

## Luo Yi-hao

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### Education

2015                      B. A. Agricultural Resources & Environment  
                                 Zhejiang University, China  
2011                      Huangyan Senior High School, Zhejiang province, China

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### Research Experience

10/14 - present           Undergraduate Research Associate, Zhejiang University  
                                 Department of Environmental Engineering  
06/12 - 10/14           Undergraduate Research Associate, Zhejiang University  
                                 MOE Key Lab of Environmental Remediation and Ecosystem Health

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### Projects Participated

The methane based microbial reduction of perchlorate, National Foundation of Natural Science, China. (NSF21577123, 2016.1-2019.12, RMB 650K).

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### Journal Publications

- **Luo, Y. H.**, Chen, R., Wen, L. L., Meng, F., Zhang, Y., Lai, C. Y., Rittmann, B. E., Zhao, H. P., Zhen, P. Complete perchlorate reduction using methane as the sole electron donor and carbon source. *Environ. Sci. & Technol.* **2015**, 49, 2341-2349. DOI: 10.1021/es504990m
  - Lai, C. Y., Wen, L. L., Zhang, Y., Luo, S. S., Wang, Q. Y., **Luo, Y. H.**, Chen, R., Yang, X. E., Rittmann, B. E., Zhao, H. P. Autotrophic antimonite bio-reduction using hydrogen as the electron donor. *Water Research.* **2016**, 88, 467-474. DOI:10.1016/j.watres.2015.10.042
  - Chen, R., **Luo, Y. H. (share the first author)**, Chen, J. X., Zhang, Y., Wen, L. L., Shi, L. D., Zhao, H. P., Tang, Y. N., Rittmann, B. E., Zheng, P. Evolution of the microbial community of the biofilm in a methane-based membrane biofilm reactor reducing multiple electron acceptors. *Environ. Sci. & Pollut. Res.* DOI: 10.1007/s11356-016-6146-y
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### Honors and Awards

- Excellent Thesis, Agricultural Resources & Environment (2015)
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### **Research Techniques and Skills**

- **Molecular biological analysis:** Experience in DNA/RNA extraction, PCR, real-time quantitative PCR and reverse transcription PCR. Experience in using the MEGA 6 (Molecular Evolutionary Genetics Analysis) program packages to generate the phylogenetic trees, based on distance analysis for 16S rRNA gene, and SPSS 19.0 (Statistical Product and Service Solutions) to do some basic statistical analysis.
- **Microorganism enrichment:** Experience in taking care of three different enrichment of mixed microorganism cultures with the function of aerobic methane oxidation, denitrification and methane-depend perchlorate reduction.
- **Chemical analysis:** Experience in using gas chromatography (GC-ECD, GC-FID, GC-TCD and GC-MS) to analysis TCE (Trichloroethylene), methane, nitrogen, oxygen and isotope-labelled  $^{13}\text{CH}_4$  in gaseous environmental examples. Skilled in using ion chromatography to detect nitrate, nitrite, perchlorate and other anions; using high performance liquid chromatography (HPLC) to detect formic acid, acetic acid, citric acid and other organic acid in liquid environmental examples.
- **Environmental bioreactor:** Experience in running SBR (Sequencing Batch Reactor) and MBfR (membrane biofilm reactor).