

EDUCATION

Ph.D., 08.2007-12.2012, Environmental Engineering, University of California, Berkeley

M.S., 08.2005-07.2007, Environmental Science and Engineering, Tsinghua University, Beijing, China

B.S., 09.2001-07.2005, Environmental Engineering, Tsinghua University, Beijing, China

EMPLOYMENT HISTORY

03.2016 - *present*, Assistant Professor, Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, Champaign, IL, U.S.A.

01.2014 - 03.2016, Postdoctoral researcher, Department of Environmental Chemistry, Eawag, Swiss Federal Institute of Aquatic Science, Switzerland.

01.2013 - 12.2013, Postdoctoral scholar, Engineering Research Center (ERC) for Re-inventing the Nation's Urban Water Infrastructure (ReNUWI), Department of Civil and Environmental Engineering, University of California, Berkeley, CA, U.S.

09.2012 - 12.2012, Postdoctoral scholar, Department of Civil and Environmental Engineering, University of California, Berkeley, CA, U.S.

RESEARCH AREAS

- Fate of contaminants of emerging concerns (CECs) during wastewater treatment and the effects on anti-microbial resistance development in environmental microbial communities.
- Ecological roles and interactions of environmental microbes in bioremediation, biotransformation and wastewater treatment processes.
- Resource recovery for value-added products via engineered microbial consortia.

PUBLICATIONS (*: corresponding author)

26. Xing Y, Yu Y, **Men Y***. (2018). Occurrence and fate of emerging organic contaminants in wastewater treatment plants with an enhanced nitrification step. *Environ. Sci.: Water Res. Technol.* DOI: 10.1039/C8EW00278A
25. Yu Y, Han P, Zhou LJ, Li Z, Wagner M, **Men Y***. (2018) Ammonia monooxygenase-mediated cometabolic biotransformation and abiotic transformation of micropollutants in an AOB/NOB co-culture. *Environ. Sci. Technol.* DOI: 10.1021/acs.est.8b02801.
24. Wang Q, Tan GYA, Azari M, Huang X, Denecke M, **Men Y**, Jung JY, Okabe S, Ali M, Huang YT, Wu Z, Lo W, Gu JD, Lin JG, Lee PH. (2018). Insights into the roles of anammox bacteria in post-treatment of anaerobically-treated sewage. *Crit. Rev. Environ. Sci. Technol.* Accepted.
23. **Men Y***, Yu K, Tremblay J, Bælum J, Prestat E, Stenuit B, Tringe SG, Jansson JR, Zhang T, Alvarez-

- Cohen L. (2017). Metagenomic and metatranscriptomic analyses reveal structure and dynamics of a dechlorinating community containing *Dehalococcoides mccartyi* and corrinoid-providing microorganisms under cobalamin-limited condition. *Appl. Environ. Microbiol.* 83 (8), e03508-16.
22. **Men Y***, Achermann S, Johnson DR, Helbling DE, Fenner K. (2017). Relative contribution of ammonia oxidizing bacteria and other members of nitrifying activated sludge communities to micropollutant biotransformation. *Water Res.* **109**: 217-226.
 21. Liang J, Bai Y, **Men Y**, Qu J. (2017). Microbe-microbe interactions trigger Mn(II)-oxidizing gene expression. *ISME J.* **11**: 67-77.
 20. **Men Y**, Han P, Helbling DE, Jehmlich N, Herbold C, Gulde R, Onnis-Hayden A, Gu A, Johnson DR, Wagner M, Fenner K. (2016). Biotransformation of two pharmaceuticals by the ammonia-oxidizing archaeon *Nitrososphaera gargensis*. *Environ. Sci. Technol.* **50**: 4682-4692.
 19. Johnson DR, Helbling DE, **Men Y**, Fenner K. (2015). Can meta-omics help to establish causality between contaminant biotransformations and genes or gene products? *Environ. Sci.: Water Res. Technol.* **1**: 272-278.
 18. Lee PKH, **Men Y**, Wang S, He J, Alvarez-Cohen L. (2015). Development of a fluorescence-activated cell sorting method coupled with whole genome amplification to analyze minority and trace *Dehalococcoides* genomes in microbial communities *Environ. Sci. Technol.* **49**:1585-93.
 17. Crofts TS, **Men Y**, Alvarez-Cohen L, Taga M. (2014). A bioassay for the detection of benzimidazoles reveals their presence in a range of environmental samples. *Front. Microbiol.* **5**: 592.
 16. **Men Y**, Seth EC, Yi S, Crofts TS, Allen RH, Taga ME, Alvarez-Cohen L. (2015). Identification of specific corrinoids reveals corrinoid modification in dechlorinating microbial communities. *Environ. Microbiol.* **17**: 4873-4884.
 15. Zhuang WQ, Yi S, Bill M, Brisson V, Feng X, **Men Y**, Conrad ME, Tang Y, Alvarez-Cohen L. (2014). The incomplete Wood-Ljungdahl pathway facilitates a novel one-carbon metabolism in organohalide-respiring *Dehalococcoides mccartyi*. *Proc. Natl. Acad. Sci. U. S. A.* **111**: 6419–6424.
 14. **Men Y**, Seth EC, Yi S, Allen RH, Taga ME, Alvarez-Cohen L. (2014). Sustainable growth of *Dehalococcoides mccartyi* 195 by corrinoid salvaging and remodeling in defined lactate-fermenting consortia containing *Pelosinus fermentans* R7. *Appl. Environ. Microbiol.* **80**: 2133-2141.
 13. **Men Y**, Lee PKH, Harding KC, Alvarez-Cohen L. (2013). Characterization of four TCE-dechlorinating microbial enrichments grown with different cobalamin stress and methanogenic conditions. *Appl. Microbiol. Biotechnol.* **97**: 6439-6450.
 12. Yi S, Seth EC, **Men YJ**, Allen RH, Alvarez-Cohen L, Taga ME. (2012). Versatility in corrinoid salvaging and remodeling pathways supports the corrinoid-dependent metabolism of *Dehalococcoides maccartyi*. *Appl. Environ. Microbiol.* **78**: 7745-7752.
 11. **Men Y**, Feil H, VerBerkmoes NC, Shah MB, Johnson DR, Lee PKH, West KA, Zinder SH, Andersen GL, Alvarez-Cohen L. (2012). Sustainable syntrophic growth of *Dehalococcoides ethenogenes* strain 195 with *Desulfovibrio vulgaris* Hildenborough and *Methanobacterium congolense*: global transcriptomic and proteomic analyses. *ISME J.* **6**: 410-421.
 10. Zhang X, Hu HY, **Men YJ**, Christoffersen KS. (2010). The effect of *Poteroochromonas* abundance on production of intra- and extracellular microcystin-LR concentration. *Hydrobiologia* **652**: 237-246.
 9. Zhang X, Hu HY, **Men YJ**, Yang J, Christoffersen KS (2009). Feeding characteristics of a golden alga

- (*Poterochromonas* sp.) grazing on toxic cyanobacterium *Microcystis aeruginosa*. *Water Res.* **43**: 2953-2960.
8. **Men YJ**, Hu HY, Li FM. (2007). Effects of a Novel Allelochemical Ethyl-2-methylacetoacetate in *Phragmites australis* Trin on the Growth of Several Common Species of Algae. *J. Appl. Phycol.* **19**: 521-527.
 7. Li FM, Hu HY, Chong YX, **Men YJ**, Guo MT. (2007). Influence of EMA isolated from *Phragmites communis* on physiological characters of *Microcystis aeruginosa*. *China Environ. Sci.* **27**: 377-381. (In Chinese)
 6. Li FM, Hu HY, Chong YX, Guo MT, **Men YJ**. (2007). Effects of allelochemical isolated from *Phragmites communis* on algal membrane permeability. *Huan Jing Ke Xue (Environ. Sci.)*. **28**: 2453-2456. (In Chinese)
 5. **Men YJ**, Li FM, Hu HY. (2007). Effects of an Allelopathic Fraction in *Phragmites communis* Trin on the Growth Characteristics of *Selenastrum capricornutum* and *Chlamydomonas reinhardtii*. *J. Lake Sci.* **4**: 473-478. (In Chinese)
 4. Li FM, Hu HY, Chong YX, **Men Y**, Guo MT. (2007). Effects of allelochemical EMA isolated from *Phragmites communis* on algal cell membrane lipid and ultrastructure. *Huan Jing Ke Xue (Environ. Sci.)*. **28**: 1534-1538. (In Chinese)
 3. Li FM, Hu HY, **Men YJ**, Hong Y, Guo MT. (2006). Effects of EMA on activities of algal antioxidant enzymes. *Huan Jing Ke Xue (Environ. Sci.)*. **27**: 2091-2094. (In Chinese)
 2. **Men YJ**, Hu HY, Li FM. (2006). Effects of an Allelopathic Fraction from *Phragmites communis* Trin on the Growth Characteristics of *Scenedesmus obliquus*. *Ecol. Environ.* **15**: 925-929. (In Chinese)
 1. Hu HY, **Men YJ**, Li FM. (2006). Research process on phyto-allelopathic algae control. *Ecol. Environ.* **15**: 153-157. (In Chinese)

PENDING PUBLICATIONS

3. Mansfeldt CB, Achermann S, **Men Y**, Walser JC, Johnson D, Fenner K. Residence time is an experimentally and mathematically demonstrated controlling parameter of the taxonomic and functional composition of microbial communities. In preparation.
2. Achermann S, Falas P, Joss A, Mansfeldt CB, **Men Y**, Vogler B, Fenner K. Trends in micropollutant biotransformation along a solid retention time gradient. In preparation.
1. Han P, Yu Y, Zhou LJ, Tian Z, Li Z, Wu Q, **Men Y***, Wagner M. Distinctive micropollutant biotransformation capabilities of a comammox bacterium *Nitrospira inopinata* among three ammonia-oxidizers. In preparation.

PRESENTATIONS

24. Yu Y., **Men Y.** (03.2018). "Ammonia-monooxygenase-mediated cometabolic biotransformation and abiotic transformation of micropollutants". 255th ACS National Meeting, New Orleans, LA (Oral presentation).
23. Xing Y., **Men Y.** (03.2018). "Occurrence and fate of emerging organic contaminants in wastewater treatment processes with an enhanced nitrification step". 255th ACS National Meeting, New Orleans, LA (Oral presentation).
22. **Men Y.** (04. 2017). "Roles of nitrifiers in the removal of micropollutants during wastewater treatment

- processes”. ISTC sustainability seminar, Champaign, IL (Invited talk).
21. **Men Y.** (04.2017). “Roles played by ammonia oxidizers of a nitrifying activated sludge community in micropollutant biotransformation”. 253rd ACS National Meeting in San Francisco, California. (Oral presentation).
 20. **Men Y.** (08.2016). “Roles played by ammonia oxidizers of a nitrifying activated sludge community in micropollutant biotransformation as evidenced by inhibition experiments”. ISME16, Montreal, Canada. (Oral presentation).
 19. **Men Y.** (07.2016). “Links between Micropollutant Biotransformation and Ammonia Oxidizers”. Colorado School of Mines, Golden, Colorado. (Invited talk).
 18. **Men Y.** (11.2015). “Unraveling roles of microbes in communities – towards a resilient and effective strategy”. Tsinghua University, Beijing, China. (Invited talk)
 17. **Men Y.** (11.2015). “Links between Micropollutant Biotransformation and Ammonia Oxidizers”. 2015 Micropollutant and Ecohazard Conference, Singapore. (Oral presentation)
 16. **Men Y.** (11.2015). “Micropollutant biotransformation by ammonia-oxidizing archaea”. City University of Hong Kong. (Invited talk)
 15. **Men Y.** (06.2015). “The identification of the Ecological Roles of Supportive Microorganisms using Microbial Molecular Tools”. Civil and Environmental Engineering, Temple University, Philadelphia, U.S.A (Invited Talk).
 14. **Men Y.** (06. 2015). “Deciphering Ecological Roles of Supportive Microorganisms in TCE-dechlorinating Microbial Communities”. Civil, Architectural and Environmental Engineering, Drexel University, Philadelphia, U.S.A. (Invited Talk).
 13. **Men Y.** (06.2015). “Links between ammonia oxidizers and micropollutant biotransformation”. 2015 AEESP Conference, Yale University, New Haven, U.S.A. (Poster presentation).
 12. **Men Y.** (08.2014). “Linkages between biodiversity, nitrifiers, and micropollutant biotransformation in activated sludge microbial communities”. ISME15, Seoul, South Korea. (Oral presentation).
 11. **Men Y.** (03.2014). “Deciphering corrinoid salvaging in *Dehalococcoides mccartyi*-containing microbial communities”. DehaloCon- A Conference on Anaerobic Biological Dehalogenation, Friedrich Schiller University, Jena, Germany. (Oral presentation).
 10. **Men Y.** (06.2013). “The identification of novel biomarkers from TCE-dechlorinating microbial communities—Who is supporting *Dehalococcoides* and how?”. Department of Environmental Chemistry, Swiss Federal Institute of Aquatic Science and Technology (EAWAG), Switzerland. (Invited talk).
 9. **Men Y,** Seth EC, Yi S, Allen RH, Taga ME, Alvarez-Cohen L. (2013). Sustainable growth of *Dehalococcoides mccartyi* 195 by corrinoid salvaging and remodeling in a defined lactate-fermenting consortim. 113th general meeting of American Society for Microbiology. Denver, CO, U.S.A. (Poster).
 8. **Men Y,** Tremblay J, Prestat E, Bælum J, Stenuit B, Tringe SG, Jansson JR, Alvarez-Cohen. (2013). Metagenomic and metatranscriptomic analyses of TCE-dechlorinating microbial communities enriched under different exogenous cobalamin conditions. 2013 JGI user meeting. Walnut Creek, CA, U.S.A. (Poster).
 7. **Men Y,** Seth EC, Yi S, Crofts TS, Allen RH, Taga ME, Alvarez-Cohen L. (2012). The production and interspecies transfer of corrinoids in dechlorinating microbial communities containing *Dehalococcoides*. The 25th annual meeting of the superfund research program. Raleigh, NC, U.S.A. (Poster)

6. **Men Y.** (2012). “Who is supporting *Dehalococcoides*? — An ecological view on TCE-dechlorinating microbial communities under different cobalamin stress”. Microbial ecology seminar series, Lawrence Berkeley National Laboratory and University of California, Berkeley, CA, U.S.A. (Invited talk).
5. **Men Y,** Seth EC, Yi S, Crofts TS, Allen RH, Taga ME, Alvarez-Cohen L. (2011). Characterization the effects of cobalamin and methanogenesis on TCE-dechlorinating enrichments. *111th general meeting of American Society for Microbiology*. New Orleans, LA, U.S.A. (Poster).
4. **Men Y,** Harding KC, Yi S, Alvarez-Cohen L. (2010). Identification of corrinoid-providing supportive microorganisms for *Dehalococcoides* in TCE dechlorinating enrichment cultures by analytical and molecular tools. *110th general meeting of American Society of Microbiology*. San Diego, CA, U.S.A. (Poster).
3. **Men Y,** Harding KC, Feil H, Alvarez-Cohen L. (2009). Application of molecular and analytic tools to track enrichment of reductive dechlorination cultures from a TCE contaminated groundwater site. *109th General Meeting of American Society of Microbiology*. Philadelphia, PA, U.S.A. (Poster, student travel grant award winner).
2. Hong Y, **Men YJ,** Hu HY. (2005). The application of plant resource for the control of water bloom in small scale water bodies. *The Conference on Environmental Technology and Development for Beijing Green Olympics*, Beijing, China. (Abstract).
1. Li FM, Guo MT, Hu HY, **Men YJ,** Hong Y. (2005). Effects of adding ways of allelochemicals from *Phragmites communis* Trin on the inhibition of *Chlorella pyrenoidosa*. *2nd National Allelopathy Conference*, Hangzhou, China. (Abstract).

RESEARCH PROJECTS

- NSF_ECS SusChEM: Collaborative Research: Cobalt-catalyzed Defluorination of Branched Perfluorinated Compounds. (PI, Award No. NSF CHE 17-09286, 2017-2020, \$542,324 total, \$216,324 to this PI)
- 2016-present, roles of nitrifying microorganisms on biotransformation of emerging contaminants in wastewater treatment plants (Startup funding).
- 2014-2016, investigation on the linkage between biotransformation of micropollutants and transcript abundance of functional genes in nitrifying activated sludge microbial communities (Swiss National Science Foundation).
- 2013, Development of sustainable and energy efficient municipal wastewater treatment technology: Direct anaerobic digestion combined with anammox treatment (funded by the NSF-Engineering Research Center (ERC) for Re-inventing the Nation’s Urban Water Infrastructure (ReNUWIt).
- 2011-2012, Toxic Substances in the Environment, Project 4: Meta-omics of microbial communities involved in bioremediation (Funded by National Institute of Environmental and Health Sciences, U.S.).
- 2007-2011, Identify novel biomarkers to assess, monitor, and optimize the biodegradative potential of microbial communities during bioremediation of chlorinated solvents contaminated soil or groundwater. (Funded by Strategic Environmental Research and Development Program (SERDP), U.S.) (Ph.D. Dissertation).
- 2007, Sustainable water concept and its application for the Olympic Games 2008 (Supported by Joint Chinese - German Project). In charge of the management of landscape water qualities for the Olympic Games 2008.
- 2004-2007, Investigation of inhibitory effect of allelochemicals from water plants on water bloom

algae in eutrophicated freshwater bodies. (Funded by National Natural Science Foundation by China - Japan Science and Technology Agency (NSFC-JST) joint project) (Bachelor and Master's Thesis).

TEACHING

- 08.2016-present, Water Quality Engineering (CEE437), Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign.
- 09.2014-12.2014, Tutor of a master student in a term paper writing class (701-1303-00L), Department of Environmental and Systems Science, ETH, Zürich.
- 05.2013-06.2013, Summer Institution: Preparing for the Future Faculty, University of California, Berkeley.
- 01.2012-05.2012, Teaching assistant (course: "Environmental Microbiology"), Department of Civil and Environmental Engineering, University of California, Berkeley.
- 08.2006, Teaching assistant (summer course: "Environmental Quality Monitoring of Campus"), School of Environment, Tsinghua University, China.

PROFESSIONAL ACTIVITIES

- Organizer of webinar series and symposium on emerging contaminants together with ISTC (Illinois Science and Technology Center)
- Organizer of symposiums i) "Emerging Environmental Biotechnologies for Energy-Efficient Pollutant Control, Remediation & Resource Recovery"; ii) "Ongoing Challenges in the Treatment of Contaminants of Emerging Concern" at 255th ACS National Meeting (March 18-22, 2018, New Orleans).
- Peer-reviewer for journals: Environmental Science and Technology, Applied and Environmental Microbiology, Applied Microbiology and Biotechnology, Water Research, Science of the Total Environment, Journal of Hazardous Materials, Chemosphere, PLOS ONE, Journal of Petroleum and Environmental Biotechnology, and Journal of Environmental Sciences.
- Memberships:
 - 2013-present Member of Association of Environmental Engineering and Science Professors (AEESP)
 - 2013-present Member of International Society of Microbial Ecology (ISME)
 - 2013-present Member of American Chemical Society (ACS)
 - 2009-present Member of American Society for Microbiology (ASM)

AWARDS & HONORS

- 02. 2017 **UIUC IIP International Research Travel Grant** (\$3,000).
- 05. 2009 **ASM 2009 Student Travel Grant Award**, Philadelphia.
- 08. 2007 **Wei Fellowship** (\$21,000), University of California, Berkeley.
- 10. 2006 **1st Class Scholarship** of Tsinghua University for graduates funded by Guanghai educational foundation.
- 06. 2006 3rd prize in the 1st Environmental-friendly Science and Technology Competition.
- 07. 2005 **Excellent graduate** student in Beijing

07. 2005 **Excellent Bachelor Thesis** of Tsinghua University
11. 2004 **Scholarship** of Tsinghua University funded by POSCO, Tsinghua University
09. 2004 Danaher-Hach Environmental **Scholarship**
05. 2004 **Excellent Student** on Science & Technology of Department of Environmental Science & Engineering, Tsinghua University
11. 2003 **Scholarship of Tsinghua University** funded by POSCO, Tsinghua University
11. 2002 **Scholarship of Tsinghua University** funded by Shun-de WU Couple, Tsinghua University

WORKING EXPERIENCE

- 07-08. 2004 Internship in Danaher-Hach company for the project of “A Survey of Operation and Monitoring Situation of Waste Water Treatment Plant in China”.