

# BP Blakley

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## Education

<b>Pasadena City College</b> <i>Geology Major (Part-time)</i> Expected date of completion Summer 2024. GPA 3.9	<b>2021-Present</b> <i>Pasadena, CA</i>
<b>School of The Art Institute of Chicago</b> <i>Bachelor of Fine Arts</i> Courses graded on credit/no-credit basis; full credits bestowed. Degree conferred spring 2010.	<b>2006-2010</b> <i>Chicago, IL</i>
<b>Wake Technical Community College</b> <i>Associate in Arts (Transfer)</i> Transferred Spring 2006. GPA 4.0	<b>2005-2006</b> <i>Raleigh, NC</i>

## Research Experience

<b>Astrophysical Materials Laboratory, Northern Arizona University (NAU)</b> <i>REU Student</i> <i>Supervisor: Dr. Will Grundy</i>	<b>Jun 2023-Present</b> <i>Flagstaff, AZ</i>
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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; an article detailing the research is in review.

<b>Lunar Trailblazer Mission, Caltech</b> <i>Research Assistant</i> <i>Supervisor: Dr. Bethany Ehlmann</i>	<b>Jan 2022-Present</b> <i>Pasadena, CA</i>
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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 geysirite 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, A.M. Engle, G.E. Lindberg, S.C. Tegler, S.M. Reposa, K.J. Koga (202X), The Equilibrium Vapor Pressures of Ammonia and Oxygen Ices at Outer Solar System Temperatures. *In review*.

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-Present

*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 the broader program, and training new undergraduate and graduate facilitators.

Astronomy Society of the Pacific

2022-Present

*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)*

## Skills & Strengths

Data Visualisation

Jupyter Notebook, Microsoft Excel, Adobe Illustrator

Programming

Python, Shell, HTML5, CSS3, Git

Document Creation

Latex, Adobe InDesign, Microsoft Word

Data Management

MySQL, Salesforce (Certified Admin)

Website Management

WordPress, Adobe Experience Manager

Operating System

Mac, Windows, Linux

Language

Spanish, French

## Relevant Coursework

Physical Geology (Grade: A)  
Physical Geology Field Studies (Grade: A)  
Independent Study in Geology (Grade: A)  
Historical Geology (In-progress; A)  
Historical Geology Field Studies (In-progress; A)  
Geologic Mapping (Spring 2024)  
Mineralogy (Spring 2024)  
Introduction to Chemistry (Grade: A)  
General Chemistry I (In-progress; A)  
General Chemistry II (Spring 2024)  
Physics 1, Calculus-based Mechanics (Grade: A)  
Physics 2, Calculus-based E&M (Grade: B)

Single Variable Calculus 1 (Grade: A)  
Single Variable Calculus 2 (Grade: A)  
Multivariable Calculus (Grade: A)  
Linear Algebra (Grade: A)  
Astronomy (Grade: A)  
Principles of Biology (Grade: A)  
Python Programming & Open-Source Software (Workshop)  
MySQL Database Management (Certificate)  
Introduction to GIS (Spring 2024)  
GIS Map Interpretation and Spatial Analysis (Spring 2024)

## Selected Work Experience

### Everest Group

Oct 2020-Present

#### *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.