

YERIN CHOE

✉ gygyerin@snu.ac.kr

EDUCATION

Seoul National University

Master of Science in Civil and Environmental Engineering

Mar. 2022 – Feb. 2024

Seoul, South Korea

Thesis: Investigation on the applicability of UV/sulfite reductive treatment of PFASs in sorption regenerant

Seoul National University

Bachelor of Science in Chemistry (cum laude)

Mar. 2017 – Feb. 2022

Seoul, South Korea

RESEARCH INTEREST

- **Water treatment:** Development of water treatment technologies for practical demonstration, Physico-chemical treatment of micropollutants, Determination and degradation of PFASs
- **Environmental impact analysis:** Material flow analysis (MFA) of basic element, Assessment of environmental impact of product and technology with life-cycle assessment (LCA), Environmental impact assessment of emerging technologies and industrial system

PUBLICATION

- Jaehee Kim, Taeyeon Kim, Heungjoo Park, Moon-Kyung Kim, Soyeon Eom, **Yerin Choe**, Jong Kwon Choe, Kyung-Duk Zoh (2024) Kinetics and proposed mechanisms of hexafluoropropylene oxide dimer acid (GenX) degradation via vacuum-UV (VUV) photolysis and VUV/sulfite processes, *Journal of Hazardous Materials* 463, 132864. <https://doi.org/10.1016/j.jhazmat.2023.132864>

RESEARCH EXPERIENCE

Metabolism-Carbon Modeling Group | Seoul National University

Mar. 2024 – Present

Research Intern (advisor: Jooyoung Park)

- Food-related Nitrogen flow analysis in Korea

Sustainable Environmental Technology Lab | Seoul National University

Postmaster fellow (advisor: Jong Kwon Choe)

Mar. 2024 – Present

- Determination and sorption removal of PFASs in industrial wastewater

Research Assistant (advisor: Jong Kwon Choe)

Mar. 2022 – Feb. 2024

- Degradation of PFASs mixture in regenerant condition by UV/sulfite process
- Monitoring PFASs by ¹⁹F NMR

Undergraduate Research Intern (advisor: Jong Kwon Choe)

Mar. 2021 – Feb. 2022

- Degradation of aqueous PFASs via photoreductive processes
- Quantification of PFOS by ¹⁹F NMR

Inorganic Molecular Conversion Lab | Seoul National University

Jun. 2020 – Feb. 2021

Undergraduate Research Intern (advisor: Yunho Lee)

- Synthesis of less rigid acir-PNP ligand to offer enhanced reactivity toward carbonyl conversion

Synthetic Organic Chemistry Lab | Seoul National University

Jun. 2019 – Feb. 2020

Undergraduate Research Intern (advisor: Hong Geun Lee)

- Enantioselective N-centered radical conjugate addition to activated alkene

PRESENTATION

- **Yerin Choe & Jong Kwon Choe** (2023, August 16-21). *Influence of regenerant conditions on degradation and defluorination efficiency of UV/sulfite reductive treatment of PFASs in sorption regenerant* [In-person oral presentation]. ACS Fall 2023, San Francisco, CA, United States.
- **Yerin Choe & Jong Kwon Choe** (2022, November 8-11). *Investigation on photoreductive degradation products and degradation mechanisms of perfluorooctane sulfonate (PFOS) using ¹⁹F NMR characterization* [Poster session]. 2022 Korean Society of Environmental Engineers Conference, Jeju, Republic of Korea.

PROJECT

- Adsorption-based removal technology and detoxification of PFASs** | Samsung Electronics **Feb. 2024 – Present**
- Sorption treatment of PFASs in wastewater with activated carbon and ion-exchange resin
 - Chromatographic analysis of PFASs in wastewater
- Integration and Utilization Framework for Carbon Neutrality Technology Information**
| Korea Environment Institute **Aug. 2024 – Present**
- Collection of process flow and carbon neutrality technology information for the petroleum refining sector
- Super Recalcitrant PFAS Treatment LAB** | National Research Foundation of Korea **Mar. 2021 – Feb. 2024**
- Reductive treatment of aqueous PFASs
- Precise Analysis of PFCs in G-tower Wastewater** | Samsung Electronics **Jul. 2023 – Dec. 2023**
- Quantification and qualification of PFASs by NMR

LEADERSHIP / EXTRACURRICULAR

- Volunteering Engineers & Scientists of SNU** **Mar. 2021 – Feb. 2022**
Team member *Seoul National University*
- Development of assistive device for improving mobility rights of visually impaired individuals
- College of Natural Sciences Students' Government** **Oct. 2018 – Mar. 2019**
Vice President *Seoul National University*
- Worked as the vice president directly elected by all undergraduate students of college of natural sciences
- 2018 Summer Science Volunteering Camp** **Aug. 2018**
Organizing committee *Seoul National University*
- Engaging in planning and volunteer work for science education and mentoring programs in rural communities
- 2017 Summer Science Volunteering Camp** **Aug. 2017**
Organizing committee *Seoul National University*
- Engaging in planning and volunteer work for science education and mentoring programs in rural communities

SCHOLARSHIP

- Alumni Association Scholarship** | 3 million KRW Fall 2023
- Alumni Association Scholarship** | 3 million KRW Spring 2023
- Alumni Association Scholarship** | 2.5 million KRW Fall 2022
- Merit-Based Scholarship** | 30% tuition Fall 2020
- Alumni Association Scholarship** | full tuition Spring 2019
- Merit-Based Scholarship** | 50% tuition Spring 2018