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a. Professional Preparation

- Ph.D. 2008 Environmental Engineering, University of Cincinnati, Cincinnati, Ohio, USA
- M.S. 2001 Environmental Engineering, Sungkyunkwan University, Korea
- B.S. 1999 Civil Engineering, Sungkyunkwan University, Korea

b. Appointments

- 2013-Present Associate Professor, Civil Engineering, Chemical & Environmental Engineering
The University of Toledo
- 2008-2013 Assistant Professor, Civil Engineering, Chemical & Environmental Engineering
The University of Toledo
- 2007-2008 Project Engineer, CDM (Camp, Dresser & McKee)
- 2002-2007 Research & Teaching Assistant, Environmental Engineering, University of Cincinnati
- 2001-2002 Research Scientist, KIST (Korea Institute of Science and Technology)
- 1999-2000 Research Assistant, Environmental Engineering, Sungkyunkwan University, Korea

c. Products

30 Refereed Journal Articles, 2 Book Chapters, 65 Conference Proceedings and Presentations

(i) Five most closely related publications

1. Liu, L., Choi, O., Seo, Y.* Elucidating Decay Kinetics of Cyanotoxins under Various Conditions in Water Distribution Systems. American Water Works Association WQTC, Salt Lake City, USA, November 2015
2. Xue, Z., Lee, W., Coburn, M. K., Seo, Y.*, (2014) Selective Reactivity of Monochloramine with Extracellular Matrix Components Affects the Disinfection of Biofilm and Detached Clusters, *Environmental Science and Technology*. 48, 3832-3839.
3. Wang, Z., Choi, W., Seo, Y.*, (2013) Relative Contribution of Biomolecules in Bacterial Extracellular Polymeric Substances to Disinfection By-product Formation, *Environmental Science and Technology*, 47, 9764-9773.
4. Wang, Z., Hessler, C. M., Zheng, X., Seo, Y.* (2012) The role of Extracellular Polymeric Substances on the Sorption of Natural Organic Matter. *Water Research*, 46, 1052-1060.
5. Wang, Z., Kim, J., Seo, Y.* (2012), Influence of Bacterial Extracellular Polymeric Substances on the Formation of Carbonaceous and Nitrogenous Disinfection By-products, *Environmental Science and Technology*, 46, 11361-11369.

(ii) Five other significant publications

6. Xue, Z., Seo, Y.*, (2013) Impact of Chlorine Disinfection on Redistribution of Cell Clusters from Biofilm, *Environmental Science and Technology*, 47(3), 1365-1372.
7. Wu, M.-Y., Sendamangalam, V., Xue, Z., Seo, Y.*, (2012) The Influence of Biofilm Structure and Total Interaction Energy on Pathogen Retention by Biofilm, *Biofouling Journal*. 28, 10, 1119-1128.
8. Xue, Z., Hessler, C., Panmanee, W., Hassett, D. J., Seo, Y.* (2013) Impact of Capsular Extracellular Polymeric Substances on *Pseudomonas aeruginosa* Inactivation Mechanisms by Model Disinfectants. *FEMS Microbiology Ecology*, 1-11.

9. Xue, Z., Sendamangalam, V. Gruden, L. C. **Seo, Y.***, (2012) Multiple Roles of Extracellular Polymeric Substances on Susceptibility of Biofilm and Detached Clusters, *Environmental Science and Technology*, 46, 13212-13219.
10. Hessler, C., Wu, M.-Y., Xue, Z., Choi, H., Seo, Y.*, (2012) The Influence of Extracellular Polymeric Substances on the Toxicological Interaction Between TiO₂ Nanoparticles and Planktonic Bacteria. *Water Research*, 46, 4687-4696.

* indicates the corresponding author; underline indicates advisees

d. Synergistic Activities

- Professional Society Affiliations: Member of American Water Works Association (AWWA), Ohio AWWA, International Water Association (IWA), Biofilm Research Group and Water Environment Federation (WEF), Ohio WEF, American Society for Engineering Education (ASEE), American Chemical Society (ACS), Association of Environmental Engineering and Science Professors (AEESP)
- Water Research Foundation project advisory board member (Project #4312)
- Water Environmental Federation Disinfection Group Committee
- International Water Association Biofilm Research Group.
- Journal Reviewer: 15 Journals) *Environmental Science and Technology*; *Water Research*; *ACS Sustainable Chemistry & Engineering*; *ACS Nano*, *Water Environmental Research*; *Journal of the Air & Waste Management*; *Journal of Environmental Engineering (ASCE)*; *Water Science and Technology*; *Journal of American Institute of Chemical Engineers*; *Journal of Clean Soil, Air, Water*; *Journal of Colloidal Science B*; *Environmental Engineering and Science*; *Sensors and Actuators B*, etc.
- Proposal Reviewer: EPA, USGS, US Army, and NSF
- Courses Taught: *Water Supply & Treatment (CIVE 3610)*, *Physico & Chemical Processes for Water Treatment (CHEE 6980)*, *Water Resources Engineering (CIVE 4610/5610)*, *Advanced Biological Processes (CIVE 6900/8900)*

e. Research Collaborators & Other Affiliations (over past 48 month)

i) **Collaborators**

Darren Lytle (US EPA), Jeff Szabo (US EPA), Jahn-Ulrich Kreft (Univ. of Birmingham), Guanghui Hua (South Dakota State University), Dionysios Dionysiou (Univ. of Cincinnati), Dominic Beccelli (Univ. of Cincinnati), Ian Papautsky (Univ. of Cincinnati), George Sorial (Univ. of Cincinnati), Daniel Hassett (Univ. of Cincinnati), Thomas Bridgeman (Univ. of Toledo), Cyndee Gruden (Univ. of Toledo), John Kirchhoff (Univ. of Toledo), Robert Nerenberg (Univ. Notre Dame), Moses Noh (Drexel University), Hyeok, Choi (Univ. of Texas Arlington), Woo Hyoung Lee (Univ. of Central Florida)

ii) **Thesis Advisor and Postgraduate-Scholar Sponsor (within 5 years):**

Zheng Xue (Ph.D. 2013, Currently working for a consulting company), Zhikang Wang (Ph.D. 2013, currently working for the Chinese government), Zongsu Wei (M.S 2010, currently a Ph.D. student at the OSU), Varunraj Sendamangalam (M.S., 2012, 2010, currently working for a consulting company), Christopher Hessler (M.S., 2011, currently working for a consulting company), Ding Xue (M.S., 2012, currently working at a consulting company), Kimberly Coburn (M.S., 2013, currently working for a consulting company), Yahya Khan (M.S 2014, currently working for a consulting company), Steven Cummins (M.S Expected 2015), Farhad Batmanghelich (M.S 2015 Currently working for a material company), Mohsen Behbahani (Ph.D. Expected 2017), Lijiao Liu (Ph.D. Expected 2018), Lei Li (Ph.D. Expected 2018), Youchul Jeon (Ph.D. Expected 2018), Rosa Mystica (Ph.D. Expected 2018), Post docs: Dr. Mau-Yi Wu (2011-2012, currently working for a consulting company in Taiwan), Dr. One-Kyun Choi (current)