**CURRICULUM VITA**

# Juliane Gross

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## EDUCATION:

2006 – 2009: *Ph.D. Geoscience*, with **summa cum laude**, *Ruhr-University Bochum, Germany*. Dissertation: Mineral Solubility Measurements at High Pressures: Redesigning the Hydrothermal Diamond Anvil Cell; Crystal Volume Computations and Birefringence Mapping.

2005: *Diplom* (= *M.S.) Mineralogy*, *Ruhr-University Bochum, Germany*. Thesis: Petrology of the contact zone between eclogite and host rocks at the Stümpelfelsen, Hammerunterwiesenthal, Westerzgebirge.

## PROFESSIONAL EXPERIENCE:

2017 – present: *Associate Professor*, Rutgers University, NJ.

2016 – present: *Adjunct Professor*, The Graduate Center, City University of New York, NY.

2016 – present: *Senator*, Rutgers University, NJ.

2015 – present: *Research Associate*, American Museum of Natural History, NY.

2015 – 2016: *Assistant Professor*, Rutgers University, NJ.

2013 – 2015: *Visiting Scientist,* Columbia University, NY.

2011 – 2015: *Research Scientist,* American Museum of Natural History, NY.

2011 – 2015: *Electron Microprobe Lab-Manager,* American Museum of Natural History, NY.

2011 – present; *Visiting Scientist,* Lunar and Planetary Institute, TX.

2009 – 2011: *Postdoctoral Research Fellow*, Lunar and Planetary Institute/NASA JSC, TX.

2006 – 2009: *Graduate Research Assistant,* Ruhr-University Bochum, Germany.

## GRANTS RECEIVED (active grants indicated by an *)

***2013:** *"Spinel-rich Lithologies in the Lunar Highland Crust: Linking Lunar Samples, Crystallization Experiments and Remote Sensing"* NASA Cosmochemistry Program. **Funded 2013-2017** ($95.000/per year). Gross is Principal Investigator (PI).

**2013:** *"Constraints on the Martian volatile budget: a combined experimental and analytical study of basaltic shergottites"* NASA Mars Fundamental Research Program. **Funded 2013** (1 year; ~$130.000). Gross is Co-Investigator (Co-I).

**2012:** *"Volatiles in the Moon's Highlands Crust: Interpreting its Apatite, Nominally Volatile-Free Minerals, and Cordierite"* NASA Cosmochemistry Program. **Funded 2012-2016** (~$200.000/year). Gross is Co-I.

**2012:** *"Petrology, mineral chemistry and formation history of Apollo granulitic impactites"* NLSI/CLSE Program Subaward. **Funded 2012** (1 year; ~$24.000). Gross is PI.

## GRANTS PENDING

**2017: "***A new Moon: Assessing the petrogenetic relationship and global distribution of Apollo Mg-suite to KREEP-poor troctolites and Mg-Anorthosites"* NASA Solar System Workings program; Gross is Co-I.

**2017: "***Application of Al-in-olivine geothermometry to extraterrestrial igneous system"* NASA Solar System Workings program; Gross is Co-Investigator.

**2017: "***Petrogenesis of enriched lherzolitic shergottites and implications for the martian interior"* NASA Solar System Workings program; Gross is collaborator.

## AWARDS/HONORS:

2017 – present: *Chancellor's Scholar*; Rutgers University, NJ

2016 – present: *Early Career Faculty Excellence Fellow*; Rutgers University, NJ

2015 – 2016: *Preparation for Research Excellent Fellow*; Rutgers University, NJ

2015 – *Early Career Faculty in Geoscience Fellow*: On the cutting edge – strong undergraduate and graduate geoscience teaching managed by NAGT

2013 – *Publication highlighted in Nature Geosciences*: Nature Geosciences, Vol.6, ngeo1846.

2013 – *NASA Early Career Fellow (ECF) in Planetary Sciences*: Fellows are eligible to receive $100.000 upon accepting a tenure track position.

2012 – *MAS travel grant award*: Microanalytical Reference Materials, Golden, Co.

2010 – *Scholarship to NASA's Planetary Geology and Geophysics Program (PG&G)*: Scholarship to participate NASA's Planetary Volcanology Workshop in Hawai'i.

2009 – *Niedermeyer Award*: Award (and 1000 Euro prize money) for an outstanding dissertation in Geosciences of the Ruhr-University of Bochum.

2009 – *Student Travel Award*: Geochemical Society, Goldschmidt Switzerland

2008 – *Marie Curie EURISPET Short term EU Scholarship*: Scholarship for young scientists

2006 – *Paul Ramdohr Award*: of the German Mineralogical Society for outstanding young scientists.

## GRADUATE STUDENT RESEARCH SUPERVISION (* indicates graduated)

2016 (Rutgers University): Michael Klaser*; Analog modeling of ice tectonics on Europa.

2016 (Rutgers University): Shannon Boyle; Understanding planetary body processes through petrology and geochemistry of lunar meteorites.

## UNDERGRADUATE STUDENT RESEARCH SUPERVISION

2017 (Rutgers University, Chemistry): Alissa Madera; independent study: *Calibration of cathodoluminescene spectra on extra-terrestrial materials*

2016 (Rutgers University, EPS): Sean Stevenson; Honor Thesis: *Classifying an unknown iron meteorite, the first iron meteorite found in NJ.*

2015-2016 (Rutgers University, EPS): Shannon Boyle, Liam Hoare, Natalie Fiorino: *working on various planetary science research projects.*

2015 (AMNH REU program): *Classifying the unknown: The lunar edition.* Annette Hilton, The College of Wooster, Ohio.

2014 (AMNH REU program): *Petrology of the Lunar Highlands: Lithic Clasts in Lunar Meteorites.* Sandra Garcia, El Paso Community College.

2013-2014 (AMNH SRMP program – 1 year): Mentoring of three high school students in the *Science Research Mentoring Program.* The SRMP program offers high school students the opportunity to join ongoing research projects lead by an AMNH scientist.

2013 (AMNH REU program): *Apatite in the martian meteorite NWA 6963: the search for water on the martian interior.* Rebecca Selin, Oberlin College.

2012 (AMNH REU program): *Martian Magmas: Calculating their compositions from melt inclusions in martian meteorites*. Michael Powers, Western Kentucky University.

2011 (LPI summer intern program): *Discovery of spinel rich rocks on the Moon, detected by the M*3 *spectrometer on the Chandrayaan-1 Spacecraft: An experimental approach.* Julia Gorman, University of Rochester.

2010 (LPI summer intern program): *Mineral chemistry and origin of Spinel bearing rocks in Lunar Highland Meteorites.* Tiffany Engle, Sam Houston State University.

## TEACHING

- *Planet Mars: The next frontier* (200 level science core class for non-science undergraduates) Fall semesters, Rutgers University
- *Planetary Sciences* (500 level graduate course) Spring semesters, Rutgers University
- Teacher Training Workshop/Field Course: *The Heat from Within: earthly insights into planetary volcanism*, Eugene, OR; 2009, Lunar and Planetary Institute

## PROFESSIONAL ACTIVITES & SERVICES

- *University Senator;* Rutgers University (2016)
- *Committee Member of the "Instruction, Curricula, and Advising Committee";* Rutgers University (2016)
- *Chair and Session Convener*, GSA, Denver (2016)
- *Co-Lead for accepted Session proposal* for GSA (2016) with sponsorship from MGPV (Mineralogy, Geology, Petrology, Volcanology) division and the PG (Planetary Geology) division
- *Chair and Session Convener*, Goldschmidt Conference, Yokohama (2016)
- *Co-Lead for accepted Session proposal* for Goldschmidt 2016
- *CAPTEM (Curation and Analysis Planning Team for Extraterrestrial Materials) member* and lunar subcommittee member (2014-present)
- *Geology consultant* for the Noguchi Museum in New York City (2012 - 2014)
- *Program Committee:* Lunar and Planetary Science Conference (2011 - 2015)
- *NASA proposal review panel* (2012 - 2014)
- *NASA proposal outside reviewer* (2012-2016)
- *Reviewer* for journals: GCA; MaPS; Am.Min.; JGR-planets
- *Dwornik Award committee member* (2015)

- *Judge*, Dwornik Awards (2011, 2012, 2014-2017)
- *Chair*, 41st - 44th , 47th Lunar and Planetary Science Conference (2010 – 2013; 2016)
- *Chair*, 73rd, 74th, 76th Annual Meeting of the Meteoritical Society (2010 - 2013)
- *Seminar Chair,* Lunar and Planetary Institute Seminar Series, (2010 - 2011)
- *Judge and committee member* for the LPI Early Career Development Award (2010)

**INVITED CONFERENCE TALKS:**

- *Jupiter's Moon Europa: New Insights into Global Resurfacing Processes and Planetary Ice Tectonics from Physical Experiments.* Geological Society of America (GSA) annual meeting, Seattle, WA, Oct. 2017.
- *Cathodoluminescence Mapping of Chondrules and Their Constituents: Identification of Zoning Patterns in Olivine and Chondrules and Implications for Their Formation History and Parent Bodies Processes.* Microscopy and Microanalysis Conference (M&M) July 2016, Columbus, OH.
- *The Evolving Lunar Highlands: New Views on Lunar Crust Formation*. Goldschmidt Conference, June 2016, Yokohama, Japan.
- *Spinel-rich lithologies in the lunar highland crust: Linking lunar samples with crystallization experiments and remote sensing.* American Geophysical Union (AGU) Dec. 2012, San Francisco, LA.

**INVITED RESEARCH TALKS:**

- *Water on asteroids? The curious case of R-chondrite MIL 11207*. Colby College, Maine, Feb. 2017
- *Spinel-rich lithologies in the lunar highland crust: Linking samples with crystallization experiments and remote sensing.* Massachusetts Institute of Technology, MA, Nov., 2016
- *Spinel-rich lithologies in the lunar highland crust: Linking samples with crystallization experiments and remote sensing.* Fordam University, Nov. 2016
- *Spinel-rich lithologies in the lunar highland crust: Linking samples with crystallization experiments, and remote sensing*. University of Heidelberg, Germany; Jan. 2016
- *Spinel-rich lithologies in the lunar highland crust: Linking lunar samples with crystallization experiments and remote sensing.* University of Las Vegas, Nevada; Oct. 2015.
- *Water on asteroids? The curious case of R-chondrite MIL 11207.* Rutgers University, NJ; April 2015
- *Spinel-rich lithologies in the lunar highland crust: Linking lunar samples with crystallization experiments and remote sensing.* Rutgers University, NJ; Feb. 2014.
- *Lunar feldspathic meteorites: Constraints on the geology of the lunar farside and the origin of the lunar crust.* Stony Brook University, Long Island, NY; Feb. 2013
- *Formation and evolution of our Moon: From the lunar magma ocean to the giant impact and what we really know.* American Museum of Natural History; Astrophysics, NY; Oct 2012.
- *The complex history of the lunar highlands: New spinel-rich lithology.* Southern Illinois University, Carbondale, Il; Sept. 2012 (lecture for an graduate course: planetary geology)
- *Constraints on the geochemical variations and complex evolution of the lunar highlands.* Brown University, Department of Geological Sciences, Providence, RI 2012; May 2012

- *Constraints on the complex evolution of the lunar highlands: ALHA81005's view from the farside.* The Institute of Meteoritics, Albuquerque, NM; May 2012
- *Constraints on the geochemical variations of the lunar highlands: ALHA81005's view from the farside.* American Museum of Natural History, New York, NYC; July 2011
- *New evidence of the complex history of the lunar highlands determined from lunar meteorite ALHA81005.* Rutgers University, New Jersey; Oct. 2010
- *Lunar meteorites and their secrets about the origin of our Moon.* Houston Astronomical Society, Houston, TX; Oct. 2010
- *What can small scale experiments tell us about large scale subduction zones? New in situ techniques for determining mineral solubility at high pressures.* Rice-University, Houston, TX; Oct. 2009
- *New methods for in-situ determination of mineral solubilities: Mineral geometry and birefringence approaches.* Institut de Minéralogie et de Physique des Milieux Condensés UMR, Jussieu, Paris, France; Feb. 2009
- *Determining mineral solubilities at high pressures: New methods combining weight-loss and in situ approaches* Lunar and Planetary Institute, Houston, TX; Sept. 2008

**EDUCATIONAL OUTREACH AND INVITED PRESENTATIONS**

- *Invited Science speaker* at the yearly Rutgers Day: *"Space rocks: Solar System Evolution and Planetary Formation"*. New Brunswick, NJ, April 2017
- *Invited Science speaker* at the yearly Rutgers Day: *"The Moon rocks"*. New Brunswick, NJ, April 2016
- *Invited Science speaker* at the yearly open house event of the Rutgers Geology museum: *"The Moon rocks: Lunar meteorites and the secrets they contain"*. New Brunswick, NJ, Jan. 2016
- *Invited Science speaker* at the Common Core Literacy & Science Standards workshops: *"Minerals and Gems"*, New York, AMNH; 2013 - present (4-6 presentations per year)
- *Invited Science speaker* at the Earth Science Workshop for teachers: "*Meteorites and their secrets*", New York, AMNH; 2013- present (4-6 presentations per year)
- *Invited Science speaker* at the Earth Science Workshop for teachers: "*What do we know about Earth and its History, or, Why geoscientists are rock-detectives*", New York, AMNH; 2012 – present (4-6 presentations per year)
- *Invited Science speaker* at the Noguchi Museum: *"Nature as an artist"* New York; Sept. 2012
- *Educational Outreach at the AMNH* 2011-present (teaching school groups about geology/planetary sciences, giving lab tours for museum members, teacher and school groups, giving presentations for children of the "Center of Talented Youth")
- *Invited Lecturer* at the Teacher Renewal for Urban Science Teaching (TRUST) Summer Institute: Earth and Space Science. New York, AMNH; Aug. 2012; 2014
- *Invited Science speaker* at the Faculty Institute for NASA Earth and Space Science Education (FINESSE) at ASTE*: "Lunar meteorites and their secrets about the origin of the Moon"* California, Feb. 2011; Florida, Jan. 2012

- *Invited Science speaker* at the Faculty Institute for NASA Earth and Space Science Education (FINESSE): *"Lunar meteorites and their secrets about the origin of our Moon"* Minnesota, Minneapolis; Jan. 2011
- *Volunteer, "Family Space Day"* Lunar and Planetary Institute, Houston, TX; 2009-2011
- *Speaker: "Exploring the Moon"*. Space day at the library in Allen (300 kids age 4-10), TX; Jan. 2011
- *Speaker, "Our Solar System"* Star of Hope Transitional Living Center, Houston, TX; 2010.
- *Organizer of the Teacher Training Workshop/Field Course:* The Heat from Within: earthly insights into planetary volcanism, Eugene, OR ; 2009

## MEDIA/NEWS

- *2016* Rutgers EPS: http://geology.rutgers.edu/news/653-nasa-internship
- *2016* The College of Wooster: https://www.wooster.edu/news/releases/2016/january/research-hilton/
- *2014* The Moon's Pink Mineral: http://www.psrd.hawaii.edu/Dec14/lunar-pink-spinel.html

## INSTRUMENTATION EXPERIENCES

- Electron Microprobe Analysis (Manager at AMNH 2011-2015; Lab-Director at RU 2015-present)
- Scanning Electron Microscopy
- Pulsed Laser Space Weathering Instrument
- Optical Microscopy (transmitted, reflected, spinel stage, U-stage)
- Hydrothermal Diamond Anvil Cell
- 1-bar Deltech gas mixing furnace
- Piston-cylinder apparatus

## PROFESSIONAL MEMBERSHIPS

Deutsche Mineralogische Gesellschaft (German Mineralogical Society)
Meteoritical Society of America
Microscopy Society of America
American Geophysical Union

## LANGUAGES

- Fluent in Germany and English.

## PUBLICATIONS, PEER-REVIEWED

[26] Von Euw S., Zhang Q., Manichev V., Murali N., **Gross J.,** Feldman L.C., Gustafsson T., Flach C., Mendelsohn R., Falkowski P. (2017): Biological control of aragonite formation in stony corals. *Science*, 356, 933-938.

[25] Goodrich C.A., Kita N.T, Sutton S.R., Wirick S., and **Gross J.** (2017): The Miller Range 090340 and 090206 meteorites: New Brachinite-like achondrites with implications for the diversity and petrogenesis of the Brachinite clan. *Meteoritics and Planetary Sciences*, 52, 949-978.

[24] **Gross J.,** Treiman A.H., and Harlow G. (2017): Reported Sulfate Mineral in Lunar Meteorite PCA 02007 is Impact Glass. *Meteoritics & Planetary Sciences;* 52; 191-194.

[23] **Gross J.** and Joy K.H. (2016): The evolving Moon: from magma ocean to crust formation. Springer International Publishing; B. Cudnik (ed.), Book: *Encyclopedia of Lunar Science*, DOI: 10.1007/978-3-319-05546-6_39-1

[22] Dunn T.L., **Gross J.,** Ivanova M.A., Runyon S.E., and Bruck A.M. (2016): Magnetite in the unequilibrated CK chondrites: Implications for metamorphism and new insights into the relationship between the CV and CK chondrites. *Meteoritics & Planetary Sciences, p.1-20,* doi: 10.1111/maps.12691

[21] Treiman A.H., Boyce J., Greenwood, J., Eiler, J, **Gross J.,** Guan Y., Ma C., Stolper E. (2016): D-poor hydrogen in lunar mare basalts assimilated from lunar regolith. *American Mineralogist*, Vol. 101, p. 1596-1603.

[20] Farcy B., **Gross J.,** Carpenter P., Hicks, J., and Filiberto J (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 Sciences, p.1-12*, doi: 10.1111/maps.12662.

[19] Filiberto J., **Goss J.,** and McCubbin F.M. (2016): Constraints on the Water, Chlorine, and Fluorine Content of the Martian Mantle. *Meteoritics & Planetary Sciences, p.1-13,* doi: 10.1111/maps.12624

[18] Boyce J.W., Treiman A.H., Guan Y., Ma C., Eiler J.M., **Gross J.,** Greenwood J.P., Stolper E.M. (2015): The chlorine isotope fingerprint of the lunar magma ocean. *Science Advances,* Vol.1, no.8; DOI: 10.1126/sciadv.1500380

[17] Treiman A.H., and **Gross J.** (2015): A rock fragment related to the magnesian suite in lunar meteorite Allan Hills (ALHA) 81005. *American Mineralogist,* vol. 100, p.414-426. DOI: http://dx.doi.org/10.2138/am-2015-4800.

[16] **Gross J.,** Isaacson P., Treiman A.H., Le L., Gorman J. (2014): Spinel-rich lithologies in the lunar highland crust: Linking lunar samples with crystallization experiments and remote sensing. *American Mineralogist,* vol. 99, p. 1849-1859.

[15] Filiberto J., Treiman A.H., Giesting P.A., Goodrich C.A., **Gross J.** (2014): High-temperature chlorine-rich fluid in the martian crust: a precursor to habitability. *Earth and Planetary Science Letters,* vol. 401, p. 110-115.

[14] Filiberto J., Dasgupta R., **Gross J.,** Treiman A.H. (2014): Effect of chlorine on near-liquidus phase equilibria of an Fe-Mg-rich tholeiitic basalt. *Contributions to Mineralogy and Petrology*, 168:1027, DOI 10.1007/s00410-014-1027-1.

[13] **Gross J.,** Treiman A.H., and Mercer C.N. (2014): Lunar feldspatic meteorites: Constrains on the geology of the lunar highlands, and the origin of the lunar crust. *Earth and Planetary Science Letters,* vol. 388, p. 318-328.

[12] Filiberto F., **Gross J.,** Trela J., and Ferre E. (2014): Gabbroic Shergottite Northwest Africa 6963: An intrusive sample of Mars. *American Mineralogist,* vol. 99, p. 601-606.

[11] Treiman A.H., Boyce J.W., **Gross J.,** Guan Y., Eiler J.M., Stolper E.M. (2014): Halogen-phosphate metasomatism of lunar granulite 79215: Impact-induced elemental mobility and fractionation in the lunar volatile cycle. *American Mineralogist,* vol. 99, p. 1860-1870.

[10] Goodrich C., Treiman A.H., Filiberto J., **Gross J.,** Jercinovic M. (2013): $K_2O$-rich met in olivine in the Nakhla meteorite: Implications for petrogenesis of Nakhlites and the evolution of the martian mantle. *Meteoritics and Planetary Sciences,* vol. 48, p. 2371-2405.

[9] **Gross J.,** Bell A.S., Filiberto J. (2013): Water in the martian interior: Evidence from Hydroxyl-rich Apatite in Olivine-Phyric Shergottite NWA 6234. *Earth and Planetary Science Letters,* vol. 369-370; p. 120-128.

[8] **Gross J.,** Filiberto J., Herd C.D.K., Melwani Daswani M., Schwenzer S.P., and Treiman A.H., (2013): Petrography, mineral chemistry, and crystallization history of olivine-phyric shergottite NWA 6234: A new melt composition. *Meteoritics and Planetary Sciences,* 48, 854-871.

[7] Filiberto J., Chin E., Day J.M.D., Franchi I.A., Greenwood R.C., **Gross J.,** Penniston-Dorland S.C., Schwenzer S. P., Treiman A.H. (2012): Geochemistry of intermediate olivine-phyric shergottite Northwest Africa 6234, with similarities to basaltic shergottite Northwest Africa 480 and olivinephyric shergottite Northwest Africa 2990. *Meteoritics and Planetary Sciences*, vol. 47, 1256-1273.

[6] **Gross J.,** Maresch W.V., Burchard M., and Schilling K. (2012): Development of a new *in situ* mass-loss approach for determining mineral solubility at high pressures and temperatures: Crystal volume computation method. *European Journal of Mineralogy*, vol. 24, 97-106.

[5] **Gross J.,** and Treiman A.H. (2011): Unique spinel-rich lithology in lunar meteorite ALHA 81005: Origin and possible connection to M3 observations of the farside highlands. Journal of Geophysical Research, Vol. 116, 9 PP., doi:10.1029/2011JE003858

[4] **Gross J.,** Treiman A.H., Filiberto J., and Herd C.D.K. (2011): Primitive olivine-phyric shergottite NWA 5789: Petrography, Mineral Chemistry and Cooling history imply a magma similar to Yamato 980459. *Meteoritics and Planetary Sciences,* vol. 46, 116-133.

[3] Filiberto J., Musselwhite D., **Gross J.,** Burgess K., Le L., and Treiman A. H. (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 and Planetary Sciences,* vol. 45, 1258-1270.

[2] Treiman A.H., Maloy A.K., Shearer C.K. Jr., and **Gross J.** (2010), Magnesian anorthositic granulites in lunar meteorites Allan Hills 81005 and Dhofar 309: Geochemistry and global significance. *Meteoritics and Planetary Science*, vol. 45, 163-180.

[1] **Gross J.,** Burchard M., Schertl H.-P., Maresch W.V., (2008): Common high-pressure metamorphic history of eclogite lenses and surrounding metasediments: a case study of calc-silicate reaction zones (Erzgebirge, Germany). *European Journal of Mineralogy,* vol. 20, 757-775.

**PUBLICATIONS, OTHER (WHITE PAPERS):**

Penniston-Dorland S., Bebout G., Hacker B., Marschall H., Feineman M., John T., Agard P., van Keken P., Abers G., Filiberto J., Zack T., **Gross J.,** Ague J., Baxter E. (2011): Metamorphic processes. *White paper to GeoPRISMS SCD Implementation Strategy.*

Penniston-Dorland S., Ague J., Bebout G., Filiberto J., **Gross J.,** Hacker B., Harlow G., Manning C., Ryan J., Simons K., Zack T. (2010): Metamorphic processes in the subducting slab and overlying mantle wedge. *NSF-Margins Planning and Review White Papers.*

**ABSTRACTS (* indicates my students):**

*Klaser M.W., **Gross J**., Tindall S.E. (2017): Subsumption on Europa's icy surface: A physical analogue modeling approach. *48th Lunar and Planetary Science Conference,* Abstr. #2751 (poster)

**Gross J.,** Prissel T.C., Korotev R.L., Parman S. (2017) Unique pink spinel symplectite assemblage in NWA 10401: Breakdown reaction through solid-state diffusion and potential relation to Apollo 17 samples. *48th Lunar and Planetary Science Conference,* Abstr. #2589 (poster)

*Boyle S., Goodrich C.A., Kita N.T., Treiman A.H., **Gross J.** (2017): Unraveling the diversity of early aqueous environments and climate on Mars through the phyllosilicate record. *48th Lunar and Planetary Science Conference,* Abstr. #1804 (oral)

Prissel T.C., **Gross J.,** Draper D.S. (2017): Application of Olivine-Spinel equilibria to extraterrestrial igneous systems. *48th Lunar and Planetary Science Conference,* Abstr. #2436 (poster)

**Gross J.** and Filiberto J. (2016): Granitic compositions in gabbroic martian meteorite NWA 6963: Extrem fractional crystallization of a hydrous magma? *Geological Society of America Annual meeting (GSA),* Abstr.# 284368 (oral)

McCoy C., Chartrand Z., Carpenter P.K., **Gross J.,** Filiberto J. (2016): Experimentally melting a Mg#80 martian mantle at 0.5 to 2 GPA: Implications for basalt genesis. *Geological Society of America Annual meeting (GSA),* Abstr.# 282245 (oral)

Dunn T. and **Gross J.** (2016): Metamorphism of CK carbonaceous chondrites: So, what's your petrologic type? *Geological Society of America Annual meeting (GSA),* Abstr.# 283567 (oral)

**Gross J.** and Dunn T.L. (2016): Cathodoluminescence mapping of chondrules and their constituents: Identification of zoning patterns in olivine and chondrules and implications for their formation history and parent bodies processes. *Microscopy & Microanalysis 2016*. Abstr. # 0741-000923 **(oral, invited)**

**Gross J.,** and Joy, K. (2016): The evolving lunar highlands: New views on lunar crust formation. *Goldschmidt Conference,* Abstr. # 4695 **(oral, invited)**

Dunn T.L., **Gross J.,** Ivanova M. (2016): Homogeneity of Matrix and Chondrule Olivine in the unequilibrated CK chondrites. *79th Meeting of the Meteoritical Society,* Abstr. # 6429 (oral)

*Hilton A., **Gross J.,** Korotev R. Calzada-Diaz A. (2016): Classifying the unknown – the lunar edition: North West Africa 10401 a new type of the Mg-suite rock? *47th Lunar and Planetary Science Conference,* Abstr. #1168 (oral)

Dunn T.L., Ivanova M., **Gross J.** (2016): Magnetite as an indicator of equilibration in the CK chondrites. *47th Lunar and Planetary Science Conference,* Abstr. #2101 (poster)

Zolensky M., Mikouchi T., Hagiya K., Ohsumi K., Komatsu M., Chan Q.H.S., Le L., Kring D., Cato M., Fagan A.L., **Gross J.,** Tanaka A., Takegawa D., Hoshikawa T., Yoshida T., Sawa N. (2016): Unique view of C Asteroid Regolith from the Jbilet Winselwan CM chondrite. *47th Lunar and Planetary Science Conference,* Abstr. #2148 (oral)

Cato M.J., Fagan A.L., **Gross J.** (2016): Crystal Size Distribution of Low-Ti Lunar Basalt Northwest Africa 8632. *47th Lunar and Planetary Science Conference,* Abstr. #2751 (poster)

Boyce J.W., Treiman A., Eiler J., Stolper E., Greenwood J., **Gross J.,** Guan Y., Ma C. (2016): Fractionating Chlorine Isotopes in the Lunar Magma Ocean. *47th Lunar and Planetary Science Conference,* Abstr. #1542 (oral)

**Gross J.,** Gillis-Davis J., Isaacson P.J., and Le L (2015): How rich is rich? Placing constraints on the abundance of spinel in the pink spinel anorthosite lithology on the Moon through space weathering. *46th Lunar and Planetary Science Conference,* Abstr. #2642 (oral)

Treiman A.H., **Gross J.,** and Glasner A.F. (2015): Lunar rocks rich in Mg-Al spinel: Enthalpy constraints suggest origin by impact melting. *46th Lunar and Planetary Science Conference,* Abstr. #2518 (oral)

Goodrich C.A., and **Gross J.** (2015): A new type of ordinary chondrite (?) Clasts in polymict Ureilite DaG 319. *46th Lunar and Planetary Science Conference,* Abstr. #11214 (oral)

Dunn T.L., and **Gross J.** (2015): Magnetite in CK and CV chondrites: Evidence for two parent bodies? *46th Lunar and Planetary Science Conference,* Abstr. #1105 (oral)

*Garcia S., **Gross J,** and Korotev R.L. (2015): Shisr 162: A glimps into lunar lithologies. *46th Lunar and Planetary Science Conference,* Abstr. #2300 (poster)

**Gross J.** and Filiberto J. (2014): Granitic Compositions in Gabbroic Martian Meteorite NWA 6963: Evidence for Extreme Fractional Crystallization of a Hydrous Magma. *Workshop on Volatiles in the Martian Interior* Abstr. #1015 (oral)

Filiberto J. and **Gross J.** (2014): Continued Evidence for Chlorine-rich Martian Magmas: Constraints on the Chlorine Content of the Martian Mantle. *Workshop on Volatiles in the Martian Interior* Abstr. #1009 (oral)

Dunn T. and **Gross J.** (2014): The CV and CK chondrites: a single parent asteroid? *Geological Society of America, Abstracts with Programs*. Vol. 46, No.6, p.338 (poster)

**Gross J.** (2014): Can Chondritic Clasts in Lunar Meteorite ALHA81005 constrain early Solar System Processes? Evidence from Oscillatory Zoning in Olivine. *77th Annual Meeting of the Meteoritical Society.* Abst. #5381 (oral)

Dunn T.L. and **Gross J.** (2014): Geochemical Trends in Magnetite during Metamorphism of type 3 CK chondrites. *77th Annual Meeting of the Meteoritical Society.* Abst. #5387 (oral)

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