

# Energy and water production by anaerobic osmotic membrane bioreactor



Large volume of industrial wastewaters has a potential for biogas production through conventional anaerobic digestion (AD), limited though by the need concentrating of the wastewaters. The use of anaerobic membrane bioreactor (AnMBR) combining forward osmosis with anaerobic biological treatment could not only produce energy in a form of biogas, but also alleviate environmental problems associated with the more stringent water policy. The main focus of the experimental study is to evaluate performance of FO-AnMBR fed with synthetic wastewater operated at mesophilic conditions in terms of water flux, reverse salt transport, nutrient removal, volatile fatty acids production and gas composition. The study is part of **MEMENTO project** (<http://www.memento.env.dtu.dk/>) in collaboration with **Aquaporin A/S**. Further the experimental results will be used in connection with other activities of biomimetic group.

## Project type

Topic is suitable for MSc project

## Pre-requisite

Experience with separation processes

## Group size

1-2 students

## Department of supervisors

Main supervisor: DTU Environment/Aquaporin A/S

Co-supervisor: DTU Environment

## Contact person

PhD Student Agata Zarebska,  
DTU Environment ([agza@env.dtu.dk](mailto:agza@env.dtu.dk))

