

Supplementary Materials: Metal-Free Photoredox Catalyzed Cyclization of *O*-(2,4-Dinitrophenyl)oximes to Phenanthridines

Xiubin Liu, Zhixing Qing, Pi Cheng, Xinyu Zheng, Jianguo Zeng, Hongqi Xie

¹H and ¹³C-NMR Spectroscopy

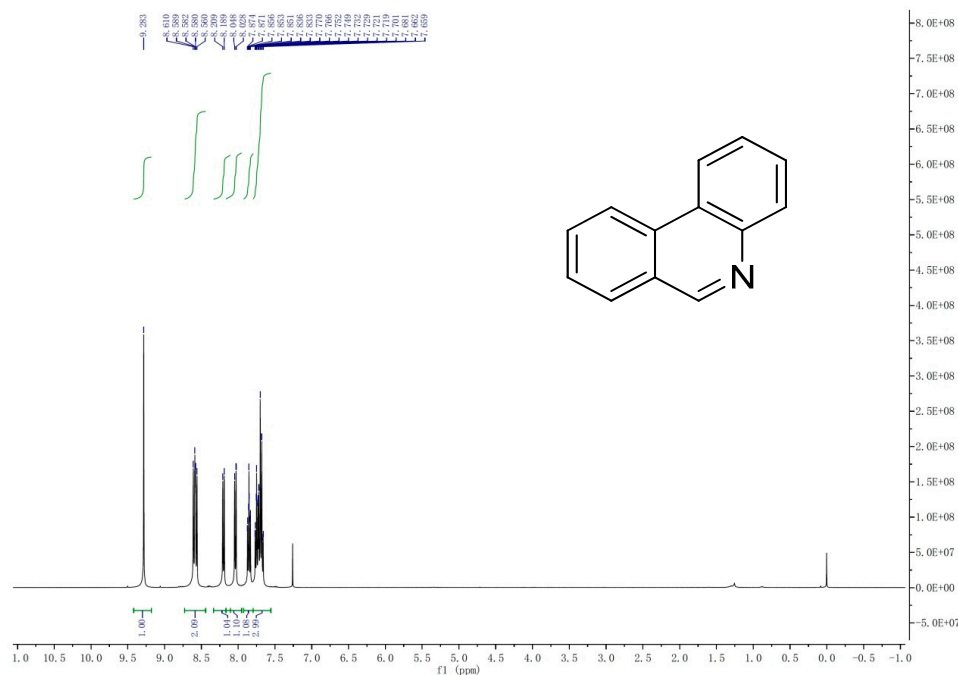
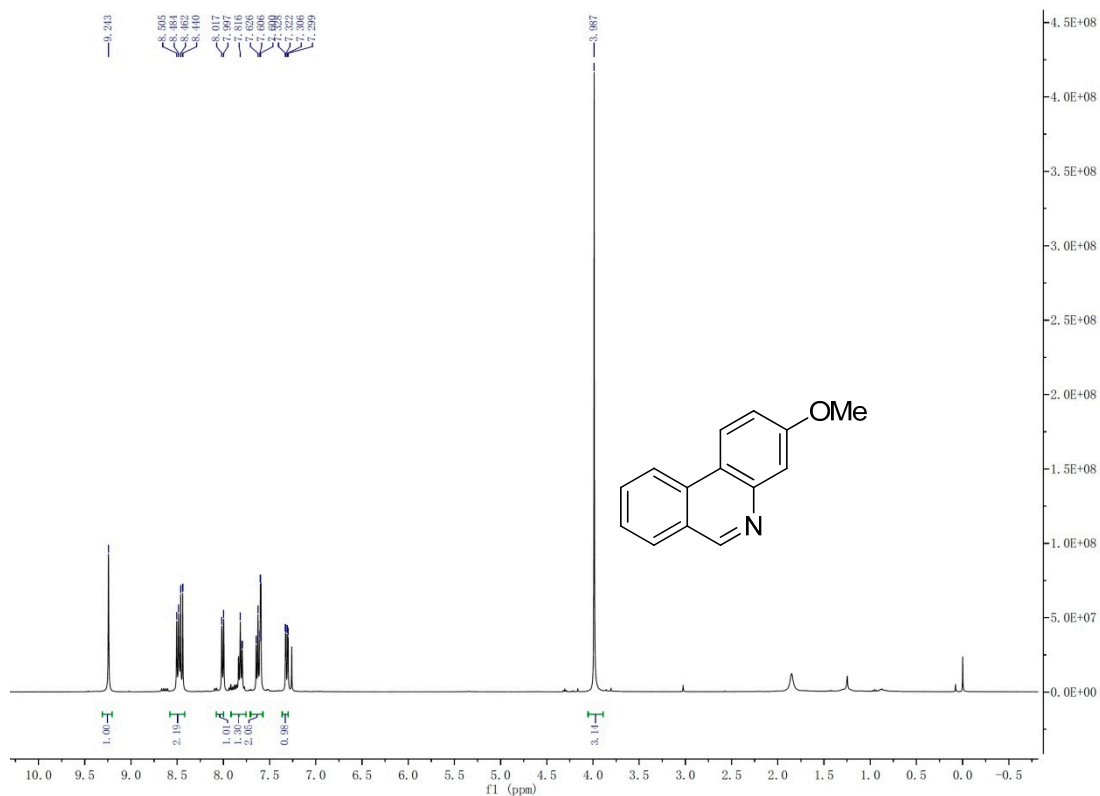
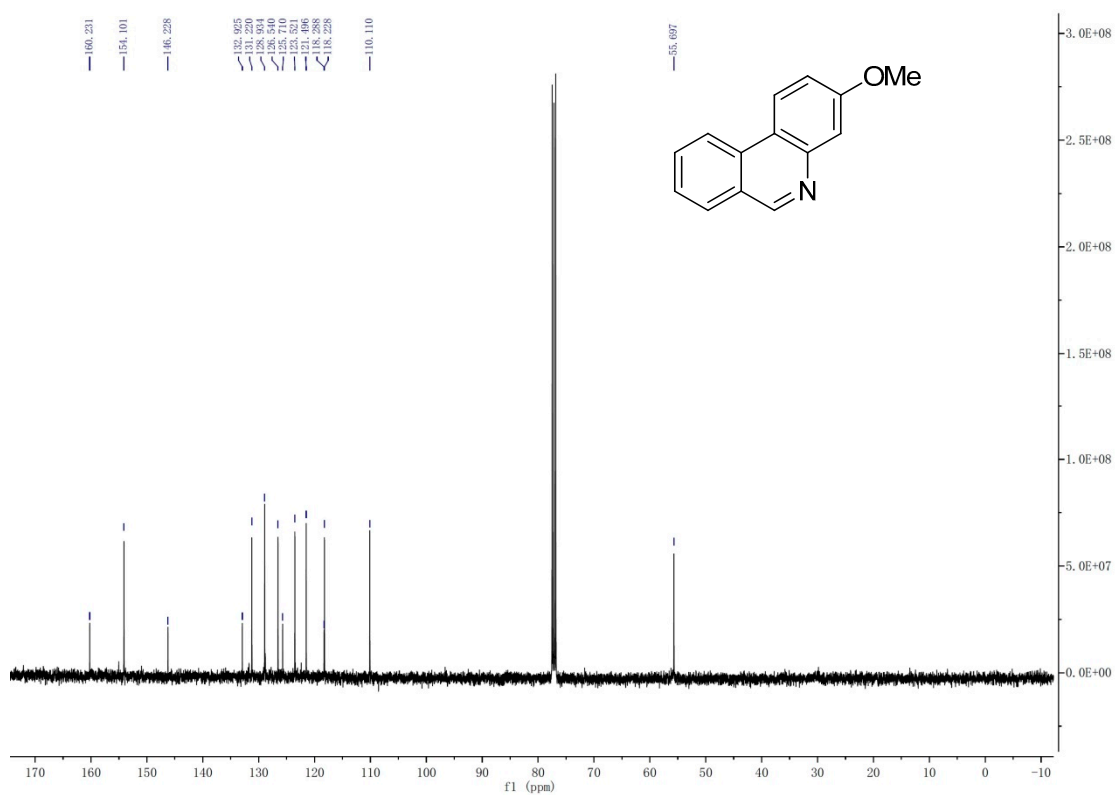


Figure S1. ¹H-NMR spectrum of compound 4a.



Figure S3. ¹H-NMR spectrum of compound 4b.Figure S4. ¹³C-NMR spectrum of compound name 4b.

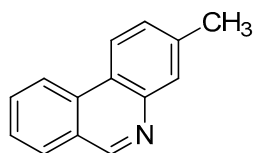
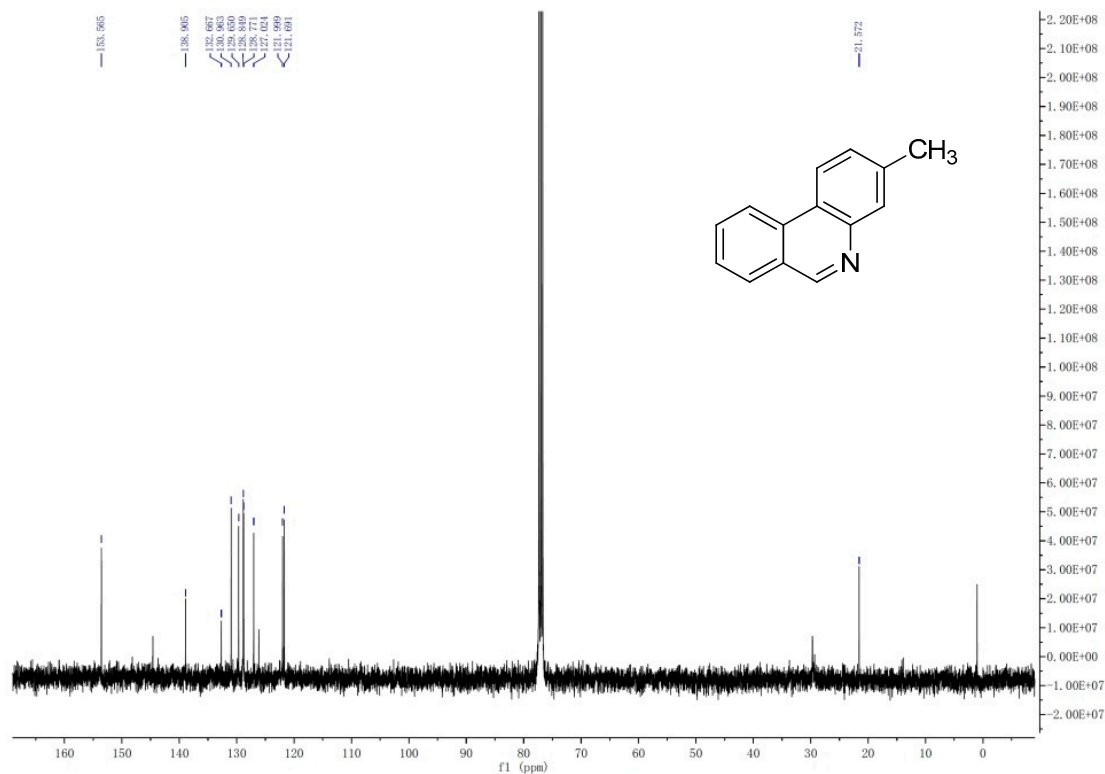
Cc1ccc2c(c1)c(c[nH]2)c3ccccc3

Figure S6. ^{13}C -NMR spectrum of compound name **4c**.

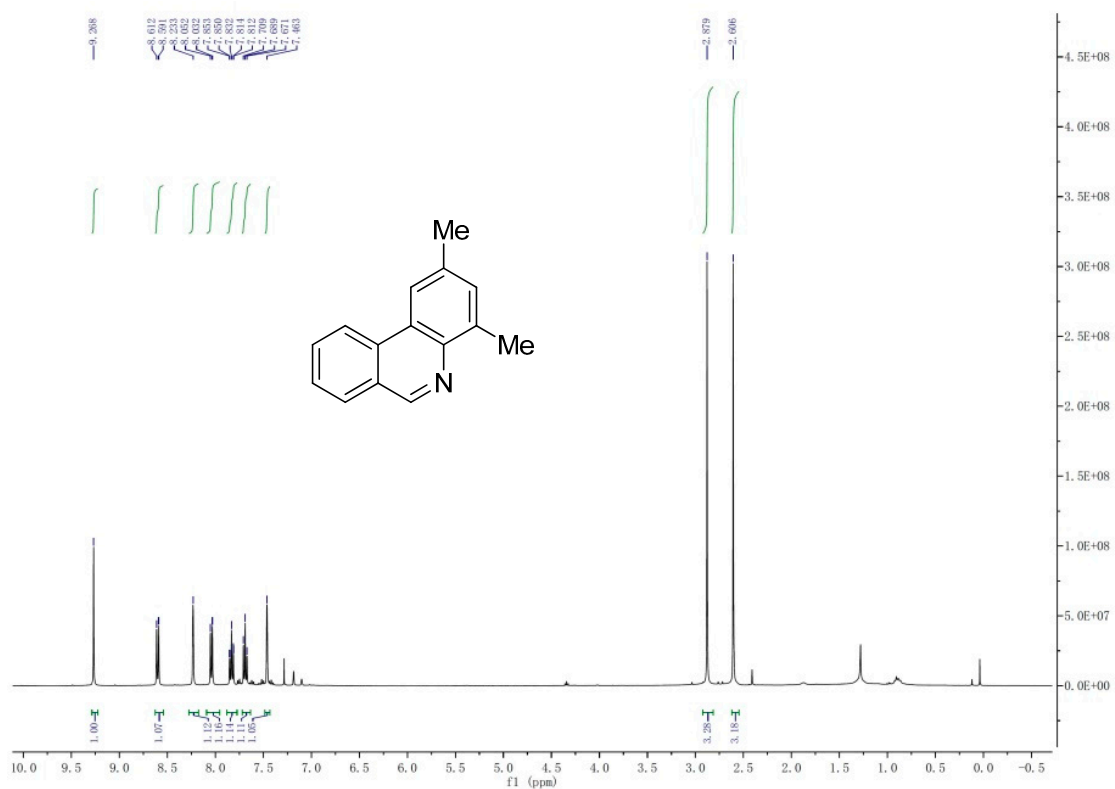


Figure S7. ^1H -NMR spectrum of compound **4d**.

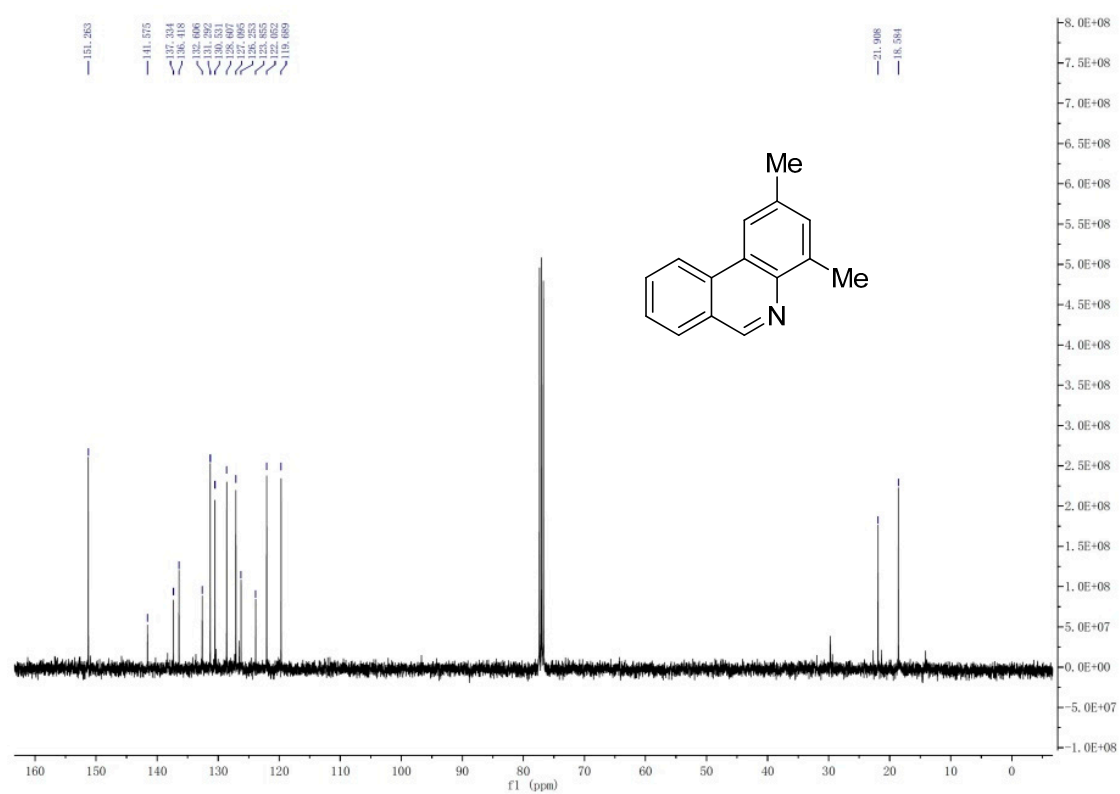
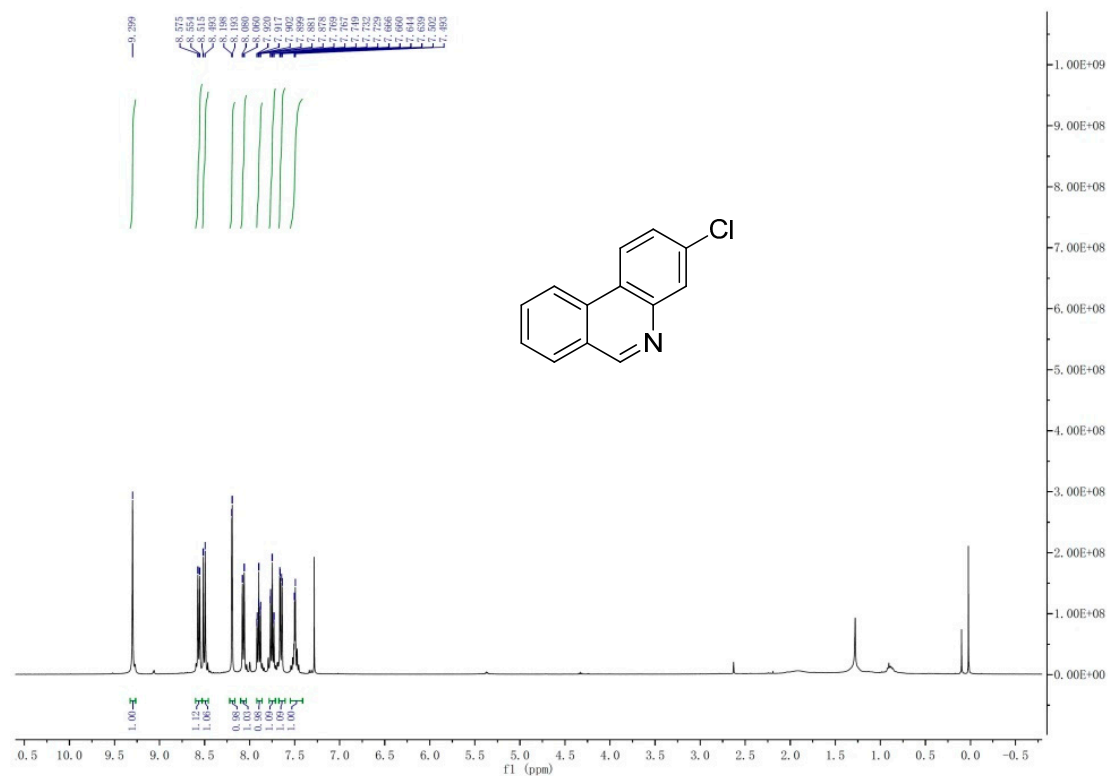
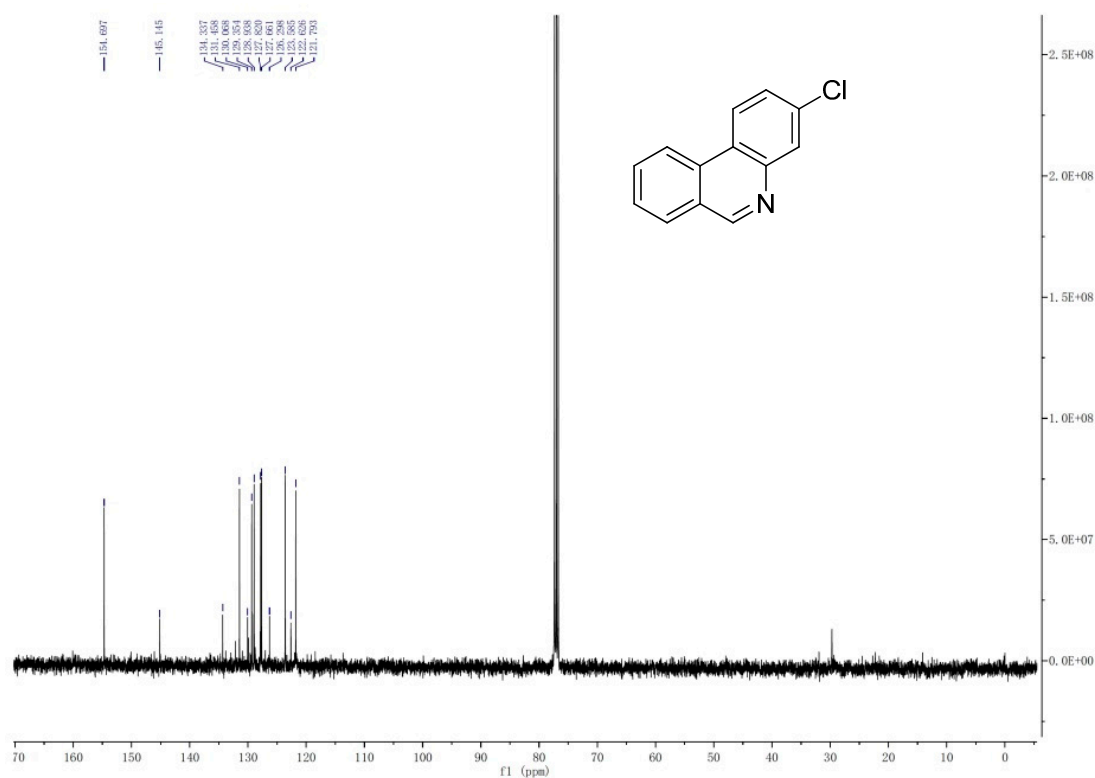
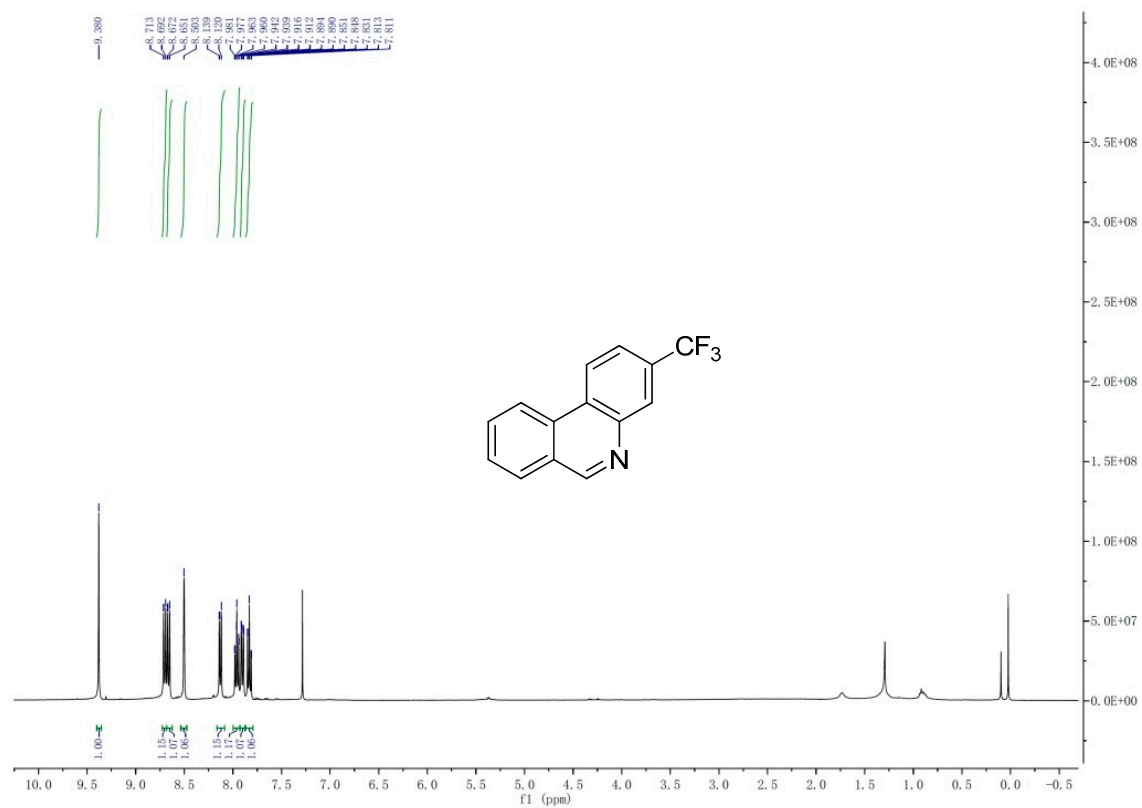
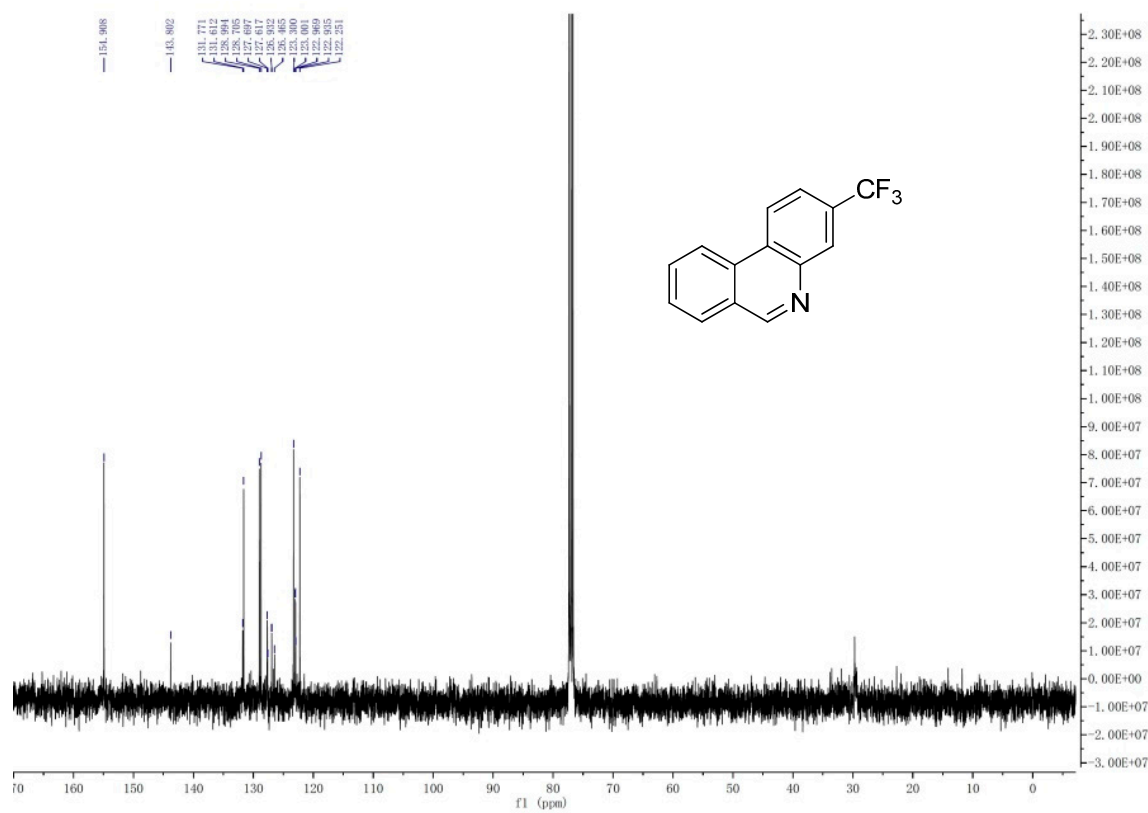
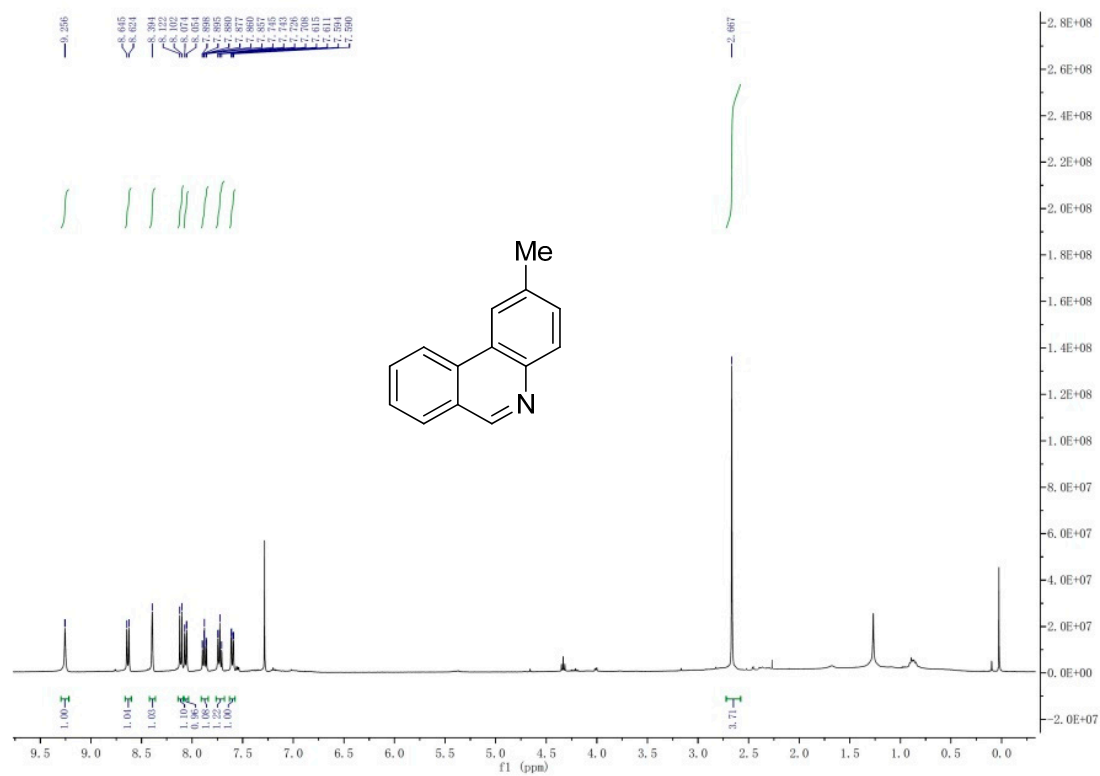
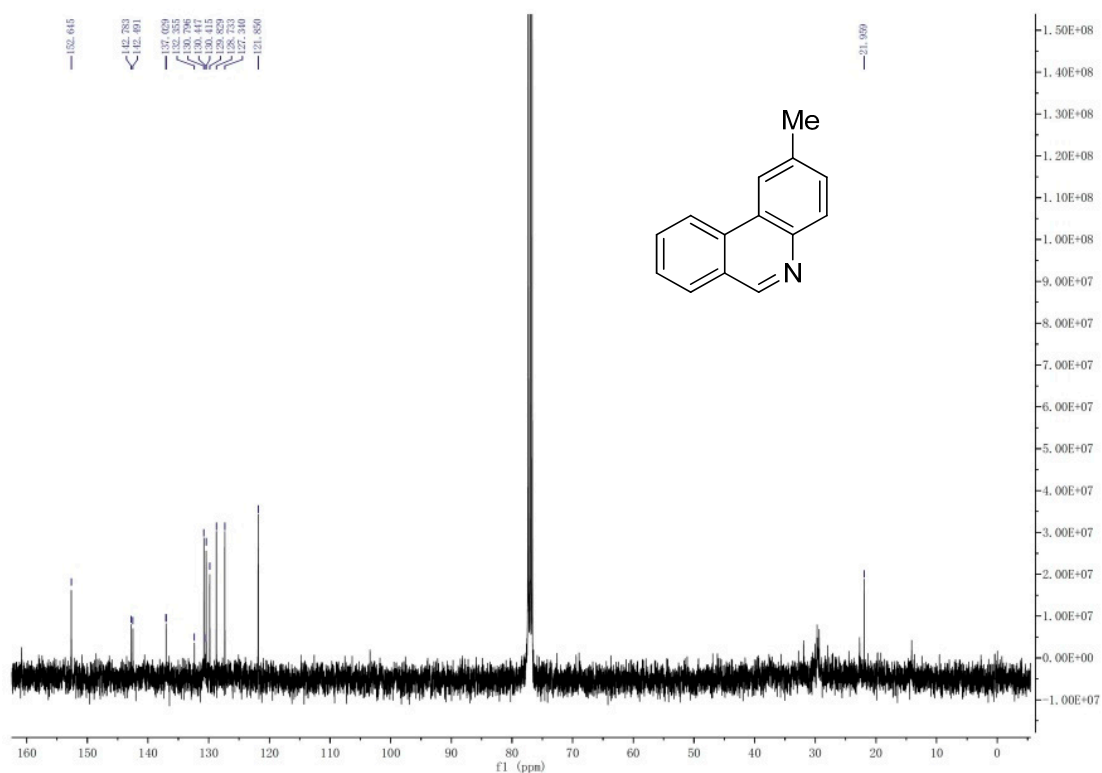
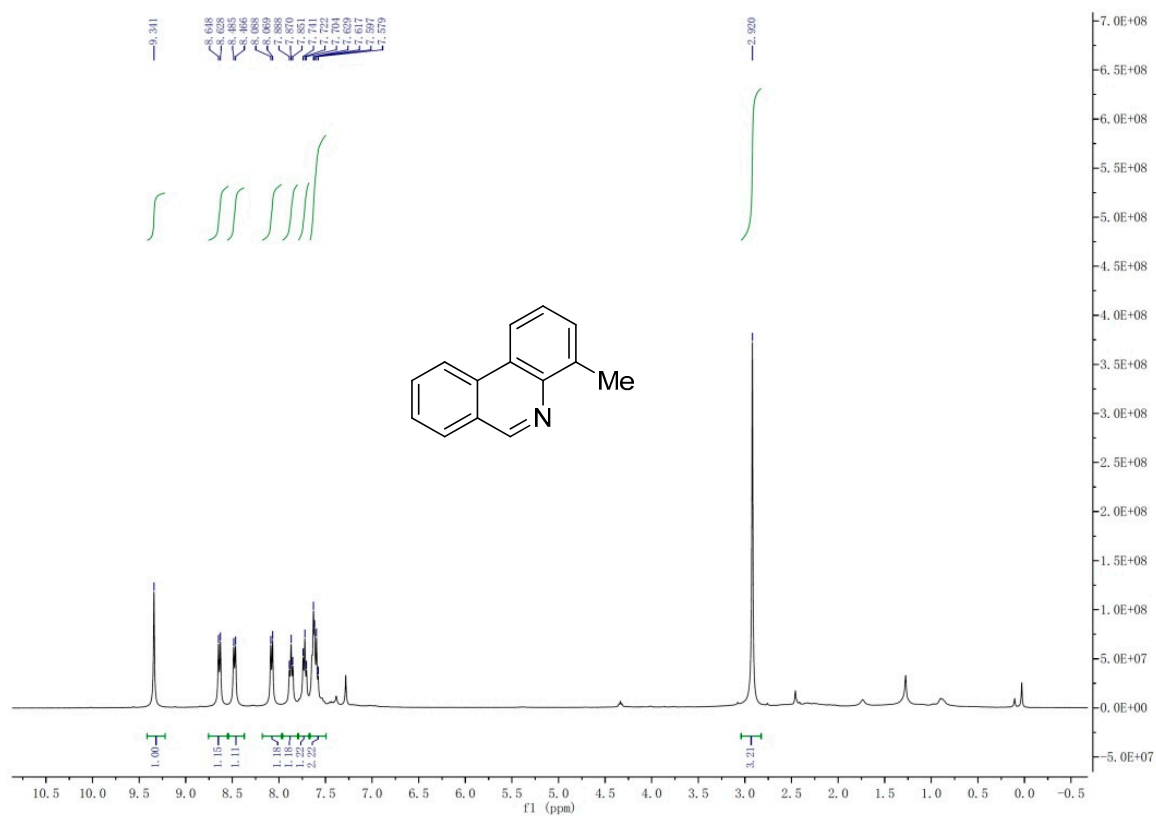


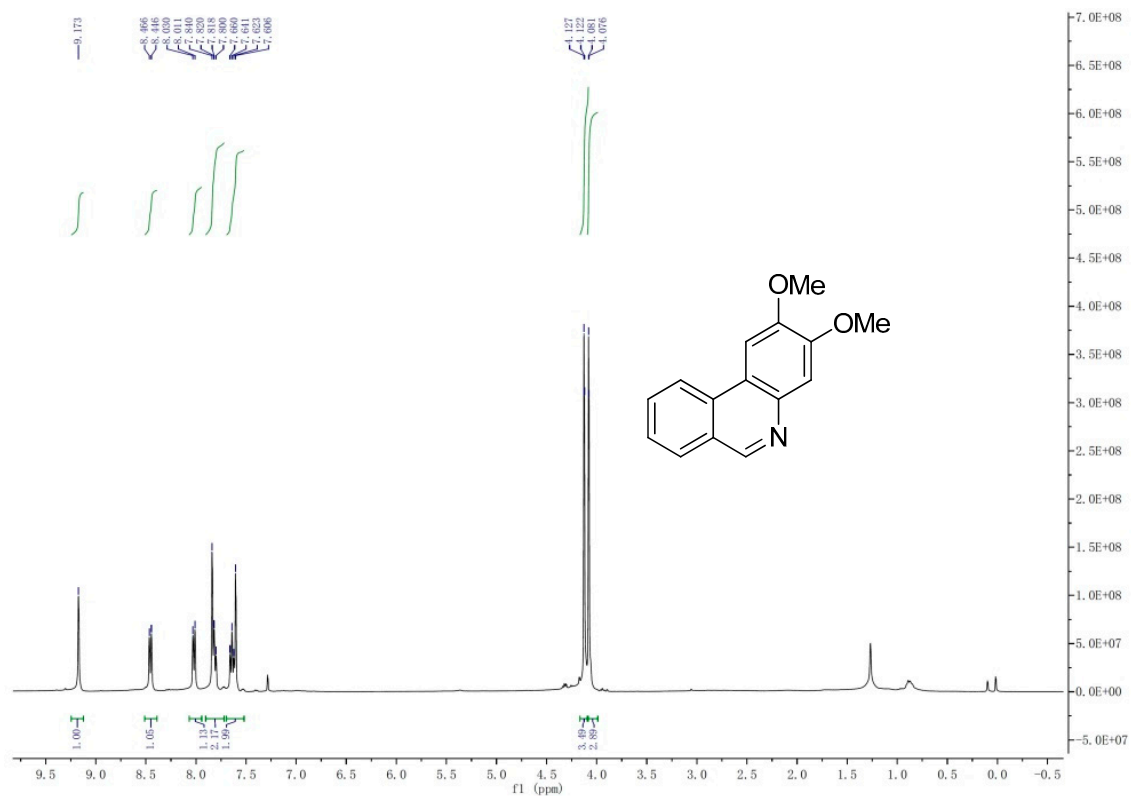
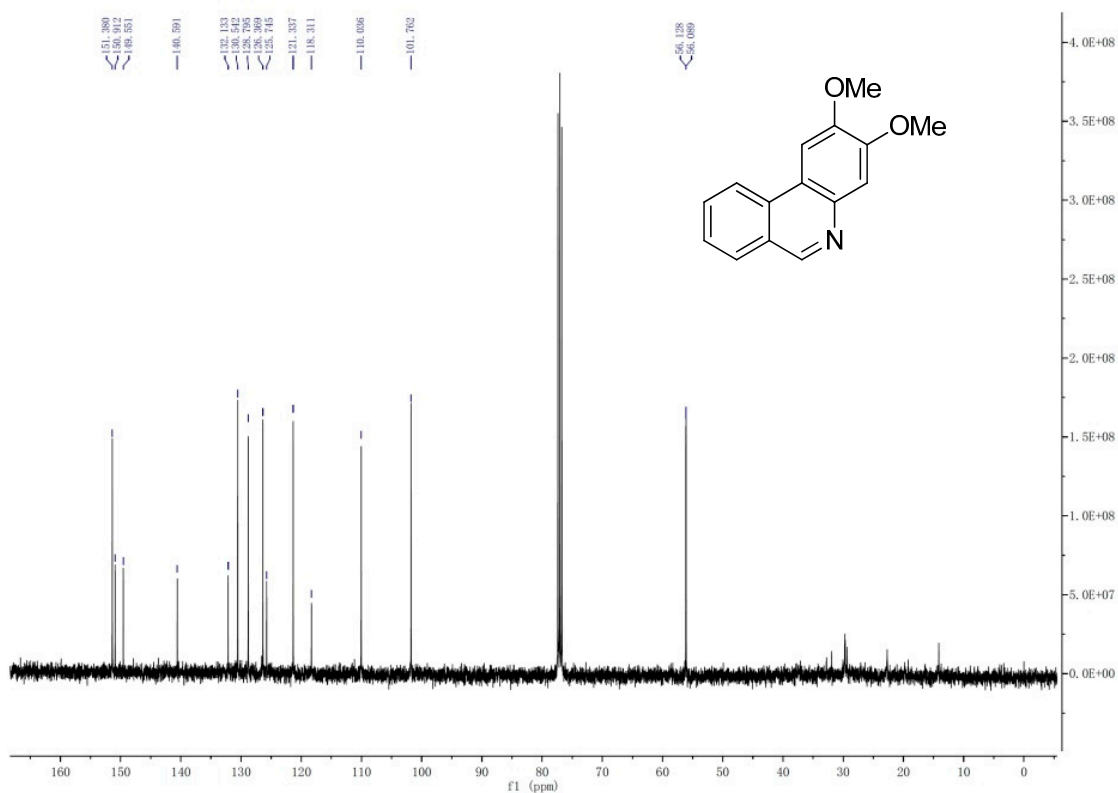
Figure S8. ^{13}C -NMR spectrum of compound name **4d**.

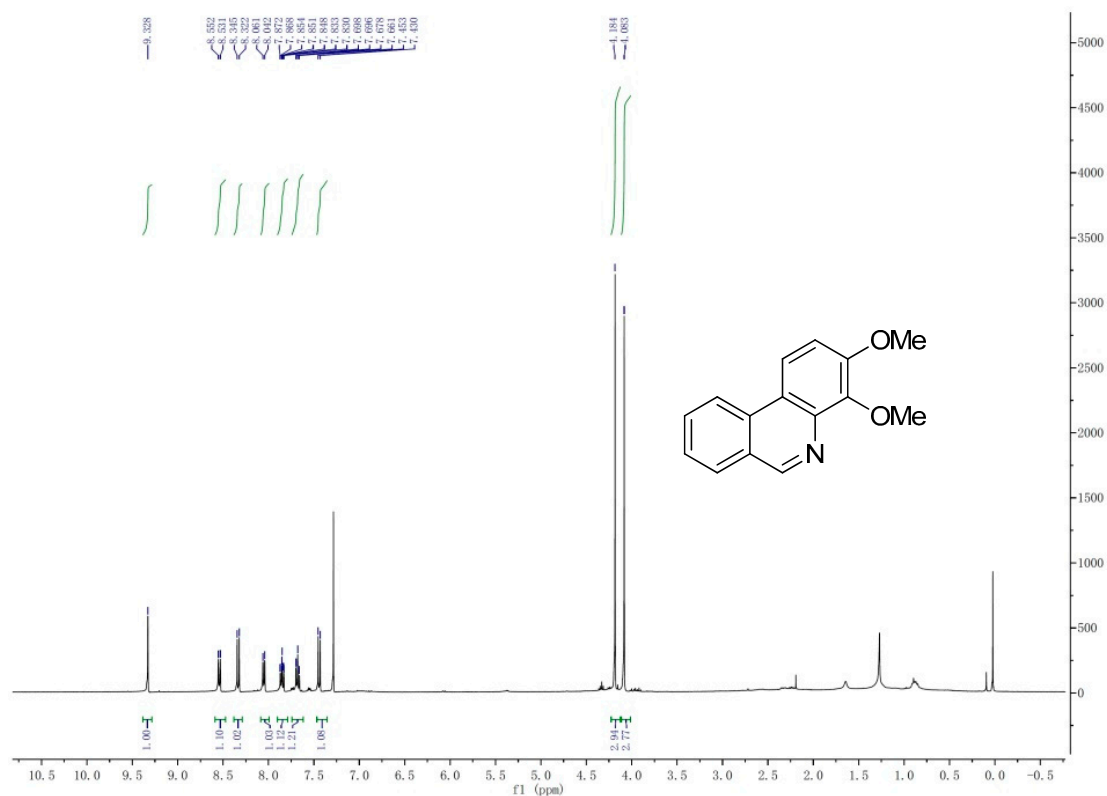
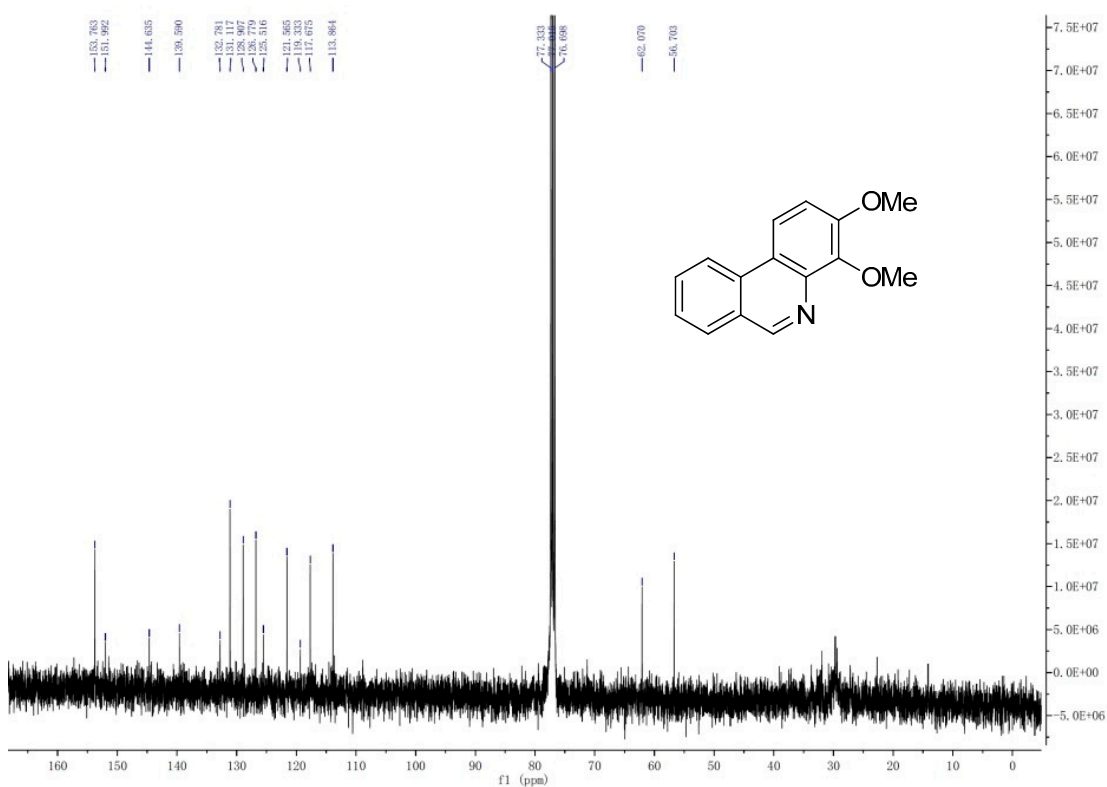
Figure S9. ¹H-NMR spectrum of compound 4e.Figure S10. ¹³C-NMR spectrum of compound name 4e.

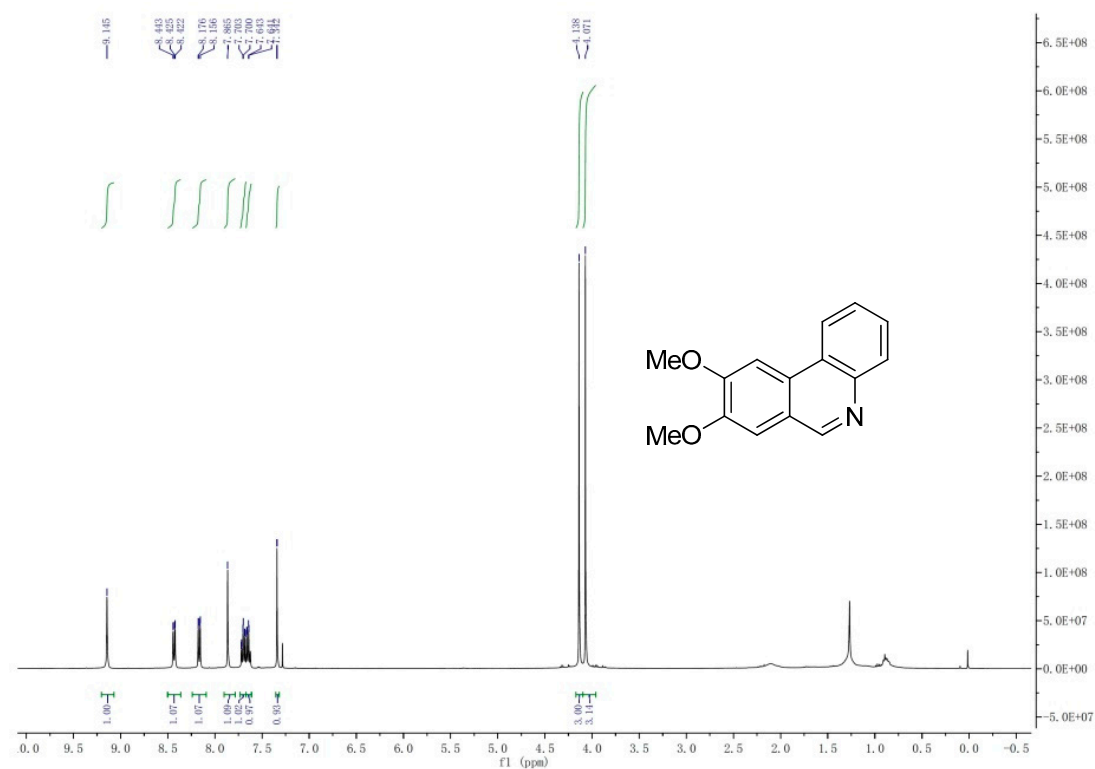
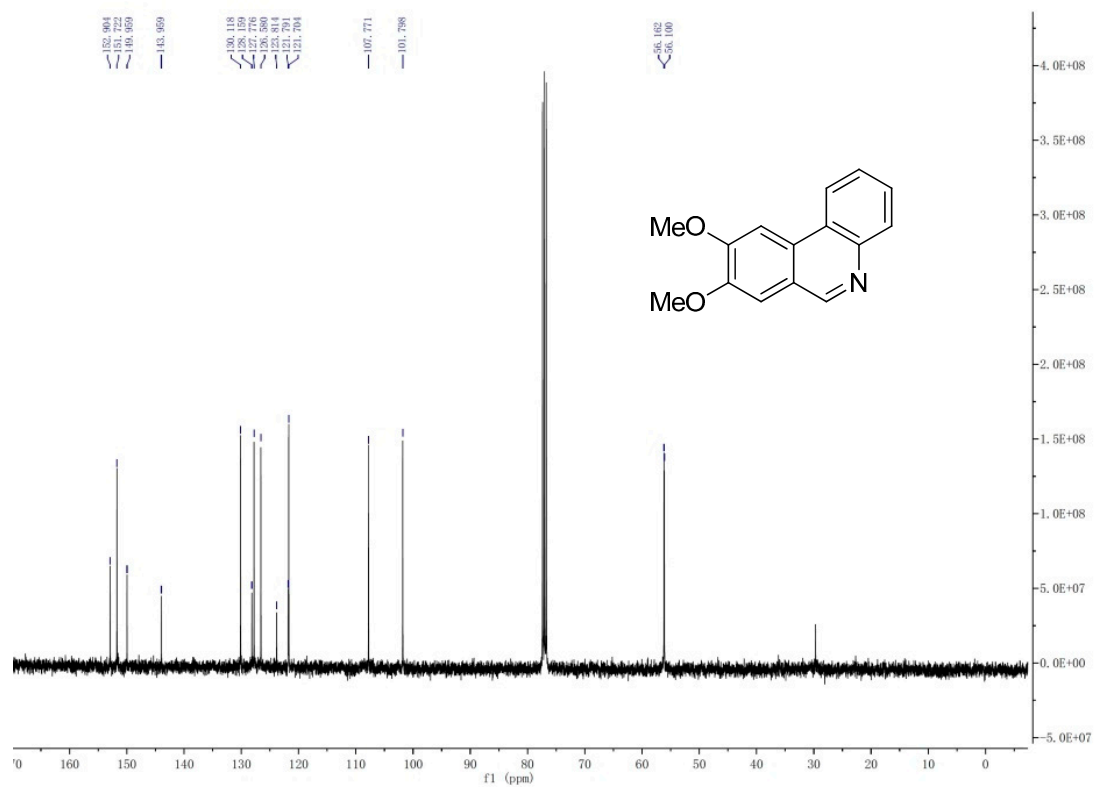
Figure S11. ¹H-NMR spectrum of compound 4f.Figure S12 ¹³C-NMR spectrum of compound name 4f.

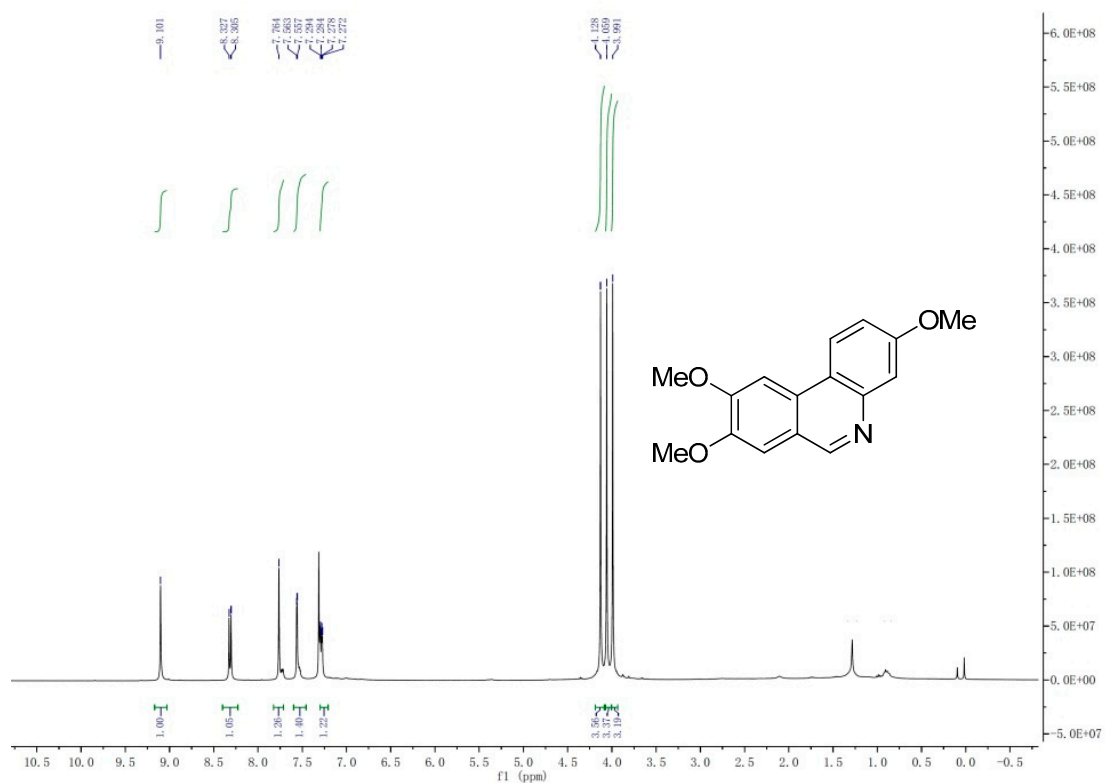
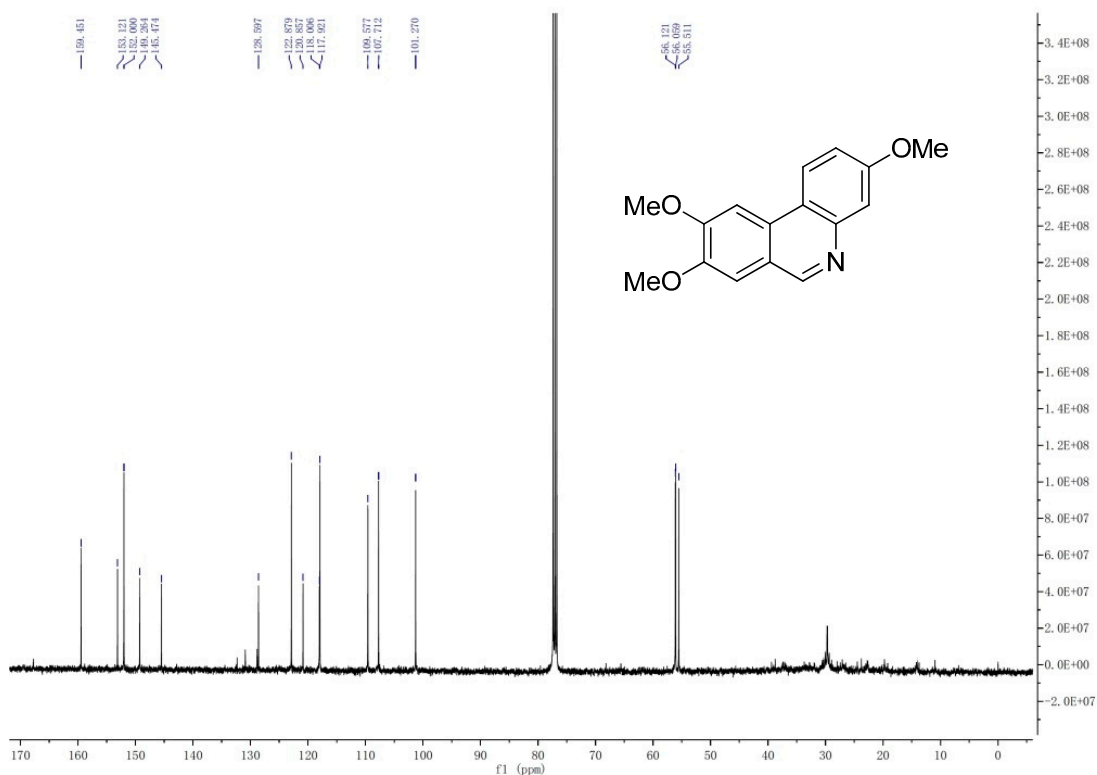
Figure S13. ¹H-NMR spectrum of compound 4ga.Figure S14. ¹³C-NMR spectrum of compound 4ga.

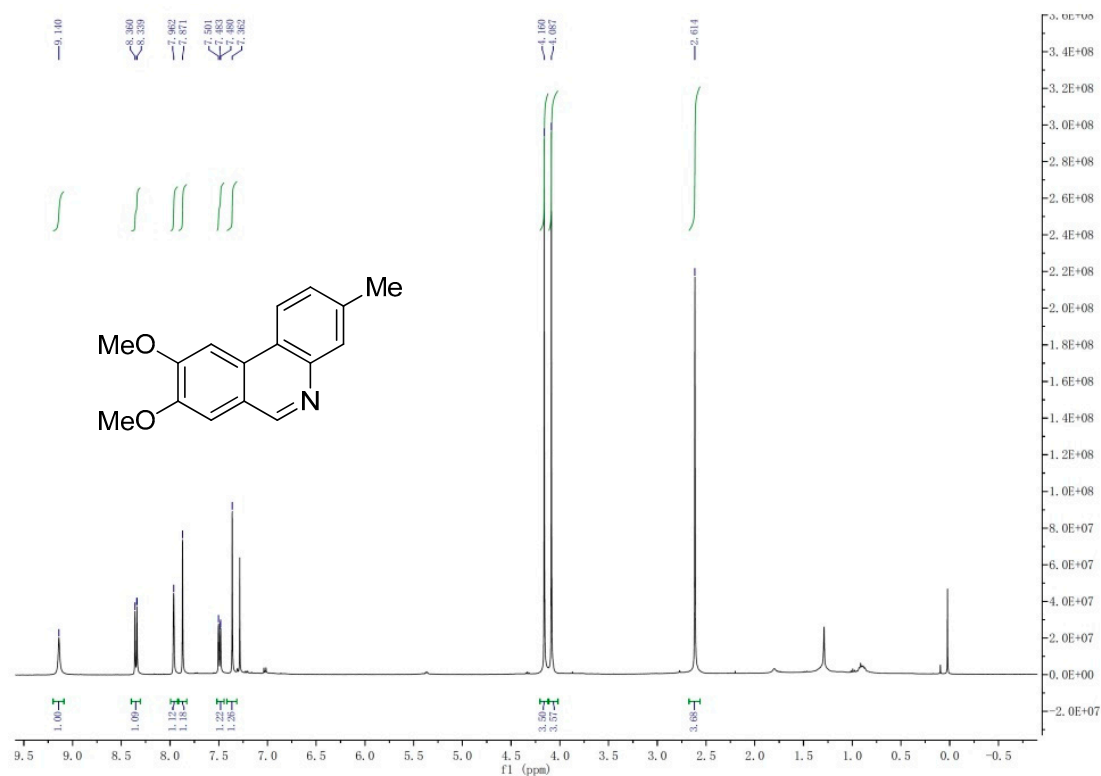
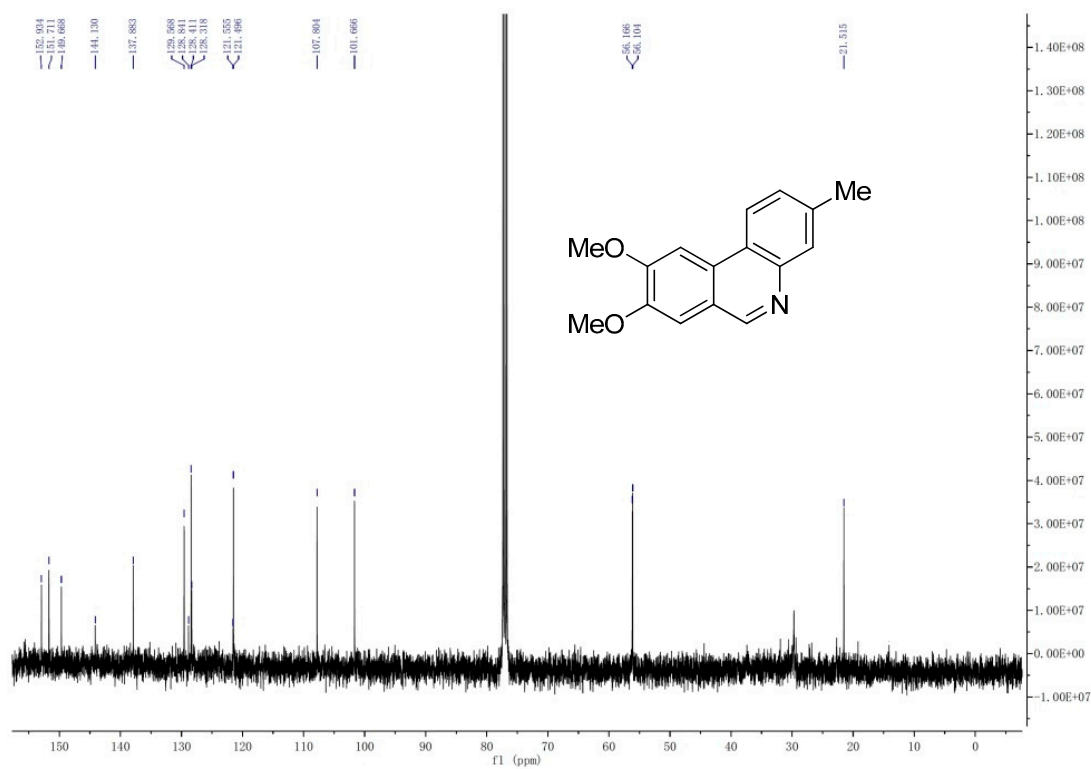


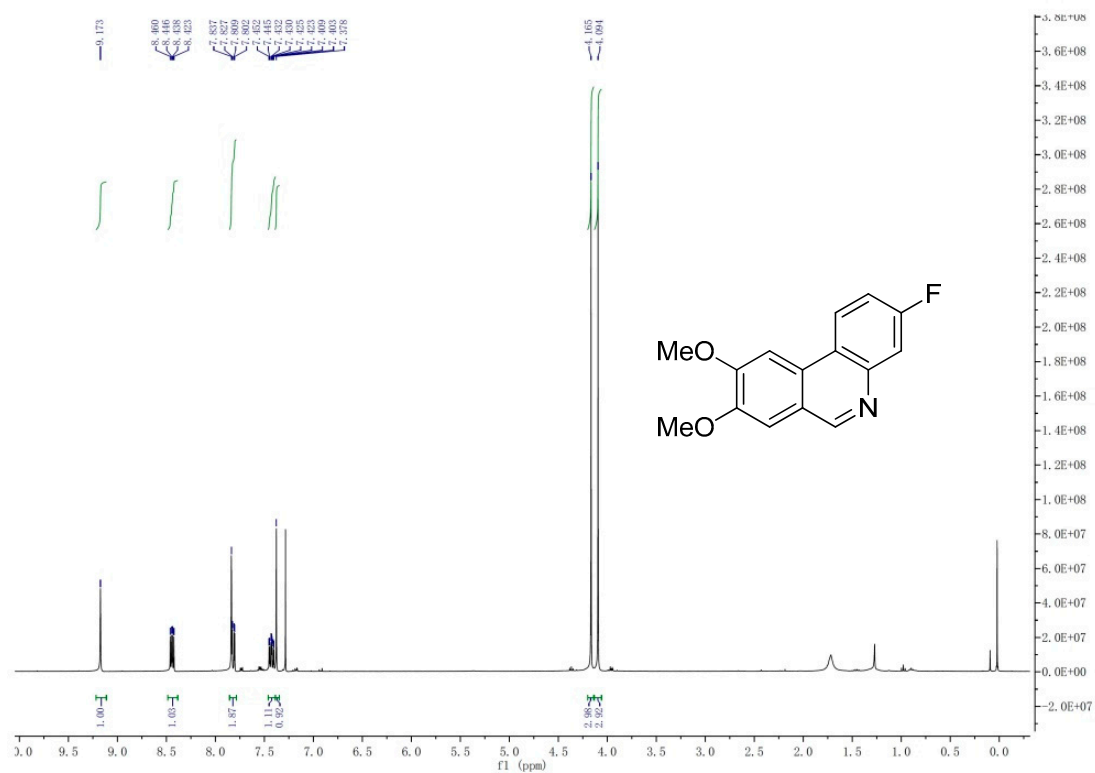
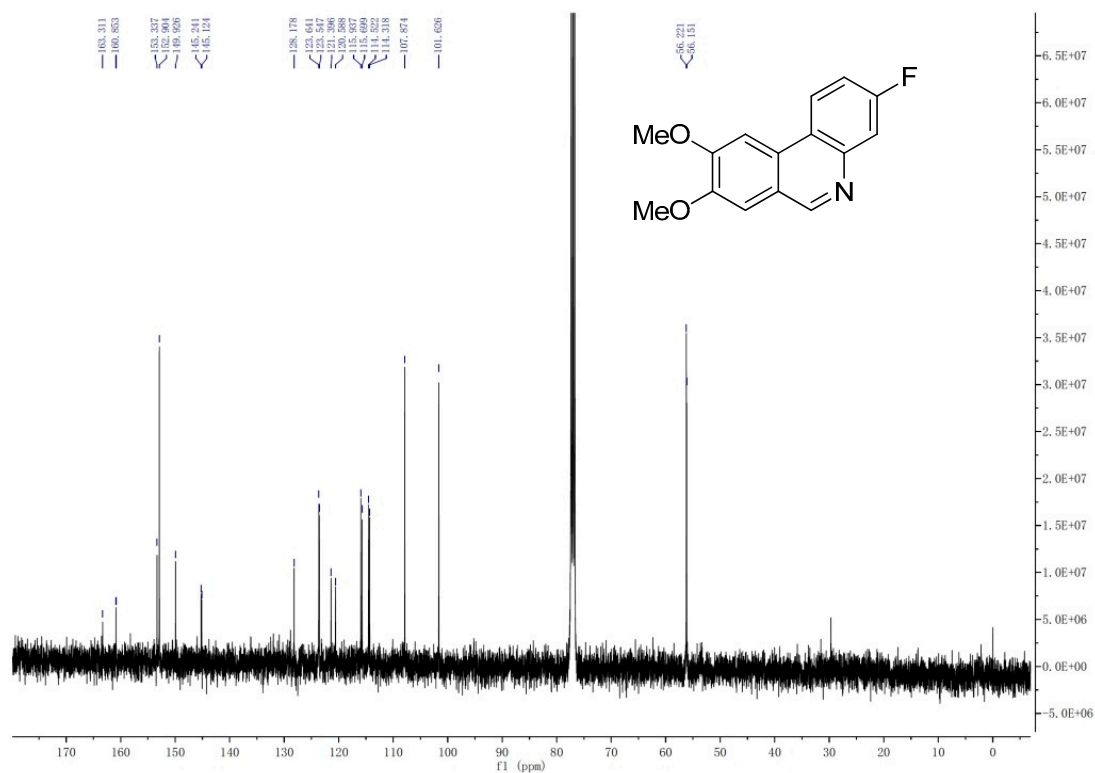
Figure S17. ¹H-NMR spectrum of compound 4ha.Figure S18. ¹³C-NMR spectrum of compound 4ha.

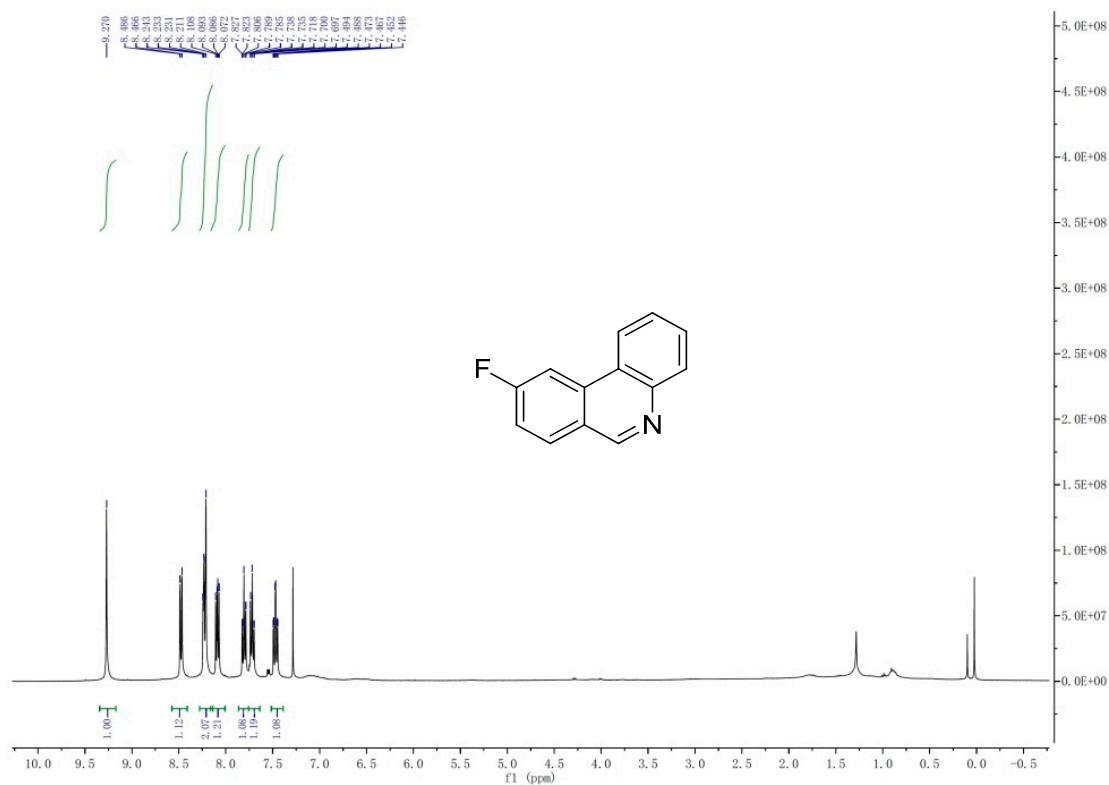
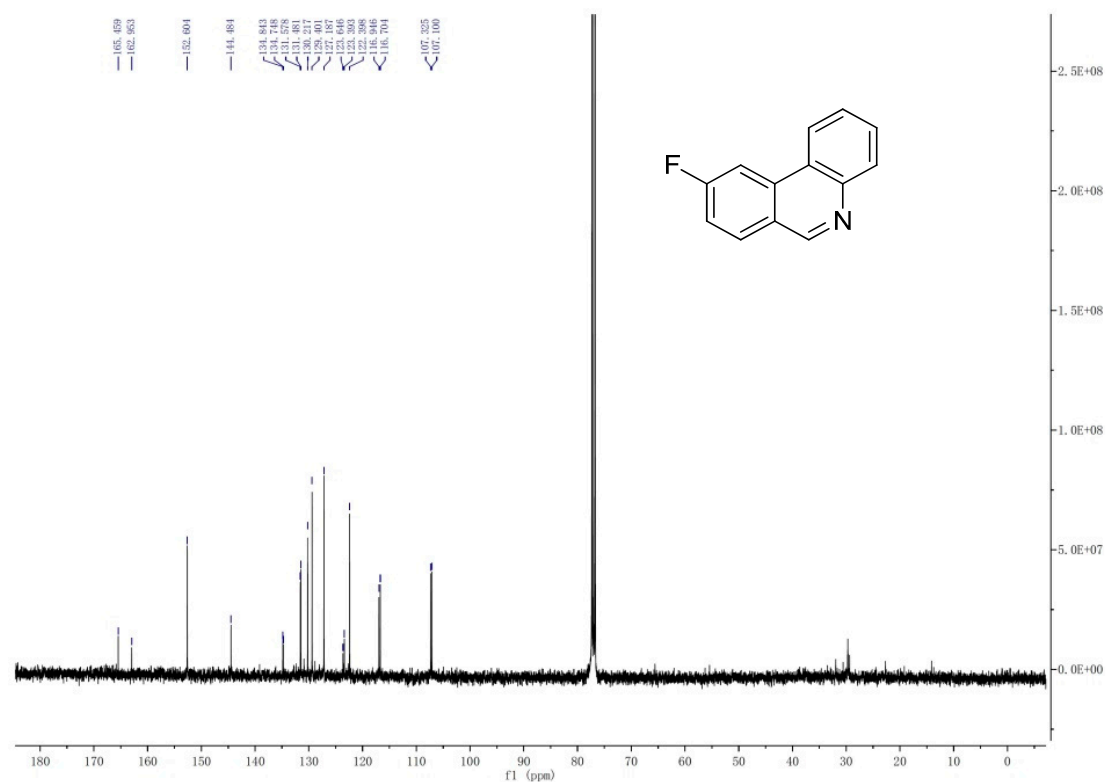
Figure S19. ¹H-NMR spectrum of compound 4hb.Figure S20. ¹³C-NMR spectrum of compound 4hb.

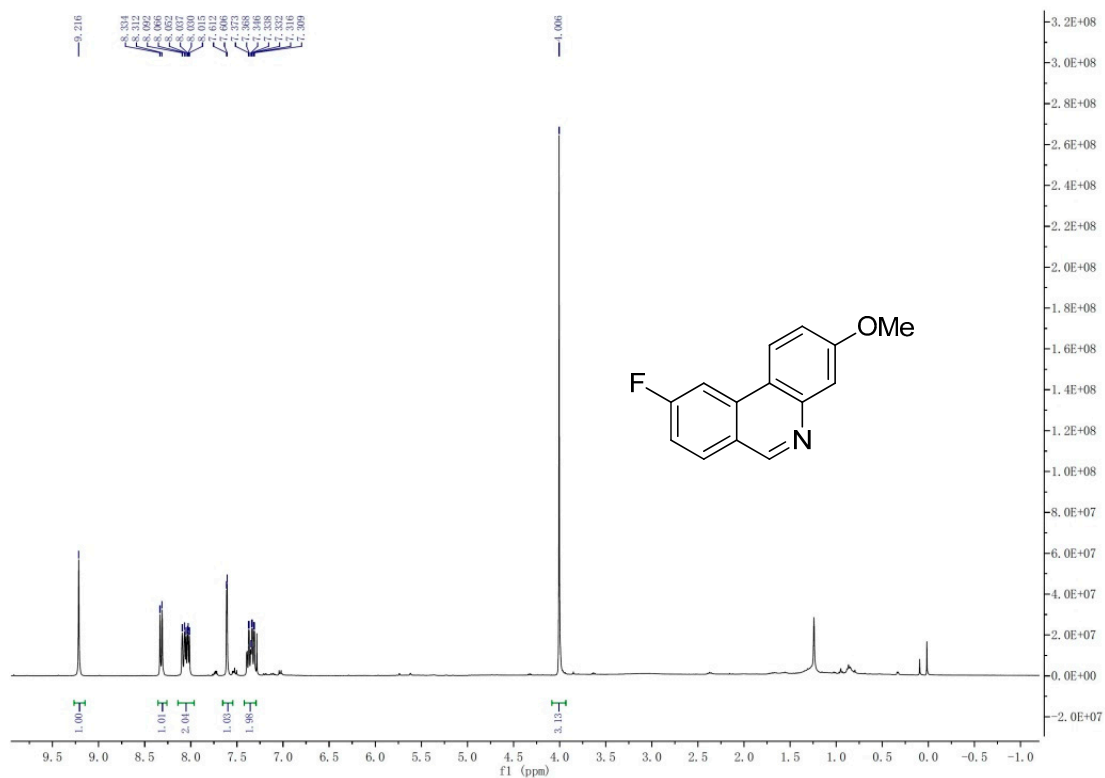
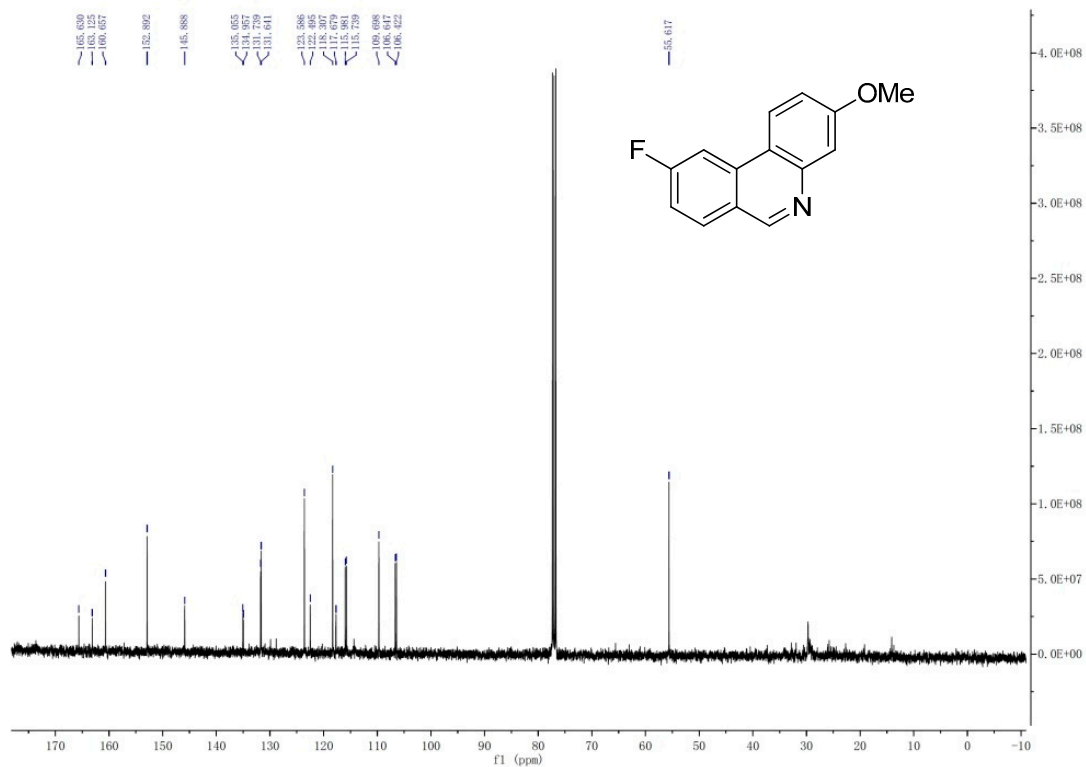
Figure S21. ¹H-NMR spectrum of compound **4i**.Figure S22. ¹³C-NMR spectrum of compound **4i**.

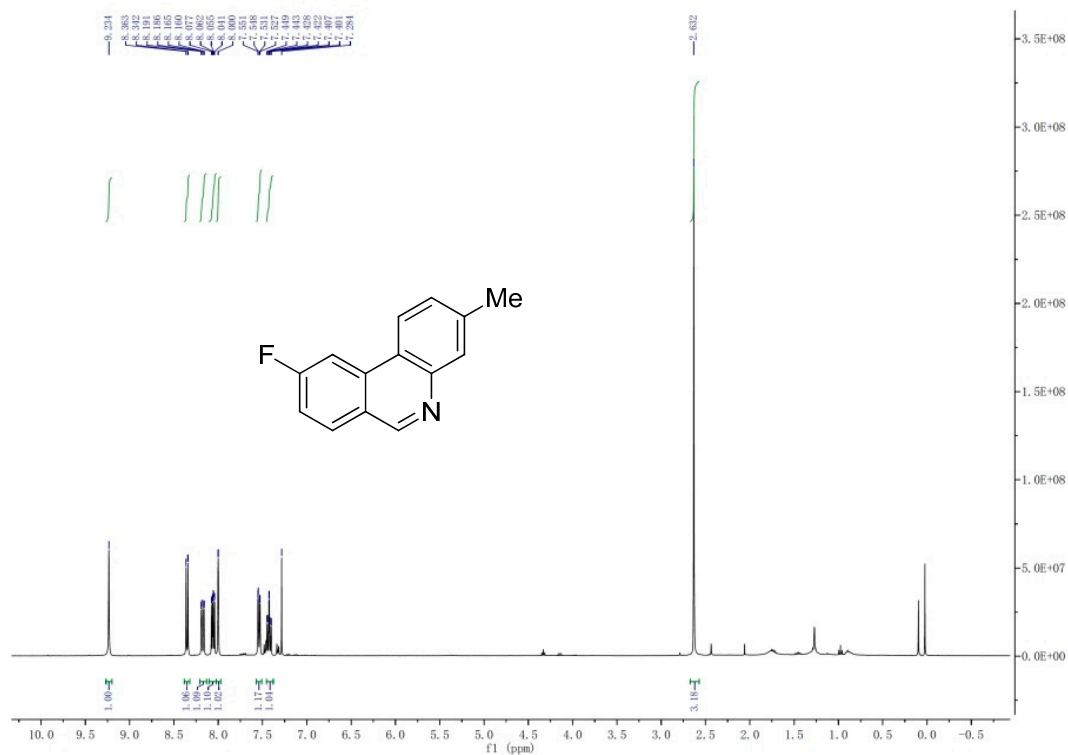
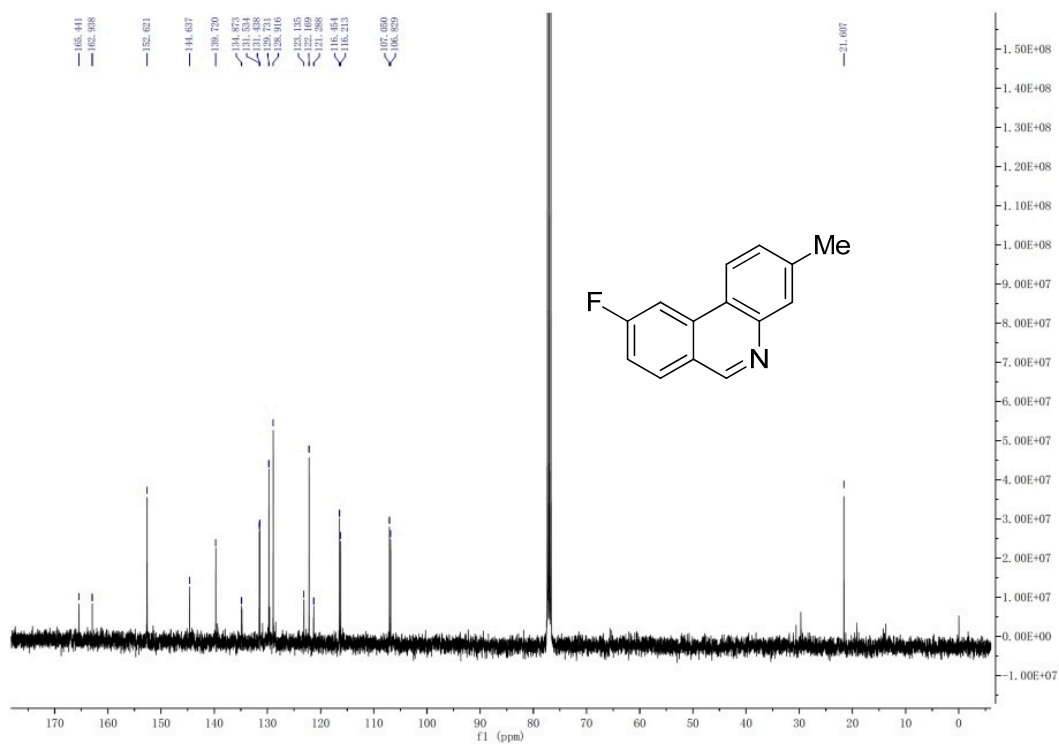
Figure S23. ¹H-NMR spectrum of compound 4j.Figure S24. ¹³C-NMR spectrum of compound 4j.

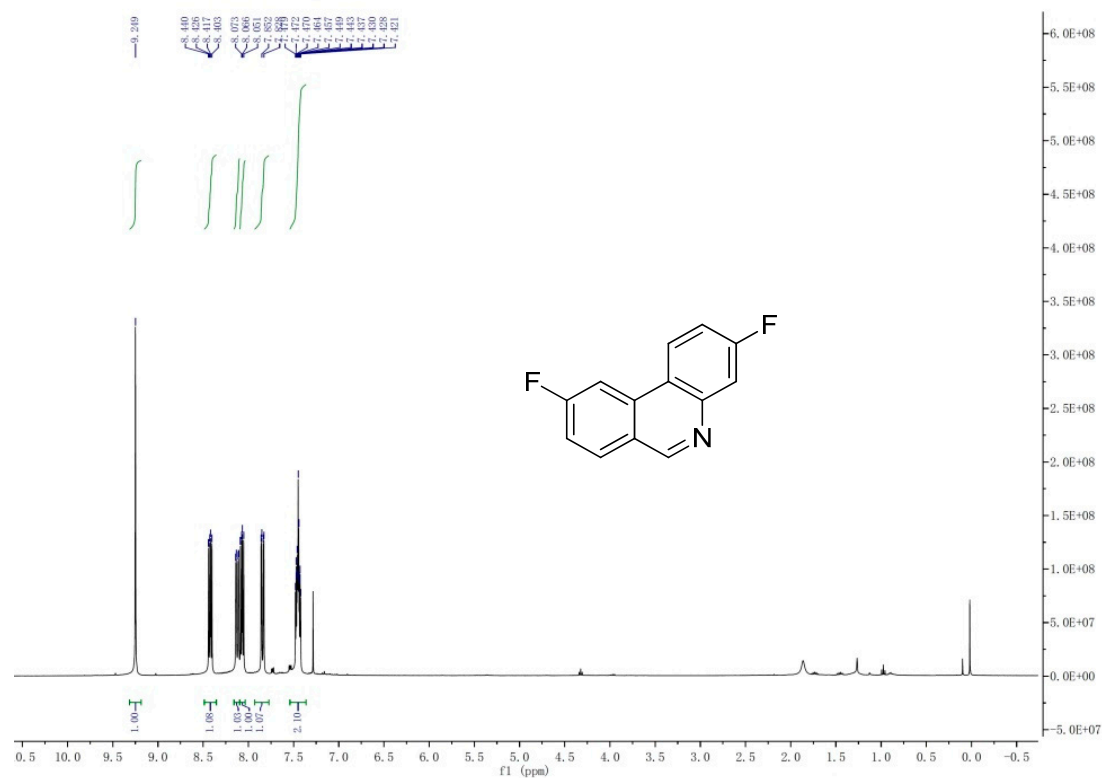
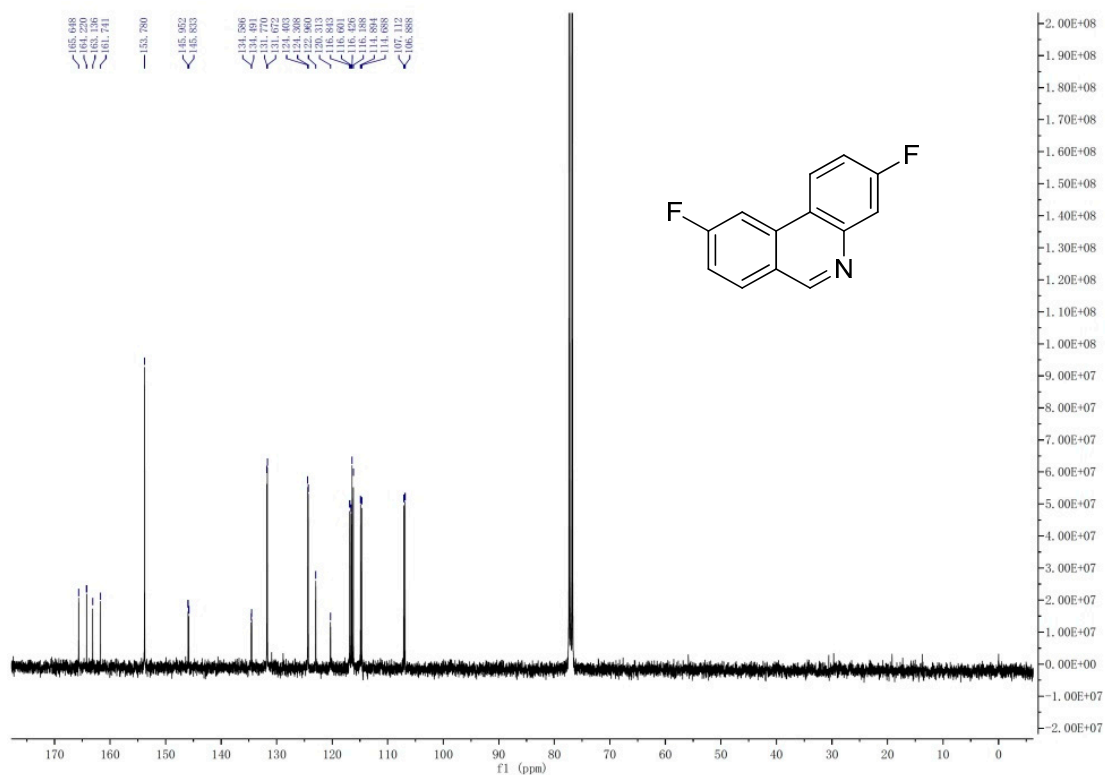
Figure S25. ¹H-NMR spectrum of compound 4k.Figure S26. ¹³C-NMR spectrum of compound 4k.

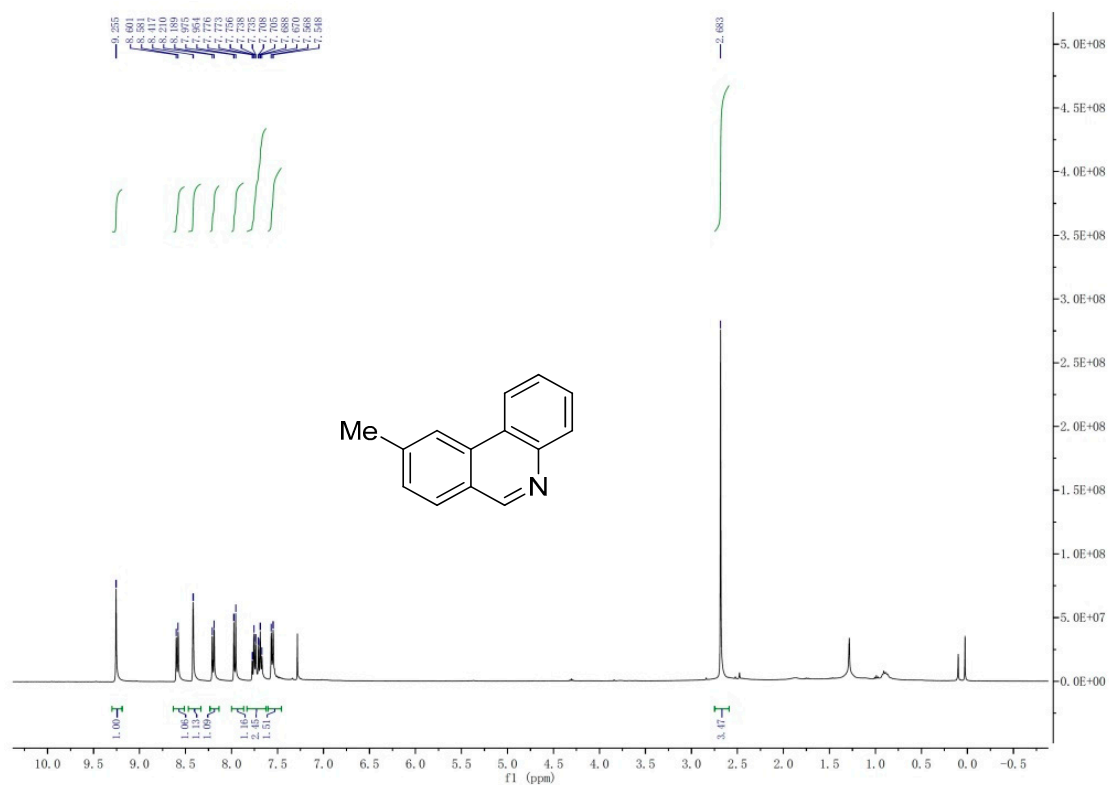
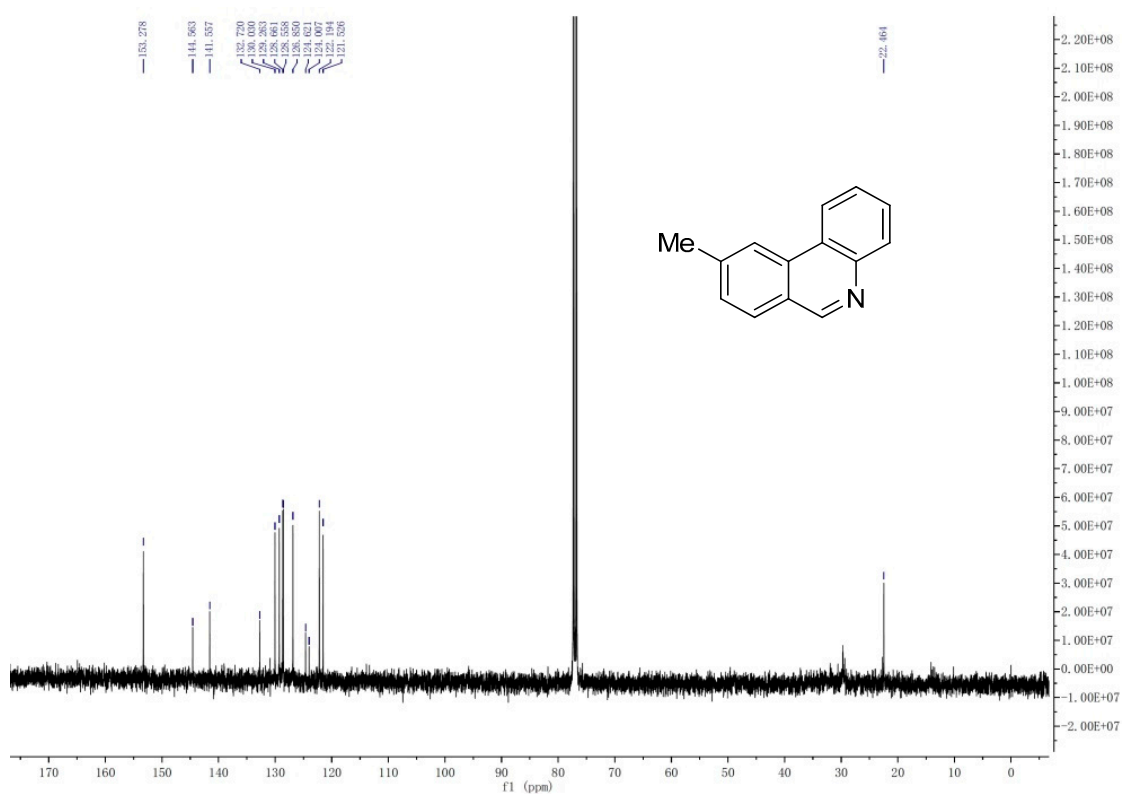
Figure S27. ¹H-NMR spectrum of compound 4l.Figure S28. ¹³C-NMR spectrum of compound 4l.

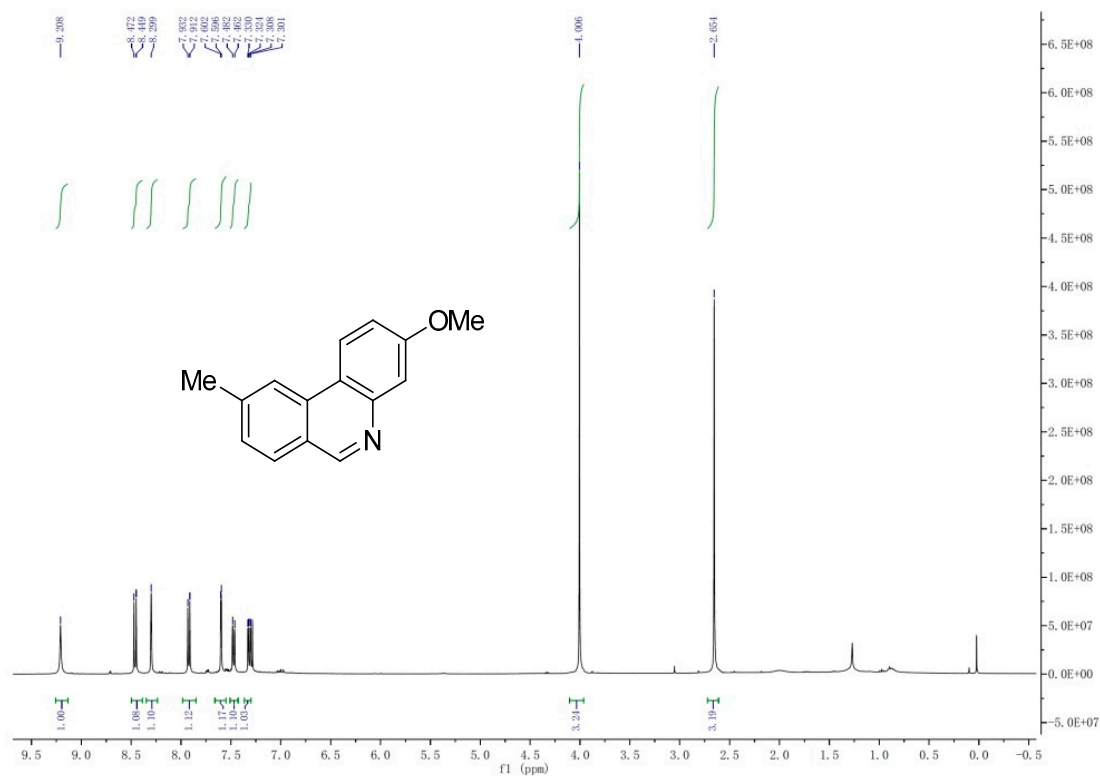
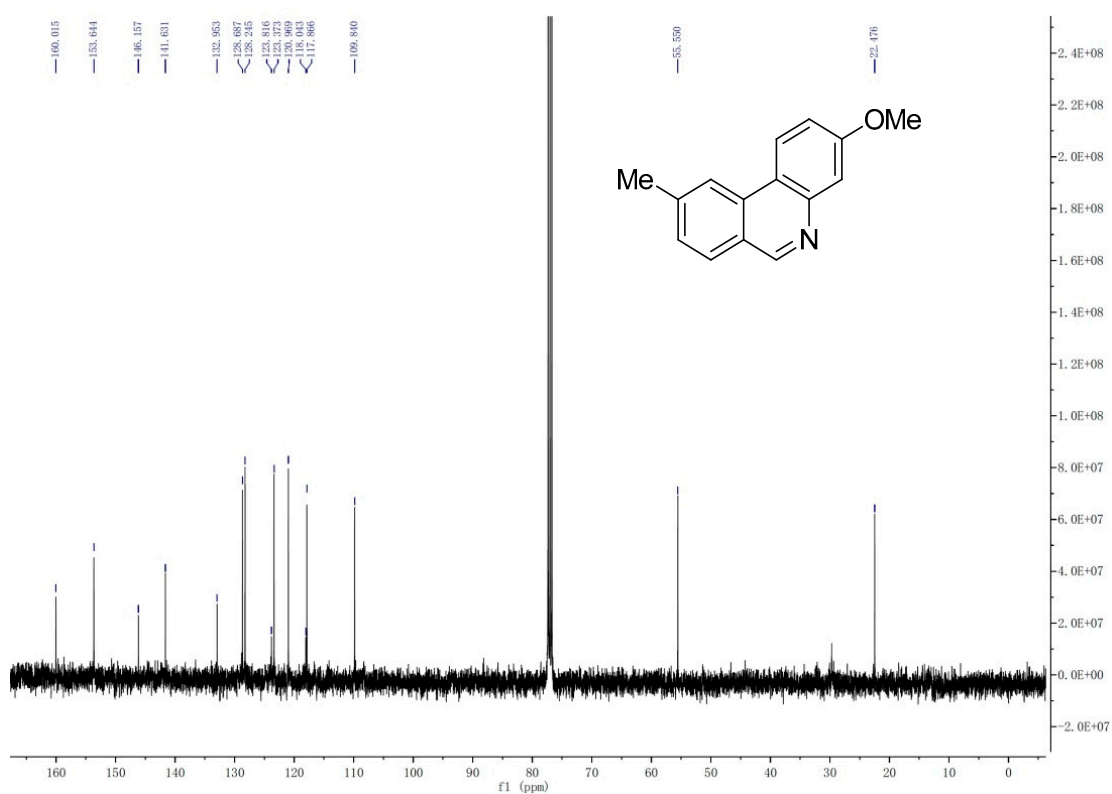
Figure S29. ¹H-NMR spectrum of compound 4m.Figure S30. ¹³C-NMR spectrum of compound 4m.

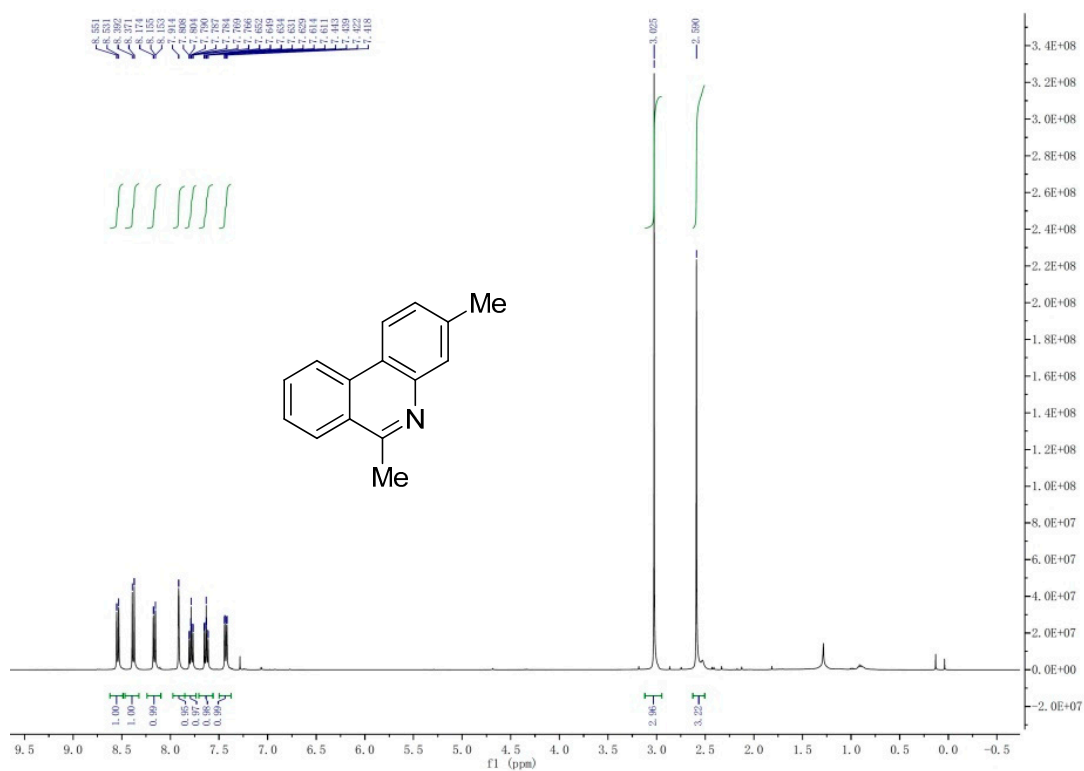
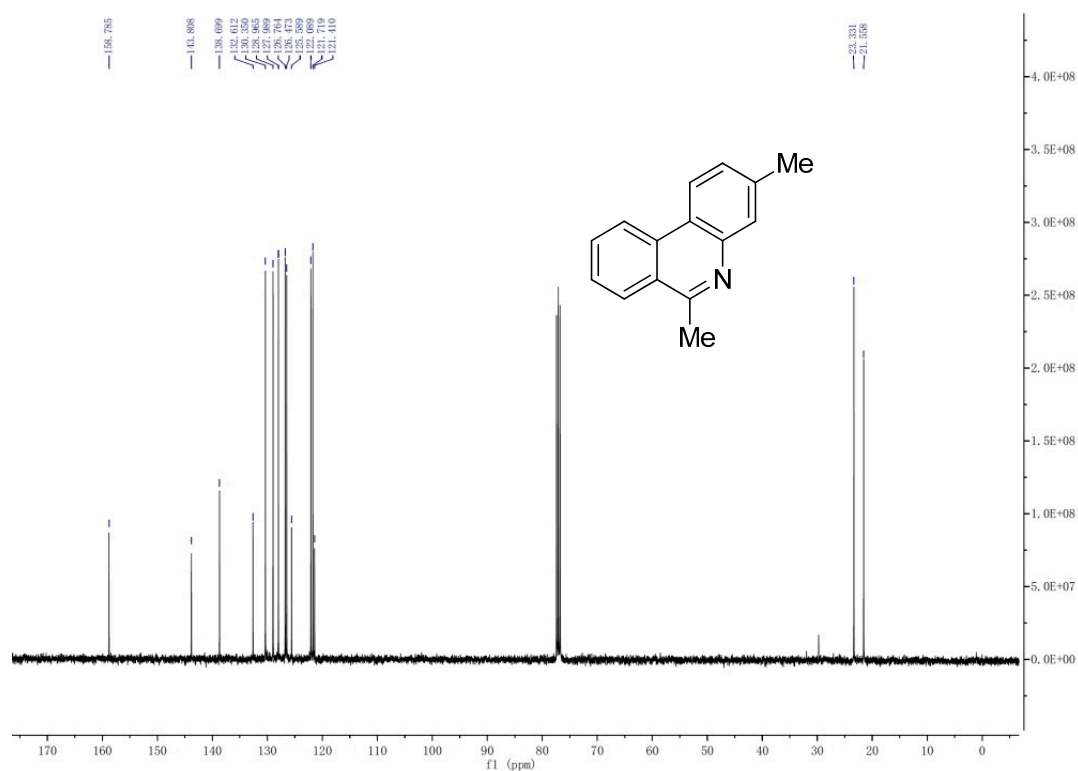
Figure S31. ¹H-NMR spectrum of compound 4n.Figure S32. ¹³C-NMR spectrum of compound 4n.

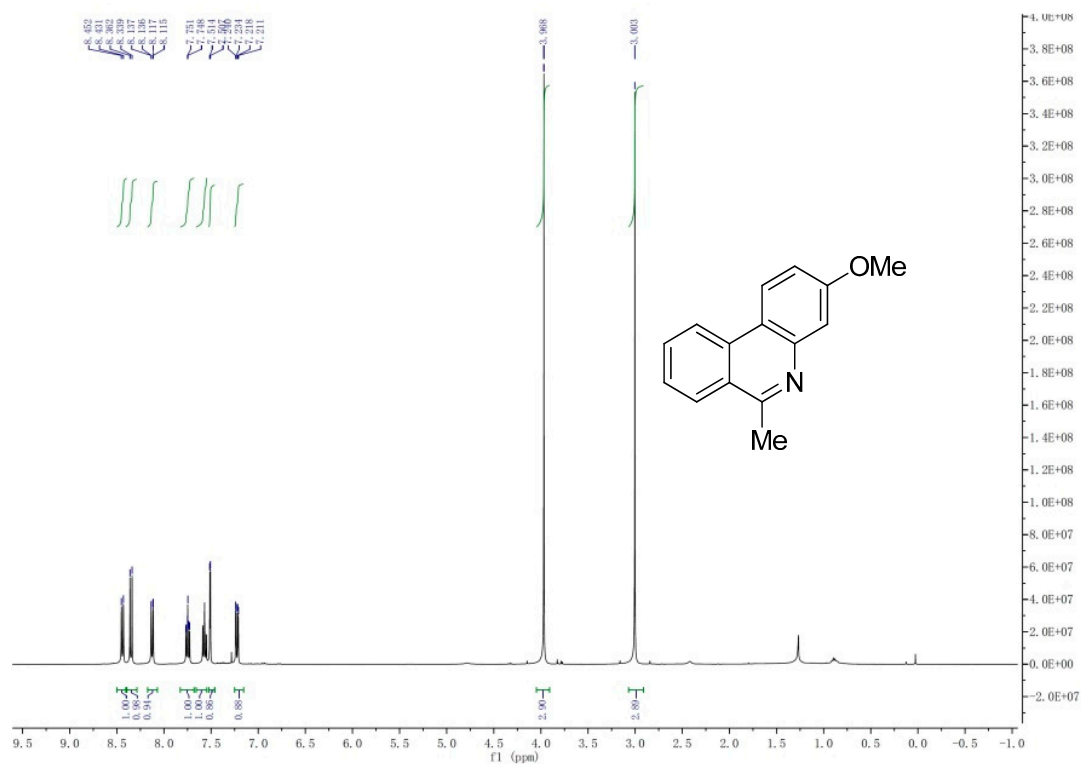
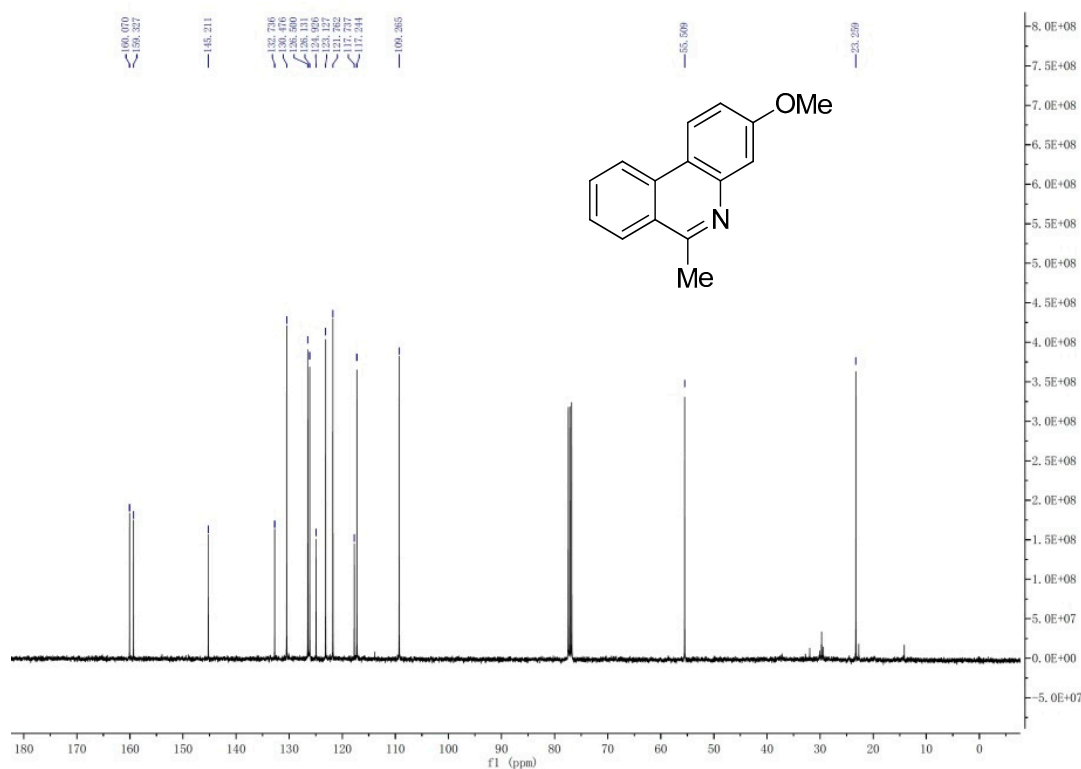
Figure S33. ¹H-NMR spectrum of compound 4o.Figure S34. ¹³C-NMR spectrum of compound 4o.

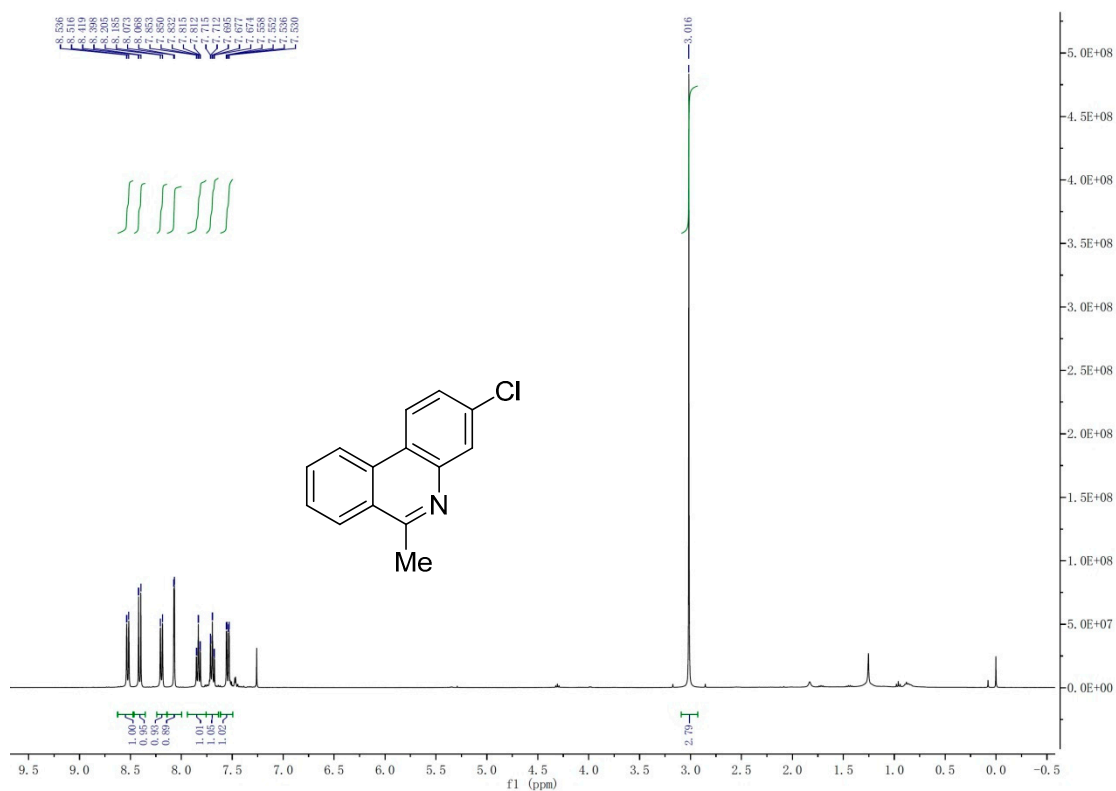
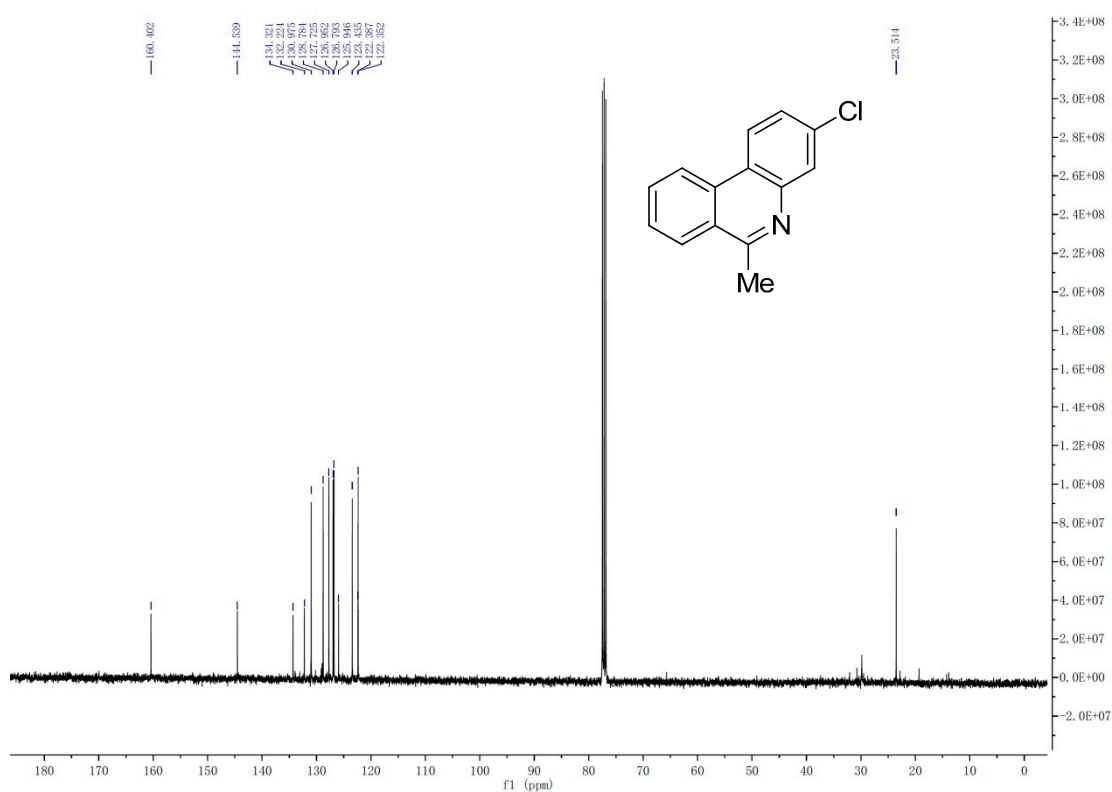
Figure S35. ¹H-NMR spectrum of compound 4p.

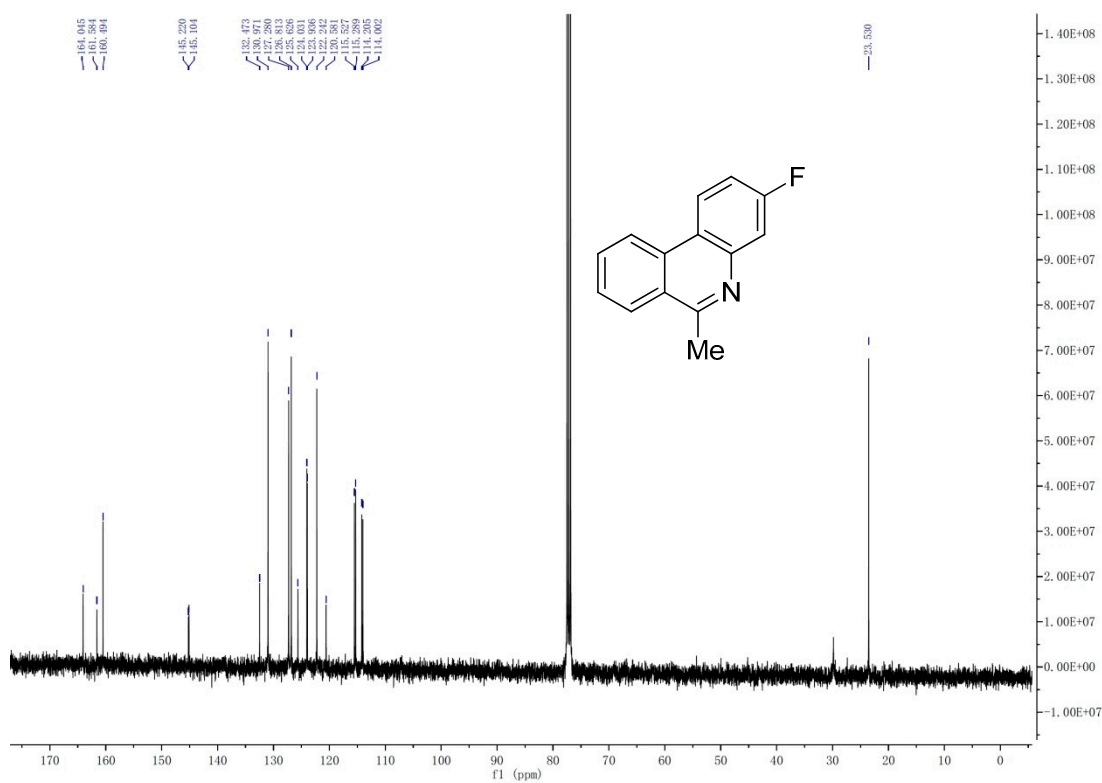
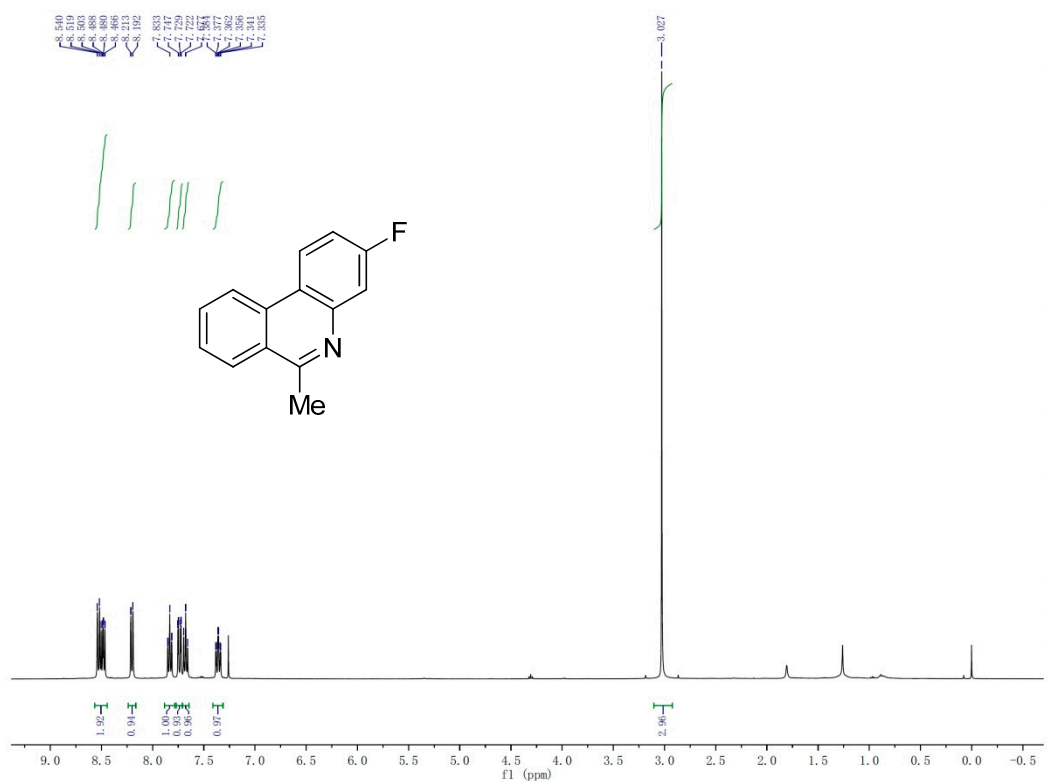
Figure S37. ¹H-NMR spectrum of compound 4q.Figure S38. ¹³C-NMR spectrum of compound 4q.

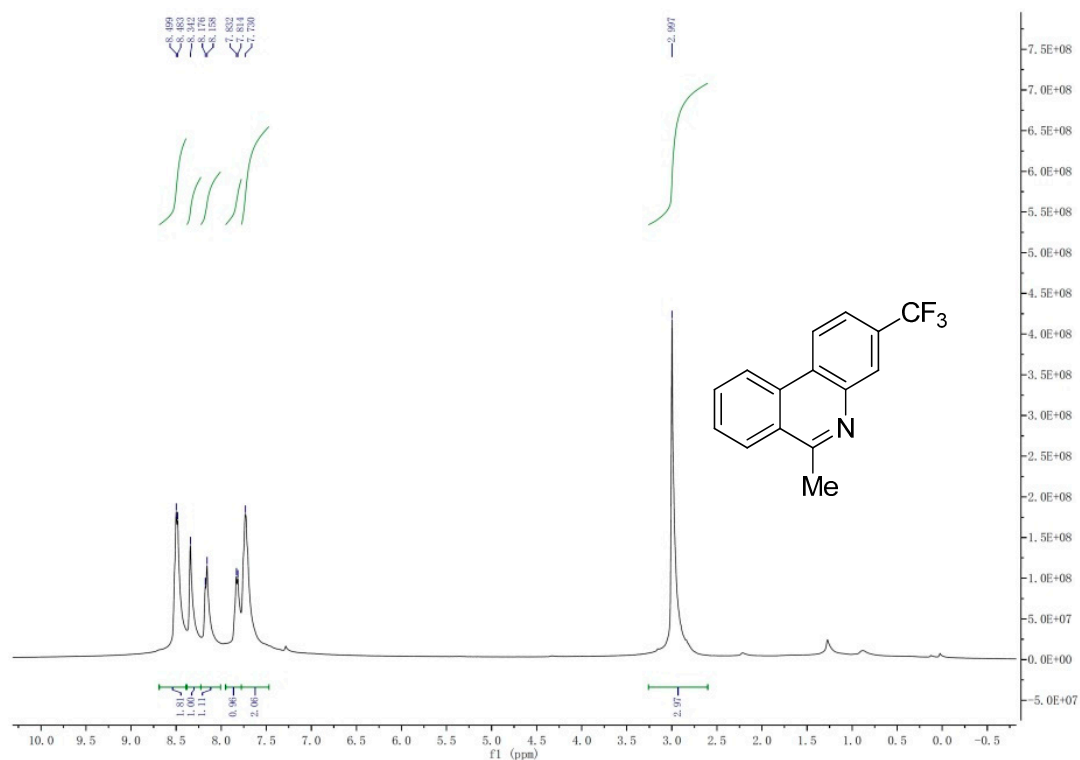
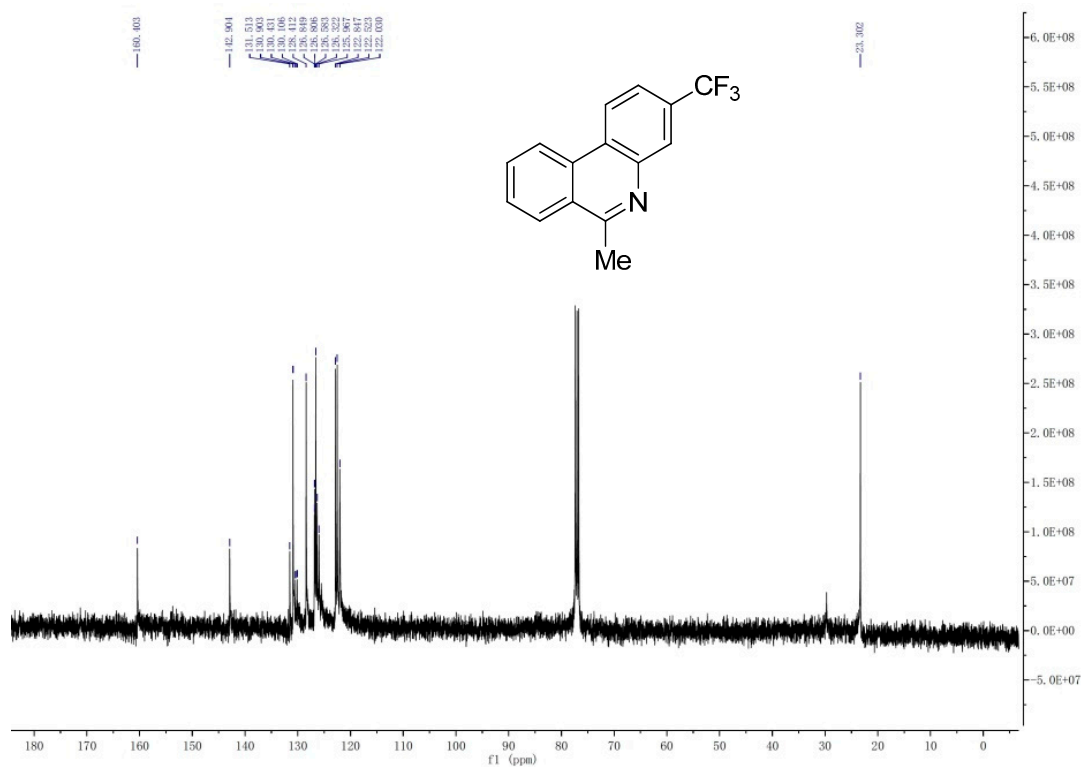
Figure S39. ¹H-NMR spectrum of compound 4r.Figure S40. ¹³C-NMR spectrum of compound 4r.

Figure S41. ¹H-NMR spectrum of compound 7b.Figure S42. ¹³C-NMR spectrum of compound 7b.

Figure S43. ¹H-NMR spectrum of compound 7c.Figure S44. ¹³C-NMR spectrum of compound 7c.

Figure S45. ¹H-NMR spectrum of compound 7d.Figure S46. ¹³C-NMR spectrum of compound 7d.



Figure S49. ¹H-NMR spectrum of compound 7f.Figure S50. ¹³C-NMR spectrum of compound 7f