

JUSTIN FILIBERTO

Lunar and Planetary Institute
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Houston, TX 77058
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Curriculum Vitæ: July, 2018

SUMMARY:

- Lead editor of a book
- NASA Planetary Science Advisory Committee 2017 – present
- Early Career Award at SIU – 2015
- Excellence in Teaching Award at SIU – 2014
- Visiting Fellow – The Open University, Milton Keynes, UK
- Associate Editor – Journal of Geophysical Research: Planets
- Two current NASA grants with continuous funding since 2009
- 43 peer-reviewed publications and 3 book chapters

EDUCATION:

Ph.D. Geology, 2006, *Stony Brook University*.

Dissertation: Constraints on the Chemistry of Martian Magmas.

B.S. Geological Sciences and Marine Science, 2001, *University of Miami*.

Thesis: Volatiles in basaltic glasses from a subglacial volcano in northern British Columbia (Canada): implications for ice sheet thickness and mantle volatiles.

PROFESSIONAL EXPERIENCE:

Staff Scientist, Lunar and Planetary Institute. 2018 – present

Visiting Fellow, The Open University, United Kingdom. 2015 – present

Associate Professor, Southern Illinois University. 2016 – 2018

Assistant Professor, Southern Illinois University. 2011 – 2016

Visiting Scientist, Lunar and Planetary Institute. 2009 – 2011

Postdoctoral Research Associate, Rice University. 2009 – 2011

Postdoctoral Research Fellow, Lunar and Planetary Institute. 2006 – 2009

Adjunct Professional Assistant, Suffolk Community College. Spring/Summer 2006

Teaching Assistant, Stony Brook University. 2001 – 2003

AWARDS AND HONORS:

Early Career Faculty Excellence Award, Southern Illinois University, 2015

Excellence in Teaching Award, Southern Illinois University chapter of the National Society of Leadership and Success, Sigma Alpha Pi, 2014

Stephen E. Dwornik Planetary Geoscience Student Paper Award (Best Poster presentation), Lunar and Planetary Science Conference, 2006

Student Travel Award, NASA Cosmochemistry Program, Meteoritical Society Meeting, 2005

GAANN Fellowship, Dept. of Geosciences, SUNY Stony Brook, 2005

Student Poster Award Overall, First Place, Undergraduate Research Day, Univ. of Miami, 2001

Student Poster Award in Physical Sciences, First Place, Undergraduate Research Day, University of Miami, 2001

Earth Science Honor Society Award, Sigma Gamma Epsilon, 2001

Departmental Honors, Geological Sciences and Marine Science, University of Miami, 2001

PRESS ABOUT RESEARCH

WSIU/NPR interview about water on Mars

news.wsui.org/post/wsui-infocus-siu-geology-professor-discusses-water-mars#stream/0

Inside Science press release about Filiberto (2014)

insidescience.org/content/thirty-year-old-data-offers-new-view-venus/1536

Nature Geoscience Research Highlights article about Gross, Filiberto, and Bell (2013):

nature.com/ngeo/journal/v6/n6/full/ngeo1846.html

WSIU/NPR interview about Mars in advance of Science Café presentation (April, 2012)

news.wsui.org/post/science-cafe-mars-research

Vidette Online, Illinois State University News Paper (2010):

videtteonline.com/index.php/2010/10/04/researcher-explains-chance-of-life-on-mars/

Nature News and Views article about Filiberto & Treiman (2009); McSween (2009) Volatility in Martian magmas. *Nature* **458**, 45. [doi:10.1038/458045a](https://doi.org/10.1038/458045a)

GRANTS: *Active

* Rock Weathering on Venus; *NASA Solar System Workings Program*; October 2017 – September 2020; CoI – Justin Filiberto; PI – Allan Treiman

*Detectability of Magmatic Intrusions within Sulfur-rich Sediments for Martian Mineralogical and in-situ Operational Analyses; *NASA Planetary Science and Technology through Analog Research*; May 2018 – February 2021; PI – Justin Filiberto

Magmatic Intrusions Into Sulfur-rich Sediments; *National Geographic*; May 2016 – November 2017; PI – Justin Filiberto

Collaborative Research: Identification of magnetic sources in the Upper Mantle; *National Science Foundation Geophysics Program*; January 2014 – December 2017; CoPI – Justin Filiberto; PI – Eric Ferré

Noble Gas Fractionation during Aqueous Alteration of Minerals on Mars; *NASA Mars Fundamental Research Program*; June 2014 – October 2017; CoI – Filiberto; PI – Mark Bullock and Michael Miller, SWRI

Constraints on the Martian volatile budget; *NASA Mars Fundamental Research Program*; June 2013 – June 2015; PI – Justin Filiberto

Spinel-rich lithologies in the lunar highland crust; *NASA Cosmochemistry Program*; February 2013 – February 2014; CoI – Justin Filiberto; PI – Juliane Gross, AMNH

Acid Fog on Mars: Experimental study of Halogens in Martian Basalts and their Fluids; *NASA Mars Fundamental Research Program*; June 2009 – June 2013; Science PI – Justin Filiberto

INVITED TALKS AND COLLOQUIA:

CONFERENCES AND WORKSHOPS: (abstract information below)

Lunar and Planetary Institute's 50th Anniversary Celebration Planetary Science Symposium.
Houston, TX March 2018

[Key note] Crustal Differentiation on Mars: A New View of the Red Planet Forty Years after
Viking, The 5th UK in the Aurora Programme Meeting. London, UK, November 2016

Geological Society of American Annual Meeting, Denver, September 2016

European Geophysical Union Conference, Vienna, April 2016

Goldschmidt Conference, Prague, August 2015

[Key note] The 4th UK in the Aurora Programme Meeting. London, UK, May 2015

46th Lunar and Planetary Science Conference, Houston, TX March 2015

Advances in Mars Research, The 3rd UK in Aurora Meeting. February 2013

COLLOQUIA:

Constraints on the Martian Volatile Budget. Astrobiology Group, The Open University, Milton
Keynes, UK. November 2016

Geochemistry of Martian Basalts with Constraints on Magma Genesis. Lunar and Planetary
Laboratory, University of Arizona, November 2016.

*Comparison of the Conditions of Melting in the Martian Mantle from Surface Basalts and
Meteorites.* University of Central Florida, Florida Space Institute, May 2016.

Comparison of the Mantle Potential Temperature of Ancient Mars and the Earth. Institute of
Geophysics, ETH Zurich, April 2016.

Constraints on the Martian Volatile Budget. Arecibo Observatory, Puerto Rico, November 2015

What Can Experimental Petrology Tell Us About Martian Rocks? University of Nevada, Las
Vegas, April 2015

What Can Experimental Petrology Tell Us About Martian Rocks? South West Research Institute,
Boulder, CO, October, 2014

Constraints on the Martian Volatile Budget. Terra Society, University of Illinois Chicago,
Chicago, IL. October 2014

Constraints on the Depth and Thermal Vigor of Melting in the Martian Mantle University of
Illinois at Chicago, Chicago, IL. October 2014

What Can Experimental Petrology Tell Us About Martian Rocks? Southern Illinois University,
Carbondale, IL. September, 2014

*Conditions of Basalt Genesis in Mars from Surface Basalts, compared with the Martian
Meteorites.* Washington University, St Louis, MO. September 2013

*Conditions of Basalt Genesis in Mars from Basalts in Gusev Crater and Meridiani Planum,
compared with the Martian Meteorites.* Lunar and Planetary Institute, Houston, TX.
September 2013

Updates on collaborative studies with the Open University: Martian meteorites

NWA 6234 and NWA 2737. The Open University, Milton Keynes, UK. February 2013

*Comparing the Effects of Volatile Species (H₂O, F, and Cl) on Near-Liquidus Phase Equilibria of
a Basalt.* American Museum of Natural History. March 2012

Comparing the Effects of H₂O, F, and Cl on Near-Liquidus Phase Equilibria of a Basalt. The
Open University, Milton Keynes, UK. January 2012

A Consortium Study of Olivine-phyric Shergottite NorthWest Africa 6234. The Open University,
Milton Keynes, UK. January 2012

Comparing the Effects of H₂O, F, and Cl on Near-Liquidus Phase Equilibria of a Basalt: Implications for Volatile Induced Mantle Melting. Southern Illinois University at Carbondale. February 2011

Fe-Mg Partitioning between Olivine and Basaltic Melts: Applications to Genesis of Olivine-Phyric Shergottites and Conditions of Melting in the Martian Interior. Rice University. October 2010

What Experimental Petrology Can Tell Us About the Evolution of Mars. Illinois State University, Department of Geography and Geology, GGGeo Seminar. October 2010

Mars Rocks: Experimental High Pressure Investigations of Martian Basalts. University of Houston Clear Lake, Physics Seminar Series. April 2010

Experimental High Pressure Phase Equilibrium Investigations of Martian Basalts. Institute of Meteoritics, University of New Mexico. April 2010

High Pressure, Near-Liquidus Phase Equilibria of the Martian Basalt Fastball and Melting in the Martian Mantle. Rice University. February 2010

Martian Magmas Contained Abundant Chlorine, But Little Water. Mississippi State. May 2009

Martian Magmas were Chlorine-rich and Water-poor. Institute of Meteoritics, University of New Mexico. March 2009

What Can Experimental Petrology Tell Us About Martian Rocks? University of Houston Clear Lake, Physics Seminar Series. February 2008

Ferropicrites: Terrestrial Analogues of the SNC Meteorites? LPI. February 2006

POSTDOC RESEARCH SUPERVISION:

Paul Giesting, Postdoc Jan 2012 – Jan 2014 *Halogens in Martian Meteorites.*

GRADUATE STUDENT RESEARCH SUPERVISION:

Jake Crandall, PhD August 2015 – present *Magmatic Intrusions into Sulfur-rich Sediments*

Lacey Costello, MS 2018 *Oxidation of an Ol- Lamprophyre: Analog for Mars*

Andrea Meado, MS 2017 *Pyroxene Zoning and Crystallization of NWA 6963*

Chris McCoy, MS 2016 *Experimentally melting a Mg# 80 Martian Mantle at 0.5 to 1.5 GPa*

Joseph Knafelc, MS 2016 *Experimental Constraints on Oxidation of Olivine*

Jake Crandall, MS 2015 *The Potential for Economic Mineral Deposits on Mars*

Ben Farcy, MS 2015 *Effect of Chlorine on Crystallization of NWA 6234*

Zachary Chartrand, MS 2014 *Experimentally melting the Martian Mantle at 1.0 GPa*

UNDERGRADUATE STUDENT RESEARCH SUPERVISION:

Joshua Richards, Spring 2016 *Mineralogy of the Martian Mantle*

Joe Krienert, August 2013 – Dec 2014 *Experimental Constraints on Volatile Element Partitioning between Amphibole and Melt*

Chris McCoy, August 2013 – May 2014 *Crystallization of the Lunar Crust*

Kevin Walsh, August 2012 – May 2015 *The Effect of Chlorine on Crystallization of a Martian Basalt; The Effects of Oxidation and Decompression on the Magnetic Properties of Olivine*

Kelsey Manuele, August 2012 – December 2013 *Felsic Volcanics of the St Francis Mountains.*

Justin Wood, summer 2008, LPI Intern, *The Effect of Fluorine on the Liquidus of a Basalt.*

Colin Jackson, summer 2007, LPI Intern, *Ni Partitioning Behavior at Magmatic Conditions.*

PROFESSIONAL ACTIVITIES AND SERVICES

NASA Planetary Science Advisory Committee 2018 – present

FOR MEETINGS:

LPSC Haiku Competition Judge 2018

Co-Convener – session “What lies beneath: Multi-disciplinary approaches to probing the structure and evolution of planetary interiors” at American Geophysical Union, Fall Meeting 2015, San Francisco, Ca (with M. Panning, K.K.M. Lee, and N. Tosi)

Convener – session “Volatiles in the Martian Crust” at American Geophysical Union, Fall Meeting 2014, San Francisco, Ca (with S.P. Schwenzer and P. Conrad)

Organizer and Convener, Workshop on Volatiles in the Martian Interior, Lunar and Planetary Institute, Houston, TX, November 2014

Co-Convener – session “Preparing for the Science of Mars Sample Return” at American Geophysical Union, Fall Meeting 2011, San Francisco, Ca (with M. Schmidt, C. Budney, and J.M.D. Day)

Co-Convener – session “Volatiles in Earth & Planetary Interiors” at Goldschmidt Conference 2010, Knoxville, Tennessee (with E. G. Hauri, A. Shaw, A. Jones, and R. Dasgupta)

Lunar and Planetary Science Conference Program Committee 2009-2011

Chair, Lunar and Planetary Institute 40th Anniversary Seminar Series, Jan 2008-Dec 2008

Co-Chair, Lunar and Planetary Institute Seminar Series, May 2007-Dec 2008

Organizer and Convener, Workshop on Water in Planetary Basalts, Lunar and Planetary Institute, Houston, TX, November 2007

Student Award Judge, Stephen E. Dworkin Student Award Judge, LPSC 2009, 2011, 2017, 2018; Meteoritical Society Annual Meeting – Outstanding Student Paper Award Judge 2013, 2014; 2017; AGU Fall meeting – Outstanding Student Paper Award Judge 2011 – 2013

FOR GRANTING OFFICES:

Review Chair/Co-Chair of Grant Panel, NASA 2017

Group Chief of Grant Sub-Panel, NASA 2015, 2016, 2017 x 4, 2018 x 2

Grant Panelist, EUROPLANET 2016, 2018, NASA 2008, 2011, 2015 x 3, 2016, 2017 x 2, 2018

External Reviewer, Austrian Science Fund, Deutsche Forschungsgemeinschaft German Science Foundation, ETH Zurich Research Commission, National Science Foundation: EAR, NASA Programs: Cosmochemistry, Emerging Worlds, Graduate Student Geology Fellowship, Mars 2020 Rover Science Panel, Mars Fundamental Research, Outer Planets Research, Planetary Geology and Geophysics, Solar System Workings

FOR PUBLICATIONS:

Associate Editor of Journal of Geophysical Research – Planets May 2013 – present

Guest Associate Editor of Meteoritics and Planetary Science for the special issue of Volatiles in the Martian Interior July 2015 – November 2016

Referee for journals, American Mineralogist; Chemical Geology; Contributions to Mineralogy and Petrology; Earth and Planetary Science Letters; Earth, Planets, and Space; G-cubed; Geochimica et Cosmochimica Acta; Geologica Carpathica; Geology; Geophysical Research Letters; Icarus; Journal of Geophysical Research – Planets; Meteoritics and Planetary Science; Nature Communications; Nature Geosciences; Nature Scientific Reports; Ore Geology Reviews; Polar Science; Progress in Earth and Planetary Science

Referee for books, Cambridge University Press; Elsevier publishing; Space Science Reviews; Springer Geochemistry Series

EDUCATIONAL AND PUBLIC OUTREACH

COURSES TAUGHT AT SIU:

History of the Earth (GEOL 121)
Igneous and Metamorphic Petrology (GEOL 315)
Volcanology (GEOL 411)
Planetary Geology (GEOL 430)
Advanced Igneous Petrology (GEOL 520)

EDITOR'S BLOGS AGU:

AGU Vox article about Venus session at LPSC and the need for a new mission
<https://eos.org/editors-vox/why-its-time-for-a-new-mission-to-venus>. April 2017
AGU Vox article about OSIRIS-Rex launch <https://eos.org/editors-vox/to-bennu-and-back>.
October 2016

MENTORING AND TRAINING:

Lunar and Planetary Science Conference *Insights Mentor* 2017
Science Mentor for LPI High School Lunar Research Projects associated with the NASA Lunar Science Institute, Belfrey High School, KY, 2011
Science Mentor for the winning team of the LPI High School Lunar Research Projects associated with the NASA Lunar Science Institute, Chenango Forks High School, NY, Spring 2010
Teacher Training Workshop/Field Course: *The Heat from Within: earthly insights into planetary volcanism*, Eugene Oregon, 2009

PUBLIC OUTREACH TALKS:

Volcanism in the Inner Solar System. Planetary Science Palooza, Houston, TX March 2017
The Student Hub Live, The Open University.
<https://www.youtube.com/watch?v=8zk9eZDeGAc&feature=youtu.be> October 2017
Planetary Exploration: Planetary Research at SIU, Eclipse Crossroads Astronomy, Science, and Technology Expo, Southern Illinois University, Carbondale, IL. August 2017.
"think like a scientist", *Mars Exploration: How to be a Planetary Geologist*. Next Generation Science Standards (NGSS) training, Monroe/Randolph Regional Office of Education, Belleville, IL. July 2017
Live from LPSC Teleconference, NASA Solar System Ambassadors and members of NASA's Museum Alliance. March 2017
Mars Rocks: What We Have Learned about Mars from Meteorites and Robotic Exploration. Rend Lake Environmental Science Series, Benton, IL. June 2016
Mars Exploration: Curiosity Exploration at Gale Crater. Saluki Science Ambassadors, SIU, Carbondale, IL. April 2016
Keynote Speaker, Mars Exploration: From Meteorites to Rovers. Junior Science and Humanities Symposium Award Ceremony, SIU, Carbondale, IL. March 2016
NASA Mission and Future Missions. Total Lunar Eclipse Event at Southern Illinois University, Carbondale, IL September 2015

Mars Rocks: What We Have Learned about Mars from Meteorites and Robotic Exploration.

Science Café, Carbondale IL. April 2013

Rocks from Mars, Falcon Pass Elementary School, Houston, TX, 2009

A Martian Christmas, Mendel Elementary School, Houston, TX, 2008

Rocks from Mars, Pasadena Optimist Club, Pasadena, TX, 2008

Mars Rocks, Seminar Day, Horace Greely High School, Chappaqua, NY, 2006

PUBLICATIONS:

H-Index: 22 (Google Scholar), 20 (Scopus), 19 (Web of Science), i10-index: 35 (Google Scholar)

post-doc, * graduate student, ^ undergrad

- J. Filiberto**, J. Gross, A. Udry, J. Trela, A. Wittmann, K.M. Cannon, S. Penniston-Dorland, V.E. Hamilton, A. Meado*, P. Carpenter, B. Jolliff, and E. C. Ferré (In press; 2018) Shergottite Northwest Africa 6963: A Pyroxene-Cumulate Martian Gabbro. *Journal of Geophysical Research - Planets*. DOI: 10.1029/2018JE005635
- E.C. Ferré, A.L. Meado*, J.W. Geissman, G. Di Toro, E. Spagnuolo, T. Ueda, L.D. Ashwal, N. Deseta, T.B. Andersen, **J. Filiberto**, and J.A. Conder (2017) Earthquakes in the Mantle? Insights from Rock Magnetism of Pseudotachylytes. *Journal of Geophysical Research: Solid Earth* 122, 8769-8785. DOI: 10.1002/2017JB014618
- P.H. Edwards, J.C. Bridges, R. Wiens, R. Anderson, M.D. Dyar, M. Fisk, L. Thompson, P. Gasda, **J. Filiberto**, S.P. Schwenzer, D. Blaney, and I. Hutchinson (2017) Basalt-Trachybasalt Samples from Gale Crater, Mars. *Meteoritics and Planetary Science*, 52, 2391-2410. DOI: 10.1111/maps.12953
- J. Filiberto** (2017) [Invited Research Article] Geochemistry of Martian Basalts with Constraints on Magma Genesis. *Chemical Geology*, 466: 1–14. doi.org/10.1016/j.chemgeo.2017.06.009
- J. Filiberto**, D. Baratoux, D. Beaty, D. Breuer, B.J. Farcy*, M. Grott, J.H. Jones, W.S. Kiefer, P. Mane, F.M. McCubbin, and S.P. Schwenzer (2016) A Review of Volatiles in the Martian Interior. *Meteoritics and Planetary Science*, 51(11): 1935-1958. DOI: 10.1111/maps.12680
- J. Filiberto**, J. Gross, and F. M. McCubbin (2016) Constraints on the Water, Chlorine, and Fluorine Content of the Martian Mantle. *Meteoritics and Planetary Science*, 51(11): 2023-2035. DOI: 10.1111/maps.12624
- B.J. Farcy*, J. Gross, P. Carpenter, J. Hicks*, and **J. Filiberto** (2016) Effect of Cl on Near-Liquidus Crystallization of Olivine-Phyric Shergottite NWA 6234 at 1 GPa: Implication for Volatile-induced Melting of the Martian mantle. *Meteoritics and Planetary Science*, 51(11): 2011-2022. DOI: 10.1111/maps.12662
- P. A. Giesting[#] and **J. Filiberto** (2016) Amphibole Chemistry and the Formation Environment of Potassic-chloro-hastingsite in the Nakhilites MIL 03346 and pairs and NWA 5790. *Meteoritics and Planetary Science*, 51(11): 2127-2153. DOI: 10.1111/maps.12675
- F.M. McCubbin, J.W. Boyce, P. Srinivasan, A.R. Santos, S.M. Elardo, **J. Filiberto**, A. Steele, and C.K. Shearer (2016) Heterogeneous Distribution of H₂O in the Martian Interior: Implications for the Abundance of H₂O in the Depleted and Enriched Mantle Sources. *Meteoritics and Planetary Science*, 51(11): 2036-2060. DOI: 10.1111/maps.12639
- S.M. Presswood*, S.M. Rimmer, K.B. Anderson, and **J. Filiberto** (2016) Geochemical and Petrographic Alteration of Rapidly Heated Coals from the Herrin (No. 6) Coal seam, Illinois Basin. *International Journal of Coal Geology*, 165: 243-256.
- A.H. Treiman, D.L. Bish, D.T. Vaniman, S.J. Chipera, D.F. Blake, D.W. Ming, R.V. Morris, T.F. Bristow, S.M. Morrison, M.B. Baker, E.B. Rampe, R.T. Downs, **J. Filiberto**, A.F. Glazner, R. Gellert, L.M. Thompson, M.E. Schmidt, L. Le Deit, R.C. Wiens, A.C. McAdam, C.N. Achilles, K.S. Edgett, J.D. Farmer, K.V. Fendrich, J.P. Grotzinger, S. Gupta, J.M. Morookian, M.E. Newcombe, M.S. Rice, J.G. Spray, E.M. Stolper, D.Y. Sumner, A.R. Vasavada, and A.S. Yen (2016) Mineralogy, Provenance, and Diagenesis of a Potassic Basaltic Sandstone on Mars: Chem X-ray Diffraction of the Windjana Sample (Kimberley Area, Gale Crater). *Journal of Geophysical Research – Planets*. DOI: 10.1002/2015JE004932

- W.S. Kiefer, **J. Filiberto**, C. Sandu, and Q. Li (2015) The Effects of Mantle Composition on the Peridotite Solidus: Implications for the Magmatic History of Mars. *Geochimica et Cosmochimica Acta*, 162, 247-258.
- J. Filiberto**, D. Beatty, and W. S. Kiefer (2015) Volatiles in Mars: Constraints, questions, and future directions. *Eos, Earth & Space Science News*, 96, doi:10.1029/2015EO027375.
- P.A. Giesting[#], S.P. Schwenzer, **J. Filiberto**, N.A. Starkey, I.A. Franchi, A.G. Tindle, A.H. Treiman, and M.M. Grady (2015) Igneous and Shock Processes Affecting Chassignite Amphibole Evaluated Using Chlorine/Water Partitioning and Hydrogen Isotopes. *Meteoritics & Planetary Science*, 50, 433-460.
- A. H. Treiman and **J. Filiberto** (2015) Geochemical Diversity of Shergottite Basalts: Mixing and Fractionation, and Their Relation to Mars Surface Basalts. *Meteoritics & Planetary Science*, 50, 632-648. DOI:10.1111/maps.12363.
- J. Filiberto** and R. Dasgupta (2015) Constraints on the Depth and Thermal Vigor of Melting in the Martian Mantle. *Journal of Geophysical Research – Planets*, 120, 2014JE004745.
- E. L. Walton, T. G. Sharp, J. Hu, and **J. Filiberto** (2014) Heterogeneous Mineral Assemblages in Martian Meteorite Tissint as a Result of a Recent Small Impact Event on Mars. *Geochimica et Cosmochimica Acta*, 140, 334-348.
- J. Filiberto**, A.H. Treiman, P.A. Giesting[#], C.A. Goodrich, and J. Gross (2014) High-Temperature Chlorine-Rich Fluid in the Martian Crust: A Precursor to Habitability. *Earth and Planetary Science Letters*, 401, 110-115.
- J. Filiberto**, R. Dasgupta, J. Gross, and A.H. Treiman (2014) The Effect of Chlorine on Near-Liquidus Phase Equilibria of Basalts. *Contributions to Mineralogy and Petrology*, 168, 1-13.
- J. Filiberto**, J. Gross, J. Trela*, and E.C. Ferré (2014) Gabbroic Shergottite Northwest Africa 6963: an Intrusive, Crustal Sample of Mars. *American Mineralogist*, 99, 601-606.
- P. A. Giesting[#] and **J. Filiberto** (2014) Quantitative Models Linking Igneous Amphibole Composition with Magma Volatile Chemistry. *American Mineralogist*, 99, 852-865.
- J. Filiberto** (2014) Magmatic Diversity on Venus: Constraints from Terrestrial Analog Crystallization Experiments. *Icarus*, 231, 131-136.
- C.A. Goodrich, A.H., Treiman, J., Filiberto, J., Gross, and M., Jercinovic (2013) K₂O-rich Trapped Melt in Olivine in the Nakhla Meteorite: Implications for Petrogenesis of Nakhrites and Evolution of the Martian Mantle. *Meteoritics & Planetary Science* 48, 2371-2405.
- J. Filiberto** and S.P. Schwenzer (2013) Alteration Mineralogy of Home Plate and Columbia Hills—Formation Conditions in Context to Impact, Volcanism, and Fluvial Activity. *Meteoritics & Planetary Science*, 48, 1937-1957.
- J. Gross, **J. Filiberto**, and A. Bell (2013) Water in the Martian Interior: Evidence for Terrestrial-MORB Mantle like Volatile Contents from Hydroxyl-Rich Apatite in Olivine-Phyric Shergottite NWA 6234. *Earth and Planetary Science Letters*, 369-370, 120-128.
- J. Gross, **J. Filiberto**, C. D. K. Herd, M. Melwani Daswani, S. P. Schwenzer and A. H. Treiman (2013) Petrography, Mineral Chemistry, and Crystallization History of Olivine-Phyric Shergottite NWA6234: a New Intermediate Melt Composition. *Meteoritics and Planetary Science*, 48, 854-871.
- J. Filiberto**, E. Chin, J.M.D. Day, I.A. Franchi, J. Gross, R.C. Greenwood, S. Penniston-Dorland, S.P. Schwenzer, and A.H. Treiman (2012) Geochemistry of Intermediate Olivine-Phyric Shergottite NorthWest Africa 6234 with Similarities to Basaltic Shergottite NorthWest Africa 480 and Olivine-Phyric Shergottite NorthWest Africa 2990. *Meteoritics and Planetary Science*, 47, 1256-1273.

- S.P. Schwenzer, O. Abramov, C.C. Allen, J.C. Bridges, S. Clifford, **J. Filiberto**, D. A. Kring, J. Lasue, P.J. McGovern, H.E. Newsom, A.H. Treiman, D.T. Vaniman, R.C. Wiens, A. Wittmann (2012) Gale Crater: Formation and Post-Impact Hydrous Environments. *Planetary and Space Science*, 70, 84-95.
- S.P. Schwenzer, O. Abramov, C.C. Allen, S.M. Clifford, C.S. Cockell, **J. Filiberto**, D. A. Kring, J. Lasue, P.J. McGovern, H.E. Newsom, A.H. Treiman, D.T. Vaniman, R.C. Wiens (2012) Puncturing Mars: How Impact Craters Interact with the Martian Cryosphere. *Earth and Planetary Science Letters*, 335–336, 9–17.
- J. Filiberto**, J. Wood[^], R. Dasgupta, N. Shimizu, L. Le, and A.H. Treiman (2012) Effect of Fluorine on Near-Liquidus Phase Equilibria of an Fe-Mg Rich Basalt. *Chemical Geology*, 312–313, 118-126.
- J. Filiberto** and R. Dasgupta (2011) Fe²⁺-Mg Partitioning Between Olivine and Martian Magmas: Application to Genesis of Olivine-Phyric Shergottites and Conditions of Melting in the Martian Interior. *Earth and Planetary Science Letters*, 304, 527-537.
- J. Gross, A.H. Treiman, **J. Filiberto**, and C.D.K. Herd (2011) Primitive Olivine-phyric Shergottite NWA 5789: Petrography, Mineral Chemistry and Cooling History Imply a Magma Similar to Yamato-980459. *Meteoritics & Planetary Science*, 46, 116-133.
- J. Filiberto**, D.S. Musselwhite, J. Gross, K. Burgess, L. Le and A.H. Treiman (2010) Experimental Petrology, Crystallization History, and Parental Magma Characteristics of Olivine-phyric Shergottite NWA 1068: Implications for the Petrogenesis of “Enriched” Olivine-phyric Shergottites. *Meteoritics & Planetary Science*, 45, 1258-1270.
- J. Filiberto**, R. Dasgupta, W.S. Kiefer, and A.H. Treiman (2010) High Pressure, Near-liquidus Phase Equilibria of the Home Plate Basalt Fastball and Melting in the Martian Mantle. *Geophysical Research Letters*, 37(L13201), doi:10.1029/2010GL043999.
- J. Filiberto** and A.H. Treiman (2009) Martian Magmas Contained Abundant Chlorine, but Little Water. *Geology*, 37, 1087-1090.
- J. Filiberto** and A.H. Treiman (2009) The Effect of Chlorine on the Liquidus of Basalt: First Results and Implications for Basalt Genesis on Mars and Earth. *Chemical Geology*, 263, 60-68.
- J. Filiberto**, C. Jackson[^], L. Le., and A.H. Treiman (2009) Partitioning of Ni between Olivine and an Iron-Rich Basalt: Experiments, Partition Models, and Planetary Implications. *American Mineralogist*, 94, 256-261.
- J. Filiberto**, A.H. Treiman, L. Le (2008) Crystallization Experiments on a Gusev Basalt Composition. *Meteoritics & Planetary Science*, 43, 1137-1146.
- J. Filiberto** (2008) Similarities between the Shergottites and Terrestrial Ferropicrites. *Icarus*, 197, 52-59.
- J. Filiberto** (2008) Experimental Constraints on the Parental Liquid of the Chassigny Meteorite: A Possible Link between the Chassigny Meteorite and a Gusev Basalt. *Geochimica et Cosmochimica Acta*, 72, 690-701.
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