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PROFESSIONAL PREPARATION

MT Coll. of Mineral Sci. & Tech.	Geophysical Engineering	B.S. 1982
University of Houston	Geology	M.S. 1998
TX A&M University	Chemical Oceanography	Ph.D. 2004

Magna Cum Laude

APPOINTMENTS

2011-current	Associate Research Scientist and Lecturer, Texas A&M University
2007-2010	Assistant Research Scientist, Texas A&M University
2004-2006	Postdoctoral Fellow, Texas A&M University, Dr. Peter Santschi
1999-2004	Graduate Research Associate, Texas A&M University, Dr. Peter Santschi
1997-1999	Graduate Research Associate, University of Houston, Dr. Siechi Nagihara
1997-1993	Graduate Research Associate, University of Houston, Dr. James Lawrence
1982-1992	Geophysicist for Exploration and Development, Union Oil of California

5 RELEVANT PRODUCTS (OUT OF 33)

- Xu, C., Athon, M., Ho, Y.-F., Chang, H.-S., Zhang, S., Kaplan, D.I., **Schwehr**, K.A., DiDonato, N., Hatcher, P.G., Santschi, P.H. 2014. Plutonium Immobilization and Re-mobilization by Soil Mineral and Organic Matter in the Far-field of the Savannah River Site, USA. *ES&T*, 48, 3186–3195.
- Xu, C., Chen, H.M., Sugiyama, Y., Zhang, S.J., Li, H.-P., Ho, Y.-F., Chuang, C.-Y., **Schwehr**, K.A., Kaplan, D.I., Yeager, C., Roberts, K.A., Hatcher, P.G., Santschi, P.H. 2013. Novel Molecular-Level Evidence of Iodine Binding to Natural Organic Matter from Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. *Science of the Total Environment*, 449, 244–252.
- Xu, C., Zhong, J.Y., Hatcher, P.G., Zhang, S., Li, H.-P., Ho, Y.-F., **Schwehr**, K.A., Kaplan, D.I., Roberts, K.A., Brinkmeyer, R., Yeager, C.M., Santschi, P.H. 2012. The molecular environment of stable iodine and radioiodine (¹²⁹I) in natural organic matter: evidence from NMR. *Geochim. Cosmochim. Acta*, 97, 166–182.
- Xu, C., Zhang, S., Athon, M., Ho, Y.-F., Li, H.-P., Grandbois, R., **Schwehr**, K.A., Kaplan, D.I., Yeager, C.M., Wellman, D., Santschi, P.H. 2015. A Re-evaluation of Radioiodine Transformation and Migration in the subsurface of Hanford Site. *J. Env. Radioactivity*, 139, 43-55
- Zhang, S., Ho, Y.-F., Creeley, D., Roberts, K.A., Xu, C., Li, H.-P., **Schwehr**, K.A., Kaplan, D.I., Yeager, C.M., and Santschi, P.H. 2014. Temporal Variation of Iodine Concentration and Speciation (127I and 129I) in Wetland Groundwater from the Savannah River Site, USA. *Environ. Sci. Technol.*, 48, 11218-11226.

5 OTHER PRODUCTS

- Li, H.-P., Yeager, C.M., Brinkmeyer, R., Zhang, S., Ho, Y.-F., Xu, C., Jones, W.L., **Schwehr**, K.A., Otosaka, S., Kaplan, D.I., Santschi, P.H. 2012. Organic acids produced by subsurface bacteria enhance iodide oxidation in the presence of hydrogen peroxide. *Environmental Science and Technology*, 46, 4837-4844.
- Schwehr**, K.A., Otosaka, S., Merchel, S., Kaplan, D.I., Zhang, S., Xu, C., Li, H.-P., Ho, Y.-F., Yeager, C.M., Santschi, P.H., ASTER Team. 2014. Speciation of iodine isotopes inside and outside of a contaminant plume at the Savannah River Site. *Science of the Total Environment*, 497–498, 671–678.

8. Kaplan, D. I., M. E. Denham, S. Zhang, C. Yeager, C. Xu, K. A. **Schwehr**, H. P. Li, Y. F. Ho, D. Wellman, and P. H. Santschi. 2014. Radioiodine Biogeochemistry and Prevalence in Groundwater. *Critical Reviews of Environmental Science and Technology*, *44*(20), 2287-2335.
9. Chang, H.-S., Xu, C., **Schwehr**, K.A., Zhang, S., Kaplan, D.I., Seaman, J.C., Yeager, C., and Santschi, P.H. 2014. Model of Radioiodine Speciation and Partitioning in Organic-rich and Organic-poor Soils from the Savannah River Site. *Journal of Environmental Chemical Engineering*, *2*, 1321-1330.
10. Li, H.-P., Daniel, B., Creeley, D., Grandbois, R., Zhang, S., Xu, C., Ho, Y.-F., **Schwehr**, K.A., Kaplan, D.I., Santschi, P.H., Hansel, C., Yeager, C.M. 2014. Superoxide production by a manganese-oxidizing bacterium facilitates iodide oxidation. *Applied and Environmental Microbiology*, *80*(9), 2693-2699.

SYNERGISTIC ACTIVITIES

- Develop analytical protocols for the determination of inorganic and organic Iodine species, and the hydrophobicity of acid polysaccharides and exopolymeric substances in natural waters.
- Review for scientific journals: *Environ. Sci and Technol.*; *Mar. Chem.*; *Geoph. Res. Let.*; *Appl. Geochem.*; *Environ. Chem.*; *G-Cubed*; *Geostds. and Geoanalyt. Res.*; *Water, Air, and Soil Pollution*; *J.of Environ. Radioactivity*, *PLoS ONE*, *Analyt. Chem.*
- Mentor undergraduate students (27) in the laboratory to encourage them to pursue a scientific career, to develop their understanding of the scientific method to solve research projects and to present the results orally or as posters at conferences, and to successfully apply for grants, internships, and fellowships.
- Lecture for classes, seminars, at local and national meetings to disseminate new research results. Participate in community services as a science judge for high schools and a volunteer geoscience guide at the Houston Museum of Natural Sciences. Mentor for 8th student project studying mercury levels in fish. Participate in National Ocean Science Bowl and Chemistry Bowl.
- Scientific Research Cruises: 2006: R/V *Seward Johnson*, Gulf of Mexico, Co-chief Scientist; 2005: R/V *Pelican*, Gulf of Mexico; 2001: R/V *Gyre*, Gulf of Mexico; 2000: R/V *Gyre*, Gulf of Mexico; 1997: USCGC *Polar Sea*, Bering Shelf and Chukchi Sea.

COLLABORATORS AND AFFILIATIONS

- *Old Dominion U*: Pat Hatcher (NMR, molecular characterization of natural org. matter); *Pacific Northwest Lab*: Schwantes, J.M. (Radiochem.); *Nanjing U*: Miao, A.J. (Plankton toxicology); *Japan Atomic Energy Agency*: Otosaka, S.Y. (Radiochem., carbon); *UC-Merced*: W.C. Chin (Biophys. Eng.); *National Sun Yat-sen University, Kaohsiung, Taiwan*: Chin-Chang Hung (Ocng.); *Helmholtz-Zentrum Dresden-Rossendorf*: Silke Merchel (Accelerator Mass Spectrometry); *Savannah River Natl. Lab*: Daniel Kaplan (Geochem.), *Los Alamos Natl. Lab*: Christopher Yeager (Microb. Bio.); *TX A&M U.*: Thomas Iliffe (Mar. Bio.), Ethan Grossman (Geol.), Bruce Herbert (Geol.), Antoinetta Quigg (Mar. Bio.), Chen Xu (Mar. Sci.), Saijin Zhang (Mar. Sci.); *Hsiu-Ping Li* (Mar. Sci.); *U. of WI*: Laodong Guo (Biogeochem.); *U. of KY*: Kevin Yeager (Radiochem); *TAMU*: Jason Sylvan (Microb.); *USC*: Uta Passow (Biopolymers); *Mt Allison U*: Zoe Finkel (Plankton ecol.) & Andrew Irwin (Math., Stat., Biochemometrics)
- **Graduate Advisors**: James R. Lawrence (Geosci., U. of Houston), Peter H. Santschi (Ocng., TX A&M U.),
- **Postdoctoral Sponsor**: Peter H. Santschi (Ocng., TX A&M U.)
- **Graduate Students**: Xu Chen (Ph.D), Dissertation Committee