

# Curriculum Vitae

Jonathan E. Snow  
University of Houston  
S&R 1 Rm. 315, Houston, TX, 77204-5007

Tel : (713) 743-3298  
Email: jesnow@uh.edu  
http://www.geosc.uh.edu/

## Research Interests:

The geology, physics and chemistry of the formation of the Earth's lithosphere. Early evolution of oceanic rift systems. Partial melting in the mantle and the petrogenesis of mid-ocean ridge basaltic magmas. The isotopic evolution of Nd, Sr, Pb and Os in the upper mantle. Mantle noble metal geochemistry, including Re-Os and Pt-Os isotope geochemistry. Low-temperature mantle/seawater chemical exchange at ridges. The tectonics of fracture zones, and the petrology and structure of oceanic lower crust and upper mantle exposure.

## Professional History:

2016	Faculty Senate President, University of Houston.
2014-present	Professor, Earth and Atmospheric Sciences, University of Houston, TX, USA
2008-2014	Associate Professor, Earth and Atmospheric Sciences, University of Houston, TX, USA
2005-2009:	Adjunct Scientist, Woods Hole Oceanographic Institution, Woods Hole, MA, USA
2005-2008:	Assistant Professor of Geosciences, University of Houston, TX, USA
1994-2005:	Research scientist, Max-Planck Institut für Chemie, Mainz, Germany.
1993-1994:	Chercheur Associé, CRPG/CNRS, Nancy, France.
1987-1992:	Graduate Research Assistant, Woods Hole Oceanographic Institution.
1987-1993:	Independent Computer Programming Consultant.
1984-1987:	National Science Foundation Graduate Fellow.
1983-1984:	Graduate Teaching Assistant, University of Rochester, Rochester, NY.
1981-1982:	Exchange student, Universität Hamburg, Germany.

## Academic Degrees:

<b>Habilitation</b>	(2000)	Universität Mainz, Germany. Mineralogy (Geochemistry)
<b>Ph.D.</b>	(1993)	WHOI/MIT Joint Program. Oceanography (Marine Geology and Geophysics)
<b>M. Sc.</b>	(1986)	University of Rochester, Rochester, NY. Geology
<b>B. A.</b>	(Aug. 1983)	Indiana University, Bloomington, IN. Geology,
<b>B. A.</b>	(June 1983)	Indiana University, Bloomington, IN. Economics and German,

## Awards:

2015	Elected to Phi Kappa Phi national honor society.
2003	Japan Society for the Promotion of Science Visiting Fellowship
2000	Heisenberg Fellowship, Deutsche Forschungsgemeinschaft, Germany
2000	Liste des professeurs des universités, French Ministry of Education
1996	Alexander von Humboldt Fellowship, Germany
1994	Max-Planck Society Postdoctoral Fellowship, Germany
1993	Poste Rouge Fellowship, Centre National de la Recherche Scientifique, France
1991	WHOI Ocean Ventures Fund Grant "Osmium Isotopes in Abyssal Peridotites."
1984	US National Science Foundation Graduate Fellowship.
1983	Indiana University Field Camp Merit Scholarship; 1 <sup>st</sup> prize, Grace Martin German Essay Contest.

## Cruise and Field Experience (Leadership roles in bold):

2012: December	<b>Co-chief Scientist</b>	<b>IODP Leg 345: Hess Deep Plutonic Foundation:</b> Deep drilling ocean crust.
2011: October	<b>Vice-Chief Scientist</b>	<b>R/V Yokosuka/Shinkai 6500-YK1108:</b> Sub dives, Godzilla Mullion rift
2009: May	<b>Vice-Chief Scientist</b>	<b>R/V Yokosuka/Shinkai 6500-YK0905:</b> Godzilla Mullion detachment
2007-Aug-Sept	Petrologist	<b>R/V Hakuho Maru KH07-02:</b> Godzilla Mullion dredging, deep tow
2004: July-Aug.	<b>Chief Petrologist</b>	<b>PFS Polarstern ARK XX/2:</b> Lena Trough, Arctic Ocean
2003: November	Petrologist	<b>R/V Yokosuka:</b> Submersible exploration of backarc peridotite.
2003: January	Petrologist	<b>R/V Kairei KR03-01:</b> Backarc Peridotites, Philippine Sea
2001: July-Oct	<b>Chief Petrologist</b>	<b>PFS Polarstern ARK XVII/2:</b> AMORE 2001, Gakkel Ridge, Arctic Ocean
1997: Oct.-Nov.	Igneous Petrologist	<b>Ocean Drilling Program Leg 176:</b> Return to 735b
1988: Mar.-Apr.	Shipboard Scientist	<b>R/V Acad. Boris Petrov (USSR) Cruise 12 :</b> 1520 Fracture Zone
1987: July-Sept.	Geologist.	Structure of the Vesturhorn Gabbroic Complex, SE Iceland
1986: Sept.-Nov.	Shipboard Scientist.	<b>R/V Conrad 27-09.</b> The Atlantis II Fracture Zone, Indian Ocean

**Languages:** Fluent German and French. Native English.

**Teaching:** Physical Geology (12x), Mineralogy(4x), Petrography(4x), Graduate Igneous Petrology(4x), Field trips.

**Ph.D. Committees:** Dr. Sylvie DeCitre. INPL Lorraine, France (2000); Dr. Ambre Luguët, Mus. Histoire Nat., Univ. de Paris VI et VII, France (2000), Dr. Karah Wertz, Univ Texas Austin (2003), Dr. Michaela Bock Univ. Mainz (2004), Dr. Markus Freise, Univ. Hannover (2004), Dr. Ana Krueger (2012), .

**Ph.D Students:** Dr. Dipl. Min Eric Hellebrand, Univ. Mainz, (2001), Dr. Yongjun Gao Univ. Göttingen (2004); Dr. Mary Sue Bell, UH (2006), Dr. Chuanzhou Liu Chinese Academy of Sciences, 2007;, Dr. Dipl. Min. Anette von der Handt, Univ. Mainz (2008); Dr. Alex Barnard, UH (2014), Mr. Donald Barker (in 2016), Mr. Peter Anderson (in 2018), Ms. Xiang Lin (in 2018), Ms. Tithi Ghosh (in 2018).

**Postdoctoral Mentoring:** Dr. Eric Hellebrand, Max-Planck Institut für Chemie, Mainz (2001-2004). Dr. Francois Nauret, MPI on cruise ARKXX/2 (2004). UH: Dr. Yumiko Harigane (2011); Dr. Wendy Nelson (2011-2012).

**Professional Societies and Panels:** American Geophysical Union (since 1985), InterRidge Ultraslow Ridges Working Group (chair 2003-2008), NSF Ocean Sciences Panel (MGG) 2006, 2015, European Geoscience Union (since 1995), Japan Geoscience Union (since 2012).

### Selected Publications in Scientific Journals:

(79 scientific publications, 20 first-authored since 1993; 200+ conference abstracts, 11 Science/Nature)

**Snow, J. E.** (2016) VOLCANOLOGY Petit spots go big, **Nature Geoscience** 9:12 862-863

Gillis, K., **Snow, J.**, Klaus, A. and Leg 345 Shipboard Scientific Party (2014) Primitive Layered Gabbros from Fast-Spreading Lower Oceanic Crust, **Nature** 505, 200-207

**Snow, JE, E. Hellebrand, A. von der Handt, F. Nauret, Y. Gao, H.-W. Schencke** (2011) " Oblique nonvolcanic seafloor spreading in Lena Trough, Arctic Ocean ", **Geochemistry, Geophysics, Geosystems** doi:10.1029/2011GC003768

\*Liu, C., **J. Snow, E. Hellebrand, G. Bruegmann, A. von der Handt, A. Buechl, A. W. Hofmann** (2008) Ancient, Highly Heterogeneous Mantle beneath Gakkel Ridge, Arctic Ocean. **Nature** 452:311-316. (Article).

**Snow, J.** and petrology group ARK XX-2 (2007) Petrology of Lena Trough and Gakkel Ridge in: G. Budéus and P. Lemke (2007). The Expeditions ARKTIS-XX/1 and XX/2 of the Research Vessel "Polarstern" in 2004. **Reports on Polar and Marine Research** 544:153-208.

\*Hellebrand, E. and **J. Snow** (2003) Deep melting underneath the highly oblique-spreading Lena Trough (Arctic Ocean) **Earth and Planetary Science Letters** 216:283-299.

Michael, P. C. Langmuir, H. Dick, **J. Snow**, S. Goldstein, D. Graham, K. Lehnert, G. Kurras, R. Mühe and H. Edmonds (2003) Magmatic and amagmatic seafloor spreading at the slowest mid-ocean ridge: Gakkel Ridge, Arctic Ocean, **Nature** 423:956-961.

Jokat, W., O. Ritzmann, M. Schmidt-Aursch, S. Drachev, S. Gauger, **J. Snow** (2003) Geophysical evidence for reduced melt production on the super-slow Gakkel Ridge (Arctic Ocean), **Nature** 423:962-965.

Edmonds, H., P.J. Michael, E.T. Baker, J.E. **Snow**, C. Langmuir, H.J.B. Dick, and D. Graham (2003) Abundant hydrothermal venting on the ultra-slow spreading Gakkel Ridge, Arctic Ocean, **Nature** 421:252-256

**Snow, J. E.** and Petrology Group, ARK VXII-2 (2002) ARK XVII/2 Petrology cruise report: Petrogenesis of magmatic and amagmatic crust along the world's slowest spreading mid-ocean ridge. In: Thiede, J. (ed) (2002) Cruise report, ARK XVII/2, **Reports on Polar and Marine Research** 421:118-164.

\*Hellebrand, E. W., J.E. **Snow**, H. J. B. Dick and A. W. Hofmann (2001) Major and trace element coupling in global mid-ocean ridge melting residues, **Nature** 410:677-681.

Brandon, A, **J. Snow**, R. Walker, J. Morgan and T. D. Mock (2000)  $^{190}\text{Pt}$ - $^{186}\text{Os}$  and  $^{187}\text{Re}$ - $^{187}\text{Os}$  Isotope Systematics of Abyssal Peridotites. **Earth and Planetary Science Letters** 177:319-335.

**Snow, J.** and Schmidt, G. (1998) Constraints on Earth accretion from noble metals in abyssal peridotite, **Nature** 391: 166-169.

**Snow, J.** (1996) Recycling Osmium, **Science** 272:825.

**Snow, J.** and L. Reisberg, (1995) Os isotopic systematics of the MORB mantle: Results from altered abyssal peridotites, **Earth and Planetary Science Letters** 136:723-733.

**Snow, J.** and H. Dick (1995) Pervasive Mg loss by marine weathering of peridotite, **Geochimica et Cosmochimica Acta** 59:4219-3235.

**Snow, J.** (1995) Of Hess Crust and Layer Cake, **Nature** 374:413-414.

**Snow, J.**, S. R. Hart and H. Dick (1994) Nd and Sr isotopic evidence for a link between mid-ocean-ridge basalts and abyssal peridotites, **Nature** 371:57-60.

**Snow, J.**, S. Hart and H. J. B. Dick (1993) 'Orphan'  $^{87}\text{Sr}$  in Abyssal Peridotites: Daddy was a Granite, **Science** 262:1861-1863.