

# CURRICULUM VITAE

Personal Information			
Name	Qingyao He	Gender	Male
Position Title	Associate Professor		
Working Department	Department of Agricultural Engineering		
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Research Interest			
His research interests including membrane process for resource recovery, CO <sub>2</sub> capture and CO <sub>2</sub> utilization in agriculture. He is currently working on the study of membrane-based water and nutrients recovery from wastewater, CO <sub>2</sub> capture from bio-system. He is also developing bio-based CO <sub>2</sub> conversion technologies.			
Professional Memberships			
Dr. He is the Premium Membership of Chinese Society of Agricultural Engineering, and Chinese Society of Bioengineering.			
Other Roles			
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Education & Working Experience			
<b>Dec.2021-present</b> , Associate Professor, Huazhong Agricultural University <b>Jul. 2018 – Nov. 2021</b> , Lecturer (PhD), Huazhong Agricultural University (TOP 50 in China), Wuhan, China. <b>Dec. 2016 - Dec. 2017</b> , Joint PhD student, Macquarie University, Sydney. <b>Sep. 2012 – Jun. 2018</b> , Combined Master-PhD student, Huazhong Agricultural University, Wuhan, China. <b>Sep. 2008 – Jun., 2012</b> . Bachelor of Science, Sichuan Agricultural University, Ya'an, China.			
Publications (more than 30 publications)			
[1] Mingfei Shi#, Haichao Duan#, Liang Feng, Man Xiao, <b>Qingyao He*</b> , Shuiping Yan**, Sustainable ammonia recovery from anaerobic digestion effluent through pretreating the feed by biomass ash, <b>Separation and Purification Technology</b> , 307 (2023) 122655. [2] Benchi Chen#, Yusen Shao#, Mingfei Shi; Long Ji; <b>Qingyao He*</b> ; Shuiping Yan* ; Anaerobic digestion of chicken manure coupled with ammonia recovery by vacuum-assisted gas-permeable membrane process, <b>Biochemical Engineering Journal</b> , 2021, 175(1): 108135 [3] Liang Feng, Feihong Liang, Lang Xu, Long Ji, <b>Qingyao He*</b> , Shuiping Yan*. Simultaneous biogas			

upgrading, CO<sub>2</sub> sequestration, and biogas slurry decrement using biomass ash[J]. **Waste Management**, 2021, 133:1-9.

- [4] **Qingyao He**, Mingfei Shi, Feihong Liang, Lang Xu, Long Ji\*, Shuiping Yan\*. Renewable absorbents for CO<sub>2</sub> capture: from biomass to nature. *Greenhouse Gases-science and Technology*. 2019, 9 (4): 637-651. Review paper, front cover.
- [5] Mingfei Shi#, **Qingyao He**#, Liang Feng, Lanlan Wu, Shuiping Yan\*. Techno-economic evaluation of ammonia recovery from biogas slurry by vacuum membrane distillation without pH adjustment. **Journal of Cleaner Production**. 2020, 121806.
- [6] **Qingyao He**, Jiang Xi, Mingfei Shi, Feng Liang, Shuiping Yan\*, Liangwei Deng. Developing a vacuum assisted gas-permeable membrane process for rapid ammonia recovery and CO<sub>2</sub> capture from biogas slurry. **ACS Sustainable chemistry & engineering**. 2020 8 (1):154-162. Front cover.
- [7] **Qingyao He**, Mingfei Shi, Feihong Liang, Long Ji, Xin Cheng, Shuiping Yan\*. BEEF: A sustainable process concerning negative CO<sub>2</sub> emission and profit increase of anaerobic digestion. **ACS Sustainable Chemistry & Engineering**. 2019, 7 (2): 2276-2284.
- [8] **Qingyao He**, Ge Yu, Te Tu, Shuiping Yan\*, Yanlin Zhang, Shuaifei Zhao\*. Closing CO<sub>2</sub> loop in biogas production: recycling ammonia as fertilizer. **Environmental Science & Technology**. 2017, 51 (15): 8841-8850.
- [9] **Qingyao He**, Long Ji, Bing Yu, Shuiping Yan, Yanlin Zhang\*, Shuaifei Zhao. Renewable aqueous ammonia from biogas slurry for carbon capture: Chemical composition and CO<sub>2</sub> absorption rate. **International Journal of Greenhouse Gas Control**. 2018, 77: 46-54. (Q2, 5-year Impact Factor = 3.639, citations = 3)
- [10] **Qingyao He**, Ge Yu, Shuiping Yan\*, Ludovic F. Dumeé, Yanlin Zhang, Vladimr Strezov, Shuaifei Zhao\*. Renewable CO<sub>2</sub> absorbent for carbon capture and biogas upgrading by membrane contactor, **Separation and Purification Technology**. 2018, 194: 207-215.

#### **Other research outputs (Chinese Patents)**

- [1] Shuiping Yan, **Qingyao He**, Ping Ai, Yuanyuan Wang, Hongmei Xu, Yanlin Zhang, Qizhou Fan, Qiaoxia Yuan, Kai Cai. Chemical absorption system and method for CO<sub>2</sub> separation from mixer gases based on solvent concentration swing. (ZL 2013 1 0449986.6).
- [2] Shuiping Yan, **Qingyao He**, Ping Ai, Yuanyuan Wang, Hongmei Xu, Yanlin Zhang, Qizhou Fan, Qiaoxia Yuan, Kai Cai. Chemical absorption system for CO<sub>2</sub> separation from mixer gases based on solvent concentration swing. (ZL 2013 2 0602912.7).
- [3] Shuiping Yan, **Qingyao He**, Wenchao Wang, Yanlin Zhang, Ping Ai, Yuanyuan WANG, Qiaoxiao Yuan. System and method for biogas slurry reducing and co-purification of biogas. (ZL 201510407545.9)
- [4] Shuiping Yan, Wenchao Wang, **Qingyao He**, Yanlin Zhang, Ping Ai, Yuanyuan Wang, Qiaoxia Yuan. CO<sub>2</sub> separation system with amino acid salt solution from biogas slurry and straw hydrolysate. (ZL 2015 20568799.4)
- [5] Shuiping Yan, Kai Cai, **Qingyao He**, Minhui Cao, Wenchao Wang, Yuanyuan Wang, Ping Ai, Lanlan Wu, Yanlin Zhang. One system for CO<sub>2</sub> absorption and storage using biogas slurry. (ZL 2015 20568799.4)
- [6] Shuiping Yan, Te Tu, Feihong Liang, Qiufang Cui, Liqiang Xu, Ge Yu, **Qingyao He**, Daofeng Mei, Ming Wang. CO<sub>2</sub> chemical absorption system based on heat recovery. (ZL 2018 21103111.5)