

Yixi Tian

Eng.Sc.D. Candidate, Columbia University in the city of New York

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Education

Columbia University, School of Engineering and Applied Science, New York, NY

Master of Earth & Environmental Engineering, May 2018, cumulative GPA: 3.765/4.0

Engineering Science of Doctor, Earth & Environmental Engineering, expected May 2022.

Concentration: Sustainable of Waste Management, Environmental Materials

Research Topic: Transforming industrial residues into high value civil engineering materials

Advisor: Athanasios Bourtsalas, Nickolas J. Themelis, Shiho Kawashima

Teaching Assistant: Thermal Processing of Waste and Biomass Materials, Solid and Hazardous Waste Management

Hefei University of Technology (HFUT), School of Resource and Environmental Engineering, Hefei, China

Bachelor of Engineering in Environmental Engineering, Jun.2016, cumulative GPA: 88.14/100

Thesis: Technical Study of Palygorskite Clayey Dolomite for Removal Lead Ions from Aqueous Solution (2016)

Advisor: Prof. Tianhu Chen

Honor: Third-class Scholarship for Academic Performance (2015), Single Scholarship for Social Activity (2014), University Excellent Graduation Thesis (2016)

Research Experience

Earth Engineering Center, Columbia University, New York, NY

Jun.2017 – Dec.2017

- Research: Assess the viability of using WTE residues in civil engineering applications. Identify the beneficial uses, physical and chemical transformation. Explore the optimum solution and valuable utilization for WTE residues.
- Symposium: Production of Structural Concrete from Waste to Energy Bottom Ash (oral presentation, Oct. 2017).
The Performance and Utilization from Waste to Energy Residues (poster presentation, Oct. 2018).
- MS Thesis: Production of Structural Concrete from Waste to Energy Bottom Ash, May. 2018

Laboratory for Nano-mineralogy and Environmental Material, HFUT, Hefei, China

Jun.2014 – Jul.2016

- Program: National College Students Innovation and Entrepreneurship Training Program, Team Leader
- Research: Investigate the performance and mechanisms for the removal heavy metal ions from aqueous solution by clayey dolomite in palygorskite clay deposit. Devote over 1000 hours in experimental work. Write proposals, accomplish academic report, pass oral defense and succeed in obtaining project approval.
- Result: A higher solid-aqueous rate and higher pH value can improve the removal efficiency. The main mechanism of removal is that lead ions are induced to deposit by clayey dolomite, and meanwhile produce hydrocerussite after dolomite dissolution.

Publication & Patent

- The Function and Mechanism of the Removal of the Lead Ions from Aqueous Solutions by Clayey Dolomite, Acta Petrologica et Mineralogica, Vol.36, No. 1: 104~109, Jan., 2017. (First Writer)
- Performance and Mechanisms for the Removal of Copper ions from Aqueous Solutions by Clayey Dolomite, Geological Journal of China Universities, December 2015, Vol.21, No.4, pp.616-622. (One of co-authors)
- Patent for Invention: Method for treating heavy metal wastewater. State Intellectual Property Office, China. Application No.: CN:201510582084:A, Publication No.: CN105110445A.
- Patent for Invention: Heavy metal wastewater treatment material and method thereof. State Intellectual Property Office, China. Application No.: CN:201610224584:A, Publication No.: CN105858832A.

Course Project

The Fu Foundation School of Engineering and Applied Science, Columbia University, New York, NY

Course final project of Industrial Ecology and Earth Resource

December 2018

- Life Cycle of Lightweight aggregate (A+)

Course final project of GIS-Resources Environment Infrastructure Management

May 2017

- Potential Impact of Vesuvius on Population in Campania (Italy) (A+)

- Course group project of Environmental Biochemical Processing Dec. 2016
- Evil Twin Brewery Water Resource Recovery Facility - A Comparison of Two Systems (A)
- Course group project of Thermal Treatment of Waste and Biomass Materials Dec. 2016
- Transforming South Oak Creek CPP into a Waste to Energy Facility (A-)

School of Resource and Environmental Engineering, Hefei University of Technology, Hefei, China

- Course project of Water Pollution Control Engineering Jul. 2015
- Design engineering procedure of a sewage treatment plant independently. Choose the complicated Obel oxidation ditch as the treatment procedure and finish the tough parameter calculation. (A)
- Course project of Air Pollution Control Engineering Jul. 2015
- Design an acid mist control system for a metal product factory. Choose sulfite process as the factory procedure and finish parameter calculation. (A)

Additional Experience

Hefei University of Technology, School of Resource and Environmental Engineering, Hefei, China

- Production practice Jun. 2015
- Anhui Conch Cement Company dry cement clinker production line to survey its pollution distribution
 - Flue gas desulfurization system of Masteel No.2 ironmaking plant, Maanshan energy plant sewage treatment station and Magang Coking Co., Ltd
- University Sports Games Oct. 2012 & Oct. 2013
- 5th (2012) and 6th (2013) place in Women’s High Jump

Technical Skills

- X-ray Diffraction Certification in SMCL, Columbia Nano Initiative
- Zeiss SEM/EDS Certification in Electron Microscopy, Columbia Nano Initiative
- Instron 600DX 135k Universal Testing Machine, Lab Access in Robert A.W. Carleton Strength of Materials Laboratory, Columbia University
- ICP-OES Operation and Data Analysis, Lamont-Doherty Earth Observatory
- AAS (Atomic Absorption Spectroscopy) Operation and Data Analysis
- C14 Certificate Issued by NYC Fire Department
- French Horn, Grading Test Level 7 Certificate, China Conservatory of Music
- Design-Expert Software
- AutoCAD
- Origin
- JMP
- Simapro
- Biowin
- MDI Jade
- Microsoft Office
- ArcGIS
- C Language
- R Language
- WordPress