

Supporting Information

Electropolymerisable Ruthenium(II) Phenanthrolines Carrying Azacrown Ether Receptors: Metal Ion Recognition in Thin Film Redox Sensors

Michael Schmittl* and Hengwei Lin

Center of Micro- and Nanochemistry and Engineering, Organische Chemie I, Universität
Siegen, Adolf-Reichwein Str. D-57068 Siegen, Germany

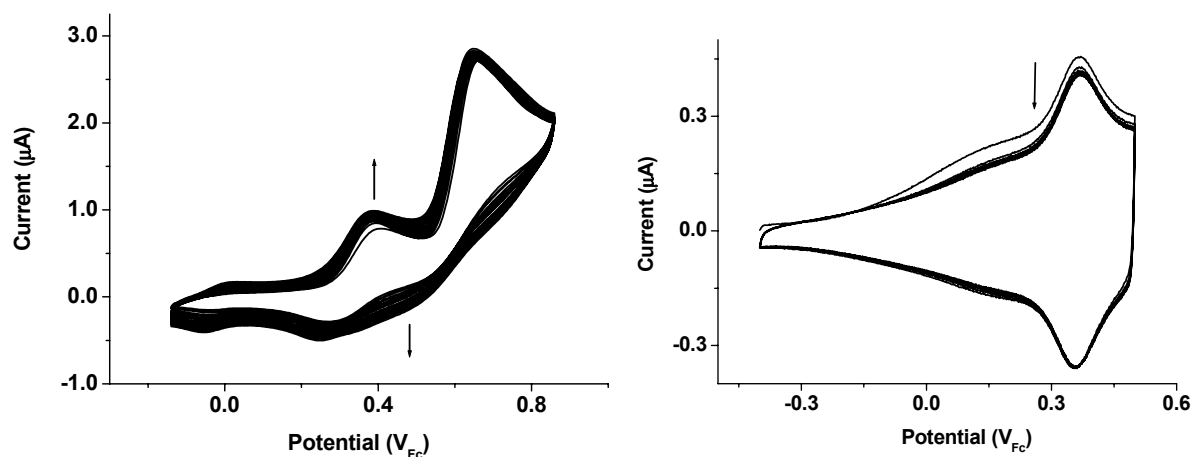


Figure S1. Electro-copolymerisation of **2** (1.0 mM) and CPDT (0.2 mM) in CH₂Cl₂ (left), and electrochemical behaviour of copoly(**2**+CPDT) in MeCN (right). 0.1 M *n*Bu₄NPF₆ was used as electrolyte.

* Prof. Dr. M. Schmittl, H.-W. Lin, M. Sc. Center of Micro- and Nanochemistry and Engineering, Universität
Siegen, Adolf-Reichwein-Str., D-57068 Siegen, Germany

Fax: (+49) 271-740-3270

E-mail: schmittl@chemie.uni-siegen.de

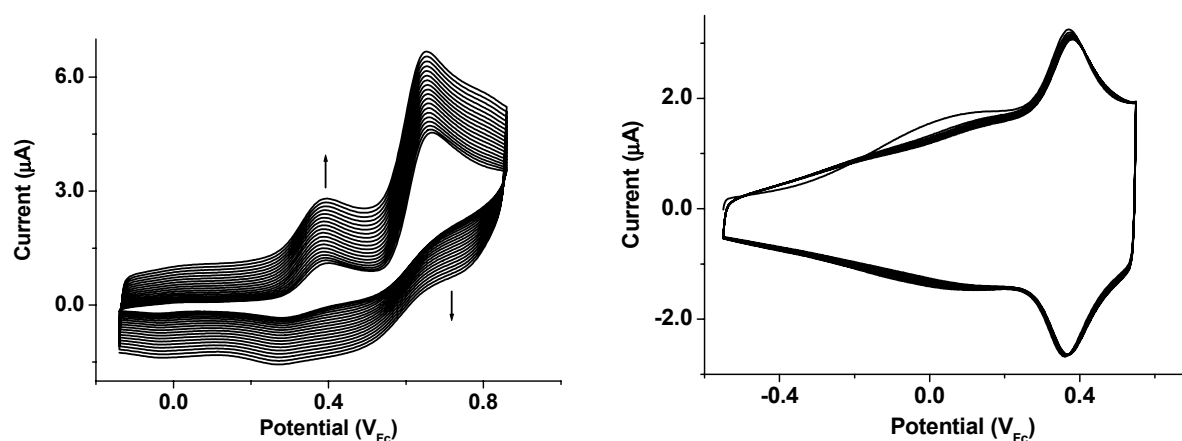


Figure S2. Electro-copolymerisation of **2** (1.0 mM) and CPDT (0.4 mM) in CH_2Cl_2 (left), and electrochemical behaviour of copoly(**2**+CPDT) in MeCN (right). 0.1 M $n\text{Bu}_4\text{NPF}_6$ was used as electrolyte.

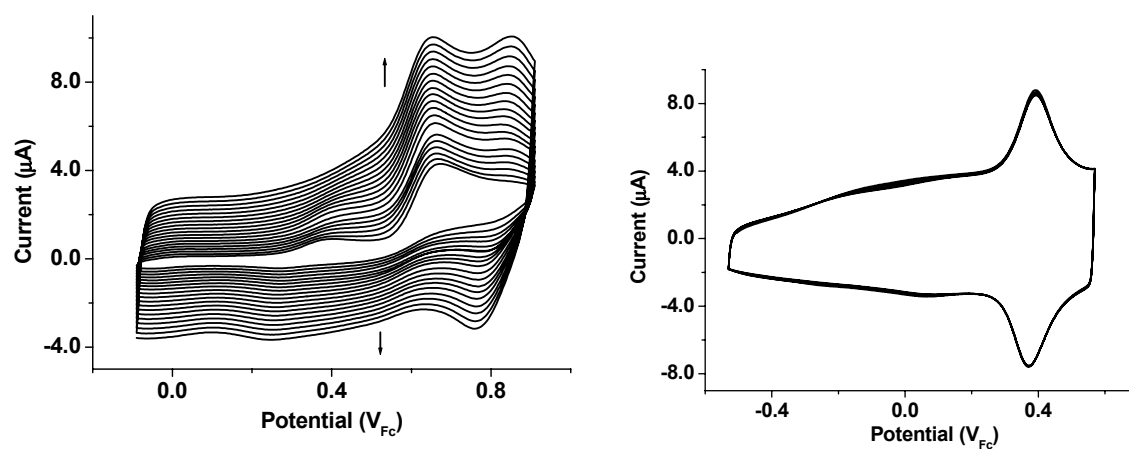


Figure S3. Electro-copolymerisation of **2** (1.0 mM) and CPDT (1.0 mM) in CH_2Cl_2 (left), and electrochemical behaviour of copoly(**2**+CPDT) in MeCN (right). 0.1 M $n\text{Bu}_4\text{NPF}_6$ was used as electrolyte.

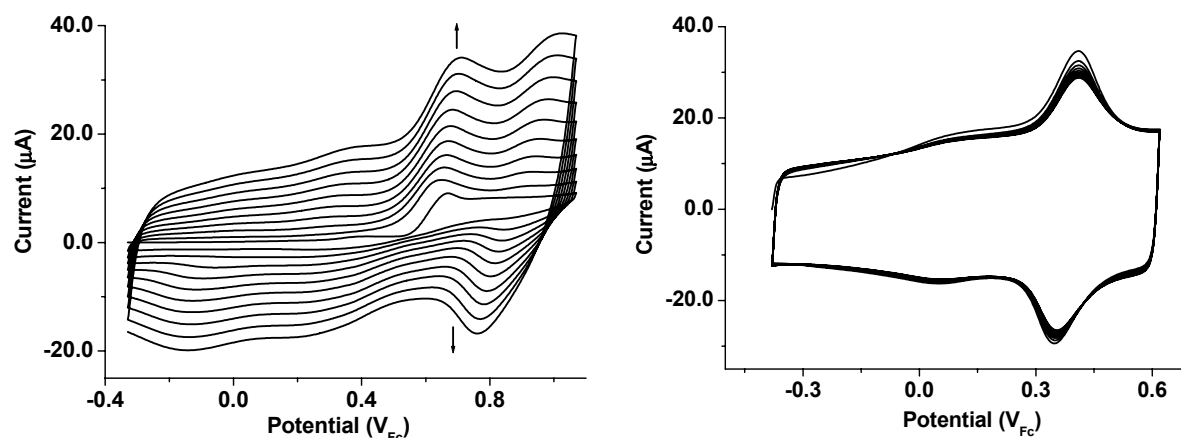


Figure S4. Electro-copolymerisation of **2** (1.0 mM) and CPDT (2.0 mM) in CH_2Cl_2 (left), and electrochemical behaviour of copoly(**2**+CPDT) in MeCN (right). 0.1 M $n\text{Bu}_4\text{NPF}_6$ was used as electrolyte.

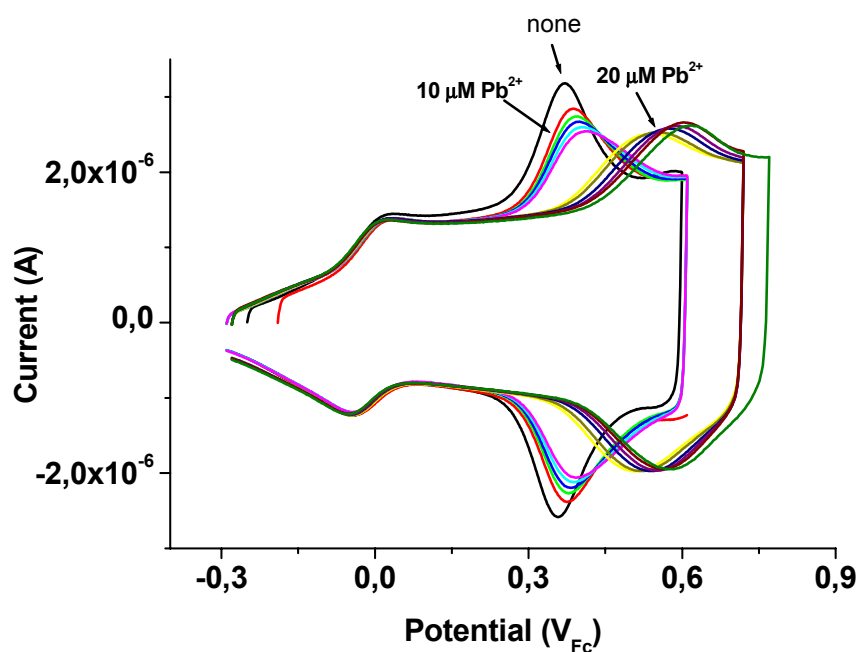


Figure S5. Electrochemical responses of copoly(**2**+CPDT) ($\Gamma = 2.4 \times 10^{-9} \text{ mol/cm}^2$) in presence of various concentrations of Pb^{2+} in MeCN. 0.1 M $n\text{Bu}_4\text{NPF}_6$ was used as electrolyte. The reversible waves on the left side show ferrocene added as internal standard. The various cyclic voltammograms recorded in presence of Pb^{2+} (10 μM and 20 μM) over 10 min exhibit an anodic shift showing that for Pb^{2+} ions their complexation at the binding site is slow.

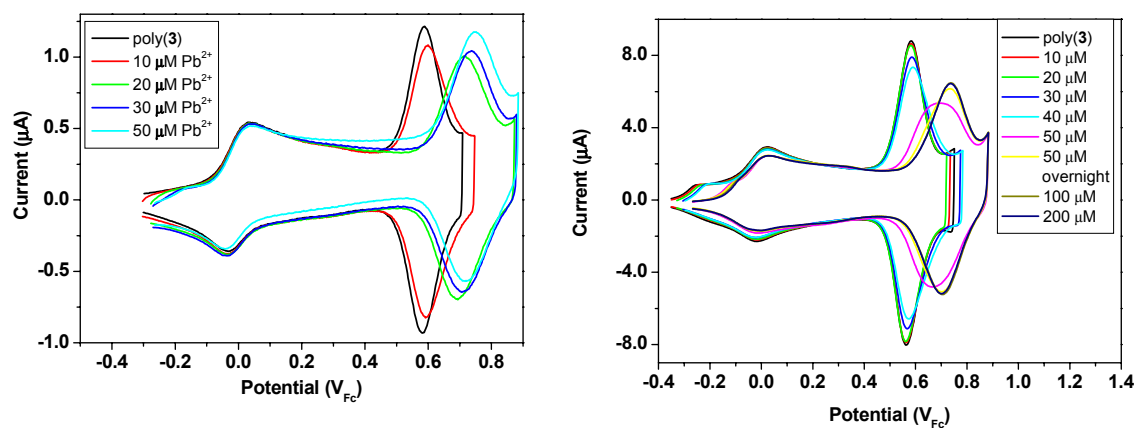


Figure S6. The different electrochemical responses of poly(**3**) towards various concentrations of Pb^{2+} as a function of different surface coverages on Pt (left: $\Gamma = 2.6 \times 10^{-9} \text{ mol/cm}^2$ and right: $\Gamma = 2.2 \times 10^{-8} \text{ mol/cm}^2$).