

Supplementary Information

Ruthenium(II) Complexes of New Chelating Indolizino[2,3-b]pyrazine and Indolizino[2,3-b]quinoxaline Derived Ligands; Syntheses, Electrochemistry and Absorption Spectroscopy

C. J. Sumbly^{AB}

^A School of Chemistry & Physics, The University of Adelaide, Adelaide, Australia.

^B Author to whom correspondence may be addressed. Fax: +61 8 8303 4358; email: christopher.sumbly@adelaide.edu.au

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2. Full spectrum and the aromatic region of the ¹ H NMR spectrum of 3 .	S4-S5
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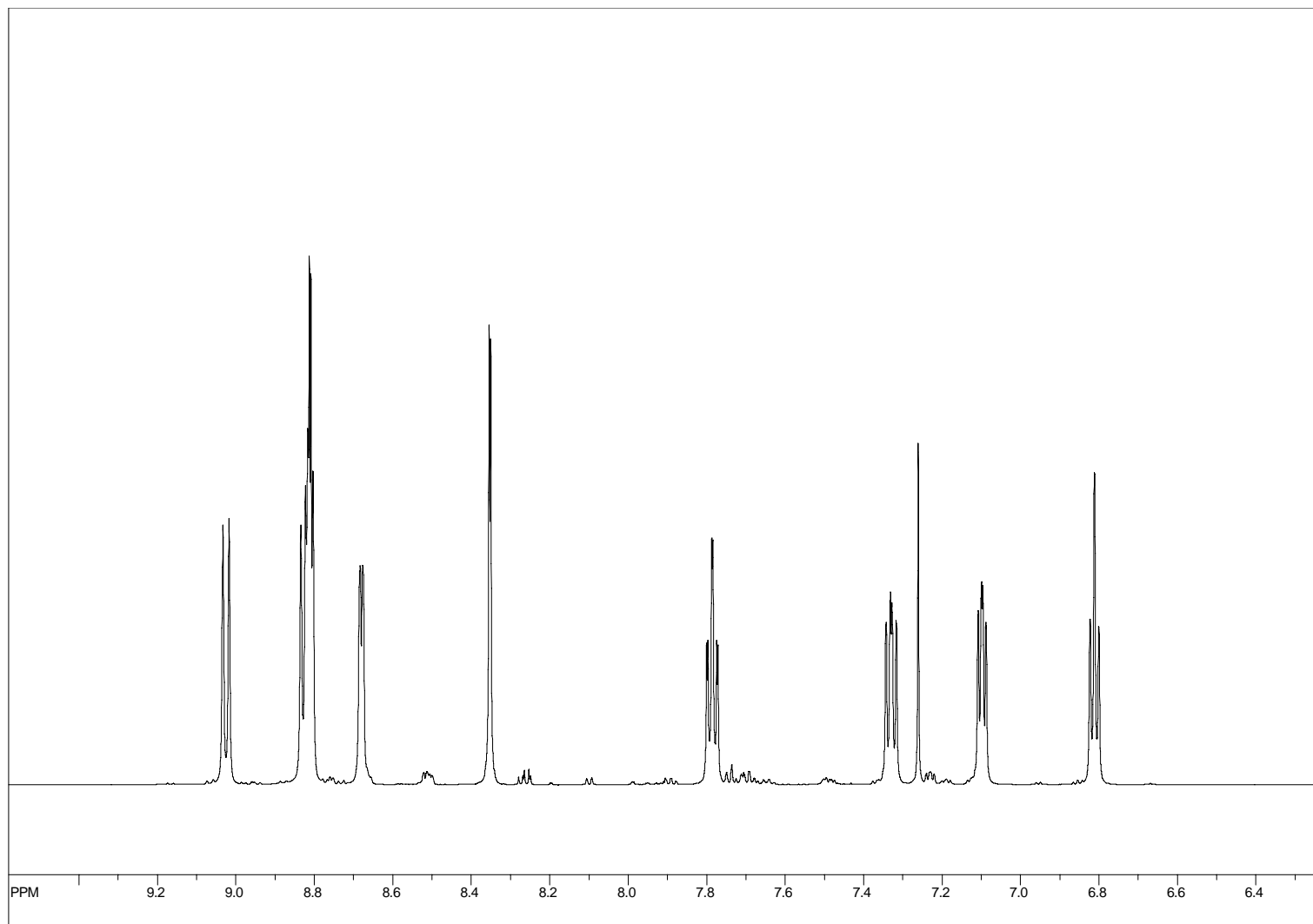


Figure S1. Aromatic region of the ^1H NMR spectrum of compound **1**.

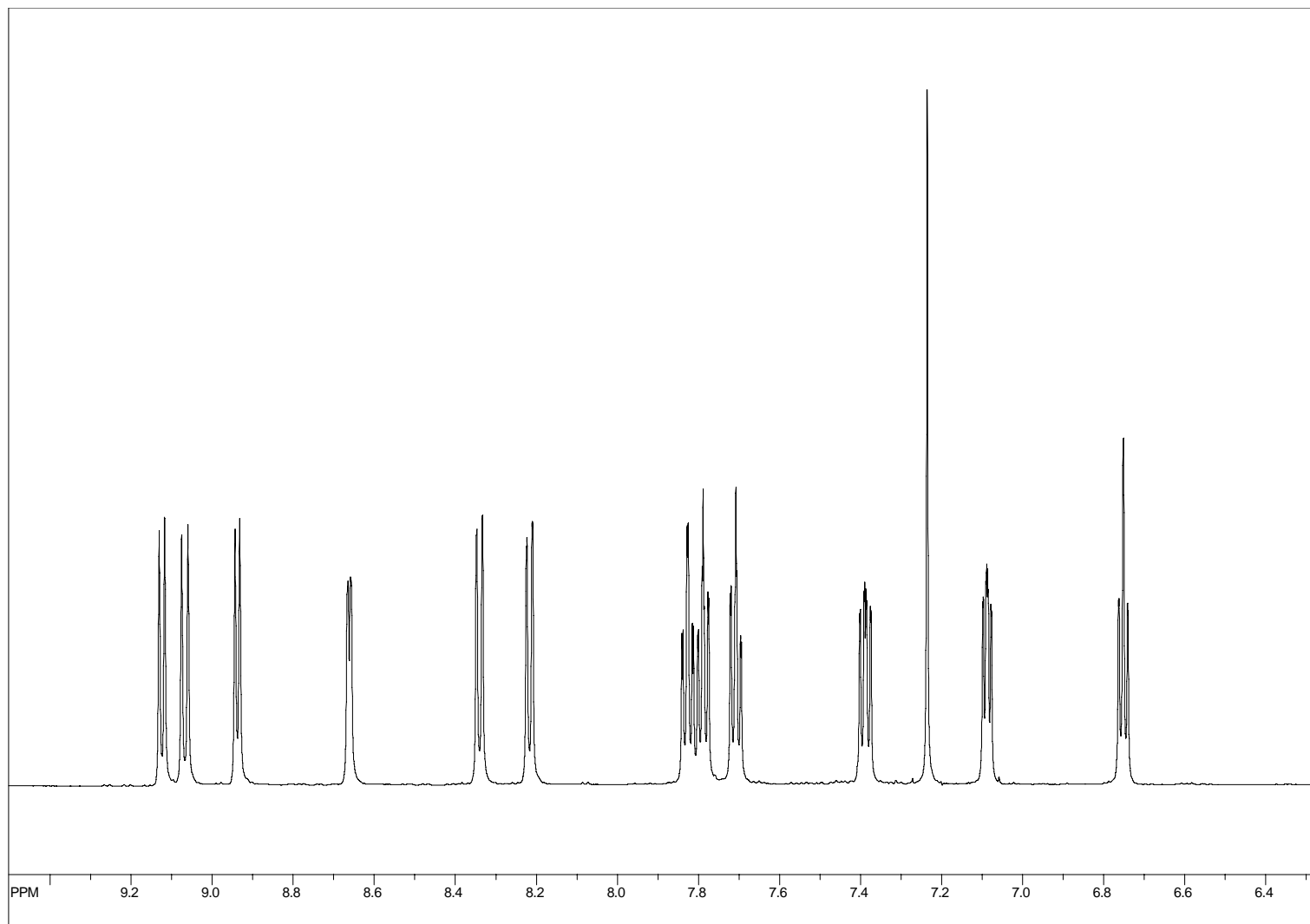


Figure S2. Aromatic region of the ^1H NMR spectrum of compound **2**.

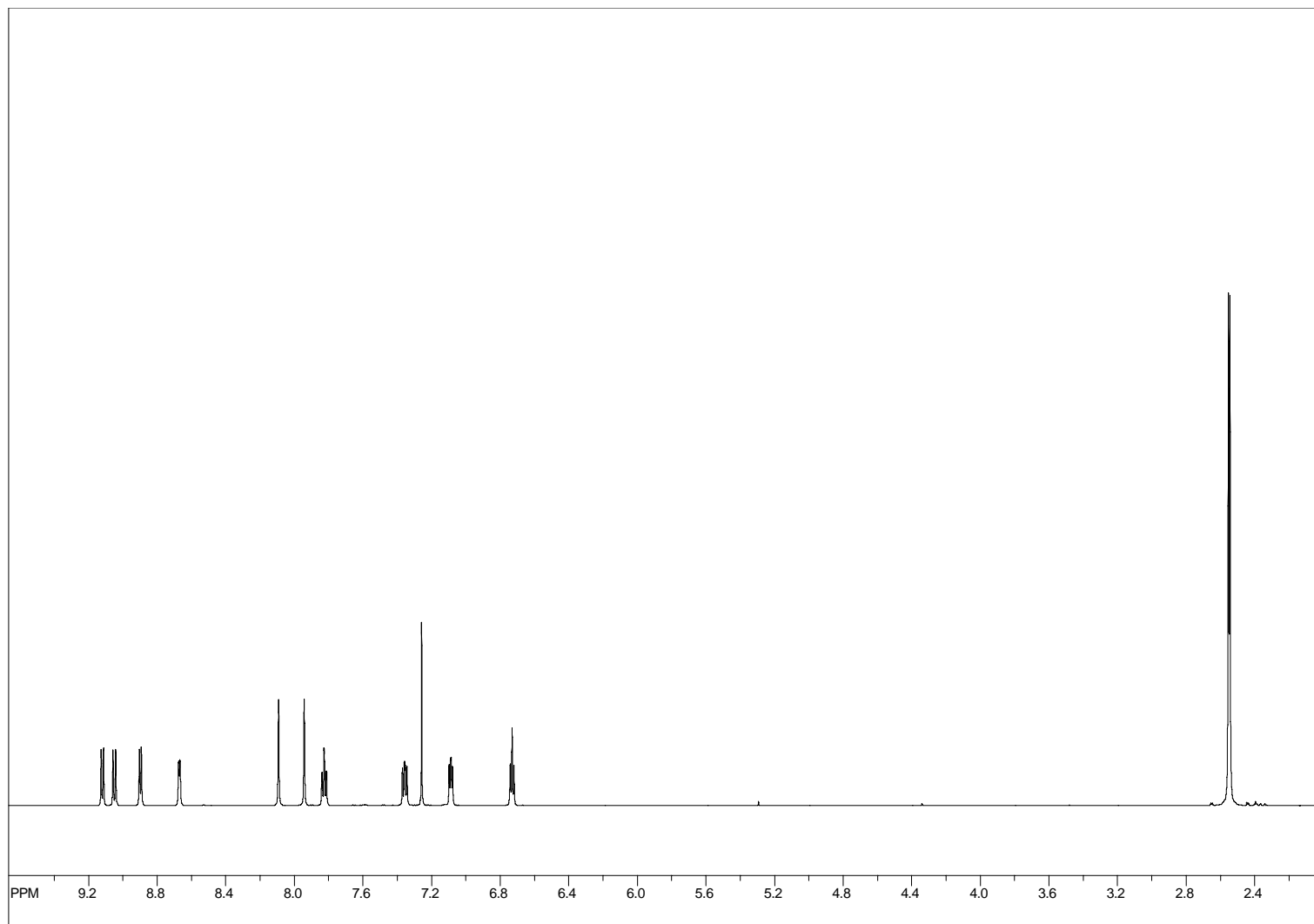


Figure S3. The ^1H NMR spectrum of compound 3.

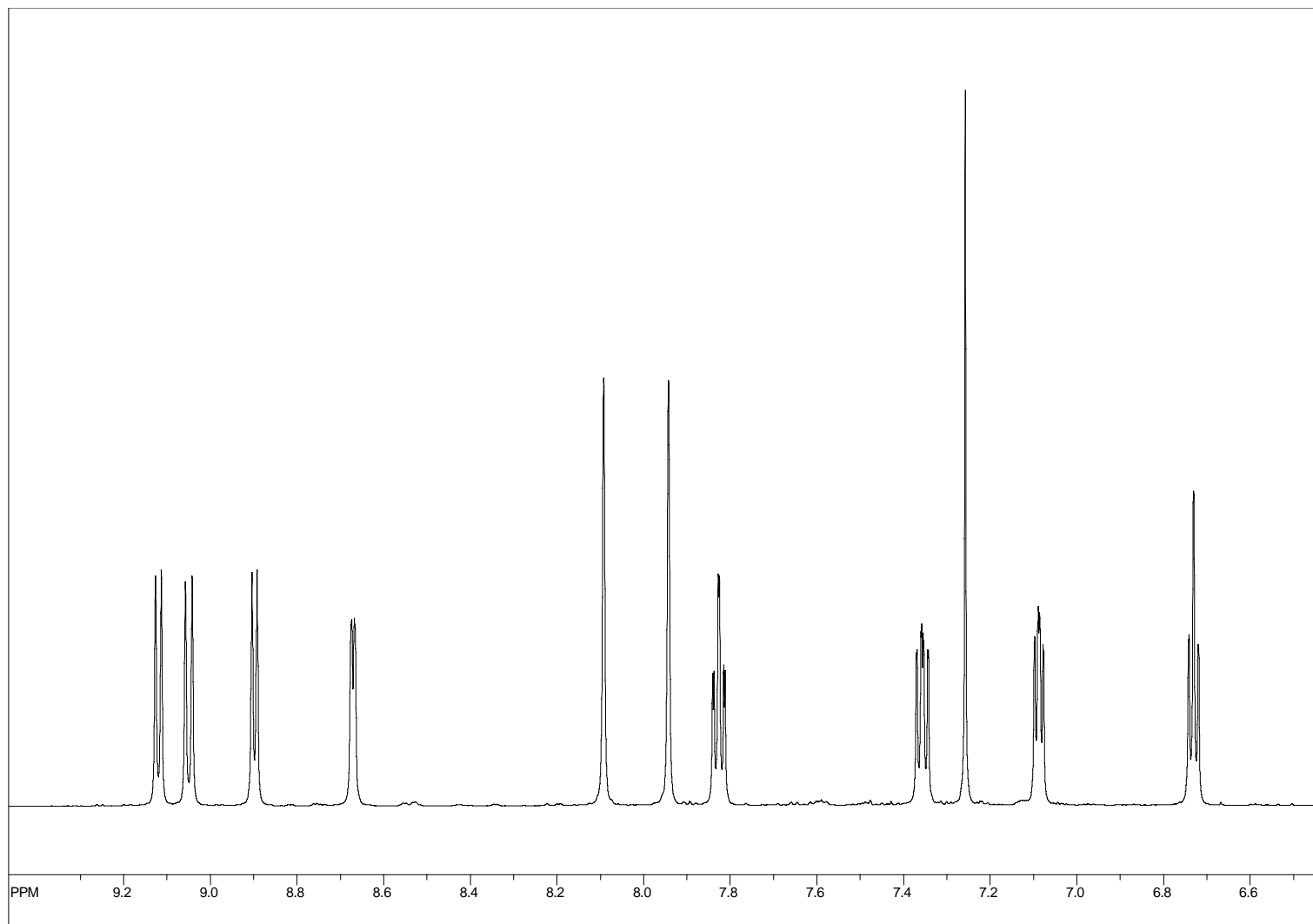


Figure S4. Aromatic region of the ^1H NMR spectrum of compound **3**.

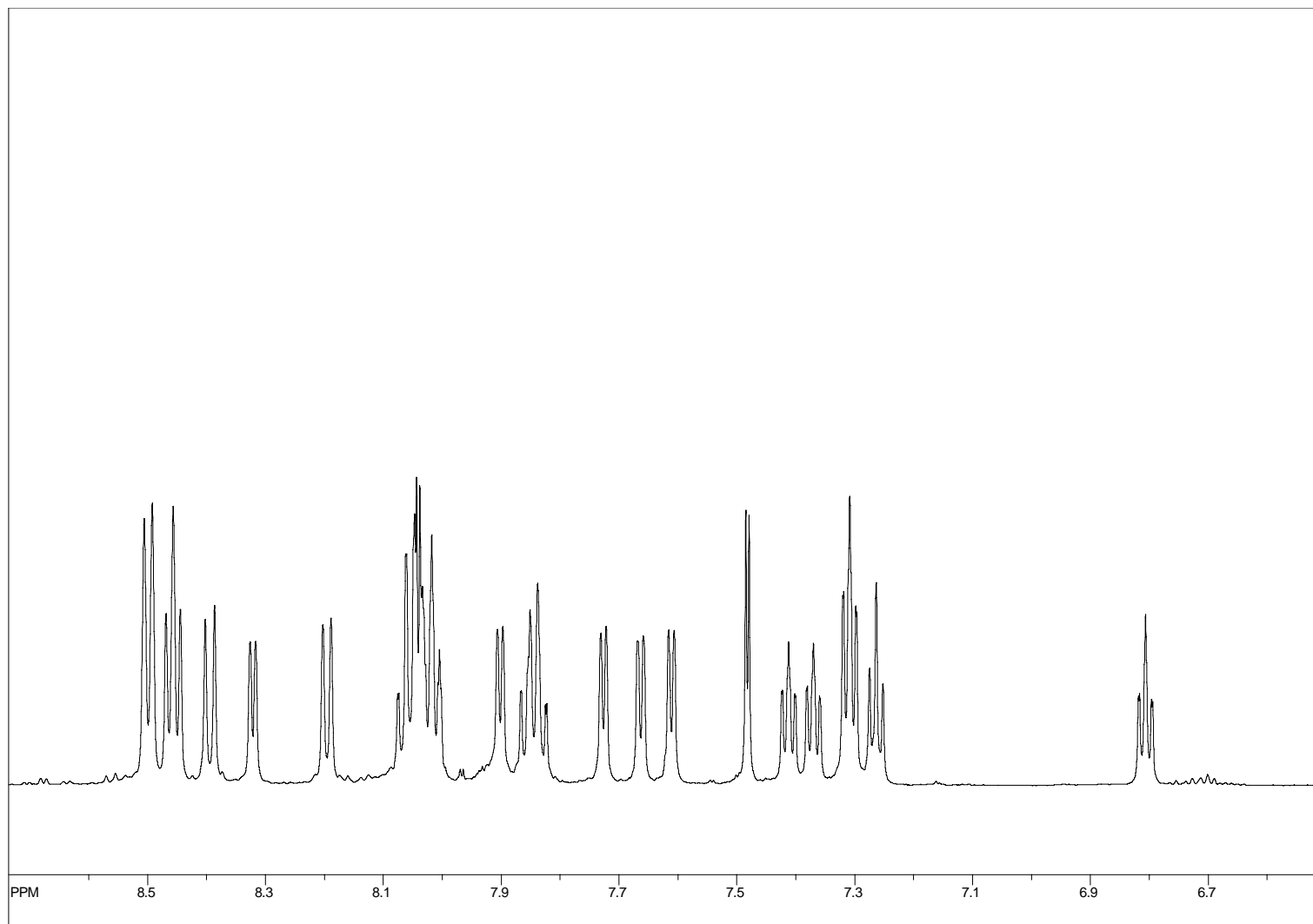


Figure S5. Aromatic region of the ^1H NMR spectrum of $[\text{Ru}(\mathbf{1})(\text{bpy})_2](\text{PF}_6)_2$, complex 4.

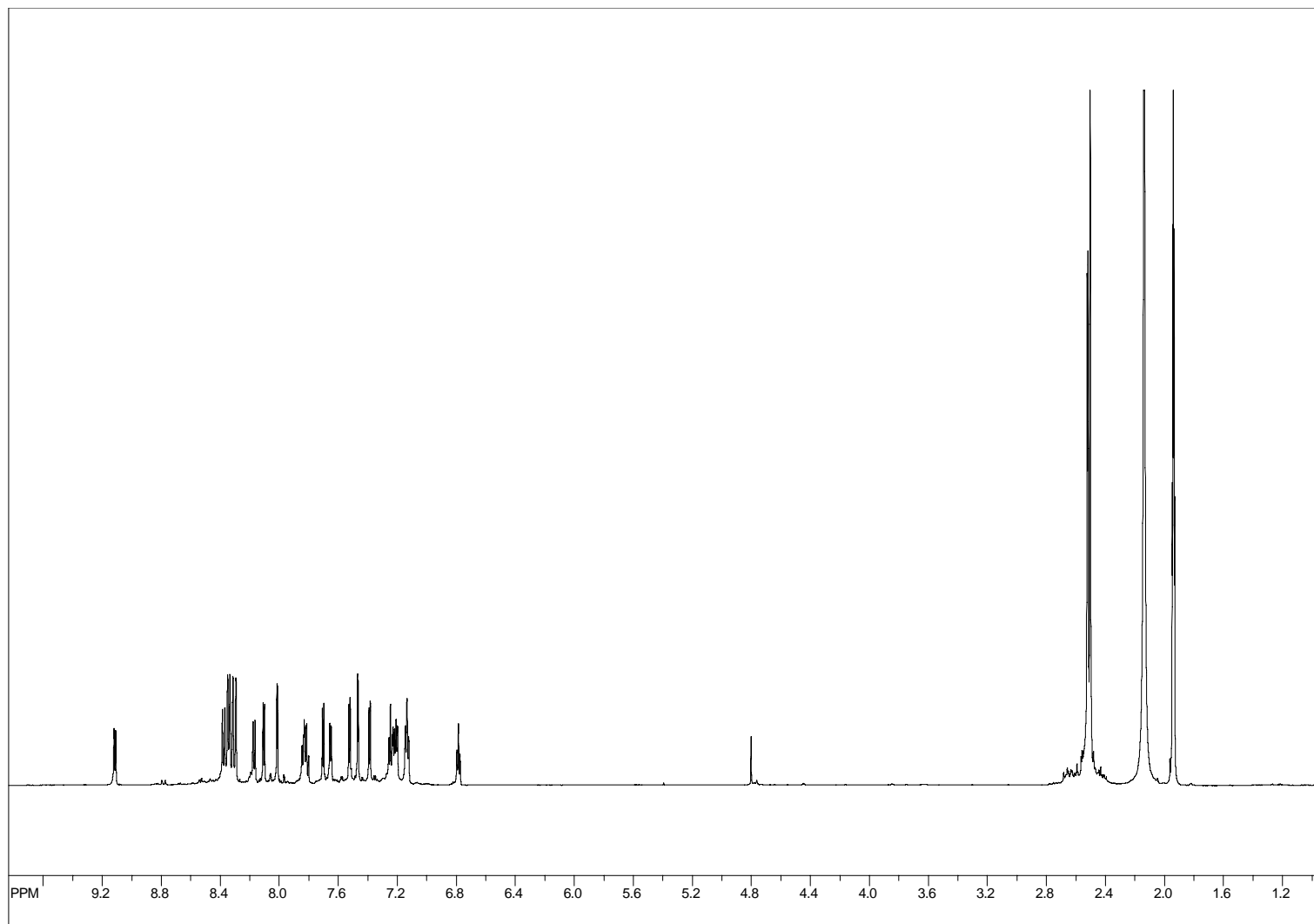


Figure S6. The ^1H NMR spectrum of $[\text{Ru}(\mathbf{1})(\text{dmb})_2](\text{PF}_6)_2$, complex 5.

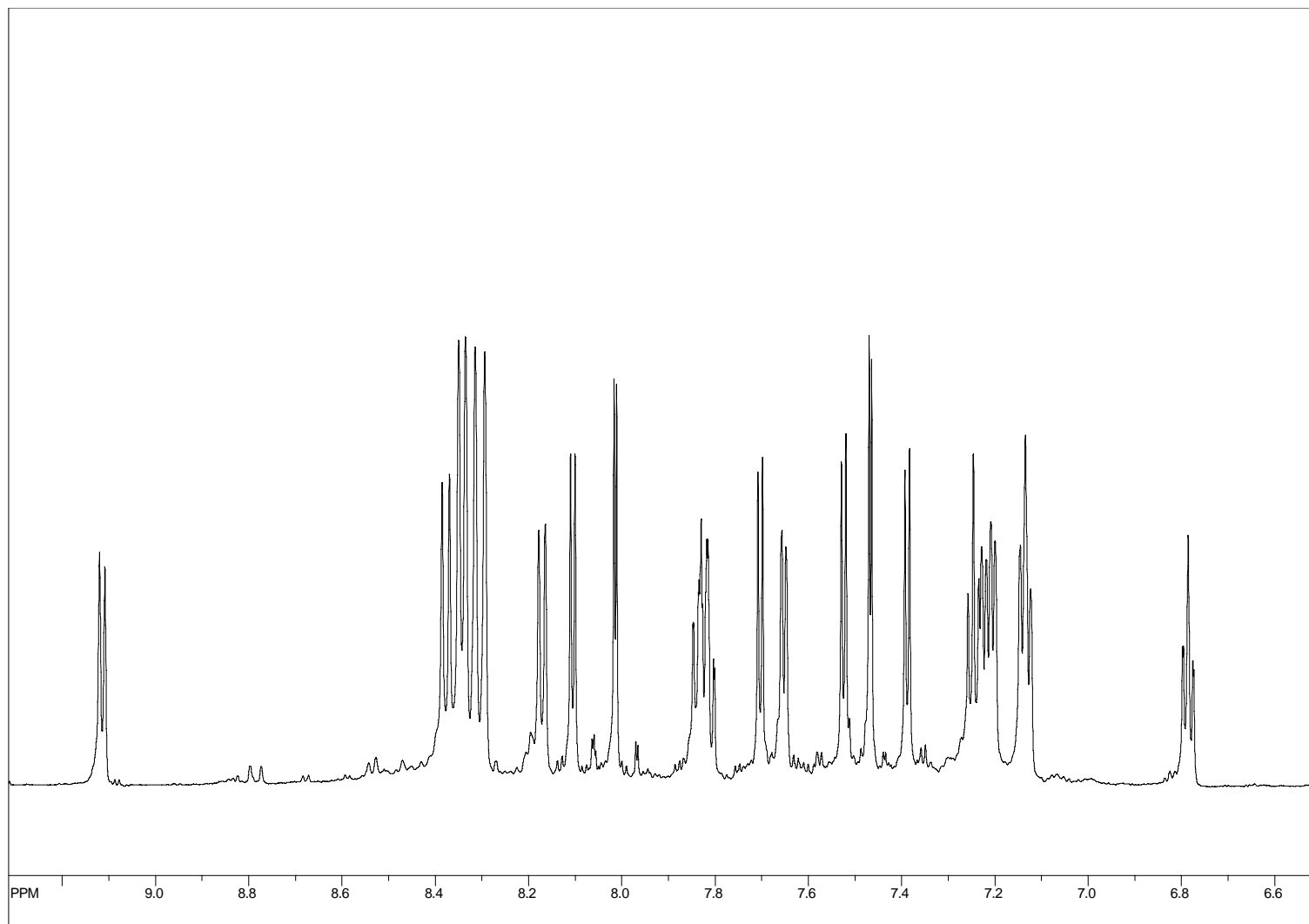


Figure S7. Aromatic region of the ^1H NMR spectrum of $[\text{Ru}(\mathbf{1})(\text{dmb})_2](\text{PF}_6)_2$, complex 5.

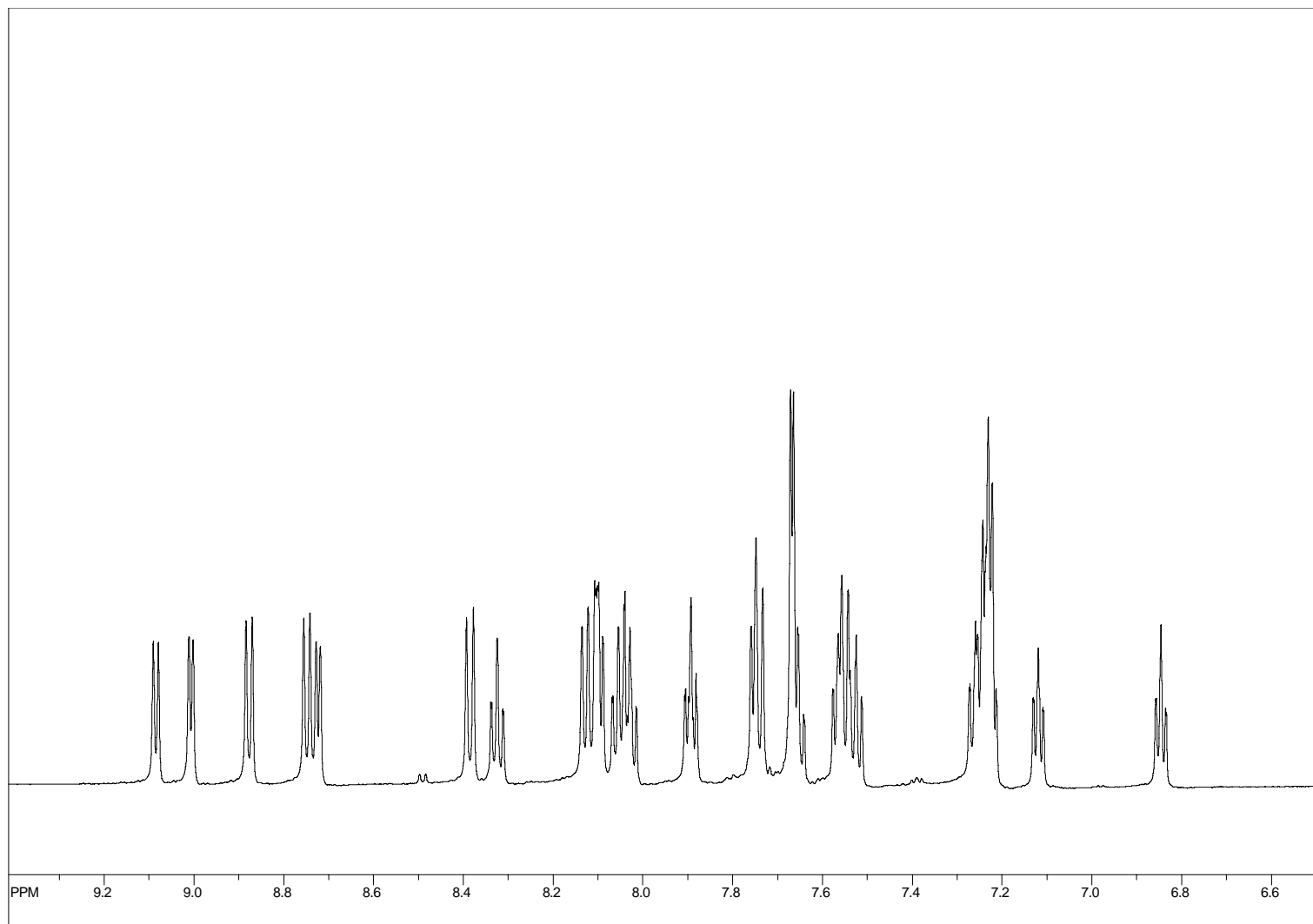


Figure S8. Aromatic region of the ^1H NMR spectrum of $[\text{Ru}(\mathbf{2})(\text{bpy})_2](\text{PF}_6)_2$, complex 6.

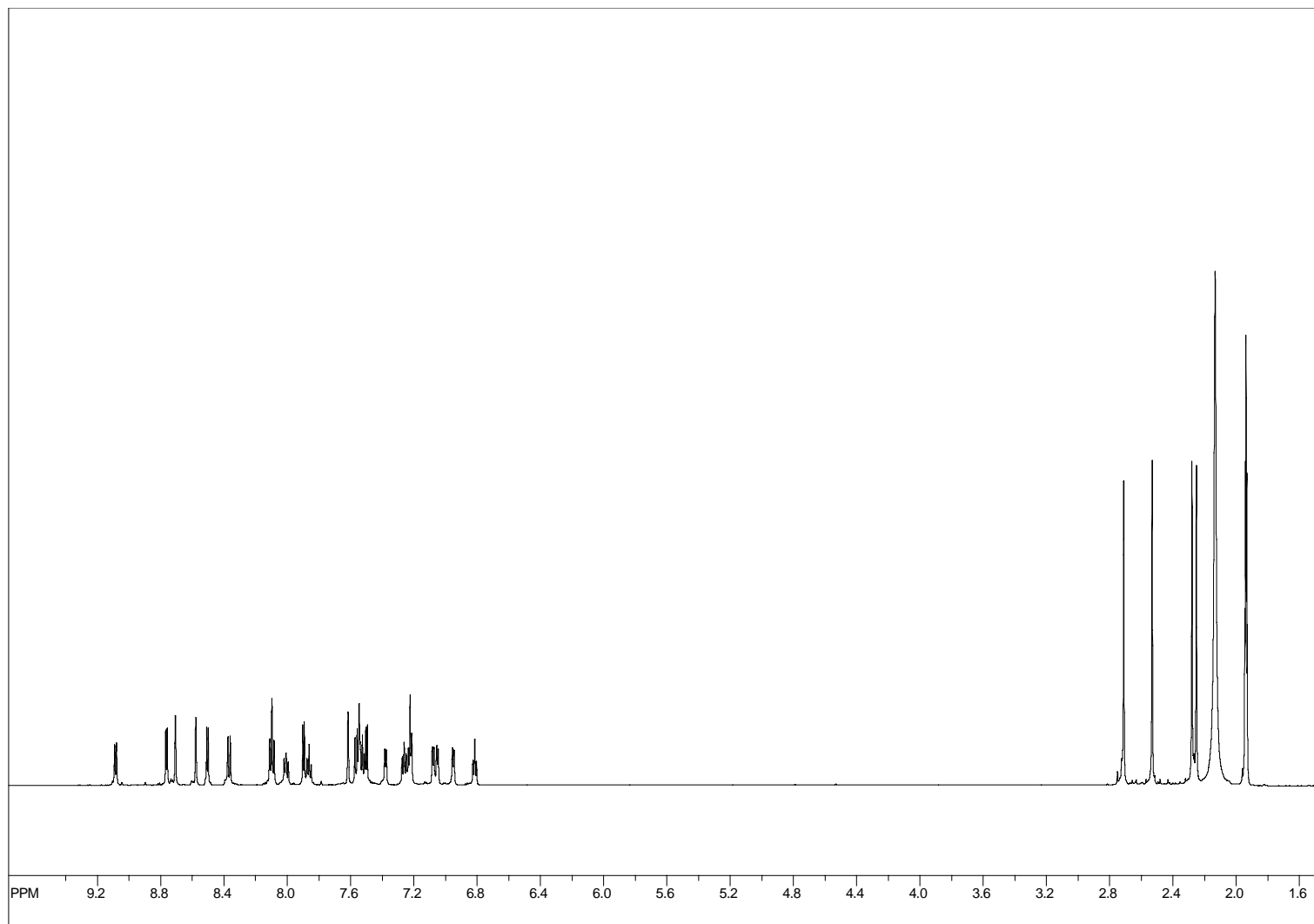


Figure S9. The ^1H NMR spectrum of $[\text{Ru}(\mathbf{2})(\text{dmb})_2](\text{PF}_6)_2$, complex 7.

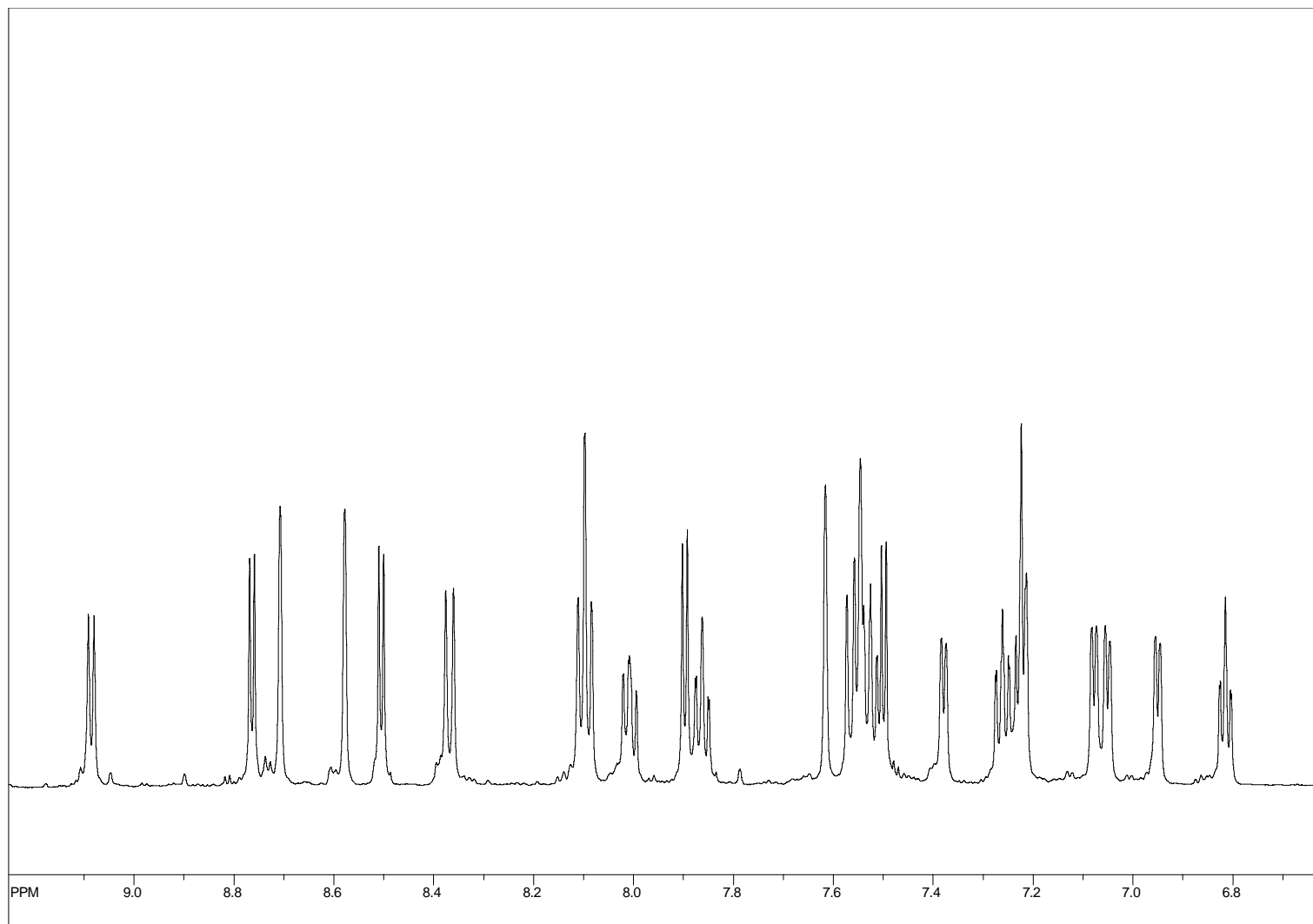


Figure S10. Aromatic region of the ^1H NMR spectrum of $[\text{Ru}(\mathbf{2})(\text{dmb})_2](\text{PF}_6)_2$, complex 7.

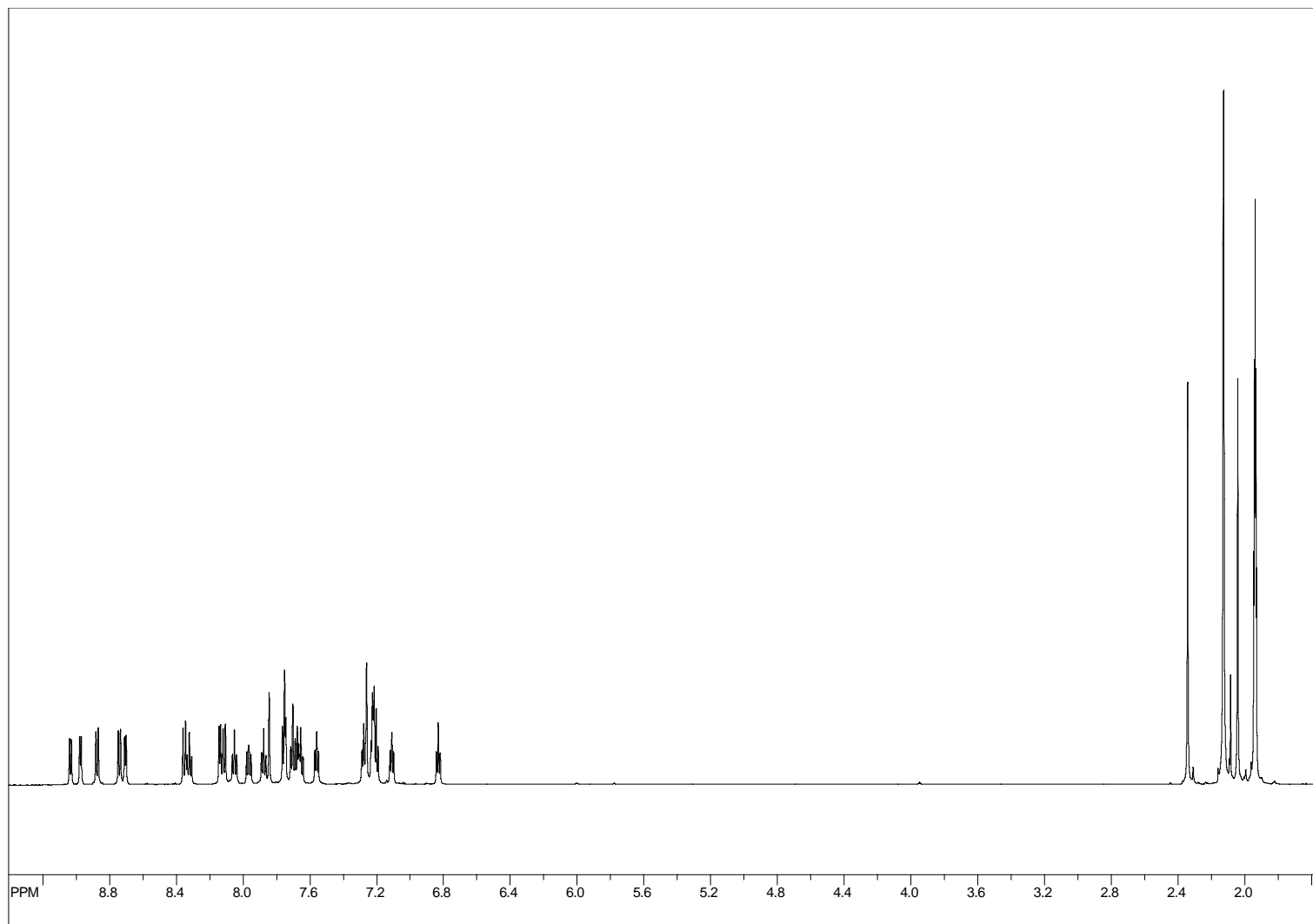


Figure S11. The ^1H NMR spectrum of $[\text{Ru}(\mathbf{3})(\text{bpy})_2](\text{PF}_6)_2$, complex 8.

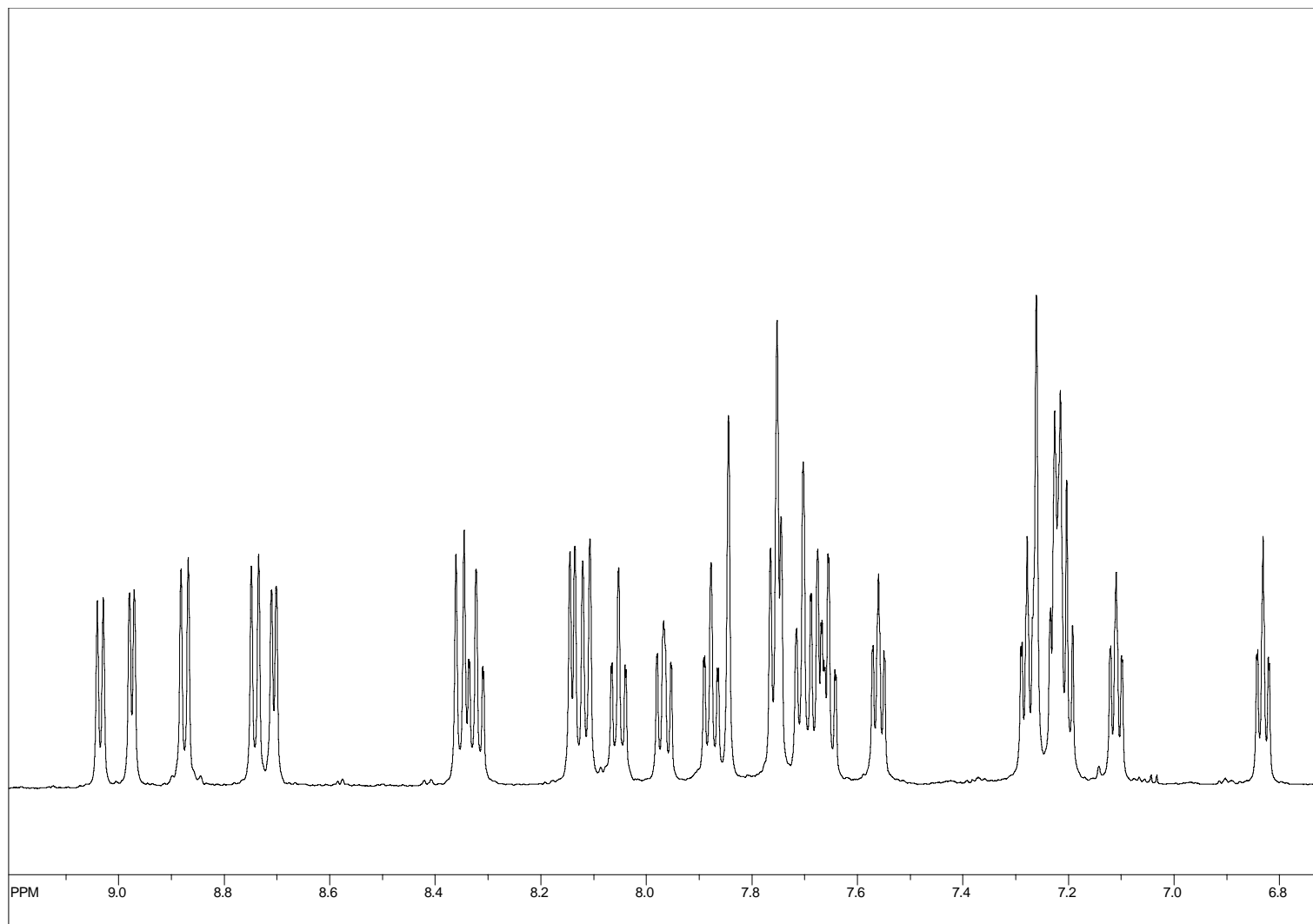


Figure S12. Aromatic region of the ^1H NMR spectrum of $[\text{Ru}(\mathbf{3})(\text{bpy})_2](\text{PF}_6)_2$, complex 8.

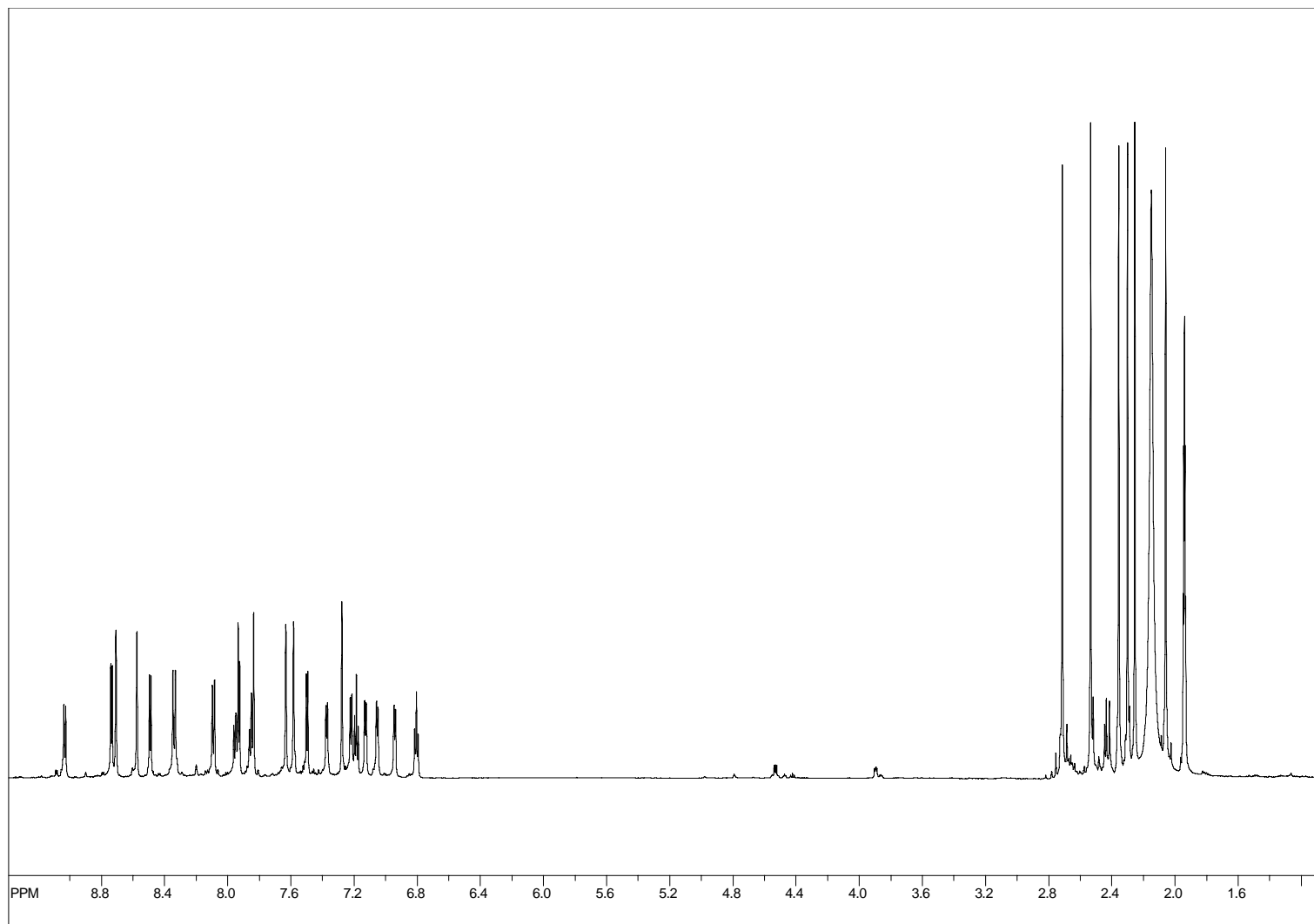


Figure S13. The ^1H NMR spectrum of $[\text{Ru}(\mathbf{3})(\text{dmb})_2](\text{PF}_6)_2$, complex 9.

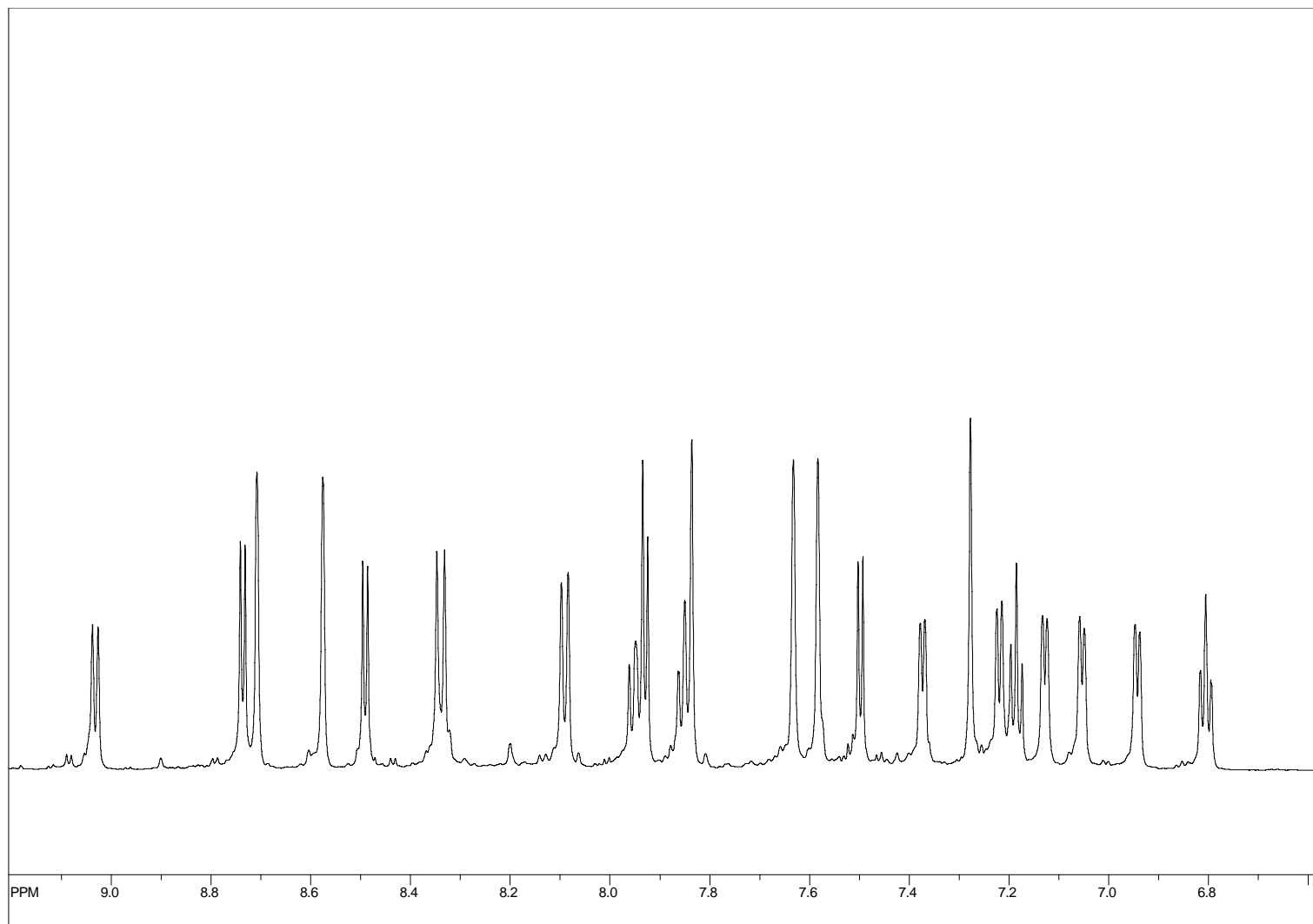


Figure S14. Aromatic region of the ^1H NMR spectrum of $[\text{Ru}(\mathbf{3})(\text{dmb})_2](\text{PF}_6)_2$, complex 9.

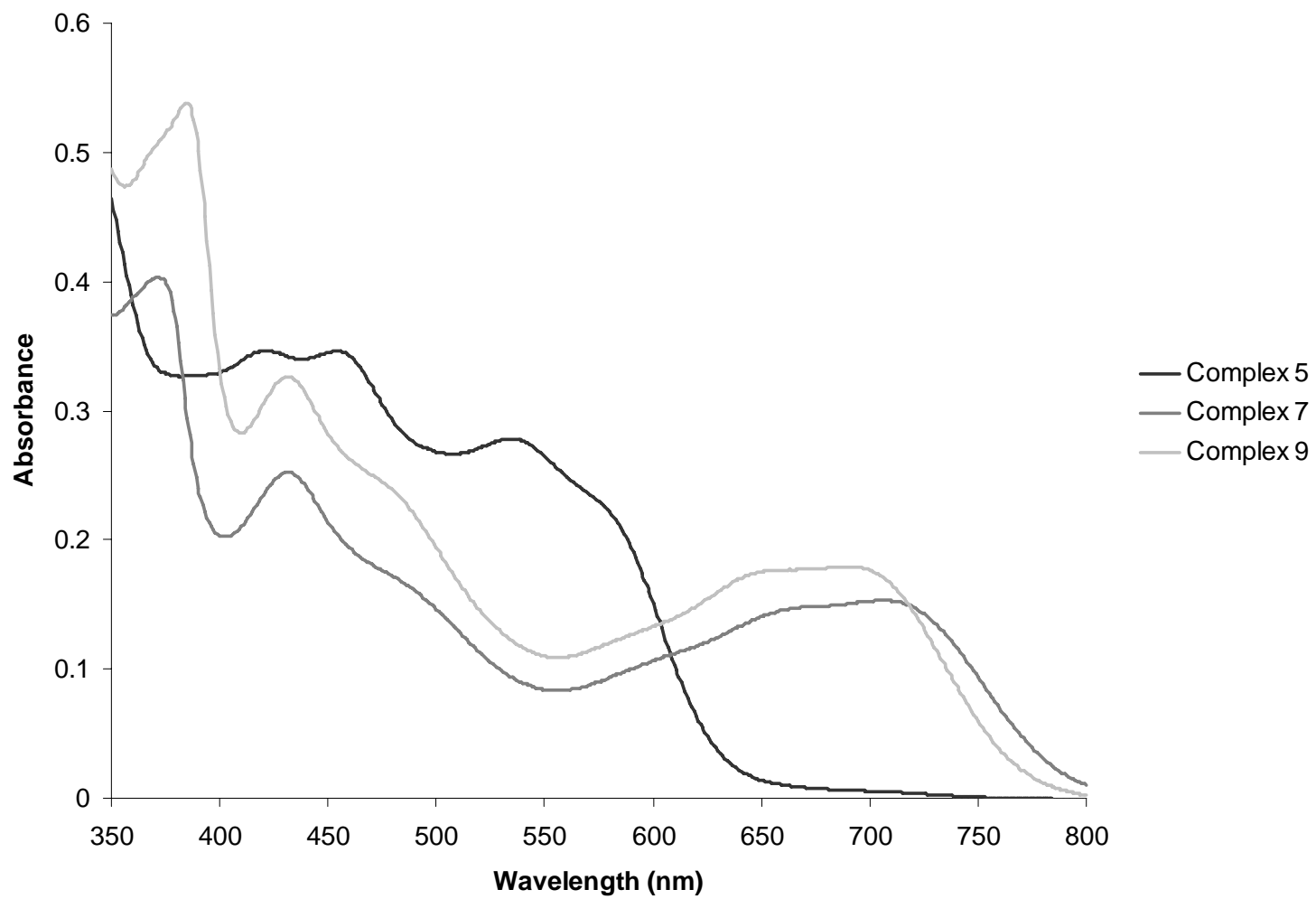


Figure S15. Visible absorption spectra for the bis(4,4'-dimethyl-2,2'-bipyridyl)ruthenium(II) complexes **5**, **7** and **9**.

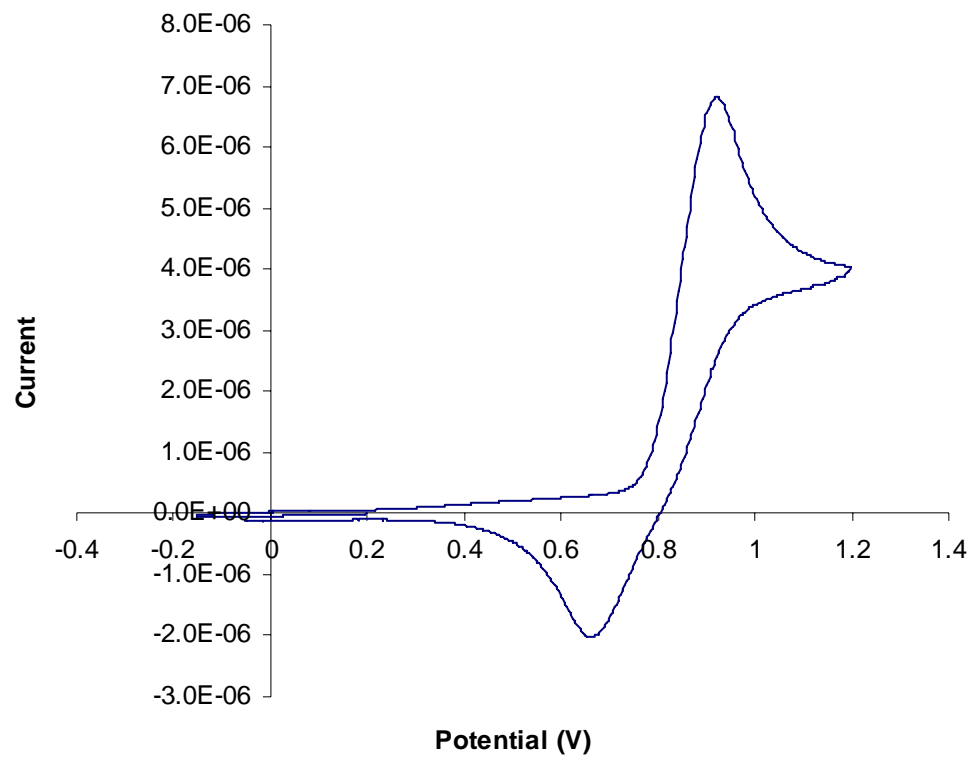


Figure S16. Cyclic voltammogram for compound **1**.

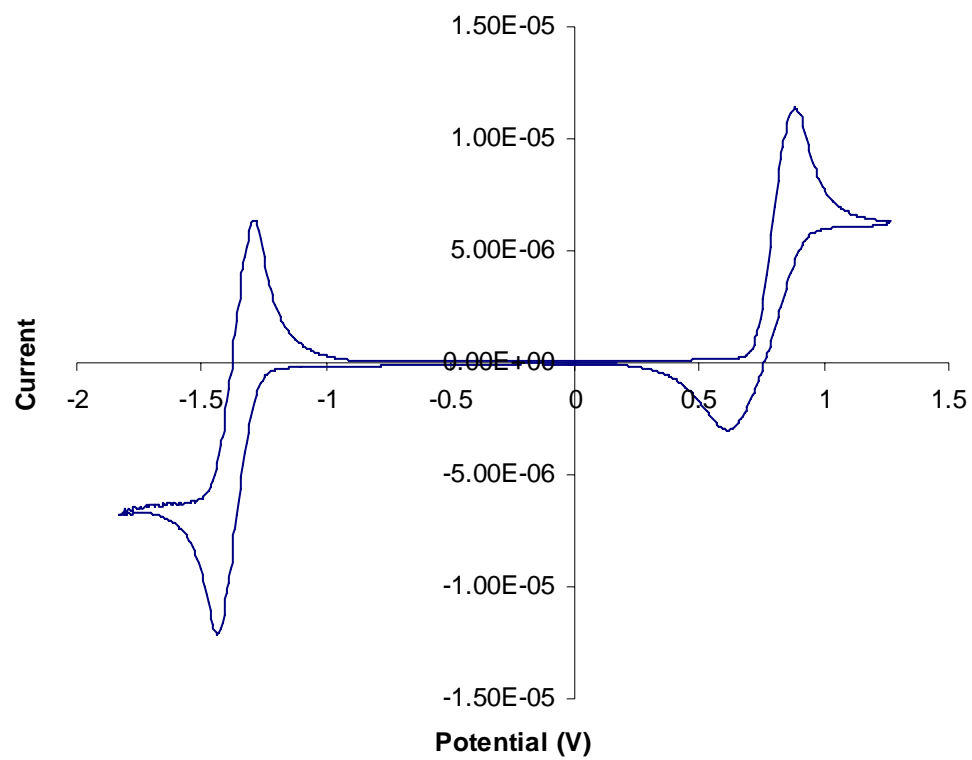


Figure S17. Cyclic voltammogram for compound 2.

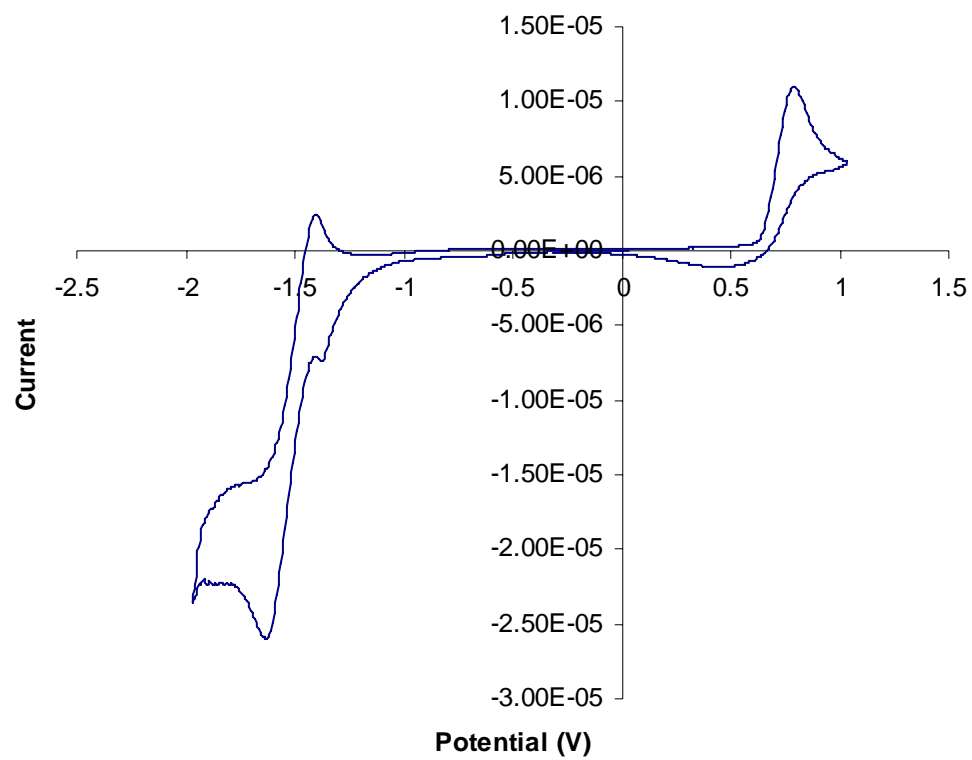


Figure S18. Cyclic voltammogram for compound 3.

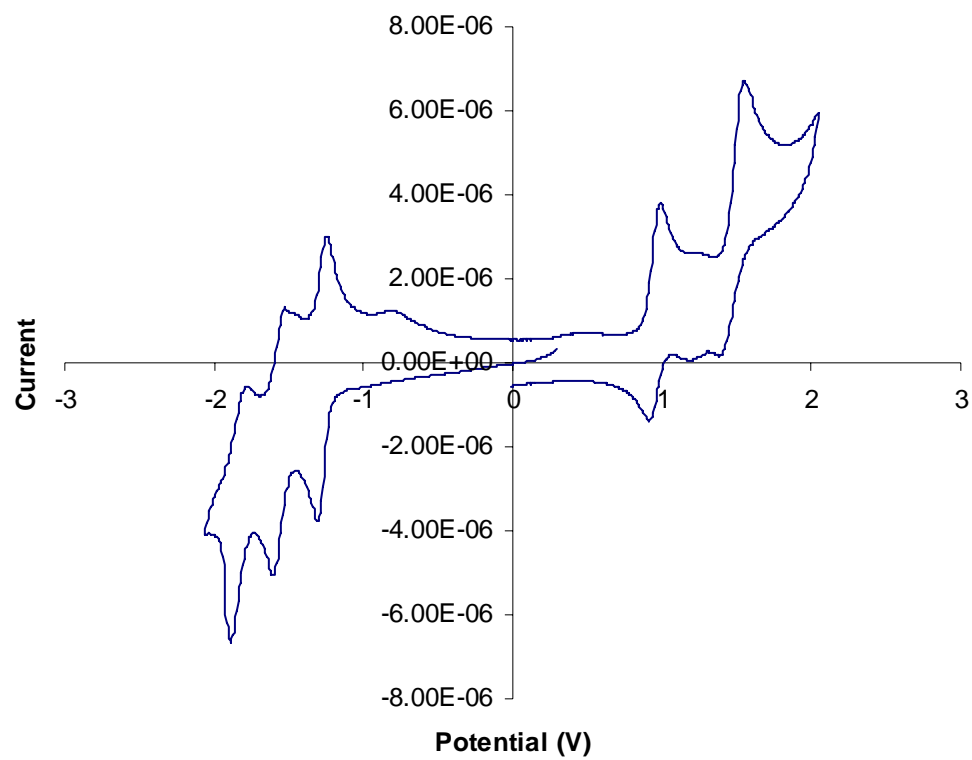


Figure S19. Cyclic voltammogram for $[\text{Ru}(\mathbf{1})(\text{bpy})_2](\text{PF}_6)_2$ compound **4**.

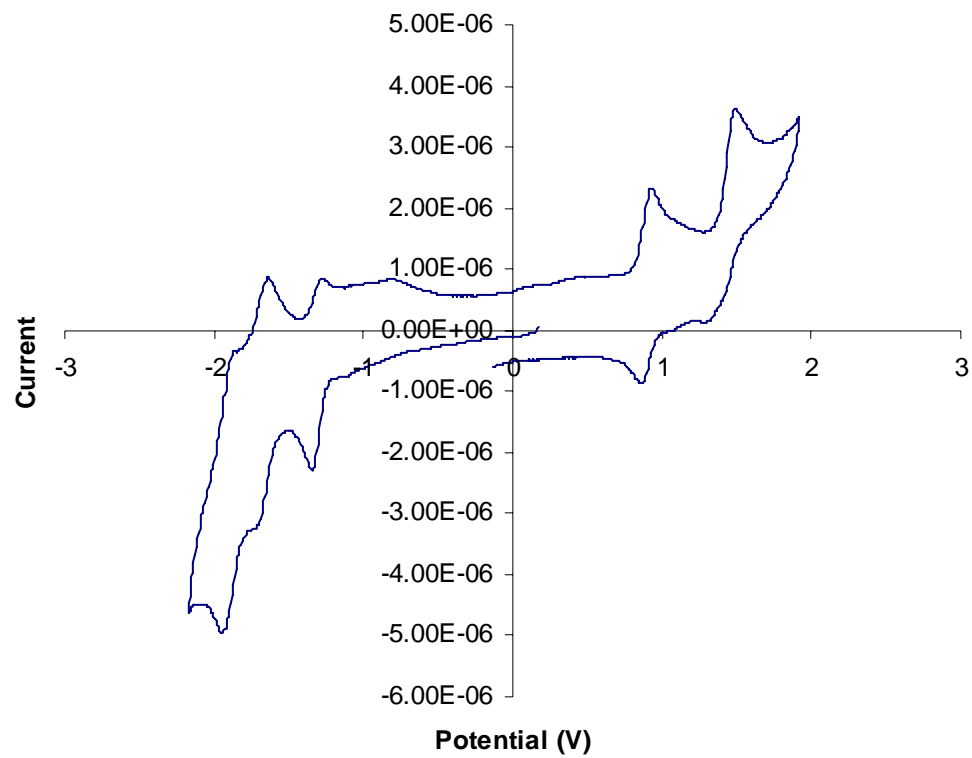


Figure S20. Cyclic voltammogram for $[\text{Ru}(\mathbf{1})(\text{dmb})_2](\text{PF}_6)_2$ compound **5**.

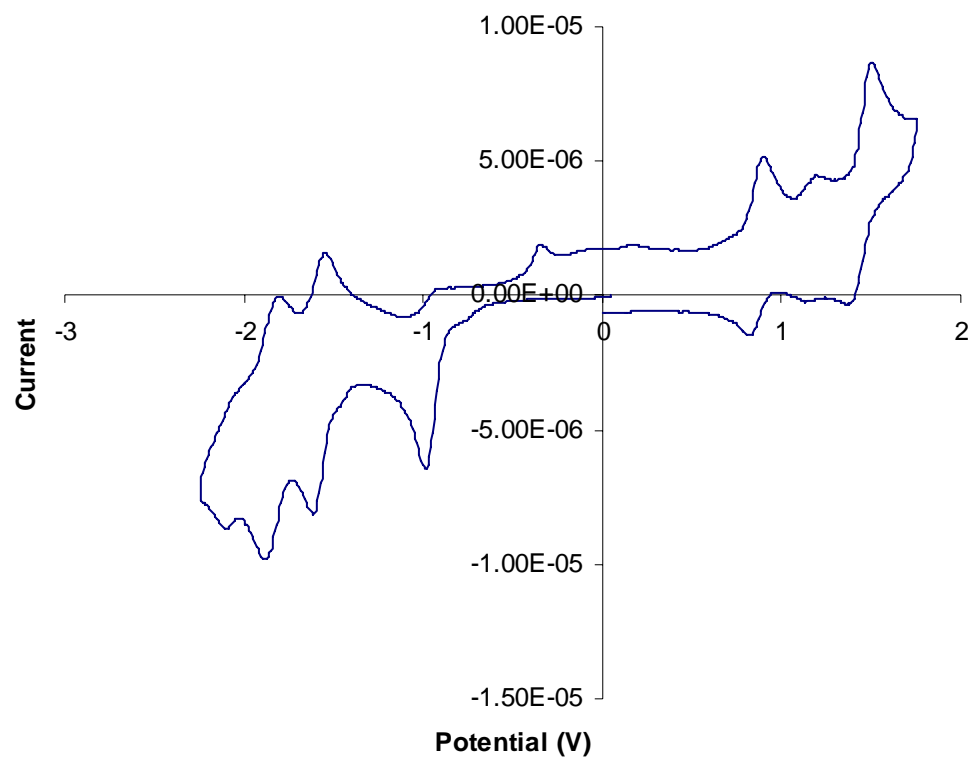


Figure S21. Cyclic voltammogram for $[\text{Ru}(\mathbf{2})(\text{bpy})_2](\text{PF}_6)_2$ compound **6**. The first reduction of compound **6** is irreversible in the full cyclic voltammogram, but is reversible when scanned alone.

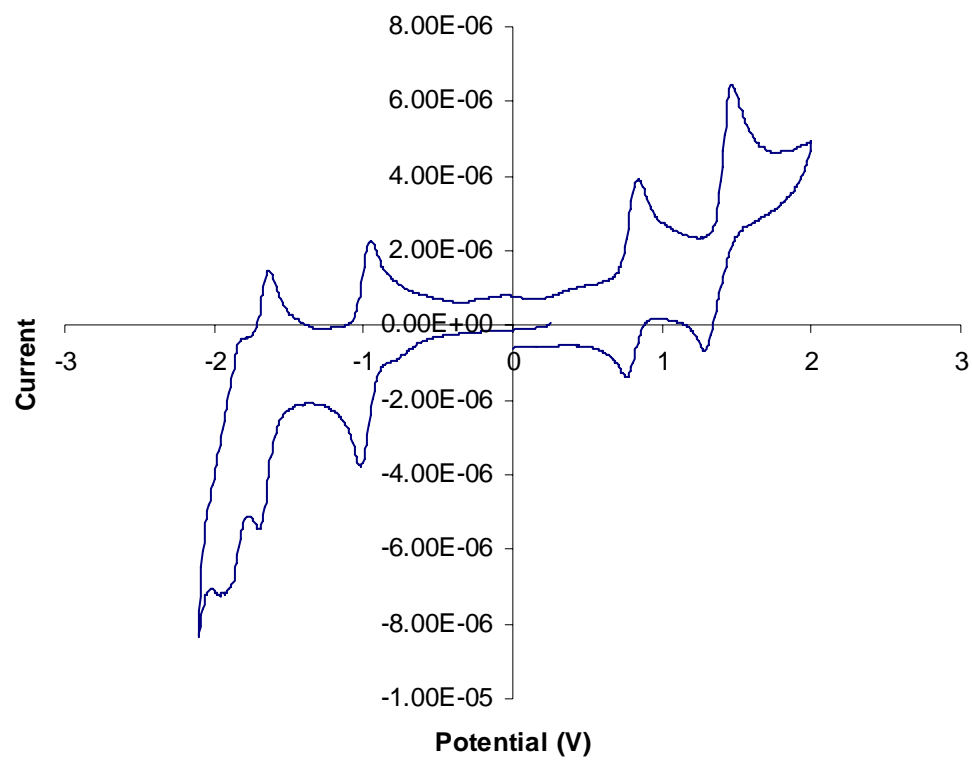


Figure S22. Cyclic voltammogram for $[\text{Ru}(\mathbf{2})(\text{dmb})_2](\text{PF}_6)_2$ compound **7**.

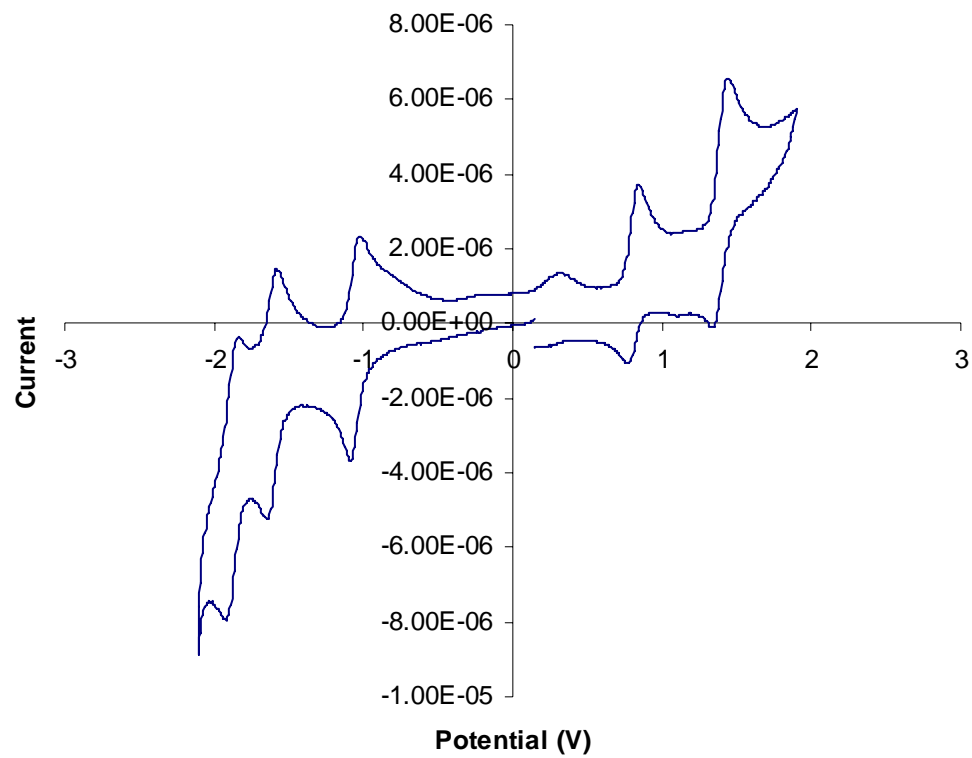


Figure S23. Cyclic voltammogram for $[\text{Ru}(\mathbf{3})(\text{bpy})_2](\text{PF}_6)_2$ compound **8**.

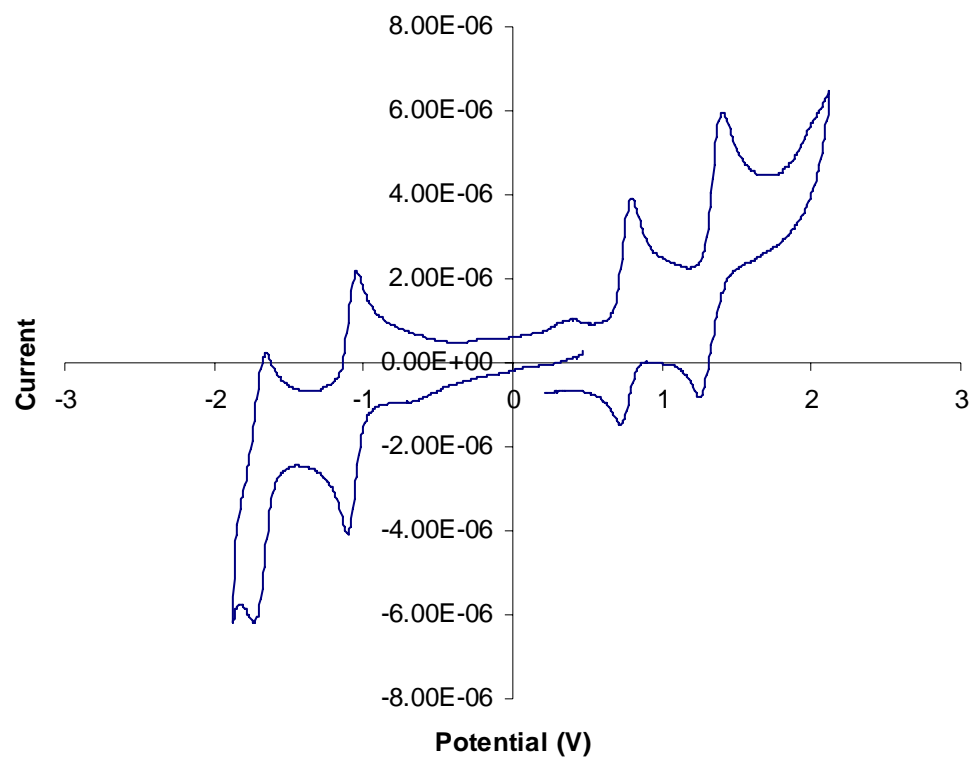


Figure S24. Cyclic voltammogram for $[\text{Ru}(\mathbf{3})(\text{dmb})_2](\text{PF}_6)_2$ compound **9** (third reduction not shown).

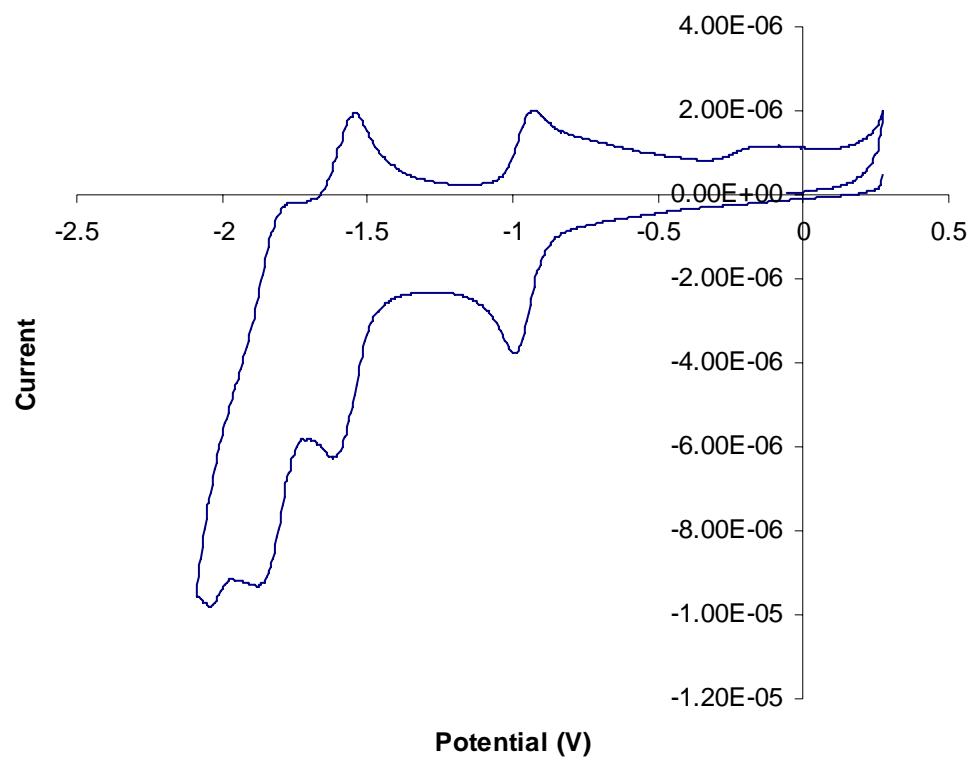


Figure S25. Cyclic voltammogram for $[\text{Ru}(\mathbf{3})(\text{dmb})_2](\text{PF}_6)_2$ compound **9** showing only the reductions.