NING ZHANG, PH.D.
PROFESSOR OF ENVIRONMENTAL ENGINEERING

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1. EDUCATION

- Ph. D, Civil Engineering, West Virginia University, Morgantown, WV, 2012
- M.S., Civil Engineering, West Virginia University, Morgantown, WV, 2008
- B.S., Environmental Engineering, Dalian University of Technology, Dalian, China, 2004

2. ACADEMIC EXPERIENCE

- Professor, 09/2022 – present, Central State University, Wilberforce, OH
- Associate Professor, 09/2017 – 08/2022, Central State University, Wilberforce, OH
- Assistant Professor, 09/2012 – 08/2017, Central State University, Wilberforce, OH,
- Research Assistant, 05/2012 – 08/2012, National Research Center for Coal and Energy, Water Research Institute, Morgantown, WV,
- Research Assistant, 08/2005 – 05/2012, West Virginia University, Morgantown, WV.,

3. PROFESSIONAL AFFILIATION

- Association of Environmental Engineering & Science Professors (AEESP)
- American Society for Engineering Education (ASEE)
- American Water Resources Association (AWRA)
- American Chemical Society (ACS)
- American Association of University Professors (AAUP)

4. CERTIFICATIONS or PROFESSIONAL REGISTRATIONS

- Engineering in Training (EIT) registered in West Virginia

5. PUBLICATIONS

BOOK Chapter

- **Ning Zhang**, Ankur Dwivedi, and Amita Chaudhary (2021) Physical Processes in Wastewater Treatment, *Advanced Materials and Technologies for Wastewater Treatment,* CRC Press, Boca Raton, FL, 1st Ed.

PEER REVIEWED JOURNAL PAPER

- Sakil Mahmud, **Ning Zhang** and K.V. Nedunuri (2025) Characterization of bismuth-based photocatalyst for microcystin-LR degradation and mechanism: a critical review, *Royal Society Open Science*, 12, 241506.
- **Ning Zhang**, Dianchen Gang, Louis McDonald, and Lian-Shin Lin, (2018) Background Electrolytes and pH Effects on Selenate Adsorption Using Iron-impregnated Granular Activated Carbon and Surface Binding Mechanisms, *Chemosphere*, 195, 166 -174.
- Yan, Dong; Dianchen Gang, **Ning Zhang** and Lian-Shin Lin (2013) Adsorptive selenite removal using iron-coated GAC: modeling selenite breakthrough with the pore surface diffusion model, *Journal of Environmental Engineering*, 139, 213 – 219.

- Yan, Dong; Dianchen Gang, **Ning Zhang** and Lian-Shin Lin (2011) Iron oxide-coated GAC adsorbents: diffusion-controlled sorption of selenite, *Industrial and Engineering Chemistry Research*, 50, 2214 – 2219.
- **Ning Zhang,** Dianchen Gang and Lian-Shin Lin (2010) Adsorptive removal of ppm-level selenate using iron-coated GAC adsorbents, *Journal of Environmental Engineering*, 136 (10), 1089-1095.
- **Ning Zhang,** Lian-Shin Lin and Dianchen, Gang (2008) Adsorptive selenite removal from water using iron-coated GAC adsorbents, *Water Research*, 42(14), 3809-3816.
- Yang, S., Quan, X., Li, X., Fang, N., **Zhang, N.**, Zhao, H. (2005) Enhanced photocatalytic activity of nanotube-like titania by sulfuric acid treatment, *Journal of Environmental Science*, 17, 290 – 293.

CONFERENCE PROCEEDINGS

- **Zhang, Ning**, Nedunuri, K.; Wei, X., Kandiah, R. (2022) Impact of hydraulic fracturing induced landscaping change on regional surface water quality in eastern Ohio, American Society of Engineering Education, 2022 ASEE Annual Conference, Minneapolis, MN, June, 2022.
- **Zhang, Ning**, Lowell, C., Wei, X., Liu, D. (2020) A design of research based summer workshop for STEM undergraduate students education and engagement at minority institution, American Society of Engineering Education, 2020 ASEE Virtual Annual Conference, June, 2020.
- Dong Yan, Daniel D. Gang, **Ning Zhang**, Lian-Shin Lin (2010) Modeling selenite breakthrough with the pore surface diffusion model in iron coated granular activated carbon packed bed columns, Proceedings of the 83rd Annual Water Environment Federation Technical Exhibition and Conference, 5717 - 5727.
- **Zhang, Ning**; Lin, Lian-Shin; Gang, Dianchen (2007) Evaluation of GAC-based iron-containing adsorbents for selenite removal, ACS National Meeting, Division of Environmental Chemistry, 47(2), 115-123.

6. TEACHING EXPERIENCE

COURSE ENHANCEMENT AND NEW SECTIONS

- Online course development for WRM 2200 Intro to Water Resources Management
- Course learning outcomes and assessment rubric for ENE 4596 Internship
- Demonstrated the various engineering software application (VisualMINTEQ, SewerCAD / SewerGEM, RStudio, ArcMap) in core Environmental Engineering and Water Resources courses
- Revised core ENE courses to enhance engineering design experience to meet ABET accreditation requirement

COURSE TAUGHT

- WRM 2200 Introduction to Water Resources Management: Fall 2021 | Spring 2021 | Fall 2020 | Spring 2020 | Fall 2019 | Spring 2019 | Fall 2018 | Spring 2018 | Fall 2017
- ENE 2200 Introduction to Environmental Engineering: Spring 2020 | Fall 2018 | Fall 2017
- ENE 3309 Water Chemistry: Spring 2021 | Fall 2020 | Fall 2019 | Fall 2018 | Fall 2017

- ENE 4430 Wastewater Treatment System: Spring 2021 | Spring 2020 | Spring 2019 | Spring 2018
- ENE 4440 Environmental Professional Seminar: Fall 2021 | Fall 2020 | Fall 2019 | Fall 2018
- ENE 4596 Internship: Fall 2021 | Fall 2020 | Fall 2019 | Spring 2019
- WRM 3310 Streams and Lakes: Spring 2019 | Spring 2018
- WRM 3340 Hydrometry: Spring 2021 | Spring 2020 | Spring 2019

7. CONFERENCE PRESENTATION

- KrishnaKumar Nedunuri, Ramanitharan Kandiah, Xiaofang Wei, **Ning Zhang**, Subramania Sritharan (2021) Assessing the hydrological impacts from the fragmentation of forested watersheds experiencing significant oil and gas (O&G) exploration, World Environmental & Water Resources Congress (EWRI) annual conference, 2021.
- **Ning Zhang**, KrishnaKumar Nedunuri, Ramanitharan Kandiah, and Xiaofang Wei, Unconventional Hydraulic Fracturing Impacts on Surface Water Quality in Northeast Ohio, American Water Resources Association Annual Conference, Nov., 2018.
- Ashia Burns, **Ning Zhang**, and Krishnakumar Nedunuri, Hydraulic Fracturing Flowback Fluids Analysis and Treatment, 1890 Land Grant Universities Association of 1890 Research Directors, Inc ARD Research Symposium, April, 2017
- **Ning Zhang**, Krishnakumar Nedunuri, Ramanitharan Kandiah, Xiaofang Wei Non-Ideal Behavior Characterization for Hydraulic Fracturing Flowback Fluids, 251st American Chemical Society National Meeting $ Exposition, San Diego, CA, March, 2016.
- Krishnakumar Nedunuri, **Ning Zhang** and Ramanitharan Kandiah, Water Resources Measurements & Estimations. Fall Meeting of Ohio American Water Works Association for the Southwest Region, Wilberforce, OH. October, 2015.
- Ramanitharan Kandiah, Krishnakumar Nedunuri, Xiaofang Wei, **Ning Zhang** and Michael Smith II. 2015. WII4HF: A conceptual model for computing water impact index for hydraulic fracturing. *Chemistry for Natural Resources*. 249th ACS National Meeting & Exposition. Denver, CO. March, 2015.

8. PROFESSIONAL DEVELOPMENT

RESEARCH GRANTS

- Principal Investigator: "Development of a Holistic Nano Photocatalytic Approach for Controlling Agriculturally-Induced Algal Blooms and Associated Cyanotoxins in Lake", funded by National Institute of Food and Agriculture (NIFA) Capacity Building Grants Program, 2022 – 2025. Total amount: $599,982
- Co-Principal Investigator: "Strengthening Agricultural Hyperspectral Imaging Education and Research at Central State University", funded by National Institute of Food and Agriculture (NIFA) Capacity Building Grants Program, 2017 – 2020. Total amount: $ 599,999
- Co-Principal Investigator: "Role of water quality in sustainable food production on urban landscapes", funded by National Institute of Food and Agriculture (NIFA) Capacity Building Grants Program, 2017 – 2020. Total amount: $595,014

- Co-Principal Investigator “Ecosystem Sustainment of the Appalachian Forest Regions under Natural Gas Exploration in Ohio”, funded by USDA NIFA McIntyre-Stennis Program, 2016 – 2021.