

Tag Meeting No. 2

Friday, September 17, 2021

12:00 noon – 1:30 pm, Zoom Meeting <https://fsu.zoom.us/j/98894568145>

Project Title: Break the Loop of PFAS Cycling in Landfills: Aqueous PFAS Destruction or Solid Thermal Incineration?

Tag Members: Sterling Carrol, Gary Williams, Chen Lin, Boya Wang and Simeng Li

In Attendance: Sterling Carrol, Gary Williams, Chen Lin, Boya Wang, Simeng Li, Peyton Piotrowski, Runwei Li, Yudi Wu, Lin Qi, Jieya Yang, Yu Zhang and Gang Chen

A website has been developed for this research (www.eng.famu.fsu.edu/~gchen). All the information regarding this project has been uploaded to this site to facilitate the dissemination of the research discovery.

1. Project Overview

Detailed information is available at
https://web1.eng.famu.fsu.edu/~gchen/index_files/Page7296.htm

2. Research Activities of the Project

Presentation by Gang Chen, Yudi Wu and Lin Qi

3. Dissemination of the Research Plan of the Project

Meeting Presentations:

2021 ARWA/FRWA Joint Technical Training Conference in Orange Beach, Alabama

2021 FRWA Annual Conference in Daytona Beach Florida

2021 ACS Fall Meeting, Resilience of Chemistry, Atlanta, GA

2021ACS National Meeting & Expo Macromolecular Chemistry, The Second Century, Virtual

4. Potential Funding Sources for the Continuation of Related Research

NSF/CBET/Environmental Engineering

USDA

EREF

5. Discussion

Gary Williams discussed with the research group about the costs associated with PFAS treatment. A consensus is reached that the users may need to pay for the costs associated with PFAS disposal and treatment.



The research has been presented at 2021 ARWA/FRWA Joint Technical Training Conference in Orange Beach, Alabama and 2021 FRWA Annual Conference in Daytona Beach Florida. The audiences of both meetings were very interested in the research. The research team had in detail discussion with the audience and exchanged ideas by emails after the meetings.

Chen Lin pointed out the EPA regulation on PFAS. He first discussed the scale of PFAS contamination spreading. Then he discussed the EPA target level of drinking water on PFAS. Using the PFOA and PFOS as the model PFAS, EPA has regulated 70 ng/L as the standard for drinking water for both PFOA and PFOS. Chen Lin further discussed the percentage removal of PFAS from conventional wastewater treatment processes. PFAS in the wastewater might accumulate in the biosolids.

Simeng Li proposed other potential sorbents to be used besides biochar for PFAS adsorption and removal. The research team discussed with him regarding the feedstocks and engineering processes of biochar to enhance PFAS removal.

Sterling Carrol from Florida Rural Water Association (FRWA) was interested in using biosolids as feedstocks for engineered biochar. The research team agreed with this. Using biosolids as feedstocks for engineering biochar can help disposal biosolids, but also remove PFAS at the same time. Yudi Wu showed some data that engineered biochar produced using biosolids as feedstocks performed better for PFAS removal by adsorption.