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Research Area

My research interests lie at the crossroads of microbiology, engineering, and electrochemistry towards addressing water-energy-food nexus. My work has included fundamental contributions and technological advancements that have generated novel insight, defined new frontiers of research and technology development, and charted innovation pathways to translate mechanistic understanding of molecule-scale phenomena to systems-scale impacts. I and my team aim to advance the feasibility and sustainability of a circular economy in which all people have reliable and affordable access to freshwater, renewable bioenergy, and a safe environment. My research aligns with multiple UN Sustainable Development Goals through sustainable water treatment, resource recovery, CO₂ capture and utilization, biosynthesis, and environmental bioremediation & monitoring.

Work experiences

- 07/2018- Now Associate Professor, Department of Environmental Engineering, Technical University of Denmark
- 04/2017-06/2018 Senior Researcher, Department of Environmental Engineering, Technical University of Denmark
- 10/2012-03/2017 Postdoc, Department of Environmental Engineering, Technical University of Denmark

Education

- 2012 Ph.D., Department of Environmental Engineering, Technical University of Denmark
- 05/2012 Guest PhD, Leuphana University Lüneburg, Germany
- 06/2011 Guest PhD, Department of Biotechnology, Delft University of Technology
- 2009 MSc in Environmental Engineering, Dalian University of Technology, China
- 2007 Exchange MSc, Department of Environmental Engineering, Technical University of Denmark
- 2005 BSc in Environmental Engineering, Dalian Polytechnic University, China

Management experience

- SynoProtein, Carbon capture from syngas to Single Cell Protein (SCP) and use as fish feed ingredie. **Horizon Europe**, (HORIZON-JU-CBE-2022, no. 101112345), **6.81 mDKK**, 2023-2028 (**WP leader**)
- LTA BOOST, Low Trophic Aquaculture: Blue food for green transition, **Innovation Fund Denmark**, **1.32 mDKK**, 2023-2027 (**WP leader**)
- Demonstrating and Connecting Production Innovations in the BIOMETHane universe (BIOMETHAVERSE). **EU HORIZON Innovation Actions** (HORIZON-CL5-2021-D3-03, No. 101084200), **3 mDKK**, 2022-2027 (**WP leader**)
- Carbon cApture for microbial Protein synthesis in Burkina Faso (CAP-BFA), **The Ministry of Foreign Affairs of Denmark (MFA)**, Window 1 - Research in Danida priority countries 2021 (No. 21-08-DTU), **12 mDKK**, 2022-2025 (**PI**)
- Light-driven green ammonia synthesis in soil using bio-inorganic hybrid electrode (SolN), Villum Experiment Programme, **VILLUM FONDEN** (No.40828), **2 mDKK**, 2022-2023 (**PI**)
- Microbial syntrophic metabolism of CO₂ on 3D carbon microelectrodes for bioethanol production (MIRACLE), **Independent Research Fund Denmark** (Project 1, No.171114), **2.8 mDKK**, 2021-2024 (**PI**)
- NovaDraiN, Novel Agricultural Drainage Filter Technologies for Nitrogen reduction, **Innovation Fund Denmark** (IFD0224-00045A), **6.4 mDKK** (total 16.19 mDKK), 2021-2025 (**WP leader**)
- A Remediation of marine dead zones by enhancing microbial sulfide oxidation using electrodes (REDOX). Villum Experiment Programme, **VILLUM FONDEN** (No.35802), **2 mDKK**, 2021-2022 (**Co-PI**)
- SEE: Sulfide as an Electron Elevator, **Danish Hydrocarbon Research and Technology Centre**, Abandonment of Offshore Oil and Gas Fields Program, **0.4 mDKK**, 09-11, 2020 (**Co-PI**)
- Starting cell-to-cell communication for highly efficient microbial electrochemistry (GENECHAT), Carlsberg Foundation Distinguished Fellowships, **The Carlsberg Foundation** (CF18-0084), **4.5 mDKK**, 2019-2021 (**PI**)
- From Urban Bio-waste to Animal Feed – FUBAF, **MUDP** (MST-117-00508), **2.3 mDKK**, 2018-2020 (**WP partner**)
- Implementation of bioelectrode technology to improve the aquatic environment, **MUDP** (MST-141-01570), **1.7 mDKK**, 2018-2021(**Co-PI**)
- Boosting biomass derived syngas-to-biofuels conversion with microbial electrochemical fermentation (EcoFuel), **Novo Nordisk Foundation** (NNF16OC0021568), **2.7 mDKK**, 07.2017-2020 (**Co-PI**)
- Innovative bioelectrochemical-anaerobic-digestion coupled system for ammonia recovery and energy production from ammonia-rich residues, **The Danish Council for Independent Research** (DFF-1335-00142), **6.4 mDKK**, 2013-2018 (**Co-PI**)

- Alternate switching between MEC and MFC as a new method for control of H₂O₂ level in advanced oxidation processes, **PoC Fond from Technical University of Denmark, 0.5 mDKK, 01-10, 2016 (PI)**
- Otto Mønstedts Fond, Hellerup, Denmark, 5750 DKK, 2016 (PI)
- Otto Mønsted Fond, Hellerup, Denmark, 5209 DKK, 2014 (PI)
- A new method to recover ammonia from biogas plants, **GAP-funding from “Copenhagen Cleantech Cluster”, 0.633 mDKK, 04.2013-10.2013 (PI)**
- Otto Mønsted Fond, Hellerup, Denmark, 11.942 DKK, 2010
- Danida Fellowship (Denmark), 75.000 DKK, 11.2007-09.2008 (PI)

Editorial service and memberships

- Associate Editor, Water Research (Elsevier)
- Associate Editor, Science of the Total Environment (Elsevier)
- Associate Editor, Frontiers in Microbiology
- Associate Editor, Sustainable Horizons
- Editor, Water Cycle
- Editorial Board: Engineering (Elsevier), Environmental Science & Ecotechnology (Elsevier), Fermentation (MDPI), npj Materials Sustainability (Nature)
- Special Issue Editor, Energies
- Scientific committee members, International PhD School on Advanced Oxidation Processes
- Scientific committee members, Environment Concerns and its Remediation (F-EIR CONFERENCE 2021), Chandigarh, India, October 18-22, 2021
- Scientific committee members, The 5th Asia-Pacific International Society of Microbial Electrochemistry and Technology Conference, July 16-18, 2021, Harbin, China
- Scientific committee members, The European meeting of the international society for microbial electrochemistry and technology, 2016 & 2023
- Project Peer Reviewer of the Science Fund of the Republic of Serbia 2021-2023
- Project reviewer for The European Science Foundation – Science connect
- Project reviewer Research Grants Council (RGC) of Hong Kong
- Irish Research Council Laureate Peer Review 2022
- Chinese Academy of Sciences: Program for Overseas Evaluation Experts 2021-2023

Academic awards and honors

- 2021 James J. Morgan Environmental Science & Technology Early Career Award - Honorable Mentions
- 2020 Top 50, The Elsevier Foundation-ISC3 Green & Sustainable Chemistry Challenge Award
- 2019 Outstanding Reviewer Award, Frontiers of Environmental Science & Engineering (FESE)
- 2018 Carlsberg Foundation Distinguished Fellowships
- 2018 Enter the Second Stage (interviewed), Villum Young Investigator Program
- 2017 Outstanding Reviewer, Environmental Science: Water Research & Technology
- 2016 Outstanding Reviewer, Environmental Science: Water Research & Technology
- 2015 Outstanding Reviewer, Water Research
- 2011 Chinese government award for outstanding PhD students abroad
- 2005 Excellent graduate of Dalian
- 2002-2003 Merit student of Dalian
- 2001-2005 The first-class scholarship provided by the Dalian Polytechnic University
- 2001-2005 Merit student of Dalian Polytechnic University
- 2001 Excellent study pacemaker of Dalian Polytechnic University

Supervisor functions

- 5 postdoc, 13 PhD students (7 as main supervisor), 15 MSc & BSc thesis, and 20+ guest PhD/researchers
 - PhD student Mingyi Xu won “The Bright Idea” Award from Otto Mønstedts Fond in 2019
 - PhD student Nannan Zhao won “EliteForsk rejsestipendie” Award from Ministry of Higher Education and Science Denmark in 2018
 - MSc student Argyro Kokkoli won Colding Award for “Best MSc Thesis” in 2015

Summary publication and bibliometric information

- **166** peer-reviewed ISI publications (most are in top journals of the field, e.g., Energy & Environmental Science, One Earth, Trend in Biotechnology, Environmental Science & Technology, Water Research), 30+ conferences, 2 patents and 4 book chapters
- **19** as First author, **99** as Corresponding author and **91** as Senior author
- Total Citations: **4649** (Web of Science), **6595** (Google scholar); Yearly citations: **1268** in 2022
- *h*-index: **37** (Web of Science), **43** (Google scholar)

SCI publications (*Corresponding author)**A. Highlighted papers**

1. Wang P., Zuo W., Zhu W., Wang S., Li B., Jiang Y., Wang G., Tian Y., **Zhang Y***. 2023. Deciphering the interaction of heavy metals with Geobacter-induced vivianite recovery from wastewater. *Water Research*, Accepted
2. Wang G., Li B., **Zhang Y.*** 2023. Ammonia-mediated iron cycle for oxidizing agent activation in advanced oxidation process. *Water Research*. 120295.
3. Wang J., Dong C., Li Q., Yang X., Li D., Zhang L., **Zhang Y***, Zhan G. 2023. Innovative electrochemical biosensor with nitrifying biofilm and nitrite oxidation signal for comprehensive toxicity detection in Tuojiang River. *Water Research*, 233,119757
4. Na Chu, Yong Jiang, Qinjun Liang, Panpan Liu, Donglin Wang, Xueming Chen, Daping Li, Peng Liang, Raymond Jianxiong Zeng, **Yifeng Zhang**. 2023. Electricity-driven microbial metabolism of carbon and nitrogen: a waste-to-resource solution. *Environmental Science & Technology*, 11, 4379–4395
5. Zhou S., An W., Zhao K., Lin L., Yang S., **Zhang Y.**, Xu M. 2023. Protection of electroactive biofilms against hypersaline shock by quorum sensing. *Water Research*. 233, 119823
6. Wang, B., **Zhang, Y.***, Minter, S. 2023. Renewable electrons-driven bioinorganic nitrogen fixation: A superior route toward green ammonia? *Energy & Environmental Science*, 16, 404-420.
7. Wang G., Tang K., Hambly A., **Zhang Y.***. 2022. Andersen H. Sustainable and reagentless Fenton treatment of complex wastewater. *Environmental Science & Technology*. 57(1), 626–634
8. Fessler M., Madsen J., **Zhang Y***. 2022. Microbial interactions in electroactive biofilms for environmental engineering applications: a role for non-exoelectrogens. *Environmental Science & Technology*, 56(22), 15273–15279
9. Wang S, Wang X., Fessler M.; Jin B., Su Y., **Zhang Y***. 2022. Insights into the impact of polyethylene microplastics on methane recovery from wastewater via bioelectrochemical anaerobic digestion. *Water Research*. 221, 118844.
10. Li B., Cheng X., Zou R., Yong X., Pang C., Su Y., **Zhang Y***. 2021. Simple modulation of Fe-based single atoms/clusters catalyst with acidic microenvironment for ultrafast Fenton-like reaction. *Applied Catalysis B: Environmental*. 304, 121009.
11. Wang S., Xu M., Jin B., Wunsch U., Su Y., **Zhang Y***. 2022. Electrochemical and Microbiological Response of Exoelectrogenic Biofilm to Polyethylene Microplastics in Water. *Water Research*. 211, 118046
12. Ma L., Chen N., Feng C., Yao Y., Wang S., Wang G., Su Y., **Zhang Y***. 2022. Enhanced Cr(VI) reduction in biocathode microbial electrolysis cell using Fenton-derived ferric sludge. *Water Research*, 118144.
13. Xu M., Zhou H., Zou R., Yang X., Su Y., Angelidaki I., **Zhang Y.***. 2021. Beyond the farm: making edible protein from CO₂ via hybrid bioinorganic electrosynthesis. *One Earth*. 4(6), 868-878
14. Fu S., Angelidaki I., **Zhang Y.***. 2021. In-situ Biogas Upgrading by CO₂-to-CH₄ Bioconversion. *Trends in Biotechnology*. 39(4), 336-347
15. Zou R., Tang K., Angelidaki I., Andersen H. R., **Zhang Y.***. 2020. An innovative microbial electrochemical ultraviolet photolysis cell (MEUC) for efficient degradation of carbamazepine. *Water Research*. 187, 116451
16. Xu M., Zhou H., Yang X., Angelidaki I., **Zhang Y.***. 2020. Sulfide restrains the growth of *Methylocapsa acidiphila* converting renewable biogas to single cell protein. *Water Research*. 184, 116138.
17. Zhao N., Treu L., Angelidaki I., **Zhang Y.*** 2019. Exoelectrogenic anaerobic granular sludge for simultaneous electricity generation and wastewater treatment. *Environmental Science & Technology*. 53: 12130-12140
18. Li X., Angelidaki I., **Zhang Y.*** 2018. Salinity-gradient energy driven microbial electrosynthesis of value-added chemicals from CO₂ reduction. *Water Research*, 142, 396-404.
19. Omar, B., Abou-Shanab, R., El-Gammal, M., Fotidis, I., Kougias, P., **Zhang, Y.***, Angelidaki, I. 2018. Simultaneous biogas upgrading and biochemicals production using anaerobic bacterial mixed cultures. *Water Research*, 142, 86–95.
20. Jin X., **Zhang Y.***, Li X., Zhao N., Angelidaki I. 2017. Microbial electrolytic capture, separation and regeneration of CO₂ for biogas upgrading. *Environmental Science & Technology*, 51(16), 9371–9378.
21. Li X., Jin X., Zhao N., Angelidaki I., **Zhang Y.*** 2017. Efficient treatment of aniline containing wastewater in bipolar membrane microbial electrolysis cell-Fenton system. *Water Research*, 119, 67-72.
22. Jin X., Li X., Zhao N., Angelidaki I., **Zhang Y.*** 2017. Bio-electrolytic sensor for rapid monitoring of volatile fatty acids in anaerobic digestion process. *Water Research*, 111, 74-80.
23. Zhao N., Angelidaki I., **Zhang Y.*** 2016. Electricity generation and microbial community in response to short-term changes in stack connection of self-stacked submersible microbial fuel cell powered by glycerol. *Water Research*, 109, 367-374.
24. Wang H., **Zhang Y.***, Angelidaki I. 2016. Ammonia inhibition on hydrogen enriched anaerobic digestion of manure

- under mesophilic and thermophilic conditions. *Water Research*, 105, 314-319.
25. Zhang Y.*, Angelidaki I. 2016. Microbial electrochemical systems and technologies: it is time to report the capital costs. *Environmental Science & Technology*, 50, 5432–5433.
 26. Jin X., Angelidaki I., Zhang Y.* 2016. Microbial electrochemical monitoring of volatile fatty acids during anaerobic digestion. *Environmental Science & Technology*, 50, 4422-4429.
 27. Zhang Y.*, Angelidaki I. 2015. Recovery of ammonia and sulfate from waste streams and bioenergy production via bipolar bioelectrodialysis. *Water Research*, 85, 177–184.
 28. Zhang Y.*, Angelidaki I. 2015. Bioelectrochemical recovery of waste-derived volatile fatty acids and production of hydrogen and alkali. *Water Research*, 81, 188-195.
 29. Zhang Y.*, Angelidaki I. 2014. Microbial electrolysis cells turning to be versatile technology: recent advances and future challenges. *Water Research*, 56, 11-25.
 30. Zhang Y., Angelidaki I. 2013. A new method for in situ nitrate removal from groundwater using submerged microbial desalination-denitrification cell (SMDDC). *Water Research*, 47(5), 1827-1836.
 31. Zhang Y., Angelidaki I. 2012. Bioelectrode-based approach for enhancing nitrate and nitrite removal and electricity generation from eutrophic lakes. *Water Research*, 46(19), 6445-6453.
 32. Zhang Y., Angelidaki I. 2012. Innovative self-powered submersible microbial electrolysis cell (SMEC) for biohydrogen production from anaerobic reactors. *Water Research*, 46(8), 2727-2736.
 33. Zhang Y., Noori J., Angelidaki I. 2011. Simultaneous organic carbon, nutrients removal and energy production in a photomicrobial fuel cell (PFC). *Energy & Environmental Science*, 4(10), 4340-4346.
 34. Haxthausen K., Lu X., Zhang Y., Gosewinkel U., Petersenc D.G., Marzocchid U., Brocka A., Trapp S. 2021. Novel method to immobilize phosphate in lakes using sediment microbial fuel cells. *Water Research*, Accepted.
 35. Li B., Sun J., Tang C., Zhou J., Wu X., Jia H., Wei P., Zhang Y., Yong X. 2020. Coordinated response of Au-NPs/rGO modified electroactive biofilms under phenolic compounds shock: Comprehensive analysis from architecture, composition, and activity. *Water Research*. 189, 116589
 36. Wang B., Liu W., Zhang Y., Wang A. 2020. Intermittent electro field regulated mutualistic interspecies electron transfer away from the electrodes for bioenergy recovery from wastewater. *Water Research*, 185, 116238
 37. Wang B., Liu W., Zhang Y., Wang A. 2020. Bioenergy recovery from wastewater accelerated by solar power: intermittent electro-driving regulation and capacitive storage in biomass. *Water Research*, 175, 115696
 38. Zhou S., Liao Z., Zhang B., Hou R., Wang Y., Zhou S., Zhang Y., Ren Z.J., Yuan Y. Photochemical Behavior of Microbial Extracellular Polymeric Substances in the Aquatic Environment. *Environmental Science & Technology*, 55, 22, 15090-15099.

B. Other papers as first/corresponding author*

39. Fessler M. Su Q., Jensen M., Zhang Y.* 2024. Electroactivity of the magnetotactic bacteria *Magnetospirillum magneticum* AMB-1 and *Magnetospirillum gryphiswaldense* MSR-1. *Frontiers of Environmental Science & Engineering*, Accepted
40. Wang Y., Shang Y. Sun X., Yang Q., Zhang Y.* 2023. Enhancing freshwater production via customizable and highly efficient solar-driven seawater desalination. *ACS Applied Materials & Interfaces*, Accepted
41. Li B., Wang P., Cheng X., Zou R., Su Y., Zhang Y.* 2023. Selective and nonselective removal of hydrophobic compounds by coupling engineered FeOCl in a cathode-anode synergistic electrochemical platform. *Journal of Hazardous Materials*, 459, 132148
42. Wang P., Zuo W., Li B., Wang S., Xu M., Zhu W., Tian Y., Zhang Y.* 2023. Reagentless electrochemically assisted desorption for selective phosphate recovery from wastewater: proof of concept and mechanism. *Chemical Engineering Journal*, 144079
43. Li B., Cheng X., Zou R., Su Y., Zhang Y.* 2023. Dynamic coordination of two-phase reactions in heterogeneous Fenton for selective removal of water pollutants, *Journal of Hazardous Materials*, 454, 131554,
44. Wang S. Jin B., Su Y., Zhang Y.*. 2023. Long-term effect of polyethylene microplastics on the bioelectrochemical nitrogen removal process. *Chemical Engineering Journal*. In Press
45. Zeng D., Wang S., Jiang Y., Su Y., Zhang Y.*. 2023. Recovery and upcycling of residual lactic acid and ammonium from biowaste into yeast single cell protein. *Separation and Purification Technology*, In press
46. Niu J., Kong X, Li Q., Zhang Y., Yuan J., Liu J., Zhang Y.*2023. Deciphering different effects of ZVI and NaOH on metabolic characteristics in the process of methanogenesis recovery from VFA suppression. *Journal of Environmental Management* Accepted
47. Fessler M., Madsen J.S., Zhang Y.*. 2023. Conjugative plasmids inhibit extracellular electron transfer in *Geobacter sulfurreducens*. *Front. Microbiol.* Accepted
48. Castilla-Archilla J., Zeng D., Zhang Y.*, Lens P.N., 2023. Simultaneous production and recovery of volatile fatty acids

- from fermentation process using an electrochemically assisted up-flow granular sludge bed reactor. *Journal of Environmental Chemical Engineering*, 109568
49. Kong X., Li Q., Zhang W., Niu J., Wang S., Liu J., Yuan J., Yue X., Liu Y., **Zhang Y.*** 2023. Metabolic effects of Fe⁰ on simultaneously eliminating excessive acidification and upgrading biogas in mesophilic or thermophilic anaerobic reactor, *Journal of Cleaner Production*, doi: <https://doi.org/10.1016/j.jclepro.2023.136079>.
 50. Wang G., Tang K., Yao Y., Zhang W., Andersen H.R., **Zhang Y.*** 2023. Improved Fe(II) regeneration from actual ferric sludge using a biocathode with granular sludge. *Journal of Cleaner Production*, Accept
 51. Feng H., Guo W., Ying X., Ma X., Jin A., Hong Z., Ding Y., Zhao N., **Zhang Y.*** 2023. Unveiling the mechanism of enhanced extracellular electron transfer by polarity inversion of bioelectrode. *ACS ES&T Water*, Accepted.
 52. Li B., Zou R., Su Y. **Zhang Y.*** 2022. A hybrid subnano cluster electrocatalysis process for recalcitrant wastewater treatment. *Separation and Purification Technology*, In press
 53. Guo W., Ying X., Zhao N., Yu S., Zhang X., Feng H.*, **Zhang Y.***, Yu H. 2022. Interspecies electron transfer between *Geobacter* and denitrifying bacteria for nitrogen removal in bioelectrochemical system. *Chemical Engineering Journal*. In Press
 54. Zeng D., Jiang Y., Schneider C., Su Y., Hélix-Nielsen Claus, **Zhang Y.*** 2022. Recycling of acetate and ammonium from digestate for single cell protein production by a hybrid electrochemical-membrane fermentation process. *Resources, Conservation & Recycling*. In Press
 55. Wang S., Zeng D., Jin B., Su Y., **Zhang Y.***, 2022. Deciphering the role of polyethylene microplastics on antibiotic resistance genes and mobile genetic elements fate in sludge thermophilic anaerobic digestion process, *Chemical Engineering Journal*, 139520
 56. Zeng D., Jiang Y., Su Y., **Zhang Y.***, 2022. Upcycling waste organic acids and nitrogen into single cell protein via brewer's yeast, *Journal of Cleaner Production*, 133279
 57. Jiang Y., Yang X., Zeng D., Su Y., **Zhang Y.***, 2022. Microbial conversion of syngas to single cell protein: the role of carbon monoxide. *Chemical Engineering Journal*. 450, 138041
 58. Wang G., Jiang Y., Tang K., **Zhang Y.***, Andersen H., 2022. Efficient recovery of dissolved Fe(II) from near neutral pH Fenton via microbial electrolysis. *Journal of Hazardous Materials*, 129196
 59. Zhou H., Xing D., Ma J., Su Y., **Zhang Y.***, 2022. Electrifying anaerobic granular sludge for enhanced waste anaerobic digestion and biogas production. *Separation and Purification Technology*. Accepted
 60. Fakhry H., El-Sonbati M., Omar B., El-Henawy R., **Zhang Y.***, EL-Kady M. 2022. Novel fabricated low-cost hybrid polyacrylonitrile/polyvinylpyrrolidone coated polyurethane foam (PAN/PVP@PUF) membrane for the decolorization of cationic and anionic dyes, *Journal of Environmental Management*. 315, 115128.
 61. Su Y., Zhu X., Zou R., **Zhang Y.*** 2022. The interactions between microalgae and wastewater indigenous bacteria for treatment and valorization of brewery wastewater. *Resources, Conservation and Recycling*, 182, 106341.
 62. Zou R., Tang K., Hambly A.C., Chhetri R.K., Andersen H.R., **Zhang Y.*** 2022. Elimination of recalcitrant micropollutants by medium pressure UV-catalyzed bioelectrochemical advanced oxidation process: Influencing factors, transformation pathway and toxicity assessment, *Science of The Total Environment*, 828, 154543.
 63. Yang X., Jiang Y., Wang S., Zou R., Su Y., Angelidaki I., **Zhang Y.*** 2021. Self-sustained ammonium recovery from wastewater and upcycling for hydrogen-oxidizing bacteria-based power-to-protein conversion. *Bioresource Technology*. 126271
 64. Xu W., Zou R., Jin B., Zhang G., Su Y., **Zhang Y.*** 2021. The ins and outs of pharmaceutical wastewater treatment by microbial electrochemical technologies. *Sustainable Horizons*. In press
 65. Yang X., Jiang Y., Zou R., Xu M., Su Y., Angelidaki I., **Zhang Y.*** 2022. Green electricity-driven simultaneous ammonia recovery and in-situ upcycling for microbial protein production. *Chemical Engineering Journal*, 430, 132890
 66. Wang G., Yao Y., Tang K., Wang G., Zhang W., **Zhang Y.***, Andersen H., 2021. Cost-efficient microbial electrosynthesis of hydrogen peroxide on a facile-prepared floating electrode by entrapping oxygen, *Bioresource Technology*, 125995
 67. Zou, R., Tang, K., Hambly, A. C., Wünsch, U. J., Andersen, H. R., Angelidaki, I., & **Zhang, Y.*** 2021. When microbial electrochemistry meets UV: the applicability to high-strength real pharmaceutical industry wastewater. *Journal of Hazardous Materials*, [127151]. In press
 68. Xu M., Zhao D., Zhu X., Su Y., Angelidaki I., **Zhang Y.*** 2021. Biogas upgrading and valorization to single-cell protein in a bioinorganic electrosynthesis system. *Chemical Engineering Journal*. In Press.
 69. Zou R., Tang K., Hambly A., Chhetri R.K., Yang X., Xu M., Su Y., Andersen H.R., Angelidaki I., **Zhang Y.*** 2021. A novel persulfate-photo-bioelectrochemical hybrid system promoting the degradation of refractory micropollutants at neutral pH. *Journal of Hazardous Materials*. Accepted.
 70. Zou R., Hasanzadeh A., Khataee A., Meng F., Angelidaki I., **Zhang Y.***, 2021. Synergistic effect for efficient oxidization of refractory organics with high chroma by an innovative persulfate assisted microbial electrolysis ultraviolet cell.

71. Zhang C., Yang L., Huo S., Su Y., **Zhang Y.*** 2021. Optimization of the cell immobilization-based chain elongation process for efficient n-caproate production. *ACS Sustainable Chemistry & Engineering*. 9(11), 4014–4023
72. Zou R., Hasanzadeh A., Khataee A., Yang X., Xu M., Angelidaki I., **Zhang Y.*** 2021. Scaling-up of microbial electrosynthesis with multiple electrodes for in-situ production of hydrogen peroxide. *iScience*. 24 (2), 102094
73. Pan M., Su Y., Zhu Xin., Pan G., **Zhang Y.***, Angelidaki I. 2021. Bioelectrochemically assisted sustainable conversion of industrial organic wastewater and clean production of microalgal protein. *Resources Conservation and Recycling*. 168, 105441
74. Yang X., Zou R., Tang K., Andersen H., Angelidaki I., **Zhang Y.*** 2021. Degradation of metoprolol from wastewater in a bio-electro-Fenton system, *Science of the Total Environment*. 771, 145385
75. Sun H., Xu M., Wu S., Dong R., Angelidaki I., **Zhang Y.*** 2021. Innovative air-cathode bioelectrochemical sensor for monitoring of total volatile fatty acids during anaerobic digestion. *Chemosphere*. 273, 129660
76. Yang X., Xu M., Zou R., Angelidaki I., **Zhang Y.***, 2021. Microbial protein production from CO₂, H₂, and recycled nitrogen: focusing on ammonia toxicity and nitrogen sources. *Journal of Cleaner Production*. 291, 125921
77. Zhou H., Xing D., Xu M., Su Y., Ma J., Angelidaki I. **Zhang Y.*** 2020. Optimization of a newly developed electromethanogenesis for the highest record of methane production. *Journal of Hazardous Materials*, 407, 124363
78. Wang G., Tang K., Jiang Y., Andersen H., **Zhang Y.***. 2020. Regeneration of Fe(II) from Fenton-derived ferric sludge using a novel biocathode. *Bioresource Technology*. 318, 124195
79. Zhao N., Su Y. Angelidaki I., **Zhang Y.*** 2020. Electrochemical capacitive performance of intact anaerobic granular sludge-based 3D bioanode. *Journal of power source*. 470, 228399.
80. Zhou H., Xing D., Xu M., Su Y., **Zhang Y.*** 2020. Biogas upgrading and energy storage via electromethanogenesis using intact anaerobic granular sludge as biocathode. *Applied Energy*, 269: 115101.
81. Zou R., Angelidaki I., Yang X., Tang K., Andersen H. R., **Zhang Y.***. 2020. Degradation of pharmaceuticals from wastewater in a 20-L continuous flow bio-electro-Fenton (BEF) system. *Science of the Total Environment*. 727:138684.
82. Álamo A.C., Zou R., Pariente M.I., Molina R., Martínez F., **Zhang Y.***. 2020. Catalytic activity of LaCu_{0.5}Mn_{0.5}O₃ perovskite at circumneutral/basic pH conditions in electro-Fenton processes. *Catalysis Today*. 361, 159-164
83. Xu W., Jin B., Zhou S., Su Y., **Zhang Y.*** 2020. Triclosan removal in microbial fuel cell: the contribution of adsorption and bioelectricity generation. *Energies*. 13, 76
84. Zou R., Angelidaki I., Jin B., **Zhang Y.*** 2020. Feasibility and applicability of the scaling-up of bio-electro-Fenton system for textile wastewater treatment. *Environment International*. 134, 105352
85. Wang H., Zhu X., Yan Q., **Zhang Y.***, Angelidaki I. 2019. Microbial community response to ammonia levels in hydrogen assisted biogas production and upgrading process. *Bioresource Technology*. 296, 122276
86. Zhou H., Zhang D., **Zhang Y.***, Yang Y., Liu B., Ren N., Xing D. 2019. Magnetic cathode stimulates extracellular electron transfer in bioelectrochemical systems. *ACS Sustainable Chemistry & Engineering*. 7: 15012-15018.
87. Omar, B., Abou-Shanab, R., El-Gammal, M., Fotidis, I., Angelidaki, I., **Zhang, Y.*** 2019. Biogas upgrading and biochemical production from gas fermentation: impact of microbial community and gas composition. *Bioresource Technology*. 286, 121413
88. Zhang C., Yang L., Tsapekos P., **Zhang Y.***, Angelidaki I. 2019. Immobilization of Clostridium kluyveri on wheat straw to alleviate ammonia inhibition during chain elongation for n-caproate production. *Environment International*. 127, 134-141
89. Sun H., Angelidaki I., Wu S., Dong R., **Zhang Y.*** 2019. The potential of bioelectrochemical sensor for monitoring of acetate during anaerobic digestion: focusing on novel reactor design, *Frontiers in Microbiology*. 9, 3357.
90. Sun H., **Zhang Y.***, Wu S., Dong R., Angelidaki I., 2019. Innovative operation of microbial fuel cell-based biosensor for selective monitoring of acetate during anaerobic digestion. *Science of the Total Environment*. 655, 1439-1447.
91. Huang L., **Zhang Y.***, Hu X., Hansen H.C.B., Pedersen S. U., Daasbjerg K. 2018. Energy-harvesting bio-electrodehalogenation for sustainable wastewater treatment. *Electrochimica Acta*, 290: 38-45.
92. Karakashev D., **Zhang Y.*** 2018. BioEnergy and BioChemicals Production from Biomass and Residual Resources. *Energies*, 11, 2125.
93. Li X., Chen S., Angelidaki I., **Zhang Y.*** 2018. Bio-Electro-Fenton processes for wastewater treatment: advances and prospects. *Chemical Engineering Journal*, 354, 492-506.
94. Zhao N., Angelidaki I., **Zhang Y.*** 2018. Current as an indicator of ammonia concentration during wastewater treatment in an integrated microbial electrolysis cell - Nitrification system. *Electrochimica Acta*, 281, 266-273.
95. Zhao N., Jiang Y., Alvarado-Morales M.; Treu L., Angelidaki I., **Zhang Y.*** 2018. Electricity generation and microbial communities in microbial fuel cell powered by macroalgal biomass. *Bioelectrochemistry*, 123, 145-149,
96. Zhou S., Huang S., Li Y., Zhao N., Li H., Angelidaki I., **Zhang Y.*** 2018. Microbial fuel cell-based biosensor for toxic carbon

- monoxide monitoring. *Talanta*, 186, 368-371
97. Zhou S., Huang S., Li Y., Angelidaki I., **Zhang Y.*** Microbial electrolytic disinfection process for highly efficient Escherichia coli inactivation. *Chemical Engineering Journal*. 342(15), 220-227
98. Nadais H., Li X., Alves N., Couras C., Andersen H.R., Angelidaki I., **Zhang Y.*** 2018. Bio-Electro-Fenton process for the degradation of Non-Steroidal Anti-Inflammatory Drugs in wastewater. *Chemical Engineering Journal*. 338(15), 401-41
99. Zhao N., Li X., Jin X., Angelidaki I., **Zhang Y.*** 2018. Integrated electrochemical-biological process as an alternative mean for ammonia monitoring during anaerobic digestion of organic wastes. *Chemosphere*. 195, 735-741.
100. Kokkoli A., **Zhang Y.***, Angelidaki I. 2018. Microbial electrochemical separation of CO₂ for biogas upgrading. *Bioresource Technology*, 247, 380-386.
101. El-Gammal M., Shanab R., Angelidaki I., Omar B., Sveding P., Karakashev D., **Zhang Y.*** 2017. High efficient ethanol and VFA production from gas fermentation: effect of acetate, gas and inoculum microbial composition. *Biomass & Bioenergy*, 105, 32-40.
102. Yin Y., **Zhang Y.***, Karakashev D., Wang J., Angelidaki I. 2017. Biological caproate production by Clostridium kluyveri from ethanol and acetate as carbon sources. *Bioresource Technology*, 241, 638-644.
103. Ucar D., **Zhang Y.***, Angelidaki I. 2017. An overview of electron acceptors and mediators in microbial fuel cells. *Frontiers in Microbiology*. 8:643.
104. Li X., Zhang R., Qian Y., Angelidaki I., **Zhang Y.*** 2017. The impact of anode acclimation strategy on microbial electrolysis cell treating hydrogen fermentation effluent. *Bioresource Technology*, 236, 37-43.
105. Li X., Jin X., Zhao N., Angelidaki I., **Zhang Y.*** 2017. Novel bio-electro-Fenton technology for azo dye wastewater treatment using microbial reverse-electrodialysis electrolysis cell. *Bioresource Technology*, 228, 322-329.
106. Li X., Angelidaki I., **Zhang Y.*** 2017. Salinity-gradient energy driven microbial electrosynthesis of hydrogen peroxide. *Journal of Power Sources*, 341, 357-365.
107. **Zhang Y.***, Wang Y., Angelidaki I. 2015. Alternate switching between microbial fuel cell and microbial electrolysis cell operation as a new method to control H₂O₂ level in Bioelectro-Fenton system. *Journal of Power Sources*, 291, 108-116.
108. **Zhang Y.***, Angelidaki I. 2015. Counteracting ammonia inhibition during anaerobic digestion by recovery using submersible microbial desalination cell. *Biotechnology and Bioengineering*, 112(7), 1478-1482.
109. **Zhang Y.***, Angelidaki I. 2015. Submersible microbial desalination cell for simultaneous ammonia recovery and electricity production from anaerobic reactors containing high levels of ammonia. *Bioresource Technology*, 11(177C), 233-239.
110. **Zhang Y.**, Angelidaki I. 2012. A simple and rapid method for monitoring dissolved oxygen in water with a submersible microbial fuel cell (SBMFC). *Biosensors and Bioelectronics*, 38(1), 189-194.
111. **Zhang Y.**, Angelidaki I. 2012. Self-stacked submersible microbial fuel cell (SSMFC) for improved remote power generation from lake sediments. *Biosensors and Bioelectronics*, 35(1), 265-270.
112. **Zhang Y.**, Olias L., Kongjan P., Angelidaki I. 2011. Submersible microbial fuel cell for electricity production from sewage sludge. *Water Science and Technology*, 64(1), 50-55.
113. **Zhang Y.**, Angelidaki I. 2011. Submersible microbial fuel cell sensor for monitoring microbial activity and BOD in groundwater: Focusing on impact of anodic biofilm on sensor applicability. *Biotechnology and Bioengineering*, 108(10), 2339-2347.
114. **Zhang Y.**, Min B., Huang L., Angelidaki I. 2011. Electricity generation and microbial community response to substrate changes in microbial fuel cell. *Bioresource Technology*, 102(2), 1166-1173.
115. **Zhang Y.**, Min B., Huang L., Angelidaki I. 2009. Generation of electricity and analysis of microbial communities in wheat straw biomass-powered microbial fuel cells. *Applied and Environmental Microbiology*, 75, 3389-3395.
116. **Zhang Y.**, Huang L., Chen J., Qiao X., Cai X. 2008. Electricity generation in microbial fuel cells using humic acids as a mediator. *Journal of Biotechnology*, 136S, 474.
117. Su Y, **Zhang Y.***, Wang J., Zhou J., Lu X., Lu H. 2009. Enhanced bio-decolorization of azo dyes by the co-immobilization of acclimatized quinone-reducing consortium and anthraquinone. *Bioresource Technology*, 100 (12), 2982-2987.

C. Papers as co-authors

118. Feng H., Jin A., Yin X., Hong Z., Ding Y., Zhao N. Chen Y., **Zhang Y.** 2024. Enhancing biocathode denitrification performance with nano-Fe₃O₄ under polarity period reversal. *Environmental Research*. Accepted
119. Li Q., Kong X., Chen Y., Niu J., Jing J., Yuan J., **Zhang Y.** 2024. Co-enhancing effects of zero valent iron and magnetite on anaerobic methanogenesis of food waste at transition temperature (45 °C) and various organic loading rates. *Waste Management*. Accepted

120. Zhang L., Adyari B., Hou L., Yang X., Gad M., Wang Y., Ma C., Sun Q., Tang Q., **Zhang Y.**, Yu C., Hu A. 2024. Science of the Total Environment. 908,168193.
121. Lu J. , Gu J., Han J., Xu J., Liu Y., Jiang G., Zhang Y. Evaluation of spatiotemporal patterns and water quality conditions using multivariate statistical analysis in the Yangtze River, China. **Water**, accepted
122. Li H., Cao H., Li T., He Z., Zhao J., **Zhang Y.**, Song H. 2023. Biofilm electrode reactor coupled manganese ore substrate 1 up-flow microbial fuel cell-constructed wetland system: High removal efficiencies of antibiotic, zinc (II), and the corresponding antibiotic resistance genes. **Journal of Hazardous Materials**, accepted
123. Li R., Fan X., Jiang Y., Wang R., Guo R., **Zhang Y.**, Fu S. 2023. From anaerobic digestion to single cell protein synthesis: A promising route beyond biogas utilization, **Water Research**, 243, 120417
124. Ren W., Wu Q., Deng L., Wang H., **Zhang Y.**, Guo W. 2023. Insights into Chain Elongation Mechanisms of Weak Electric-Field-Stimulated Continuous Caproate Biosynthesis: Key Enzymes, Specific Species Functions, and Microbial Collaboration. **ACS ES&T Engineering**, accepted
125. Brock, A. L., Kostadinova, K., Mørk-Pedersen, E., Hensel, F., **Zhang, Y.**, Pérez, B. V., Stedmon, C. A. & Trapp, S., 2023, Remediation of marine dead zones by enhancing microbial sulfide oxidation using electrodes. **Marine Pollution Bulletin**. 115142.
126. Feng H., Yang W., **Zhang Y.**, Ding Y., Chen L., Kang Y., Huang H., Chen R. 2023. Electroactive microorganism-assisted remediation of groundwater contamination: Advances and challenges. **Bioresource Technology**, 2023, 128916
127. Azarmanesh R., Qaretapeh M.Z., Zonoozi M.H, Ghiasinejad H., **Zhang Y.**, 2023. Anaerobic co-digestion of sewage sludge with other organic wastes: A comprehensive review focusing on selection criteria, operational conditions, and microbiology. **Chemical Engineering Journal Advances**, 14, 100453.
128. Liu Y., Li X., Zhou W., He R., **Zhang Y.**, Zhao N. 2023. Electrical stimulation accelerated phenanthrene biodegradation coupling with nitrate reduction in groundwater. **Separation and Purification Technology**, 309, 123019.
129. Wu P., Zhang J., Li J., Zhang Y., Fu B., Xu M., **Zhang Y.**, Liu H. 2023. Deciphering the role and mechanism of nano zero-valent iron on medium chain fatty acids production from CO₂ via chain elongation in microbial electrosynthesis. **Science of The Total Environment**. In press
130. Wang B., Bonn  R., **Zhang Y.**, Wang A., Liu W.. 2022. Renewable energy driving microbial electrochemistry toward carbon neutral. **Sustainable Horizons**, 4, 100031
131. Liu Y. , Wang Y., Jin B., Wang Z., Gligorovski S., Vione D., **Zhang Y.**, Peng P., Zhang G.,2022. Day-night alternation and effect of sulfate ions on photodegradation of triclosan in water, **Applied Geochemistry**. In Press
132. Ye J. , Yuan Y., **Zhang Y.**, Yang W. and Gao X. 2022 Editorial: Biophotocatalysis for the nexus of energy and environment. **Front. Microbiol.** 13:1072083. doi: 10.3389/fmicb.2022.1072083
133. Wang L., Hu Z., Hu M., Zhao J., Zhou P., Zhang Y., Zheng X. **Zhang Y.**, Hu Z., Pan Z. 2022. Cometabolic biodegradation system employed subculturing photosynthetic bacteria: A new degradation pathway of 4-chlorophenol in hypersaline wastewater. **Bioresource Technology**, Just Accepted
134. Sun H., Xiao K., Zeng Z., Yang B., Duan H., Zhao H., Zhang Y. 2022. Electroactive biofilm-based sensor for volatile fatty acids monitoring: A review. **Chemical Engineering Journal**, 137833.
135. Lin Y., Huo P., Li F., Chen X., Yang L., Jiang Y., **Zhang Y.**, Ni B., Zhou M. 2022. A critical review on cathode modification methods for efficient electro-fenton degradation of persistent organic pollutants. **Chemical Engineering Journal**. In Press
136. Hu Z., Chen Y., Fei Y., Loo S., Chen G., Hu M., Song Y., Zhao J., **Zhang Y.**, Wang J. 2022. An overview of nanomaterial-based novel disinfection technologies for harmful microorganisms: Mechanism, synthesis, devices and application. **Science of The Total Environment**. 837, 155720.
137. Zhao N., Liu Y., **Zhang Y.**, Li Z. 2022. Pyrogenic carbon facilitated microbial extracellular electron transfer in electrogenic granular sludge via geobattery mechanism. **Water Research**, accepted
138. Hao J., Zeng H., Li X., **Zhang Y.**, Lei Y., Sheng G., Zhao X. 2022. Nitrogen and phosphorous recycling from human urine by household electrochemical fixed bed in sparsely populated regions. **Water Research**. 118467
139. Zhao W., Su X., **Zhang Y.**, Xia D., Hou S., Zhou Y., Fu H., Wang L., Yin X. 2022. Microbial electrolysis enhanced bioconversion of coal to methane compared with anaerobic digestion: Insights into differences in metabolic pathways. **Energy Conversion and Management**, 259, 115553
140. Liu Y., Li Z., **Zhang Y.**, Burns K., Zhao N. Extracellular electron transfer in electroactive anaerobic granular sludge mediated by the phenothiazine derivative. **Journal of Power Source**. In press.
141. Roy M., Aryal N., **Zhang Y.**, Patil S., Pant D. Technological progress and readiness level of microbial

- electrosynthesis and electrofermentation for carbon dioxide and organic wastes valorization. *Current Opinion in Green and Sustainable Chemistry*. Accepted
142. Yi G., Wang B., Feng Y., Fang D., Yang L., Liu W., **Zhang Y.**, Shao P., Pavlostathis S.G., Luo S., Luo X., Wang A. 2022. The ins and outs of photo-assisted microbial electrochemical systems for synchronous wastewater treatment and bioenergy recovery. *Resource Conservation and Recovery*. Accepted
143. Wang X., **Zhang Y.**, Wang B., Wang S., Xing X., Xu X., Liu W., Ren N., Lee D., Chen C. 2022. Enhancement of methane production from waste activated sludge using hybrid microbial electrolysis cells-anaerobic digestion (MEC-AD) process-A review, *Bioresource Technology*, 346, 126641
144. Sun K., Cheng F., Liu Y., Hua Y., **Zhang Y.** 2022. Microwave-assisted iron oxide process for efficient removal of tetracycline. *Journal of Environmental Management*. Just accepted.
145. Khoshnevisan B., He L., Xu M., Pérez B., Sillman J., Mittra G., Kougiaris P., Zhang Y., Yan S., Ji L., C. M., Elyasi S., Marami H., Tsapekos P., Liu H., Angelidaki I. 2022. From renewable energy to sustainable protein sources: Advancement, Challenges, and future roadmaps. *Renewable & Sustainable Energy Reviews*. 157, 102241
146. Wang B., Liu W., **Zhang Y.**, Wang A. 2021. Enhancement of methane production from waste activated sludge using hybrid microbial electrolysis cells-anaerobic digestion (MEC-AD) process-A review. *Chemical Engineering Journal*. 134369.
147. Luo J., Yi Y., Ying G., Fang Z., **Zhang Y.** Activation of persulfate for highly efficient degradation of metronidazole using Fe(II)-rich potassium doped magnetic biochar. 2021. *Science of the Total Environment*. Just accepted
148. Aryal N. , **Zhang Y.**, Bajaracharya S., Pant D., Chen X. 2021. Microbial electrochemical approaches of carbon dioxide utilization for biogas upgrading. *Chemosphere*. 132843.
149. Zhu H., Fu S., Zou H., Su Y., **Zhang Y.** 2021. Effects of nanoplastics on microalgae and their trophic transfer along food chain: Recent advances and perspectives. *Environmental Science: Processes & Impacts*. In press
150. Yang Z., Tsapekos P., **Zhang Y.**, Angelidaki I., Wang W. 2021. Bio-electrochemically extracted nitrogen from residual resources for microbial protein production. *Bioresource Technology* Accepted.
151. Li C., Wang R., Yang X., Zhou M., Pan X., Cai G., **Zhang Y.**, Zhu G. 2021. Deeper investigation on methane generation from synthetic wastewater containing oxytetracycline in a scale up acidic anaerobic baffled reactor. *Bioresource Technology*, Accepted.
152. Fan F., Xu R., Wang D., Tao J., **Zhang Y.**, Meng F. 2021. Activated sludge diffusion for efficient simultaneous treatment of municipal wastewater and odor in a membrane bioreactor. *Chemical Engineering Journal*. 415, 128765
153. Zhang C., Kang X., Wang F., Tian Y., Liu T., Su Y., Qian T. **Zhang Y.** 2020. Valorization of food waste for cost-effective reducing sugar recovery in a two-stage enzymatic hydrolysis platform, *Energy*. 208, 18379.
154. Li C., Xie S., Wang Y., Pan Xiao., Yu G., **Zhang Y.** 2020. Simultaneous heavy metal immobilization and antibiotics removal during synergetic treatment of sewage sludge and pig manure. *Environmental Science and Pollution Research*. 27, 30323–30332.
155. Khoshnevisan B., Dodds M., Tsapekos P., Torresi E., Smets B. F., Angelidaki I., **Zhang Y.**, Valverde-Pérez. B. Coupling electrochemical ammonia extraction and cultivation of methane oxidizing bacteria for production of microbial protein. *Journal of Environmental Management*. 265, 110560.
156. Zhang Q., He D., Li X., Feng W., Lyu C., **Zhang Y.** 2019. Mechanism and performance of singlet oxygen dominated peroxymonosulfate activation on CoOOH nanoparticles for 2,4-dichlorophenol degradation in water. *Journal of Hazardous Materials*. 384, 121350
157. Hasanzadeh A., Khataee A., Zarei M., **Zhang Y.** 2019. Two-electron oxygen reduction on fullerene C60-carbon nanotubes covalent hybrid as a metal-free electrocatalyst. *Scientific Report*. 9, 13780
158. Khoshnevisan B., Tsapekos P., **Zhang Y.**, Valverde Pérez B., Angelidaki I. 2019. Urban biowaste valorization by coupling anaerobic digestion and single cell protein production. *Bioresource Technology*. 290: 121743
159. Tong J., Tang A., Wang H., Huang Z., Wang Z., Zhang J., Wei Y., Su Y., **Zhang Y.** 2019 Microbial community evolution and fate of antibiotic resistance genes along six different full-scale municipal wastewater treatment processes. *Bioresource Technology*. 272, 489-500.
160. Duan N., Zhang D., Lin C., **Zhang Y.**, Zhao L., Liu H., Liu Z. 2018. Effect of organic loading rate on anaerobic digestion of pig manure: methane production, mass flow, reactor scale and heating scenarios. *Journal of Environmental Management*. 231, 646-652
161. Tong J., Tang A., Wang H., Liu X., Huang Z., Wang Z., Zhang J., Wei Y., Su Y., **Zhang Y.** 2019. Community evolution and fate of antibiotic resistance genes along six different full-scale municipal wastewater treatment processes. *Bioresource Technology*. 272, 489-500
162. Li R., Liu D., Zhang Y., Duan N., Zhou J., Liu Z., **Zhang Y.** 2018. Improved methane production and energy recovery of posthydrothermal liquefaction wastewater via integration of zeolite adsorption and anaerobic digestion. *Science*

of the Total Environment, 651:61-69.

163. Fatima A, **Zhang Y.**, Angelidaki I. 2014. Nanomodification of the electrodes in microbial fuel cell: impact of nanoparticle density on electricity production and microbial community. *Applied Energy*, 116, 216-222.
164. Fatima A., **Zhang Y.**, Noori J., Angelidaki I. 2012. Surface area expansion of electrodes with grass-like nanostructures to enhance electricity generation in microbial fuel. *Bioresource Technology*, 123, 177-183.
165. Wang G., Huang L., **Zhang Y.** 2008. Cathodic reduction of hexavalent chromium [Cr(VI)] coupled with electricity generation in microbial fuel cells. *Biotechnology Letters*, 30, 1959-1966.
166. Ye J. , Yuan Y., **Zhang Y.**, Yang W. Gao X. 2022. Editorial: Biophotoelectrochemistry for the Nexus of Energy and Environment. *Frontiers in Microbiology*, *Accepted*

Books

1. Aryal N., **Zhang Y.**, Patil S., Pant D., 2023. Material-Microbes Interactions, ISBN: 9780323951241
2. **Zhang Y.**, Jin X., Xu M., Zou R. 2020. Microbial Electrochemical Technologies, 460-474.
3. Karakashev D., Angelidaki I., Jørgensen P., **Zhang Y.**, Mattiasson B, Andersson M, Freiesleben A. 2012. Sustainable Urban Distribution in the Øresund Region
4. Angelidaki I., Xie L., Luo G., **Zhang Y.**, Oechsner H., Lemmer A., Munoz R., and Kougias P.G. 2019. Biogas Upgrading: Current and Emerging Technologies.

Patents

1. **Zhang Y.**, Angelidaki I. 2014. System and method to control H₂O₂ level in advanced oxidation processes. European Patent Application No. P81401437EP00
2. **Zhang Y.**, Angelidaki I. 2013. A bio-electrochemical system for removing inhibitors of anaerobic digestion processes from anaerobic reactors. Grant EP-2976421-B1