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### CURRENT POSITIONS

- Corporate Fellow, Oak Ridge National Laboratory (ORNL), Oak Ridge, TN
- Professor, Joint Faculty, Department of Biosystems Engineering & Soil Science, The University of Tennessee, Knoxville, TN

### EDUCATION

- 1991 Ph.D., Geochemistry - University of California, Berkeley, USA  
1986 M.Sc., Soil Chemistry - University of British Columbia, Vancouver, Canada  
1982 B.Sc., Chemistry – Nanjing Agricultural University, Nanjing, China

### HONORS AND AWARDS

- 2017 **Corporate Fellow**, Oak Ridge National Laboratory (ORNL)  
2016 **Fellow**, American Association for the Advancement of Science (AAAS)  
2016 **Fellow**, Geological Society of America (GSA)  
2014 **Scientist of the Year**, Oak Ridge National Laboratory  
2013 **Director's Award**, Oak Ridge National Laboratory  
2013 **Scientific Research Award**, Oak Ridge National Laboratory  
2009 **ESTCP Project of the Year Award**, U.S. Department of Defense  
2008 **Fulbright Senior Specialist Scholar**, U.S. State Department  
2004 **R&D 100 Award**, *R&D Magazine* for ORNL regenerable perchlorate treatment system  
2003 **Inventor of the Year**, Oak Ridge National Laboratory  
2001 **Distinguished Scientific Achievement Award**, Environmental Sciences Division, ORNL  
2000, 1999 **Technical Achievement Award**, Oak Ridge National Laboratory

### PATENTS

- W. Wang, **B. Gu**, S. T. Retterer, M. J. Doktycz. 2015. Volume-labeled nanoparticles and methods of preparation (*U.S. Patent 9,011,735*).
- **B. Gu**, N.A. Hatab, S.T. Retterer, G. Eres, Z. Zhang. 2010. The fabrication and use of elevated noble metallic nanostructures for enhanced Raman spectroscopy, plasmonic and optoelectronic applications (*US Patent Application No. 61/556,863*).
- **B. Gu**, C. Ruan and W. Wang. 2010. Functionalized gold surface-enhanced Raman scattering substrate for rapid and ultra-sensitive detection of anionic species in the environment. (*US Patent, 12,645,017*).
- **B. Gu**, D. Cole, and G. M. Brown. 2004. Destruction of perchlorate in ferric chloride and hydrochloric acid solution with control of temperature, pressure, and chemical reagents. (*US Patent 6,800,203; European Patent 1507587*).
- **B. Gu** and G. M. Brown. 2002. Regeneration of anion exchange resins by catalyzed electrochemical reduction. (*US Patent 6,358,396*).
- G. M. Brown, **B. Gu**, B. A. Moyer, and P. V. Bonnesen. 2002. Regeneration of anion exchange resins by sequential chemical displacement. (*US Patent 6,448,299*).

## PUBLICATIONS (Total citations >17,000; H-index 70 by Google Scholar)

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Zheng, W.; Demers, J. D.; Lu, X.; Bergquist, B. A.; Anbar, A. D.; Blum, J. D.; **Gu, B.**, Mercury stable isotope fractionation during abiotic dark oxidation in the presence of thiols and natural organic matter. *Environ. Sci. Technol.* **2019**, 53, 1853–1862. DOI: 10.1021/acs.est.8b05047.

Zhang, L.; Wu, S.; Zhao, L.; Lu, X.; Pierce, E. M.; **Gu, B.**, Mercury sorption and desorption on organo-mineral particulates as a source for microbial methylation. *Environ. Sci. Technol.* **2019**, 53, 2426–2433. DOI: 10.1021/acs.est.8b06020.

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Liu, Yu-Rong, Xia Lu, Linduo Zhao, Jing An, Ji-Zheng He, Eric M. Pierce, Alexander Johs, and Baohua Gu. **2016**. "Effects of Cellular Sorption on Mercury Bioavailability and Methylmercury Production by *Desulfovibrio desulfuricans* ND132." *Environmental Science & Technology* 50 (24):13335-13341. doi: 10.1021/acs.est.6b04041.

Wang, Yingge, F. Marc Michel, Yongseong Choi, Peter J. Eng, Clement Levard, Hagar Siebner, Baohua Gu, John R. Bargar, and Gordon E. Brown Jr. **2016**. "Pb, Cu, and Zn distributions at humic acid-coated metal-oxide surfaces." *Geochimica et Cosmochimica Acta* 188:407-423. doi: <http://dx.doi.org/10.1016/j.gca.2016.05.009>.

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