

Pierre Haenecour

Postdoctoral Research Associate

Earths in Other Solar Systems (EOS) team

Lunar and Planetary Laboratory

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UA SCIENCE

**LUNAR & PLANETARY
LABORATORY**

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RESEARCH & ACADEMIC INTERESTS

Geochemistry and Cosmochemistry - stable isotopes; Ultrahigh-resolution ion- and electron-microscopy techniques; Origin and early history of the Earth and the Solar System; Circumstellar (presolar) grains and interstellar organic matter in primitive extraterrestrial materials; STEM education, scientific policy and public outreach.

EDUCATION

2016 - **PhD Degree**, *Earth and Planetary Sciences*, Washington University in St Louis

Thesis title: Presolar Grains in Primitive Astromaterials: Stellar Nucleosynthesis & Insights into Secondary Processes in the Early Solar System (PhD advisors: B. L. Jolliff and C. Floss)

2012 - **M.A. Degree**, *Earth and Planetary Sciences*, Washington University in St Louis

2010 - **B.A & M.A. Degree**, *Geology & Geochemistry*, Free University of Brussels

Master thesis title: Study of Pb and Zn isotopic fractionation and in situ trace element variations in terrestrial komatiitic lava flows from the Abitibi Greenstone Belt in Ontario, Canada.

EMPLOYMENT AND WORK EXPERIENCE

Fall 2019: **Assistant Professor**, Lunar and Planetary Laboratory, The University of Arizona

Jan 2017 - Present: **Postdoctoral Research Associate**, The University of Arizona

Collaborator on Earths in Other Solar Systems (EOS) team

May - Dec 2016: **Robert M. Walker Postdoctoral Fellow**, Washington University in St. Louis

Jan 2011 - May 2016: **Doctoral Student (PhD)**, Washington University in St. Louis

PROFESSIONAL AFFILIATIONS

Meteoritical Society, Geochemical Society; American Association for the Advancement of Science (AAAS); National Postdoctoral Association.

FELLOWSHIPS AND ACADEMIC AWARDS

2017 - Selected for the AAAS/Science Program for Excellence in Science

2017 - Meteoritical Society Early Career Scientist Award

2016 - The Brian Mason Award

2016 - Dean's Recognition for Student Leadership at Washington University

2015 - Dr. Diane DeMell Jacobsen Scholarship

2012 to 2016 - NASA Earth and Space Science Fellowship (NNX12AN77H)

2012 to 2016 - NASA Cosmochemistry Travel Awards for the Annual MetSoc meetings

2014 - Seventh LPI Career Development Award

2009 - Summer Research Fellowship from the McDonnell Center for the Space Sciences

LABORATORY EXPERIENCE

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| Cameca® NanoSIMS 50 Ion Microprobe | Raster ion imaging of stable isotopes (e.g., C, N, O, Si, S) |
| Nu plasma MC-ICP-MS | Zinc & lead isotopes |
| PHI® Auger Nanoprobe | Elemental compositions of presolar grains (spectra, maps) & submicron chondrite matrix grains |
| FEI Helios NanoLab 660 FIB-SEM | Extraction and preparation of electron-transparent sample cross-sections |
| Hitachi® 30 kV SU9000 SEM/TEM | Characterization of the microstructure, elemental composition and functional chemistry of organic matter in Antarctic micrometeorites and study of presolar graphite grains |
| Hitachi® 60-200 kV HF5000 STEM/TEM | Characterization of the microstructure, elemental composition and functional chemistry of organic matter in carbonaceous chondrite |
| Electron Probe Micro-Analysis (EPMA) | Chemical composition of fine-grained material in carbonaceous chondrites |
| Raman Spectroscopy (inVia® Laser Raman Imaging system) | Structure of meteoritic organic matter and presolar carbonaceous grains |
| Others | Scanning electron microscopy (SEM), ultramicrotomy, optical microscopy, anion-exchange resin separation column chemistry. |

INVITED TALKS, LECTURES AND BROWN BAGS

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| Aug 2018 | Washington University - Brown Bag in the Dept. of Earth & Planet. Sciences <i>Origins of organics and volatiles in meteorites: insights from TEM in-situ heating experiments.</i> |
| Aug 2018 | Microscopy & Microanalysis Conference - Invited Talk <i>Low-Voltage Transmission Electron Microscopy Analysis of ¹⁵N-Rich Organic Matter: Insight into the Origins of Fine-Grained Antarctic Micrometeorites.</i> |
| March 2018 | University of Arizona - Colloquium in the Lunar & Planetary Laboratory <i>Before and After Solar System Formation: Insights from Micrometeorites</i> |
| March 2018 | University of Arizona - Brown Bag in the Lunar & Planetary Laboratory <i>From Stars to the Laboratory: Reconstructing Stellar History via State-of-the-Art Microscopy</i> |
| Feb 2018 | University of Arizona - 2018 UA Core Facilities Fair (on behalf of Hitachi) <i>In-Lens High Resolution Electron Microscopy: Low-Voltage Study of Meteoritic Carbonaceous Materials.</i> |
| Oct 2017 | University of Arizona - Seminar in the Dept. of Materials Science & Engineering. <i>Laboratory Astronomy: Stardust in the Solar System.</i> |
| Oct 2017 | University of Arizona - EOS Origins Seminar in the Dept. of Astronomy <i>Circumstellar and interstellar grains in Antarctic Micrometeorites.</i> |
| Sept 2015 | Harvard University - Cosmochemistry Special Seminar in the Dept. of Earth & Planetary Sciences |

- Sept 2015 *From Stars to the Laboratory: Presolar Silicates in the Solar System*
Washington University - Brown Bag in the Dept. of Earth & Planet. Sciences *Antarctic Micrometeorites: Tiny Meteorites or Cometary Particles?*
- Nov 2012 **University of Hawaii** - HIGP Seminar Series, University of Hawai'i at Manoa
Presolar Grains in Fine-Grained Chondrule Rims: Tracers of Nebular and Parent-body Processing
- Sept 2012 **Washington University** - Brown Bag in the Dept. of Earth & Planet. Sciences *Presolar Grains as Tracers of Nebular and Parent-body Processing in Meteorites*

PROFESSIONAL SERVICE & ADVISING ACTIVITIES

- 2018 - **Completed the Safe Zone Network training at the University of Arizona**
- 2018 - **Special Issue organizer for Meteoritics & Planetary Science**
- 2018 - **Team coordinator for grant/funding applications at the Colby Olsen Foundation**
- 2018 - **Session Convener at the Goldschmidt Conference**
- 2017 - 2018 - **External Reviewer for NASA ROSES Planetary Science Review Panel**
- 2017 - **Panelist on NASA ROSES Planetary Science Review Panel**
- 2015 to 2016 - **Co-President of the Graduate Student Senate**, Washington University
- 2015 to 2016 - **Chair of the Graduate Student Professional Development Committee**, Washington University
- 2014 to 2016 - **Member of the Graduate Student Health & Graduate Student Diversity and Inclusiveness Committees**, Washington University
- 2015 to 2016 - **Member of the Jed and Clinton Foundations Health Matters Campus Program - Mental Health Task Force**, Washington University in St. Louis
- 2015 to 2016 - **Member of the Facilitating Inclusive Classroom Standing Committee**, Washington University in St. Louis
- 2016 - **Reviewer for Geochimica et Cosmochimica Acta**
- 2016 - **Session chair at the Annual Meeting of the Meteoritical Society**
- 2014 to 2015 - **Earth & Planetary Sciences Graduate Student Representative**, Washington University
- 2014 - **Reviewer for Meteoritics & Planetary Science**
- 2008 to 2010 - **Earth and Environmental Sciences Student Representative**, Free University of Brussels

PRESS COVERAGE AND INTERVIEWS

- Press Coverage:** [Science Magazine](#), [The New Yorker](#), [Scientific American](#), [Huffington Post](#), [sciencedaily.com](#), [space.com](#), [universetoday.com](#)
- Interview:** [WUSTL Class Act 2016](#)

CONFERENCES & WORKSHOPS PARTICIPATIONS

- 2018 - *Goldschmidt Conference (Boston)*
- 2018 - *Microscopy and Microanalysis Conference (Baltimore)*
- 2017 - *Habitable Worlds 2017: A System Science Workshop (Laramie)*
- 2017 - *Microscopy and Microanalysis Conference (St. Louis)*
- 2011 to 2018 - *Lunar & Planetary Science Conference (Houston)*

2011 to 2017 – Annual Meeting of the Meteoritical Society

2011, 2012, 2013, 2016 – Presolar Grain Workshop

2016 – The XII Torino Workshop on AGB stars and the IV CSFK Astromineralogy workshop

2014 – 11th International GeoRaman Conference

2013 – WUSTL Graduate Student Symposium

PUBLICATIONS & CONFERENCE ABSTRACTS

Peer-reviewed Publications

8. **Haenecour P.**, Howe J. Y., Zega T. J., Amari S., Lodders K., José J., Kaji K., Sunaoshi T., and Atsushi M. (2019). Laboratory identification of co-condensed O- and C-rich meteoritic stardust grains from nova outbursts. *Nature Astronomy*, <https://doi.org/10.1038/s41550-019-0757-4>.
7. **Haenecour P.**, Floss C., Zega T.J., Croat K. T., Jolliff B.L and Carpenter P. (2018). Presolar Silicates in the Matrix and Fine-grained Rims Around Chondrules in Primitive CO3.0 Chondrites: Evidence for Pre-Accretionary Aqueous Alteration of the Rims in the Solar Nebula. *Geochimica Cosmochimica Acta*, 221, 379-405.
6. **Haenecour P.**, Floss C., José J., Amari S., Lodders K., Wang A., Jadhav M., Gyngard F. (2016). Coordinated Analysis of Two Graphite Grains from the CO3.0 LAP 031117 Meteorite: First Identification of a CO Nova Graphite and a Presolar Iron Sulfide Subgrain. *The Astrophysical Journal* 825, 88.
5. Floss C. & **Haenecour P.** (2016). Presolar Silicate Grains: Abundances, Isotopic and Elemental Compositions, and the Effects of Secondary Processing. *The Geochemical Journal* 50, 3-25.
4. Zega T. J., **Haenecour P.**, Floss C., Stroud R. M. (2015). Circumstellar magnetite from the LAP 031117 CO3.0 chondrite. *The Astrophysical Journal* 808, 55.
3. Siegel C., Arndt N.T., Barnes S.J., Henriot, A-L., **Haenecour P.**, Debaille V., Mattielli N. (2014). Fred's Flow (Canada) and Murphy Well (Australia): thick komatiitic lava flows with contrasting compositions, emplacement mechanisms and water contents. *Contributions to Mineralogy and Petrology* 168, pp. 1084.
2. **Haenecour P.**, Zhao X., Floss C., Lin Y. and Zinner E. (2013). First laboratory observation of silica grains from core-collapse supernovae. *The Astrophysical Journal Letters* 768, L17.
1. Debaille V., O'Neill C., Brandon A. D., **Haenecour P.**, Yin Q-Z., Mattielli N., and Treiman A. H. (2013). Stagnant-lid tectonics in early earth revealed by ¹⁴²Nd variations in late Archean rocks. *Earth and Planetary Science Letters* 373, pp. 83-92.

Manuscripts in preparation and in review

Leitner J., Metzler K., Vollmer C., Floss C., **Haenecour P.**, Kodolanyi J., Harries D., Hoppe P. The Presolar Grain Inventory of the Mighei-type (CM) Chondrites. *Meteoritics & Planetary Sciences* 'Special Issue dedicated to Christine Floss', in revision.

Zega T. J., **Haenecour P.**, Stroud, R. Floss, C. An in-situ investigation of several circumstellar oxide and silicate grains in carbonaceous chondrites. *Meteoritics & Planetary Sciences* 'Special Issue dedicated to Christine Floss', in revision.

Floss, C., **Haenecour P.**, Brearley A. J., Zega T. J. The Effects of Secondary Processing in the Unique Carbonaceous Chondrite Miller Range 07687. *Meteoritics & Planetary Sciences* 'Special Issue dedicated to Christine Floss', submitted.

Haenecour P., Howe J. Y., Zega T. J., Kaji K., Sunaoshi T., Atsushi M., Amari S., and Ramprasad T. *Low-Voltage Scanning Transmission Electron Microscopy Study of Planetary Materials*. Microscopy and Microanalysis, in preparation.

Haenecour P. and Floss C. Auger Electron Spectroscopy: Investigation of the Effects of Alteration on Sub-Micrometer Grains in Chondrite Matrices, in preparation.

Haenecour P., Howe J. Y., Zega T. J., Wallace P., Floss C., K. Kaji K., Sunaoshi T., Atsushi M., Wang A., and Yada T. Coordinated Analyses of Presolar Grains and Organic Matter in Fine-grained Antarctic Micrometeorite: Insight into the Injection of Supernova Dust into the Solar Nebula. *Meteoritics & Planetary Sciences*, in preparation.

Conference Abstracts (oral and poster presentations)

60. **Haenecour P.**, Thompson M. S., Zega T. J., Howe J. Y., Chen W.-Y. (2019). In-situ Ion Irradiation and Heating Experiments in the Transmission Electron Microscope: Simulations of Dust Processing in Circumstellar Environments. *Proc. of Microsc. Microanal.*, Abstract # 0284_0413_000298.
59. Seifert L. B., **Haenecour P.**, Zega T. J. and Ramprasad T. (2019). Coordinated Analyses of a Supernova Polycrystalline Olivine Aggregate in the CO Chondrite Dominion Range 08006 *Proc. of Microsc. Microanal.*, Abstract # 0284_0413_000571.
58. Ramprasad T., **Haenecour P.**, Seifert L. and Zega T. J. (2019). Understanding the Origin and Evolution of Meteoritic Refractory Minerals Through Transmission Electron Microscopy. *Proc. of Microsc. Microanal.*, Abstract #0284_0413_000616.
57. Jadhav M., **Haenecour P.**, Amari S., Davidson J., and Zega T.J. (2019). A Preliminary Search for Presolar Grains in a New Acid Residue of the Tagish Lake Meteorite. *Lunar Planet. Sci. L*, #3121.
56. Zega T.J, Bernal J. J., Howe J.Y., **Haenecour P.**, Amari S., and Ziurys L. M. (2019). In Situ Irradiation and Heating of Synthetic SiC and Implications for the Origins of C-rich Circumstellar Materials. *Lunar Planet. Sci. L*, #2127.
55. McGlaun M. L., Thompson M. S., Vander Kaaden K. E., Loeffler M. J., McCubbin F. M., and **Haenecour P.** (2019). Understanding the Space Weathering of Mercury via Simulation of Micrometeorite Impacts. *Lunar Planet. Sci. L*, #2019.
54. Thompson M. S., **Haenecour P.**, Howe J. Y., Laczniak D. X., Zega T. J., Keller L. P., and Christoffersen R. (2019). Simulating Space Weathering in the Transmission Electron Microscope via Dynamic In Situ Heating and Helium Irradiation of Olivine. *Lunar Planet. Sci. L*, #1425.
53. Ramprasad T., **Haenecour P.**, and Zega T. J. (2019). Microstructural Analysis of a Compact Type-A Calcium-Aluminum-Rich Inclusion in the NWA 5028 CR2 Chondrite. *Lunar Planet. Sci. L*, #2129.
52. Seifert L. B., **Haenecour P.**, and Zega T. J. (2019). Elemental Composition and Microstructure of a Supernova Polycrystalline Olivine Aggregate in the CO Chondrite Dominion 08006. *Lunar Planet. Sci. L*, #2585.
51. **Haenecour P.**, Howe J. Y. Zega T. J., Sunaoshi T., Thompson M. S., Dogel S., and Sagar J. (2019). Thermal Alteration of Organics and Volatiles in Carbonaceous Chondrites: Insights from In-situ TEM Heating Experiments. *Lunar Planet. Sci. L*, #1469.
50. **Haenecour P.**, Floss C., Brearley A. J., Howe J. Y., and Zega T. J. (2019). A Large Donut-Shaped Presolar Silicate from the MIL 07687 Carbonaceous Chondrite. *Lunar Planet. Sci. L*, #1683.
49. **Haenecour P.**, Howe J. Y., Zega T. J., Wallace P., Amari S., Floss C., Lodders K., Kaji K., Sunaoshi T., and Atsushi M. (2018). Presolar Graphite: Insight into Redox Conditions in CO Nova Ejecta. Goldschmidt Conference, abstract #2018001235

48. Seifert L., **Haenecour P.**, Zega T. J., and Floss C. (2018). Multi-keV Analyses of a Presolar Mg-Silicate Grain via SEM/STEM. *Proc. of Microsc. Microanal.* 24, S1, pp 2098-2099.
47. Howe J. Y., **Haenecour P.**, Thompson M. S., Dogel S., Sunaoshi T., Sagar J., Hosseinkhannazer H., and Zega T. J. (2018). Nanoscale Investigation of Thermal Alteration of Chondritic Meteorites via Simultaneous Secondary and Transmitted Electron Imaging during *In Situ* Heating up to 1000°C. *Proc. of Microsc. Microanal.* 24, S1, pp 2102-2103.
46. **Haenecour P.**, Howe J. Y., Zega T. J., Amari S., Floss C., Wallace P., Lodders K., Kaji K., Sunaoshi T., and Atsushi M. (2018). Low-Voltage Energy-Dispersive X-ray Spectroscopy and Electron Energy-Loss Spectroscopy Analysis of Presolar Graphite Spherules. *Proc. of Microsc. Microanal.* 24, S1, pp 2110-2111.
45. **Haenecour P.**, Howe J. Y., Zega T. J., Wallace P., Amari S., Floss C., Lodders K., José J., Kaji K., Sunaoshi T., and Atsushi M. (2018). Microstructure and inclusions of both in-situ and acid-residue presolar graphite grains. *Lunar Planet. Sci. XLIX*, #1330.
44. **Haenecour P.**, Howe J. Y., Zega T. J., Wallace P., Atsushi M., Sunaoshi T., Kaji K., Floss C., and Yada T. (2018). Mineralogy and ¹⁵N-rich organic matter in the fine-grained Antarctic Micrometeorite T98G8: Evidence for a cometary origin? *Lunar Planet. Sci. XLIX*, #1507.
43. **Haenecour P.**, Zega T. J., Howe J. Y., Bose M., and Wallace P. (2017). Origins and Delivery of Volatile Elements in Terrestrial Planets: Insight from the Composition and Functional Chemistry of Organic Matter in Meteorites. *Habitable Worlds 2017 Workshop*, #4037.
42. Bose M., Zega T. J., **Haenecour P.**, and Domanik K. (2017). Correlated isotopic anomalies associated with organic matter in meteorites. *Habitable Worlds 2017 Workshop*, #4033.
41. **Haenecour P.**, Zega T. J., Bose M., and Howe J. Y. (2017). Electron Energy-Loss Spectroscopy of Deuterium-rich organic matter in the CM Chondrite QUE 97990. *80th Annual Meeting of the Meteoritical Society*, #6138.
40. Zega T. J., **Haenecour P.**, Floss C., and Howe J. Y. (2017). Polycrystalline presolar spinel identified in the DOM 08006 CO3.0 chondrite. *80th Annual Meeting of the Meteoritical Society*, #6319.
39. Bose M., Zega T. J., **Haenecour P.**, and Domanik K. (2017). Correlated Deuterium and Nitrogen isotopic enrichments in meteoritic organic matter. *80th Annual Meeting of the Meteoritical Society*, #6033.
38. **Haenecour P.**, Zega T. J., Howe J. Y., and Wallace P. (2017). Investigation of the nature of capping layer materials for FIB-SEM preparation: implications for the study of carbonaceous material in extraterrestrial samples. *Proc. of Microsc. Microanal.* 23, S1, pp. 1820-1821.
37. **Haenecour P.**, Floss C., Ogliore R., Wang A., and Yada T. (2017). Presolar grains in micrometeorites: evidence for the injection of supernova dust into the solar nebula. *Lunar Planet. Sci. XLVIII*, #1080.
36. **Haenecour P.**, Floss C., Zega T.J., Croat T.K., Wang A., Jolliff B.L. and Carpenter P. (2017). Pre-accretionary aqueous alteration of dust in fine-grained chondrule rims: evidence from presolar grains abundances and mineralogy in primitive CO3.0 chondrites. *Lunar Planet. Sci. XLVIII*, #2222.
35. **Haenecour P.** and Floss C. (2016) Stardust in the CO3.0 Chondrite NWA 8631: Low Abundance of Presolar Silicates. *Meteorit. Planet. Sci.* 51, #6209.
34. **Haenecour P.**, Floss C., Zega T. J., and Ogliore R. (2016) Auger spectroscopy analysis of submicron-sized silicate grains in chondrites: insight into their aqueous and thermal alteration history. *Meteorit. Planet. Sci.* 51, #6354.

33. Floss C. and **Haenecour P.** (2016) Presolar Silicate Abundances in the Unequilibrated Ordinary Chondrites Meteorite Hills 00526 and Queen Alexandra Range 97008. *Meteorit. Planet. Sci.* 51, #6015.
32. **Haenecour P.**, Floss C., José J., Amari S., Lodders K., Jadhav M., Wang A., and Gyngard F. (2016) Presolar Graphite from a CO Nova. *Lunar Planet. Sci.* XLVII, #1580.
31. Floss C. and **Haenecour P.** (2016) Meteorite Hills (MET) 00526: An Unequilibrated Ordinary Chondrite with High Presolar Grain Abundances. *Lunar Planet. Sci.* XLVII, #1030.
30. Leitner J., Hoppe P., Metzler K., **Haenecour P.**, Floss C., and Vollmer C. (2015). Investigation of the Presolar Grain Inventory of the CM Chondrites. *The 2015 joint meeting of the Paneth Kolloquium*, submitted.
29. **Haenecour P.**, Floss C., Wang A., Gyngard F., Amari S., and Jadhav M. (2015). A unique presolar graphite in the CO3.0 chondrite LAP 031117. *Meteorit. Planet. Sci.* 50, #5006.
28. Zega T. J., **Haenecour P.**, Floss C., and Stroud R. M. (2015). Circumstellar magnetite identified in the LAP 031117 CO3.0 chondrite. *Meteorit. Planet. Sci.* 50, #5390.
27. Leitner J., Hoppe P., Metzler K., **Haenecour P.**, Floss C., and Vollmer C. (2015). The presolar grain inventory of CM chondrites. *Meteorit. Planet. Sci.* 50, #5178.
26. Floss C., Wiesman H., and **Haenecour P.** (2015). NanoSIMS and Auger analysis of impact craters from the Genesis 'aluminum kidney'. *Meteorit. Planet. Sci.* 50, #5010.
25. Mattielli N., Hublet G., **Haenecour P.**, Duchemin C., and Debaille V. (2015). Correlated Zn-Mg Isotope Fractionation in the Archean Fred's and Theo's Flows. *Goldschmidt Conference*, #5926.
24. Zega T. J., **Haenecour P.**, Floss C., and Stroud R. M. (2015). Identification of Circumstellar Magnetite in the LaPaZ Icefield 031117 CO3.0 Chondrite. *Lunar Planet. Sci.* XLVI, #2828.
23. Croat T. K., **Haenecour P.**, and Floss C. (2015). FIB-TEM Studies of a Presolar SiC and the Surrounding Matrix in a Primitive CO3.0 Chondrite. *Lunar Planet. Sci.* XLVI, #2135.
22. **Haenecour P.**, Zega T. J., Croat T. K., and Jolliff B. L. (2015). Abundance and Elemental Compositions of Presolar Silicates in CO3.0 Chondrites: Possible Indicators of Secondary Processing? *Lunar Planet. Sci.* XLVI, #1160.
21. Mattielli N., **Haenecour P.**, Hublet G., Duchemin C., and Debaille V. (2014). Correlated Mg-Zn Isotope Fractionation in Archean Komatiitic Lava-flows. *Annual Meeting of The Geological Society of America*, #75-7.
20. **Haenecour P.**, Floss C., Wang A., and Yada T. (2014). Raman spectroscopy of organic matter in Antarctic micrometeorites. *Meteorit. Planet. Sci.* 49, A150.
19. **Haenecour P.**, Floss C., and Zega T.J. (2014). Spatial variation of presolar silicate abundances in CO3 chondrites: correlation with aqueous alteration? *Meteorit. Planet. Sci.* 49, #5042.
18. **Haenecour P.**, Floss C., Wang A., and Yada T. (2014). Coordinated Analysis of Isotopic Anomalies in Antarctic Micrometeorites. *11th International GeoRaman Conference*, #5017.
17. **Haenecour P.**, Floss C., Jolliff B. L., Zega T. J., Bose M., and Carpenter P. (2014). Presolar silicates as tracers of the formation of fine-grained chondrule rims in CO3 chondrites. *Lunar Planet. Sci.* XLV, #1316.
16. Wiesman H., Floss C., **Haenecour P.**, and Wang A. (2014). Search for ultra-carbonaceous particles in the interplanetary dust collection. *Lunar Planet. Sci.* XLV, #1509.
15. Zega T. J., **Haenecour P.**, Floss C., and Stroud R. M. (2014). Extraction and analysis of presolar grains from the LAP 031117 CO3.0 chondrite. *Lunar Planet. Sci.* XLV, #2256.

14. **Haenecour P.** (2014). Presolar Grains in CO3.0 Chondrites: Insights into the Formation of Fine-grained Chondrule Rims. *Presolar Grain Workshop* in the Department of Terrestrial Magnetism at the Carnegie Institution of Washington.
13. **Haenecour P.**, Floss C., Wang. A., and Yada T. (2013). Large Nitrogen Anomalies in Antarctic Micrometeorites. *Meteorit. Planet. Sci.* 48, A151.
12. **Haenecour P.** and Floss C. (2013). Presolar Silica Grains in Meteorites: Identifications of a Supernova Silica Grain in the CO3.0 Chondrite LaPaz 031117. *Lunar Planet. Sci.* XLIV, #1024.
11. **Haenecour P.**, Zhao X., Floss C., Lin Y. and Zinner E. (2013). Grains of Sand from an Exploding Star. *Graduate Research Symposium*, Washington University in St. Louis.
10. **Haenecour P.**, Floss C., Jolliff B. J., and Carpenter P. (2013). Presolar Grains in Fine-Grained Chondrule Rims: Re-equilibration of Oxygen Isotopic Compositions in some Presolar Silicates by Heating. *Lunar Planet. Sci.* XLIV, #1150.
9. **Haenecour P.** (2013). First observation of supernova silica grains. *Presolar Grain Workshop* in the Department of the Geophysical Sciences at the University of Chicago.
8. **Haenecour P.**, Floss, C., and Yada, T. (2012). Heterogeneous Distribution of Supernova Silicate and Oxide Grains in the Solar System. *75th Annual Meeting of the Meteoritical Society*, #5220.
7. Debaille V., O'Neill C., Brandon A.D., **Haenecour P.**, Yin Q.-Z., Mattielli N., Treiman A.H. (2012). How to preserve a chemically heterogeneous martian mantle? A plate tectonics point of view. *75th Annual Meeting of the Meteoritical Society*, #5231.
6. Debaille V., O'Neill C., Brandon A.D., **Haenecour P.**, Yin Q.-Z., Mattielli N., Treiman A.H. (2012). Stagnant-lid tectonics in early Earth revealed by ¹⁴²Nd variations in late Archean rocks. *Goldschmidt Conference*, #1636.
5. Mattielli N., **Haenecour P.**, Debaille V. (2012). Zn isotope fractionation in Archean komatiites and associated lava-flows. *Goldschmidt Conference*, #2080.
4. **Haenecour P.** and Floss C. (2012). Stardust in Fine-Grained Chondrule Rims and Matrix in LaPaz 031117: Insights into the Conditions of the Dust Accretion in the Solar Nebula. *Lunar Planet. Sci.* XLIII, #1107.
3. **Haenecour P.** (2012). Presolar Silicates in LAP 031117: Insights into the Formation of Fine-Grained Rims around Chondrules. *Presolar Grain Workshop* in the Physics Department at Washington University in St. Louis.
2. **Haenecour P.** and Floss C. (2011). High Abundance of Stardust in the CO3.0 Chondrite LaPaz 031117. *Meteorit. Planet. Sci.* 46, A85.
1. Mattielli N.D., **Haenecour P.**, Debaille V. (2010). Zn isotope fractionation in the komatiitic and tholeiitic lava flows of Fred's flow and Theo's flow (Ontario, Canada). *AGU Fall Meeting*, #V51B-2196.