



## CURRICULUM VITAE

### **Jinjun Kan, Ph. D**

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Microbiology  
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### PROFESSIONAL EXPERIENCE

**Associate Research Scientist**, 2017-present. Microbiology, Stroud Water Research Center, PA  
**Assistant Research Scientist**, 2010-2017. Microbiology, Stroud Water Research Center, PA

**Adjunct Professor**, 2012-present. Department of Biology, University of Pennsylvania, PA  
**Adjunct Professor**, 2012-present. Department of Plant and Soil Sciences, University of Delaware, DE

**Postdoc Research Fellow**, 2006-2010. Department of Earth Sciences, Univ. of Southern California

**Graduate Research Assistant**, 2001-2006. University of Maryland College Park.

**Research Assistant**, 1999-2001. Department of Biology, Hong Kong University of Science and Technology, Clear Water Bay, Hong Kong

**Research Assistant**, 1997-1999. First Institute of Oceanography, State Oceanic Administration, Qingdao, China

### EDUCATION

**PhD**, 2006. Environmental Molecular Microbiology/Biotechnology, University of Maryland College Park. Dissertation: Bacterioplankton in the Chesapeake Bay: genetic diversity, population dynamics, and community proteomics.

**MS**, 1997. Ecology. First Institute of Oceanography, State Oceanic Administration, Qingdao, China.

**BS**, 1994. Ecology and Environmental Sciences, Life Science School, Ocean University of China, Qingdao, China.

## MAJOR GRANTS AND AWARDS

1. NSF EAR-0724971. 2009-2014. *Christina River Basin Critical Zone Observatory (CZO): Spatial and temporal integration of carbon and mineral fluxes: a whole watershed approach to quantifying anthropogenic modification of critical zone carbon sequestration.* \$2,444,480.
2. ONR SPAWAR. 2011-2013 *Marine Sediment Microbial Fuel Cells: A collaborative research with Naval Research Laboratory.* \$40,000.
3. NSF DEB-1120717. 2011-2015. *Meta-Ecosystems and the Upstream Legacy: Influence of Dissolved Organic Matter on the Structure and Function of Streambed Bacterial Communities.* \$821,799.
4. NSF DEB-1052716. 2011-2016. *Long Term Research in Environmental Biology (LTREB): Trajectory for the recovery of stream ecosystem structure and function during reforestation.* \$450,000.
5. DOJ. DJ#90-5-1-1-18628. 2012-2013. *Wetland function characterization at Painsville, Ohio.* \$160,000.
6. NSF 1331856. 2014-2015. *Christina River Basin Critical Zone Observatory (CZO): a whole watershed approach to integrating feedbacks between water, mineral and carbon fluxes in human landscapes.* \$390,676.
7. USDA AFRI 2015-67020-23585. 2015-2017. *Large runoff flux and transformation of particulate nitrogen (PN) following large storms: A critical but unexplored component of N cycling in watersheds.* \$185,000.
8. Suez/United Water. 2015-2016. *Pathogen and Water Quality Monitoring at White Clay Creek: Assessing the benefits of watershed management programs and water safety plans.* Phase 1-Hydrological monitoring infrastructure deployment and maintenance. \$47,950.
9. Suez/United Water. 2016-2017. *Pathogen and Water Quality Monitoring at White Clay Creek: Assessing the benefits of watershed management programs and water safety plans.* Phase 2-Baseflow and storm flow sample collection and analysis. \$170,000.
10. White Clay Watershed Association (WCWA) and City of Newark. 2016-2024. *Bacterial monitoring and source tracking at White Clay Watershed.* \$118,000.
11. Starrett Foundation. 2016-2023. *Bacterial monitoring at Red Clay Watershed.* \$75,000.

12. William Penn Foundation 158-15. 2016-2020. *Supporting Citizen Science within the DRWI cluster teams.* \$2,500,000.
13. NSF DEB-1557063. 2016-2021. *Long Term Research in Environmental Biology (LTREB) renewal: Trajectory for the recovery of stream ecosystem structure and function during reforestation.* \$450,000.
14. NFWF 43759. 2014-2017. *Reducing flood impacts and restoring habitat in the Brandywine River Watershed (PA).* NFWF, \$3,030,000.
15. PA DEP 2015-2020. *Transforming water quality in the Sharitz headwaters of Brandywine Creek.* \$874,244.
16. USDA-AFRI 2017-67019-26330. 2017-2020. *Significance of stream-bank legacy sediments as nutrient (N and P) sources and implications for aquatic nutrient cycling.* \$500,000.
17. Fair Hill Training Center 2017-2020. *Bacterial and water chemistry monitoring at Fair Hill Training Center and adjacent headwaters.* \$100,000.
18. William Penn Foundation. 188-17. 2018-2023. *Evaluating how conventional, conservation, and organic farming management practices enhance soil health and improve water quality.* \$2,590,000.
19. Pennsylvania Department of Agriculture and Rodale Institute. 2019-2024. *Impact of management of practices on winter squash yield and post-harvest nutrient density.* \$216,150.
20. Foundation Prince Albert II DeMonaco. 2019-2021. *Mitigating agricultural pollution of fresh water and combating climate change by restoring soil health through conservation and organic agricultural practices.* \$283,675.
21. USDA-AFRI 2020-67019-31164. 2020-2023. *Back from the past: Recovery of nutrient processes and microbial communities in relict, hydric soils following restoration.* \$500,000.
22. USDA-AFRI 2020-67019-31024. 2020-2023. *Biological nitrogen removal in sediment plumes-a critical but missing component of watershed models.* \$499,899.
23. Pennsylvania Department of Agriculture. 2021-2023. *Impact of pesticides on soil and vegetables grown in organic and conventional systems in a long-term vegetable system trial.* \$127,887.

24. NFWF-WPF. 2021-2022. Delaware River Restoration Fund Project Impact Assessment (PIA). \$295,000.
25. Foundation for Food and Agriculture Research-CA20-SS-0000000152. 2021-2025. *Exploring the link between soil and human health: Protein, protein quality, and the nutraceutical amino acid ergothioneine*. \$1,000,000.
26. NSF EAR-2049073. 2021-2024. *Resolving Sediment Connectivity between Rivers and Estuaries by Tracking Particles with their Microbial Genetic Signature*. \$452,047.
27. Pennsylvania Department of Agriculture. 2022-2024. *Impact of soil microbes on bean nutrient quality in organic and conventional systems*. \$123,520.
28. NSF EAR-2213856. 2022-2025. *Saturated, suffocated, and salty: Hotspots of ammonium-N and dissimilatory nitrate reduction to ammonium (DNRA) - denitrification dichotomy in anoxic riparian soils*. \$249,848.
29. USDA-AFRI 2023-2026. Anthropogenic soil memories: Human legacies shape physical, chemical and microbial composition of riparian soils. \$650,000.
30. USDA-AFRI 2023-67020-40173. 2023-2027. Agriculture viromes in farming systems: effects on microbiome assembly, function and crop production. \$850,000.

### PEER-REVIEWED JOURNAL PUBLICATIONS

(Asterisk\* denotes graduate students/postdocs advised or co-advised by Kan)

1. Bier\*, R., M. Daniels, D. Oviedo-Vargas, M. Peipoch, J. Price, A. Smith, and **J. Kan**. Long-term agricultural systems differentiate surface soil microbiomes by fertility source, tillage, and cover crops. *Agriculture, Ecosystems & Environment*. Submitted.
2. Wang\*, H., F. Liu, M. Wang, Y. Bettarel, Y. Eissler, F. Chen and **J. Kan**. Community structure and distribution of planktonic eukaryotes in the Chesapeake Bay: Contrasting responses of abundant and rare taxa to spatiotemporal estuarine gradients. *Appl. Environ. Microbiol.* Submitted.
3. Peck, E., S. Inamdar, **J. Kan**, M. Peipoch, A. Gold, D. Merritts, R. Walter, E. Hyland, K. Wegmann, A. Yaculak, and M. Rahman. Back from the past? Comparison of buried hydric and modern wetland soils and relative changes following one-year incubation on a restored floodplain. *Restoration Ecology*. Submitted.
4. Joshi, B., E. Bacmeister, E. Peck, M. Peipoch, **J. Kan**, and S. Inamdar. Sediment-nitrogen (N) connectivity: Suspended sediments in streams as N exporters and reactors for denitrification and assimilatory N uptake during storms. *Frontiers in Water*. Submitted.

5. He, C, D. Fucich, A. Sosa, H. Wang, **J. Kan**, J. Liu, Y. Xu, M. Gonsior, and F. Chen. Deep metagenomic sequencing unveils novel *Chloroflexi* taxa in the deep ocean and unique cell wall structure of SAR202 bacteria. *Microbiome*. Submitted.
6. Price\*, J., D. Oviedo-Vargas, M. Peipoch, M. Daniels, and **J. Kan**. 2023. Precipitation and soil moisture dominate N-cycling within fields transitioning from conventional to organic farming. *Ecosphere*. In revision.
7. **Kan, J.**, O Lazareva, D. Oviedo-Vargas, S. Mcallister, and C. Chan. 2023. Porewater microbiomes in buried wetland soils: synergic effects of water chemistry and redox gradients driven by hydrological processes. *Freshwater Biology*. In revision.
8. **Kan, J.**, E. Peck, L. Zglesweski, M. Peipoch and S. Inamdar. 2023. Mill dams impact microbiome structure and depth distribution in accumulated sediments. *Frontiers in Microbiology*. 14. doi: 10.3389/fmicb.2023.1161043
9. Bier\*, R., J. Mosher, L. Kaplan, **J. Kan**. 2023. Spatial scale impacts microbial community composition and distribution within and across stream ecosystems in North and Central America. *Environmental Microbiology*. <https://doi.org/10.1111/1462-2920.16396>
10. Alowaifeer, A., S. Clingenpeel, **J. Kan**, P.E. Bigelow, M. Yoshinaga, B. Bothner, and T.R. McDermott. 2023. Arsenic and Mercury distribution in an aquatic food chain: Important of femtoplankton and picoplankton filtration fractions. *Environmental Toxicology and Chemistry*. 42:225-241.
11. Liu, Q., Li, Y., Wang, H., Yang, G., **Kan, J.**, Yang, M., ... & Jiang, Y. 2023. Assembly and Network Stability of Planktonic Microorganisms under the Influence of Salinity Gradient: An Arctic Case Study from the Lena River Estuary to the Laptev Sea. *Microbiology Spectrum*, e02115-22.
12. Inamdar, S. P., Peck, E. K., Peipoch, M., Gold, A. J., Sherman, M., Hripto, J., ... & **Kan, J.** 2022. Saturated, suffocated, and salty: Human legacies produce hot spots of nitrogen in riparian zones. *Journal of Geophysical Research: Biogeosciences*, e2022JG007138.
13. Pujari\*, L., **Kan, J.**, Xin, Y., Zhang, G., Noman, M.A., Nilajkar, S. and Sun, J., 2022. Deciphering the diversity and distribution of chromophytic phytoplankton in the Bohai Sea and the Yellow Sea via RuBisCO genes (rbcL). *Marine Pollution Bulletin*. 184: p.114193.
14. Bacmeister\*, E., Peck, E., Bernasconi, S., Inamdar, S., **Kan, J.** and Peipoch, M. 2022. Stream nitrogen uptake associated with suspended sediments: a microcosm study. *Frontiers in Environmental Science*: p.2068.
15. Wang, J., M. Peipoch, X. Guo, and **J. Kan**. 2022. Convergence of biofilm successional trajectories initiated during contrasting seasons. *Frontiers in Microbiology*. 13: 991816.
16. Lazareva\*, O., **J. Kan**, C. Chen, and D. L. Sparks. 2022. Coupled dynamics of aqueous biogeochemistry in contrasting floodplain environments: Implications for Critical Zone carbon sequestration along redox gradients. *Applied Geochemistry* 145: 105413
17. Wu\*, C., **J. Kan**, D. Narale, K. Liu, and J. Sun. 2022. Dynamics of bacterial communities during a seasonal hypoxia at the Bohai Sea: Coupling and response between abundant and rare populations. *Journal of Environmental Sciences* 111: 324-339.
18. Ouellet\*, V., M. Daniels, M. Peipoch, L. Zgleszewski, N. Watson, E. Gibson, S. Krause, and **J. Kan**. 2022. Beyond the light effect: How hydrologic and geomorphologic stream

- features control microbial distribution across pool sequences in a temperate headwater stream. *Ecohydrology*. 15(2): DOI: 10.1002/eco.2380
19. Wang\*, H., F. Chen, C. Zhang, M. Wang and **J. Kan**. 2021. Estuarine gradients dictate spatiotemporal variations of microbiome networks in the Chesapeake Bay. *Environmental Microbiome* 16: 22. <https://doi.org/10.1186/s40793-021-00392-z>
  20. Akinwole, P., **J. Kan**, L. Kaplan, and R. Findlay. 2021. Spatial variability in streambed microbial community structure across two watersheds. *Microbiology Spectrum* 9(3) e01972-21.
  21. Lewis, E, S. Inamdar, A.J. Gold, K. Addy, T.L.E. Trammell, D. Merritts, M. Peipoch, P.M. Groffman, J. Hripto, M. Sherman, **J. Kan**, R. Walter, and E. Peck. 2021. Draining the landscape: How do nitrogen concentrations in riparian groundwater and stream water change following milldam removal? *JGR Biogeosciences*. <https://doi.org/10.1029/2021JG006444>
  22. Rosier, C.L., S.W. Polson, V. D'Amico, **J. Kan**, and T.L.E. Trammell. 2021. Urbanization pressures alter tree rhizosphere microbiomes. *Scientific Reports* 11: 9447.
  23. Liu\*, Y., **J. Kan**, J. Yang, M.A. Noman, and J. Sun. 2021. Bacterial community composition and chromophoric dissolved organic matter differs with culture time of *Skeletonema dohrnii*. *Diversity* 13(4):150.
  24. Pujari\*, L., D. Narale, **J. Kan**, C. Wu, G. Zhang, C. Ding, L. Li, and J. Sun. 2021. Distribution of chromophytic phytoplankton in the eddy-induced upwelling region of the west Pacific Ocean revealed using rbcL genes. *Frontiers in Microbiology* 12: 596015.
  25. Liu\*, Y., **J. Kan**, C. He, Q. Shi, Y. Liu, Z. Fan, and J. Sun. 2021. Epiphytic bacteria are essential for the production and transformation of algae-derived carboxyl-rich alicyclic molecule (CRAM)-like DOM. *Microbiology Spectrum* 9(2) e01531-21.
  26. Inamdar, S., M. Peipoch, A. J. Gold, E. Lewis, J. Hripto, M. Sherman, K. Addy, D. Merritts, **J. Kan**, P. M. Groffman, R. Walter, and T.L.E. Trammell. 2021. Ghosts of landuse past: legacy effects of milldams for riparian nitrogen (N) processing and water quality functions. *Environmental Research Letters*. 16: 035016.
  27. Krieg\*, C., E. Johnson, E. Peck, **J. Kan**, and S. Inamdar. 2021. After the storm: fate and leaching of particulate nitrogen (PN) in the fluvial network and the influence of watershed sources and moisture conditions. *Water* 13(22): 3182.
  28. Wang\*, H., R. Bier, L. Zgleszewski, M. Peipoch, E. Omondi, A. Mukherjee, F. Chen, C. Zhang, and **J. Kan**. 2020. Distinct distribution of Archaea from soil to freshwater to estuary: implications of archaeal composition and function in different environments. *Frontiers in Microbiology*. 11:n576661.
  29. Mattern, K., A. Lutgen, N. Sienkiewicz, G. Jiang, **J. Kan**, M. Peipoch, and S. Inamdar. 2020. Stream Restoration for Legacy Sediments at Gramies Run, Maryland: Early Lessons from Implementation, Water Quality Monitoring, and Soil Health. *Water*. 12: 2164; doi:10.3390/w12082164
  30. Inamdar, S., N. Sienkiewicz, A. Lutgen, G. Jiang, and **J. Kan**. 2020. Streambank legacy sediment in surface waters: Phosphorus sources or sinks? *Soil Systems*. 4: 30; doi:10.3390/soilsystems4020030
  31. Wang\*, H., C. Zhang, F. Chen, and **J. Kan**. 2020. Re-examining Chesapeake Bay bacterioplankton community with high throughput sequencing analysis. *Limnology and*

- Oceanography*. 65: 3032-3045. doi: 10.1002/lno.11572
32. Payne, A., A. Davidson, **J. Kan**, M. Peipoch, R. Bier, and K. Williamson. 2020. Widespread cryptic viral infections in lotic biofilms. *Biofilm*. 2: 100016
  33. Sienkiewicz\*, N., R. Bier, J. Wang, L. Zgleszewski, A. Lutgen, G. Jiang, K. Mattern, S. Inamdar, and **J. Kan**. 2020. Bacterial communities and nitrogen transformation genes in streambank legacy sediments and implications for biogeochemical processing. *Biogeochemistry*. 148: 271-290.
  34. Jiang\*, G., A. Lutgen, K. Mattern, N. Sienkiewicz, **J. Kan** and S. Inamdar. 2020. Streambank legacy sediment contributions to sediment-bound nutrient yields from a Mid-Atlantic, Piedmont Watershed. *Journal of the American Water Researches Association* 56: 820-841. <https://doi.org/10.1111/1752-1688.12855>.
  35. Lutgen\*, A., G. Jiang, N. Sienkiewicz, K. Mattern, **J. Kan** and S. Inamdar. 2020. Nutrients and heavy metals in legacy sediments: concentrations, comparisons with upland soils, and implications for water quality. *Journal of the American Water Researches Association* 56: 669-691. <https://doi.org/10.1111/1752-1688.12842>.
  36. Pujari\*, L., C. Wu, **J. Kan**, N. Li, X. Wang, X. Shang, M. Wang, C. Zhou and J. Sun. 2019. Diversity and spatial distribution of chromophytic phytoplankton in the Bay of Bengal revealed by RuBisCO genes (rbcL). *Frontiers in Microbiology*. 10: 1501
  37. Wang, J., **J. Kan**, G. Qian, J. Chen, Z. Xia, X. Zhang, H. Liu, and J. Sun. 2019. Denitrification and Anammox: understanding nitrogen loss from Yangtze Estuary to the East China Sea (ECS). *Environmental Pollution*. 252: 1659-1670.
  38. Wu\*, C., **J. Kan**, H. Liu, L. Pujari, C. Guo, X. Wang, and J. Sun. 2019. Heterotrophic bacteria dominate diazotrophic community in the Eastern Indian Ocean (EIO) during pre-southwest monsoon. *Microbial Ecology*. 78: 804-819.
  39. **Kan, J.** 2018. Storm events restructured bacterial community and their biogeochemical potentials. *JGR Biogeosciences*. 123: 2257-2269.
  40. Zhang, Y., X. Song, P. J. Harrison, S. Liu, Z. Yu, **J. Kan**, P. Qian, H. Liu, and K. Yin. 2018. Regeneration and utilization of nutrients during the collapse of red tide of ciliate *Mesodinium rubrum*: influence on phytoplankton specie composition. *Science China: Earth Sciences*. 61: doi: 10.1007/s11430-017-9233-x
  41. Johnson\*, E., S. Inamdar, **J. Kan**, and R. Vargas. 2018. Particulate organic matter composition in stream runoff following large storms: Role of POM. *JGR Biogeosciences*. 123: 660-675.
  42. Qian, G, J. Wang, **J. Kan**, X. Zhang, Z. Xia, X. Zhang, Y. Miao, and J. Sun. 2018. Diversity and distribution of anammox bacteria in water column and sediments of the Eastern Indian Ocean. *Int. Biodeterioration & Biodegradation*. 133: 52-62.
  43. Petrakis\*, S., A. Seyfferth, **J. Kan**, S. Inamdar, and R. Vargas. 2017. Influence of experimental extreme water pulses on greenhouse gas emissions from soils. *Biogeochemistry*. 133: 147-164.
  44. Wang\*, J., **J. Kan**, X. Zhang, Z. Xia, X. Zhang, G. Qian, Y. Miao, X. Leng, and J. Sun. 2017. Archaea dominate the Ammonia-Oxidizing community in deep-sea sediments of the Eastern Indian Ocean - from the Equator to the Bay of Bengal. *Front. Microbiol.* 8: 415.
  45. Pan\*, W., **J. Kan**, S. Inamdar, C. Chen, and D. Sparks. 2016. Dissimilatory microbial

- iron reduction release DOC (dissolved organic carbon) from carbon-ferrihydrite association. *Soil Biol. & Biochem.* 103: 232-240.
46. **Kan, J.**, S. Clingenpeel, C. Dow, T. McDermott, R. Macur, W. P. Inskeep, and K. Nealson. 2016. Geochemistry and mixing drive the spatial distribution of free-living Archaea and Bacteria in Yellowstone Lake. *Front. Microbiol.* 7: 210.
  47. Rosier\*, C. L., D. F. Levia, J. T. Van Stan, and **J. Kan.** 2016. Seasonal dynamics of soil microbial community structure in the proximal area of tree boles: possible influence of stemflow. *Plant and Soil.* 73: 108-118.
  48. Wang, J., L. Borecki, X. Zhang, D. Wang, **J. Kan,** and J. Sun. 2016. A snapshot on spatial and vertical distribution of bacterial communities in the Eastern Indian Ocean. *Acta Oceanologica Sinica.* 35: 85-93.
  49. Zhang\*, X., **J. Kan,** J. Wang, H. Gu, J. Hu, Y. Zhao, and J. Sun. 2015. First record of a large-scale bloom-causing species *Nannothloropsis granulata* (Monodopsidaceae, Eustigmatophyceae) in China Sea Waters. *Ecotoxicology.* 24: 1430-1441.
  50. Inskeep, W. P., Z. J. Jay, R. E. Macur, S. Clingenpeel, A. Tenney, D. Lovalvo, J. P. Beam, M. A. Kozubal, W. C. Shanks, L. A. Morgan, **J. Kan,** Y. Gorby, S. Yooseph, and K. Nealson. 2015. Geomicrobiology of sublacustrine thermal vents in Yellowstone Lake: geochemical controls on microbial community structure and function. *Front. Microbiol.* 6: 1044.
  51. Stone\*, M. M., **J. Kan,** and A. F. Plante. 2015. Parent material and vegetation influence bacterial community structure and nitrogen functional genes along deep tropical soil profiles at the Luquillo Critical Zone Observatory. *Soil Biol. & Biochem.* 80: 273-282.
  52. Rosier\*, C., J. van Stan, L. Moore, J. Schrom, T. Wu, J. Reichard, and **J. Kan.** 2015. Forest canopy structural controls over throughfall affect soil microbial community structure in an epiphyte-laden maritime oak stand. *Ecohydrology.* 8: 1459-1470.
  53. Hong, Y., X. Xu, **J. Kan,** and F. Chen. 2014. Linking seasonal inorganic nitrogen shift to the dynamics of microbial communities in the Chesapeake Bay. *Appl. Microbiol. Biotechnol.* 98: 3219-3229.
  54. Mosher\*, J. J., B. Bowman, E. L. Bernberg, O. Shevchenko, **J. Kan,** J. Korlach, and L. A. Kaplan. 2014. Improved performance of the PacBio SMRT technology for 16S rDNA sequencing. *J Microbiol. Methods.* 104: 59-60.
  55. Clingenpeel, S., **J. Kan,** R. E. Macur, T. Woyke, D. Lovalvo, J. Varley, W. P. Inskeep, K. H. Nealson, and T. McDermott. 2013. Yellowstone Lake Nanoarchaeota. *Front. Microbiol.* 4: 274.
  56. **Kan, J.**, A. Obraztsova, Y. Wang, J. Leather, K. G. Scheckel, K. H. Nealson, and Y. M. Arias-Thode. 2013. Apatite and chitin amendments promote microbial activity and augment metal removal in marine sediments. *OJMetal*, Heavy metal special issue. 3: 51-61.
  57. Conley, J. M., D.H. Funk, D. H. Hesterberg, L. Hsu, **J. Kan,** Y. Liu, and D. B. Buchwalter. 2013. Bioconcentration and biotransformation of selenite versus selenate exposed periphyton and subsequent toxicity to the mayfly *Centroptilum triangulifer*. *Environ. Sci. Technol.* 47: 7965-7973.



58. Jang, J.K, **J. Kan**, O Bretschger, Y. A. Gorby, L. Hsu, B. H. Kim, and K. H. Nealson. 2013. Electricity generation from microbial fuel cell using microorganisms as catalyst in cathode. *J Microbiol. Biotechnol.* 2013. 23: 1765-1773.
59. Mosher\*, J. J., E. L. Bernberg, O. Shevchenko, **J. Kan**, and L. A. Kaplan. 2013. Efficacy of a 3rd generation high-throughput sequencing platform for analyses of 16S rRNA genes from environmental samples. *J Microbiol. Methods.* 95: 175-181.
60. Futamata, H., O. Bretschger, A. Cheung, **J. Kan**, R. Owen, and K. H. Nealson. 2013. Adaptation of soil microbes during establishment of microbial fuel cell consortium fed with lactate. *J. Biosci. Bioeng.* 115: 58-63.
61. Huang, Y., Z. He, **J. Kan**, A. K. Manohar, K. H. Nealson, and F. Mansfeld. 2012. Electricity generation from a floating marine microbial fuel cell. *Bioresource Technol.* 114: 308-313.
62. Helton, R.R., K. Wang, **J. Kan**, D.H. Powell, and K.E. Wommack. 2012. Interannual dynamics of viriobenthos abundance and morphological diversity in Chesapeake Bay sediments. *FEMS Microbiol. Ecol.* 79: 474-486.
63. **Kan, J.**, and J. Sun. 2011. Bacterial community biodiversity in estuaries and its controlling factors: a case study in Chesapeake Bay. *Biodiversity Sci.* 19: 770-778.
64. **Kan, J.**, P. Chellamuthu, A. Obratsova, J. E. Moore, and K. H. Nealson. 2011. Diverse bacterial groups are associated with corrosive lesions at a granite mountain record vault (GMRV). *J. Appl. Microbiol.* 111: 329-337.
65. **Kan, J.**, Y. Wang, A. Obratsova, G. Rosen, J. Leather, K. Scheckel, K. H. Nealson, and Y. M. Arias-Thode. 2011. Marine Bacterial community response to inorganic and organic amendments in marine sediments. *Ecotoxicol. Environ. Saf.* 74: 1931-1941.
66. Rosen, G., J. Leather, **J. Kan**, and Y. M. Arias-Thode. 2011. Ecotoxicological response of marine organisms to inorganic and organic sediment amendments in laboratory exposure. *Ecotoxicol. Environ. Saf.* 74: 1921-1930.
67. **Kan, J.**, B. Flood, J. P. McCrow, J. S. Kim, L. Tan, and K. H. Nealson. 2011. A rapid fingerprinting approach to distinguish between closely related strains of *Shewanella*. *J Microbiol. Methods* 86: 62-68.
68. **Kan, J.**, S. Clingenpeel, R. E. Macur, W. P. Inskeep, D. Lavalvo, J. Varley, Y. Gory, T. R. McDermott, and K. H. Nealson. 2011. Archaea in Yellowstone Lake. *ISME J.* 5: 1784-1795.
69. Clingenpeel, S., R. E. Macur, **J. Kan**, W. P. Inskeep, D. Lavalvo, J. Varley, E. Mathur, K. Nealson, Y. Goby, T. L. Fracois, and T. R. McDermott. 2011. Yellowstone Lake: High energy geochemistry and rich bacterial diversity. *Environ. Microbiol.* 13: 2172-2185.
70. **Kan, J.**, L. Hsu, A. C. M. Cheung, M. Pirbazari, and K. H. Nealson. 2011. Current production by bacterial communities in microbial fuel cells enriched from wastewater sludge with different electron donors. *Environ. Sci. Technol.* 45: 1139-1146.
71. Williamson, K. E., **J. Kan**, S. W. Polson, and S. J. Williamson. 2011. Optimizing the indirect extraction of prokaryotic DNA from soils. *Soil Biol. & Biochem.* 43: 736-748.
72. Isaacs, L.T., **J. Kan**, L. Nguyen, P. Videau, M. A. Anderson, T. L. Wright and R. T. Hill. 2009. Comparison of the bacterial communities of wild and captive sponge *Clathria prolifera* from the Chesapeake Bay. *Mar. Biotech.* 11: 758-770.n

73. He Z., **J. Kan**, Y. Wang, Y. Huang, F. Mansfeld, and K. H. Nealson. 2009. Electricity production coupled to ammonium in a microbial fuel cell. *Environ. Sci. Technol.* 43: 3391-3397.
74. He Z., **Kan, J.**, F. Mansfeld, L. T. Angenent, and K. H. Nealson. 2009. Self-sustained phototrophic microbial fuel cells based on the synergistic cooperation between photosynthetic microorganisms and heterotrophic bacteria. *Environ. Sci. Technol.* 43: 1648-1654.
75. **Kan, J.**, S. E. Evans, F. Chen, and M. T. Suzuki. 2008. Novel estuarine bacterioplankton in rRNA operon libraries from the Chesapeake Bay. *Aquat. Microb. Ecol.* 51: 55-66.
76. Mohamed, N. M., E. Cicirelli, **J. Kan**, F. Chen, C. Fuqua, and R. T. Hill. 2008. Diversity and quorum sensing signal production of Proteobacteria associated with marine sponges. *Environ. Microbiol.* 10: 75-86.
77. Yin, K., X. Song, S. Liu, **J. Kan**, and P. Qian. 2008. Is inorganic nutrient enrichment a driving force for the formation of red tides? A case study of the dinoflagellate *Scrippsiella trochoidea* in an embayment. *Harmful Algae.* 8: 54-59.
78. **Kan, J.**, M. Suzuki, K. Wang, S.E. Evans, and F. Chen. 2007. High temporal but low spatial heterogeneity of bacterioplankton in the Chesapeake Bay. *Appl. Environ. Microbiol.* 73: 6776-6789.
79. **Kan, J.**, B. C. Crump, K. Wang, and F. Chen. 2006. Bacterioplankton community in Chesapeake Bay: Predictable or random assemblages. *Limnol. Oceanogr.* 51: 2157-2169.
80. Chen, F., K. Wang, **J. Kan**, M. Suzuki, E. Wommack, and W. Coats. 2006. Diverse and unique picocyanobacteria found in the Chesapeake Bay. *Appl. Environ. Microbiol.* 72 (3): 2239-2243.
81. **Kan, J.**, K. Wang, and F. Chen. 2006. Temporal variation and detection limit of an estuarine bacterioplankton community analyzed by denaturing gradient gel electrophoresis (DGGE). *Aquat. Microb. Ecol.* 42: 7-18.
82. **Kan, J.**, T. E. Hanson, J. M. Ginter, K. Wang, and F. Chen. 2005. Metaproteomic analysis of Chesapeake Bay microbial communities. *Saline Systems* 1: 7.
83. Bettarel, Y., **J. Kan**, K. Wang, S. Cooney, K. Williamson, F. Chen, E. Wommack, and W. Coats. 2005. Isolation and characterization of a small nuclear inclusion virus infecting the diatom *Chaetoceros* c.f. *gracilis*. *Aquat. Microbial. Ecol.* 40: 103-114.
84. Wu, M., L. Song, J. Ren, **J. Kan**, and P. Qian. 2004. Assessment of microbial dynamics in the Pearl River Estuary by 16S rRNA terminal restriction fragment analysis. *Continental Shelf Research* 24: 1925-1934.
85. Chen, F., K. Wang, **J. Kan**, D. Bachoon, J. Lu, S. Lau, and L. Campbell. 2004. Phylogenetic diversity of *Synechococcus* in the Chesapeake Bay revealed by Ribulose-1, 5-bisphosphate carboxylase-oxygenase (RuBisCO) large subunit gene (rbcL) sequences. *Aquat. Microb. Ecol.* 36: 153-164.
86. **Kan, J.**, and F. Chen. 2004. Co-monitoring bacterial and dinoflagellates communities by Denaturing Gradient Gel Electrophoresis (DGGE) and SSU rDNA sequencing during a dinoflagellates Bloom. *Acta Oceanologia Sinica.* 23: 483-492.
87. Hong, X., Y. Yang, and **J. Kan**. 1998. A study on induced metamorphosis of larvae of the Bay Scallop *Argopecten irradians*. *J. Oceanogr. Huanghai & Bohai Seas.* 16(3): 47-51.

88. Hong, X., **J. Kan**, and B. Wu. 1996. Mutual effects of different inducers on larval settlement and metamorphosis of *Haliotis discus hannai* Ino (Gastropoda, Mollusca). *J. Oceanogr. Huanghai & Bohai Seas*. 14(4): 28-33.

### CONTRIBUTED BOOK CHAPTERS

1. **Kan, J.**, T. E. Hanson, and F. Chen. 2011. Synchronicity between population structure and proteome profiles: A metaproteomic analysis of Chesapeake Bay bacterial communities. In: Frans J. de Bruijn (*ed.*). *Handbook of Molecular Microbial Ecology I; Metagenomics and Complementary Approaches*. *Wiley-Blackwell*, pp 637-644.
2. Jiao, N.Z., C.L. Zhang, F. Chen, **J. Kan**, and F. Zhang. 2008. Frontiers and Technological Advances in Microbial Processes and Carbon Cycling in the Ocean. In: Lea P. Mertens (*ed.*). *Biological Oceanography Research Trends*. *Nova Science Publishers, Inc.* Hauppauge, New York. pp 217-267.
3. **Kan, J.** et al., 1999. National Climbing Plan B: Study on better quality and disease resistance of marine aquaculture (III) Reproduction, attachment and metamorphosis of mollusks (B. Wu *Ed.*), *Shandong Science and Technology Press*, Jinan, P. R. China.

### INVITED SEMINARS (SELECTED)

Southern Univ. of Science and Technology, Shenzhen, China. July 11<sup>th</sup>. 2022. “A change in the current of geomicrobiology: Electron flow, power production, and its implication”.

School of Environmental Sciences and Engineering, Southern Univ. of Science and Technology, China. Apr 20<sup>th</sup>. 2019. “Organic matter and microbial communities from headwater to estuary”.

School of Marine Sciences, Sun Yat-Sen University, Guangzhou, China. Jul 7<sup>th</sup>, 2018. “Organic matter and microbial communities: from terrestrial to estuary”.

Spring 2018 Joint Technical Conference AWWA PA Section. Exton, PA. Mar 15<sup>th</sup>, 2018. “Increasing occurrence of high fecal indicator bacteria (FIB) in headwater streams within the Lower Delaware River Watershed”.

School of Marine Life Sciences, Ocean Univ. of China, Qingdao, China. Apr 19<sup>th</sup>, 2017. “The predominance of ammonia-oxidizing archaea (AOA) in the Eastern Indian Ocean (EIO)”.

Department of Civil and Environmental Engineering, University of Delaware, Newark, DE. May 15<sup>th</sup>, 2015. “DOM (Dissolved organic matter) structure and bacterial community: a River Continuum Concept reprise”

Department of Biology, College of William & Mary, Williamsburg, VA, Nov. 11<sup>th</sup>, 2014. “DOM (Dissolved Organic Matter) structure and bacterial community: a re-look at the River Continuum Concept”.

Tianjin University of Science and Technology, Tianjin, China, Oct. 22<sup>nd</sup> 2013. “Molecular Microbial Ecology and Ecophysiology: From the Chesapeake Bay to Microbial Fuel Cells”.

South China Sea Institute of Oceanology, Chinese Academy of Sciences, Jul 16-31 2012. “Molecular Microbial Ecology: Case studies in Yellowstone Lake and the Chesapeake Bay”.

School of Marine Science and Policy, Spring 2012 Invitational seminar series, Newark, DE, April 24<sup>th</sup>, 2012. “High-energy geochemistry drives microbial diversity and distribution in Yellowstone Lake”.

Department of Biology, University of Pennsylvania, April 17<sup>th</sup>, 2012. “High-energy geochemistry and rich microbial diversity in Yellowstone Lake”.

Environmental Genomics, J Craig Venter Institute, San Diego, CA, Apr 22<sup>nd</sup>, 2008. “Environmental Bacterial Community: Detection, Characterization and Potential Applications”.

### SELECTED CONFERENCE PRESENTATIONS

**Kan, J.**, F. Chen, and H. Wang. Planktonic microbiomes in the Chesapeake Bay: Can we predict their population structure? June 6-8, 2022. Annapolis, MD, USA. **Oral Presentation**

**Kan, J.** Soil microorganisms under farming practices. PASA 2020 Sustainable Agriculture Conference, Feb 7, 2020. Lancaster, PA, USA. **Oral Presentation**

Bier, R., and **J. Kan**. Patterns and processes of fecal indicator bacteria in the Delaware River Basin. 2020 Watershed Congress, Philadelphia, USA. **Oral Presentation.**

**Kan, J.**, J. Wang, R. Bier and M. Peipoch. Natural bacterial succession in headwater biofilms. May 19-23, 2019. SFS Annual Meeting, Salt Lake City, Utah, USA. **Oral Presentation.**

Bier, R., J. Mosher, L. Kaplan, and **J. Kan**. Biogeography of bacteria in headwater streams across biomes and seasons. May 19-23, 2019. SFS Annual Meeting, Salt Lake City, Utah, USA. **Oral Presentation.**

**Kan, J.**, M. Ehrhart, M. Daniels, J. Jackson, D. Oviedo, M. Peipoch, B. Sweeney, and D. Arscott. Watershed restoration to improve water quality in the Delaware River Watershed. Sep 16-18,

2019. American Water Resource Association Annual Meeting, Beijing, China. **Oral Presentation.**

Bier, R., L. Zgleszewski, S. Morgan, J. Jackson, D. Arscott, and **J. Kan**. What's the story with high fecal indicator bacteria (FIB) in Delaware River Watershed headwaters? Nov 19, 2019. 3rd Annual Delaware Watershed Research Conference, Philadelphia, USA. **Oral Presentation.**

Inamdar, S., N. Sienkiewicz, A. Lutgen, G. Jiang, and J. Kan. Streambank legacy sediments in aquatic ecosystems: nutrient source or sink? Dec 9-13, 2019. AGU Fall Meeting. San Francisco, USA. **Oral Presentation.**

Inamdar, S., Merritts, D, Walter R., Czuba, J., Peipoch and J. Kan. Dose the past haunt us? Landuse legacy and its consequences for hydrology and water quality. Dec 9-13, 2019. AGU Fall Meeting. San Francisco, USA. **Poster Presentation.**

**Kan, J.**, S. Inamdar, N. Sienkiewicz, A. Lutgen, and G. Jiang. Microbial signatures in stream bank legacy sediments. Dec 10-14, 2018. AGU Fall Meeting. Washington D. C., USA. **Oral Presentation.**

**Kan, J.** DOM (dissolved organic matter) structure and bacterial community: a river continuum concept reprise. The 2<sup>nd</sup> Shenzhen Forum on Ocean Sciences for Young Scholars. Nov 24-26, 2017. Shenzhen, China. **Oral Presentation.**

**Kan, J.** J. Wang, and J. Sun. The predominance of ammonia-oxidizing archaea (AOA) in the Eastern Indian Ocean (EIO). The 10<sup>th</sup> WESTPAC International Scientific Conference, Apr 17-20, 2017. Qingdao, China. **Oral Presentation.**

**Kan, J.**, D. Karwan, and A. Aufdenkampe. Storm events restructured microbial community and their biogeochemical potentials. AGU Chapman Meeting. Jan 22-27, 2017. San Juan, PR. **Oral Presentation.**

Kan, J. Bacterial diversity DOM distributions in headwaters: a metaecosystem approach. The 12<sup>th</sup> National Biodiversity and Preservation Conference, Oct 9-10, 2016. Beijing, China. **Oral Presentation.**

Krieg, C., I. Shreeram, **J. Kan**, and R. Vargas. After the storm: assessing the content, transformation, and fate of nitrogen in floodplain sediments in aquatic ecosystems. AGU. Dec. 12-16, 2016. San Francisco, CA. **Poster Presentation.**

Johnson, E., D. Rowland, J. Protokowicz, I. Shreeram, **J. Kan**, and R. Vargas. POM pulses: characterizing the physical and chemical properties of particulate organic matter (POM) mobilized by large storm events and its influence on receiving fluvial systems. AGU. Dec. 12-16, 2016. San Francisco, CA. **Oral Presentation.**

Arscott, D., **J. Kan**, J. K. Jackson, S. Morgan, and J. Egan. Increasing occurrence of high fecal indicator bacteria (FIB) in headwater streams within the lower Delaware River Watershed. 11<sup>th</sup> Annual Susquehanna River Symposium. Nov. 11-12, 2016. Lewisburg, PA. **Oral Presentation.**

**Kan, J.**, J. Mosher, L. Kaplan. Biogeographic distribution of bacterial communities in headwater streams: a Meta-Ecosystem approach. ISME-16. August 21-26, 2016. Montreal, Canada. **Poster Presentation.**

**Kan, J.** Composition and distribution of Bacteria and DOM in freshwater environments. National Biodiversity Conference. Oct. 9-12, 2016. Beijing China. **Oral Presentation.**

**J. Kan** and A. Aufdenkampe. Overview of microbial ecology at CRB-CZO. Cross-CZO Microbial Ecology Workshop. Nov 16-17, 2015. Argonne National Laboratory, Argonne, IL. **Oral Presentation.**

Mosher, J, L. Kaplan, **J. Kan**, R. Findlay, T. Branam and C. Griffith. Linkage of Longitudinal Patterns of Bacterial Community Composition and Dissolved Organic Matter Composition Across a River Continuum in Two Distant Watersheds. American Society for Microbiology 115th General Meeting, May 30-June 2, 2015. New Orleans, LA. **Poster Presentation.**

Pan, W. **J. Kan**, S. Inamdar, C. Chen, and D. L. Sparks. Anaerobic Microbial Degradation of Ferrihydrite-Adsorbed Organic Carbon: DOC and Fe(II) Release Mediated By Dissimilatory Iron Reduction, Soil Science Annual Meeting, Nov. 2-6, 2014, Long beach, CA. **Poster Presentation.**

**Kan, J.**, O. Lazareva, C. Dow, C. Chan, and A. Aufdenkampe. Contrasting population dynamics of pore water bacterial communities across stream banks at the Christina River Basin-Critical Zone Observatory. ISME-15. Aug 24-29, 2014. Seoul, South Korea. **Poster Presentation.**

Rosier, C., D. Levia, J. Van Stan, and **J. Kan**. Seasonal dynamics of soil microbial community structure in the proximal area of tree boles: possible influence of stemflow. AGU. Dec. 15-19, 2014. San Francisco, CA. **Poster Presentation.**

Mosher, J., L. Kaplan, **J. Kan**, R. Findlay, D. Podgorski, A. McKenna, T. Branam, and C. Griffith. Are longitudinal patterns of bacterial community composition and dissolved organic matter composition linked across a river continuum? AGU. Dec. 9-13, 2013. San Francisco, CA. **Oral Presentation.**

Chan, C, S. McAllister, S. Krepski, C. Lin, O. Lazareva, and **J. Kan**. A novel Fe(II)-oxidizing Epsilonproteobacterium from a streambank aquifer. AGU. Dec. 9-13, 2013. San Francisco, CA. **Poster Presentation.**

**J. Kan**, D. Karwan, O. Lazareva, C. Rosier, A. Aufdenkampe, D. L. Sparks, L. A. Kaplan, J. Pizzuto, K. Yoo. The Christina River Basin Critical Zone Observatory (CRB-CZO): Quantifying

carbon sequestration by integrating spatial and temporal carbon and mineral fluxes. The 2<sup>nd</sup> International Conference of Geobiology-Critical Zone Observatories for sustainable soil development and beyond. Sep. 4-8, 2012, Wuhan, China. **Oral Presentation.**

Lazareva, O., Sparks, D.L., Aufdenkampe, A., **Kan, J.**, Hicks, S., LeMonte, J., Pan, W., and Chen, C. 2012. Biogeochemical transformation of Fe- and Mn- along a redox gradient: Implications for carbon sequestration within the Christina River Basin Critical Zone Observatory. ACS National Meeting, March 25-29, 2012. San Diego, CA, USA. **Oral Presentation.**

Rosier, C., **J. Kan**, A. Aufdenkampe, K. Yoo. Subsoil organic matter complexation and stabilization: assessment of abiotic and biotic controls. AGU. Dec. 5-9, 2011. San Francisco, CA. **Poster Presentation.**

Lazareva, O., Sparks, D.L., Aufdenkampe, A., Yoo, K., Hicks, S., **Kan, J.** 2011. Role of Fe- and Mn- redox coupling on the carbon cycle in a mixed land use watershed: Christina River Basin Critical Zone Observatory. 21th Annual Goldschmidt Conference on Geochemistry, August 14-19, 2011. Prague, Czech Republic. **Poster Presentation.**

Hsu, L., **J. Kan**, M. Pirbazari, K. Nealson. 2010. Bioremediation potential of mixed culture microbial fuel cell communities. 2010 AIChE Annual Meeting, November 7-12, 2010. Salt Lake City, UT, USA. **Oral Presentation.**

**Kan, J.**, S. Clingenpeel, R. E. Macur, W. P. Inskeep, D. Lavalvo, J. Varley, Y. Gory, T. R. McDermott, and K. Nealson. 2010. Novel and diverse Archaea in Yellow Stone Lake. The 13th International Symposium on Microbial Ecology, ISME-13. August 22-27, 2010. Seattle, USA. **Poster Presentation.**

Inskeep, W., R. Macur, Z. Jay, S. Clingenpeel, A. Tenney, D. Lavalvo, W. Shanks, T. McDermott, **J. Kan**, Y. Gorby, L. Morgan, S. Yooseph, J. Varley, and K. Nealson. Geomicrobiology of hydrothermal vents in Yellowstone Lake: phylogenetic and functional analysis suggest importance of geochemistry. AGU. Dec. 13-17, 2010. San Francisco, CA. **Oral Presentation.**

Hsu, L., **J. Kan**, A. Cheung, and K. H. Nealson. 2009. Effects of carbon source on enrichment in microbial fuel cells. ACS National Meeting and Exposition. August 19, 2009. Washington, D.C., USA. **Oral Presentation.**

**Kan, J.**, Y. M. Arias-Thode, Y. Wang, A. Obraztsova, G. Rosen, J. Leather, and K. Nealson. 2008. Bacterial and benthic community response to inorganic and organic sediment amendments. The 12th International Symposium on Microbial Ecology, ISME-12. August 17-22, 2008. Cairns, Australia. **Poster Presentation.**

**Kan, J.**, Z. He, F. Mansfeld, and K. H. Neelson. 2008. Current production and microbial diversity in self-sustained photosynthetic microbial fuel cells. The 1st International Symposium of Microbial Fuel Cell. May 27-29, 2008. University Park, Penn State University, USA. **Poster Presentation.**

Wang, Y., **J. Kan**, A. Obraztsova, and K. Neelson. 2007. Physiological and phylogenetic properties of *Shewanella* spp. ASM 2008 General Meeting, June 1-5, Boston, MA. **Poster Presentation.**

**Kan, J.**, T. Hanson, E. Wommack, and F. Chen. 2007. Seasonal synchronicity between microbial community DNA and proteomic patterns in the Chesapeake Bay. 4th Annual Microbial Observatories Workshop, Washington DC. March 1-3, 2007. **Poster Presentation.**

Crump, B. C., H. E. Adams, F. Chen, J. E. Hobbie, **J. Kan**, and G. W. Kling. 2006. Synchrony and seasonality in bacterioplankton community composition. The 11th International Symposium on Microbial Ecology, ISME-11. August 20-25, 2006. Vienna, Austria. **Oral Presentation.**

Hanson, T., **J. Kan**, A. Snellinger, M. Johnston, and F. Chen. Environmental proteomics: profiling complex microbial communities. AGU. Dec. 11-15, 2006. San Francisco, CA. **Oral Presentation.**

**Kan, J.**, B. C. Crump, K. Wang, and F. Chen. 2006. Bacterioplankton community in Chesapeake Bay: Predictable or random assemblages. GRC Conference on MARINE MICROBES, July 23-28, 2006, The University of New England, Biddeford, ME. **Poster Presentation.**

**Kan, J.**, T. Hanson, C. Cary, E. Wommack, R. Hill, F. Chen. 2006. Community proteomics, a new way to explore microbial functions in natural environments. American Society of Limnology and Oceanography Summer Meeting, June 5-9, 2006, Victoria, Canada. **Poster Presentation.**

**Kan, J.**, T. Hanson, B. Campbell, C. Cary, E. Wommack, R. Hill, and F. Chen. Meta-proteomics, a new way to explore microbial function in natural environments. HUPO 4th Annual World Congress, August 28-September 1, 2005. Munich, Germany. **Poster Presentation.** The abstract was published in *Molecular and Cellular Proteomics* 4.8 (Suppl.1):S286

**Kan, J.**, T. Hanson, K. Wang, B. Campbell, C. Cary, E. Wommack, R. Hill, and F. Chen. Meta-proteomics, a New Way to Explore Microbial Processes in the Ocean? International Marine Biotechnology Conference, June 7-12, 2005, St. John's, Newfoundland, Canada. **Oral Presentation.**

**Kan, J.**, T. Hanson, B. Campbell, C. Cary, E. Wommack, R. Hill, and F. Chen. Meta-proteomics, a new way to explore microbial processes in the ocean? NSF 3rd Microbial Observatories Workshop, September 12-14, 2004. Big Sky, MT. **Oral Presentation.**



Chen, F., and **J. Kan**. A proteomic study of picoplankton community. The 10th International Symposium on Microbial Ecology, ISME-10. August 22-27, 2004. Cancun, Mexico. **Oral Presentation.**

**Kan, J.**, M. Suzuki, K. Wang, and F. Chen. Spatial and temporal variation of Chesapeake bacterioplankton communities revealed by DGGE and clone libraries. The 10th International Symposium on Microbial Ecology, ISME-10. August 22-27, 2004. Cancun, Mexico. **Poster Presentation.**

**Kan, J.** and F. Chen. Genetic fingerprinting and proteomic analysis of bacterial communities in the Chesapeake Bay. Marine Biotechnology Conference September 21-27, 2003, Chiba, Japan. **Oral Presentation.**

**Kan, J.**, M. Suzuki and F. Chen. Spatial and Temporal Dynamics of Bacterial Community in the Chesapeake Bay. The 103rd General Meeting of American Society for Microbiology, May 18-22, 2003, Washington DC. **Poster Presentation.**

## SERVICE AND EDUCATIONAL ACTIVITIES

### **Editorial Board and Reviewer for Journals**

*Frontiers in Microbiology*, Review Editor and Associate Editor, 2011- present; *Acta Oceanica Sinica*, editorial board, 2015- present; *Journal of American Water Resources Association*, Guest Editor 2019-2021.

*Reviewer for journals: Acta Oceanica Sinica, Aquatic Ecosystem Health and Management, Applied and Environmental Microbiology, African Journal of Biotechnology, Applied Microbiology and Biotechnology, Applied Microbiology and Biotechnology Express, Aquatic Microbial Ecology, Aquatic Sciences, Bioresource Technology, Continental Shelf Research, Critical Reviews in Biotechnology, Environmental Microbiology, Environmental Monitoring and Assessment, Environmental Pollution, Environmental Science and Technology, Extremophiles, FEMS Microbiology Ecology, Frontiers in Microbiology, Geochimica et Cosmochimica Acta, Geomicrobiology, International Journal of Environmental Research and Public Health, ISME Journal, ISME Communication, Journal of American Water Resources Association, Journal of Hazardous Materials, Journal of Proteomics, Journal of North American Benthological Society, Journal of Oceanology and Limnology, Journal of Ocean University of China, Journal of Zhejiang University Science B, Limnology and Oceanography, Marine Biology, Marine and Freshwater Research, mBio, Microbial Ecology, Microbiome Journal, Microorganisms, PLOS One, Polar Biology, Science of the Total Environment, Scientific Report, Water, Water Environment Research, Water Research.*

### **Panelist and Proposal Reviewer**

NSF, Sea Grant, Department of Army, Dutch Research Council (NWO), Foundation for Science and Technology of Portugal (FCT), Maryland Industry Partnership, University of Delaware CNAR

### **Professional Affiliations**

2001- American Society for Microbiology  
 2003- American Society of Limnology and Oceanography  
 2007- International Society for Microbial Ecology

### **Teaching**

Fresh Water Ecology (BIO 415), Univ. of Pennsylvania, Spring Semester, 2012-present  
 Watershed Hydrochemistry, Univ. of Delaware, guest lecture, 2017-present  
 Microbial Ecology, Univ. of Maryland, guest lecture, 2020-2021  
 Geomicrobiology, Southern Univ. of Science and Technology, guest lecture, 2017-2022  
 Microbiology and Lab (BIO 375 and 376), Univ. of Pennsylvania, Fall Semester, 2012  
 Microbial Observatory International Summer Course (SMaRT), Graduate level. Instructor, 2004-2006, University of Maryland Biotechnology Institute, Baltimore, MD