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RESEARCH INTERESTS

I am interested in the large-scale magmatic evolution of the terrestrial planets, Moon, & differentiated asteroids. My current research challenges classical interpretations of the martian & lunar interiors, & is redefining petrogenetic models by providing new windows into planetary mantles. I am also developing non-destructive analytical techniques for high-precision analysis of irreplaceable astromaterials via EPMA.

EDUCATION

Brown University, Providence, RI.
Ph.D., Geological Sciences. 2015
M.Sc., Geological Sciences. 2013

Minnesota State University Moorhead, Moorhead, MN.
B.Sc., Summa Cum Laude, Geosciences, minor in Astronomy. 2009

PROFESSIONAL EXPERIENCE

Gordon A. McKay Postdoctoral Fellow: NASA JSC. 2018-present
Visiting Research Professor: Rutgers University. 2017-present
Research Faculty: EPMA Lab Manager, Rutgers University. 2016-2017
NASA SSERVI Grad. Research Assistant: Brown University. 2010-2015
Planetary Geology Research Intern: NASA Ames Research Center. 2010
Research Assistant: NASA Radio JOVE program, MSUM. 2009
Research Assistant: Expt. Petrology & EPMA Labs, MSUM. 2008-2009

GRANTS

Fully Funded

- NASA Solar System Workings: 17-SSW17-0299
PI: Gross, J., (*Rutgers University*).
Co-Is: Prissel, T.C., (*NASA ARES JSC*) + 2 others.
Title: *A New Moon: Assessing the Petrogenetic Relationship and Global Distribution of Apollo Mg-suite to KREEP-poor Troctolites and Mg-Anorthosite*.
Total Award: \$584,924.00

To be Submitted by Jan. 31st, 2019, NASA Solar System Workings.

- **PI: Prissel, T.C.**, (*NASA ARES JSC*).
Co-Is: Gross, J. (*Rutgers University*); Draper, D.S. (*NASA ARES JSC*).
Title: *Experimental Calibration of Olivine-Spinel Astrothermometry & Application to Martian & Lunar Astromaterials*.
Note: This is a re-submission with revisions from SSW 2016.
- **PI: Prissel, T.C.**, (*NASA ARES JSC*).
Co-Is: Gross, J. (*Rutgers University*); Draper, D.S. (*NASA ARES JSC*).
Title: *Redefining Co-Genetic Trends Among the Non-Mare Lunar Highlands*.

PUBLICATIONS —IN REVIEW (AVAILABLE UPON REQUEST)—

Gaffney, A.M., Gross, J., ...**Prissel, T.C.**, et al. *Magmatic Evolution I – Initial Differentiation of the Moon*, in *New Views of the Moon II*, Mineralogical Society of America, Reviews in Mineralogy and Geochemistry.

Shearer, C., Neal, C., ...**Prissel, T.C.**, et al. *Magmatic Evolution II: A New View of Post-Differentiation Magmatism*, in *New Views of the Moon II*, Mineralogical Society of America, Reviews in Mineralogy and Geochemistry.

PUBLICATIONS —TO BE SUBMITTED 2018 (AVAILABLE UPON REQUEST)—
(cont.)

Prissel, T.C., and Gross, J. *Reconciling the Forsterite Content of Lunar Troctolites with the Magma Ocean and Cumulate Mantle Overturn Hypotheses.*

Gross, J., Hilton, A., **Prissel, T.C.**, Korotev, R.L. *Lunar Meteorite North West Africa 10401: A New Type of Mg-suite Rock?*

—PEER REVIEWED ARTICLES—

Prissel, T.C., Parman, S.W., and Head, J.W. (2016). *Formation of the Lunar Highlands Mg-suite as told by Spinel.* *Am. Min.*, 101, p. 1624-1635.

Prissel, T.C., et al., (2016). *On the Potential for Lunar Highlands Mg-suite Extrusive Volcanism and Implications Concerning Crustal Evolution.* *Icarus*, 277, p. 319-329.

Williams, K.B., Jackson, C.R.M., ...**Prissel, T.C.** (2016). *Reflectance Spectroscopy of Chromium-bearing Spinel with Application to Recent Orbital Data from the Moon.* *Am. Min.*, 101, p. 726-734.

Prissel, T.C., et al., (2014). *Pink Moon: The Petrogenesis of Pink Spinel Anorthosites and Implications Concerning Mg-suite Magmatism.* *EPSL*, 403, p. 144-156.

Pieters, C.M., Donaldson-Hanna, K., ...**Prissel, T.C.** et al., (2014). *The Distribution of Mg-Spinel Across the Moon and Constraints on Crustal Origin.* *Am. Min.*, 99, p. 1893-1910.

—IN PREPARATION—

Prissel, T.C., Zhang, N. et al., *Spatial and Temporal Constraints on Early Lunar Mantle Convection and Initial Melting of Primordial Magma Ocean Cumulates.*

—SELECTED CONFERENCE ABSTRACTS (*DENOTES STUDENT ADVISEE)—

Prissel, T.C., and Gross, J. (2018). *Reconciling the Forsterite Content of Lunar Troctolites with the Magma Ocean & Cumulate Mantle Overturn Hypotheses* GSA, 239-8.

*Boyle, S., Gross, J., and **Prissel, T.C.** (2018). *Understanding the Magnesium-suite Lithology & Lunar Highlands Terrain Through a Detailed Investigation of Lunar Meteorites Northwest Africa (NWA) 10291 & 11182.* 49th LPSC, 2346.

Prissel, T.C., Whitten, J.L., Parman, S.W., Head, J.W. (2017). *Ancient Phases of Our Moon: Formation of Lunar Troctolites & Temporal Implications Concerning Crustal Fracturing.* NASA SSERVI Forum, NASA Ames.

Prissel, T.C., Gross, J., Draper, D.S. (2017). *Origin of Olivine-Phyric Shergottites.* 80th Annual Meeting of the Meteoritical Society, 6338.

Prissel, T.C., Gross, J., Draper, D.S. (2017). *Application of Olivine-Spinel Equilibria to Extraterrestrial Igneous Systems.* 48th LPSC, 2436.

Gross, J., **Prissel, T.C.**, Korotev, R.L., Parman, S.W. (2017). *Unique Pink Spinel Symplectite Assemblage in Northwest Africa (NWA) 10401: Breakdown Reaction through Solid-State Diffusion and Potential Relation to Apollo 17 Samples.* 48th LPSC, 2589.

Prissel, T.C. (2016). *On the Provenance & Distribution of the Lunar Highlands Magnesian-suite.* New Views of the Moon II workshop, 6011.

HONORS & AWARDS	Gordon A. McKay Fellowship (2 years fully funded, 3rd negotiable).	2018
	Lawrence Livermore National Lab Travel Grant.	2015
	Brown University Dissertation Fellowship.	2015
	Stephen Dwornik Planetary Geoscience Student Paper Award. (Hon. Mention).	2013
	Brown University First Year Graduate Fellowship.	2010
	George & Francis Comstock Scholarship.	2009
TEACHING & ADVISING	Co-Ph.D. Advisor: <i>w/ Dr. Juliane Gross (Boyle, Ph.D., '21).</i>	2017-present
	Science Advisor: <i>NASA ExMASS Contest. 1st Prize National Winners.</i>	2016-2017
	Graduate Student Mentor: <i>Brown U. Mentoring Program.</i>	2013-2015
	Brown University Field Trip Co-Leader: <i>Spring Semester.</i>	2014
	Teaching Assistant: <i>Physical Processes in Geology.</i>	2013
	Teaching Assistant: <i>Earth & Planetary Materials & Processes.</i>	2012, 2013
	Volunteer Science Instructor: <i>Vartan Gregorian Elementary, RI.</i>	2011-2012
SERVICE to the PROFESSION	Peer Reviewer: <i>JGR; Am. Min.</i>	2014-present
	Official Science Micro-Blogger: <i>LPSC.</i>	2016-present
	Proposal Review Panelist & External Reviewer: <i>NASA PSD.</i>	2016-present
	Dwornik Judge: <i>LPSC.</i>	2017-present
	Program Committee Member: <i>LPSC.</i>	2018
	Session Chair: <i>Origin & Igneous Evolution of the Moon, LPSC.</i>	2018
	Session Chair: <i>Martian Meteorites, MetSoc.</i>	2017
	NESSF Review Panelist.	2017
	McKay Judge: <i>MetSoc.</i>	2017
EDUCATION & PUBLIC OUTREACH	Science Microblog: <i>Twitter: @OMGsuite.</i>	2015-present
	Invited Speaker: <i>Lunar & Planetary Institute.</i>	2017, 2018
	Invited Speaker: <i>Dept. of Geology, Colby College, ME.</i>	2017
	Invited Essay: <i>Issues in Earth Science.</i>	2017
	Coordination Committee Member: <i>Rutgers Day</i>	2017
	Coordination Committee Member: <i>Issues in Planetary Science, Brown.</i>	2014
	Moon's Pink Mineral: <i>PSRD, U. of Hawaii, Manoa.</i>	2014
New Moon Rock Reveals Rosy Secret: <i>Live Science.</i>	2014	