

Glen Snyder

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EDUCATION ♦ Ph.D. in Geological Sciences, **University of Rochester**, August 2001
Thesis: *Volatiles of the Central American Volcanic Arc: Source Determination through Iodine-129, Noble Gas, and Stable Isotope Analyses*
Principal Adviser: Professor Udo Fehn

- ♦ M.S. in Geological Sciences, **University of Rochester**, Rochester, NY, 1998.
- ♦ M.Ed. in Education, **Lesley College**, Cambridge, MA., 1989.
- ♦ A.B. in Geology/Environmental Studies, **Bowdoin College**, Brunswick, ME, 1981.

EMPLOYMENT ♦ **Research Scientist**, Department of Earth Science, Rice University (8/2002 to present).

- HISTORY
- ♦ **Research Associate**, Cosmogenic Isotope Laboratory, Department of Earth and Environmental Sciences, University of Rochester (9/2001—8/2002).
 - ♦ **Graduate Research Assistant and Teaching Assistant** Department of Earth and Environmental Sciences, University of Rochester (1996—2001).
 - ♦ **High School Science Instructor and Department Head**, Costa Rica Academy, Heredia, Costa Rica (1984-1996).
 - ♦ **Peace Corps Volunteer**, Limón Province, Costa Rica (1981-1983).

- INTERESTS
- ♦ Chemical and isotopic hydrology, aqueous geochemistry.
 - ♦ Environmental geochemistry, dispersal of anthropogenic isotopes in the environment.
 - ♦ Authigenesis associated with microbially mediated reactions in hydrocarbon systems.
 - ♦ Biogeochemical cycling in polar regions.
 - ♦ Volatiles associated with volcanic and geothermal activity.

- FIELD EXPERIENCE
- ♦ **Guizhou and Hunan Provinces, China:** (June 2007). Widely distributed barite deposits in a Paleozoic basin. Samples collected from mines in the region. Analytical work presently being carried out with Rice post-doc Hua Yu and the research group of Gerald Dickens.
 - ♦ **Dry Valleys, Antarctica:** (Nov.2005-Jan.2006). Water and sediment sampling of Dry valleys Lakes. Inorganic chemistry carried out at McMurdo Station. Subsequent analyses: ^{129}I and ^{36}Cl in water and salt crusts, XRD identification of cryogenic salt deposits. Noble gas, and trace metal work by collaborating researchers. Funding agency: National Science Foundation.
 - ♦ **Sea of Japan:** Massive sea-floor methane seeps at Umitaka Spur and Joetsu Knoll (Jul.–Aug.2004; Aug.2005; Jul.–Aug. 2006). Piston coring on-board research vessels Umitaka Maru III and Kaiyo. Pore fluid and sediment chemistry. Host institutions: University of Tokyo, Tokyo University of Marine Science and Technology, Japan Agency for Marine-Earth Science and Technology.

- ◇ **New Zealand:** Mud volcanoes and cold seeps on the East Coast of the North Island (Jul.2003). Noble gas, stable isotope, and ^{129}I analyses. Volatile sources in the Taupo Volcanic Zone geothermal system (Oct.2000). Noble gas, stable isotope, and ^{129}I analyses. Host Institution: New Zealand Institute of Geological & Nuclear Research.
- ◇ **Central America:** High-temperature gas and fluid chemistry in Costa Rica, Nicaragua, and El Salvador (Jul.1997-Aug.2000). Extensive sampling of Miravalles, Momotombo, Ahuachapán and Berlín Geothermal Fields, hot springs, fumaroles, and hyperacidic crater lakes. Noble gas, stable isotope, major ion, and ^{129}I analyses. Host Institutions: Instituto Costarricense de Electricidad (Costa Rica), Empresa Nicaragüense de Electricidad (Nicaragua), Geotérmica Salvadoreña (El Salvador).
- RESEARCH FUNDING ◇ **Co-PI:** Collaborative Research: Timing of Holocene Climate Change in the McMurdo Dry Valleys, Antarctica. NSF ANT-0440686. Rice PI: Glen Snyder (\$88,334); Lead PI: Carolyn Dowling, Arkansas State Univ. (07/01/05–06/30/08)
- ◇ **Co-PI:** Laboratory Geotechnical and Geochemical Analyses of Sediments. Chevron Texaco Gulf of Mexico Gas Hydrates Joint Industry Project (JIP). Lead PI: Brandon Dugan, Rice Univ. (01/01/05–12/31/05)
- ◇ **Post-Doctoral Researcher:** Marine sediment studies (NSF-OCE), Peru Margin I-129 studies (JOI-USSP), New Zealand gas seep studies (NSF-EAR). Grants obtained in separate grants by PIs Fehn & Dickens.
- ◇ **Student Researcher:** Iodine-129 and volatile studies in volcanic arcs (NSF-EAR, ACS-PRF). Grants obtained by PIs Fehn & Poreda. Student grants for two years from *Sigma-Xi* and G.S.A for initial investigation in Central America. Coal bed methane research funded by Vastar Resources (BP America Production).
- SYNERGISTIC ACTIVITIES ◇ **Session co-convener:** *Isotopic tracers in deep groundwater basins*, GSA Annual Meeting, Houston, Texas, 2008.
- ◇ **Session co-convener:** *The halogens and their isotopes in marine and terrestrial aqueous environments*, Goldschmidt Conference, Moscow, Idaho, 2005.
- ◇ **Session co-chair:** *Cold seeps and gas hydrates*, International Sedimentological Congress, Fukuoka, 2006; *Radionuclides in the Environment*, Goldschmidt Conference, Copenhagen, 2004.
- ◇ **Co-editor:** Applied Geochemistry special volume: *The halogens and their isotopes in marine and terrestrial aqueous environments* (*Appl. Geochem.*, 2007, **22**:3).
- ◇ **Affiliations:** American Geophysical Union, Geochemical Society, FROMAGE (Friends of Marine Authigenesis)
- ◇ **Invited Speaker:** Gakushuin University, Tokyo (2007), First Oceanographic Institute, Qindao (2007), Goldschmidt Conference, Copenhagen (2004), Max Planck Institute for Marine Microbiology, Bremen (2004), NIRS (Japanese National Institute for Radiological Sciences), Chiba (2003); MALT AMS Facilities, Tokyo (2003); USGS Hubbert Quorum, Menlo Park (2003), Fall AGU, San Francisco (2003).
- ◇ **Peer Reviewer:** Journal manuscripts: *Appl. Geochem.*, *Geochem. Geophys. Geosys.*, *J. Volcanol. Geotherm. Res.*, *Geophys. Res. Lett.*, *Nucl. Inst. Meth. B*, *Chemosphere*, *J. Terr. Atmos. Ocean. Sci.*, *Water Res.*, *Quat. Geochron.*, *J. Env. Rad.*, *Env. Sci. Technol.*, *Geochem. J.*. Grant proposals: NSF/EAR/ Hydrol. Sci., NSF/EAR/Petrol. Geochem., NSF/OCE/Mar. Geol. Geophys., ACS/PRF, CRDF/BGP.
- RECENT COLLABORATORS G. Dickens (Rice University), U. Fehn (University of Rochester), Y. Muramatsu (Gakushuin University, Japan), R. Matsumoto (Tokyo University), Hailong Lu (Canadian Research Council), S. Hurwitz (USGS, Menlo Park, CA), J.E. Moran (Lawrence Livermore National Laboratory), W.B. Lyons (Byrd Polar Research Center, Ohio State University), C. Dowling (Arkansas State University), J. Fabryka-Martin (Los Alamos National Laboratory).
- LANGUAGES English, Spanish (fluent written and spoken), Japanese (novice).