

BP Blakley

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Education

Johns Hopkins University	2024-Present
<i>PhD, Earth & Planetary Sciences</i>	<i>Baltimore, MD</i>
Pasadena City College	2021-2024
<i>Geology</i>	<i>Pasadena, CA</i>
School of The Art Institute of Chicago	2006-2010
<i>Bachelor of Fine Arts</i>	<i>Chicago, IL</i>
Wake Technical Community College	2005-2006
<i>Associate in Arts (Transfer)</i>	<i>Raleigh, NC</i>
Transferred Spring 2006.	

Honors, Fellowships, & Awards

NSF Graduate Research Fellowship	Sep 2024-May 2029
Wayne Loel Scholarship, Geology, Pasadena City College	Jun 2024
Bruce Carter Field Award, Geology, Pasadena City College	Jun 2024

Research Experience

Astrophysical Materials Laboratory, Northern Arizona University (NAU)	Jun 2023-Feb 2024
<i>REU Student</i>	<i>Flagstaff, AZ</i>
<i>Supervisor: Dr. Will Grundy</i>	

Carried out experiments to determine the equilibrium vapor pressures and enthalpies of sublimation of volatiles at temperatures relevant to the outer solar system. Utilized a quartz crystal microbalance (QCM) within a cryo-cooled vacuum chamber, as well as a mass-spectrometer and Fourier-transform infrared (FTIR) spectrometer for characterization.

I presented my results in a talk at the 55th Division of Planetary Science (DPS) meeting; I wrote an article detailing the research and results, published in [volume 244](#) of *Planetary and Space Science*.

Lunar Trailblazer Mission, Caltech

Jan 2022-Dec 2024

Research Assistant

Pasadena, CA

Supervisor: Dr. Bethany Ehlmann

Researched and wrote a public-facing [science article](#) about the nature of lunar water. Transitioned from science communications support to laboratory research in June 2022. Ongoing work includes performing laboratory investigations to simulate potential lunar mixtures of water-ice and regolith in support of forward- and reverse-modeling of in-situ water-ice spectral signatures. Utilizing an ASD field spectrometer and FTIR spectrometer.

I presented this research as a [poster](#) at the 2023 Lunar and Planetary Sciences Conference (LPSC).

Geology Independent Study, Pasadena City College

Jan-May 2023

Research Assistant

Pasadena, CA

Supervisor: Dr. Michael Vendrasco

Investigated microstructures/microtextures of samples collected at Little Hot Creek, California, using a scanning electron microscope (SEM), for textural biosignatures to understand the role of biological processes in the morphology of siliceous sinters at the site. Conducted a review of relevant scientific literature on diagnostic structural biosignatures in geyserite and other hydrothermally deposited sediment. Produced teaching aids and annotated bibliography.

Caltech Connections Undergraduate Research Program, Caltech

Feb-Jul 2022

Research Assistant

Pasadena, CA

Supervisor: Dr. Sadie Dutton (PhD '23) under the Blake Research Group

Hypothesized and modeled alcohol:water hexamer geometries using Avogadro and Gaussian modeling programs. Identified an asymmetric hexamer in laboratory spectroscopic data.

I presented these results as a poster at Caltech Connections Symposium, and SoCal Undergraduate Chemistry Research Symposium, University of California Irvine.

Planetary and Exoplanetary Atmospheres Group, JPL

Jan-Jun 2022

Maximizing Student Potential in STEM (MSP) Intern

Pasadena, CA

Supervisor: Dr. Glenn Orton

Continued previous JPL internship project to archive observational data of Jupiter in the mid-infrared with the Planetary Data System (PDS). Developed an open-source, pip-installable [python package](#) to automate creation and correction of data labels, and wrote documentation for future interns to utilize the software. Submitted the digital archives of ground-based observations of Jupiter to the PDS.

Planetary and Exoplanetary Atmospheres Group, JPL

Sep-Dec 2021

Student Independent Research Internship (SIRI) Research Assistant

Pasadena, CA

Supervisor: Dr. Glenn Orton

Archived digital files of ground-based observations of Jupiter in the mid-infrared in support of the Juno mission for the PDS. Wrote Python code and utilized Bash scripts to automate creation and correction of data labels.

Presentations & Conference Proceedings

B.P. Blakley, W.M. Grundy, S.C. Tegler, S.P. Tan, A.N. Morgan, A.E. Engle, C.L. Thieberger (2023), Study of Uranian Satellite Volatiles. DPS LV, Abstract #343, oral presentation.

B.P. Blakley, B.L. Ehlmann, R.N. Greenberger, V.V. Kachmar, E.S. Sosa (2023), Laboratory Reflectance Study of Water-Ice-Regolith Mixtures for Modeling of Lunar Water Scenarios. LPSC LIV, Abstract #2578, poster.

B.P. Blakley, B.L. Ehlmann, R.N. Greenberger, V.V. Kachmar, E.S. Sosa
Laboratory Reflectance Study of Water-Ice-Regolith Mixtures for Modeling of Lunar Water Scenarios.
Mar 2023, Pasadena City College, Natural Sciences Division Poster Session, poster. **Red ribbon award.**

B.P. Blakley, S.E. Dutton, G.A. Blake
Identifying hexamer structures in alcohol:water mixes.
Jun 2022, Caltech Connections Symposium, poster.
Aug 2022, SoCal Undergraduate Chemistry Research Symposium, University of California Irvine, poster.

Publications

B.P. Blakley, W.M. Grundy, J.K. Steckloff, S.P. Tan, J. Hanley, A.E. Engle, S.C. Tegler, G.E. Lindberg, S.M. Raposa, K.J. Koga, and C.L. Thieberger (2024), The equilibrium vapor pressures of ammonia and oxygen ices at outer solar system temperatures. *Planetary and Space Science*, 244, p.105863.

W.M. Grundy, S.C. Tegler, J.K. Steckloff, S.P. Tan, , M.J. Loeffler, A.V. Jasko, K.J. Koga, **B.P. Blakley**, S.M. Raposa, A.E. Engle, C.L. Thieberger, J. Hanley, G.E. Lindberg, M.D. Gomez, and A.O. Madden-Watson (2023), Laboratory measurement of volatile ice vapor pressures with a quartz crystal microbalance. *Icarus*, p.115767.

Teaching & Service

Caltech Connections—Astronomy Research Mentorship Program 2022-2024

Undergraduate Liaison, Small-group Facilitators

Worked with Caltech Connections leaders Tiffany Kimoto, Scott Cushing, and Jared Ashcroft to expand the mentorship program into the Astronomy department. Designed and led a small-group pilot program to provide support for mentors and create a community of mentees. Ongoing work includes supporting the roll-out of the pilot program to all major focus areas for the 2023-2024 academic year, and training new undergraduate and graduate facilitators.

Astronomy Society of the Pacific 2022-2023

NASA Partner Eclipse Ambassador

Code/Astro—Python Programming and Open-Source Software Workshop 2022

Teaching Assistant

Pasadena City College Astronomy Club 2021-2023

Founding Member (2021) and Club President (2022-2023)

Selected Work Experience

Everest Group

Oct 2020-May 2024

Digital Marketing Manager

Remote Offices, US

Everest Group is a research firm focused on strategic IT, business services, engineering services, and sourcing.

Direct efforts to optimize marketing and sales processes through automation and reporting. Bring best practices to digital marketing, A/B testing, and data analysis.

- Manage implementation projects of new technology and process improvements across revenue teams.
- Oversee marketing technology stack and train team members.
- Build and maintain end-to-end marketing and sales attribution model and real-time tracking dashboards.
- Drive increase in qualified leads through website & email user experience (UX) improvements.

Vivante Health

Jan-Aug 2020

Director of Acquisition (Growth)

Remote Offices, US

Vivante Health is a Software-as-a-Service (SaaS) digital healthcare organization, providing a comprehensive digestive health program for self-insured employers.

- Developed marketing automation and lead-generation strategy, including buyer persona research.
- Designed and implemented a sales and marketing engine through Hubspot and Salesforce.
- Created email nurture program, paid ads strategy, and webinar strategy.
- Managed website redesign and user-interface/experience (UI/UX) testing program.
- Hired and managed two direct reports: content marketing strategist & visual designer.

TurnTo Networks

Nov 2018-Jan 2020

Marketing Operations Director

New York, NY & Remote

TurnTo Networks is a B2B SaaS company, providing user-generated content solutions to ecommerce retailers and brands.

- Delivered analytics and sales reporting, implemented marketing automation through Salesforce.com and Pardot.
- Promoted best practices in marketing operations, user experience, content, design, and marketing tactics.
- Acted as project manager for the marketing team, handling shifting priorities and deadlines.
- Developed and managed email marketing program and CRM database.

TurnTo Networks

Dec 2017-Nov 2018

Campaign Marketing and Brand Manager

New York, NY & Remote

- Took ownership of the company website; optimized UX, growing leads by 72% month-over-month.
- Overhauled content strategy and built marketing automation program; designed A/B testing program.

DeVry Medical International/Ross University School of Veterinary Medicine

June 2014-Nov 2017

Senior Digital Marketing Specialist

North Brunswick, NJ

DeVry Medical International was a shared services organization, under AdTalem Global Education, provided services to AdTalem medical school holdings. Ross University School of Veterinary Medicine is an accredited DVM-granting institution, and a holding of AdTalem Global Education.

- Managed website development and optimization, UX improvement.
- Implemented and developed marketing automation program.
- Boosted email engagement rates through A/B testing, customer segmentation, and promotion of best practices.

DeVry Medical International/Ross University School of Veterinary Medicine June 2014-Nov 2017

Web Designer

Woodbridge, NJ

- Oversaw website optimization; streamlined development and design processes; acted as Digital Art Director.
- Researched best practices, emerging trends and opportunities, and provided recommendations to stakeholders.