Supporting Information

Molecular Inclusion of Organometallic Sandwich Complexes within Hybrid Cavitand-resorcin[4]arene Receptors

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List of Contents

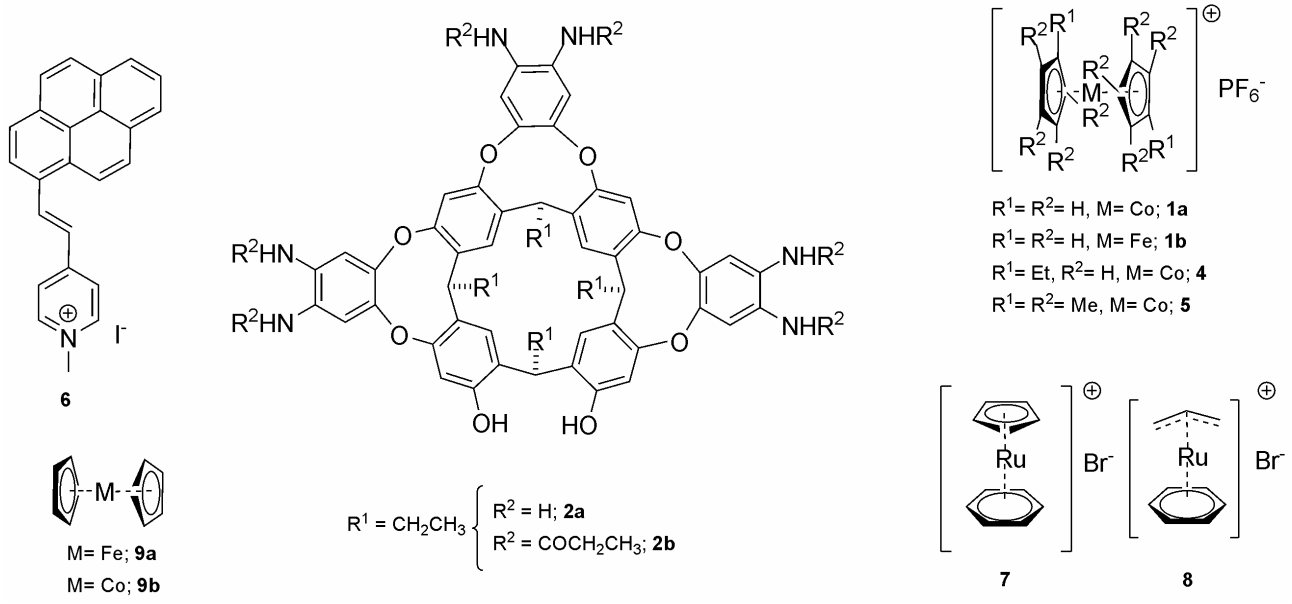


Figure S1. Structure of substrates and the receptors **2a-b**.

Fluorescence titrations

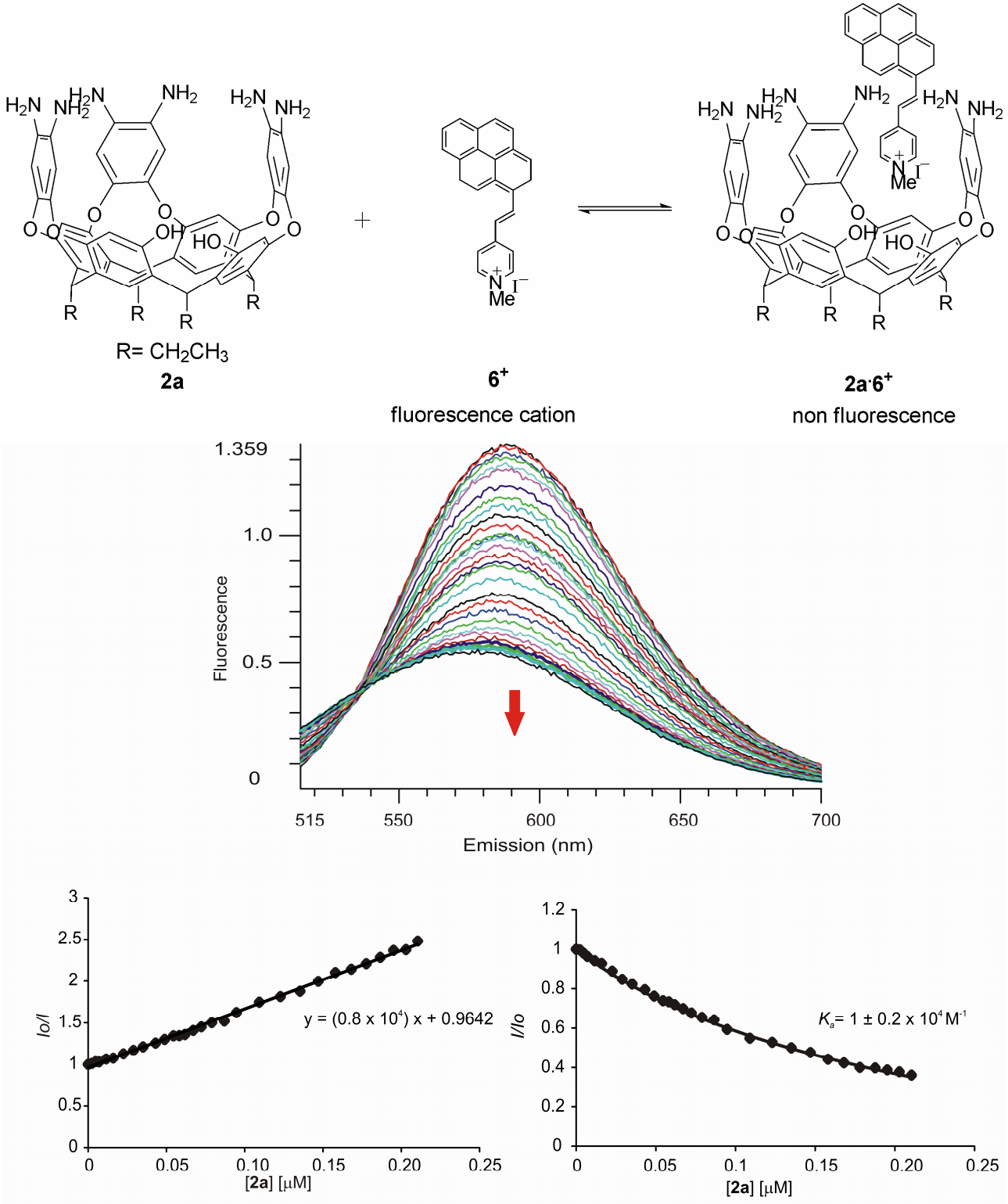
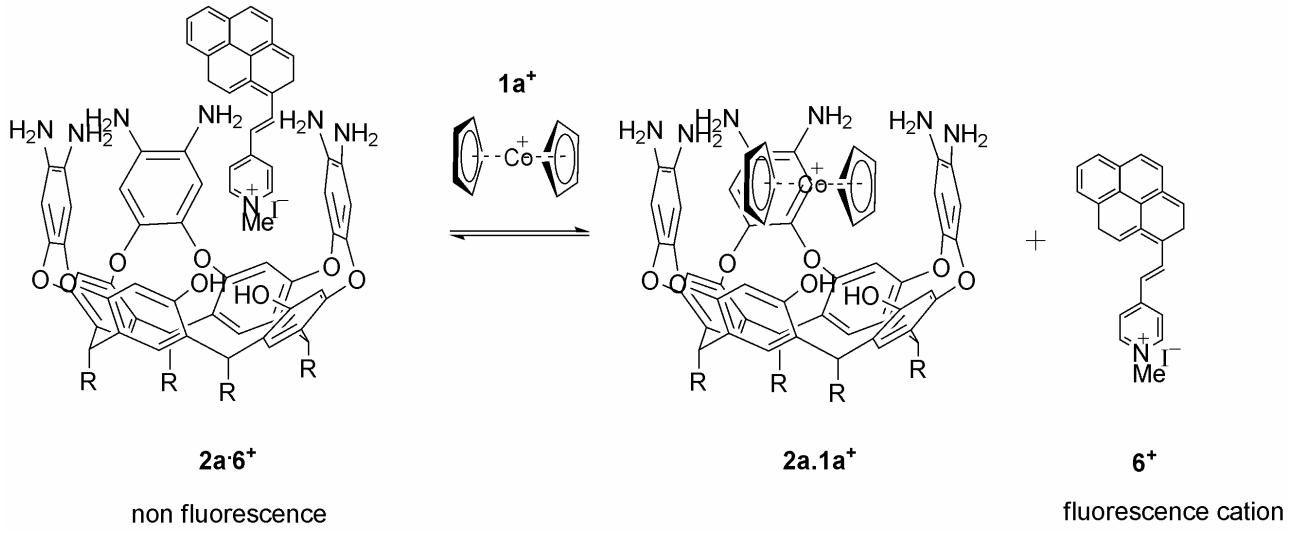


Figure S2. : Fluorescence titration of $\mathbf{6}^+$ (8.25×10^{-6} M) in MeOH upon addition of incremental amounts of **2a**.



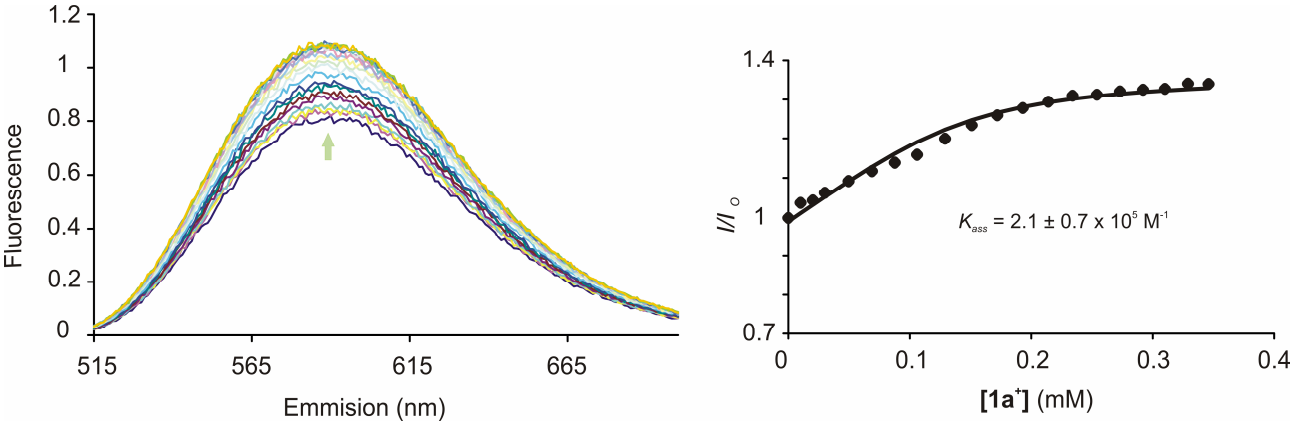


Figure S3. : Fluorescence titrations of $\mathbf{6}^+$ (0.24 mM) in MeOH in the presence of **2a** (0.15 mM) and upon addition of incremental amounts of $\mathbf{1a}^+$.

^{1}H NMR titrations

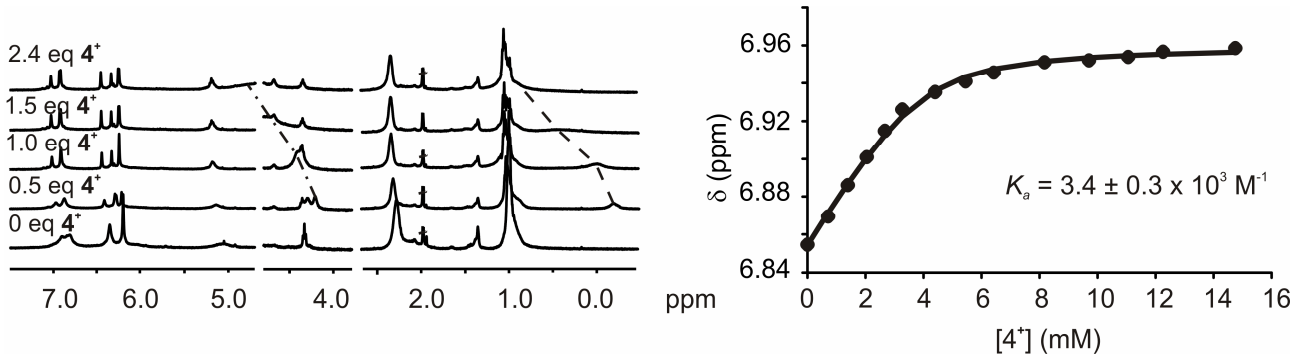


Figure S4. : NMR titration of **2a** ([**2a**]= 4.48 mM) with $\mathbf{4}^+$ in MeOH-d_4.

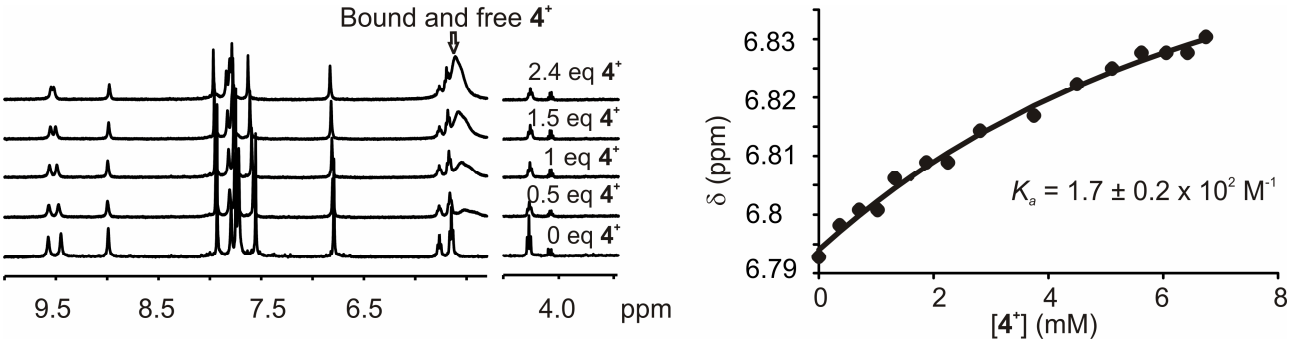


Figure S5. : NMR titration of **2b** ([**2b**]= 2.80 mM) with $\mathbf{4}^+$ in acetone-d_6.

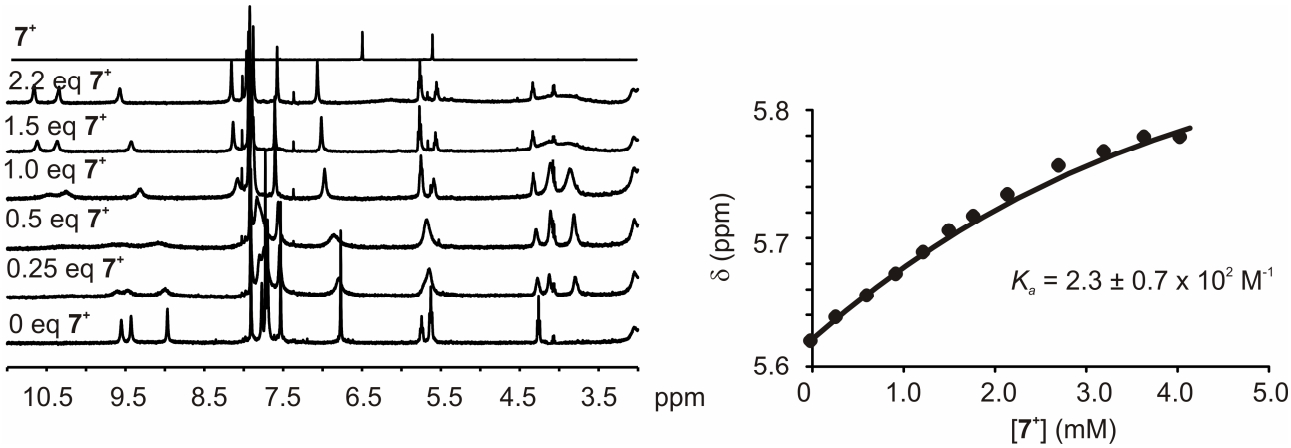


Figure S6. : NMR titration of **2b** ([**2b**]= 2.64 mM) with $\mathbf{7}^+$ in acetone-d_6.

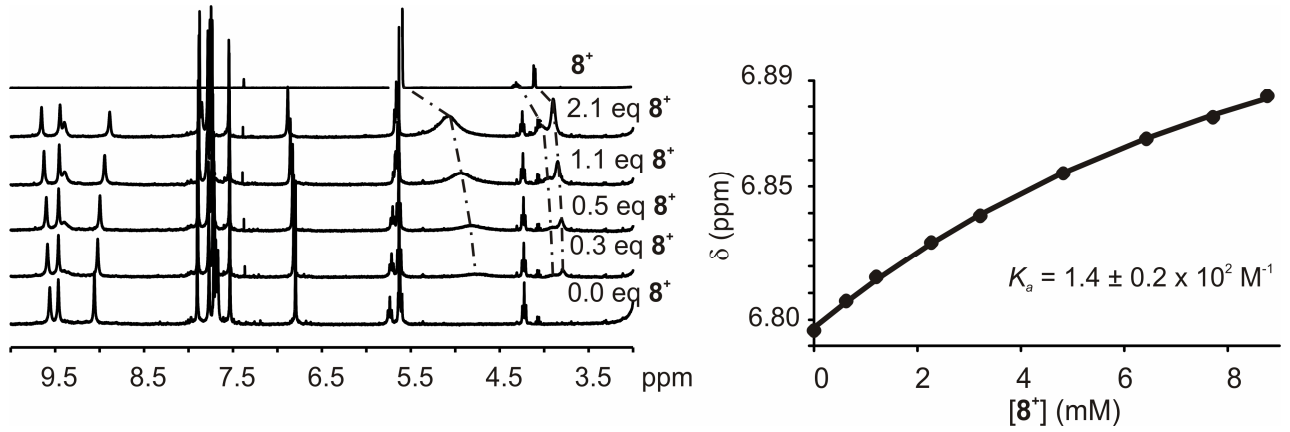


Figure S7. : NMR titration of **2b** ([**2b**]= 4.20 mM) with $\mathbf{8}^+$ in acetone-d_6.

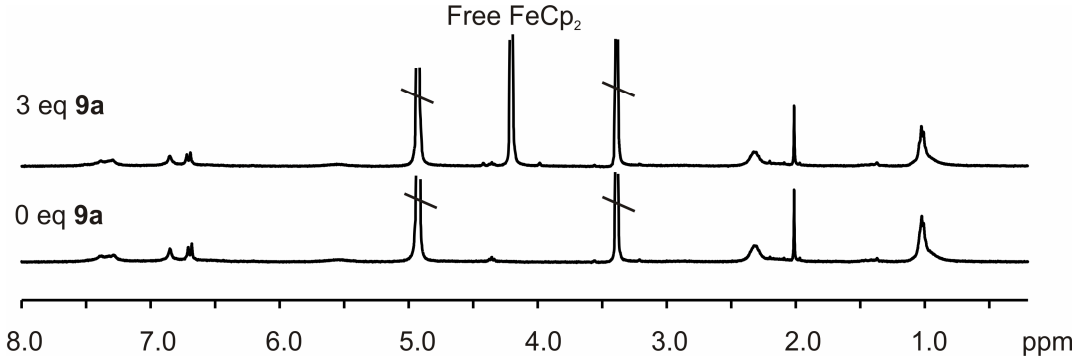


Figure S8. : NMR spectra of **2a** ([**2a**]= 2.50 mM) and **2a** with 3 equivalents of **9a** in MeOH-d_4.

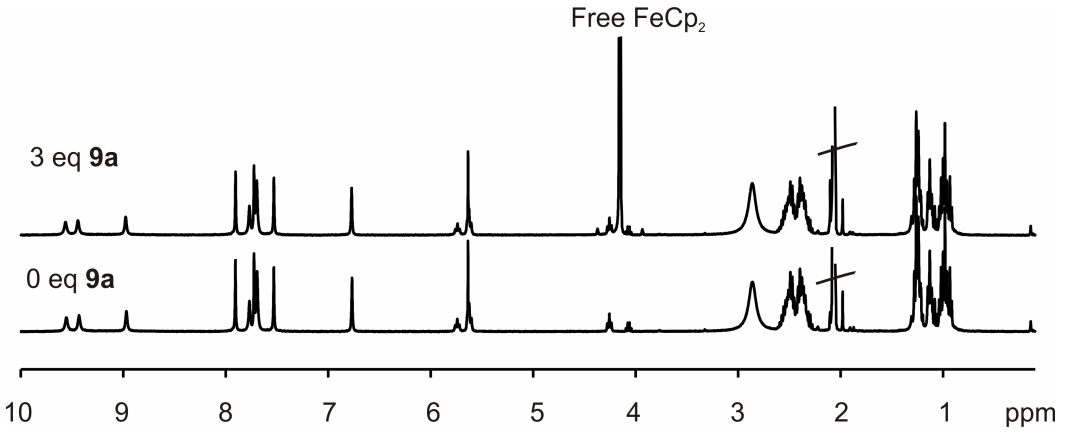


Figure S9. : NMR spectra of **2b** ([**2b**]= 4.50 mM) and **2b** with 3 equivalents of **9a** in acetone-d_6.

ITC titration.

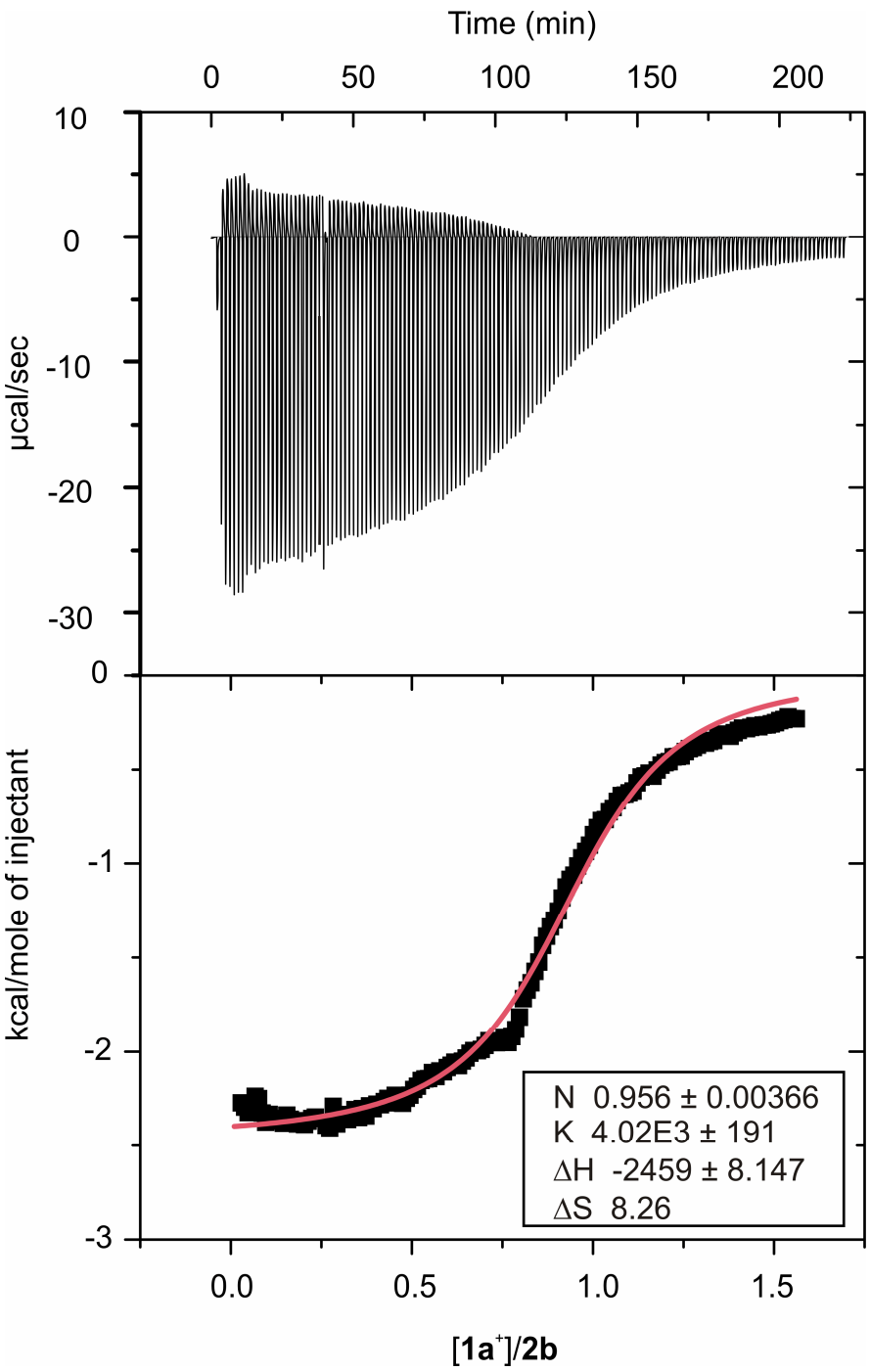
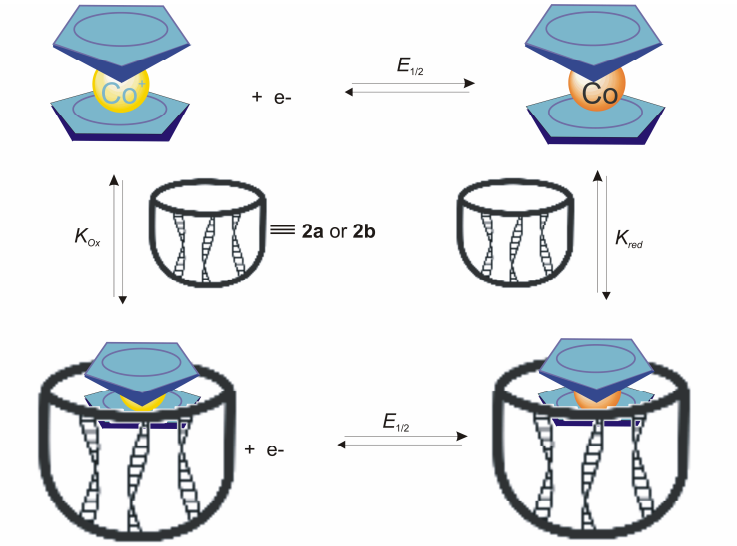


Figure S10: Calorimetric titration between the receptor or **2b** ([**2b**]= 10 mM in acetone) and **1a**$^+$ seven times more concentrated than the corresponding receptor.

Cyclic voltammetry



Scheme S1: Coupled electrochemical and chemical equilibria for the cobaltocenium **1a**$^+$ forming supramolecular complexes with non-electroactive hosts **2a** or **2b.**

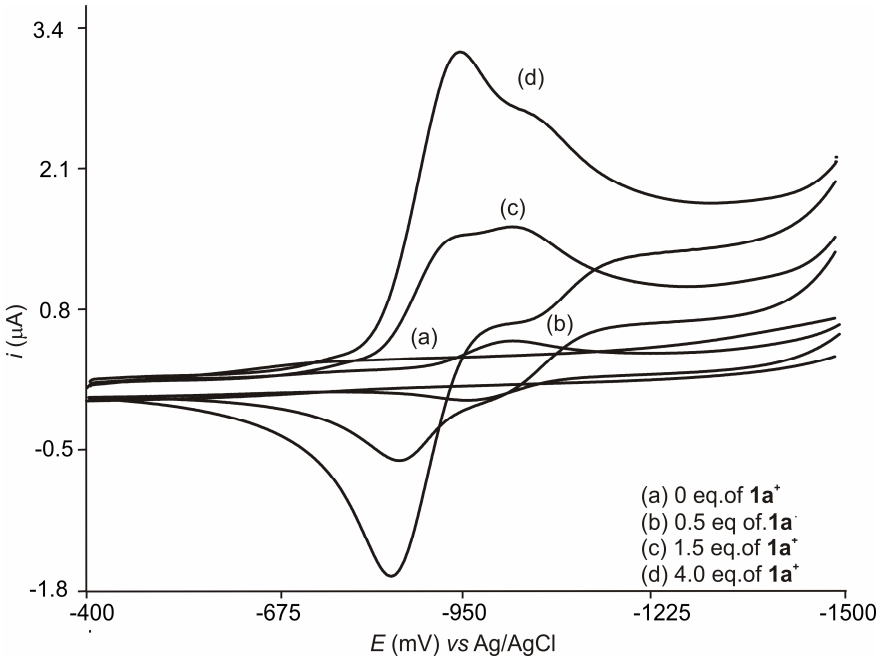


Figure S11. : Cyclic voltammetric behavior on glass carbon (0.071 cm^2) of 1.0 mM **2b** in acetone also containing 0.1 M tetraoctylammonium bromide (a) and after each addition ((b) 0.5 (c) 1.5 (d), 4.0 eq) of cobaltocenium **1a**$^+$. Scan rate 100 mV/s.

Diffusion coefficients

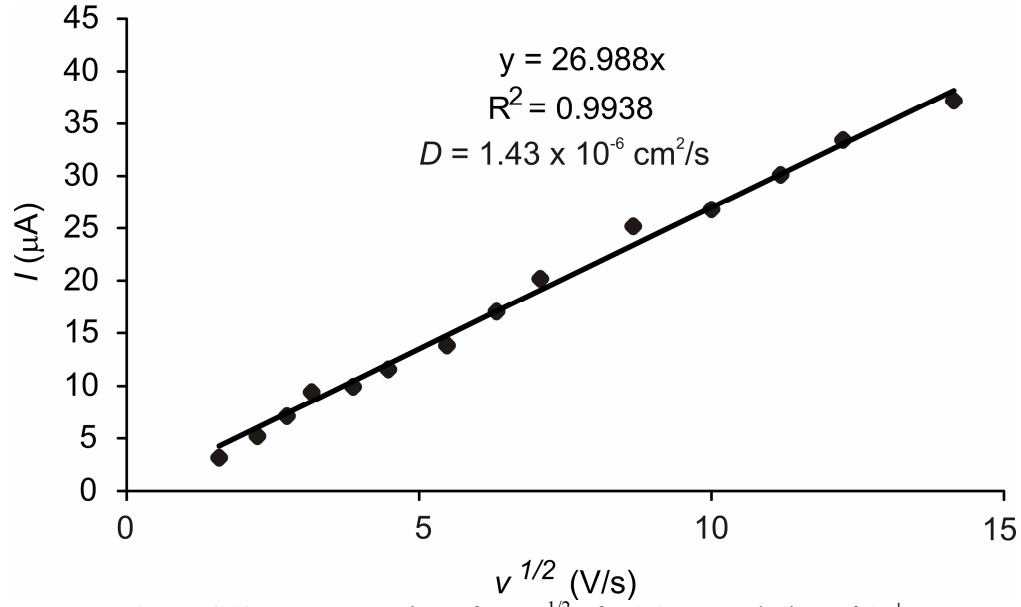


Figure S12: Representation of *I vs* $v^{1/2}$ of a 1.0 mM solution of **1a**$^+$.

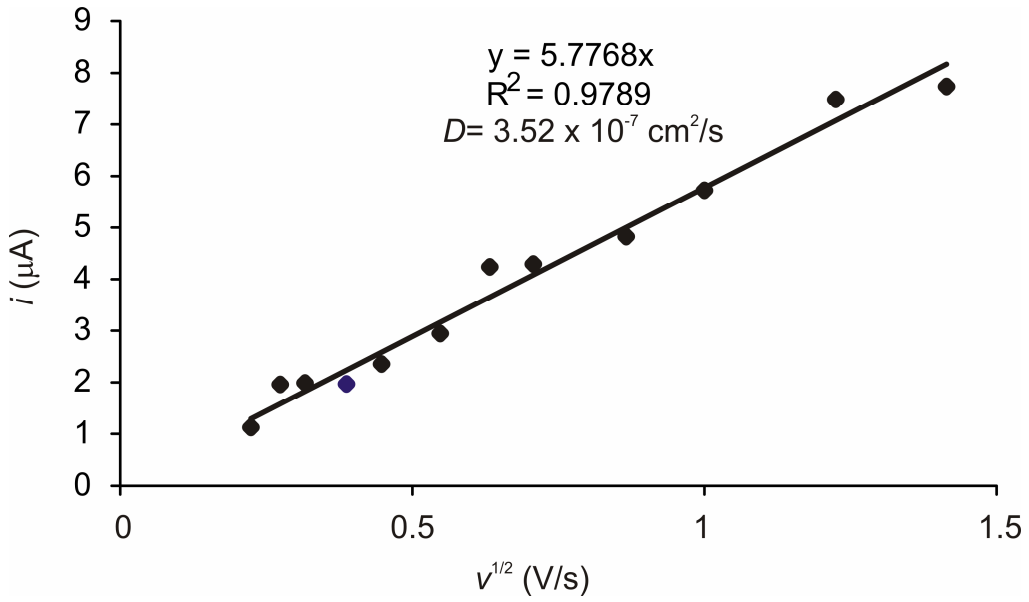


Figure S13: Representation of *I vs* $v^{1/2}$ of a 1.0 mM solution of **1a**$^+$ with 2 equivalents of **2a**.