



# Department of Chemistry

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COLLEGE OF SCIENCE | THE UNIVERSITY OF UTAH

## **TOGETHER APART**

**Education, Research, & Community  
During the COVID-19 Pandemic**

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Spring 2020

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Transition to Online Education  
Building Closures & Essential Research  
Graduation Celebrations In a Box & Online

Dear Friends of Chemistry,

We hope you and all of your loved ones are safe and healthy during this unprecedented time, as we all try to flatten the spread of COVID-19. Our faculty and staff have been working hard to transition all our courses to an online platform that was launched on March 18th, while our research labs have been limited to only essential research operations as of March 20th.

We are doing all that we can to contribute to efforts to slow the spread of the virus in our community and city. Our students, faculty, and staff have all been asked to work from home, while those few who need to monitor the buildings and labs are adhering to strict safety protocols. As a department, we have offered to donate both personal protective equipment and chemicals needed for COVID-19 testing to the University Hospital and ARUP including 79,400 nitrile gloves, 605 safety glasses, and 31 N95 respirators. We have taken the health and safety of our students, staff, faculty, and university community very seriously, and hope to resume on-campus research and education as soon as it is safe to do so.

We look forward to connecting with all of you again when everything settles down, and we are able to return to a fully operational department. Please reach out to me or Anne Vivienne ([anne.vivienne@utah.edu](mailto:anne.vivienne@utah.edu)) if you have any questions or concerns in the meantime.

Stay well and safe.

With warmest regards,



Matthew S. Sigman  
Distinguished Professor and Department Chair  
Peter J. Christine S. Stang Presidential Endowed Chair in  
Chemistry

## The Sigman Group: April 2020



# transition timeline

Our students left for spring break early in March just as all of us began to sense that our world was about to change like we've never experienced before. There was and is no road map for this unprecedented situation. For the faculty and staff, the week of spring break was suddenly filled with meetings and strategizing. The Department of Chemistry spent the entire week quickly putting measures in place to secure the safety and well-being of its students, staff, and faculty. Here's how the Department of Chemistry got things in order working with the University and the College of Science within ten days thanks to the cooperation and collaboration of faculty and staff, and what's happened since it all began:

**Monday  
March 9,  
2020**

- Chemistry Seminar visitors given option to cancel their trip if they feel it is safer.
- University restricts all university-related business travel.

**Wednesday  
March 11,  
2020**

- Classes canceled for Monday and Tuesday to give professors and instructors time to transition to online courses.

**Friday  
March 13,  
2020**

- Summer abroad programs canceled
- Possibility that summer courses will also be online

**Wednesday  
March 18,  
2020**

- 5.7 Earthquake
- First day of online classes canceled.

**Wednesday  
April 1,  
2020**

PPE Donations to U Hospital & ARUP:  
79,400 Nitrile Gloves  
605 Safety Glasses  
31 N95 Respirators

**Tuesday  
March 10,  
2020**

- Message from Dean Trapa: prepare for possible transition to online classes and students returning from spring break should self-isolate.

**Thursday  
March 12,  
2020**

- Lab Action Plans:
- Allowed and Disallowed Work
    - Critical 14-Day Instrument Maintenance
    - Non-critical 14-day Instrument Maintenance
  - All group meetings go virtual

**Sunday  
March 15,  
2020**

- Non-essential Chemistry staff will telecommute and work from home if possible.

**Thursday  
March 19,  
2020**

- NMR Center & Mass Spec Core Closures
- Essential Research:  
Caring for living organisms  
Maintaining continuous cell lines  
Maintaining equipment and reagents

**Friday  
April 3,  
2020**

University-wide Hiring Freeze implemented.

# THANK YOU!

## **Renee Laws** **Administrative Director**

Renee is always keeping this department together and helping us grow. Her leadership during the quick transition to keep the students, faculty, and staff safe is remarkable.

## **Jim Muller** **Facilities Director, Optical Spectroscopy Director,** **Mass Spec/Research Associate Professor**

Jim makes sure the facilities are safe and functional as he orchestrates regular safety inspections, manages construction and remodeling projects, and makes research and education possible. During the closures, he's been on campus making sure everything continues to run safely.

## **Craig Erickson** **Facilities Coordinator**

Hired at the beginning of the year, Craig's arrival couldn't have been better timed. He's been essential in assisting Jim on campus as they work together to keep everything running in the building while the rest of us are at home.

## **Emily Platt** **Undergraduate Academic Advisor**

Emily has played a significant role helping students get settled into their online courses and testing, and has helped to organize alternative graduation plans. As the students have needed help or someone to listen, Emily has been there for them.

# **We Are Stronger As One**

## **Personal Protection Equipment Donated to The University of Utah Hospital**

**79,400**  
**Nitrile**  
**Gloves**

**605**  
**Safety**  
**Glasses**

**31**  
**N95**  
**Respirators**

Donations Provided By:  
Department of Chemistry Stockroom  
ACS Student Chapter  
Burrows Research Lab



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## **COVID-19 RESEARCH**

Two members of our faculty have received seed grants from the University of Utah to pursue research directly related to testing and treatment for the virus.

**Jon Rainier**

The Synthesis of  
Coronavirus Translation Inhibitors

**Matthew Kieber-Emmons**

Thermodynamic Considerations for  
Zinc Chemotherapeutics towards  
Emergent Coronavirus

**CONGRATULATIONS, GRADUATES!**



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# Graduation 2020



# Comes In a Box

For our students who have worked for so many years for this moment, many of them overcoming significant hurdles and obstacles to get here, graduation is a rite of passage signifying to themselves and their community that they have gained the skills and knowledge to contribute to making this world a better and brighter place. We could not let spring pass without acknowledging their success and celebrating with them.

The College of Science is sending out Graduation In a Box this spring which will include:

Two Convocation Programs

A College of Science Mug

Honors or Internship Cords Awarded by  
The College of Science



**The College of Science will host an  
in-person convocation in December for Graduates.**

CLASS OF  
2020



CHEMISTRY

## Dominique Pablito



I fell in love with chemistry because of the many domains of research that fall within the department. The projects range from water conservation, finding alternatives for renewable resources, crop growth, medical research, and so much more.

Natascha Knowlton (one of Chemistry's student advisors) kept me going when I wanted to give up. I walked into her office at the age of 15 to declare my degree in the Chemistry Department. Throughout the years, I have faced numerous challenges. Both of my parents abandoned my life freshman year, I was diagnosed with an adrenal tumor my sophomore year, underwent surgery my junior year, and have lost many family members throughout my time in college. As a Native American student studying far from my home on the reservation, I constantly felt like returning home when things got hard. Living away from my people, language, and culture has had a huge effect on my mental health. Natascha Knowlton and Whitney Hills were definitely big assets for me during the challenging moments of my life.

After graduation, I will be pursuing my Ph.D. at Brown University in the Molecular Biology, Cell Biology, and Biochemistry Department. I plan to celebrate this accomplishment by taking a one year break from school to spend time with my family and learn more about my culture. I look forward to returning home and taking a break because I have gone to school year-round for my entire life. I never took a break which is how I've managed to graduate high school at the age of 15 and now college at the age of 20.

## Connor Terry Weatherly



"Connor has been working in my lab for three years on the physics and chemistry of electron-transfer reactions at three-phase boundaries, research that impacts energy storage and generation technologies. He has published his research in leading chemistry journals, and is headed to graduate school next year (he has been accepted at Cal Tech and several other top chemistry graduate programs). His undergraduate research has not only contributed to an important scientific area, but has prepared him for graduate school and beyond."

- Professor Henry White

## Nick Olsen



I fell in love with chemistry gradually. My favorite part was how it changed the way I looked at everyday objects. There's a lot more going on in glass of water than I expected.

There are so many people that inspired me throughout my time at the University of Utah! Caitlin Coplin is the sweetest smartest person out there, Michael Grünwald is a fantastic and jolly mentor, and Samira Gholami helped me take those first few steps necessary to get engaged on campus!

I'm going to Columbia University to pursue a PhD in chemical physics! I gotta get more time in the pretty Utah wilderness before I move.

## Rachel Cantrell



I am going to Yale this fall to pursue my PhD in Organic Chemistry, where I plan to conduct total synthesis research. I am immensely grateful to have been a member of the Looper Group since freshman year, and I will always be thankful for the support I've received from Professor Looper and my labmates! (Rachel was last year's Goldwater Scholar).

## Sara Leininger



I took chemistry my senior year of high school, and really struggled through it for the first 8 months. But in the last month of school, my teacher pulled me aside and told me that I had a talent for chemistry, and suddenly my perspective totally changed. It all started to make sense for me, and I began to love working in chemistry. Here at the U, I've had so many supportive professors that have made student success their priority, and have helped me build my confidence in science.

# CLASS OF 2020



*spotlights*

# CHEMISTRY

## Erin Johnston



I fell in love with chemistry (specifically nuclear chemistry) in Gen Chem II, taught by Jeff Statler. Before that, I hadn't really known why I pursued chemistry other than it sounded cool. It's not the most glamorous origin story, but it wound up working out pretty well. I begin my PhD in Nuclear Engineering at the U of U this summer which I am very much looking forward to.

There are too many people at the University of Utah that encouraged me in my many moments of doubt to discuss only one. The following assisted me through my undergraduate experience with their unwavering faith in my abilities, and truly are to thank for my success in this four-year journey: Tascha Knowlton, Jeff Statler, Dr. Matthew Cecil, Dr. Sam Carroll, Dr. Luther McDonald, Dr. Michael Morse, Madi Odette, and Caitlyn Greenburg.

To celebrate my graduation, I plan to binge eat gas station candy while watching old seasons of Project Runway until 2AM.

## Kiana Luu



## Kason Glover



My love for chemistry really started in high school when I had to take some medication that gave me ridiculous goosebumps as a side effect. My fascination with how that happened led to a more serious study of chemistry, and my time at the U has allowed me to explore that and a host of other questions about the chemical nature of the human body.

I've been accepted to the PhD program at the University of Michigan, and head there this fall! I think I'm going to buy a new camera.

## Jessie Ann Montgomery



Chemistry was the subject that made me fall back in love with science. I spent my freshman year of high school taking Honor Biology, which I absolutely hated. However, it set me up to take "normal" chemistry my sophomore year, which was a blessing in disguise. I reveled in the study of elements & molecules. As if the tears shed over obtaining my bachelor's wasn't enough, I've decided to go do more schooling after this. I'm planning on taking a gap year to work as a medical assistant and conduct research. I guess one degree just wasn't enough for me!

## Marisa Asadian

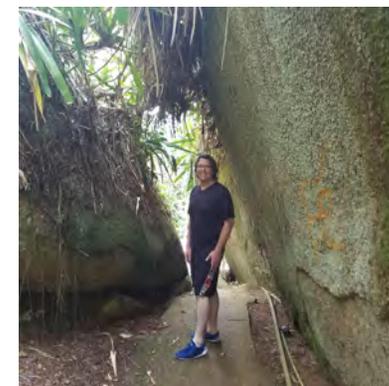


I fell in love with science as a child intrigued by nature, the skies, and the stars. The historical aspect of quantum mechanics has always been so fascinating to me. When I took General Chemistry, I truly enjoyed problem-solving, and learning about thermodynamics, leading me to become a chemist today.

I have been fortunate to have many great professors including Prof. Peter Armentrout who allowed me to be a part of his research lab, and Prof. Michael Morse, my hero in Quantum Chemistry, whom I also took a graduate course in spectroscopy.

I will be starting my Ph.D. in Chemistry at the University of Illinois Urbana-Champaign in fall 2020. In the meantime, I plan on working on my German and enjoying the beautiful scenery of Utah.

## Austin Goodwin



I absolutely fell in love with Chemistry from a biology class in High School actually. I found that I loved the chemistry side of things much more and I decided to jump right into chemistry after that. I don't regret it at all and I love that there is always more to learn.

# Chemistry Student Awards and Scholarships

## UNDERGRADUATE

**American Institute of Chemists Award**  
Allison Jacobsen

**Senior Comprehensive Exam Prize**  
Allison Jacobsen

**Walter D. & Grace G. Bonner Memorial Awards**  
Natasha Andreasen  
Kason Glover  
Kathryn Jones  
Yingyue Li  
Rachel Payne  
Susanna An Tang

Magdalene Brueggemeyer  
Elliott Gray  
Sara Leininger  
Nicholas Olsen  
Anthony Phero  
Chase Zagorec-Marks

**COS Outstanding Senior Undergraduate Researcher Award**  
Connor Terry Weatherly

**Dean's Scholarships (College of Science)**  
Bassel Tekarli  
Rory Weeks  
Emily Yang

**Crocker House Scholarship**  
Lillee Casselman

**Joseph T. Crockett M.D. Memorial Scholarships**  
Corvin Arveseth  
Kaden Rawson

**James M. Sugihara Scholarship (CoS)**  
Brekke Pattison

**Paul C. and Darice F. Koo Scholarship**  
Yexalen Barrera

**National Science Foundation Predoctoral Fellow**  
Connor Terry Weatherly

**Undergraduate Research Award**  
Susanna An Tang

**Honors in Chemistry Awards**  
Magdalene Brueggemeyer  
Kathryn Jones  
Jessie Montgomery  
Wallis Scholl

Rachel Cantrell  
Nicholas Olsen  
Siani Weston  
Chase Zagorec-Marks

**ACS Division of Inorganic Chemistry Award**  
Magdalene Brueggemeyer

**ACS Division of Organic Chemistry Award**  
Rachel Cantrell

**ACS Division of Physical Chemistry Award**  
Allison Jacobsen

**ACS Division of Analytical Chemistry Award**  
Alayna Arnholt

**Leon Watters Memorial Awards**  
James Carrington  
Brayden Fairbourn  
Kincade Stevenson  
Aryana Vadipour

**Ferdinand A. & Ruth Anderson Peterson Scholarships**  
Christopher Nielson  
Jose Rivera

**Departmental Tuition Benefit Scholarships**  
Julia Case  
Alex Engstrom  
Samantha Kraus  
Joshua Walker  
Rory Weeks

**The Ronald & Eileen Ragsdale Undergraduate Endowment Scholarships**  
Brighton Alvey (Burdett Awards)  
Brandt Graham  
Min Htet Kyaw  
Noah Shepard (Eyring Award)  
David Swan (Reese Award)

**Undergraduate Research Scholarships**  
Tyler Ball  
Alex Engstrom  
Christopher Nielson

# Chemistry Student Awards and Scholarships

## UNDERGRADUATE

### Goldwater Scholarships

Rachel Cantrell (2019-2020)  
Lydia Fries (2020-2021)

### Mack Thomas Rozelle Scholarships

Alayna Arnholt  
Tyler Ball  
Shelby Galinat  
Samantha Kraus  
Jarom Mercer  
Jose Rivera  
Kincade Stevenson  
Joshua Walker  
Emily Yang

### Lloyd E. Malm Memorial Awards

Lillee Casselman  
Connor Elggren  
Kevin Lutz  
Warren McCarthy  
Chris McNerney  
Grace Moore

### Laura Foot Award

Sarada Adhikari Timsina

### W.H. Breckenridge Honors Scholarship

Alison Wang

### Educational Service Awards

Paul Basking  
Caitlin Coplin  
Heather Cummins  
Kaitlin Marler  
Nicholas Papadopoulos  
Henry Ponce  
Alice Snelling  
Ella Spurlock  
Anna Thomas  
Hector Torres  
Tobi Yoon

### Teaching Assistants of the Semester Recognitions

Liz Cowgill  
Dale Cummings  
Jessica Garcia  
Allison Jacobsen  
Brian Johns  
Hyonoo Joo  
Marcus Mifflin  
Sasha Moonitz  
Yulia Piminova  
Jordan Reelitz  
Nathan Ricks

### Teaching Assistants of the Year

Kaelen Harris  
John Kim

## GRADUATE

### Cheves T. Walling Graduate Research Awards

Cheryl Mathis  
Peter Stevenson

### Dow Chemical First-Year Scholarships

Changhang Dai  
Nicholas Vitti  
Marcus Mifflin

### The Ronald & Eileen Ragsdale Curie Club

Graduate Research Awards  
Pavithra Naullage  
Mengwei Yuan

### Anthony W. Czarnik Curie Club

Graduate Teaching Award  
Lori Digal

### Craig & Linda Lee Curie Club

Graduate Teaching Award  
Emily Kirkeby

### NSF Graduate Research Fellow

Amy Morren

# Chemistry Faculty Awards

**University of Utah  
Rosenblatt Prize for Excellence**

Cynthia J. Burrows  
Distinguished Professor

**American Chemical Society  
Leadership in Publishing Award**

Cynthia J. Burrows  
Distinguished Professor

**Phi Beta Kappa Visiting Scholar**

Cynthia J. Burrows  
Distinguished Professor

**Mayent-Rothschild Sabbatical Award**

Cynthia J. Burrows  
Distinguished Professor

**Royce W. Murray  
Young Investigator Award**

Martin Edwards  
Research Assistant Professor

**Fellow of the  
American Chemical Society**

Joel Harris  
Distinguished Professor

**Eastern Analytical Symposium Award  
for Outstanding Achievements in  
the Fields of Analytical Chemistry**

Joel Harris  
Distinguished Professor

**American Chemical Society Award  
in Spectrochemical Analysis**

Joel Harris  
Distinguished Professor

**The Analytical Science  
Power List 2019**

Joel Harris  
Distinguished Professor

**Jon M. Huntsman Presidential Chair**

Ryan Looper  
Professor

**AAA If/Then Ambassador**

Janis Louie  
Professor

**International Society of  
Electrochemistry Fellow**

Shelley D. Minteer  
Professor

**University of Utah Distinguished  
Research Award (2020)**

Shelley D. Minteer  
Professor

**The Society of Electroanalytical  
Chemistry Reilly Award**

Shelley D. Minteer  
Professor

**Dale and Susan Poulter Endowed Chair  
of Biological Chemistry**

Shelley D. Minteer  
Professor

**Distinguished Professor of Chemistry**

Valeria Molinero

**National Academy of Sciences  
Publishing Cozzarelli Prize**

Valeria Molinero  
Distinguished Professor

**Jack and Peg Simons Endowed Professor  
of Theoretical Chemistry**

Valeria Molinero  
Distinguished Professor

**NSF Early Career Award**

Caroline Saouma  
Assistant Professor

**American Institute of Chemists  
Gold Medal**

Peter Stang  
Distinguished Professor

**National Academy of Inventors Fellow**

Peter Stang  
Distinguished Professor

**John A. Widtsoe Presidential  
Endowed Chair in Chemistry**

Henry White  
Distinguished Professor

**W.W. Epstein Outstanding  
Educator Award**

Luisa Whittaker-Brooks

# Staff Service Recognitions



**10 Years**

Aaron Fleming

**15 Years**

Steve Brown  
Katherine Snow  
Lucy Houser

**25 Years**

James Muller

**30 Years**

Dennis Edwards