

XIAOJIA HE

Education

Master of Science , Marine Sciences University of Georgia—Athens, GA	2015-Current
Doctor of Philosophy , Computational and Data-enabled Science & Engineering Jackson State University—Jackson, MS	2014-2015 (Aborted)
Master of Science , Environmental Science Jackson State University—Jackson, MS	2012-2014
Bachelor of Engineering , Bioengineering Ocean University of China—Qingdao, China	2007-2011

Experience

Graduate Research Assistant Department of Marine Sciences, University of Georgia—Athens, GA	2015 to Current
Graduate Research Assistant Department of Computer Science, Jackson State University—Jackson, MS	2015
Research Associate (Full-time) Department of Biology, Jackson State University—Jackson, MS	2011 to 2014
Member Mississippi Academy of Sciences	2013 to Current
Editorial Board American Journal of Nanosciences, Nanoscience and Nanometrology	2015 to Current
Reviewer Toxicology Research, Current Medicinal Chemistry, Analyst Colloids and Surfaces B: Biointerfaces, Environmental Science & Technology Desalination and Water Treatment Applied Medical Research, Basic Research Journal of Food Science and Technology	2014 to Current
Mentor , Research Experience for Undergraduate Summer Program Jackson State University—Jackson, MS	2013 to 2014
Judge , Mississippi State Science and Engineering Fair Jackson State University—Jackson, MS	2013
Judge , Mississippi Science and Engineering Region II Fair (MSEF) Jackson State University—Jackson, MS	2013 to 2014

Publications

1. **He, X.**, Aker, W. G., Fu, P., & Hwang, H.-m. (2015) Engineered Metal Oxide Nanomaterials at Nano-bio-eco Interface: A Review and Perspective. *Environmental Science: Nano*, special issue, invited review, under review.
2. **He, X.**, Aker, W. G., Huang, M.-J., Watts, J. D., & Hwang, H.-m. (2015) Metal oxide nanomaterials in nanomedicine: Application in photodynamic therapy and potential toxicity. In *From Chemoinformatics to Nanoinformatics: New tools for Drug Discovery and Nanoparticles Design in Medicinal Chemistry* (Toropova, A.P., & Toropov, A.A., eds). *Current Topics in Medicinal Chemistry*, invited review, 15(18), 1887-900.
3. Lin, Y., **He, X.**, & Hamme, A. T. (2015) Detection, measurement of *Salmonella* DT104 using gold nanoparticle labeling and inductively coupled plasma mass spectrometry, and its quantitative destruction. *Journal of Materials Chemistry C*, accepted, In Press.

4. **He, X.**, Aker, W. G., Pelaez, M., Lin Y., Dionysiou, D. D., & Hwang, H.-m. (2015) Assessment of Nitrogen-Fluorine-codoped TiO₂ under visible light for degradation of BPA: implication for field remediation. *Journal of Photochemistry and Photobiology C*, In Press.
5. **He, X.**, Sanders, S., Aker, W. G., Lin Y., Douglas, J., & Hwang, H.-m. (2015) Assessing the effects of surface-bound humic acid on phototoxicity of anatase and rutile TiO₂ nanoparticles *in vitro*. *Journal of Environmental Science*, In Press.
6. **He, X.**, Akil, L., Aker, W. G., Hwang, H.-m., & Ahmad, H. A. (2015) Trends in Infant Mortality in United States: A Thorough Investigation of Southeastern States from 2005-2009. *International Journal of Environmental Research and Public Health*, 12(5), 4908-4920.
7. **He, X.**, & Hwang, H.-m. (2014) Engineered TiO₂ nanoparticles: Their fate and effects in natural aquatic environments. In *Titanium Dioxide: Chemical Properties, Applications and Environmental Effect* (Brown, J., ed). NOVA Publishers, invited review, Chapter 1, 1-20
8. **He, X.**, Hwang, H.-m., Aker, W. G., Wang, P., Lin, Y., Jiang, X., He, X. (2014). Synergistic combination of marine oligosaccharides and azithromycin against *Pseudomonas aeruginosa*. *Microbiological Research*, 169(9-10), 759-767
9. **He, X.**, Aker, W. G., Leszczynski, J., & Hwang, H.-m. (2014). Using holistic approach to assess the impact of engineered nanomaterials inducing toxicity in aquatic systems. *Journal of Food and Drug Analysis*, invited review, 22(1), 128-146.
10. **He, X.**, Aker, W. G., & Hwang, H.-M. (2013). An in vivo study on the photo-enhanced toxicities of S-doped TiO₂ nanoparticles to zebrafish larvae embryos (*Danio rerio*) in terms of malformation, mortality, rheotaxis dysfunction, and DNA damage. *Nanotoxicology*, 8 (S1), 185-195.
11. **He, X.**, Li, R., Huang, G., Hwang, H.-m., & Jiang, X. (2013). Influence of marine oligosaccharides on the response of various biological systems to UV irradiation. *Journal of Functional Foods*, 5(2), 858-868.
12. Pathakoti, K., Morrow, S., Han, C., Pelaez, M., **He, X.**, Dionysiou, D. D., et al. (2013). Photoinactivation of *Escherichia coli* by sulfur-doped and nitrogen-fluorine-codoped TiO₂ nanoparticles under solar simulated light and visible light irradiation. *Environmental Science & Technology*, 47(17), 9988-9996.
13. Pathakoti, K., Huang, M.-J., Watts, J. D., **He, X.**, & Hwang, H.-M. (2013). Using experimental data of *Escherichia coli* to develop a QSAR model for predicting the photo-induced cytotoxicity of metal oxide nanoparticles. *Journal of Photochemistry and Photobiology B: Biology*, 130, 234-240
14. Quinones, M., Zhang, Y., Riascos, P., Hwang, H.-M., Aker, W. G., **He, X.**, et al. (2013). Effects of light energy and reducing agents on C60-mediated photosensitizing reactions. *Photochemistry and Photobiology*, 90 (2), 374-379.
15. Hwang, H., Ray, P., Yu, H., & **He, X.** (2012). Toxicology of designer/engineered metallic nanoparticles. In *Sustainable Preparation of Metal Nanoparticles: Methods and Applications* (Luque, R., & Varma, R., eds.). Royal Society of Chemistry, Cambridge, United Kingdom, 190-212.

Patents

1. Jiang, X., **He, X.**, Li, L., & Huang, G. (2011) Application of a combination of oligosaccharides for cosmetics as anti-UVR ingredients. China. Application Number, 201010593506.X. Publication Number, 102078265..

Presentations

1. **He, X.**, Sanders, S., Aker, W. G., Lin Y., Douglas, J., & Hwang, H.-m. The role of humic acid and crystallinity on the phototoxicity of TiO₂ nanoparticles. 15th Southern School on Computational Chemistry and Materials Science. August 3-4, Jackson, MS.
2. Meghanathan, N., & **He, X.** (Presenter). (2015) Design of an Algorithms for Bioinformatics Course for Computer Science Majors. 79th Annual Mississippi Academy of Science Meeting. February 26-27, Hattiesburg, MS.
3. **He, X.**, Aker, W. G., Pelaez, M., Lin Y., Dionysiou, D. D., & Hwang, H.-m. (2015) Novel Nitrogen-Fluorine-codoped TiO₂ for degradation of BPA under visible light. 79th Annual Mississippi Academy of Science Meeting. February 26-27, Hattiesburg, MS.
4. McAllister, D., Hwang, H.-m., Pathokoti, K., **He, X.** (2014) Assessing the effect of different natural dissolved organic matters on the nanotoxicity of titanium dioxide with bacteria. Annual Biomedical Research Conference for Minority Students (ABRCMS) Conference. November 12-15, San Antonio, TX.

5. **He, X.**, Akil, L., Aker, W. G., Hwang, H.-m., & Ahmad, H. A. (2014) Trends in infant mortality in united states: A thorough investigation of southeastern states from 2005-2009. Eleventh International Symposium on Recent Advances in Environmental Health Research. September 14-18, Jackson, MS.
6. **He, X.**, Aker, W. G., & Hwang, H.-m. (2014). Photo-enhanced toxicities of Sulfur-doped TiO₂ nanoparticles to zebrafish embryos (*Danio rerio*): An in vivo investigation. 78th Annual Mississippi Academy of Science Meeting. March 6-7, Hattiesburg, MS.
7. **He, X.**, Aker, W. G., Pathakoti, K., & Hwang, H.-m. (2013). Photo induced toxicity of engineered metal oxide nanoparticles in aquatic ecosystem, Tenth International Symposium on Recent Advances in Environmental Health Research. September 14-18, Jackson, MS.
8. **He, X.**, Aker, W. G., Pathakoti, K., & Hwang, H.-m. (2013). Assessment of photo-enhanced toxicity of metal oxide nanoparticles in aquatic environments, 13th Southern School on Computational Chemistry and Materials Science. August 1-2, Jackson, MS.
9. Hwang, H.-m., Ray, P., Yu, H., & **He, X.** (2013) Keeping toxicology abreast of technology of engineered metallic nanoparticles, Mississippi Academy of Sciences Seventy-seventh Annual Meeting. February 21-22, Hattiesburg, MS.