

CURRICULUM VITAE

NAME : **XIN, GANG**
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EDUCATION

2008 Ph.D., Environmental Engineering, University of Washington, Seattle, WA, USA
2002 MS, Environmental Engineering, Sichuan University, Chengdu, China
1996 BS, Chemistry, Northeastern University, Shenyang, China

PROFESSIONAL EXPERIENCE/ACHIEVEMENTS

- 2/2025 – now **Wai Environmental Solutions AS**
Co-founder and Chief Executive Officer
- 6/2017 – 1/2025 **Wai Environmental Solutions AS**
Co-founder and Chief Technology Officer
- 8/2016 – 5/2017 **Biowater Technology AS**
Regional manager - Asia
- Managed sales, marketing and implementation across the Asian market
 - Built and expanded partner network in Asia
 - Established the branch office in Shanghai
- 1/2014 – 5/2017 **Biowater Technology AS**
Chief Technical Officer
- Led for all R&D projects and IPRs
 - Directed the company's technology development strategy
 - Oversaw turn-key wastewater treatment projects implementations in Norway
- 7/2009 – 12/2013 **Aquateam-Norwegian Water Technology Centre A/S**
Senior Process Engineer
- Specialized in municipal and industrial wastewater treatment
 - Conducted lab, pilot and full-scale testing of biological treatment processes
 - Performed feasibility studies, expert verification, and third-party verifications
 - Developed proposals for Framework Program 7 (FP7) of the European Commission
- 1/2008 – 6/2009 **Hydrnautics/ A Nitto Denko Company**
Senior Application Engineer
- Commercialized the HYDRAsub-MBR product
 - Collaborated with Japanese manufacturer to improve MBR module/cassette design
 - Developed new seawater pretreatment modules (microfiltration, both submerged and pressurized)
 - Operated MBR pilots, conducted troubleshooting, and delivered final reports
- 09/2002-12/2007 **University of Washington, Department of Civil and Environmental Engineering**

Research scientist

- Independently planned, designed, built, and operated bench-scale activated sludge processes
- Modeled nutrient removal and filamentous bacterial population of activated sludge systems
- Conducted sampling and analysis of groundwater, soil, and air from a phytoremediation field in a Superfund contaminated site in Tacoma, WA
- Tested transgenic houseplants for remediation of indoor air organic pollutants
- Isolated and characterized nitrogen-fixing and biofuel-producing organisms from poplar and willow trees
- Cloned and sequenced nitrogenase genes of nitrogen-fixing endophytes

9/1999 – 06/2002 **Sichuan University, College of Architecture and Environment**

Research Assistant

- Developed a computer model for CEPT systems using BP neural networks
- Designed an air treatment system for oil-contaminated exhaust in restaurants and hotels
- Collected data for a survey of industrial pollution sources in Sichuan and Yunnan provinces

07/1996-08/1999 **Tieling Environmental Institute of Science, Liaoning, China**

Environmental Engineer

- Authored eight environmental impact assessment reports
- Operated a pilot study of an anaerobic filter process for food industry wastewater treatment
- Managed QA/QC processes in an environmental laboratory

PUBLICATIONS

1. Shuai Wang, Nirmal Ghimire, Gang Xin, Eshetu Janka Wakjera and Rune Bakke. 2017. Efficient high strength petrochemical wastewater treatment in a hybrid vertical anaerobic biofilm (HyVAB) reactor: a pilot study. *Water Practice and Technology* 12: 501-513.
2. Gang Xin, Mafalda P. Lopes, João G. Crespo, and Bjørn Rusten. 2013. A continuous nanofiltration + evaporation process for high strength rubber wastewater treatment and water reuse. *Separation and Purification Technology* 119: 19-27.
3. Mafalda P. Lopes, Gang Xin and João G. Crespo. 2013. Energy saving membrane treatment of high organic load industrial effluents: from lab to pilot scale. *Journal of Environmental Management* 131: 161 – 169.
4. Gang Xin, Dean Glawe, and Sharon L. Doty. 2009. Characterization of three endophytic, indole-3-acetic acid-producing yeasts occurring in *Populus* trees. *Mycological Research* 133: 973-980.
5. Gang Xin, Genyun Zhang, Jun Won Kang, James T. Staley, and Sharon L. Doty. 2009. A diazotrophic, indole-3-acetic acid-producing endophyte from wild cottonwood. *Biology and Fertility of Soils* 45: 669-674.
6. C. Andrew James, Gang Xin, Sharon L. Doty, Indulis Muiznieks, Lee Newman, and Stuart E. Strand. 2009. A mass balance study of the phytoremediation of perchloroethylene-contaminated groundwater. *Environmental Pollution* 157: 2564-2569.
7. Sharon L. Doty, Brain Oakley, Gang Xin, Jun W. Kang, Glenda L. Singleton, Zereen Khan, Azra Vajzovic, and James T. Staley. 2009. Diazotrophic endophytes of native black cottonwood and willow. *Symbiosis* 47: 23-33.
8. Gang Xin, Heidi L. Gough, and H. David Stensel. 2008. Effect of anoxic selector configuration on SVI control and bacterial population fingerprinting. *Water Environment Research* 80:2228-2240.
9. C. Andrew James[†], Gang Xin[†] ([†]co-first authors), Sharon L. Doty, and Stuart E. Strand. 2007. A comparison of the degradation of low molecular weight volatile organic compounds by plants: the effects of transgenic modification with mammalian cytochrome P450 2E1. *Environmental Science and Technology* 42: 289-293.

10. Sharon L. Doty, C. Andrew James, Allison L. Moore, Azra Vajzovic, Glenda L. Singleton, Caiping Ma, Zareen Khan, Gang Xin, Jun Won Kang, Jin Young Park, Richard Meilan, Steven H. Strauss, Jasmine Wilkerson, Federico Farin, and Stuart E. Strand. 2007. Enhanced phytoremediation of volatile environmental pollutants with transgenic trees. *Proceedings of the National Academy of Sciences* 104: 16816-16821.
11. H. David Stensel and Gang Xin. 2008. Develop and demonstrate fundamental basis for selectors to improve activated sludge settleability: phase 2 lab investigation. Water Environment Research Foundation (WERF) Report.
12. H. David Stensel and Gang Xin. 2005. Laboratory investigation of Thiothrix and Microthrix parvicella growth in activated sludge systems with and without aerobic selectors. Water Environment Research Foundation (WERF) Report.
13. Gang Xin, Wenju Jiang, Yan Jin, Qinwen Tan, and Chengjun Liu. 2002. A modeling study of a chemically enhanced primary treatment system by a BP neural network. *Environmental Science & Technology* 25(4): 10-12 (In Chinese).
14. Tieqing Li and Gang Xin. 2000. Study on recirculation of copper mineral tailing wastewater. *Liaoning Urban and Rural Environmental Science and Technology* 20(2): 38-40 (In Chinese).
15. Tieqing Li and Gang Xin. 1999. Basic contaminative characteristics of furfural wastewater to groundwater. *Liaoning Urban and Rural Environmental Science and Technology* 19(1): 18-21 (In Chinese).

CONFERENCE PAPERS

1. Tao, R., Sivalingam, V., Lin, L., Dinamarca, C., Danielsen, S., & Xin, G. 2022. Enhancement of Biogas Production by Integrating Anaerobic Digestion and Pyrolysis. *European Biomass Conference and Exhibition Proceedings*, Online.
2. Subhash S. Rathnaweera, Bjørn Rusten, Gang Xin and Eirik Rismyhr. 2016. Solids separation with an innovative denitrifying biofilm reactor. *Proceedings of IWA Specialist Conference: Advances in Particle Science and Separation*. Oslo, Norway.
3. Marc-Andre Labelle, Marie Ferland, Gang Xin and Yves Comeau. 2016. Static versus Moving Bed Biofilm Reactor Nitrification Kinetics. *Proceedings of 51th Central Canadian Symposium on Water Quality Research*. Toronto, Ontario, Canada.
4. Shuai Wang, Gang Xin, Carlos Dinamarca and Rune Bakke. 2015. Study of an anaerobic aerobic hybrid (HyVAB) reactor treating oil refinery wastewater. *Proceedings of WEFTEC 2015*. Chicago, IL, USA.
5. Jon G. Siljudalen, Laura Marcolini, Gang Xin, Pascal Stang, and Bjørn Rusten. 2014. Sustainable wastewater treatment with the innovative CFIC® biofilm reactor process. *Proceedings of SIWW 2014*. Singapore.
6. Gang Xin, Mafalda P. Lopes, João Crespo and Bjørn Rusten. An integrated nanofiltration + evaporation solution for high strength rubber wastewater treatment, water reuse and zero liquid discharge. *Proceeding of AMAT/AWWA Membrane Conference 2013*, San Antonio, TX.
7. Keith Roebuck and Gang Xin. Hydrocarbon and MEG Spill Contingency Planning for the Ormen Lange Subsea Compression Test Site. *TEKNA Produced Water Management 2012*, Stavanger, Norway.
8. Naomi Jones, Adam Smith, and Gang Xin. 2008. Managing operational issues for an industrial membrane bioreactor. *Proceedings of WEFTEC 08*, Chicago, IL.
9. Gang Xin, Heidi L. Gough, and H. David Stensel. 2007. Effect of anoxic selector configuration on SVI control and bacterial population fingerprinting. *Proceedings of WEFTEC 07*, San Diego, CA.
10. Gang Xin, Azra Vajzovic, James T. Staley, and Sharon L. Doty. 2007. Diazotrophic endophytes of poplar trees. *Proceedings of ASM Northwest Branch Conference*, Seattle, WA.

11. Stuart E. Strand, Gang Xin, C. Andrew James, Azra Vajzovic, and Sharon L. Doty. 2006. A comparison of the degradation of low molecular weight VOCs by plants: the effects of transgenic modifications with mammalian cytochrome P450 2E1. Proceedings of National Institute of Environmental Health Science 2006 Superfund Basic Research Program Annual Meeting, San Diego, CA

LANGUAGES

- English – full professional fluency, both written and spoken
- Norwegian (Bokmål) – basic professional fluency, both written and spoken
- Chinese – mother tongue