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EDUCATION:

PhD, Environmental Microbiology, Graduate School of the Chinese Academy of Sciences, Beijing, China

MS, Environmental Microbiology, Graduate School of the Chinese Academy of Sciences, Beijing, China

BS, Environmental Biology, Jinan University, Guangzhou, China

ACADEMIC POSITIONS:

December 2008-present

Professor, Guangdong Institute of Microbiology, Guangzhou, Guangdong, China

August 2006-September 2008

Postdoctoral Research Associate, The University of Oklahoma, Norman, OK, USA

November 2003-November 2008

Associate Professor, Guangdong Institute of Microbiology, Guangzhou, Guangdong, China

AREAS OF RESEARCH INTEREST:

- Microbial electroactivity and conductivity;
- Environmental microorganisms and environmental protection;
- Microbiomes in polluted aquatic ecosystem;
- Microbial communities and their responses to global changes.

Research Grants (last 3 years):

- Key project of NSFC Major Research Plan for Microbes in Hydrosphere, Driving mechanisms of microbial power network for distant nitrogen and sulfur cycles in river heterogenous sediments. 2019-2022
- Natural Scientific Foundation of China, Response and regulation mechanisms of cable bacteria to the organic pollution in aquatic sediments, 2017-2020
- Key-Area Research and Development Program of Guangdong Province, Development and application of key technologies for protection and remediation of drinking water sources in Pearl River Basin, 2019-2023

Honors & Awards

- The First Prize of Guangdong Award for Advances on Science and Technology, Guangdong Province, 2018.
- Award for Scientific and Technological Innovation Leader of National“Ten Thousand Talent Program”, 2017.
- The First Prize of Guangzhou Award for Advances on Science and Technology, Guangzhou City, 2016.
- Award for Young and Middle-aged Scientific and Technological Innovation Leader of Ministry of Science and Technology Innovation Talent Promotion Program, 2015.
- Award for National Excellent Young Scholars, 2014.
- Award for Scientific and Technological Innovation Leader of Guangdong Province Special Support Program, 2014.
- The Second Prize of Guangdong Award for Advances on Science and Technology, Guangdong Province, 2014.

- The Second Prize of Heilongjiang Award for Advances on Science and Technology, Guangdong Province, 2014.
- The Third Prize of Science and Technology for Environmental Protection, State Environmental Protection Administration of China, 2013.
- Award for State Council Special Allowance (Natural Science Research), 2012.
- Award for Excellent Patent, Guangdong Province, 2011.
- The Second Prize of Guangdong Award for Advances on Science and Technology, Guangdong Province, 2007.
- The First Prize of Science and Technology for Environmental Protection, State Environmental Protection Administration of China, 2007.
- The First Prize of Science and Technology for Environmental Protection, Guangdong Environmental Protection Bureau, 2007.
- Award for Excellent Patent, Guangdong Province, 2007.
- The First Prize of Guangzhou Award for Advances on Science and Technology, Guangzhou City, 2006.
- Award for Excellent Youth, Guangdong Province, 2005.

Representative publications (selected from 122 papers)

- **Xu M. Y.***, Zhang Q., Xia C., Zhong Y., Sun G., Guo J., Yuan T., Zhou J., He Z.*, Elevated nitrate enriches microbial functional genes for potential bioremediation of complexly contaminated sediments, *The ISME Journal*, 2014, 8:1932-44.
- **Xu M. Y.**, Wu W-M, Wu L., He Z., van Nostrand J. D., Deng Y., Luo J., Carley J., Ginder-Vogel M., Gentry T., Gu B., Watson D., Jardine P. M., Marsh T. L., Tiedje J. M., Hazen T., Criddle C. S., Zhou J.*, Responses of microbial community functional structures to pilot-scale uranium in situ bioremediation, *The ISME Journal*, 2010, 4: 1060-1070.
- He Z. L. #, **Xu M. Y.#**, Deng Y., Kang S., Kellogg L., Wu L. Y., Van Nostrand J., Hobbie S. E., Reich P. B., Zhou J. Z. *, Metagenomic analysis reveals a marked divergence in the functional structure of belowground microbial communities at elevated CO₂, *Ecology Letters*. 2010, 13: 564-575.

- Luo Y. S. [#], Liu F. [#], Li E. Z., Fang Y., Zhao G., Dai X., Li J. J., Wang B., **Xu M. Y.***, Liao B.*, and Sun G. P., FRET-based fluorescent nanoprobe platform for sorting of active microorganisms by functional properties, *Biosensor and Bioelectronics*, 2020, 148:111832.
- **Xu M. Y.***, He Z., Zhang Q., Liu J., Guo J., Sun G. P., Zhou J., Responses of aromatic-degrading microbial communities to elevated nitrate in sediments, *Environmental Science & Technology*, 2015, 49: 12422–12431.
- Yang Y. G., Xiang Y. B., Sun G. P., Wu W-M, **Xu M. Y.***, Electron acceptor-dependent respiratory and physiological stratifications in biofilms. *Environmental Science & Technology*, 2015, 49:196-202.
- Liu F., **Xu M. Y.***, Chen X. J., Yang Y. G., Wang H. J., Sun G. P., Novel strategy for tracking the microbial degradation of azo dyes with different polarity in living cells, *Environmental Science & Technology*, 2015, 49: 11356–11362.
- Yang Y. G., Lu Z. J., Lin X. K., Xia C. Y., Sun G. P., **Xu M. Y.***, Enhancing the bioremediation by harvesting electricity from the heavily contaminated sediments, *Bioresource Technology*, 2015, 179: 615-618.
- Yang Y. G.[#], Xiang Y. B.[#], Xia C. Y., Wu W-M, Sun G. P., **Xu M. Y.***, Physiological and electrochemical effects of different electron acceptors on bacterial anode respiration in bioelectrochemical systems, *Bioresource Technology*, 2014, 164: 270-275.
- Fang Y.[#], Liu J. [#], Kong G. N. [#], Liu X. D., Yang Y. G., Li E. Z., Chen X. J., Song D., You X. J., Sun G. P., Guo J., **Xu M. Y.***, Adaptive responses of *Shewanella decolorationis* to toxic organic extracellular electron acceptor azo dyes in anaerobic respiration, *Applied and Environmental Microbiology*, 2019, 85(16): e00550-19.
- Chen X. J., Song D., Xu J. J., Li E. Z. Sun G. P., **Xu M. Y.***, Role and mechanism of cell-surface hydrophobicity in the adaptation of *Sphingobium hydrophobicum* to electronic-waste contaminated sediment, *Applied Microbiology and Biotechnology*, 2018, 102(6), 2803-2815.
- Chen X. J., Song D., Xu J. J., Sun G.P., **Xu M. Y.***, Microbial depassivation of Fe(0) for contaminant removal under microoxic conditions, *Applied Microbiology and Biotechnology*, 2017, 101: 8595-8605.

- Liu F., Du J., Song D., **Xu M. Y.*** and Guoping Sun, A sensitive fluorescent sensor for the detection of endogenous hydroxyl radicals in living cells and bacteria and direct imaging with respect to its ecotoxicity in living zebra fish, *Chemical Communications*, 2016, 52: 4636.
- Pan T., Ren S. Z., **Xu M. Y.***, Sun G. P., Guo J., Extractive biodecolorization of triphenylmethane dyes in cloud point system by *Aeromonas hydrophila* DN322p., *Applied Microbiology and Biotechnology*, 2013, 97 (13): 6051-6055.
- Yang Y. G., Sun G. P., Guo J., **Xu M. Y.***, Characterizing the snorkeling respiration and growth of *Shewanella decolorationis* S12, *Bioresource Technology*, 2013, 128: 472-478.
- Yang Y. G., Sun G. P., Guo J., **Xu M. Y.***, Differential biofilms characteristics of *Shewanella decolorationis* microbial fuel cells under open and closed circuit conditions, *Bioresource Technology*, 2011, 102: 7093-7098.
- Chen X. J., **Xu M. Y.***, Wei J., Sun G. P., Two different electron transfer pathways may involve in azoreduction in *Shewanella decolorationis* S12, *Applied Microbiology and Biotechnology*, 2010, 86: 743-751.