

Cover Page



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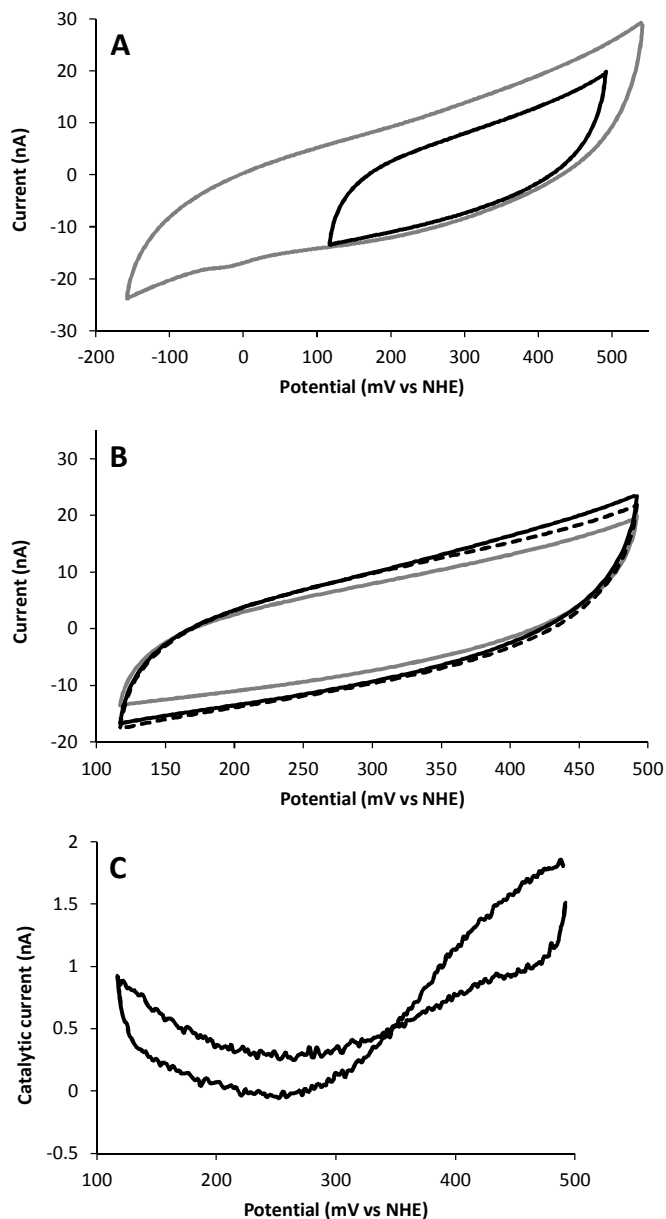
The handle <http://hdl.handle.net/1887/57991> holds various files of this Leiden University dissertation

Author: Rossius, S.G.H.

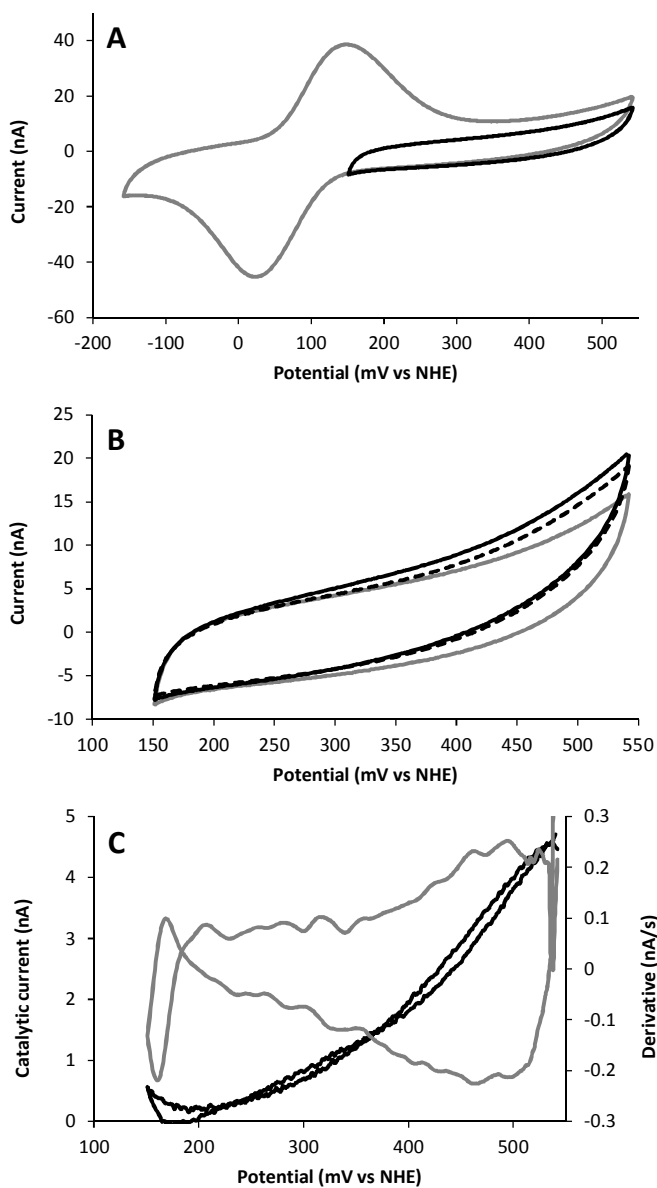
Title: Q-wires': Synthesis, electrochemical properties and their application in electro-enzymology

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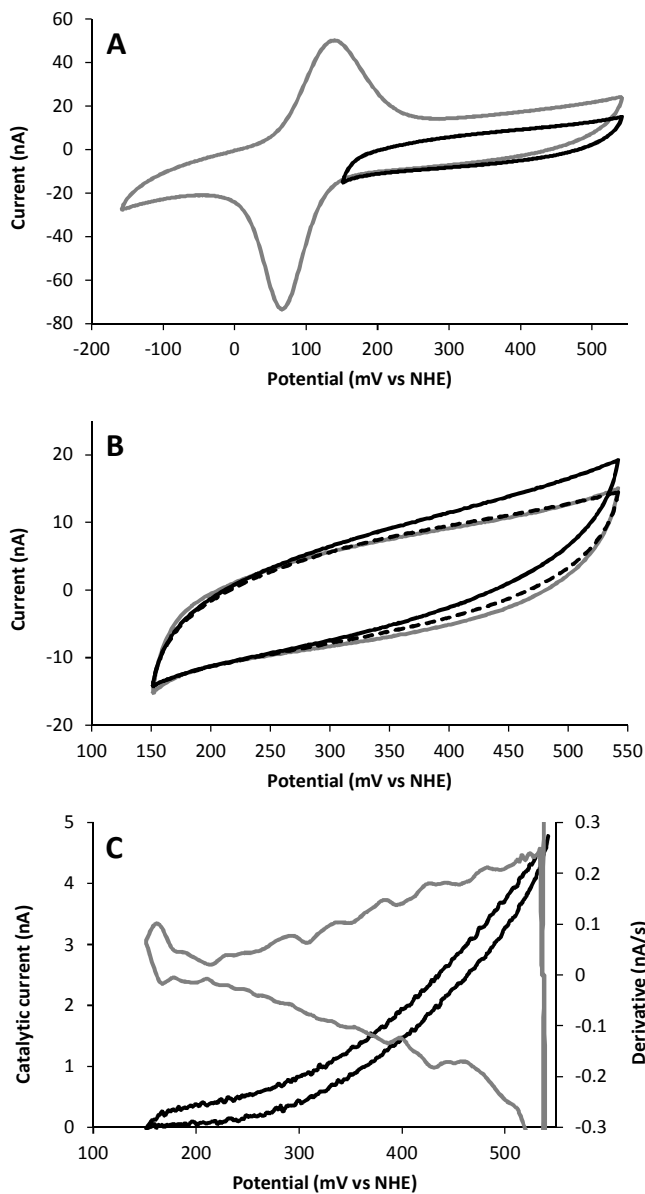
APPENDICES



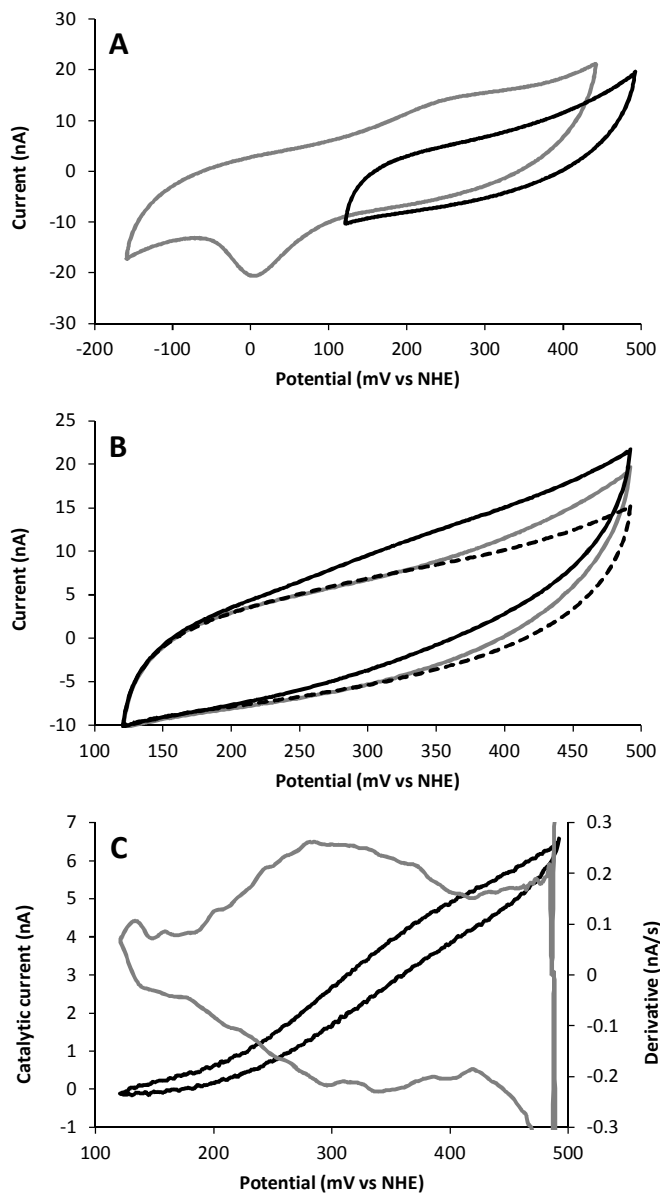
Appendix 1 (A) Cyclic voltammograms of a heptanethiol-modified electrode at different potential ranges in 50 mM MOPS pH 7.2, 5 mM EDTA, 50 mM succinate, 20°C; scan rate: 10 mV/s (B) Voltammograms after addition of *E. coli* succinate dehydrogenase (black solid line; before addition: gray line); inhibited signal after addition of oxaloacetic acid (40 mM; black dashed line) (C) 'Catalytic' current (solid minus dashed black line in B)



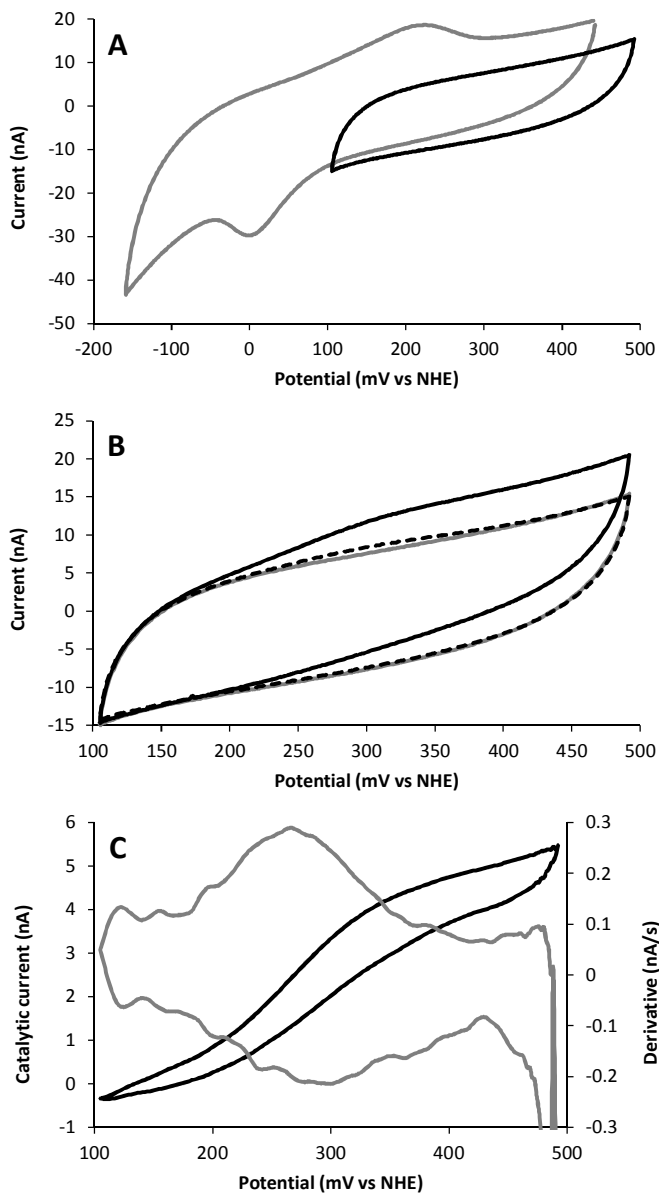
Appendix 2 (A) Cyclic voltammograms of a U_0^- and heptanethiol-modified electrode at different potential ranges in 50 mM MOPS pH 7.2, 5 mM EDTA, 50 mM succinate, 20°C; scan rate: 10 mV/s (B) Catalytic voltammogram after addition of *E. coli* succinate dehydrogenase (black solid line; before addition: gray line); inhibited signal after addition of oxaloacetic acid (40 mM; black dashed line) (C) Catalytic current (solid minus dashed black line in B) and its derivative (gray line)



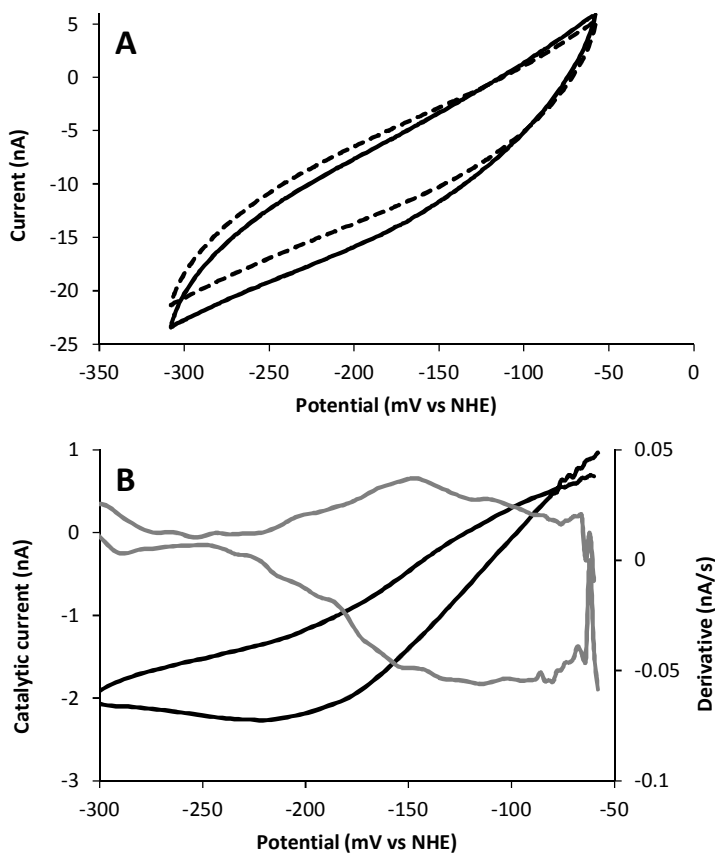
Appendix 3 (A) Cyclic voltammograms of a U_1 - and heptanethiol-modified electrode at different potential ranges in 50 mM MOPS pH 7.2, 5 mM EDTA, 50 mM succinate, 20°C; scan rate: 10 mV/s (B) Catalytic voltammogram after addition of *E. coli* succinate dehydrogenase (black solid line; before addition: gray line); inhibited signal after addition of oxaloacetic acid (40 mM; black dashed line) (C) Catalytic current (solid minus dashed black line in B) and its derivative (gray line)



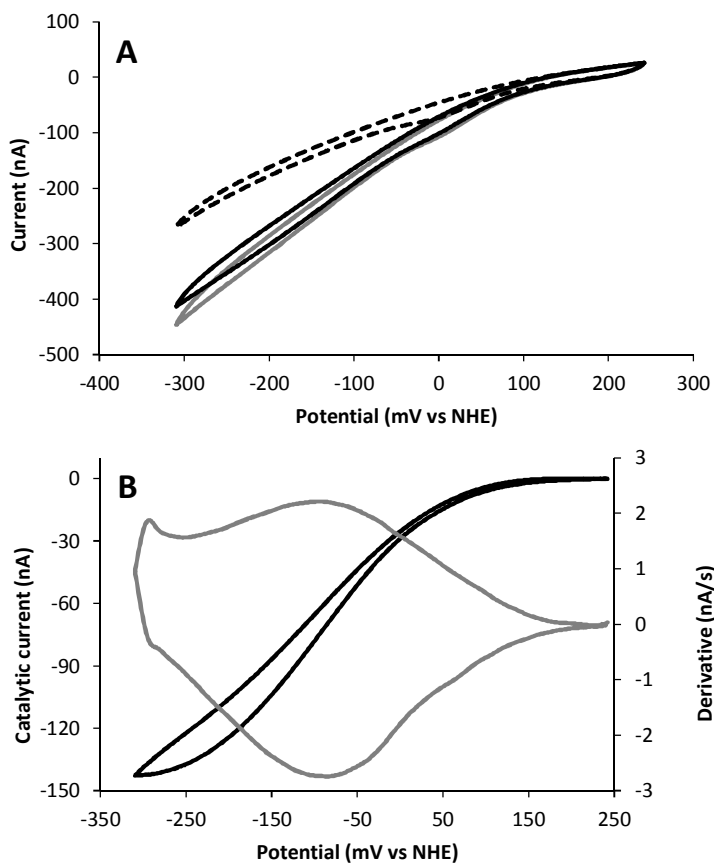
Appendix 4 (A) Cyclic voltammograms of a U_3^- - and heptanethiol-modified electrode at different potential ranges in 50 mM MOPS pH 7.2, 5 mM EDTA, 50 mM succinate, 20°C; scan rate: 10 mV/s (B) Catalytic voltammogram after addition of *E. coli* succinate dehydrogenase (black solid line; before addition: gray line); inhibited signal after addition of oxaloacetic acid (40 mM; black dashed line) (C) Catalytic current (solid minus dashed black line in B) and its derivative (gray line)



Appendix 5 (A) Cyclic voltammograms of a U_{SAT} - and heptanethiol-modified electrode at different potential ranges in 50 mM MOPS pH 7.2, 5 mM EDTA, 50 mM succinate, 20°C; scan rate: 10 mV/s (B) Catalytic voltammogram after addition of *E. coli* succinate dehydrogenase (black solid line; before addition: gray line); inhibited signal after addition of oxaloacetic acid (40 mM; black dashed line) (C) Catalytic current (solid minus dashed black line in B) and its derivative (gray line)



Appendix 6 (A) Catalytic voltammograms of *E. coli* fumarate reductase (enriched membrane suspension) before (solid line) and after inhibition with ZnSO₄ (16 mM; dashed line); buffer: 50 mM MOPS pH 7.2, 5 mM EDTA, 100 mM fumarate, 20°C; scan rate: 2 mV/s; electrode modifications: **M**₃ and *mercaptohexanol* (B) Catalytic current (solid minus dashed line in A) and its derivative (gray line)



Appendix 7 (A) Catalytic voltammograms of *E. coli* cytochrome *bo*₃ (purified) before (solid black line) and after inhibition with KCN (100 μ M; dashed line); gray line: before addition of enzyme; buffer: 50 mM MOPS pH 7.2, 5 mM EDTA, lauryl maltoside, 20°C; scan rate: 5 mV/s; electrode modifications: U_{SAT} and heptanethiol (B) Catalytic current (solid black line minus dashed line in A) and its derivative (gray line)