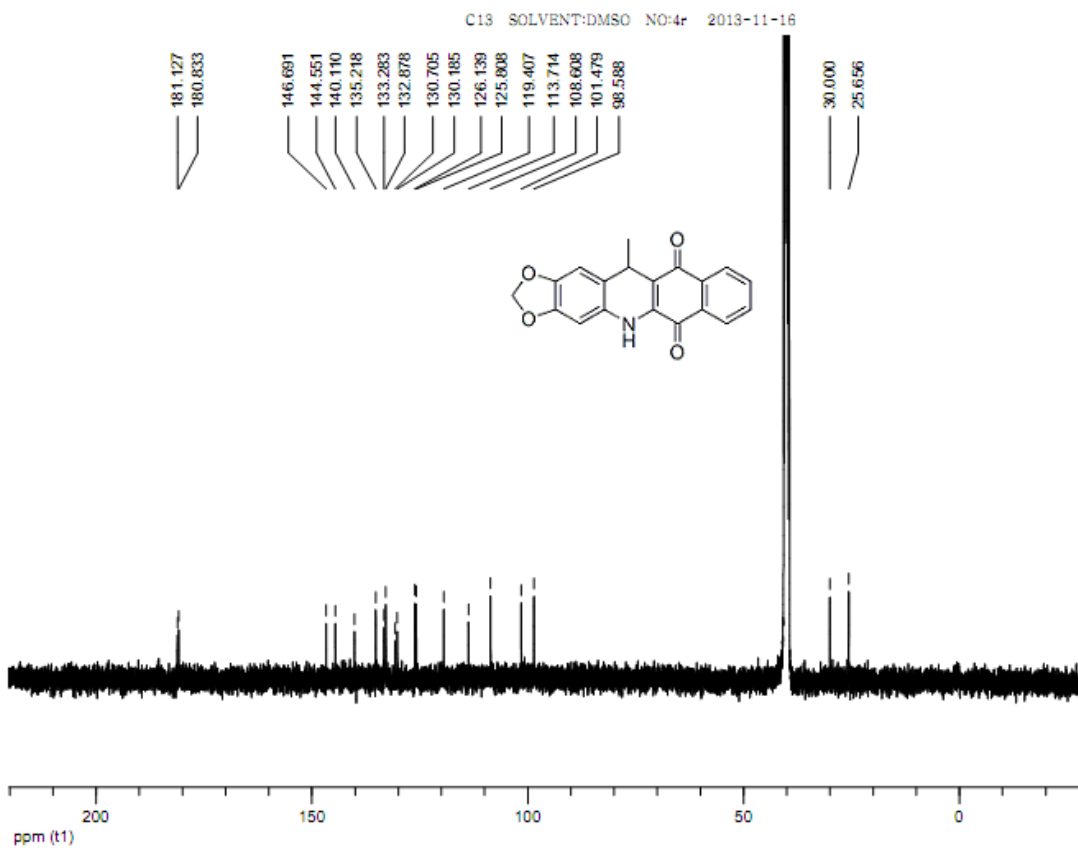


Figure 53. ^{13}C NMR of 4r

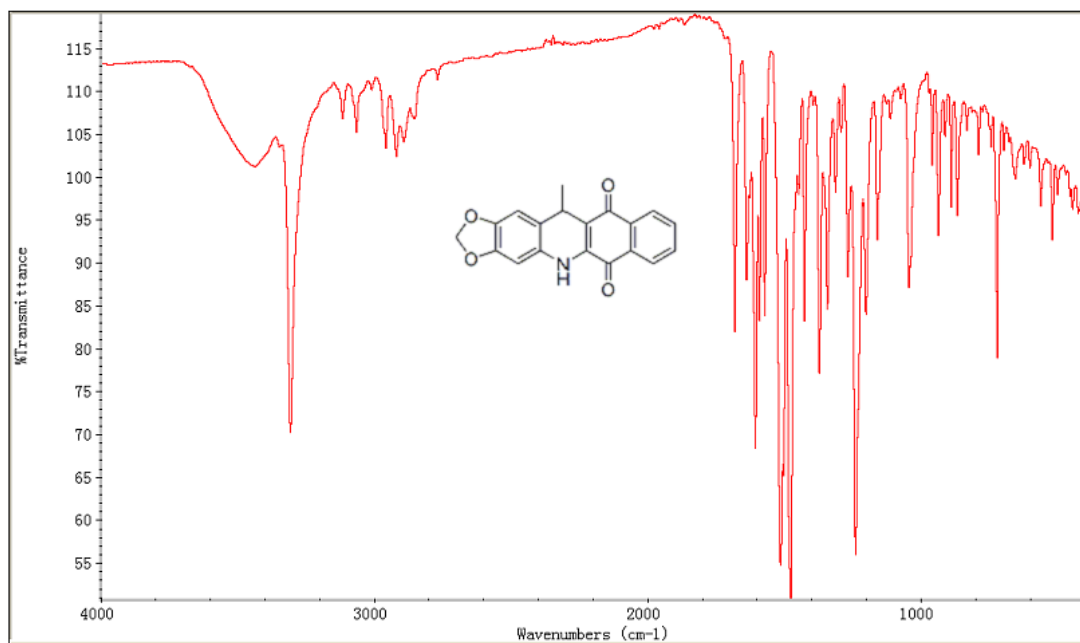


Figure 54. IR of 4r