

Supporting Information

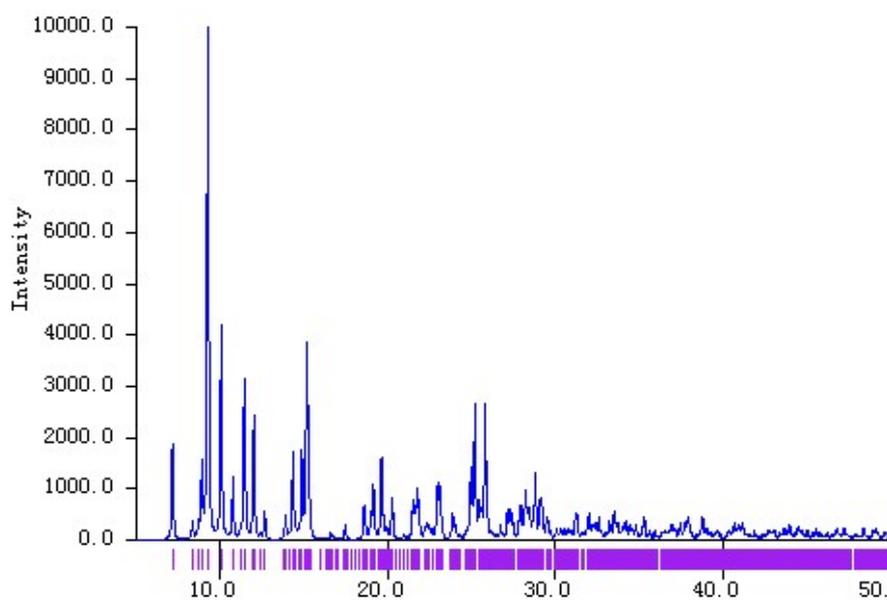


Figure S1. The calculated XRD pattern from single crystal data of complex **1**.

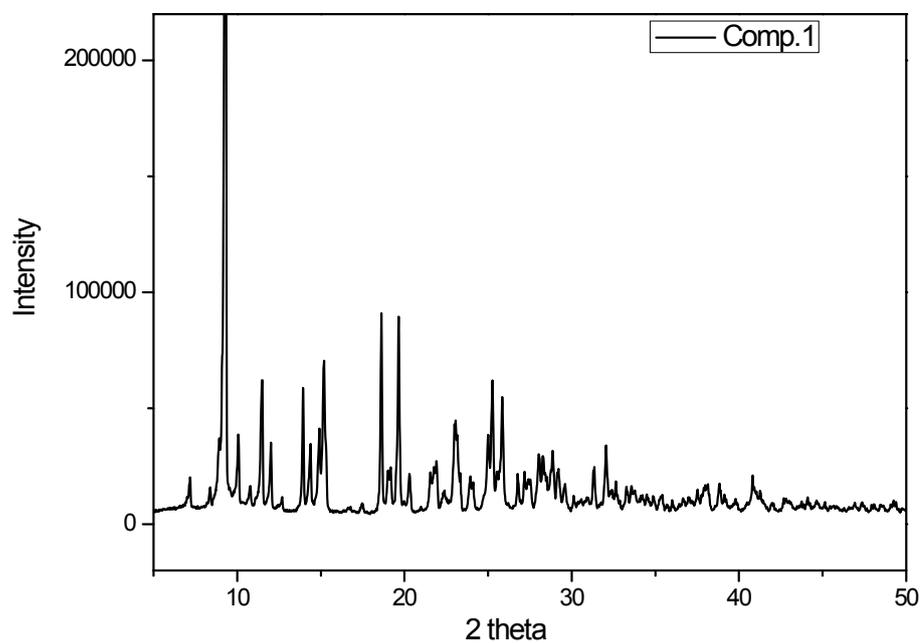


Figure S2. The powder XRD pattern for complex **1**.

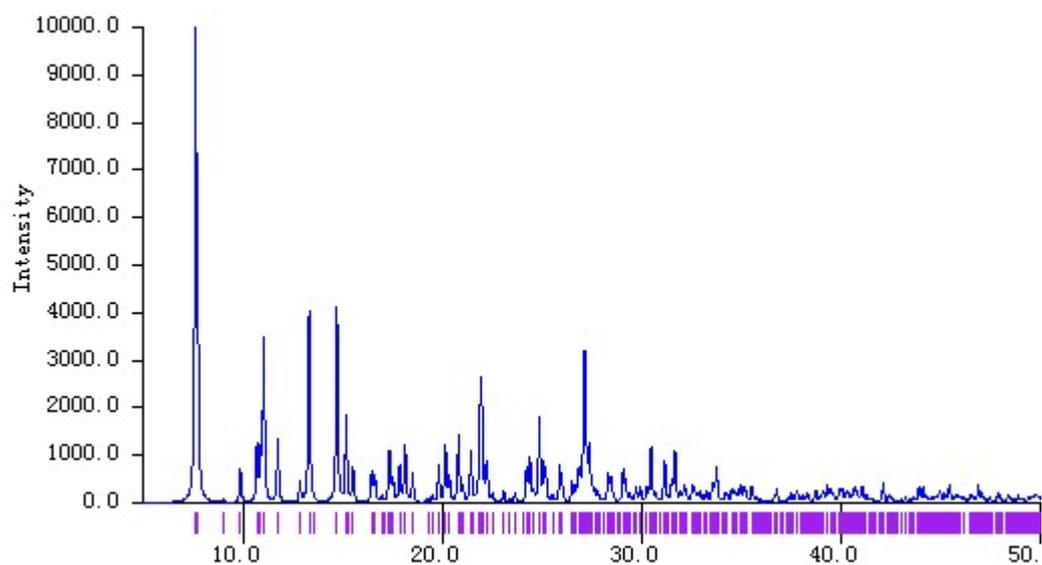


Figure S3. The calculated XRD pattern from single crystal data of complex **2**.

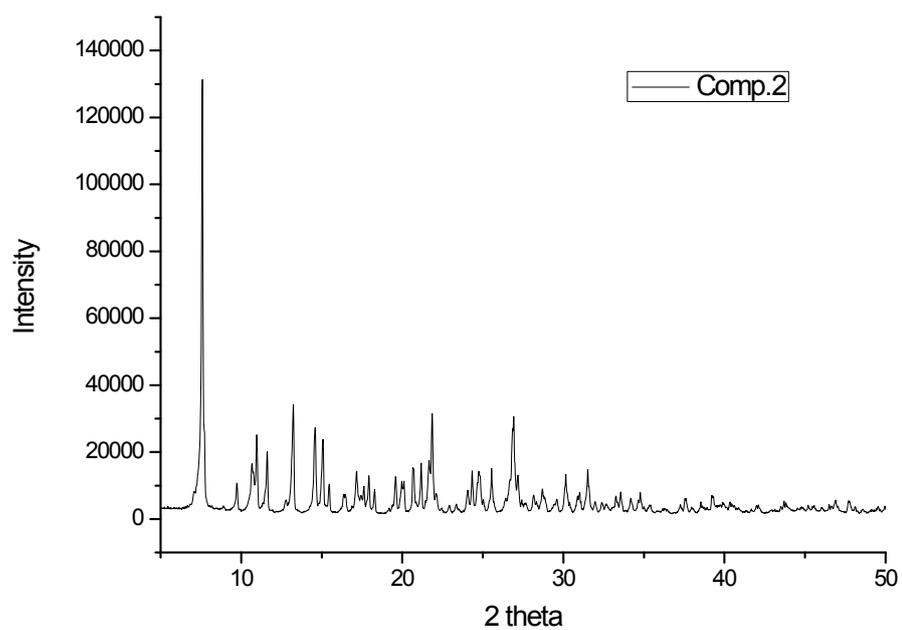


Figure S4. The powder XRD pattern for complex **2**.

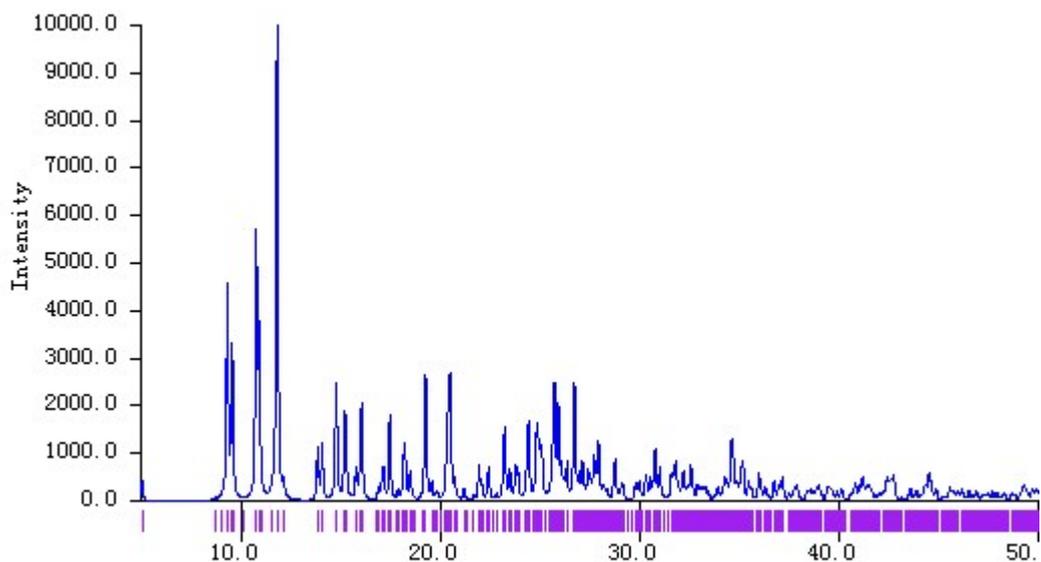


Figure S5. The calculated XRD pattern from single crystal data of complex **3**.

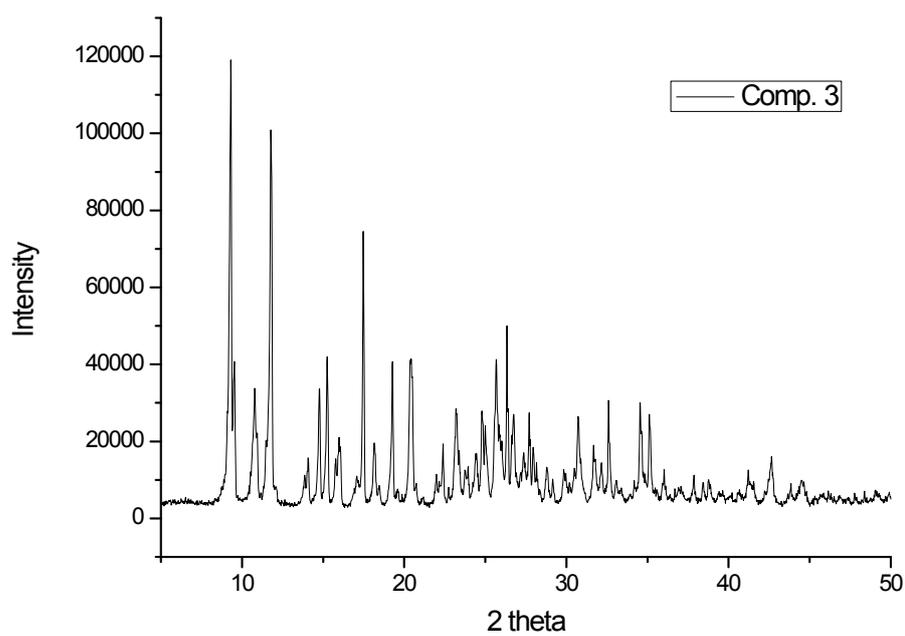


Figure S6. The powder XRD pattern for complex **3**.

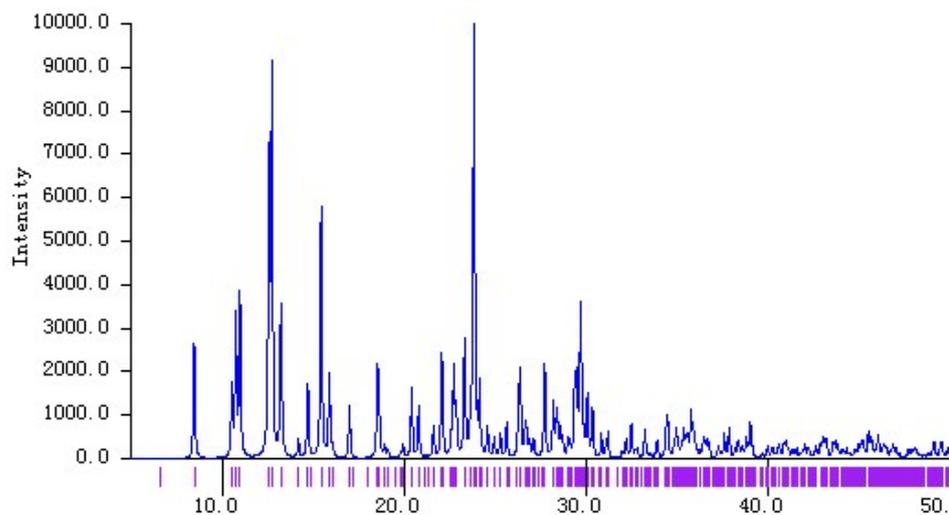


Figure S7. The calculated XRD pattern from single crystal data of complex 4.

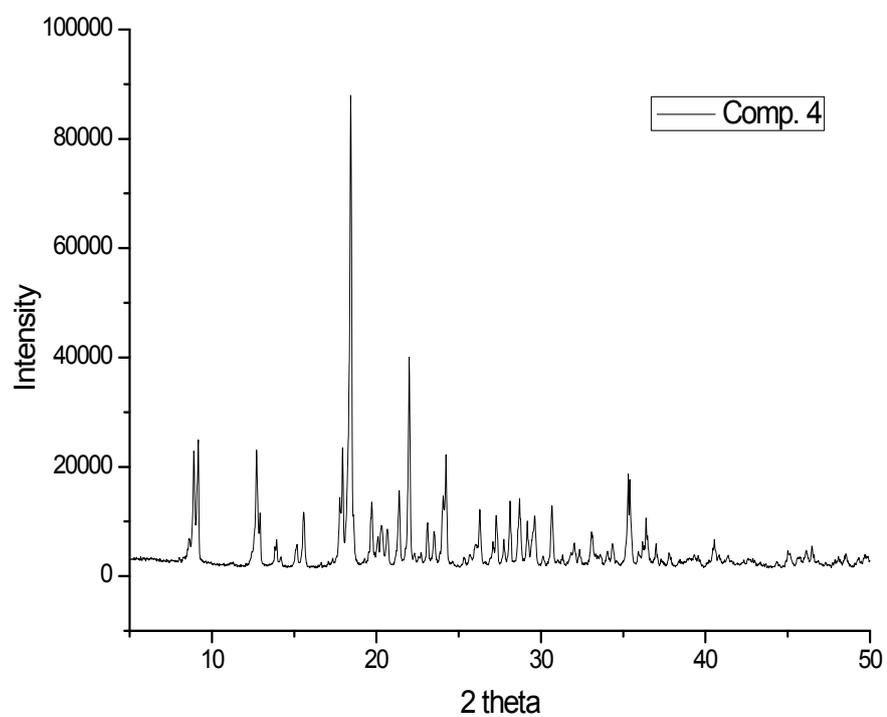


Figure S8. The powder XRD pattern for complex 4.

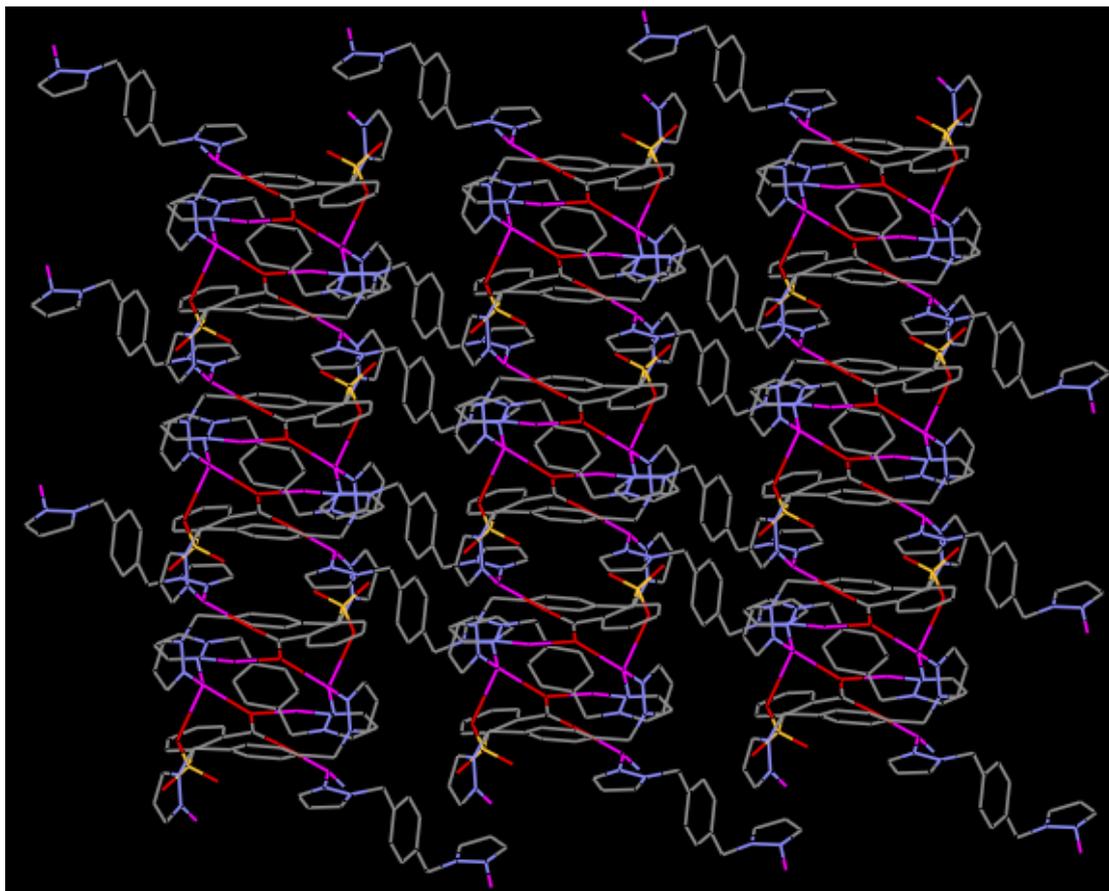


Figure S9. View of two-dimensional network for **1**. The 2-Hsb⁻, H atoms and lattice water molecules are omitted for clarity.

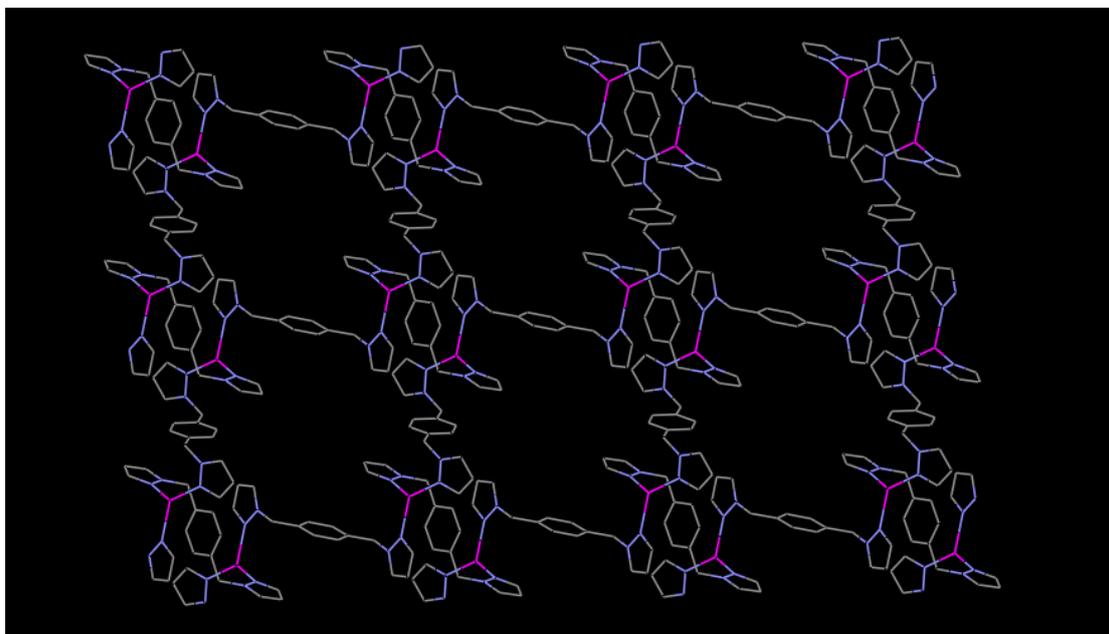


Figure S10. View of the two-dimensional network of **2**. The terminal 2-Hsb⁻ and H atoms are omitted for clarity.

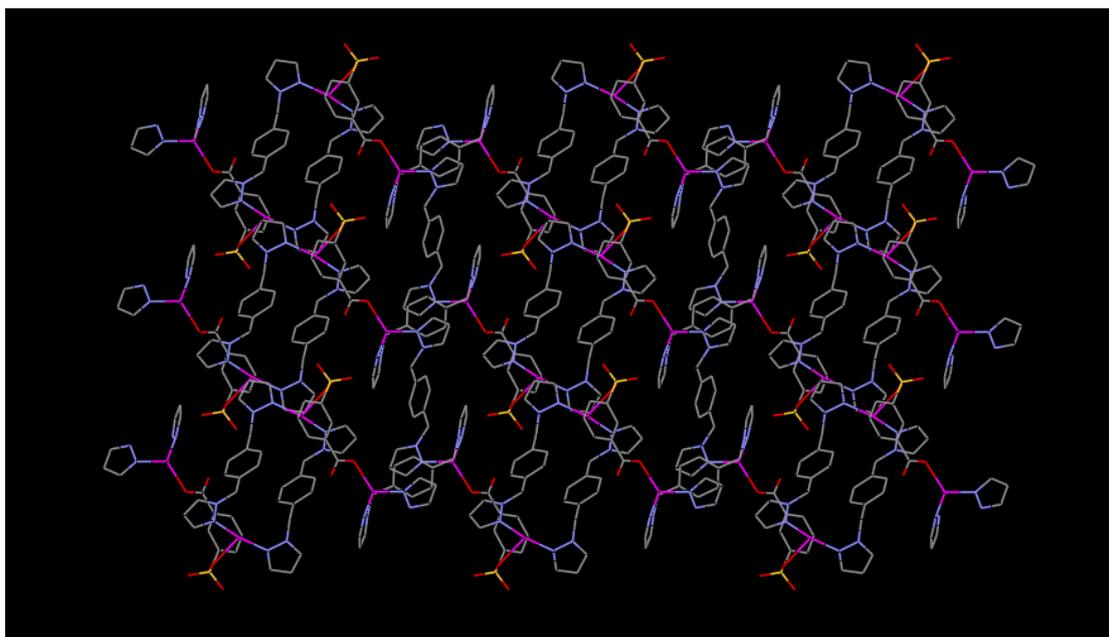


Figure S11. View of 2-D network for complex **3**. H atoms and water molecules are omitted for clarity.

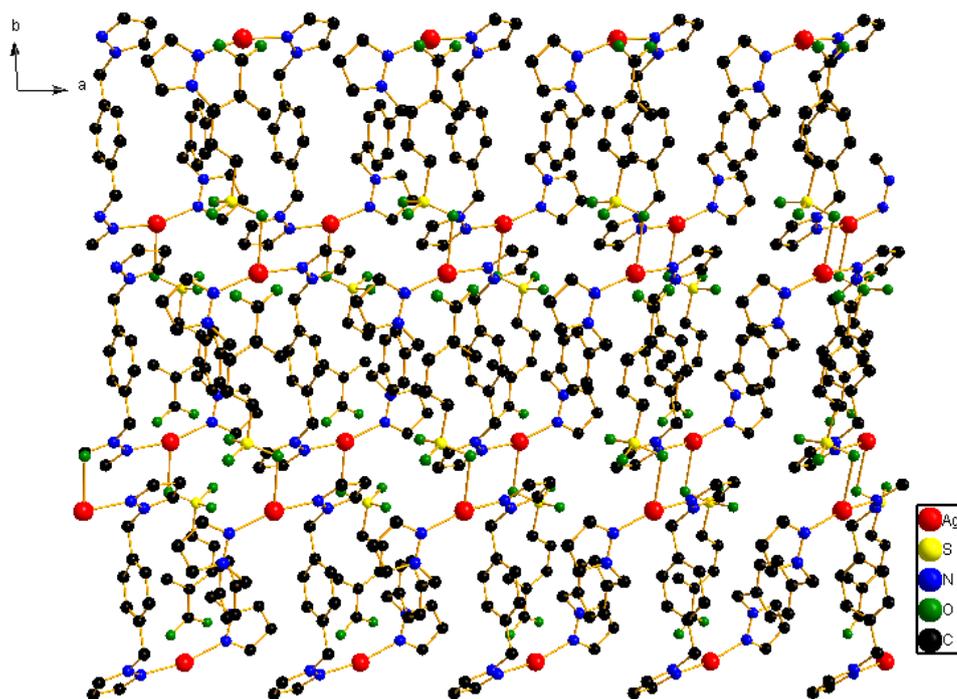


Figure S12. View of the 2-D layer for complex **4**. All the hydrogen atoms have been omitted for clarity.

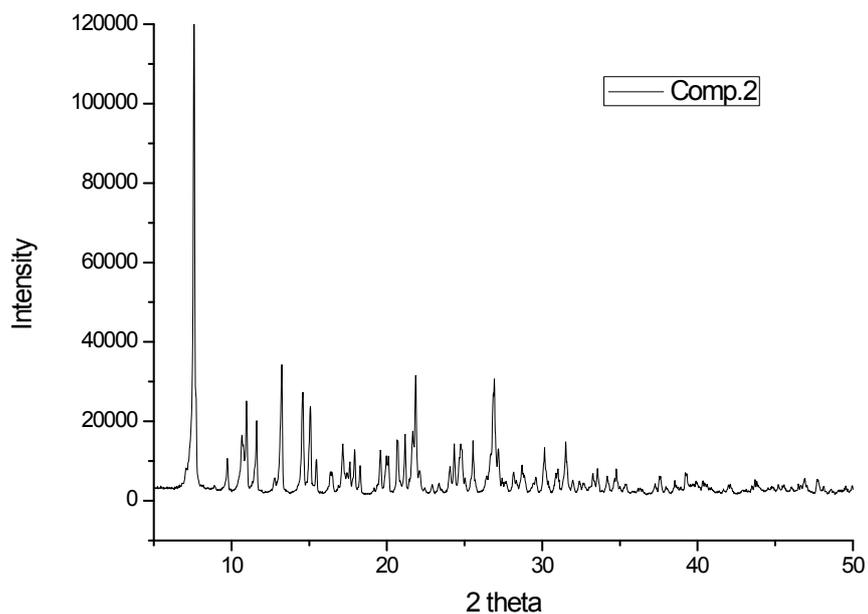


Figure S13. The powder XRD pattern after catalytic reaction one time for complex 2.

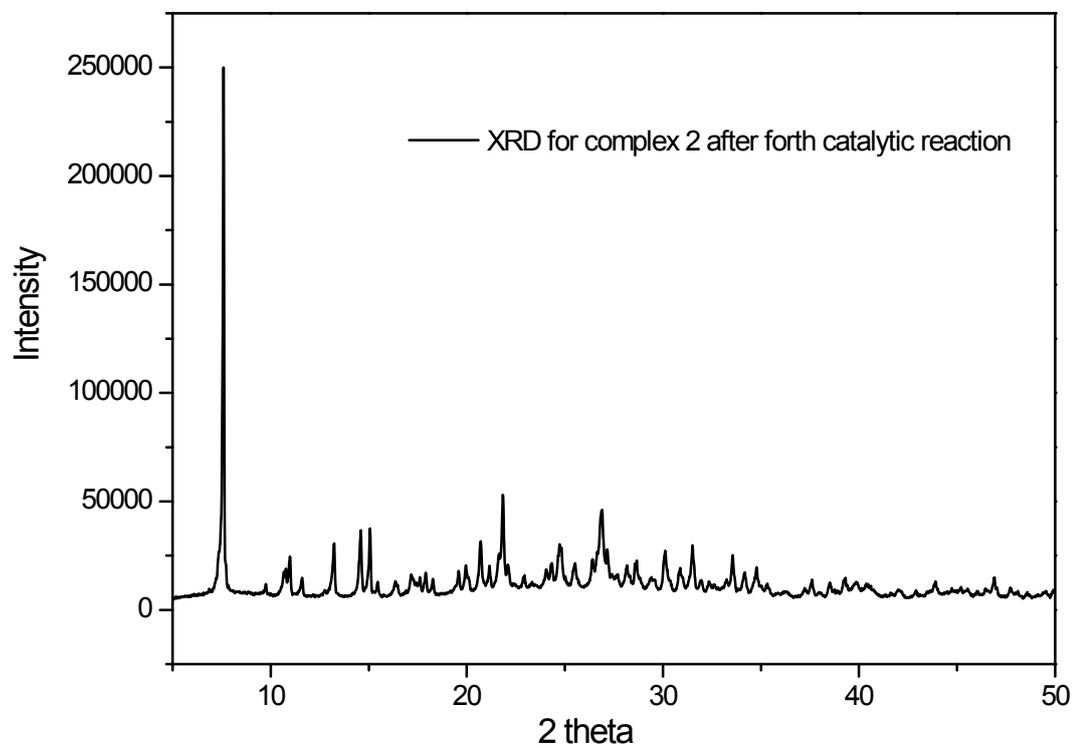


Figure S14. The powder XRD pattern after four recycling of catalytic reaction for

complex 2.

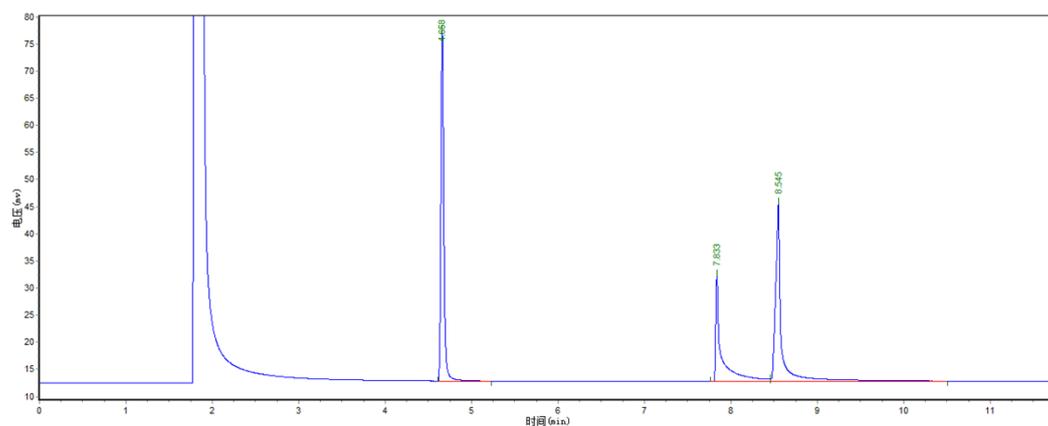


Figure S15. The GC chromatogram for standard samples of MPS, MPSO and MPSO₂ with the mole ratio of 1:1:1. The peak at 2 minute is the retention time of ethanol.

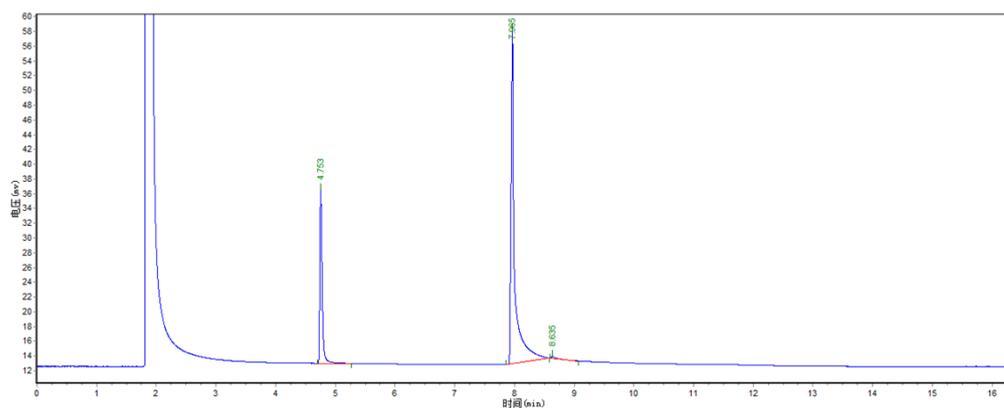


Figure S16. The GC chromatogram of oxidation of MPS with hydrogen peroxide for 3h in the presence of 2-H₂sb at 50°C.

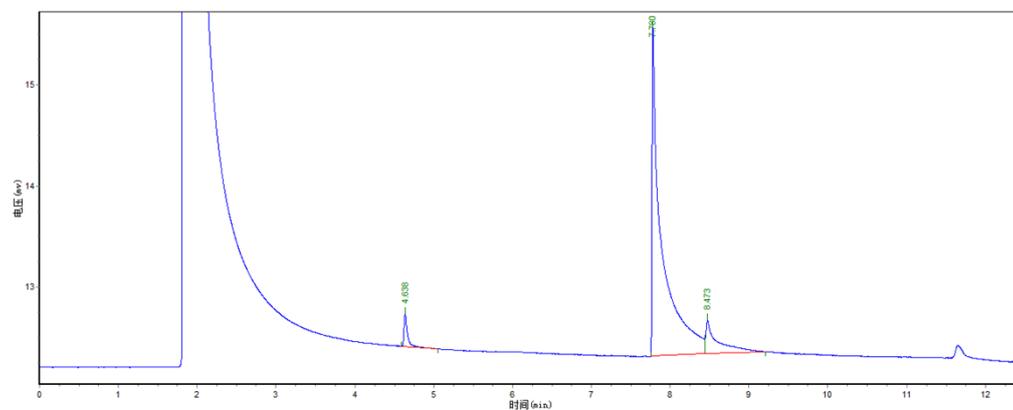


Figure S17. The GC chromatogram of oxidation of MPS with hydrogen peroxide for 3h catalyzed by complex 2 and 2-H₂sb at 50°C.

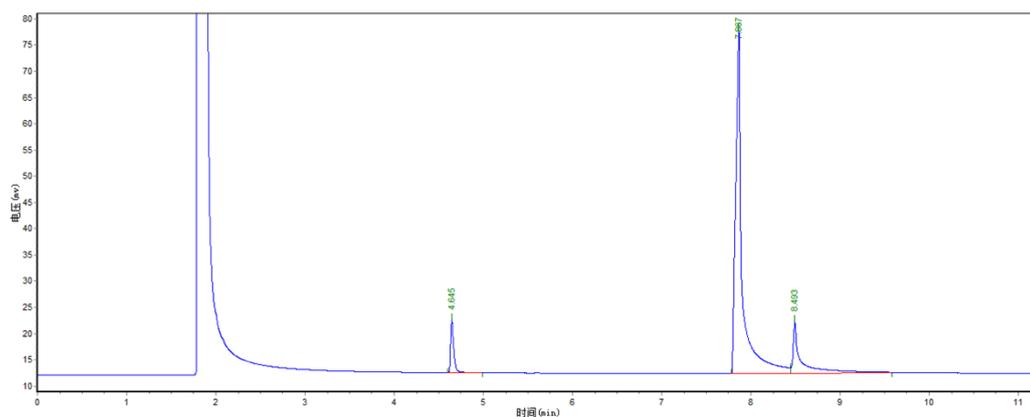


Figure S18. The GC chromatogram of oxidation of MPS with hydrogen peroxide for 3h catalyzed by complex 4 and 2-H₂sb at 50°C.

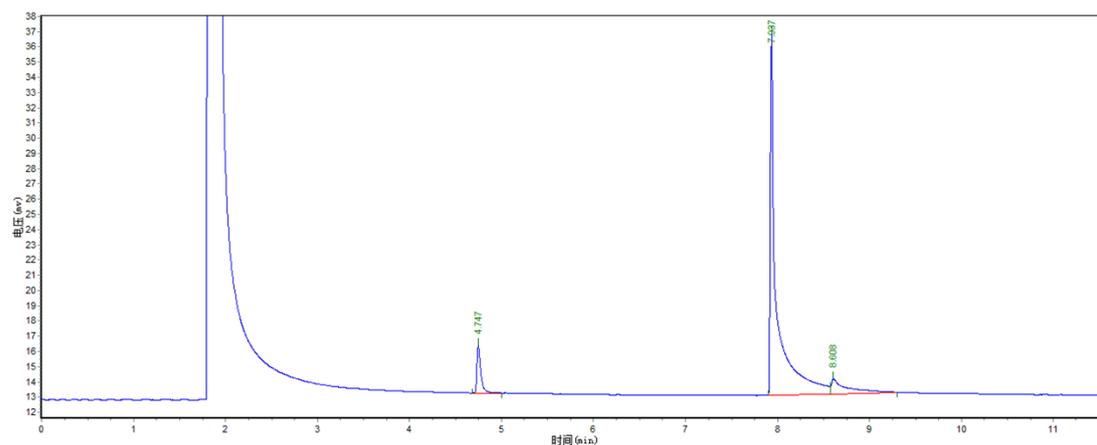


Figure S19. The GC chromatogram of the second time using complex 2 and 2-H₂sb as catalysts for oxidation of MPS with hydrogen peroxide for 3h at 50°C.

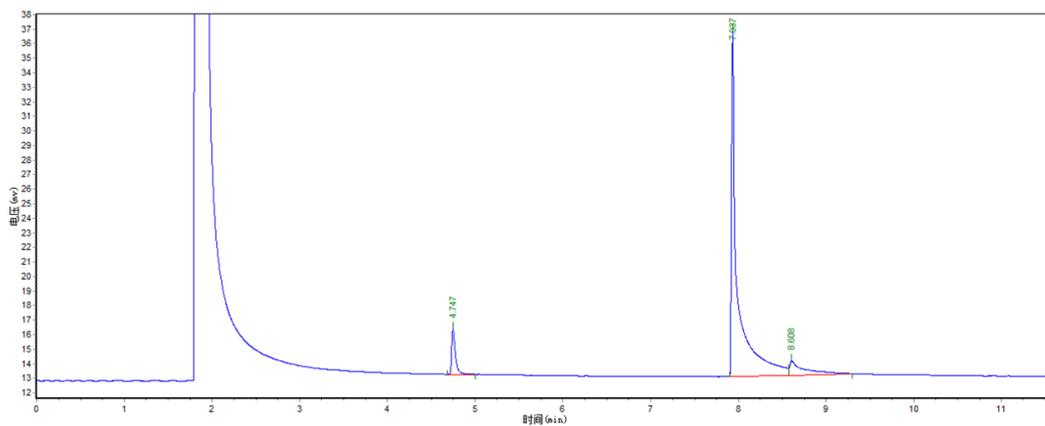


Figure S20. The GC chromatogram of the third time using complex 2 and 2-H₂sb as catalysts for oxidation of MPS with hydrogen peroxide for 3h at 50°C.

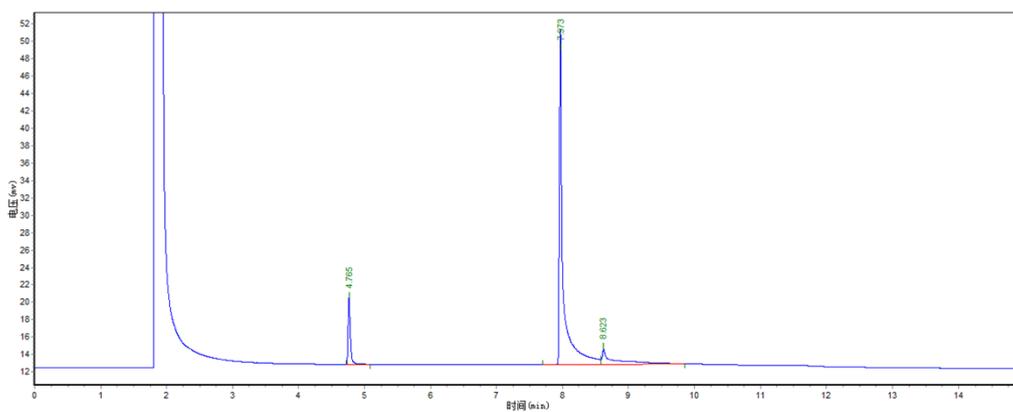


Figure S21. The GC chromatogram of the fourth time using complex 2 and 2-H₂sb as catalysts for oxidation of MPS with hydrogen peroxide for 3h at 50°C.

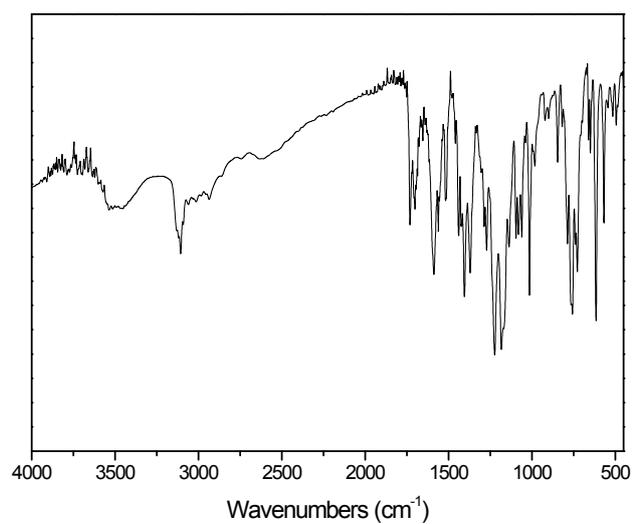


Figure S22. The IR spectrum of complex **1**.

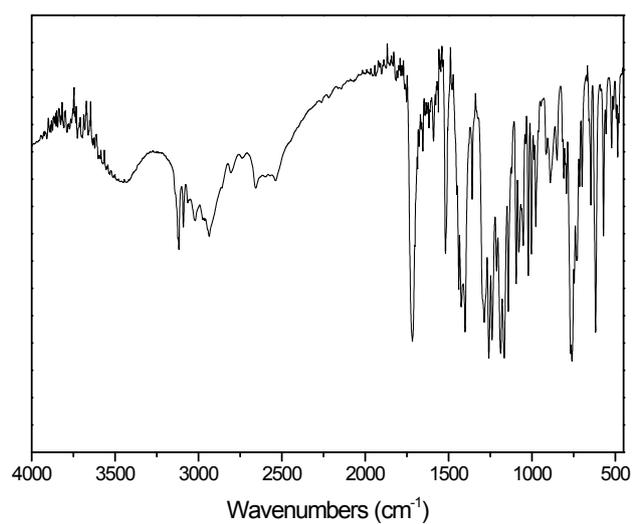


Figure S23. The IR spectrum of complex **2**.

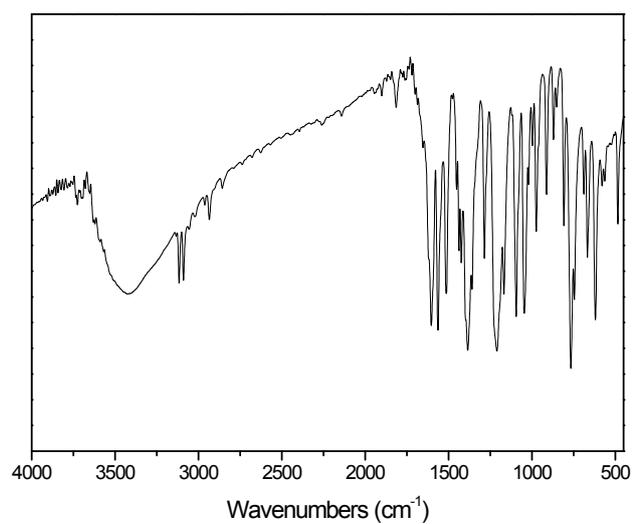


Figure S24. The IR spectrum of complex 3.

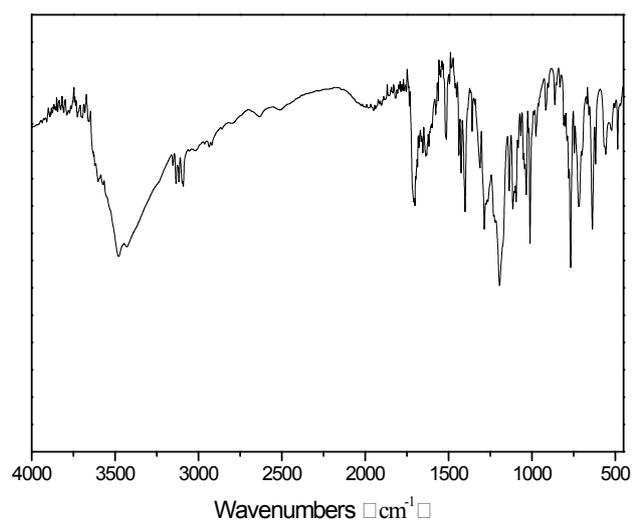


Figure S25. The IR spectrum of complex 4.

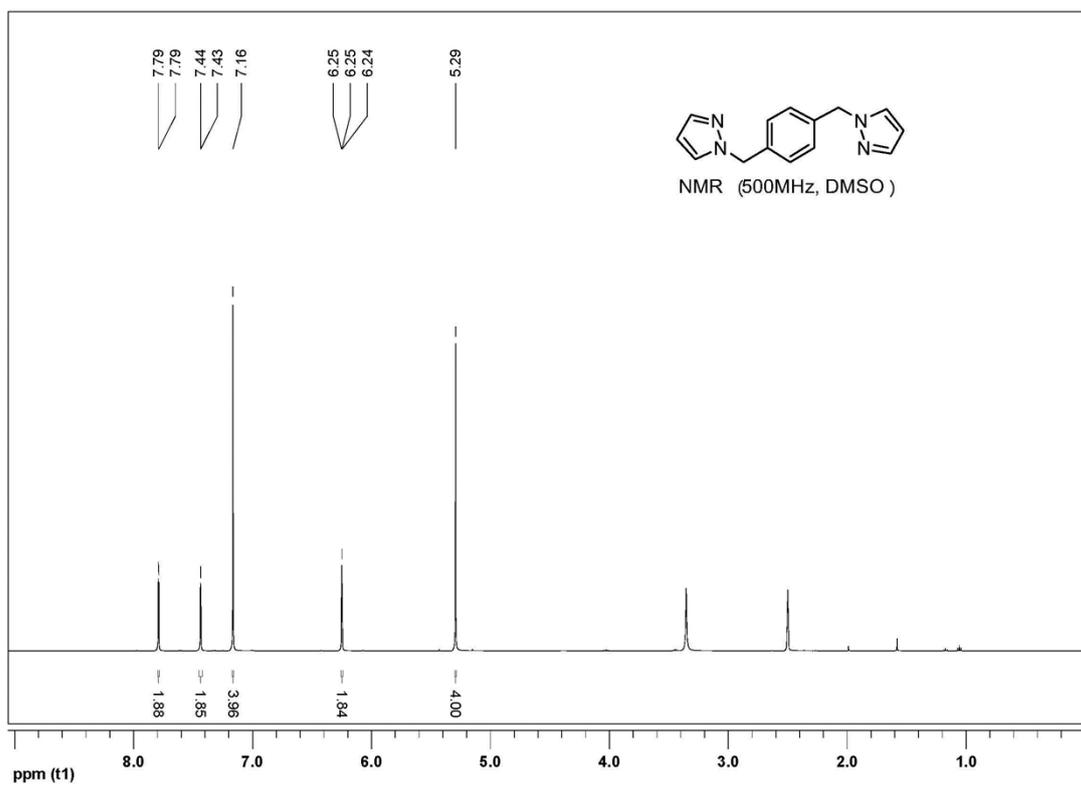


Figure S26. ¹H NMR of bpmb.

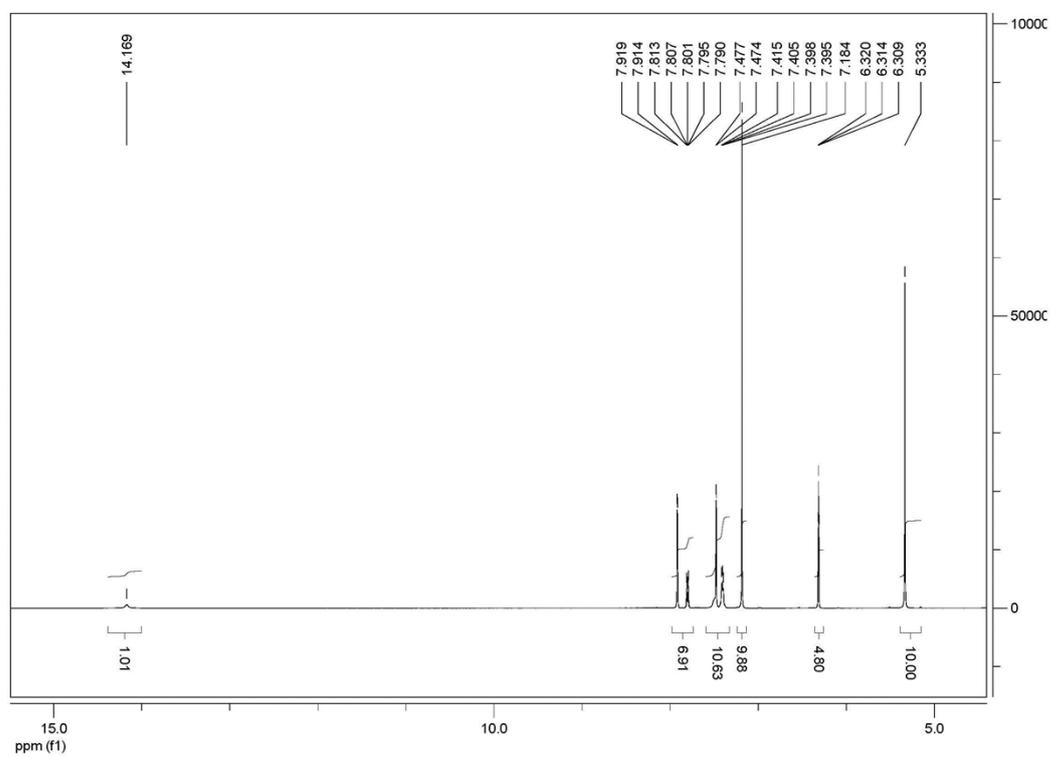


Figure S27. ¹H NMR of complex 1.

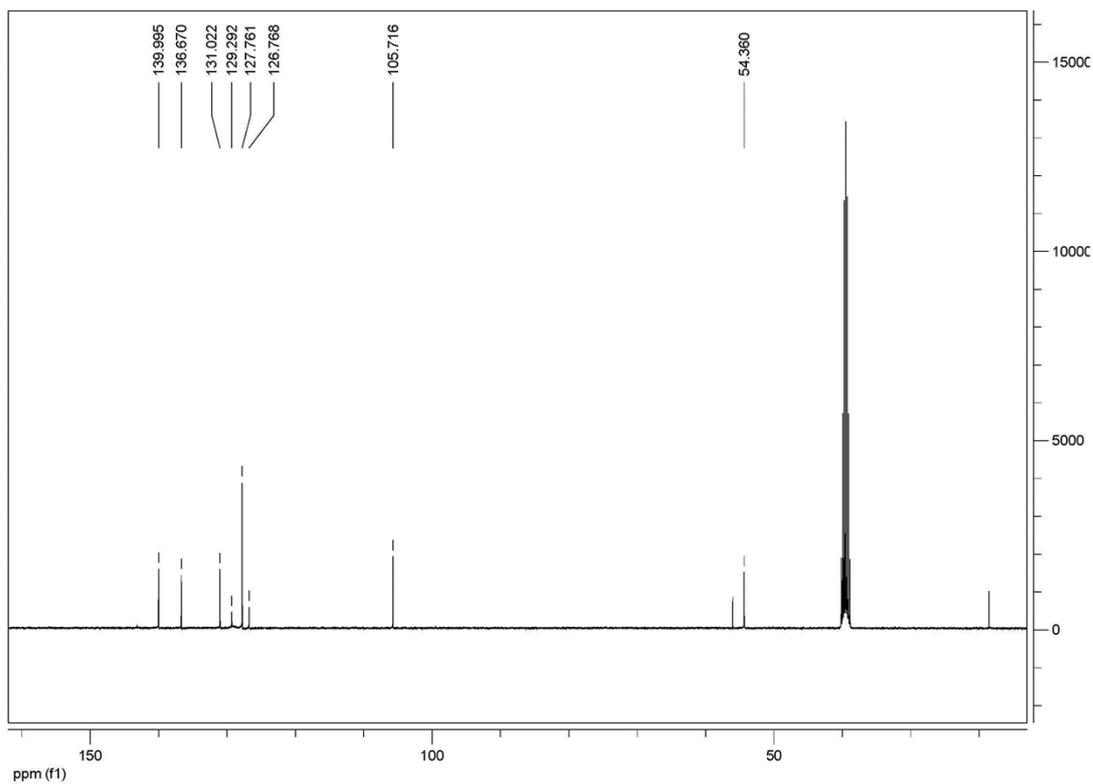


Figure S28. ^{13}C NMR of complex 1.

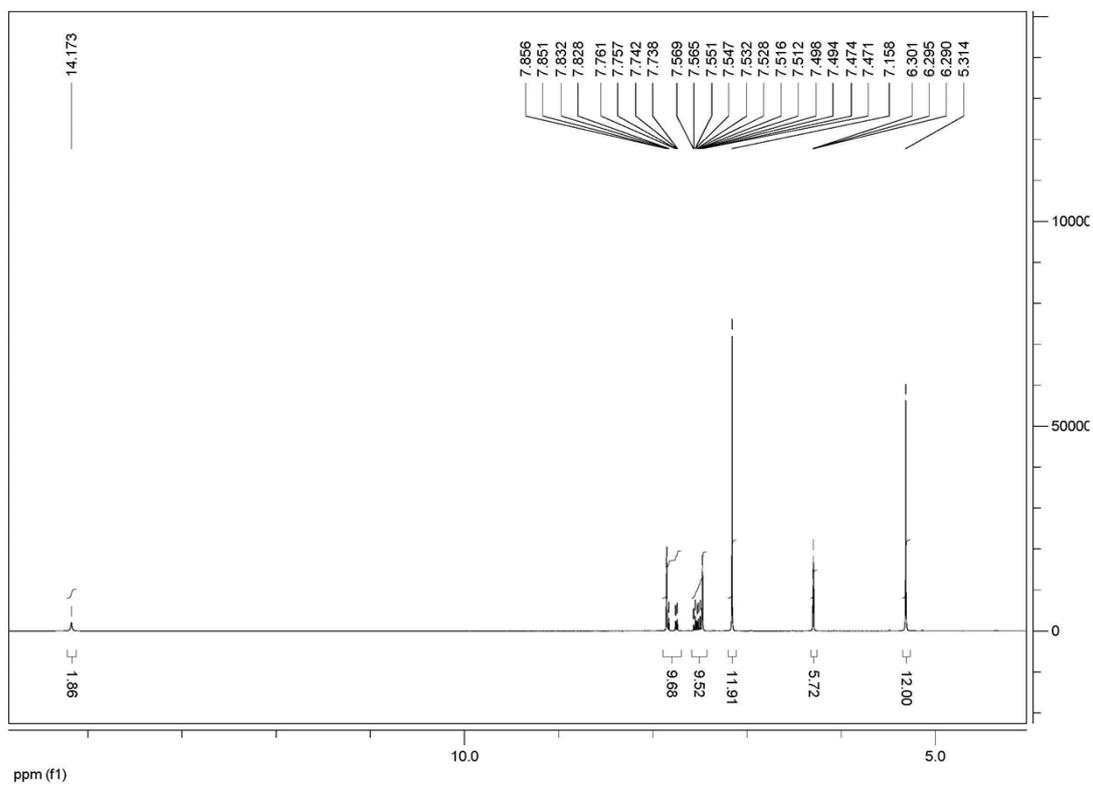


Figure S29. ^1H NMR of complex 2.

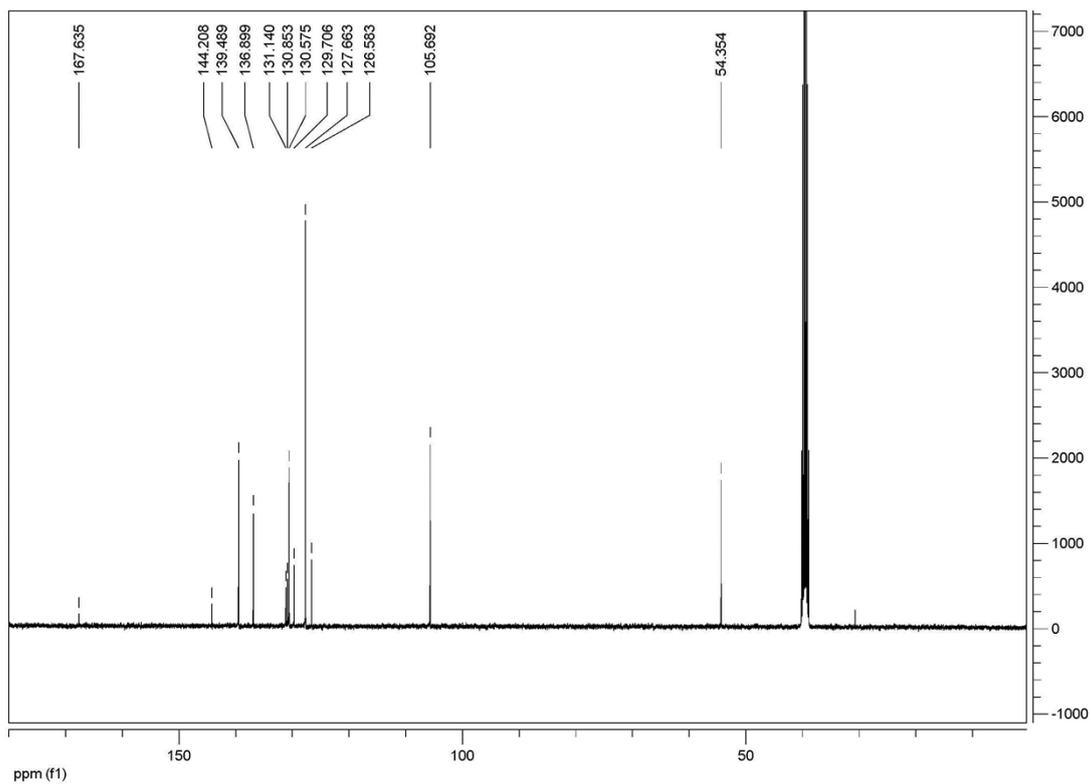


Figure S30. ^{13}C NMR of complex 2.

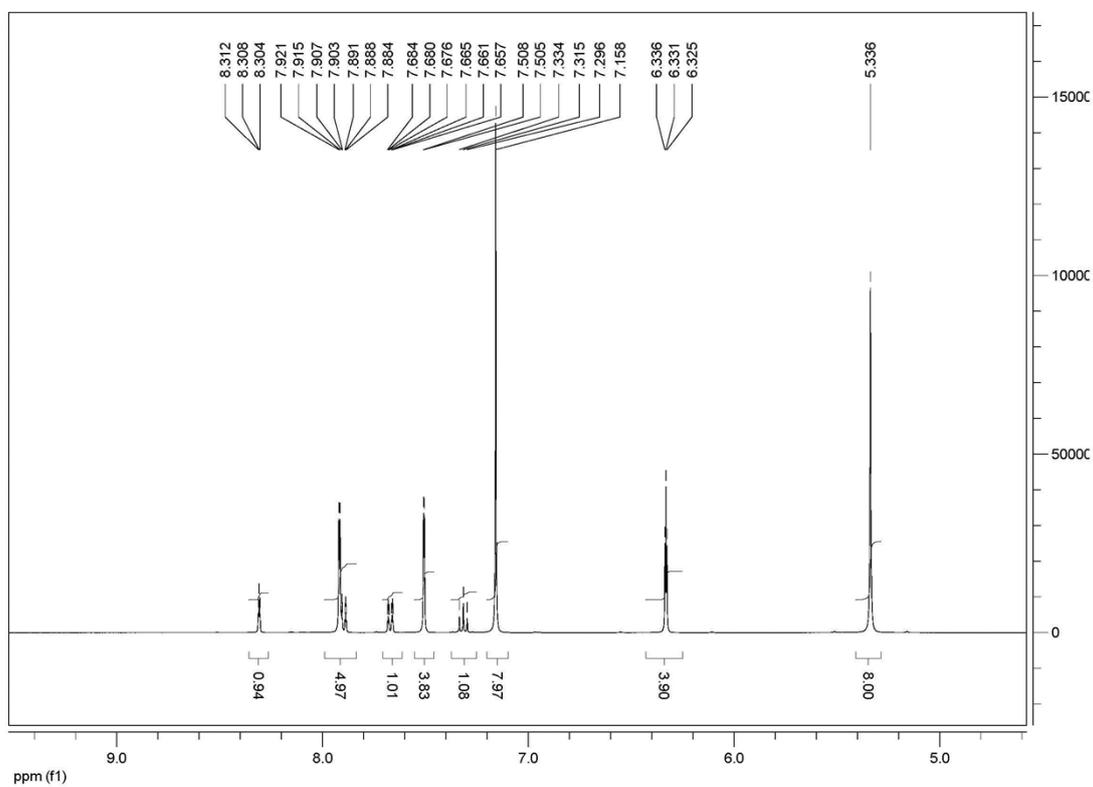


Figure S31. ^1H NMR of complex 3.

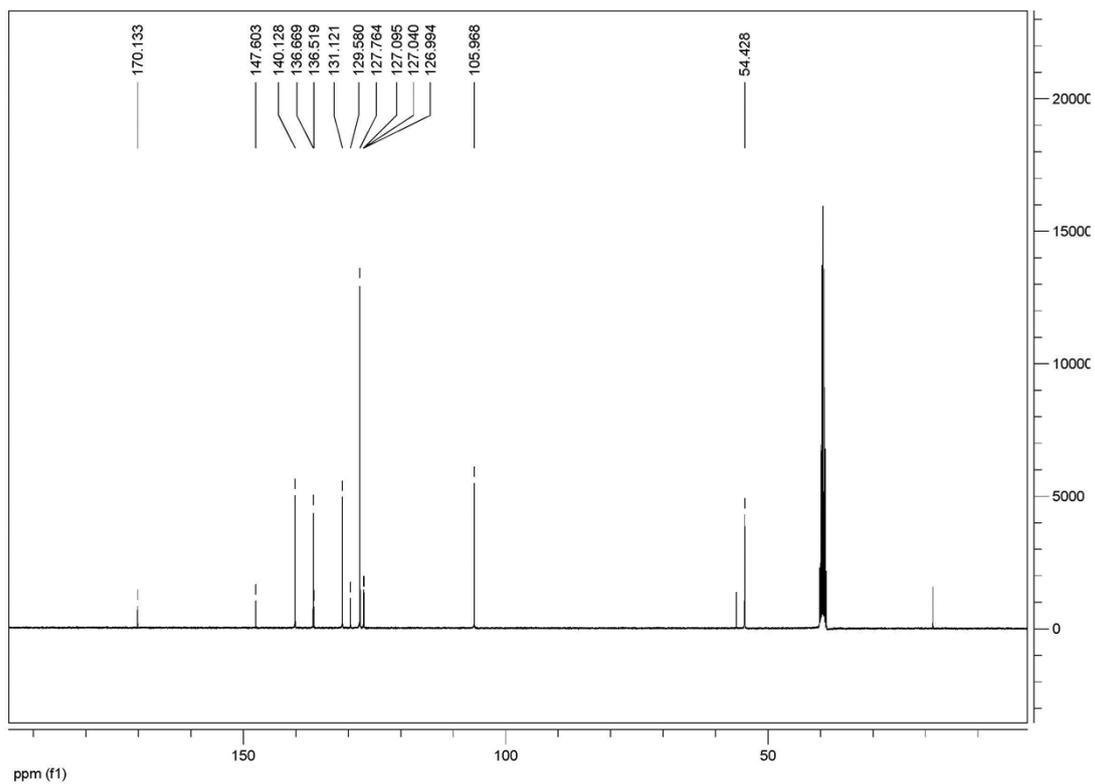


Figure S32. ^{13}C NMR of complex **3**.

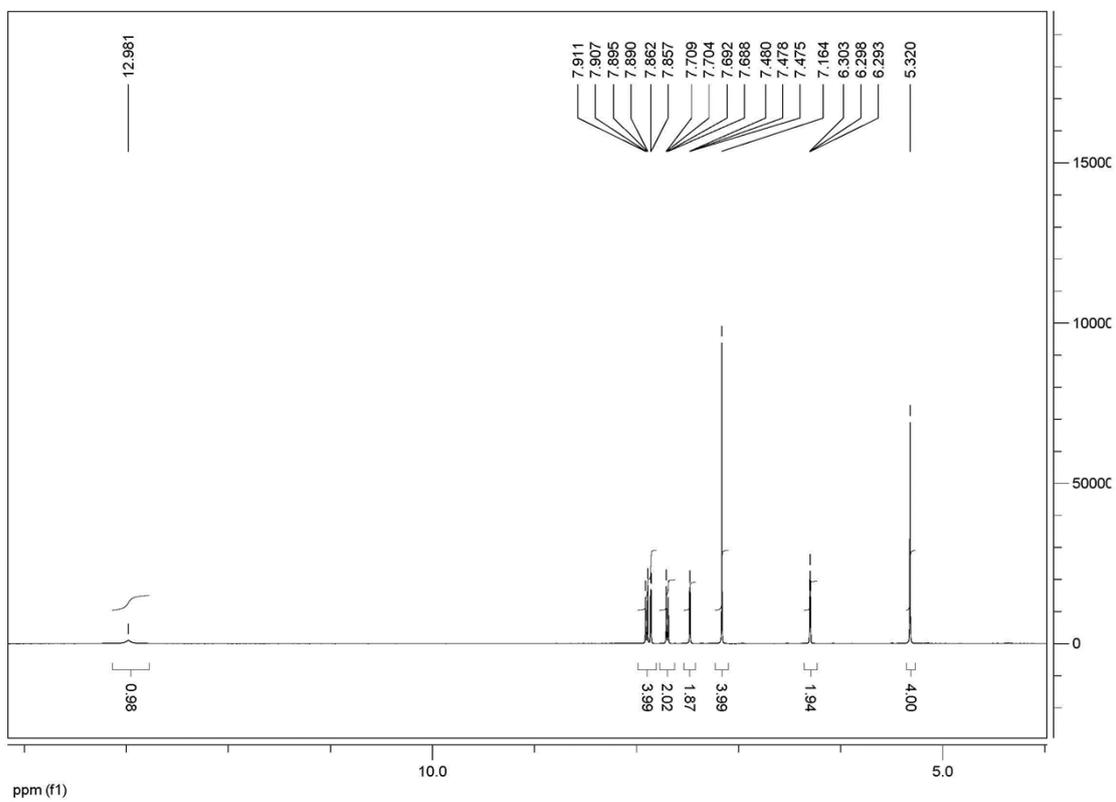


Figure S33. ^1H NMR of complex **4**.

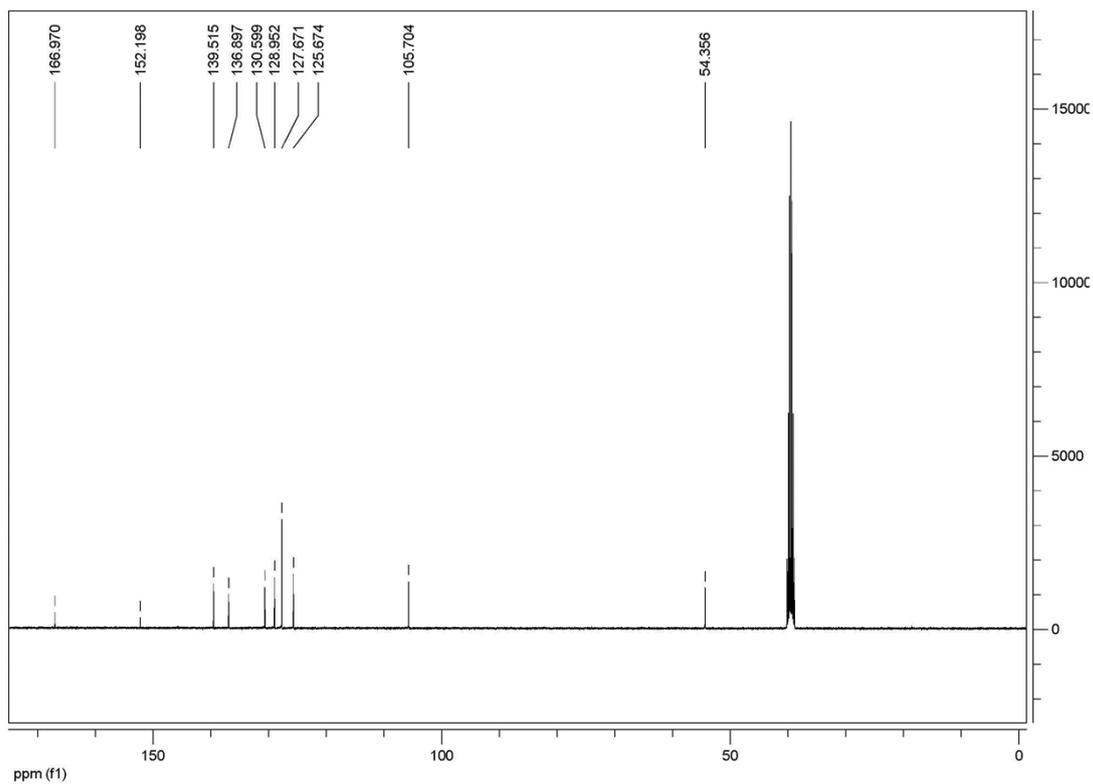


Figure S34. ^{13}C NMR of complex 4.