

Supplementary Material

for

Effect of ancillary ligand proton on the photophysical properties of some Ru^{II}N₆ cores. A proton valve

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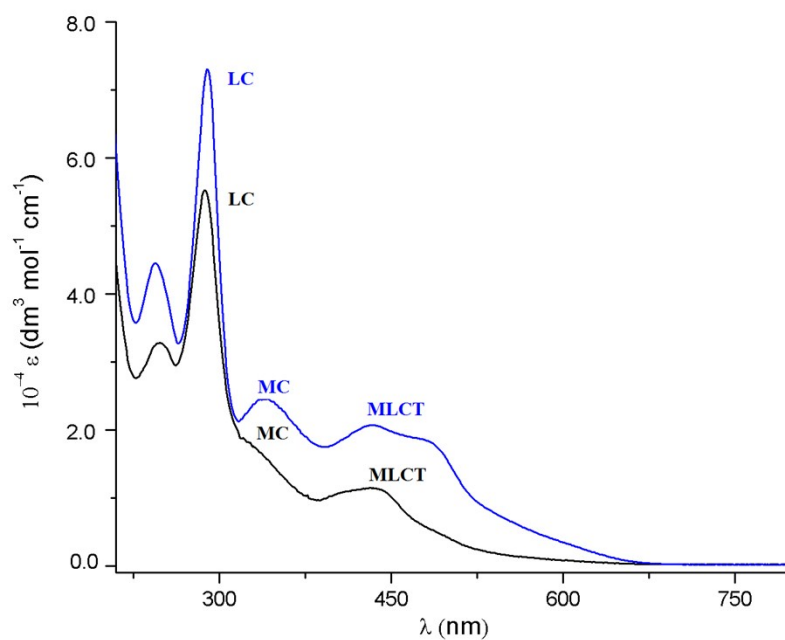


Fig. S1. Electronic spectra of **1a** (black) and **1b** (blue) in acetonitrile.

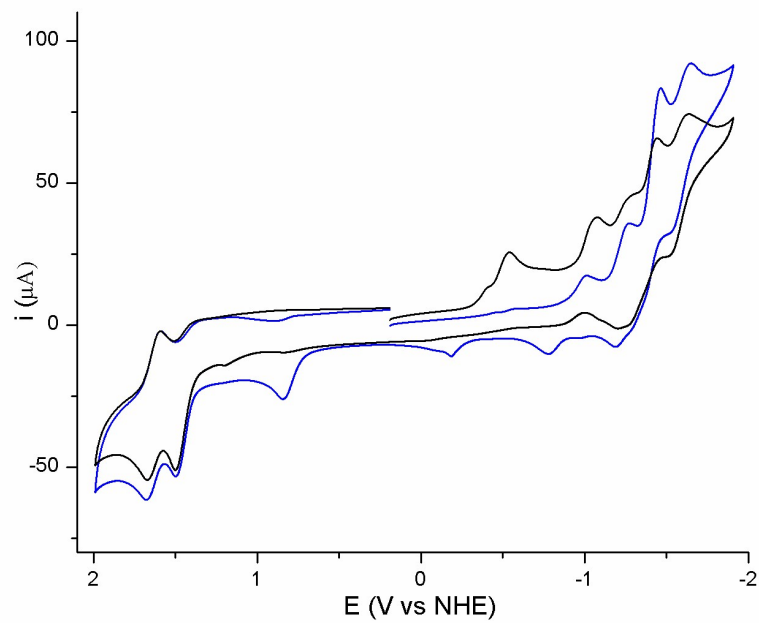


Fig. S2. Cyclic voltammogram of **1a** (black) and **1b** (blue) in CH_3CN , 0.1 mol dm^{-3} in TEAP at a GC electrode. Solute concentration is 1 mmol dm^{-3} . Scan rate: 100 mV s^{-1} .

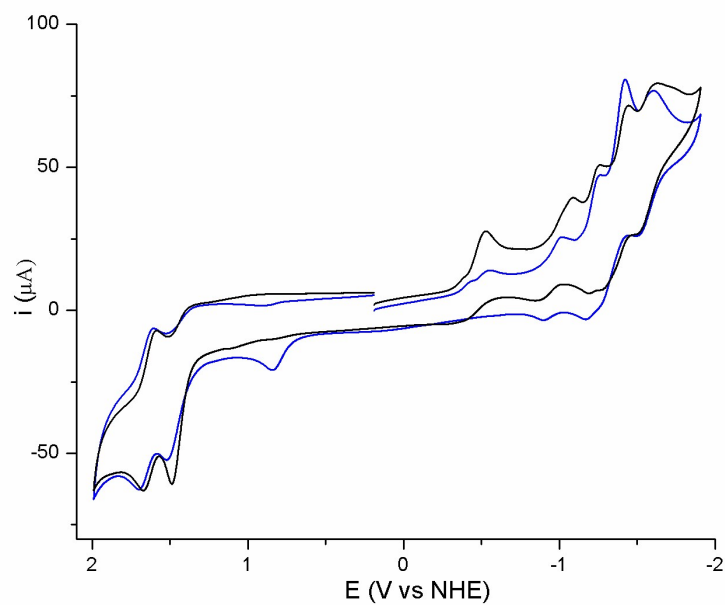


Fig. S3. Cyclic voltammogram of **2a** (black) and **2b** (blue) in CH_3CN , 0.1 mol dm^{-3} in TEAP at a GC electrode. Solute concentration is 1 mmol dm^{-3} . Scan rate: 100 mV s^{-1} .

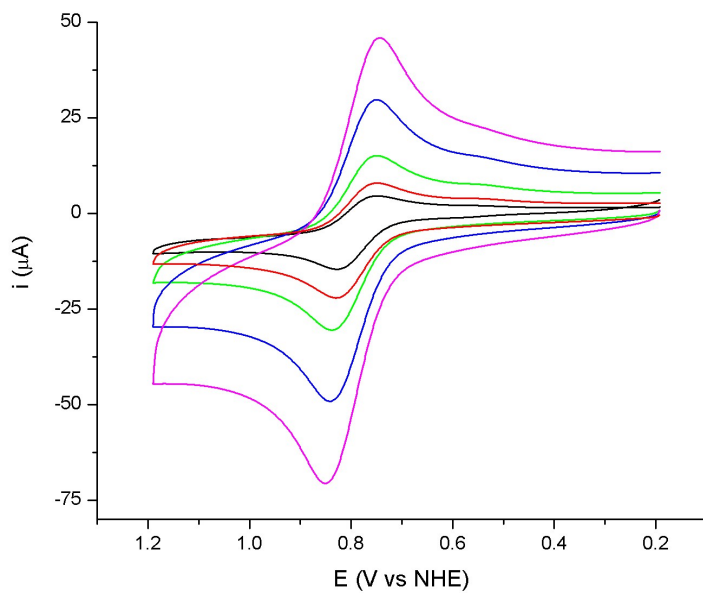


Fig. S4. A portion of the cyclic voltammogram of **2b** in CH₃CN, 0.1 mol dm⁻³ in TEAP at a GC electrode. Solute concentration is 1 mmol dm⁻³. Scan rate (mV s⁻¹): 50, black; 100, red; 200, green; 500, blue; 1000, magenta.

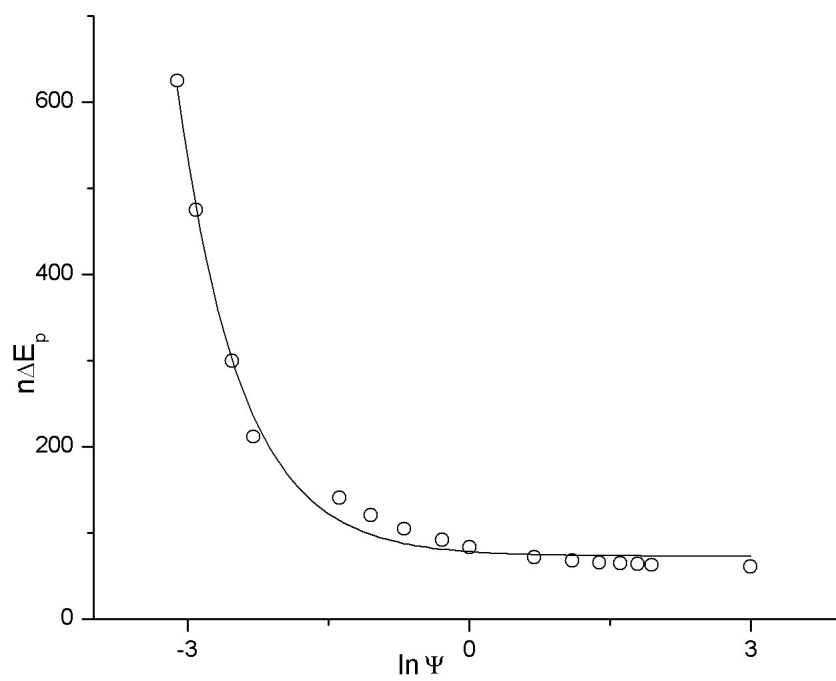


Fig. S5. Working relationship of ΔE_p vs $\ln \psi$; $r^2 = 0.992$. It has been created by using Nicholson's data.³⁷

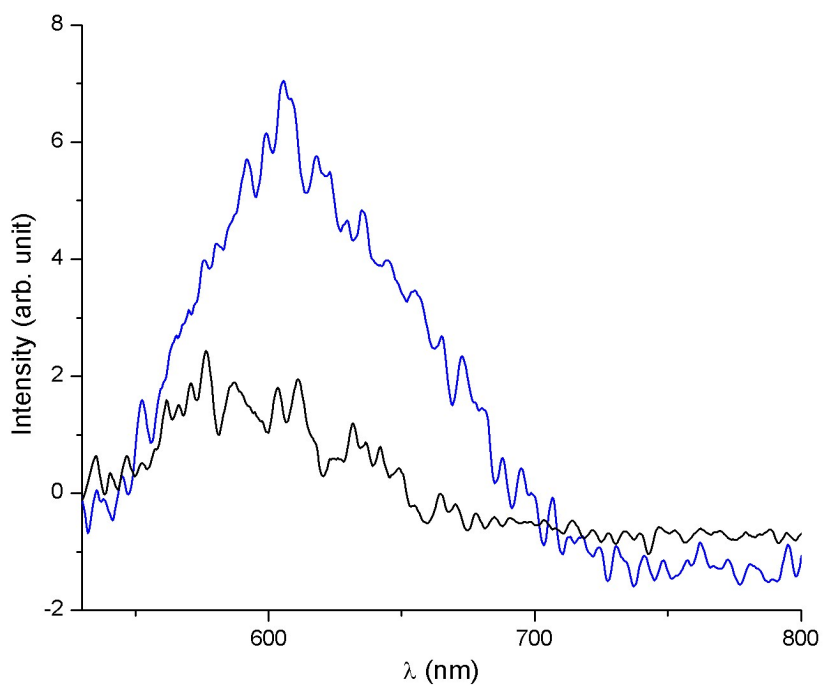


Fig. S6. Emission spectra of **1a** (blue) and **2a** (black) in deaerated CH₂Cl₂. The absorbance of both the solutions was 0.5 at 430 nm which was the λ excitation. Quantum yields ϕ are 1.17×10^{-4} and 6.13×10^{-5} for **1a** and **2a** respectively.