Research outputs:

**Effect of organic loading rate on anaerobic digestion of pig manure: Methane production, mass flow, reactor scale and heating scenarios**
Research output: Research - peer-review › Journal article – Annual report year: 2019

**Improved methane production and energy recovery of post-hydrothermal liquefaction waste water via integration of zeolite adsorption and anaerobic digestion**
Research output: Research - peer-review › Journal article – Annual report year: 2019

**Microbial electrolytic disinfection process for highly efficient Escherichia coli inactivation**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Bio-Electro-Fenton processes for wastewater treatment: advances and prospects**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Bio-Electro-Fenton process for the degradation of Non-Steroidal Anti-Inflammatory Drugs in wastewater**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**BioEnergy and BioChemicals Production from Biomass and Residual Resources**
Karakashev, D. & Zhang, Y. 2018 In : Energies. 11, 8, 6 p.
Research output: Research - peer-review › Editorial – Annual report year: 2018

**Current as an indicator of ammonia concentration during wastewater treatment in an integrated microbial electrolysis cell - Nitrification system**
Zhao, N., Angelidaki, I. & Zhang, Y. 2018 In : Electrochimica Acta. 281, p. 266-273
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Electricity generation and microbial communities in microbial fuel cell powered by macroalgal biomass**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Energy-harvesting bio-electro-dehalogenation for sustainable wastewater treatment**
Microbial Community Evolution and Fate of Antibiotic Resistance Genes along Six Different Full-Scale Municipal Wastewater Treatment Processes

Microbial electrochemical separation of CO2 for biogas upgrading

Microbial fuel cell-based biosensor for toxic carbon monoxide monitoring

Salinity-gradient energy driven microbial electrosynthesis of value-added chemicals from CO2 reduction

Simultaneous biogas upgrading and biochemicals production using anaerobic bacterial mixed cultures

An overview of electron acceptors in microbial fuel cells
Ucar, D., Zhang, Y. & Angelidaki, I. 2017 In : Frontiers in Microbiology. 8, 14 p., 643

Bioelectricity production and microbial communities in microbial fuel cell powered by macroalgal biomass

Bio-electrolytic sensor for rapid monitoring of volatile fatty acids in anaerobic digestion process

Biological caproate production by Clostridium kluyveri from ethanol and acetate as carbon sources

Efficient treatment of aniline containing wastewater in bipolar membrane microbial electrolysis cell-Fenton system

Electricity generation and microbial community in response to short-term changes in stack connection of self-stacked submersible microbial fuel cell powered by glycerol

Electrochemical monitoring of ammonia during anaerobic digestion
High efficient ethanol and VFAs production from gas fermentation: effect of acetate, gas and inoculum microbial composition
Research output: Research - peer-review › Journal article – Annual report year: 2017

Integrated electrochemical-biological process as an alternative mean for ammonia monitoring during anaerobic digestion of organic wastes
Research output: Research - peer-review › Journal article – Annual report year: 2017

Microbial electrochemical sensor for online ammonia monitoring of waste streams
Zhao, N., Angelidaki, I. & Zhang, Y. 2017 1 p.
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2017

Microbial electrolytic capture, separation and regeneration of CO2 for biogas upgrading
Research output: Research - peer-review › Journal article – Annual report year: 2017

Novel bio-electro-Fenton technology for azo dye wastewater treatment using microbial reverse-electrodialysis electrolysis cell
Research output: Research - peer-review › Journal article – Annual report year: 2017

Salinity-gradient energy driven microbial electrosynthesis of hydrogen peroxide
Li, X., Angelidaki, I. & Zhang, Y. 2017 In : Journal of Power Sources. 341, p. 357-365
Research output: Research - peer-review › Journal article – Annual report year: 2017

The impact of anode acclimation strategy on microbial electrolysis cell treating hydrogen fermentation effluent
Research output: Research - peer-review › Journal article – Annual report year: 2017

System and method to control h2o2 level in advanced oxidation processes
Research output: Research › Patent – Annual report year: 2016

Alternate switching between MFC and MEC for H2O2 synthesis and residual removal in Bioelectro-Fenton system
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2016

Ammonia inhibition on hydrogen enriched anaerobic digestion of manure under mesophilic and thermophilic conditions
Research output: Research - peer-review › Journal article – Annual report year: 2016

An innovative process for biogas upgrading by the microbial electrolysis cell
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2016

Innovative microbial electrochemical process for H2O2 synthesis and residual H2O2 removal for wastewater treatment
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2016
Microbial electrochemical monitoring of volatile fatty acids during anaerobic digestion
Research output: Research - peer-review › Journal article – Annual report year: 2016

Microbial Electrochemical Systems and Technologies: It Is Time To Report the Capital Costs
Research output: Research › Comment/debate – Annual report year: 2016

Microbial electrosynthesis of hydrogen peroxide in microbial reverse-electrodialysis electrolysis cell
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2016

Monitoring of volatile fatty acids during anaerobic digestion using a microbial electrochemical sensor
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2016

Recovery of ammonia and sulfate from waste streams and bioenergy production via bipolar bioelectrodialysis
Research output: Research - peer-review › Journal article – Annual report year: 2015

Alternate switching between microbial fuel cell and microbial electrolysis cell operation as a new method to control H2O2 level in Bioelectro-Fenton system
Research output: Research - peer-review › Journal article – Annual report year: 2015

Bioelectrochemical recovery of waste-derived volatile fatty acids and production of hydrogen and alkali
Zhang, Y. & Angelidaki, I. 2015 In : Water Research. 81, p. 188-195
Research output: Research - peer-review › Journal article – Annual report year: 2015

Counteracting ammonia inhibition during anaerobic digestion by recovery using submersible microbial desalination cell
Zhang, Y. & Angelidaki, I. 2015 In : Biotechnology and Bioengineering. 112, 7, p. 1478-1482
Research output: Research - peer-review › Journal article – Annual report year: 2015

Innovative bioelectrochemical-anaerobic-digestion coupled system for ammonia recovery and biomethane production from ammonia-rich residues
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

Innovative bioelectrochemical-anaerobic-digestion integrated system for ammonia recovery and bioenergy production from ammonia-rich residues
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

Microbial electrochemical monitoring of volatile fatty acids during anaerobic digestion
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

Salinity-Gradient Energy Driven Microbial Electrosynthesis of Hydrogen Peroxide from Oxygen Reduction
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015
Innovative self-powered submersible microbial electrolysis cell (SMEC) for biohydrogen production from anaerobic reactors
Zhang, Y. & Angelidaki, I. 2012 In : Water Research. 46, 8, p. 2727-2736
Research output: Research - peer-review › Journal article – Annual report year: 2012

Self-stacked submersible microbial fuel cell (SSMFC) for improved remote power generation from lake sediments
Research output: Research - peer-review › Journal article – Annual report year: 2012

Surface Area Expansion of Electrodes with Grass-like Nanostructures to Enhance Electricity Generation in Microbial Fuel Cells
Research output: Research - peer-review › Journal article – Annual report year: 2012

Electricity generation and microbial community response to substrate changes in microbial fuel cell
Zhang, Y., Min, B., Huang, L. & Angelidaki, I. 2011 In : Bioresource Technology. 102, 2, p. 1166-1173
Research output: Research - peer-review › Journal article – Annual report year: 2011

Simultaneous organic carbon, nutrients removal and energy production in a photomicrobial fuel cell (PFC)
Zhang, Y., Noori, J. S. & Angelidaki, I. 2011 In : Energy & Environmental Science. 4, 10, p. 4340-4346
Research output: Research - peer-review › Journal article – Annual report year: 2011

Submersible microbial fuel cell for electricity production from sewage sludge
Zhang, Y., Olias, L. G., Kongjan, P. & Angelidaki, I. 2011 In : Water Science and Technology. 64, 1, p. 50-55
Research output: Research - peer-review › Journal article – Annual report year: 2011

Submersible microbial fuel cell sensor for monitoring microbial activity and BOD in groundwater: Focusing on impact of anodic biofilm on sensor applicability
Zhang, Y. & Angelidaki, I. 2011 In : Biotechnology and Bioengineering (Print). 108, 10, p. 2339-2347
Research output: Research - peer-review › Journal article – Annual report year: 2011

Electricity Generation from Organic Matters in Biocatalyst-Based Microbial Fuel Cells (MFCs)
Min, B., Zhang, Y. & Angelidaki, I. 2010
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2010

Submersible microbial fuel cell for electricity production from sewage sludge
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

Enhanced bio-decolorization of azo dyes by co-immobilized quinone-reducing consortium and anthraquinone
Research output: Research - peer-review › Journal article – Annual report year: 2009

Generation of Electricity and Analysis of Microbial Communities in Wheat Straw Biomass-Powered Microbial Fuel Cells
Zhang, Y., Min, B., Huang, L. & Angelidaki, I. 2009 In : Applied and Environmental Microbiology. 75, 11, p. 3389-3395
Research output: Research - peer-review › Journal article – Annual report year: 2009

Cathodic reduction of hexavalent chromium [Cr(VI)] coupled with electricity generation in microbial fuel cells
Research output: Research - peer-review › Journal article – Annual report year: 2008

Electricity generation in microbial fuel cells: Using humic acids as a mediator
Research output: Research - peer-review › Journal article – Annual report year: 2008
Projects:

**EcoFuel: Boosting biomass derived syngas-to-biofuels conversion with microbial electrochemical fermentation**
Zhang, Y. & Angelidaki, I.
01/07/2017 → 01/07/2020
Project: Research

**Lake remediation by microbial fuel cells**
Samfinansieret - Andet
01/02/2018 → 31/01/2021
Project: PhD

**Bioinorganic artificial photosynthesis of single cell protein from carbon dioxide.**
Xu, M., Angelidaki, I. & Zhang, Y.
Privatist
01/11/2017 → 31/10/2020
Project: PhD

**Microbial electrochemistry meet UV: For effektive degradation of organic matter**
Zou, R., Angelidaki, I. & Zhang, Y.
Stipendie fra uelandet
01/12/2017 → 30/11/2020
Project: PhD

**Innovative-bio-electrochemical-anaerobic-digestion coupled system for ammonia recovery and energy production from food-waste residues**
Zhao, N., Angelidaki, I. & Zhang, Y.
Stipendie fra uelandet
01/10/2015 → 28/02/2019
Project: PhD

**Innovative microbial electrolysis cell-anaerobic digestion coupled system for ammonia recovery and energy production from ammonia-rich residues**
Li, X., Angelidaki, I., Zhang, Y., Kougias, P., Thomsen, A. B. & Verstraete, W.
Stipendie fra uelandet
15/12/2014 → 18/04/2018
Project: PhD

**Deciphering the microbial ecology in biogas reactors for optimizing the anaerobic digestion process**
Institut stipendie (DTU)
01/12/2014 → 28/02/2018
Project: PhD

**Bioelectrochemical-anaerobic digestion-coupled system for simultaneous recovery and bioenergy production**
Stipendie fra uelandet
15/10/2014 → 20/12/2017
Project: PhD

**Development of new microbial fuel cell configuration for optimization of electricity production with simultaneous wastewater treatment**
Zhang, Y., Angelidaki, I., Karakashev, D. B., Norddahl, B. & Verstraete, W.
Institut/centerfinansieret
01/10/2009 → 30/09/2012
Project: PhD

Sustainable Production and Utilization of Microalgae for industrial wastewater treatment
Institut stipendie (DTU) Samf.
01/06/2012 → 30/08/2017
Project: PhD

ElectroAD: Innovative bioelectrochemical-anaerobic-digestion coupled system for ammonia recovery and energy production from ammonia-rich residues
Zhang, Y., Angelidaki, I. & Fotidis, I.
01/10/2013 → 30/09/2017
Project: Research

ElectroAD1: A novel method to recover ammonia from biogas plants
Zhang, Y. & Angelidaki, I.
01/04/2013 → 31/10/2013
Project: Research

Activities:

Bioelectrochemical systems serve anaerobic digestion process for process monitoring and biogas upgrading
Jin, X. (Speaker), Angelidaki, I. (Speaker), Zhang, Y. (Speaker)
12 Sep 2018
Activity: Talks and presentations › Conference presentations