

## CV of the Chinese PI

<b>1. Basic Information</b>		
<b>Full Name in English :</b> <u>Ping Ai</u>		
<b>Date of Birth:</b>	11/21/1976	
<b>National ID:</b>	422422197611210042	
<b>Last University Degree Ph.D.</b>	<b>Faculty, University, Country:</b> College of Engineering, Huazhong Agricultural University, P.R. China.	<b>Graduation Date:</b> 1999
<b>Title: Professor</b>	<b>Field of Specialization:</b> Agricultural Bio-Environment and Energy Engineering.	
<b>Affiliation:</b>	College of Engineering, Huazhong Agricultural University	
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<b>2. Personal Satatement</b>		
<b>Ai Ping, female, professor of agricultural engineering at College of Engineering at Huazhong Agricultural University, doctoral tutor.</b>		
<ul style="list-style-type: none"><li>● Education: Graduated from the College of Engineering at Huazhong Agricultural University, in 1999. She received her master's degree in Agricultural Bio-Environment and Energy Engineering in 2002 and taught at the university. In 2012, she received her doctorate in Agricultural Bio-Environment and Energy Engineering.</li><li>● Academia: In 2010, served as Associate Professor. 2014.12—2016.1 she was a visiting scholar in the Department of Biological Systems Engineering at Washington State University, (USA). In 2018, she started to work as a full professor.</li><li>● Research Interests: Agricultural Bio-Environment and Energy Engineering, in the College of Engineering, Huazhong Agricultural University. She is the lecturer of some courses: <i>Biogas Engineering Design</i>, <i>Biogas Engineering Course Design</i> and <i>Biomass Energy Engineering</i>. Mainly engaged in the comprehensive utilization of agricultural waste, and the research on the treatment and resource utilization of aquaculture waste, presided over the National Natural Science Foundation project, the Ministry of agriculture finance special project, Hubei Natural Science Foundation, the Key Laboratory Opening Project of the Ministry of agriculture, the industrialization project of the Department of agriculture of Hubei Province, Central University basic scientific research business fees and a number of horizontal projects.</li><li>● Academic Distinctions: Published more than 60 papers in SCI/EI in high-level national and</li></ul>		

international journals. Additionally, she has edited a textbook, and participated in the compilation of *Rural Biogas, Rural Energy Practical New Technology*, and *Vegetable-Marsh-Animal Recycling Agriculture Model & Technology*. She is a member of the main expert group of the Hubei Provincial Rural Energy Office and, a member of the expert group of mechanized promotion actions for major crop production in Hubei Province (livestock and poultry waste treatment direction). The current research projects include one National Natural Science Foundation and one national key research plan. In the past five years, she has published 17 papers collected by SCE and EI in international academic journals as a first or corresponding author, additionally, applied for 5 invention patents and authorized 3.

## 2. Work Experience

<b>2002–2010</b>	<b>Lecturer.</b> College of Engineering, Huazhong Agricultural University, Wuhan (China)
<b>2014–2016</b>	<b>Visiting Scholar.</b> College of Biological Systems Engineering, Washington State University, (USA). 99164 Pullman, Washington, (United States)
<b>2014–2016</b>	<b>Associate Professor.</b> College of Engineering, Huazhong Agricultural University, Wuhan (China)
<b>2018–Present</b>	<b>Professor.</b> College of Engineering, Huazhong Agricultural University Wuhan (China)

## 3. Education and Training

<b>1 Sep 1995–15 Jul 1999</b>	<b>Bachelor of Agricultural Engineering.</b> College of Engineering, Huazhong Agricultural University.
<b>1 Sep 1999–15 Jul 2002</b>	<b>Master of Engineering (M.Eng.).</b> College of Engineering, Huazhong Agricultural University.
<b>1 Sep 2007–15 Jul 2012</b>	<b>Doctoral of Engineering (Ph.D.).</b> College of Engineering, Huazhong Agricultural University.

## 4. Publications

1	Ahmed Alengebawy, Badr A. Mohamed, Yi Ran, Yi Yang, Andrea Pezzuolo, Mohamed Samer, P Ai*.A comparative environmental life cycle assessment of rice straw-based bioenergy projects in China. <i>Environmental Research</i> , 2022, <u>212(D)</u> , 113404.
2	Jin Keda, <u>AndreaPezzuolo</u> , <u>Shaban .Gouda</u> , Jia <u>Shijiang</u> , <u>Mohamed Eraky</u> , Ran <u>Yi</u> , Chen <u>Mengdi</u> , <b>Ai Ping*</b> . Valorization of bio-fertilizer from anaerobic digestate through ammonia stripping process: A practical and sustainable approach towards circular economy. <i>Environmental Technology &amp; Innovation</i> , 2022, 27: 102414.
	Ran Yi, Mahdy Elsayed, Mohamed Eraky, Wang Dianlong, Ai Ping. Sequential production of biomethane and bioethanol through the whole biorefining of rice straw: Analysis of structural properties and mass balance[J]. <i>Biomass Conversion and Biorefinery</i> , 2022,3: s13399

	Giovanni Ferrari, <b>Ping Ai</b> , Ahmed Alengebawy, Francesco Marinello, Andrea Pezzuolo et al. An assessment of nitrogen loading and biogas production from Italian livestock: A multilevel and spatial analysis. <i>Journal of Cleaner Production</i> , 2021,317: 128388.
	Mohamed Eraky, Jin Keda, Zhang Quanguo, Zhang Zhiping, Ai Ping, MahdyElsayed. Acidogenic biorefinery of rice straw for volatile fatty acids production via sequential two-stage fermentation: Effects of pre-treatments. <i>Environmental Technology &amp; Innovation</i> , 2021, 23: 101686.
	Ahmed Alengebawy, Keda Jin, Yi Ran, Jingjing Peng, Xiuzhi Zhang, Ping Ai*. Advanced pre-treatment of stripped biogas slurry by polyaluminum chloride coagulation and biochar adsorption coupled with ceramic membrane filtration. <i>Chemosphere</i> , 2021, 267:129197.
	Meng Liang, Ahmed Alengebawy, <b>Ping Ai</b> , Keda Jin, Mengdi Chen, Yulong Pan*. Techno-economic assessment of three modes of large-scale crop residue utilization projects in china. <i>Energies</i> . 13, no. 14 (2020): 3729.
	<b>Ping Ai</b> , Keda Jin, Ahmed Alengebawy, Mahdy Elsayed, Liang Meng, Mengdi Chen, and Yi Ran*. Effect of application of different biogas fertilizer on eggplant production: Analysis of fertilizer value and risk assessment. <i>Environmental Technology &amp; Innovation</i> . 19 (2020): 101019.
	Mahdy Elsayed, Yi Ran, <b>Ping Ai*</b> , Maha Azab, Abdelaziz Mansour, Keda Jin, Yanlin Zhang, Abd El-Fatah Abomohra*. Innovative integrated approach of biofuel production from agricultural wastes by anaerobic digestion and black soldier fly larvae. <i>Journal of Cleaner Production</i> . 263 (2020): 121495.
1	<b>Ai Ping</b> , Chen Mengdi, Ran Yi*, Jin Keda, Peng Jingjing, Abd El-Fatah Abomohra*. Digestate recirculation through co-digestion with rice straw: Towards high biogas production and efficient waste recycling. <i>Journal of Cleaner Production</i> , 2020, 121441.
2	Mahdy Elsayed,Ran Yi, <b>Ai Ping*</b> , Maha Azabe, Abdelaziz Mansour, Keda Jin,ZhangYanlin, Abd El-FatahAbomohra. Innovative integrated approach of biofuel production from agricultural wastes by anaerobic digestion and black soldier fly larvae. <i>Journal of Cleaner Production</i> , 2020, 121495.
3	<b>Ping Ai</b> , Xiuzhi Zhang, Yi Ran, Liang Meng, Mahdy Elsaye, Qizhou Fan* , Abd El-Fatah Abomohra. Biomass briquetting reduces the energy loss during long-term ensiling and enhances anaerobic digestion: A case study on rice straw. <i>Bioresource Technology</i> , 2019,292:1-9.
4	Mahdy Elsayed, Abd -Fatah Abomohrace, <b>Ping Ai</b> , Keda Jin, Qizhou Fan,Yanlin Zhang. Acetogenesis and methanogenesis liquid digestates for pretreatment of rice straw: A holistic approach for efficient biomethane production and nutrient recycling [J]. <i>Energy Conversion and Management</i> , 2019,195(1): 447-456.
5	Jingjing Peng, Abd El-FatahAbomohra, Mahdy Elsayed, xiuzhi Zhang, Qizhou Fan, <b>Ping Ai</b> . Compositional changes of rice straw fibers after pretreatment with diluted acetic acid: Towards enhanced biomethane production[J]. <i>Journal of Cleaner Production</i> ,2019,230(1) : 775-782.
6	<b>Ping Ai</b> , Xiuzhi Zhang, Carlos Dinamarca, Mahdy Elsayed, Liang Yu, Jiang Xi,Zili Mei. Different effects of ozone and aqueous ammonia in a combined pretreatment method on rice straw and dairy manure fiber for enhancing biomethane production[J]. <i>Bioresource Technology</i> 2019.282:275-284.
7	<b>Ai Ping</b> ,Peng Jingjing,Xi Jiang,Zhang Xiuzhi,Tang Wei,Zhang Rufeng,Mei Zili.Effect of temperature and CO2 ratio of stripping biogas on biogas slurry stripping of ammonia[J]. <i>Transactions of the Chinese Society of Agricultural Engineering</i> , 2019,35(1):206-212.

8	<b>Ai Ping</b> , Tian Qihuan, Xi Jiang, Mei Zili, Yan Shuiping, Fan Qizhou. VFAs production technology by two stage fermentation from rice straw based on digestate reuse[J]. Transactions of The Chinese Society for Agricultural Machinery, 2019,50(1):300-307
9	Mahdy Elsayed, Abd El-Fatah Abomohra, <b>Ping Ai</b> *, Dianlong Wang, Hamed M. El-Mashad, Yanlin Zhang. Biorefining of rice straw by sequential fermentation and anaerobic digestion for bioethanol and/or biomethane production: Comparison of structural properties and energy output. Bioresource Technology 2018.07.29 183-189. ( SCI/EI )
10	Dianlong Wang, Hao Shi, Ya Xin, Yanlin Zhang, <b>Ping Ai</b> , Xiangqian Li. Mild acid hydrolysis of rice straw for highly efficient methane generation with hydrolysates. Bioresources, 2018,08: 7851-7863. ( SCI/EI )
11	<b>Ai Ping</b> , Tian Qihuan, Xi Jiang, Jiang Hua, Peng Jingjing, Yang Zhihao. Enhancement of Volatile Fatty Acids Production from Rice Straw via Anaerobic Digestion with Different Pretreatment. Transactions of The Chinese Society for Agricultural Machinery, 2018,49(03):309-316.
12	Wang Dianlong, <b>Ai Ping</b> *, Wu Bo, Xin Ya, He Mingxiong, Zhang Yanlin. Effect of Two-step Pretreatment on Enzymatic Hydrolysis and Biogas Fermentation of Anaerobically Digested Fiber from VFAs Production. Transactions of The Chinese Society for Agricultural Machinery, 2018.49(3):322-327 (EI).
13	<b>Ai Ping</b> *, Zhang Jitao, Xi Jiang, Shen Ziyang, Yang Zhihao, Lu Yi, Hu Chai, mechanism of promoting anaerobic fermentation of rice straw and pig manure by cellulosic ethanol residue, Journal of environmental engineering, 11 (12): 6404-6414 2017 (CSCD)
14	Wang Dianlong, Xi Jiang, <b>Ai Ping</b> *, Yu Liang, Zhai Hong, Yan Shuiping, Zhang Yanlin. Enhancing ethanol production from thermophilic and mesophilic solid digestate using ozone combined with aqueous ammonia pretreatment[J]. Bioresource technology, 2016, 207: 52-58, 2016. (SCI/EI)
15	Wang Yongjiang*, <b>Ai Ping</b> , Cao Hongliang, et al. Prediction of moisture variation during composting process: A comparison of mathematical models. Bioresource technology, 193: 200-205, 2015. (SCI/EI)
16	Wang, Yongjiang* , <b>Ai, Ping</b> , Integrating particle physical geometry into composting degradation kinetics. Bioresource technology, 200: 514-520, 2015. (SCI/EI)
17	Dianlong Wang, <b>Ping Ai</b> *, Liang Yu, Zhongxin Tan, Yanlin Zhang. Comparing the hydrolysis and biogas production performance of alkali and acid pretreatments of rice straw using two-stage anaerobic fermentation[J]. Biosystems Engineering, Volume 132(1):47-55, 2015. (SCI/EI)
18	Wang Dianlong, <b>Ai Ping</b> *, Yan leliang, Yu Liang, Yan horizontal, Zhang Yanlin. Performance analysis of two-step anaerobic fermentation of rice straw pretreated with dilute acid and dilute alkali [J]. Journal of agricultural machinery, 46 (2): 168-175 1802015. (EI)
19	Wang Dianlong, <b>Ai Ping</b> *, Yan leliang, Yu Liang, Yan horizontal, Zhang Yanlin. Experimental study on ethanol extraction from rice straw anaerobic digestion fiber [J]. Journal of agricultural machinery, 46 (5): 156-163, 2015. (EI)
20	MEng Liang, Wang Dianlong, <b>Ai Ping</b> , et al. Study and optimization of factors affecting anaerobic methane production by glucose [J]. Guangdong agricultural science, 2014,41 (8): 139-144
21	<b>Ai Ping</b> , Wang Dianlong, Tan Zhongxin, Yan Zhiping *, Zhang Yanlin. Characteristics of reducing sugar components and methane production of straw hydrolysate [J]. Journal of agricultural machinery, Vol.44, No.10, pp176-182, 2013. (EI)

22	<b>Ai Ping</b> , Wang Dianlong, Tan Zhongxin, Yan Zhiping *, Zhang Yanlin. Characteristics of reducing sugar components and methane production of straw hydrolysate [J]. Journal of agricultural machinery, Vol.44, No.10, pp176-182, 2013. (EI)
23	Yan Zhiping, Wang Dianlong, Gao Xin, <b>Ai Ping</b> *, he Qingyao, Wang Yuanyuan. Experiment on the influence of fermentation conditions on biogas production from typical lignocellulosic raw materials [J]. Journal of agricultural machinery, 2013,44 (S2): 136-142. (EI)
24	<b>Ai Ping</b> , Zhang Yanlin *, Zhai Hong, Yan horizontal. Pretreatment of biogas production by anaerobic fermentation of rice straw, Journal of agricultural engineering, 2010, 26 (7): 266-271. (EI)
25	Tan Zhongxin*, <b>Ai Ping</b> , Li Yanmin, Ji Xiaoyan, Feng wei. Investigation on co-pyrolysis of sewage sludge with coal[J]. Environment Protection Engineering, 2014,40(1): ( SCI/EI)
26	Wang Yuanyuan, <b>Ai Ping</b> *. Effect of the supernatant liquid recirculation on H <sub>2</sub> and CH <sub>4</sub> production in the two-phase anaerobic fermentation, Applied Mechanics and Materials, Vol.291-294, No.1, pp610-613, 2013. (EI)
27	Shuiping Yan*, Qingyao He, <b>Ping Ai</b> , Yuanyuan Wang, Yanlin Zhang. Regeneration performance of concentrated CO <sub>2</sub> -rich alkanolamine solvents: The first step study of a novel concept for reducing regeneration heat consumption by using concentration swing absorption technology[J]. Chemical Engineering and Processing: Process Intensification, Vol.70,No.8, pp.86-94, 2013. ( SCI/EI )
28	Yan Shuiping *, Zhang Liqiang, <b>Ai Ping</b> , Wang Yuanyuan, Zhang Yanlin, Shefeng Li. CO <sub>2</sub> absorption by using a low-cost solvent: biogas slurry produced by anaerobic digestion of biomass[J]. Energy Procedia, Vol.37, pp.2172-2179, 2013. ( SCI/EI )
29	Ai Ping ,Wang Yuanyuan, Zhang Yanlin, Li Wu, Yan Shuiping*. The effect of alkali pretreatment of rice straw for anaerobic digestion. Advanced Materials Research, Renewable and Sustainable Energy, Vol.347-353, pp2555-2558, 2012 ( EI )
30	<b>Ai Ping</b> , Wang Dianlong, Yan Shuiping*, Wang Yuanyuan, The assessment of three straw utilization project of rural energy[J]. Advanced Materials Research, Renewable and Sustainable Energy II, Vol.512-515, pp473-476, 2012. (EI)
31	Wang Yuanyuan, <b>Ai Ping</b> , Hu Cheng-Xiao, Zhang Yanlin*. Effects of various pretreatment methods of anaerobic mixed microflora on biohydrogen production and the fermentation pathway of glucose, International Journal of Hydrogen Energy, Vol.36, No.1, pp390-396 , 2011. ( SCI/EI)
32	<b>Ai Ping</b> , Zhang Yanlin *, Wang Yuanyuan, Yan Zhiping, Zhai Hong. System dynamics analysis and Simulation of rural energy planning in Hubei Province, Hubei agricultural science, Vol. 50, No. 5, page 1045-1048, 2011. (CSCD)
33	<b>Ai Ping</b> , Zhang Yanlin* , Sheng Kai, Hong Zhai. Impact factor on the pretreatment technology for anaerobic fermentation of rice straw , 2010 International Conference on Mechanic Automation and Control Engineering (MACE), pp5178-5183, 2010. (EI)
34	Zhang Jiaqiang, <b>Ai Ping</b> *. Measurement of ecological and environmental benefits of household biogas in mountainous areas, world survey, Vol. 7, No. 1, page 44-47, 2010. (CSSCI)
35	<b>Ai Ping</b> , Zhang Yanlin *, Li Shanjun, Zhai Hong, Meng Liang. Agricultural waste treatment and utilization technology and agricultural mechanization development, agricultural mechanization research, Vol. 9, No. 2, pp. 234-237, 2009. (CSCD)
36	<b>Ai Ping</b> , Zhang Yanlin *, yuan qiaoxia, he Lihong, Zhai Hong. Factors affecting anaerobic dry fermentation of livestock and poultry manure, Journal of Huazhong Agricultural University (self SCIENCE EDITION), Vol. 28, No. 3, page 377-380, 2009. (CSCD)

37	<u>AiPing</u> *, Zhang Jiaqiang, Zhang Yanlin, Xiang Jinwen, Zhang Wenfei. Behavior analysis of farmers' adoption of biogas technology, Journal of Huazhong Agricultural University (SOCIAL SCIENCES EDITION), Vol. 7, No. 1, pp. 31-34, 2009. (CSSCI)
<b>5.Projects</b>	
<b>5.1 Recent Grant Support Project</b>	
1	National Natural Science Foundation of China, construction and research of nitrogen nutrient recovery and value-added system based on ammonia stripping strategy of biogas slurry from pig farms (31972611) 2020.1—2023.12.
2	Project of Hubei Provincial Department of Agriculture, research on biogas slurry resource utilization mode of large and medium-sized biogas projects and optimization of straw collection, storage and transportation mode. 2021.01-2022.12.
3	Chongqing Rural Revitalization Project, Research and Demonstration of Large-scale Chicken Farm Planting and Breeding Combined with Ecological Cycle Model (xczx0036), 2022.01-2024.12
4	Hubei Provincial Department of Agriculture Project, research and compilation of the “14th Five-Year Plan” for rural energy development in Hubei Province, 2020.01-2021.06
5	
6	Hubei Provincial General Fund for natural science, 2018cfb512, research on nutrient recovery and value-added system of livestock manure biogas liquid based on ammonia stripping and circulation. 2018.1—2019.12.
7	Open project of Key Laboratory of rural renewable energy development and utilization of the Ministry of agriculture, research on the key technology of "zero-emission" of biogas residue and straw secondary fermentation in livestock and poultry farms (2018004). 2018.1-2019.12.
8	Project of Hubei Provincial Department of agriculture. Research on the current situation of rural energy development in Hubei Province. 2018.7-2019.12.
9	Ministry of agriculture public welfare industry special, 201503135-11. Research on the technology and equipment of straw pyrolysis high-value carbon gas CO production -- the sub-subject of straw carbon adsorption and promotion mechanism in the process of anaerobic digestion of aquaculture wastewater. 2018.6-2019.12.
10	Ministry of agriculture public welfare industry special, 201503135-11. Research on the technology and equipment of straw pyrolysis high-value carbon gas CO production -- the sub-subject of straw carbon adsorption and promotion mechanism in the process of anaerobic digestion of aquaculture wastewater. 2018.6-2019.12.
11	The key technology of anaerobic dry fermentation (2013py056) based on the "nearly zero-emission" of feces from large-scale pig farms, a special project of basic scientific research business expenses of Central University of Huazhong Agricultural University, January 2013 to December 2015.
12	Research and demonstration of household biogas with two-phase fermentation using straw hydrolysate as raw material", Ministry of agriculture finance special project, (2013039) 2013.1-2013.12.
13	Research on the accumulation of volatile acid and the recovery of methanogenic activity in anaerobic digestion of straw" (2011qc054), a special fund for basic scientific research business expenses of Central University. 2011.1—2012.12.
14	Investigation on the current situation of efficient emission reduction furnaces in rural areas of Hubei Province, Department of agriculture of Hubei Province (107071).

<b>15</b>	Agricultural Department of Hubei Province, research on the achievements of rural energy promotion in Hubei Province (107072)
<b>5.2 Participating Projects</b>	
<b>1</b>	Research and demonstration of key technologies for low-carbon breeding, energy conservation and emission reduction of main livestock and poultry" - Research on Value-added Utilization Technology and key equipment of solid waste in livestock and poultry farms (201303091). Ministry of agriculture public welfare industry special, 2013-2017.
<b>2</b>	Research on combined equipment and technology of biogas comprehensively replacing household commodity energy consumption" (201303099). Ministry of agriculture public welfare industry special, 2013-2017.
<b>6.Patents</b>	
<b>1</b>	Special equipment for ammonia nitrogen recovery and biogas purification process of biogas liquid after anaerobic fermentation of pig manure (Patent No.: ZL 2016 2 0361703.1, date of authorization announcement: September 7, 2016) inventor: AI Pingyu, Tang Wei, Han Fang, Liu Chengshi, GUI Zhen, Wang Gang, Zhao Junjie, Zhang Jitao, Tian qihuanyan, Wang Mingwang, Yuan Yuan, Wang Yongjiang.
<b>2</b>	Invention patent: a process and device for ammonia nitrogen recovery and biogas purification from biogas slurry after anaerobic fermentation of pig manure, application No.: 201610265956.3.
<b>3</b>	Patent for invention: a method for the treatment of mixed fermentation of fiber ethanol waste residue and agricultural waste, application No.: 201611237533.7. Inventors: AI Ping, Zhang Jitao, Shen Ziyang, Yang Zhihao, Lu Yi, Hu Chai, Tian Qihuan, Peng Jingjing, Yan Zhiping, Wang Yuanyuan, Wang Ming.
<b>7.Published Works</b>	
<b>1</b>	Editor in chief, operation research textbook, Huazhong University of science and Technology Press, 2009 / 11, 4th printing in January 2014.
<b>2</b>	Participated in the compilation of research on energy conservation and emission reduction technology of agricultural mechanization, China Agricultural Science and Technology Press, published in July 2012, and was responsible for writing the chapter "energy conservation and emission reduction technology of straw and other agricultural waste treatment", with 30000 words written independently.
<b>3</b>	Participated in the compilation of rural energy practical new technology, Hubei science and Technology Press, published in April 2011, writing 40000 words independently.
<b>4</b>	Participated in the compilation of rural biogas workers, Jindun press, first edition in September 2007, reprinted in October 2010.
<b>8. Innovation Guidance of Undergraduate</b>	
<b>1</b>	As a guidance teacher, she participated in the fourth national college students' innovation design competition of agricultural building environment and energy engineering in 2016 and won the first prize of the undergraduate group, July 2016, Guangzhou. High-efficiency anaerobic treatment system of waste based on nutrition recycling.
<b>2</b>	Took part in the Fifth National College Students' innovation design competition of agricultural building environment and energy engineering in as a guidance teacher, and won the first prize of the undergraduate group, August 2017, Zibo. Anaerobic value-added technology of agricultural waste

	based on the VFAs platform.
<b>3</b>	As a guidance teacher, she participated in the fourth national college students' innovation design competition of agricultural building environment and energy engineering in 2016 and won the first prize of the undergraduate group, August 2019, Beijing. Value-added recovery of nitrogen and phosphorus from piggery wastewater and balanced application of nutrients in the farm.
<b>9.Memberships</b>	
<b>1</b>	Council member of China Biogas Society
<b>2</b>	Editorial board member of China Biogas Journal
<b>3</b>	Council Member of the Standardization Working Group of China's Animal Husbandry Environment and Waste Utilization
<b>4</b>	Expert member of the main expert group of Hubei rural energy office.
<b>5</b>	Member of the expert group of the whole process mechanization promotion action of Hubei main crop production.
<b>6</b>	Member of China Biogas Society (CBS )

**Interested cooperative research theme:** Treatment and Utilization of Agricultural Wastes.

**Expected cooperation:** As the Ph.D supervisor for joint Ph.D program students / As the Ph.D supervisor for doctoral degree students / As a visiting scholar.