Supporting Information

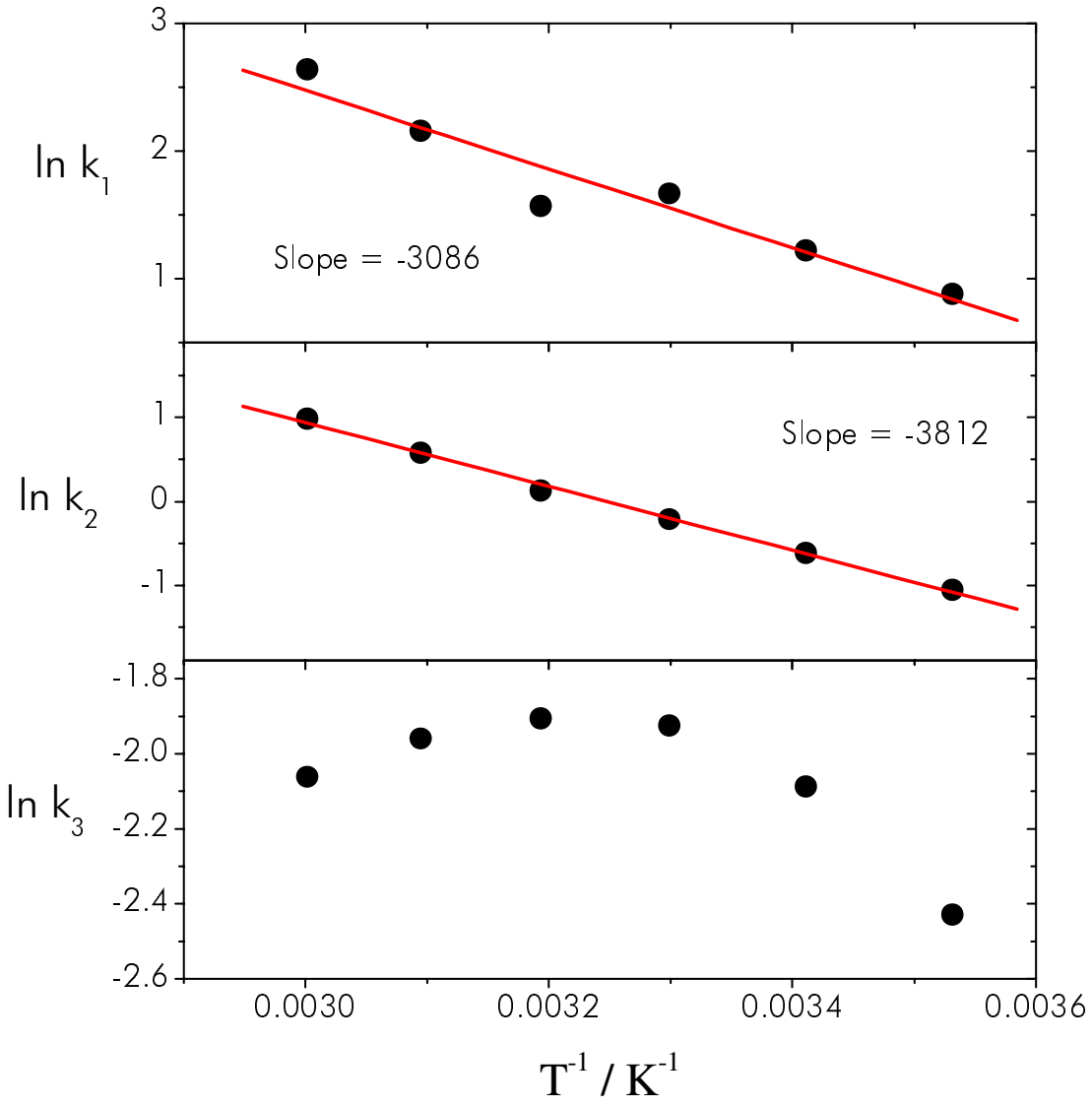

Figure S1. Arrhenius plot of macroscopic rate constants for relaxation of $[Ru(phen)_2dppz]^{2+}$ in glycerol. Lifetimes were obtained by global fitting of the TCSPC traces at three wavelengths (600, 660 and 740 nm).

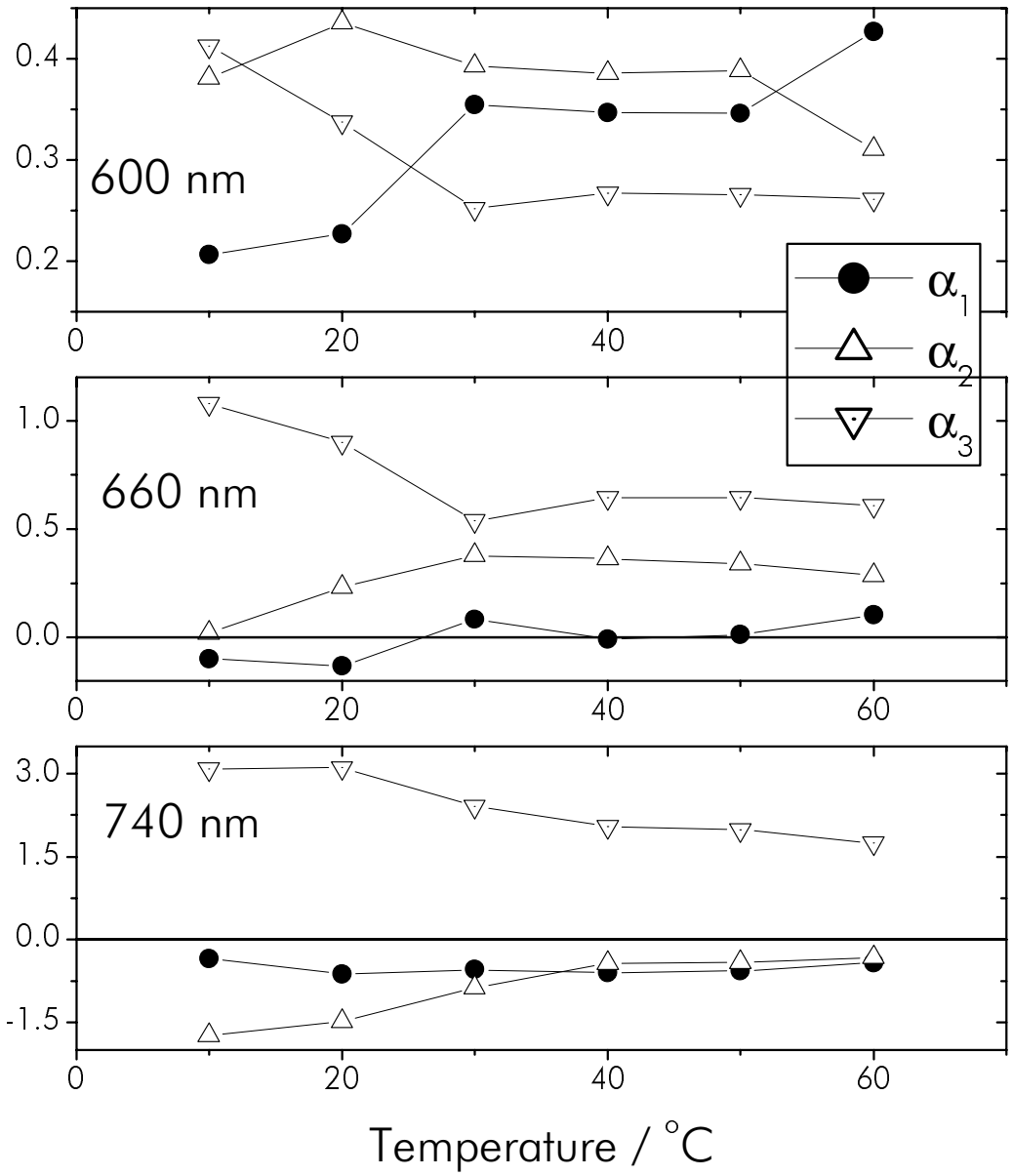

Figure S2. Preexponential factors corresponding to rate constants in Figure S1 ($\alpha_1 + \alpha_2 + \alpha_3 = 1$ at all temperatures).

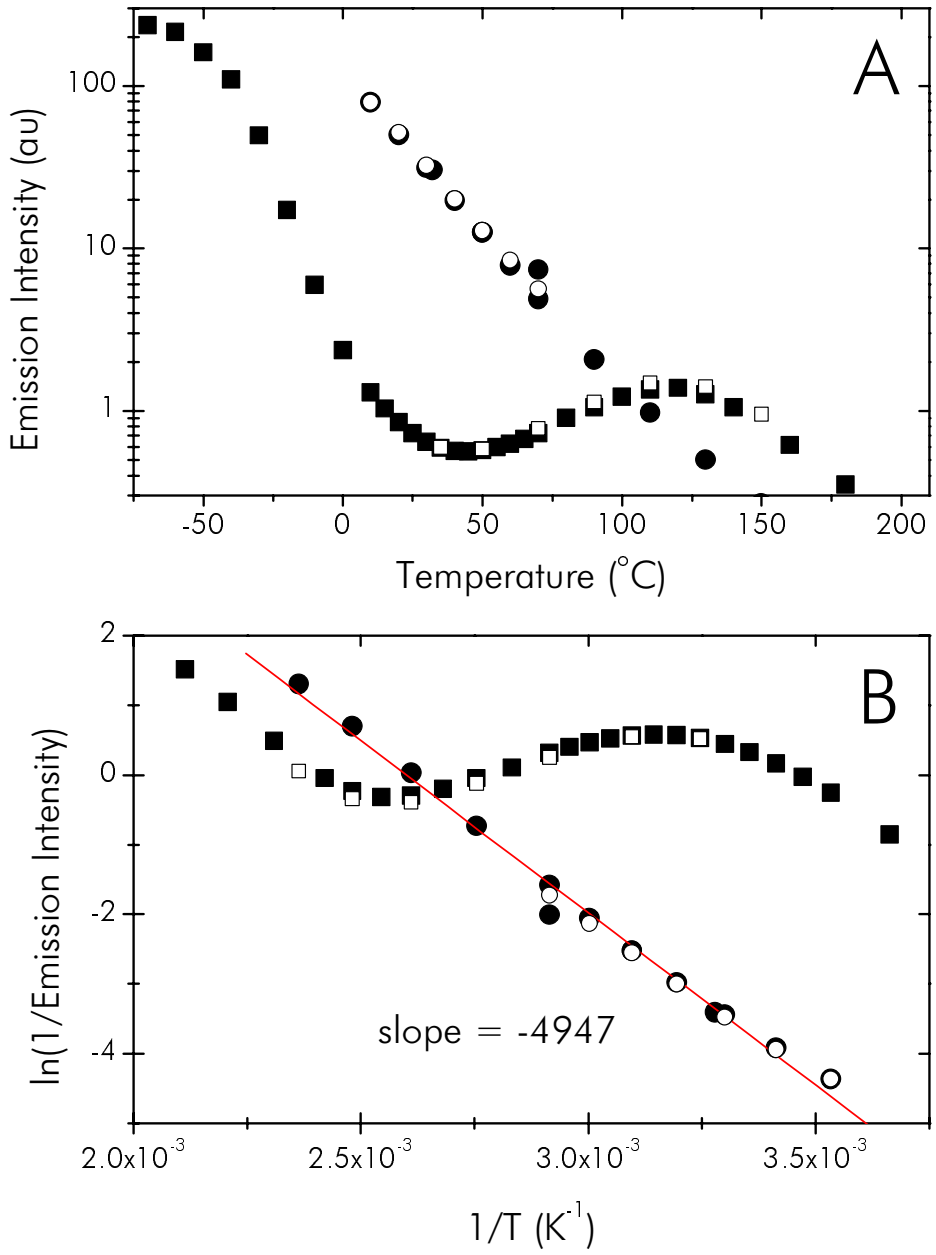

Figure S3. Panel A Plot of integrated emission intensity (500 – 850 nm) against temperature for $[Ru(phen)_3]^{2+}$ (● = under air, ○ = under argon) and $[Ru(phen)_2dppz]^{2+}$ (■= under air, □ = under argon) in glycerol. Panel B. Same data as in panel A as an Arrhenius plot. Assuming that the integrated emission is proportional to the lifetime, the slope in the graph represent - E_a / R for the ground state decay of $[Ru(phen)_3]^{2+}$, corresponding to an activation energy of 41± 3 kJ/mol.