Birgit Hagedorn, PhD
2200 Alder Drive Anchorage, Alaska • 99508
Phone: 907-351-5362, email: birgit.hagedorn@gmail.com

Summary

Environmental geochemist, with extensive experience of environmental field research on scientific projects in cold climates. Specific expertise in the fate and transport of metals and organic contaminants at Arctic sites, analytical techniques to analyze and quantify metals and organic contaminant in ice, soil and groundwater, analytical field instruments and permafrost processes. Demonstrable track record in successful proposal writing and research grant awards from federal (NSF, NASA, USGS) and state agencies (ADEC) and publishing. Experienced in project management, leading field investigations to remote areas of Greenland, Siberia, and Antarctica including logistical setup and scientific performance. Extended knowledge in Word Office programs, SigmaPlot and basic knowledge in Matlab and operation of differential GPS (Trimble) units. Providing training for Qualified Environmental Sampler. 40h HAZWOPER certification, marine oil spill training.
US Legal Resident.

Education

Technical University of Braunschweig, Germany	MS Mineralogy	1988
University of Heidelberg, Germany	Ph.D Isotope Geochemistry	1993
University of Heidelberg, Germany	Postdoctoral Scientist	1994

Professional Experience

Sustainable Earth Research LLC:

- Environmental and Analytical Consultant, 2017 – present. Training for DEC certified Environmental Sampler, environmental consultant in water and soil quality and contamination, Analytical Consultant in method development HPLC DAD (MS) and GCMS.

University of Alaska Anchorage

- Term Assistant Professor, fall 2016-2017. Teaching of Chemistry classes and Labs.
- Laboratory Manager, 2006-2017: Management of Interdisciplinary Analytical Chemistry Research Laboratory (ASET lab) at UAA: supervising of technical laboratory personnel, training of faculty, and students in diverse analytical techniques. Developing and overseeing QC/QA performance for analytical equipment (11) and analytical procedures, writing of standard operation procedures, quotes, and reports, data reduction, overseeing budget, invoicing, performing safety training and maintenance of safety performances in the laboratory, waste management, web page development. Developing and performing Workforce Development Workshops: "Environmental Sampling" and "Water Quality", in rural Alaska and Anchorage
- Research Professional, 2006-2016: Proposal writing to federal and state agencies to investigate water quality, toxic metal (e.g. Hg) cycling in glacier, fate and transport of contaminants in permafrost, and lipid compositions in freshwater and marine fish and mussels. The following proposals were awarded from federal and state agencies:
- Lipid composition in mussels tissue from Great Lakes" USGS Colorado 1/7/2016-5/31/2017).
- Meltwater composition of glacial runoff from Wolverine Glacier Alaska" USGS Alaska 9/15/2016 – 6/30/2017.
- "Omega three and six ratios in Alaska fish" ADEC 7/1/2015-6/30/2016)

- "Collaborative Proposal: Greenland Ice Sheet Geo-microbiology" NSF OPP.
- "Enhancing research and education with state-of-the-art Liquid Chromatograph-Triple Mass Spectrometer" at UAA, NSF MRI Chemistry $411,539.00 2008 to 2011
- "Marine Plastic Debris: A Toxin?" NOAA. 2008 – 2011
- "EPA-RARE Project on Fate and Effects of Leachate Contamination on Alaska's Tribal Drinking Water Sources" $150, 00.00 EPA Alaska Office; 2009 to 2012.
- "Dynamics of ground ice on Earth and Mars: An investigation using terrestrial measurements, modeling, and remote sensing". NASA NNH05ZDA001N-IES, $247,776.00; 2006 – 2010,
- "Ground ice dynamics in hyper-arid soils of the McMurdo Dry Valleys, Antarctica." NSF Office of Polar Programs 2007 – 2011
- PI on field expeditions (duration 3-8 weeks): NW and SW Greenland, summer 2011- 2013; Antarctica, summer 2008 – 2010, Alaska, 2012-1016

University of Washington, Seattle, USA, 2002-2005:

- Visiting Scientist, Research in permafrost areas of Antarctica and Greenland. Investigating pattern ground formation and ground ice stability in Antarctica and interaction of snow on permafrost temperature and water and nutrients cycling in the High Arctic of Greenland. Installment of a Geochemical Laboratory
- Proposal Writing "Dynamics of ground ice on Earth and Mars: An investigation using terrestrial measurements, modeling, and remote sensing". NASA, and "Ground ice dynamics in hyper-arid soils of the McMurdo Dry Valleys, Antarctica." NSF Office of Polar Programs.
- Field expeditions: McMurdo Station Antarctica, summer 2002; NW Greenland Thule Airforce Base summer 2003-2005

University of Göttingen, **Institute for Geochemistry, Germany 1999-2001:**

- Assistant Professor, teaching "Introduction to Geochemistry" and "Biogeochemical Cycles". Overseeing analytical laboratory with two technicians. Research on water quality and nutrient transport in High Arctic of NE Greenland (Zackenberg Station).
- Proposal to German Research Foundation for fellowship for three years at University of Washington, Seattle (awarded 155,000 Euros).
- Field expeditions; NE Greenland, Zackenberg Station 1999-2000

Alfred Wegener Institute for Marine and Polar Research, Germany 1995-1999:

- Research Scientist, establishing and overseeing an analytical geochemistry laboratory, supervising 2 laboratory technicians. Supervising graduate students, Proposal and report writing. Logistical preparation for three month expeditions to Siberia with 25 participants, including shipping of equipment, custom declarations, food ordering, and management of participants in the field. Responsible for technical equipment and operation in the field. Research on paleoclimate and anthropogenic metal deposition using lake cores, and on water cycling in permafrost.
- Field expeditions; Siberia, Taymyr Peninsula 1995; 1996; NE Greenland Zackenberg Station 1997, 1998

Professional Memberships and Affiliations:

- Member of the American Geophysical Union Sections Hydrology and Geochemistry
- Member of the American Chemical Society
- Member of the American Geological Society
- Member of the Geochemical Society

- Member of the European Geological Union
- Board Member of the Anchorage Waterways Council (since 2009)