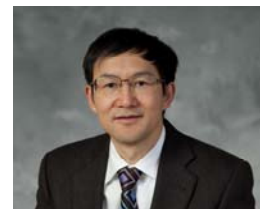


## CURRICULUM VITAE FOR DR. YONGSHENG CHEN

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### EDUCATION

Degree	Field Institution	Date Conferred
Ph.D.	Environ. Chem. Nankai University	1995
M.S.	Environ. Chem. Nankai University	1992
B.S.E	Chemical Eng. Northern China Institute of Technology	1986

### ACADEMIC EXPERIENCE

- 2009 - Present: Associate Professor**, School of Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta, GA30332
- 2009 - Present: Adjunct Professor**, Department of Civil and Environmental Engineering, Arizona State University, Main Campus
- 2003 - 2009: Associate Professor Research**, Department of Civil and Environmental Engineering, Arizona State University, Main Campus
- 1998 – 2002: Research Engineer II**, National Center for Clean Industrial and Treatment Technologies, Michigan Technological University
- 1996 - 1998: Associate Professor**, Department of Environmental Science and Engineering, Nankai University, P. R. China
- 1995 - 1996: Assistant Professor**, Department of Environmental Science and Engineering, Nankai University, P. R. China

### GRANTS AND CONTRACTS (Total US \$4,255,875 as PI and Co-PI)

#### - Environmental Applications and Implications of Nanotechnology

- Principal Investigator, "Development of an *In Vitro* Test and a Prototype Model to Predict Cellular Penetration of Nanoparticles" Supported by EPA, \$399,628; 06/01/08-05/30/11
- Principal Investigator, "Methodologies Development for Manufactured Nanomaterial Bioaccumulation Test" Supported by EPA, \$399,768; 05/01/07-04/30/10
- Co-Principal Investigator, "Understanding and Improving Nano-structured Arsenic Adsorptive Medias"; Funded by American Water Works Association Research Foundation; Award Amount: \$100,000; 2004-2005
- Principal Investigator, "Potential Toxicity Evaluation of Nanoparticles in Drinking Water", Supported by NSF Water Quality Center, \$15,000; 2005-2006
- Co-Principal Investigator, "The Fate, Transport, Transformation and Toxicity of Manufactured Nanomaterials in Drinking water", Supported by EPA START, \$454,000; 2004-2007
- Principal Investigator, "Evaluation of Litree PVC Ultrafiltration Membrane for Removal of Microbiological, Particulate, and Organic Contaminants in Drinking Water", Supported by Litree, \$110,000; 2006-2008
- Principal Investigator, "Evaluation of Lynntech's Disinfection Process"; Funding Source: NIH, Award Amount: \$70,000; 2007-2009.
- Senior Personnel, "NSEC: Center for Nanotechnology in Society at Arizona State University", Support by NSF, \$6,200,000, 2005-2010

9. Co-Principal Investigator, "Design, Synthesis, and Characterization of Nanotube p-n Junction Photocatalyst for Destruction of Environmental Pollutants", Supported by NSF NER program, \$99,745, 2001-2002
10. Co-Principal Investigator, "Development of a High Performance Photocatalytic Reactor System for the Production of Methanol from Methane in the Gas Phase", Supported by EPA CenCitt, \$205,648, 1999-2001

**-Sustainable Biofuel**

11. Principal Investigator, "Membrane technology for algae-based biomass harvesting and dewatering", funded by Litree purification company, \$350,000; 09/2009-08/2013
12. Principal Investigator, "Evaluation of a Membrane Filtration-Dissolved Air Flotation Technique for Harvesting and Dewatering of Algal Biomass" Supported by Boeing Company, \$75,000, 2008-2009
13. Co-Principal Investigator, "DARPA-BAA 08-07JP-8 Biofuel Program Proposal- General Atomics-Phase I Effort"; Supported by DARPA; \$1,137,540; 06-08/2008 – 11/30/2009
14. Co-Principal Investigator, "Sustainable Disruptive Technology for Algae-Based Jet Fuel Production in Arizona" funded by Arizona Science Foundation, \$1,500,000; 2008-2010

**-Urban Sustainability**

15. Co-Principal Investigator, "Assessing and managing the sustainability of global reverse supply chains: the case of personal computers"; Supported by NSF; \$397,834.00; 06/01/2007 – 05/31/2010
16. Co-Principal Investigator, "Sustainability Science and Engineering Education ", Supported by NSF, \$245,605; 2005-2010
17. Co-Principal Investigator, "Decision Support for Urban Development: Air Quality, Social Injustice, Material and Energy and the Impact of Social Decision Making", Supported by NSF, \$115,000; 2004-2005
18. Co-Principal Investigator, "Benchmarking Sustainability Engineering Education", Supported by EPA, \$350,000; 2004-2006
19. Co-Principal Investigator, "Impacts of Material Use in Future Urban Development", supported by Arizona Science Foundation, \$400,000; 2006-2007

**-Others**

20. Draftsman and Co-Principal Investigator, Joint-Project: "Water Resources Sustainable Management in the Beijing -Tianjin Region" Supported by International Development Agency of Canada. \$ 100,000, 1997-2000
21. Co-Principal Investigator, "The Transformation, Transport, and Fate of Typical Chiral Pesticide in Aquatic and Soil System", Supported by Doctoral Program Foundation of State Education Commission, \$5,500, 1997-1999
22. Principal Investigator, "Biodegradability Prediction and Biosorption Behavior of Aromatic Compounds and Dyes," Supported by Tianjin Science and Technology Commission, \$2,000, 1997 - 1998
23. Principal Investigator, "Development of a novel high performance anaerobic sludge bed," Supported by Tianjin City Natural Science Foundation, \$5,000, 1997-1998
24. Principal Investigator, "Investigation on Environmental Behaviors and Source Analysis of Typical Organic Pollutants in Microlayer," Supported by The National Natural Sciences Foundation, \$15,000, 1996-1998
25. Principal Investigator, "Mechanism of Microorganism Metabolism for Phthalic Ester," Supported by the National Key Laboratory of Pollution Protection and Prevention Control, \$1,500, 1996-1997

26. Principle Investigator, "Environmental Assessment of Novo Nordisk (China Biotechnology Company," Supported by Novo Nordisk Biotechnology Company (China) LTD., \$32,000, 1995-1996
27. Co- Principle Investigator, "The Investigation of Wastewater Treatment for Containing None-Readily Organic Pollutants by Using Biotechnology," Supported by Doctoral Program Foundation of State Education Commission, \$4,100, 1995-1997
28. Co-Principal Investigator, "Investigation of Pesticides Industrial Wastewater Treatment,"(by using photocatalytic degradation method) Supported by National Commission of Science and Technology, \$4,300, 1992-1995

## **STUDENTS SUPERVISED**

**Current:** 4 Ph.D. Students; 2 Postdocs.

**Supervised:** 21 undergraduate students and 12 graduate students; for example, a number of my students I advised have studied/graduated at/from University of California at Berkeley; Purdue University; Texas A&M University; and New Jersey Institute of Technology.

## **UNIVERSITY COURSES TAUGHT**

CEE384 (Numerical Method for Engineers in 2007 Spring); CEE ASU-FSE 101 (The ASU Experience, 2007 Spring, 2008 Spring); CEE 792A (Research, 2007 Spring & Fall; 2008 Spring); CEE 790A (Reading and Conference, 2007 Spring & Fall; 2008 Spring); Introduction to Water and Wastewater Treatment (undergraduate, 2001); Environmental Chemistry (undergraduate and graduate, 1997); Aquatic Chemistry (graduate, 1997); Polluting Sources Control Technology (graduate, 1996); Advanced Analytical Chemistry (graduate, 1997); Inorganic Chemistry and Analytical Chemistry (undergraduate, 1995); Physics (undergraduate, 1995); Professional English (undergraduate and graduate, 1996)

## **SCIENTIFIC REVIEW ACTIVITIES**

Member, Review Panel, National Science Foundation  
 Member, Chinese Chang-Jiang Scholar Abroad Review Committee  
 Member, Review Panel, Department of Energy  
 Member, The U.S. Environmental Protection Agency

Environmental Science & Technology; Journal of Environmental Engineering; Water Research; Separation and Purification Technology; Environmental Toxicology and Chemistry; Chemosphere; the Journal of Membrane Science; Journal of Hazardous Materials; Groundwater Monitoring and Remediation; Clean Products & Processes; Separation and Purification Technology; Environmental Chemistry

## **SCIENTIFIC AND PROFESSIONAL ASSOCIATIONS**

American Chemical Society  
 American Water Works Association  
 The Association of Environmental Engineering and Science Professors (AEESP)  
 Secretary of Disciplinary Evaluation Group for Environmental Science and Engineering, Academic Degree Committees, China State Council  
 Graduate Degree Control Board of Nankai University  
 Chinese Ecological Society

## **PROFESSIONAL CONSULTANTING**

- Amway, MI, regarding to air purification via TiO<sub>2</sub> photocatalysis and activated carbon
- SDI, emergency response for drinking water distribution systems

- EST, Purging and Trap

## AWARDS

- 2007 Top viewed article in Journal of Scripta Materialia for January - March 2007 (Satoshi Kaneco, **Yongsheng Chen**, Paul Westerhoff and John C. Crittenden, “Fabrication of uniform size titanium oxide nanotubes: Impact of current density and solution conditions,” *Scripta Materialia* 56:373–376 (2007)
- 2006 Runnerup for the editors choice award for the most significant technology based paper that was submitted to the Journal of Environmental Science and Technology. (**Chen, Y.**, J. C. Crittenden, S. Hackney, L. Sutter and D.W. Hand, “Preparation of a Novel TiO<sub>2</sub>-based p-n Junction Nanotube Photocatalyst,” *Environmental Science and Technology*, Vol. 39, No. 5, 1201-1208 (2005).
- 2000 Exceptional Advising in Student Life, Michigan Technological University
- 1997 Motorola Teaching Award

## PUBLICATIONS

### -Published

1. “Harvesting algal biomass for biofuels using ultrafiltration membranes”, Xuezhi Zhang, Qiang Hu, Milton Sommerfeld, Emil Puruhito, **Yongsheng Chen**, *Bioresource Technology*, 101(2010): 5297–5304
2. "Gigaton Problems Need Gigaton Solutions", Xu, Ming; John, Crittenden, **Yongsheng Chen**, Valerie Thomas, Douglas Noonan, Reginald DesRoches, Marilyn Brown, Steve French, *Environmental Science & Technology*, 44(2010) 4037-4041
3. “Trophic transfer of TiO<sub>2</sub> nanoparticles from Daphnia to zebrafish in a simplified freshwater food chain”, Xiaoshan Zhu, Jiangxin Wang, Xuezhi Zhang, Yung Chang, and **Yongsheng Chen**, *Chemosphere*, 79 (2010) 928–933
4. “Toxicity and bioaccumulation of TiO<sub>2</sub> nanoparticle aggregates in Daphnia magna”, Xiaoshan Zhu, Yung Chang, **Yongsheng Chen**, *Chemosphere*, 78 (2010): 209–215
5. “Toxicity and cellular responses of intestinal cells exposed to titanium dioxide”, Brian A. Koenema, Yang Zhang, Paul Westerhoff, **Yongsheng Chen**, John C. Crittenden, David G. Capco, *Cell Biol Toxicol.*, (2010) 26:225–238
6. “Decolorization of industrial wastewater by ozonation followed by adsorption on activated carbon”, A.H. Konsowa, M.E. Ossman, **Yongsheng Chen**, John C. Crittenden, *Journal of Hazardous Materials*, 176(2010): 181-185
7. “The impact of ZnO nanoparticle aggregates on the embryonic development of zebrafish (Danio rerio)”, Xiaoshan Zhu, Jiangxin Wang, Xuezhi Zhang, Yung Chang and **Yongsheng Chen**, *Nanotechnology*, 20 (2009):195103 (9pp)
8. “Acute toxicities of six manufactured nanomaterial suspensions to Daphnia magna”, Xiaoshan Zhu, Lin Zhu, **Yongsheng Chen**, Shengyan Tian, *Journal of Nanoparticle Research*, 11 (2009):67-75
9. “Impact of natural organic matter and divalent cations on the stability of aqueous nanoparticles”, Yang Zhang, **Yongsheng Chen**, Paul Westerhoff, John Crittenden, *Water Research*, 43 (2009):4249-4257
10. “Experimental approach for an in vitro toxicity assay with non-aggregated quantum dots”, Brian A. Koeneman, Yang Zhang, Kiril Hristovski, Paul Westerhoff, **Yongsheng Chen**, John C. Crittenden, David G. Capco, *Toxicology in Vitro.*, 23 (2009): 955–962

11. “ Effects of aqueous stable fullerene nanocrystals (nC60) on Daphnia magna: Evaluation of sub-lethal reproductive responses and accumulation”, Xianji Tao, John D. Fortner, Bo Zhang, Yiliang He, **Yongsheng Chen** , Joseph B. Hughes, *Chemosphere*, 77 (2009): 1428-1487
12. “Influence of titanium dioxide nanoparticles on speciation and bioavailability of arsenite”, Hongwen Sun, Xuezhi Zhang, Zhiyan Zhang, **Yongsheng Chen**, John C. Crittenden, *Environmental Pollution*, 157 (2009):1165–1170
13. “Do all wurtzite nanotubes prefer faceted ones?”, Yafei Li, Zhen Zhou, **Yongsheng Chen**, and Zhongfang Chen, *The Journal of Chemical Physics*, 130 (2009):1-5
14. “Real-Time Ozone Detection Based on a Microfabricated Quartz Crystal Tuning Fork Sensor”, Rui Wang, Francis Tsow, Xuezhi Zhang, Jih-Hong Peng, Erica S. Forzani, **Yongsheng Chen**, John C. Crittenden, Hugo Destailats and Nongjian Tao, *Sensor*, 9 (2009):5655-5663
15. “Evaluation of an innovative polyvinyl chloride (PVC) ultrafiltration membrane for wastewater treatment”, Xuezhi Zhang, **Yongsheng Chen**, A.H. Konsowa, Xiaoshan Zhu, John C. Crittenden, *Separation and Purification Technology*, 70 (2009): 71–78
16. “Life cycle assessment of three water supply systems: importation, reclamation and desalination”, E. Lyons, P. Zhang, T. Benn, F. Sharif, K. Li, J. Crittenden, M. Costanza and **Y. S. Chen**, *Water Science and Technology: Water Supply*, 9 (2009): 439-448
17. “Toxicity Assessment of Manufactured Nanomaterials Using the Unicellular Green Algae Chlamydomonas reinhardtii” Jiangxin Wang, Xuezhi Zhang, **Yongsheng Chen**, Milton Sommerfeld, and Qiang Hu, *Chemosphere*, 73 (2008):1121–1128
18. “Oxidative stress and growth inhibition by nC<sub>60</sub> on fish”, Xiaoshan Zhu, Lin Zhu, Yupeng Lang, **Yongsheng Chen**, *Environmental Toxicology and Chemistry*; 27(2008):1979-1985
19. “Stability and Removal of Water Soluble CdTe Quantum Dots in Water”, Zhang, Y.; **Yongsheng Chen**; Westerhoff, P.; Crittenden, J. C., *Environmental Science and Technology*, 42(2008): 321-325.
20. “One-Dimensional ZnO Nanostructures: Size- and Surface-Dependent Stability, Electronic Properties, and Potential Chemical Sensors”, Zhen Zhou, Yafei Li, Lu Liu, **Yongsheng Chen**, S. B. Zhang, Zhongfang Chen; *Journal of Physical Chemistry C*; 112(2008):13926–13931
21. “Stability of commercial metal oxide nanoparticles in water”, Yang Zhang, **Yongsheng Chen**, Paul Westerhoff, Kiril Hristovski, John C Crittenden, *Water Research*, , 42(2008):2204-2212
22. “Energetics and Electronic Structures of AlN Nanotubes/Wires and their Potential Application as Ammonia Sensors” Zhou, Z.; Zhao, J.; **Yongsheng Chen**, Schleyer, P. v. R.; Chen, Z., *Nanotechnology*, 18 (2007): 424023 (7pp)
23. “Fabrication of uniform size titanium oxide nanotubes: Impact of current density and solution conditions”, Kaneco, S., **Yongsheng Chen**, P. Westerhoff, and J.C. Crittenden, *Scripta Materialia*, 56 (2007): 373-376.
24. “Enhanced Accumulation of Arsenic in Carp in the Presence of Titanium Dioxide Nanoparticles”, Zhang, X., H. Sun, Z. Zhang, Q. Niu, **Yongsheng Chen**, and J. Crittenden, *Water, Air, and Soil Pollution*, 178(2007):245–254
25. “Enhanced bioaccumulation of cadmium in carp in the presence of titanium dioxide nanoparticles”, Zhang, X., H. Sun, Z. Zhang, Q. Niu, **Yongsheng Chen**, and J.C. Crittenden, *Chemosphere*, 67(2007): 160–166
26. “Mathematical Model for Photocatalytic Destruction of Organic Contaminants in Air”, Sanongraj, W., **Yongsheng Chen**, J. Crittenden, H. Destailats, D. Hand, and R. Taylor, *J. Air & Waste Manage. Assoc.*, 57(2007): 1112–1122
27. “Development of a Framework for Quantifying the Environmental Impacts of Urban Development and Construction Practices,”\_Ke Li, Peng Zhang, John C. Crittenden, Subhrajit

- Guhathakurta, **Yongsheng Chen**, Harindra Fernando, Anil Sawhney, Peter McCartney, Nancy Grimm, Himanshu Joshi, Goran Konjevod, Yu-jin Choi, Ernesto Fonseca, Braden Allenby, Daniel Gerrity, Ramzy Kahhat, Paul M. Torrens, *Environmental Science and Technology*, 41(2007): 5130 – 5136
28. "Adding Sustainability to the Engineer's Toolbox: A Challenge for Engineering Educators," Chris T. Hendrickson, H. Scott Matthews, Michael W. Bridges, Braden R. Allenby, John Crittenden, **Yongsheng Chen**, Eric Williams, David T. Allen, Cynthia F. Murphy, and Sharon Austin, Cliff I. Davidson, *Environmental Science and Technology*, 41(2007): 4847-4849
  29. "Modeling of Indoor Air Treatment of Polychlorinated Dibenzo-*p*-Dioxins and Dibenzofurans Using High-Efficiency Particulate Air-Carbon Filtration", Li, H. **Yongsheng Chen**, J. Crittenden, and D. Hand, *J. Air & Waste Manage. Assoc.* 56(2006):1155–1166
  30. "Preparation of a Novel TiO<sub>2</sub>-based P-N Junction Nanotube Photocatalyst" **Yongsheng Chen**, John C. Crittenden, Stephen Hackney, and David W Hand, *Environmental Science and Technology*, 2005, 39(5); 1201-1208 (**THE RUNNER-UP ENVIRONMENTAL SCIENCE AND TECHNOLOGY 2005 EDITOR'S CHOICE TOP PAPER AWARD**)
  31. "Magnetic MnO-Fe<sub>2</sub>O<sub>3</sub> powder -- a novel nanomaterial for the removal of azo dye from water", Wu Rongcheng, Qu Jihui, and **Yongsheng Chen**, *Water Research*, 2005, 39 (4): 630-638.
  32. "Particle Counter Applications in Drinking Water Treatment", Dongsheng Wang and **Yongsheng Chen**, *China Water and Wastewater*, 2003, 19 (9): 29-31
  33. "Isolation and Characterization of a new plasmid from Bacteria for Degradation of 2, 4-Dichlorophenol", **Yongsheng Chen**, Yuanyi Zhuang, Shugui Dai, and Cai Baoli, *Acta Scientiae Circumstantiae*, 1999, 19(1): 28-32
  34. "Exploration of Bioremediation of p-Chlorophenol for Polluted Soil," **Yongsheng Chen**, Xiaoqing Chang and Lin Zhu, *Environmental Chemistry*, 1999, 18(1): 86-90
  35. "Enrichment Technology of Phthalate Esters in Water," Zhaohui Jin, Hongliang Li, Guolan Huang, Hongwen Sun, and **Yongsheng Chen**, *Environmental Science*, 1998, 19(1): 30-33
  36. "Biosorption of Dyes on Prepared Algae (Spirulina subsalsa)," **Yongsheng Chen**, Guolan Huang, Yuanyi Zhuang, Yiran Sun, Shu Yan, and Qijun Sun, *Environmental Chemistry*, 1998, 17(5): 439-443
  37. "Biosorption of Heavy Metallic Ions by Saccharomyces cerevisiae and Spirulina subsalsa," **Yongsheng Chen**, Qijun Sun and Dali Wang, *Shanghai Environmental Sciences*, 1998, 17(7): 14-23
  38. "The Relationship between Biosorption Characteristics and Structure of Phenolic Compounds," **Yongsheng Chen**, Shu Yan, and Qijun Sun, *China Environmental Science*, 1998, 18(3): 248-251
  39. "Toxic Effects of Dibutyl Phthalate on Daphnia magna," Guolan Huang, Hongwen Sun, Gao Juan, and **Yongsheng Chen**, *Environmental Chemistry*, 1998, 17(5): 428-433
  40. "A Survey on the Microbial Degradation of Chlorinated Aromatic Compounds," **Yongsheng Chen**, Yuanyi Zhuang, and Shugui Dai, *Advances in Environmental Science*, 1997, 5(2): 17-26
  41. "A Study on Biodegradability of 32 Aromatic Compounds," **Yongsheng Chen**, Lixia Chen, Jie Yang, Yuanyi Zhuang, and Shugui Dai, *Environmental Chemistry*, 1997, 16(1): 43-48
  42. "Application of Molecular Topological Indexes to Quantitative Structure-Biodegradability Relationships," **Yongsheng Chen**, Lixia Chen, Jie Yang, Yuanyi Zhuang, and Shugui Dai, *Environmental Chemistry*, 1997, 16(3): 208-214
  43. "Research on Technology of Biosorption of Heavy Metals," **Yongsheng Chen**, Qijun Sun, Jun Chen, Yuanyi Zhuang, and Shugui Dai, *Advances in Environmental Science*, 1997, 5(6): 34-43.

44. "The Correlation between  $COD_{Cr}$  and  $COD_{Mn}$  of the Regional Wastewater from a Petrochemistry Industrial Zone," Xiangru Zhang, Tan Zhu, **Yongsheng Chen**, Bin Hu, and Hongbin Yu, *Environmental Monitoring in China*, 1996, 12(6): 25-27
45. "Study on Degradation of Resorcinol by Microorganism," **Yongsheng Chen**, Yuanyi Zhuang, Lixia Chen, and Shugui Dai, *Environmental Chemistry*, 1996, 15(4): 307-312
46. "Study on Enzyme Activity and Distribution in Two Strains of Bacteria by Dichlorophenol Degradation," Shugui Dai, Yuanyi Zhuang, **Yongsheng Chen**, Guanghong Chen, Lixia Chen, and Jun Xiao, *Acta Scientiae Circumstantiae*, 1996, 16(2): 173-178
47. "Sunlight  $TiO_2$  Photocatalytic Degradation of o-Chloroaniline," Daoxin You, **Yongsheng Chen**, and Shugui Dai, *Water Quality Research Journal of Canada*, 1995, 30(1): 61-67
48. "Study on the Relationship between Structure of Synthetic Organic Chemical and Their Biodegradability," Shugui Dai, Yuanyi Zhuang, **Yongsheng Chen**, and Lixia Chen, *Environmental Chemistry*, 1995, 14(4): 354-367

**-Presentations and Proceedings:**

1. "Adsorption of Hematite Nanoparticles onto Caco-2 Cells and the Exposure Induced damages to Cells", Wen Zhang and Yongsheng Chen, The second International Conference on Implication of Nanotechnology, Los Angeles, 11<sup>th</sup> to 13<sup>th</sup>, 2010
2. "Development of Quantitative Structure-Activity Relationship for Prediction of Biological Effects of Nanoparticles Associated with Semiconductor Industries", GRC/SEMATECH Engineering Research Center for Environmentally Benign Semiconductor Manufacturing Review, Tucson, Arizona, February 17-19, 2010
3. "Methodology Development for Adhesion Force Measurement between Nanomaterials and Cells Using AFM", Wen Zhang, Yongsheng Chen, et.al., 237th American Chemical Society National Meeting & Exposition, Salt Lake City, UT, March 22 - 26, 2009
4. Methodology Development for Adhesion Force Measurement between Nanomaterials and Cells Using AFM. Wen Zhang, Yongsheng Chen, Bruce Rittmann, and John Crittenden. 48th Annual Arizona-Southern Nevada ASM Branch Meeting. Arizona State University, Tempe, Arizona, April, 12, 2008
5. "Potential Toxicity of Nanomaterials and their Removal", Xiaoshan Zhu, Xuezhi Zhang, Wen Zhang, Yung Chang, Hu Qiang, and Yongsheng Chen, Proceedings of the Chicago International Environmental Nanotechnology Conference: Applications and Implications Oct. 7-9, 2008
6. "Potential toxicity of nanomaterials and their removal", Zhang, W., Zhu, X., Zhang, X., Chang, Y., Hu Q., Rittman, B., Crittenden, J. and Chen, Y., *EPA International Environmental Nanotechnology Conference*. Chicago, Illinois, Oct 2008
7. "Potential environmental and ecological effect of nanomaterials", Zhang, W., Zhu, X., Zhang, X., Wang, J., Zhang, Y., Chang, Y., Hu Q., Rittman, B., Crittenden, J. and Chen, Y., *ACS 42<sup>nd</sup> Western Regional Meeting*. Las Vegas, Nevada, Sep 2008
8. "Potential toxicity of nanomaterials and their removal" Wen Zhang, Xiaoshan Zhu, Xuezhi Zhang, Yung Chang, , Bruce Rittman, John Crittenden, and Yongsheng Chen, Arizona Regional Nanotechnology Conference, April, 2008.
9. "Toxicity of ZnO Nanoparticle Sedimentation on Zebrafish Embryo Development" Xiaoshan Zhu, Jiangxin Wang, Xuezhi Zhang, Yung Chang, Qiang Hu, John Crittenden, and Yongsheng Chen, NanoTech Meeting, June, 2008.

10. The Impact of TiO<sub>2</sub> Nanoparticles on Bioaccumulation of Arsenic in Fish. Zhang, Xuezhi, Yongsheng Chen, Sun, Hongwen, and John Crittenden, *The 2<sup>nd</sup> Nanotoxicology Conference: Progress and Future Perspectives*. Venice, Italy, April 2007
11. Adsorption/desorption of Cd by titanium dioxide nanoparticles and sediment particles as well as their facilitated bioaccumulation of Cd into carp. Zhang, Xuezhi, Yongsheng Chen, Sun, Hongwen, and John Crittenden, *NSTI (Nano Science and Technology Institute) Nanotech 2007*. Santa Clara, California, May 2007
12. Bioaccumulation of nanomaterials and their potential impact. . Zhang, Xuezhi, Yongsheng Chen, Sun, Hongwen, and John Crittenden, *AEESP (Association of Environmental Engineering and Science Professors) Conference 2007*. Blacksburg, Virginia, July 2007
13. “Sustainable Urban Engineering and Science,” John C. Crittenden, Yongsheng Chen, and Ke Li, American Association of Environmental Engineering and Science Professors Workshop: Frontiers in Environmental Engineering Education, Arizona State University, Tempe, AZ, January 10, 2007.
14. “Sustainable Urban Engineering and Science,” John C. Crittenden, Yongsheng Chen, and Ke Li, Department of Civil and Environmental Engineering, University of California - Riverside, February 2, 2007.
15. “Sustainable Urban Engineering and Science,” John C. Crittenden, Yongsheng Chen, and Ke Li, University of Vermont, April 13, 2007.
16. “Sustainable Urban Engineering and Science,” John C. Crittenden, Yongsheng Chen, and Ke Li, Key Note Speaker at the Energy and Environment Conference, Washington University, St Louis, MO, May 6, 2007.
17. “Application of Nanotechnology for Adsorption Processes,” John Crittenden, Yang Zhang, Brian Koeneman, Kiril Hristovski, Paul Westerhoff, Yongsheng Chen, and David Capco, Plenary Lecture, International Water Association Leading Edge Technology Conference, Singapore, June 6, 2007.
18. “Nanoparticles in the Water Environment: Characterization, Removal, Environmental Applications, Bioaccumulation and Cytotoxicity, Department of Environmental Science and Engineering, John Crittenden, Yang Zhang, Brian Koeneman, Kiril Hristovski, Paul Westerhoff, Yongsheng Chen, David Capco, Daniel Gerrity, Hodon Ryu, and Morteza Abbaszadegan, Tsinghua University, Beijing, China, July 24th, 2007.
19. “Nanoparticles in the Water Environment: Characterization, Removal, Environmental Applications, Bioaccumulation and Cytotoxicity, John Crittenden, Yang Zhang, Brian Koeneman, Kiril Hristovski, Paul Westerhoff, Yongsheng Chen, David Capco, Daniel Gerrity, Hodon Ryu, and Morteza Abbaszadegan, Department of Environmental Science and Engineering, Chinese Academy of Sciences, Institute of Chemistry. July 30th, 2007
20. “Toxicity screening of Nanoparticles in Drinking Water”, National Science Foundation Water Quality Center Meeting, Yongsheng Chen, Absar Alum, May, **2007**
21. “PVC Ultra filtration membrane for Scottsdale Wastewater Treatment”, National Science Foundation Water Quality Center Meeting, Yongsheng Chen, Xuezhi Zhang, John Crittenden, Nov, **2007**
22. “Sustainable Urban Engineering and Science,” John C. Crittenden, Yongsheng Chen, and Ke Li, Department of Civil and Environmental Engineering, Stanford University, December 1, **2006**
23. “The Fate, Transport, Transformation and Toxicity of Manufactured Nanomaterials in Drinking Water” Paul Westerhoff, Yongsheng Chen, David G. Capco and John Crittenden, U.S. EPA 2005



Nanotechnology Science to Achieve Results (STAR) Progress Review Workshop - Nanotechnology and the Environment II, October 26-28, **2005**

24. "Nanomaterials in water environments: potential applications, treatments, fate, and potential biological consequences", Kiril Hristovski, Yang Zhang, Brian A. Koeneman, Yongsheng Chen, Paul Westerhoff, David G. Capco and John Crittenden, Washington, DC, USA, Aug. 28-Sept. 1, **2005**
25. "Informed Decision Making towards a More Sustainable Urban Development", Li, K.; Gerrity, D.; Guhathakurta, S.; Crittenden, J.; Sawhney, A.; Fernando, H.; McCartney, P.; Grimm, N.; Joshi, H.; Konjevod, G.; Choi, Y.-j.; Winter, S.; Chen, Y.; Allenby, B., ISIE 2005 Conference, Stockholm, Sweden, **2005**
26. "Holistic Approach for the Study of Urban Development and Sustainability", Li, K.; Guhathakurta, S.; Crittenden, J.; Sawhney, A.; Fernando, H.; McCartney, P.; Grimm, N.; Joshi, H.; Konjevod, G.; Choi, Y.-j.; Gerrity, D.; Winter, S.; Chen, Y.; Allenby, B., UrbanSim User Group Meeting, San Antonio, TX, **2005**
27. "Simulating and Visualizing Phoenix Urban Futures with UrbanSim Modeling", Guhathakurta, S.; Joshi, H.; Li, K.; Crittenden, J.; Sawhney, A.; Fernando, H.; McCartney, P.; Grimm, N.; Konjevod, G.; Chen, Y.; Allenby, B.; Gerrity, D.; Winter, S.; Choi, Y.-j., Environment ISIE 2005 Conference, Stockholm, Sweden, **2005**
28. "Fate, Transport, Transformation, and Toxicity of Nanomaterials in Conventional Drinking Water Treatment Processes", Yongsheng Chen, Paul Westerhoff, John C. Crittenden, and David Capco, U.S. EPA 2004 Nanotechnology Science to Achieve Results (STAR) Progress Review Workshop - Nanotechnology and the Environment II, August 18-20, **2004**
29. "Assessment of Indoor Air Treatment Devices", Hebi Li, Yongsheng Chen, and John Crittenden, American Lung Association of Arizona/New Mexico, Feb. 7th, **2004**
30. "Nanotube Semiconductor Photocatalytic Purification of Air", Yongsheng Chen, David Perram, John C. Crittenden, and David W. Hand, presented at ACS National Meeting (Aug. 26-30, Chicago), **2001**
31. "Advances in TiO<sub>2</sub> Photocatalytic Oxidation Process" Yongsheng Chen, John C. Crittenden, David W. Hand, Volker H. Selzer, the US 22nd Annual Midwest Environmental Chemistry Workshop, October, **1999**
32. "Toward the Development of Commercial Applications of Photocatalysis", John C. Crittenden, Volker H. Selzer, David Hand, Dave Perram, Yongsheng Chen and Micheal Mullins, 1998, Pan-American Workshop on Commercialization of Advanced Oxidation Technologies, London, Ontario, Canada, June 27-30, **1998**
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3. "Environmental implications of nanotechnology", Yongsheng Chen, Shanghai JiaoTong University, Beijing, April 17<sup>th</sup>, **2010**
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