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Education:

PhD: Environmental Engineering

MS: Environmental Engineering

BS: Environmental Engineering

General Areas of Expertise:

pollution control, solid waste recycling, energy-saving and emission-reduction

Short Bio:

Prof. Dr. Xiaohu Dai was born on November 18th, 1962 in Zhenjiang, Jiangsu. He studied at government's expense in Germany from 1987 and graduated from Civil Engineering Department of RUHR-University Bochum, Germany and obtained doctor's degree in 1992. He lived and worked in Germany for 23 years, and returned as a National Distinguished Professor of the "One Thousand Talents Scheme" (University R&D) launched by Organization Department of the CPC Central Committee from abroad in 2010. Prof. Dai is currently Dean of College of Environmental Science and Engineering and Director of National Engineering Research Center for Urban Pollution Control of Tongji University. Prof. Dai is now Deputy director of division of civil environment of S&T Commission of MoE; member of the 7th Discipline Appraisal Group of the State Council; Consultative Committee Member of Engineering and Materials Division of The National Natural Science Foundation of China; Convenor and Specialist Committee Member of "Waste Recovery" - key research program of MoST; Specialist Committee Member of "Chinese National 863 plans" for Resource and Environment (group leader of pollution control subcommittee); Specialist Committee Member of Major Water Project; Expert of Major Water Project "City Water Pollution Control"; IWA Fellow; Vice Chairman of the Executive Committee of the "One Thousand Talents Scheme" Association. Prof. Dai led the team to research the theme of "sludge and organic matter waste stabilization and efficient resource recycling" to meet the country's urgent need, and proposed the "resource-oriented" concept. His research includes: Anaerobic Digestion of Thermal Pre-treated Sewage Sludge (demonstration in Changsha), Efficient Stabilization and Utilization of Food Waste (demonstration in Zhenjiang), Hall-centralized Quality and Function Orientated Municipal Water Supply and Drainage and wastewater utilization (demonstration in Qingdao), which provided a new idea for the efficient handling and recycling of decentralized sewage and solid waste in urban and rural areas during the process of urbanization in China. For the contribution listed above, Prof. Dai has been awarded "National Innovation Award of cooperation in academy & industry & research (2016)", the 18th Chinese patent award of excellence (ZL201110319442.9), "Advanced Worker of National Engineering Research Center for Urban Pollution Control" (by the National Development and Reform Commission, "Athena Award" (by TU Darmstadt) and "China Water Sector Elites of the Year 2014- For Contributions on Teaching and Research".

Five Representative Publications:

- 1) Dai X, Li X, Zhang D*, Chen Y, Dai L. Simultaneous enhancement of methane production and methane content in biogas from waste activated sludge and perennial ryegrass anaerobic co-digestion: The effects of pH and C/N ratio. Bioresource Technology. 2016, 216: 323-330. 2) Dai X, Chen Y, Zhang D*, Yi J. High-solid anaerobic co-digestion of sewage sludge and cattle manure: the effects of volatile solid ratio and pH. Scientific Reports. 2016, 6, 35194. 3) Dai X, Luo F, Zhang D*, Dai L, Chen Y, Dong B. Waste-activated sludge fermentation for polyacrylamide biodegradation improved by anaerobic hydrolysis and key microorganisms involved in biological polyacrylamide removal. Scientific Reports. 2015, 5, 11675. 4) Dai X, Duan N, Dong B*, Dai L. High-solids anaerobic co-digestion of sewage sludge and food waste in comparison with mono digestions: stability and performance. Waste Management, 2013, 33(2): 308-316. 5) Dong B, Liu X, Dai L, Dai X*. Changes of heavy metal speciation during high-solid anaerobic digestion of sewage sludge. Bioresource Technology, 2013, 131(3): 152-158.

FEWSTERN Symposium 2017 Presentation Title and Abstract:

Bioenergy and Resource Recovery From Sewage Sludge
Because of the rapid development of economy and urbanization, a huge number of waste water is treated, and the sludge production increases year by year. Current technical routes of sludge treatment and disposal face challenges. In this presentation key innovative technologies in research and application are introduced. At the end, case study on highly efficient anaerobic digestion is introduced.