

QILIN LI

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Education

Ph.D. in Environmental Engineering October, 2002
University of Illinois at Urbana-Champaign, Urbana, Illinois
MS in Environmental Engineering August, 1999
University of Illinois at Urbana-Champaign, Urbana, Illinois
BE in Environmental Engineering July, 1995
Tsinghua University, Beijing, P. R. China

Professional Experience

Sept. 2015 – present Associate Director for Research, NSF Nanosystems Engineering Research Center for Nanotechnology Enabled Water Treatment
July 2014 – present Chair, IWA Nano and Water Specialty Group management committee
July 2011 – present Associate professor, Rice University
Jan. 06 – June 2011 Assistant Professor, Rice University
Apr. 09 – Jul. 09 NRC Summer Faculty Fellow, USEPA National Exposure Research Laboratory
Jan. 04 – Dec. 05 Assistant Professor, Oregon State University
Sept. 02 – Dec. 03 Post-doctoral Research Associate, Yale University
Aug. 97 – Aug. 02 Graduate research assistant, University of Illinois at Urbana-Champaign
Sept. 95 – Feb. 97 Graduate research assistant, Tsinghua University

Honors and Awards

1st Place in the Tech Idol Competition (American Water Summit), Pengcheng Scholar (2016 – 2019, Tsinghua University), Super Reviewer Award (Environmental Science & Technology), Roy E. Campbell Faculty Development Award, Excellence in Review Award (Environmental Science & Technology), Water Quality and Technology Conference Best Student Paper Award (with graduate student Alison Harris), Association of Environmental Engineering and Science Professors/Parsons Engineering Science Best Doctoral Thesis Award; Scott Dissertation Completion Fellowship (UIUC); Mavis Memorial Fund Scholarship Awards (UIUC); Larson Aquatic Research Award (American Water Works Association); Richard and Mary Engelbrecht Fellowship (UIUC); Distinguished University Fellowship (UIUC); Municipal Engineering Scholarship (Beijing Institute of Municipal Engineering); Tao Baokai Scholarship (Tsinghua University); National Guanghua Scholarship (Chinese Ministry of Education); Graduate with Honor (Tsinghua University); IET Scholarship (International Engineering and Technology Foundation); Excellent Student Fellowship (Tsinghua University); National “December 9th Memorial” Scholarship (Chinese Ministry of Education)

Professional Membership

Dec. 98 – Nov. 13 American Water Works Association
Apr. 02 – March 13 North American Membrane Society
Jan. 04 – present Association of Environmental Engineering and Science Professors
Jan. 05 – present American Chemical Society
Feb. 05 – Jan. 07 American Society of Civil Engineers
June 06 – present Chinese Association of Professionals in Science and Technology

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- June 07 – present Association of Chinese American Professors in Environmental Engineering and Science
- Jan. 11 – present International Water Association

Peer Reviewed Journal Publications

1. Long M., Brame, J., Qin, F., Bao, J., Li, Q.* and Alvarez, P.J.J.* Phosphate Changes Effect of Humic Acid on TiO₂ Photocatalysis: From Inhibition to Mitigation of Electron-Hole Recombination. *Environmental Science & Technology*, 2017, 51: 514-521.
2. Wu, J., Yu, C. and Li, Q.* Novel Regenerable Antimicrobial Nanocomposite Membranes: Effect of Silver Loading and Valence State. *Journal of Membrane Science*, 2017, 531: 68-76.
3. Westerhoff, P.* , Alvarez, P.J.J., Li, Q., Gardea-Torresdey, J., Zimmerman, J. Overcoming Implementation Barriers for Nanotechnology in Drinking Water Treatment. *Environmental Science: Nano*. 2016, 3, 1241-1253.
4. Monzon, O., Yang, Y., Kim, J., Heldenbrand, A., Li, Q. and Alvarez, P.J.J.* Microbial Fuel Cell Fed by Barnett Shale Produced Water: Power Production by Hypersaline Autochthonous Bacteria and Coupling to a Desalination (Capacitive Deionization) Unit. *Biochemical Engineering Journal*. 2017, 117: 87-91.
5. Torres, J.M.* , Duenas-Osorio, L., Li, Q. and Yazdani, A. Exploring Topological Effects on Water Distribution System Performance Using Graph Theory and Statistical Models. *ASCE Journal of Water Resources Planning and Management*. 2017, 143(1): 04016068-1 - 04016068-16.
6. Buono, R.M.* , Zodrow, K., Alvarez, P.J.J. and Li, Q. A New Frontier in Texas: Managing and Regulating Brackish Groundwater. *Water Policy*. 2016, 18: 727-749.
7. Wang, Y.* , Meng, Y., Han, Q., Xue, N., Sun, Y., Gao, B. and Li, Q. Trihalomethane (THM) Formation from Synergic Disinfection of Bio-treated Municipal Wastewater: Effect of UV irradiation and Titanium Dioxide Photocatalysis on Dissolved Organic Matter Fractions. *Chemical Engineering Journal*. 2016, 303: 252-260.
8. Yang, Y., Flatebo, C., Liang, J., Dong, P., Yuan, J., Wang, T., Chen, W., Wu, J., Ajayan, P.M., Ci, L., Li, Q. and Lou, J.* Towards Methyl Orange Degradation by Direct Sunlight Using Coupled TiO₂ Nanoparticles and Carbonized Cotton T-Shirt. *Applied Materials Today*. 2016, 3: 57-62.
9. Fu, H., Liu, H., Mao, J., Chu, W., Li, Q., Alvarez, P.J.J., Qu, X.* and Zhu, D. Photochemistry of Dissolved Black Carbon Released from Biochar: Reactive Oxygen Species Generation and Phototransformation. *Environmental Science & Technology*. 2016, 50 (3): 1218–1226.
10. Yu, C., Li, X., Zhang, N., Liu, C., Wen, D. and Li, Q.* Inhibition of Biofilm Formation by D-Tyrosine: Effect of Bacterial Type and D-Tyrosine Concentration. *Water Research*. 2016, 92: 173-179.
11. Monzon, O., Yang, Y., Li, Q. and Alvarez, P.J.J.* Quorum Sensing Autoinducers Enhance Biofilm Formation and Power Production in an Axenic Hypersaline Microbial Fuel Cell. *Biochemical Engineering Journal*. 2016, 109: 222-227.
12. Brame, J., Long, M., Li, Q., and Alvaerz, P.J.J.* Inhibitory effect of natural organic matter or other background constituents on photocatalytic oxidation processes: mechanistic model development and validation. *Water Research*. 2015, 84: 362-371.
13. Jung, S-K., Qu, X., Aleman-Meza, B., Wang, T., Riepe, C., Zheng, L., Li, Q.* and Zhong, W.* Multi-endpoint, high-throughput study of nanomaterial toxicity in *Caenorhabditis elegans*. *Environmental Science & Technology*. 2015, 49(4): 2477-2485.

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14. Wu, J., Yu, C. and Li, Q.* Regenerable antimicrobial activity in polyamide thin film nano-composite membranes, *Journal of Membrane Science*. 2015, 476: 119-127.
 15. Guo, X.*, Li, Q., Zhang, M., Long, M., Kong, L., Zhou, Q., Shao, H. and Wei T. Enhanced photocatalytic performance of N-nitrosodimethylamine on TiO₂ nanotube based on the role of singlet oxygen. *Chemosphere*. 2015, 120C: 521-526.
 16. Monzon, O., Yang, Y., Yu, C., Li, Q. and Alvarez, P.J.J.* Microbial fuel cells under extreme salinity: performance and microbial analysis. *Environmental Chemistry*. 2015, 12(3): 293.
 17. Farrell, J.S., Fortner, J., Work, S., Avendano, C., Gonzalez-Pech, N., Araiza, R.Z., Li, Q., Alvarez, P.J.J., Colvin, V., Kan, A., Tomson, M.* Arsenic Removal by Nanoscale Magnetite in Guanajuato, Mexico. *Environmental Engineering Science*. 2014, 31(7): 393-402.
 18. Yu, C., Ma, J., Zhang, J., Lou, J., Wen, D., Li, Q.* Modulating Particle Adhesion with Micro-patterned Surfaces. *ACS Applied Materials and Interfaces*. 2014, 6(11): 8199-8207.
 19. Mauter, M.S.*, Alvarez, P.J.J., Burton, A., Cafaro, D.C., Chen, W., Gregory, K.B., Jiang, G.B., Li, Q., Pittock, J., Reible, D., Schnoor, J. Regional Variation in Water-Related Impacts of Shale Gas Development and Implications for Emerging International Plays. *Environmental Science & Technology*, 2014, 48(15): 8298-8306.
 20. Brame, J., Long, M., Li, Q., Alvarez, P.J.J.* Trading Oxidation Power for Efficiency: Differential Inhibition of Photo-Generated Hydroxyl Radicals versus Singlet Oxygen. *Water Research*, 2014, 60: 259-266.
 21. Gu, L., Li, Q., Quan, X.*, Cen, Y. and Jiang, X. Comparison of Nanosilver Removal by Flocculent and Granular Sludge and Short- and Long-term Inhibition Impacts. *Water Research*, 2014, 58: 62-70.
 22. Wu, J., Contreras, A.E. and Li, Q.* Studying the Impact of RO Membrane Surface Functional Groups on Alginate Fouling in Seawater Desalination. *Journal of Membrane Science*. 2014, 458: 120-127.
 23. Si, X., Quang, X.*, Li, Q. and Wu, Y. Effect of D-amino Acids and Norspermidine on the Disassembly of Large, Old-aged Microbial Aggregates. *Water Research*, 2014, 54: 247-253.
 24. Wang, S., Liu, C. and Li, Q.* Impact of Polymer Flocculants on Treated Water Quality in Surface Water Treatment by Coagulation-Microfiltration. *Separation Science and Technology*. 2014, 49(5): 682-690.
 25. Brame, J., Fattori, V., Clarke, R., Mackeyev, Y., Wilson, L.J., Li, Q. and Alvarez, P.J.J.* Water disinfection using nanotechnology for safer irrigation: A demonstration project in Swaziland. *Environmental Engineer and Scientist: Applied Research and Practice*. 2014, 16: 1-9.
 26. Huang, X.*, Xue, J.J., Li, Q., Tang, Y.C. Desorption of metals from aquifer soil during infiltration of low ionic strength water by pH effect. *Asian Journal of Chemistry*. 2014, 26(5): 1271-1274.
 27. Qu, X., Brame, J. Li, Q.* and Alvarez, P.J.J.* Nanotechnology for a Safe and Sustainable Water Supply: Enabling Integrated Water Treatment and Reuse. *Accounts of Chemical Research*. 2013, 46(3): 834-843.
 28. Wiesner M.*, Li, Q., Burgess, J., Kaeji, R., Dixon, D. Progress towards the responsible application of nanotechnology for water treatment. *Water Research*. 2013, 47(12): 3865.
 29. Qu, X., Alvarez, P.J.J. and Li, Q.* Photochemical Transformation of Carboxylated Multi-walled Carbon Nanotubes: Role of Reactive Oxygen Species. *Environmental Science & Technology*. 2013, 47(24): 14080-14088.
 30. Liao, Y., Brame, J., Que, W., Xiu, Z., Xie, H., Li, Q., Fabian, M. and Alvarez, P.J.J.* Photocatalytic Generation of Multiple ROS Types Using Low-Temperature Crystallized Anodic TiO₂ Nanotube Arrays. *Journal of Hazardous Materials*. 2013, 260: 434-441.

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31. Liga, M., Maguire-Boyle, S.J., Jafry, H.R., Barron, A.R. and Li, Q.* Silica Decorated TiO₂ for Virus Inactivation in Drinking Water – Green Synthesis Method and Mechanisms of Enhanced Inactivation Kinetics. *Environmental Science & Technology*. 2013, 47(12): 6463–6470.
 32. Wang, S., Liu, C. and Li, Q.* Impact of Polymer Flocculants on Coagulation-Microfiltration of Surface Water. *Water Research*, 2013, 47(13): 4538-4546.
 33. Yazdani, A., Duenas-Osorio, L.* and Li, Q. A Scoring Mechanism to Support the Ranking of Complex Network Topology Robustness. *Communications in Nonlinear Science and Numerical Simulation*. 2013, 18(10): 2722-2732.
 34. Qu, X., Alvarez, P.J.J. and Li, Q.* Applications of Nanotechnology in Water and Wastewater Treatment. Special Issue on Nanotechnology for Water and Wastewater Treatment, *Water Research*, 2013, 47: 3931-3946.
 35. Hwang, Y.S., Qu, X. and Li, Q.* The Role of Photochemical Transformations in the Aggregation and Deposition of Carboxylated Multi-Walled Carbon Nanotubes Suspended in Water. *Carbon*, 2013, 55: 81-89.
 36. Wen, D.*, Zhang, N., Yu, C., Li, Q. Community Structure and Contaminant Degradation Function of Biofilm in Environmental Engineering Systems. *Microbiology China*. 41(7): 1394-1401, 2013.
 37. Qu, X., Alvarez, P.J.J. and Li, Q.* Impact of Sunlight and Humic Acid on the Deposition Kinetics of Aqueous Fullerene Nanoparticles (nC₆₀). *Environmental Science & Technology*, 2012, 46: 13455-13462.
 38. Yu, C., Wu, J., Contreras, A.E. and Li, Q.* Control of Nanofiltration Membrane Biofouling by *Pseudomonas aeruginosa* Using D-Tyrosine. *Journal of Membrane Science*, 2012, 423–424 (15): 487-494.
 39. Maguire-Boyle, S.J., Liga, M.V., Li, Q.* and Barron, A.R.* Alumoxane/ferroxane nanoparticles for the removal of viral pathogens: the importance of surface functionality to nanoparticle activity. *Nanoscale*, 2012, 4: 5627-5632.
 40. Ma, J., Sun, Y., Gleichauf, K., Lou, J. and Li, Q.* Nanostructure on Taro Leaves Resists Fouling by Colloids and Bacteria under Submerged Conditions. *Langmuir*, 2011, 27: 10035-10040.
 41. Contreras, A.E., Steiner, Z., Jing, M., Kasher, R. and Li, Q.* Studying the Role of Common Membrane Surface Functionalities on Adsorption and Cleaning of Organic Foulants Using QCM-D. *Environmental Science & Technology*. 2011, 45 (15): 6309–6315.
 42. Brame, J., Li, Q. and Alvarez, P.J.J.*. Nanotechnology-Enabled Water Treatment and Reuse: Emerging Opportunities and Challenges for Developing Countries. *Trends in Food Science and Technology, Special issue: Food nano applications*. 2011, 618-624.
 43. Raciny, I., Zodrow, K.R., Li, D., Li, Q. and Alvarez, P.J.J*. Addition of a Magnetite Layer onto a Polysulfone Water Treatment Membrane to Enhance Virus Removal. *Water Science and Technology*. 2011, 63(10): 2346-2352.
 44. Jafry, H., Liga, M., Li, Q.* and Barron, A.R*. Simple Route to Enhanced Photocatalytic Activity of P25 Titanium Dioxide Nanoparticles by Silica Addition. *Environmental Science and Technology*. 2011, 45(4): 1563-1568.
 45. Jafry, H., Liga, M., Li, Q.* and Barron, A.R*. Single Walled Carbon Nanotubes (SWNTs) as Templates for the Growth of TiO₂: The Effect of Silicon in Coverage and the Positive and Negative Synergies for the Photocatalytic Degradation of Congo Red Dye. *New Journal of Chemistry*. 2011, 35(2): 400-406.

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46. Wang, S., Liu, X.S. and Li, Q.* Fouling of Microfiltration Membranes by Organic Polymer Coagulants and Flocculants: Controlling Factors and Mechanisms. *Water Research*, 2011, 45: 357-365.
 47. Liga, M.V., Bryant, E.L., Colvin, V.L. and Li, Q.* Virus Inactivation by Silver Doped Titanium Dioxide Nanoparticles for Drinking Water Treatment. *Water Research*, 2011, 45(2): 535-544.
 48. Li, D., Fortner, J.D. Johnson, D.R., Chen, C., Li, Q., Alvarez, P.J.J.* Bioaccumulation of $^{14}\text{C}_{60}$ by the Earthworm *Eisenia foetida*. *Environmental Science & Technology*. 2010, 44(23): 9170-9175.
 49. Hadduck, N.A., Hindagolla, V., Contreras, H.E., Li, Q. and Bakalinsky, A.T*. Does aqueous fullerene inhibit growth of *Saccharomyces cerevisiae* or *E. coli*? *Applied and Environmental Microbiology*. 2010, 76(34): 8239-8242.
 50. Qu, X., Hwang, Y.S., Alvarez, P.J.J., Bouchard, D. and Li, Q.* UV Irradiation and Humic Acid Mediate Aggregation of Aqueous Fullerene (nC_{60}) Nanoparticles. *Environmental Science & Technology*, 2010, 44(20): 7821-7826.
 51. Kong, L.L., Guo, X.Y.*, Zhou, Q.X., Li, Q., Hu, W.L. and Lu, J. Degradation Methods of NDMA in Surface and Drinking Water. *Progress in Chemistry*, 2010, 22(4): 734-739.
 52. Hwang, Y.S. and Li, Q.* Characterizing Photochemical Transformation of Aqueous nC_{60} under Environmentally Relevant Conditions. *Environmental Science & Technology*, 2010, 44(8): 3008-3013.
 53. Law, C.M.C., Li, X.Y. and Li, Q.* The Combined Colloid-Organic Fouling on Nanofiltration Membranes for Wastewater Treatment and Reuse. *Separation Science & Technology*, 2010, 45(7): 935-940.
 54. Kim, A.*, Contreras, A., Li, Q. and Rong, Y. Fundamental Mechanisms of Three-Component Combined Fouling with Experimental Verification. *Langmuir*, 2009, 25(14): 7815-7827.
 55. Li, Q.*, Xie, B., Hwang, Y.S. and Xu, Y. Kinetics of C_{60} Fullerene Dispersion in Water Enhanced by Natural Organic Matter and Sunlight. *Environmental Science and Technology*, 2009, 43(10): 3574-3579.
 56. Zodrow, K., Brunet, L., Mahendra, S., Li, D., Zhang, A., Li, Q. and Alvarez, P.J.J.* Polysulfone Ultrafiltration Membrane Impregnated with Silver Nanoparticles Show Improved Biofouling Resistance and Virus Removal. *Water Research*, 2009, 43(3): 715-723.
 57. Contreras, A., Kim, A. and Li, Q.* Combined Fouling Behavior of Nanofiltration Membranes: Mechanisms and Effect of Organic Matter. *Journal of Membrane Science*, 2009, 327(1-2): 87-95.
 58. Guo, X.*, Li, Q., Hu, W., and Liu, D. Ultrafiltration of Dissolved Organic Matter in Natural Water. *Journal of Membrane Science*, 2009, 327(1-2): 254-263.
 59. Li, Q.*, Mahendra, S., Lyon, D.Y., Brunet, L., Liga, M.L., Li, D. and Alvarez, P.J.J.* Antimicrobial Nanomaterials for Water Disinfection and Microbial Control: Potential Applications and Implications. *Water Research*, 2008, 42(18): 4591-4602.
 60. Li, D., Lyon, D., Li, Q. and Alvarez, P.J.J.* Effect of Natural Organic Matter on Antibacterial Activity of Fullerene Water Suspension. *Environmental Toxicology and Chemistry*, 2008, 27(9): 1888-1894.
 61. Xie, B., Xu, Z., Guo, W. and Li, Q.* Impact of Natural Organic Matter on the Physicochemical Properties of Aqueous C_{60} Nanoparticles. *Environmental Science & Technology*, 2008, 42(8): 2853-2859.
 62. Huang, X., Leal, M., and Li, Q.* Degradation of natural organic matter by TiO_2 photocatalytic oxidation and its effect on fouling of low pressure membranes. *Water Research*, 2008, 42: 1142-1150.

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63. Li, Q.*, Xu, Z. and Pinnau, I. Fouling of Reverse Osmosis Membranes by Biopolymers in Wastewater Secondary Effluent: Role of Membrane Surface Properties and Initial Permeate Flux. *Journal of Membrane Science*, 2007, 290 (1-2): 173-181.
 64. Li, Q.* and Elimelech, M. Synergistic effects in Combined Fouling of a Loose Nanofiltration Membrane by Colloidal Material and Natural Organic Matter. *Journal of Membrane Science*, 2006, 278: 72-82.
 65. Ding, L., Mariñas, B.J., Schideman, L., Snoeyink, V.L.* and Li, Q. Competitive effects of natural organic matter: Parameterization and verification of the three-component adsorption model COMPSORB. *Environmental Science & Technology*, 2006, 40(1): 350-356.
 66. Escobar, I. C. et al. Committee Report: Recent Advances and Research Needs in Membrane Fouling. *Journal of AWWA*, 2005, Vol. 97(8): 79-89.
 67. Li, Q. and Elimelech, M.* Natural Organic Matter Fouling and Chemical Cleaning of Nanofiltration Membranes. *Water Science and Technology: Water Supply*, 2004, Vol. 4(5-6): 245-251.
 68. Li, Q., Mariñas, B. J., Snoeyink, V. L.* and Campos, C. Pore Blockage Effects on Atrazine Adsorption in a PAC/Membrane System. I: Model Development. *Journal of Environmental Engineering, ASCE*, 2004, Vol. 130(11): 1242-1252.
 69. Li, Q., Mariñas, B. J., Snoeyink, V. L.* and Campos, C. Pore Blockage Effects on Atrazine Adsorption in a PAC/Membrane System. II: Model Verification and Application. *Journal of Environmental Engineering, ASCE*, 2004, Vol. 130(11): 1253-1262.
 70. Li, Q. and Elimelech, M.* Organic Fouling and Chemical Cleaning of NOM-Fouled Nanofiltration Membranes: Measurements and Mechanisms. *Environmental Science & Technology*, 2004, Vol. 38(17): 4683-4693.
 71. Chen, J. C., Li, Q. and Elimelech, M.* In-situ Monitoring Techniques for Concentration Polarization and Fouling Phenomena in Membrane Filtration. *Advances in Colloid and Interface Science*, 2004, Vol. 107(2-3): 83-108.
 72. Li, Q., Snoeyink, V.L.*, Mariñas, B.J., and Campos, C. Pore Blockage Effect of NOM on Atrazine Adsorption Kinetics of PAC: the Roles of NOM Molecular Weight and PAC Pore Size Distribution. *Water Research*, 2003, Vol. 37(20): 4863-4872.
 73. Li, Q., Mariñas, B.J., Snoeyink, V.L.* and Campos, C. Three-Component Competitive Adsorption Model for Flow-Through PAC Systems. Part I: Model Development and Verification with a PAC/Membrane System. *Environmental Science & Technology*, 2003, Vol. 37(13): 2997-3004.
 74. Li, Q., Mariñas, B.J., Snoeyink, V.L.* and Campos, C. Three-Component Competitive Adsorption Model for Flow-Through PAC Systems. Part II: Model Application to a PAC/Membrane System. *Environmental Science & Technology*, 2003, Vol. 37(13): 3005-3011.
 75. Li, Q., Snoeyink, V.L.*, Mariñas, B.J. and Campos, C. Elucidating Competitive Adsorption Mechanisms of Atrazine and NOM Using Model Compounds. *Water Research*. 2003, Vol. 37(4): 773-784.
 76. Li, Q., Snoeyink, V.L.*, Campos, C. and Mariñas, B. J. Displacement Effect of NOM on Atrazine Adsorption by PACs with Different Pore Size Distributions. *Environmental Science & Technology*. 2002, Vol. 36 (8): 1510-1515.
 77. Hao, J.*, Zhou, X., Fu, L., and Li, Q. Sulfuric Deposition Modeling Research in the East Part of China: Model Application, *China Environmental Science*ⁱ, 1996, Vol. 16 (5): 345-349. (citation: 5)

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78. Zhou, X.*, Hao, J. Fu, L., and Li, Q. Sulfuric Deposition Modeling Research in the East Part of China: Model Development and Performance Analysis. *China Environmental Science*ⁱ, 1996, Vol. 16 (4): 241-245.

Peer reviewed conference papers

1. Yazdani, A.*, Duenas-Osorio, L. and Li, Q. Analysis of Water Distribution Network Topology to Support Vulnerability Assessment. The 2012 PSAM11 & ESREL Conference on Probabilistic Safety Assessment, June 25-29, 2012, Helsinki, Finland.
2. Yazdani, A.*, Duenas-Osorio, L. and Li, Q. Network topology analysis to support optimal design and performance of water distribution systems. The 14th ASCE Water Distribution System Analysis Conference, September 24-27, 2012, Adelaide, Australia.
3. Wang, S., Liu, X. and Li, Q.* Effect of Polymer Flocculants on Microfiltration Membrane Flux. *Proceedings of the 2009 IWA Membrane Technology Conference*. Beijing, China, September 1-4, 2009.
4. Contreras, A.E., Kim, A. and Li, Q.* Investigating Combined Fouling of Colloid and Organic Macromolecules on Nanofiltration and Reverse Osmosis Membranes. *Proceedings of the 2009 IWA Membrane Technology Conference*. Beijing, China, September 1-4, 2009.
5. Hale, J.S., Harris, A., Li, Q., and Houchens, B.C.* The Fluid Mechanics of Membrane Filtration. *Proceedings of 2007 ASME International Mechanical Engineering Congress and Exposition*. Seattle, Washington, November 11-15, 2007.

Book Chapters

1. Mahendra, S., Li, Q., Lyon, D. Y., Brunet, L. and Alvarez, P. J. J. Nanotechnology Enabled Water Disinfection and Microbial Control: Merits and Limitations. In *Nanotechnology Applications for Clean Water*, Diallo et al., Ed., William Andrew Publishing: 2008.
2. Snoeyink, V. L., Campos, C., Li, Q., Schideman, L. and Marinãs, B. J. Application of Powdered Activated Carbon in the Floc Blanket Reactor/Ultrafiltration Process. In *Water Research and Water Supply in the 21st Century*, Watanabe, Y. and Funamizu, N., Ed., Hokkaido University Press, Sapporo, Japan, 2003: 157-165.

Published Technical Reports

1. Qu, X., Alvarez, P.J.J., Choi, Y.-C., Conlon, W., Li, Q.* Review of Nanomaterial Research and Relevance for Water Reuse. 2013, WRF 10-13, WateReuse Foundation.
2. Huang, X. and Li, Q.* Leaching of Metals from Aquifer Soils during Infiltration of Low Ionic Strength Reclaimed Water: Determination of Kinetics and Potential Mitigation Strategies. 2009. WRF 06-005, WateReuse Foundation. ISBN: 978-1-934183-25-0
3. Li, Q.* and Kegley, L. Assessing the Effectiveness and Environmental Impacts of Using Natural Flocculants to Manage Turbidity. 2006. State Planning and Research Project Number 615, Oregon Department of Transportation Research Group.

Non-peer reviewed articles

ⁱ Top environmental journal in China; Included in more than 10 international journal database including EI, CA, and ASFA.

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1. Li, Q., Tomson, M., Wong, M. and Alvarez, P.J.J. Nanotechnology: A Source of Answers to Global Clean Water Challenge. *Water 21*, August 2008.

Conference Keynote Talks and Invited Seminars/Presentations

1. Treating alternative water sources using nanotechnology. NNI Webinar on Water Sustainability through Nanotechnology: Increasing Water Availability. December 7, 2016.
2. Low Energy Desalination Enabled by Nanotechnology. Texas Tech University, November 14, 2016.
3. Nanotechnology Enabled Water Treatment: A New Approach to Water Supply. Lamar University, October 7, 2016.
4. New mechanistic and predictive model for ion adsorption equilibrium in capacitive deionization. The 252nd ACS National Meeting. Philadelphia, PA. Aug. 21-25, 2016.
5. Nanotechnology Enabled Water Treatment: A New Approach to Water Supply. Yuehua Water Company, July 22, 2016.
6. Nanotechnology for Low Energy Desalination: Beyond Reverse Osmosis. Tsinghua University Shenzhen Graduate School. July 15, 2016.
7. Nanotechnology Enabled Water Treatment: A New Approach to Water Supply. School of Environment, Tsinghua University. June 21, 2016.
8. Nanotechnology for Low Energy Desalination: Beyond Reverse Osmosis. US Army Corps of Engineers, Engineer Research and Development Center. March 23, 2016.
9. Nanotechnology for Low Energy Desalination: Beyond Reverse Osmosis. Texas A&M University Kingsville, March 11, 2016.
10. Nanosystems Engineering Research Center for Nanotechnology Enabled Water Treatment Systems. Energy and Environment Workshop, Houston TX. Dec. 9, 2015.
11. Photothermal Nanocomposite Membranes for Low Energy Desalination. The 8th National Conference on Environmental Chemistry. Guangzhou, China. Nov. 5, 2015.
12. Nanocomposite Membranes: Improving Energy Efficiency in Desalination. The First International Forum on Water/Wastewater Treatment Related Nanotechnology. Shenzhen, China, Nov. 5, 2015.
13. Nanotechnology for Desalination: Beyond Reverse Osmosis. 2015 Gordon Research Conference on Environmental Nanotechnology. Mount Snow, VT, U.S.A. June 21-26, 2015.
14. Nanotechnology for Low Energy Desalination. 2015 IWA Nano & Water Regional Conference. Dalian, China, May 20-23, 2015.
15. Nanotechnology Enabled Low Energy Desalination. July 25, 2015, Sichuan University, Chengdu, China
16. Nanotechnology Enabled Low Energy Desalination. July 20, 2015, Harbin Institute of Technology, Harbin, China
17. Membrane Fouling: Mechanisms and Control Strategies. July 8, 2015, Shangdong University, Jinan, China.
18. Nanotechnology Enabled Low Energy Desalination. May 25, 2015, Shanghai Jiaotong University, Shanghai, China.
19. Nanotechnology based strategies for membrane biofouling control. Jan. 30, 2015, University of Texas at San Antonio, San Antonio, TX.

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20. Biofouling and Nanotechnology Based Control Strategies. July 7, 2014, Universidade Federal de Santa Catarina, Florianopolis, Brazil
 21. Biofouling and Nanotechnology Based Control Strategies. June 6, 2014, Nanjing University, Beijing, China
 22. Biofouling and Nanotechnology Based Control Strategies. June 12, 2014, Tsinghua University, Beijing, China
 23. Photochemical Transformation of nC₆₀ and MWCNTs in the Aqueous Environment: Mechanisms and Impact on Transport Behaviors. University of Notre Dame, Notre Dame, IN. Jan. 20, 2014.
 24. Water-energy nexus: a global challenge that requires local solutions. The 2013 Water Management and Nano Energy Summit. November 13-14, 2013, Houston TX.
 25. Application of nano- and bio- technologies in membrane biofouling control. The 246th ACS national meeting. September 8-12, 2013, Indianapolis, IN.
 26. Nanotechnology for Water Management in Energy Production. SINOPEC Beijing Research Institute of Chemical Industry. Beijing, China. August 2, 2013,
 27. Advances in Membrane Fouling Research and Fouling Control Strategies. Tsinghua University. Beijing, China. July 31, 2013.
 28. Membrane Biofouling and Nanotechnology Based Control Approaches. Institute of Process Engineering, Chinese Academy of Sciences. Beijing, China. July 30, 2013.
 29. Challenges in Water Management for Shale Gas Production in the US. Workshop on Environmental Protection Technology of Shale Gas Industry Development. Chengdu, China. July 22-23, 2013.
 30. Photochemical Transformation of nC₆₀ and COOH-MWCNTs: Mechanisms and Impact on Transport Properties. IWA Symposium of Environmental Nanotechnology. April 24-26, 2013, Nanjing, China
 31. Fate and Risks of Nanomaterials. Understanding and Managing Nanotechnologies in Water Systems workshop. IWA World Water Congress and Exhibition. Busan, Korea. Sept. 17-21, 2012.
 32. Advances in Nano-scale Science and Engineering: Potential Application in Wastewater Treatment and Reuse. Frontiers of Membrane and Nano-membrane Technologies in Reuse and Desalination workshop. IWA World Water Congress and Exhibition, Sept., 17-21. 2012.
 33. Membrane Fouling and Control: From Organics to Bacteria. Tsinghua University, June 20, 2012
 34. Fate and Transport of carbon nanomaterials in the environment: Impact of NOM and Sunlight. Peking University, June 19, 2012.
 35. Fate and Transport of carbon nanomaterials in the environment: Impact of NOM and Sunlight. Beijing Normal University, June 18, 2012.
 36. Nanotechnology Based Approaches for Biofouling Control. The 2011 IWA Nano and Water Conference. Ascona, Switzerland, May 13-15, 2011.
 37. Impact of sunlight and humic acid on the aggregation kinetics of nC₆₀. The 6th International Conference on Sustainable Water Environment. Newark, Delaware, July 29-31, 2010.
 38. Effect of polymer flocculants on microfiltration of surface water. The 6th International Conference on Sustainable Water Environment. Newark, Delaware, July 29-31, 2010.
 39. Fate and transport of carbon nanomaterials in the aqueous environment: Impact of NOM and Sunlight. Texas A&M University, Kingsville, March 7, 2010.
 40. Nanotechnology Enabled Water Treatment. Rice 360 Global Health Technologies Symposium. Houston, Texas, November 6, 2009.

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41. Membrane Fouling and Fouling Control. Petroleum Environmental Research Forum annual meeting. Houston, Texas, November 18, 2009.
 42. Environmental Application and Implication of Nanotechnology. Department of Chemical and Biomolecular Engineering, Rice University. August 27, 2009.
 43. Using Metals and Metal Oxide Nanoparticles in Water Filtration Membranes to Reduce Bacterial Adhesion and Enhance Virus Removal. Engineering Conferences International Symposium Series on Advanced Membrane Materials. Trondheim, Norway, June 7-12, 2009.
 44. Nanotechnology Enabled Water Treatment. Gloyna Breakfast Speaker, Texas Water Conference. Galveston, Texas, April 17, 2009.
 45. Fate, Transport and Toxicity of nC_{60} in the Aqueous Environment. Texas A&M University at Galveston, March 31, 2009.
 46. Impact of NOM on the Fate, Transport and Toxicity of C_{60} Fullerene Nanoparticles. University of California at Los Angeles. March 3, 2009.
 47. Fate, Transport and Toxicity of nC_{60} in the Aqueous Environment. University of Texas at Austin, February 4, 2009.
 48. Impact of NOM on the Fate, Transport and Toxicity of C_{60} Fullerene Nanoparticles. University of Cincinnati. November 14, 2008.
 49. Impact of NOM on the Fate, Transport and Toxicity of C_{60} Fullerene Nanoparticles. University of Hong Kong. Hong Kong, China. October 24, 2008.
 50. Impact of NOM on the Fate, Transport and Toxicity of C_{60} Fullerene Nanoparticles. NSF Center of Advanced Materials for Purification of Water with Systems, University of Illinois at Urbana-Champaign. Urbana, Illinois. October 3, 2008.
 51. Impact of NOM on the Fate, Transport and Toxicity of C_{60} Fullerene Nanoparticles. Hong Kong University of Science and Technology. Hong Kong, China. August 15, 2008.
 52. Membrane Fouling in Reverse Osmosis and Nanofiltration: A Multi-scale Study on Fouling Mechanisms. University of Houston. Houston, Texas. February 20, 2008.
 53. Nanotechnology Enabled Water Treatment. Texas Water Summit. San Antonio, Texas. December 3, 2007.
 54. Membrane Fouling in Reverse Osmosis and Nanofiltration: A Multi-scale Study on Fouling Mechanisms. University of Delaware. Newark, Delaware. June 28, 2007.
 55. Chemical Cleaning of NF Membranes Fouled by Natural Organic Matter, Effect of Solution Chemistry. AWWA Water Quality Technology Conference. Québec City, Québec, Canada, November 6-10, 2005.
 56. Fouling and Chemical Cleaning of Nanofiltration Membranes: Effects of Solution Chemistry and Foulant Interactions. NSF Center of Advanced Materials for Purification of Water with Systems, University of Illinois at Urbana-Champaign. Urbana, Illinois. November 12, 2005.
 57. Fouling and Chemical Cleaning of Nanofiltration Membranes: Effects of Solution Chemistry and Foulant Interactions. McGill University, Montreal, Canada. November 10, 2005.
 58. Fouling and Chemical Cleaning of NF Membranes: Measurements and Mechanisms. Tsinghua University, Beijing, China. September 3, 2005.
 59. Fouling and Chemical Cleaning of NF Membranes: Measurements and Mechanisms. Rice University, Houston, Texas. December 2, 2004.

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60. Interactions of Natural Organic Matter and Polymeric Membrane Surface: Mechanisms of Membrane Fouling and Cleaning. University of Illinois at Urbana-Champaign. Urbana, Illinois. May 15, 2003.