

## CURRICULUM VITAE

### JIZHONG ZHOU

(As of 11-7-2015)

George Lynn Cross Research Professor, Department of Microbiology and Plant Biology

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#### EDUCATION:

- |                 |           |   |
|-----------------|-----------|---|
| BS              | 1978-1981 | <b>Plant Pathology &amp; Entomology</b> , Hunan Agricultural University, Changsha, China  |
| MS              | 1982-1984 | <b>Mathematical Ecology</b> , Hunan Agricultural University, Changsha, China,<br>Advisor: Prof. Changmin Chen<br>Thesis: Mathematical modeling and simulation of predator-prey systems in agro-ecosystems   |
| Ph.D. Candidate | 1986-1988 | <b>Systems Ecology</b> , Eco-Environmental Research Center, Chinese Academy of Sciences, Beijing China<br>Advisor: Prof. Shijun Ma (Academician)<br>Thesis: Ecological engineering, simulation and prediction of agroecosystem (Note, not obtaining Ph.D. degree) |
| Ph.D.           | 1990-1993 | <b>Molecular Biology</b> , Washington State University, Pullman, WA<br>Advisor: Prof Andris Kleinhofs<br>Thesis: Molecular evolution of plant nitrate reductases  |
| Postdoc         | 1993-1995 | <b>Microbial ecology</b> , Center for Microbial Ecology, Michigan State University, East Lansing, MI, Advisor, James M. Tiedje  |
|                 | 1996-1997 | <b>Microbial ecology</b> , Alexander Hollaender Distinguished Postdoctoral Fellow, Environmental Sciences Division, Oak Ridge National Laboratory, Mentor, Anthony V. Palumbo   |

#### PROFESSIONAL EXPERIENCE

- |              |  |
|--------------|--|
| 2014-Present | <u>George Lynn Cross Research Professor</u> , Department of Microbiology and Plant Biology, University of Oklahoma, Norman, OK |
| 2005-present | <u>Director</u> of the Institute for Environmental Genomics (IEG), University of Oklahoma, Norman, OK                          |

2005-present Presidential Professor, Department of Microbiology and Plant Biology, University of Oklahoma, Norman, OK

2006-present Adjunct Senior Scientist, Lawrence Berkeley National Laboratory (LBL)

2009-present Adjunct Professor, School of Environment, Tsinghua University, Beijing, China

2013-2014 Visiting Professor, Department of Civil and Environmental Engineering, Stanford University

2013-2014 Visiting Professor, Department of Civil and Environmental Engineering, University of California, Berkeley (Sabbatical leave)

2013-present Visiting Investigator, Department of Global Ecology, Carnegie Institution for Science, Stanford, CA

2003-2005 Distinguished R&D Staff Scientist, Environmental Sciences Division, ORNL

2004-2005 Member of Science Council, Biological and Environmental Sciences Directorate, ORNL

2002-2004 Science Leader for Environmental Genomics Program, Biological and Environmental Sciences Directorate, ORNL

2001-2002 Senior Staff Scientist, Environmental Sciences Division, ORNL

2000-2001 Science Team Leader for Microbial Genomics and Ecology, Environmental Sciences Division, ORNL

1997-2000 Staff Scientist, Environmental Sciences Division, ORNL

1996-1997 Alexander Hollaender Distinguished Postdoctoral Fellow, Environmental Sciences Division, ORNL

1993-1995 Research Associate, Laboratory of Dr. James M. Tiedje, NSF Center for Microbial Ecology, Michigan State University, East Lansing, MI. Bioreactor Subgroup Leader of the Community Analysis Group

1990-1993 Graduate Research and Teaching Assistant, Laboratory of Dr. Andris Kleinhofs, Department of Genetics and Cell Biology, Washington State University, Pullman, WA

1989 Graduate Research and Teaching Assistant, Laboratory of Dr. Alan Berryman, Department of Entomology, Washington State University, Pullman, WA

1988 Visiting Scientist, Department of Biological Sciences, University of Calgary, Calgary, Alberta, Canada

1986-1988 Research Associate, Eco-Environmental Research Center, Chinese Academy of Sciences, Beijing, China

1985-1986 Lecturer in the Department of Plant Pathology and Entomology, Hunan Agricultural University, Changsha, China

1982-1984 Teaching and Research Assistant, Department of Plant Pathology and Entomology, Hunan Agricultural University, Changsha, China

## **TEACHING EXPERIENCE**

2005-present Advanced topics on environmental genomics

2004 A joint course on molecular techniques for microbial ecology for graduate and senior undergraduate students. University of Puerto Rico, Mayaguez, Puerto Rico.

1993-1995 Trained 8 graduate and undergraduate students on molecular techniques, computer sequence analyses and related software, Michigan State University

- 1992 General Genetics for senior undergraduate students, Laboratory Teaching Assistant, Washington State University
- 1985-1986 Lecturer, Hunan Agricultural University, Changsha, China  
Courses taught:  
Mathematical Ecology for graduate students  
General Ecology for senior undergraduate students  
Agricultural Pathology and Entomology for junior undergraduate students
- 1982-1984 General Biology, Laboratory Teaching Assistant, Hunan Agricultural University  
General Entomology, Laboratory Teaching Assistant  
General Plant Pathology, Laboratory Teaching Assistant

### **MAJOR PROFESSIONAL SERVICES**

- 2014-present Member of Advisory Committee, CAS Key Laboratory, Center for Eco-Environmental Sciences (RCEES), Chinese Academy of Sciences.
- 2014-present Member of Steering Committee, NASA Omics Initiative, NASA, Wash DC
- 2013-present Member of ASM International Board's Committee on Global Engagement (CGE).
- 2012-present Member of the Advisory Committee for State Key Laboratory of Oral Disease, Sichun University, China
- 2011-2014 Member of Local Organizing Committee, The 15<sup>th</sup> International Symposium on Microbial Ecology (ISME-15)
- 2011-present Member of Environmental Microbiology Committee, Public and Scientific Affairs Board, ASM
- 2011-present Member of Selection Committee, William A. Hinton Research Training Award, ASM
- 2010 Member of the Review Panel, Key National Lab on Microbiology, Shandong University, Jinan, China
- 2010-present Member of Advisory Committee, NSF PIRE Project to University of Nevada, Las Vegas.
- 2009-2014 Chair, Board of Directors, the Overseas Chinese Society for Microbiology (Sino\_Micro)
- 2009 Member of the Review Panel, DOE Early Career Research Program on Genomics and Systems Microbiology
- 2009 Member of Advisory Committee, Max-Planck Institute Partner (MPI) Group Between Germany and China
- 2009-2013 Member, Oklahoma EPSCoR Bioenergy Executive Committee
- 2009-2012 Member, Nominations Committee for the Promega Biotechnology Award, American Academy of Microbiology, American Society of Microbiology
- 2008-2012 Member of Steering Committee, International Soil Metagenomics Consortium.
- 2008-present Member of Advisory Committee, Water Research Foundation, Denver, CO
- 2008 Member of the review panel for NIEHS program on Development and Application of Nanotechnology-based Tools to Understand Mechanisms of Bioremediation.
- 2008 Member of the review panel for NSF-USDA Microbial Observatories program.
- 2007 Honorary Chair for the 3<sup>rd</sup> Annual Meeting of Microbial Ecology, Chinese

Society of Ecology

2007-2012 Member of Academic Committee, Qingdao Institute of Biomass Energy and Bioprocessing Technology (QIBEBT), Chinese Academy of Sciences, Qingdao, Shandong, China

2007-2009 Member of Advisory Committee for the Norman Campus Vice President for Research (AC/VPR), University of Oklahoma

2007-2010 Member of the Oklahoma Bioenergy Center Board appointed by Oklahoma Governor

2007 Advisory member of preparing the roadmap for Oklahoma Bioenergy Center

2007 Member of VPR Task Forces on Centers, Institutes and Consortia, University of Oklahoma

2007 Member of the review panel for Genomics:GTL, New Genomic Strategies and Technologies for Studying Complex Microbial Communities and Validating Genomic Annotations

2006-2009 Member of ASM International Committee - Task Force on China

2006-2007 Member of National Key Microbial Program Panel, Chinese National Science Foundation

2005 Reviewer for 2005 State Natural Science Award of the People's Republic of China (The highest achievement award for science and technology in China)

2004-present US Ambassador for International Society of Microbial Ecology.

2004 Member of the review panel for DOE Joint Genome Institute Community Sequencing (CSP) program.

2003 Member of the review panel for NSF the Frontiers in Biological Research (FIBR) program.

2003-2006 Specially Invited Oversea Reviewer of Scientific Programs of National Natural Science Foundation of China.

2001-2007 Member of Scientific Advisory Committee on Molecular Environmental studies, Scientific Committee on Problems of the Environment (SCOPE), International Council of Scientific Union (ICSU)

2001 Panel member for preparing the roadmap for Genomes to Life program, US Department of Energy, in charge of writing Goal 3 on community genomics.

2001 Member of the Advisory Committee for Functional Genomics Initiative, Netherlands Institute of Ecology, The Netherlands

2000-2006 Associate Director for the Committee of Microbial Ecology, Chinese Society of Ecology

2000-2003 Member of Academic Advisory Committee, Northeastern Forestry University, Harbin, P. R. China

1998 Member of the review panel for DOE NABIR Biotransformation and Biodegradation Element

1994-1995 Member of seminar committee, NSF Center for Microbial Ecology, Michigan State University

1990-2000 Scientific Advisory Committee for the Department of System Ecology, Eco-Environmental Research Center, Chinese Academy of Sciences

1986-1988 Member of Scientific Advisory Committee of the Population Control Program in the Center for National Agricultural Research and Development, State Council, PRC

1986-1991 Director of the Ecological Association of Chinese Young Scientists

### **JOURNAL EDITOR**

2014-present Section Editor for Microbial Ecology and Evolution, BMC Microbiology  
2009-present Editor for mBio®, A new ASM open source integrated Journal.  
2003-2013 Editor, Applied and Environmental Microbiology, The American Society for Microbiology journal,  
2011 Editor, Analytical Biotech 2012 Section in Current Opinion in Biotechnology (COBIOT)  
2008 Guest Associate Editor for PLoS Computational Biology

### **MEMBER OF EDITORIAL BOARD OF JOURNALS**

2008-2014 Environmental Microbiology and Environmental Microbiology Reports  
2013-present Member of Faculty of 1000  
2007-present Chinese Journal of Biotechnology  
2006-present The ISME Journal  
2001-2003 The American Society for Microbiology journal, Applied and Environmental Microbiology.  
2001-2007 Omics: A Journal of Integrative Biology.  
2001-present Acta Ecologia Sinica.

### **PROFESSIONAL MEMBERSHIPS**

American Society for Microbiology  
International Society for Microbial Ecology  
American Association for the Advancement of Sciences  
Society of Industrial Microbiology  
American Chemical Society  
Ecological Society of America  
International Water Association  
American Geological Union

### **AWARDS AND HONORS**

2015 The Ernest Orlando Lawrence Award in Biological and Environmental Sciences in 2014 (U.S Department of Energy's highest scientific award established by President Dwight Eisenhower in 1959).  
2014-present George Lynn Cross Research Professor, the most prestigious honor for OU faculty  
2013 OU VPR Research Award for Exceptional Achievements in Research and Creative Activity  
2013 Cruise Lectures to five institutions and ASM Annual Meeting Under the Visiting Speaker Program (VSP) organized by Australian Society for Microbiology

<http://www.theasm.org.au/visiting-speakers-program-2013>).

2012 OU VPR Award for Outstanding Research Impact

2010-present One-Thousand Talent Scholar (Class B), the highest honor awarded by Chinese Government for overseas Chinese Scientists.

2010 ASM Division N Annual Keynote Speech

2010 Innovator of the year, recognizing Oklahoma's best new products and services by The Journal Record

2009 Specially Invited Oversea Chinese American Scientist by the State Government for witnessing the Grand Parade in Tian An Men Square for celebrating 60<sup>th</sup> Anniversary of China. The delegation was received by Chinese Former President Jindiao Hu and Former Premier Jiabao Wen.

2009 Outstanding Asian American for the Asia Society of Oklahoma

2009 R & D 100 Award for GeoChip development by R&D Magazine. (R&D magazine presents awards annually to the 100 most innovative scientific and technical breakthroughs of the year).

2008 Fellow of American Association for the Advancement of Science.

2007-present Honorary Director for the Committee of Microbial Ecology, Chinese Society of Ecology

2007-2010 Overseas Changjiang Scholar (One of the greatest awards for Overseas Chinese professionals), Chinese Ministry of Education.

2006 Presidential professor, University of Oklahoma, Norman, OK

2005 Federal Laboratory Consortium (Southeast) award for Excellence in Technology Transfer

2005 Fellow of American Academy of Microbiology

2004 Member of Interview Panel by Chinese Central TV as the only representative of overseas Chinese Scientists for memorizing Mr. Xiaoping Deng (Chinese Leader) for 100 year of birth for his education reform in China in 1977.

2004 Outstanding Overseas Young Scientist (Highest award for overseas young scientist), Chinese National Science Foundation

2004 Significant Event Award, Oak Ridge National Laboratory

2003 Superior Performance Award, Oak Ridge National Laboratory

2002 Superior Performance Award, Oak Ridge National Laboratory

2001 Presidential Early Career Award for Scientists and Engineers in 2001 from the President of the United States of America (The highest honor for young scientists and engineers)

2001 DOE Office of Science's 2001 Early Career Award for Scientists and Engineers.

2001 Significant Event Award, Oak Ridge National Laboratory

2001 Research Accomplishment Award, Oak Ridge National Laboratory

2001 Superior Performance Award, Oak Ridge National Laboratory

2001 Environmental Sciences Division Distinguished Scientific Achievement Award, Oak Ridge National Laboratory

2000 Superior Performance Award, Oak Ridge National Laboratory

1999 Superior Performance Award, Oak Ridge National Laboratory

1999 Most Valuable Player Award, Oak Ridge National Laboratory

1998 Superior Performance Award, Oak Ridge National Laboratory

1998 Research Accomplishment Award, Oak Ridge National Laboratory

1996	<u>Alexander Hollaender Distinguished Postdoctoral Fellow</u>
1993	First prize from Hunan Science and Technology Committee for the project of integrated pest management of rice, Co-PI
1988	Distinguished Young Scientist Fellowship from Chinese Academy of Sciences
1987	Excellent scientific paper award from the Science and Technology Association of Hunan Province
1979	Excellent Student Award from Hunan Agricultural University

#### **OTHER HONORIFIC APPOINTMENTS:**

2015-2016	Visiting Professor, Nanyang Environment and Water Research Institute (NEWRI), Nanyang Technology University, Singapore
2013-2014	Visiting Professor, Department of Civil and Environmental Engineering, Stanford University, Stanford, CA
2012-present	Guest Professor, One hundred talent scholar, Sichun University
2011-present	Guest Professor, Harbin Institute of Technology, Harbin, China
2010	Guest Professor, Zhongshan University, Guangzhou, China
2009-present	Guest Professor, Minjiang Scholar, Xiamen University, Xiamen, China
2008-2012	Distinguished Scholar, Qingdao Institute of Biomass Energy and Bioprocessing Technology (QIBEBT), Chinese Academy of Sciences, Qingdao, Shandong, China.
2007	Guest Professor, Institute of Microbiology, Chinese Academy of Sciences, Beijing, China.
2007	Guest Professor, Shanghai Institute of Plant Physiology, Chinese Academy of Sciences, Shanghai, China.
2005-2008	Shenhua Distinguished Professor, Central South University, Changsha, China (Highest honor in the university).
2000	Guest Professor, Zhejiang University, Hangzhou, China
1998-present	Guest Professor, Eco-Environmental Research Center, Chinese Academy of Sciences, Beijing, China
1998	Guest Professor, Northeastern Forestry University, Harbin, China
1997-present	Guest Professor, Hunan Agricultural University, Changsha, China

#### **AWARDS OF STUDENTS, POSTDOCTORALS AND VISITORS:**

- Fengping Wang, Distinguished Young Scientist from Chinese National Foundation, 2015
- Hongchen Jiang, Excellent Young Scientist, Chinese National Science Foundation, 2014
- Meiying Xu, Excellent Young Scientist, Chinese National Science Foundation, 2014
- Zhenmei Lu, Excellent Young Scientist, Chinese National Science Foundation, 2014
- Lei Cheng, Excellent Young Scientist, Chinese National Science Foundation, 2014
- Ye Deng, 100 Scholar, Chinese Academy of Sciences, 2014
- Lei Cheng, Young 1000 Scholar Program, 2013
- Aijie Wang, Changjiang Scholar, Ministry of Education, 2011
- Aijie Wang, Distinguished Young Scientist from Chinese National Foundation, 2011
- Dongru Qiu, 100 Scholar, Chinese Academy of Sciences, 2011

- Yunfeng Yang, Distinguished Professor, Tsinghua University, 2010
- Aihua Liu, 100 Scholar, Chinese Academy of Sciences, 2010
- Helong Jiang, 100 Scholar, Chinese Academy of Sciences, 2009
- Haichun Gao, Distinguished Professor, Zhejiang University, 2007

## PUBLICATIONS

**Published/in press (Citations > 16,000, H-index, 67 based on Web of Science; Citations > 23,000, H-index, 78 based on Google Scholar)**

## PEER REVIEWED JOURNALS

### Research articles

#### In press/revision

1. Trivedi, P., M. Delgado-Baquerizo, T. Jefferies, H. Hu, I. C Anderson, **J.-Z. Zhou**, and B. K. Singh. 2015. Relating microbial community structure to functioning in grain producing agro-ecosystem. *ISME J*, in minor revision.
2. Cai, M., Y. Nie, C. Chi, Y. Tang, Y. Li, X. Wang, Z. Liu, Y. Yang, **J.-Z. Zhou**, and X. L. Wu. 2015. A metagenomic study revealing crude oil as a microbial seed bank with unexpectedly rich functional potentials. *Sci. Reports*, 5:16057, doi:10.1038/srep16057.
3. Wang, Y., R. Zhang, Q. Zheng, Y. Deng, J. D. Van Nostrand, **J.-Z. Zhou**, and Nianzhi Jiao. 2015. Bacterioplankton community resilience to ocean acidification: evidence from microbial network analysis. *ICES Journal of Marine Science*; in press. doi:10.1093/icesjms/fsv187.
4. Wang, X. J.D. Van Nostrand, Y. Deng, X. Lu, C. Wang, C, **J.-Z. Zhou**, and X. Han. 2015. Scale-dependent effects of climate and geographic distance on bacterial diversity patterns across northern China's grasslands. *FEMS Microbiology Ecology*, in press, DOI: <http://dx.doi.org/10.1093/femsec/fiv133>.
5. Huang, C., Z. Li., F. Chen., Q. Liu., Y. Zhao., L. Gao., C. Chen., **J.Z. Zhou**, and A.J. Wang. 2015. Efficient regulation of elemental sulfur recovery through optimizing working height of upflow anaerobic sludge blanket reactor during denitrifying sulfide removal process. *Bioresour Technol.* In press, doi:10.1016/j.biortech.2015.09.109.
6. Deng, Y. Z. He, J. Xiong, H. Yu, M. Xu, S. E. Hobbie, P. B. Reich, C. W. Schadt, A. Kent, E. Pendall, M. Wallenstein, and **J.-Z. Zhou**. 2015. Elevated carbon dioxide accelerates the spatial turnover of soil microbial communities. *Glob. Chang. Biol.*, in press
7. Michaletz, S.T., M. D. Weiser, **J.-Z. Zhou**, M. Kaspari, B. R. Helliker, and B. J. Enquist. Plant thermoregulation: Energetics, trait-environment interactions, and carbon economics. *Trends in Ecology and Evolution*, in press.
8. Weiss, S., W. Van Treuren, C. Lozupone, K. Faust, J. Friedman, Y. Deng, L. C. Xia, Z. Z. Xu, L. Ursell, E. J. Alm, A. Birmingham, J. Cram, J. A. Fuhrman, J. Raes, F. Sun, **J.-Z. Zhou**, and R. Knight. 2015. Correlation detection strategies in microbial datasets vary widely in sensitivity and precision. *ISME J*, in press
9. Tu, Q., X. Zhou, Z. He, K. Xue, L. Wu, P. Reich, S. Hobbie, and **J.-Z. Zhou**. 2015. The diversity and co-occurrence patterns of N<sub>2</sub>-fixing communities in a CO<sub>2</sub> enriched

- grassland ecosystem, in revision, *Microbial Ecol*, in press, DOI: 10.1007/s00248-015-0659-7
10. Deng, Y., P. Zhang, Y. Qin, Q. Tu, Y. Yang, Z. He, C.W. Schadt, and **J.-Z. Zhou**. 2015. Network succession reveals the importance of competition in response to emulsified vegetable oil amendment for uranium bioremediation. *Environ. Microbiol.*, in press, doi:10.1111/1462-2920.12981.
  11. Liang, Y., Y. Jiang, F. Wang, C. Wen, K. Xue, Y. Qin, Y. Yang, L. Wu, **J.-Z. Zhou**, and B. Sun. 2015. Long-term soil transplant simulating climate change with latitude significantly alters microbial temporal turnover. *ISME J*, in press, doi: 10.1038/ismej.2015.78.
  12. Zhou, A., K. L. Hillesland, Z. He, W. Schackwitz, Q. Tu, G.M. Zane, Q. Ma, Y. Qu, D. A. Stahl, J. D. Wall, P. Adam, T. C. Hazen, M. Fields, A. P. Arkin, and **J.-Z. Zhou**. 2015. Rapid selective sweep of pre-existing polymorphisms and slow fixation of new mutations in experimental evolution of *Desulfovibrio vulgaris*. *ISME J*, in press, doi:10.1038/ismej.2015.45

### **Published**

13. Shi, S., E. Nuccio, D. J. Herman, R. Rijkers, K. Estera, J. Li, U. N. da Rocha, Z. He, J. Pett-Ridge, E. Brodie, **J.-Z. Zhou**, and M. Firestone. 2015. Successional trajectories of rhizosphere bacterial communities over consecutive seasons. *mBio*, *mBio* 6: e00746-15. doi:10.1128/mBio.00746-15.
14. Wang, M., S. Liu, F. Wang, B. Sun, **J.-Z. Zhou**, and Y. Yang. 2015. Microbial responses to southward and northward Cambisol soil transplant. *MicrobiologyOpen*, doi: 10.1002/mbo3.302.
15. Hemme, C.L., Q. Tu, Z. Shi, Y. Qin, W. Gao, Y. Deng, J. Van Nostrand, L. Wu, Z. He, P. S. G. Chain, S. G. Tringe, M. W. Fields, E. Rubin, J. M. Tiedje, T. C. Hazen, A.P. Arkin, and **J.-Z. Zhou**. 2015. Comparative metagenomics reveals impact of contaminants on groundwater microbiomes. *Front. Microbiol.*, 6:1205, doi: 10.3389/fmicb.2015.01205.
16. Qu, Y., X. Zhang, Q. Ma, J. Deng, Y. Deng, J. D. Van Nostrand, L. Wu, Z. He, Y. Qin, J. Zhou, **J.-Z. Zhou**. 2015. Microbial community dynamics and activity link to indigo production from indole in bioaugmented activated sludge systems. *PloS One*, 10: e0138455, DOI: 10.1371/journal.pone.0138455.
17. Yin, H., J. Niu, Y. Ren, J. Cong, X. Zhang, F. Fan, Y. Xiao, X. Zhang, J. Deng, M. Xie, Z. He, **J.-Z. Zhou**, Y. Liang, and X. Liu. 2015. An integrated insight into the response of sedimentary microbial communities to heavy metal contamination. *Sci Reports*, 5: 14266, DOI: 10.1038/srep14266.
18. Zhang, P., J. D. Van Nostrand, Z. He, R. Chakraborty, Y. Deng, D. Curtis, M. W. Fields, T.C. Hazen, A. P. Arkin, and **J.-Z. Zhou**. 2015. A slow-release substrate stimulates groundwater microbial communities for long-term in-situ Cr(VI) reduction. *Environ Sci & Technol.*, 49:12922-12931., DOI: 10.1021/acs.est.5b00024
19. Trivedi, P., I.J. Rochester, C. Trivedi, J.D. Van Nostrand, **J.-Z. Zhou**, S. Karunaratne, I.C. Anderson, B.K. Singh. 2015. Soil aggregate size mediates the impacts of cropping regimes on soil carbon and microbial communities. *Soil Biol Biochem.* 91: 169-181.

20. Wang, F., Y.T. Liang, Y.J. Jiang, Y.F. Yang, K. Xue, J.B. Xiong, **J.-Z. Zhou**, and B. Sun. 2015. Planting increases the abundance and structure complexity of soil core functional genes relevant to carbon and nitrogen cycling. *Sci. Reports*, 5: 14345, 10.1038/srep14345.
21. Ding, J., Y.G. Zhang, M.M Wang, X. Sun, J. Cong, J., Y. Deng, H. Lu, T. Yuan, Van Nostrand, D.Q. Li, **J.-Z. Zhou**, and Y.F. Yang. 2015. Soil organic matter quantity and quality shape microbial community compositions of subtropical broadleaved forests. *Mol. Ecol.*, 24: 5175-5185.
22. Xu, M., Z.L. He, Q. Zhang, J. Liu, J. Guo, G.P. Sun, **J.-Z. Zhou**. 2015. Responses of Aromatic-Degrading Microbial Communities to Elevated Nitrate in Sediments. *Environ. Sci. Technol.*, 49: 12422-12431.
23. Xue, K., J.D. Van Nostrand, J. Vangronsveld, N. Witters, J.O. Janssen, J. Kumpiene, G. Siebielec, R. Galazka, L. Giagnoni, M. Arenella, **J.-Z. Zhou**, and G. Renella. 2015. Management with willow short rotation coppice increase the functional gene diversity and functional activity of a heavy metal polluted soil. *Chemosphere*, 138: 469-477.
24. Zhang, Y., J. Ling, Q.S. Yang, C. Q. Wen, Q.Y. Yan, H.Y. Sun, J. Van Nostrand, Z. Shi, **J.-Z. Zhou**, J.D. Dong. 2015. The functional gene composition and metabolic potential of coral-associated microbial communities. *Sci Report*. 5: 16191.
25. Huang, C., Z. Li, F. Chen, Q. Liu, Y. K. Zhao, **J.-Z. Zhou**, A. J. Wang. 2015. Microbial community structure and function in response to the shift of sulfide/nitrate loading ratio during the denitrifying sulfide removal process. *Bioresour Technol*. 197: 227-234.
26. Xu, X., Z. Shi, D. Li, A. Rey, H. Ruan, J. M. Craine, J. Liang, **J.-Z. Zhou**, and Y. Luo. 2015. Soil properties control decomposition of soil organic carbon: results from data assimilation analysis. *Geoderma*. 262: 235-242.
27. Myung, J., W. M. Galega, J. D. Van Nostrand, T. Yuan, **J.-Z. Zhou**, C. S. Criddle, Long-term cultivation of a stable *Methylocystis*-dominated methanotrophic enrichment enabling tailored production of poly(3-hydroxybutyrate-co-3-hydroxyvalerate), *Bioresour Technol*. **198**: 811-818.
28. Myung, J., Z. Wang, T. Yuan, P. Zhang, J. Van Nostrand, **J.-Z. Zhou**, and C. S. Criddle. 2015. Production of nitrous oxide from nitrite in stable Type II methanotrophic enrichments. *Environ. Sci. Tech.*, 49:10969-10975, DOI: 10.1021/acs.est.5b03385.
29. Sheng, Z., J. Van Nostrand, **J.-Z. Zhou**, and Y. Liu. 2015. The effects of silver nanoparticles on intact wastewater biofilms. *Front. Microbiol.*, Article number 680: DOI: 10.3389/fmicb.2015.00680
30. Penton, R. C., D. S. Louis, A. Pham, J. R Cole, L. Wu, Y. Luo, E.A.G. Schuur, **J.-Z. Zhou**, and J. M. Tiedje. 2015. Denitrifying and diazotrophic community responses to artificial warming in permafrost and tallgrass prairie soils. *Front. Microbiol*. 6: Article number 746, DOI: 10.3389/fmicb.2015.00746
31. Zhang, Y., M. Liu, Z. Tian, **J.-Z. Zhou**, and M. Yang. 2015. High concentration of antibiotics in wastewater could lead to the dominance of ammonia-oxidizing archaea in nitrifying populations. *Environ. Sci. Tech.*, 49: 9124-9132.
32. Li, X., P. L. Bond, J. D. Van Nostrand, **J.-Z. Zhou**, Jizhong, and L. B. Huang. 2015. From lithotroph- to organotroph-dominant: directional shift of microbial community in sulphidic tailings during phytostabilization. *Scientific Reports* 5, Article number: 12978, doi:10.1038/srep12978,

33. Yue, H., M. Wang, S. Wang, J. A. Gilbert, X. Sun, L. Wu, Q. Lin, Y. Hu, X. Li, Z. He, **J.-Z. Zhou**, and Y. Yang. 2015. The microbe-mediated mechanisms affecting topsoil carbon stock in Tibetan grasslands. *ISME J*, 9: 2012-2020.
34. Huang, C., Y. Zhao, Z. Li, Y. Yuan, C. Chen, W. Tan, S. Gao, L. Gao, **J.-Z. Zhou**, and A. Wang. 2015. Enhanced elementary sulfur recovery with sequential sulfate-reducing, denitrifying sulfide-oxidizing processes in a cylindrical-type anaerobic baffled reactor. *Bioresource Technology*: 192: 478-485.
35. Xu, T., Y. Li, Z. Shi, C. L. Hemme, Y. Li, Y. Zhu, J. D Van Nostrand, Z. He, and **J.-Z. Zhou**. 2015. Efficient genome editing in *Clostridium cellulolyticum* via CRISPR-Cas9 nickase. *Appl. Environ. Microbiol.*, 81: 4423-4431 doi: 10.1128/AEM.00873-15 (**Picked up as AEM Spotlight**)
36. Xiong, J., Z. He, S. Shi, A. Kent, Y. Deng, L. Wu, J. D Van Nostrand, and **J.-Z. Zhou**. 2015. Elevated CO<sub>2</sub> shifts the functional structure and metabolic potentials of soil microbial communities in a C<sub>4</sub> agroecosystem. *Scientific Reports* 5, doi:10.1038/srep09316
37. Wu\*, L., C. Wen\*, Y. Qin\*, H. Yin, Q. Tu, J. D. Van Nostrand, T. Yuan, M. Yuan, Y. Deng, and **J.-Z. Zhou**. 2015. Phasing amplicon sequencing on Illumina Miseq for robust environmental microbial community analysis. *BMC Microbiology*: 15:125, DOI 10.1186/s12866-015-0450-4. (\*Equal contribution).
38. Zhang, Y., J. Cong, H. Lu, G. Li, Y. g. Xue, Y. Deng, H. Li, **J.-Z. Zhou**, and D. Li. 2015. Soil bacterial diversity patterns and drivers along an elevational gradient on Shennongjia Mountain, China. *Microbial Biotechnol.*, 8: 739–746.
39. Tu, Q., M. Yuan, Z. He, Y. Deng, K. Xue, L. Wu, S. Hobbie, P. Reich, and **J.-Z. Zhou**. 2015. Fungal communities respond to long-term elevated CO<sub>2</sub> by community reassembly. *Appl. Environ. Microbiol.*, 81: 2445-2454.
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456. **Zhou, J.-Z.** and S.Ma. 1990. Ecosystem stability. pp. 54-71. In Perspectives on Modern Ecology, Edited by Shijun M. China Science and Technology Press.

### Conference papers

457. Zhu, M., Q. Wu, Y. Yang, **J.-Z. Zhou**. 2006. A New Approach to Identify Functional Modules Using Random Matrix Theory. IEEE Sym-posium on Computational Intelligence in Bioinformatics and Computational Biology 1:117-123.
458. Liu, Y., A. Venkateswaran, and **J.-Z. Zhou**, 2004. Functional Genomic Analysis of Deinococcus radiodurans Resistance to Ionizing Radiation. European Symposium on Environmental Biotechnology on April 25-28, 2004.
459. Palumbo, A.V., S. Fisher, J. R. Tarver, W. L. Daniels, Z. Yang, S. M. Tiquia, L. Wu, and **J.-Z. Zhou**, and J. Amonette,. 2003. Issues with the Use of Fly Ash for Carbon Sequestration Proceedings of the Second National Conference on Carbon Sequestration. Hilton Mark Center, Alexandria, Virginia. May 5-8, 2003.
460. **Zhou, J.-Z.**, B. Xia, L. Wu, R. V. O'Neill, A. V. Palumbo, and J. M. Tiedje. 2000. Unusual diversity in soil microbial communities. The 6th Chinese Society of Ecology. P. 29-40 (Invited).
461. Li, G., and **J.-Z Zhou**. 1999. Genomics, microarray-based genomic technology and potential ecological applications. The 3rd Conference on Molecular Ecology, Beijing, P. 29-40 (Invited).
462. Palumbo, A. V., **J.-Z. Zhou**, T. J. Phelps, B. Kinsall, C. Zhang, E. L. Majer, J. E. Peterson, T. Griffin, S. M. Pfiffner. 1999. Ecology and bioremediation: a staged approach to site characterization. Uzochukwu and Reddy (eds), Proceedings of the 1998 National Conference on Environmental Remediation Science and Technology. Battelle Press, pp. 195-202.
463. **Zhou, J.-Z.**, S. V. Liu, C., Zhang, A. V. Palumbo, and T. J. Phelps. 1998. Extremophilic iron-reducing bacteria: Their implications for possible life in extraterrestrial environments. The Third Symposium of Chinese Young Scientists, p. 47-52, Beijing, P. R. China.
464. Tiedje, J.M., K. Nüsslein, **J.-Z. Zhou**, B. Xia, C. Moyer, and F. Dazzo. 1997. The vast world of microbial diversity. In The 5th International Symposium on New Frontiers in Microbiology by the Japan Science and Technology Corporation. January 30-31, 1997, Tokyo, Japan.
465. **Zhou, J.-Z.** 1987. On ecological engineering. The proceeding of Symposium of Ecological Society of China. Chengdu, China.
466. **Zhou, J.-Z.** 1986. A general model for insect population simulation. The proceeding of the Symposium of Youth Ecologists of China, Zhangjiajie, China.

### PATENTS & PETENT APPLICATIONS

1. **Zhou, J.-Z.**, L. Wu, and X. Liu. 2010. Method for analyzing microbial communities. US Patent No. 7,759,057.

2. **Zhou, J.-Z.**, D. Qiu, Z. He, M. Xie. Production of protoporphyrin IX and heme by bacteria, filed, in March 15, 2013

## **PROJECTS**

### **Currently funded projects**

1. Establishment to senescence: plant-microbe and microbe-microbe interactions mediate switchgrass sustainability, Department of Energy, Co-PI with Mary Firestone et al, **\$2500K** for J. Zhou (October 1, 2015 - September 30, 2019)
2. From Structure to Functions: Metagenomics-Enabled Predictive Understanding of Soil Microbial Feedbacks to Climate Change, Department of Energy, PI (Zhou, Tiedje, Schuur, Luo, Konstantinidis) **\$3,595K** (October 1, 2013 - September 30, 2016) (OU's portion: \$2,069K).
3. Plant Stimulation of Soil Microbial Community Succession: How Sequential Expression Mediates Soil Carbon Stabilization and Turnover, Department of Energy, Co-PI with Mary Firestone et al, **\$620K** for J. Zhou (October 1, 2013 - September 30, 2016)
4. Experimental Macroecology: Effects of Temperature on Biodiversity. NSF Macrosystems Biology, Co-PI with James Brown, Mike Kaspari, Brian Enquist, et al (\$4.5M in total, **\$1.8M** for J. Zhou) (July 1, 2011 to June 30, 2016),
5. From Genomes to Ecosystems: Systems-Level Mechanistic Understanding of Microbial Stress Responses at Chromium Contaminated Sites. Department of Energy. PI, **\$4000K** (Oct 1. 2012-September 30, 2017) (This project is changed from previous VIMSS project (2002-2007) to LBL SFA, i.e. ENIGMA- Ecosystems and Networks Integrated with Genes and Molecular Assemblies. Paul Adams and Adam Arkin are the Program Directors.)
6. Microbial biogeography of soil communities in paddy fields. PI, Chinese NSF, ¥3.6M (October 1, 2014 - September 30, 2019)
7. The Fund for Foreign Scholars in University Research and Teaching Programs supported by The Ministry of Education of China and The State Administration of Foreign Experts Affairs of China, ¥10M Chinese yuan (equivalent to ~\$770K) (January 1, 2007--- December 31, 2016) (This has been funded by Chinese Government to support research activity within China)

### **Accomplished projects**

1. Development of Microarrays-based Metagenomics Technology for Monitoring Sulfate-Reducing Bacteria in Subsurface Environments. PI, DOE STTR/SBIR Phase II, \$750K (June 19, 2011- March 18, 2014)
2. Development of Novel Random Network Theory-Based Approaches to Identify Network Interactions Among Nitrifying Bacteria. PI, DOE STTR/SBIR Phase I, \$750K (June 19, 2011- March 18, 2014)
3. HuMiChip to detect and characterize the human microbiome. Co-PI with He. OCAST, **\$300K** (February 1, 2011 to January 31, 2014)
4. From Community Structure to Functions: Metagenomics-Enabled Predictive Understanding of Temperature Sensitivity of Soil Carbon Decomposition to Climate Warming, Department

- of Energy, PI (Zhou, Tiedje, Schuur, Luo, Konstantinidis) **\$3M** (July 1, 2010 - June 30, 2014) (OU's portion: \$1,946K).
5. Plant Stimulation of Soil Microbial Community Succession: How Sequential Expression Mediates Soil Carbon Stabilization and Turnover, Department of Energy, Co-PI with Mary Firestone et al, **\$0.5M** for J. Zhou (July 1, 2010 - June 30, 2014)
  6. Center for Advanced Microbial Ecology, Tsinghua University, Beijing, China, ¥6M Chinese (Yuan equivalent to ~\$940K) (January 1, 2011 December 30, 2013). (This has been funded by Chinese Government to support research activity within China)
  7. Oklahoma EPSCoR Research Infrastructure Improvement Plan, Building Oklahoma's Leadership Role in Cellulosic Bioenergy. NSF EPSCoR Program (\$8.7M in total), PI with Ray Huhnke (Director) et al, **\$2,117K** for J. Zhou (Oct 1, 2008-Dec 30, 2013) Integrated genome-based studies of *Shewanella* ecophysiology. DOE Genomics:GTL program (\$15M) PI with J. Fredrickson (Director), K. Nealson, J.M Tiedje, and et al.), **\$1000K** for J. Zhou (October 1, 2006– September 30, 2009). DOE Genomics:GTL program, October 1, 2006– March 30, 2012.
  8. Rapid Deduction of Stress Response Pathways in Metal and Radionuclide Reducing Bacteria Phase 2: Molecular Determinants of Community Activity, Stability and Ecology (MDCASE) (ESPP 2), DOE Genomics:GTL Program (\$35M in total), PI with Adam Arkins (Director), Terry Hazen, Judy Wall, David Stahl, et al, **\$4,000K** (October 1, 2007 – September 30, 2012)
  9. Metagenomics-enabled understanding of the functions and activities of microbial communities at ERSP Field Research Center at Oak Ridge, TN. Co-PI with Tiedje and Marsh. DOE NABIR program, ~ \$1500 K (October 1, 2006 – March 30, 2012), **\$750K** for J. Zhou.
  10. MO: A Genomics-enabled FACE Microbial Observatory: Changes in Microbial Diversity and Functions in responding to elevated CO<sub>2</sub>, Nitrogen Deposition and Plant Diversity. NSF-USDA Microbial Observatories Program, PI with Zhili He, **\$866K** (July 1, 2007 – August 13, 2012).
  11. Trajectories of microbial community function in response to accelerated remediation of subsurface metal contaminants. Co-PI with Mary Firestone et al. DOE ERSP program, ~ \$1350 K (October 1, 2007 – May 30, 2012), **\$210K** for J. Zhou.
  12. Microbial Enhanced Hydrocarbon Recovery (MEHR) Systems Biology Program. Energy BioSciences Institute, Co-PI with Hazen et al, \$600K for J. Zhou (Oct 1, 2008 – Sept 30, 2012).
  13. Isolation and characterization of novel microbial catalysts for direct fermentation of lignocellulose to ethanol. PI with Liyou Wu, Zhili He, Oklahoma Bioenergy Center, **\$400K** (February 1, 2008, January 31, 2011)
  14. Multiscale Investigations on the Rates and Mechanisms of Targeted Immobilization and Natural Attenuation of Metal, Radionuclide and Co-Contaminants in the Subsurface. Co-PI with Jardine, Watson, Criddle, Gu et al. \$15M, (October 1, 2006 --- September 30, 2011), **\$150K** for Zhou.
  15. Genomics-enabled understanding of microbial interactions and regulatory networks of microbial consortia for efficient cellulosic ethanol production. Co-PI with Zhili He, Liyou Wu et al, Oklahoma Bioenergy Center, **\$830K** (February 1, 2008, January 31, 2011)

16. Linking community structure to functions: Metagenomic analysis of Feedstock-Related Microbial Communities using GeoChip and Pyrosequencing. Co-PI with Liyou Wu, Zhili He, Yiqi Luo, Oklahoma Bioenergy Center, **\$1,030K** (February 1, 2008, January 31, 2011)
17. Whole genome DNA arrays for bacterial identification and detection, Co-PI with Wu et al. OCAST, \$300K (February 1, 2008 to January 31, 2011)
18. Characterization of an H<sub>2</sub> Producing Biological System operating at 1 nM H<sub>2</sub> Concentration. Co-PI with Krumholtz et al (\$900K in total). DOE BES, **\$250K** for J. Zhou (Oct 1, 2008- Sept 30, 2011)
19. Extending Knowledge of Anaerobic Hydrocarbon Metabolism: Linking Metabolism, Functional Gene Molecular Markers and the GeoChip. ConoPhilipps, Co-PI with Joseph Suflita et a (\$2 M in total), \$ 403K for J. Zhou (Oct 1, 2008 –December 30, 2010)
20. Development of Microarrays-based Metagenomics Technology for Monitoring Sulfate-Reducing Bacteria in Subsurface Environments. PI, DOE STTR/SBIR Phase I, \$100K (June 19, 2010- March 18, 2011)
21. Development of Novel Random Network Theory-Based Approaches to Identify Network Interactions Among Nitrifying Bacteria. PI, DOE STTR/SBIR Phase I, \$100K (June 19, 2010- March 18, 2011)
22. Institute for Environmental Genomics, PI with Z.L. He, **\$200K** (January 1, 2008 --- December 31, 2010).
23. The Joint BioEnergy Institute (JBEI) (\$125M in total), \$400K for J. Zhou (October 1, 2007 – September 30, 2012).
24. Development of Comprehensive Functional Gene Arrays for Microbial Community Analysis, Co-PI with He. OCAST, \$300K (October 1, 2006 to Sept 30, 2009)
25. Microarray analysis and functional assays to assess microbial ecology and disease suppression in soils under organic or sustainable management. Co-PI with Louws and Hu, USDA, \$160K (October 1, 2006 ---September 30, 2008)
- 26.** Development of microbial consortia for efficient ethanol production from plant biomass, PI, Department of Energy, Oklahoma, \$200K (April 1, 2007 --- March 31, 2009)
27. Special award for Oversea Young Scientist, ¥120K Chinese Yuan (July 1, 2004 --- June 30, 2007). (This was funded by Chinese Government to support research activities within China)
28. Identification of Molecular and Cellular Responses of *Desulfovibrio vulgaris* Biofilms under Culture Conditions Relevant to Field Conditions for Bioreduction of Heavy Metals, Co-PI with Matthew Fields, Judy Wall, DOE ERSP Program, \$300K (October 1, 2005 to Sept 30, 2008).
29. Deduction and analysis of the interacting stress response pathways of metal/radionuclide-reducing bacteria, DOE Genomics:GTL Program, PI with Adam Arkins (Director), Terry Hazen, Judy Wall, David Stahl, et al (\$30M in total), \$5,010K for J. Zhou (July 1, 2002 – September 30, 2007).
30. Molecular Approaches to Understanding C and N Dynamics and their Role in the Global Carbon Cycle. Co-PI, with Tiedje, Devol, and Massol-Deya, DOE Biotechnological Investigations — Ocean Margin Program. ~ \$1,500 K (October 1, 2003 – September 30, 2006). \$600K for J. Zhou.
31. Towards Understanding Population Dynamics of Metal and Radionuclide Reducers at Field Remediation Sites. Co-PI with Tiedje and Treves. DOE NABIR program, ~ \$900 K (October 1, 2003 – September 30, 2006), \$450K for J. Zhou.

32. Development and Use of Integrated Microarray-based Genomic Technologies for Assessing Microbial Community Composition and Dynamics. PI, DOE NABIR program, ~ \$900 K (October 1, 2003 – September 30, 2006).
33. Elucidating the Molecular Basis of Chromium(VI) Reduction by *Shewanella oneidensis* MR-1 and Resistance to Metal Toxicity Using Integrated Biochemical, Proteomic, and Comparative Genomics Approaches. Co-PI with Thompson and Hettich. DOE NABIR program, ~ \$820 K (October 1, 2003 – September 30, 2006).
34. Integrated analysis of protein complexes and regulatory networks involved in anaerobic energy metabolism of *Shewanella oneidensis* MR-1, PI, with Larimer, Nealson, Thompson, et al., DOE Microbial Cell Project, \$4,500K (October 1, 2001– September 30, 2006).
35. Field-scale evaluation of biostimulation for remediation of uranium–contaminated groundwater at a proposed NABIR Field research center in Oak Ridge TN, Co-PI, with Criddle, Jardine, Kitanidis, Hopkins. DOE NABIR program, ~ \$3,250 K (October 1, 2000 – September 30, 2004). \$540K for J. Zhou.
36. Center for research on enhancing carbon sequestration in terrestrial ecosystems (Co-PI, with Jacobs et al.) (\$10M in total), \$900K for J. Zhou (October 1, 1999 – September 30, 2005).
37. The *Rhodospseudomonas palustris* Microbial Cell Project, Co-PI, with Tabita, Thompson, et al., DOE Microbial Cell Project (\$2.1M in total), \$150K for J. Zhou (October 1, 2001– September 30, 2006).
38. The dynamics of cellular stress responses in *Deinococcus radiodurans*, Co-PI, with Mike Daly et al., DOE Microbial Cell Project (\$900K in total), \$240K (October 1, 2001– September 30, 2004).
39. Microbially mediated immobilization of contaminants through in situ biostimulation: Scale up of EMSP project 55267, Co-PI with Jardine and Brooks, DOE EM Science Program, \$1,427K (October 1, 2000 – September 30, 2004). \$140K for J. Zhou.
40. Use of DNA Microarrays for Understanding the Genetic and Metabolic Regulation of Carbon Dioxide Fixation and Hydrogen Production in *Rhodospseudomonas palustris*. Co-PI with Harwood and Thompson. DOE Microbial Genome Program (\$1.8M in total), \$750K for J. Zhou (October 1, 2001– September 30, 2004).
41. Gene Expression Profiles in *Nitrosomonas europaea*, an Obligate Chemolitho- autotroph. Co-PI with Arp and Klotz, DOE Microbial Genome Program, \$600K for J. Zhou (October 1, 2001– September 30, 2004).
42. Genomic Characterization of Belowground Ecosystem Responses to Climate Change. Co-PI with DiFazio, Fields, et al., ORNL Laboratory Directed Development and Research Program, \$545K (October 1, 2002– September 30, 2004).
43. Community-Wide Analysis of Unique Sequences and Functions from Uncultured Microorganisms, Co-PI with Fields, ORNL Laboratory Directed Development and Research Program, \$500K, (October 1, 2001– September 30, 2003).
44. Coupling process and microbial community studies to understand the mechanisms controlling carbon preservation and nitrogen loss in marine sediments. Co-PI, with Tiedje, Devol, Massol-Deya and Palumbo, DOE Biotechnological Investigations — Ocean Margin Program. ~ \$1,650 K (October 1, 2000 – September 30, 2003). \$600K for J. Zhou.
45. Understanding the roles of spatial isolation and carbon in microbial community structure dynamics, and activity for bioremediation, Co-PI with Tiedje and Treves. DOE NABIR program, ~ \$1,250 K (October 1, 2000 – September 30, 2003), \$650K for J. Zhou.

46. Development and use of 16S rRNA gene-based oligonucleotide microarrays for Assessing Microbial Community Composition and Dynamics. PI with Thompson, Hurt, Xu and Xu, DOE NABIR program, ~ \$1,200 K (October 1, 2000 – September 30, 2003). \$900K for J. Zhou.
47. Enhancing carbon sequestration and reclamation of degraded lands with fossil fuel combustion byproducts, Co-PI with Palumbo et al., DOE Fossil Energy Program, ~1,100K (October 1, 2000 – September 30, 2003).
48. Computational structure characterization of metal-reduction proteins in microbe, Co-PI with Ying Xu, Dong Xu et al., DOE Experimental and Computational Structural Biology, ~ \$1,100K (October 1, 2000 – September 30, 2003).
49. *Shewanella putrefaciens*: Regulation of the genes and proteins involved in metal reduction pathways, Co-PI with Carol Giometti, DOE NABIR Program, \$210K (October 1, 1999 – September 30, 2002).
50. Linking genomics to cellular responses and mechanisms for radiation resistance in *Deinococcus radiodurans*, PI, with Hettich, Burlage, Beliaev, and Thompson, Laboratory Directed Research and Development Program, Oak Ridge National Laboratory, \$867K (October 1, 2000 – September 30, 2002).
51. Development of microchip-based detection methods: a high throughput microbial detection tool for bioremediation and carbon sequestration. PI, Seed Money Program, Oak Ridge National Laboratory, 100K (February 1, 2000 – September 30, 2001).
52. Exploring whole genome sequence information for defining the functions of unknown genes and regulatory networks in dissimilatory metal reduction pathways. PI, with Nealson and Tiedje, DOE Microbial Genome Program, \$1,350K (October 1, 1998 – September 30, 2001).
53. Noncompetitive diversity patterns in soils: their causes and implications. Co-PI with Tiedje, O'Neill and Palumbo, DOE NABIR program, ~ \$1,100 K (October 1, 97 – September 30, 2000)
54. Linking process and population studies to understand the nitrogen loss mechanisms of Pacific Northwest marine sediments. Co-PI with Tiedje, Devol, Massol-Deya and Palumbo, DOE Biotechnological Investigations — Ocean Margin Program. ~ \$1,300 K (October 1, 1997 – September 30, 2000).
55. Rapid gene probe for microorganisms monitoring by novel MS approaches. Co-PI with W. Chen, DOE NABIR program, ~ \$800 K (October 1, 1999 – September 30, 2002).
56. Isolation of Proteins Involved in Metal Reduction from *Shewanella oneidensis* MR-1 with Mass Spectrometry, LDRD Program, Oak Ridge National Laboratory, \$50K (March 1, 2000 – September 30, 2000)
57. Development and testing of molecular probes that distinguish effective TCE-cooxidizers from ineffective TCE-cooxidizers: a potential tool for site assessment and management. Co-PI with Tiedje, Department of Defense, \$150K (September 1, 1996 to September 1, 1998).
58. Enzymes from extremophiles in bioremediation and bioprocessing. Co-PI with Woodward and Palumbo et al., Oak Ridge National Laboratory, ~ \$800K (September 1, 1996 to August 31, 1998).
59. Development of gene probes for nitrate reductase in environmental media: a tool to evaluate nitrogen retention in watersheds. Co-PI with Mulholland and Garten, Oak Ridge National Laboratory, 92K (January 1, 1998 to December 30, 1998).

### **Finished genome sequencing projects:**

1. Genomic Sequencing of Multiple Species of Class Clostridia Relevant to the Production of Bioethanol from Cellulosic Feedstocks. 2006. (PI with Hemme, He et al). The genome will be sequenced by DOE Joint Genome Institute.
2. Sequencing *Clostridium cellulolyticum* to advance understanding plant biomass degradation and energy production, 2005. (Qing He, and J.-Z. Zhou). The genome will be sequenced by DOE Joint Genome Institute.
3. Genome sequencing of multiple *Anaeromyxobacter* species: comparative genomics for insight into the ecophysiology, genetics and evolution of metal-reducing and halorespiring bacteria. 2005. (Robert A. Sanford, Matthew W. Fields, Frank E. Löffler, John R. Kirby, J.-Z. Zhou, James K. Fredrickson, and Alexander S. Beliaev). Three genomes will be sequenced by DOE Joint Genome Institute.
4. Genome-level understanding of the diversity and structure of a groundwater microbial community in the NABIR Research Field Research Center. 2004. (Zhou, PI, Fields, co-PI). The entire community with about 20 species in highly contaminated site will be sequenced by DOE Joint Genome Institute in 2005.
5. Whole-genome sequence determination of novel, extremophilic, metal-reducing bacteria important to bioremediation and energy production. 2003. (Fields, Zhou). 3 gram-positive extremophilic iron-reducing bacteria isolated at ORNL are under sequencing.
6. Sequence multiple strains of *Shewanella* to advance understanding their metal-reducing physiology and ecological potential. 2004. (Fredrickson, Nealson, DiChristina, Tiedje, Zhou et al.). 16 *Shewanella* strains are under sequencing by JGI. Two of these strains were isolated at ORNL.

### **CONFERENCE AND SYMPOSIUM ORGANIZATION**

- |           |  |
|-----------|--|
| 2012      | Chair for the Roundtable Session on Microbial Network Ecology: Deciphering complex interactions in microbial communities, ISME-14, Copenhagen, Denmark, August 20, 2012  |
| 2011-2014 | Member of Local Organizing Committee, The 15 <sup>th</sup> International Symposium on Microbial Ecology  |
| 2011      | Co-Organizer, The 1 <sup>st</sup> Jim Tiedje International Symposium on Microbial Genomics and Ecology, East Lansing, Michigan State University, October 28-30, 2011   |
| 2010      | Member of the Advisory Committee for The 18 <sup>th</sup> International Conference on Microbial Genomes, September 12-16, 2010, Lake Arrowhead, CA   |
| 2010      | Member of the organizing committee for the Roundtable Session on TerraGenome at The 13 <sup>th</sup> International Symposium on Microbial Ecology, Seattle, WA, August 22-27, 2010.  |
| 2010      | Organizer and Chair for the Roundtable Session on High Throughput MetaGenomic Technologies for Complex Microbial Community Analysis at The 13 <sup>th</sup> International Symposium on Microbial Ecology, Seattle, WA, August 22-27, 2010. |
| 2009      | Member of the Advisory Committee for The 17 <sup>th</sup> International Conference on  |

- 2009 Microbial Genomes, October 11-15, 2009, Rocky Gap State Park, MD  
 Chairperson for the Symposium, High Throughput Genomics Technologies for Complex Microbial Community Analysis, The 109<sup>th</sup> General Meeting of American Society for Microbiology, May 17–21, 2009, Philadelphia, PA.
- 2008 Co-organizer for ASM-CSM (Chinese Society of Microbiology) Joint Workshop on Environmental Microbiology and Bioenergy, November 8, 2008, Haikou, China.
- 2008 Member of the Advisory Committee for The 16<sup>th</sup> International Conference on Microbial Genomes, September 14-18, 2008, Lake Arrowhead, CA
- 2008 Chair and Organizer, The 4<sup>th</sup> SCOPE (The Scientific Committee on Problems of the Environment, International Council of Scientific Union) Workshop on Microbial Environmental Genomics, Changsha, P.R. China, September 20-24, 2008.
- 2008 Oklahoma Bioenergy Center Workshop, April 23, 2008, Norman, OK
- 2007-2012 Member of the Advisory Committee of the China Summit Forums on Industrial Biotechnology
- 2007 Member of the Advisory Committee for The 15<sup>th</sup> International Conference on Microbial Genomes, September 16–20, 2007, College Park, MA
- 2006 Member of the Advisory Committee for The 14<sup>th</sup> International Conference on Microbial Genomes, September 24–28, 2006, Lake Arrowhead, CA
- 2006 “Application of OMICs to Field Bioremediation: Current Status, Challenges and Future”. The ERSP Breakout Session 2, Environmental Remediation Science Program, Warrenton, VA, April 3, 2006.
- 2005 Member of the Advisory Committee for The 13<sup>th</sup> International Conference on Microbial Genomes, September 11 – 15, 2005, Madison, WI.
- 2004 Chair for the session Symposium on Microbial Heterogeneity / Bioremediation, American Geophysical Union, San Francisco, CA, December 13–17, 2004.
- 2004 International Convener for the session on “Impacts of Microarrays and Bioinformatics on Microbial Ecology”, The 10<sup>th</sup> International Symposium on Microbial Ecology, August 22-27, 2004, Cancun, Mexico.
- 2004 Chair for the session on “Advanced technologies for microbial ecology”, The 10<sup>th</sup> International Symposium on Microbial Ecology, August 22-27, 2004, Cancun, Mexico.
- 2004 Member of the Advisory Committee for The 12<sup>th</sup> International Conference on Small Genomes, September 26–30, 2004, Lake Arrowhead, CA
- 2003-2008 Member of the SCOPE (The Scientific Committee on Problems of the Environment, International Council of Scientific Union) Workshop on Environmental Genomics.
- 2003 Organizer and Chair, The 11<sup>th</sup> International Conference on Microbial Genomes, September 28 – October 2, 2003, Durham, NC.
- 2002 Member of the Advisory Committee for The 10<sup>th</sup> International Conference on Microbial Genomes, September 8–12, 2002, Lake Arrowhead, CA.
- 2001 Organizer and Chair, The 9<sup>th</sup> International Conference on Microbial Genomes, October 27–November 1, 2001, Gatlinburg, TN.
- 2001 Organizer for the session on “Application of Microarray Technology to Environmental Studies”, The 9<sup>th</sup> International Symposium on Microbial

- Ecology, August 26–31, 2001, Amsterdam, The Netherlands.
- 2001 Chairperson for the Symposium, Microarrays and Microfluidics in Microbial Ecology, The 101<sup>st</sup> General Meeting of American Society for Microbiology, May 20–24, 2001, Orlando, FL.
- 2001 Session Chair, Bioinformatics and functional genomics, TIGR/ASM Conference on Microorganisms, January 28–31, 2001, Monterey, CA.
- 2000 Member of the Advisory Committee for The 8<sup>th</sup> International Conference on Small Genomes, September 24–28, 2000, Lake Arrowhead, CA
- 2000 Chair on the session of Bioremediation, The 8<sup>th</sup> International Conference on Small Genomes, September 24–28, 2000, Lake Arrowhead, CA
- 2000 Co-organizer, The 4<sup>th</sup> Conference on Molecular Ecology, July 15–18, 2000, Harbin, P.R. China
- 1999 Organizer and Chair, The 7<sup>th</sup> Conference on Small Genomes, November 13–17, 1999, Washington, DC.
- 1999 Organizer and Chair, DOE NABIR Workshop in Application of Genomic Technology to Bioremediation, December 5–7, 1999, Washington, DC.
- 1999 Co-organizer, The 3<sup>rd</sup> Conference on Molecular Ecology, August 28–31, 1999, Beijing, P.R. China.
- 1999 Chairperson for the Symposium, Recent Advances in Subsurface Microbial Ecology, The 99<sup>th</sup> General Meeting of American Society for Microbiology, Chicago, IL, May 30 – June 3, 1999.
- 1998 Organizer for the Symposium, Key Issues in Microbial Ecology, the VII International Congress of Ecology, July 19–25, 1998, Florence, Italy.
- 1998 Chairperson on the session of microbial community dynamics, the VII International Congress of Ecology, July 19–25, 1998, Florence, Italy.

## PROMOTION REVIEW

- 2015 Louisiana State University (Professor appointment)
- 2014 Nanyang Technology University (Tenure)
- 2013 University of Alberta (Tenure)
- 2013 Icahn School of Medicine at Mount Sinai, New York (Tenure)
- 2012 University of Massachusetts, Amherst, MA (Professor appointment)
- 2012 Shanghai Jiaotong University, Shanghai, China (Professor appointment)
- 2012 E' cole Polytechnique Fe' de' rale de Lausanne, Lausanne CH 101, Switzerland (Tenure)
- 2012 University of North Carolina at Charlotte (Tenure)
- 2012 University of California at Berkeley (Professor Appointment)
- 2011 University of California at Berkeley (Distinguished Professor)
- 2011 Pacific Northwest National Laboratory (Senior Scientist)
- 2011 University of Waterloo (tenure)
- 2011 Michigan State University (tenure)
- 2011 Clemson University (tenure)
- 2011 University of Michigan (tenure)
- 2010 Peking University
- 2010 University of Alaska Fairbanks (tenure)

2009 Louisiana State University (tenure)  
2008 University of Nevada (tenure)  
2002 Uniformed Services University of the Health Sciences (tenure)

### **PAPER REVIEW**

2015-present Science Advances  
2014 Water Research  
2014 Environmental Engineering Science  
2014 BMC Ecology  
2013-present Biotechnology for Biofuels  
2012-Present Ecology Letter  
2012 Computers & Chemical Engineering  
2012-present Nature Communications  
2012 Ecology  
2011 Antonie van Leeuwenhoek Journal of Microbiology  
2011 Biotechnology and Bioengineering  
2011 PLoS One  
2011 Genome Biology  
2009-present Global Change Biology  
2009 Cold Spring Harbor Protocols  
2009 Applied Energy  
2008 BMC Genomics  
2008 BMC Microbiology  
2006-present The ISME Journal  
2006-present Bioinformatics  
2006-present Environmental Microbiology  
2001-present Reviewer for Applied and Environmental Microbiology  
2001-present Reviewer for the Chinese Society of Ecology journal, Ecology  
2001-2007 Reviewer for Omics: A Journal of Integrative Biology  
2006-present BMC Bioinformatics  
2005 Journal of Virological Methods  
2005-present FEMS Microbiology Ecology  
2005 Environmental Monitoring and Assessment  
2005 Trends in Biotechnology  
2004 Anaerobe  
2004 Water Research  
2004-2005 Analytical Chemistry  
2004 Soil Biology & Biochemistry  
2004 Pedosphere  
2004 Trends in Biotechnology  
2004-present Environmental Sciences & Technology  
2003-present Biotechniques  
2003 Plant and Soil  
2003 Frontiers in Ecology and the Environment  
2002 Cell Biology International

2002-present	Proceedings of the National Academy of Sciences USA
2002-2003	Journal of Clinical Microbiology
2002-present	Journal of Bacteriology
2001	Soil Science Society of America Journal
2001	Physiological Genomics
2001	Molecular and Cellular Probes
2001-present	FEMS Microbiology Letter
2000	Biogeochemistry
1998	Ecological Engineering

### **AD HOC PROPOSAL REVIEW**

2015	The National Research, Development and Innovation Office (NKFIH) of Hungary
2015	NSF --- Arctic Natural Sciences
2014	NSF --- Population and Community Ecology
2014	National Research Foundation of Korea
2014	European Science Foundation
2014	NSF--- Ocean Science Program
2013	Young Qianren Program, China
2013	Austrian Science Fund
2013-present	NSF Early Career Program
2012	NSF Information & Intelligent Systems (IIS) Division
2012	European Research Council
2011	Biological and Medical Sciences, Austrian Science Fund
2010	NSF Ecosystem Program
2010	Leaders Opportunity Fund, Canada Foundation for Innovation
2010	Natural Environment Research Council
2009	Member of the Panel for Germany-China program on microbial ecology
2009	Swiss National Science Foundation
2005-present	Netherlands Organization for Scientific Research
2009	United States-Israel Binational Science Foundation
2008-present	Geobiology & Low Temperature Geochemistry Program, National Science Foundation
2008	Instrumentation and Facilities Program, National Science Foundation
2008	Israel Science Foundation (ISF)
2006-2008	Chinese National Science Foundation
2008	NSF-USDA Microbial Observatories Program
2007	Energy Biosciences Institute, University of California, Berkeley
2007	Cellular Systems, National Science Foundation
2007	Ecosystem Science Program, National Science Foundation
2007	Genomics:GTL program, Department of Energy
2007	Environmental Genomics Program, National Science Foundation
2007	Frontier in Biological Research, National Science Foundation
2007	North Carolina Biotechnology Center
2006	The Chilean Research Fund Council

2006 The Environment and Water Industry Development Council, Singapore  
2006-present National Research Foundation Board of Singapore  
2006 Swiss National Science Foundation  
2005 Austrian Science Fund  
2005 DOE Biological Investigation – Ocean Margin Program (BI-OMP)  
2005 NSF Genes and Genome Systems program  
2005-present Natural Environment Research Council (NERC), United Kingdom  
2005 Natural Sciences and Engineering Research Council (NSERC) of Canada  
2004 NSF Microbial Interactions and Processes program  
2004-present NSF Faculty Early Career Development (CAREER) Program  
2004 NSF Ocean Sciences Program  
2004 European Science Foundation  
2004 NSF Ecology Program  
2004 Singapore Science & Engineering Research Council  
2004 NSF Biogeosciences Program  
2004 Competitive Grant, Utah State University  
2003-2004 Genome Canada program  
2003 Idaho Research Center Grant Program  
2002-2004 NSF Biocomplexity in the Environment (BE): Integrated Research and Education in Environmental Systems  
2003 US Army Research Office, DOD Young Investigator Program  
2003 Reviewer for Tamasek Yong Investigator Award, National University of Singapore, Singapore  
2002-2007 NSF Microbial Observatories Program  
2002 NSF Integrated Research Challenges in Environmental Biology Program  
2002 NSF program for International Opportunities for Scientists and Engineers  
2002-2005 DOE Small Business Innovation Research and Small Business Technology Transfer Programs  
2002 National Oceanographic Partnership Program  
2001-2003 US Department of Energy EPSCoR Program  
1999 Reviewer for award for Natural Environment Research Council, United Kingdom  
1995 Reviewer for grants in NSF Young Scientist Program

### **INVITED SEMINARS**

2015 “Microbial Functional Diversity: Does It Matter To Ecosystem Functioning?”. An invited talk at Nanyang Technological University, Singapore, November 25, 2015.  
2015 “How to Prepare Publications to High Profile Broader Scientific Journals: Some Tips”. An invited talk at Nanyang Technological University, Singapore, November 12, 2015.  
2015 “Microbial Ecology in Genomics Era: Challenges and Opportunities”. Invited talk at Zhongshan University, Guangzhou, November 5, 2015.

- 2015 “Global Water Microbiome Consortium (GWMC)”. Invited talk at The 4th International Conference on Environmental Simulation and Pollution Control Beijing, China, November 2, 2015.
- 2015 “Recent Advances in Developing High Throughput Technologies for Microbial Community Analyses”. Invited talk at Sichun University, October 30, 2015.
- 2015 “Microbial Functional Diversity: Does It Matter To Ecosystem Functioning?”. Invited talk at Frontiers in Soil Microbiology, Beijing, October 26<sup>th</sup>, 2015.
- 2015 “Microbial Ecology in Genomics Era: Challenges and Opportunities”. Invited talk at Kunming University of Science and Technology, Kunming, October 22, 2015.
- 2015 “Feedback Responses of Soil Microbial Communities to Climate Warming”. An invited talk at 2015 ESA Annual Meeting, Baltimore, MD, August 12, 2015 (Given by Cong Wang)
- 2015 “Microbial Functional Diversity: Does It Matter To Ecosystem Functioning?” An invited talk at 2015 Annual Meeting on Microbial Ecology, Daqing, July 25<sup>th</sup>, 2015 (Given by Yunfeng Yang).
- 2015 “From Community Structure to Functions: GeoChip-based Metagenomics Technology”. An invited talk at Nanyang Technological University, Singapore, June 25, 2015.
- 2015 “Metagenomics: Current Status, Challenges, and Future Perspectives”. An invited talk at Nanyang Technology University, Singapore, June 23, 2015.
- 2015 “Road to Success: From a Country Boy to a Chaired Professor”. School of Environment, Tsinghua University, Beijing, June 12, 2015.
- 2015 “Microbial Ecology in Genomics Era: Challenges and Opportunities”. An invited talk at Shandong University, Jinan, June 11, 2015.
- 2015 “Microbial Genomics, Genomics Technologies, and Environmental Applications”. OU Day, Tsinghua University, Beijing, June 9, 2015.
- 2015 “High Throughput Metagenomic Technologies for Microbial Community Analysis: Current Status, Challenges and Future Perspectives”. Invited talk at Peking University, Beijing, March 20, 2015.
- 2015 “Microbial Functional Diversity: Does It Matter To Ecosystem Functioning?”. Invited talk at The 3<sup>rd</sup> Conference on Biogeochemistry, Wuhan Geological University, Wuhan, March 18, 2015.
- 2015 “Microbial Ecology in Genomics Era: Challenges and Opportunities”. Invited talk at Shanghai Jiaotong University, Shanghai, March 16, 2015.
- 2014 “Metagenomics-Enabled Understanding of Soil Microbial Feedbacks to Climate Warming”. Invited talk at The 47<sup>th</sup> American Geological Union Annual Fall Meeting, San Francisco, CA, December 15- 19, 2014
- 2014 “From Macroecology to Microecology: Ten Lessons Learned from JMT”. The Jim Tiedje Family Reunion in China, Beijing, October 26, 2014
- 2014 “Stochastic Processes in microbial community assembly and Succession”. Invited talk at 2014 Annual Microbial Ecology, Beijing, October 26, 2014
- 2014 “High Throughput Metagenomic Technologies for Microbial Community Analysis: Current Status, Challenges and Future Perspectives”. Invited talk at Environmental Forum, Tsinghua University, Beijing, October 25, 2014.
- 2014 “How to Prepare Publications to High Profile Broader Scientific Journals”. Invited talk at the Writing Workshop, Annual Microbial Ecology Meeting, Beijing,

- October 25, 2014.
- 2014 “Microbial Ecology in Genomics Era: Challenges and Opportunities”. Invited talk at Nanjing Institute of Geography & Limnology, Nanjing, October 24, 2014.
- 2014 “High Throughput Metagenomic Technologies for Microbial Community Analysis: Current Status, Challenges and Future Perspectives”. Invited talk at Hunan Academy of Agricultural Sciences, Changsha, October 22, 2014.
- 2014 “High Throughput Metagenomic Technologies for Microbial Community Analysis”. Invited talk at The 2<sup>nd</sup> Forum on Microbial Ecology and Ocean Environment, Ningbo University, Ningbo, October 17, 2014.
- 2014 “Grand Computational Challenges in the Metagenomics Era: A Biologist’s View”. Invited talk at Univ of Southern California, Los Angeles, October 2, 2014
- 2014 “Global Water Microbiome Consortium (GWMC)”, Invited talk at The IWA World Water Congress, Lisbon, Portugal, September 24, 2014
- 2014 “Global Water Microbiome Consortium (GWMC)”, Roundtable Discussion at Microbial Ecology in Water Engineering Session, The IWA World Water Congress, Lisbon, Portugal, September 22, 2014
- 2014 “Road to Success: From a Country Boy to a Chaired Professor”. Talk to senior undergraduate and graduate students at Tsinghua University, September 9, 2014
- 2014 “Microbial Ecology in Genomics Era: Challenges and Opportunities”. An invited talk at Hunan Agricultural University, Changsha, September 4, 2014.
- 2014 “Microbial Network Ecology: Current Status, Challenges and Future Perspectives”. An invited talk at ISME-15, Seoul, South Korea, August 24-29, 2014
- 2014 “Challenges in Linking Microbial Biodiversity to Ecosystem Functioning”. An invited talk at 2014 ESA Annual Meeting, Sacramento, CA, August 12, 2014.
- 2014 “Challenges in Linking Microbial Biodiversity to Ecosystem Functioning”. An invited talk at 2014 ESA Annual Meeting, Sacramento, CA, August 12, 2014.
- 2014 “Succession, Stability and Mechanisms of Microbial Communities in Anaerobic Digestion Reactors”. An invited talk at Science Summit on Urban Water, and IWA International Workshop on Resource Recovery from Wastewater/Biosolids, Harbin, China, July 13-16, 2014.
- 2014 “High Throughput Metagenomic Technologies for Soil Microbial Community Analysis”. An invited talk at Nanjing Institute of Soil Sciences, July 10, 2014.
- 2014 “Ecosystem Manipulation: MEC?” Talk at Xiamen University, Xiamen, July 8, 2014.
- 2014 “Microbial Ecology in Genomics Era: Challenges and Opportunities”. An invited talk at International Symposium on Microbiology in the Omics Era, Chongqing, China, June 30, 2014.
- 2014 “Feedback Responses of Soil Microbial Communities to Climate Warming”. An invited talk at 114th General Meeting | American Society for Microbiology, Boston, MA, May 17 - 20, 2014.
- 2014 “Microbial Ecology in Genomics Era: Challenges and Opportunities”. An invited talk at Department of Civil and Environmental Engineering, University of California at Berkeley, Berkeley, March 21, 2014.
- 2014 “Microbial Ecology in Genomics Era: Challenges and Opportunities”. A talk at Department of Environmental Science, Policy and Management, University of California at Berkeley, Berkeley, February 19, 2014.

- 2014 “From Community Structure to Functions: Linking Metagenomics to Single Cell Analysis”. Invited talk at Symposium on Advanced Single Cell Biotechnology, University of Sheffield, Sheffield, UK, February 14, 2014
- 2013 “Metagenomic insights of microbial feedbacks to Climate Warming”. Invited talk at American Geophysical Union’s 46th annual Fall Meeting, San Francisco, December 13, 2013.
- 2013 “Recent Development Of Metagenomics Technologies Available To Environmental Sciences And Engineering”. Stanford University, EES, Stanford, November 22, 2013.
- 2013 “High Throughput Metagenomic Technologies for Microbial Community Analysis: Current Status, Challenges And Future Perspectives”. Tsinghua University, Beijing, November 19 2013
- 2013 “Temperature-dependent latitudinal microbial diversity in forest soils”. Invited Keynote talk at Annual Microbial Ecology Meeting, Chengdu, November 16, 2013
- 2013 “Microbial Ecology in Genomics Era: Challenges and Opportunities”. Invited talk at University of Hong Kong, Hong Kong, November 8, 2013.
- 2013 “Microbial Ecology in Genomics Era: Challenges and Opportunities”. Invited Keynote talk at The 3rd International Conference on Environmental Simulation and Pollution Control, Beijing, November 7, 2013.
- 2013 “Grand Computational Challenges in the Metagenomics Era: A Biologist’s View”. Invited talk at National Tsinghua Univ, Hsingchu, Taiwan, November 5, 2013.
- 2013 “High Throughput Metagenomic Technologies for Microbial Community Analysis”. Invited talk at National Cheng Kung University, Tainan, Taiwan, November 4, 2013.
- 2013 “Microbial Ecology in Genomics Era: Challenges and Opportunities”. Invited Keynote talk at The 5<sup>th</sup> Taiwan-Korea-Japan International Symposium on Microbial Ecology, Taipei, Taiwan, November 1, 2013.
- 2013 “Microbial Ecology in Genomics Era: Challenges and Opportunities”. Invited talk at Nanyang Technology University, Singapore, September 23, 2013.
- 2013 “Recent Advances in Developing High Throughput Technologies for Microbial Community Analyses”. Invited talk at Nanyang Technology University, Singapore, September 23, 2013.
- 2013 “Microbial Ecology in Genomics Era: Challenges and Opportunities”. Invited talk at DOE Joint Genome Institute, Walnut Creek, CA, August 22, 2013.
- 2013 “Stochastic assembly leads to alternative communities with distinct functions”. Invited talk at The 98<sup>th</sup> ESA Annual Meeting, Minneapolis, MN, August 7, 2013
- 2013 “Stochasticity, Succession and Ecosystem Characteristics”. Invited talk at The 98<sup>th</sup> ESA Annual Meeting, Minneapolis, MN, August 6, 2013
- 2013 “Recent Advances in Developing High Throughput Technologies for Microbial Community Analyses”. Invited talk at Sichun University, Chengdu, China, July 23, 2013
- 2013 “Recent Advances in Developing High Throughput Technologies for Microbial Community Analyses”. Invited talk at Xiamen University, Xiamen, China, July 18, 2013
- 2013 “Microbial Ecology in Genomics Era: Challenges and Opportunities”. Cruise Lectures Under the Visiting Speaker Program (VSP) organized by Australian

- Society for Microbiology, University of Western Sydney, Penrith South, NSW, Australia, July 12, 2013.
- 2013 “High Throughput Metagenomic Technologies for Microbial Community Analysis”. Cruise Lectures Under the Visiting Speaker Program (VSP) organized by Australian Society for Microbiology, CSIRO Ecosystem Sciences, Glen Osmond, SA, Australia, July 11, 2013.
- 2013 “Metagenomic insights of microbial feedbacks to elevated CO<sub>2</sub>”. Invited keynote talk at Australian Society for Microbiology Annual Meeting, Adelaide, Australia, July 10, 2013.
- 2013 “Microbial Ecology in Genomics Era: Challenges and Opportunities”. Cruise Lectures Under the Visiting Speaker Program (VSP) organized by Australian Society for Microbiology, University of Queensland, Brisbane, Australia, July 5, 2013.
- 2013 “Microbial Ecology in Genomics Era: Challenges and Opportunities”. Cruise Lectures Under the Visiting Speaker Program (VSP) organized by Australian Society for Microbiology, University of Sydney, Sydney, Australia, July 3, 2013.
- 2013 “High Throughput Metagenomic Technologies for Microbial Community Analysis”. Cruise Lectures Under the Visiting Speaker Program (VSP) organized by Australian Society for Microbiology, University of New South Wales, Sydney, July 1, 2013.
- 2013 “Recent Advances in Developing High Throughput Technologies for Microbial Community Analyses”. Invited talk at US-China Collaborative Research on Geomicrobiological Processes in Extreme Environments, Yunnan University, Kunming, June 30, 2013.
- 2013 “GeoChip Development and Applications”. Invited Keynote talk at 12<sup>th</sup> International Symposium on the Genetics of Industrial Microorganisms, Cancun, Mexico, June 26, 2013
- 2013 “Tracking Community Functions with Functional Gene Arrays”. Invited talk at Marshfield Clinic Research Foundation, Marshfield, WI, May 23, 2013
- 2013 “High Throughput Metagenomic Technologies for Microbial Community Analysis”. Invited talk at Marshfield Clinic Research Foundation, Marshfield, WI, May 22, 2013
- 2013 “Microbial Ecology in Genomics Era: Challenges and Opportunities”. Invited talk at Michigan State University, East Lansing, MI, April 1, 2013
- 2013 “Recent Advances in Developing High Throughput Technologies for Microbial Community Analyses”. Invited talk at China Agricultural University, Beijing, China, March 6, 2013
- 2013 “Feedback Responses of Soil Microbial Communities to Climate Warming”. Invited talk in 2013 DOE Genomic Science Meeting, Washington DC, February 24-27, 2013
- 2013 “Responses of Microbial Communities to Oil Spill and Chemical Dispersant”. Invited talk at Gulf of Mexico Oil Spill and Ecosystem Science Conference, January 22, 2013.
- 2013 “From Community Structure to Functions: Metagenomics Technologies, Current Status, Challenges and Future Perspectives”. Invited talk at Institute of Applied Ecology, Shenyang, January 7, 2013.

- 2013 “Recent Advances in Developing High Throughput Technologies for Microbial Community Analyses”. Invited talk at Harbin Institute of Technology, Harbin, January 4, 2013.
- 2012 “Grand Computational Challenges in the Metagenomics Era: A Biologist’s View”. Invited talk at Computer Sciences, Zhongshan Univ, Guangzhou, December 31, 2012
- 2012 “From Community Structure to Functions: Metagenomics Technologies, Current Status, Challenges and Future Perspectives”. Invited talk at College of Life Sciences, Zhongshan University, Guangzhou, December 30, 2012
- 2012 “Recent Advances in Developing High Throughput Technologies for Microbial Community Analyses”. Invited talk at Central South University, Changsha, December 26, 2012.
- 2012 “High Throughput Metagenomics Technologies for Microbial Community Analysis”. Invited talk at Sichun University, Chengdu, December 24, 2012
- 2012 “Molecular Ecological Network”. Invited talk at Leibniz-Institute of Freshwater Ecology and Inland Fisheries, Berlin, Germany, December 3, 2012
- 2012 “From Community Structure to Functions: Metagenomics Technologies, Current Status, Challenges and Future Perspectives”. Invited talk at Department of Civil and Environmental Engineering, Rice University, Houston, TX, November 26, 2012.
- 2012 “From Community Structure to Functions: Metagenomics Technologies, Current Status, Challenges and Future Perspectives”. Invited talk at Department of Civil and Environmental Engineering, UCLA, Los Angeles, November 6, 2012.
- 2012 “New Methods and Technologies for Soil Biology”. Invited talk at the Forum on Soil Biology organized by Chinese Academy of Sciences, November 5, 2012.
- 2012 “Recent Advances in High Throughput Technologies for Microbial Community Analyses”. Plenary talk at International Workshop on Agricultural Resource Utilization and Soil Quality Improvement, Nanjing Agriculture University, Nanjing, October 29, 2012.
- 2012 “From Community Structure to Functions: Metagenomics Technologies, Current Status, Challenges and Future Perspectives”. Plenary talk at ISABE2012, Proceedings of 2012 International Symposium on Advanced Biological Engineering, Guilin, China, October 27, 2012.
- 2012 “Microbial Gene Functions Enriched in the Deep-Sea Oil Plume”. An invited talk at The 3<sup>rd</sup> International Workshop on Deep-Sea Microbiology, Shanghai, October 26, 2012.
- 2012 “Molecular Ecological Network In Response To Elevated Carbon Dioxide”. An invited at ASA-CSSA-SSSA, 2012 International Annual Meetings, Cincinnati, OH, October 22, 2012.
- 2012 “From Community Structure to Functions: GeoChip-based High throughput Metagenomic Technologies and their Applications”. An invited talk at Memorial Sloan Kettering Cancer Center, New York, October 2, 2012.
- 2012 “From Macroecology to Microecology: Grand Challenges and Future Perspectives”. Invited talk The 77<sup>th</sup> Shuangqing Forum on Earth Microbiomes sponsored by Chinese National Sciences Foundation, Guiyang, August 26, 2012
- 2012 “Microbial Network Ecology: Current Status, Challenges and Future Perspectives”.

- Invited talk at the Roundtable Session on Microbial Network Ecology: Deciphering complex interactions in microbial communities, ISME-14, Copenhagen, Denmark, August 20, 2012
- 2012 “Long-term elevated CO<sub>2</sub> decreases microbial biodiversity in a grassland ecosystem as revealed by metagenomics sequencing”. Invited talk at Society of Industrial Microbiology, Washington DC, August 13, 2012
- 2012 “From Community Structure to Function: Metagenomics-Enabled Predictive Understanding of Microbial Communities to Climate Warming at the Temperate Grassland Ecosystems in Oklahoma”. Talk at The 97<sup>th</sup> ESA Annual Meeting, Portland, OR, August 6, 2012
- 2012 “From Macroecology to Microecology: Grand Challenges and Future Perspectives”. Invited talk at Special Session: "Earth Stewardship: Exploring Connections Between Microecology and Macroecology", The 97<sup>th</sup> ESA Annual Meeting, Portland, OR, August 6, 2012
- 2012 “High Throughput Metagenomics Technologies for Microbial Community Analysis”. Invited talk at Xiamen Institute of Urban and Environment, Chinese Academy of Sciences, Xiamen, August 3, 2012
- 2012 “High Throughput Metagenomics Technologies for Microbial Community Analysis”. Invited talk at West China College of Stomatology, Sichun University, August 2, 2012
- 2012 “High Throughput Metagenomics Technologies for Microbial Community Analysis”. Invited talk at Northeast Institute of Geography and Agricultural Ecology, Chinese Academy of Sciences, Harbin, July 30, 2012
- 2012 “Molecular Ecological Networks”. Invited talk at Harbin Institute of Technology, Harbin, China, July 28, 2012
- 2012 “High Throughput Metagenomics Technologies for Microbial Community Analysis”. Invited talk at Harbin Institute of Technology, Harbin, China, July 28, 2012
- 2012 “Grand Challenges and Opportunities of Microbial Ecology in MetaGenomics Era”. Invited Plenary talk at Microbial Ecology Annual Meeting, Shenyang, China, July 26, 2012.
- 2012 “High Throughput Metagenomics Technologies for Microbial Community Analysis”. Invited talk at Eco-Environmental Research Center, Chinese Academy of Sciences, Beijing, July 23, 2012.
- 2012 “Soil microbial community responses to global warming”. Invited talk at Forum on Environmental Microbiology and Bioenergy, Lanzhou, July 16, 2012.
- 2012 “High Throughput Metagenomics Technologies for Microbial Ecology and Biogeochemical Sciences”. Invited talk at Max-Planck-Institute for Terrestrial Microbiology, Marburg, Germany, June 27, 2012.
- 2012 “Molecular Ecological Networks”. Invited talk at University of Florence, Florence, Italy, June 22, 2012
- 2012 “Systems Microbiology: From Genomes to Ecosystems”, Invited talk at University of Florence, Florence, Italy, June 22, 2012
- 2012 “High Throughput Metagenomics Technologies for Studying Microbiomes”. Invited talks at Sino-Micro Symposium 2012, San Francisco, June 16, 2012
- 2012 “Systems Microbiology: From Genomes to Ecosystems”, Invited talk at the

- Institute of Marine and Environmental Technology, University System of Maryland, Baltimore, May 31, 2012
- 2012 “GeoChip: Development, Applications, and Future Perspectives”. Invited talk at Xiamen University, Xiamen, May 14, 2012.
- 2012 “Road to Success: From a Country Boy to a Professional Professor ”, Invited talk at School of Environment for undergraduate students, Central South University, Changsha, May 14, 2012.
- 2012 “Current Status And Challenges Of Soil Metagenomics Related To Climate Warming”. Invited talk at Institute of Tibetan Plateau Research, Chinese Academy of Sciences, Beijing, May 11, 2012.
- 2012 “High Throughput Metagenomics Technologies For BiogeoSciences”. Invited talk at Institute of Hydrogeology and Environmental Geology, Chinese Academy of Geological Sciences, May 9, 2012.
- 2012 “Road to Success: From a Country Boy to a Professional Professor ”, Invited talk at School of Environment for undergraduate students, Tsinghua University, Beijing, May 7, 2012.
- 2012 “Current Status of Soil Metagenomics”, Invited talk at Soil Biology Forum, Chinese Academy of Sciences, Beijing, May 6, 2012
- 2012 “Systems Microbiology: From Genomes to Ecosystems”. Invited talk at University of Alberta, Edmonton, AB, Canada, April 5, 2012.
- 2012 “Comparison Of Metagenomics Technologies To Profile Microbial Community Structure”. Invited talk at University of Alberta, Edmonton, AB, Canada, April 4, 2012.
- 2012 “From Community Structure to Functions: Metagenomics Technologies, Current Status, Challenges and Future Perspectives”. Invited talk at Pennsylvania State University, University Park, PA, March 30, 2012.
- 2012 “From Community Structure to Functions: Metagenomics Technologies, Current Status, Challenges and Future Perspectives”. Invited talk at Stanford University, Stanford, CA, March 20, 2012.
- 2012 “Systems Microbiology: From Genomes to Ecosystems”, Invited talk at Carnegie Institution for Science, Stanford, CA, March 19, 2012.
- 2012 “From Community Structure to Functions: Metagenomics Technologies, Current Status, Challenges and Future Perspectives”. Invited talk at University of Tennessee, Knoxville, TN, February 24, 2012.
- 2011 “Stochastic Assembly Mediates the Responses of Microbial Communities to Environmental Perturbations”. Invited talk at 2011 Annual Meeting and International Symposium on Microbial Ecology, Nanjing, December 29, 2011
- 2011 “From Community Structure to Functions: Metagenomics Technologies, Current Status, Challenges and Future Perspectives”. Invited talk at Beijing Normal University, Beijing, December 21, 2011.
- 2011 “Metagenomics Technologies for Microbial Community Analysis: Current Status, Challenges And Future Perspectives”. Invited talk at Tsinghua University, Beijing, December 20, 2011.
- 2011 “Microbial Functional Responses and Feedbacks to Global Climate Change”. Invited talk at Nanjing Institute of Geography and Limnology, Chinese Academy of Science, Nanjing, December 19, 2011.

- 2011 “From Structure to Functions Metagenomics Technologies: Current Status, Challenges And Future Perspectives”. Invited talk at the 18<sup>th</sup> Forum on Terrestrial and Ocean Carbon Dynamics, Chinese Association of Sciences and Technologies, Sanya, December 15, 2011
- 2011 “Tracking Ecosystem Functions With GeoChip: Current Status, Challenges And Future Perspectives”. Invited talk at the 2<sup>nd</sup> World Congress on Biotechnology, Philadelphia, November 30, 2011.
- 2011 “Systems Microbiology: From Genomes to Ecosystems”. Invited talk at The 14<sup>th</sup> Annual Conference on Environmental Microbiology, Xiamen, November 26, 2011.
- 2011 “High Throughput Metagenomics Technologies for Analyzing Microbial Community structure”. Invited talk at Tsinghua University, Beijing, China, November 23, 2011”
- 2011 “Comparison of metagenomics technologies to profile soil microbial community structure”. Invited talk at 2011 International Conference on Soil Omics (ICSO)-Nanjing, November 20, 2011.
- 2011 “Tracking Ecosystem Functions With GeoChip: Current Status, Challenges And Future Perspectives”, Invited talk at 2011 International Conference on Soil Omics (ICSO)-Nanjing, November 20, 2011.
- 2011 “From Macroecology to Microecology: Lessons Learned from JMT”. Invited talk at The Jim Tiedje Symposium on Microbial Genomics and Ecology, East Lansing, MI, October 29, 2011.
- 2011 “Molecular Ecological Network in Response to Elevated CO<sub>2</sub>”. Invited talk at The 3<sup>rd</sup> Soil Metagenomics Workshop, Bloomingdale, IL October 7, 2011.
- 2011 “Grand Computational Challenges in the Metagenomics Era: A Biologist’s View”. Invited talk at Tsinghua National Laboratory for Information Sciences and Technologies (TNLIST), Beijing, September 22, 2011.
- 2011 “High Throughput Metagenomics Technologies for Soil Microbial Communities”. Invited talk at Chinese Academy of Agricultural Sciences, Beijing, China, September 22, 2011.
- 2011 “GeoChip-Based Metagenomics Analysis Of A Field Bioleaching Pilot Experiments In Zambia”, Invited talk at the 19<sup>th</sup> International Biohydrometallurgy Symposium, Changsha, China, September 17-25, 2011.
- 2011 “High Throughput Metagenomics Technology For Bioenergy And Environmental Protection”, Invited talk at Changzhou Science and Technology Center, Changzhou, China, September 18, 2011
- 2011 “BioTechnologies For Biomedince, Bioenergy And Environmental Protection”, Invited talk at 2011 Qianren Plan Meeting, Wuxi, China, September 16, 2011
- 2011 “Tracking ecosystem functions with GeoChip: Current Status, Challenges and Future Perspectives”, Invited talk at the 96<sup>th</sup> ESA Annual Meeting, Austin, TX, August 7-12, 2011.
- 2011 “High Throughput Metagenomics Technologies for Biogeochemical Sciences”, Invited talk at China-US Collaborative Research on Tibetan Lake Ecology, Xining, China, August 2, 2011
- 2011 “Molecular Ecological Network”, Invited talk at Xiamen University, Xiamen, August 1, 2011
- 2011 “Tracking the impacts of arsenic contamination on soil microbial communities with

- 2011 GeoChip”, Invited talk at SIM Annual Meeting, New Orleans, LA, July 28, 2011
- 2011 “Comparison of metagenomics technologies to differentiate the effects of elevated CO<sub>2</sub> on soil microbial communities”, Invited talk at SIM Annual Meeting, New Orleans, LA, July 26, 2011
- 2011 “Genomics and Bioenergy”, Invited talk at International Workshop on Application and Optimization of Methane Production under Drought Condition, Lanzhou University, Lanzhou, China, July 11, 2011.
- 2011 “Systems Microbiology: From Genomes to Ecosystems”, Invited talk at Lanzhou University, Lanzhou, China, July 7, 2011.
- 2011 “High Throughput Metagenomics Technologies for Marine Biogeochemistry”, Invited talk at The 2<sup>nd</sup> International Ocean Sciences Summer School & PhD Forum, Xiamen, July 5, 2011
- 2011 “Systems Microbiology: From Genomes to Ecosystems”, Invited talk at Earth Science Center, Tsinghua University, Beijing, China, June 29, 2011.
- 2011 “High Throughput Metagenomics Technology For Bioenergy And Environmental Protection”, Invited talk at 2011 Conference on Oversea Chinese Pioneering and Developing, Wuhan, China, June 26\_28, 2011.
- 2011 “Biogeographic Patterns of Microbial Communities from Different Oil-Contaminated Fields in China”, Invited talk at International Symposium on Applied Microbiology and Molecular Biology in Oil Systems (ISMOS), Calgary, Canada, June 14, 2011.
- 2011 “Systems Microbiology: From Genomes to Ecosystems”, Invited talk at University of Science and Technology Beijing, Beijing, China, June 3, 2011.
- 2011 “GeoChip: A High Throughput Technology for Linking Microbial Community Structure to Functions”, Invited talk at Beijing National Engineering Research Center for Biochip Technology, Beijing, China, May 31, 2011.
- 2011 “Tracking Biogeochemical Functions with GeoChip: Current Status, Challenges, and Future Perspectives”, Invited talk at China University of GeoSciences, Wuhan, China, May 29, 2011.
- 2011 “Systems Microbiology: From Genomes to Ecosystems”, Invited talk at China Ocean University, Qingdao, China, May 28, 2011.
- 2011 “Microbial Conversion Of Lignocellulosic Biomass To Biofuels”, Invited talk at The Fifth China Summit Forum on Industrial Biotechnology Development, Qingdao, China, May 25-27, 2011
- 2011 “Tracking Community Functions with GeoChip: Current Status, Challenges, and Future Perspectives”, Invited talk at International Symposium of Microbial Biofilm, Chengdu, China, April 6-8, 2011
- 2011 “Road to Success: From a Country Boy to a Professional Professor”, Invited talk to Junior Undergraduate student, School of Environment, Tsinghua University, March 29, 2011.
- 2011 “GeoChip-Based Metagenomics Insights Of Microbial Communities In Response To BP Oil Spill”. Invited talk at University of Arkansas at Pine Bluff, Pine Bluff, AR, February 22, 2011.
- 2011 “GeoChip-based Metagenomics Technologies for Monitoring Carbon Cycling Processes”. Invited talk at ASLO (American Society of Liminology and Oceanography) Emerging Issues Workshop and The 2nd Meeting of SCOR

- (Scientific Committee for Oceanic Research, International Council for Science) WG134, San Juan, Puerto Rico, February 18-21, 2011.
- 2011 “Metagenomic Analysis of the Feedback Responses of Soil Microbial Communities to Elevated CO<sub>2</sub>”, Invited talk at Microbial Genome Sequencing and Microbial Observatories Programs Awardee Workshop, Plant & Animal Genome XIX, San Diego, CA, January 15-19, 2011.
- 2010 “High Throughput Metagenomics Technologies for Biogeosciences”, Invited talk at China University of Geosciences, Beijing, China, December 23, 2010.
- 2010 “Systems Microbiology: From Genomes to Ecosystems”, Invited talk at Shandong University, Jinnan, China, December 13, 2010.
- 2010 “From Community Structure to Functions: GeoChip Development and Applications”. Talk at Soils Metagenomics, Braunschweig, Germany, December 8-11, 2010
- 2010 “Metagenomics Insights of The Effects of Long-term Fertilization on Microbial Community Functional Structure”. Invited talk at Argonne Soils Metagenomics Workshop, Argonne, IL, October 7, 2010
- 2010 “Recent Advances in Microbial Metagenomics”, Invited talk at Central South University, Changsha, September 28, 2010.
- 2010 “High Throughput Metagenomics Technologies for Microbial Community Analysis”, Invited plenary talk at Microbial Metagenomics Workshop, Yonsei University, Seoul, South Korea, September 27, 2010.
- 2010 “Applications of Metagenomics Technologies to Environmental Sciences and Engineering”. Invited talk at Academic Salon on Environmental Sciences and Engineering, Tsinghua Univ, Beijing, September 25, 2010.
- 2010 “Microbial Mediation of Carbon Cycle Feedbacks to Climate Change”. Invited plenary talk at China-US 2010 Joint Symposium: “Energy, Ecosystem, and Environmental Change (E<sup>3</sup>C), Beijing, September 22-24, 2010.
- 2010 “Rapid Genome Evolution and Adaptation to Salt Selection”. The 18<sup>th</sup> International Conference on Microbial Genomes. Lake Arrowhead, CA, September 12-16, 2010.
- 2010 “GeoChip and BP Oil Spill”. Departmental Seminar, Department of Botany and Microbiology, University of Oklahoma, Norman, OK. September 9, 2010.
- 2010 “Systems Microbiology: From Genomes to Ecosystems”, Invited talk at Washington State University, Pullman, WA, August 25, 2010.
- 2010 “Promoting collaboration between American Society of Microbiology and Chinese Society of Microbiology”. Ambassador Meeting for International Symposium on Microbial Ecology, Seattle, WA, August 23, 2010
- 2010 “Linking community structure to functions: Approaches, Problems Challenges, and Strategies”. Roundtable talk at The 13<sup>th</sup> International Symposium on Microbial Ecology, Seattle, WA, August 23, 2010.
- 2010 “Microbial Mediation of Carbon Cycle Feedbacks to Climate Warming”. Invited talk at The 13<sup>th</sup> International Symposium on Microbial Ecology, Seattle, WA, August 23, 2010.
- 2010 “Applications of Metagenomics Technologies to Environmental Sciences and Engineering”. Invited keynote talk at Workshop on Key Issues in Environmental Sciences, Harbin, China, August 16-17, 2010.
- 2010 “Metagenomic Insights of microbial Communities in Response to Climate

- Change”. Invited keynote talk at 2010 Annual Meeting on Microbial Ecology, Harbin, China, August 12-13, 2010.
- 2010 “Systems Microbiology: From Genomes to Ecosystems”. Invited talk at South China Sea Institute of Oceanography (SCSIO), Guangzhou, China, July 8, 2010.
- 2010 “GeoChip: A High Throughput Metagenomics Technology for Characterizing Microbial Functional Community Structure”. Invited talk at Guangdong Institute of Microbiology, Guangzhou, China, July 8, 2010.
- 2010 “Systems Microbiology: From Genomes to Ecosystems”. Invited talk at Zhongshan University, Guangzhou, China, July 7, 2010
- 2010 “Rapid Genome Evolution and Adaptation to Salt Stress”. Invited talk at Halophiles 2010, 9<sup>th</sup> International Conference on Halophilic Microorganisms, Beijing, China, June 29-July 3, 2010
- 2010 “GeoChip: A High Throughput Metagenomics Technology for Characterizing Microbial Functional Community Structure”. Invited talk at Deep Sea Research and Earth Systems Science Symposium, Tonji University, Shanghai, June 29, 2010.
- 2010 “Genomic Insights of Bacterial Stress Responses” Invited talk at Harbin Institute of Technology, Harbin, China, June 4, 2010.
- 2010 “High Throughput Metagenomics Technologies for Microbial Community Analysis”, Invited talk at Harbin Institute of Technology, Harbin, China, June 4, 2010.
- 2010 “Stress Responses: From Genomes to Ecosystems”, Invited talk at The 110<sup>th</sup> General Meeting of American Society for Microbiology, Division N Talk, San Diego, CA, May 24, 2010
- 2010 “GeoChip: High Throughput Metagenomics Technologies for BioGeosciences”, Invited talk at Workshop: US-China Collaborative Research on Geomicrobiological Processes in Extreme Environments, Penn State University, May 18-23, 2010.
- 2010 “High Throughput Metagenomics Technologies for Microbial Community Analysis”, Invited talk at Chinese Academy of Agricultural Sciences, Beijing, China, April 12, 2010.
- 2010 “High Throughput Metagenomics Technologies for Microbial Community Analysis”, Invited talk at Institute of Microbiology, Chinese Academy of Sciences, Beijing, China, April 7, 2010.
- 2010 “High Throughput Metagenomics Technologies for Microbial Community Analysis”, Invited talk at Tsinghua University, Beijing, China, April 8, 2010.
- 2010 “High Throughput Metagenomics Technologies for Microbial Community Analysis”, Invited talk at Institute of Microbiology, Chinese Academy of Sciences, Beijing, China, April 7, 2010.
- 2010 “Systems Microbiology: From Genomes to Ecosystems”, Invited talk at Zhejiang University, Institute of Microbiology, Hangzhou, China, April 6, 2010.
- 2010 “Systems Microbiology: From Genomes to Ecosystems”, Invited talk at Zhejiang University, Medical School, Hangzhou, China, April 6, 2010.
- 2010 “Systems Microbiology: From Genomes to Ecosystems”, Invited talk at Xiamen Institute of Urban Environment, Chinese Academy of Sciences, Xiamen, China, April 2, 2010.
- 2010 “High Throughput Metagenomics Technology for Microbial Community

- Analysis”, Invited talk at Xiamen University, Xiamen, China, April 2, 2010.
- 2010 “GeoChip-based Analysis of Community Structure in Microbial Electrohydrolysis Cell”, Invited talk at American Chemical Society (ACS) Annual Meeting, San Francisco, CA, March 21, 2010
- 2010 “Systems Microbiology: From Genomes to Ecosystems”, Invited talk at Northwestern University, Evanston, IL, January 22, 2010.
- 2010 “Metagenomic Analysis of the Feedback Responses of Soil Microbial Communities to Elevated CO<sub>2</sub>”, Invited talk at Microbial Genome Sequencing and Microbial Observatories Programs Awardee Workshop, Plant & Animal Genome XVIII, San Diego, CA, January 8-13, 2010.
- 2009 “Metagenomic Analysis of the Feedback Responses of Soil Microbial Communities to Elevated CO<sub>2</sub>”, Invited talk at ASA-CSSA-SSSA, 2009 International Annual Meetings, Pittsburgh, PA, November 1-5, 2009
- 2009 “Spatial Scaling of Microbial Functional Gene Diversity Across Different Soil Ecosystems”, Invited talk at Soil Metagenomics Workshop, Argonne, October 26, 2009
- 2009 “Metagenomic Analysis of the Feedback Responses of Soil Microbial Communities to Elevated CO<sub>2</sub>”, Invited talk at DIVERSITAS, Cape Town, South Africa, October 13-17, 2009
- 2009 “Comparative Genomics of Ethanol-Producing Clostridia”, Invited talk at 17<sup>th</sup> Annual Microbial Genomics Conference, Rocky Gap State Park, Cumberland, MD, October 11-15, 2009
- 2009 “GeoChip: Current Development, Challenges, and Applications”, Invited talk in the Monsoon Asia Agro-Environmental Research Consortium (MARCO): Toward International Research Collaboration, Workshop on Metagenomic approach on the rhizosphere soil microbiome. Tsukuba, Japan, October 4-8, 2009
- 2009 “Systems Microbiology: From Genomes to Ecosystems”, Invited talk at Xiamen University, Xiamen, August 17, 2009.
- 2009 “Random Matrix Theory-based Network Analysis for Microbial Ecology”. Invited talk at European Molecular Biology Organization, World Practical Course, Computational Biology: From (meta)genomes to phenotype and environment, Shanghai Jiaotong University, Shanghai, August 16, 2009
- 2009 Systems Microbiology: From Genomes to Ecosystems”, Invited talk at Shanghai Institute of Plant Physiology and Ecology, Shanghai, August 14, 2009.
- 2009 “Systems Microbiology: From Genomes to Ecosystems”, Invited talk at Nanjing Agricultural University, Nanjing, August 13, 2009.
- 2009 “Linking Community Structure to Functions: GeoChip Development, Challenges, and Applications”, Invited talk at Nanjing Institute of Soil Science, Nanjing Institute of Geography and Limnology, Chinese Academy of Science, Nanjing, August 12, 2009.
- 2009 “GeoChip: A High Throughput Genomics Technology For Characterizing Microbial Functional Community Structure”, Invited talk at American Phytopathological Society (APS) - Annual Meeting 2009, Portland, OR, August 3, 2009.
- 2009 “Genomics and Bioenergy”. Invited talk at 2009 International Conference for Bioeconomy (BioEco 2009), Tianjin, China, June 25-28, 2009

- 2009 “GeoChip: A High Throughput Genomics Technology for Characterizing Microbial Functional Community Structure”. The 2nd International Symposium on Applied Microbiology and Molecular Biology in Oil Systems (ISMOS-2), Aarhus, Denmark, June 17-19, 2009.
- 2009 “Metagenomic analysis of the feedback responses of soil microbial communities to elevated CO<sub>2</sub>”, The 10th International Symposium on Bacterial Genetics and Ecology (Bageco-10), Uppsala, Sweden, June 15-19, 2009.
- 2009 “Key issues in soil metagenomics”. TerraGenome Workshop, Uppsala, Sweden, June 14-15, 2009.
- 2009 “Key issues in soil metagenomics”. TerraGenome Workshop, Uppsala, Sweden, June 14-15, 2009.
- 2009 “GeoChip as a high throughput tool to analyze microbial communities”. Invited Seminar in International Organization for Biological Control (IOBC) Workshop on Multitrophic Interactions in Soil. Uppsala, Sweden, June 10-13, 2009.
- 2009 “GeoChip: A High Throughput Metagenomics Tool for Functional Microbial Ecology”. Invited Seminar, Eco-Environmental Research Center, Chinese Academy of Sciences, Beijing, May 27, 2009.
- 2009 “GeoChip: A High Throughput Metagenomics Tool for Functional Microbial Ecology”. Invited Seminar, International Ecopolis Forum, Huaibei, China, May 23-26, 2009.
- 2009 “Linking Community Structure to Functions: GeoChip Development and Applications”, The 109<sup>th</sup> General Meeting of American Society for Microbiology, Philadelphia, PA, May 17–21, 2009.
- 2009 “GeoChip: Current Development, Challenges, and Applications”. Invited Seminar, University of Toronto, Toronto, Canada. May 13-14, 2009.
- 2009 “Genomics of Cellulose-Degrading and Ethanol-Producing Bacteria”, Invited talk at Oklahoma NSF EPSCoR Annual State Conference, Oklahoma City, OK, March 31, 2009.
- 2009 “Systems Microbiology: From Genomes to Ecosystems”, Invited Seminar, University of Texas, Arlington, TX, March 12-14, 2009.
- 2009 “Microbial Systems Biology”, Invited Departmental Seminar, Department of Mathematics, University of Oklahoma, Norman, OK, February 17, 2009.
- 2009 “Systems Microbiology: From Genomes to Ecosystems”, Invited Seminar, Louisiana State University, Baton Rouge, LO, February 13, 2009.
- 2009 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”, Invited talk at National University of Singapore, Singapore, January 22, 2009.
- 2009 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”, Invited talk at Nanyang Technical University, Singapore, January 21, 2009.
- 2009 “GeoChip: A High Throughput Genomics Technology for Characterizing Microbial Functional Community Structure”, ISME-IWA Colloquium on The Engineering of Microbial Communities, Singapore, January 18-21, 2009.
- 2009 “Genomics of ethanol-producing microorganisms”, NSF EPSCoR Workshop, Oklahoma City, OK, January 12, 2009.
- 2008 “GeoChip: A High Throughput Genomics Technology for Characterizing

- Microbial Functional Community Structure”, American GeoPhysical Union (AGU) Meeting, San Francisco, December 18, 2008.
- 2008 “Systems Microbiology: From Genomes to Ecosystems”, Invited Departmental Seminar, Michigan State University, East Lansing, MI, November 24-26, 2008.
- 2008 “Target Sequencing Microbial Genes of Interest”, Workshop on the Complete Metagenome Sequencing of a Reference Soil, Lyon, France, December 13-14, 2008
- 2008 “GeoChip: A High Throughput Genomics Technology for Characterizing Microbial Functional Community Structure”. Joint Bioenergy Institute (JBEI), Berkeley, CA, November 14, 2008.
- 2008 “GeoChip: A High Throughput Genomics Technology for Characterizing Microbial Functional Community Structure”. Invited talk at Tsinghua University, Beijing, China, November 13, 2008.
- 2008 “Systems Microbiology: From Genomes to Ecosystems”, Invited talk at China Agricultural University, Beijing, China, November 13, 2008.
- 2008 “Random Matrix Theory-based Network Identification”. Invited talk at Qingdao Institute of Biomass Energy and Bioprocessing Technology (QIBEBT), Chinese Academy of Sciences, Qiangdao, Shandong, China, November 11, 2008
- 2008 “Genomics and Bioenergy”. Invited talk at Annual Meeting on Microbial Ecology, Ecological Society of China, Changsha, China, November 10, 2008.
- 2008 “GeoChip: Recent Development, and its Applications to Global Change Biology”, Invited talk at ASM-CSM (Chinese Society of Microbiology) Joint Workshop on Environmental Microbiology and Bioenergy, Haikou, China, November 8, 2008.
- 2008 “Issues related to Long-Term Microbial Sampling and Analysis”. Invited talk at “Curation of Biological Specimens, Physical Samples and Associated Data”. NMNH (National Museum of Natural History)-NSF NEON Workshop, Smithsonian Institution, Washington, DC, October 19-22, 2008.
- 2008 “GeoChip: Recent Development, and its Applications to Bioenergy and Sustainability”. Invited talk at the joint annual meeting of Geological Society of America (GSA)-Soil Science Society of America (SSSA)-American Society of Agronomy (ASA)-Crop Society of America (CSSA), Houston, TX, October 5-9, 2008.
- 2008 “Systems Microbiology: From Genomes to Ecosystems”, Washington University at St. Louis, St. Louis, MO, October 3, 2008.
- 2008 “Genomics-Enabled Microbial Biogeography”. The 4<sup>th</sup> SCOPE (The Scientific Committee on Problems of the Environment, International Council of Scientific Union) Workshop on Microbial Environmental Genomics, Changsha, P.R. China, September 20-24, 2008.
- 2008 “Random Matrix Theory-based Network Identification”. The 4<sup>th</sup> SCOPE (The Scientific Committee on Problems of the Environment, International Council of Scientific Union) Workshop on Microbial Environmental Genomics, Changsha, P.R. China, September 20-24, 2008.
- 2008 “GeoChip: Recent Advances and Applications”. The 4<sup>th</sup> SCOPE (The Scientific Committee on Problems of the Environment, International Council of Scientific Union) Workshop on Microbial Environmental Genomics, Changsha, P.R. China, September 20-24, 2008.
- 2008 “Metagenomics Insights of the Feedback Responses of a Grassland Ecosystem to

- Elevated Atmospheric CO<sub>2</sub>". The 16<sup>th</sup> International Conference on Microbial Genomes. Lake Arrowhead, CA, September 14-18, 2008.
- 2008 "GeoChip: A high throughput genomics technology for linking microbial community structure to functions", Invited talk at the Roundtable session, Emerging Ecogenomic Methods: Is one better?, The 12<sup>th</sup> International Symposium on Microbial Ecology, Cairns, Australia, August 17-22, 2008.
- 2008 "Microbial Systems Biology", Invited Talk at The University of Memphis, Memphis, TN, July 3, 2008
- 2008 "GeoChip: Current Development, Challenges, and Applications", Invited talk at Biocorrosion Workshop, Norman, OK, June 24-25, 2008.
- 2008 "Genomics and Bioenergy", Invited Talk at National Center for Agricultural Utilization Research (NCAUR), Peoria, IL, June 24, 2008
- 2008 "GeoChip: Current Development, Challenges, and Applications", Invited talk at the US-EC Workshop on Metabolomics and Environmental Biotechnology, Palma de Mallorca, Spain, June 16-17, 2008.
- 2008 "GeoChip: Recent Development, and its Applications to Marine Environments", Invited talk at the Academy colloquium: "Assessing marine microbial diversity: problems and solutions", the Royal Netherlands Academy of Arts and Sciences, Amsterdam, Netherlands, May 26-30, 2008
- 2008 "Genomics and Bioenergy", Talk at Oklahoma Bioenergy Center, Norman, Oklahoma, April 23, 2008
- 2008 "Genomics and Bioenergy", Invited talk at China Summit on Industrial Biotechnology Development • 2008, Tianjin, China, April 18-19, 2008
- 2008 "Microbial Functional Genomics, Genomic Technologies and Environmental Applications", Invited talk at Tianjin University, Tianjin, China, April 17, 2008
- 2008 "Microbial Functional Genomics, Genomic Technologies and Environmental Applications", Invited talk at Qingdao Institute of Biomass Energy and Bioprocessing Technology (QIBEBT), Chinese Academy of Sciences, Qiangdao, Shandong, China, April 16, 2008
- 2008 "From Community Structure to Functions: GeoChip Development and Its Applications to Bioremediation", Invited talk at DOE ERSP Annual PI Meeting, Lansdowne, VA, April 7-9, 2008.
- 2008 "Genomics of Ethanol-Producing Bacteria", Invited talk at Oklahoma NSF EPSCoR Annual State Conference, March 7, 2008.
- 2008 "Microbial Functional Genomics, Genomic Technologies and Environmental Applications", Invited talk at University of California, Davis, CA, March 2-4, 2008
- 2008 "GeoChip: Current status, challenges and future perspectives", Invited talk at NSF Workshop, Integrating NEON with Microbial Biology, Baton Rouge, Louisiana, February 14-16, 2008
- 2007 "Most recent development in metagenomics", Invited talk at Tsinghua University, Beijing, China, December 19, 2007
- 2007 "Microbial Functional Genomics, Genomic Technologies and Environmental Applications", Invited talk at Peking University, Beijing, China, December 19, 2007
- 2007 "Microbial ecology in current genome era", Invited talk at Annual Meeting on

- Microbial Ecology, Ecological Society of China, Henan, China, December 16-18, 2007.
- 2007 “Metagenomics: Current Status, Challenges, and Future Perspectives”, Invited talk at Central South University, Changsha, China, December 14, 2007
- 2007 “Metagenomics: Current Status, Challenges, and Future Perspectives”, Invited talk at Harbin Institute of Technology, Harbin, China, December 12, 2007
- 2007 “GeoChip: Current Development, Challenges, and Applications”, Invited talk at Harbin Institute of Technology, Harbin, China, December 11, 2007
- 2007 “Systems Genome Biology: Current Status, Challenges and Future Perspectives”, Invited talk at Harbin Institute of Technology, Harbin, China, December 10, 2007
- 2007 “Molecular Microbial Ecology”, Invited talk at Harbin Institute of Technology, Harbin, China, December 9, 2007
- 2007 “Linking Community Structure To Functions: GeoChip-based Analysis Of Microbial Communities In Uranium Bioremediation And Hydrogen Production”, Invited talk at The 3rd SCOPE Meeting on Microbial Environmental Genomics, Lyon, France, November 29-December 2, 2007
- 2007 “GeoChips: A comprehensive arrays for studying various biogeochemical, ecological and environmental processes”, University of Minnesota, St Paul, MN November 19-20, 2007
- 2007 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”, Invited talk at Oklahoma State University, Stillwater, OK, November 12, 2007
- 2007 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”, Invited talk at Montana State University, Bozeman, MT, November 1-2, 2007
- 2007 “Genomics and Ecology: Challenges and future perspectives”, Invited talk at NSF Workshop: Data-Model Assimilation in Ecology: Techniques and Applications, Norman, Oklahoma, October 22-24, 2007
- 2007 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”, Invited talk at University of Southern California, Los Angelis, CA, October 17-20, 2007.
- 2007 “Genomics of ethanol-producing bacteria”, The 2<sup>nd</sup> Annual Grow: Oklahoma Biofuels Conference, October 15-17, 2007
- 2007 “GeoChips: A comprehensive arrays for studying various biogeochemical, ecological and environmental processes”, Invited talk, The 15<sup>th</sup> International Conference on Microbial Genomes, College Park, MA, September 16-20, 2007
- 2007 “Recent updates of GeoChips for environmental applications”, Invited talk at Rothamsted Experimental Station, Harpenden, UK, September 7, 2007
- 2007 “GeoChips: A comprehensive arrays for studying various biogeochemical, ecological and environmental processes”, Invited talk, 161<sup>st</sup> Meeting, Society for General Microbiology, University of Edinburgh, Edinburgh, UK, September 3-6, 2007
- 2007 “Applications of Genomics to Ecology and Bioenergy”, Invited talk at Institute of Botany, Chinese Academy of Sciences, Beijing, China, July 30, 2007
- 2007 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”, Invited talk at The University of Sciences and Technology of

- China, Anfei, Hefei, China, July 23, 2007
- 2007 “Ecosystem Genomics: Current Status, Challenges and Future Perspectives”, Invited talk at Shanghai Institute of Plant Physiology and Ecology, Shanghai, China, July 19, 2007.
- 2007 “GeoChip development and its applications”, Invited talk at Shanghai Institute of Plant Physiology and Ecology, Shanghai, China, July 19, 2007
- 2007 “Systems Genome Biology: Current Status, Challenges and Future Perspectives”, Invited talk at The Third Institute of Oceanography, Xiamen, China, July 13, 2007
- 2007 “Genomics and Bioenergy”, Invited talk at Hunan Agricultural University, Changsha, China, July 17, 2007
- 2007 “Genomics and Bioenergy”, Invited talk at The Third Institute of Oceanography, Xiamen, China, July 13, 2007
- 2007 “Ecosystem Genomics: Current Status, Challenges and Future Perspectives”, Invited talk at The Third Institute of Oceanography, Xiamen, China, July 13, 2007
- 2007 “Systems Genome Biology: Current Status, Challenges and Future Perspectives”, Invited talk at The Third Institute of Oceanography, Xiamen, China, July 13, 2007
- 2007 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”, Invited talk at Yunnan University, Kuming, Yunnan, China, July 9, 2007
- 2007 “Community Genomics: Current Status, Challenges and Future Perspectives”, Invited talk at Tsinghua University, Beijing, China, July 5, 2007
- 2007 “Genomics and Bioenergy”, Invited talk at Institute of Microbiology, Chinese Academy of Sciences, Beijing, China, July 4, 2007
- 2007 “Ecosystem Genomics: Current Status, Challenges and Future Perspectives”, Invited talk at Institute of Microbiology, Chinese Academy of Sciences, Beijing, China, July 4, 2007
- 2007 “Systems Genome Biology: Current Status, Challenges and Future Perspectives”, Invited talk at Institute of Microbiology, Chinese Academy of Sciences, Beijing, China, July 4, 2007
- 2007 “Microbial Functional Genomics: Current Status, Challenges and Future Perspectives”, Invited talk at Tsinghua University, Beijing, China, July 3, 2007
- 2007 “Applications of Functional Gene Arrays for Environmental Studies”, Invited talk at Tsinghua University, Beijing, China, July 3, 2007
- 2007 “Development of Functional Gene Arrays for Microbial Community Analysis”, Invited talk at Tsinghua University, Beijing, China, July 2, 2007
- 2007 “Molecular Microbial Ecology”, Invited talk at Tsinghua University, Beijing, China, July 2, 2007
- 2007 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”, Invited talk at 2007 International Conference for Bioeconomy, Tianjin, China, June 27, 2007
- 2007 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”, Invited talk at East China Normal University, Shanghai, June 25, 2007
- 2007 “GeoChip: Development and Applications for Microbial Community Analysis”, Conferences Jacques-Monod: Environmental Genomics: from individual genomes to genomes of complex communities, Roscoff, France, June 11, 2007

- 2007 “Genomics-enabled Microbial Ecology: Current Status, Challenges and Future Perspectives”, Central South University, May 29, 2007.
- 2007 “Microbial Ecology at Genome Era: Current Status, Challenges and Future Perspectives” Keynote talk at The 3rd International Ecosummit, Beijing, May 26, 2007
- 2007 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”, Invited talk at Auburn University, Auburn, AL, May 1, 2007
- 2007 “Genomics of ethanol-producing bacteria”, The 29<sup>th</sup> Symposium on Biotechnology for Fuels and Chemicals, Denver, Co, April 29, 2007
- 2007 “Functional Gene Arrays: Current Status, Challenges and Future”, University of Oklahoma, April 4, 2007
- 2007 “Genomics of ethanol-producing bacteria”, The First Annual Oklahoma Biofuels Symposium, Ponca City, OK, March 10, 2007
- 2007 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”. Robert M. and Mary Haythornthwaite Distinguished Lecture, College of Engineering, Temple University, Philadelphia, PA, February 23, 2007.
- 2006 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”. Invited talked, Genomics Division, Los Alamos National Laboratory, Los Alamos, November 7, 2006.
- 2006 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”. Invited talked, Department of Genetics and Biochemistry, Clemson University, Clemson, SC. October 27, 2006.
- 2006 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”. Lawrence Berkeley National Laboratory, Berkeley, CA. September 29, 2006.
- 2006 “Development and Application of Functional Gene Arrays for Assessing Microbial Community Structure and Functions in Natural Settings”, Department of Environmental Sciences, Policy and Management, University of California, Berkeley, CA. September 28, 2006.
- 2006 “Genomics of ethanol-producing bacteria”. The 14<sup>th</sup> International Conference on Microbial Genomes. Lake Arrowhead, CA, September 24-28, 2006.
- 2006 “Functional Gene Arrays: Current Status, Challenges and Future”. The 4<sup>th</sup> Okazaki Biology Conference, Okazaki, Japan, September 10-15, 2006.
- 2006 “Development and Applications of Functional Gene Arrays to Understanding Microbial Diversity, Distribution and Dynamics in Groundwaters, Soils and Marine Sediments”, Invited talk at Rothamsted Experimental Station, Harpenden, UK, August 25, 2006
- 2006 “Development and Application of Functional Gene Arrays for Assessing Microbial Community Structure and Functions in Natural Settings”, Invited talk at The 11<sup>th</sup> International Symposium on Microbial Ecology, Vienna, Austria, August 20-25, 2006
- 2006 “Functional Gene Arrays: Current Status, Challenges and Future”, Invited talk at Central South University, Changsha, China, August 19, 2006
- 2006 “Microbial Genomics, Genomic Technologies and Environmental Applications”, Keynote speech at The 9th National Symposium on Environmental Microbiology, Hangzhou, China, August 15, 2006

- 2006 “Microbial Genomics, Genomic Technologies and Environmental Applications”, Invited talk at Institute of Microbiology, Chinese Academy of Sciences, Beijing, China, August 7, 2006
- 2006 “Functional Gene Arrays: Current Status, Challenges and Future”, Invited talk at Tsinghua University, Beijing, China, August 7, 2006
- 2006 “Microbial Genomics, Genomic Technologies and Environmental Applications”, Invited talk at Zhejiang University, Hangzhou, China, August 4, 2006
- 2006 “Microbial Genomics, Genomic Technologies and Environmental Applications”, Invited talk at Shanghai Jiaotong University, Shanghai, China, August 2, 2006
- 2006 “Challenges and Trends in Contemporary Microbial Ecology”, Keynote speech at 2006 Annual Symposium of Chinese Society of Ecology, August 3, 2006.
- 2006 “GeoChip: A Comprehensive Microarrays for Studying Geochemical, Ecological and Environmental Processes”, Distinguished seminar at the Institute of Applied Ecology, Chinese Academy of Sciences, Shenyang, China, July 31, 2006.
- 2006 “Development and Application for Understanding Spatial Variation in Soil Microbial Communities”, Keynote speech at the 18th World Congress of Soil Science, Philadelphia, PA, July 10-14, 2006.
- 2006 “Functional Gene Arrays for Environmental Studies: Current Status, Challenges and Future”, Keynote speech at the International Symposium on Environmental Biotechnology, Leipzig, Germany, July 10-13, 2006.
- 2006 “Challenges in Metagenomics and Microarray-based Functional Analysis of Microbial Communities at Contaminated Sites”. The ERSP PI Meeting, Environmental Remediation Science Program, Warrenton, VA, April 3, 2006.
- 2006 “Development and Use of Integrated Microarray-Based Genomic Technologies for Monitoring Microbial Community Dynamics in groundwaters and marine sediments”, Keynote speech at the 6<sup>th</sup> International Symposium on Global Renaissance by Green Energy Revolution, The 21<sup>st</sup> Century COE (Center of Excellence) Program, Nagaoka, Japan, January 26-28, 2006.
- 2005 “Microbial Genomics, Genomic Technologies and Environmental Applications”, Keynote talk at the 2<sup>nd</sup> International Symposium on Environmental Chemistry and Toxicology, Hong Kong, December 26-29, 2005.
- 2005 “Physiological and Genomic Diversity of Thermophilic Iron-Reducing Bacteria from the Deep Subsurface” The 8th International Thermophiles Conference - From Evolution to Revolution, Gold Coast, Queensland, Australia, September 18-22, 2005.
- 2005 “Microbial community diversity at the NABIR Field Research Center, Oak Ridge, TN”, The 13<sup>th</sup> International Conference on Microbial Genomes, Madison, WI, September 11–15, 2005.
- 2005 “Use of Microarray-based Genomic Technologies for Assessing Microbial Community Composition and Dynamics in Contaminated Groundwater” The Joint International Symposia for Subsurface Microbiology (ISSM 2005) and Environmental Biogeochemistry (ISEB XVII), Jackson Hole, Wyoming; August 14-19, 2005.
- 2005 “Application of Microarrays to Microbial Community Analysis”, Eco-Environmental Research Center, Chinese Academy of Sciences, Beijing, China, July 7, 2005.

- 2005 “Genomic Technologies, And Their Applications”, Institute of Zoology, Chinese Academy of Sciences, Beijing, China, July 7, 2005.
- 2005 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”, China Agricultural University, Beijing, China, July 6, 2005.
- 2005 “Application of Microarrays to Microbial Community Analysis”, Tsinghua University, Beijing, China, July 4, 2005.
- 2005 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”, Hunan Normal University, Changsha, China, June 30, 2005.
- 2005 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”, Hunan Agricultural University, Changsha, China, June 29, 2005.
- 2005 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”, Northwestern University, Xian, China, June 24, 2005.
- 2005 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”, Chinese Academy of Sciences, Beijing, China. Special keynote talk at Chinese Academy of Sciences under the special seminar series, "Sciences and China", sponsored by Chinese Academy of Sciences, National Academy of Sciences, National Academy of Engineering, Ministry of Science and Technology, Ministry of Education, and Chinese Association of Sciences and Technologies. June 21, 2005.
- 2005 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”, Central South University, Changsha, China, June 21, 2005.
- 2005 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”, Medical School, Zhejiang University, Hangzhou, China, June 17, 2005.
- 2005 “Using functional gene arrays to assess microbial community diversity in marine sediments from Gulf of Mexico,” The 2<sup>nd</sup> International Workshop on Microbial Environmental Genomics, Shanghai, China, June 11–16, 2005.
- 2005 “Functional gene arrays: current status, challenges and future,” The 105<sup>th</sup> General Meeting of American Society for Microbiology, Atlanta, GA, June 4 – June 9, 2005.
- 2005 “Microarrays-based functional analysis of stress responses”. The 5<sup>th</sup> Annual Northwestern Gene Expression Conference, University of Washington, Seattle, May 25-27, WA, 2005.
- 2005 “Microarrays-based functional analysis of stress responses”. Departmental Seminar, Plant Science, University of Tennessee at Knoxville, Knoxville, TN, April 28, 2005.
- 2005 “Development and application of integrated genomic technology for microbial community analysis”. The 8<sup>th</sup> Annual PI Meeting, Natural and Accelerated Bioremediation Program (NABIR), Warrenton, VA, April 17–20, 2005.
- 2005 “Microarrays-based Genomic Technologies for Environmental and Microbial Community Analysis”, New England BioLabs, Beverly, MA, March 23-24, 2005.
- 2005 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”, Medical School, Southern Illinois University, Springfield, IL, March 10-12, 2005.
- 2005 “Novel Random Matrix Theory-Based Approach for Identifying Gene Interaction Network”, Departmental Seminar, Department of Mathematics, University of

- Tennessee at Knoxville, Knoxville, TN, February 21, 2005.
- 2004 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”, Departmental Seminar, Environmental and Civil Engineering, Stanford University, Stanford, December 15, 2004.
- 2004 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”, Departmental Seminar, Environmental and Civil Engineering, University of Tennessee at Knoxville, Knoxville, TN, November 3, 2004.
- 2004 “Application of Functional Gene Arrays for Analyzing Community Structure at NABIR Field Research Center”. DOE Natural and Accelerated Bioremediation Program (NABIR) Workshop, Oak Ridge, TN, October 18-19, 2004.
- 2004 “Microarray-Based Genomic Technologies for Microbial Community Analysis”. Great Lakes and Central States Ecological Observatory (GLACEO) Workshop on Building a Regional Ecological Observatory: Sensors, Tools, and Networking, University of Michigan Biological Station, Pellston, MI, October 15-17, 2004.
- 2004 “Novel random matrix theory-based approach for identifying modular network”, The 12<sup>th</sup> International Conference on Microbial Genomes, Lake Arrowhead, CA, September 26–30, 2004.
- 2004 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”, Argonne National Lab, September 20, 2004.
- 2004 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”, Brookhaven National Lab, Upton, NY, September 17-18, 2004
- 2004 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”, Medical School, University of Alabama at Birmingham, Birmingham, AL, September 7-8, 2004.
- 2004 “Functional gene arrays for environmental studies”, The 10<sup>th</sup> International Symposium on Microbial Ecology, Cancun, Mexico, August 22-27, 2004
- 2004 “Microarrays-based analysis of stress responses”. The 10<sup>th</sup> International Symposium on Microbial Ecology, Cancun, Mexico, August 22-27, 2004
- 2004 “Genomics-based stress responses of meta-reducing bacteria”. Workshop on Stress in Metal-Reducing Bacteria: Ecology, Functional Genomics, Bioinformatics at the Society of Industrial Microbiology Annual Meeting, Anaheim, CA, July 25-29, 2004
- 2004 “Microarrays for bacterial detection and community analysis”, National Institute of Biological Monitoring and Quarantine, Beijing, China, September 15, 2004
- 2004 “Microbial Functional Genomics, Genomic Technologies and Environmental Applications”, Chinese National Sciences Foundation, Beijing, China, September 14, 2004.
- 2004 “Microarrays for bacterial detection and microbial. community analysis”, Workshop, Nucleic Acids-based Technologies, Amplifications Amplified. Cambridge Health Tech Institute, McLean, VA, June 21-23, 2004.
- 2004 “Functional Genomics of Environmentally Important Model Microorganisms”, The South East Structural Genomics Workshop on Frontier in Biology, The University of Georgia, Athens, GA, May 20-21, 2004.
- 2004 “Microarray-Based Genomic Technologies for Environmental Studies”. The 2<sup>nd</sup> International Workshop in Biochips and Environmental Biosensors, Gwangju, Korea, May 1-2, 2004.

- 2004 “Integrated Functional Analysis Of Environmentally Important Microorganisms”. The 5<sup>th</sup> International Symposium on Advanced Environmental Monitoring, Seoul, Korea, April 29-30, 2004.
- 2004 “Microarray-Based Functional Analysis of the Radiation-Resistant Bacterium, *Deinococcus radiodurans*”. 2004 European Symposium on Environmental Biotechnology, Oostende, Belgium, April 27-29, 2004.
- 2004 “DOE genomics programs”. The 1<sup>st</sup> International Workshop on Microbial Environmental Genomics, Wageningen, The Netherlands, April 18–20, 2004.
- 2004 “Microarray-Based Genomic Technologies for Environmental Studies”. The 1<sup>st</sup> International Workshop on Microbial Environmental Genomics, Wageningen, The Netherlands, April 18–20, 2004.
- 2004 “Functional Gene Arrays for Studying Microbial Community Structure”. The 7<sup>th</sup> Annual PI Meeting, Natural and Accelerated Bioremediation Program (NABIR), Warrenton, VA, March 14–16, 2004.
- 2004 “Microbial functional genomics, genomic technology and environmental applications”, The University of Georgia, Athens, GA, February 10, 2004.
- 2004 “Molecular Microbial Ecology And Community Genomics”, Savannah River Ecology Laboratory, Aiken, SC, February 12, 2004.
- 2004 “Functional genomic analysis of *Shewanella oneidensis* MR-1”, The University of Georgia, Athens, GA, February 11, 2004.
- 2004 “Microbial functional genomics, genomic technology and environmental applications”, The University of Georgia, Athens, GA, February 10, 2004.
- 2004 “Microbial functional genomics, genomic technology and environmental applications”, Zhongshan University, Guangzhou, China, January 1, 2004.
- 2003 “Microbial functional genomics, genomic technology and environmental applications”, Central South University, Changsha, China, December 25, 2003.
- 2003 “Microbial functional genomics, genomic technology and environmental applications”, Hunan Agricultural University, Changsha, China, December 24, 2003.
- 2003 “Future Perspectives of Microbial Ecology: Ecological Genomics Beyond Single Cells”, Eco-Environmental Research Center, Chinese Academy of Sciences, Beijing, China, December 24, 2003.
- 2003 “Microarray-based functional analysis of environmentally important microorganisms and communities”, Tsinghua University, Beijing, China, December 23, 2003.
- 2003 “Microarray-based functional analysis of environmentally important microorganisms and communities”, Chinese Academy of Forestry Sciences, Beijing, China, December 23, 2003.
- 2003 “Microbial functional genomics, genomic technology and environmental applications”, Keynote speaker, The 5<sup>th</sup> National Symposium on Microbial Ecology, Beijing, China, December 22, 2003.
- 2003 “Extremophilic metal-reducing bacteria”, NASA Astrobiology Workshop: Looking into the Extremes of Life, American Society for Gravitational and Space Biology (ASGSB), Huntsville, AL, November 12-15, 2003.
- 2003 “Application microarray-based genomic technology to environmental studies”, Savannah River Ecology Laboratory, Aiken, SC, October 22-23, 2003.

- 2003 “Soil microbial diversity, controlling mechanisms and detection”. International Symposium on Structure and Function of Soil Microbiota, Marburg, Germany, September 18-20, 2003.
- 2003 “Microbial genomics, genomic technology and environmental applications”, Lawrence Berkeley National Laboratory, Berkeley, CA, July 30-31, 2003.
- 2003 “Microbial genomics, genomic technology and environmental applications”, DOE Joint Genome Institute, Walnut Creek, CA, May 6-8, 2003.
- 2003 “Microarray-based functional analysis of the radiation-resistant bacterium, *Deinococcus radiodurans*”. The 10<sup>th</sup> Genome Conference of DOE Genome Joint Institute, Santa Fe, NM, March 29–April 2, 2003.
- 2003 “Development and evaluation of oligonucleotide-based functional gene arrays for bioremediation”. The 6<sup>th</sup> Annual PI Meeting, Natural and Accelerated Bioremediation Program (NABIR), Warrenton, VA, March 17–19, 2003.
- 2003 “Microarray-based genomic technology for microbial community analysis”. Montreal Microarray Symposium, Montreal, Canada, March 12-15, 2003.
- 2003 “Microarray technology for gene expression analysis”. DOE Genome To Life Workshop, Washington DC, February 10-12, 2003.
- 2002 “Microarray-based genomic technology and microbial ecology”. The Advisory Committee Meeting for Natural and Accelerated Bioremediation Program (NABIR), Baltimore, MD, November 7, 2002.
- 2002 “Microbial genomics, genomic technology and environmental applications”, Department of Microbiology, University of Alabama, Birmingham, AL, October 24-25, 2002.
- 2002 “Microbial genomics, genomic technology and environmental applications”, Pacific Northwest National Laboratory, Richland, WA, October 15, 2002.
- 2002 “Microbial genomics, genomic technology and environmental applications”, Washington State University, Pullman, WA, October 14, 2002.
- 2002 “Microbial genomics and ecology”, on an international Workshop entitled An Ecological Perspective of Genomics: Assessing Ecological Risk Through Partnerships. Pensacola Florida, FL, September 22–25, 2002.
- 2002 “Development and evaluation of microarray-based genomics technology for microbial detection”. The Genomic Workshop on Environmental Biotechnology, Idaho Falls, ID, September 19–20, 2002.
- 2002 “Microarray-based whole genome analysis for metal-reducing and radiation-resistant bacteria”. The US-Japan Workshop on System Biology, Tsuruoka, Yamagata, Japan, September 14–18, 2002.
- 2002 “Development of Novel Attachment Strategy for Immobilizing Oligonucleotides and Proteins on Microarrays”, The 10<sup>th</sup> International Conference on Small Genomes, Lake Arrowhead, CA, September 14–18, 2002.
- 2002 “Development and evaluation of 16S rRNA-based oligonucleotide microarrays for microbial detection”. The X<sup>th</sup> International Congress of Bacteriology and Applied Microbiology, Paris, France, July 27–August 1, 2002.
- 2002 “Microbial genomics, genomic technology and environmental applications”, The Sanger Centre, Wellcome Trust Genome Campus, Hinxton, UK, July 22, 2002.
- 2002 “Development and evaluation of microarray-based genomics technology for microbial detection”. The 102<sup>nd</sup> General Meeting of American Society for

- Microbiology, Salt Lake City, UT, July 27–August 1, 2002.
- 2002 “Development of microarray-based genomics technology for microbial community analysis”. Department of Microbiology, North Carolina State University, Raleigh, NC, March 28, 2002.
- 2002 “Development of microarray-based genomics technology for microbial community analysis”. Department of Biology, Duke University, Durham, NC, March 27, 2002.
- 2002 “Molecular microbial diversity of NABIR Field Research Center, Oak Ridge, TN”. The 5<sup>th</sup> Annual PI Meeting, Natural and Accelerated Bioremediation Program (NABIR), Warrenton, VA, March 18–20, 2002.
- 2002 “Integrated analysis of genes and proteins involved in anaerobic energy metabolism of *Shewanella oneidensis* MR-1”. The 9<sup>th</sup> Genome Contractor and Grantee Workshop, Department of Energy, Oakland, CA, January 27–31, 2002.
- 2002 “Environmental microbial genomics, genomic technology and detection”, Department of Pharmaceutics and Pharmacodynamics, University of Illinois, Chicago, IL, January 16, 2002.
- 2002 “Microbial genomics, genomic technology and environmental applications”, Biotechnology research Institute, National Research Council Canada, Montreal, Quebec, Canada, February 1, 2002.
- 2001 “Development of Microarray-based genomic technology for environmental detection”, American Society for Microbiology Southeastern Branch Annual Meeting, Birmingham, AL, November 8–10, 2001.
- 2001 “Application of genomic technology to microbial ecology”, The 9<sup>th</sup> International Symposium on Microbial Ecology, August 26–31, 2001, Amsterdam, The Netherlands.
- 2001 “Functional gene arrays and community gene arrays”, The 101<sup>st</sup> General Meeting of American Society for Microbiology, Orlando, FL, May 20–24, 2001.
- 2000 “Metal reduction by extremophiles”, American Geophysical Union, Session B19 on Metal reduction, San Francisco, CA, December 15–19, 2000.
- 2000 “Developing microarray-based genomic technology for environmental studies,” a special symposium at the American Society of Agronomy meetings, Minneapolis, MN, November 6–9, 2000.
- 2000 “Genome-wide functional analysis of metal-reducing bacteria *Shewanella oneidensis* MR-1”, The 8<sup>th</sup> International Conference on Small Genomes, Lake Arrowhead, CA, September 24–28, 2000.
- 2000 “Microbial model organisms and DOE’s mission”, Oak Ridge National Laboratory, September 20, 2000.
- 2000 “Microbial genomics of metal-reducing bacteria”, Life Sciences Division, Oak Ridge National Laboratory, August 15, 2000.
- 2000 “Genomics and toxicology,” Shanghai Institute of Medicine, Shanghai, China, June 23, 2000.
- 2000 “Genomics, genomic technology and their impacts,” Zhejiang University, Hangzhou, China, June 21, 2000.
- 2000 “Genomics, genomic technology and their applications,” Hunan Normal University, Changsha, China, June 20, 2000.
- 2000 “Microarray-based microbial detection,” Hunan Agricultural University, Changsha, Hunan, China, June 13, 2000.

- 2000 “Recent advances in bioremediation,” Eco-Environmental Research Center, Chinese Academy of Sciences, Beijing, China, June 12, 2000.
- 2000 Keynote speech, “Genomics, genomic technology and applications,” Northeastern Forest University, Harbin, P.R. China, June 10, 2000.
- 2000 “Microarray-based genomic technology for environmental studies,” NASA/JPL, Pasadena, CA, May 25, 2000.
- 2000 “Microbial genomics and ecology”, Life Sciences Division, Oak Ridge National Laboratory, April 5, 2000.
- 2000 “Development of microarray-based genomic technology for environmental studies,” Ohio State University, Columbus, OH, April 15, 2000.
- 1999 “DNA microarrays for characterizing microbial communities,” DOE NABIR Workshop in Application of Genomic Technology to Bioremediation, Washington, DC, December 5–7, 1999.
- 1999 “Ecological, physiological and genomic diversity of metal-reducing bacteria,” The 7<sup>th</sup> Conference on Small Genomes, Washington, DC, November 13–17, 1999.
- 1999 “Molecular microbial diversity and controlling mechanisms in subsurface environments,” The 99<sup>th</sup> General Meeting of American Society for Microbiology, Chicago, IL, May 29–June 3, 1999.
- 1999 “Bioremediation, genomic technology and data analysis,” Life Sciences Division, Oak Ridge National Laboratory, November 25, 1999.
- 1998 “Recent advances of nucleic acid technology for measuring microbial biomass and activities,” DOE NABIR Workshop, Bethesda, MD, November 17, 1998.
- 1998 “Unusual microbial community diversity in soils and its controlling mechanisms,” in the Session of Microbial Community Dynamics, the VII International Congress of Ecology, Florence, Italy, July 18–26, 1998.
- 1998 Keynote speech, “Extremophilic iron-reducing bacteria: their implications for possible life in extraterrestrial environments,” The Third Symposium of Chinese Young Scientists, Beijing, P.R. China, August 19–22, 1998.
- 1998 Keynote speech, “Genomics and bioremediation,” The workshop for environmental technology, The Ministry of Chinese Sciences and Technology, Beijing, P.R. China, September 1–2, 1998.
- 1998 “Microbial genomics,” Institute of Microbiology, Chinese Academia of Sciences, Beijing, China, August 23, 1998.
- 1998 “Trends in ecology,” Eco-Environmental Research Center, Chinese Academia of Sciences, Beijing, China, August 24, 1998.
- 1998 “Bioremediation of hydrogen carbons, chlorinated solvents and heavy metals,” Eco-Environmental Research Center, Chinese Academia of Sciences, Beijing, China, August 25, 1998.
- 1998 “Application of molecular techniques to environmental studies,” Northeastern Forestry University, Harbin, China, August 27–29, 1998.
- 1995 “Ecological and phylogenetic diversity of toluene-degrading bacteria,” Hunan Agricultural University, Changsha, China, December 22, 1995.
- 1995 “Applications of molecular techniques to microbial community analysis,” Institute of Microbiology, Chinese Academy of Sciences, Beijing, China, December 20, 1995.
- 1995 “Recent advances in microbial ecology,” Eco-Environmental Research Center,

Chinese Academy of Sciences, Beijing, China, December 19, 1995.

**SPECIALLY INVITED WORKSHOP PARTICIPATION**

- 2015 AAM Colloquium on Promoting Ethical Practices in the Scientific Enterprise. September 14-15, 2015.
- 2009 ISME-IWA Colloquium on The Engineering of Microbial Communities, Singapore, January 18-21, 2009.
- 2008 “Matasted”, Workshop on the Complete Metagenome Sequencing of a Reference Soil, Lyon, France, December 13-14, 2008
- 2008 “Curation of Biological Specimens, Physical Samples and Associated Data”. NMNH (National Museum of Natural History)-NSF NEON Workshop, Smithsonian Institution, Washington, DC, October 19-22, 2008.
- 2008 “Integrating NEON with Microbial Biology”, NSF Workshop, Baton Rouge, Louisiana, February 14-16, 2008
- 2007 “Data-Model Assimilation in Ecology: Techniques and Applications”, NSF Workshop, Norman, Oklahoma, October 22-24, 2007
- 2005 “Molecular Biological Tools Workshop” organized by the Strategic Environmental Research and Development Program (SERDP) and the Environmental Security Technology Certification Program (ESTCP), Charlottesville, Virginia, August 9-10, 2005.
- 2005 “Workshop on Genetic Sensors for Environmental Water Quality”, The Alliance for Coastal Technologies (ACT) and the University of South Florida (USF), St. Petersburg, FL, January 5-7, 2005.
- 2004 “DOE Genomics:GTL Technology Deep-Dive Specification Workshop” Arlington, VA, June 14-16, 2004.
- 2003 “Workshop on Progress and Promise in Systems Microbiology”, The National Academies of Sciences, Washington DC, August 19, 2003.

**Current staff at OU**

	From	Time	Position
Zhili He	Australian National Univ, Australia	2005.11	Research Professor
Liyu Wu	Hunan Agricultural Univ	2005.11	Research Professor
Aifen Zhou	Shandong Univ	2011.2	Research Scientist
Joy Van Nostrand	Univ of South Carolina Medical School	2011.2	Research Scientist
Missy Lee		2007.5	Administrative Assistant

**Current postdocs at OU**

Postdoctorals	From	Start time	
Ping Zhang	University of Arkansas	2009.8	
James Voordeckers	Rutgers University	2009.8	
Tong Yuan	University of Oklahoma	2010.7	
Jie Deng	Michigan State University	2012.3	
Daliang Ning	Tsinghua University	2012.9	
Qichao Tu	University of Oklahoma	2014.8	
Lauren Hale	University of California at Riverside	2014.11	
Megan L. Kempher	Southern Illinois University, Carbondale, IL	2015.1	
Arthur Escalas		2015.7-	

### **Current graduate students at OU**

	From	Start time	
Wenbin Liu	Central South Univ, China	2008.1	Ph.D candidate
Feifei Liu	Central South Univ, China	2008.1	Ph.D candidate
Min Xie	Central South Univ	2009.1	Ph.D candidate
Yujia Qin	Harbin Institute of Technology	2009.1	Ph.D candidate
Zhou Shi	Yunnan Univ	2010.8-	Ph.D candidate
Mengting Yuan	Tsinghua Univ	2011.8-	Ph.D candidate
Tao Xu	Chinese Academy of Agricultural Sciences	2011.8-	Ph.D candidate
Daniel Curtis	Georgia State Univ	2011.8	Ph.D candidate
Jiajie Feng	Tsinghua Univ	2013.8	Ph.D candidate
Cong Wang	Tsinghua Univ	2013.8	Ph.D candidate
Colin Bates	Univ of Texas, Austin	2015.7	Ph.D candidate
Xuanyu Tao	Lanzhou University	2015.8	

### **Current visiting scholars and students at OU (including incoming)**

	From	Start	
Bo Wu	Huazhong	2013.9	Ph.D student

	Agricultural University		
Yongdong Xu	Harbin Institute of Technology, WeiHai, Shandong	2014.3	Associate Professor
Xishu Zhou	Central South University	2014.4	Ph.D student
Feiyan Pan	College of Life Sciences, Nanjing Normal University	2014.4	Lecturer
Young Li	Western China Univ	2014.9-	Associate Professor
Xue Guo	Central South Univ	2014.9-	Ph.D Candidate
Lebin Yin	Shaoyang University, China	2014.10	Associate Professor
Kaihui Liu	Shaanxi University of Technology, China	2014.11-	Associate Professor
Jing Zhang	Northeast Institute of Geography and Agroecology (IGA), Chinese Academy of Sciences	2014.12	Associate Professor
Xueling Wu	Central South Univ	2015.3-	
Yunxiao Chong	South China Agricultural Univ, Guangzhou, China	2015.3-	
Anyi Hu	Inst of Urban Development-CAS, Xiamen, China	2015.3-	Associate Professor
Jiang Zhou	China Univ of Geoscience, Wuhan, Hubei, China	2014.9-	Ph.D student
Juan Li	Hunan agricultural Univ	2015.1-2015.7	Associate Professor
Yi Liu	Inst of Subtropical Agriculture, Changsha, Hunan	2015.3-	

**Current staff at Tsinghua University**

	From	Time	Position
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Yunfeng Yang	Oak Ridge National Laboratory	2010.9	Professor
Songping Zhang	Jinlin Univ	2010.12	Secretary

### **Current graduate students at Tsinghua University**

Ying Gao	China Agricultural University	2011.7	Ph.D candidate
Mengxin Zhao	China Agricultural University	2011.7	Ph.D candidate
Suo Yang	China Forestry University	2011.7	Ph.D candidate
Houjuan Chu	Shandong University	2011.7	M.S candidate
Shanshan Liu	University of Wuhan Sciences and Technology	2011.7	M.S candidate
Linwei Wu	Tsinghua University	2011.5	Ph.D candidate
Haowei Yue	Tsinghua University	2011.5	Ph.D candidate
Xin Sun	Zhongshan University	2012.3	M.S. Candidate
Mengmeng Wang	Shandong University	2012.3	M.S. Candidate
Junjun Ding	Qingdao Univ	2012.9	Ph.D candidate
Xinyu Ma	China Forestry University	2013.9	Ph.D candidate
Qiaoshu Zheng	Tsinghua University	2013.9	M.S. Candidate
Tengxu Wang	Sichuan University	2013.9	M.S. Candidate
Changyi Xie	Tsinghua University	2014.2	Ph.D candidate
Qun Gao	Shandong University	2014.2	Ph.D candidate
Sihang Yang	Shandong University	2014.2	Ph.D candidate

### **Ph.D. students mentored**

Qichao (Philloid) Tu	Zhejiang Univ	2008.8-2014.8	University of Oklahoma
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### **Master students mentored**

Master Students	From	Time period	Present position
Jingrong Chen	Nanjing Univ, China	2006.8-2009.5	Oklahoma Medical Research Foundation
Yunyu (Irene) Chen	Nanjing Agricultural Univ	2007.8-2011.5	University of Oklahoma Medical School
Yue Huang	Shanghai Institute of Plant Physiology and	2009.1-2013.5	Private in China

	Ecology		
Rong Song	Virginia Tech	2010.6-2014.12	???
Depeng Xu	Tsinghua Univ	2011.8-2014.12	??

### **POSTDOCTORAL TRAINED**

Postdoctorals	From	Time period	Present position
Raymond D. Stapleton	Univ of Tenn, Knox	1998.4-1999.8	Staff Scientist, Merck & Co Pharmaceutical Company, VA
Guangshan (Gary) Li	Virginia Tech	1998.10-2000.9	Staff Scientist, Dow Corning, NY
Richard Hurt	Univ of Tenn, Knox	1998.4-2001.9	Staff Scientist, Atomic Sciences, Oak Ridge, TN
Dorothea Thompson	Univ of Maryland	1999.12-2001.9	Assistant Prof, Purdue Univ
Gina Holguin	Univ of Waterloo	2000.12-2001.6	Staff Scientist , Centrode Investigaciones Biolo´gicasdel No-roeste, CIBNOR, LaPaz 23090, BCS, Mexico
Matthew Fields	Cornell Univ	2000.12-2000.9	Assistant Prof, Montana State Univ
Christopher Bagwell	Univ of South Carolina	2001.3-2002.8	Staff Scientist, Savannah River National Lab, Aiken, SC.
Alex Beliaev	Univ of Massettutes	1999.12-2002.9	Staff Scientist, Pacific Northwest National Laboratory, Richland, WA
Adam Leaphart	Univ of South Carolina	2002.6-2003.9	Staff Scientist, State Department of Health, SC.
Sonia Maraya Tiquia	Univ of Hongkong	2001.9-2003.8	Assistant Professor, Univ of Michigan, Dearborne, MI.
Sung-Keun Rhee	Rutgers University	2002.3-2003.8	Staff Scientist, Biotechnology Center, South Korea.
Xiufeng Wan	Univ of Mississippi	2001.12-2003-11	Staff Scientist, Center for Disease

			Control, Atlanta, GA
Yongqing Liu	Noble Foundation, OK	2000.3-2003.12	Research Assist Prof, University of Louisville, Louisville, KY
Ting Li,	Univ of Kenturky	2002.3-2003.12	Postdoc, Univ of Georgia, Athens, GA
Song Chong	Oregon Polytech	2002.3-2003.9	Scientist, private company, Korea
Jost Liebich		2003.1-2004.7	Postdoc, Institute of Chemistry and Dynamics of the Geosphere IV, Forschungszentrum Jülich GmbH, Germany
Crystal Bickley McAlvin	Univ of Tenn, Knox	2003.3-2004.11	Postdoc, Univ of Tenn, Knox
Yunfeng (David) Yang	Albert Einstein College of Medicine, Bronx, NY	2003.2-2005.11	Staff Scientist, Oak Ridge National Lab
Christopher Schadt	Univ of Colorado	2003.1-2005.11	Staff Scientist, Oak Ridge National Lab
Steve Brown	Univ of Otago, Dunedin, New Zealand	2002.10-2005.11	Staff Scientist, Oak Ridge National Lab
Terry Gentry	Univ of Arizona	2003.8-2005.11	Assist Prof, Texas A&M Univ
Xichun Zhou	Univ of Singapore	2001.8-2005.11	Staff Scientist, Adatech Inc, Denver, CO
Haichun Gao	Purdue Univ	2002.2-2008.4	Professor, Zhejiang Univ
Zhili He	Australian National Univ, Australia	2003.2-2005.11	Research Assist Prof, Univ of Oklahoma
Weimin Gao	Penn State Univ	2001.9-2005.3	Staff Scientist, Brookheaven National Lab
Soumitra Barua	Nagoya Univ Graduate School of Medicine	2003.9-2006.9	Postdoc, Univ of Oklahoma Medical School
Qiang He	Univ of Illinois at Urbana-Champaign	2003.8-2005.8	Assist Prof, Univ of Tenn, Knoxville
Amudhan Venkateswaran	Uniformed Services University of the	2003.1-2004.2	Postdoc, Oak Ridge National Lab

	Health Sciences (USUHS), Bethesda, Maryland		
Tingfen Yan	Northeastern Forestry Univ., Harbin China	2003.1-2005.11	Postdoc, Oak Ridge National Lab
Youlboong Sung	Georgia Institute of Technology	2004.8-2006.8	Staff Scientist, Research Institute of Industrial Science and Technology, South Korea.
Gene Wickam	Univ of Indiana	2003.8-2005.11	Private firm
Laurie Kellogg	Univ of Minnesota	2005.12-2007.9	Law School, Univ of Minnesota
Hongchen Jiang	Miami Univ	2007.11-2008.10	Assistant Professor, China GeoSciences University
Helong Jiang	Univ of Singapore	2006.9-2008.10	One Hundred Scholar, Professor, Institute of Lake and River, Chinese Academy of Science
Housna Mouttaki	Univ of Oklahoma	2007.11-2008.10	France
Aihua Liu	Tohoku University, Japan	2008.11-2009.10	100 Scholar Plan, Qingdao Biomass Energy and Engineering, Chinese Academy of Sciences
Yuting Liang	Tsinghua University	2009.8-2010.7	Changzhou Technology Univ, China
Sanghoon Kang	Univ of Virginia	2004.9-2010.8	Assistant Prof, Univ of Texas, Houston
Aifen Zhou	Shandong Univ	2005.12-2011.1	Research Scientist, OU
Joy Van Nostrand	Univ of South Carolina Medical School	2006.4-2011.1	Research Scientist, OU

Dongru Qiu	Keo Univ, Japan	2008.4-2011.3	Professor, 100 Scholar Plan, Institute of Hydrobiology, Chinese Academy of Sciences,
Jin Zhang	Iowa State Univ	2010.10-2011.8	Private Firm
Yi-Huei Jiang	National Tsinghua University, Taiwan	2009.8-2011.9	Private Firm
Lei Cheng	North Carolina State Univ	2010.5-2012.5	Penn State Univ
Jincai Ma	Rutgers University	2011.7-2012.5	Lawrence Livermore National Lab
Yongjin Lee	University of Georgia	2009.8-2013.9	Assistant Professor, Albany State University, Albany, GA
Kai Xue	Cornell Univ	2009.1-2014.6	Private Firm, China
Shengjing Shi	Univ of California at Berkeley	2012.12-2014.6	UC Berkeley
Ye Deng	Zhejiang Univ	2007.11-2014.7	Research Center for Eco-Environmental Sciences (RCEES)
Huaqun Yin	Central South University	2012.9-2014.7	Central South University, Changsha
Yuan Li	University of Tsukuba, Japan	2012.1-2014.12	
Jianjun Wang	Nanjing Institute of Geography and Limnology, Chinese Academy of Sciences	2014.3-2015.3	Associate Professor at Nanjing Institute of Geography and Limnology, Chinese Academy of Sciences
Christopher Hemme	Univ of Missouri, Columbus	2003.4-2014.5	Research Scientist, University of Southern California

Yongchao Li	Cornell Univ	2011.7-2015.3	Microbiologist, Tulsa Medical Center
Qingyun Yan	Institute of Hydrobiology, CAS, Wuhan	2014.9-2015.8	Associate Professor

### **Postmasters or BS trained**

	From		Current position
Heshu Huang	Univ of Georgia	1997.3-2000.4	Private firm
Xiaoyun Qiu	Fudan Univ, China	1998.8-1999.9	Ph.D candidate, Mich State Univ
Julia Stair	Univ of Tennessee	2001.5-2001.11	Research scientist, Univ of Tennessee
Debra Beth Arnett	Univ of Tennessee	2001.4-2002.5	Private firm
Hongbin Pan		2003.4-2004.9	Oak Ridge National Lab
Dawn Stanek	Univ of Georgia	2002.3-2004.3	Research scientist, Oak Ridge National Lab
Lisa Fagan	BS, Univ of Tennessee	2002.1-2003.12	Technician, Oak Ridge National Lab
Joy M. Pelfrey	BS, Univ of Oklahoma	2006.1-2007.1	Private firm
Patricia J. Waldron	Univ of Massachusetts	2006.8-2000.1	Private firm
Mark H. Pinkerton	Drexel Univ	2010.8-2011.7	Private firm

### **Past visiting Ph.D or MS students mentored (Did thesis in my lab)**

	From	Time periods	Present position
Xueduan Liu	Ph.D, Central South Univ	2000.8-2003.11	Shenhua scholar, Central South Univ
Liyou Wu	Ph.D, Hunan Agricultural Univ	1997.11-2001.12	Research assistant Prof, Univ of Oklahoma
Huaquang Hua	Central South Univ	2004.5-2007.5	Assistant prof, Central South Univ
Laurel Crosby	Stanford Univ	2002.1-2003.12	Postdoc, Stanford Univ
Xiaohu Wang	Baylor College of Medicine	2004.3-2005.11	Postdoc, Baylor College of Medicine
Yi Wen	Stanford Univ	2003.3-2005.9	Stanford Univ
Feng Luo	University of Texas, Dallas	2003.4-2004.12	Clemson Univ, SC
Qi Ye	Univ of Georgia	2003.1-2004.8	Univ of Georgia
Ye Deng	Zhejiang Univ	2005.12-2007.12	Postdoc at OU

Qichao (Philloid) Tu	Zhejiang Univ	2007.8-2008.8	Ph.D student at OU
Yili Liang	Central South Univ	2006.3-2009.1	Central South Univ
Yuting Liang	Tsinghua Univ	2006.12-2009.3	Tsinghua Univ
Jian Wang	Tsinghua Univ	2008.10-2009.9	Ph. D Candidate at Tsinghua Univ
Xiaoyang Zhi	Yunnan Univ	2008.11-2010.5	Ph. D Candidate at Yunnan Univ
Lin Lu	Qingdao Institute of Biomass Energy and Bioprocessing Technology, Chinese Academy of Sciences	2008.7-2010.6	Ph.D candidate
Shengmu Xiao	Donghua University	2009.4-2010.2	Donghua University, Shanghai
Yanfei Chen	Zhejiang Univ	2010.2-2010.8	Ph.D candidate
Jianping Xie	Central South Univ	2007.5-2010.9	Ph.D candidate
Wenzhong Liu	Harbin Institute of Technoloy	2008.4-2010.10	Ph.D candidate
Hao Yu	Harbin Institute of Technoloy	2008.9-2010.10	Ph.D candidate
Jinbo Xiong	Huazhong Agricultural Univ	2008.9-2010.9	Ph. D Candidate
Su Xu	Wuhan Univ	2010.8-2011.8	Ph.D candidate
Shijie Bai	Xiamen University	2009.10-2011.10	Ph.D candidate
Sharon Zhou	Central South University	2010.11-2012.3	Master student
Linfang Gao	Harbin Institute of Technoloy	2009.1-2012.9	Ph.D candidate
Qiao Ma	Dalian Technology University	2012.9-2013.8	Ph.D student
Di Cui	Harbin Institute of Technology	2012.9-2013.9	Ph.D student
Yu Wang	Xianmen Univ	2011.12-2013.5	Ph.D student
Caiyun Yang	Xiamen University	2011.9-2013.7	Ph.D student
Linwei Wu	Tsinghua Univ	2013.10-2014.11	Ph.D student
Yu Xia	Tsinghua Univ	2013.10-2014.10	Ph.D. student
Lina Shen	Tsinghua Univ	2012.1	Ph.D candidate

### **Ph.D. committee members**

	From	Time periods
Xiaoyun Qiu	Michigan State Univ	1999-2004

Laurel Crosby	Stanford Univ	1999-2003
Wim De Windt	Ghent University, Belgium	1999-2003
Weiming Liu	Electrical and Computer Engineering, Univ. of Oklahoma	2006-2010
Xia Xu	Microbiology and Plant Biology, Univ of Oklahoma	2008-2012
Huang Chen	Biochemistry, Univ of Oklahoma	2012
Kangmei Zhao	Dept of Microbiology and Plant Biology, Univ. of Oklahoma	2012
Yuchen Qiu	Electrical and Computer Engineering, Univ. of Oklahoma	2012

### **Past visiting scholars and students**

	From	Time periods	Current position
Beicheng Xia	Zhongshan Univ	1998.8-2000.9	Prof, Zhongsha Univ
Zhijian Wang,	Zhongshan University	2004.8-2005.10	Assistant Prof, Zhongshan University
Huiwen Zhang	Institute of Applied Ecology, Chinese Academy of Sciences	2004.11-2005.11	Institute of Applied Ecology, Chinese Academy of Sciences
Wen-Tso Liu,	Singapore University	2004.1-2004.4	Prof, Singapore University
Yimin Wang	Savannah River Ecology Laboratory, Aiken, SC.	2004.1-2004.12	Private firm
Zhiyong Huang	Univ of Georgia	2004.4-2004.8	Univ of Georgia
Tingfen Yan	Northeastern Forestry University, Harbin, China	2000.11-2004.4	Oak Ridge National Lab
Lara Martin	Virginia Tech	1998.8-1999.8	
Matthew Wallenstein	Duke Univ	2002.6-2003.8	
Fengping Wang	The 3 <sup>rd</sup> Institute of Oceanography	2006.11-2007.3	The 3 <sup>rd</sup> Institute of Oceanography
Etienne Yergeau	Netherlands Institute of Ecology, The Netherlands	2005.12-2006.2	Netherlands Institute of Ecology, The Netherlands
Neslihan Tas	Wageningen Univ, The Netherlands	2006.12-2007.5	Wageningen Univ, The Netherlands
Gina La Spada	Istituto Sperimentale Talassografico, CNR, Messina, Italy	2006.12-2007.5	Istituto Sperimentale Talassografico, CNR, Messina, Italy
Aijie Wang	Harbin Institute of Technology	2007.7-2007.8	Professor, Harbin Institute of Technology
Olivia Mason	Oregon State Univ	2007.9-2007.10	Oregon State Univ
Yuting Liang	Tsinhua Univ, Beijing,	2006.12-	Tsinhua Univ, Beijing,

	China	2007.12	China
Zhiguo Fang	Eco-Environmental Research Center Chinese Academy of Science	2006.8-2008.4	Associate Professor, Hangzhou Industrial Univ
Di Liu	Institute of Microbiology, Chinese Academy of Science (CAS)	2008.2-2008.5	Scientist, Institute of Microbiology, CAS
Jie Yu	Chinese Academy of Science (CAS)	2008.3-2008.5	Scientist, Institute of Microbiology, CAS
Manuela di Lorenzo	Centre for Terrestrial Ecology, Netherlands Institute of Ecology	2008.5-2008.5	Centre for Terrestrial Ecology, Netherlands Institute of Ecology
Lur Epelde	Netherlands Institute of Ecology, The Netherlands	2008.7-2008.7	Netherlands Institute of Ecology, The Netherlands
Eiko Kuramae	Netherlands Institute of Ecology, The Netherlands	2008.7-2008.7	Netherlands Institute of Ecology, The Netherlands
Guochun Ding	Julius Kühn-Institut Bundesforschungsinstitut für Kulturpflanzen Institut für Epidemiologie und Pathogendiagnostik	2008.6-2008.7	Julius Kühn-Institut Bundesforschungsinstitut für Kulturpflanzen Institut für Epidemiologie und Pathogendiagnostik
Zhiguo Fang	Eco-Environmental Research Center, Chinese Academy of Sciences	2006.8-2008.5	Assistant Professor, Zhejiang Industrial Univ
Meiying Xu	Guangzhou Institute of Microbiology	2006.8-2008.9	Associate Professor, Guangzhou Institute of Microbiology
Tuyong Yi	Huanan Agri Univ	2008.9-2009.12	Associate Professor
Xinyu Li	Shengyang Institute of Ecology, CAS	2010.4-2010.9	Assocaite Professor
Jiangtao Li	Tongji University	2010.10-12	Lecturer
Fabiana Paula	University of Sao Paulo	2010.10-12	Ph.D candidate
Zhengmei Lu	Zhangjiang Univ	2008.12-2011.3	Associate Professor
Pigang Liu	Harbin Institute of Technology	2009.11-2011.8	Associate Professor
Jing Li	Sichun University	2011.5-7	Associate Professor
Arthur Escalas	Université Montpellier II	2012.2-3	Ph.D. candidate
Jie Ma	Rice University, Texas	2012.4-2012.7	Ph.D. candidate

Hamed Azarbad	VU University, Amsterdam	2012.3-4	Ph.D. candidate
Xiaohui Wang	Tsinghua University	2011.9-2012.4	Postdoc
Shouwen Chen	Huazhong Agricultural Professor	2012.1-5.2012	Professor
Dongrui Zhou	Hehai University	2012.2-9.2012	Associate Professor
Xiaofei Lu	Chinese Academy of Agricultural Sciences	2011.1-2012.8	Postdoc
Yunfu Gu	Sichun University	2011.9-2012.9	Associate Professor
Yuanyuan Qu	Dalian Technology University	2012.9-2013.8	Associate Professor
Yanying Zhang	South China Sea Institute of Oceanology, CAS	2013.8- 2013.10	Associate Professor
Bin Liang	Harbin Institute of Technology	2012.3- 2013.11	Ph.D student
Xiaobo Wang	Institute of Applied Ecology, Chinese Academy of Sciences	2013.4- 2013.11	Research scientist
Yanying Zhang	South China Sea Inst of Oceanology, Guangzhou, CAS	2013.8- 2013.11	Associate Professor
Wanpeng Wang	The third institute of Oceanography State Oceanic Administration, Xiamen China	2013.10- 2013.12	Associate Professor
Qingyun YAN	Institute of Hydrobiology, Chinese Academy of Sciences, Wuhan	2013.4-2014.5	Associate Professor
Hui Li	Inst of Applied Ecology; CAS; Shenyang China	2014.3-2014.5	Research scientist
Yu Zhang	Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences	2013.7-2014.6	Professor
Chongqing Wen	Guangdong Ocean University, Chin	2011.11- 2014.6	Associate Professor
Lian Ma	Coll of Life Science, Yangtze Univ, Hubei, China	2013.12- 2014.6	Associate Professor
Jiabao Li	Chendu Institute of Biology, Chinese Academy of Sciences	2013.3-2014.8	Associate Professor
Hua Qin	Zhejiang A & F University	2013.11- 2014.9	Associate Professor

Rongjiu Shi	Inst of Applied Ecology; CAS; Shenyang China	2013.10- 2014.12	Associate Professor
Fenliang Fang	Chinese Academy of Agricultural Sciences, Beijing	2013.12- 2015.1	Associate Professor
Xiaoxiao Zhang	Chinese Academy of Agricultural Sciences, Beijing	2013.12- 2014.12	Associate Professor
Lijun Chen	Inst of Soil Science- CAS, Nanjing, China	2014.10- 2015.1	Ph.D student
Zhongzheng Chen	South China Agricultural Univ, Guangzhou, China	2014.8-2015.8	Associate Professor
Yonghua Zhu	Hunan Univ, Changsha	2014.9-	Professor
Ze He	Chinese Acad of Geosciences	2015.3-2015.8	
Zhenxin Li	Northeastern Normal University, Changchun city	2014.5-2015.5	Associate Professor

### **Past visiting undergraduate students and interns**

Patrick E. McDonel	University of Indiana at South Bend	1998.8-1999.8	Ph.D candidate, Univ of Calif, Berkeley
Zakee Sabree	Florida A&M Univ	1998.8-1998.12	Univ of Wisconsin, Madison, WI
Jestus Kim	Emory University	1999.6-1999.8	Emory Univ
Nicholas Laszio		2001.9-12	
Jon Brooks Boroughs		2000.6-2000.8	High School Teacher
Daree Russell		2000.4-2001.3	
Roshitha V. Dunstan		2001.6-2001.8	
Shreni Keniya		2001.8-2001.12	
Katie Bergman		2001.6-2001.8	
Samantha Danielle		2002.5-2002.8	
Scott J. Pesek	Univ of Tennessee	2003.8-2003.12	Univ of Tennessee
Funjun Zhou	Univ of Tennessee	2004.8-2004.12	Univ of Tennessee
Kevin Kuhaida		2000.10-2000.12	
Rachel Lynch		2004.5-2004.8	
Melissa Schuyler		2004.5-2004.8	