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 › Conference abstract in proceedings – 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
Projects:

Microalga-based bio-electro-remediation technology for antibiotic-dominated wastewater treatment and microalgae resource utilization study
Pan, M., Angelidaki, I., Valverde Pérez, B. & Pan, G.
01/12/2018 → 30/11/2021
Project: PhD
Wastewater resource recovery via the Enhanced Biological Phosphorus Removal and Recovery (EBP2R) process coupled with green microalgal cultivation
Valverde Pérez, B., Plósz, B. G., Smets, B. F., Trapp, S., Oehmen, A. & Villez, K.
Technical University of Denmark
01/10/2012 → 27/01/2016
Project: PhD

Activities:

Feasibility-test of a complete autotrophic nitrogen removal process treating the effluent of an industrial anaerobic digester
Feldman, H. (Other), Flores Alsina, X. (Other), Kasper Kjellberg (Other), Blum, J. (Other), Valverde Pérez, B. (Other), Sin, G. (Other), Smets, B. F. (Other), Gernaey, K. V. (Other)
9 May 2017 → 12 May 2017
Activity: Talks and presentations › Conference presentations

Where to direct modelling efforts for a faster road towards resource recovery?
Valverde Pérez, B. (Invited speaker)
31 Mar 2016
Activity: Talks and presentations › Guest lectures, external teaching and course activities at other universities