Dr. Alexander Sehlke

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R Alexander-Sehlke

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Summary ____

Position and Focus: Planetary Geologist at NASA Ames Research Center/BAER Institute, with focus on scientific exploration of the solar system through returned sample analyses, fieldwork, space flight hardware development, and NASA-led science exploration missions. Serving as Principal Investigator (PI) and Co-Investigator (Co-I) on multiple research awards funded by NASA's Science Mission Directorate (SMD).

Publications and Presentations: Author of 31 peer-reviewed papers in international scientific journals and over 100 scientific abstracts presented at prestigious international conferences such as the American Geophysical Union (AGU), Lunar and Planetary Science Conference (LPSC), Meteoritical Society (MetSoc), among others.

Teaching and Mentoring: Extensive experience in teaching and mentoring students at high school, undergraduate, and graduate levels.

Education _____

PhD	 University of Missouri, Columbia MO, Geological Sciences Minor in College Science Teaching 	Jan 2011 – Dec 2015
Dipl	 Leibniz Universitaet Hannover, Germany, Geosciences Minor in Material Sciences 	Oct 2005 – Jan 2011
Profe	essional Appointments	
NASA • A lu • F tu • S • S • A F • S • A P p	Ames Research Center/ BAER Institute, Research Scientist pollo Lunar Sample Analysis: Investigating the thermochronology of the unar surface and subsurface using thermoluminescence, with a focus on old trap prospecting in support of NASA's Artemis program. Planetary Analog Research: Leading field and laboratory studies of errestrial analog sites to better understand planetary surface processes in the Moon and Mars. Paceflight Instrumentation: Designing, developing, and field-testing dvanced scientific instruments for robotic and crewed planetary xploration. VASA VIPER Mission: Instrument Scientist for the Volatiles Investigating tolar Exploration Rover (VIPER), contributing to hardware development and cience operations. VASA Ames Vertical Gun Range (AVGR): Serving as Science PI for NASA's remier hypervelocity impact facility, enabling experimental studies of lanetary surface processes and impact dynamics.	Moffett Field, CA, USA Jan 2019 – present
NASA • F N • Ir	Ames Research Center/ USRA, Postdoctoral Researcher Planetary Analog Research: Volcanic Terrains on Earth as Analogs for the Noon and Mars Instrument Development for Human Space Exploration Missions	Moffett Field, CA, USA Feb 2016 – Jan 2019

Awards and Honors

NASA Ames Honor Award

- Contractor Employee in 2020
- Partnership RESOURCE Research Program in 2020
- Team/Group BASALT Research Program in 2020
- Team/Group FINESSE Research Program in 2018

Committees and Assignments	
SSERVI NASA Exploration Science Forum, Science Organization Committee	Mar 2025 – May 2025
 SSERVI NASA Exploration Science Forum, Session Co-Chair Sample Science In-Situ Resource Utilization 	July 2024
 Lunar and Planetary Science Conference Moderator: Planetary Volcanism: Eruptions in Fire and Ice Moderator: Lunar Regolith Properties and Processes 	Mar 2023
 SSERVI NASA Exploration Science Forum, Session Co-Chair Apollo Next Generation Sample Analysis 	July 2022
SSERVI NASA Exploration Science Forum, Science Organization Committee Co-Chair	Mar 2022 – July 2022
Lunar Surface Science Workshop #17 - Defining a Coordinated Lunar Resource Evaluation Campaign • Documentarian	July 2022
 Lunar Surface Science Workshop #13 - Inclusive Lunar Exploration Session Co-Chair Documentarian 	Jan 2022
 Peer Review Assignments: NASA Research Proposals Several NASA Research Opportunities in Space and Earth Science (ROSES) pro or twice per year. Served as External Reviewer, Executive Secretary, Panelist, an 	2016 – present gram proposals, once d Panel Chair.
 Peer Review Assignments: Manuscripts International scientific journals, such as Journal of Geothermal Research, Fronti Journal of Volcanology and Geophysical Research, Earth and Planetary Science I American Ceramic Society 	2015 – present iers in Earth Science, Letters, Icarus,
Peer-reviewed Publications	
Thermal Equilibrium States and Timescales of Lunar Cold Traps via Low- Temperature Thermoluminescence A Sehlke , D Sears, and the ANGSA Science Team Planetary and Space Science, in review	2025
Geomorphological Evidence of Near-Surface Ice at Candidate Landing Sites in Northern Amazonis Planitia, Mars E Luzzi, JL Heldmann, KE Williams, G Nodjoumi, A Deutsch, <i>A Sehlke</i> https://doi.org/10.1029/2024JE008724 🖸 (JGR Planets, Vol 130(5))	2025
A detailed μ-FTIR study of Hermean glasses: Spectral mainband shape and flank, what do they tell us? A. Stojic, A. Sehlke , AG Whittington, A. Morlok, H. Hiesinger	2025

https://doi.org/10.1016/j.jnoncrysol.2025.123523 🖸 (Journal of Non-Crystalline Solids, Volume 66)))
Thermoluminescence and Apollo 17 ANGSA lunar samples: NASA's fifty-year experiment and prospecting for cold traps	2024
DWG Sears, A. Sehlke , HH Schmitt, and the ANGSA Science Team https://doi.org/10.1029/2024JE008358 🖸 (Journal of Geophysical Research: Planets, Volume 129)(4))
Apollo Next Generation Sample Analysis (ANGSA): An Apollo Participating Scientist Program to Prepare the Lunar Sample Community for Artemis	2024
CK Shearer, FM McCubbin, S Eckley, SB Simon, A Meshik, F McDonald, HH Schmitt, RA Zeigler, J G Mitchell, C Krysher, RV Morris, R Parai, BL Jolliff, JJ Gillis-Davis, K Joy, SK Bell, P Lucey, L Sun, Z Sh Dukes, A Sehlke , A Mosie, J Allton, C Amick, JI Simon, TM Erickson, JJ Barnes, MD Dyar, K Burgess Petro, D Moriarty, NM Curran, JE Elsila, RA Colina-Ruiz, T Kroll, D Sokaras, HA Ishii, JP Bradley, D Se Cohen, O Pravdivseva, MS Thompson, CR Neal, R Hanna, R Ketcham, K Welten, and the ANGSA Sci Team	ross, J Iarp, C s, N ears, B ience
https://doi.org/10.1007/s11214-024-01094-x 🗹 (Space Science Review, Volume 220:62)	
Synthetic analogs for lava flows on the surface of Mercury: A mid-infrared	2024
A Morlok, A Sehlke , AN Stojic, AG Whittington, I Weber, MP Reitze, Hiesinger H, Helbert J. https://doi.org/10.1016/J.ICARUS.2024.116078 🗗 (Icarus, Volume 415)	
The Apollo 17 Regolith: Induced Thermoluminescence Evidence for Formation by a Single Event ~100 Million Years Ago and Possibly the Presence of Tycho Material	2024
A Sehlke, DWG Sears, and the ANGSA Science Team https://doi.org/10.1029/2023JE008083 ☑ (Journal of Geophysical Research: Planets, Volume 129)(4))
Average VNIR reflectance: A rapid, sample-free method to estimate glass content and crystallinity of fresh basaltic lava	2022
E Rader, S Ackiss, A Sehlke , J Bishop, B Orrill, K Odegaard, M Meier, A Doloughan https://doi.org/10.1016/j.icarus.2022.115084 🖸 (Icarus, Volume 383)	
Ejecta blocks around the Kings Bowl phreatomagmatic crater in Idaho: An indication of subsurface water amounts with implications for Mars DWG Sears, A Sehlke , SS Hughes, S Kobs-Nawotniak	2022
10.1016/j.pss.2022.105564 🖸 (Planetary and Space Science, Volume 222)	
Spontaneous reheating of crystallizing lava AG Whittington, A Sehlke	2021
10.1130/g49148.1 亿 (Geology, Volume 49 Issue 12)	
The impact and recovery of asteroid 2018 LA P Jenniskens, M Gabadirwe, QZ Yin, A Proyer, O Moses, and with ' A Sehlke ' among 61 other interna- co-authors'	2021 ational
https://doi.org/10.1111/maps.13653 🖸 (Meteoritics & Planetary Science, Volume 56, Issue 4)	
Induced thermoluminescence as a method for dating recent volcanism: The Blue Dragon flow, Idaho, USA and the factors affecting induced thermoluminescence	2021
DWG Sears, A Sehlke , SS Hughes	
https://doi.org/10.1016/j.pss.2020.105129 🖸 (Planetary and Space Science, Volume 195)	
Basaltic fissure types on Earth: Suitable analogs to evaluate the origins of volcanic terrains on the Moon and Mars?	2020

SS Hughes, WB Garry, A Sehlke , EH Christiansen, SE Kobs Nawotniak, DWG Sears, RC Elphic, DS Lim, J Heldmann	JL
10.1016/J.PSS.2020.105091 🖸 (Planetary and Space Science, Volume 193)	
Thermal properties of glassy and molten planetary candidate lavas A Sehlke, AM Hofmeister, AG Whittington https://doi.org/10.1016/J.PSS.2020.105089 더 (Planetary and Space Science, Volume 193)	2020
Rheology of a KREEP Analog Magma: Experimental Results Applied to Dike Ascent through the Lunar Crust A Sehlke, AG Whittington https://doi.org/10.1016/j.pss.2020.104941 더 (Planetary and Space Science, Volume 187)	2020
Microbial community distribution in variously altered basalts: Insights into astrobiology sample site selection A Brady, E Gibbons, A Sehlke , C Renner, S Kobs Nawotniak, D Lim, G Slater 10.1016/j.pss.2020.105107 (2) (Planetary and Space Science, Volume 194)	2020
The rheology of crystallizing basaltic lavas from Nyiragongo and Nyamuragira	2020
volcanoes, D.R.C. A Morrison, AG Whittington, B Smets, M Kervyn, A Sehlke https://doi.org/10.30909/vol.03.01.0128 亿 (Volcanica, Volume 3 Issue 1)	
A Low-Diversity Microbiota Inhabits Extreme Terrestrial Basaltic Terrains and Their Fumaroles: Implications for the Exploration of Mars C Cockell, J Harrison, A Stevens, S Payler, S Hughes, S Kobs Nawotniak, A Brady, R Elphic, C Haberle, <i>A</i> Sehlke, K Beaton, A Abercromby, P Schwendner, J Wadsworth, H Landenmark, R Cane, A Dickinson, N Nicholson, L Perera, D Lim 10.1089/ast.2018.1870 🗠 (Astrobiology, Volume 19 Issue 3)	2019
Opportunities and Challenges of Promoting Scientific Dialog throughout Execution of Future Science-Driven Extravehicular Activity SE Kobs Nawotniak, MJ Miller, AH Stevens, JJ Marquez, SJ Payler, AL Brady, SS Hughes, CW Haberle, J Sehlke, KH Beaton, SP Chappell, RC Elphic, DSS Lim 10.1089/ast.2018.1901 ☑ (Astrobiology, Volume 19 Issue 3)	2019 A
The BASALT Research Program: Designing and Developing Mission Elements in Support of Human Scientific Exploration of Mars D Lim, A Abercromby, S Kobs Nawotniak, D Lees, M Miller, A Brady, Z Mirmalek, <i>A Sehlke</i> , S Payler, A Stevens, C Haberle, K Beaton, S Chappell, S Hughes, C Cockell, R Elphic, M Downs, JL Heldmann 10.1089/ast.2018.1869 ☑ (Astrobiology, Volume 19 Issue 3)	2019
Basaltic Terrains in Idaho and Hawai'i as Planetary Analogs for Mars Geology	2019
and Astrobiology S Hughes, C Haberle, S Kobs Nawotniak, <i>A Sehlke</i> , W Garry, R Elphic, S Payler, A Stevens, C Cockell, A I JL Heldmann, D Lim 10.1089/ast.2018.1847 🗗 (Astrobiology, Volume 19 Issue 3)	3rady,
Strategic Planning Insights for Future Science-Driven Extravehicular Activity	2019
on Mars A Brady, S Kobs Nawotniak, S Hughes, S Payler, A Stevens, C Cockell, R Elphic, A Sehlke , C Haberle, G S D Lim	Slater,
10.1089/ast.2018.1850 🗹 (Astrobiology, Volume 19 Issue 3)	
Requirements for Portable Instrument Suites during Human Scientific	2019

A Sehlke , Z Mirmalek, D Burtt, CW Haberle, D Santiago-Materese, SE Kobs Nawotniak, SS Hughes, WE Garry, N Bramall, AJ Brown, JL Heldmann, DSS Lim 10.1089/ast.2018.1841 ☑ (Astrobiology, Volume 19 Issue 3)	}
Induced thermoluminescence as a method for dating recent volcanism: Hawaii County, Hawaii, USA DWG Sears, H.Sears, A.Sebike , SS Hughes	2018
10.1016/j.jvolgeores.2017.09.022 🖸 (Journal of Volcanology and Geothermal Research, Volume 349))
X-ray computed tomography of extraterrestrial rocks eradicates their natural radiation record and the information it contains	2018
DWG Sears, A Sehlke , JM Friedrich, ML Rivers, DS Ebel 10.1111/maps.13183 🗗 (N/A, Volume 53 Issue 12)	
Induced thermoluminescence as a method for dating recent volcanism: Eastern Snake River Plain, Idaho, USA DWG Sears, H.Sears, A.Sebike , S.Hugbes	2017
10.1002/2016JB013596 ☑ (Journal of Geophysical Research: Solid Earth, Volume 122 Issue 2)	
Transport properties of glassy and molten lavas as a function of temperature and composition	2016
A Hofmeister, A Sehlke , G Avard, A Bollasina, G Robert, AG Whittington 10.1016/j.jvolgeores.2016.08.015 🖸 (Journal of Volcanology and Geothermal Research, Volume 327))
The viscosity of planetary tholeiitic melts: A configurational entropy model	2016
A Senike, AG Whittington 10.1016/j.gca.2016.07.027 🖸 (Geochimica et Cosmochimica Acta, Volume 191)	
Field and experimental constraints on the rheology of arc basaltic lavas: the January 2014 Eruption of Pacaya (Guatemala) A Soldati, <i>A Sehlke</i> , G Chigna, AG Whittington 10 1007/s00445-016-1031-6 rd (Bulletin of Volcanology, Volume 78 Issue 6)	2016
Rheology of lava flows on Mercury: An analog experimental study	2015
A Sehlke, AG Whittington 10.1002/2015JE004792 ☑ (Journal of Geophysical Research E: Planets, Volume 120 Issue 11)	
Pahoehoe to a'a' transition of Hawaiian lavas: An experimental study A Sehlke, AG Whittington, B Robert, AJ Harris, L Gurioli, E Médard 10.1007/s00445-014-0876-9 ☑ (Bulletin of Volcanology, Volume 76 Issue 11)	2014
Thermal diffusivity of Fe-rich pyroxene glasses and their melts A Hofmeister, <i>A Sehlke</i> , AG Whittington 10.1016/j.chemgeo.2014.06.018 🖸 (Chemical Geology, Volume)	2014
Textural and rheological evolution of basalt flowing down a lava channel B Robert, AJ Harris, L Gurioli, E Médard, A Sehlke , AG Whittington 10.1007/s00445-014-0824-8 ぱ (Bulletin of Volcanology, Volume 76 Issue 6)	2014
Selected Abstracts and Presentations	
Thermochronometry of Lunar Cold Traps via Thermoluminescence: Probing Their Thermal Equilibrium Over Billions of Years A Sehlke, and DWG Sears Goldschmidt Conference 2025, to be held in Prague from July 7-11 2025, Czech Republic - Oral Presentation	2025

Transit Times of Lunar Meteorites Via Thermoluminescence J Baden, A Sehlke , and DWG Sears 56th Lunar and Planetary Science Conference, Abstract Nr. 1672 - Poster Presentation	2025
Glimmerings in the Cold and Dark: Thermoluminescence of Lunar Regolith at Cryogenic Temperatures for Cold Trap Prospecting	2024
A Sehlke, and DWG Sears	
NASA Exploration Science Forum held at Washington University in St. Louis, MO, USA - Oral Presen	itation
Science, Operations, and Technology Development from NASA's RESOURCE Project	2024
JL Heldmann, A Sehlke , MC Deans, and the RESOURCE Team NASA Exploration Science Forum held at Washington University in St. Louis, MO, USA - Oral Presen	itatation
Update on the Near Infrared Volatiles Spectrometer System (NIRVSS) Instrument on the Volatiles Investigating Polar Exploration Rover (VIPER) Mission: Calibration and Surface Operations	2024
A Sehlke , A Colaprete, K Ennico-Smith, S Gyalay, E Noe Dobrea, TL Roush, JE Benton, R Bielawski, N Connally, A Cook, L Ellingson, JB Forgione, DT Hoang, V Jha, A Rademacher, F Renema, EJ Talle, B Youngquist, and the VIPER Science Team	∕I Chin, J White, C
NASA Exploration Science Forum held at Washington University in St. Louis, MO, USA - Oral Presen	itation
The Apollo 17 Regolith: Induced Thermoluminescence Evidence for Formation by a Single Event 100 Million Years Ago and Possibly the Presence of Tycho Material	2024
A Sehlke , DWG Sears, ANGSA Science Team 55th Lunar and Planetary Science Conference, Abstract Nr. 2536 - Poster Presentation	
The Effect of Composition on the Spectral Appearance of Hermean Analog Glasses	2024
AN Stojic, A Sehlke , A Morlok, AG Whittington, MP Reitze, I Weber, H Hiesinger, J Helbert 55th Lunar and Planetary Science Conference, Abstract Nr. 1857 - Poster Presentation	
New Model to Calculate Lava Viscosity During Disequilibrium Crystallization for a Wide Range in Cooling and Strain Rates A Sehlke, AG Whittington	2023
54th Lunar and Planetary Science Conference, Abstract Nr. 2677 - Poster Presentation	
Lunar Regolith Thermoluminescence Glow Curve Fitting to Extract Its Most Important Kinetic Parameters. A Sehlke, DWG Sears, ANGSA Science Team	2023
54th Lunar and Planetary Science Conference, Abstract Nr. 1870 - Oral Presentation	
Geomorphical Evidence of Near-Surface Ice at Candidate Landing Sites in Arcadia Planitia, Mars E Luzzi, II. Heldmann, K Williams, A Deutsch, A Sablka , G Nodioumi	2023
54th Lunar and Planetary Science Conference, Abstract Nr. 2677 - Oral Presentation	
Thermal Histories of Lunar Cold Traps: Prospecting for Volatiles by Thermoluminescence	2022
A Senike, Dwg Sears Lunar Polar Volatiles Conference, LPI Contrib. Nr. 5024 - Poster Presentation	
A Fifty-Year Experiment, the Natural TL Kinetics of Apollo 17 Regolith, and Prospecting for Water and Other Volatiles on the Moon	2022

A Sehlke , DWG Sears, ANGSA Science Team 53rd Lunar and Planetary Science Conference, LPI Contrib. Nr. 2030 - Oral Presentation	
THEIA - A Thermal History Exploration Instrument for Artemis A Sehlke, DWG Sears, JL Heldmann Appual Masting of the Luner Exploration Applyaic Crown, Abstract Nr. 5005, Dector Presentation	2022
In-Situ Thermoluminescence Measurements on the Moon Using THEIA - Thermal History Exploration Instrument for Artemis A Sehlke, DWG Sears, JL Heldmann	2022
NASA Exploration Science Forum held at the University of Colorado, Boulder CO, USA - Poster Present Crystallization, latent heat release, and thermal history of magmas AG Whittington, <i>A Sehlke</i> , B Halvernon Goldschmidt Conference - Oral Presentation	2022
Recalescence during crystallization of stardust: Resolution of the amorphous interstellar medium paradox A Speck, AG Whittington, <i>A Sehlke</i> American Astronomical Society Meeting '#240', American Astronomical Society Meeting Abstracts '#147.04' - Poster Presentation	2022
Five Decades of Thermoluminescence Studies on Lunar Samples: First Results of NASA's Unique 46-Year Experiment and Implications for Resource Prospecting on the Moon <i>A Sehlke</i> , DWG Sears, ANGSA Science Team 53rd Lunar and Planetary Science Conference, Abstract Nr. 1267 - Oral Presentation	2022
High-Temperature Rheology Measurements on Planetary Analog Magmas and Lavas A Sehlke 53rd Lunar and Planetary Science Conference, Abstract Nr. 1171 - Poster Presentation	2022
Lunar Cold Traps: Prospecting by Thermoluminescence A Sehlke, DWG Sears, ANGSA Science Team NASA Exploration Science Forum & European Lunar Symposium, held virtually - Oral Presentation	2022
Lava Surface Roughness and Morphologies: A New Remote-Sensing Method To Estimate Physical Properties of Lava Flows on Earth, the Moon and Mars <i>A Sehlke</i> , J Leija, SE Kobs Nawotniak, SS Hughes, DWG Sears, WB Garry, AG Whittington, DSS Lim, JL Heldmann Workshop on Terrestrial Analogs for Planetary Exploration, Abstract Nr. 2595 - Oral Presentation	2021
Natural Thermoluminescence of Lunar Samples: Review and Update A Sehlke, DWG Sears, ANGSA Science Team 52nd Lunar and Planetary Science Conference, Abstract Nr. 2548 - Oral Presentation	2021
A luminescence-based Instrument to Explore the History and Nature of the Lunar Surface A Sehlke, DWG Sears American Geophysical Union 2020 Fall Meeting. Abstract Nr. V013-0006 - Poster Presentation	2020
Looking Backwards to Look Forward: A Fifty-Year Experiment in the Kinetics of Thermoluminescence of Lunar Samples and the Apollo Next Generation Sample Analysis Program (ANGSA) A Sehlke, DWG Sears, ANGSA Science Team	2020

51st Lunar and Planetary Science Conference, Abstract Nr. 1148 - Oral Presentation	
Thermal Properties of Glassy and Molten Planetary Candidate Lavas. A Sehlke , AM Hofmeister, AG Whittington American Geophysical Union, Annual Fall Meeting 2019, Abstract ID V43D-0107 - Poster Presentation	2019
Requirements for portable instrument suites during human scientific	2018
exploration of Mars <i>A Sehlke</i> , Z Mirmalek, D Burtt, CW Haberle, D Santiago-Materese, SE Kobs Nawotniak, SS Hughes, WI Garry, N Bramall, AJ Brown, JL Heldmann, DSS Lim NASA Exploration Science Forum held at NASA Ames Research Center, Moffett Field CA, USA - Oral Presentation	3
Synchrotron X-Ray Computed Microtomography and the Radiation History of Meteorites A Sehlke, DWG Sears, JM Friedrich, ML Rivers, DS Ebel 80th Annual Meeting of the Meteoritical Society, Abstract Nr. 1987 - Oral Presentation	2017
The Ultimate Geologic Tricorder? Handheld Science Instruments and Requirements for Future Human Exploration Missions on Other Worlds A Sehlke, Z Mirmalek, B Cohen, CW Haberle, SE Kobs Nawotniak, SS Hughes, A Brown, JL Heldmann,	2017 , DSS
Lim 48th Lunar and Planetary Science Conference, Abstract Nr. 2451 - Poster Presentation	
The Viscosity of Tholeiitic Planetary Melts: A Configurational Entropy Model A Sehlke , AG Whittington 47th Lunar and Planetary Science Conference. Abstract Nr. 1957 - Poster Presentation	2016
Rheology of lava flows on Mercury: an experimental study A Sehlke, AG Whittington 45th Lunar and Planetary Science Conference, Abstract Nr. 2275 - Poster Presentation	2015
Concentric cylinder viscometry at subliquidus conditions on Mauna Ulu Iavas, Kilauea Volcano, Hawaii A Sehlke, B Robert, AJ Harris, L Gurioli, AG Whittington American Geophysical Union, Annual Fall Meeting 2013, Abstract ID V51D-2697 - Poster Presentation	2013 n
Invited Talks, Lectures and Presentations	
Requirements for Handheld VNIR and XRF Instruments during Human Exploration Missions. Lunar Petrology and Landed Instrument Interchange Workshop NASA Jet Propulsion Laboratory, Pasadena CA, USA	2022
Exploration of our Solar System: Earth-based Science Investigations in Preparation for NASAs Moon to Mars Campaign. Graduate Student Seminar. Graduate Student Seminar (virtual) Department of Geological Science, University of Texas at San Antonio, USA	2021
Rheological and Thermal Evolution of Magmatic Systems: Insights into the Volcanic Past of our Solar System. Speaker Seminar Series Departement of Earth and Planetary Sciences, University of California - Santa Cruz CA, USA	2020
Rheological and Thermal Evolution of Magmatic Systems: Insights into the Volcanic Past in our Solar System	2019

1-Year Funded Extension, Thermoluminescence Studies on Frozen Apollo 17 Samples: Temperature Estimates of Shaded and Illuminated Lunar Surfaces.	Apr 2023 – Mar 2024
Research Awards and Funding The Vertical Gun Range at NASA Ames • NASA ROSES Planetary Science Enabling Facilities Program - \$1,567,144 • PI: Chuck Cornelison, Science PI: Alexander Sehlke	Oct 2024 – Sept 2028
11 Secrets of Volcanologists written by Lela Nargi Mental Floss ☑	Mar 2018
NASA's lassoing of moon's potential for future use starts with a trove of rocks written by Peter Fimrite (Science and Environment Reporter) San Francisco Chronicle (Front Page, continued on pg. A8) [2]	Mar 2019
Interviews and Mentions in Media The Secrets of Moondust written by Marina Koren (The Atlantic Staff Writer) The Atlantic C	July 2019
White Paper: Investigations Regarding Subsurface Temperature Profiles at Polar Regions on the Moon <i>A Sehlke</i> , and DWG Sears Artemis III Science Definition Team Report, White Paper #2107	2020
Technical Reports and Other Publications (not Peer-reviewed Inclusive Lunar Exploration K Bennett and P Prem (Co-Chairs), C Ahrens, N Kumari, L Pigue, A Sehlke , and C Ta Lunar Surface Science Workshop Virtual Session 13 (LSSW-13) Report	i)2022 i Udovicic
The morphological transition from pāhoehoe to aā of basaltic lavas: Combining field studies and experimental work to interpret the volcanic past on Earth and other planets and moons. Speaker Series Seminar United States Geological Survey (USGS), Menlo Park CA, USA	2017
Straight outta morphologies: Understanding the magmatic history of lava terrains on Earth and other rocky worlds in our Solar System Speaker Seminar Series Department of Geological Sciences, San Jose State University, San Jose CA, USA	2017
Designing Future Human Spaceflight Keynote at Sensors Expo 2017 San Jose CA, USA	2017
Anatomy of the Blue Dragon: Changes in Lava Flow Morphology and Physical Properties Observed in an Open Channel Lava Flow as a Planetary Analogue. Geological Society of America Annual Meeting Seattle WA, USA	2017
Keynote at GeoMünster Conference Münster, Germany	

• NASA ROSES Science Mission Directorate Single-Source - By invitation only (2022) - \$113,000

• PI: Alexander Sehlke, Co-I: Derek WG Sears

 1-Year Funded Extension, Thermoluminescence Studies on Frozen Apollo 17 Samples: Temperature Estimates of Shaded and Illuminated Lunar Surfaces. NASA ROSES Apollo Next Generation Sample Analysis (ANGSA) Program - \$10 PI: Alexander Sehlke, Co-I: Derek WG Sears 	Apr 2022 – Mar 2023 3,359
 THEIA: Thermal History Exploration Instrument for Artemis NASA Ames Research Center Innovation Funds - \$41,000 PI: Jennifer Heldmann, Co-Is: Alexander Sehlke, Derek WG Sears 	Oct 2020 - Sept 2021
Resources for Exploration & Science of OUR Cosmic Environment (RESOURCE)	Feb 2020 – Jan 2025
 NASA Solar System Exploration Virtual Research Institute (SSERVI) - \$7,452,46 PI: Jennifer Heldmann, Deputy PIs: Alexander Sehlke, Matthew Deans, Co-Is: 16 federal agencies and private sector 	7 across academia,
 Thermoluminescence Studies on Frozen Apollo 17 Samples: Temperature Estimates of Shaded and Illuminated Lunar Surfaces. NASA ROSES Apollo Next Generation Sample Analysis (ANGSA) Program - \$34 PI: Alexander Sehlke, Co-I: Derek WG Sears 	Apr 2019 – Mar 2022 8,050
 Fast and/or Furious? Nature and Emplacement History of Lavas Erupted on Mars NASA ROSES Solar System Workings (SSW) Program - \$490,705 PI: Alexander Sehlke, Co-I: Alan G Whittington 	May 2019 – Apr 2022
IceCrystal: Portable instrument protocol to delineate ancient ice and water on Mars using microcrystallinity of volcanic products • NASA ROSES Planetary Science and Technology from Analog Research (PSTAF • PI: Erika Rader, Co-Is: Alexander Sehlke, Janice Bishop	Oct 2018 – Sept 2021 R) Program - \$874,012
 NASA Postdoctoral Fellowship 3rd-Year Extension NASA ROSES Postodoctoral Program (NPP) - \$86,866 PI: Alexander Sehlke, Co-Is: Jennifer Heldmann, Darlene SS Lim 	Feb 2018 – Jan 2019
 NASA Postdoctoral Fellowship NASA ROSES Postodoctoral Program (NPP) - \$149,248 PI: Alexander Sehlke, Co-Is: Jennifer Heldmann, Darlene SS Lim 	Feb 2016 – Jan 2018
Teaching Experience	
 University of Missouri - Columbia MO, USA 2015 Course Instructor - The Moon. Undergraduate 2015 Teaching Assistant - Regional Geology Field Course. Undergraduate 2014 Teaching Assistant/Lab Experiments - Igneous Petrology. Graduate 2013 Teaching Assistant - Mineralogy. Undergraduate 	2011 – 2015

- 2012 Teaching Assistant Mineralogy. Undergraduate
- 2011 Teaching Assistant Mineralogy. Undergraduate

Mentoring Experience _

NASA Internship mentoring at NASA Ames Research Center

- Summer 2024 (virtual), Arjun Prem, Summit Tahoma Highschool, San Jose CA, USA
- Summer 2024, Jordan Baden, Undergraduate at University of California, Santa Cruz CA, USA
- Summer 2023, Adriana Ariza Pardo, Graduate at UT San Antonio TX, USA

- Spring 2021, Iyare Oseghae. Undergraduate at UT San Antonio TX, USA
- Fall 2020 (virtual), Brianna Orrill, Undergraduate at Arizona State University AZ, USA
- Fall 2020 (virtual), Javier Leija, Undergraduate at Sam Houston University TX, USA
- Summer 2018, Caleb Renner, Undergraduate at Idaho State University ID, USA
- Spring 2017, David Burtt, Undergraduate at Whitman College WA, USA

Technology and Inventions

THEIA - Thermal History Exploration Instrument for Artemis: Instrument protoype to enable thrmoluminescence measurements on the lunar surface via robotic or human exploration missions. Technology Readiness Level (TRL) is 4. Invention is submitted to NASA's *New Technology Reporting (NTR) System*, with e-NTR Number 1684365045

Public Outreach and Engagement

 ExMASS (Exploration of the Moon and Asteroids by Secondary Students) Science Advisor Logos Charter School, Medford OR, USA - virtual 	Oct 2023 - July 2024
 ExMASS (Exploration of the Moon and Asteroids by Secondary Students) Science Advisor Logos Charter School, Medford OR, USA - virtual 	Oct 2022 - July 2023
 Silicon Valley Comic Con, San Jose CA, USA Panel Discussion on The Artemis Generation: NASA's Journey Forward to the Mod 	July 2019 on.
 Fremont Peak Observatory, San Juan Bautista CA, USA Volcanism on terrestrial planets and moons across our solar system 	Aug 2017