

# Supporting Information

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## SI Text

**SI Materials and Methods. Calculation of diffusion coefficients.** Scan rate dependence of the current response was measured for **2** and **3**. The Randles-Sevcik equation:

$$i_p = 0.4463 n F A C \left( \frac{n F \nu D}{RT} \right)^{1/2} \quad [S1]$$

was used to determine the diffusion coefficient, which relates the peak height,  $i_p$  (A), to analyte concentration  $C$  ( $\text{mol cm}^{-3}$ ), area of the electrode surface  $A$  ( $0.07 \text{ cm}^2$ ), scan rate  $\nu$  ( $\text{V s}^{-1}$ ), and

diffusion coefficient of the analyte  $D$  ( $\text{cm}^2 \text{ s}^{-1}$ ).  $F$  is Faraday's constant ( $96485 \text{ C mol}^{-1}$ ),  $n$  is the number of electrons appearing in a half reaction for the redox couple ( $n = 1$  for **3**,  $n = 2$  for **2**),  $R$  is the universal gas constant ( $8.314 \text{ J mol}^{-1} \text{ K}^{-1}$ ), and  $T$  is temperature (K). Plots of peak height current vs.  $(\text{scan rate})^{1/2}$  showed a linear relationship indicating a diffusion controlled process, and the slope of the linear fit ( $b = i_p/\nu^{1/2}$ ) was used to determine diffusion coefficient. Each experiment was repeated three times, and calculated diffusion coefficients were consistent between runs. The reported value is the average of the three runs.

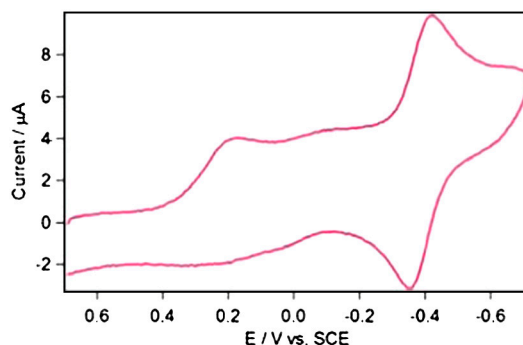


Fig. S1. Cyclic voltammogram of 0.372 mM **2** in 0.1 M  $[\text{NBu}_4][\text{PF}_6]$   $\text{CH}_3\text{CN}$  solution. Scan rate = 100 mV/s.

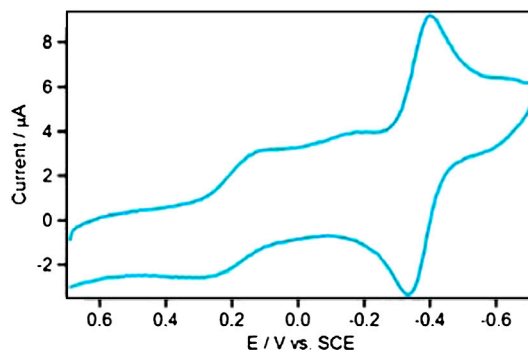


Fig. S2. Cyclic voltammogram of 0.649 mM **3** in 0.1 M  $[\text{NBu}_4][\text{PF}_6]$   $\text{CH}_3\text{CN}$  solution. Scan rate = 100 mV/s.

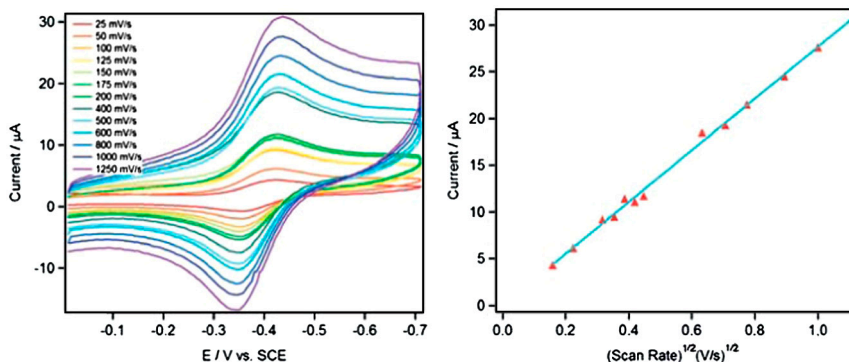


Fig. S3. (Left) Cyclic voltammograms of 0.372 mM **2** in 0.1 M  $[\text{NBu}_4][\text{PF}_6]$   $\text{CH}_3\text{CN}$  solution at varying scan rates. (Right) Peak current vs.  $(\text{scan rate})^{1/2}$  with linear fit. Slope =  $2.76 \times 10^{-5} \text{ A V}^{-1/2} \text{ s}^{1/2}$ .

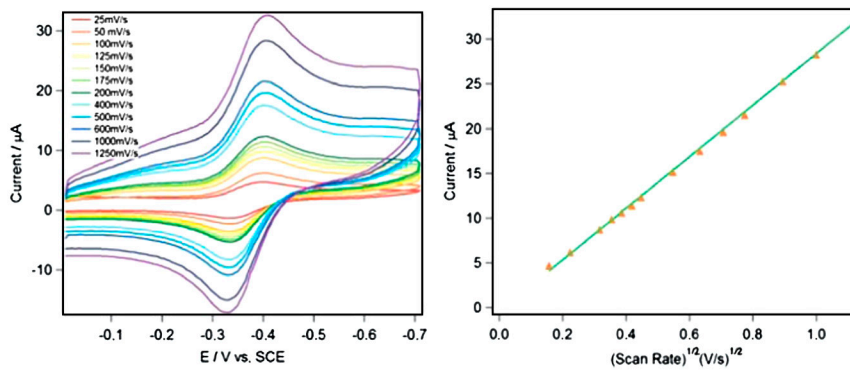


Fig. S4. (Left) Cyclic voltammograms of 0.649 mM 3 in 0.1 M [NBU<sub>4</sub>][PF<sub>6</sub>] CH<sub>3</sub>CN solution at varying scan rates. (Right) Peak current vs. (scan rate)<sup>1/2</sup> with linear fit. Slope =  $2.93 \times 10^{-5} \text{ A V}^{-1/2} \text{ s}^{1/2}$ .