

# Shike Zhang

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## EDUCATION

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**Tongji University** SHANGHAI, CHINA

*Bachelor in Environmental Science, College of Environmental Sciences and Technology* Sep. 2018 – July 2022

- GPA: 86.62/100
- Award: Undergraduate Scholarship (Twice), Kelan Environment Scholarship
- Coursework: Sustainable Development Theory, Control of Environmental Physical Pollution, Environmental Impact and Assessment, Advanced Mathematics, Probability and Mathematical Statics, Linear Algebra etc.

**Korea University** SEOUL, SOUTH KOREA

*Exchange student*

*Department of Earth and Environmental Sciences, Korea University* July 2019

- GPA: 95/100

## ACADEMIC EXPERIENCE

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### **Evaluation of Wastewater Resource Utilization and Related Energy Consumption and Carbon Emissions**

*Key Laboratory of Yangtze River Water, Environment, Ministry of Education, UNEP-Tongji Institute of Environment for Sustainable Development* July 2021 – July 2022

- Written two reviews with topics Comparison of energy consumption and carbon emission before and after sewage is removed of heavy metals and emerging pollutants and Comparison of energy consumption and carbon emission of different treatment techniques respectively. This project is under the applying process.

### **Energy Consumption Model of Wastewater Treatment Plant**

*Key Laboratory of Yangtze River Water, Environment, Ministry of Education, UNEP-Tongji Institute of Environment for Sustainable Development* Jan. 2020 – July 2022

- Developed a new model to analyze the relationship between water qualities, both influent and effluent, and energy consumption of Wastewater treatment plants.
- Applied model to the prediction of energy consumption of Wastewater treatment plants with a few key parameters and improvement of sewage treatment standards
- Led a paper A Novel Machine Learning-based Energy Consumption Model of Wastewater Treatment Plants as first author with Hongtao Wang and Arturo A. Keller, in journal ACS ES&T Water, in press.

### **Plan of Green Development of Yangtze River and Lancang Mekong River Basin Economic Development Belt**

*Key Laboratory of Yangtze River Water, Environment, Ministry of Education, UNEP-Tongji Institute of Environment for Sustainable Development* Sep. 2020 – Dec. 2020

- Analyzed data and helped to sort out the current situation of industrial structure, energy structure, water environment and development strategic planning of coastal countries.

### **Technology of National Key Projects for Urban Water Environment Improvement**

*College of Environmental Sciences and Technology, Tongji University* Dec. 2018 – Mar. 2020

- Revealed the whole process of how sludge changes after acidification +  $K_2FeO_4$  conditioning, and explored the optimal value of dewatering effect, from the perspectives of EPS (Extracellular Polymeric Substances), particle size, type and content of organic matter.
- This project was based on my one and a half years' experiment in the lab.
- Published a paper titled Preparation of a novel sludge-derived biochar by  $K_2FeO_4$  conditioning to enhance the removal of  $Pb^{2+}$  in journal Colloid and Interface Science Communications, collaborated with my fellow students.

## ACADEMIC CONFERENCE

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**2021 National Organic Solid Waste Treatment and Resource Utilization Summit Forum** CHENGDU, CHINA

*Co-Speaker*

*College of Environment and Civil Engineering, Chengdu University of Technology* Apr. 2021

- Share the project progress of our seminar.

**6th International Symposium on Environmental Simulation and Pollution Control (2019)** BEIJING, CHINA

*Co-Speaker*

- Share the project progress of our seminar.

## EXTRACURRICULAR ACTIVITIES

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### **Tongji Shanghainese Association**

SHANGHAI, CHINA

*President*

*Sep. 2019 – Sep. 2021*

- Take charge of recruiting new members and organizing extracurricular activities regularly. Aimed to protect local language and tradition of Shanghai.

### **Survey on Economy and Environmental Effects of Street Stalls After Covid-19 in Four Provinces**

CHINA

*Leader*

*May 2019 – July 2019*

- Granted Kelan Environment Scholarship for excellent social work.

### **Work in Education Organization**

SHANGHAI, CHINA

*Teaching Assistant*

*June. 2018 – July. 2018*

- Take charge of grading homework, Q&A and substituting classes etc.

## SKILLS AND OTHERS

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- Computer: C#.Net, Python, MATLAB, Visual Basic, 3ds Max, Photoshop, After Effects, Audition, Premiere
- Language: Mandarin (Native), English
- Interests: Table Tennis, Dragon Dance, Traditional Chinese Martial Art, Swimming, etc.

## PUBLICATIONS

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1. **Shike Zhang**, Hongtao Wang\*, Arturo Keller. Novel Machine Learning-Based Energy Consumption Model of Wastewater Treatment Plants. *ACS ES&T Water*. 2021.
2. Junsen Wang, Tianrun Wang, Qinyun Zhu, **Shike Zhang**, Qi Shi, Jean-Marc Chovelon, Hongtao Wang\*. Preparation of a novel sludge-derived biochar by K<sub>2</sub>FeO<sub>4</sub> conditioning to enhance the removal of Pb<sup>2+</sup>. *Colloid and Interface Science Communications*. 2021.
3. Runyao Huang, Jin Xu, Hongtao Wang\*, Yidi Zhang, **Shike Zhang**. Evaluation on the efficiency of wastewater treatment plants with data envelopment analysis from a water-energy nexus perspective. *Energy Proceedings*. 2020.