Research outputs:

**Microalgae and cyanobacteria modeling in water resource recovery facilities: A critical review**
Research output: Research - peer-review › Review – Annual report year: 2019

**Control of anaerobic digestion for maximal biogas production under dynamic conditions**
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2019

**Monitoring of primary treatment: Estimation of the bioavailable organic carbon in wastewater by measuring the total organic solids (TSS) and turbidity**
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2019

**Control of anaerobic reactor treating cattle manure for maximal biogas production under dynamic conditions**
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2018

**Light attenuation in photobioreactors and algal pigmentation under different growth conditions – Model identification and complexity assessment**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Microalgae modeling in water resource recovery facilities - Toward a consensus**
Research output: Research - peer-review › Poster – Annual report year: 2018

**Microbial protein as an alternative protein source enabling circular bioeconomy**
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2018

**Microbial protein production using a novel bubble-free membrane bioreactor**
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2018

**Model-based optimization biofilm based systems performing autotrophic nitrogen removal using the comprehensive NDHA model**
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2018

**Model identification for hindered-compression settling velocity**
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2018

**Nutrient recovery from industrial wastewater as single cell protein by a co-culture of green microalgae and methanotrophs**
Research output: Research - peer-review › Journal article – Annual report year: 2018
Research in organic waste as resources: How to implement circular bio-economy in the urban context
Research output: Research › Sound/Visual production (digital) – Annual report year: 2018

The pH dependency of N-converting enzymatic processes, pathways and microbes: effect on net N₂O production
Research output: Research › peer-review › Review – Annual report year: 2018

Use of Forward Osmosis to Harvest Methane Oxidizing Bacteria Producing Single Cell Protein
Research output: Research › peer-review › Conference abstract in proceedings – Annual report year: 2018

Valorisation of Effluents from Anaerobic Digestion as Single Cell Protein – Focus on Safe Gas Supply
Research output: Research › peer-review › Conference abstract for conference – Annual report year: 2018

A systematic model identification method for chemical transformation pathways – the case of heroin biomarkers in wastewater
Research output: Research › peer-review › Journal article – Annual report year: 2017

Co-cultivation of Green Microalgae and Methanotrophic Bacteria for Single Cell Protein Production from Wastewater
Research output: Research › peer-review › Conference abstract in proceedings – Annual report year: 2017

Development and validation of a novel monitoring system for batch flocculant solids settling process
Research output: Research › peer-review › Conference abstract in proceedings – Annual report year: 2017

In-situ UV-Vis Probe to Monitor Algal Photobioreactors Treating Municipal Wastewater
Research output: Research › peer-review › Poster – Annual report year: 2017

Model-based identification of chemicals transformation pathways combined with reaction kinetics models – the case of heroin biomarkers in wastewater
Research output: Research › peer-review › Conference abstract for conference – Annual report year: 2017

Modelling biotransformation of drug biomarkers by sewer biofilms
Research output: Research › peer-review › Conference abstract for conference – Annual report year: 2017

Modelling of green microalgal growth and algal storage processes using wastewater resources
Research output: Research › peer-review › Book chapter – Annual report year: 2017

Nitrogen recovery from wastewater to produce microbial protein using methane oxidizing bacteria
Research output: Research › peer-review › Conference abstract for conference – Annual report year: 2017

N₂O emissions from a single-stage partial nitritation/anammox granule-based reactor – a model based assessment
Research output: Research › peer-review › Poster – Annual report year: 2017

Simple control rules for mitigating N₂O emissions in phase isolated fullscale WWTPs
Research output: Research › peer-review › Conference abstract in proceedings – Annual report year: 2017

Simple control strategy for mitigating N₂O emissions in phase isolated full-scale WWTPs
Research output: Research › peer-review › Conference abstract in proceedings – Annual report year: 2017

Transformation and sorption of illicit drug biomarkers in sewer biofilms
Research output: Research › peer-review › Journal article – Annual report year: 2017
UV-Vis spectrophotometry for Wastewater Resource Recovery with Algae Photobioreactors
Research output: Research › Sound/Visual production (digital) – Annual report year: 2017

A novel bioflocculation method to separate microalgal biomass cultivated on wastewater resources
Research output: Research › peer-review › Conference abstract for conference – Annual report year: 2016

Bioflocculation of green microalgae using activated sludge and potential for biogas production
Research output: Research › peer-review › Poster – Annual report year: 2016

Co-digestion of microalgae and activated sludge following a novel bioflocculation method
Research output: Research › peer-review › Poster – Annual report year: 2016

Control structure design for resource recovery using the enhanced biological phosphorus removal and recovery (EBP2R) activated sludge process
Research output: Research › peer-review › Journal article – Annual report year: 2016

Harvesting microalgae using activated sludge can decrease polymer dosing and enhance methane production via co-digestion in a bacterial-microalgal process
Research output: Research › peer-review › Journal article – Annual report year: 2016

Impact of influent quality on green microalgal cultivation with used water resources – experimental assessment combined with image analysis
Research output: Research › peer-review › Poster – Annual report year: 2016

Life cycle assessment as development and decision support tool for wastewater resource recovery technology
Research output: Research › peer-review › Journal article – Annual report year: 2016

Low-sludge age EBPR process for resource recovery – microbial and biochemical process characterization
Research output: Research › peer-review › Poster – Annual report year: 2016

Low-sludge age EBPR process for resource recovery – microbial and biochemical process characterization
Research output: Research › peer-review › Conference abstract in proceedings – Annual report year: 2017

Microbial and biochemical process characterization of a low-sludge age EBPR process for resource recovery
Research output: Research › peer-review › Poster – Annual report year: 2016

Modelling and control of nitrogen and phosphorus removing systems
Research output: Research › peer-review › Book chapter – Annual report year: 2016

Modelling of two-stage WWT systems: a faster road towards resource recovery
Research output: Research › peer-review › Conference abstract for conference – Annual report year: 2016

Optimal algal cultivation for used water resource recovery
Research output: Research › peer-review › Poster – Annual report year: 2016

Protocol for settling velocity model calibration using an innovative batch settling test– focus on identifiability analysis of the hindered-transient-compression model
Research output: Research › peer-review › Conference abstract for conference – Annual report year: 2016

Secondary settling sensor setup development – testing prototypes and compression models via practical model parameter identifiability assessment
Research output: Research › peer-review › Conference abstract for conference – Annual report year: 2016
Short-sludge age EBPR process – Microbial and biochemical process characterisation during reactor start-up and operation
Research output: Research - peer-review › Journal article – Annual report year: 2016

Sources and propagation of uncertainty in N2O model predictions
Research output: Research - peer-review › Poster – Annual report year: 2016

Systematic design of an optimal control system for the SHARON-Anammox process
Research output: Research - peer-review › Journal article – Annual report year: 2016

Systematic design of optimal control systems for WWTPs: case study of the SHARON-Anammox process
Research output: Research - peer-review › Poster – Annual report year: 2016

Towards a consensus-based biokinetic model for green microalgae – The ASM-A
Research output: Research - peer-review › Journal article – Annual report year: 2016

Towards an optimal experimental design for N2O model calibration during biological nitrogen removal
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2016

Control Structure Design for an EB2PR Process Operated as a Sequencing Batch Reactor
Research output: Research - peer-review › Poster – Annual report year: 2015

Control Structure Design of an Innovative Enhanced Biological Nutrient Recovery Activated Sludge System Coupled with a Photobioreactor
Research output: Research - peer-review › Conference article – Annual report year: 2015

EBP2R – An innovative enhanced biological nutrient recovery activated sludge system to produce growth medium for green microalgae cultivation
Research output: Research - peer-review › Journal article – Annual report year: 2015

Impact of operational conditions and reactor configuration on process performance and microbial community in short solid retention time EBPR systems
Research output: Research - peer-review › Poster – Annual report year: 2015

Life Cycle Assessment as Decision Support Tool for Development of a Ressource Recovery Technology
Research output: Research - peer-review › Poster – Annual report year: 2015

Life cycle assessment as decision support tool in early stage development of a new technology for wastewater resource recovery
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

Modeling green microalgal growth, nutrient uptake and storage in the ASM framework
Research output: Research › Sound/Visual production (digital) – Annual report year: 2015

Wastewater resource recovery via the Enhanced Biological Phosphorus Removal and Recovery (EBP2R) process coupled with green microalgae cultivation
Research output: Research › Ph.D. thesis – Annual report year: 2015

Wastewater resource recovery with green microalgae – modelling the microalgal growth, nutrient uptake and storage using ASM-A
Research output: Research - peer-review › Poster – Annual report year: 2015
A Green Micro-Algal Growth Model developed in the Activated Sludge Modeling Framework
Research output: Research - peer-review • Poster – Annual report year: 2014

An Activated Sludge Model for Mixed Green Microalgae (ASM-A): model identification and calibration
Research output: Research - peer-review • Paper – Annual report year: 2014

An Innovative Activated Sludge System for Enhanced Nutrient Recovery via Downstream Cultivation of Green Microalgae
Research output: Research - peer-review • Poster – Annual report year: 2014

Microplate-based method for high-throughput screening of microalgae growth potential
Research output: Research - peer-review • Journal article – Annual report year: 2014

Modelling and assessment of the storage of nutrients in a mixed green microalgae culture
Research output: Research - peer-review • Conference abstract for conference – Annual report year: 2014

The Effect Of Light On Mixed Green Micro-Algal Growth: Experimental Assessment And Modelling
Research output: Research - peer-review • Poster – Annual report year: 2014

A Mixed Green Micro-Algal Model (MAMO) – Model Identification And Calibration Using Synthetic Medium And Nutrient Rich Carbon Depleted Wastewater
Research output: Research - peer-review • Paper – Annual report year: 2013

Innovative Two-stage Engineering Solutions for Resource Recovery via Downstream Cultivation of Green Microalgae
Research output: Research - peer-review • Conference abstract in proceedings – Annual report year: 2013

Microalgae Biorefinery - Industrial Symbiosis
Research output: Research - peer-review • Poster – Annual report year: 2014

pH variation and influence in an autotrophic nitrogen removing biofilm system using an efficient numerical solution strategy
Research output: Research - peer-review • Journal article – Annual report year: 2013

Selection of controlled variables in bioprocesses. Application to a SHARON-Anammox process for autotrophic nitrogen removal
Research output: Research - peer-review • Poster – Annual report year: 2013

Control of SHARON reactor for autotrophic nitrogen removal in two-reactor configuration
Research output: Research • Article in proceedings – Annual report year: 2012

Control of SHARON reactor for autotrophic nitrogen removal in two-reactor configuration
Research output: Research • Poster – Annual report year: 2012

Incremental design of control system of SHARON-Anammox process for autotrophic nitrogen removal
Research output: Research • Article in proceedings – Annual report year: 2012

Incremental design of control system of SHARON-Anammox process for autotrophic nitrogen removal
Research output: Research • Sound/Visual production (digital) – Annual report year: 2012

Modelling and control design for SHARON/Anammox reactor sequence
Research output: Research - peer-review • Article in proceedings – Annual report year: 2012
**pH variation and influence in an autotrophic nitrogen removing biofilm system: An efficient numerical solution strategy**
Research output: Research - peer-review › Poster – Annual report year: 2012

**pH variation and influence in a nitrogen converting biofilm**
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

**Projects:**

Microalga-based bio-electro-remediation technology for antibiotic-dominated wastewater treatment and microalgae resource utilization study  
Project: PhD

Wastewater resource recovery via the Enhanced Biological Phosphorus Removal and Recovery (EBP2R) process coupled with green microalgae cultivation  
Project: PhD

**Activities:**

Feasibility-test of a complete autotrophic nitrogen removal process treating the effluent of an industrial anaerobic digester  
Activity: Talks and presentations › Conference presentations

Where to direct modelling efforts for a faster road towards resource recovery?  
Activity: Talks and presentations › Guest lectures, external teaching and course activities at other universities