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EDUCATION

Massachusetts Institute of Technology/ Woods Hole Oceanographic Institution Joint Program,
Cambridge, MA, Ph.D. in Oceanography, May 1988.
Harvard University, Cambridge, MA, A.M. in Chemistry, January 1981.
Cornell University, Ithaca, NY, A.B. in Chemistry, June 1979.

PROFESSIONAL EXPERIENCE

Swiss Federal Institute of Aquatic Science and Technology (Eawag) (2007 to present) Director.
Swiss Federal Institute of Technology Lausanne (EPFL) (2010 to present) Professor of Environmental
Chemistry, School of Architecture, Civil Engineering and Environmental Engineering (ENAC).
Swiss Federal Institute of Technology Zürich (ETHZ) (2007 to present) Professor of Environmental
Biogeochemistry, Department of Environmental Sciences; affiliated faculty, Department of Civil,
Environmental, and Geomatic Engineering.
California Institute of Technology, Environmental Science & Engineering Department, (2009-2011)
Visiting Associate, (2002-2008) Professor, (1996-2002) Associate Professor; (2003-2006) Executive
Officer, Keck Laboratories for Bioengineering, Environmental Science & Engineering, and Materials
Science.
University of California, Los Angeles, Civil and Environmental Engineering Department, (1997-1999)
Adjunct Professor, (1995-1996) Associate Professor, (1991-1995) Assistant Professor.
Institute for Water Resources and Water Pollution Control (EAWAG), Dübendorf, Switzerland,
Chemistry Department, (1988-1991) Research Fellow.
Massachusetts Institute of Technology, Cambridge, MA, Ralph M. Parsons Laboratory for Water
Resources and Hydrodynamics, Department of Civil Engineering, (1982-1988) Research and
Teaching Assistant.
Harvard University, Cambridge, MA, Chemistry Department, (1979-1981) Research and Teaching
Assistant.
Cornell University, Ithaca, NY, Chemistry Department, (1978-1979) Teaching Assistant.
Mobil Oil Research and Development Corporation, Princeton, NJ, (Summer 1978) Summer Research
Intern

RESEARCH INTERESTS

Knowledge exchange at the interface of science with policy and practice
Biogeochemical cycling of trace metals and metalloids: microbial redox cycling; field studies of metal
redox cycling, mobilization, and sequestration
Water treatment processes for removal of inorganic contaminants: role of sorption in contaminant
removal; design of novel sorbents

Mineral weathering and reactions at mineral surfaces: mechanisms and kinetics of dissolution and precipitation reactions; macroscopic, spectroscopic, and modeling studies of sorption processes

PUBLICATIONS

Papers in Professional Journals

- Biswakarma, J., Kang, K., Schenkeveld, W.D.C., Kraemer, S.M., Hering, J.G., and Hug, S.J. (2020) “Catalytic Effects of Photogenerated Fe(II) on the Ligand-Controlled Dissolution of Iron(hydr)oxides by EDTA and DFOB”, *Chemosphere*, <https://doi.org/10.1016/j.chemosphere.2020.128188>.
- Biswakarma, J., Kang, K., Schenkeveld, W.D.C., Kraemer, S.M., Hering, J.G. and Hug, S.J. (2020) “Linking Isotope-Exchange with Fe(II)-Catalyzed Dissolution of Iron (hydr)oxides in the Presence of the Bacterial Siderophore Desferrioxamine-B”, *Environ. Sci. Technol.* 54: 768-777, DOI: 10.1021/acs.est.9b04235
- Hering, J.G. (2019) “From slide rule to big data: the digital transformation in water science”, *J. Environ. Eng., ASCE*, 145(8): 02519001, [https://doi.org/10.1061/\(ASCE\)EE.1943-7870.0001578](https://doi.org/10.1061/(ASCE)EE.1943-7870.0001578).
- Hering, J.G. (2019) “Women as Leaders in Academic Institutions: Personal Experience and Narrative Literature Review”, *Pure App. Chem*, 91(2): 331–338, <https://doi.org/10.1515/pac-2018-0603>.
- Biswakarma, J., Kang, K., Borowski, S. C., Schenkeveld, W. D. C., Kraemer, S. M., Hering, J. G., & Hug, S. J. (2019). Fe(II)-catalyzed ligand-controlled dissolution of iron(hydr)oxides. *Environ. Sci. Technol.*, 53: 88-97. <https://doi.org/10.1021/acs.est.8b03910>
- Hering, J.G. (2019) “Drink safely with biomimetic nanotechnology” (News and Views), *Nature Nanotechnology*, 14(1): 5-6. DOI: 10.1038/s41565-018-0326-5.
- Kang, K., Schenkeveld, W.D.C., Biswakarma, J., Borowski, S.C., Hug, S.J., Hering, J.G., Kraemer, S.M., (2019) “Low Fe(II) Concentrations Catalyze the Dissolution of Various Fe(III) (hydr)oxide Minerals in the Presence of Diverse Ligands and over a Broad pH Range”, *Environ. Sci. Technol.* 53: 98-107, DOI: 10.1021/acs.est.8b03909.
- Hering, J.G. (2018) “Implementation Science for the Environment”, *Environ. Sci. Technol.*, 52: 5555–5560, <http://dx.doi.org/10.1021/acs.est.8b00874>.
- Borowski, S.C., Biswakarma, J., Kang, K., Schenkeveld, W.D., Hering, J.G., Kubicki, J.D., Kraemer, S.M. and Hug, S.J. (2018) “Structure and reactivity of oxalate surface complexes on lepidocrocite derived from infrared spectroscopy, DFT-calculations, adsorption, dissolution and photochemical experiments”, *Geochim. Cosmochim. Acta*, <https://doi.org/10.1016/j.gca.2018.01.024>
- Senn, A.C., Hug, S.J., Kaegi, R., Hering, J.G. and Voegelin, A. (2018) “Arsenate co-precipitation with Fe(II) oxidation products and retention or release during precipitate aging”, *Water Research*, 131: 334-345.
- Hering, J.G., Katsoyiannis, I.A., Ahumada Theoduloz, G., Berg, M. and Hug, S.J. (2017) “Arsenic removal from drinking water: Experiences with technologies and constraints in practice”, *J. Environ. Eng ASCE*, DOI: 10.1061/(ASCE)EE.1943-7870.000122.
- Hoffmann, S, Pohl, C. and Hering J.G. (2017) “Methods and procedures of transdisciplinary knowledge integration: empirical insights from four thematic synthesis processes”, *Ecology and Society*, 22 (1):27, URL: <http://www.ecologyandsociety.org/vol22/iss1/art27/>.
- Hoffmann, S, Pohl, C. and Hering J.G. (2017) “Exploring transdisciplinary integration within a large research program: empirical lessons from four thematic synthesis processes”, *Research Policy*, <http://dx.doi.org/10.1016/j.respol.2017.01.004>.
- Senn, A.C., Kaegi, R., Hug, S.J., Hering, J.G., Mangold, S. and Voegelin, A. (2017) “Effect of aging on the structure and phosphate retention of Fe(III)-precipitates formed by Fe(II) oxidation in water”, *Geochim. Cosmochim. Acta*, 202: 341–360, <http://dx.doi.org/10.1016/j.gca.2016.12.033>.

- Hering, J.G. (2017) “Maintaining Trust and Objectivity in the Context of Use-Inspired Research” (letter to the editor), *Environ. Sci. Technol.* 51: 1054, DOI: 10.1021/acs.est.6b05825.
- Hering, J.G. (2016) “Do We Need More Research or Better Implementation through Knowledge Brokering?” *Sustainability Science*, 11:363-369 (published online June 2015) DOI: 10.1007/s11625-015-0314-8.
- Hering, J.G., Maag, S. and Schnoor, J.L. (2016) “A Call for Synthesis of Water Research to Achieve the Sustainable Development Goals by 2030” (Viewpoint) *Environ. Sci. Technol.* 50: 6122–6123, DOI: 10.1021/acs.est.6b02598.
- Hering, J.G., Giger, W., Hug, S.J., Kohler, H.P.E., Kretzschmar, R., Schwarzenbach, R., Sigg, L., Sulzberger, B., von Gunten, U., Zehnder, A.J.B. and Zobrist, J. (2016) “An American in Zurich: Jerry Schnoor as an Ambassador for U.S. Environmental Science and Engineering” (perspective), *Environ. Sci. Technol.* 50: 6597–6598, DOI: 10.1021/acs.est.5b06233.
- Hering, J.G., Sedlak, D.L., Tortajada, C., Biswas, A.K., Niwagaba, C. and Breu, T. (2015) “Local perspectives on water” *Science*, 349:479-480, DOI: 10.1126/science.aac5902 (policy forum)
- Kunz, N.C., Fischer, M., Ingold, K., Hering, J.G. (2015) “Drivers and barriers towards municipal wastewater recycling: A review of previous approaches and directions for future research”, *Water. Sci. Technol.* DOI: 10.2166/wst.2015.496.
- Senn, A.C., Kaegi, R., Hug, S.J., Hering, J.G., Mangold, S. and Voegelin, A. (2015) “Composition and structure of Fe(III)-precipitates formed by Fe(II) oxidation in water: Interdependent effects of phosphate, silicate and Ca”, *Geochim. Cosmochim. Acta*, 162: 220-246, DOI: 10.1016/j.gca.2015.04.032.
- Kunz, N., Fischer, M., Ingold, K., Hering, J.G., (2015) “Why do some water utilities recycle more than others? A Qualitative Comparative Analysis in New South Wales, Australia”, *Environ. Sci. Technol.* 49: 8287–8296, DOI: 10.1021/acs.est.5b01827.
- Stamm, C., Eggen, R.I.L, Hering, J.G., Hollender, J., Joss, A. and Schärer, M. (2015) “Micropollutant Removal from Wastewater: Facts and Decision-Making Despite Uncertainty” (Viewpoint), *Environ. Sci. Technol.*, 49: 6374-6375, DOI: 10.1021/acs.est.5b02242
- Hering, J.G., Dzombak, D.A., Green, S.A., Luthy, R.G. and Swackhamer, D. (2014) “Engagement at the Science–Policy Interface” (Viewpoint) *Environ. Sci. Technol.*, 48: 11031–11033, DOI: 10.1021/es504225t
- Tilley, E., Trande, L., Lüthi, C., Mosler, H.-J., Udert, K.M. Gebauer, H. and Hering, J.G. (2014) “Looking beyond technology: an integrated approach to water, sanitation and hygiene in low income countries” (Feature), *Environ. Sci. Technol.*, 48: 9965-9970, DOI: 10.1021/es501645d
- Rudolf von Rohr, M., Hering, J.G., Kohler, H.-P.E., von Gunten, U. (2014) “Column studies to assess the effects of climate variables on redox processes during riverbank filtration”, *Water Research*, 61: 263-275, DOI: 10.1016/j.watres.2014.05.018.
- Sternitzke, V., Janousch, M., Heeb, M. Hering, J.G. and Johnson, C.A. (2014) "Strontium Hydroxyapatite and Strontium Carbonate as Templates for the Precipitation of Calcium-Phosphates in the Absence and Presence of Fluoride", *J. Crystal Growth*, 396: 71-78, DOI: 10.1016/j.jcrysgro.2014.03.036.
- Diem, S., Rudolf von Rohr, M., Hering, J.G., Kohler, H.P., Schirmer, M., von Gunten, U. (2013) “NOM degradation during river infiltration: effects of the climate variables temperature and discharge”, *Water Research*, 47: 6585-6595, dx.doi.org/10.1016/j.watres.2013.08.028.
- Hering, J.G., Waite, T.D., Luthy, R., Drewes, J., and Sedlack, D. (2013) “A Changing Framework for Urban Water Systems”, *Environ. Sci. Technol.*, 47: 10721-10726, dx.doi.org/10.1021/es4007096.
- Hering, J.G and Eggen, R.I.L. (2013) “Interdisciplinary research to address societal issues” (perspective) *Environ. Sci. Technol.*, 47 :6730–6731, DOI: 10.1021/es402161g.
- Hering, J.G. and Ingold, K.M. (2012) “Water Resources Management: What Should Be Integrated?”, *Science*, 336: 1234-5. (policy forum)

- Sternitzke, V., Kaegi, R., Audinot, J.-N., Lewin, E., Hering, J.G. and Johnson, C.A. (2011) “Uptake of Fluoride from Aqueous Solution on Nano-Sized Hydroxyapatite: Examination of a Fluoridated Surface Layer”, *Environ. Sci. Technol.*, 46: 802-809, DOI: 10.1021/es202750t.
- Farnsworth, C.E., Voegelin, A. and Hering, J.G. (2012) “Manganese oxidation induced by water table fluctuations in a sand column”, *Environ. Sci. Technol.* 46: 277-284, DOI: 10.1021/es2027828.
- Hering, J.G., Hoffmann, S., Meierhofer, R., Schmid, M., and Peter, A. (2012) “Assessing the Societal Benefits of Applied Research and Expert Consulting in Water Science and Technology”, *GAI*, 21 (2) 95-101.
- Hering, J., Hoehn, E., Klinke, A., Maurer, M., Peter, A., Reichert, P., Robinson, C., Schirmer, K., Schirmer, M., Stamm, C., and Wehrli, B. (2012) “Moving Targets, Long-Lived Infrastructure, and Increasing Needs for Integration and Adaptation in Water Management: An Illustration from Switzerland”, *Environ. Sci. Technol.*, 46: 112-118, DOI: 10.1021/es202189s.
- Hering, J.G., Swackhamer, D.L., and Schlesinger, W.H. (2012) “An Unparalleled Scientific Resource Endangered” (viewpoint) *Environ. Sci. Technol.* 46: 8525-8526, DOI: 10.1021/es3030512.
- Johnston, R.B., Berg, M., Johnson, C.A., Tilley, E., and Hering J.G. (2011) “Water and Sanitation in Developing Countries: Geochemical Aspects of Quality and Treatment”, *Elements*, 7(3): 163-168.
- Oelkers, E.H., Hering, J.G. and Zhu, C. (2011) “Water: Is there a Global Crisis?”, *Elements*, 7(3): 157-162.
- Farnsworth, C.E. and Hering, J.G. (2011) “Inorganic Geochemistry and Redox Dynamics in Bank Filtration Settings” *Environ. Sci. Technol.* 45: 5079–5087, dx.doi.org/10.1021/es2001612.
- Wildman, Jr., R.A and Hering, J.G. (2011) “Potential for release of sediment phosphorus to Lake Powell (Utah and Arizona) due to sediment resuspension during low water level”, *Lake and Reservoir Management*, 27: 365-375, dx.doi.org/10.1080/07438141.2011.632705.
- Wildman, Jr., R.A., Pratson, L.F., DeLeon, M., and Hering, J.G. (2011) “Physical, Chemical, and Mineralogical Characteristics of a Reservoir Sediment Delta (Lake Powell, USA) and Implications for Water Quality during Low Water Level”, *J. Environ. Qual.*, 40: 575–586, doi:10.2134/jeq2010.0323.
- Wildman, Jr., R.A, Chan, N.W., Dalleska, N.F., Anderson, M. and Hering, J.G. (2010) “Effect of Changes in Water Level on Sediment Pore Water Redox Geochemistry at a Reservoir Shoreline”, *Applied Geochemistry*, 25: 1902–1911, DOI: 10.1016/j.apgeochem.2010.10.005.
- He, Y.T., Fitzmaurice, A.G., Bilgin, A., Choi, S., O’Day, P.A., Horst, J., Harrington, J., Reisinger, H.J., Burris, D.R., Hering, J.G. (2010) “Geochemical processes controlling arsenic mobility in groundwater: A case study of arsenic mobilization and natural attenuation”, *Applied Geochemistry*, 25: 69–80, doi:10.1016/j.apgeochem.2009.10.002.
- Farnsworth, C.E. and Hering, J.G. (2010) “Hydrous Manganese Oxide Doped Gel Probe Sampler for Measuring *In Situ* Reductive Dissolution Rates: I. Laboratory Development”, *Environ. Sci. Technol.*, 44:34-40, DOI: 10.1021/es901577q
- Farnsworth, C.E., Griffis, S.D., Wildman, Jr., R.A. and Hering, J.G. (2010) “Hydrous Manganese Oxide Doped Gel Probe Sampler for Measuring *In Situ* Reductive Dissolution Rates: II. Field Deployment”, *Environ. Sci. Technol.*, 44: 41-46, DOI: 10.1021/es901572h
- Hering, J.G. (2009) “Metal speciation and bioavailability: revisiting the ‘big questions’” *Environ. Chem.* 6: 290–293, doi:10.1071/EN09021.
- Fitzmaurice, A.G. Bilgin, A.A., O’Day, P.A., Illera, V., Burris, D.R., Reisinger, H.J., and Hering, J.G. (2009) “Geochemical and hydrologic controls on the mobilization of arsenic derived from herbicide application”, *Applied Geochemistry*, 24: 2152-2162.
- Choi, S., O’Day, P.A., Hering, J.G. (2009) “Natural Attenuation of Arsenic by Sediment Sorption and Oxidation” *Environ. Sci. Technol.*, 43: 4253-4259.

- Wildman, R.A., Domagalski, J.L. and Hering, J.G. (2009) “Hydrologic and Biogeochemical Controls of River Subsurface Solutes under Agriculturally-Enhanced Groundwater Flow”, *J. Environmental Quality*, 38: 1830–1840, doi:10.2134/jeq2008.0448.
- He, Y.T. and Hering, J.G., (2009) “Enhancement of Arsenic(III) Sequestration by Manganese Oxides in the Presence of Iron(II)”, *Water, Air, and Soil Pollution*, 203:359–368, DOI 10.1007/s11270-009-0018-8.
- Hering, J.G., O’Day, P.A., Ford, R.G., He, Y.T., Bilgin, A., Reisinger, H.J., and Burris, D.R. (2009) “MNA as a Remedy for Arsenic Mobilized by Anthropogenic Inputs of Organic Carbon”, *Ground Water Monitoring & Remediation*, 29(3): 84-92.
- Stefanescu, D.M., Khoshnan, A., Patterson, P. and Hering, J.G. (2009) “Neurotoxicity of Manganese Oxide Nanomaterials”, *J. Nanoparticle Research*, 11: 1957-1969, DOI 10.1007/s11051-008-9554-1.
- Cheng, T., Hammond, D.E., Berelson, W.M., Hering, J.G., and Dixit, S. (2009) “Dissolution kinetics of biogenic silica collected from the water column and sediments of three Southern California borderland basins”, *Marine Chemistry*, 113: 41-49.
- Domagalski, J.L., Phillips, S.P., Bayless, E.R., Zamora, C., Kendall, C., Wildman, R.A., and Hering, J.G. (2008) “Influences of the Unsaturated, Saturated, and Riparian Zones on Transport of Nitrate near the Merced River, California”, *Hydrogeology J.*, 16: 675-690.
- Campbell, K.M., Root, R., O’Day, P.A., and Hering, J.G. (2008) “A Gel Probe Equilibrium Sampler for Measuring Arsenic Porewater Profiles and Sorption Gradients in Sediments: I. Laboratory Development”, *Environ. Sci. Technol.*, 42: 497-503.
- Campbell, K.M., Root, R., O’Day, P.A., and Hering, J.G. (2008) “A Gel Probe Equilibrium Sampler for Measuring Arsenic Porewater Profiles and Sorption Gradients in Sediments: II. Field Application to Haiwee Reservoir Sediment”, *Environ. Sci. Technol.*, 42: 504-510.
- Root, R., Dixit, S., Campbell, K.M., Jew, A.D., Hering, J.G., and O’Day, P.A. (2007) “Arsenic Sequestration by Sorption Processes in High-Iron Sediments”, *Geochim. Cosmochim. Acta*, 71: 5782-5803.
- Ferguson, M.A., Fernandez, D.P., and Hering, J.G. (2007) “Lowering the detection limit for arsenic: Outlook for a new PQL”, *J. Amer. Water Works Assoc.*, 99(8): 92-98.
- Campbell, K.M., Malasarn, D., Saltikov, C.W., Newman, D.K., and Hering, J.G. (2006) “Simultaneous Microbial Reduction of Iron(III) and Arsenic(V) in Suspensions of Hydrous Ferric Oxide”, *Environ. Sci. Technol.*, 40: 5950-5955.
- Ferguson, M.A. and Hering, J.G. (2006) “TiO₂-photocatalyzed As(III) oxidation in a fixed-bed, flow-through reactor”, *Environ. Sci. Technol.*, 40: 4261-4267.
- Dixit, S. and Hering, J.G. (2006) “Sorption of Fe(II) and As(III) on goethite in single- and dual-sorbate systems”, *Chemical Geology*, 228: 6-15.
- Reisinger, H.J., Burris, D.R., and Hering, J.G. (2005) “Remediating subsurface arsenic contamination with monitored natural attenuation”, *Environ. Sci. Technol.*, 39: 458A-464A.
- Salmassi, T.M., Walker, J.J., Newman, D.K., Leadbetter, J.R., Pace, N.R. and Hering J.G. (2006) “Community and Cultivation Analysis of Arsenite Oxidizing Biofilms at Hot Creek”, *Env. Microbiol.*, 8: 50-59. online publication date: 25-Jul-2005, doi: 10.1111/j.1462-2920.2005.00862.x.
- Lee, G. and Hering, J.G. (2005) “Oxidative dissolution of chromium hydroxide at pH 9 and 2 and its inhibition at pH 2 by the reaction product Cr(VI)”, *Environ. Sci. Technol.*, 39: 4921-4928.
- Ferguson, M.A., Hoffmann, M.R., and Hering, J.G. (2005) “TiO₂-photocatalyzed As(III) oxidation in aqueous suspensions: Reaction kinetics and effects of adsorption”, *Environ. Sci. Technol.*, 39: 1880-1886.

- Malasarn, D., Saltikov, C.W., Campbell, K.M., Santini, J.M., Hering, J.G. and Newman, D.K. (2004) “*arrA* is a reliable marker for As(V)-respiration”, *Science*, 306: 455.
- Giammar, D.E. and Hering, J.G. (2004) “Influence of Dissolved Sodium and Cesium on Uranyl Oxide Hydrate Solubility”, *Environ. Sci. Technol.* 38: 171-179
- Stephens, J.C. and Hering, J.G., (2004) “Factors Affecting the Dissolution Kinetics of Volcanic Ash Soils: Dependencies on pH, CO₂, and Oxalate”, *Appl. Geochem.* 19: 1217-1222.
- Dixit, S. and Hering, J.G. (2003) “Comparison of Arsenic(V) and Arsenic(III) Sorption onto Iron Oxides: Implications for Arsenic Mobility”, *Environ. Sci. Technol.*, 37: 4182-4189.
- Lee, G. and Hering, J.G. (2003) “Removal of Chromium(VI) from Drinking Water by Redox-Assisted Coagulation with Iron(II)”, *J. Water Supply: Res. Technol. – AQUA*, 52: 319-332.
- Giammar, D.E. and Hering, J.G. (2002) Equilibrium and Kinetic Aspects of Sodydyte Dissolution and Secondary Phase Precipitation in Aqueous Suspension, *Geochim. Cosmochim. Acta*, 66: 3235-3245.
- Kneebone, P.E., O’Day, P.A., Jones, N., and Hering, J.G. (2002) “Deposition and Fate of Arsenic in Iron- and Arsenic-Enriched Reservoir Sediments”, *Environ. Sci. Technol.*, 36: 381-386.
- Stephens, J.C. and Hering, J.G. (2002) “Comparative Characterization of Volcanic Ash Soils Exposed to Decade-Long Elevated Carbon Dioxide Concentrations at Mammoth Mountain, California”, *Chem. Geol.*, 186: 301-313.
- Salmassi, T.M., Venkateswaren, K., Satomi, M., Neilson, K.H., Newman, D.K., and Hering, J.G. (2002) “Oxidation of Arsenite by *Agrobacterium albertimagni*, AOL15, sp. nov., Isolated from Hot Creek, California”, *Geomicrobiol. J.*, 19: 53-66.
- Giammar, D.E. and Hering, J.G. (2001) “Time Scales for Sorption-Desorption and surface Precipitation of Uranyl on Goethite”, *Environ. Sci. Technol.*, 35: 3332-3337.
- Kneebone, P.E. and Hering, J.G., (2000) “The Behavior of Arsenic and Other Redox-Sensitive Elements in Crowley Lake, CA, a Reservoir in the Los Angeles Aqueduct System”, *Environ. Sci. Technol.*, 34: 4307-4312.
- Chiu, V.C. and Hering, J.G. (2000) “Arsenic adsorption and Oxidation at Manganite (γ -MnOOH) surfaces: Part 1. Method for Simultaneous Determination of Adsorbed and Dissolved Arsenic Species”, *Environ. Sci. Technol.*, 34: 2029-2034.
- Hering, J.G. and Chiu, V.C. (2000) “Arsenic Occurrence and Speciation in a Municipal Groundwater-Based Supply System”, *J. Environ. Eng. ASCE*, 126: 471-474.
- Piatina, T.B. and Hering, J.G. (2000) “Direct Quantification of Metal-Organic Interactions by Size-Exclusion Chromatography (SEC) and Inductively Coupled Plasma Mass Spectrometry (ICP-MS)”, *J. Environ. Qual.*, 29: 1839-1845.
- Min, J.H. and Hering, J.G. (1999) “Removal of Selenite and Chromate using Fe(III)-Doped Alginate Gels”, *Water Environ. Research*, 71: 169-175.
- Kraemer, S.M., Chiu, V.Q., and Hering, J.G. (1998) “Influence of pH and competitive adsorption on the kinetics of ligand-promoted dissolution of aluminum oxide”, *Environ. Sci. Technol.*, 32: 2876-2882.
- Min, J.H. and Hering J.G. (1998) “Arsenate, Selenite, and Chromate Sorption by Fe(III)-Doped Alginate Gels” *Adv. Environ. Res.*, 2: 207-217.
- Wilkie, J.A. and Hering, J.G. (1998) “Rapid Oxidation of Geothermal Arsenic(III) in Streamwaters of the Eastern Sierra Nevada”, *Environ. Sci. Technol.*, 32: 657-662.
- Baron, D. and Hering, J.G. (1998) “Analysis of Metal-EDTA Complexes by Electrospray Mass Spectrometry” *J. Environ. Qual.*, 27: 844-850.
- Min, J.H. and Hering, J.G. (1998) “Arsenate Sorption by Fe(III)-Doped Alginate Gels” *Water Research*, 32: 1544-1552.

- Kraemer, S.M. and Hering, J.G. (1997) "Influence of Solution Saturation State on the Kinetics of Ligand-Controlled Dissolution of Oxide Phases", *Geochim. Cosmochim. Acta*, 61: 2855-2866.
- Hering, J.G., Chen, P.Y., Wilkie, J.A., and Elimelech, M. (1997) "Arsenic Removal from Drinking Water During Coagulation", *J. Environ. Eng., ASCE*, 123: 800-807.
- Waypa, J.A., Elimelech, M., and Hering, J.G. (1997) "Arsenic Removal by Reverse Osmosis and Nanofiltration Membranes", *J. Amer. Water Works Assoc.*, 89(10): 102-114.
- Hering, J.G., Chen, P.Y., Wilkie, J.A., Elimelech, M., and Liang, S. (1996) "Arsenic Removal by Ferric Chloride", *J. Amer. Water Works Assoc.*, 88(4): 155-167.
- Wilkie, J.A. and Hering, J.G., (1996) "Adsorption of Arsenic onto Hydrous Ferric Oxide: Effects of Adsorbate-Adsorbent Ratios and Co-occurring Solutes", *Colloids Surf. A*, 107: 97-124.
- Hering, J.G., (1996) "Risk Assessment for Arsenic in Drinking Water: Limits to Achievable Risk Levels", *J. Hazard. Mat.*, 45: 175-184.
- Hering, J.G. and Kraemer, S. (1994) "Kinetics of Complexation Reactions at Surfaces and in Solution: Implications for Enhanced Radionuclide Migration", *Radiochimica Acta*, 66/67: 63-71.
- Ching, H.-W., M. Elimelech, and J.G. Hering (1994) "Dynamics of Coagulation of Clay Particles with Aluminum Sulfate" *J. Environ. Eng.*, 120: 169-189.
- Benoit, P., J.G. Hering, and W. Stumm (1993) "A comparative study of the adsorption of organic ligands on aluminum oxide by titration calorimetry", *Appl. Geochem.*, 8: 127-139.
- Xyla, A.G., B. Sulzberger, G.W. Luther, III, J.G. Hering, P. van Cappellen, and W. Stumm (1992) "Reductive Dissolution of Manganese (III,IV) (hydr)oxides by Oxalate: the Effect of pH and Light", *Langmuir*, 8: 95-103.
- Hering, J.G. and W. Stumm (1991) "Fluorescence Spectroscopic Evidence for Surface Complex Formation at the Mineral-Water Interface: Elucidation of the Mechanism of Ligand-Promoted Dissolution", *Langmuir*, 7: 1567-70.
- Sulzberger, B., J.L. Schnoor, R. Giovanoli, J.G. Hering, and J.Zobrist (1990) "Biogeochemistry of iron in an acidic lake" *Aquatic Sciences*, 52: 56-74.
- Hering, J.G. and F.M.M. Morel, (1990) "The Kinetics of Trace Metal Complexation: Ligand-Exchange Reactions" *Environ. Sci. Technol.* 24: 242-52.
- Hering, J.G. and F.M.M. Morel (1989) "Slow coordination reactions in seawater" *Geochim. Cosmochim. Acta* 53: 611-8.
- Price, N.M., G.I.Harrison, J.G. Hering, R.J. Hudson, P.M.V. Nirel, B. Palenik, F.M.M. Morel (1988/1989) "Preparation and Chemistry of the Artificial Algal Culture Medium Aquil" *Biol. Oceanogr.* 6: 443-461.
- Hering, J.G. and F.M.M. Morel (1988) "Kinetics of Trace Metal Complexation: Role of Alkaline-Earth Metals" *Environ. Sci. Technol.* 22: 1469-78.
- Hering, J.G. and F.M.M. Morel (1988) "Humic Acid Complexation of Calcium and Copper" *Environ. Sci. Technol.* 22:1234-7.
- Hering, J.G., W.G. Sunda, R.L. Ferguson, and F.M.M. Morel (1987) "A Field Comparison of Two Methods for the Determination of Copper Complexation: Bacterial Bioassay and Fixed-Potential Amperometry" *Mar. Chem.* 20: 299-312.
- Boyle, E.A., D.F. Reid, S.S. Husted, and J. Hering (1984) "Trace metals and radium in the Gulf of Mexico: an evaluation of river and continental shelf sources" *Earth Planet. Sci. Lett.* 69: 69-87.

Books and Chapters in Books

- Hering, J.G. (2020) "Fresh Water", In: Earth 2020: An Insider's Guide to a Rapidly Changing Planet, P.D. Tortell (Ed.), Cambridge: Open Book Publishers, pp. 221-229, <https://www.openbookpublishers.com/10.11647/obp.0193.pdf>.
- Hering, J.G. (2020) "Water: The Environmental, Technological and Societal Complexity of a Simple Substance. In: Encyclopedia of Water: Science, Technology, and Society, P. Maurice (Ed.), New York: Wiley, <https://doi.org/10.1002/9781119300762.wsts0038>
- Hering, J.G., Nunnemacher, L. and von Waldow, H. (2018) Perspectives from a Water Research Institute on Knowledge Management for Sustainable Water Management" (2018) in *Handbook of Knowledge Management for Sustainable Water Systems*, (Series *Challenges in Water Management*), M. Russ (Ed.) Wiley, New York, pp. 13-33, <http://dx.doi.org/10.1002/9781119271659.ch1>.
- Hering, J.G. and Vairavamoorthy, K., "Harvesting Experience to Support Sustainable Urban Water Management" in *Assessing Global Water Megatrends*, A.K. Biswas, C. Tortajada and P. Rohner (Eds.), Springer, Berlin, pp. 61-75, https://doi.org/10.1007/978-981-10-6695-5_4.
- Hering, J.G., Hug, S., Farnsworth, C. and O'Day, P.A. (2011) "Role of coupled redox transformations in the mobilization and sequestration of arsenic", in *Aquatic Redox Chemistry*, ed. P.G. Tratnyek, T.J. Grundl, S.B. Haderlein, *ACS Symposium Series*, vol. 1071, pp 463-476, DOI: 10.1021/bk-2011-1071.
- Campbell, K.M. and Hering, J.G. (2008) "Biogeochemical mechanisms of arsenic mobilization and sequestration" in *Arsenic Contamination of Groundwater: Mechanism, Analysis, and Remediation*, ed. S Ahuja, Wiley, pp. 95-122.
- Hering, J.G. and Dixit, S. (2005) "Contrasting Sorption Behavior of Arsenic(III) and Arsenic(V) in Suspensions of Iron and Aluminum Oxyhydroxides", in *Advances in Arsenic Research*, ed. P.A. O'Day, D. Vlassopoulos, X. Meng, and L.G. Benning, ACS Symposium Series v. 915, American Chemical Society, Washington, DC, pp.8-24.
- Hering, J.G., Dixit, S., Campbell, K., and O'Day, P. (2004) "Arsenic mobilization from contaminated sediments: a full-scale experiment in progress", *Water-Rock Interaction: Proceedings of the 11th International Symposium on Water-Rock Interactions*, Ed. R.B. Wanty and R.R. Seal, A.A. Balkema, Leiden, The Netherlands, pp. 39-44.
- Hering, J.G. and Kneebone, P.E. (2001) "Biogeochemical Controls on Arsenic Occurrence and Mobility In Water Supplies", in *Environmental Chemistry of Arsenic*, ed. W. Frankenberger, Marcel Dekker, pp. 155-181.
- Hering, J.G. and S. Kraemer (1998) "Environmental Chemistry of Trace Metals", in *Perspectives in Environmental Chemistry*, ed. D. Macalady, Oxford Univ. Press, pp.57-74.
- Hering, J.G., Chen, P.Y., and Wilkie, J.A. (1997) "Arsenic Removal from Drinking Water by Coagulation: The Role of Adsorption and Effects of Source Water Composition", in *Arsenic: Exposure and Health Effects*, ed. C.O. Abernathy, R.L. Calderon, and W.R. Campbell, Chapman and Hall, pp. 369-381.
- Hering, J.G. (1995) "The effects of organic-surface interactions on geochemical processes at the mineral-water interface", in *Advances in Aquatic Chemistry*, ed. C.P Huang, C.R. O'Melia, and J.J. Morgan, *ACS Advances in Chem. Ser.*, 244, 95-110, American Chemical Society, Wash., DC.
- Hering, J.G., (1995) "Implications of Complexation, Sorption, and Dissolution Kinetics for Metal Transport in Soils" in *Metal Speciation and Contamination of Soils*, ed. H.E. Allen, C.P. Huang, G.W. Bailey, A.R. Bowers, Lewis: Chelsea, MI, 59-86.
- Morel, F.M.M. and J.G.Hering (1993) *Principles and Applications of Aquatic Chemistry*, Wiley-Interscience, New York, 588 pp.

Hering, J.G. and W. Stumm (1990) "Oxidative and reductive dissolution of minerals" in *Reviews in Mineralogy (vol. 23): Mineral-Water Interface Geochemistry*, ed. M. Hochella and A. White (Mineralog. Soc. Am.: Wash.) pp. 427-465.

Hering, J.G. and F.M.M. Morel (1990) "The Kinetics of Trace Metal Complexation: Implications for Metal Reactivity in Natural Waters" in *Aquatic Chemical Kinetics*, ed. W. Stumm (Wiley-Interscience: New York) pp. 145-171.

Other Publications

Hering, J. (2020) "Why I do not have a 10-year plan for Eawag". *Voices of Eawag*,

<https://www.voicesofeawag.ch/detail/why-i-do-not-have-a-10-year-plan-for-eawag/>

Hering, J. (2020) "Why I am co-Chair of SDSN Switzerland". *Voices of Eawag*,

<https://www.voicesofeawag.ch/detail/why-i-am-co-chair-of-sdsn-switzerland/>.

Hering, J. (2019). "Counting is not enough - rediscovering the value of narrative". *Elephant in the Lab*. <https://doi.org/10.5281/zenodo.2562817>

Hering, J.G. (2018) "Getting Water Research into Policy and Practice (GRIPP for Water)", Clarke Prize lecture. National Water Research Institute (NWRI): Irvine, CA, 12 pp., <https://doi.org/10.5281/zenodo.1469682>.

Hering, J.G. (2018) "Scientific publishing – why should academic research institutions be concerned?", Open Science Framework Quick File, <https://osf.io/4an7c>.

Hering, J.G. (2018) "Reconnecting academic research with societal needs through assessment", Open Science Framework Quick File, <https://osf.io/kbcn2>.

Hering, J.G. and von Waldow, H. (2017) Concept Note: Call for Management of Knowledge Relating to Freshwater and Sustainable Knowledge Management as a Public Good (version 2), <https://osf.io/28rhn/>.

Hering, J.G. (2017) Water Data Portals: An Annotated List (versions 3 and 2: <https://osf.io/8mn3q/>; version 1: <https://doi.org/10.5281/zenodo.495080>)

Hering, J., Thorleifson, H., van Geer, F., Verstraete, W. and Voss, V. (2015) "Scientific evaluation of programme area 2 Water resources (2007-2014) at the Geological Survey of Denmark and Greenland (GEUS)" Report 2015/27, GEUS, Copenhagen.

Hering, J.G. (2014) "A virtual flood of information: open data for sustainable water management" Future Earth blog, <http://www.futureearth.info/blog/2014-aug-27/virtual-flood-information-open-data-sustainable-water-management>

Hering, J.G. (2013) "Many paths to a common goal: water in context" Eawag Newsletter (online), http://www.eawag.ch/medien/publ/news/2013_na_01/01_e.pdf

Diem, S., Rudolf von Rohr, M., Hering, J.G., Kohler, H.P., Schirmer, M., von Gunten, U. (2013) "Qualität des Uferfiltrats: Einfluss der Klimabestimmten Variablen Temperatur und Abfluss", *Aqua und Gas*, 11: 14-21.

Hering, J.G. (2012) "An End to Waste?" (editorial) *Science*, 337: 623, DOI:10.1126/science.1227092.

Hering, J.G. and Schnoor, J. (2011) "Eawag at 75" (comment) *Environ. Sci. Technol.* 45: 9115, DOI: 10.1021/es203291e.

Hering, J.G. (2011) "Water and Our Future – One Institution's View on Meeting the Challenge of Sustainability" (editorial) *GAIA*, 20(3): 145.

Hering, J.G. (2011) "The Future of Water in a Rapidly-Changing World", *Eawag News*, 70e(June): 38-41.

Hering, J.G. (2010) "Research for Development and Academic Career Trajectories: Opportunities and Challenges", Annual Report of the ETHZ North-South Center.

Anderson, P.A., Blum, J., Brantley, S.L., Chadwick, O., Chorover, J., Derry, L.A., Drever, J.I., Hering, J.G., Kirchner, J.W., Kump, L.R., Richter, D., and White, A.F. (2004) "Proposed initiative would study Earth's weathering engine", *EOS Transactions*, 85(28): 1+.

Hering, J.G. (1997) "Chinatown Revisited: Arsenic and the Los Angeles Water Supply", *Engineering and Science*, vol. LX, No. 3, Calif. Inst. of Technol, Pasadena, CA, pp. 34-40.

Technical Reports

- Hering, J.G., Burris, D., Reisinger, H.J., and O'Day, P (2008) "Environmental Fate and Exposure Assessment for Arsenic in Groundwater", Strategic Environmental Research and Development Program (SERDP) Final Report ER-1374.
- Min, J.H., Boulos, L., Brown, J.C., Cornwell, D.A., LeGoullec, Y., Coppola, E.N., Baxley, J.S., Rine, J.A., Hering, J.G., and Vural, N. (2005) "Innovative Alternatives to Minimize Arsenic, Perchlorate, and Nitrate Residuals", Amer. Water Works Assoc. Res. Fndn. Report 91054F, Denver, CO.
- Hering, J.G. and Harmon, T.C. (2004) "Geochemical Controls on Chromium Occurrence, Speciation, and Treatability", Amer. Water Works Assoc. Res. Fndn. Report 91043F, Denver, CO.
- Hering, J.G. and Elimelech, M. (1996) "Arsenic Removal by Enhanced Coagulation and Membrane Processes", Amer. Water Works Assoc. Res. Fndn. Report 90706, Denver, CO.

Papers in Conference Proceedings

- Hering, J.G. (2010) "Monitored Natural Attenuation of Arsenic: Promises and Pitfalls from Two Case Studies" *GQ10: Groundwater Quality Management in a Rapidly Changing World* (Proc. 7th International Groundwater Quality Conference held in Zurich, Switzerland, 13–18 June 2010).
- Lee, G., Stewart, L., Gadtke, A. and Hering, J. (2002) "Hollywood, Health Goals, and Hexavalent Chromium: Cr(VI) Occurrence and Treatment in Southern California Groundwater", Proceedings of the American Water Works Association Inorganic Contaminants Workshop, San Diego, CA, Feb. 3-5.
- Steinberg, L.J. and Hering, J.G. (2001) "Variations in Arsenic Concentrations within a Groundwater Distribution System", Proceedings of the World Water and Environmental Resources Conference, ASCE, Orlando, FL, May 20-24.
- Min, J.H. and Hering, J.G., "Arsenate, Selenite, and Chromate Sorption by Fe(III)-Doped Alginate Gels", Proceedings of the 1997 Annual Meeting of the American Institute of Chemical Engineering, Los Angeles, CA, Nov. 16-21, 1997.
- Hering, J.G. and Chiu, V.P. "Arsenic Occurrence and Speciation in Groundwater, Hanford, CA: Implications for Health Effects and Treatment Options", Proceedings of the 1997 Canadian Society of Civil Engineers-American Society of Civil Engineers Environmental Engineering Conference, Edmonton, Alberta, Canada, July 23-25, 1997.
- Hering, J.G. "Arsenic Speciation in Environmental Systems: Consequences for Biogeochemistry, Toxicology, and Treatment", Proceedings of the Royal Australian Chemical Institute, 13th Symposium on Analytical Chemistry and 4th Environmental Chemistry Conference, Darwin, Australia, July 9-14, 1995.
- Hering, J.G. and Chen, P.Y., "The Effect of Source Water Composition on Arsenic Removal by Enhanced Coagulation", Proceedings of the National Meeting of the American Water Works Association, Anaheim, June 18-22, 1995, pp.C941-C951.
- Hering, J.G. and Elimelech, M., "International Perspectives on Arsenic in Groundwater: Problems and Treatment Strategies", Proceedings of the National Meeting of the American Water Works Association, Anaheim, June 18-22, 1995, pp. C1-C6.
- Hering, J.G. (1994) "Arsenic Removal by Coagulation Treatment: Current Models and Research Needs", Proceedings of the National Meeting of the American Water Works Association, New York, June 19-24, 1994.
- Hering, J.G. and Chen, P.Y. (1993) "Removal of inorganic contaminants from industrial wastewaters: Effects of pH and competing ions on adsorption and precipitation", Proceedings of the 66th Annual Conference and Exposition, Water Environment Federation, AC93-040-006.

PATENTS AND INVENTION DISCLOSURES

Hering, J.G. and Min, J.H., Calcium-Iron(III)-Doped Alginate Gel Beads for Sorption of Arsenate and Selenate, U.S. Patent No. 6,203,709 (issued 3/20/2001).

AWARDS, PROFESSIONAL AFFILIATIONS, AND ACTIVITIES

2020 to present, member Swiss Commission for UNESCO.

2020 to present, co-Chair, SDSN Switzerland.

2019 to present, advisory committee member, IRGC Foundation Council.

2019, member, Universities of Excellence Panel for the University of Tübingen, Germany.

2018, laureate, Clarke Water Prize

2018 to present, member, advisory board for Sustainability Research SCNAT (and Future Earth National Committee)

2018 to present, member, advisory board for td-net SCNAT

2018 to present, member, IWA Global Water Award jury

2018 to present Fellow, the Geochemical Society and European Association of Geochemistry

2017 – 2020 member, scientific advisory board, Ernst Strüngmann Forum, Frankfurt am Main, Germany

2017 Chair, Evaluation Panel “Instrument Leibniz-Forschungsverbund”

2017 to present Honorary Fellow, IHE Delft, the Netherlands

2017 to present, foreign member, Russian Academy of Natural Sciences

2016 – 2019 member, Swiss National Science Foundation Council.

2016 jury member, Microbials program, Gebert Rüt Foundation, Switzerland.

2016 – 2020 President, ETH Women Professors Forum (2012–2016 Vice President)

2015 to present member, U.S. National Academy of Engineering

2015 recipient, IUPAC 2015 Distinguished Women in Chemistry or Chemical Engineering Awards, awarded at the 45th World Chemistry Congress, 9-14 August 2015, Busan, South Korea.

2015–2017 member, scientific advisory board, Helmholtz Zentrum für Umweltforschung (UFZ), Leipzig, Germany.

2015–2017 member, Swiss Hydrological Commission, Swiss Academy of Sciences.

2015 chair, evaluation committee for Programme area 2 Water resources (2007-2014) at the Geological Survey of Denmark and Greenland (GEUS), 26-29 May 2015, Copenhagen, Denmark.

2013–2014 member of organizing team for the session on “Water for All” at the 2014 IARU Congress: Global Challenges: Achieving Sustainability, Copenhagen, Denmark, 22-24 October 2014.

2013–2015 member, Swiss Experiment (phase 2) Advisory Board

2013–2017 member, scientific advisory board, AquaDiva, Friedrich-Schiller-Universität Jena, Germany.

2013–2015 Scientific Director, Center for Risk Analysis and Risk Governance (CRAG), EPFL, Lausanne.

2013–2015 member, Scientific and Technical Council, Integrated Risk Governance Council (IRGC), EPFL, Lausanne.

2012 O’Melia Distinguished Lecturer, Johns Hopkins University, Baltimore, MD, 1 November 2012.

2012–2014 member, panel on Terrestrial Water under Climate Change, Climate Service Center, Hamburg, Germany

2012–2015 member, Advisory Board, Water Institute, Stellenbosch University.

2012 member, faculty search committee, ETH Zürich, Professorship in Agricultural Economics.

- 2011–2015** member, visiting committee, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, Cambridge, MA
- 2011** member, faculty search committee, ETH Zürich, Professorship in Sustainable Agroecosystems.
- 2011** invited panelist, TED Global Conference, Edinburgh, UK, 13 July 2011.
- 2011** invited panelist, International Year of Chemistry, U.S. kick-off, Philadelphia, PA, 1 February 2011.
- 2010–2015** member of the board, Fondation pour l'Etude des Eaux du Léman.
- 2010–2011** member, faculty search committee, ETH Zürich, Professorship in Isotope Geochemistry.
- 2010–2011** member of the scientific committee, EuCheMS International Conference on Chemistry and the Environment (ICCE 2011), Zürich, 11-15 September 2011.
- 2010–2011** co-organizer, Monte Verita workshop on “Chemodynamics and Biointerfaces: Bioavailability and biological effects of chemicals in the environment”, 23-27 October 2011.
- 2010–2012** member, Scientific Advisory Committee (SAC) of the Water Science Alliance, Helmholtz Center for Environmental Research.
- 2010–2011** member, faculty search committee, University of Bern-Eawag, Joint Professorship in Policy Analysis – Focus: Environment.
- 2010 to present** member, Board of Reviewing Editors, *Science*.
- 2009–2011** Guest Editor, *Elements* magazine, special issue on Water, to appear June 2011.
- 2009–2016** Chair, 2008-2009, Member, Advisory Board, Leibniz Institute of Freshwater Ecology and Inland Fisheries, Berlin, Germany.
- 2009–2017** member, ETH Board Committee on Competence Centers (BCC)
- 2009–2013** member, Board of Directors, NCCR North-South
- 2008** Feng Distinguished Lecturer, University of Massachusetts, Amherst, MA.
- 2008–2011** member, Research Advisory Group, UNESCO Center for Water Law, Policy, and Science, University of Dundee, Scotland.
- 2008–2019** member, GAIA Advisory Board
- 2008 to present** member, Eawag Equal Opportunity Committee.
- 2008–2009** member, Program Committee, Alliance for Global Sustainability Annual Meeting
- 2007–2009** member, Program Committee, AGU Chapman Conference.
- 2007–2010** member, ETH Board
- 2007–2017** member, Steering Board, Competence Center Environment and Sustainability (CCES)
- 2007–2009** Science Coordinating Team member, 2009 Goldschmidt Conference.
- 2007** Appointed Honorary Professor, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing, China
- 2007** Appointed Guest Professor, Harbin Institute of Technology, China
- 2007** invited participant, Workshop on Frontier Research Directions in Civil and Environmental Engineering, U.S. National Science Foundation, Arlington, VA, 2-11 June.
- 2007** invited participant, Workshop on Basic Needs in Geosciences, U.S. Department of Energy, Bethesda, MD, 21-24 February.
- 2005** Member, Visiting Committee for the U.S. Dept. of Energy Environmental Molecular Sciences Laboratory, Richland, WA, May 17-19.
- 2005** Invited participant, EPA/NIEHS Workshop on Assessment and Disposal of Arsenic-Bearing Solid Residuals, Washington, DC, February 26-March 1.

- 2004** Invited participant, National Science Foundation/U.S. Department of Energy workshop on Water: Challenges at the Intersection of Human and Natural Systems, Richland, WA, September 16-17.
- 2004** Invited speaker, National Science Foundation workshop on Advancing the Quality of Water, Chapel Hill, NC, March 10-12 .
- 2004-2007** Associate Editor, *Environmental Science and Technology*
- 2003** Invited participant, National Science Foundation workshop on Weathering System Science, Baltimore, MD, October 19-21.
- 2003** Member, Visiting Committee for the Swiss Federal Institute for Environmental Science and Technology (EAWAG), Swiss Federal Institute of Technology, Zurich, Switzerland, September 28 - October 3.
- 2003** Co-organizer of an international workshop on “Biogeochemical Controls on the Mobility and Bioavailability of Metals in Soils and Groundwater”, Swiss Federal Institute of Technology, Ascona, Switzerland, March 2-7.
- 2002** Invited speaker, National Academy of Sciences, “Challenges for the Chemical Sciences in the 21st Century: Workshop on the Environment”, Irvine, CA, November 19-19,2002
- 2002-2003** Panel member, National Science Foundation, Hydrology Panel
- 2001** Invited participant, National Science Foundation workshop on Collaborative Large-Scale Engineering Assessment Network for Environmental Research, Stanford, CA, December 4-5.
- 2001-2003** Aldo Leopold Leadership Fellow
- 2000-2003** Editorial Advisory Board Member, *Environmental Science and Technology*
- 2000** Co-organizer of symposium on “Chemical Speciation and Reactivity in Water Chemistry and Water technology: A Symposium in Honor of James J. Morgan”, Environmental Chemistry Division, American Chemical Society 220th National Meeting, Washington, DC, August 20-25.
- 2000** Consultant, U.S. Environmental Protection Agency, Science Advisory Board, Drinking Water Committee.
- 2000** Panel member, National Science Foundation, Graduate Fellowship Panel, Arlington, VA, February 17-20.
- 1999** Co-organizer of symposium on “Interfacial and Colloidal Phenomena in Aquatic Environments”, Environmental Chemistry Division, American Chemical Society 217th National Meeting, Anaheim, CA, March 21-25.
- 1999** Panel member, National Science Foundation, Graduate Fellowship Panel, Arlington, VA, February 5-7.
- 1998** Guest Editor, *Environmental Science and Technology*.
- 1998** Co-organizer of symposium on “Research and Education Challenges in Environmental Chemistry”, Environmental Chemistry Division, American Chemical Society 216th National Meeting, Boston, MA, August 23-27.
- 1997** Invited participant in the National Academy of Sciences “Ninth Annual Symposium on Frontiers of Science,” Irvine, CA, November 6-8.
- 1997** Invited session chair at National Science Foundation Workshop on “Research Needs for Coastal Pollution in Urban Areas”, Milwaukee, WI, October 16-17.
- 1997** Invited participant at the Sandia National Laboratories workshop on “Natural Attenuation of Metals and Radionuclides,” Albuquerque, NM, June 18-20.
- 1997** Co-organizer of symposium on “Redox Reactions in Natural and Engineered Aqueous Systems”, Environmental Chemistry Division, American Chemical Society 213th National Meeting, San Francisco, CA, April 13-17.

- 1997** Panel member, National Science Foundation, Minority Graduate Fellowship Panel, Washington, DC, February 12-14.
- 1997** Panel member, U.S. Environmental Protection Agency Ad Hoc Subcommittee on Arsenic Research, Board of Scientific Counselors, Washington, DC, January 22-23.
- 1996** Invited participant in the National Academy of Engineering "Second Annual Symposium on Frontiers in Engineering," Irvine, CA, September 19-21.
- 1996** Invited speaker at the American Water Works Association Research Foundation Technology Transfer Conference, Costa Mesa, CA, August 1-2.
- 1996** Guest Editor, *Colloids and Surfaces A-Physicochemical and Engineering Aspects*.
- 1995** NSF Presidential Faculty Fellows Award
- 1995** Co-organizer of symposium on "Colloidal and Interfacial Phenomena in Aquatic Environments", Environmental Chemistry Division, American Chemical Society 209th National Meeting, Anaheim, CA, April 2-6.
- 1994** UCLA Faculty Career Development Award
- 1994** Invited speaker at the Gordon Research Conference on Environmental Sciences - Water, New Hampton, NH, June 20-24.
- 1994** Invited participant in the National Science Foundation Workshop on "Environmental Geochemistry and Biogeochemistry", Airlie, VA, May 18-21.
- 1994** Co-organizer of symposium on "Physical-Chemical Processes Controlling Contaminant Mobility in Aquatic Environments", Environmental Chemistry Division, American Chemical Society 207th National Meeting, San Diego, CA, March 13-17.
- 1994** Invited participant in the National Academy of Engineering workshop on "Academic Engineering Research in a Changing World: Issues, Problems, and Solutions", Irvine, CA, Feb. 18-20.
- 1993** *Who's Who in the World*, 11th ed.
- 1992** National Science Foundation Young Investigator Award.
- 1992** Invited discussion leader at the Gordon Research Conference on Environmental Sciences - Water, New Hampton, NH, June 15-19.
- 1990** Poster Session Chair, European Research Conference on Particles in Natural Waters and in Water Technology, Il Ciocco, Italy, Sept. 3-7.
- 1988** Student Research Award from the ACS Division of Environmental Chemistry for the paper "Slow Coordination Reactions in Aquatic Systems".
- 1975–1979** National Merit Scholar, Cornell University.
- Member:** American Association for the Advancement of Science, American Chemical Society, American Geophysical Union, American Society of Civil Engineers, American Society of Limnology and Oceanography, American Water Works Association, Association of Environmental Engineering and Science Professors, The Oceanography Society, Sigma Xi
- Reviewer:** *Environmental Science and Technology*, *Geochimica et Cosmochimica Acta*, *Deep-Sea Research*, *Journal of Environmental Engineering ASCE*, *Colloids and Surfaces*, *Journal of Physical Chemistry*, *Journal of the American Water Works Association*, *Nature*, *Separation Science and Technology*, *Water Environment Research*, U.S. National Science Foundation, U.S. Department of Energy, U.S. Department of Defense, U.S. Environmental Protection Agency, ACS/Petroleum Research Fund, Swiss National Science Foundation, Leibniz Association

Consulting: Ropes & Gray (2006), Kleinfelder (2005), Metcalf & Eddy (2004), Center for Law in the Public Interest (2004), Los Angeles Regional Water Quality Control Board (2004), Carollo Engineers (2002-2004), HDR Engineering (2001), Lahontan Regional Water Quality Control Board (2001), Southern California Coastal Water Research Project (2000-2001), Environmental Protection Agency Science Advisory Board (2000), Lord, Bissell & Brook (2000), Law Office of Irwin Stevenson (1999), TetraTech (1999), Pillsbury, Madison, and Sutro (1996), LaFollett, Johnson, de Haas, Fesler and Ames (1996), Zeneca (1995-1996)