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Associate Professor of Civil, Environmental and Construction Engineering
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Professional Preparation

B.E. in Environmental Engineering, Tsinghua University, China, 1998

M.S. in Environmental Engineering, Pennsylvania State University, 2000

Ph.D. in Environmental Engineering, University of Michigan, 2005

Professional Chronology

Associate Professor of Environmental Engineering, Texas Tech University (2015-present)

Assistant Professor of Environmental Engineering, University of Notre Dame (2009-2015)

Postdoctoral Fellow, Harvard University (2006 – 2009)

Research Interests

Nano-enabled solutions of environmental and energy challenges

Honors/Awards

First-Runner Up Award for Top Environmental Science Paper, Environmental Science & Technology (with Scot T. Martin) (2008)

Synergistic Activities/Committee Membership

1. Member, the International Working Group for Capacitive Deionization & Electrosorption
2. Proposal Reviewer for U.S. Department of Energy, U.S. National Science Foundation, and European Research Council.

Selected Publications (Last 10 years)

1. Na, Wang, and Ma. Carbon nanotube ponytails. U.S. Pat. App. NO. 14/709173, 2015.
2. Ma,* Wang,* Wu, and Na. Highly active layered double hydroxide-derived cobalt nano-catalysts for p-nitrophenol reduction. Applied Catalysis B: Environmental. 2016, 180, 471-479. *These authors contributed equally.
3. Wu,* Wang,* Liu, Burns, and Na. Multi-body coalescence in Pickering emulsions. Nature Communications. 2015, doi:10.1038/ncomms6929. *These authors contributed equally.
4. Ma and Na. Isokinetic temperature and size-controlled activation of ruthenium-catalyzed ammonia borane hydrolysis. ACS Catalysis. 2015, 5, 1726-1735.
5. Wang and Na. Chemical bath deposition of aluminum oxide buffer on curved surfaces for growing aligned carbon nanotube arrays. Langmuir. 2015, 31, 7401-7409.
6. Wang, Grant, Burns, and Na. Infrared signature of the cation- π interaction between calcite and aromatic hydrocarbons. Langmuir. 2015, 31, 5820-5826.
7. Krylova and Na. Photo-induced crystallization and activation of amorphous titanium dioxide. Journal of Physical Chemistry C. 2015, 119, 12400-12407.
8. Krylova, Yashan, Hauck, Burns, McGinn, and Na. Microwave-assisted solution-liquid-solid synthesis of single-crystal copper indium sulfide nanowires. Crystal Growth & Design. 2015, 15, 2859-2866.
9. Na, Tang, Wang, and Martin, Opposing effects of humidity rhodochrosite surface oxidation. Langmuir. 2015, 31, 2366-2371.

10. Ma, Wang, and Na. Microwave-assisted optimization of platinum-nickel nanoalloys for catalytic water treatment. *Applied Catalysis B: Environmental*. 2015, 163, 198-204.
11. Duster, Szymanowski, Na, Showalter, Bunker, and Fein, Surface complexation modeling of proton and metal sorption onto graphene oxide. *Colloids and Surfaces A*. 2015, 466, 28-39.
12. Wang, H.; Na, C. Binder-free carbon nanotube electrode for electrochemical removal of chromium. *ACS Applied Materials & Interfaces*. 2014, 6, 20309-20316.
13. Wang,* Ma,* Zheng, An, and Na. Multifunctional and recollectable carbon nanotube ponytails for water purification. *ACS Applied Materials & Interfaces*. 2014, 6, 9426-9434. *These authors contributed equally.
14. Wang and Na. Synthesis of millimeter-long vertically aligned carbon nanotube arrays on aluminum oxide buffer prepared by layer-by-layer assembly of boehmite nanoplates. *Carbon*. 2014, 66, 727-729.
15. Jing, Wang, Lin, McGinn, Na, and Zhu. A facile method to functionalize engineering solid membrane supports for rapid and efficient oil-water separation. *Polymer*. 2013, 54, 5771-5778.
16. Wang, Dong, and Na. Hierarchical carbon nanotube membrane supported gold nanoparticles for rapid catalytic reduction of p-nitrophenol. *ACS Sustainable Chemistry & Engineering*. 2013, 1, 746-752. Featured in Front Cover.
17. Wang, Lin, Jing, Krylova, Sigmon, McGinn, Zhu, and Na. Removal of oil droplets from contaminated water using magnetic carbon nanotubes. *Water Research*. 2013, 47, 4198-4205.
18. Singh, Wang, Casquinha da Silva, Na, Prieto, Futerman, Luberto, and Del Poeta. Methylation of glycosylated sphingolipid modulates membrane lipid topography and pathogenicity of *Cryptococcus neoformans*. *Cellular Microbiology*. 2012, 14, 500-516.
19. Na and Olson. Disinfectant and byproduct analysis in water treatment by membrane introduction mass spectrometry. In *Applied Handbook of Mass Spectrometry*; Lee, Ed.; John Wiley & Sons, 2012.
20. An, Na, Bielawski, Hannun, and Kasper. Membrane sphingolipids as essential molecular signals for *Bacteroides* survival in the intestine. *Proceedings of the National Academy of Sciences of the United States of America*. 2011, 108, 4666-4671.
21. Na, McNamara, Konkol, Bearce, Mitchell, and Martin. The use of force volume microscopy to examine bacterial attachment to surfaces. *Annals of Microbiology*. 2010, 6, 495-502.
22. Liu, Talley, Na, Larson, and Wolfe. Copper doping improves hydroxyapatite sorption for arsenate in simulated groundwaters. *Environmental Science & Technology*. 2010, 44, 1366-1372.
23. Na and Martin. Growth of manganese oxide nanostructures alters the layout of adhesion on a carbonate substrate. *Environmental Science & Technology*. 2009, 43, 4967-4972.
24. Na and Martin. Interfacial forces are modified by the growth of surface nanostructures. *Environmental Science & Technology*. 2008, 42, 6883-6889. Awarded first-runner up as best 'Environmental Science' paper by the journal for the year.
25. Kendall, Na, Jun, and Martin. Electrical properties of mineral surfaces for increasing water sorption. *Langmuir*, 2008, 24, 2519-2524.
26. Na, Kendall, and Martin. Surface potential heterogeneity of reacted calcite and rhodochrosite. *Environmental Science & Technology*. 2007, 41, 6491-6497.
27. Na and Olson. Relative reactivity of amino acids with chlorine in mixtures. *Environmental Science & Technology*. 2007, 41, 3220-3225.
28. Na and Olson. Mechanism and kinetics of cyanogen chloride formation from the chlorination of glycine. *Environmental Science & Technology*. 2006, 40, 1469-1477.
29. Lee, Na, Ramirez, and Olson. Cyanogen chloride precursor analysis in chlorinated river water. *Environmental Science & Technology*. 2006, 40, 1478-1484.
30. Cannon, Parette, Na, Chen, and Hagerup. Method for perchlorate removal from ground water. U.S. Pat. NO. 7,157,006, 2005.