

CHEMISTRY & BIOCHEMISTRY NEWSLETTER



ITHACA COLLEGE
2023-2024



Key Points

We pay tribute to Dr. Bergmark and Dr. Eberhard

IC₆₀ : The Chemistry Dept. celebrates 60 years!

Student Scholarships & Awards

Alumni Seminars

Congratulations to our Class of 2023

Maxwell Bridges Chemistry, BA

Benjamin Rath Chemistry, BS

Nat Risheg Chemistry, BS

Innocenzo Martellucci Chemistry, BS

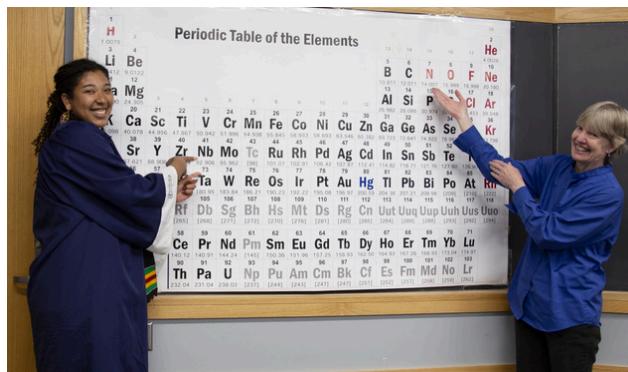
Alexander Rono Biochemistry, BS *

Tenjing Sherpa Chemistry, BS *

Pierce Pfaff Biochemistry, BS *

Talia Morris Chemistry, BS *

*Not pictured above



Periodic Trivia
Talia Morris '23 &
Prof. Janet Hunting

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In Remembrance of Dr. Bergmark



William (Bill) Russell Bergmark (b. October 28, 1940 – d. December 24, 2023) of Ithaca, NY died peacefully during the early hours of Christmas Eve Day, following a brief at-home hospice care and a long, but successful post-retirement life with Parkinson's.

Bill was born in Mankato, MN as the only child of Mr. and Mrs. Russell Bergmark where he graduated high school, then earned his BA degrees in mathematics and chemistry from St. Olaf in Northfield, MN in 1962. He earned his PhD from the Massachusetts Institute of Technology (MIT) in 1966 with a special interest in organic chemistry and photochemistry.

Just before entering his doctoral program at MIT, he met his wife, Donna (nee Caroon) a student attending Carleton College, also in Northfield, MN. They moved to Cambridge following their 1963 wedding, where they finished their respective degrees. After receiving his PhD, Bill became a research associate at SUNY Buffalo, as well as a research chemist studying chemiluminescence for the American Cyanamid Co in NJ.

Bill quickly shifted gears away from corporate applications, which led the Bergmarks to Ithaca in 1968 where they joined the community and launched their careers in academic pursuits. Throughout their lives in Ithaca, Bill and Donna invested their time and resources with glee and gusto through their last days. Living and fully participating in the intellectual, progressive, and active community of Ithaca was a perfect fit for these bright stars.

Bill was made an Associate Professor at Ithaca College in Organic Chemistry in 1971, judicial administrator in 1972, Professor in 1973, and was named Professor Emeritus in 2003. He served as a chair of the Chemistry Department and was author or co-author of over 40 research papers, with an emphasis on the synthesis and characterization of organic compounds and their interactions with light. Many of his high-impact papers featured Ithaca College students as co-authors, underscoring his commitment both to the field of photochemistry as well as to undergraduate education. Bill also served as chairperson and board member of many Ithaca College committees and had a career-long involvement in the local American Chemical Society.



Bill was an avid skier and aviator, including his time with the East Hill Flying Club. Bill applied his brilliant mind to critical thinking in mathematical and scientific pursuits, as well as to his favorite card games ranging from Cribbage, Canasta, and Bulls*** to his more significant competitions in the American Contract Bridge League. He was also an exacting gourmet home chef using ingredients from their gardens and wine collection. He enjoyed travels with his many friends and family, on trips and cruises all over the world. As much as those far-flung worldly travels, he loved the rugged wilderness, including cross country skiing and hiking all around Ithaca and surrounding Finger Lakes areas, as well as backpack camping/canoeing on the Boundary Waters and MN lakes.

Donna and Bill were enthusiastic and loving spouses to each other until her sudden passing in 2015. He was able to move to the Longview community near the other love of his life, Ithaca College. Shortly after, and at a time when he needed hope, he met Hope Horst who helped him regain his appetite for life. Bill and Hope eventually became companions and traveled, enjoyed each other's company, and lived contently at her home throughout the pandemic and for the remainder of his life, including the challenges they faced during his journey through Parkinson's. Bill's friends and family are grateful for this close companionship as we know Bill cared for Hope very much and made his remaining years filled with happiness and good times.

Bill was preceded in death by his wife of 52 years, Donna (Caroon) Bergmark as well as his parents and beloved in-laws Tom Caroon, David Ball and Joan Caroon. He is survived by his sister-in-law Janet (Caroon) Evans, nieces Katie and Kristi, nephews Scott and PJ, his MN cousins, his late-life companion Hope, his long-time friend Glenn Vogel, and his many former students. All of us are better for having been in his wingspan.

Bill will be missed in the hearts and minds of all those who loved him, enjoyed life with him, and learned with him.

To learn more about Bill's extraordinary life, please visit the link below.

[Click for Link](#)

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03/15

In Remembrance of Dr. Eberhard



Anatol Eberhard died at age 85 on January 9, 2024 at home in his "House in the Woods" in Sippewissett. He lived with dementia for five years supported by his caregiver wife of 59 years Carolyn (Veeder) with help from caregivers Amy, Deb, Michelle, Penelope, VNA Hospice, volunteer Kyle, and many other friends and neighbors.

He was born November 13, 1938 in Istanbul Turkey to Wolfram Eberhard and Alide Eberhard. (Wolfram was named after the Element W (tungsten) that was first discovered in the sun by Anatol's grandfather Gustav). During the hardscrabble war years the family escaped Germany (no jobs), lived briefly in

China where his brother Rainer was born in 1935, and then in Ankara, Turkey where his father taught at the University of Ankara. Why the name Anatol? He was named after Anatolia where they lived, but because only names from German literature were allowed, after Schnitzle's play, ANATOL.

The family of 4 was forced to leave Turkey in Sept 1948 but Wolfram was recruited to teach at UC Berkeley where they arrived after an exciting voyage in the empty Liberty ship SS Exton through an Atlantic hurricane, Ellis Island and a sick-making Greyhound bus trip.

Anatol was 9 and the only English word he knew was U-S-A. Starting out as a mostly mute sixth grade crossing guard, he climbed the academic ladder through public schools, UC Berkeley in chemistry, earning a Phi Beta Kappa Key and a Woodrow Wilson Fellowship to Harvard Chemistry for his PhD. In summer 1962, he was advised to learn some Biology and enrolled in the Physiology Course directed by Woody Hastings at the Marine Biological Laboratory in Woods Hole where he met course assistant Carolyn Veeder. They married in 1964 while he was a postdoc with Dan Mazia (another MBL connection) in Berkeley. Woody became their lifelong mentor and brought Anatol to Harvard Biology in Cambridge for a five year stint as Assistant Professor. After a year at Fairleigh Dickenson in New Jersey, he joined the Chemistry Dept at Ithaca College, Carolyn joined Biology at Cornell, and they began enjoying the rural life in upstate Ithaca. Hiking, snowshoeing, Cayuga Lake, windsurfing and deer hunting. They restored an old farmhouse, including a new foundation, and built a new "retirement" lake house. They were called the "diggers". After retirement from IC, Anatol spent 10 winters with a research group at Cornell Microbiology as a volunteer adjunct professor doing lab work and advising graduate students. The main theme of his research career was marine bioluminescence and identification of the autoinducer that regulates it.

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While in Cambridge, Anatol and Carolyn spent weekends and summers in Woods Hole and naively bought a wooden sailboat (VANDA) and a tear-down carriage house to store the boat stuff. Then he brought along some lab students from Ithaca college in addition to restoring and sailing. The sailboat and 2 successors were greatly enjoyed, often with friends, and used for many cruises even as far as Maine and City Island NY. Sailing was interrupted when the 2018 "bomb cyclone" took the mast off in Falmouth Harbor. The Eberhards liked to travel and arranged sabbaticals from teaching at City of Hope (Duarte, CA), UC San Francisco, Scripps Institution of Oceanography (La Jolla, CA), the University of Konstanz (Konstanz, Germany), Woods Hole Oceanographic Institute (Woods Hole, MA), and Technion (Haifa, Israel), which produced a patent on catalytic antibodies, a first for the Ithaca College Chemistry Department. Also memorable were island vacation trips to the Virgin islands, Panama (Cuna Indians), Taiwan, Fiji (scuba), Bonaire, Dominica, Santorini, Crete, and San Salvador in the Bahamas, where he taught Ecological Chemistry to undergraduates.

Anatol leaves his wife of 59 years and co-digger Carolyn (Veeder), Eberhard nephews Eric (Cheryl), Martin (Carolyn), Karl (Karin), sister-in-law Susan Eberhard (Rainer, deceased), sister-in-law Mary Veeder-Civitello, daughter-in-law Mandi King, son-in-law Cory Civitello and in-law children. Also "cousins" Carey Miller (Peter), Kris Stott (Barry), and Ulrike "Icki" von Kaufman (Georg). Georg's German band CD provided the happiest music during Anatol's final days. In lieu of flowers, memorial donations may be made in Anatol's name to The Finger Lakes Land Trust (<https://www.flit.org/about/>), or The 300 Committee Land Trust (<https://300committee.org/>), or a charity of your choice.

**To learn more about the Eberhard Nature Preserve,
please visit the link below.**

Click for Link

**To learn more about Anatol's remarkable life,
please visit the link below.**

Click for Link



A NOTE FROM THE CHAIR

Greetings, friends! It has been a very memorable year! In October, we hosted nearly 50 alumni, students, and friends during Alumni Weekend to celebrate the Chemistry Department's "IC 60" – our 60th Anniversary Celebration! Our programming included a poster session filled with student research, a wonderful sit-down lunch, and featured a slide show of pictures curated by Glenn Vogel depicting the history of our department and the people that have made it so special.

Shortly after IC 60, Professor Stanley Whittingham of Binghamton University visited Ithaca College as part of a Jean Dreyfus Lectureship award granted to Akiko Fillinger. Professor Whittingham, who shared the 2019 Nobel Prize in Chemistry for his development of lithium ion batteries, presented two lectures related to his research and met with students and faculty. The lectures attracted members of the local public as well as Wells College and Cornell University colleagues. Both lectures were recorded and can be viewed on the IC Chemistry Department website page.

[Link Here](#)

Last May, we celebrated the graduation of six Chemistry majors and two Biochemistry majors who embarked on new journeys to graduate school and to industry. Interestingly, our 2024 seniors are those who started with us in the fall of 2020 – the first class to begin during the Covid-19 pandemic while classes were taught over Zoom! How time flies!

This year, we wished Daisy Rosas Vargas and Jamie Ellis the best of luck as they start new chapters in their careers outside of Ithaca College. We also conducted a search in the fall 2023 semester for an Assistant Professor of Chemistry specializing in biochemistry. We had an exceptional pool of applicants and we are very excited to announce that Dr. Bryan Ferlez has accepted the position to start in August of 2024 (more about Dr. Ferlez in the pages ahead).

We are extremely grateful for the many student opportunities and formative experiences noted in this newsletter, which are made possible by the generosity of our alumni! We were also thrilled to welcome back two alumni, Meghan Ricciardi '20 and Connor Shea '16, who presented seminars this past fall. Visits from alumni are always the highlight of our seminar series as rated by students! If you'd consider returning to give a seminar, or if you plan to be in the area, please let us know – we would greatly appreciate you sharing your work, career trajectory, or other topics for students! You can email me at atorelli@ithaca.edu or contact us at chemistry@ithaca.edu.

Sending you the best,
-Andy Torelli



Andrew Torelli

CHEMISTRY & BIOCHEMISTRY STUDENT SCHOLARSHIPS & AWARDS



2023 ACS National Conference

Left to right: Talia Morris '23, Max Bridges '23, Enzo Martellucci '23, Nat Risheg '23

Chemistry and biochemistry students presented their research at the 2023 American Chemical Society meeting in Indianapolis, IN funded by alumni donations. Thank you!

Roger Harris '80 Scholarship

Ginny Illingworth '25

Bill and Donna Bergmark Chemistry Scholar

Alexandra Montgomery '24
Lily Goulding '24

Russell Drago Chemistry Award

Emily Leach '24

Chemistry Book Award

Miles Wheaton '25

First Year Chemistry Award

Rishabh Sen '25
Maddy Kim '26

Glenn Vogel and Marjorie Chelley Chemistry Education Fund Award

Enzo Martellucci '23



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STANLEY WHITTINGHAM DREYFUS LECTURE



Professor Whittingham delivers his lecture on how lithium ion batteries and energy storage fit into the picture of global climate change.

We were thrilled to host a visit in October by Professor Stanley Whittingham, who shared the 2019 Nobel Prize in Chemistry for his research and development of lithium ion batteries. Professor Whittingham arrived Thursday afternoon and delivered a technical lecture on *"50 Years Old: What Are the Ultimate Limits of Lithium Batteries and How Do We Get There?"* followed by dinner with several students and faculty. The following day was dedicated to interactions with Prof. Whittingham - individual meetings with faculty, lunch with students, and another dinner with students and faculty. Finally, on Saturday, Professor Whittingham gave a talk on *"Renewable Energy, Energy Storage, and Global Climate Change."*

This event was made possible thanks to a *Jean Dreyfus Lectureship for Undergraduate Institutions* grant awarded to Akiko Fillinger. In addition to the opportunities for Ithaca College students and faculty from multiple departments to interact with a Nobel Laureate who pioneered a highly relevant and ubiquitous technology, Professor Whittingham's lectures were also made available to colleagues from nearby Wells College and Cornell University. It was important that the Ithaca College Chemistry Department was able to make this impactful experience available to the broader Ithaca Community.

In case you'd like to view the recorded lectures, the links can be found on the Ithaca College Chemistry Department website and are included below for convenience.

Technical Lecture:

[Link Here](#)

General Audience Lecture:

[Link Here](#)



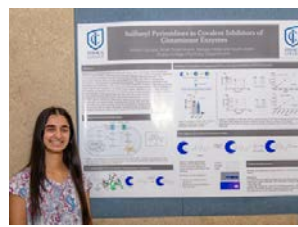
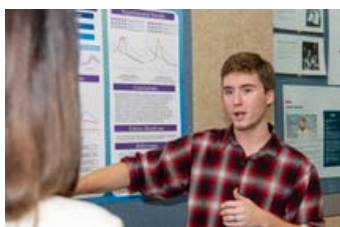
Professor Whittingham meets with Ithaca College students. Left to right: Maddy Kim '26, Brodie Hart '27, Ariel Odessky '26, Casey Ellison '27, Sierra Houck '27, Alys Pop '27



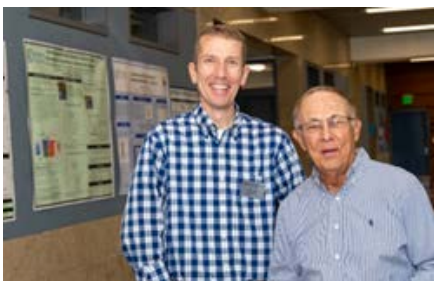
CHEMISTRY DEPARTMENT ANNIVERSARY CELEBRATION IC₆₀

The department celebrated its 60th anniversary over Alumni weekend this past Fall. We were delighted that about 50 alumni came back to celebrate this milestone and reconnect with their classmates, current faculty, and students.

The morning was spent reminiscing about the department's history. The current and former department chairs Andy Torelli and Mike Haaf led the gathering on a photo tour of the department's history, including notable people, events, and common student experiences that have defined the chemistry department since its beginning. Glenn Vogel reminded people that their E4 papers were due(!) and many alumni shared their fond recollections of faculty and staff that had recently passed, including Jim MacNeil and Heinz Koch. Former IC trustee Dr. Bill Schwab ('68) also shared his thoughts about the effects his time at IC had on his career and shared his advice for current students as they start their careers. Current and former students as well as current and former faculty and staff connected on the student experience, values, and mission of the department.



The group then walked upstairs to the third-floor atrium where current students described their independent research projects in a lively poster session. The Chemistry Club gave out commemorative T-shirts while everyone took an opportunity for one-on-one meetings and discussions.



After the poster session, the group shared lunch at the campus center lounge. While there, Glenn Vogel shared photos from the department's past. Alumni shared their guidance and advice with current students and celebrated their shared bond through IC chemistry. It was a wonderful day and we thank all the alumni and current students who came together to celebrate this anniversary!

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Fall 2023 Alumni Seminars

Connor Shea '16

PhD candidate in Biological
Oceanography,
University of Hawai'i at Mānoa
October 10, 2023

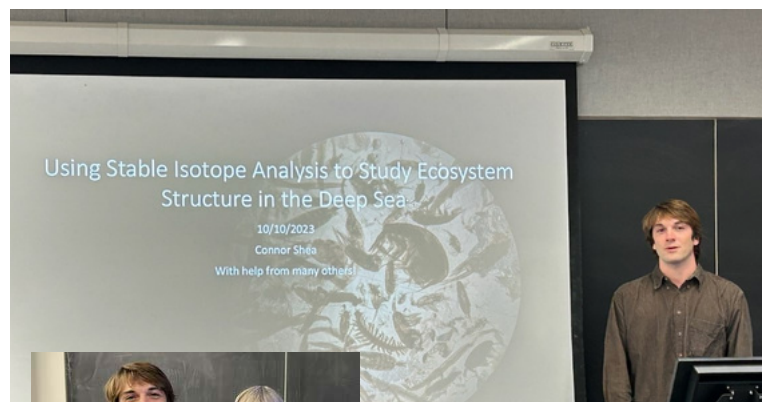
*Using Stable Isotope Analysis to
Study Ecosystem Structure
in the Deep Ocean*



Meghan Ricciardi '20

PhD candidate in Chemical
Biology/Medicinal Chemistry,
University of North Carolina
October 3, 2023

*Investigating the effect of electron
withdrawing lysine analogues on
methyllysine reader protein binding*



We love having chemistry
alumni visit for talks!

Interested? Please email
chemistry@ithaca.edu

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CHEMISTRY CLUB



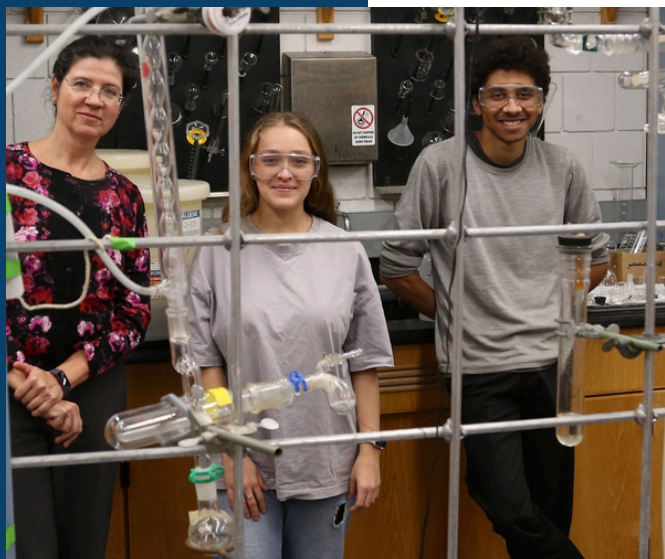
The Chemistry Club is filled with the wonders of science, whilst encapsulating the hard work and dedication of our members. Club membership comprises mostly Chemistry and Biochemistry majors and minors, but welcomes all majors. We focus on bringing science to our surroundings and the college community through volunteering and various activities such as participating in enticing Chemistry Club brackets (best of applesauce, Valentine's Day red things, and top salsa flavors). We also provide souvenirs, such as t-shirts to celebrate the accomplishments and successes of Ithaca College's 60th anniversary of the Chemistry Department. Chemistry Club facilitates connections to meet different people throughout campus and our community.



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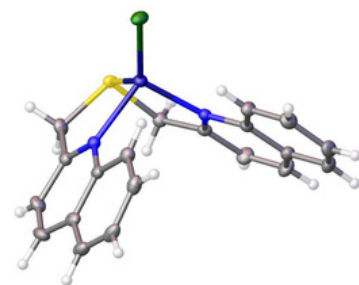


News from Anna Larsen's Lab:

left to right Anna Larsen, Mariia Grebenkina (Biochemistry '26), Miles Wheaton (Chemistry '25)

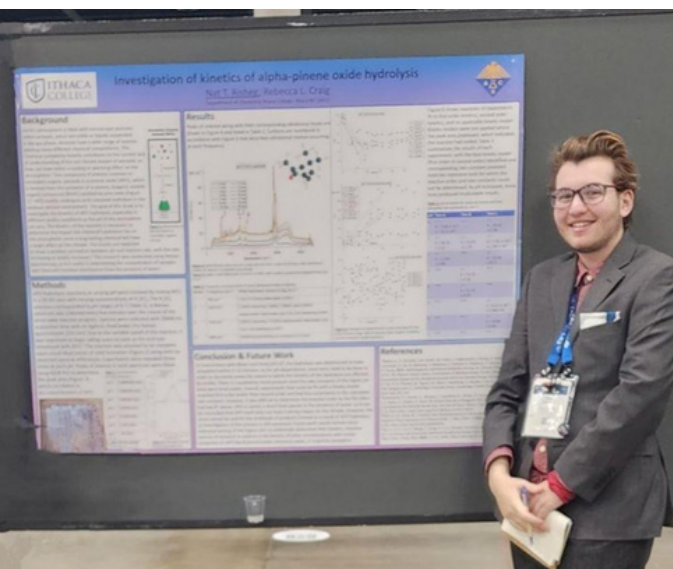
In Spring 2023, two of our long-time research lab members graduated from Ithaca College: Tenjing Sherpa (BS in chemistry) and Alex Rono (BS in Biochemistry). Ten has presented a strong research Thesis on Iridium pincer complex chemistry studied by NMR spectroscopy. The results of the work that Ten and Alex have done in our laboratory was part of the joint project with our collaborators in Texas A&M University and comprised about 1/3 of the data in the PhD thesis defended the prior summer by Vinh Nguen, a graduate student in Oleg Ozerov's lab. There is currently a peer reviewed paper in preparation, which will feature Ten, Alex and another member of our laboratory – Miles Wheaton (Chemistry '25)– among the listed coauthors. Ten has since graduated, traveled to Nepal for several month and is currently gainfully employed in Fintex, Inc in Albany NY. Miles Wheaton joined our lab in Fall of 2022 and has been involved in several projects since then. After helping with Iridium pincer complex Miles switched gears and synthesized two new quinoline based ligands. One of them – chelating BQT ligand – has been used in the reactions with several transition metals by yet another new member of our research group, Mariia Grebenkina (Biochemistry, '26). In the fall of 2023, Mariia discovered an unusual redox reaction yielding a copper (I) BQT complex (structure shown below). We are currently working on elucidating the mechanistic details of this reaction. In the meantime, Miles is pursuing another joint project with TAMU chemists – now approaching air-sensitive tetra-dentate "PP3" ligand, which we will be using in synthesis of various transition metal complexes with pro-catalytic properties. Both Mariia and Miles are planning to do summer research internships in one of the research universities in US, which would be second REU for Miles – after his 2023 summer REU in PennState.

Anna Larsen has been serving in the position of the Councilor of the Local Cornell ACS section for the past 2 years. She is involved in various activities sponsored by ACS – such as joint Spring Ithaca College x Cornell undergraduate research chemistry symposia, summer chemistry picnics and other events, as well as in councilors sessions and Inorganic Division technical programming at the National ACS meetings. Additionally, Anna has recently served on the National Science Foundation panel.



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Hello from the Craig Lab:

Nat Risheg '23 with their poster at the ACS Meeting.

Nat Risheg (Chemistry '23) wrapped up two years of research in Becky Craig's lab on atmospherically relevant reactions of alpha pinene oxide. They presented their senior thesis project 'Investigation of kinetics of alpha pinene oxide hydrolysis' at the ACS National Meeting in Indianapolis, IN in March 2023. This project was a comprehensive study aimed at determining reaction rates and order over a range of pH conditions. Nat graduated in May 2023 and is now a chemist at MRIGlobal.

Patty McHugh (Environmental Science '25) joined the lab in Spring 2023 and is continuing work on the alpha pinene oxide project.

In Spring 2023, Emily Leach (Chemistry and Physics '24) joined the Craig lab to work on a chemical education project in collaboration with the Torelli lab. The goal of the project is to use cell phone compatible devices and IR thermography to develop classroom and lab activities to help visualize and improve understanding of abstract concepts related to heat transfer, evolution, and temperature. Emily has continued this work into her senior year and it will be the focus of her senior thesis project.

Lily Goulding (Chemistry '24) returned from a semester abroad in Australia and joined the lab in Fall 2023 for her senior thesis project. The goal of Lily's research is to characterize the kinetics of reactions relevant to secondary organic aerosol. A few specific reactions of interest include small organic acids, such as oxalic acid and succinic acid, with hydroxyl radical and hydrolysis of beta pinene oxide. Lily has the added challenge of needing to synthesize some of her compounds before being able to study their reactions.

Both Emily and Lily were accepted to present their research at the ACS National Meeting in New Orleans, LA in March 2024.

Janet Hunting's Lab:

Hunting Materials Chemistry
Research Group: Spring 2024.

Front row: Anya Kraenzel ('27), Trinity Bellamy ('25), Maddy Kim ('26), Lucia Moix ('27). Back row: Ella Carbray ('27), Ariel Odessky ('26), Janet Hunting, Ariel Esteva ('24)



A Note from our new faculty member:

Bryan Ferlez



My name is Bryan Ferlez and I am thrilled to be joining the Chemistry department at Ithaca College in the Fall of 2024! I grew up in Pennsylvania and taught high school chemistry in the Bronx, NY as a NYC Teaching Fellow before pursuing a PhD on the light-driven electron transfer reactions of photosynthesis at Penn State. As a postdoc at the Department of Energy Plant Research Laboratory I received the Anton Lang memorial award for my work on bacterial organelles, which I am very excited to be continuing with students at IC. Since 2022, I've been a postdoc in the Crickard Lab at Cornell University where we study the biochemistry of DNA repair. The strong support for undergraduate research and the close-knit community of faculty and students attracted me to Ithaca College and it's an absolute honor to be joining such a great team of engaged educators. When I'm not in the lab or the classroom, you'll find me either walking in the woods, or searching for new music to listen to or play – in pursuit of the latter, I've been a radio DJ at a local NPR station, the clarinetist for the Open Music Ensemble in Pennsylvania, a shape note singer, and more recently, a guitarist-in-training.

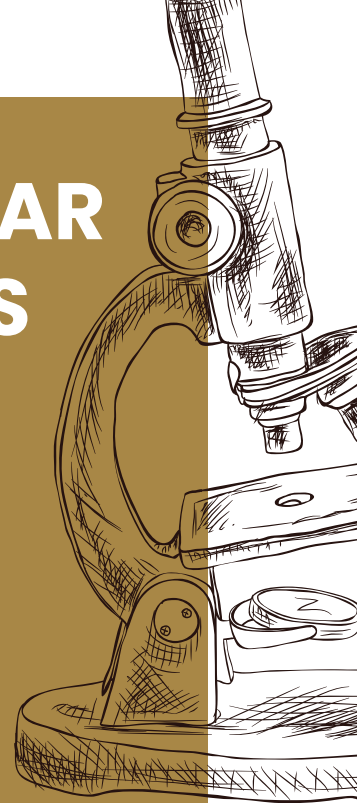


Professor Becky Craig & Jacob Adams '27 2023

MOLECULAR MOMENTS



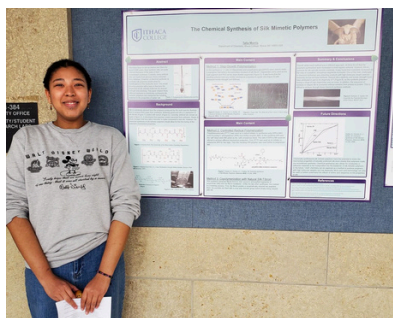
Nat Risheg '23 & Tessa Kurtz '23
2023 Senior Brewery



Noah Strathmann '24 & Jake Perkins '24 2023



Brady Sullivan '27 & Payton Yahner '27



Talia Morris '23 Polymer Poster Session 2023



Prof. Mike Haaf '94 & Nat Risheg '23
Popsicle Party 2023

Stay connected!



Prof. Mike Haaf '94, Rishabh Sen '25, Lilly Johnson '25, Abby Costa '25

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