

Supporting Information

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Probing the potential of *N*-heterocyclic carbenes in molecular electronics: Redox-active metal centers interlinked by a rigid ditopic carbene ligand

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Deconvolution of the DPV signals for the Ru₂ complexes **3a** and **3b** has been carried out by superimposing two shifted DPV signals as obtained from the oxidation of the monometallic species **6a** and **6b**, respectively.

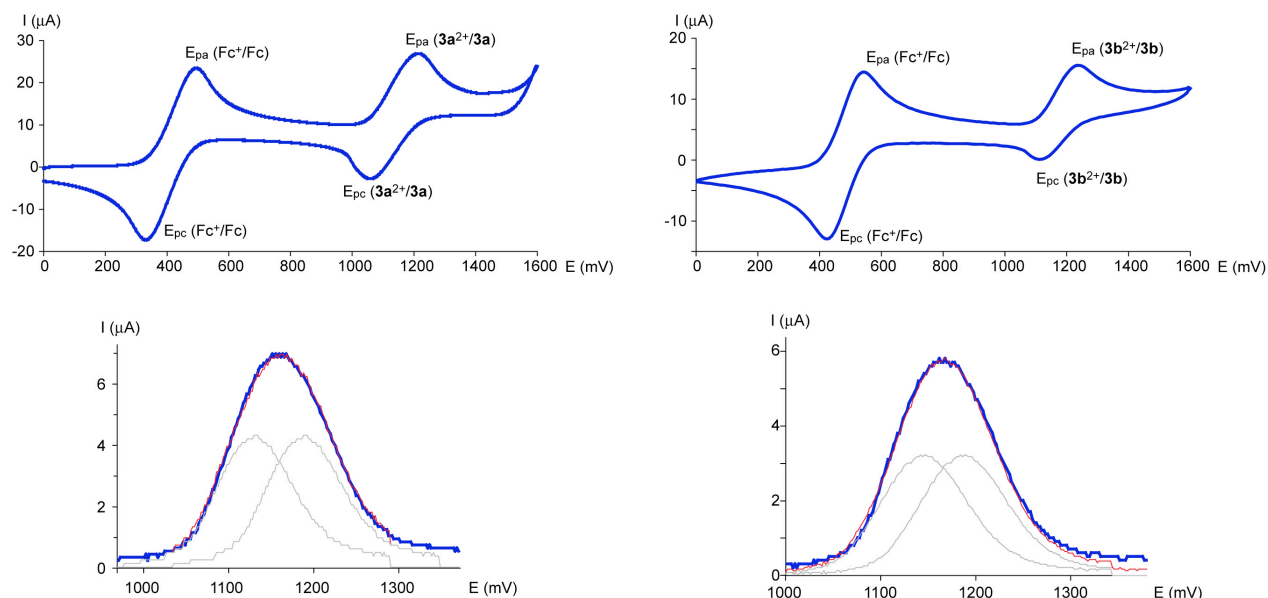


Fig. S1 a) Cyclic voltammetry diagram of complex **3a** (top, left) and **3b** (top, right); b) Relevant sections of the differential pulse voltammetry analysis (blue bold lines) together with the curves obtained from deconvolution (grey lines, red is the sum of the two deconvoluted curves, showing the excellent match with the measured data). The peak separations are 58 mV (for **3a**, left) and 42 mV (for **3b**, right), respectively.

Concentration-dependence of peak current (I_{pa})

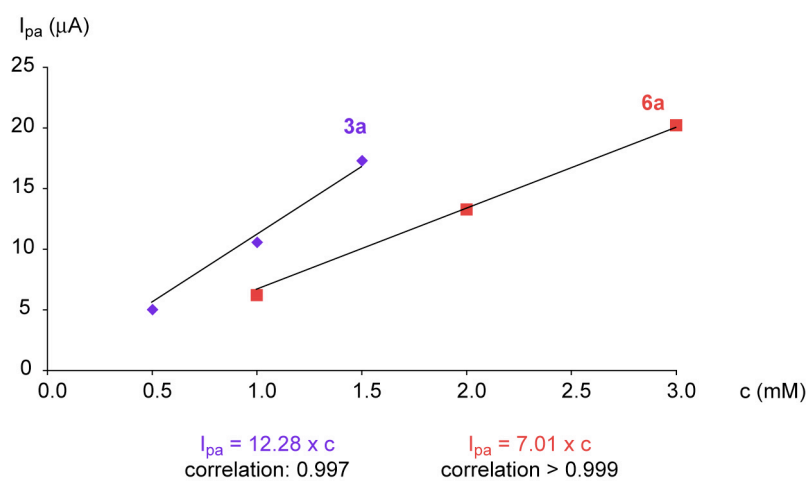


Fig. S2. Concentration dependence of the anodic peak current for the dimetallic complex **3a** and its monometallic analogue **6a**. The ratio of the slopes is 1.75 and hence in good agreement with a 2-electron process in **3a**.