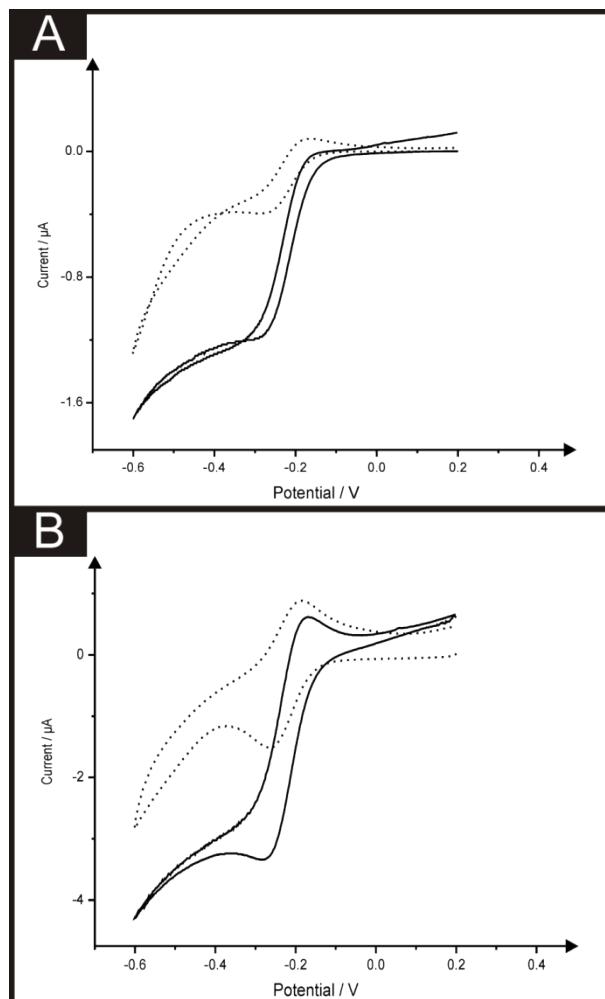


Electronic Supporting Information

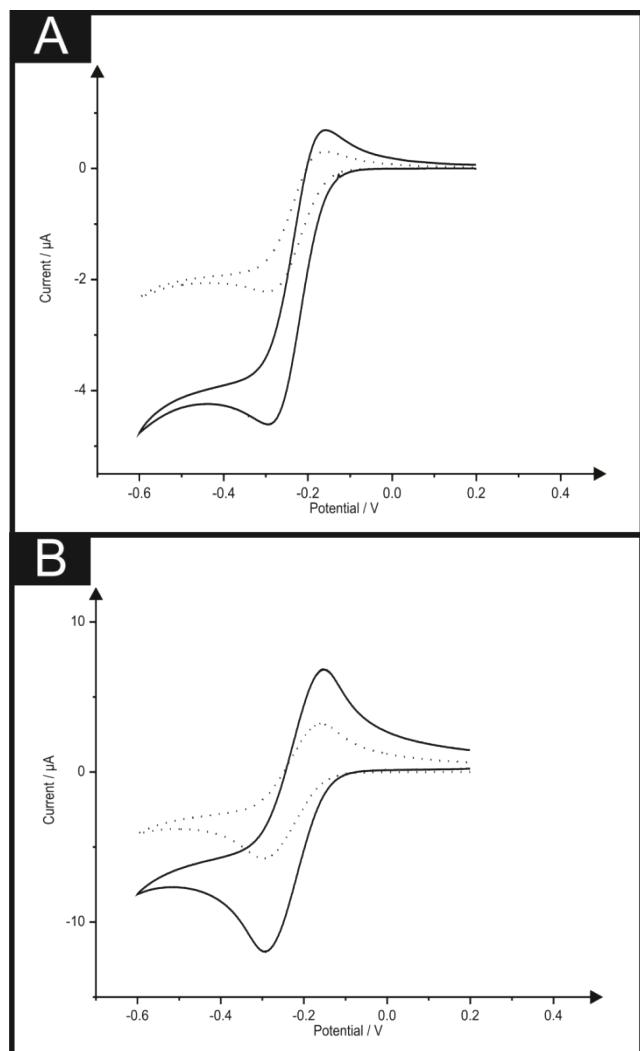
ESI Figure 1

Cyclic voltammograms recorded in 1 mM hexaammine-ruthenium (III) chloride / 0.1 M KCl at scan rates of 5 mV s⁻¹ (A) and 100 mV s⁻¹ (B) using a single MD-SPE (dotted line) and MD²-SPE (solid line).



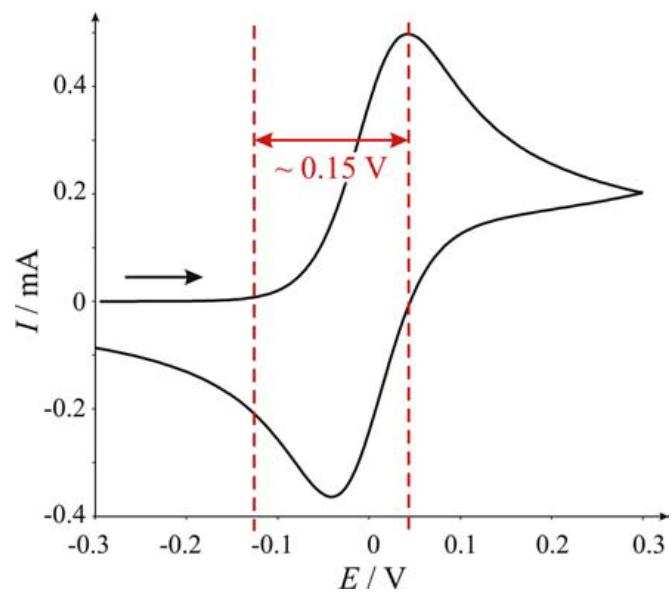
ESI Figure 2

Cyclic voltammograms recorded in 1 mM hexaammine-ruthenium (III) chloride / 0.1 M KCl at scan rates of 5 mV s⁻¹ (A) and 100 mV s⁻¹ (B) using a single B-SPE (dotted line) and B²-SPE (solid line).



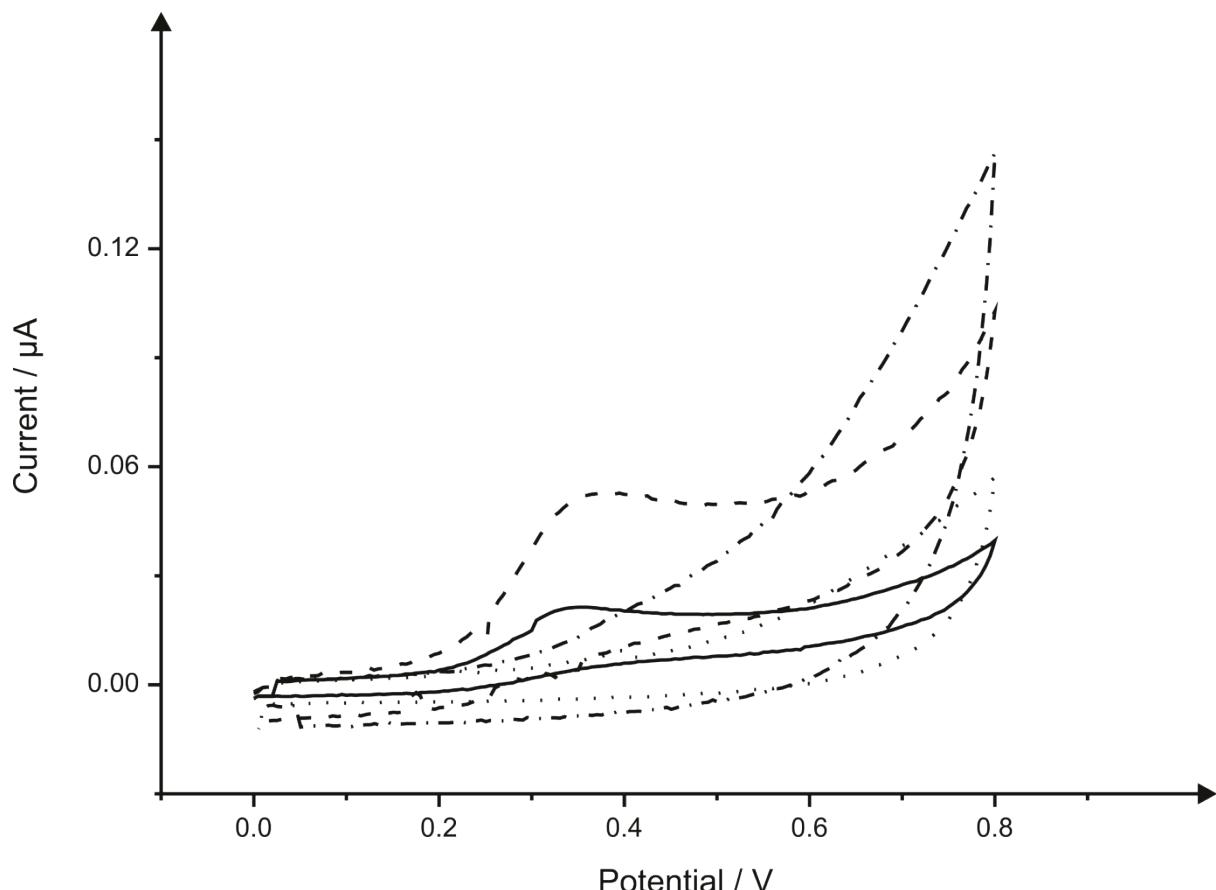
ESI Figure 4

Potential width of the voltammetric signal corresponding from a non-Faradaic to Faradaic process. Image reproduced from reference [1].



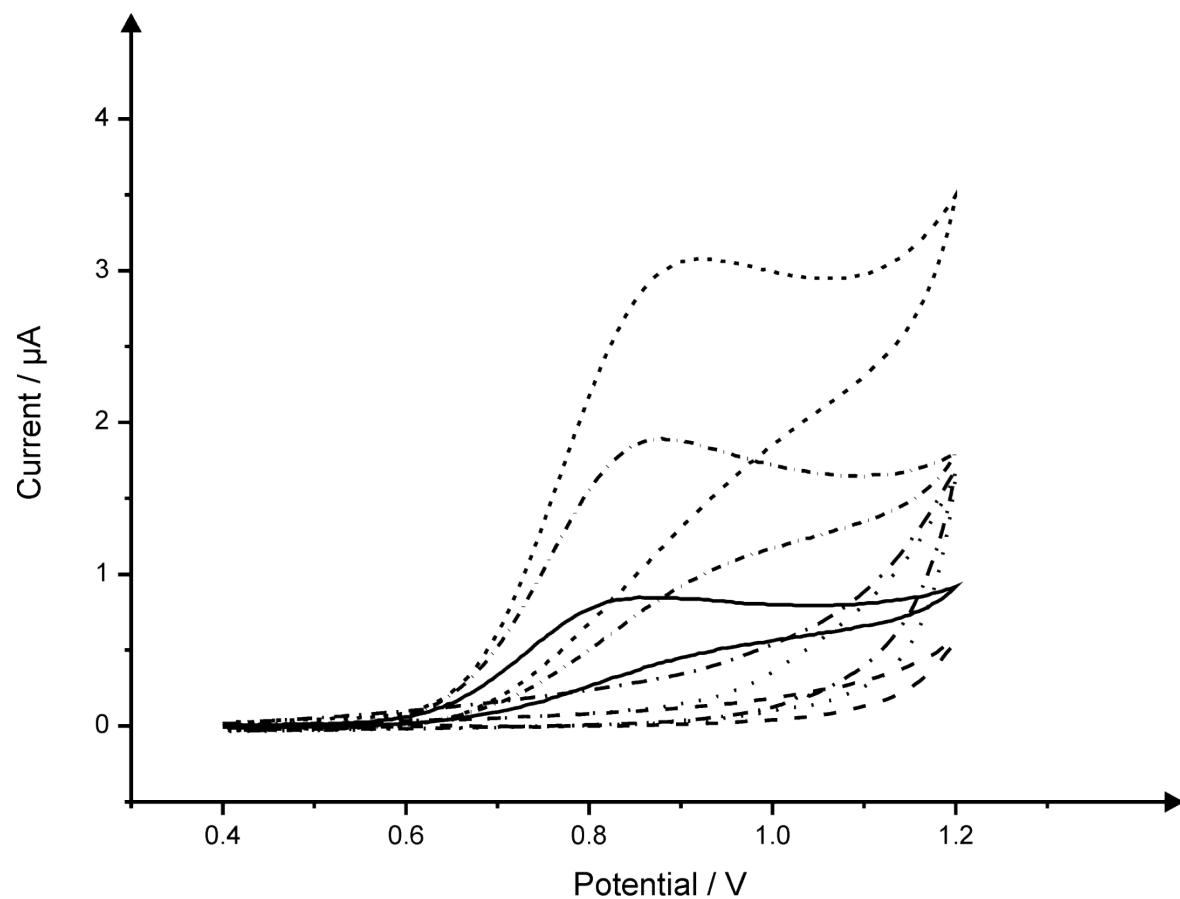
ESI Figure 5

A comparison of cyclic voltammograms obtained in presence of 6 μM NADH using the B-SPE (solid line) and B²-SPE (dashed line) and absence of NADH (dot and dot-dash lines respectively) in a solution of pH 7 phosphate buffer solution. Scan rate: 50 mV s⁻¹.



ESI Figure 6

A comparison of cyclic voltammograms obtained in presence and absence of 60 μM nitrite using the B-SPE, B²-SPE and B⁴-SPE in a solution of pH 7 phosphate buffer solution. Scan rate: 50 mV s⁻¹. Key: With nitrite: B-SPE; solid line, B²-SPE; short dash-dot line, B⁴-SPE; short dash line. Without nitrite (blank): B-SPE; dashed line, B²-SPE; dotted line, B⁴-SPE; dot-dash line.



References

1. T.J. Davies, C.E. Banks, R.G. Compton, *J Solid State Electrochem*, 2005, 9, 797