Research outputs:

**An Adaptive Laboratory Evolution Method to Accelerate Autotrophic Metabolism**
Research output: Research - peer-review › Book chapter – Annual report year: 2018

**Highly Conductive Poly(3,4-ethylenedioxythiophene) Polystyrene Sulfonate Polymer Coated Cathode for the Microbial Electrosynthesis of Acetate From Carbon Dioxide**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Extracellular Electron Uptake: Among Autotrophs and Mediated by Surfaces**
Research output: Research - peer-review › Journal article – Annual report year: 2016

**Freestanding and flexible graphene papers as bioelectrochemical cathode for selective and efficient CO₂ conversion**
Aryal, N., Halder, A., Zhang, M., Whelan, P. R., Tremblay, P-L., Chi, Q. & Zhang, T. 2017 In : Scientific Reports. 7, 9107
Research output: Research - peer-review › Journal article – Annual report year: 2017

**Microbial electrosynthesis for acetate production from carbon dioxide: innovative biocatalysts leading to enhanced performance**
Research output: Research › Ph.D. thesis – Annual report year: 2017

**Performance of different Sporomusa species for the microbial electrosynthesis of acetate from carbon dioxide**
Research output: Research - peer-review › Journal article – Annual report year: 2017

**Production of long chain alkyl esters from carbon dioxide and electricity by a two-stage bacterial process**
Research output: Research - peer-review › Journal article – Annual report year: 2017

**Three-dimensional Hierarchical Metal oxide-Carbon Electrode Material for High Efficient Microbial Electrosynthesis**
Research output: Research - peer-review › Journal article – Annual report year: 2017

**Acetate production enhancement from carbon dioxide reduction by using modified cathode materials in microbial electrosynthesis**
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2017

**Editorial: Current Challenges and Future Perspectives on Emerging Bioelectrochemical Technologies**
Zhang, T. & Tremblay, P-L. 2016 In : Frontiers in Microbiology. 7, 3 p., 860
Research output: Research - peer-review › Editorial – Annual report year: 2016

**Effect of tungstate on acetate and ethanol production by the electrosynthetic bacterium Sporomusa ovata**
Ammam, F., Tremblay, P-L., Lizak, D. M. & Zhang, T. 2016 In : Biotechnology for Biofuels. 9, 10 p., 163
Research output: Research - peer-review › Journal article – Annual report year: 2016
Electrosynthesis of acetate from CO₂ by a highly structured biofilm assembled with reduced graphene oxide–tetraethylene pentamine
Research output: Research - peer-review › Journal article – Annual report year: 2016

Enhanced microbial electrosynthesis with three-dimensional graphene functionalized cathodes fabricated via solvothermal synthesis
Research output: Research - peer-review › Journal article – Annual report year: 2016

Voices of biotech
Research output: Communication » Contribution to newspaper - Feature article – Annual report year: 2016

3D Graphene-based bio-cathode for Carbon dioxide reduction in Microbial Electrosynthesis
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

Adaptation of the autotrophic acetogen Sporomusa ovata to methanol accelerates the conversion of CO₂ to organic products
Research output: Research - peer-review › Journal article – Annual report year: 2015

Bioproduction of chemical Compounds by CO₂ fixing cell factories
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

Chemical production by microbial electrosynthesis
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

Conversion of fatty acids to their corresponding alcohols by Sporomusa ovata using Microbial Electrosynthesis (MES) technology
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

Effectively Improved Field Emission Properties of Multiwalled Carbon Nanotubes/Graphenes Composite Field Emitter by Covering on the Si Pyramidal Structure
Research output: Research - peer-review › Journal article – Annual report year: 2015

Electrifying microbes for the production of chemicals
Tremblay, P-L. & Zhang, T. 2015 In : Frontiers in Microbiology. 6, 10 p., 201
Research output: Research - peer-review › Journal article – Annual report year: 2015

Ethanol production in microbial electrosynthesis using Sporomusa ovata as biocatalyst
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015
Genetic evidence that the degradation of para-cresol by Geobacter metallireducens is catalyzed by the periplasmic para-cresol methylhydroxylase
Research output: Research - peer-review › Journal article – Annual report year: 2015

Harnessing light energy with a planar transparent hybrid of graphene/single wall carbon nanotube/n-type silicon heterojunction solar cell
Research output: Research - peer-review › Journal article – Annual report year: 2015

More efficient together: Hybrid bioinorganic photosynthesis yields a wide range of chemicals
Research output: Research - peer-review › Journal article – Annual report year: 2015

Screening of novel microbial catalyst in Bioelectrochemical systems (BES)
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

Sustainable production of biochemicals by CO2-fixing cell factories
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

Bioelectrochemical reduction of carbon dioxide by pure culture at the cathode
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

Constraint-Based Modeling of Carbon Fixation and the Energetics of Electron Transfer in Geobacter metallireducens
Research output: Research - peer-review › Journal article – Annual report year: 2014

Development of Graphene-based novel cathode material in MES system
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

Identification of genes specifically required for the anaerobic metabolism of benzene in Geobacter metallireducens
Research output: Research - peer-review › Journal article – Annual report year: 2014

Microbial electro synthesis: a novel strategy for flexible energy storage from electricity surplus and greenhouse gas
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

Microbial electro synthesis: understanding and strengthening microbe-electrode interactions
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

Production of butyrate and caproate from a coculture of Sporomusa ovataand Clostridium kluysteri during MES
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014
Sulfur oxidation to sulfate coupled with electron transfer to electrodes by Desulfuromonas strain TZ1
Research output: Research - peer-review › Journal article – Annual report year: 2014

Anaerobic benzene oxidation via phenol in Geobacter metallireducens
Research output: Research - peer-review › Journal article – Annual report year: 2013

Improved cathode for high efficient microbial-catalyzed reduction in microbial electrosynthesis cells
Research output: Research - peer-review › Journal article – Annual report year: 2013

Improved cathode materials for microbial electrosynthesis
Research output: Research - peer-review › Journal article – Annual report year: 2013

Sulfide-Driven Microbial Electrosynthesis
Research output: Research - peer-review › Journal article – Annual report year: 2013

Anaerobic benzene oxidation by Geobacter species
Research output: Research - peer-review › Journal article – Annual report year: 2012

The Rnf complex of Clostridium ljungdahlii is a proton-translocating ferredoxin: NAD⁺ oxidoreductase essential for autotrophic growth
Research output: Research - peer-review › Journal article – Annual report year: 2012

Geobacter: The Microbe Electric’s Physiology, Ecology, and Practical Applications
Research output: Research - peer-review › Book chapter – Annual report year: 2011

Stimulating the anaerobic degradation of aromatic hydrocarbons in contaminated sediments by providing an electrode as the electron acceptor
Research output: Research - peer-review › Journal article – Annual report year: 2010

The direct electrocatalysis of Escherichia coli through electroactivated excretion in microbial fuel cell
Zhang, T., Cui, C., Chen, S., Yang, H. & Shen, P. 2008 In : Electrochemistry Communications. 10, 2, p. 293-297
Research output: Research - peer-review › Journal article – Annual report year: 2008

Improved performances of E. coli-catalyzed microbial fuel cells with composite graphite/PTFE anodes
Zhang, T., Zeng, Y., Chen, S., Ai, X. & Yang, H. 2007 In : Electrochemistry Communications. 9, p. 349–353
Research output: Research - peer-review › Journal article – Annual report year: 2007
A novel mediatorless microbial fuel cell based on direct biocatalysis of Escherichia coli
Research output: Research - peer-review › Journal article – Annual report year: 2006

Projects:

Microbial electrosynthesis for acetate production from carbon dioxide: innovative biocatalysts leading to enhanced performance
Samfinansierede - Virksomhed
15/02/2014 → 25/08/2017
Project: PhD

Characterization and optimization of the electron transfer mechanisms involved in microbial electrosynthesis
Zhang, T., Tremblay, P. & Aryal, N.
01/03/2014 → …
Project: Research