## **Curriculum Vitae - Daniel Obrist**

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| Education  | 2002 <b>University of Nevada, Reno, Ph.D.</b> Graduate Program of Hydrologic Sciences Field: Hydrogeology |  | Reno, NV              |
|------------|---|--|-----------------------|
|            | D   | Iniversity of Basel, M.S. Department of Biology Dield: Integrative Biology/Plant Ecology | Basel,<br>Switzerland |
| Employment |   |  |                       |
|            | 2013-Present  | Desert Research Institute  | Reno, NV              |

| 2013-Present           | Desert Research Institute  Research Professor  Division of Atmospheric Sciences   | Reno, NV              |
|------------------------|---|-----------------------|
| 2009-2013              | Desert Research Institute  Associate Research Professor  Division of Atmospheric Sciences   | Reno, NV              |
| 2007-2009              | Desert Research Institute  Assistant Research Professor  Division of Atmospheric Sciences   | Reno, NV              |
| 2007/08/10-<br>Present | University of Nevada, Reno Faculty Member Graduate Programs: Hydrologic Sciences; Atmospheric Sciences; Environmental Sciences and Health |                       |
| 2006                   | Desert Research Institute  Postdoctoral Research Associate  Division of Atmospheric Sciences  [Prof. H. Moosmüller]                       | Reno, NV              |
| 2003-2005              | University of Basel  Postdoctoral Research Associate (Senior Assistant), Institute of Environmental Geosciences [Prof. Ch. Alewell]       | Basel,<br>Switzerland |
| 2003                   | University of Nevada, Reno Postdoctoral Research Associate Department of Environmental and Resource Sciences [Prof. M.S. Gustin]          | Reno, NV              |
| 1999-2002              | Desert Research Institute  Research Assistant  Division of Earth and Ecosystem Sciences  [Prof. John A. Arnone]                           | Reno, NV              |

Basel, Switzerland

|          | 1997-1998     | University of Basel  Research Assistant  Department of Integrative Biology  |
|----------|---------------|---|
| Teaching |               |   |
|          | 2015          | <b>Course Instructor GEOL 701Z,</b> University of Nevada, Reno. Graduate Seminar in Hydrology. Topic: Snow Hydrology.   |
|          | 2014          | Course Instructor ATMS 700R, University of Nevada, Reno: Graduate Seminar in Atmospheric Sciences (Topic: Semi-volatile atmospheric pollutants). A joint, distributed class with Michigan Technological University and the Massachusetts Institute of Technology. |
|          | 2011          | Course Co-Instructor ATMS 792, University of Nevada, Reno. Special topic: Air Quality Measurements and Data Analysis.   |
|          | 2011          | Course Instructor ATMS 792, University of Nevada, Reno. Special topic: Hydrometeorology.  |
|          | 2009          | Course Instructor ATMS 792 & GEOL 691:<br>University of Nevada, Reno, GEOL 796,<br>University of Nevada, Las Vegas:<br>Hydrometeorology   |
|          | 2008          | Course Instructor, ATMS 792, University of Nevada, Reno. Special topic: Hydrometeorology.   |
|          | 2003-<br>2005 | Course Co-Instructor, University of Basel,<br>Switzerland: Hydrology; Soil Science;<br>Biogeochemical Cycles  |

## Student and Post-doc Mentoring

2003- Advisor, co-advisor, and graduate committee member of students, Present Principal mentor of post-doctoral fellows:

- Post-doctoral Fellows: Dr. Yannick Agnan (2014-2016); Dr. Christopher Moore (2011-2013); Dr. X. Faïn (2008-2010).
- Graduate Students: C. Hedge, M. McDaniel, R. David, B. Trustman, C. Pearson, A. Pierce, A. Pokharel, S. Vadwalas, A. Millhollen, G. Castillo (all University of Nevada, Reno); T. Khan (Michigan Technological University); O. Hararuk (University of Oklahoma, Norman); R. Teisserenc (Université du Québéc à Montréal); J. Fritsche (University of Basel, Switzerland); Visiting students: D. Howards, Macquarie University, Australia; S. Darby, University College Cork, Ireland; T. Le Dantec, ENSAT Toulouse; Y. Zhang (East China University of Science and Technology, Shanghai); G. Marty (Polytech' Grenoble); R. Schürmann (University of Basel).

Undergraduate and High School Students: A. Harvey (MIT); C. Berger, C. Berger (both Sparks High School); J. Hoberg, Q. Campbell, J. P. Ponco de Leo (all Reno High School); O. Dillon, S. Lee, J. Dagget (both University, of Nevada, Reno); L. Arnone (Swarthmore College).

### **Memberships**

- 1. American Geophysical Union
- 2. American Chemical Society
- 3. American Association for the Advancement of Science
- 4. Soil Science Society of America

## Awards and Honors

2015

- Congressional Briefing, Association of Ecosystem Research Centers (AERC): Ecosystem Resilience to Extreme Events "How disturbances and climate change affect ecosystem regulation, filtering, and exposure of mercury and other persistent pollutants". Capital Visitor Center, Washington, DC.
- 2013 Sabbatical Leave Award: "Combining soil chemistry and atmospheric processes to assess fate of heavy metals in the environment." Sabbatical visits with:
  - Dr. Ruben Kretzschmar, Institute of Biogeochemistry and Pollutant Dynamics, Swiss Federal Institute of Technology, Zürich, Switzerland.
  - Dr. Ulf Skyllberg, Institute for Forest Ecology and Management, Swedish University of Agricultural Sciences, Umeå, Sweden.
  - Dr. Erik Björn, Department of Chemistry, Umeå University; Sweden.
- 2010 **Awardee**, Nevada System of Higher Education (NSHE) Board of Regents Rising Researcher Award.
- Awardee, Peter B. Wagner Medal of Excellence for DRI Scholars in the Early Stages of Career Development.
- 2003 **Best Dissertation Award**, Hydrologic Sciences Program, University of Nevada, Reno.
- 1999- Three Outstanding Student Awards: Mackay School of Mines;
- University of Nevada, Reno; Desert Research Institute (DRI).
- Nevada Medal Research Fellowship 2000 Award to recognize achievements of DRI graduate students.
- 2000 **Colin Warden Memorial Award** The endowment recognizes outstanding graduate students

# Professional Service

2015 - **Ad-hoc Graduate Faculty**, Environmental Engineering, Michigan present Technological University, Houghton, MI

2015- Scientific Advisor/Collaborator, Division of Environmental Protection of the State of Valais, Switzerland. Scientific guidance and coordination of remediation of polluted sites.

2014 **Chair,** Special Session, American Geophysical Union Fall Meeting, San Francisco. "Atmosphere-surface Exchangeable Pollutants: Emissions, Environmental Processing, Governance, and Perturbations related to Global Change." with J. Perlinger, S. Wu, Michigan Technological University.

2013- Editor, Biogeosciences; Associate Editor, Elementa (until 2016).

present

2008- Member, DRI Promotions Committee; DRI Faculty Senate; DRI
 Present Sabbatical Leave Committee; DRI Campus Environment Committee;
 Division of Atmospheric Sciences Advisory Group.

2006 **Chair,** Special Session: "Mercury exchange in terrestrial systems," 8<sup>th</sup> International Conference on Mercury as a Global Pollutant, Madison, WI, with M. Gustin, University of Nevada, Reno).

2001- **Reviewer** for peer-reviewed journals and funding agencies:

Present

U.S. National Science Foundation (various programs); Nevada NASA Space Grant Consortium; L'Agence Nationale de la Recherche, France; Swiss National Science Foundation; Natural Sciences and Engineering Research Council of Canada.

Canadian Mercury Science Assessment, Environment Canada.

Journals, including: Analytica Chimica Acta; Atmosphere; Atmospheric Environment; Atmospheric Chemistry and Physics; Biogeochemistry; Biogeosciences; Biogeochemical Cycles; Chemosphere; Environmental Pollution; Environmental Science and Technology; Geophysical Research Letters; Global Change Biology; Journal of Arid Environments; Journal of Geophysical Research; Journal of Rangeland Ecology & Management; Journal of Soils and Sediments; Nature Geoscience; New Phytologist; Scientific Reports; Science of the Total Environment; Soil Science Society of America Journal; Water, Air, and Soil Pollution.

## Funded Research Projects

### Total funding as PI and Co-PI: \$8,241,039

State of Alaska Division of Air Quality: Amendment to MOA for Mercury and Trace Metals Backtrajectory Study. Obrist D (PI), Pearson C (Co-PI)
 \$ 31.421

State of Alaska Division of Air Quality: Memorandum of Agreement for Mercury and Trace Metals Backtrajectory Study. Obrist D (PI), Pearson C (Co-PI)
 \$49,101

- DOE/Office of Science Program Office: Office of Biological and Environmental Research: Systematic Investigation of the Biogeochemical Stability of Iron Oxide-Bound Organic Carbon: Linking Redox Cycles and Carbon Persistence. Yang Y (PI), Roden EE, **Obrist D**, Kersting AB, Gu B (Co-PIs).

  \$ 650,000
- NASA Experimental Program to Stimulate Competitive Research (EPSCoR): Building Capacity in Interdisciplinary Snow Sciences for a Changing World. **Obrist D** (Science PI); Tyler S, Hausrath L, Ferrell G (Co-PIs).

  \$ 1,125,000 (incl. cost share)
- 2013 U.S. NSF: Collaborative Research: Soil-Snow-Atmosphere Exchange of Mercury in the Interior Arctic Tundra. Obrist D. (PI); Helmig D. (Co-PI). \$832,810 (DRI component \$415,918).
- U.S. NSF: Dynamics of Coupled Natural-Human Systems (CNH):
   Managing Impacts of Global Transport of Atmosphere-Surface
   Exchangeable Pollutants in the Context of Global Change. Perlinger J.
   (PI); Norman E., **Obrist D.**, Selin N., Wu S. (Co-PIs).
   \$1,499,975.
- 2013 USGS 2013 State Water Research Institute Program: Estimation of atmospheric wet and dry deposition of nutrients to Lake Tahoe snowpack and watersheds. Schumer R (PI); **Obrist D** (Co-PI). \$146,221 (incl. cost share)
- DRI Division of Atmospheric Sciences EDGES grant: Development of a cold plate sampler to measure atmospheric mercury and volatile organic compounds. Moore C (PI), **Obrist D** (Co-PI). \$33,196.
- 2012 California Institute of Technology, NASA/Jet Propulsion Laboratory:
  Subcontract: Implications of Arctic Sea Ice Reduction on Tropospheric
  Bromine, Ozone, and Mercury Chemical Process, Transport, and
  Distribution. **Obrist D** (PI); Moore C. (Co-PI).
  \$59,857 (incl. cost share)
- U.S. NSF: Collaborative Research: Reno Mercury Inter-comparison Experiment. **Obrist D** (PI), Moosmüller H (Co-PI). \$50,023 (DRI component)
- USDA Forest Service (SNPLMA Round 10): Particulate Emissions from Biomass Burning: Quantification of the Contributions from Residential Wood Combustion, Forest Fires, and Prescribed Fires. **Obrist D** (PI); Gertler A; Zielinska B (Co-PIs). \$225,594 (including cost share).
- U.S. NSF: Major Research Instrumentation (MRI): Development of a Cavity Ring-Down Sensor for Real-Time Measurement of Mercury Concentrations and Fluxes. **Obrist D** (PI); Moosmüller H, Faïn X, Hallar AG (Co-PIs).
   \$ 934,985 (including cost share)

- U.S. NSF: Upgrades to Storm Peak Laboratory, a High Elevation Atmospheric Research and Education Station, Hallar AG (PI), Lowenthal D, McCubbin I, Moser D, Obrist D (Co-PIs).
   \$601,245
- DRI IPA: Atmospheric mercury sequestration and storage in Arctic carbon-rich soils. **Obrist D** (PI). \$19,033
- U.S. NSF Atmospheric Chemistry: Mercury Oxidation and Depletion in the Reactive Halogen Enriched Troposphere of the Dead Sea. **Obrist D** (PI); Luria M (Co-PI).
   \$545,234 (including cost share)
- 2008 State of Colorado Air Pollution Control Division: Atmospheric mercury levels and impact of Asian long-range transport at Storm Peak Laboratory in Steamboat Springs, Colorado. **Obrist D** (PI); Hallar G (Co-PI). \$4,191
- Nevada NASA EPSCoR: Observations of reactive halogens and speciated mercury at a high-elevation observation platform to characterize the oxidative capacity of the troposphere. **Obrist D** (PI); Hallar G, Volkamer R (Co-PIs). \$16.554
- DRI VPR office (Substantial Effort Grant): Air-snow exchange of mercury at Summit, Greenland: impact on the tropospheric reservoir and implications for long-term records preserved in ice cores. Faïn X (PI);

  Obrist D (Co-PI).
  \$29.985
- 2007 Lawrence Foundation: Impact of Atmospheric Mercury on Rocky Mountain Region. Hallar G (PI), **Obrist D** (Co-PI). \$5,000
- U.S. EPA STAR Consequences of Global Change for Air Quality: Effects of global change on the atmospheric mercury burden and mercury sequestration through changes in ecosystem carbon pools. **Obrist D** (PI); Johnson DW, Lindberg SE (Co-PIs).

  \$898,735
- U.S. NSF EPSCoR: Proof of Concept Program: Development of an Optical Method for Sensing Mercury in Real Time with Below Background Sensitivity. Moosmüller H (PI); Arnott WP (Co-PI), Obrist D (Post-doc).
   \$74,951
- 2006 U.S. NSF Small Grant for Exploratory Research (SGER): Atmospheric mercury (Hg) emission from combustion of biomass. **Obrist D** (PI). \$35,597
- U.S. NSF EPSCoR Proof-of-concept Program: Scaling environmental processes in heterogeneous arid soils (SEPHAS): Application of a <sup>222</sup>Rn/H<sub>2</sub>O method to measure nighttime evapotranspiration in arid ecosystems to complement and scale-up conventional measurement methods. **Obrist D** (PI); Jasoni R (Co-PI), Arnone JA (Co-PIs). \$31,823

2006 Desert Research Institute, Research Enhancement Program: Atmospheric mercury monitoring at DRI's Storm Peak Laboratory to determine the fate of East Asian atmospheric mercury pollution during continental transport. **Obrist D** (PI); Hallar G (Co-PI). \$4,866 2006 Desert Research Institute, Research Enhancement Program: Acquisition of a Tekran 2537A Mercury Vapor Analyzer. **Obrist D** (PI); Moosmuller H (Co-PI). \$35,000 2006 DRI IPA: Atmospheric mercury emissions and mercury contamination due to modern gold mining in Nevada. Obrist D (PI); Moosmüller H (Co-PI). \$12,142 Swiss National Science Foundation: Hg<sup>0</sup> fluxes and reductive processes 2004 in the Alps. **Obrist D** (PI); Alewell C (Co-PI). \$129,000 2004 University of Basel: Small Research Grant. Obrist D (PI).

Geological Society of America Research Grant, Obrist D (PI).

#### **Publications**

- 59. Perlinger, J.A., Gorman, H.S., Norman, E.S., **Obrist, D.**, Selin, N.E., Urban, N.R., and Wu, S., 2016: Measurement and Modeling of Atmosphere-Surface Exchangeable Pollutants (ASEPs) To Better Understand their Environmental Cycling and Planetary Boundaries. *Environ. Sci. Technol. Viewpoints, Article ASAP*, DOI: 10.1021/acs.est.6b03447 (Aug 18 2016).
- 58. Zheng W, **Obrist D**, Weis D, Bergquist BA. Mercury isotope compositions across North American forests. *Global Biogeochemical Cycles*, in press.

\$4.500

\$5,000

2001

- 57. Zhao Q, Poulson SR, **Obrist D**, Sumaila S, Dynes JJ, McBeth JM, Yang Y. Iron-bound organic carbon in forest soils, *Biogeosciences*, 13, 4777-4788, 2016.
- 56. Eagles-Smith CA, Wiener JG, Eckley CS, Willacker JJ, Evers DC, Marvin-DiPasquale MC, Obrist D, Fleck J, Aiken GR, Lepak JM, Jackson AK, Webster J, Stewart R, Davis K, Alpers CN, Ackerman JT. Mercury in western North America: A synthesis of environmental contamination, fluxes, bioaccumulation, and risk to fish and wildlife. *The Science of the Total Environment*, doi: 10.1016/j.scitotenv.2016.05.094, 2016.
- 55. Webster JP, Kane TK, **Obrist D**, Ryan JN, Aiken GR. Estimating soil mercury emissions resulting from wildfire in the western United States. *The Science of the Total Environment*, doi: 10.1016/j.scitotenv.2016.01.166, 2016.
- 54. **Obrist D**, Pearson C, Webster J, Kane T, Lin C-L, Aiken GR, Alpers CN Terrestrial mercury in the western United States: spatial distribution defined by land cover and plant productivity. *The Science of the Total Environment*, doi:10.1016/j.scitotenv.2015.11.104, 2015.
- 53. Agnan Y., Le Dantec T., Moore CW, Edwards GC, **Obrist D**. New constraints on terrestrial surface-atmosphere fluxes of gaseous elemental mercury using a global database. *Environmental Science and Technology*, 50(2), 507-524, 2016.
- 52. Peleg M, Tas E, Matveev V, **Obrist D**, Moore C, Gabay M, Luria M. Contribution of the Nitrate

- Radical to Oxidation of Gaseous Elemental Mercury. *Environmental Science and Technology*, DOI: 10.1021/acs.est.5b03894, 2015.
- 51. Amos HM, Sonke JE, **Obrist D**, Robins N, Hagan N, Horowitz HM, Mason RP, Witt M, Hedgecock I, Corbitt ES, Sunderland EM. Observational and modeling constraints on global anthropogenic enrichment of mercury. *Environmental Science and Technology*, 49(7), 4036-4047, 2015.
- 50. Pearson C, Schumer R, Rittger K, Johnson DW, **Obrist D**. Nutrient and mercury deposition and storage in an alpine snowpack of the Sierra Nevada, USA. *Biogeosciences* 12, 3665-3680, 2015.
- 49. **Obrist D**, Zielinska B, Perlinger J. Accumulation of polycyclic aromatic hydrocarbons (PAHs) and oxygenated PAHs (OPAHs) in organic and mineral soil horizons from four U.S. remote forests. *Chemosphere* 134, 98-105, 2015.
- 48. Pierce A, Moore C, Wohlfahrt G, Hörtnagl L, Kljun N, **Obrist D**. Eddy covariance flux measurements of gaseous elemental mercury using cavity ring-down spectroscopy. *Environmental Science and Technology*, 49(3), 1559-1568, 2015.
- 47. Weiss-Penzias P, Amos HM, Selin NE, Gustin MS, Jaffe DA, **Obrist D**, Sheu G-R, Giang A. Use of a global model to understand speciated atmospheric mercury observations at five highelevation sites. *Atmos. Chem. Phys.*, 15, 1161-1173, 2015.
- 46. **Obrist D**, Pokharel AK, Moore C. Vertical profile measurements of soil air suggest immobilization of gaseous elemental mercury in mineral soil. *Environmental Science and Technology*, 48(4) 2242-2252, 2014.
- 45. Moore CW\*, **Obrist D**\*, Steffen A, Staebler RM, Douglas TA, Richter A, Nghiem SV. Sea ice lead-induced convective forcing of mercury and ozone in the Arctic boundary layer. *Nature*, doi:10.1038/nature12924, 2014. (\*Equal Contributions).
- 44. Teisserenc R, Lucotte M, Canuel R, Moingt M, **Obrist D**. Combined dynamics of mercury and terrigenous organic matter following impoundment of Churchill Falls Hydroelectric Reservoir, Labrador. *Biogeochemistry*, 10.1007/s10533-013-9902-9, 2013.
- 43. Hararuk O, **Obrist D**, Luo Y. Modeling the sensitivity of soil mercury storage to climate-induced changes in soil carbon pools *Biogeosciences*, 9, 11403-11441, 2013.
- 42. Faïn X, Helmig D, Hueber J, **Obrist D**, Williams MM. Mercury Dynamics in the Rocky Mountain, Colorado, Snowpack. *Biogeosciences*, 10, 3793-3807, 2013.
- 41. Nghiem S, Clemente-Colón P, Douglas T, Moore C, **Obrist D**, Perovich D, Pratt K, Rigor I, Simpson W, Shepson PB, Steffen A, Woods J. The Bromine, Ozone, and Mercury Experiment. *EOS*, 94, 33: 289-291, 2013.
- 40. Van Dam B, Helmig D, Burkhart JF, **Obrist D**, Oltmans S. Springtime boundary layer O<sub>3</sub> and GEM depletion at Toolik Lake, Alaska. *Journal of Geophysical Research*, 118, 3382-3391, 2013.
- 39. Pierce A, **Obrist D**, Moosmüller H, Faïn X, Moore C. A cavity ring-down spectroscopy sensor for high-time-resolution measurements of gaseous elemental mercury in ambient air. *Atmospheric Measurement Techniques*, 6, 1477-1489, 2013.
- 38. Zhang Y, **Obrist D**, Zielinska B, Gertler A., Particulate emissions from different types of prescribed biomass burning. *Atmospheric Environment*, 72, 27-35, 2013
- 37. Moore C, **Obrist D**, Luria M. Atmospheric mercury depletion events at the Dead Sea: Spatial and temporal aspects. *Atmospheric Environment*, 69, 231-239, 2013.
- 36. **Obrist D**. Mercury distribution across 14 U.S. forests. Part II: Patterns of methyl mercury concentrations and areal mass of total and methyl mercury. *Environmental Science and Technology*, 46, 5921–5930, 2012.
- 35. **Obrist D**, Johnson DW, Lindberg SW, Luo Y, Hararuk O, Bracho R, Battles JJ, Dail DB,

- Edmonds RL, Monson RK, Ollinger SV, Pallardy SG, Pregitzer KS, Todd DE. Mercury distribution across 14 U.S. forests. Part I: Spatial patterns of total Hg concentrations in biomass, litter, and soils. *Environmental Science and Technology*, 45, 3974–3981, 2011.
- 34. **Obrist D**, Johnson DW, Edmonds RL. Effects of vegetation type on mercury concentrations and pools in two adjacent coniferous and deciduous forests, *Journal of Plant Nutrition and Soil Science*, 175, 68-77, 2012.
- 33. Pokharel AK, **Obrist D.** Fate of mercury in tree litter during decomposition. *Biogeosciences*, 8, 2507-2521, 2011.
- 32. Tas E, **Obrist D**, Peleg M, Matveev V, Faïn X, Asaf D, Luria M. Measurement-based modelling of bromine-induced oxidation of mercury above the Dead Sea. *Atmospheric Chemistry and Physics*, 12, 2429-2440, 2012.
- 31. Faïn X, **Obrist D,** Pierce A, Barth C, Gustin MS, Boyle DP. Whole-watershed mercury balance in a Sierra Nevada ecosystem. *Geochimica et Cosmochimica Acta*. 75, 2379-2392, 2011.
- 30. **Obrist D,** Peleg M, Tas, E, Matveev V, Faïn X, Tas E, Asaf D, Luria M. Efficient mercury oxidation by bromine in the temperate atmosphere. *Nature Geoscience*, 4, 22-26, 2011.
- 29. Volk M, **Obrist D,** Novak K, Giger R, Bassin S., Fuhrer J. Subalpine grassland carbon dioxide fluxes indicate substantial carbon losses under increased nitrogen deposition, but not at elevated ozone concentration. *Global Change Biology*. 17, 366–376, 2011.
- 28. **Obrist D,** Faïn X, Berger C. Gaseous elemental mercury emissions and CO<sub>2</sub> respiration rates in terrestrial soils under controlled aerobic and anaerobic laboratory conditions. *The Science of Total Environment*, 408, 1691–1700, 2010.
- 27. Mack LA, Levin EJT, Kreidenweis SM, **Obrist D**, et al. Optical closure experiments for biomass smoke aerosols. *Atmospheric Chemistry and Physics*, 10, 9017-9026, 2010.
- 26. Faïn X, Moosmüller H, **Obrist D**. Toward a real-time measurement of atmospheric mercury concentrations using cavity ring-down spectroscopy. *Atmos. Chem. Phys.*, 10, 2879–2892, 2010.
- 25. Faïn X, **Obrist D,** Hallar AG, McCubbin I, Rahn T. High levels of reactive gaseous mercury observed at a high elevation research laboratory in the Rocky Mountains. *Atmospheric Chemistry and Physics*, 9, 8049–8060, 2009.
- 24. Cheng X, Luo Y, Su B, Verburg P, Hui D, **Obrist D,** Arnone JA, Johnson DW, Evans RD. Responses of net ecosystem CO<sub>2</sub> exchange to nitrogen fertilization in experimentally manipulated grassland ecosystems. *Agricultural and Forest Meteorology*, 149: 1956-1963, 2009.
- 23. **Obrist D,** Johnson DW, Lindberg SE. Mercury concentrations and pools in four Sierra Nevada forest sites, and relationships to organic carbon and nitrogen. *Biogeosciences* 6, 1-13, 2009.
- 22. Fritsche J., Wohlfahrt G, Ammann C, Zeeman M, Hammerle A, **Obrist D,** Alewell C. Summertime elemental mercury exchange of temperate montane grasslands on an ecosystem-scale. *Atmospheric Chemistry and Physics*, 8, 7709-7722, 2008.
- 21. Hallar AG, Wiedinmyer C, McCubbin IB, Bowers RB, Fierer N, Mazzoleni L, Christner B, **Obrist D**, Fain X. A High Altitude Interdisciplinary Field Campaign The Storm Peak Aerosol and Cloud Characterization Study (SPACCS08). *Mountain Research Initiative Newsletter*, 2, 8-9, 2009.
- 20. **Obrist D,** Hallar AG, McCubbin I, Stephens BB, Rahn T. Atmospheric mercury concentrations at Storm Peak Laboratory in the Rocky Mountains: Evidence for long-range transport from Asia, boundary layer contributions, and plant mercury uptake. *Atmospheric Environment* 42, 7579-7589, 2008.
- 19. Fritsche J, **Obrist D,** Zeeman MJ, Conen F, Eugster W, Alewell C. Elemental mercury fluxes over a sub-alpine grassland in Switzerland determined with two micrometeorological methods.

- Atmospheric Environment, 42, 2922-2933, 2008.
- 18. Fritsche J, **Obrist D,** Alewell C. Evidence of microbial control of Hg<sup>0</sup> emissions from uncontaminated terrestrial soils. *Plant Nutrition and Soil Science*, 171, 200-209, 2008.
- 17. **Obrist D,** Moosmüller H, Schürmann R, Chen A, Kreidenweis S. Particulate-phase and gaseous elemental mercury emissions during biomass combustion: controlling factors and correlation with particulate matter emissions. *Environmental Science and Technology*, 42, 721-727, 2008.
- 16. Li W, Collins JF, Durbin TD, Huai T, Ayala A, Full G, Mazzoleni C, Nussbaum NJ, **Obrist D,** Zhu D, Kuhns HD, Moosmüller H. Detection of Gasoline Vehicles with Gross PM Emissions. *SAE Tech. Pap. Ser.*, SP-2089, 2007-01-1113 (13 pages), 2007.
- 15. Peleg M, Matveev V, Tas E, Luria M, Valente RJ, **Obrist D**. Mercury depletion events in the troposphere in Mid-Latitudes at the Dead Sea, Israel. *Environmental Science and Technology*, 41, 7280-7285, 2007.
- 14. Faïn X, Grangeon S, Bahlmann E, Fritsche J, **Obrist D,** Dommergue A, Ferrari CP, Cairns W, Ebinghaus R, Barbante C, Cescon P, Boutron C. Diurnal production of Gaseous Mercury in the alpine snowpack before snowmelt. *Journal of Geophysical Research Atmosphere*, 112, D21311, 2007.
- 13. **Obrist D**. Atmospheric mercury pollution due to losses of carbon pools? *Biogeochemistry* 85, 119-123, 2007.
- 12. Millhollen AG, Gustin MS, **Obrist D**. Foliar mercury accumulation and exchange for three tree species. *Environmental Science and Technology*, 40, 6001-6006, 2006.
- 11. Millhollen AG, **Obrist D,** Gustin MS. Mercury accumulation in grass and forb species as a function of atmospheric carbon dioxide concentrations and mercury. *Chemosphere*, 65, 889-897, 2006.
- 10. **Obrist D,** Conen F, Vogt R, Siegwolf R, Alewell C. Estimation of Hg<sup>0</sup> exchange between ecosystems and the atmosphere using <sup>222</sup>Rn and Hg<sup>0</sup> concentration changes in the stable nocturnal boundary layer. *Atmospheric Environment*, 40, 856-866, 2006.
- 9. Prater MR, **Obrist D,** Arnone JA, DeLucia EH. Net carbon exchange and evapotranspiration in post-fire and intact sagebrush communities in the Great Basin. *Oecologia*, 146, 595-607, 2006.
- 8. **Obrist D,** Gustin MS, Arnone JA, Schorran DE, Verburg PSJ, Johnson DW. Measurements of gaseous elemental mercury fluxes over intact tallgrass prairie monoliths during one full year. *Atmospheric Environment*, 39, pp. 957-965, 2005.
- 7. **Obrist D,** Yakir, D, Arnone JA III (2004). Temporal and spatial patterns of soil water following wildfire-induced changes in plant communities in the Great Basin. *Plant and Soil*, 262, pp. 1-12, 2004.
- 6. Verburg PS, Arnone JA, **Obrist D,** Schorran DE, Evans D, LeRoux-Swarthout D, Johnson D, Luo Y, Coleman JS. Net ecosystem carbon exchange in two experimental grassland ecosystems. *Global Change Biology*, 10, pp. 498-508, 2004.
- 5. **Obrist D,** Verburg PSJ, Young MH, Coleman JS, Schorran DE, Arnone JA. Quantifying the effects of phenology on ecosystem evapotranspiration in planted grassland mesocosms using EcoCELL technology. *Agricultural and Forest Meteorology*, 118: 173-183, 2003.
- 4. **Obrist D,** DeLucia EH, Arnone JA. Consequences of wildfire on ecosystem CO<sub>2</sub> and water vapor fluxes in the Great Basin. *Global Change Biology*, 9, pp. 563-574, 2003.
- 3. Arnone JA, **Obrist D**. A large daylight geodesic dome for quantification of whole ecosystem CO<sub>2</sub> and water vapor fluxes in arid ecosystems. *Journal of Arid Environments*, 55: pp. 629-643, 2003.
- 2. **Obrist D,** Arnone JA. Increasing CO<sub>2</sub> accelerates root growth and enhances water acquisition

- during early stages of develop. ment in *Larrea tridentata*. New Phytologist, 159, pp. 175-184, 2003.
- 1. **Obrist D,** Arnone JA, Körner Ch. In situ effects of elevated atmospheric CO<sub>2</sub> on leaf freezing resistance and carbohydrates in a native temperate grassland. *Annals of Botany*, 87(6), pp. 839-844, 2001.

### **Conference and Seminar Presentations**

- **Obrist D**, Agnan Y, Zheng W, Bergquist B, Jiskra M, Sonke J., Helmig D. Terrestrial Mercury Biogeochemistry: A Need To Re-assess the Role of Dry Deposition of Elemental Mercury. *Keynote Presentation*, Goldschmidt Conference, Yokohama, 2016.
- 160. Agnan Y., Edwards G., **Obrist D**. Methane emissions throughout the year in arctic tundra, northern Alaska. Goldschmidt Conference, Yokohama, 2016.
- 159. Zhao Q, Adhikari D, Mejia K, Huang R, Patel A, Wang X, Tang Y, **Obrist D**, Roden E, Yang Y. Coupled Dynamics of Iron and Iron-bound Organic Carbon in Forest Soils during Anaerobic Reduction. Soil Science Society of America Annual Meeting, 2016.
- 158. Zhao Q, Poulson SR, **Obrist D**, Yang Y. Importance of Iron in Stabilization of Organic Carbon with Emphasis on the Influences of Soil Physicochemical Properties. Nevada Water Environment Association Annual Meeting, Sparks, NV, 2016.
- 157. Zhao Q, Adhikari D, Patel A, Mejia J, Huang R, Sumaila S, Dynes JJ, McBeth JM, Poulson S, Tang Y, **Obrist D**, Roden EE, Yang Y. Biogeochemical Cycles of Iron-Bound Organic Carbon in Forest Soils. DOE ESS-PI Meeting, Potomac, MD, 2016.
- 156. Adhikari D, Zhao Q, Xu S, Mejia J, Huang R, Patel A, Sumaila S, Agnan Y, Hedge C, Dynes JJ, McBeth J, Poulson S, Tang Y, Kersting AB, Gu B, **Obrist D**, Roden EE, Yang Y. Systematic Investigation of the Biogeochemical Stability of Iron Oxide-Bound Organic Carbon: Linking Redox Cycles and Carbon Persistence. DOE ESS-PI Meeting, Potomac, MD, 2016.
- 155. Moore C, Dastoor A, Steffen A, Nghiem S, Agnan Y, **Obrist D**. Measurements to Refine Global and Regional Scale Atmospheric Transport Models. Abstract A23I-08, American Geophysical Union Fall Meeting in San Francisco, December 2015.
- 154. Agnan Y, **Obrist D**, Edward G, Moore C, Hedge C, Helmig D, Paxton D, Hueber J. Spatial and Temporal Variability of Methane Mole Fractions and Exchanges in and Between Soil, Snow, and the Atmosphere in a Tundra System in Northern Alaska. Abstract B13D-0648, American Geophysical Union Fall Meeting in San Francisco, December 2015.
- 153. **Obrist D**, Helmig D, Agnan Y, Hedge C, Moore C, Paxton D, Hueber J. Mercury dynamics of an arctic tundra ecosystem in northern Alaska: a mass balance. Abstract B33G-03, American Geophysical Union Fall Meeting in San Francisco, December 2015.
- 152. Khan T, Agnan Y, Obrist D, Selin N, Urban N, Wu S, Perlinger J. Preliminary Assessment of Mercury Atmosphere-Surface Exchange Parameterizations for Incorporation into Chemical Transport Models. Abstract B11D-0454, American Geophysical Union Fall Meeting in San Francisco, December 2015.
- 151. Zhao Q, Yang Y, **Obrist D**, Poulson S. Importance of Iron and Soil Physicochemical Properties to Stabilize Organic Carbon in Soils. Abstract B43I-0676, American Geophysical Union Fall Meeting in San Francisco, December 2015.
- 150. Hedge C, **Obrist D**, Agnan Y, Moore C, Biester H, Helmig D. Soil and Plant Mercury

- Concentrations and Pools in the Arctic Tundra of Northern Alaska. Abstract B13I-04. American Geophysical Union Fall Meeting in San Francisco, December 2015.
- 149. Eagles-Smith C, Marvin-DiPasquale M, Evers D, Eckley C, Wiener J, Fleck J, Ackerman J, Aiken G, Davis J, Drevnick P, Geesey G, Jackson A, Lepak J, Obrist D, Stewart R, Webster J, Weiss-Penzias P, Willacker J. Western North American Mercury Synthesis (WNAMS): A multi-disciplinary tri-national assessment of the climate, landscape, and land-use controls on mercury risk to ecological and human health across western North America. Society of Environmental Toxicology and Chemistry (SETCAC) 36th Annual Meeting, Salt Lake City, November 2015.
- 148. Trustman B, **Obrist D**, Schumer R, Strachan S. Characterizing spatial and temporal variability of snow water equivalent. Tahoe Science Conference, Reno, September 2015.
- 147. Moore, C.W, **Obrist D**, Steffen A, Staebler RM, Douglas TA, Simpson WR, Peterson P, Nghiem SV. Role of Snow and Ice Surfaces in the Atmospheric Cycling of Mercury in the Arctic. International Conference on Mercury as a Global Pollutant, Jeju, South Korea, June 2015.
- 146. Hedge C, Obrist D, Kretzschmar R, Wiederhold JG, Biester H, Chow J, Moore C, Agnan Y, Helmig D. Soil and plant mercury concentrations and pools in the Arctic tundra of northern Alaska. International Conference on Mercury as a Global Pollutant, Jeju, South Korea, June 2015.
- 145. **Obrist D**, Helmig D, Agnan Y, Hueber J, Hedge C, Moore C, Steffen A, Brooks S. Mercury dynamics of an inland tundra ecosystem in northern Alaska: an attempt for a first mass balance. International Conference on Mercury as a Global Pollutant, Jeju, South Korea, June 2015.
- 144. Zheng W, **Obrist D**, Weis D, Bergquist BA.Mercury isotope compositions in North American forests. International Conference on Mercury as a Global Pollutant, Jeju, South Korea, June 2015.
- 143. Howard DA, Edwards GC, Moore CW, **Obrist D**. Observation of night time GEM depletion events over an Australian mid-latitude Alpine grassland. International Conference on Mercury as a Global Pollutant, Jeju, South Korea, June 2015.
- 142. Agnan Y, Moore CW, Edwards GC, LeDantec T, **Obrist D**. A global analysis of surfaces-atmosphere exchange of gaseous elemental mercury (Hg0). International Conference on Mercury as a Global Pollutant, Jeju, South Korea, June 2015.
- 141. Amos, HM, Sonke JE, **Obrist D,** Robins N, Hagan N, Horowitz HM, Masin RP, Witt M, Hedgecock I, Corbitt ES, Sunderland EM. Global anthropogenic enrichment of mercury and implications for future environmental concentrations. International Conference on Mercury as a Global Pollutant, Jeju, South Korea, June 2015.
- 140. Steffen A, Cole A, Dastoor A, Moore C, **Obrist D**. Potential impacts of emissions, increases in temperature and sea ice loss on the mercury cycle in the high Arctic. International Conference on Mercury as a Global Pollutant, Jeju, South Korea, June 2015.
- 139. Denzler B, Bogdal C, Henne S, Ubl-Kägi S, Qureshi A, **Obrist D**, Hungerbühler K. Source apportionment of atmospheric mercury based on background air monitoring at the High Altitude Research Station Jungfraujoch (3580 m). International Conference on Mercury as a Global Pollutant, Jeju, South Korea, June 2015.
- 138. **Obrist D**, Hedge C, Agnan Y, Moore C, Helmig D, Hueber J. Comparisons of Terrestrial Mercury (Hg) Accumulation and Dynamics across Temperate Forests and an Arctic Tundra site. AGU-GAC-MAC-CGU Joint Assembly, Montreal, Canada, May 2015.
- 137. Trustman B, **Obrist D**, Schumer R, Strachan S. Characterizing spatial variabulity of snow water equivalent using pressure sensors. 2015 Western Snow Conference, Grass Valley, CA,

- April 2015.
- 136. Helmig D, **Obrist D**, Moore C, VanDam B, Hueber J, Molnar T, Williams M, Kramer L, Doskey P, Fain X. The role of snow cover on surface trace gas exchanges at Toolik Lake, AK; American Geophysical Union Fall Meeting in San Francisco, December 2014.
- 13. Agnan Y, **Obrist D**, Moore C. A comprehensive database of global soil-snow-atmosphere flux studies of mercury. American Geophysical Union Fall Meeting, San Francisco; December 2014.
- 134. Perlinger J, Urban N, **Obrist D**, Wu S. The Role of Biogeochemical Cycling of Atmospheresurface Exchangeable Pollutants (ASEPs) in the Dynamic Coupled Human-Natural ASEP System. American Geophysical Union Fall Meeting, San Francisco; December 2014.
- 133. **Obrist D**, Zielinska B, Perlinger J. Accumulation of polycyclic aromatic hydrocarbons (PAHs) in surface litter and soils in four forests in the United States. American Geophysical Union Fall Meeting, San Francisco; December 2014.
- 132. **Obrist D**, Moore C, LeDantec T, Agnan Y, Pearson C. Soil mercury sequestration and remobilization and relationships to the global cycling of mercury. Soil Science Society of America Annual Meeting, Long Beach, CA; November 2014.
- 131. Théo LeDantec, Agnan Y, **Obrist D**, Moore C. A comprehensive database of global soil-atmosphere flux studies of mercury; Soil Science Society of America Annual Meeting, Long Beach, CA, November 2014.
- Moore C, **Obrist D**, Brooks S, Steffen A. An overview of mercury speciation measurements and analysis at high latitudes. Data collection, analysis, and application of speciated mercury workshop. San Francisco, CA. July 2014.
- 129. **Obrist D.** Terrestrial mercury cycling: sequestration and re-emissions. Seminar; Federal Institute of Technology, Zurich, Switzerland, May 2014.
- 128. Persistent Semi-Volatile Pollutants: A Long-term Problem. **Obrist D.** Seminar; University of Basel, Switzerland. April 2014.
- 127. Trustman B, **Obrist D**, Schumer R. Nutrient and mercury dynamics within the Lake Tahoe basin snowpack. Mountain Observatories Fair and Workshop, Reno, July 2014.
- 127. Zheng W, Bergquist BA, Weis D, **Obrist D**. Mercury isotope compositions in North American forest soils and litters. Goldschmidt Conference, Sacramento, June 2014.
- 126. Moore C, **Obrist D**, Steffen A, Staebler RM, Douglas TA, Nghiem SV. Mercury Depletion, Deposition, and Re-emission in Snowpack over the Arctic Tundra and Ocean. Goldschmidt Conference, Sacramento, June 2014.
- **Obrist D**. Mercury in terrestrial environments: sinks, sources, and impacts for atmospheric loads. National Ecological Observatory network (NEON), Seminar; Boulder, CO, February 2014.
- 124. Pearson C, **Obrist D**, Schumer R. Nutrient and Mercury Concentrations and Loads in Tahoe Basin Snowpack. Fall Meeting, AGU, C12A-07, San Francisco, December 2013.
- 123. Zheng W, **Obrist D**, Bergquist BA. Mercury isotope compositions in North American forest soils and litters. Fall Meeting, AGU, B41C-0415, San Francisco, December 2013.
- 122. Weiss-Penzias P, Eckley C, Parsons M, Morris K, Jaffe D, Gustin M, Steffen S, Mintz R, Rothenberg S, Schmelz D, Perry K, **Obrist D**, Cole A, Gay D. Spatial and temporal patterns of air concentrations of mercury in Western North America 1998-present. Fall Meeting, AGU, B44B-04, San Francisco, December 2013.
- **Obrist D,** Perlinger J. Linking atmospheric and terrestrial cycles of Surface-Atmosphere-Exchangeable Pollutants (ASEPS). Department of Civil and Environmental Engineering,

- Michigan Technological University, Houghton, MI, November 2013.
- 120. **Obrist D.** Sequestration and re-emission of Atmosphere-Surface Exchangeable Pollutants (ASEPs). Community and Partner Workshop: Managing impacts of global transport of atmosphere-surface exchangeable pollutants (ASEPs) in the context of global change, Great Lakes Research Center, Michigan Technological University, Hougthon, MI, November 2013.
- 119. **Obrist D.** Mercury cycling in terrestrial environments an ecosystem perspective. Department of Forest Ecology and Management, Swedish University of Agricultural Sciences, Umeå, Sweden. Seminar, October 2013.
- 118. **Obrist D**. Terrestrial ecosystems and atmospheric mercury loads: Sequestration of past pollution and importance of legacy re-emissions. Department of Chemistry, University College Cork, Cork, Ireland. Seminar, October 2013.
- 117. Tas E. **Obrist D**, Peleg M, Matveev V, Faïn X, Asaf D, Luria M. Measurement-based modelling of bromine-induced oxidation of mercury above the Dead Sea, 14th EuChemMS International Conference on Chemistry and the Environment (ICCE 2013). Barcelona, Spain, June 2013.
- **116. Obrist D**, Moore, Pearson C, Pierce A, Schumer R, Helmig D, Van Dam B, Faïn X, Steffen A, Staebler R, Nghiem S, Douglas T. 2013. Mercury in alpine and Arctic snow: atmospheric deposition and fate processes. Seminar Graduate Program of Hydrologic Sciences, University of Nevada, Reno, USA. April 2013.
- 24th Meeting of the International Symposium on Polycyclic Aromatic Compounds (ISPAC 2013), Corvallis, OR, USA, September, 2013.
- 114. Tas E, **Obrist D**, Peleg M, Matveev V, Faïn X, Asaf D, Luria. Measurement-based modelling of bromine-induced oxidation of mercury above the Dead Sea. The Atmospheric Chemistry Gordon Research Conference, Mount Snow Resort, West Dover, VT, USA, July/August 2013.
- 113. Nghiem SV, Shepson PB, Simpson W, Perovich DK, Sturm M, Douglas T, Rigor IG, Clemente-Colón P, Burrows JP, Richter A, Steffen A, Staebler R, **Obrist O**, Moore C, Bottenheim J, Platt U, Pöhler D, General S, Zielcke K,Fuentes JD, Hall DK, Kaleschke L, Woods J, Hager C, Smith K, Sweet CR, Pratt K, Custard K, Peterson P, Walsh S, Gleason E, Saiet E, Webster M, Lieb-Lappen R, Linder C, Neumann G. Science Progress from the BRomine, Ozone, and Mercury EXperiment (BROMEX); Davos Atmosphere and Cryosphere Assembly 2013 Air, Ice & Process Interactions, July 8-12, 2013, Davos, Switzerland.
- 112. Nghiem SV, Shepson PB, Simpson W, Perovich DK, Sturm M, Douglas T, Rigor IG, Clemente-Colón P, Burrows JP, Richter A, Steffen A, Staebler R, Obrist D, Moore C, Bottenheim J, Platt U, Pöhler D, General S, Zielcke J, Fuentes JD, Hall DK, Kaleschke L, Woods J, Hager C, Smith J, Sweet CR, Pratt K, Custard K, Peterson P, Walsh S, Gleason E, Saiet E, Webster M, Lieb-Lappen R, Linder C, Neumann G, Arctic sea ice reduction and tropospheric chemical processes. The Fourth International Conference on Bioenvironment, Biodiversity and Renewable Energies, BIONATURE, March 2013, Lisbon, Portugal.
- 111. Helmig D, Fain X, Obrist D, Barbero A, Barret M, van Dam B, Dommergue A, Hueber J, Magand O, Mass A, Pirrone N, Savarino J, Seok B, Sprovieri F, Stephens C, Williams M. Vertical gaseous elemental mercury concentration gradients, mercury redox processes, and surface exchanges in alpine and polar snowpacks. International Conference on Mercury as a Global Pollutant, Edinburgh, Scotland, July 2013.
- 110. **Obrist D**, Pokharel AK, Moore CW. Elemental Mercury Depletion in Soils: An Unaccounted Mercury Sink? International Conference on Mercury as a Global Pollutant, Edinburgh, Scotland, July 2013.

- 109. Moore CW, Steffen A, **Obrist D**, Staebler R, Douglas TA, Nghiem SV. Effects of Sea Ice Dynamics on Arctic Atmospheric Mercury Cycling. International Conference on Mercury as a Global Pollutant, Edinburgh, Scotland, July 2013.
- 108. Pierce A, **Obrist D**, Moore C, Moosmüller M. Atmospheric mercury concentration measurements and eddy covariance flux measurements using cavity ring-down spectroscopy. International Conference on Mercury as a Global Pollutant, Edinburgh, Scotland, July 2013.
- 107. Venables DS, Darby SB, Pierce A, Moore CW, Moosmüller H, **Obrist D**. The role of BrO in the oxidation of GEM: A chamber investigation at close-to-representative concentrations. International Conference on Mercury as a Global Pollutant, Edinburgh, Scotland, July 2013. Accepted.
- 106. Darby SB, Pierce A, Moore CW, Moosmüller H, Venables DS, **Obrist D**. An atmospheric simulation chamber study of the bromine-initiated oxidation of mercury at a range of temperatures. International Conference on Mercury as a Global Pollutant, Edinburgh, Scotland, July 2013.
- 105. Corbitt ES, Jacob DJ, Horowitz HM, **Obrist D**, Sunderland EM. Coupled Atmosphere-Terrestrial Modeling of Global Mercury Cycling. International Conference on Mercury as a Global Pollutant, Edinburgh, Scotland, July 2013.
- 104. Luria M, **Obrist D**, Moore CW, Peleg M, Matveev V. Is Nitrate radical a major oxidant of elemental mercury in the atmosphere? International Conference on Mercury as a Global Pollutant, Edinburgh, Scotland, July 2013.
- 103. Pearson C, **Obrist D**, Schumer R. Nitrogen and Phosphorus Concentrations and Loads within Lake Tahoe Snowpack. University Council on Water Resources 2013 Annual Conference, Lake Tahoe, June 2013.
- 102. **Obrist D**, Moore CW, Douglas TA, Steffen A; Staebler RM; Pearson C. Concentrations of total and dissolved Hg in snow and vapor deposition collected during atmospheric mercury depletion events (AMDEs) in Barrow, Alaska during the BROMEX campaign. Fall Meeting, AGU, Abstract A31D-0059, San Francisco, December 2012.
- 101. Moore CW, Steffen A, **Obrist D**, Staebler RM. Influence of Sea Ice Dynamics on Atmospheric Mercury and Ozone Concentrations and Fluxes during the BROMEX Campaign. Fall Meeting, AGU, Abstract A31D-0065, San Francisco, December 2012.
- 100. Pearson C, **Obrist D**, Schumer R. Quantifying Nutrient and Mercury Concentrations and Loads in Lake Tahoe Snowpack. Fall Meeting, AGU, Abstract B23H-0540, San Francisco, December 2012.
- 99. Luria M. **Obrist D**, Peleg M, Matveev V, Moore C, Tas E. Is nitrate radical a major oxidant of elemental mercury in the atmosphere? Fall Meeting, AGU, Abstract A13D-0253, San Francisco, December 2012.
- 98. Pearson C, **Obrist D**, Schumer R. Quantifying Nutrient and Mercury Concentrations and Loads in Tahoe Snowpack. Water Summit 2012, Milwaukee, September 2012.
- 97. Zhang Y, **Obrist D**, Zielinska B, Gertler AW. Emissions of Carbon Species, Organic Polar Compounds, Potassium, and Mercury from Controlled Biomass Burning. Air Quality Management at Urban, Regional, and Global Scales; 4th International Symposium and IUAPPA Regional Conference, Istanbul, Turkey, September 2012.
- 96. Hararuk O, **Obrist D**, Luo Y. Modeling the sensitivity of soil mercury storage to climate-induced changes in soil carbon pools. 97th Annual Ecological Society of America Meeting, Portland, Oregon, USA, August, 2012.
- 95. **Obrist D**, Terrestrial Mercury Surface Reservoirs: Magnitude, Spatial Patterns, Fate, and Reemission Potential to the Atmosphere. 1<sup>st</sup> conference on Atmospheric Biogeosciences,

- American Meteorological Society, Boston, May/June 2012.
- 94. Zhang Y, **Obrist D**, Zielinska B, Gertler A. Smoke emissions from prescribed burning in the Lake Tahoe Basin (Nevada/California). Tahoe Science Conference, Incline Village, CA, May 2012.
- 93. VanDam B, Helmig D, Burkhart J, Oltmans S, Fain X, **Obrist D**. Observations of springtime surface O<sub>3</sub> and GEM depletion at Toolik Lake, AK. National Ocean & Atmospheric Administration, Earth System Research Laboratory Global Monitoring Annual Conference, Boulder, CO, May 2012,
- 92. Y. Zhang, **D. Obrist**, B. Zielinksa, A. Gertler. Emissions of carbon species, organic polar compounds, potassium, and mercury from prescribed burning activities. 2012 Tahoe Science Conference, Incline Village, CA, May, 2012.
- 91. A. Pierce, **D. Obrist**, H. Moosmüller, and C. Moore. Cavity ring-down spectroscopy (CRDS) system for measuring atmospheric mercury using differential absorption. European Geophysical Union Annual Meeting, Abstract EGU2012-11454ys, Vienna, Austria. April 2012.
- 90. Y. Zhang, **D. Obrist**, B. Zielinska, and A. Gertler. Emissions of carbon species, organic polar compounds, potassium, and mercury from prescribed burning activities. European Geophysical Union Annual Meeting, Abstract EGU2012-12008ys, Vienna, Austria. April 2012.
- 89. E. Tas, **D. Obrist**, C. Moore, M. Peleg, and M. Luria. Bromine-induced atmospheric mercury depletion events (AMDEs) at the Dead Sea: magnitude, frequency, spatial extent, and modeled reaction pathways. European Geophysical Union Annual Meeting, Abstract EGU2012-12475, Vienna, Austria. April 2012.
- 88. **D. Obrist**, D.W. Johnson, S.E. Lindberg, and Y. Luo. Mercury Accumulation in Terrestrial Carbon Reservoirs: Magnitude, Spatial Patterns, Fate upon C losses, and Implications of Global Change. European Geophysical Union Annual Meeting, Abstract EGU2012-11087, Vienna, Austria. April 2012.
- 87. C. Moore, A. Steffen, **D. Obrist**, R. Staebler, T. Douglas, and S. Nghiem. Mercury Surface-Atmosphere Flux and Speciation Measurements in Barrow, Alaska, USA during the BROMEX campaign. European Geophysical Union Annual Meeting, Abstract EGU2012-12603ys, Vienna, Austria. April 2012.
- 86. Meinert M, **Obrist D**. DRI Mercury Research to Benefit WCSD Students. Washoe County School District Employee Newsletter. February 27, 2012.
- 85. **Obrist D**. Mercury in Sierra Nevada Forests. Blodgett Forest Research Workshop, Georgetown, CA, January 2012.
- 84. Pokharel A, **Obrist D**. Behavior and transport of mercury in soil profiles. Fall Meeting, AGU, Abstract B33H-0578, San Francisco, December 2011.
- 83. Luria M, Tas E., **Obrist D**, Marveev V., Peleg M. Air chemistry over the Dead Sea: Observations and model simulations. Fall Meeting, AGU, Abstract A41A-0048, San Francisco, December, 2011.
- 82. Hararuk O, **Obrist D**, Luo Y. Temperature and precipitation effect on the top soil mercury stocks: a sensitivity analysis. 96th Annual Ecological Society of America Meeting, Austin, Texas, USA, August, 2011.
- 81. **Obrist, D,** Air Above Dead Sea Contains Very High Levels of Oxidized Mercury. EPA Mercury Coordination Group (MCG), July 2011.
- 80. **Obrist D**, Tas E, Peleg M, Matveev V, Faïn X, Asaf D, Luria M. Measurement-based modeling of reactive bromine species over the Dead Sea: Measurements and Modeling of Atmospheric Mercury Depletion Events at the Dead Sea, Israel. International Conference on

- Mercury as a Global Pollutant, Halifax, Nova Scotia, July 2011.
- 79. **Obrist D**, Johnson DW, Lindberg SW, Luo Y, Hararuk O, Bracho R, Battles JJ, Dail DB, Edmonds RL, Monson RK, Ollinger SV, Pallardy SG, Pregitzer KS, Todd DE. (2011) Mercury distribution across 14 U.S. forests: Spatial patterns of total and methyl-mercury concentrations in biomass, litter, and soils. International Conference on Mercury as a Global Pollutant, Halifax, Nova Scotia, July 2011.
- 78. Pierce A, Fain X, **Obrist D**, Hans Moosmüller H. Atmospheric mercury concentration measurements using cavity ring-down spectroscopy. International Conference on Mercury as a Global Pollutant, Halifax, Nova Scotia, July 2011.
- 77. **Obrist D**. (2010) Soil-Plant-Atmosphere Interactions of Mercury. Seminar, Harvard University, Atmospheric Chemistry Seminar Series, December 2010.
- 76. Pierce A, Faïn X, **Obrist D,** Moomüller H. Atmospheric mercury concentration measurements using cavity ring-down spectroscopy. Fall Meeting, AGU, Abstract A41A-0047, San Francisco, December 2010.
- 75. **Obrist D.** Mercury research at DRI: Measurements from –1,400 to +11,000 feet elevation. Invited presentation, Nevada System of Higher Education Board of Regents Meeting, Las Vegas, December 2010.
- 74. **Obrist D,** Faïn X, Hallar GA, McCubbin I. Mercury at Storm Peak Laboratory at 3220 m. Invited presentation, Kick-off Meeting of the Global Mercury Observation System (GMOS), Consiglio Nazionale delle Ricerche, Rome, November 2010.
- 73. **Obrist D,** Gertler A, Zielinska B. Particulate emissions from biomass burning: contributions from residential wood combustion, forest fires, and prescribed fires. Lake Tahoe Environmental Research Center Symposium on Forest Management Decision Support Tools. November, 2010.
- 72. Faïn X, **Obrist D,** Pierce A, Barth C, Gustin MS, Boyle DP. Whole-watershed mercury balance in a Sierra Nevada ecosystem. 2010 Annual Scientific Symposium of the National Atmospheric Deposition Program, October, 2010.
- 71. **Obrist D**. Spatial distribution of mercury across U.S. forests: Spatial relationships to atmospheric pollution and ecological processes. Invited Seminar, Graduate Program of Environmental Sciences, University of Nevada, Reno, October, 2010.
- 70. Obrist D, Johnson D, Lindberg S, Luo Y, Hararuk O, Bracho R, Battles J, Dail B, Edmonds B, Monson R, Ollinger S, Pallardy S, Pregitzer K, Todd D. Total mercury and methyl-mercury concentrations and pools across 14 U.S. forest sites: Factors that determine mercury loads in remote terrestrial ecosystems. 2010 Annual Scientific Symposium of the National Atmospheric Deposition Program, October, 2010.
- 69. **Obrist D,** Luo Y, Johnson D, Lindberg S. Effects of global change on the atmospheric mercury burden and mercury sequestration through changes in ecosystem carbon pools. EPA STAR Program "Consequences of Global Change for Air Quality" Progress and Review Meeting, Research Triangle Park, North Carolina, October, 2010.
- 68. **Obrist D,** Hallar AG, Faïn X, McCubbin. Atmospheric mercury patterns observed at a high elevation (3220 m a.s.l.) research station, Storm Peak Laboratory, in the Rocky Mountains, USA. Symposium on Atmospheric Chemistry and Physics at Mountain Sites, Interlaken, Switzerland, June 2010.
- 67. McCubbin I, Hallar AG., Lowenthal D. Borys R, **Obrist D**. Overview of Storm Peak Laboratory. Symposium on Atmospheric Chemistry and Physics at Mountain Sites, Interlaken, Switzerland, June, 2010.
- 66. **Obrist D,** Peleg M, Fain X, Matveev V, Tas E, Asaf D, Luria M. Efficient Bromine-Induced

- Mercury Oxidation Observed Under Temperate Conditions at the Dead Sea. Goldschmidt 2010: Earth, Energy, and the Environment, Knoxville, Tennessee, June, 2010.
- 65. **Obrist D**. Atmospheric Mercury: from –400 m to +3200 m elevation. Swiss Federal Institute of Technology, Department of Chemistry and Applied Biosciences, Zurich, June, 2010.
- 64. Faïn X, Helmig D, Honrath R, Van Dam B, Hueber J, **Obrist D**. Investigation of air-snow exchanges of mercury: proof of concept for automated gradient sampling of interstitial air at the Summit FLUX facility. State of the Arctic Conference, Miami, Florida, March, 2010.
- 63. Luria M, **Obrist D**. Mercury chemistry in the air over the Dead Sea. Kaplan Memorial Symposium on Biogeochemistry at the Dead Sea, Institute of Earth Sciences, Hebrew University, Jerusalem. January, 2010.
- 62. **Obrist D,** Peleg M, Matveev V, Luria M. Extensive halogen-induced mercury oxidations in the Dead Sea Basin. American Geophysical Union Fall Meeting. Fall Meet Suppl. Abstract A21B-0141, San Francisco, December, 2009.
- 61. Pokharel AK, **Obrist D**. Assessing the fate of litter mercury during decomposition under controlled laboratory conditions. American Geophysical Union Fall Meeting. Fall Meet Suppl. Abstract A51G-0201, San Francisco, December, 2009.
- 60. Fain X, **Obrist D,** Barth C, Pierce A, Gustin M, Boyle D. Do seasonal snowpacks enhance or decrease mercury contamination of high elevation ecosystems? American Geophysical Union Fall Meeting. Fall Meet Suppl. Abstract A51G-0203, San Francisco, December, 2009.
- 59. **Obrist D**. Interactions of atmospheric mercury with terrestrial ecosystems: uptake, storage, and emissions. Invited Seminar, Université de Québéc à Montréal, Canada, October, 2009.
- 58. **Obrist D,** Fain X, Pokharel A, Berger C. The fate of mercury in soils and litter during carbon decomposition: relationships between Hg<sup>0</sup> and CO<sub>2</sub> emissions in the laboratory and field and a litter mass balance study. Poser Presentation, 9th International Conference on Mercury as a Global Pollutant (9th ICMGP), Guiyang city, China, June, 2009.
- 57. **Obrist D,** Johnson DW, Lindberg S, Luo Y. Effects of global change on the terrestrial mercury fluxes and mercury sequestration through changes in ecosystem carbon pools. Oral Presentation, 9th International Conference on Mercury as a Global Pollutant (9th ICMGP), Guiyang city, China, June, 2009.
- 56. Fain X, **Obrist D,** Hallar G, McCubbin I. Speciated mercury measured at a high elevation research station, Colorado: in situ conversion and transport from the upper troposphere. Oral Presentation, 9th International Conference on Mercury as a Global Pollutant (9th ICMGP), Guiyang city, China, June, 2009.
- 55. Moosmüller H, Fain X, **Obrist D**. Cavity Ring-Down Spectroscopy for Measurement of Gaseous Elemental Mercury Concentrations and Fluxes. Oral Presentation, 9th International Conference on Mercury as a Global Pollutant (9th ICMGP), Guiyang city, China, June, 2009.
- 54. **Obrist D,** Johnson DW, Lindberg S, Luo Y. Mercury in terrestrial biomass and soils and factors determining atmospheric mercury sequestration. AGU 89(53), Fall Meet Suppl Abstract B42A-03.
- 53. Moosmüller H, Arnott WP, Chen, L-WA, **Obrist D,** Chakrabarty RK, Wold CE, Hao WM, Kreidenweis SM. Particle emissions from flaming and smoldering laboratory combustion of wildland fuels. NASA Fire Science Workshop, Adelphi, MD, February, 2008.
- 52. Berger C, Faïn X, **Obrist D**. Soil mercury and CO<sub>2</sub> emissions and their relationship under controlled laboratory conditions: Effects of oxygen depletion and soil sterilization. AGU 89(53), Fall Meet Suppl Abstract B43B-0435, December, 2008.
- 51. Faïn X, **Obrist D**, Hallar G, McCubbin I, Rahn T. Speciated mercury measured at a high elevation research station, Colorado: in situ conversion and long range transport. Eos Trans

- AGU 89(53), Fall Meet Suppl Abstract A53D-0323A, December, 2008.
- 50. Hallar AG, **Obrist D,** McCubbin IB, Faïn X, Rahn T (2008). Chemical and Aerosol Signatures of Biomass Burning via Long Range Transport observed at Storm Peak Laboratory. Eos Trans AGU 89(53), Fall Meet Suppl Abstract A21B-0137.
- 49. **Obrist D,** Fritsche J, Fain X, Moosmüller H. Ecosystem-level mercury exchange: Why is it important? Uncertainties? Hg sequestration in plant/soils and impacts on atmosphere, results from year-long MBR measurements/comparisons, and development of a real-time sensor for eddy covariance measurements. Invited presentation, NSF Workshop on reducing the uncertainty in measurements of atmospheric Hg. Seattle, WA, October, 2008.
- 48. **Obrist D,** Alewell C, Mc Cubbin I, Fain X, Gustin M, Fritsche J, Hallar G, Johnson DW, Lindberg S, Luo Y, Luria M, Moosmüller H. Interactions of atmospheric mercury with terrestrial ecosystems: uptake, storage, and emissions, University of New Hampshire, Climate Change Research Center and NOAA AIRMAP Cooperative Institute for the Study of Earth, Oceans, and Space. Invited Seminar, October, 2008.
- 47. Mack L, **Daniel Obrist**, Hans Moosmüller, Kristin Lewis, Patrick Arnott, Gavin McMeeking, Ezra Levin, Sonia Kreidenweis, Cyle Wold, Wei Min Hao, Jeffrey Collett, Jr., and William Malm. Optical closure experiments for biomass smoke aerosols. Submitted Platform presentation, American Association for Aerosol Research, 27th Annual Conference, American Aerosol AAAR, Orlando, FL, October, 2008.
- 46. Moosmüller H., **Obrist D,** Arnott W, Mack L, Kreidenweis S. Cavity ring down and cavity enhanced detection measurements of extinction from smoke generated through laboratory combustion of wildland fires. Abstract presented at the AMWA Moab conference, April/May, 2008.
- 45. **Obrist D**, Luo Y, Johnson D, Lindberg S. Mercury sequestration in vegetation and soils in US forests and consequences for atmospheric mercury levels. Swiss Soil Monitoring Network (NABO), Federal Office for the Environment, Department of the Environment, Transport, Energy, and Communications, Switzerland, June, 2008.
- 44. **Obrist D,** Fain X, Johnson D, Lindberg S, Luo Y. Mercury sequestration in vegetation and soils and consequences for atmospheric mercury levels. USDA Air Pollution Workshop and Symposium, Raleigh, NC, April, 2008.
- 43. **Obrist D,** Jasoni R, Arnone JA. Comparison of nighttime water vapor and CO<sub>2</sub> fluxes measured by eddy covariance and by absolute concentration changes of 222Rn, CO<sub>2</sub>, and water vapor in the nocturnal boundary layer. Seminar "Understanding near-surface environmental processes;" Nevada Water Resources Association, Las Vegas, NV, April, 2008.
- 42. Moosmüller H, Mack L, **Obrist D,** Arnott WP, Kreidenweis SM. Cavity Ring Down and Cavity Enhanced Detection Measurements of Extinction from Smoke Generated through Laboratory Combustion of Wildland Fuels. Conference Aerosol and Atmospheric Optics: Visual Air Quality and Radiation, Moab, Utah, April/May, 2008.
- 41. Hallar AG, **Obrist D,** McCubbin I, Rahn TA. Research in Transport of Asian Pollution at Storm Peak Laboratory, Empa, Swiss Federal Institute for Materials Testing and Research, Lab 134, Dubendorf, Switzerland, August, 2008.
- 40. Hallar AG, **Obrist D,** McCubbin I, Rahn TA. Research in Transport of Asian Pollution at Storm Peak Laboratory, Paul Scherrer Institut (PSI), Labor für Atmosphärenchemie, Switzerland, August, 2008.
- 39. Hallar AG, **Obrist D,** McCubbin I, Rahn TA. Research in Transport of Asian Pollution at Storm Peak Laboratory, Department of Chemistry, University of Copenhagen, Denmark, August, 2008.

- 38. Ian B. McCubbin IB, Hallar AG, **Obrist D,** Lowenthal D, Wiedinmyer C, Rahn TA, Mazzoleni C. Storm Peak Laboratory Investigates Air Quality from Regional and Long Range Sources. Poster Presentation, American Meteorological Society, 13th Conference on Mountain Meteorology, Whistler, BC, Canada, August, 2008.
- 37. Hallar, AG, **Obrist D,** McCubbin IB. Storm Peak Laboratory's Research of Long Range Transport and Outreach Activities, Presented at NASA Goddard Institute of Space Technology, New York, New York, October, 2007.
- 36. Hallar, AG, **Obrist D,** McCubbin IB. Storm Peak Laboratory's Research of Long Range Transport and Outreach Activities, Presented at Department of Energy Headquarters to Program Managers for Atmospheric Science Program and Atmospheric Radiation Measurement Program, October, 2007.
- 35. Hallar GA, **Obrist D,** McCubbin I, Rahn T. Measurements of atmospheric mercury at Storm Peak Laboratory in the central Rocky Mountains: Evidence for local/regional emissions and influence of long-range transport from Asia. Title, Eos Trans. AGU, 88(52), Fall Meet. San Francisco, December, 2007.
- 34. Lindberg SE, **Obrist D**. Mercury deposition almost two decades later does it matter yet? National Atmospheric Deposition Program (NADP) Scientific Symposium in Boulder, CO, September, 2007.
- 33. **Obrist D,** Jasoni R, Arnone JA. Application of a <sup>222</sup>Rn/H<sub>2</sub>O method to measure nighttime evapotranspiration in arid ecosystems to complement and scale-up conventional measurement methods. NSF EPSCoR RING-TRUE III Project meeting: Scaling Environmental Processes in Heterogeneous Arid Soils (SEPHAS), Las Vegas, NV, September, 2007.
- 32. Mack L, **Obrist D,** Moosmüller H, Arnott P, McMeeking G, Kreidenweis S, Wold C, Hao W, Collett Jr. J, and Malm W. Experimental and theoretical closure experiments for biomass smokes using extinction cells, photoacoustics, and nephelometry. American Association for Aerosol Research, 26th Annual Conference, September, 2007, Reno, NV.
- 31. **Obrist D,** Hallar AG, McCubbin I. Mercury monitoring at Storm Peak Laboratory in Colorado to determine regional and Asian long-range transport contributions to atmospheric mercury loads. International Air Quality Conference, September, 2007, Arlington, VA.
- 30. **Obrist D,** Johnson DW, Lindberg SE. Effects of global change on the atmospheric mercury burden and mercury sequestration through changes in ecosystem carbon pools. Consequences of Global Change for Air Quality Progress Review; US EPA National Center for Environmental Research, February, 2007, Raleigh, NC.
- 29. McMeeking, G. R., A. Sullivan, S. M. Kreidenweis, J. L. Collett, Jr., T. W. Kirchstetter, M. Lunden, L.-W. A. Chen, **D. Obrist**, H. Moosmüller, J. C. Chow, C. E. Wold, W. M. Hao, D. E. Day, and W. C. Malm. A Comparison of Thermal-Optical Carbon Measurement Methods for Aerosols Emitted by a Series of Controlled Biomass Burning Experiments. American Association for Aerosol Research, 26th Annual Conference, September, 2007, Reno, NV.
- 28. Li, W., J. F. Collins, T. D. Durbin, T. Huai, A. Ayala, G. Full, C. Mazzoleni, N. J. Nussbaum, **D. Obrist**, D. Zhu, H. D. Kuhns, and H. Moosmüller. Detection of Gasoline Vehicles with Gross PM Emissions. 2007 SAE World Congress, Detroit, MI, April 16-19, 2007.
- 27. Collins, J. F., W. Lei, T. D. Durbin, T. Huai, A. Ayala, G. Full, C. Mazzoleni, N. J. Nussbaum, D. Obrist, D. Zhu, H. D. Kuhns, and H. Moosmüller. Detection of High PM Emitters. Smog Check Technology Forum and Roundtable Discussion of the South Coast Air Quality Management District, Diamond Bar, CA, March 21, 2007.
- 26. Huai, T,Collins JF, Ayala A, Durbin TD, Lei W, Full G, Mazzoleni C, Nussbaum NJ, **Obrist D,** Zhu D, Kuhns HD, Moosmüller H. Comparison of Remote Sensing Devices with Gravimetric Measurements of Light-Duty Gasoline PM Emissions. 17th CRC On-Road

- Vehicle Emissions Workshop, March, 2007, San Diego, CA.
- 25. Moosmüller H, Arnott WP, Chen L-W, Chakrabarty RK, **Obrist D,** Lewis K. Emissions from Laboratory Combustion of Wildland Fuels: Aerosol Optical Properties During Flaming and Smoldering Combustion Phases. Aerosol Workshop on Climate Prediction Uncertainty, July, 2006, Santa Fe, NM, USA.
- 24. **Obrist D,** Moosmüller H, Wold C, Lincoln E.N., Freeborn P, Hao W.-M., Kreidenweis S. Speciated mercury emissions from laboratory combustion of wildland fuel. Tahoe Science Symposium, October, 2006, Incline Village, NV, USA.
- 23. **Obrist D**. Measurement of elemental mercury deposition in terrestrial ecosystems methods, results, and challenges. American Chemical Society, 61st Northwest Regional Meeting, June, 2006, Reno, NV, USA.
- 22. Moosmüller H, **Obrist D**. Development of a real-time cavity ring down laser absorption spectroscopy (CRLAS) sensor to measure atmospheric mercury concentrations and fluxes. American Chemical Society, 61st Northwest Regional Meeting, June, 2006, Reno, NV, USA.
- 21. **Obrist D,** Moosmüller H. Development and application of micrometeorological methods and sensors to measure gaseous Hg exchange. Science Seminar Series, Division of Atmospheric Sciences, Desert Research Institute, Reno, NV, USA.
- 20. **Obrist D,** Fritsche J, Marsik FJ, Alewell C. Direct measurements of elemental mercury deposition in terrestrial ecosystems. 8th International Conference on Mercury as a Global Pollutant. August, 2006, Madison, WI, USA.
- 19. Gustin MS, Marsik FJ, **Obrist D**. Air-surface exchange of mercury in terrestrial ecosystems. 8th International Conference on Mercury as a Global Pollutant. August, 2006, Madison, WI, USA.
- 18. Stamenkovic J, Gustin MS, **Obrist D**. Environmental controls on mercury flux from ecosystem components at different temporal scales. 8th International Conference on Mercury as a Global Pollutant. August, 2006, Madison, WI, USA.
- 17. Fritsche J, **Obrist D**, Alewell C. Effects of microbiological activity on Hg<sup>0</sup> emission in uncontaminated terrestrial soils. 8th International Conference on Mercury as a Global Pollutant. August, 2006, Madison, WI, USA.
- 16. **Obrist D,** Conen F, Vogt R, Siegwoelf R, Alewell C. Quantification of net Hg<sup>0</sup> exchange in a subalpine grassland using micrometeorological methods. 3<sup>rd</sup> Swiss Geoscience Meeting, November, 2005, Zürich, Switzerland.
- 15. Fritsche J, **Obrist D,** Alewell C. Effects of microbiological activity on Hg<sup>0</sup> emission in uncontaminated terrestrial soils. 3<sup>rd</sup> Swiss Geoscience Meeting, November, 2005, Zürich, Switzerland.
- 14. **Obrist D**. Measuring gaseous Hg<sup>0</sup> exchange between soils, plants, and the atmosphere Methods and Challenges. Invited Seminar: Ruprecht-Karls-University, Heidelberg, Institute of Applied Environmental Geochemistry, February, 2005, Heidelberg, Germany.
- 13. **Obrist D,** Conen F., Vogt R. Quantification of gaseous Hg<sup>0</sup> emissions using micrometeorological methods. Symposium: Biosphere-Atmosphere Exchange Research in Switzerland, Swiss Academy of Sciences, August, 2004, Sarnen, Switzerland.
- 12. **Obrist D,** Gustin MS, Arnone JA, Johnson DW, Schorran DE, Verburg PS. Large annual Hg emissions over tallgrass prairie grasslands indicate vegetated terrestrial ecosystems to be sources of Hg to the atmosphere. RMZ Materials and Geoenvironment: Mercury as a Global Pollutant, 51.3, pp. 1688 1690.
- 11. **Obrist D,** Gustin MS, Arnone JA, Schorran DE, Verburg PSJ, Johnson DW. Hg exchange between grassland mesocosms and the atmosphere large net Hg emissions over tallgrass

- prairie. 7th International Conference on Mercury as a Global Pollutant, Ljubljana, Slovenia, June, 2004.
- 10. Gustin MS, Zehner R, Stamenkovic J, **Obrist D**. Experimental examination of the influence of precipitation and moisture content on mercury emissions from soils. 7th International Conference on Mercury as a Global Pollutant, Ljubljana, Slovenia, June, 2004.
- 9. **Obrist D,** Gustin MS, Arnone JA, Schorran DE, Verburg PSJ, Johnson DW. Large annual Hg emissions over Tallgrass Prairie grasslands indicate higher natural loading of Hg to the atmosphere than previously estimated. First Swiss Geosciences Meeting, Basel, Switzerland, November, 2003.
- 8. **Obrist D,** Gustin MS, Arnone JA, Schorran DE, Verburg PSJ, Johnson DW (2003). Vegetated terrestrial ecosystems are large sources of Hg to the atmosphere. American Geophysical Union Fall Meeting, Eos Trans. AGU, 84(46).
- 7. **Obrist D,** Arnone JA. Effects of wildfire-induced changes in plant community composition on ecosystem CO<sub>2</sub> and water vapor fluxes in the Great Basin. The Ecological Society of America, 87th Annual Meeting Tucson, AZ, 2002.
- 6. Verburg PS, Arnone JA, Evans D, LeRoux-Swarthout D, **Obrist D,** Johnson DW, Luo Y, Coleman JS. The potential of short-rotation cropping systems to sequester C. The Ecological Society of America, 87th Annual Meeting, Tucson, AZ, 2002.
- 5. Prater MR, **Obrist D**, Arnone JA, DeLucia EH. Post-fire effects on ecosystem gas exchange patterns in northern Great Basin communities. The Ecological Society of America, 87th Annual Meeting, Tucson, AZ, 2002.
- 4. Su B, Hui P, **Obrist D,** Arnone JA, Johnson D, Evans RD, Luo Y (2002). Canopy radiationand water-use efficiencies of cheatgrass as affected by pulse and gradual N fertilization. The Ecological Society of America, 87th Annual Meeting, Tucson, AZ, 2002.
- 3. **Obrist D,** Arnone JA. A large daylight geodesic dome for quantification of whole-ecosystem carbon dioxide and water vapor fluxes. American Geophysical Union Fall Meeting, Eos. Trans. AGU, 82(47), Abstract B42A-0107, 2001.
- 2. **Obrist D,** Arnone JA. Responses of creosote bush (*Larrea tridentata*) to patches of water and nitrogen under different atmospheric CO<sub>2</sub> concentrations. The Ecological Society of America, 85th Annual Meeting Snowbird, UT, 2000.
- 1. **Obrist D,** Arnone JA. Responses of two dominant Mojave Desert shrubs to patches of water and nitrogen. Great Basin Biological Research Conference Reno, NV, 1999.