Supplementary Material (ESI) for Dalton Transactions

Electronic Supporting Information

Co^{II}, Ni^{II}, Cu^{II}, and Zn^{II} complexes of a bipyridine bis-phenol conjugates: Generation and Properties of Coordinated Radical Species

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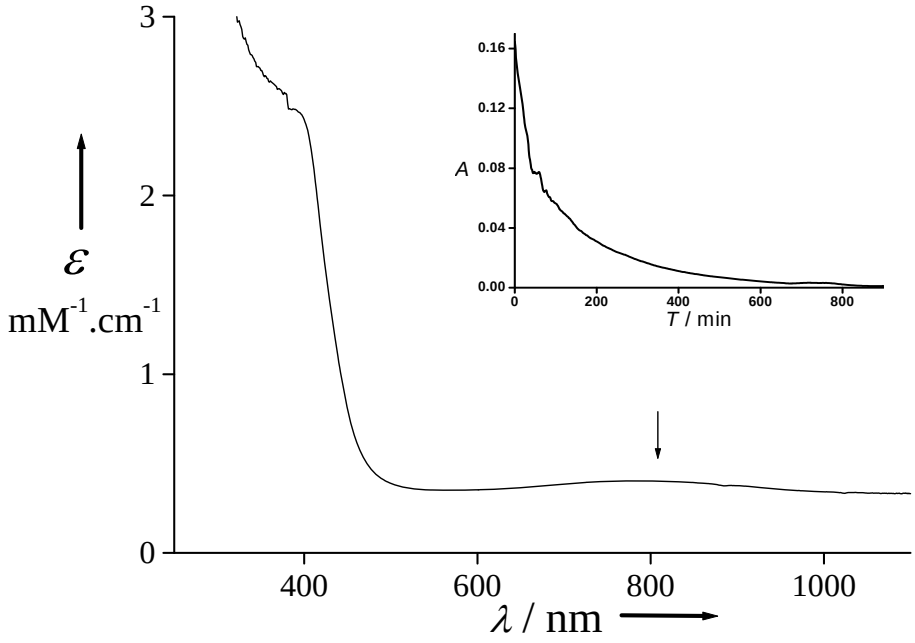

Figure S1 Electronic spectra of the electrogenerated $[Zn^{II}(L^{\bullet})]^{2+}$ in CH_2Cl_2 (0.01 M TBAP). The insert represents the decay pattern at T = 298 K. l = 1.000 cm.

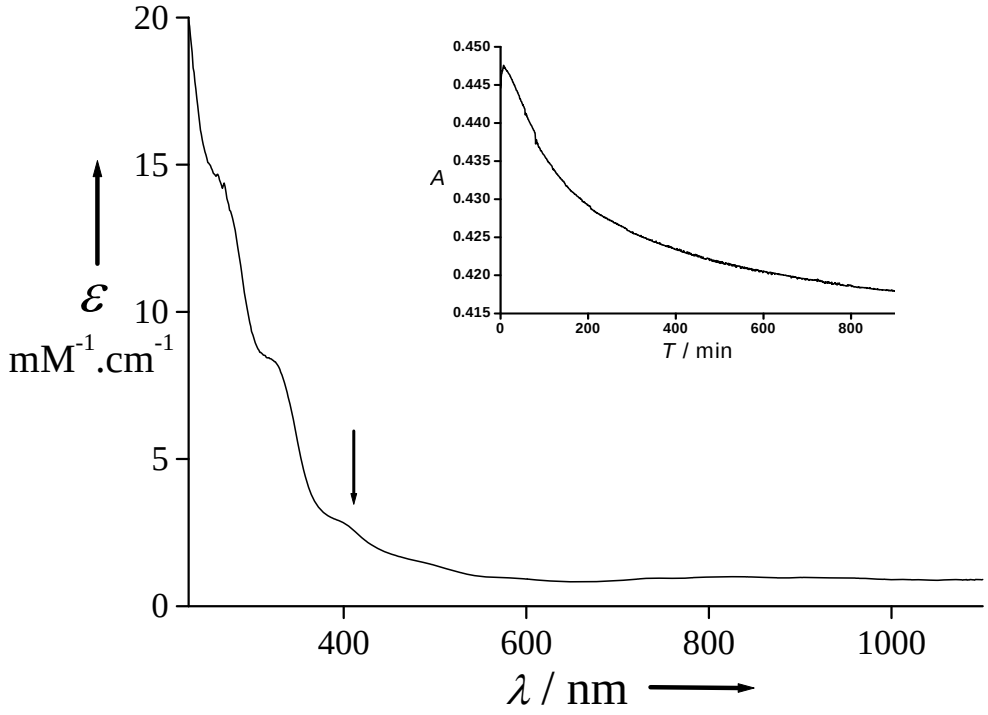

Figure S2 Electronic spectra of the electrogenerated **[Co^{III}(L$^{\bullet}$)]$^{+}$** in CH_2Cl_2 (0.01 M TBAP); The insert represents the decay pattern at T = 298 K. l = 1.000 cm.

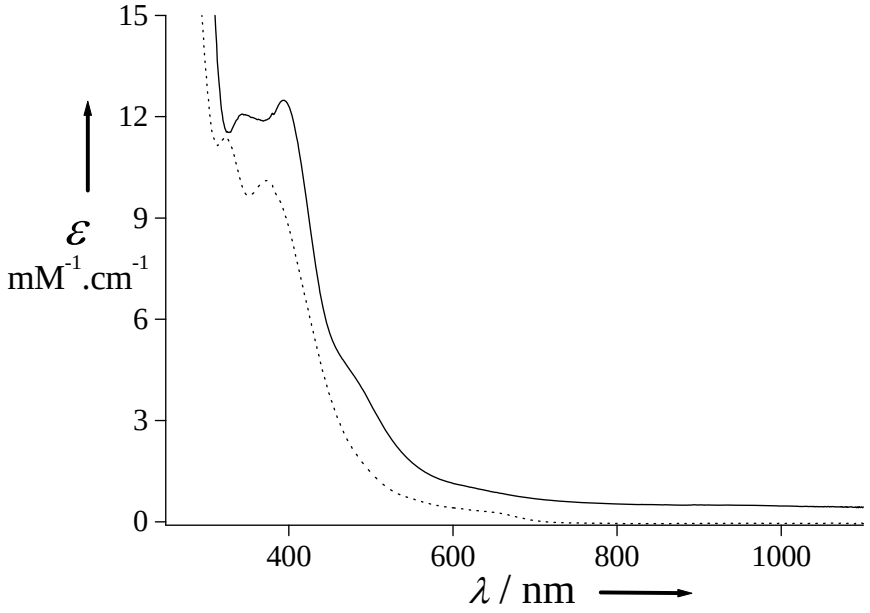

Figure S3 Electronic spectra of 0.05 mM solutions of **[Co^{II}(L)(Py)(O$_2^{\bullet}$)]** (dotted line) and the electrogenerated **[Co^{III}(L$^{\bullet}$)(Py)$_x$]$^{2+}$** (solid line) in CH_2Cl_2 containing 0.005 M TBAP, room temperature, path length = 1.000 cm; where x =1 or 2.

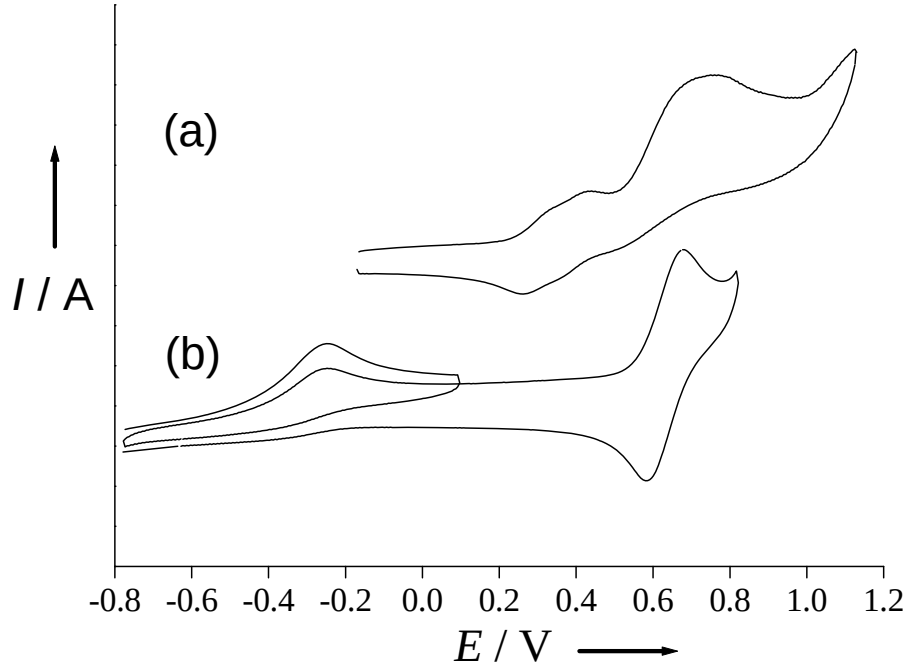

Figure S4 CV curves of CH_2Cl_2 solutions (+ 0.1 M TBAP) of the complexes (a) **[Ni^{II}L]**, (b) **[Co^{II}L]** in the presence of 0.05 M pyridine. Concentrations are 0.75 mM, and the potentials are referenced *vs*. Fc^+/Fc. Scan rate: 0.1 V.s^{-1}, T = 298 K

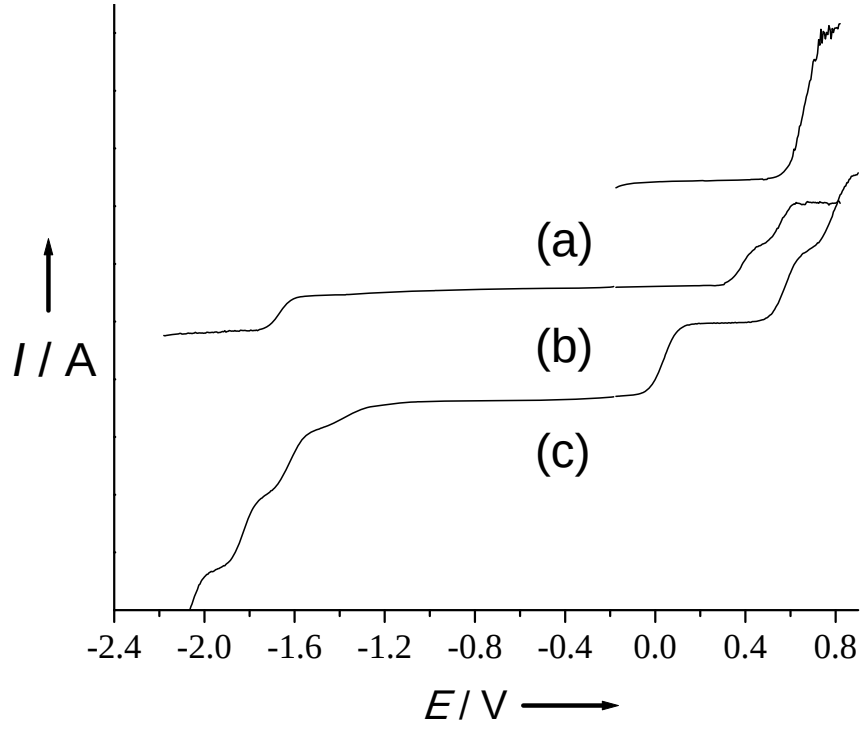

Figure S5 RDE curves of CH_2Cl_2 solutions (+ 0.1 M TBAP) of the complexes (a) **[Zn^{II}L]**, (b) **[Cu^{II}L]**, (c) **[Co^{II}L]**. T = 298 K. Concentrations are 0.75 mM except for **[Cu^{II}L]** (0.5 mM), and the potentials are referenced *vs*. Fc^+/Fc. Scan rate: 0.01 V.s^{-1} (500 rpm), T = 298 K.

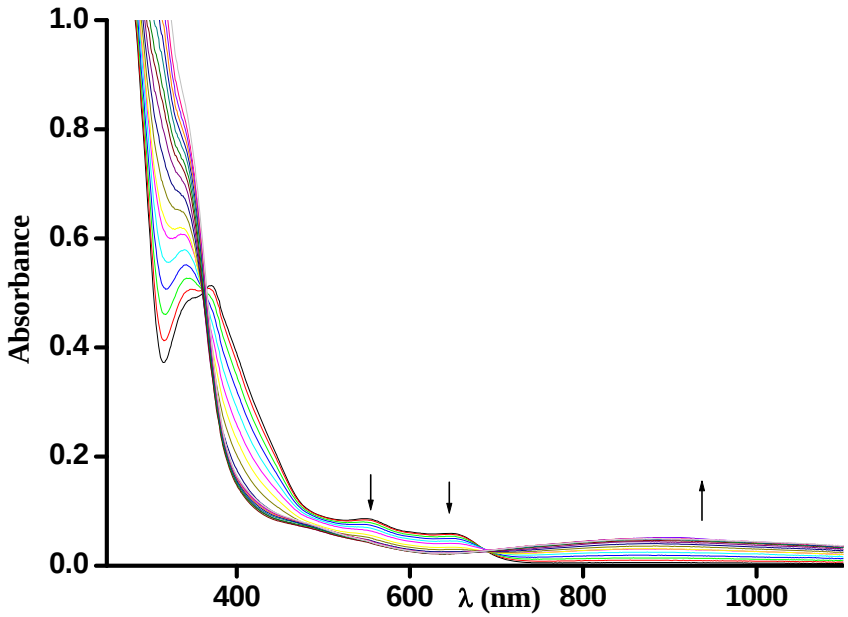

Figure S6 Spectrochemical titration of **[Co^{II}(L)]** with 0-2 equivalents of Tris(4-bromophenyl) ammonium hexachloro antimonate. Arrows indicate spectral changes upon addition of oxidizer. *T* = 298 K, *l* = 1.000 cm, **[Co^{II}L]** = 0.05 mM.

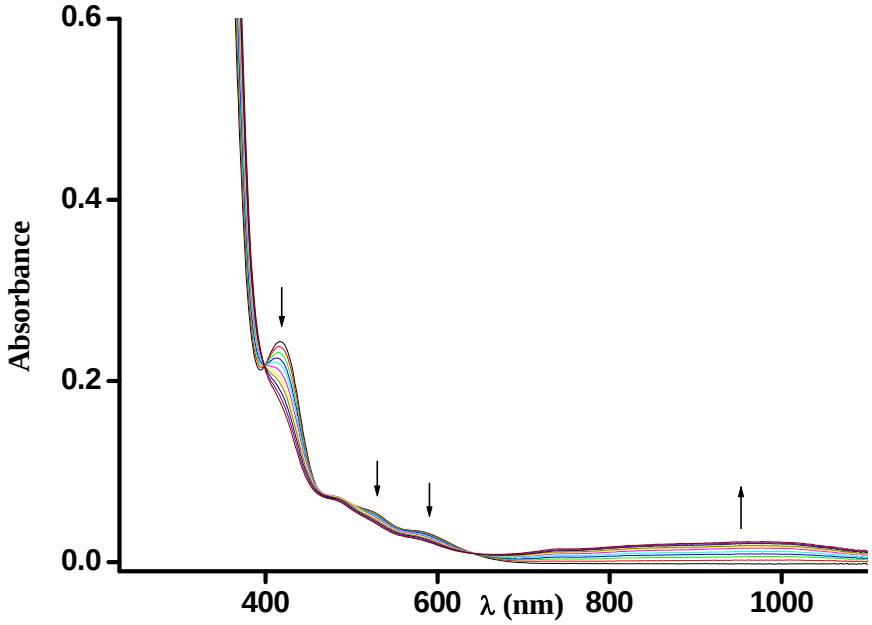

Figure S7 Spectrochemical titration of **[Ni^{II}L]** with 0-1 equivalent of Tris(4-bromophenyl) ammonium hexachloro antimonate. Arrows indicate spectral changes upon addition of oxidizer. *T* = 298 K, *l* = 1.000 cm, **[Ni^{II}L]** = 0.02 mM.

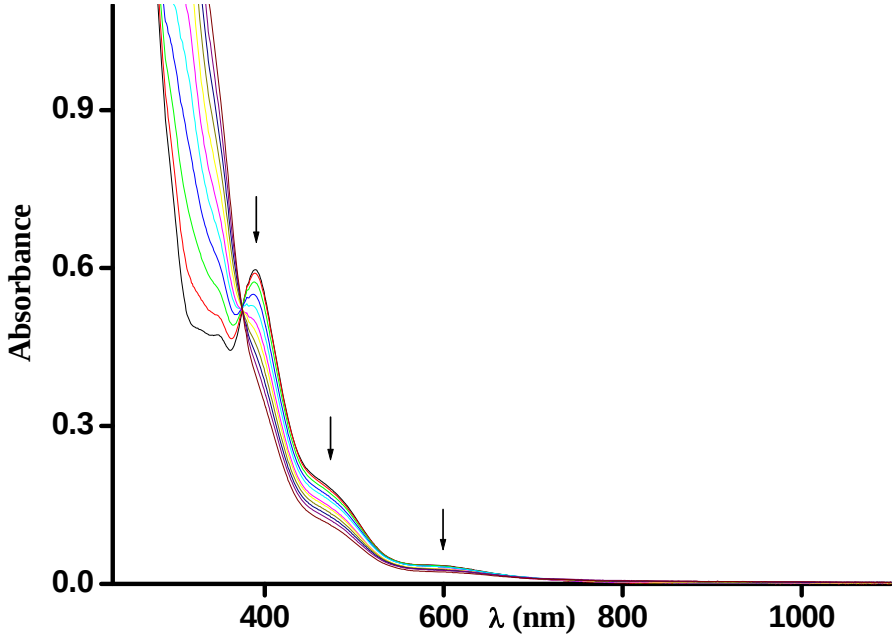

Figure S8 Spectrochemical titration of **[Cu^{II}L]** in CH_2Cl_2 with 0-1 quivalent of Tris(4-bromophenyl) ammonium hexachloro antimonate. Arrows indicate spectral changes upon addition of oxidizer. T = 298 K, l = 1.000 cm, **[Cu^{II}L]** = 0.05 mM.