Supplementary Material (ESI) for Dalton Transactions

Supporting Information

Thermodynamic and kinetic studies on the interaction of Ru^{III}(edta) with NO in an ionic liquid

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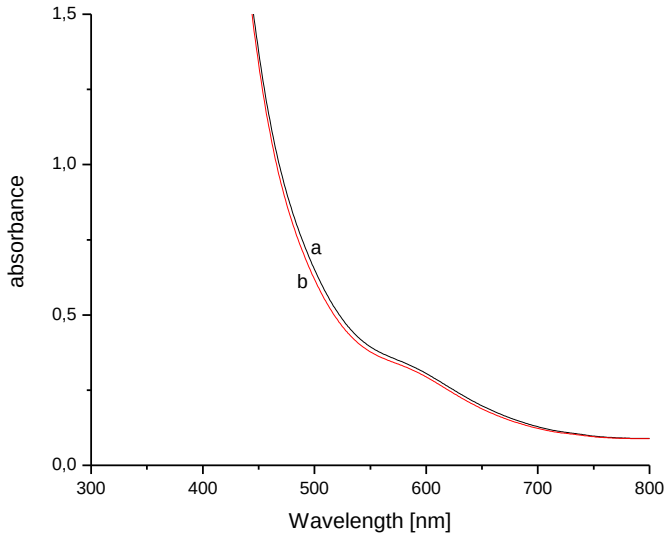

Figure S1: Absorption spectral changes recorded for the reaction of K[Ru(Hedta)Cl] with $[Fe(dca)_5NO]^{3-}$ in [emim][dca]. Experimental conditions: 0.7×10^{-3} M $[Fe(dca)_5NO]^{3-}$, 6×10^{-3} M K[Ru(Hedta)Cl] in [emim][dca], T = 25 °C, Curves: a - separate solutions, b - after mixing.

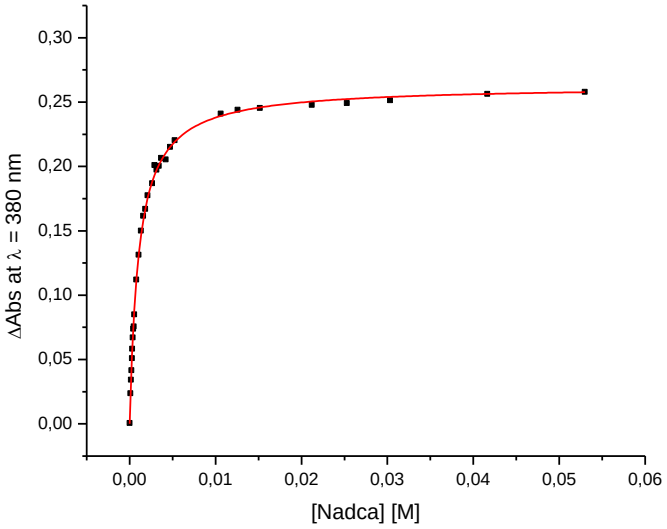

Figure S2: Change in absorbance at 380 nm for the reaction of $[Ru(edta)(H_2O)]^-$ with Na(dca) in aqueous solution. Experimental conditions: 5×10^{-4} M $[Ru(edta)(H_2O)]^-$ and 0 – 0.053 M Na(dca) in 0.2 M MES buffer, pH = 6, T = 25 °C.

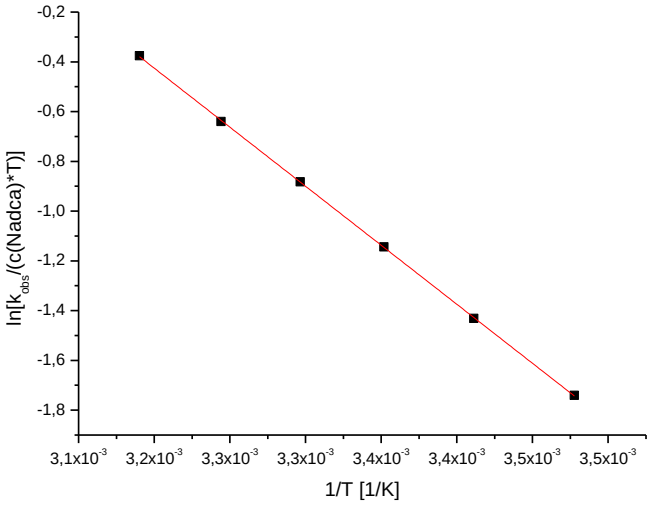

Figure S3: Eyring plot for the reaction of $[Ru(edta)(H_2O)]^-$ with Na(dca) measured by stopped-flow. Experimental conditions: 1×10^{-4} M $[Ru(edta)(H_2O)]^-$ and 12.5×10^{-3} M Na(dca) in 0.2 M MES buffer, pH = 6, λ_{det} = 380 nm, T = 14 - 40 °C.

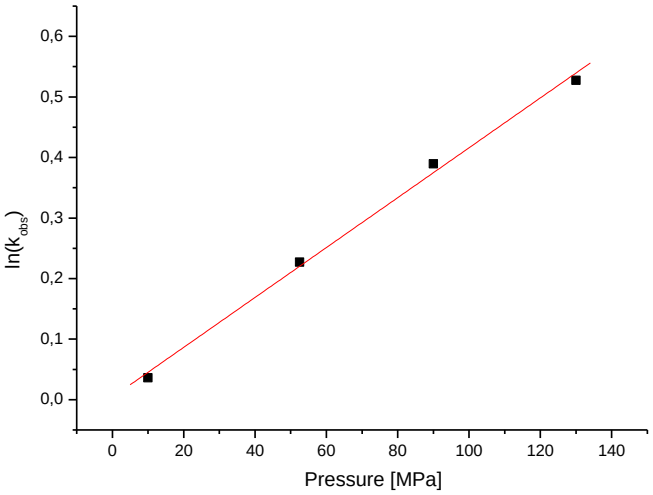

Figure S4: Plot of $\ln(k_{obs})$ vs. pressure for the reaction of $[Ru(edta)(H_2O)]^-$ with Na(dca) measured by high pressure stopped-flow. Experimental conditions: 4×10^{-4} M $[Ru(edta)(H_2O)]^-$ and 12.5×10^{-3} M Na(dca) in 0.2 M MES buffer, pH = 6, λ_{det} = 380 nm, T = 25 °C, pressure: 10 – 130 MPa.

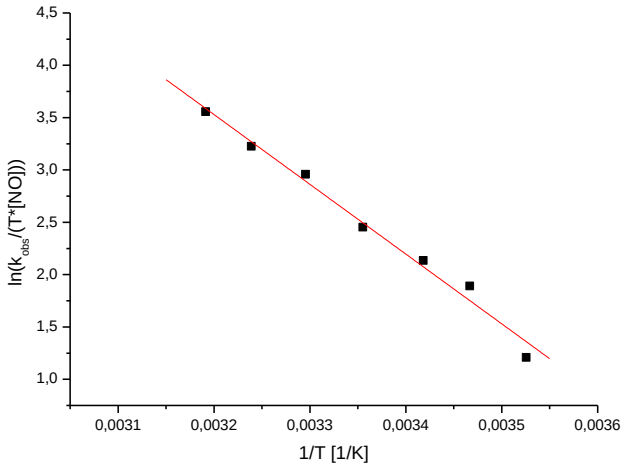

Figure S5: Eyring plot for the reaction of $[Ru(edta)(dca)]^{2-}$ with the first NO molecule measured by stopped-flow. Experimental conditions: 25×10^{-6} M $[Ru(edta)(dca)]^{2-}$ in pure water (pH = 8.8, adjusted with NaOH) and 25×10^{-5} M NO in 0.05 M TRIS buffer, pH = 8.8, λ_{det} = 260 nm, T = 10° - 40 °C.

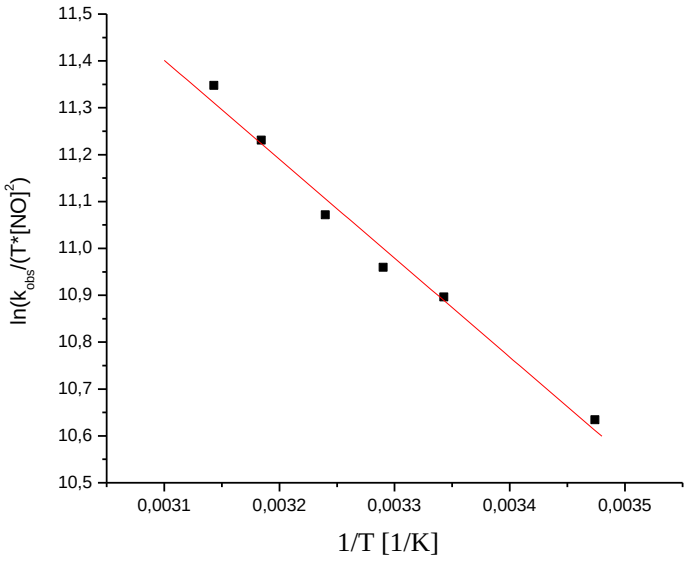

Figure S6: Eyring plot for the reaction of $[Ru(edta)(dca)]^{2-}$ with the second NO molecule measured by stopped-flow. Experimental conditions: 25×10^{-6} M $[Ru(edta)(dca)]^{2-}$ in pure water (pH = 8.8, adjusted with NaOH) and 1×10^{-3} M NO in 0.05 M TRIS buffer, pH = 8.8, λ_{det} = 260 nm, T = 15 – 45 °C.