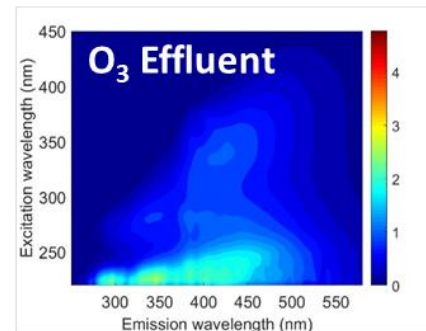
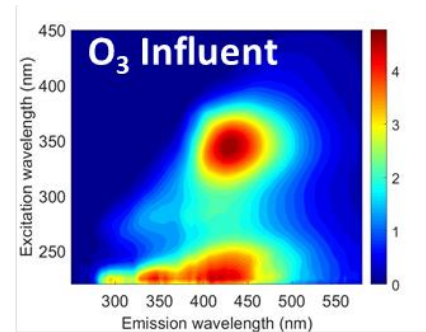


- An integrated membrane (UF/RO) skid mounted system using Dow membranes, rated for 10gpm and plumbed into our reclaim water influent line. Set up as single-pass but with capability for double-pass configuration.
- Currently being used for studies on operational optimization, brine management and microbiological treatment for potable reuse

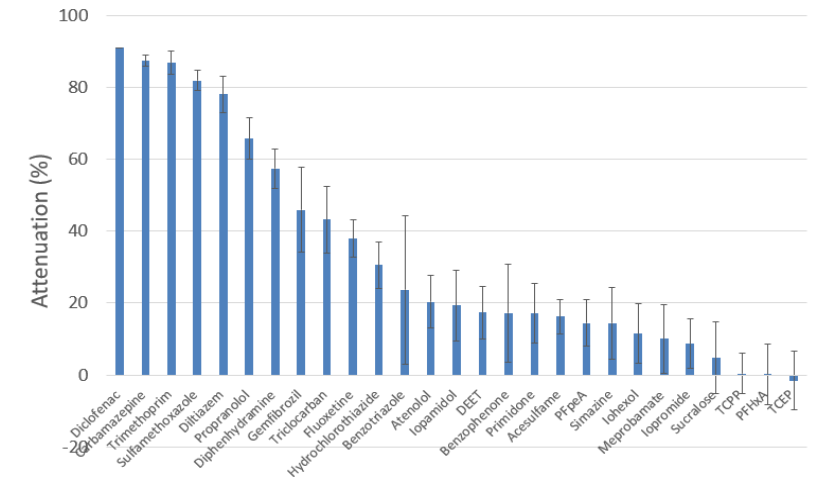


< Xylem WEDECO 8HC Ozone generator and UV reactor >

- WEDECO integrated Ozone and UV-AOP containerized system
- Ozone and UV-AOP are effective for the attenuation of bulk and trace organic compounds in wastewater effluents.



< Reduction of bulk fluorescence by ozone >



< Attenuation of trace organic compounds by ozonation, n=15 >

# Ozone-biological activated carbon (BAC)

CONTACT: Minkyu Park;  
minkyupark@email.arizona.edu

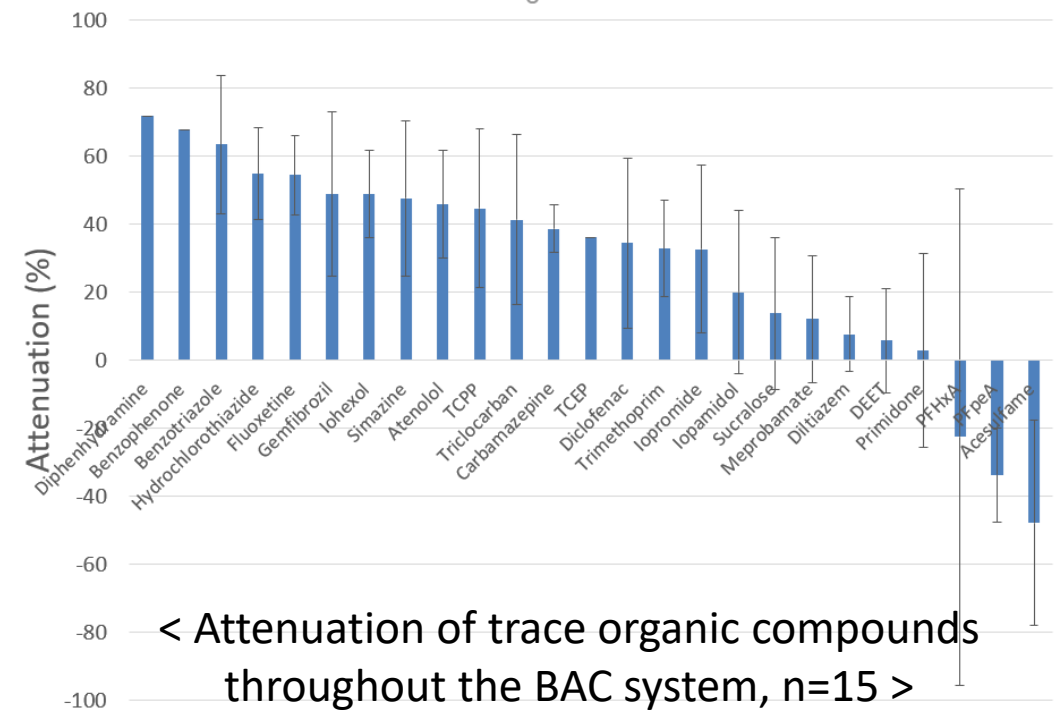


UNIVERSITY OF ARIZONA  
Water & Energy Sustainable  
Technology Center



< 4-inch column activated carbon system >

- Biological activated carbon receiving ozonated wastewater effluent has been studied for the abatement of trace organic compounds.



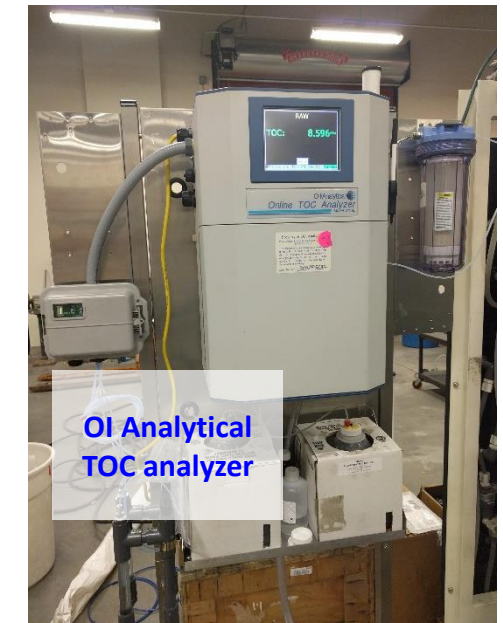
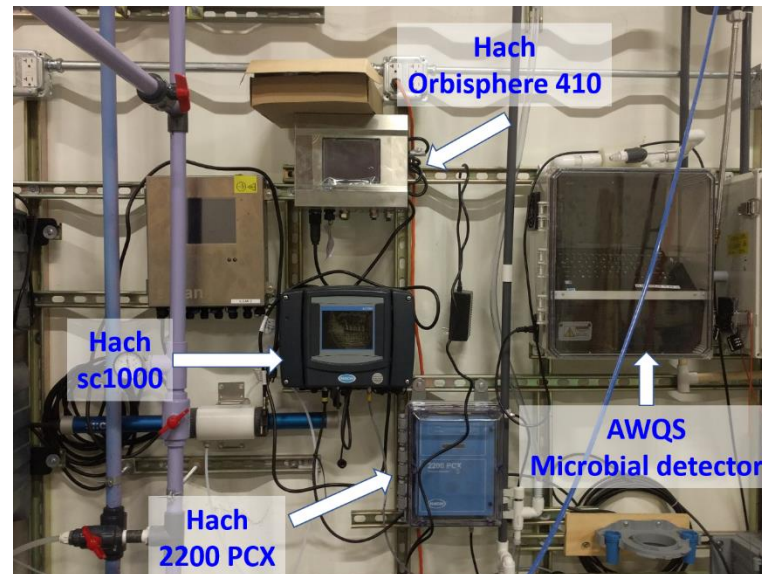
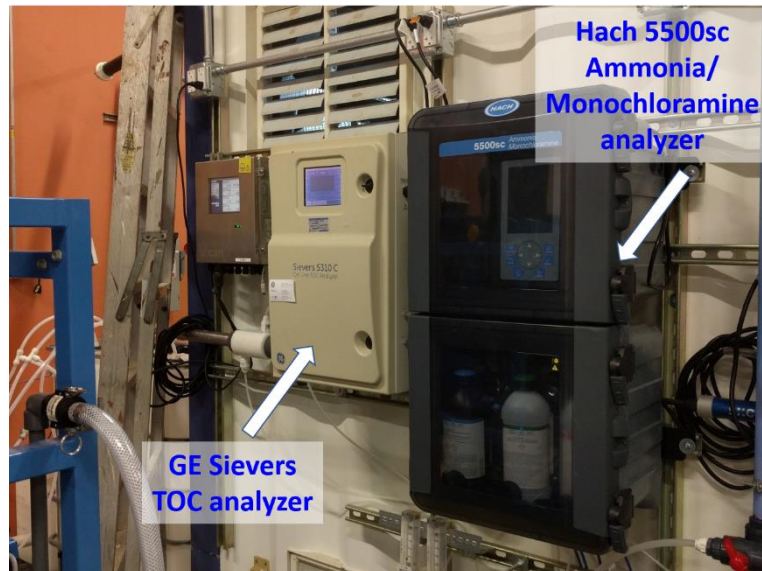
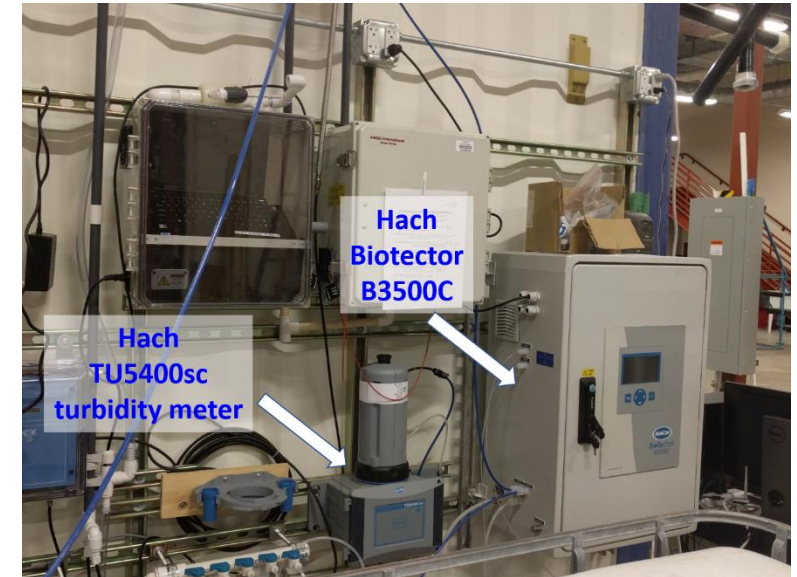
# On-line monitoring sensors

CONTACT: Ian Pepper;  
ipepper@email.arizona.edu



UNIVERSITY OF ARIZONA  
Water & Energy Sustainable  
Technology Center

- Various real-time on-line sensors can monitor anomaly of water treatment efficacies.



# Fluidized Bed Crystallizer Reactor

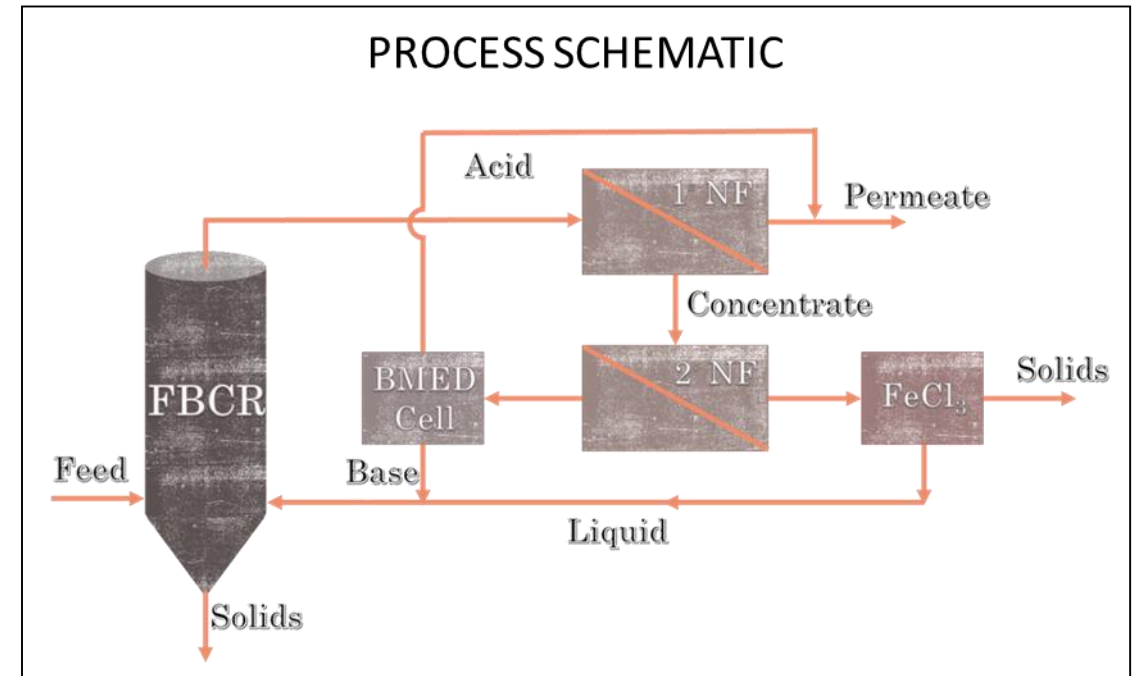
CONTACT: Jim Farrell;  
farrellj@email.arizona.edu

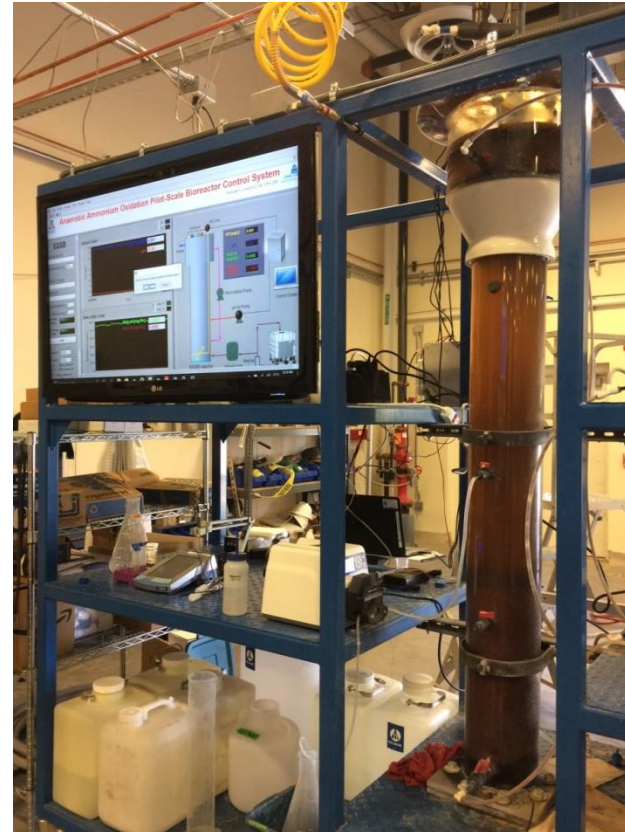


UNIVERSITY OF ARIZONA  
Water & Energy Sustainable  
Technology Center



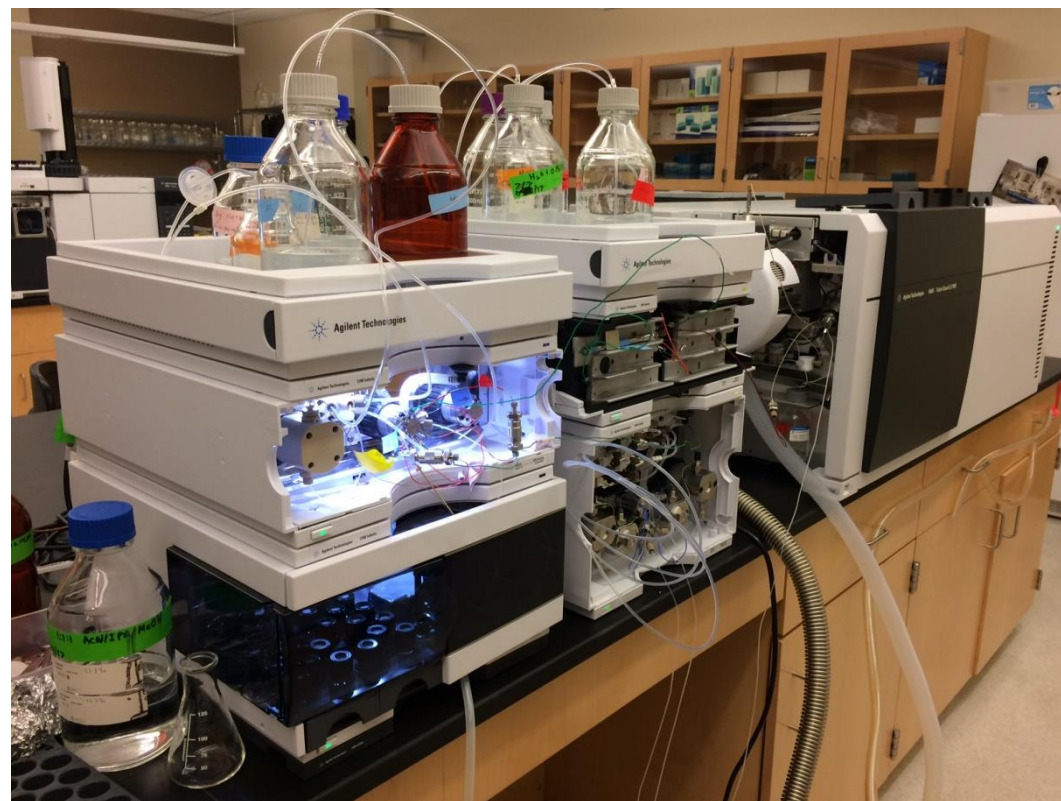
- Aim: Remove inorganic contaminants and investigate organic contaminants removal
- Experiment designs: pHs 10.5, 11, 11.5, 12





- Utilizing the microbial process of anaerobic oxidation of ammonium to N<sub>2</sub> using nitrite as terminal electron acceptor
- Conducting parallel test of Anitamox and Anammox to study process control and optimization

**Agilent 6460 Triple Quad LC/MS**



**Agilent 7890B GC System**

