Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

name	**Zhang wei**	**gender**	**man**	**Date of birth**	**1973.09**	**job title**	**Professor, senior engineer**
Highest academic qualifications	**graduate student**	**Highest degree**	**doctor**	**mailbox**	**hnweizhang@163.com**		
Education							
1991.09-1994.06, Department of Urban Construction, Hunan College of Urban Construction, Water Supply and Drainage Engineering **2002.09-2005.06, Master of Engineering, School of Civil Engineering, Hunan University** **2006.09-2011.06, Ph.D. in Municipal Engineering, School of Civil Engineering, Hunan University**							
Scientific research and education reform projects							
[1] 2024 National Natural Science Foundation of China (52370074, 520,000 RMB) **[2].2020 National Natural Science Foundation of China General Project - Study on the Mechanism of Modified Shell Powder/Ce-N-TiO2 Adsorption and Photocatalytic Degradation of Typical Dissolved Organophosphorus (42071122, 550,000 RMB, Principal Investigator)** **[3]. Collaborative Education Project of the Department of Higher Education of the Ministry of Education: Construction of School-Enterprise Cooperation Innovation and Entrepreneurship Base for Water Supply and Drainage Science and Engineering in Local Universities under the Background of Engineering and New Engineering (201902099006, 10,000 yuan, host)** **[4].2015 Hunan Provincial Natural Science Foundation General Project - Research on the Degradation of Organophosphorus Pesticide Wastewater by Coagulation and Precipitation-MWNTs/TiO2 Photocatalytic Process (2015JJ2022, 40,000 RMB, Principal Investigator)** **[5].2013 Hunan Provincial Education Science "Twelfth Five-Year Plan" Project - Reform and Application of Practical Teaching Platform for Engineering Majors in Colleges and**							

Universities Based on the Education and Training of Outstanding Engineers (10,000 RMB, Host)

[6]. 2012 "Twelfth Five-Year" National Science and Technology Support Program Project Sub-project - Integration of Groundwater Source Monitoring Technology in Villages and Towns (2012BAJ24B03-2, 370,000 RMB, Principal Investigator)

2011 Hunan Provincial Department of Education Key Scientific Research Project - Phosphoric Acid Activation-Microwave Pyrolysis Method to Optimize the Preparation of Sludge Adsorption Materials (11A022, 80,000 RMB, Principal Investigator)

[8]. Hunan Provincial Scientific Research Program - Functionalization of Carbon Nanotube/TiO2 Composites and Their Photodegradation of Polychlorinated Benzene in Water (40,000 RMB, Principal Investigator)

Scientific papers

[1].ZHANG Wei,LI Liwu,ZHANG Qian,XU Shunkai,ZHANG Hua. Photocatalytic degradation of typical chlorobenzene compounds by MWNTs/TiO2[J], Journal of Environmental Science, 2012, 32(03), 631-639

[2].ZHANG Wei,SHI Zhou,ZHANG Qian,XU Shunkai,ZHANG Hua. Synergistic effect of MWNTs/TiO2 adsorption on 1,2,3-trichlorobenzene and photocatalytic degradation[J], Journal of Hunan University (Natural Science Edition), 2012, 39(01), 71-76

[3]. Zhang Wei, Shi Zhou, Zhang Qian, Zhang Hua, Xu Shunkai. Photocatalytic degradation of 1,2,4-trichlorobenzene by carbon nanotube-supported TiO2[J], Environmental Science, 2011, 32(07), 1974-1980.

[4]. Zhang Wei, Shi Zhou, Zhang Qian, Zhang Hua, Xu Shunkai. Effect of Preparation Process Conditions of Composite Photocatalysts (TiO2/MWNTs) on Photocatalytic Degradation Kinetics of Methyl Orange[J], Environmental Chemistry, 2011, 30(02), 549-554.

[5]. Shi Zhou, Zhang Qian, Zhang Wei, Xu Shunkai, Zhang Hua. Photocatalytic degradation of 1,2,3-trichlorobenzene by microwave-modified MWNTs/TiO2 composites[J], Environmental Science, 2012, 33(11), 3840-3846.

[6]. Zhang Wei, Yang Liu, Li Liwu, Xu Shunkai, Zhang Hua. Preparation of sludge adsorbents by phosphoric acid activation-microwave pyrolysis[J].Chinese Journal of

Environmental Engineering,2013,7(07):2699-2704.)

[7]. Zhang Wei, Yang Liu, Jiang Haiyan, Wang Caiwen, Wang Aihe, Zhou Jun. Characterization of sludge activated carbon and its adsorption characteristics of Cr(VI.)[J].Chinese Journal of Environmental Engineering,2014,8(04):1439-1446.)

[8]. Zhang Wei, Wang Aihe, Jiang Haiyan. Adsorption of methylene blue by sulfuric acid-activated municipal sludge[J].Chinese Journal of Environmental Engineering,2015,9(08):3790-3794.)

[9]. Zhang Wei, Wang Jue, Wang Aihe. Adsorption characteristics of MWNTs and MWNTs/TiO2 on dimethoate in water[J].China Water Supply and Drainage,2017,33(11):82-85+90.)

[10]. Zhang Wei, Wang Jue, Wang Aihe. Study on influencing factors and kinetics of MWNTs/TiO2 photocatalytic degradation of oxymethoate pesticides[J].Chinese Journal of Water Ecology,2017,38(06):27-33.)

[11] Zhang Wei, Liang Zhe, Wang Aihe, et al. Optimized preparation of modified oyster shell powder and its adsorption performance on glyphosate[J].Industrial Water Treatment,2022,42(03):90-97.)

[12].ZHANG Wei, YOU Qizheng, SHU Jinkai, et al. Modified oyster shell powder/Ce-N-TiO2 adsorption-photocatalytic degradation of glyphosate[J].Chinese Journal of Environmental Engineering,2023,17(05):1398-1408.)

[13] Zhang Wei, Yu Long, Shu Jinkai. Performance and mechanism of photocatalytic degradation of oxytetracycline by MWNTs/Bi2WO6-TiO2[J].Water Purification Technology,2023,42(03):81-87+142.

[14] Wei Zhang, Zhe Liang*, Hai Lin, Jinkai Shu, and Aihe Wang. Adsorption Performance of Glyphosate on Modified Shell Powder/Ce-N-TiO2, E3S Web of Conferences,2022,350, 01016.

[15] Wei Zhang, Nan Li, Caiwen Wang, Guangchao Li, Julong Sun and Shumin Zhu*. Elimination of micropollutants by the solar/chlorine process: contribution of reactive species and formation risk of NDMA, Environ. Sci.: Water Res. Technol., 2022, 8, 1252-1260.

[16] Zhang W, You Q, Shu J, et al. Optimization of Preparation Conditions of Modified

Oyster Shell Powder/Ce-N-TiO2 by Response Surface Methodology (RSM) [J]. Journal of EnvironmentalProtection, 2023, 14(01): 16-31. **[17] Zhang W, You Q, Shu J, et al. Photocatalytic degradation of glyphosate using Ce/N co-doped TiO2 with oyster shell powder as carrier under the simulated fluorescent lamp [J]. Frontiers in Environmental Science, 2023, 11.**
Educational Reform Papers
[1]. Zhang Wei, Wang Aihe, Jiang Haiyan. Reform and thinking of "student-centered" talent training system in colleges and universities[J].Education and Teaching Forum,2020(47):161-164.) **[2]. Zhang Wei, Wang Aihe. A preliminary study on the reform of internship teaching in water supply and drainage science and engineering for the training of outstanding engineers[J].Science & Technology Information,2013(20):170-171.)** **[3]. Zhang Wei, Zhang Chun, Li Liwu, Wang Aihe. Research on the construction of professional practice teaching platform for water supply and drainage engineering[J].Science and Technology Innovation Herald,2012(13):185.)**
patent
National Utility Model Patent: Suspended Photocatalytic Reactor (Patent No.: ZL201520404733.1);[2].National Utility Model Patent: A Suspended Photocatalytic Reactor (Patent No.: ZL201520405045.7)[3].National Utility Model Patent: Coagulation Precipitation-Photocatalytic Combined Treatment Device (Patent No.: ZL201720780350.3)[4]. National Invention Patent: Preparation method of bismuth tungstate composite photocatalyst (application number: 202011374423.1)
Scientific research awards
[1]. Presided over the third prize of Hunan Science and Technology Progress Award - Research and application technology of adsorption and photodegradation of multi-walled carbon nanotube-supported TiO2 to chlorobenzene (2016)
Teaching awards
[1]. Presided over and won the third prize of Hunan Provincial Teaching Achievement Award - Research and Practice of Water Supply and Drainage Science and Engineering

Professionals Training-oriented Talent Training Model Guided by "Engineering Ability Output" (2016) **[2]. Presided over the first prize of the Teaching Achievement Award of Hunan City University - the construction and practice of the "12345" training system for the professional practice ability of water supply and drainage science and engineering with the project as the carrier (2019)**
Publication of monographs/books
Study on the adsorption and photodegradation of chlorobenzene by multi-walled carbon nanotube-supported TiO2, Hunan Science and Technology Press, 2016.03 (monograph, first author) **[2]. Water Analytical Chemistry, Chemical Industry Press, 2014.09 (textbook, editor-in-chief)** **[3]. Water Pump and Pumping Station, Peking University Press, 2013.10 (Textbook, Editor-in-Chief)**
Engineering background
[1].Presided over the completion of the construction drawing design of the waterworks and supporting pipe network in the Jindong Management Area (Jindong Management Area Urban Construction Investment and Development Co., Ltd., 2016)[2].Presided over the completion of the site selection demonstration report of the second water source in Yiyang City (Yiyang Planning Bureau, 2017) **[3].Presided over the completion of the construction drawing design of the Taoyi Road water supply pipeline project (Taojiang County Water Supply Company, 2018)[4].Presided over the completion of the special planning for drainage and flood prevention in Yiyang City (Yiyang City Planning Bureau, 2018)[5].Presided over the completion of the feasibility study report on emergency water source in Yiyang City (Yiyang Housing and Urban-Rural Development Bureau, 2018)[6]Presided over the completion of the construction drawing design of the water supply pressurization station and supporting pipe network on Jinpen North Road, Taojiang County Economic Development Zone (Taojiang County Water Supply Company, 2020)**

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name	**ZHANG Chun**	**gender**	**man**	**Date of birth**	**1979.12**	**job title**	**professor**
Highest academic qualifications	**graduate student**	**Highest degree**	**doctor**	**mailbox**	**yuanc332@168.com**		

Education

2012.09-2012.06, Ph.D., School of Metallurgy and Environment, Central South University

2004.09-2007.07, M.S., School of Civil Engineering, University of South China

1999.09-2003.07, B.S., School of Chemical Engineering, North University of China

Scientific research and education reform projects

[1]. 2017 Natural Science Foundation of Hunan Province: Reaction Mechanism of Magnetic Nanocore-Shell Fe3O4 Composites for the Removal of Heavy Metal Antimony in Acidic Wastewater, Hunan Provincial Department of Science and Technology, 2017JJ2020, PI; (Closed)

[2]. 2016 Outstanding Youth Project of Hunan Provincial Department of Education: Mechanism and Kinetics of Sulfur Dioxide Reduction and Decomposition of Zinc Cadmium Ferritate, Hunan Provincial Department of Education, 16B049, Principal Investigator; (Closed)

[3]. 2017 Hunan Provincial Teaching Reform Research Project: Engineering Education and Engineering Construction Research for Water Supply and Drainage Science and Engineering for International Certification, [2017] No. 452, Principal Investigator, (completed)

[4]. 2017 Hunan Provincial Education Planning Project: Research on the Ability Cultivation Strategy of "Engineering-Independent Thinking-Solution" for Students Majoring in Water Supply and Drainage Science and Engineering, XJK17CGD006, Principal Investigator, (Completed)

Scientific papers

[1]. Environmental Activity and Ecological Assessment of Heavy Metals in the Reductive Leaching Residue from Zinc Hydrometallurgy Industry《Transactions of the Indian Institute of Metals, 73(7):1755-1761, 2020.05, SCI, 4 districts, Chinese Academy of Sciences, ranked 1st;

[2]. Adsorption performance of antimony by modified iron powder, RSC Advances, 9(54): 31645-31653, 2019.09, SCI source journal, Chinese Academy of Sciences Zone 3, ranked 1;

[3]. Magnetic seeds assisted iron recovery from the reductive leaching solution in

hydrometallurgical process，《Transactions of the Indian Institute of Metals》, 72(10):2591-2597, 2019.05, SCI source journal, 4 districts of Chinese Academy of Sciences, ranked 1st;

[4]. Reductive Clean Leaching Process of Cadmium from Hydrometallurgical Zinc Neutral Leaching Residue Using Sulfur Dioxide, Journal of Cleaner Production, 113:910-918, 2016.02, SCI Source Journal, Chinese Academy of Sciences Zone 1, Ranked No. 1;

[5]. Study on the mechanism and kinetics of zinc leaching in leaching slag in zinc smelting, Chinese Journal of Nonferrous Metals, 26(1): 197-203, 2016.01, EI source journal, key journal of self-science, ranked 1st;

[6]. Study on the mechanical and chemical stability behavior of lead in lead-containing smelting waste slag, Journal of Process Engineering, 15(6): 1034-1038, 2015.12, CSCD, a key journal of self-science, ranked 1st;

[7]. Reductive acid leaching of cadmium from zinc neutral leaching residue using hydrazine sulfate, Transactions of Nonferrous Metals Society of China, 25(12):4175-4182, 2015.10, SCI source journal, CAS 2, Ranked No. 1;

[8]. Mechanical Activation-assisted Reductive Leaching of Cadmium from Zinc Neutral Leaching Residue Using Sulfuric Dioxide，《The Journal of The Minerals, Metals & Materials Society》, 67(12) :3010-3021, 2015.10, SCI Source Journal, Chinese Academy of Sciences Zone 3, Ranked 1st;

Educational Reform Papers

[1]. Research on the cultivation of complex engineering problem-solving ability of students majoring in water supply and drainage science and engineering, Journal of Higher Education, 27:169-172, 2020.08, Educational Reform Paper, ranked 1st;

[2]. Teaching Reform of Water Quality Engineering Based on OBE Concept in the Context of Engineering Education, Sichuan Cement, 04: 292+284 pages, 2020.04, Educational Reform Paper, ranked 1st;

[3]. Reflections on Engineering Ethics Education in Water Supply and Drainage Science and Engineering Based on Engineering Education Certification, Modern Property, 04: 130-131 , 2020.04, Educational Reform Papers, Ranked No. 1;

[4]. Water Supply and Drainage Science and Engineering Based on Professional Certification,

Engineering Education and Engineering Ability Training and Practice, Journal of Higher Education, 17:155-156+159, 2019.08, Educational Reform Papers, ranked 1st;
patent
not
Scientific research awards
not
Teaching awards
Research and Practice on the Training Model of Water Supply and Drainage Science and Engineering Professionals Oriented by "Engineering Ability Output", Provincial Teaching Achievement Award of Higher Education in Hunan Province, Provincial Third Prize, Ranked Second, Hunan Provincial Department of Education, 2016.07; [2].“ Construction and Innovation of Engineering and Innovation Compound Talent Training Model for Water Supply and Drainage Science and Engineering Characteristic Major, First Prize at the University Level, Ranked Second, Hunan City University, 2015.10; [3].“ Construction and Practice of '12345' Practical Teaching System for Water Supply and Drainage Science and Engineering Major", First Prize at the University Level, Ranked Third, Hunan City University, 2019.03;
Publication of monographs/books
not
Engineering background
[1]. Construction drawing design of water supply pipe network of Lingling Avenue, Lingling District, Yongzhou City, 2017, main completer; [2]. Construction drawing design of water supply plant in Mengquan Town, Changde, 2018, main completer.

Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

name	**Wang Aihe**	**gender**	**man**	**Date of birth**	**1982.03**	**job title**	**professor**
Highest academic qualifications	**graduate student**	**Highest degree**	**doctor**	**mailbox**	**hnwaihe409@163.com**		
Education							
2001.09-2005.07, Department of Biological and Chemical Engineering, Anhui University of Engineering and Technology, Biotechnology, B.S **2005.09-2008.06, M.S., Department of Urban Construction, University of South China** **2013.09-2017.11, Ph.D., Metallurgical and Environmental Engineering, School of Metallurgy and Environment, Central South University**							
Scientific research and education reform projects							
General Project of the Department of Education: Research on the adsorption of ammonia nitrogen in landfill leachate by modified peat resin particles (15C0260), 2015-2020, Project Leader. **Key Project of the Department of Education: Optimal Preparation of Magnetic Ternary Metal Composite Oxide Particle Adsorbents and Research on the Mechanism of Efficient Deep Fluoride Removal (20A089), 2020-2023, PI.** **[3]. Hunan Provincial Education Science Planning Leading Group Education Planning Project: Construction and Practice of SPOC Blended Teaching Model for Water Supply and Drainage Science and Engineering Professional Courses in Local Colleges and Universities under the Background of Gold Course (XJK20CGD068), 2020-2022, Project Leader.** **[4]. Collaborative Education Project of the Department of Higher Education of the Ministry of Education: Research on the Improvement of Engineering Practice Ability of Teachers of Water Supply and Drainage Science and Engineering in Local Universities under the**							

Background of Engineering Accreditation (201902099006), 2020-2021, Project Leader.

[5]. Education Reform Project of the Teaching Guidance Subcommittee of Water Supply and Drainage Science and Engineering in Colleges and Universities of the Ministry of Education: Practical Teaching Reform of Water Supply and Drainage Science and Engineering in Local Colleges and Universities under the Background of Engineering Accreditation (GPSJZW2019-02), 2019-2021, Project Leader.

[6]. Hunan Provincial Natural Science Foundation Project: Preparation of Biological Template Method and Mechanism of Sulfate Removal of Ternary Metal Composite Oxide Porous Particle Materials (2021JJ50152), 2021.01-2024.12, PI.

Scientific papers

[1]. Wang Aihe; *Zhou Kanggen; Liu Xing; Liu Fang; Zhang Chun; Chen Quanzhou，Granular tri-metal oxide adsorbent for fluoride uptake: Adsorption kinetic and equilibrium studies，Journal of Colloid and Interface Science, 2017，505：947-955.

[2]. Wang Aihe，Zhou Kanggen(*)，Liu Xing，Liu Fang，Chen Quanzhou，Development of Mg-Al-La tri-metal mixed oxide entrapped in alginate for removal of fluoride from wastewater，RSC Advances， 2017,7(50): 31221-31229.

[3]. Wang Aihe，Zhou Kanggen(*)，Chen Wei，Zhang Chun，Liu Xing，Chen Quanzhou，LiuFang，Adsorption of fluoride by the calcium alginate embedded with Mg-Al-Ce trimetal oxides，Korean Journal of Chemical Engineering，2018, 35(8): 1636-1641.

Wang Aihe, Zhou Kanggen(*), Liu Xing, Chen Quanzhou, Liu Fang, Preparation of PMg-Al-Me(Me=La,Ce,Zr) Composite Oxide and Its Fluoridation Removal Properties, Environmental Science, 2016, 37(12): 4874-4881.

[5]. Aihe Wang, Kanggen Zhou(*), Xing Liu, Quanzhou Chen, Fang Liu, Defluorination properties of MgO-LDH synthesized by double-drop co-precipitation, Chinese Journal of Nonferrous Metals, 2017, 27(04): 869-875.

[6]. Wang Aihe, Zhang Chun, Zhang Wei, Deng Yumei. China Water Supply and Drainage,2016,32(17):81-84.)

Educational Reform Papers

[1]. Wang Aihe, Li Hao, Zhang Chun, Jiang Haiyan. Research on the reform of practical

teaching in local undergraduate colleges under the background of new engineering: A case study of water supply and drainage science and engineering of Hunan City University[J].Sichuan Cement,2020(04):294.) **[2]. Wang Aihe, Zhang Wei, Li Hao, Jiang Haiyan, Zhang Chun. Construction of practical teaching system of water supply and drainage science and engineering based on engineering quality training[J].Industry and Science and Technology Forum,2020,19(04):242-243.)** **[3]. Wang Aihe, Zhang Wei. Experimental teaching reform of water supply and drainage science and engineering for the training of outstanding engineers[J].China Market,2016(15):62-63.)** **[4]. Wang Aihe. Reflections on the construction of laboratory management team in Xinsheng local undergraduate colleges[J].Higher Architectural Education,2015,24(03):160-162.)** **[5]. Wang Aihe, Zhang Wei. Research on the teaching reform of "water quality engineering experiment" course for the excellence plan[J].China Electric Power Education,2013(26):82+84.)** **[6]. Wang Aihe, Zhang Chun, Zhang Wei. Guangzhou Chemical Industry,2011,39(24):132-133.)**
patent
[1]. Wang Aihe, Zhang Chun, Zhang Wei. Preparation system of sludge-based adsorbent for treating lead-containing wastewater[P]. Hunan:CN205462267U,2016-08-17.
Scientific research awards
[1]. Zhang Wei. Research and application technology of adsorption and photodegradation of multi-walled carbon nanotube-supported TiO2 to chlorobenzene, third prize of Hunan Science and Technology Progress Award, 2016, ranked third
Teaching awards

Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

[1]. The third prize of Hunan Provincial Teaching Achievement Award---- Research and Practice of the Training Model of Water Supply and Drainage Science and Engineering Professionals Oriented by "Engineering Ability Output", 2016, ranked fourth. **[2]. In 2017, he was awarded the honorary title of Outstanding Teacher of Hunan City University.** **[3]. The 3rd "Deep Water Cup" National Water Supply and Drainage College Student Science and Technology Innovation Competition, Third Prize, 2019.**
Publication of monographs/books
[1] Study on fluoridation removal performance of granular ternary metal composite oxides. Central South University Press, 2021.11, Editor-in-Chief **[2] Water Analytical Chemistry, Chemical Industry Press, 2014.09, co-editor** **[3] Water Pump and Water Pumping Station, Peking University Press, 2013.01, co-editor**
Engineering background
Demonstration of the second water source in Anren County

Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

name	**Chi Nianping**	**gender**	**man**	**Date of birth**	**1973.12**	**job title**	**professor**
Highest academic qualifications	**graduate student**	**Highest degree**	**doctor**	**mailbox**	**chinianping@163.com**		
Education							
2008.09-2013.09, Ph.D., School of Environmental Science and Engineering, Tongji University **2003.09-2006.07, M.S., School of Urban Construction and Environmental Engineering, Chongqing University** **1993.09-1996.07, Department of Urban Construction, Hunan City University, major in water supply and drainage**							
Scientific research and education reform projects							
[1].Zhejiang Provincial Science and Technology Program: Development and Application of Low Pollution Forward Permeability Membrane for Membrane-Bioreactor (2016C33014), 2016-2017, 150,000 RMB, Project Leader. **[2].Natural Science Foundation of Hunan Province: Research on the mechanism of action of magnetic diatomaceous earth-ceramic membrane bioreactor to remove dissolved organic nitrogen** **22022-2024, 50,000 yuan, project leader.** **[3].Key Project of Hunan Provincial Department of Education: Research on the Mechanism of Sulfonamide Antibiotic Removal by Composite Magnetic Powder Coupling Dynamic Touch-Bioreactor, 60,000 RMB, Project Leader.** **[4].Hunan Provincial Education Science Planning: Research on the Optimization of Innovation and Entrepreneurship Curriculum System for Water Supply and Drainage Science and Engineering from the Perspective of "Specialized and Creative Integration", 10,000 yuan, project leader.**							

Scientific papers

[1].FeS redox power motor for PDS continuous generation of active radicals on efficient degradation and removal of diclofenac: Role of ultrasonic. Chemosphere.

[2].Efficient removal of RR2 dye by electro-Ce(III) process with its elegant arts and attractive charm in performance, energy consumption and mechanism. Environmental Research

[3].Preparation of amphiphilic cationic polyacrylamide (CPAM) with cationic microblock structure to enhance printing and dyeing sludge dewatering and condition performance. Environmental Science and Pollution Research.

[4].Pretreatment + catalytic internal electrolysis + ceramic membrane A/O-MBR treatment of coking wastewater. Water Supply and Drainage in China.

[5].ZnO/g-C3N4 Nanostructured Photocatalyst for Enhancement of Photodegradation of Antibiotic Pollutant in Wastewater under Simulated solar Light Illumination

[6]. Chi Nianping, Dong Bingzhi, Luo Wenlian, He Zhiyong, Coagulation/hydrolysis acidification/combined biological treatment process for washing wastewater[J], China Water Supply and Drainage, 2010, (26), 2, 57-59;

[7]. Chi Nianping, Luo Wenlian, Liao Yi, Dong Bingzhi, Composite Ecological Filter Bed for Remediation of Heavy Metal Contaminated Surface Water[J], Journal of Environmental Science, 2010, (30), 10, 1971-1976

[8]. Chi Nianping, Zhang Yongji, Dong Bingzhi, Zhou Lingling, Effect of different disinfectants on nutrient substrates in drinking water[J], Journal of Hunan University (Natural Science Edition), 2010, (37), 10, 83-87;

[9]. Chi Nianping, Dong Bingzhi, Liao Yi, Luo Wenlian Establishment and Application of Quantitative Model of Effective Energy Consumption in Flocculation Process[J], Water Treatment Technology, 2010, (36), 11, 22-24

Chi Nianping, A-A2/O Process Quality Improvement and Transformation of Urban Sewage Plant Practice[J], Journal of Jiamusi University, 2011, (29), 3,358-360,364;

[11]. Chi, Nianping; Chu, Huaqiang; Gui, Bo; etc,Identification of irreversible foulants in spiral ultrafiltration membranes[J],Fresenius Environmental Bulletin, 2013, 22(8): 2226-2233.

[12]. Wang Pu, Chi Nianping, Study on the influencing factors of fractal dimension of flocs[J], Water Treatment Technology, 2006, (32), 9, 19-22;

[13]. Wang Pu, Chi Nianping, Li Jiangtao, Quantitative test of flocculation effect based on fractal dimension[J], Journal of Sichuan University (Engineering Science Edition), 2006,

(38): 6, 79-82

[14]. Cheng Yizhi, Ji Zhizhi, Zhu Jian, Chi Nianping, Dynamic simulation study of landfill leachate treated by air flotation-coagulation-Fenton oxidation[J], Industrial Water and Wastewater, 2010, (40), 3, 41-45;

[15]. Luo Wenlian, Zhu Jian, Cheng Yizhi, Ji Zhizhi, Chi Nianping, Simulation experiment of coagulation-ultraviolet photocatalytic oxidation for landfill leachate[J], Journal of Central South Forestry University, 2011, (31), 1, 86-90

[16]. Luo Wenlian, Chi Nianping, Cheng Yizhi, Ji Zhizhi, Vehicle roving UV/Fenton device to treat landfill leachate in small towns[J], Sichuan Environment, 2010, (29), 12, 16-20

[17]. Preparation of a novel Fe2O3-MoS2-CdS ternary composite fifilm and its photoelectrocatalytic performance[J]； Tongtong Zhang, Handou Zhang , Yun Ji, Nianping Chi, Yanqing Cong; Electrochimica Acta，2018，285，230-240；

[18]. Mechanism and effificiency of contaminant reduction by hydrated electron in the sulfifite/iodide/UV process[J]； Keer Yu , Xuchun Li, Liwei Chen , Jingyun Fang , Huali Chen , Qiangbiao Li, Nianping Chi , Jun Ma

Water Research，2018（129），357-364；

[19]. Improving the hydrophilic and antifouling properties of poly(vinyl chloride) membranes by atom transfer radical polymerization grafting of poly(ionic liquid) brushes[J]； Yuan-yuan cheng，chun-hui Du，Chun-jin Wu，kai-xiang Sun，Nian-ping Chi,Polymers for advanced technologies; 2018

[20]. Du Chunhui, Cheng Junjie, Wu Chunjin, Zhang Xinyi, Sun Kaixiang, Chi Nianping, Chitosan Composite Positive Permeability Membrane and Its Separation of Emulsified Oil Wastewater[J], Water Treatment Technology, 2019, (45), 5, 25-28, 33

[21]. Yanqing Cong ,Wenhua Zhang, Wenchen Ding,Tongtong Zhang ,Yi Zhang, Nianping Chi ,Qi Wang.Fabrication of electrochemically-modified BiVO4-MoS2-Co3O4composite film for bisphenol A degradation[J]. Jounal of environment science, 2021，102，341-351；

Educational Reform Papers

[1].Research on the construction of teaching evaluation system for water supply and drainage science and engineering courses in local colleges and universities based on the concept of OBEContemporary Educational Practice and Teaching Research

[2].Research on the Construction of Curriculum System of Water Supply and Drainage Science and Engineering under the Background of Professional Certification. Modern property

Scientific research awards

not
Teaching awards
not
Publication of monographs/books
[1]. Safety and Intelligent Management of Drinking Water Transmission and Distribution, Central South University Press
Engineering background
Lanxi River Comprehensive Improvement Project in Yiyang City, 2023

Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

name	**Zhu Xilin**	**gender**	**man**	**born years**	**1966.10**	**job title**	**Professor-level senior engineer**
Highest academic qualifications	**undergraduate**	**Highest degree**	**bachelor**	**mail box**	**ZXL6981@163.com**		
Education							
1984.09~1988.06, Department of Environmental Engineering, Tongji University, B.S. in Engineering							
Scientific research and education reform projects							
not							
Scientific papers							
[1]. Zhu Xilin. Water Supply and Drainage, 2011,47(08):85-87. **[2]. Zhu Xilin. Research on design of roof (high) fire water tank[J].Water Supply and Drainage,2012,48(08):90-94.)** **[3]. Zhu Xilin. Research on the calculation method of water distribution network design flow of village and town water supply project[J].China Water Supply and Drainage,2012, 28(18):68-72.)**							
Educational Reform Papers							
not							
patent							
not							
Scientific research awards							
not							
Teaching awards							
not							
Publication of monographs/books							
[1]. Evaluation standard for green industrial buildings (GB/T 50878−2013), one of the main drafters of the standard. **[2] National Survey and Design Registered Public Equipment Engineer Water Supply and Drainage Professional Qualification Examination Textbook - Volume 3 Building Water Supply and Drainage Engineering, Writing Building Fire Protection Chapter.**							
Engineering background							

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I am mainly engaged in the design and management of water supply and drainage engineering. It has obtained the People's Republic of China Registered Public Equipment Engineer (Water Supply and Drainage) Qualification Certificate and the People's Republic of China Registered Supervision Engineer Practice Qualification Certificate.

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name	**Wang Lixin**	**gender**	**man**	**Date of birth**	**1966.11**	**job title**	**Professorial level Senior engineers**
Highest academic qualifications	**undergraduate**	**Highest degree**	**bachelor**	**mailbox**	**wanglixincecchina.com**		
Education							
1984.09-1988.07, Department of Civil Engineering, Hunan University, Bachelor of Engineering in Water Supply and Drainage							
Scientific research and education reform projects							
not							
Scientific papers							
not							
Educational Reform Papers							
not							
patent							
Calcium carbonate chemical sludge dewatering and discharging device **Patent Type: Utility Model** **Application/Patent No.: CN201520768412.X** **Public/Bulletin Number: CN20502407U** **Public/announcement date 2016.02.10**							
Scientific research awards							
not							
Teaching awards							
not							
Publication of monographs/books							
not							

Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

Engineering background
Registered Utilities Engineer (Water Supply & Drainage)

Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

name	**Yan Hengzhen**	**gender**	**woman**	**Date of birth**	**1973.02**	**job title**	**associate professor**
Highest academic qualifications	**graduate student**	**Highest degree**	**doctor**	**mailbox**	**Zheng7302@126.com**		
Education							
1992.09-1996.07, Bachelor of Engineering, School of Civil Engineering and Architecture, Wuhan University of Technology **2000.09-2003.07, School of Civil Engineering and Architecture, Wuhan University of Technology, M.S** **2007.09-2010.07, Ph.D., School of Civil Engineering and Architecture, Wuhan University of Technology**							
Scientific research and education reform projects							
[1].2014 Hunan Provincial Teaching Reform Research Project of Ordinary Colleges and Universities - Research on the Reform of School-Enterprise Cooperation Talent Training Model for Water Supply and Drainage Science and Engineering (Hunan Provincial Department of Education, (Xiangjiaotong [2014] No. 247), Provincial and Ministerial Level, 25,000 RMB, Host); **[2].2013 Hunan Provincial Department of Education Scientific Research Youth Project - Biodegradation Performance Evaluation of Typical Oxide Ore Flotation Reagents (Hunan Provincial Department of Education, No. 13B009, Provincial and Ministerial Level, 40,000 yuan, Principal Investigator);** **[3].2013 Hunan City University Higher Education Scientific Research Project - Construction**							

of Application-oriented and Innovative Faculty Based on the Excellent Engineer Training Program (Hunan City University, No.: JK13A007, Department and Bureau Level, 10,000 yuan, host).
Scientific papers
[1]. Yan Hengzhen, Chen Shaohua. Study on biodegradation performance and structural correlation of hydrocarbon-based xanthate collectors[J].Journal of Safety and Environment,2015,16(6):242-245.) (CSCD) **[2]. Yan Hengzhen, Gong Wenqi, Mei Guangjun, et al. Journal of Safety and Environment,2011,11(4):76-81. (CSCD)**
Educational Reform Papers
[1]. Yan Hengzhen. Exploration and practice of teaching reform of water supply and drainage pipe network system[J].China Electric Power Education,2014,(5):8-9.) **[2]. Yan Hengzhen. A preliminary study on improving the classroom teaching ability of young teachers in colleges and universities[J].Science & Technology Information,2015,(8):13-14.)**
patent
[1]. Yan Hengzhen. Utility model patent, patent number: ZL201620213460.7, authorization announcement date: 2016.08.24. **[2]. Yan Hengzhen. Utility model patent, patent number: ZL201620213491.2, authorization announcement date: 2016.10.05.**
Scientific research awards
[1]. Yan Hengzhen, Chen Shaohua. Biodegradation performance and structural correlation of hydrocarbon-based xanthate collectors. Second Prize of the 2nd Natural Science Outstanding Academic Achievement Award of Yiyang City, 2016.
Teaching awards
[1]. In 2012, he was awarded the title of "Teaching Expert of Young Teachers in Ordinary Colleges and Universities in Hunan Province". **[2]. Design of urban rain garden based on climatic conditions in Hunan Province. The First Hunan Provincial College Students' Comprehensive Utilization of Water Resources**

Innovation Design Competition, Second Prize, 2016.
Publication of monographs/books
Study on biodegradability of amine collectors, Hunan Science and Technology Press, 2016.10
Engineering background
not

Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

name	**Deng Jie**	**gender**	**woman**	**Date of birth**	**1971.11**	**job title**	**associate professor**
Highest academic qualifications	**graduate student**	**Highest degree**	**Master**	**mailbox**	**hndjie@163.com**		
Education							
1998.09-2001.06, M.S., School of Civil Engineering, Hunan University **2003.09-2008.05, M.S., School of Civil Engineering, Hunan University**							
Scientific research and education reform projects							
[1]. Collaborative Education Project of the Department of Higher Education of the Ministry of Education: Research on the Teaching Reform of Building Water Supply and Drainage Engineering Curriculum in the Context of Engineering Education Accreditation (201902099001), 2020-2021, Project Leader. **[2]. Hunan Provincial Department of Education Outstanding Youth Project: Experimental Research on Hydraulic Cavitation of Perforated Plates and Its Strengthening Effect (08C201), 2008-2012, Project Leader.** **[3]. Hunan Provincial Department of Education General Project: Experimental Research on Hydraulic Cavitation and Its Strengthening Effect of Perforated Plates (08C201), 2008.6-2010.12, Project Leader.** **[4] Yiyang Science and Technology Program: Research on Hydraulic Cavitation in the Field of Wastewater (No. YKZ0609), 2006-2008, PI.**							
Scientific papers							
[1] Deng Jie. Experimental Study of the Porous Plate Hydrodynamic Cavitation Device and							

Removal the Algae in Water[J]. Recent Development on Material Science and Environmental Material,2013,7:569-572(EI). **[2] Deng Jie, Experimental Investigation on Enhancive effect of Hydrodynamic cavitation [J]. Advances in Chemical Engineering III.,2013,7:2865-2869(EI).** **[3] Deng Jie. Study on Absorption Experiment of Methylene blue by Nitrifying peat[J]. Sustainable Cities Development and Environment, 2012, 8:1969-1972.**
Educational Reform Papers
[1] DENG Jie,ZHOU Shuiqiang,WANG Aihe,DENG Yumei. Teaching reform of building water supply and drainage engineering course under the international engineering education professional certification[J].Industry and Technology Forum,2020,19(24):150-151.) **[2] DENG Jie. Science & Technology Information,2011,(7):158-159.)**
patent
[1]. Deng Jie. Composite catalyst for treating sewage and preparation method thereof[P].Invention patent, patent number: ZL202210107796.5, authorization announcement date 2023-09-08;
Scientific research awards
not
Teaching awards
He has won the title of Outstanding Teacher of the 2nd City College, the first prize of the 4th Young Teacher Teaching Competition, the Outstanding Teaching Quality Award, the Outstanding Instructor of Graduation Design, and the Third Prize of Outstanding Paper on Teaching and Research Reform. **2015 Coach College Student "Challenge Cup" Competition, Third Prize.**
Publication of monographs/books
[1]. Deputy Editor-in-Chief of Building Water Supply and Drainage System Engineering, edited by Fu Zhengrong, China Machine Press, 21st Century Higher Education Construction and Environmental Engineering Series Planning Textbook, 2011. **[2]. Participated in the compilation of Urban Water Saving Engineering, edited by Wei Qun, China Building Materials Industry Press, 2006.**
Engineering background

Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

[1]. S209 Loudi City Ring Road South Section New Project Road and New Shibu Bridge Completion Acceptance Quality Inspection;

[2]. Changde Binhu Road West Extension Bridge Engineering Load Test Detection;

[3]. Lianyuan City Traffic Bridge Project.

Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

name	**Li Yuanping**	**gender**	**woman**	**Date of birth**	**1982.01**	**job title**	**associate professor**
Highest academic qualifications	**graduate student**	**Highest degree**	**doctor**	**mailbox**	**yuanpingli@hncu.edu.cn**		
Education							
2000.09-2004.06, College of Environmental Science and Engineering, Hunan University, B.S **2005.09-2015.06, Ph.D., School of Environmental Science and Engineering, Hunan University**							
Scientific research and education reform projects							
[1]. Hunan Provincial Department of Education Outstanding Youth Scientific Research Project: Research on the Electron Transport Mechanism of Humus-mediated Reduction and Remediation of Valent Heavy Metal Pollution (21B0715), 2021-2023, Project Leader. **[2]. Hunan Provincial Natural Science Youth Fund Project: Biochar-enhanced microbial remediation of polybrominated diphenyl ether contaminated sediment and its mechanism of action (2020JJ5019), 2020-2022, PI.** **[3]. Hunan Provincial Department of Education Scientific Research General Project: Research on the simultaneous sensing detection of heavy metals Cd and Pb in water environment based on 3D gold nanocluster modified gold electrode (17C0305), 2017-2019, Project Leader.** **[4]. 2019 The Second Batch of Industry-University Cooperation and Collaborative Education Projects of the Ministry of Education: Construction and Reform of Hydraulic Curriculum for Engineering Education Professional Certification (201902099003),**							

2020-2021, Project Leader.

[5]. Hunan Provincial Teaching Reform Research Project of Ordinary Colleges and Universities: Research on the Teaching Reform of "Golden Class" in Hydraulics under the Background of First-class Major Construction and Engineering Education Professional Accreditation (HNJG-2022-0995), 2022-2024, Project Leader.

[6]. National Natural Science Foundation of China: Research on the mechanism of action of modified shell powder/Ce-N-TiO2 adsorption and photocatalytic degradation of typical dissolved organophosphorus (42071122), 2021-2024, participant.

[6]. National Natural Science Foundation of China: Design and synthesis of LDH/MIL-101(Fe)/La-Fe-TiO2 molecules and their removal mechanism of typical nitrogen-containing heterocyclic compounds (52370074), 2024-2027, participant.

[7]. Hunan Provincial Natural Science Foundation General Project: Migration and transformation, source control and mechanism of heavy metal antimony in arsenic alkali slag in typical antimony mining areas (2021JJ30080), 2021-2023, participant.

Scientific papers

[1].Yuanping Li[#], Yuqing Liu[#], Yihuan Liu[#], Yaoning Chen[*], Li Chen, Haoqin Yan, Yanrong Chen, Fangting Xu, Meiling Li, Linshenzhang Li. Modification of sludge biochar by MnO2 to degrade methylene blue: Synergistic catalysis and degradation mechanisms. Journal of Water Process Engineering. 2022,48:102864.DOI: 10.1016/j.jwpe.2022.102864(SCI 2 Zone, 一作).

[2].Yuanping Li[#], Yanrong Chen[#], Yaoning Chen[#*], Yanxin Wu, Chun Zhang, Zhen Peng, Yihuan Liu, Sha Wang, Ran Xu, Ziping Zeng. Effects of physico-chemical parameters on *Actinomycetes* communities during composting of agricultural waste. Sustainability, 2019,11(8):2229-2242(SCI Zone 3, one work).

[3].LI Yuanping[*], ZHANG Wei, TANG Lin, ZHANG Yi, CHEN Yaoning, ZENG Guangming. Research Progress on the Detection and Analysis of Herbicide Herbicide Herbicide in Environmental Media. Environmental Science and Technology, 2017, 40(12): 104-111

[4].Yaoning Chen[#*], Mengyang Zhao[#], Yuanping Li[#*], Yihuan Liu, Li Chen, Hongjuan Jiang,

Hui Li, Yanrong Chen, Haoqin Yan, Suzhen Hou, Longbo Jiang. Regulation of tourmaline-mediated Fenton-like system by biochar: Free radical pathway to non-free radical pathway. Journal of Environmental Management. 2023,344:118497. DOI: 10.1016/j.jenvman.2023.118497. (SCI Zone 1, co-corresponding author, tied for first).

[5].Li Chen[#], Yaoning Chen[#*], Yuanping Li[#*], Yihuan Liu, Hongjuan Jiang, Hui Li, Yu Yuan, Yanrong Chen, Bin Zou. Improving the humification by additives during composting: A review. Waste Management. 2023,158:93-106. (SCI Zone 1, co-corresponding author, tied for first).

[6].Yaoning Chen[#*], Hongjuan Jiang[#], Yuanping Li[#*], Yihuan Liu, Yanrong Chen, Li Chen, Xinli Luo, Ping Tang, Haoqin Yan, Mengyang Zhao, Yu Yuan, Suzhen Hou. A critical review on EDTA washing in soil remediation for potentially toxic elements (PTEs) pollutants. Reviews in Environmental Science and Bio-Technology. 2022,21:399-423. (SCI Zone 1, co-corresponding author, tied for first).

[7].Yaoning Chen[#*], Xinli Luo[#], Yuanping Li[#*], Yihuan Liu, Li Chen, Hongjuan Jiang, Yanrong Chen, Xiaoli Qin, Ping Tang, Haoqin Yan. Effects of CaO2 based Fenton-like reaction on heavy metals and microbial community during co-composting of straw and sediment. Chemosphere. 2022,301:134563. DOI: 10.1016/j.chemosphere.2022.134563. (SCI Zone 2, co-corresponding author, tied for first).

[8].Yaoning Chen[#*], Ping Tang[#], Yuanping Li[#*], Li Chen, Hongjuan Jiang, Yihuan Liu, Xinli Luo. Effect of attapulgite on heavy metals passivation and microbial community during co-composting of river sediment with agricultural wastes. Chemosphere. 2022,299:134347.DOI: 10.1016/j.chemosphere.2022.134347. (SCI Zone 2, co-corresponding author, tied for first).

[9].Yihuan Liu[#], Yaoning Chen[#*], Yuanping Li[#*], Li Chen, Hongjuan Jiang, Hui Li, Xinli Luo, Ping Tang, Haoqin Yan, Mengyang Zhao, Yu Yuan, Suzhen Hou. Fabrication, application, and mechanism of metal and heteroatom co-doped biochar composites (MHBCs) for the removal of contaminants in water: A review. Journal of Hazardous Materials. 2022,431:128584. DOI: 10.1016/j.jhazmat.2022.128584. (SCI Zone 1, co-corresponding author, tied for first).

[10].Yanrong Chen[#], Yaoning Chen[#*], Yuanping Li[#], Yihuan Liu, Hui Li, Hongjuan Jiang, Xinli Luo, Ping Tang, Li Chen, Haoqin Yan. Evolution of humic substances and the forms of heavy metals during co-composting of rice straw and sediment with the aid of Fenton-like process. Bioresource Technology. 2021,333:125170. DOI: 10.1016/j.biortech.2021.125170

[11].Yaoning Chen[#*], Linshenzhang Li[#], Yuanping Li[#*], Yihuan Liu, Yanrong Chen, Hui Li, Meiling Li, Fangting Xu, Yuqing Liu. Preparation of a double-network hydrogel based on wastepaper and its application in the treatment of wastewater containing copper(II) and methylene blue. RSC Advances. 2021, 11: 18131-18143

[12].Yaoning Chen[#*], Meiling Li[#], Yuanping Li[#], Yihuan Liu, Yanrong Chen, Hui Li, Linshenzhang Li, Fangting Xu, Hongjuan Jiang, Li Chen. Hydroxyapatite modified sludge-based biochar for the adsorption of Cu2+and Cd2+: Adsorption behavior and mechanisms. Bioresource Technology. 2021,321:124413. DOI: 10.1016/j.biortech.2020.124413

[13].Yaoning Chen[*], Zhen Peng, Yuanping Li[*], Yihuan Liu, Yanrong Chen, Yanxin Wu, Ran Xu, Sha Wang, Ziping Zeng. Photocatalytic performance of Z-scheme SrCO3-SrTiO3/Ag3PO4 heterojunction for tetracycline hydrochloride degradation. Journal of Materials Science. 2021, 56: 4356-4365 (SCI Region 2, co-corresponding author, tied for first).

[14].Yaoning Chen[*], Yihuan Liu, Yuanping Li[*], Li Zhao, Yanrong Chen, Hui Li, Yuqing Liu, Linshenzhang Li, Fangting Xu, Meiling Li. Functional wastepaper-montmorillonite composite aerogel for Cd2+ adsorption. Environmental Science and Pollution Research. 2020, (SCI Region 3, co-corresponding author, tied for 1st).

[15].Yaoning Chen[*], Ran Xu, Yuanping Li[*], Yihuan Liu, Yanxin Wu, Yanrong Chen, Jiachao Zhang, Sha Chen, Hanshuang Yin, Ziping Zeng, Sha Wang, Zhen Peng. $La(OH)_3$-modified magnetic CoFe2O4 nanocomposites: A novel adsorbent with highly efficient activity and reusability for phosphate removal. Colloids and Surfaces A: Physicochemical and Engineering Aspects. 2020,599:124870. (SCI Region 3, co-corresponding author, tied for first).

[16].Yaoning Chen[*], Sha Wang, Yuanping Li[*], Yihuan Liu, Yanrong Chen, Yanxin Wu,

Jiachao Zhang, Hui Li, Zhen Peng, Ran Xu, Ziping Zeng. Adsorption of Pb(II) by tourmaline-montmorillonite composite in aqueous phase. Journal of Colloid and Interface Science, 2020, 575:367-376 (SCI Region 2, co-corresponding author, tied for first).

[17].Yaoning Chen*, Ziping Zeng, Yuanping Li*, Yihuan Liu, Yanrong Chen, Yanxin Wu, Jiachao Zhang, Hui Li, Ran Xu, Sha Wang, Zhen Peng. Glucose enhanced the oxidation performance of iron-manganese binary oxides: Structure and mechanism of removing tetracycline. Journal of Colloid and Interface Science, 2020, 573:287-298 (SCI Region 2, co-corresponding author, tied for first).

[18].Yaoning Chen*, Yuqing Liu, Yuanping Li*, Yanxin Wu, Yanrong Chen, Yihuan Liu,Jiachao Zhang, Fangting Xu, Meiling Li, Linshenzhang Li. Synthesis, application and mechanisms of Ferro-Manganese binary oxide in water remediation: A review. Chemical Engineering Journal, 2020, 388:124313–124327 (SCI Zone 1, co-corresponding author, tied for 1st).

[19].Yaoning Chen, Weiyu Liang, Yuanping Li*, Yanxin Wu, Yanrong Chen, Wei Xiao, Li Zhao, Jiachao Zhang, Hui Li. Modification, application and reaction mechanisms of nano-sized iron sulfide particles for pollutant removal from soil and water: A review. Chemical Engineering Journal, 2019, 362:144–159 (ESI Highly Cited Paper, SCI Zone 1, co-corresponding author, tied for 1st place).

[20].Yuan Yu, Liu Yexing, Zeng Yuwei, Zhang Wenlu, Li Yuanping*. Current Situation of Rural Domestic Sewage Treatment and New Model of Intelligent Management. Journal of Hunan City University (Natural Science Edition), 2020, 29(2): 24-27 (Corresponding author, the top four are undergraduates).

[21].LI Yuanping,ZOU Bin,JIA Shunyao,CHEN Pengyu,ZHU Chenyang,LIU Zhengwei,ZHOU Tianyun,ZHAO Yi,ZHU Li. Preparation of sludge-based biochar and its application in environmental pollution control. Journal of Hunan City University (Natural Science Edition), 2023, 32(6): 26-30

Educational Reform Papers

[1]. Li Yuanping, Chen Yaoning. A brief analysis on the importance and construction ideas of "golden course" in local application-oriented undergraduate colleges[J].Education and

Teaching Forum,2020,(50):254-256.) **[2]. Li Yuanping, Chen Yaoning. Exploration of the construction of first-class undergraduate courses: A case study of hydraulic teaching reform[J].Modern Commerce & Trade Industry,2021,42(20):161-162.)**
patent
[1]. Chen Yaoning, Chen Yanrong, Li Yuanping, Zeng Guangming, Ma Lu, Yuan Xingzhong, Yan Ming, Wu Yanxin, Zhang Jiachao. Method for remediation of 2,2',4,4'-tetrabromodiphenyl ether contaminated soil[P].Invention patent, patent number: ZL 2016 1 0894681.X, authorization announcement date: 2019.12.6. **Li Yuanping, Zou Bin, Jia Shunyao, Yuan Yu, Chen Yaoning, Zhang Wei, Chen Pengyu, Zhu Chenyang, Liu Zhengwei. Electrochemical sensor for detecting cadmium ions and lead ions, preparation method and application thereof[P].Invention patent, application number: 202211648972.2, application date: 2022.12.21.** **[3] Li Yuanping, Jia Shunyao, Zhang Wei, Chen Yaoning, Zhou Tianyun, Liu Zhengwei, Zhu Li, Peng Yishun, Zhao Yi. Method for detecting polybrominated diphenyl ethers in water by biochar electrochemical sensor[P].Invention patent, application number: 202311076966.9, application date: 2023.8.24.** **[4] Li Yuanping, Jia Shunyao, Chen Yaoning, Zou Bin, Liu Zhengwei, Zhou Tianyun, Zhu Li, Zhao Yi, Peng Yishun. A strain of aerobic defense Pseudomonas and its application[P].Invention patent, application number: 202311133588.3, application date: 2023.9.4**
Scientific research awards
[1]. Li Yuanping, Zhang Wei, Tang Lin. Research progress in the detection and analysis of herbicide chloredine in environmental media. Third Prize of the 3rd Natural Science Outstanding Academic Achievement Award of Yiyang City, 2019. **[2]. Li Yuanping, Chen Yanrong, Chen Yaoning. Effects of physicochemical factors on actinomycete community during the composting process of agricultural waste. The 4th Natural Science Outstanding Academic Achievement Award of Yiyang City, 2021.**
Teaching awards

[1]. Second Prize of the Higher Education Group Individual Competition of the 2nd Hunan Micro Course Competition, 2017.02.

[2]. In 2019, he was awarded the honorary title of Outstanding Teacher of Hunan City University.

[3]. Simultaneous sensing of heavy metals Cd and Pb in water environment based on 3D gold nanocluster modified gold electrode. The 3rd "Deep Water Cup" National College Students' Water Supply and Drainage Science and Technology Innovation Competition, Third Prize, 2019.

[4]. Outstanding instructor of the 3rd "BEWG Cup" of the National College Students' Municipal Environment Innovation and Practice Ability Competition, 2021.11.

[5]. Hunan Zhongyi Environmental Protection Co., Ltd. "Create Youth" Hunan College Student Entrepreneurship Competition, Bronze Award, 2016. (2nd Instructor)

Publication of monographs/books

[1]. Li Yuanping, Chen Yaoning. Research on the application of gene sensing and immune technology in the detection of environmental pollution control process[M].Changsha:Central South University Press, 2022.ISBN978-7-5487-5113-7

Engineering background

name	**Chen Wen**	**gender**	**man**	**Date of birth**	**1970.03**	**job title**	**Senior engineer**
Highest academic qualifications	**graduate student**	**Highest degree**	**Master**	**mailbox**	**75732071@qq.com**		

Education

1988.09-1992.07, College of Civil Engineering, Hunan University, B.S

2001.09-2004.05, Huazhong University of Science and Technology, School of Civil

Engineering, M.S
Scientific research and education reform projects
[1]. Presided over the conclusion of the project of Hunan Provincial Department of Education, "Research on the Treatment of Pathogenic Microorganisms in Air Conditioning Cooling Water", Xiang Cai Jiao Zhi [2008] No. 71 **[2]. Presided over the conclusion of the Hunan Provincial Construction Science and Technology Plan Project "Research on the Treatment of Pathogenic Microorganisms in Circulating Cooling Water" (Xiang Jianke [2008] No. 459)** **[3]. Presided over and guided the students to complete the research and innovation project of college students in Hunan Province: the provincial project of Hunan City University "Detection and Prevention of Germs in Solar Water Heaters at Medium and Low Temperatures"** **[4]. Presided over the conclusion of the "Twelfth Five-Year Plan" higher education scientific research project of the Chinese Association of Higher Education, "Research on the Construction of On-campus Production Practice Bases for Civil Engineering Majors in Application-oriented Undergraduate Colleges" (general topic)**
Scientific papers
Detection and prevention of germs in solar water heater at medium and low temperatures[J].Theoretical Research on Urban Construction,2011.6,First author. **Kinetic study on cadmium adsorption in iron-coated sand[J].Environmental Science and Technology,2007.9,first author.** **[3].Study on the behavior of bisphenol A in the coagulation process of drinking water[J].China High-tech Enterprise,2008.9,First author.**
Educational Reform Papers
not
Scientific research awards
not
Teaching awards
not
Publication of monographs/books
not
Engineering background

name	Wen Zhifang	gender	woman	Date of birth	1983.08	job title	Senior engineer
Highest academic qualifications	undergraduate	Highest degree	bachelor	mailbox	183467558@qq.com		
Education							
2002.09-2007.07, Hunan City University, B.S. in Engineering							
Scientific research and education reform projects							
not							
Scientific papers							
[1]. Wen Zhifang, Wang Jian. Application of graph algorithm in hydraulic calculation of building water supply and drainage[J].China Water Transport,2014.11:379 [2]. Wen Zhifang. How to apply water-saving measures in building water supply and drainage design[J].Science and Technology Innovation and Application,2014,36:132. [3]. Wang Jian, Wen Zhifang, Li Bo. Pile and Soil-Rock Mass Mechanical Property Based on Modified Constitutive Model[J].《Electronic Journal of Geotechnical Engineering》, 2014,p2057-2070,v19i.							
Educational Reform Papers							
not							
Scientific research awards							
not							
Teaching awards							
not							

Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

Publication of monographs/books
not
Engineering background
presided over the civil engineering building of Hunan City University; Yiyang Innovation and Entrepreneurship Service Center, Public Rental Housing; Zhongnan E-commerce Park 1#, 2# office building; Phase I of Jinyu Garden, Taojiang, Hunan Province; Xinhuyuan Times Square Phase I and II; Changyi Road Shantytown Reconstruction Project - Guofu Community; Shunde City Yiyang Home Furnishing Expo Center and building materials market; The first phase of the third water plant of Nanxian County Water Supply Company; Providence Wood Country Phase I Exhibition Hall; Hainan Taste Wang Dongao Base; the second phase of the Titian Garden of the Central Nuclear Corporation; Jinshui Sunshine; Yangfan Vocational and Technical School; More than 200 design businesses such as Hunan Wangjia Hangxiao Steel Structure Factory.

Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

name	**Zhou Jun**	**gender**	**man**	**Date of birth**	**1984.08**	**job title**	**associate professor**
Highest academic qualifications	**graduate student**	**Highest degree**	**doctor**	**mailbox**	**a82800828@163.com**		
Education							
2003.09-2007.06, Bachelor of Engineering, Department of Urban Construction, Hunan City University **2008.09-2011.03, Anhui University of Technology, Master of Engineering** **2014.09-2023.10, Ph.D., School of Civil Engineering and Architecture, Wuhan University of Technology**							
Scientific research and education reform projects							
[1] Hunan Provincial Natural Science Foundation Provincial and Municipal Joint Fund: Study on the working conditions and membrane characteristics of methyl mercaptan treated by two-phase partitioned biological trickling filter tower (No. 2022JJ50284), 2022-2024, PI. **[2] General Project of Scientific Research Project of Hunan Provincial Department of Education: Research on the Efficacy of Micro-aeration Three-dimensional Electrolytic Fixed Bed in the Treatment of Catering Wastewater (No. 19C0354), 2019-2021, Project Leader.** **[3] Science and Technology Program of Hunan City University: Preparation and Experimental Research of Electrode Particles by Fixed 3D Electrolysis (No. 2016XJ13), 2016-2018, PI.** **[4] Hunan Provincial Department of Education Scientific Research Project General Topic: Research on Optimization of Three-dimensional Electrolysis Treatment of Catering**							

Wastewater (No. 15C0259), 2015-2017, Project Leader.

[5] Yiyang Science and Technology Program: Experimental Research on Advanced Oxidation - Three-dimensional Electrolysis Combined Process for the Treatment of Catering Waste, (No. 2013ZJ33), 2013-2015, PI.

[6] Science and Technology Program of Hunan City University: Experimental Efficacy Study on Three-dimensional Electrolysis Treatment of Catering Wastewater (No. 2012XJ007), 2012-2014, Project Leader.

[7] Education Reform Project of Hunan City University: Exploration and Practice of the Construction of Core Gold Courses in Water Supply and Drainage Science and Engineering Based on the OBE Concept (Xiangcheng Yuan Jiao Zi [2023] No. 30), 2023-2025, Project Leader.

[8] Industry-University Cooperation and Collaborative Education Project of the Department of Education of the Ministry of Education: An Exploration of the Training Model of "Application-oriented" Teachers in Water Supply and Drainage Science and Engineering in Local Engineering Colleges under the Background of New Engineering (No. 201902099007), 2020-2021, Project Leader.

[9] Education Reform Project of Hunan City University: Construction of "Engineering and Innovation" Practice Ability Training System for Water Supply and Drainage Science and Engineering in Local Engineering Colleges (Xiangcheng Yuanfa [2019]), 2019-2021, Project Leader.

[10] Education Reform Project of Hunan City University: Research on the Construction of a "Project-based" Practical Teaching System for Water Supply and Drainage Science and Engineering in Local Undergraduate Colleges (Xiangcheng Yuanfa [2016] No. 51), 2016-2018, Project Leader.

[11] Education Reform Project of Hunan City University: Curriculum Reform and Practice of Water Engineering Economy Based on the Application-oriented Talent Training Model (Xiangcheng Yuanfa [2013] No. 44), 2013-2015, Project Leader.

Scientific papers

[1] Zhou Jun, Hu Xiaobing. Advanced Treatment of Fermentation Pharmaceutical

Wastewater by Three-dimensional Electrolysis[J]. Industrial Water Treatment, 2014, 34(06): 49-52.

[2] Zhou Jun, Xiong Ren, Wen Min, Cheng Xi. Pretreatment of catering wastewater by electric Fenton method[J]. Chinese Journal of Environmental Engineering, 2015, 9(12): 5887-5890.

[3] Zhou Jun, Yan Hengzhen, Hou Kanglong, Li Jixia, Zeng Yao. Study on the treatment of catering wastewater by fixed particle three-dimensional electrolysis[J]. China Water Supply and Drainage, 2016, 32(07): 78-81.

[4] Zhou Jun, Jiao Yunyi, Chen Xiangyu, Liu Xiaoqian. Research Status and Prospect of Catering Wastewater Treatment Methods[J]. Journal of Hunan City University (Natural Science Edition), 2016, 25(06): 73-75+78.

[5] Zhou Jun, Yang Fan, Deng Zhenning, Li Jian. Comparative Study on the Treatment of Catering Wastewater by Fixed 3D Electrode Method and 2D Electrode Method[J]. Journal of Hunan City University (Natural Science Edition), 2018, 27(01): 66-70.

[6] Jun Zhou, Ying H. Jiang, Wen H. Li and Xiao Y. Liu. Comparison and analysis of several wet scrubbing solutions to remove methyl mercaptan. Journal of Environmental Science and Health, Part A Toxic/Hazardous Substances and Environmental Engineering, 2018, 53(9): 819-824.

[7] Jun Zhou, Ying H. Jiang, Wen H. Li and Xiao Y. Liu. Kinetics and removal formula of methyl mercaptan by ethanol absorption without neglecting solute accumulation. Journal of Environmental Science and Health, Part A Toxic/Hazardous Substances and Environmental Engineering, 2018, 53(14), 1229-1234.

[8] Yang Y, Zhou Jun, Li Lu, Zhou Yanyi, Zheng Youchen. Research Status and Prospect of Electrochemical Treatment of Refractory Wastewater[J]. Journal of Hunan City University (Natural Science Edition), 2020, 29(06): 73-78.

[9] Zhou Jun, Guo Qianying, Yang Ying, Liu Baisheng, Liu Fan, Zheng Youchen. Comparison of Three-dimensional Electrolytic Fixed Bed Treatment of Catering Wastewater with Different Anode Plates[J]. China Water Supply and Drainage, 2020, 36(23): 58-63.

[10] Zhou Jun, Zhou Yanyi, Zheng Youchen, Li Yayi, Li Jiawei, Wang Yiyi, Zha Huanhuan, Xiang Xiannan. Research Progress on Three-dimensional Electrolysis for Particle Electrodes in Refractory Wastewater[J]. Journal of Hunan City University (Natural Science Edition), 2023, 32(03): 72-78.
Educational Reform Papers
[1] Zhou Jun, Zhang Wei. Curriculum Construction and Reform of Water Engineering Economics[J]. Value Engineering, 2013, 32(14): 237-239. **[2] Zhou Jun, Zhang Wei, Yan Hengzhen, Deng Jie. Discussion on Case Teaching in the Course of Water Engineering Economics[J]. Times Education, 2014, 23: 81+83.** **[3] Zhou Jun, Zhang Chun, Wang Aihe, Wang Caiwen, Deng Yumei. Construction of School-Enterprise Cooperative Practice Teaching System Based on Engineering Ability Training[J]. Value Engineering, 2017, 36(33): 186-187.** **[4] Zhou Jun, Zhang Chun, Wang Caiwen, Li Hao. Research on the Construction of Engineering Faculty in Local Undergraduate Colleges[J]. Modern Vocational Education, 2018(13): 35.** **[5] Zhou Jun, Zhang Chun, Wang Caiwen, Jiang Haiyan, Deng Yumei. Research on the Practical Ability Cultivation of Young Teachers in Local Undergraduate Colleges: A Case Study of Hunan City University[J]. Industry and Technology Forum, 2019, 18(15): 249-250.**
patent
[1] Zheng Youchen, Zhou Jun et al. Particle electrode packing fixture[P]. Utility model patent, patent number: ZL 2019 2 1300542.5, authorization announcement date: 2020.04.17. **[2] Zhou Jun, Li Lili, et al. A kind of temperature control water-saving device based on PLC[P]. Utility model patent, patent number: ZL 2020 2 2051955.3, authorization announcement date: 2021.06.08.** **[3] Zhou Jun, Li Yayi, et al. Suspended three-dimensional electrolytic fixed bed[P]. Utility model patent, patent number: ZL 202022546959.9, authorization announcement date: 2021.07.06.**
Scientific research awards
[1] Zhou Jun. Electric Fenton method pretreatment of catering wastewater, third prize of

the second Yiyang Natural Science Outstanding Academic Achievement Award, 2016. **[2] Zhou Jun. Research on the treatment of catering wastewater by fixed particle three-dimensional electrolysis, second prize of the 3rd Natural Science Outstanding Academic Achievement Award of Yiyang City, 2019.** **[3] Zhou Jun. Comparison of Three-dimensional Electrolytic Fixed-Bed Treatment of Catering Wastewater by Different Anode Plates, Winner of the 5th Natural Science Outstanding Academic Achievement Award in Yiyang City, 2023.**
Teaching awards
not
Publication of monographs/books
not
Engineering background
not

Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

name	**Wang**	**gender**	**man**	**Date of birth**	**1982.01**	**job title**	**lecturer**
Highest academic qualifications	**graduate student**	**Highest degree**	**doctor**	**mailbox**	**75814470@qq.com**		

Education

2014.09-2020.06, Ph.D., School of Metallurgy and Environment, Central South University

2008.09-2011.06, M.S., School of Metallurgical Science and Engineering, Central South University

2001.09-2005.06, B.S., School of Metallurgical Science and Engineering, Central South University

Scientific research and education reform projects

1. Hunan Provincial Natural Science Foundation-Provincial and Municipal Joint Fund, 2023JJ50347, Research on the recovery of metallic arsenic from sewage acid by iodine-copper synergistic reduction method, 2023/01-2025/12, 50,000 yuan, under research, PI

2. General Project of Hunan Provincial Department of Education, 23C0331, Basic Research on the Recovery of Metallic Arsenic in High Sulfuric Acid Media by Copper Chloride Synergistic Reduction, 2023/12-2025/12, 10,000 RMB, under research, Principal Investigator

Scientific papers

[1] An Wang, Kanggen Zhou*, Xuekai Zhang, Dingcan Zhou, Changhong Peng, Wei Chen*. Arsenic removal from highly-acidic wastewater with high arsenic content by copper-chloride synergistic reduction. Chemosphere, 238, 124675, 2020

[2] An Wang, Kanggen Zhou*, Xuekai Zhang, Dingcan Zhou, Changhong Peng, Wei Chen*. Reductive removal of arsenic from waste acid containing high-acidity and arsenic levels through iodide and copper powder synergy. Chemical Engineering Journal, 373, 23-30, 2019

[3] Kanggen Zhou, An Wang, Duchao Zhang*, Xinwang Zhang, Tianzu Yang. Sulfuric acid

leaching of Sm-Co alloy waste and separation of samarium from cobalt, Hydrometallurgy, 174, 66-70, 2017 **[4] Jianfeng Wen, An Wang, Fang Xia, Dong Xu, Tianzu Yang*. Pretreatment of Se-Containing Lead Matte by Alkaline Pressure Leaching, Journal of Sustainable Metallurgy, 3, 429-440, 2017**
Educational Reform Papers
not
Scientific research awards
not
Teaching awards
not
Publication of monographs/books
not
Engineering background

Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

name	**boundless**	**gender**	**man**	**Date of birth**	**1980.05**	**job title**	**lecturer**
Highest academic qualifications	**graduate student**	**Highest degree**	**doctor**	**mailbox**	**environmentor@foxmail.com**		
Education							
2010.09-2015.06, Ph.D., Geological Engineering, School of Earth Sciences and Information Physics, Central South University **2003.09-2006.07, M.Eng., School of Architecture and Built Environment, KTH Royal Institute of Technology, Sweden** **1998.09-2002.07, College of Science, Hunan Agricultural University, Majoring in Biotechnology**							
Scientific research and education reform projects							
[1]. Hunan Provincial Department of Science and Technology, Provincial and Municipal Joint Project: Research on the Formation Mechanism and Health Risk Assessment of Mercury Pollution in Groundwater in Solid Waste Landfill in Dongting Lake District (2022JJ50274), 2022-2024, 50,000 RMB, Project Leader; **[2]. General Project of Hunan Provincial Department of Education: Source and Migration and Transformation Mechanism of Plant Mercury in Yuanjiang Section, Dongting Lake District (22C0509) 2023-2024, 10,000 yuan, Project Leader;** **[3]. Applied Basic Research and Soft Science Research Program of Yiyang Science and Technology Bureau: Site Suitability Analysis and Treatment Technology of Solid Waste Landfill in Hidden Karst Area of Dongting Lake District, [2022) No. 108, Project Leader.**							
Scientific papers							
Yimin Liu, Yang Wang, Ji Wang, Xiongfei Cai, Jiawei Zheng, Characteristic analysis of groundwater pollution and health risk assessment of valley landfill[J], Environmental							

Chemistry, 2022, 41(8): 2540-2550 **[2].Yang Wang; Keneng Zhang; Yonggui Chen; Xingzhi Zhou; Fuxin Jin; Prediction on contaminant migration in aquifer of fractured granite substrata of landfill[J], Journal of Central** **South University, 2013, 20(11): 3193-3201** **[3]. Yang Wang; Keneng Zhang; Yonggui Chen ; Separation and Recovery of Gold, Copper and** **Silver from Waste Acid Residues by a Novel Alkaline Dechlorization-Acid Leaching Process[J], Asian Journal of Chemistry, 2015, 27(1): 292-296;** **[4]. Wang Yang, Li Shixiong, Zhu Xiangdong, Yu Zhiquan, A new process for preparing standard lead and zinc concentrate from cyanide tailings derivatives[J], Chinese Journal of Nonferrous Metals, 2013, 23(01): 247-253**
Educational Reform Papers
not
Scientific research awards
First Prize of Science and Technology Award of China Nonferrous Metals Industry, 2016
Teaching awards
not
Publication of monographs/books
not
Engineering background
The Second National Pollution Source Survey Project of Xingyi City, Southwest Guizhou Prefecture **The third soil contaminated land remediation project in Guiyang City**

Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

name	**Wang Caiwen**	**gender**	**man**	**Date of birth**	**1981.09**	**job title**	**lecturer**
Highest academic qualifications	**graduate student**	**Highest degree**	**Master**	**mailbox**	**469862473@qq.com**		

Education

2001.09-2005.07, Bachelor of Engineering, School of Hydraulic Engineering, Changsha University of Science and Technology

2005.09-2008.07, School of Hydraulic Engineering, Changsha University of Science and Technology, M.S

Scientific research and education reform projects

[1]. Education Reform Project of Hunan Provincial Department of Education: Research and Practice of Industry-University-Research Combination of Water Supply and Drainage Science and Engineering from the Perspective of Outstanding Engineers (Xiangjiaotong [2015] No. 118-420) 2015-2018, Project Leader.

[2]. Hunan City University Education Reform Project: Research on the Cultivation of Water Supply and Drainage Science and Engineering Application-oriented Talents by Combining Industry, Education and Research (Xiangcheng Yuanfa [2016] No. 80), 2016-2018, Project Leader.

[3]. Industry-University Cooperation and Collaborative Education Project of the Ministry of Education: Research on Industry-University-Research Practice Teaching System Based on the Perspective of Excellent Engineers, 2019-2020, Project Leader.

[4]. General Project of Hunan Provincial Department of Education: Process Characteristics of Antimony-containing Wastewater Co-precipitation with Iron and Antimony and Regulation Mechanism of Antimony Morphology (Xiangjiaotong [2020] No. 264, Project No.

20C0343), 2020-2023, Project Leader. **[5] General Project of Hunan Provincial Department of Education: Research on Photocatalytic Degradation of Typical Persistent Organic Pollutants by Electric Field Regulated Carbon Nanofibers (Xiangjiaotong [2023] No. 361, Project No. 23C0325), 2023-2025, PI.**
Scientific papers
Wei Zhang,Nan Li, Caiwen Wang, Guangchao Li,Julong Sun ,Shumin Zhu*. Elimination of micropollutants by the solar/chlorine process: contribution of reactive species and formation risk of NDMA. Environmental Science Water Research & Technology,2022,8(6),1252-1260.
Educational Reform Papers
[1]. Wang Caiwen. Reform and practice of graduation design teaching under the background of engineering education accreditation of water supply and drainage science and engineering[J].Modern Real Estate,2016,43(18),:217-218.) **[2]. Wang Caiwen. Construction and Practice of Professional Practice Teaching System of Water Supply and Drainage Science and Engineering from the Perspective of Outstanding Engineers[J]. Modern Property,2017,(10):158-159.]** **[3]. Wang Caiwen. Exploration of Practical Teaching Reform for Cultivating Outstanding Engineers in Water Supply and Drainage Science and Engineering through Industry-University-Research Combination Education[J]. Education,2016,10(8):130.]** **[4]. Wang Caiwen. Education strategy of industry-university-research combination of water supply and drainage science and engineering[J].Examination Weekly,2017,100,26** **[5]. Wang Caiwen. Teaching reform of water supply and drainage pipe network system course based on the training of outstanding engineers[J].Tribune of Science and Technology Economics,2019,27(32):158.)**
patent
not
Scientific research awards
[1]. Research and application technology of multi-walled carbon nanotube-supported TiO2 adsorption and photodegradation of chlorobenzene, third prize of Hunan Science and

Technology Progress Award (ranked fourth), December 2016.
Teaching awards
[1]. Research and Practice on the Training Model of Water Supply and Drainage Science and Engineering Professionals Oriented by "Engineering Ability Output", Third Prize of Hunan Provincial Teaching Achievement Award (ranked fifth), January 2016
Publication of monographs/books
[1]. Water Pump and Water Pumping Station, Associate Editor-in-Chief, Peking University Press, 2014
Engineering background
[1]. Construction drawing design of water plant in Jindong Management District, Yongzhou City, 2016 **[2]. Design of outdoor supporting sewage treatment station in the first phase of the food industrial park of Yuanjiang High-tech Zone, 2019** **[3]. Construction drawing design of water supply and pressurization pumping station on Jinpen North Road, Taojiang County Economic Development Zone, 2020**

Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

name	**Jiang Haiyan**	**gender**	**woman**	**Date of birth**	**1988.1**	**job title**	**lecturer**
Highest academic qualifications	**graduate student**	**Highest degree**	**Master**	**mailbox**	**125890109@qq.com**		

Education

2006.09-2010.07, Bachelor of Engineering, School of Chemical and Environmental Engineering, Shenyang University of Technology

2010.09-2013.07, Master of Engineering, College of Urban Construction, University of South China

2021.09-2022.07, Visiting Scholar, School of Civil Engineering, Hunan University

Scientific research and education reform projects

General Project of the Department of Education: Preparation of Sodium Alginate/Graphene Oxide Composite Film and Its Adsorption Performance on Cu(II) (16C0303), 2016-2020, Project Leader.

[2]. Yiyang Science and Technology Project: Recognition and Mechanism of Cu(II) Ion Blotting Composite Membrane on Cu(II) (No. 2015JZ24), 2015-2019, Project Leader.

Scientific papers

[1]. Jiang Haiyan, Zhou Shukui, Zeng Guangming. Adsorption kinetics and adsorption thermodynamics of U(VI) by insoluble humic acids[J].Journal of Safety and Environmental Engineering,2015,15(1):193~198.) (CSCD)

[2]. Jiang Haiyan, Zhang Wei, Zhou Shukui. Adsorption performance and mechanism of humic acid-modified attapulgite rod on U(VI)[J].Chinese Journal of Environmental Engineering,2015, 9(2):705~710. (CSCD)

[3]. Jiang Haiyan, Duan Yi, Liu Yuqi. Tetracycline removal from wastewater by calcined

kaolin activation of monosulfate[J].Chinese Journal of Environmental Engineering,2020, 14(9):2494~2550. (CSCD) **[4]. Jiang Haiyan, Duan Yi, Wang Aihe. Study on the adsorption of Cu(II) in water by cross-linked sodium alginate-hydroxyethylcellulose composite membrane[J].Journal of Hunan City University (Natural Science Edition),2020, 29(1):75~78.)** **[5]. Haiyan Jiang, Yi Duan, Hao Li, Aihe Wang.New insight into highly efficient removal of tetracycline by calcined hydroxyapatite activated peroxymonosulfate: The role of calcium carbonate and phosphate group [J]. Journal of Water Process Engineering,2023, 55:104207.**
Educational Reform Papers
[1]. Jiang Haiyan, Zhang Wei. Discussion on the practical teaching reform of water supply and drainage science and engineering based on the registered engineer system[J].Science and Technology Innovation Herald, 2015, 4: 158-159. **[2]. Jiang Haiyan, Wang Aihe, Li Hao. Dilemmas and countermeasures faced by water treatment biology courses in applied undergraduate colleges[J].Education and Teaching Forum,2020,32(8):315-316.)**
patent
[1]. Jiang Haiyan, Duan Yi, Zhang Wei. Invention patent, patent number: ZL 2015 1 0885424.5, authorization announcement date: 2018.6.8.
Scientific research awards
not
Teaching awards
In 2015, he won the first prize of the modern education technology application competition of Hunan City University. **[2]. Household Sewage Treatment and Reuse System, Hunan College Student Challenge Cup, Provincial Third Prize, 2015.** **[3]. Gold Medal Instructor of the 3rd "BEWG Cup" of the National College Students' Municipal Environment Innovation and Practice Ability Competition2021.11.**
Publication of monographs/books
not

Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

Engineering background
not

Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

name	**Deng Yumei**	**gender**	**woman**	**Date of birth**	**1989.11**	**job title**	**lecturer**
Highest academic qualifications	**graduate student**	**Highest degree**	**Master**	**mailbox**	**dym909163@168.com**		
Education							
2008.09-2012.07, Bachelor of Engineering, School of Hydraulic Engineering, Changsha University of Science and Technology **2012.09-2014.07, School of Hydraulic Engineering, Changsha University of Science and Technology, M.S**							
Scientific research and education reform projects							
[1]. Hunan Provincial Education Science "14th Five-Year Plan" Project: Research on the Construction of Evaluation Index System for the Cultivation of High-quality Applied Talents in the Context of Professional Certification, 2023.03-2026.03, under research, project leader. **Department of Education General Project: Effect of CTAB/Ultrasonic Combination on Activated Sludge Dewatering Performance (18C0840), 2018-2020, Project Leader.** **[2]. Science and Technology Program of Hunan City University: Effect of Microwave Quenching and Tempering on Sludge Dewatering Performance (No. 2016XJ14), 2016-2017, Project Leader.** **[3]. Education Reform Project of Hunan City University: Practice and Exploration of Laboratory Opening and Management Mechanism Based on the Application-oriented Talent Training Model (Xiangcheng Yuanfa [2016] No. 51-12), 2016-2017, Project Leader.** **[4]. National Natural Science Foundation of China: Research on the mechanism of action of modified shell powder/Ce-N-TiO2 adsorption and photocatalytic degradation of typical dissolved organophosphorus (42071122), 2020-2024, participant.**							

[5]. Outstanding Youth Project of Hunan Provincial Department of Education: Mechanism and kinetics of sulfur dioxide reduction and decomposition of zinc cadmium ferroate (No. 16B049), 2016-2019, (ranked second).
Scientific papers
[1]. Yumei Deng; Jie Deng; Chun Zhang ; Sponge City and Water Environment Planning and Construction in Jibu District in Changde City, Sustainability, 2022, 15(1): 444-461. **[2]. Deng Yumei, Xie Min, Yan Hengzhen, Li Hao. Effect of freezing and tempering on dewatering performance of activated sludge[J].Chinese Journal of Environmental Engineering,2017,11(7):4362-4366(CSCD).** **[3]. Deng Yumei, Yang Chuhui, Yu Donghui, et al. Study on the preparation of activated carbon adsorbents from residual sludge and their adsorption properties[J].Hunan City University(Natural Science Edition),2017,26(3):70-73.)** **[4]. Deng Yumei, Yan Hengzhen, Li Hao, et al. Design and application of urban rain garden:based on the climatic conditions of Yiyang City[J].Hunan City University(Natural Science Edition),2020,29(2):20-23.)** **[5]. Yan Tao, Deng Yumei*, Chen Wen, Yi Wei. Discussion on the current situation and treatment countermeasures of ecological pollution in Dongting Lake[J].Management and Technology of Small and Medium-sized Enterprises,2020,(10):32-33**
Educational Reform Papers
[1]. Deng Yumei, Yan Hengzhen. Exploration and practice of open mode of water supply and drainage science and engineering laboratory in applied universities[J].Guangdong Chemical Industry,2016,43(18),:217-218.) **[2]. Deng Yumei, Yan Hengzhen. Exploration of experimental teaching system of water supply and drainage science and engineering based on professional evaluation[J].Science & Technology Information,2017,(10):158-159.)** **[3]. Deng Yumei, Zhang Chun, Li Hao. Exploration of the Teaching Reform of Water Resources Utilization and Protection[J]. Industry & Technology Forum,2019,18(22):171-172.** **[4]. Deng Yumei, Zhou Shuiqiang, Zhang Chun, Deng Jie, Zhou Jun. Research on the improvement of teachers' teaching ability oriented to improve students' ability to solve**

complex engineering problems[J].2020,19(23):254-255.)
patent
[1]. Deng Yumei, Zhou Shuiqiang. Utility model patent, patent number: ZL 2017 2 0345653.2, authorization announcement date: 2017.11.3. [2]. Deng Yumei, Yu Donghui, Li Hao, Zhou Shuiqiang. A magnetic field generating device that can adjust the strength and direction of the magnetic field[P].Utility model patent, patent number: ZL 2017 2 0345651.3, authorization announcement date: 2018.2.9.
Scientific research awards
[1]. Deng Yumei, Xie Min, Yan Hengzhen, Li Hao. Effect of freezing and tempering on the dewatering performance of activated sludge. Third Prize of the 3rd Natural Science Outstanding Academic Achievement Award of Yiyang City, 2019.
Teaching awards
[1]. Second Prize of Classroom Teaching Competition for Teachers of Hunan City University, 2020.07. [2]. In 2020, he was awarded the honorary title of Outstanding Teacher of Hunan City University. [3]. Design of urban rain garden based on climatic conditions in Hunan Province. The First Hunan Provincial College Students' Comprehensive Utilization of Water Resources Innovation Design Competition, Second Prize, 2016.
Publication of monographs/books
not
Engineering background
not

Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

name	**Lu Sen**	**gender**	**woman**	**Date of birth**	**1990.12**	**job title**	**lecturer**
Highest academic qualifications	**graduate student**	**Highest degree**	**Master**	**mailbox**	**751742323@qq.com**		
Education							
2007.09-2011.06, Bachelor of Engineering, Department of Urban Construction, Hunan City University **2012.09-2015.06, School of Urban Construction, University of South China, Master of Engineering** **2022.09-present, School of Resources, Environment and Safety Engineering, University of South China, Ph.D. in Engineering**							
Scientific research and education reform projects							
[1].Hunan City University Open Project: Research on Rural Drinking Water Safety and Early Warning Mechanism, 2020-2021, PI. **[2].Research on the Reform of Ideological and Political Teaching of Instrumentation and Control Course of Water Supply and Drainage Engineering under the Background of "New Engineering + Professional Certification" of Hunan City University, 2021.12-2023.11, Project Leader.** **[3].Hunan Provincial Department of Education Scientific Research Project: Preparation of amidoxime silica and treatment of uranium (VI)-containing wastewater Efficacy, 2021.11-2023.11, Project Leader.**							
Scientific papers							
[1]. Lu Sen. Analysis of Influencing Factors of Graduate Employability[J]. Quality Management,2017,10(7):199-200.							

[2]. Xiong Zhengwei, Lu Sen, Yang Bohao, Wang Zhiyong, Yu Qingwei. Study on the Effect of Filling Rate on Aeration Contact Oxidation Process of Hanging Chains[J]. Environmental Science and Technology,2014,37(5):164-168.] （CSCD） **[3]. Xiong Zhengwei, Lu Sen, Wang Zhiyong, Yu Qingwei, Yang Bohao, Sun Ping. Treatment of River Wastewater by Hanging Chain Biological Contact Oxidation Process[J]. Chinese Journal of Environmental Engineering,2014,8(7):2748-2752.] （CSCD）** **[4]. Lu Sen, Yin Yueqiang, Shu Jinkai. Preparation of functionalized ethyl SiO2 by amidoxime and its adsorption of U(VI.)[J].Natural Science,2023,5(9):1-3.)**
Educational Reform Papers
Lu Sen, Shu Jinkai." Exploration of teaching reform of "Water Supply and Drainage Instrumentation and Control" under the background of "new engineering + professional certification"[J].China Teaching Work,2023,9(72):127.)
patent
[1]. Lu Sen, Xiao Han, Duan Hongling, Yin Yueqiang. A kind of sewage treatment dosing device. National Invention Patent, Patent No.: ZL201810734982.5, Authorization Announcement Date: 2020.6.26. **[2]. Wang Jinsong, Lu Sen, Xiong Zhengwei, Xie Shuibo, Tang Zhenping, Xu Hua, Tang Xiaolin, Yang Jinhui, Li Xia. Preparation method of mesoporous silica with oxime ethane bridge bond, invention patent, patent number: ZL 2014 1 0853527.9, authorization announcement date: 2017.7.14.** **[3]. Yin Yueqiang, Su Jian, Lu Sen. An automatic drainage device for the construction of water conservancy projects[P].Utility model patent, patent number: ZL201920201104.7, authorization announcement date: 2019.11.26** **[4]. Yin Yueqiang, Su Jian, Lu Sen. A new embankment maintenance device for water conservancy project[P].Utility model patent, patent number: ZL201920466336.5, authorization announcement date: 2019.12.27** **[5]. Yin Yueqiang, Su Jian, Lu Sen. A water garbage collection device for water conservancy projects[P].Utility model patent, patent number: ZL201920201026.0, authorization announcement date: 2019.11.26**
Scientific research awards
not

Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

Teaching awards
not
Publication of monographs/books
not
Engineering background
not

Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

name	**Li**	**gender**	**woman**	**Date of birth**	**1991.02**	**job title**	**Experimenter**
Highest academic qualifications	**graduate student**	**Highest degree**	**Master**	**mailbox**	**329474911@qq.com**		
Education							
2008.09-2012.07, Bachelor of Engineering, School of Hydraulic Engineering, Changsha University of Science and Technology **2012.09-2015.07, School of Hydraulic Engineering, Changsha University of Science and Technology, M.S**							
Scientific research and education reform projects							
[1]. General Project of the Department of Education: Ultrasonic-template polymerization of cationic polyacrylamide (TPAD) and its application in sludge quenching and tempering (19C0376), 2019-2021, Project Leader. **[2] 2020 Ministry of Education Industry-University Cooperation and Collaborative Education Project: Construction of Practical Teaching Base for Engineering Design Ability of Water Supply and Drainage under the Background of "Innovation and Entrepreneurship + Professional Certification", 2019-2021, Project Leader.** **[3]. Hunan City University Education Reform Project: Reform and Research on SPOC Blended Teaching in the Background of Gold Course (Xiangcheng Yuan Jiao Zi No. 2020-15), 2020-2022, Project Leader.** **[4]. Education Reform Project of Hunan City University: Research on the Construction and Management of Applied Undergraduate Innovation Laboratory Based on "Engineering and Innovation" (Xiangcheng Yuanfa No. 2017-120) (Xiangcheng Yuanfa [2016] No. 51-12), 2016-2018, Project Leader.**							

[5]. 2020 Open Project of the Engineering Technology Research Center of "Drinking Water Quality Safety Assurance in Villages and Towns in Hunan Province", Hunan City University: Preparation of Ti/IrO2 Electrode and Its Removal of Tetracycline Organic Pollutants in Water, 2020-2022, Project Leader.
Scientific papers
[1]. Li Hao, Xie Min, Wang Aihe, Jiang Haiyan. Effect of ultrasonic combined with CPAM on sludge structure and dewatering performance[J].Popular Standardization,2020(22):182-183.) **[2]. Li Hao, Wang Aihe. Study on adsorption performance of modified tea pomace/kaolin composites on ammonia nitrogen in water[J].Journal of Hunan City University (Natural Science Edition),2017,26(06):76-78.)**
Educational Reform Papers
[1]. Li Hao, Wang Aihe, Zhang Chun, Jiang Haiyan. Exploration of the application of virtual simulation project in the online teaching of "water quality engineering experiment"[J].Education and Teaching Forum,2020(45):274-275.) **[2]. Li Hao, Wang Aihe, Deng Yumei. Research on the construction and management of applied undergraduate innovation laboratory based on "engineering and innovation"[J].Education and Teaching Forum,2019(18):271-272.)** **[3]. Li Hao, Yan Hengzhen, Deng Yumei. Research on CAD course of water supply and drainage engineering based on improving engineering ability[J].Value Engineering,2018,37(05):183-184.)**
patent
[1]. "A sewage treatment system sewage treatment tank" (ZL201922285344.2), utility model patent
Scientific research awards
not
Teaching awards
[1]. Second Prize of Teacher Informatization (Wisdom) Classroom Teaching Competition of Hunan City University, 2020.07.

[2]. Third Prize of Teachers' Informatization Teaching Competition of Hunan City University, 2017.07
Publication of monographs/books
not
Engineering background
not

Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

name	**Shu Jinkai**	**gender**	**man**	**Date of birth**	**1992.07**	**job title**	**lecturer**
Highest academic qualifications	**graduate student**	**Highest degree**	**Master**	**mailbox**	**877126365@qq.com**		
Education							
2012.09-2016.06, B.S., Water Supply and Drainage Engineering, School of Municipal and Surveying Engineering, Hunan City University **2017.09-2020.06, M.S., School of Municipal and Environmental Engineering, Shenyang Jianzhu University**							
Scientific research and education reform projects							
[1]. General Project of the Department of Education: Study on the Efficacy of Hydraulic Cavitation and MWCNTs/TiO2 Photocatalytic Combined Treatment of Pyridine-containing Wastewater (20C0366), Principal Investigator. **[2]. Youth Project of Yiyang Federation of Social Sciences: Research on Heavy Metal Pollution Control Countermeasures in Dongting Lake under the Double Carbon Goal (2023YS153), Principal Investigator.** **[3]. Education Reform Project of Hunan City University: Research on the Teaching Reform of Hydraulics Curriculum in the Context of Engineering Education Accreditation (2022), Principal Investigator.**							
Scientific papers							
[1].“ Influencing Factors and Kinetics of Modified Shell Powder/La-Fe-TiO2 Photocatalytic Degradation of Pyridine Wastewater.” International journal of environmental research and public health vol. 19,22 14835. 11 Nov. 2022, doi:10.3390/ijerph192214835 **Journal of Hunan City University (Natural Science Edition),2021,30(06):69-72.)** **[3].Accelerate the research on the innovative utilization of reed straw[J].Science and Technology,2022.9.** **Papermaking Equipment and Materials,2022,51(08):141-143.**							

[5].“ Research on heavy metal pollution control countermeasures in Dongting Lake under the goal of "double carbon"[J].Papermaking Equipment and Materials,2023,52(07):147-149.)
Educational Reform Papers
[1].Reflections on the teaching of the course of "Fundamentals of Water Process Equipment" under the background of smart water[J].National Wenhui,2022.52. **Research on the teaching reform of hydraulic courses under the background of engineering education accreditation[J].Charm China,2023,36:58-60**
patent
[1]. A sewage treatment device, State Intellectual Property Office, 2023233476028, utility model patent (accepted), first.
Scientific research awards
[1]. The 5th Natural Science Outstanding Academic Achievement Award of Yiyang City, 2023, first.
Teaching awards
not
Publication of monographs/books
not
Engineering background
not

Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

name	Deng Zhenning	gender	man	Date of birth	1995.10	job title	lecturer
Highest academic qualifications	graduate student	Highest degree	doctor	mailbox	dengzn202@163.com		

Education

2013.09-2017.06, Hunan City University, Bachelor of Engineering, Water Supply and Drainage Science and Engineering

2017.09-2020.06, University of South China, Master of Engineering, Civil Engineering

2020.09-2024.06, Ph.D. in Environmental Science and Engineering, Nanchang University

Scientific research and education reform projects

[1]. 2024 Hunan Provincial Department of Education Scientific Research General Project - Construction of High Stability and Cheap Solid Adsorbents for Carbon Dioxide Capture and Research on Efficient Capture Mechanism (24C0467, 10,000 RMB, Principal Investigator).

Scientific papers

[1].**Zhenning Deng**, Yi Liu, Mingwei Wan, Shengya Ge, Zhiwei Zhao, Jingwen Chen, Shixia Chen, Shuguang Deng, Jun Wang. Breaking trade-off effect of Xe/Kr separation on microporous and heteroatoms-rich carbon adsorbents. Separation and Purification Technology, 2023, 308, 122942-122948.**(**JCR SCI Zone 1 TOP Journal**).**

[2] **Zhenning Deng,** Longsheng Yang, Hanting Xiong, Junhui Liu, Xing Liu, Zhenyu Zhou, Jingwen Chen, Shixia Chen, Shuguang Deng, Banglin Chen, Jun Wang. Green and Scalable Preparation of an Isomeric CALF-20 Adsorbent with Tailored Pore Size for Molecular Sieving of Propylene from Propane. Small Methods, 2024, 2400838.**(**JCR SCI Zone 1 Journal**).**

[3] Junhui Liu, Hanting Xiong, Hua Shuai, Xing Liu, Yong Peng, Lingmin Wang, Pengxiang Wang, Zhiwei Zhao, **Zhenning Deng,** Zhenyu Zhou, Jingwen Chen, Shixia Chen, Zheling Zeng, Shuguang Deng, Jun Wang. Molecular sieving of iso-butene from C4 olefins with simultaneous high 1,3-butadiene and n-butene uptakes. Nature Communications, 2024, 15, 2222.(Nature, JCR

SCI Zone 1 TOP Journal**).**

[4] Yong Peng, Hanting Xiong, Peixin Zhang, Zhiwei Zhao, Xing Liu, Shihui Tang, Weizhen Zhou, **Zhenning Deng,** Junhui Liu, Yao Zhong, Zeliang Wu, Jingwen Chen, Zhenyu Zhou, Shixia Chen, Shuguang Deng, Jun Wang. Interaction-selective molecular sieving adsorbent for direct separation of ethylene from senary C2-C4 olefin/paraffin mixture. Nature Communications, 2024, 15, 625.**(**Nature, JCR SCI Zone 1 TOP Journal**).**

[5] Hanting Xiong, Yong Peng, Xing Liu, Pengxiang Wang, Peixin Zhang, Longsheng Yang, Junhui Liu, Hua Shuai, Lingmin Wang, **Zhenning Deng,** Shixia Chen, Jingwen Chen, Zhenyu Zhou, Shuguang Deng, Jun Wang. Topology Reconfiguration of Anion-Pillared Metal-Organic Framework from Flexibility to Rigidity for Enhanced Acetylene Separation. Advanced Materials, 2024, 2401693.**(**JCR SCI Zone 1 TOP Journal**).**

[6] Zhiwei Zhao, Ke Wu, Yong Peng, Yi Liu, **Zhenning Deng,** Xinxin Han, Shixia Chen, Jingwen Chen, Shuguang Deng, Jun Wang. Microporous Carbon Granules with Narrow Pore Size Distribution and Rich Oxygen Functionalities for Xe/Kr Separation. Separation and Purification Technology, 2022, 122074..**(**JCR SCI Zone 1 TOP Journal**).**

[7] Zhiwei Zhao, Hanting Xiong, Yong Peng, Xing Liu, Pengxiang Wang, Junhui Liu, **Zhenning Deng,** Shixia Chen, Jingwen Chen, Zhenyu Zhou, Shuguang Deng, Jun Wang. Pore Environment Modulation of Metal Organic Frameworks Enables Efficient Adsorptive Separation of Xe/Kr. Separation and Purification Technology, 2023, 308, 124529..**(**JCR SCI Zone 1 TOP Journal**).**

[8] Liu Qing, **Deng Zhenning**, Hua Yilong, et al. Research progress on green synthesis of nanoferron and its application in the environment[J].Progress in Chemical Industry,2020,39(05):1950-1963**(**EI, Journal of Excellence**).**

[9] Zhao Guodong, Ling Xianyong, **Deng Zhenning**, et al.Research on green synthesis of FeCu/BT and its uranium removal performance[J].Industrial Water Treatment,2020,40(12):83-87**(**CSCD, Core Journal**).**

Educational Reform Papers

not

patent

not

Appendix D-2: Curriculum Vitae of Faculty in Water Supply and Drainage Science and Engineering

Scientific research awards
not
Teaching awards
not
Publication of monographs/books
not
Engineering background
not