

49th National Organic Chemistry Symposium



**49th National Organic Chemistry Symposium [June 22-26, 2025]
Rensselaer Polytechnic Institute (RPI) Troy, NY, USA**



49th National Organic Chemistry Symposium

Rensselaer Polytechnic Institute

Troy, New York

June 22 – 26, 2025

Table of Contents

Welcome & History	2
Sponsors & Exhibitors.....	7
DOC Committee Members / Symposium Organizers.....	10
Benefits of Becoming a DOC Member	12
Symposium Schedule	13
Lecture Abstracts	18
The Roger Adams Award.....	27
Lecture Abstracts (continued).....	29
Afternoon Programming	37
NOS Travel Awards	39
Poster Schedule with Titles & Authors	41
General Information	73
Info for People Staying in the Blitman Dormitory (new 6/13/2025)	75
Info for Attendees Staying at Troy Hotels (new 6/13/2025)	77
Campus Map	79

Welcome to Rensselaer Polytechnic Institute

On behalf of the Executive Committee of the Division of Organic Chemistry (DOC) of the American Chemical Society and the Department of Chemistry & Chemical Biology at Rensselaer Polytechnic Institute (RPI), we welcome you to the 49th National Organic Chemistry Symposium (NOS) as we celebrate the 100-year anniversary of this event. This biennial symposium is the premier event sponsored by the DOC and its goal is to present a roster of distinguished speakers that represent the breadth and creative advances of organic chemistry.

The first NOS was held in Rochester, NY in 1925 and a closer look at this historic symposium is provided below. The early organizers decided on a biennial sequence and the NOS has been held in odd-numbered years ever since, with two exceptions: WWII led to the 1943 and 1945 symposia being canceled and the COVID pandemic caused the 2021 NOS to be held in 2022. The NOS was held in New York State five previous times (1925, 1933, 1935, 1957, and 1989) and so our theme this year is *Return to the Roots* as the NOS is once again being held in NY for the record sixth time.

In 1959, the Roger Adams Award was established, and it has been associated with the NOS from the start. The 49th National Organic Chemistry Symposium features 17 plenary speakers, including the 2025 Roger Adams Awardee, Eric N. Jacobsen of Harvard University.

The lectures will be held in the Concert Hall of the Curtis R. Priem Experimental Media and Performing Arts Center (EMPAC). The nightly poster sessions, featuring a total of over 250 posters, will be held in Studio 1 and Studio 2 in EMPAC. There is also optional afternoon programming: a lecture by Phaedria Maria St. Hilaire, two career panels, and the popular undergraduate context session. We are excited to welcome over 450 attendees to the NOS.

Rensselaer is honored to host this prestigious event on our historic Troy campus, where innovation and interdisciplinary collaboration are part of our core identity. We are proud to support the advancement of organic chemistry and the frontiers of chemistry and chemical biology. We are excited to provide a vibrant setting for the exchange of cutting-edge research, inspiring ideas, and new connections. We hope you enjoy the stimulating scientific program, the opportunity to engage with colleagues from around the world, and the warm hospitality of the Capital Region. The organizers have arranged several activities including a riverboat ride on the Hudson River and a tour of the New York State Capitol Building in downtown Albany. Additional attractions in the region are described at the end of this program book.

We thank all of our sponsors and exhibitors for providing generous financial support for the NOS. This critical support makes the NOS possible. We also wish to thank the dozens of organizers and volunteers who have helped plan this event. Finally, we thank *you* for attending and participating to help us celebrate the 100-year anniversary of the National Organic Chemistry Symposium.

Edward E. Fenlon
49th NOS Executive Officer
Franklin & Marshall College

Christopher L. Cioffi
49th NOS Local Chair
Rensselaer Polytechnic Institute

The First NOS • 100 Years Ago

In late December 1925, around 175 organic chemists gathered for a symposium held at the Eastman School of Music in Rochester, NY. Most of them traveled by train and the weather was characteristically cold (the low was -5 °F a few days before). The 23 speakers were all men (the first woman to speak at the NOS was Marye Anne Fox in 1985), but they were not as monolithic as it first may appear (Figure 1). The chemistry they discussed ranged from the synthesis of dihydro-chaulmoogric acid, to catalytic reactions of acetylene, to cellulose chemistry, and from plant sterols to thiazole chemistry. Most of the speakers were from academic institutions, but four were industrial chemists. The industrial speakers at more recent NOS have been from the pharmaceutical industry, but in 1925, they were from the rubber, meat packing, and paper industries. Furthermore, five of the 23 speakers were immigrants to the US.



Figure 1. The 23 speakers at the 1st NOS. Industrial chemists indicated with * and immigrants indicated with † (Sweden, Scotland, Ukraine, Russia, and Belgium, respectively).

Like today, afternoon fieldtrips were part of the NOS in 1925. One trip was made to the Eastman Kodak laboratories and another to the University of Rochester Medical School. On Wednesday December 30 the chemists enjoyed a music and dance version of the “Merry Widow” which had been released as a silent film starring Mae Murray earlier in the year.

In closing, we turn to the remarks made in 1925 by M. T. Bogert of Columbia University, who served as the first Chair of the NOS. They remain relevant 100 years later.

What is more alluring than our own field of chemistry, and what more fascinating part has it than organic study? My wish for the coming year is that you many have faith to carry your work through and courage to make your scientific dreams come true.



Rensselaer

Dr. Martin A. Schmidt
President

June 22 – 26, 2025

Dear Friends,

It is my distinct pleasure to welcome you to the Rensselaer Polytechnic Institute campus for the 2025 American Chemical Society, Division of Organic Chemistry's National Organic Chemistry Symposium.

Since its founding, the National Organic Chemistry Symposium (NOS) has been a vital forum for advancing the frontiers of organic chemistry. By bringing together thought leaders, researchers, and students from across the country, this symposium serves as a catalyst for innovation, collaboration, and scientific discovery. Your work—spanning academic research, pharmaceutical breakthroughs, and technological applications—plays a crucial role in addressing some of society's most complex challenges.

Rensselaer is proud to host this prestigious gathering, and we are honored to support your mission to deepen our understanding of the molecular world. As you share knowledge and explore new ideas during your time here, I encourage you to take advantage of the spirit of inquiry and excellence that defines our campus community.

On behalf of the entire Rensselaer community, I thank you for your contributions to science and for your dedication to improving the human condition. Best wishes for a stimulating and successful symposium.

Sincerely,

Martin A. Schmidt
President
Rensselaer Polytechnic Institute



KATHY HOCHUL
GOVERNOR


June 22 - 26, 2025

Dear Friends:

It is my pleasure to send greetings to everyone gathered for the 2025 American Chemical Society, Division of Organic Chemistry's National Organic Chemistry Symposium.

Since its inception, the National Organic Chemistry Symposium (NOS) has brought leaders together to highlight advances in their field. Organic chemists from across the country participate and learn from each other's work, including academic research and pharmaceutical innovations. Together, you aid in our understanding of the scientific world around us and how we can solve some of humanity's most pressing problems.

Today, you gather to share your discoveries and scholarly research, and expand your knowledge of organic chemistry. On behalf of all New Yorkers, I am grateful for your commitment to scientific pursuits. Best wishes for a successful symposium.

Sincerely,

Kathy Hochul
Governor

“



On behalf of the City of Troy, it is my pleasure to welcome you to our community for the 100th National Organic Chemistry Symposium. We are honored to host this prestigious event at the world-class EMPAC facility at RPI.

This year's theme, "Return to the Roots," is especially meaningful as the Symposium returns to New York State for this historic milestone. With attendees from academia and the pharmaceutical industry, your presence brings energy, innovation, and inspiration to our city.

We hope you enjoy all that Troy has to offer - from our vibrant downtown and historic architecture to our growing tech and research corridor. Thank you for choosing Troy as the backdrop for this exciting gathering of scientific minds!

- Carmella R. Mantello
Mayor, City of Troy, NY



”

49th National Organic Chemistry Symposium 2025 • Rensselaer Polytechnic Institute

TONKO.HOUSE.GOV
@RepPAULTONKO

2369 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
(202) 225-5076

19 DOVE STREET, SUITE 302
ALBANY, NY 12210
(518) 465-0700

433 BROADWAY, SUITE 201
SARATOGA SPRINGS, NY 12866
(518) 374-4547



PAUL D. TONKO

U.S. HOUSE OF REPRESENTATIVES
20TH DISTRICT, NEW YORK

COMMITTEE ON ENERGY AND COMMERCE

RANKING MEMBER, SUBCOMMITTEE ON ENVIRONMENT,
MANUFACTURING, AND CRITICAL MATERIALS

SUBCOMMITTEE ON ENERGY, CLIMATE, AND GRID SECURITY

SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS

COMMITTEE ON SCIENCE, SPACE,
AND TECHNOLOGY

June 22, 2025

American Chemical Society
Division of Organic Chemistry
Rensselaer Polytechnic Institute
110 Eighth Street
Troy, New York 12180

Dear Friends:

I am delighted to extend my greetings as you gather for the 49th National Organic Chemistry Symposium.

It is especially fitting that such a grand event be held at Rensselaer Polytechnic Institute, an institution renowned for its leadership in scientific and technological innovation for more than two centuries. As you celebrate 100 years of organic chemistry research and advancement, let me be the first to welcome you to New York's Capital Region.

The study of Organic Chemistry is vital to understanding the molecular processes that drive life. By understanding these processes, we can work to address complex problems with sustainable solutions. The National Organic Chemistry Symposium is an invaluable opportunity for members of the American Chemical Society Division of Organic Chemistry to increase their scientific knowledge, skills, and networks. Uniting scientists across the country under one organization gives you the opportunity to speak with one voice and elevate your issues and values on a national stage. This conference is a testament to the strength and success of your organization.

I extend my warmest welcome to this year's attendees and offer my sincere congratulations to the organizers of this fantastic event. I look forward to our continued friendship and many more gatherings in the future.

Good luck and best wishes!

Sincerely,

PAUL D. TONKO
Member of Congress

PDT/am

Sponsors and Exhibitors

American Chemical Society



Rensselaer



abbvie

Lilly

sanofi



Roger Adams Award Sponsors



WILEY

Poster Award Sponsors



ACS Publications
Most Trusted. Most Cited. Most Read.



**ADVANCED
SYNTHESIS &
CATALYSIS**

ACS Division of Organic Chemistry

Chair	Amy Howell	Members-at-Large	Leila Abrous
Chair-Elect	Steven Silverman		Annabel Ansel
Past-Chair	Angie R. Angeles		Eric Anslyn
Treasurer	Joseph S. Ward III		Paul Blakemore
Secretary	Richard Broene		Mingji Dai
Program Chair	Scott Bagley		Alison Frontier
Program Chair-Elect	M. Kevin Brown		Aleksandra Holownia
Past Program Chair	Emily C. McLaughlin		Jessica Hoover
49 th NOS Chair	Edward E. Fenlon		André K. Isaacs
50 th NOS Chair	Mingji Dai		Vanessa M. Marx
51 st NOS Chair	Alex Grenning		Andy McNally
		Graduate Research	Steven Wisniewski
		Symposium Organizers	Angie R. Angeles
Councilors	Monica Marie Arroyo	Regional Meeting Liaison	P. Andrew Evans
	Huw Davies	Undergraduate Award	Franklin A. Davis
	Lisa McElwee-White	Program Director	Nancy Mills
	Elizabeth Swift	SURF Committee	Katelyn Billings
		co-Chairs	Karen Draths
Alternate	Alex Grenning	ACS Fellows & Awards	Michael Pirrung
Councilors	Jon Rainier	Committee Chair	
	Daniel J. Weix	Web/Technology Team	Joseph S. Ward III
	Yang Yang		Brian J. Myers
			Andrew Philip
			Freiburger
			Jennifer Muzyka
			Jessica Sampson
			Khoi Van

NOS Committee

Edward E. Fenlon, Chair
 Leila Abrous
 Mingji Dai
 Alex Grenning
 Brian J. Myers


Christopher L. Cioffi, Local Chair
 Annabel Ansel
 Andrew Freiburger
 Andy McNally
 Jon Rainier

RPI Event Staff and Other Organizers

Christopher Cioffi	Wilfredo Colón	Kristin Johnson-Finn
Rachel Mattke	Kim Strosahl	Kim Gardner
John Cook	Stephanie Van Sandt	David Bebb
Rebecca Hanesack	Lynn Gray	Betsy Preston
Mohamed Ali	Timothy Schmidt	John Myron Zerebynsky
Stephen Kraz	Shelby Robinson	Patricia Groeber
Steven Schwan	Rose Marie LaPietra	John Lawler
Paul Martin	Pamela Smith	Sharon Gardner
J. C. Sylvan	Juergen Hahn	Maxwell Moten
Peter Grimm	Cheryl McGlothlin	Kirk Ives
Casey Benson	Katie O'Malley Maloney	Ben Stickán
Geetu Sharma	Margarita Kirova-Snover	Filbert Totsingan
Chulsung Bae	Gaetano Montelione	Amani Dinar
Xuan Thi Nguyen	Nyati Misra	Daniel Rosenkranz
Annika Scully	Surya Krishnakumar	Ashma Adhikari
Jacob Aubrey	Melina Michailidis	Alfredo DiPaola
Samantha Pryor	Kavita Ramnath	Adam McKnight
Alexandre Pennell	Lucia Vasquez	Jack Foland
Anna De Falco	Mahesh Gaddam	Savanna Ward Grip
Nikita Waskiewicz	Tanmay Pati	Sheila Luong
Eric Hatcher	Benjamin Howard	Brianna Casey
Thangam Ramar	Michael Del Grosso	Caitlyn Mutchler
Brandon Russel	Julian Arnold	Selmina Huskic
Eric Brucker		

Join the Division of Organic Chemistry

Division of Organic Chemistry Membership Benefits



American Chemical Society
Division of Organic Chemistry


Improving the world one molecule at a time

Awards and fellowships like TAOC!

- ★ Technical Achievement Awards (TAOC)
- ★ Summer Undergraduate Research Fellowship (SURF)
- ★ Roger Adams, Arthur C. Cope, Gassman, and Leete Awards
- ★ JOC, OL and OPRD Publication of the Year Awards
- ★ Organometallics Distinguished Author Award
- ★ Organic Division Undergraduate Awards
- ★ ACS Future Pharma Innovators

GRADUATE RESEARCH SYMPOSIUM

"I wanted to thank you for the opportunity to attend the GRS conference without having to stress over my personal finances. The GRS was an indispensable experience for my young career and has opened up many opportunities and ideas for me thus far."



2024 GRS Group Photo University of Virginia, Charlottesville, VA




"I didn't really buy into the hype beforehand that the GRS is 'one of the best conferences you can ever attend' but it genuinely lived up to that reputation. Being able to connect with professionals from all walks of life (academia, industry, start-ups, policy) was immensely helpful for shaping my career goals and interests. I was anticipating seeing some science blow me away, but I wasn't anticipating really questioning what my future could be and being able to talk to people to answer some of the questions."

Funding for travel to ACS National meetings

- ★ Graduate Student Travel Awards
- ★ Undergraduate Student Travel Awards
- ★ PUI Faculty Travel Awards

Support for programing at national and regional ACS meetings and specialty meetings like NOS and GRS

- ★ Graduate Research Symposium (GRS)
- ★ National Organic Chemistry Symposium (NOS)
- ★ Sponsored Symposia at National & Regional ACS Meetings
- ★ Young Investigator Symposium (Academic & Industrial)
- ★ DOC Virtual Symposia, Co-sponsored by the CCHF


Hey! Are you already a member of the DOC? Don't forget to sign up!

Hi! Thanks for the reminder.

So, what do I get by joining the DOC?

Access to videos and literature on the DOC website

- ★ Organic Syntheses & Organic Reactions
- ★ Links to organic chemistry resources
- ★ DOC Virtual Symposia Archives
- ★ Videos of eminent organic chemists
- ★ Data: <https://organicchemistrydata.org>



Regular membership = cost of 🏆 (\$20)
Student membership = cost of 🎓 (\$5)







Join or renew your membership today!
www.organicdivision.org

Funding for travel to ACS National meetings

DOC membership supports poster sessions and networking at meetings

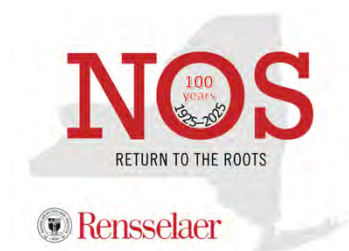
Visit us on social media

www.organicdivision.org

@ACSOrganic
 @OrganicDivision.Org
 Facebook: @ACSOrganicDivision
www.linkedin.com/company/acs-doc/

<https://www.organicdivision.org/join/>



2025 NOS SPEAKER and EVENT SCHEDULE

All plenary lectures will be held in the Curtis R. Priem EMPAC Concert Hall. Posters sessions will be held in the EMPAC Studio 1 and Studio 2. The St. Hilaire talk, career panels, and undergraduate context session will be held in the Shirley Ann Jackson, Ph.D. Center for Biotechnology and Interdisciplinary Studies (CBIS) Isermann Auditorium.

SUNDAY, June 22

3:00 – 11:00 PM	Registration	EMPAC Lobby
8:30 – 11:00 PM	Poster Session & Exhibitors	EMPAC Studio 1 and Studio 2

MONDAY, June 23

7:30 AM – 12:00 PM	Registration	EMPAC Lobby
7:15 – 8:30 AM	Breakfast buffet	EMPAC Lobby
8:15 – 8:35 AM	Opening Remarks Edward E. Fenlon , <i>Franklin & Marshall College</i> (2025 NOS Chair) Wilfredo Colón , <i>RPI</i> (Chair of Chemistry & Chemical Biology)	EMPAC Concert Hall
8:35 – 8:45 AM	Poster Awards Sponsored by ACS publications	
Presider:	Amy Howell , <i>U. of Connecticut</i>	EMPAC Concert Hall
8:45 – 9:45 AM	Véronique Gouverneur , <i>Oxford University</i> “Advances in Fluorine Chemistry with Global Challenges in Mind”	
9:45 – 10:45 AM	Francis Gosselin , <i>Genentech</i> “Asymmetric Catalysis and Data Science: A Potent Combination to Enable Breakthroughs in Process Chemistry”	

10:45 – 11:10 AM	Break	
11:10 AM – 12:10 PM	Lou Charkoudian , <i>Haverford College</i> “Unearthing the innerworkings of polyketide synthases by leaning into the unexplored and unexpected”	
12:10 PM	Box Lunch	EMPAC Lobby
12:15 – 2:15 PM	Stewart’s Ice Cream Social	EMPAC Lobby or Terrace
	Afternoon Programming	CBIS Isermann Auditorium
1:30 – 2:30 PM	Phaedria Marie St. Hilaire , <i>P M Consulting; cofounder of ProWoc</i> “Inclusive Leadership and DEI as a means to Excellence in Science”	
2:45 – 3:45 PM	Primarily Undergraduate Institution (PUI) Career Panel Rick Broene, <i>Bowdoin</i> ; Lou Charkoudian, <i>Haverford</i> ; Megan Jacobson, <i>Southern Idaho</i> ; Jim Vyvyan, <i>Western Washington U.</i>	
President:	Leila Abrous , <i>Cal St. San Marcos</i>	EMPAC Concert Hall
6:30 – 7:30 PM	Neil Garg , <i>University of California Los Angeles</i> “Strained Intermediates and Chemical Education”	
7:30 – 8:30 PM	Morten Meldal <i>University of Copenhagen</i> “Molecular Click Adventures: The intramolecular INAIC-click reaction”	
8:30 – 11:00 PM	Poster Session & Exhibitors	EMPAC Studio 1 and Studio 2

TUESDAY, June 24

7:15 – 8:30 AM	Breakfast buffet	EMPAC Lobby
8:20 AM	Poster Awards Sponsored by Wiley-VCH	EMPAC Concert Hall
President:	Christopher Cioffi , <i>RPI</i>	EMPAC Concert Hall
8:30 – 9:30 AM	Karen Wooley , <i>Texas A & M University</i> “Sugar Plastics: An evolution of carbohydrate-derived synthetic polymers from nanoparticle targets to structural and morphological metamorphoses to commercial translation”	

9:30 – 10:30 AM	Richard Gross , <i>Rensselaer Polytechnic Institute</i> “Molecular editing of sophorolipids to interrogate structure-property relationships for diverse applications”	
10:30 – 11:00 AM	Break	
11:00 AM – 12:00 PM	Sidney Wilkerson-Hill , <i>University of North Carolina Chapel Hill</i> “Orphaned Cyclopropanes”	
12:00 PM	Box Lunch	EMPAC Lobby
1:00 PM	Bus departs for Capt. JP Riverboat Cruise on the Hudson River	

The Roger Adams Award Ceremony

EMPAC Concert Hall

6:30 – 6:45 PM	Robert E. Maleczka, Jr. , <i>Michigan State University</i> (Board of Directors and Treasurer, <i>Organic Reactions</i>) “Celebrating Eight Decades of Organic Reactions”	
6:45 – 7:00 PM	John L. Wood , <i>Baylor University</i> , Presider (Board of Directors, <i>Organic Syntheses</i>) Presentation of the Roger Adams Award	
7:00 – 8:30 PM	2025 Roger Adams Award Lecture: Eric N. Jacobsen , <i>Harvard University</i> “Navigating Between the Worlds of Physical-Organic and Synthetic Chemistry”	
8:30 – 11:00 PM	Poster Session & Exhibitors	EMPAC Studio 1 and Studio 2

WEDNESDAY, June 25

7:15 – 8:30 AM	Breakfast buffet	EMPAC Lobby
8:20 AM	Poster Awards Sponsored by Wiley-VCH	EMPAC Concert Hall

Presider: Emily McLaughlin, *Bard College* EMPAC Concert Hall

8:30 – 9:30 AM **Daniel Romo**, *Baylor University*
 “Pharmacophore-Directed Retrosynthesis: Merging Total
 Synthesis with SAR Gathering to Inform Mechanism of Action
 Studies of Natural Products”

9:30 – 10:30 AM	Amanda Hargrove , <i>University of Toronto</i> “Strategies to modulate the conformation and function of RNA with small molecules”
10:30 – 11:00 AM	Break
11:00 AM – 12:00 PM	Heather Maynard , <i>University of California Los Angeles</i> “Responsive Conjugates for Drug Delivery”
12:00 PM	Box Lunch EMPAC Lobby
1:00 PM	Bus departs for NYS Capitol Building, Albany Institute of History and Art, and Empire State Plaza
	Afternoon Programming CBIS Isermann Auditorium
1:00 – 2:25 PM	Undergraduate Context Session Ron Brisbois, <i>Macalester College</i> ; Jeff Katz, <i>Colby College</i> ; Sarah Tasker, <i>Franklin & Marshall College</i>
2:30 – 3:30 PM	Industry Career Panel Jen Allen, <i>Amgen</i> ; Jacqui Hoffman, <i>Pfizer</i> ; Stephen Lathrop <i>AbbVie</i> ; Daniel Zell, <i>Genentech</i> CBIS Isermann Auditorium

WEDNESDAY, June 25 (evening)

President:	Andy McNally , <i>Colorado State U.</i>	EMPAC Concert Hall
6:30 – 7:30 PM	Jennifer Allen , <i>Amgen</i> “A Day in The Life of a Medicinal Chemist – Discovery of Sotorasib”	
7:30 – 8:30 PM	David Leigh , <i>University of Manchester</i> “Giving Chemistry Direction”	
8:30 – 11:00 PM	Poster Session & Exhibitors	EMPAC Studio 1 and Studio 2

THURSDAY, June 26

7:15 – 8:30 AM	Breakfast buffet	EMPAC Lobby
8:20 AM	Poster Awards Sponsored by ACS publications	EMPAC Concert Hall

Presider:	Mingji Dai , <i>Emory University</i>	EMPAC Concert Hall
8:30 – 9:30 AM	Melanie Sanford , <i>University of Michigan</i> “Diverse Synthetic Approaches for Carbon-Fluorine Bond Formation”	
9:30 – 10:30 AM	Keary Engle , <i>Scripps Institute</i> “Advances in Programmed Alkene Functionalization”	
10:30 – 11:00 AM	Break	
11:00 AM – 12:00 PM	Craig Crews , <i>Yale University</i> “Developing Novel Induced Proximity Therapeutic Modalities: PROTACs and Beyond”	
12:00 – 12:20 PM	Mingji Dai , <i>Emory University</i> 2027 NOS Chair Closing Remarks	
12:20 PM	Box Lunch	EMPAC Lobby
12:20 PM	End of NOS. See you in 2027.	



Véronique Gouverneur

Oxford University
Oxford, United Kingdom

Mon June 23 at 8:45 AM

Advances in Fluorine Chemistry with Global Challenges in Mind

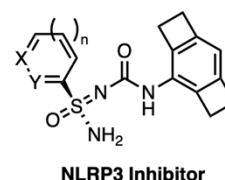
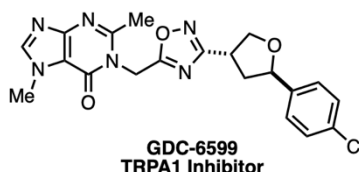
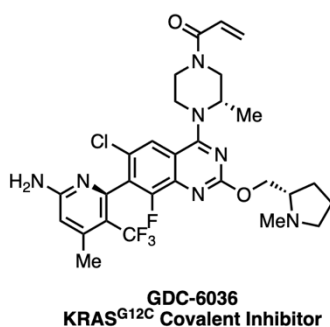
The Gouverneur laboratory has developed new approaches for the synthesis of fluorochemicals for applications in the life and material sciences. This work has enhanced our fundamental understanding of alkali metal fluoride reactivity, and led to the invention of hydrogen bonding phase transfer catalysis (HBPTC), a new concept in organocatalysis opening new opportunities in organic chemistry. In this lecture, the discussion will focus on innovative approaches aimed at addressing the challenges currently facing the fluorochemical industry. A specific highlight is the demonstration that it is possible to convert naturally occurring fluorspar (CaF_2) into complex fluorochemicals applying a method that bypasses the necessity to manufacture hydrofluoric acid, a toxic and highly dangerous acid. Another recent advance is the design of a method for the destruction of PFAS coupled with fluorine recovery in the spirit of a circular fluorine economy.

**Francis Gosselin**Genentech Research & Early Development
South San Francisco, CA, USA

Mon June 23 at 9:45 AM

Asymmetric Catalysis and Data Science: A Potent Combination to Enable Breakthroughs in Process Chemistry

High-throughput experimentation, augmented with data science, enabled the identification and development of a highly atroposelective Negishi cross-coupling for the long-term manufacturing process of KRAS^{G12C} covalent inhibitor GDC-6036 (divarasil).¹ The success of these efforts prompted the development of a broadly applicable chiral bisphosphine computed parameter open-source database to enable applications in asymmetric catalysis to support the Genentech pipeline.² Recent examples leveraging consecutive asymmetric transformations, establishing enantioselective entries into sulfonimidamides, and improved deoxyfluorination reagents will also be presented.^{3,4}



¹ Grosslight, S.; Mack, K.; Nguyen, S.; Clagg, K.; Lim, N.-K.; Timmerman, J.; Shen, J.; White, N.; Sirois, L.; Han, C.; Zhang, H.; Sigman, M.; Gosselin, F. *J. Am. Chem. Soc.* **2022**, *144*, 20955–20963. (b) Xu, J.; Lim, N.-K.; Timmerman, J.; Shen, J.; Clagg, K.; Orcel, U.; Bigler, R.; Trachsel, E.; Meier, R.; White, N.; Burkhard, J.; Sirois, L.; Tian, Q.; Angelaud, R.; Bachmann, S.; Zhang, H.; Gosselin, F. *Org. Lett.* **2023**, *25*, 3417–3422.

² Dotson, J.; van Dijk, L.; Timmerman, J.; Grosslight, S.; Walroth, R.; Püntener, K.; Gosselin, F.; Mack, K.; Sigman, M. *J. Am. Chem. Soc.* **2023**, *145*, 110–121.

³ van Dijk, L.; Haas, B. C.; Lim, N.-K.; Clagg, K.; Dotson, J. J.; Treacy, S. M.; Piechowicz, K. A.; Roytman, V. A.; Zhang, H.; Toste, F. D.; Miller, S. J.; Gosselin, F.; Sigman, M. S. *J. Am. Chem. Soc.* **2023**, *145*, 20959–20967.

⁴ Haas, B. C.; Lim, N.-K.; Jermaks, J.; Gaster, E.; Guo, M. C.; Malig, T. C.; Werth, J.; Zhang, H.; Toste, F. D.; Gosselin, F.; Miller, S. J.; Sigman, M. S. *J. Am. Chem. Soc.* **2024**, *146*, 8536–8546.

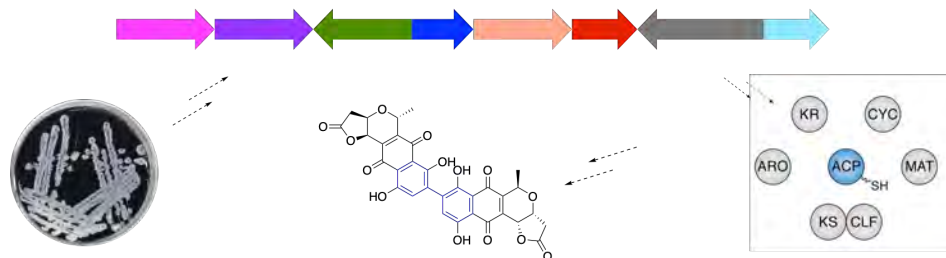


Lou Charkoudian
Haverford College
Haverford, PA, USA

Mon June 23 at 11:10 AM

Unearthing the innerworkings of polyketide synthases by leaning into the unexplored and unexpected

Microorganisms produce structurally complex and diverse molecules with a range of medically relevant properties. Our undergraduate research team is interested in understanding and harnessing this remarkable biochemical feat to gain sustainable access to molecules that can better human health. We are particularly interested in developing innovative strategies for studying two central components of type II polyketide synthases: acyl carrier proteins (ACPs) and ketosynthase - chain length factors (KS-CLFs). These proteins are critical to the biosynthesis of the polyaromatic class of polyketides that have a profound track record for serving as anticancer and antibiotic agents. In this talk, I will share how we used inferred evolutionary history to identify previously unexplored type II polyketide synthase biosynthetic gene clusters as a reservoir for ACPs and KS-CLFs with unique properties. I will also present how we have expanded access to ACPs in their active “*holo*” form through the discovery of new phosphopantetheinyl transferases and the strategic engineering of ACPs to confer their compatibility with traditionally used phosphopantetheinyl transferases. Throughout the discovery process we have embraced unexpected results to develop novel site-specific vibrational spectroscopy and mechanistic crosslinking methodologies to study important, transient interactions of biosynthetic proteins. Finally, I will connect how this work has laid a foundation for our ongoing efforts to reconstitute the biosynthesis of type II polyketides *in vitro* and access ‘new-to-nature’ type II polyketides via combinatorial biosynthesis. We hope our research-- which spans organic chemistry, biochemistry and chemical education — will be of interest to a broad audience, and we welcome opportunities for collaboration with the NOS community.





Neil K. Garg

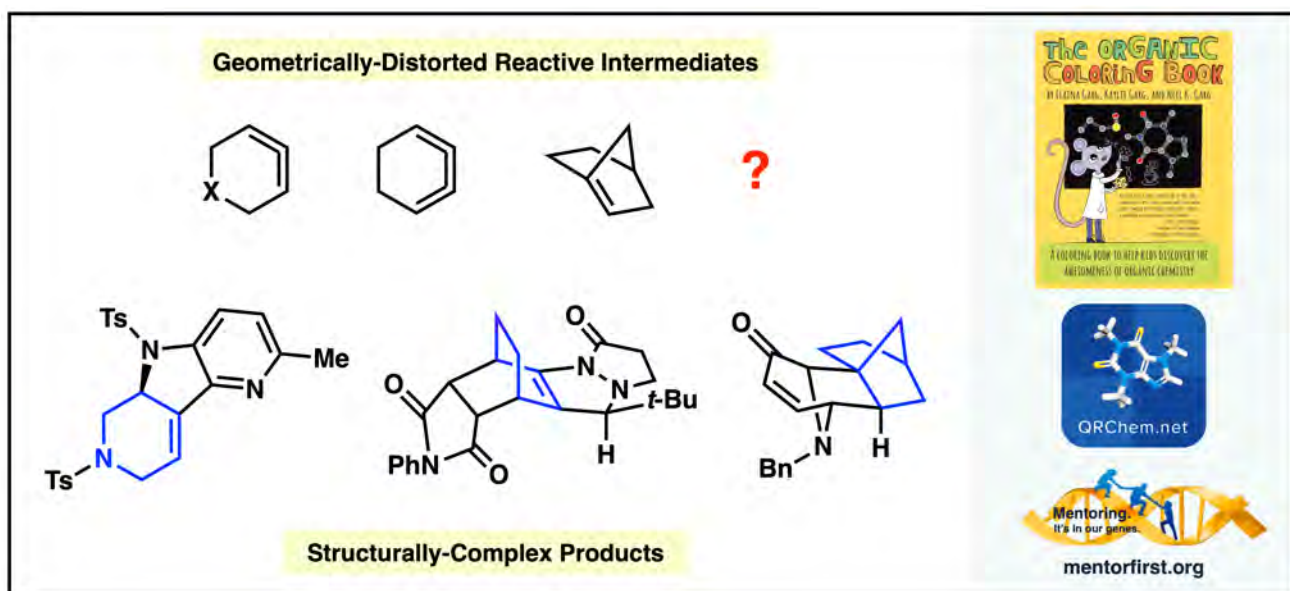
University of California, Los Angeles
Los Angeles, CA, USA

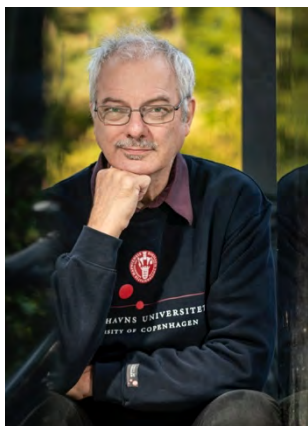
Mon June 23 at 6:30 PM

Strained Intermediates and Chemical Education

π -Bonds are typically associated with having well-defined arrangements of atoms. However, when the arrangement of atoms associated with these bonds becomes geometrically distorted due to ring constraints, heightened reactivity is seen. As a result, molecules with complex structures can be rapidly assembled from simple building blocks, typically using mild reaction conditions.

This presentation will feature several geometrically-distorted transient intermediates recently studied in our laboratory. Cyclic allenes, cyclic 1,2,3-trienes, anti-Bredt olefins, and other unusual species will be discussed. In addition, this presentation will emphasize the importance of chemical education and showcase some of our efforts to promote organic chemistry education on a local and global scale.





Morten Meldal

University of Copenhagen
Copenhagen, Denmark

Mon June 23 at 7:30 PM

Molecular Click Adventures: The intramolecular INAIC-click reaction

The presentation will take you through the journey of the 2022 chemistry Nobel Prize. During the development solid phase organic combinatorial chemistry, we investigated a large variety of reactions for merger with peptide diversity. It was during this development we discovered the extreme Cu(1) catalysis of triazole formation from azides and alkynes leading to the CuAAC click reaction. We also attempted to use peptide-linked aldehydes as electrophiles for a range of external nucleophiles. However instead, we observed the entropy driven formation of hydroxylactams with further transformation into highly reactive N-acyliminium ions through reaction of the aldehydes with upstream amide bonds. This allowed for one of the richest collections of peptide-based heterocycle templates to be accessed through an acid catalyzed intramolecular N-acyliminium tandem cascade (INAIC) reaction of the aldehyde electrophile, first with one nucleophile, then with a second side chain or backbone nucleophile, both driven by entropy and with complete stereo-control.¹ In addition, carbamides could also be used as a first nucleophile leading to another range of novel molecular scaffolds through the INCIC reaction including heterocycles with interesting fluorescent properties.² The fluorescence properties of the novel scaffolds could be developed through mild oxidation conditions and were environment dependable. For both reactions, the heterocycle formation could be performed either during or after assembly of the peptide precursors.

(1) Nielsen, T. E.; Meldal, M. Solid-phase intramolecular N-acyliminium Pictet-Spengler reactions as crossroads to scaffold diversity. *J. Org. Chem.* **2004**, 69 (11), 3765-3773.

(2) Diness, F.; Beyer, J.; Meldal, M. Solid-phase synthesis of tetrahydro-beta-carbolines and tetrahydroisoquinolines by stereoselective intramolecular N-carbamyliminium Pictet-Spengler reactions. *Chemistry* **2006**, 12 (31), 8056-8066.

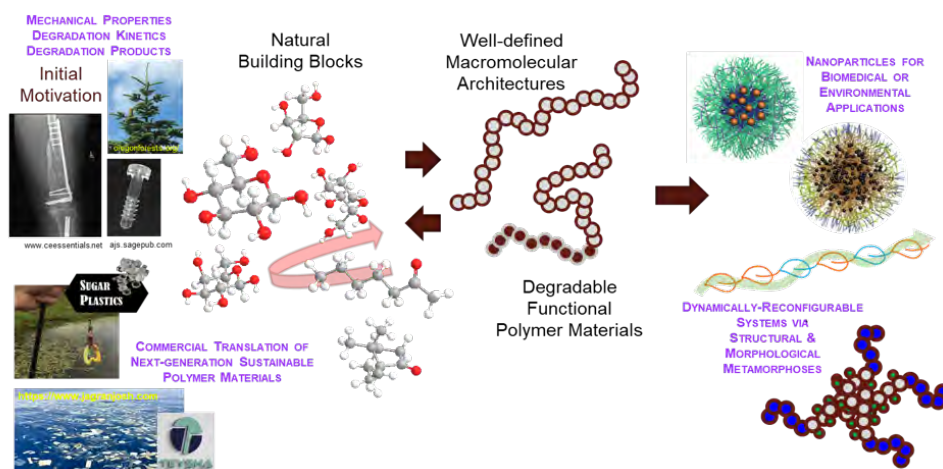


Karen L. Wooley
Texas A&M University
College Station, TX, USA

Tue June 24 at 8:30 AM

Sugar Plastics: An evolution of carbohydrate-derived synthetic polymers from nanoparticle targets to structural and morphological metamorphoses to commercial translation

A primary interest in the Wooley laboratory is the production of functional polymers from renewable sources that are capable of reverting to those natural products once their purpose has been served. A long-standing focus has been the development of synthetic methodologies that transform sugars, nucleic acids, amino acids and other natural products into polymer materials. This approach allows for the production of functional polymers from renewable sources that are capable of reverting to those natural products once their purpose has been served. This holistic life cycle approach is of importance from the perspectives of sustainable sourcing of materials feedstocks, while creating mechanisms for breakdown of the polymer materials after useful lifetime is complete, and providing for biological and environmental resorption of breakdown products. The overall process impacts the need to address the increasing accumulation and associated hazards of plastic pollution from the environmental persistence of non-degradable, petrochemically-sourced polymer systems. Moreover, inherent diversities of natural products provide opportunities to expand the scopes, complexities and properties of polymers, by utilizing fundamental organic chemistry approaches. This presentation will provide historical perspectives of Wooley's journey toward sustainable polymer chemistry and its ultimate translation to carbohydrate-derived plastics commercially. It will also reflect upon the future of polymer materials, with particular emphasis on sourcing of feedstocks and in-built degradability and digestibility to address sustainability, and with interests in the design of next-generation plastics that meet important societal needs while allowing for dynamic reconfigurability and avoiding health, welfare, and environmental adversities.



References

- 1) Tran, D. K.; Braaksma, A. N.; Andras, A. M.; Boopathi, S. K.; Darensbourg, D. J.; Wooley, K. L. *J. Am. Chem. Soc.*, **2023**, *145*, 18560-18567, DOI: [10.1021/jacs.3c05529](https://doi.org/10.1021/jacs.3c05529).
- 2) Shen, Y.; Leng, M.; Yang, Y.; Boopathi, S. K.; Sun, G.; Wooley, K. L. *J. Am. Chem. Soc.*, **2023**, *145*(28), 15405-15413, DOI: [10.1021/jacs.3c03339](https://doi.org/10.1021/jacs.3c03339).
- 3) Shen, Y.; Yang, X.; Song, Y.; Tran, D. K.; Wang, H.; Wilson, J.; Dong, M.; Vazquez, M.; Sun, G.; Wooley, K. L. *JACS Au*, **2022**, *2*(2), 515-521, DOI: [10.1021/jacsau.1c00545](https://doi.org/10.1021/jacsau.1c00545).
- 4) Tran, D. K.; Rashad, A. Z.; Darensbourg, D. J.; Wooley, K. L. "Sustainable Synthesis of CO₂-derived Polycarbonates from d-Xylose", *Polym. Chem.*, **2021**, *12*, 5271-5278, DOI: [10.1039/D1PY00784J](https://doi.org/10.1039/D1PY00784J).
- 5) Song, Y.; Yang, X.; Shen, Y.; Dong, M.; Lin, Y.-N.; Hall, M. B.; Wooley, K. L. "Invoking side-chain functionality for the mediation of regioselectivity during ring-opening polymerization of glucose carbonates", *J. Am. Chem. Soc.*, **2020**, *142*(40), 16974-16981, DOI: [10.1021/jacs.0c05610](https://doi.org/10.1021/jacs.0c05610).
- 6) Mikami, K.; Lonneck, A. T.; Gustafson, T. P.; Zinnel, N. F.; Pai, P.-J.; Russell, D. H.; Wooley, K. L. "Polycarbonates Derived from Glucose *via* an Organocatalytic Approach", *J. Am. Chem. Soc.*, **2013**, *135*(18), 6826-6829, DOI: [10.1021/ja402319m](https://doi.org/10.1021/ja402319m).

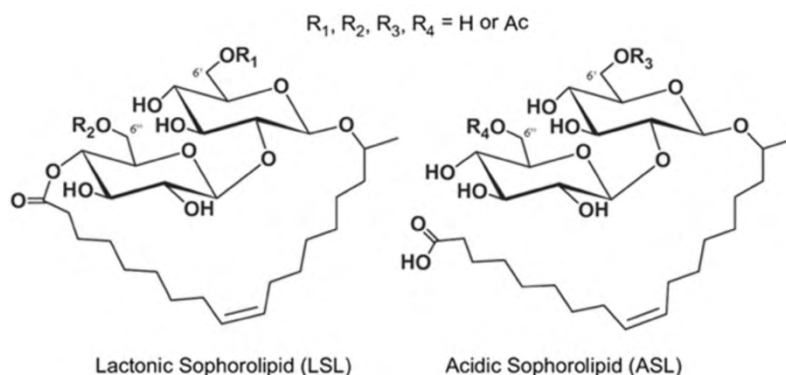


Richard A. Gross
Rensselaer Polytechnic Institute
Troy, NY, USA

Tue June 24 at 9:30 AM

Molecular editing of sophorolipids to interrogate structure-property relationships for diverse applications

Sophorolipids (SLs) are glycolipid biosurfactants, produced by non-pathogenic yeasts such as *Starmerella bombicola*, in yields approaching 200 g/L. However, natural SLs have significant shortcomings such as the low water solubility of lactonic SLs (LSL) and the low surface activity of acidic SL (ASL). To improve upon nature's design for a wide range of applications, a suite of modified sophorolipids (MSL) was synthesized by integrating chemical and biocatalytic tool sets. SL *n*-alkyl esters comprise a group of MSLs obtained by the ring-opening of LSL. Micellar self-assembly behavior as a function of SL-ester chain length was studied. A series of molecularly edited SL-esters were evaluated at oil-water interfaces for their ability to reduce interfacial tension (IFT) and generate stable emulsions. For example, with almond oil, an increase in the *n*-alkyl ester chain length from ethyl to hexyl resulted in a maximum %-decrease in the IFT from 86.1 to 95.3, respectively. Furthermore, the critical aggregation concentrations (CACs) decreased from 0.035 to 0.006 mg/mL with increase in the ester chain length from ethyl to *n*-decyl. The antimicrobial activity of modified SLs against Gram-positive human pathogens is a function of both the *n*-alkanol chain length and the degree acetylation at primary hydroxyl sites. Natural and modified SLs possess anti-cancer activity against a wide range of cancer cell lines. Comparison of the cytotoxicity of diacetate LSL and diacetate SL-ethyl ester on MDA-MB-231 breast cancer cells shows the former has higher cytotoxic efficacy that is similar to doxorubicin. However, improvements in the therapeutic index are needed for clinical use. Piscidins (P) are host defense peptides (HDPs) from fish. We demonstrate that, by combining SL-hexyl ester with subinhibitory concentration of P1 and P3 stimulates strong antimicrobial and anticancer synergy, potentiating a promising therapeutic window. Finally, we will discuss bioresorbable polymers formed by the ring-opening cross metathesis that converts natural LSL to poly(sophorolipids).



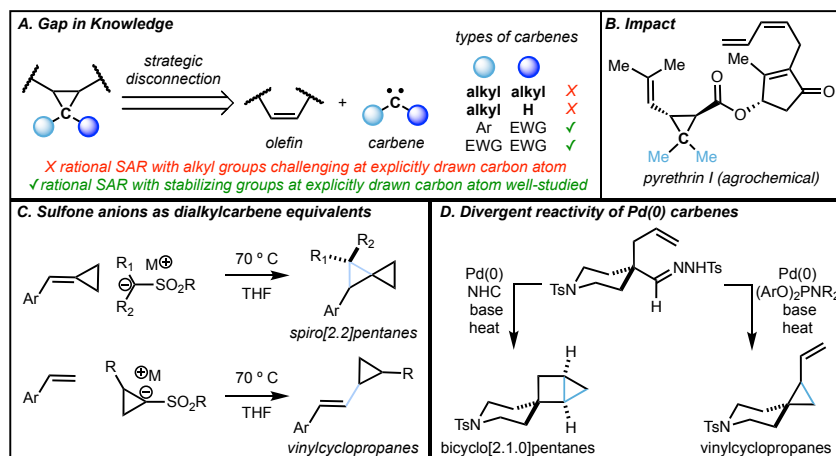
**Sidney Wilkerson-Hill**University of North Carolina at Chapel Hill
Chapel Hill, NC, USA

Tue June 24 at 11:00 AM

Orphaned Cyclopropanes

Small molecules isolated from the flowers of *chrysanthemum cinerariifolium*, known as pyrethrins, have long been used as natural insecticides. Synthetic derivatives of these compounds (i.e., pyrethroids) are now used on metric ton scale in our daily lives to combat mosquitoes in residential areas and are a key pillar of vector control programs to combat malaria in developing countries. New pyrethroids with enhanced performance properties are desperately needed, however, to combat developing resistance in insects and to reduce off-target toxicity. The goal of the Hill group is to develop new reactions to rapidly obtain small molecule leads to novel pyrethroids. To accomplish these goals, my research group is developing new routes to alkyl cyclopropanes, a structural motif found in many pyrethroids, by 1) developing new reactions to functionalize strained rings; 2) obtaining a mechanistic understanding of Group 10 metal alkylidenes; and 3) discovering new reagents that serve as carbene precursors.

Herein we disclose two projects focused on developing methods to obtain more highly strained carbocycles (strain energy > 27 kcal/mol). First, we have developed a method to obtain spiro[2.2]pentanes by reacting sulfone anions with alkylidenecyclopropanes (16 examples, 24–81% yield). When cyclopropylsulfone anions were reacted with styrenes, a formal C–H insertion reaction took place (14 examples, 24–79% yield). Separately, we have found NHC-Pd(0) alkylidenes are uniquely capable of producing bicyclo[2.1.0]pentanes (housanes) via palladacyclobutane intermediates (19 examples 37–89% yield). When phosphoramidite ligands are used to support Pd(0) carbenes, allylic C–H insertion products are obtained (8 examples, 51–88% yield). This unique divergent reactivity sets the stage for the synthesis of novel pyrethroids.



The Roger Adams Award in Organic Chemistry



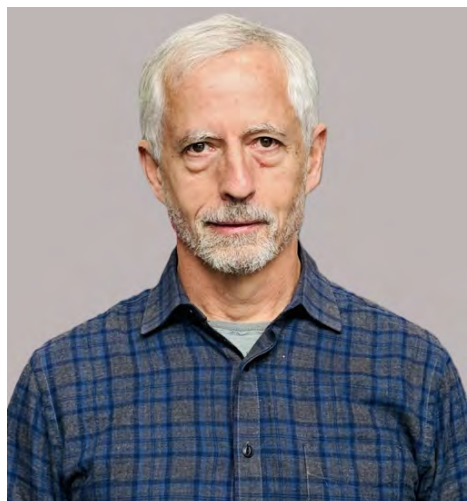
The Roger Adams Award in Organic Chemistry is sponsored jointly by the American Chemical Society (ACS), *Organic Reactions*[®], and *Organic Syntheses, Inc.* The award recognizes the distinguished career of Roger Adams, who played a vital role in each of these three organizations. He served as the Chairman of the Board of Directors and as the President of the American Chemical Society and he co-founded *Organic Syntheses* and *Organic Reactions*, serving as volume editor and editor-in-chief for each of the latter.

The award was established in 1959 and is made biennially to an individual, without regard to nationality, for outstanding contributions to research in organic chemistry. The award consists of a gold medal and a \$25,000 honorarium. It is presented at the biennial National Organic Chemistry Symposium of the ACS Division of Organic Chemistry. The awardee is a featured lecturer in the program of the symposium, held this year at Rensselaer Polytechnic Institute in Troy, NY.

The recipient of this year's award is Eric N. Jacobsen, the Sheldon Emery Professor of Chemistry at Harvard University, for outstanding contributions to the conceptualization, application, and mechanistic understanding of catalyst design for asymmetric synthesis.

Roger Adams Awardees

1959 - Sir Derek H. R. Barton	1983 - A. R. Battersby	2007 - Samuel J. Danishefsky
1961 - Robert B. Woodward	1985 - Donald J. Cram	2009 - Andrew Streitwieser
1963 - Paul D. Bartlett	1987 - Jerome A. Berson	2011 - Robert H. Grubbs
1965 - Arthur C. Cope	1989 - George A. Olah	2013 - David A. Evans
1967 - John D. Roberts	1991 - Gilbert J. Stork	2015 - Larry E. Overman
1969 - Vladimir Prelog	1993 - Elias J. Corey	2017 - Hisashi Yamamoto
1971 - Herbert C. Brown	1995 - Barry M. Trost	2019 - Stephen L. Buchwald
1973 - Georg Wittig	1997 - K. Barry Sharpless	2021 - Kendall N. Houk
1975 - Rolf Huisgen	1999 - Dieter Seebach	2023 - Carolyn R. Bertozzi
1977 - William S. Johnson	2001 - Ryoji Noyori	2025 - Eric N. Jacobsen
1979 - Melvin S. Newman	2003 - Albert Eschenmoser	
1981 - Nelson J. Leonard	2005 - Jerrold Meinwald	



2025 Roger Adams Awardee

Eric N. Jacobsen

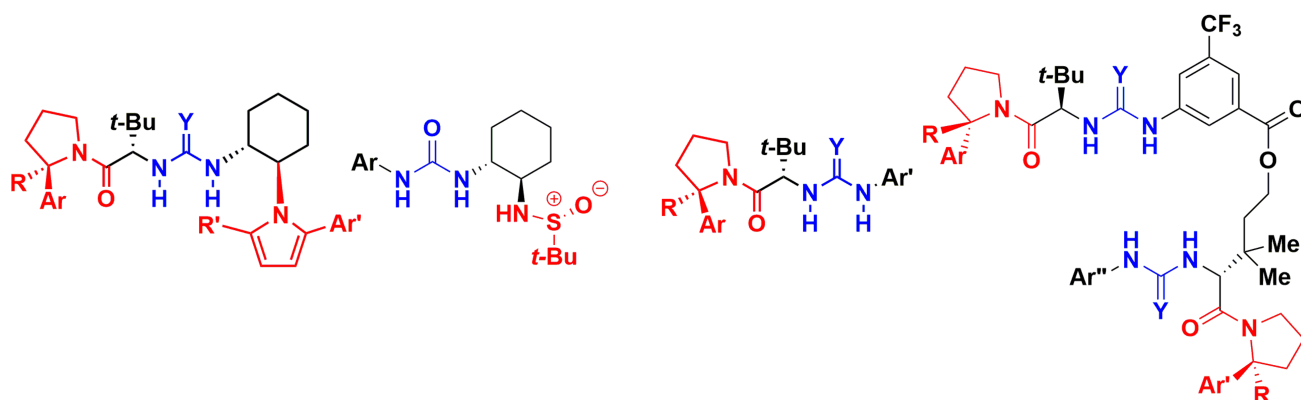
Harvard University

Cambridge, MA, USA

Tue June 24 at 7:00 PM

Navigating Between the Worlds of Physical-Organic and Synthetic Chemistry

Throughout my group's efforts over the past 37 years to discover new asymmetric catalytic reactions, we have had occasion to perform deep mechanistic analyses of several of the catalysts we have discovered, often using the enantioselectivity of the catalysts as a primary tool to obtain deep insight into critical transition states. The marriage of physical-organic and synthetic approaches led us to broadly useful concepts such as electronic tuning of chiral catalysts, homo- and hetero-catalytic cooperativity, noncovalent catalysis, and formal elucidation of catalyst generality. This lecture will provide an overview of some of our key findings, and then focus on our more recent efforts aimed at the elucidation and discovery of general catalytic systems based on new classes of chiral dual H-bond donors. Detailed case studies on the mechanism of enantioinduction with these catalysts highlight the cooperative features of these simple organic molecules that are both reminiscent and fundamentally different from those of enzymes.



blue = catalytic "engine"

red = secondary recognition elements

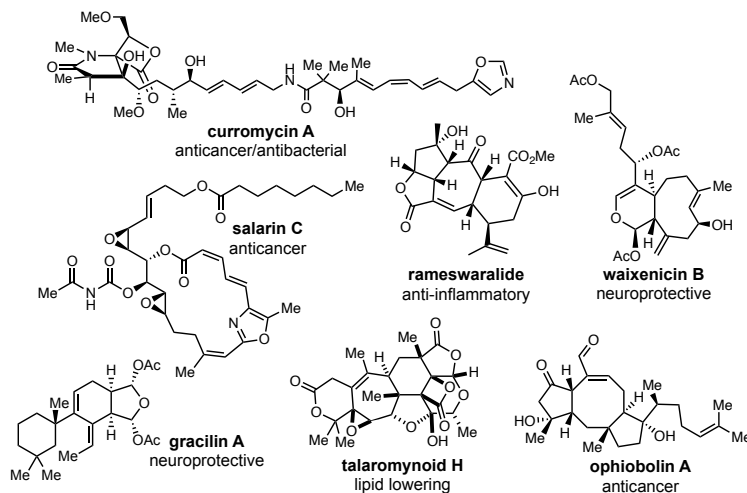


Daniel Romo
Baylor University
Waco, TX, USA

Wed June 25 at 8:30 AM

**Pharmacophore-Directed Retrosynthesis: Merging
Total Synthesis with SAR Gathering to Inform
Mechanism of Action Studies of Natural Products**

The complex architecture and often potent bioactivity of natural products frequently serve as an embarkation point for the exploration of biologically-relevant chemical space. Total synthesis followed by derivative synthesis has historically enabled a deeper understanding of structure-activity relationships (SAR) for natural product classes. However, synthetic strategies toward a natural product are not always guided by hypotheses regarding minimal structural features required for bioactivity, *i.e.* a proposed 'pharmacophore'. Inspired by Wender's ideas of function-oriented synthesis, we recently began approaching the chemical synthesis of natural products through the lens of what we call pharmacophore-directed retrosynthesis (PDR). In this strategy, a hypothesized, minimal 'pharmacophore' of a natural product with unknown cellular target is selected as an early synthetic target and sequential increases in complexity toward the natural product guide our retrosynthetic analysis. Importantly, this approach has led to the identification of simplified natural product congeners retaining bioactivity while also informing attachment points for the synthesis of cellular probes for cellular target identification. In a recent variation of this strategy toward curromycin A, we recognized that alkynes could be used as both synthetic intermediates and proteomic probes enabling cellular target identification of increasingly complex curromycin A congeners. To date, we have applied PDR to gracilin A and rameswaralide and are currently applying this strategy to several natural products including ophiobolin A, curromycin A, salarin C and talaromynoid H. Selected stories of applying PDR to bioactive natural products, bolstered by several enriching and fruitful biological collaborations, will be presented.



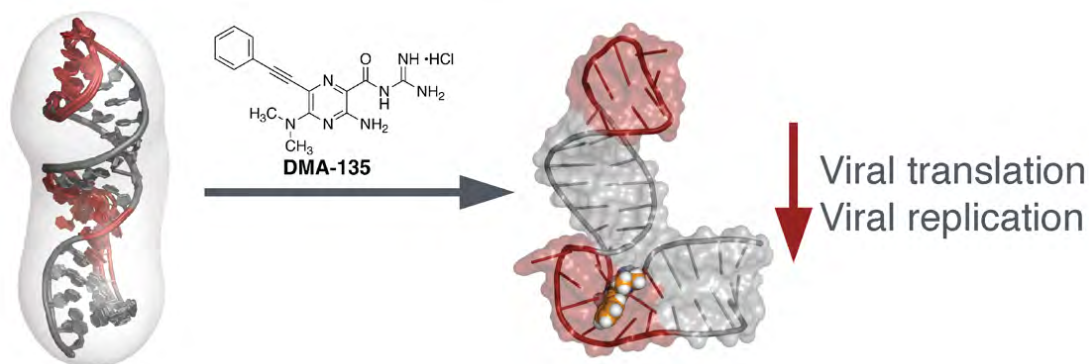


Amanda E. Hargrove
University of Toronto
Mississauga, Ontario, Canada

Wed June 25 at 9:30 AM

Strategies to modulate the conformation and function of RNA with small molecules

Small molecules offer a unique opportunity to target structural and regulatory elements in therapeutically relevant RNAs, but understanding functional selectivity has been a recurrent challenge in small molecule:RNA recognition. RNAs offer less differentiating chemical functionality than proteins and sample multiple conformations that can each impact function. We have used organic synthesis, machine learning and a variety of biophysical and cell-based assays to reveal patterns in the chemical and structural properties of bioactive RNA ligands as well as RNA topological space privileged for differentiation. We have applied these principles to several disease-relevant systems. We have tuned diiminazene-based small molecules to functionally modulate different RNA tertiary structures in the oncogenic long noncoding RNA MALAT1, leading to either monofunctional degraders or tailored manipulation of RNA:protein interactions. We have also developed RNA-targeted antivirals for enterovirus (EV71) and SARS-CoV-2, revealing a novel allosteric mechanism of small molecule: RNA targeting.



**Heather D. Maynard**University of California, Los Angeles
Los Angeles, CA, USA

Wed June 25 at 11:00 AM

Responsive Conjugates for Drug Delivery

This talk will focus on responsive peptide prodrugs, polymer conjugates, and polymeric nanoparticles to enhance the therapeutic efficacy of protein and small molecule therapeutics. The rational design, synthesis, and preclinical evaluation of these materials will be discussed. In particular, materials that respond to enzymes, chemical triggers and reductive pH will be described, with a focus on therapeutics for diabetes and pain management. Emphasis will be placed on the design and synthesis of linkers for this purpose (Figure 1). In addition, the synthesis of depside analogs will be presented, along with their antimicrobial activity.

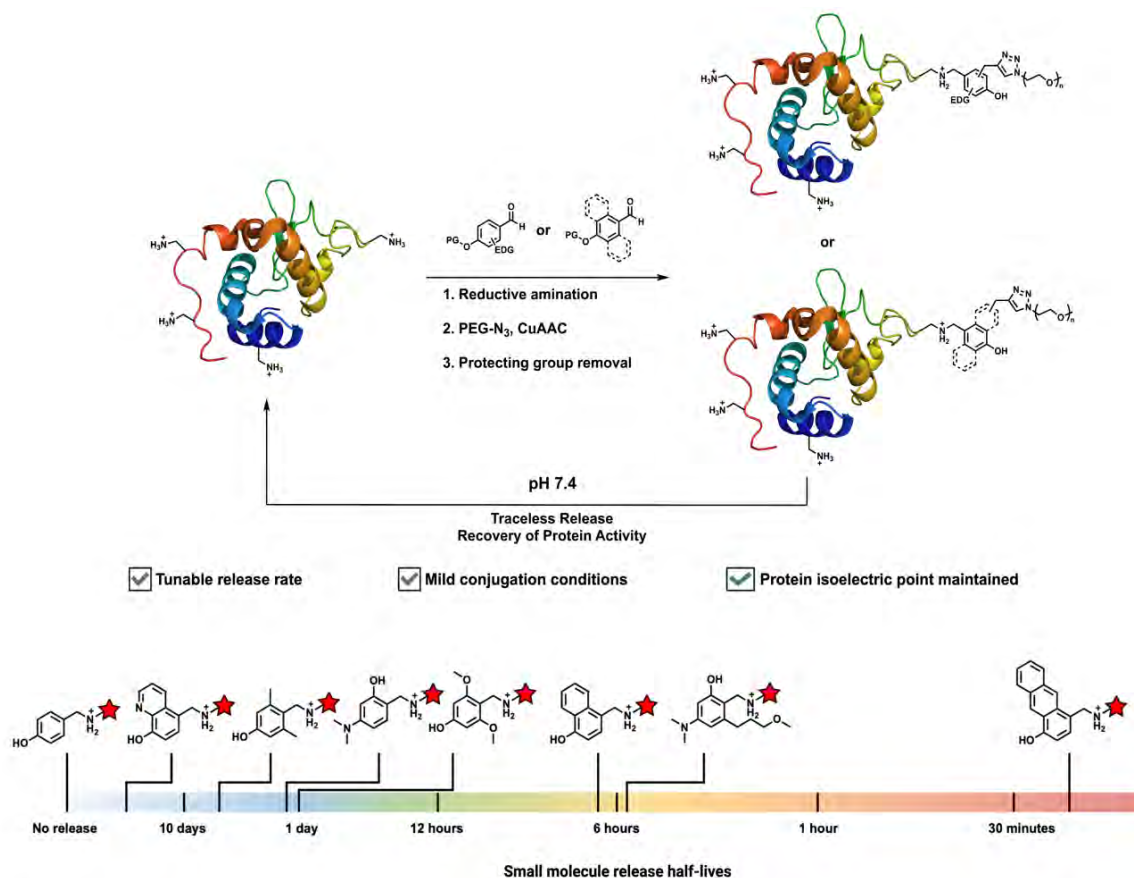


Figure 1. Hydroxybenzylammonium compounds for reversible protein conjugation (modified from *JACS*, 2022, 144, 6050 and *Chem. Sci.* 2024, 15, 10448)



Jennifer Allen

Amgen

Ventura County, CA, USA

Wed June 25 at 6:30 PM

A Day in The Life of a Medicinal Chemist – Discovery of Sotorasib

KRAS is one of the most frequently mutated oncogenes in human cancer. Despite more than three decades of research, indirect approaches targeting *KRAS*-mutant cancers have largely failed to show clinical benefit, and direct approaches have been stymied by the apparently ‘undruggable’ nature of *KRAS*. I’ll describe efforts at Amgen to identify cysteine-reactive molecules capable of selectively inhibiting a prevalent *KRAS* mutation, *KRAS*G12C. These efforts leveraged iterative screening and structural biology studies, property-based optimization, and careful process engineering to ultimately deliver a highly potent, selective, and well-tolerated inhibitor of *KRAS*G12C: LUMAKRAS[®] (sotorasib).



David A. Leigh
University of Manchester
Manchester, United Kingdom

For a musical introduction, see 'Nanobot':

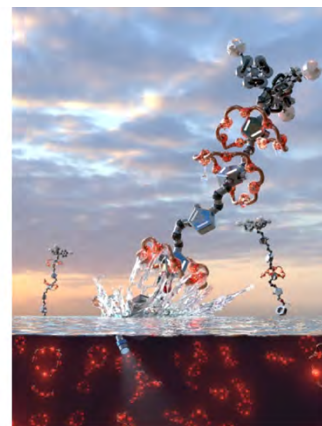
<https://bit.ly/2M5Zwdl>

Wed June 25 at 7:30 PM

Giving Chemistry Direction

Over the last three decades examples of synthetic molecular machines and motors¹ have been developed,² albeit they are primitive by biological standards. Such molecules are best designed to work through statistical mechanisms.³ In a manner reminiscent of Maxwell's Demon,⁴ random thermal motion is rectified through ratchet mechanisms,^{3–10} giving chemistry direction.

It is increasingly being recognised that similar concepts can be applied to other chemical exchange processes.¹¹ Ratchet mechanisms—effectively chemical engines¹² in which catalysis^{5,7–9} of 'fuel' to 'waste' is used to drive another chemical process—can cause directional impetus in what are otherwise stochastic systems, including endergonic chemical reactions.¹³ This is ushering in a new era of non-equilibrium chemistry, providing fundamental advances in functional molecule design and the first examples of molecular robotics,^{14,15} overturning existing dogma and offering fresh insights into biology and molecular nanotechnology.



- [1] The Nobel Prize in Chemistry 2016—Advanced Information. Nobelprize.org. Nobel Media AB 2014. Web. 6 Oct, 2016, http://www.nobelprize.org/nobel_prizes/chemistry/laureates/2016/advanced.html. [2] "Rise of the molecular machines", *Angew. Chem. Int. Ed.* **54**, 10080 (2015). [3] "Molecular ratchets and kinetic asymmetry: Giving chemistry direction", *Angew. Chem. Int. Ed.* **63**, e202400495 (2024). [4] "A molecular information ratchet", *Nature* **445**, 523 (2007). [5] "An autonomous chemically fuelled small-molecule motor", *Nature* **534**, 235 (2016). [6] "Rotary and linear molecular motors driven by pulses of a chemical fuel", *Science* **358**, 340 (2017). [7] "A catalysis-driven artificial molecular pump", *Nature* **594**, 529 (2021). [8] "Autonomous fuelled directional rotation about a covalent single bond", *Nature* **604**, 80 (2022). [9] "Transducing chemical energy through catalysis by an artificial molecular motor", *Nature* **637**, 594 (2025). [10] "A tape-reading molecular ratchet", *Nature* **612**, 78 (2022). [11] "Design, synthesis and operation of small molecules that walk along tracks", *J. Am. Chem. Soc.* **132**, 16134 (2010). [12] "Chemical engines: Driving systems away from equilibrium through catalyst reaction cycles", *Nat. Nanotechnol.* **16**, 1057 (2021). [13] "Ratcheting synthesis", *Nat. Rev. Chem.* **8**, 8 (2024). [14] "Sequence-specific peptide synthesis by an artificial small-molecule machine", *Science* **339**, 189 (2013). [15] "Stereodivergent synthesis with a programmable molecular machine", *Nature* **549**, 374 (2017).



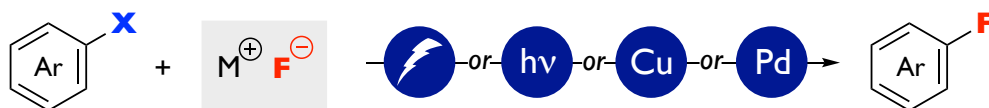
Melanie Sanford

University of Michigan
Ann Arbor, MI, USA

Thurs June 26 at 8:30 AM

Diverse Synthetic Approaches for Carbon-Fluorine Bond Formation

This presentation will discuss recent methods development for C-F bond formation, including thermal, electrochemical, and transition metal catalyzed reactions involving diverse precursors with an emphasis on reaction design and mechanistic considerations.





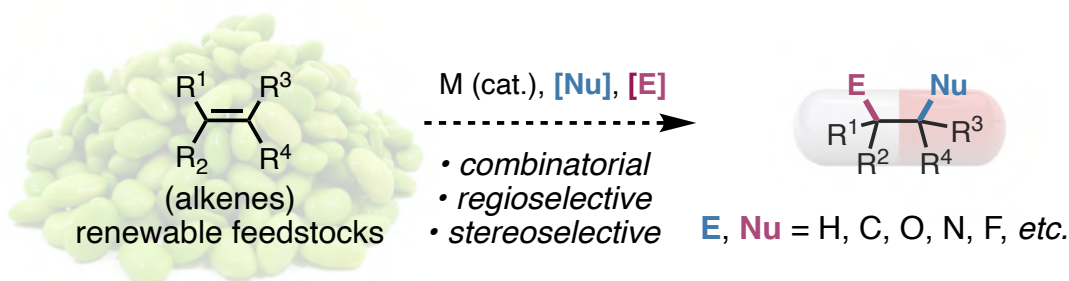
Keary M. Engle

The Scripps Research Institute
La Jolla, CA, USA

Thurs June 26 at 9:30 AM

Advances in Programmed Alkene Functionalization

Alkenes are inexpensive and widely available feedstocks derived from petroleum or renewable resources. The Engle lab focuses on developing novel catalytic alkene functionalization reactions that selectively introduce functional groups at both alkenyl carbon atoms in a controlled manner. This approach allows the direct transformation of simple starting materials into densely functionalized, stereochemically defined products, which can then serve as building blocks for complex target molecules, including important pharmaceutical agents. This talk will highlight the evolution of strategies across different metals and redox manifolds, ranging from directing auxiliaries to native and transient directing groups, and eventually to non-directed approaches. Mechanistic studies have uncovered how interactions between substrates, metals, and ligands enable these transformations, informing the design of new catalysts through an iterative feedback loop.



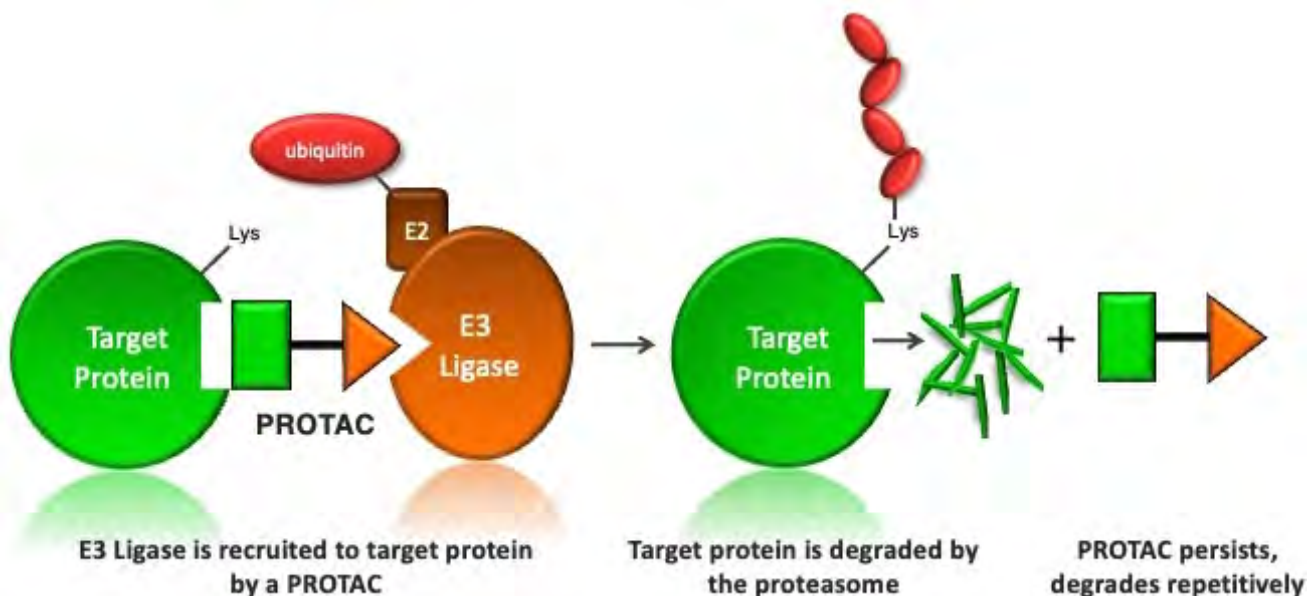


Craig M. Crews
Yale University
New Haven, CT, USA

Thurs June 26 at 11:00 AM

Developing Novel Induced Proximity Therapeutic Modalities: PROTACs and Beyond

The Crews lab uses 'Applied Chemical Biology' to develop novel therapeutic modalities. Enzyme inhibition has proven to be a successful paradigm for pharmaceutical development, however, it has several limitations. Alternatively, for the past 20+ years, my lab has focused on developing Proteolysis Targeting Chimera (PROTAC), a new 'controlled proteolysis' technology that overcomes the limitations of the current inhibitor pharmacological paradigm. Based on an '*Event-driven*' paradigm, PROTACs offer a novel, catalytic mechanism to irreversibly inhibit protein function, namely, the intracellular destruction of target proteins. This approach employs heterobifunctional molecules capable of recruiting target proteins to the cellular quality control machinery, thus leading to their degradation. We have demonstrated the ability to degrade a wide variety of targets (kinases, transcription factors, epigenetic readers) with PROTACs at picomolar concentrations. Moreover, the PROTAC technology has been demonstrated with multiple E3 ubiquitin ligases and now multiple PROTAC-based drug candidates are being tested in clinical trials for both oncology and non-oncology indications.



Afternoon Programming: MONDAY June 23

These sessions will be held in the Shirley Ann Jackson, Ph.D. Center for Biotechnology and Interdisciplinary Studies (CBIS) Isermann Auditorium.

1:30 – 2:30 PM

President: Geetu Sharma, RPI



Phaedria Marie St. Hilaire

P M Consulting

Cofounder of ProWoc (<https://prowoc.org>)

Copenhagen, Denmark

Inclusive Leadership and DEI as a means to Excellence in Science

Despite being under fire in recent years, it is well established that diversity and inclusion in an organization leads to superior results and greater collective excellence, provided the teams are well managed. During this talk, I will delve into the unique challenges faced by women and other members of underrepresented groups in the workplace as they ascend to senior roles. Participants will obtain an analysis of the current landscape, focusing on issues such as unconscious and cultural biases, microaggressions, and systemic barriers that often impede progress. We will discuss the role of inclusive leadership in promoting inclusion and present other strategies that successfully promote a more equitable work environment where everyone feels valued, respected, and empowered to contribute their unique perspectives.

2:45 – 3:45 PM

Primarily Undergraduate Institution (PUI) Career Panel

Rick Broene, *Bowdoin*; Lou Charkoudian, *Haverford*; Megan Jacobson, *Southern Idaho*; Jim Vyvyan, *Western Washington U.*

Come learn about teaching and research at PUIs. The panel has broad experience from institutions that range from selective liberal arts colleges, to public universities, to community colleges.

Afternoon Programming: WEDNESDAY June 25

These sessions will be held in the Shirley Ann Jackson, Ph.D. Center for Biotechnology and Interdisciplinary Studies (CBIS) Isermann Auditorium.

1:00 – 2:25 PM

Undergraduate Context Session

Ron Brisbois, *Macalester College*

Jeff Katz, *Colby College*

Sarah Tasker, *Franklin & Marshall College*

About 20% of the attendees at this year's National Organic Symposium are undergraduate chemists (~90 people). Although undergraduate participants can most often grasp the overarching issue(s) of seminar and poster presentations, their backgrounds do not always permit them to instantaneously register understanding of such things as named reactions and experimental techniques invoked.

This Undergraduate Context Session provides a collegial venue in which students can ask the kinds of clarifying questions—from simple definitional aspects to reaction mechanisms to spectroscopic methods to people and chemical history—they would not feel comfortable asking from the floor of an NOS session. The Context Session is moderated by PUI faculty who solicit questions from undergraduates in attendance.

In an effort to enhance connections between the undergraduates attending the Context Session, the first opportunity to “go to the board” and provide an explanation to any question is offered to undergraduates with background in those specific areas. The faculty moderators, and other advanced students and faculty who are present, weigh in with further comments only after undergraduates have had the chance to edify each other as a function of their different backgrounds. **We welcome and encourage participation from undergraduates, graduate students, postdoctoral researchers, scientists from industry, and faculty at all levels.**

2:30 – 3:30 PM

Industry Career Panel

Jen Allen, *Amgen*; Jacqui Hoffman, *Pfizer*; Stephen Lathrop *AbbVie*; Daniel Zell, *Genentech*

Come and learn about careers in industry. The panel represents pharmaceutical companies but welcomes questions concerning any industrial career path.

NOS Travel Awards

The following 50 attendees are recognized for their achievements with a Division of Organic Chemistry Travel Award to the 2025 NOS. Special thanks to Jon D. Rainier for coordinating the travel award process.

Undergraduate Student Travel Award Recipients

Brady Birkenholtz	Central College
Nikolas Bodnar	University of Connecticut
Rachel Brozenec	Illinois State University
Jacob Bundesmann	Worcester Polytechnic Institute
Nathan Coddington	University of California, Riverside
Quentin Ervin	Illinois State University
Emma Fallon	Albertus Magnus College
Dagoberto Grijalva-Flores	University of Colorado, Denver
Emma Horton	Ball State University
Katelynn McPhee	Purdue University - Fort Wayne
Minh Tran	Lawrence University
Rocco Vargas	Southeastern University

PUI Faculty Travel Award Recipients

Meredith Borden	Trinity University
Ronald Brisbois	Macalester College
Todd Eckroat	Pennsylvania State University, Behrend
Michael Gesinski	Lawrence University
Yu Liu	Northern Michigan University
Seann Mulcahy	Providence College
Keith Reber	Towson University
Erica Schultz	Lake Forest College
Jay Wackerly	Central College
Sarah Zingales	United States Coast Guard Academy

NOS Travel Awards (continued)

Graduate Student Travel Award Recipients

Laila Aiad	University of Minnesota
Joy Alende	Illinois State University
Kevin Blanco-Herrero	University of California, Davis
Suman Das	Indiana University
Serena DiLiberti	University of Minnesota
Vivek Gangadharan Pillai	University of Rochester
Constantinos Gofas	California State Polytechnic University, Pomona
Partha Hazra	Indiana University
Cheng-En Hsieh	University of California, Davis
Emily Jimenez	University of Michigan
Zhao Liu	San Diego State University
Keith McGee	University of Colorado, Denver
Hannah Mulliner	University of Bristol
Maryam Nazari	University of Minnesota
Joseph Nsabaah	Illinois State University
Tolulope Oluborode	Illinois State University
Masoumeh Rahim	University of Memphis
Jagrut Atul Shah	Stony Brook University
Neetu Sharma	Indiana University
Darshika Singh	Michigan State University
Griffin Stewart	Northwestern University
Olivia Taylor	University of California, Riverside
Po-Sen Tseng	University of Georgia
Zoe Wachtel	University of Michigan
Jason Wu	Cornell University
Wen Xiu	Purdue University
Sara Zerangnasrabad	Auburn University

Poster Sessions

The poster sessions will be held nightly in EMPAC Studio 1 and Studio 2. Four poster awards will be selected by the judges each night. These awards will be given to the recipients each morning of the symposium. Special thanks to Annabel Ansel, Andrew Freiburger, and Brian Myers for coordinating the poster submission and scheduling and to all of the poster judges. The poster sessions are sponsored by ACS publications and Wiley-VCH publications.

S= Sunday; M = Monday; T = Tuesday; W = Wednesday

Poster #	Poster Title	Authors (*presenting)	Affiliation
S1	1,2-Diamination of alkenes via 1,3-dipolar cycloaddition with NNN compounds	Setyareh Saryazdi, Ugochukwu Odagwe, Robert B. Grossman*	University of Kentucky
S2	A Green Update to Benadryl Synthesis in the Organic Teaching Lab	3/c Isaac Adkins, 3/c Laurel Davis, 3/c Liliana Feyk, 1/c Stone Grant, 3/c Katie Kogler, 2/c Jayden Lomax, 3/c Alexander McKinnon, 3/c Mackenzie Murnane, 3/c Riley Ritter, 3/c Lily Rivera, 3/c Gabrielle Sanchez, 3/c Mei Lei Urbanski, 2/c Hannah Van Cise, 3/c Lauren Wong, Dr. Sarah Zingales*	United States Coast Guard Academy
S3	A Kinetic Switch for Accessing Halogenated Medium-Sized Rings or Spiroketal	Nicholas Wills, Ankush Chakraborty, JiaoJiao Wang Babak Borhan	Michigan State University
S4	A Three-Step Method for the Preparation of N-Substituted 3,4-Dihydroisoquinolin-1(2H)-ones and Heteroaryl-Fused 3,4-Dihydropyridin-2(1H)-ones from 2-Bromobenzoate Precursors	Ethan E. Cramer*, Emily E. Freeman, Randy Jackson, Jessica Luo, Rajen Somwaru, Alex Sons, Andy Bean, Ronald N. Buckle and R. Jason Herr	Medicinal Chemistry Department, Curia Global, Inc.
S5	A Unified Approach to Vicinal Functionality	Justin J. Chang*, Munnu Kumar, Misato Okatomo, Emily Sophia Vergara-Pimentel, Daniel K. Kim	Temple University

S6	Applications of Photocatalyst-Induced Solvent Activation in N-Demethylation	Lindsay Repka*, Natalie Pinerio, Bruck Setu, Kailey Gagne, Abdul Abubakari, Angel De Pacina, Ariane Goldin	Middlebury College
S7	Bench-stable Co(III) Complexes as a Platform for Carbonyl Additions and Natural Product Synthesis	Shayne M. Weierbach*, Cylah A. Bruno, Olivia A. Brown, Jean M. Bray, Karen Vargas, and Kyle M. Lambert	Old Dominion University, Department of Chemistry and Biochemistry
S8	Bifunctional Organocatalysts for Amide Bond Formation	Kimberly A. W. Reid 1, Randy Sutio 1, Jack M. Ranani 1, Brennah E. Slaney 1, Christophe Allais 2, Johnny W. Lee 2, and Christopher Sandford* 1,3	1. Dartmouth College; 2. Pfizer Chemical Research and Development; 3. University of Texas at San Antonio
S9	Boron Enabled Interrupted de mayo reaction via Energy Transfer	Neetu Sharma*, Evan piper, Yanyao Liu, Kevin Brown	Indiana University of Bloomington
S10	Boron-directed sp ³ C-H Activation Reaction	Partha S Hazra*, Makaya Robinson, M. Kevin Brown	Indiana University-Bloomington
S11	Building up Starting material Towards Novel Rearrangement.	Joseph Nsabaah*, Andy Mitchell	Illinois State University
S12	Chemoselective Electrochemical Coupling of Thioethers and Primary Amines for Accessing Sulfilimines and Sulfoximines	Sukwoo Lee*, Jonas Rein, Evan Weingarten, Song Lin	Cornell University
S13	Cycloisomerization of N-allyl Bicyclobutane Amides	Dilhumar Uyghur, Karis Texidor, Noah Wiese, Lindsey O. Davis*, Mandy Green, Matteo Borgini	Augusta University
S14	Withdrawn		
S15	Dearomative Intramolecular (4+3) Cycloadditions of Epoxy Enolsilanes with Benzene Derivatives	Chan Long Ying*, Pauline Chiu	The University of Hong Kong

S16	Deconstructive Alcohol Functionalization via Titanium Photocatalysis	Jagrut A. Shah 1*, Ashley Lojko 1, Zilu Tang 1, Yetong Lin 1, Emma Scher 1, Celeste Barefoot 2, and Jeffrey M. Lipshultz 1	1. Dept of Chemistry, Stony Brook University, NY; 2. Department of Chemistry & Biochemistry, University of North Carolina Wilmington, Wilmington, North Carolina
S17	Deoxyradiofluorination of Phenols with a Bespoke Difluoromethoxy Nucleofuge Enabled by Organic Photoredox Catalysis	Maulik Mungalpara*, Xuedan Wu, Xinrui Ma, David Nicewicz, Zibo Li	The University of North Carolina at Chapel Hill
S18	Development of Gas-Releasing Molecules Using a Thiol Carrier	Taylor Weiss*, Henry Tavens*, Tatyana Ulman*, Dr. Sarah Tasker	Franklin & Marshall College
S19	Development of Nickel Catalyzed Reductive Cross Coupling Reactions of Carbonyls with Electrophiles	Anika Monga*, Jarrod Stanley*, Chandana Sunil*, Elizabeth Jaekle, Yuriko Fujisato, John Montgomery	University of Michigan
S20	Development of the Intermolecular halo-Nazarov Four-Component Coupling Cascade	Michael A Piacquadio*, Benjamin Kozloff, Connor Holt, Georgios Alachouzos, Jackson J Hernandez, Alison Frontier	University of Rochester
S21	Direct Acylation of Aryl and Alkyl Bromides via Nickel-Catalyzed Aldehyde C–H Functionalization	Sean Calvert 1*, Leo Vermaak 2*, Austin Ventura 3, John Montgomery	University of Michigan
S22	Electrochemical Activation of α -Carbonyl Alkoxyamines for Direct Substitution	John Putziger*, Song Lin	Cornell University
S23	Electrochemical Approaches to Reductive Transformation in Organic Synthesis	Yihuan Lai*, Arjun Halder, Jaehwan Kim, Thomas J. Hicks, Phillip J. Milner	Cornell University
S24	Embedded-Base Electrophiles for Decarbonylative C–H Functionalization	Robert Wolesensky*, Frances Gu, Brooke Dunnery, Melanie Sanford	University of Michigan
S25	Withdrawn		

S26	Exploiting new Chemical Pathways for the Synthesis of Diazepines and Benzodiazepines	Dominic Rivera, Alyssa Singer, Adam Wyatt, Jenna Doran, Amari Howard	Rowan University
S27	Formation of Derivatized Benzocyclobutenes via Palladium-Catalyzed Alkene Difunctionalization	Robert L. King*, Calliope A. Cutchins, Colin J. Priest, John P. Wolfe	University of Michigan
S28	HFIP-Mediated Retro-Henry Reaction of trans-beta-Nitrostyrenes	Olivia Gottschall*, Xiaoran Lui, Juan G. Navea, Jessada Mahattananchai	Skidmore College
S29	Intramolecular PCET of α -Keto Acids: Synthesis of Trifluoromethyl Ketones via Ketyl Radicals	Rifat N. Nabi*, Kimberly A. Jarquin, Anupam Karmakar, Kyle E. Brunner, Daniel K. Kim.	Temple University
S30	Investigations into a Method for Catalyst-Controlled, Site-Selective Olefination and Amination of Indoles	Thomas M. Reimer*, Kuang Gu, Brandon L. Ashfeld	University of Notre Dame
S31	LMCT Catalysis with Discrete, Tunable Titanium Complexes for Selective Radical Chemistry	Yetong Lin, Ashley Lojko, Jagrut A. Shah, Zilu Tang, Emma Scher, Noah Schwartzapfel, and Jeffrey M. Lipshultz	Department of Chemistry, Stony Brook University
S32	Mechanistic Investigation of Pyridoxal-Inspired Photochemical Decarboxylation of Unprotected Amino Acids	Dr. Dong-Hang Tan, Agniva Das, Vincent Huang, Dr. Timothy D. Schoch, Abubakar Lawal Mohammed, Prof. Jeffrey M. Lipshultz	Department of Chemistry and Institute of Chemical Biology and Drug Discovery, Stony Brook University
S33	Mechanochemical Synthesis of enamino carbonyl compounds: Ball milling synthesis.	Maqhawe Ndlovu*, Diego Fernandez, Tej Beniwal, Jay Patel, Akhil Pinnapareddy, Nathan Kotchkin, Jayden Hristov, Joshua Soranno, Syed R Hussaini.	University of Tulsa
S34	Metal-Free Addition of Alkyl Bromides to Access 3,3-Disubstituted Quinoxalinones Enabled by Visible Light Photoredox Catalysis	David Hunter, Jennie Liao, Cheng Wang, Ugochinyere Nancy Oloyede, Joseph McLaughlin, Abdellatif El Marrouni	Merck and Co.

S35	Metallo-dioxirane Catalysis for the Functionalization of Activated Alkenes	Alyssa N. Singer*, Steven J. Finneran, Erin L. Doran, Jenna M. Doran, Amari M. Howard, Dominic A. Rivera	Rowan University
S36	Microdroplet Chemistry Facilitates Unique Short-chain RNA Oligomer Formation	Samantha E. Pryor* 1,2; Vincent S. Riggi 1,2; Morgan F. Schaller 1; Jacob T. Shelley 1,3	1. Dept. of Earth & Environmental Sciences, Rensselaer Polytechnic Institute; 2. Rensselaer Astrobiology Research and Education Center, Rensselaer Polytechnic Institute; 3. Dept. of Chemistry and Chemical Biology, Rensselaer Polytechnic Institute
S37	Mild and Efficient Cs ₂ CO ₃ -Promoted Synthesis of Silyl (Dithio-)Carbonates and Silyl (Dithio-)Carbamates	Phillip Gray III*, Colby Lavigne, Ralph Salvatore PhD	Ralph Salvatore- University of South Florida, Southeastern University, Phillip Gray III- Southeastern University, Colby Lavigne- Southeastern University
S38	N–O Tether-Enabled Net Intermolecular [5+2] Cycloaddition: A Preliminary Study	Tolulope Oluborode*, Andy Mitchell	Illinois State University
S39	New developments in LMCT photocatalysis utilizing discrete, stable titanium complexes	Ashley Lojko*, Jagrut Shah, Yetong Lin, Emma Scher, Zongle Wei, and Jeffrey Lipshultz	Stony Brook University
S40	Nickel-Catalyzed Oxidative Cross-Dehydrogenative Coupling	Ammar F. Ibrahim*, Austin M. Ventura*, Yuriko H. Fujisato*, Paul M. Zimmerman, John Montgomery	University of Michigan
S41	Palladium-Catalyzed Alkene Difunctionalization Reactions for the Synthesis of Bioactive Small Molecules	Siqi Dong*, Matthew Culberson, Andrew Cruz, Anaise Thomas, John Wolfe	University of Michigan
S42	Phenpropyl and Phenethylamine Synthesis and Evaluation of SERT Inhibition	Evelyn S. Galgano* and Timothy J. Barker	College of Charleston

S43	Phosphorylation: Ideal Reaction for Development of Chemoselective Catalysts and Novel Reagents	Bianca Sculimbrenne*, Kathleen Stathouloupoulos, Audrey Ihlefeld, Nora Brink, Ella Lynch-Bartek, Abigail Kellogg, Stephen Meier	College of the Holy Cross
S44	Photocatalysis for Polymer Synthesis	Neely Burns, Jacelyn Escovar, Thomas McPherson, Hannah Paul, Meredith A. Borden*	Department of Chemistry, Trinity University
S45	Photocatalytic Alkene Hydrofunctionalization Utilizing Modular Acridine-Lewis Acid Complexes	Emily Jimenez*, Daniel S. Brandes, Matthew R. Lasky, Olusayo J. Ogunyemia, Siqi Dong, Theodore Goodson III, Melanie S. Sanford	University of Michigan
S46	Photocatalytic C(sp ³)-H Functionalization Enabled by Ligand-to-Metal Charge Transfer	Jun Luo, Jujhar Singh, Yongming Deng	Department of Chemistry and Chemical Biology, Indiana University Indianapolis, Indianapolis, Indiana 46202, U.S.
S47	Photocatalytic Iminyl Radical Cyclization for the Synthesis of Quinazolinones	Erin E. Gray*, Neissa Usanase, Jensen L. Rocha, Joyce Yoo, Hanbich Lee, Hannah A. Spencer, Mohammed Albotabeekh, Janeth A. Sandoval	Washington and Lee University
S48	Preparation of N-Protected Benzylic Amines by Nickel/Photoredox Dual Catalysis: A Program Developed for the Education and Training of Summer Research Interns	Emily Holman, Marwah Albaker, Alexi Martin and R. Jason Herr*	Medicinal Chemistry Department, Curia Global, Inc.
S49	Radical fluorination: Method development and mechanistic insights	Jessica Bluit*, Mathew Vetticatt	Binghamton University
S50	Radical innovations using electricity for site-selective reactions	Eva Maria Alvarez 1*, Griffin Stewart 1, Jinxiao Li 1, Chris Rapala 1, Mohammed Ullah 1, Remy Lalis 2, Osvaldo Gutierrez 2, Christian Malapit 1	1.Northwestern University; 2. University of California, Los Angeles

S51	Robust Aluminium-Based Metal-Organic Frameworks Facilitate Photochemical Fluoroalkylations Using Fluorinated Gases	Jiachen He 1*, Joharimanitra Randrianandraina 2, Husain Adamji 3, Valerie Chang 1, Yihuan Lai 1, Heather J. Kulik 3, Jung- Hoon Lee 2, Phillip J. Milner 1	Cornell university
S52	Semi-Reduction of Benzamides to Imines Using a Mixed Aluminum Hydride Reagent	Keith P. Reber*, Neechi Okwor, Grace Vaillancourt, Jennafer Buckshaw	Towson University
S53	Solvent-Free Transfer Hydrogenation by a Hantzsch Amide	Anthony C. O'Donnell, Allie E. Marks, Y Dang, Dylan M. Brandt, Robert Palkovitz, Jonathan Liu, Alisa Wang, Audrey Kinney, Jackie Guo, Bailey Sparks, Scott A. Van Arman*	Franklin & Marshall College
S54	Strategies for the synthesis of divinyl amines	Adam J. Wyatt*, Dominic Rivera, Alyssa Singer, Jenna Doran, Amari Howard, Gustavo Moura-Letts	Rowan University
S55	Surprising rearrangement of pyrone-Amides	Joy Alende*, John Goodell, Andy Mitchell	Illinois State University
S56	Synthesis and Reactivity of Mucononitriles	Liam Murphy*, Adam Zahara, Sidney Wilkerson- Hill	The University of North Carolina at Chapel Hill
S57	Synthesis of Benzooxazepines from Oxaziridines and Dipolaraphiles	Amari M. Howard*, James L. Stroud, Dominic A. Rivera, Gustavo Moura- Letts	Rowan University
S58	Synthesis of Phenpropylamines	Hannah E. Ford* and Timothy J. Barker	College of Charleston
S59	Synthesis of Quaternary Homobenzaldehydes by Zinc-Mediated Palladium-Catalyzed α -Arylation of Silyl Enol Ethers	Angelina C. Graf*, Liv R. Alleyne, Ashlynn B. Van Lare, Ritter V. Amsbaugh, and Benjamin J. Stokes	Santa Clara University

S60	Synthesis of Thioethers via a Hypervalent Iodine-Catalyzed Thiol-Ene Reaction	Zarine Gidwaney*, Sachin Balasubramanian*, Stephanie De Jesus*, Dr. Sarah Tasker	Franklin & Marshall College
S61	Synthesizing Materials for Research on (5+2) Cycloadditions	Rachel Brozenec*, Andy Mitchell	Illinois State University
S62	Synthesis of cyclopropanes using alkylsulfones as carbene equivalents	Charles R. Teeple*, J. Douglas Johnson, J. Cabell Metts, Timothy A. Lewis, Charlotte A. Ridgway, Sidney M. Wilkerson-Hill	The University of North Carolina at Chapel Hill
S63	The Base-Mediated Rearrangement	Dr. Andy Mitchell, Quentin Ervin	Illinois State University
S64	The Reductive halo-Nazarov cyclization for the construction of substituted halo-cyclopentenes.	Benjamin Kozloff*, Michael Piacquadio, Georgios Alachouzos, Alison Frontier	University of Rochester
S65	Transition Metal-Free Methods to Make C-N and C-B Bonds	Alexis Z. Hamilton, Samson W. Hill, Ben P. Cerkovnik, Katilin M. Ervine, Daniel J. Nasrallah*	Roanoke College
S66	Trifluoromethylborylation of Unactivated Alkenes	Hieu H. Nguyen*, Silas P. Cook	Indiana University, Bloomington
S67	Updates and Improvements to the Wagner-Jauregg Reaction	Samuel S. Tartakoff*	St. Lawrence University
S68	Visible Light Mediated Alkene Functionalization	Samyadev Giri, Ramesh Giri	The Pennsylvania State University
S69	Wireless Electrosynthesis using Light-Harvesting Microelectronic Devices	Bartosz Górski1†, Jonas Rein 1†*, Samantha Norris 2, Yanxin Ji 2, Paul L. McEuen 2, Song Lin 1 †Contributed equally and listed in an alphabetical order	1. Department of Chemistry and Chemical Biology, Cornell University; 2. Department of Physics, Cornell University
S70	Moved to Wednesday		
M1	[13]Graphanyl-X: Expanding the 3D Saturate Chemical Space	Alex K.H. Chu*, Antonio Rizzo, Pauline Chiu	The University of Hong Kong

M2	[2+2] Cycloadditions of Strained Cyclic Allenes	Allison T. Hands*, Noah W. Gilbertson, Matthew S. McVeigh, Jacob P. Sorrentino, and Neil K. Garg	University of California, Los Angeles
M3	7-Membered Cyclic Allenes as Building Blocks for Heterocycle Synthesis	Georgia M. Scherer*, Benjamin A. Janda, Lauren Q. Van Auken, and Neil K. Garg	University of California, Los Angeles
M4	A Divergent C–H Functionalization Approach Toward Delavatine A and Constitutional Isomers	Emily Y. Fok 1*, Alexander Kremsmair 1, Silvia Rizzo 1, Ambre Carpentier 2, Robert Paton 2, Richmond Sarpong 1	1. University of California, Berkeley; 2. Colorado State University
M5	A Solution to the anti-Bredt Olefin Synthesis Problem	Zach G. Walters*, Luca McDermott, Sarah A. French, Allison M. Clark, Jiaming Ding, Andrew V. Kelleghen, K. N. Houk, and Neil K. Garg	University of California, Los Angeles
M6	Asymmetric Cyclopropanation on Dirhodium (II,II) Paddlewheel Complexes with Tethered Axially Coordinated Chiral Ligands	Ernest Bennin 1*, Ryan Oconnell 2	1. The University of Tennessee; 2. The University of Notre Dame
M7	Asymmetric Mannich Reactions Catalyzed by Configurationally Stable Half-Sandwich Ruthenium Complexes	Gabriel Negrao de Moraes, Shuming Chen*	Oberlin College
M8	Asymmetric Rh-Catalyzed Synthesis of Dihydronicotinamides	Sara Zerangnasrabad*, Rashad Karimov	Auburn University
M9	Asymmetric Total Synthesis of (–)-Verrucarol	John F. McCleerey Jr., Madison H. Powers, Anh Tran, James McNeely, Jeffrey Bacon, John A. Porco Jr.	Boston University; Vertex Pharmaceuticals
M10	Atropisomeric beta-Carbolines in Undergraduate Research	Seann P. Mulcahy*	Providence College
M11	Azafluorenones: Toward Stable Radical Intermediates and Fluorescent Probes	Alexander Holland*, Amanda Stebner, Chris Abelt, Jonathan Scheerer	The College of William & Mary

M12	Bioinspired Total Synthesis of Abyssomicin 2 and Neoabyssomicin B	Hannah M. Mulliner 1*, Sbusisiwe Z. Mbatha 1, Paul R. Race 2, Martin A. Hayes 3 and Christine L. Willis 1.	1. School of Chemistry, University of Bristol, Bristol; School of Natural and Environmental Sciences, Devonshire Building, Newcastle University, Newcastle-Upon-Tyne; 2. Biopharmaceuticals R&D, AstraZeneca, Mölndal, Sweden
M13	C ₃ -Symmetrical Prolineamide Organocatalyst for Asymmetric Aldol Reactions	Jian Liang, Ender Harris, Jacob Cortez, Michael Koogle, Josua Hybert, Rev Derek Baluyut, Yu Liu*	Northern Michigan University
M14	Concise Total Synthesis of (–)-Pensubrubine Using an Interrupted Fischer Indolization Strategy	Jiaming Ding*, Allison T. Hands, Lucas A. Wein, Nathan J. Adamson, John M. Billingsley, Yi Tang, and Neil K. Garg	University of California, Los Angeles
M15	Conjunctive Cross-Coupling: Development of Alkene Carboboration Reactions	Suman Das*, Maeve A. Reilly, Stanna K. Dorn, Allison M. Pearson, and M. Kevin Brown	Indiana University Bloomington
M16	Control Site-Selective and Enantioselective C-H Functionalization of Arylcyclohexanes	Duc Ly 1*, Yannick T. Boni 1, Korkit Korvorapun 2, Volker Derdau 2, John Bacsá 1, Djamaladdin G. Musaev 1, and Huw M. L. Davies 1.	1. Department of Chemistry, Emory University; 2. Sanofi-Aventis Deutschland GmbH, R&D, Integrated Drug Discovery, Germany.
M17	Crystallization-Enabled and Dearomatization-Enabled Methods to Access Chiral Non-Racemic Building Blocks	Aidan Clarkson*, Seth O. Fremin, Hazel Liu, Bryn K. Werley, Kimberly A. Alley, Jacob G. Robins, Shubin Liu, Jeffrey S. Johnson	University of North Carolina at Chapel Hill

M18	Crystallization-Induced Selectivity: Case Studies from Discovery Programs at AbbVie	Stephen N. Greszler*, David A. Degeoey, Pamela L. Donner, Kristine E. Frank, Nathan J. Gesmundo, Michael A. Leitch, Augustine Osuma, Ashley L. Ramos, John T. Randolph, Anurupa Shrestha, Eric A. Voight, Matthew P. Webster, Michael D. Wood, Gang Zhao	AbbVie, Inc. North Chicago, IL
M19	Curcumin Anchored Titanium Complexes for Photocatalysis	Ajaya Sankara Warriar*, Paul Knotts, Ryan Quick, and Kolton Smouse	West Virginia University
M20	Design of Crosslinkable Poly(phthalaldehyde) Derivatives	Kaitlin E. Hopper*, J. Patrick Lutz	St. Lawrence University
M21	Design, Synthesis, and Stability Studies of Promesogenic Amine Capping Ligands for CdSe/ZnS Quantum Dots	Jasmine Q. Vu*, Ashlynn B. Van Lare, Paige S. Moriwara, Nicholas J. C. Licaucó, Isabella C. Reyes, and Benjamin J. Stokes	Santa Clara University
M22	Development and Characterization of a New Generation of Photo-activated Platinum Catalysts for Silicone Polymer Cross-linking	Patrick J. Landry*, Peter J. Bonitatibus Jr., K. V. Lakshmi	Rensselaer Polytechnic Institute
M23	Development of a Scalable Route for ABBV-576 Leveraging Multiple Process Technologies	Stephen P. Lathrop*, Nicholas J. Hafeman, Aleksandra Holownia, Jesse Brown, Nick Rosano, Kartik Kamat, Kenneth Engstrom, Jeffrey M. Kallemeyn	AbbVie Inc., North Chicago, IL
M24	Diastereoselective Synthesis of a Common Tetramethylaminocyclobutanol Building Block: Chemo- and Biocatalytic Manufacturing Process	Daniel Zell 1*, Guy Pillon 1, Hans Iding 2, Johannes A. Burkhard 1, Lauren E. Sirois 1, Chong Han 1, Francis Gosselin 1	1. Genentech, Inc., Dept. of Synthetic Molecule Process Chemistry, Genentech, Inc., South San Francisco, California, U.S.; 2. Dept. of Process Chemistry and Catalysis, F. Hoffmann-La Roche Ltd., Basel, Switzerland

M25	Divergent Stereochemistry Transfers from Chirality to Alkene Geometry	Mingxin Liu, Vibha Kanale, Christopher Uyeda	Purdue University
M26	Enantiocontrolled Cyclization to Form Chiral 7- and 8-Membered Rings Unified by the Same Catalyst Operating with Different Mechanisms	Nicolò Tampellini*, Brandon Q. Mercado, Scott J. Miller	Yale University
M27	Enantioselective Olefin Aminooxygenation via Organo-iodine Catalysis	Zhichang Yin*, Fan Wu, Alex M. Nguyen, Kristi Shrestha, Navdeep Kaur, Prabagar Baskaran, Madison Martin Erickson, Chloe E. Villa, Sara K. Colombo, Michelle M. Huynh, Wei Li	The University of Toledo
M28	Enantioselective Palladium-Catalyzed Radical Allylic Alkylation	Dhanyaj Narayanan Nampoothiry *, Eric Dobias, Thomas N Snaddon	Indiana University Bloomington
M29	Enantiospecific Synthesis and Immunological Insights into MDP-Inspired Glycopeptides for Enhancing Subunit Vaccine Efficacy	Sana Yaqoob*,1,2 Zi-Hua Jiang,3 Farooq-Ahmad Khan1,2	1. Third World Center for Science and Technology, ICCBS, Univ. of Karachi, Pakistan; 2. H.E.J Research Institute of Chemistry, ICCBS, University of Karachi, Pakistan; 3. Dept. of Chemistry, Lakehead Univ., Ontario, Canada
M30	Functionalization of controlled pore glass supports containing a terminal amine	Keith McGee	University of Colorado Denver
M31	HalA-guided, Stereoablative Total Synthesis of (+)-Napyradiomycin A1	Behrad Masoudi*, Saeedeh Torabi Kohlbouni, Nastaran Salehi Marzizarani, Matthew Ochoa, Arvind Jaganathan, Olivia Diakantonis, Richard J. Staples, Babak Borhan	Michigan State University

M32	HFIP Solvent Effects on Enantioselectivity of Dirhodium Tetracarboxylate-Catalyzed Cyclopropanation	Turki M. Alturaifi 1, Kristin Shimabukuro 2*, Jack C. Sharland 2, Binh Khanh Mai 1, Evan A. Weingarten 2, Mithun C. Madhusudhanan 1, Djamaladdin G. Musaev 3, Peng Liu 1, Huw M. L. Davies 2	1. Dept. of Chemistry, University of Pittsburgh, 2. Dept. of Chemistry, Emory University, 3. Cherry L. Emerson Center for Scientific Computation, Emory University
M33	High-throughput electron diffraction in the XtaLAB Synergy-ED	Robert Buckner 1, Mathias Meyer 2, Michal Jasnowski 2, Mateusz Idzi 2, Jessica Burch 3*	1. Rigaku Europe SE, Neu-Isenburg, Neu-Isenburg, Germany; 2. Rigaku Oxford Diffraction, Wrocław, Wrocław, Poland; 3. Rigaku Americas, The Woodlands, TX
M34	Insights into nanoparticle surface bonding and coating architecture by multinuclear solution-phase NMR spectroscopy	Jacob D. Aubrey 1*, James Gibson 1, John T. Leman 1, Benjamin M. Yeh 2, and Peter J. Bonitatibus Jr. 1	1. Chemistry and Chemical Biology, Rensselaer Polytechnic Institute, Troy, NY; 2. Department of Radiology and Biomedical Imaging, University of California San Francisco,
M35	Ionic liquid systems for cellulose integration and epoxy biocomposite fabrication	Andrea Szpecht*, Dawid Zielinski, Marcin Smiglak	Poznan Science and Technology Park, Poland
M36	Isoquinoline Derivatives from Merged Cycloaddition/Cycloreversion Sequences with 1,4-Oxazinone Precursors	Jae Lee*, Jessica Richmond*, Lauren Mullaney, LC Thompson, David Zhao, Jonathan R. Scheerer	College of William and Mary
M37	Lewis Acid Catalyzed Diels-Alder Reaction Between Electron-Rich Partners	Muhammad Taha Qureshi*, Syed Raziullah Hussaini	The University of Tulsa
M38	Modular Synthesis of Phenazine-Based Aggregation Induced Emission Materials	Viktorija Miseljic*, R. Nacif-Pimenta, Brian H. Northrop	Wesleyan University

M39	Pharmacophore-Directed Retrosynthesis Applied to Colletotrichone A	Joel G. Yoder 1*, Wei Ding 2, Stephan Sieber 2, Daniel Romo 1	1. Baylor University, Dept. of Chemistry and Biochemistry; 2. Technical University of Munich, Germany, School of Natural Sciences
M40	Pharmacophore-Directed Retrosynthesis Applied to Talaromynoid H: Synthesis of Highly Oxygenated Tetracyclic Core	Adam J Youman*, Chelsea M. Kelley, Phillip Z. Junghans, Daniel Romo	Baylor University
M41	Pharmacophore-Directed Retrosynthesis Applied to the Ophiobolin Family	Jaquelin Aroujo*, Yongfeng Taoa, Abigail Hillsa, Keighley Reisenauerb, Haleigh Parkerb, Santha Rangananthanb, Joseph H. Taubeb, and Daniel Romo	Baylor University
M42	Phosphine-Catalysed Polarity Inversion Annulation for Cyclopentane Synthesis	Chenxi Zhang 1*, Jeremy T. Maddigan-Wyatt 1, Xuan Nguyen 1, Antonia Seitz 1, Martin Breugst 2, David W. Lupton 1. Alexander I. Wright 1, Chenxi Zhang 1*, Jing Cao 1, Yuji Nakano 1, Lucia J. Sanchez 1, Julia DeBono 1, Sankeert Kapatkar 1, Gregory L. Challis 1, David W. Lupton 1.	1. Monash University, Australia; 2. Technische Universität Chemnitz 2, Germany
M43	Physiochemical Properties of Diosgenin-Graphene Oxide-Fe ₃ O ₄ Nanocomposite and Its Encapsulation into Cyclodextrins and Chitosan	Khaled Q. Shawakfeh*	Jordan University of Science & Technology, Irbid, 22110, Jordan
M44	Progress towards the Synthesis of Austin	Đức Phan*, John L. Wood	Baylor University
M45	Progress Towards the Total Synthesis of the Ansamycin Family of Natural Products	Toan Ho*, Joshua Pierce	Dept.of Chemistry and Integrative Sciences Initiative, NC State Univ.
M46	Rearrangements of oxy-substituted allyl silanes	Darshika Singh*, Emmanuel W. Maloba, Robert E. Maleczka, Jr.	Michigan State University

M47	Shedding light on alkene aziridination: Visible light photocatalysis with N-aminopyridinium ylides	Gwendolyn E. Jamison*, Zachary P. Burmeister*, Emily C. McLaughlin	Bard College
M48	Silanols – From Ligand Design in Enantioselective Catalysis to Blue Light Reactions	Kevin Blanco-Herrero*, Yun-Pu Chang, Turki Alturaifi, Peng Liu, Annaliese K. Franz*	University of California - Davis; University of Pittsburgh
M49	Stereoselective Alkylation of Auxiliary-Bound Amino-Ketones	Ian D. Terell*, Jeffrey S. Cannon	Occidental College
M50	Supported Ionic Liquid-Phase Materials (SILP) as Stable Modifiers and Hardeners for Epoxy Composites	Dawid Zielinski 1*, Andrea Szepecht 1, Rafal Kukawka 1, Joanna Dzialkowska 2, Mariusz Pietrowski 2, Michal Zielinski 2, Magdalena Palacz 1, Paulina Nadobna 1, Marcin Smiglak 1	1. Poznan Science and Technology Park, Poland; 2. Adam Mickiewicz University, Poland
M51	Synthesis and Utilization of a Paracyclophane Derived Planar Chiral Catalyst for Asymmetric C-N Bond Formation	Wesley Pullara*, Simon Blakey	Emory University
M52	Synthesis of Azide-Conjugated Prodrugs for Targeted Cancer Therapy	Marc A. Torres, B.S 1*, Dhiraj K. Jha, M.S 1, Bobae Park, Ph.D. 2, Yaguang Liu, M.D., Ph.D. 2, Bandana Chatterjee, B.S., M.S., Ph.D. 2, John C.-G. Zhao, M.S., Ph.D. 1	University of Texas at San Antonio, University of Texas Health Science Center
M53	Synthesis of bis-benzoxazolones and bis-benzimidazolinones for cholinesterase inhibition	Sophia Tallon*, Veronika Anastasiadis*, Todd J. Eckroat	Penn State Behrend

M54	Synthetic and structure–function studies of the gukulenins	Vaani Gupta 1*, Zechun Wang 1, Joshua B. Combs 1 2, Timothy Wright 1 3, Lei Chen 1 4, Boxu Lin 1 5, Ryan Holmes 1 6, Bo Qin 1 7, Joonseok Oh 1 8, Jason M. Crawford 1 9, and Seth B. Herzon 1 9.	1. Yale University; 2. University of California–San Francisco; 3. University of Toronto Mississauga, Canada; 4. Nanjing Gritpharma Co., Ltd., China; 5. Peking University, China; 6. Prelude Therapeutics; 7. New York University; 8. Amgen Inc; 9. Yale School of Medicine.
M55	Synthetic Progress towards Materials with Potential for Carbon Capture	Jay Wm. Wackerly*	Central College
M56	Synthetic Strategies for Novel 2,7-Naphthyridine Compounds as MASTL Inhibitors	Stephanie Scales*, Madeline Berry, Rebecca A. Gallego, Paul Richardson, Michelle Tran-Dubé, Fen Wang, Shouliang Yang and Indrawan McAlpine	Pfizer Oncology Medicinal Chemistry
M57	The Concise Synthesis of abeo-Steroid Bufogargarzin B	Zoey Surma*, Eugene Zviagin, Volodymyr Hiiuk, and Pavel Nagorny.	University of Michigan
M58	The ReactALL Platform: Testing and Application to Process Development	Russell Algera, Melissa Lee*, Sebastien Monfette, Truong Nguyen	Pfizer
M59	The Synthesis of Novel Acylated Proflavine Derivatives	Kathryn M. Pogue*, Samuel S. Tartakoff	Saint Lawrence University
M60	Total Synthesis of (+)–Eburnamonine via Asymmetric Alkene Cyanoamidation and C–CN Bond Activation	Serena DiLiberti*, Matt S. Eastwood, Sadie C. Otte, and Christopher J. Douglas	University of Minnesota - Twin Cities
M61	Total Synthesis of Complex Pyrroloiminoquinone Alkaloids	C. Foster Graf*, Joseph P. Tuccinardi, James T. Olsen, John L. Wood	Baylor University
M62	Total Synthesis of Cycloartobioxanthanone	Cheng-En Hsieh*, Sarah N. Dishman, Linda Ung, Tony E. Dorado, and Jared T. Shaw	University of California, Davis

M63	Total Synthesis of Rupestines H and I	Aimee Long, James R. Vyvyan*	Western Washington University
M64	Visible light-induced cyclobutane synthesis: Intermolecular [2 + 2] cycloadditions with vinylogous ester and amide heterocycles	Maximus G. Schultz*, Alexandria J. Thomas, Maryam Mohibby, Amirat Maiyegun, Emily C. McLaughlin	Bard College
M65	Wavelength-Orthogonal Optodynamics to Overcome the Statistical Limitations of Interfacial Photopolymerizations	Georgios Toupalas*, Timothy M. Swager	Department of Chemistry, Massachusetts Institute of Technology
M66	Wittig and Wagner-Jauregg Reactions in the Production of Morphine Analogs	Kaitlyn Barton 1*, Chase Smith 2*, Samuel Tartakoff	Saint Lawrence University
M67	Optimization of Cu(II)-catalyzed C-O cross-coupling reaction for the synthesis of structurally complex vinylic ethers	San L. Pham*, Frank E. McDonald	Department of Chemistry, Emory University
T1	1,2-Acyl Transposition through Photochemical Skeletal Rearrangement of 2,3-Dihydrobenzofurans	Ryan T. Steele*, Motohiro Fujiu, Richmond Sarpong	University of California, Berkeley
T2	2,5-Dipyridylpyrrole in Supramolecular Chemistry – Click, Rotaxanation, and Skeletal Editing	Jędrzej Perdek*, Rafał Grzelczak, Miłosz Siczek, Bartosz Szyszko	University of Wrocław, Poland
T3	A Catalytic Asymmetric Intramolecular [4 + 1]-Cycloaddition for the Total Synthesis of Terpene Alkaloid Natural Products	Wen Xiu*, Calvin D. Huffman, William A. Swann, Christina W. Li and Christopher Uyeda	Purdue University

T4	A Second-Generation Route to the Cereblon Fragment of ARV-471, Vepdegestrant	David J. Bernhardson 1, Jonathan Fifer 1, Zebediah C. Girvin 1, Ian Hotham 1, Johnny W. Lee 1, Valerie May 1, Blake Rauschenberger 1, Chase A. Salazar 1, Liam S. Sharninghausen 1, Robert A. Singer 1, Ryan Sullivan 2, Zheng Wang 3, Ethan Weinstein 1, Gerald A. Weisenburger 1, Joseph M. Zanghi 1*	1. Pfizer, Inc., 2 Eurofins CDMO Alphora Inc., Canada; 3. Eurofins Lancaster Laboratories
T5	Activation of Alkyl Electrophiles Mediated by Iminopyridonate Bimetallic Ni(I) Complexes for Suzuki-Migaura Cross-coupling	Hailemariam A. Mitiku, Abhishek A. Kadam, Rebecca Reagan, William W. Brennessel, & Prof. C. Rose Kennedy	University of Rochester
T6	Adding Saturated N-Heterocycles to Automated Block-Based Synthesis of Drug Like Chemical Matter	Dylan Brandt 1*, Joseph R. McAuliffe 1; Vikram Mubayi 1; Daniel J. Blair 1; Martin D. Burke 1, 2, 3, 4	1. Dept. of Chemistry Univ. of Illinois Urban-Champaign; 2. Molecule Maker Lab Institute, Univ. of Illinois Urbana Champaign; 3. Carle Illinois College of Medicine, Univ. of Illinois Urbana-Champaign; 4. Dept. of Biochemistry, Univ. of Illinois Urbana-Champaign
T7	Analysis of C-H Activation of Directed Cu(II) Cyclometalated Complexes	Ila Y. Castro De la Torre*, Melanie S. Sanford	University of Michigan
T8	Biocatalytic Aza-Michael Addition of Aromatic Amines to Enone Using α -Amylase in Water	Sunil Dutt	Thapar Institute of Engineering and technology Patiala Punjab
T9	Caging the Chlorine Radical: Selective Photocatalytic C(sp ³)-H Functionalization Enabled by Terminal Cu-Cl Sites in a Metal-Organic Framework	Mary Eaton 1*, Akash Ball 2, Sky Chen 1, Daniel Nakamura 1, Tyler Azbell 1, Heather Kulik 2, and Phillip Milner 1.	1. Cornell University; 2. Massachusetts Institute of Technology

T10	Chan-Evans-Lam Oxidative Alkylation	Pria Parker*, Nitya Sharma*, Hala Maloul*	Smith College
T11	Copper-Catalyzed Enantioselective Haloetherification of Alkenols	Joseph M. Fose*, Atinuke Abanikanda, and Sherry R. Chemler	State University of New York at Buffalo
T12	Development of an Efficient O-Acylation Reaction in a Scalable Synthesis of GDC-6599	Di Xu 1*, Allen Y. Hong 1, Thomas C. Malig 2, Kenji L. Kurita 2, Haiming Zhang 1, and Francis Gosselin 1	1. Dept. of Synthetic Molecule Process Chemistry, Genentech, Inc., South San Francisco; 2. Dept. of Synthetic Molecule Analytical Chemistry, Genentech, Inc., South San Francisco
T13	Development of Dearomative Methods to Build Molecular Complexity	William Carrick*, Michael Eng, Dorian Vallantin, Tabea Nett, Mikhail Saeed, Shubin Liu, Benjamin Darses, Jeffrey Johnson	University of North Carolina at Chapel Hill, Université Grenoble Alpes
T14	DFT study of the Rh-catalyzed cyclopropanation step in the total synthesis of rauvomine B	Gabriel N. Morais 1*, Jake M. Aquilina 2, Ankush Banerjee 2, Myles W. Smith 2, Shuming Chen 1	1. Oberlin College; 2. UT Southwestern Medical Center
T15	Division of Organic Chemistry Member Benefits	Andrew Freiburger 1, Ed Fenlon 2, Brian Myers 3	1. Northwestern University; 2. Franklin and Marshall College; 3. Ohio Northern University
T16	Electrochemical α -C-H Functionalization of Nitramines for Accessing Bifunctional Energetic Heterocycles	Cindy Lee 1, Luiz F. T. Novaes 1, Rojan Ali 2, Thomas Wirth 2*, and Song Lin 1*	Cornell University
T17	Electrochemical selective arene C-H amination	Griffin Stewart*, Eva Alvarez, Chris Rapala, Christian Malapit	Northwestern University
T18	Expanding the utility of bifunctional organosilicates for tetrahydroquinoline and piperidine synthesis	Dalia Khalil, Ohm Brijeshbhai Patel, Rahil Patel, Mohamed Ibrahim, Nidheesh Phadnis, Jessica A. Molen, John A. Milligan*	Thomas Jefferson University

T19	Exploring the Use of Redox for the Formation of Difficult-to-Form Bonds from Pd and Ni	Zoe Wachtel*, Joshua Thedford, Sabrina Carneiro, Melanie Sanford	University of Michigan
T20	FLASH Catalyst: Regioselective Chlorination of Pharmaceutical Relevant (Hetero)cycles	Zhao Liu*, Jeffery Gustafson	Stony Brook University
T21	From Flexible to Rigid: Exploring Catalytic Palladium C-X Bond Forming Reactions for More Clinically Suitable Protein Degraders	Raphael K. Klake*, Archita Sripada, Nunzio Sciammetta, Charles S. Yeung	Merck & Co., Inc.
T22	General and Selective Fluorination of Alkyl Halides via AgF ₂ -Mediated Halogen Exchange	Snehlata Yadav*, Deepak Pradhan, Subhrasish Banerjee, Mathew Vetticatt, Jennifer Hirschi	SUNY Binghamton University
T23	Generation of Polysubstituted Tetrahydrofurans via Urea-Enabled, Pd-Catalyzed Olefin Heteroannulation	Shannon O'Neil*, Owen Monteferrante, Brooke Stanley, Shauna Paradine	University of Rochester
T24	Gold(I)-Catalyzed Synthesis of 1H-Isochromenes	Miles L. McCue 1, Navraj J. Singh 1, Julianna M. Mouat 2, Zachary A. Grimm 2, Michael R. Gesinski 1*	1. Lawrence University; 2. Southwestern University
T25	Gold(I)-Catalyzed Synthesis of Naphthoquinones and Isoquinolines	Minh N. Tran 1*, Andrew F. Hardianto 1, Sean J. Calvert 2, Chelsey C. Southwell 2, Nathaniel J. Blake 2, Michael R. Gesinski 1	1. Lawrence University 2. Southwestern University
T26	Guaiazulene Functionalization as a Colorful Introduction to Column Chromatography	J. Patrick Lutz*	St. Lawrence University
T27	Highly Efficient, Green Chemical Recycling and Upcycling of Polylactic Acid (PLA) Mixed Plastic Waste	Vasilisa Palkova*, Ria Vij, and Olivia Soliman	Department of Chemistry, Union College
T28	Hydrothermal Reactions of Aromatic Carboxylic Acids and Related Products on Mineral Surfaces	Selmina Huskic*, Brianna Casey, Kristin Johnson-Finn	Rensselaer Polytechnic Institute
T29	Iron catalyzed regiodivergent synthesis of N-heterocycles	Kristi Shrestha*, Alex M. Nguyen	The University of Toledo

T30	Iron-Facilitated Bi(hetero)aryl formation via N-(2-picolyl)picolinamide complexes	Julia Schutz, Elsa Hinds*	Saint Mary's College
T31	Kinetic Studies to Enable a Scalable Direct Glycosylation of a GalNAc Donor	Shea O'Sullivan*, James Murray, Eric Kircher, Zhou Li, Tsang-Lin Hwang, Seb Caille, Janine Tom	Amgen
T32	Ligand denticity and substrate chelating ability interact to control chemoselectivity in nickel-catalyzed amide cross-coupling	Vivek G Pillai*, Kaycie R. Malyk, Daniel Akuamoah, C. Rose Kennedy	University of Rochester
T33	Methylene Insertion for Direct Access to Tailored Amines	Isabella Alansari, Meruyert Binayeva, Rebecca Brew, Caitlin Dougherty, Amlan Nayak, Ian Nelson, Wyatt Simmons	Michigan State University
T34	Nickel-Catalyzed C-CN Cross-Coupling of Benzonitriles and Cyclopropyl Ketones	Nathan Coddington*, Yvette Luna, Robert Bradley, Madison Loper, Paul Saucedo, Ana Bahamonde	University of California, Riverside
T35	Developing Photoresponsive Artificial Chaperones	Hannah Claus*, McKenna Young, Elizabeth Piedmont, Benjamin Partridge	University of Rochester
T36	Optimizing Hydrogenation Reactions with Gas Chromatography: Unveiling the Effects of Temperature, Pressure, and Catalysts	Masoumeh Rahim*, Charles Garner	University of Memphis
T37	Pd-Catalyzed hydroxylation of aryl halides under air and in eco-friendly solvent	Erica E. Schultz*, Mariam Beshara, Haylee P. Christopher, Gwendolyn A. Jones	Lake Forest College
T38	Photosensitive Platinum Catalysts for Hydrosilation-Curable Silicones	Melina Michailidis*, John Leman PhD, Peter J. Bonitatibus Jr., PhD	Dept. of Chemistry and Chemical Biology, Rensselaer Polytechnic Institute

T39	Poly(arylene ether)s via Cu(II)-Catalysis	Benedikt S. Schreib*, Timothy M. Swager	Massachusetts Institute of Technology
T40	Progress Toward the Total Synthesis of (–)-Keramaphidin B	Jordan A. M. Gonzalez*, Julianna A. Miseo, Zach G. Walters, Milauni M. Mehta, Matthew S. McVeigh, James L. Bachman, and Neil K. Garg	University of California, Los Angeles
T41	Pyrrole Rearrangements for Chromophore Development	Cesar Reyes*, Elias Picazo	University of Southern California
T42	Regioselective 1,n-Dicarbofunctionalization of Homoallylammoniums to Synthesize 1,3-Dienes Via C-N Bond Cleavage	Mandapati Bhargava Reddy*, Raj Debnath and Quinton J. Bruch	Stony Brook University
T43	Regioselective Hypervalent Iodine Catalyzed Difunctionalization of Alkenes to Access Morpholine	Madison Martin Erickson, Zhichang Yin, Wei Li	University of Toledo
T44	Shaking-Up Metal-Mediated Organic Reactions Using Ball Mill	Jagadeesh Varma Nallaparaju 1*, Tatsiana Nikonovich 2, Riin Satsi 1, Riina Aav 1, Dzmitry Kananovich 1.	1. Tallinn University of Technology, Estonia; 2. Aalto University, Finland
T45	Stereocontrolled Synthesis of O-Heterocycles	Patrycia Zybura*, Alison Frontier	University of Rochester
T46	Strained-Promoted Reactions of Cubene	Sarah A. French*, Christina A. Rivera, Dominick C. Witkowski, and Neil K. Garg	University of California Los Angeles
T47	Structure, Reactivity and Mechanistic Insights of Alkyl-Bridged bis(N-heterocyclic carbene) Nickel Precatalysts in Homogeneous Catalysis	Kerry-Ann Green 1*, Ellie Beams 1, Claudia Zhang 2, Abigail L. Moffett 1	1. Williams College; 2. Stanford University
T48	Study of Achmatowicz Intermediates in halo-Prins/ Ionization Cascades	Yusuf A. Ibrahim*, Alison J. Frontier	University of Rochester

T49	Synthesis and Characterization of Diversely Substituted Pyrrolidine-2-ones with Potential Antiproliferative Activity	Katelynn S. McPhee*, Matija Bekic, Liliya V. Frolova	Purdue University - Fort Wayne, Department of Chemistry and Biochemistry
T50	Synthesis and Reactivity of Geometrically Distorted Alkenes in Fused Bicycles	Allison M. Clark*, Luca McDermott, Marianna C. Tonoyan, and Neil K. Garg	University of California, Los Angeles
T51	Synthesis and Reactivity of Nitrogen-Containing Cyclic 1,2,3-Trienes	Daniel W. Turner*, Dominick C. Witkowski, Ana S. Bulger, K. N. Houk, and Neil K. Garg	University of California, Los Angeles
T52	Synthesis and Study of Atropisomeric 1-Aryl beta-Carboline	Joseph Mazzucca, Cristina Diaz, Elizabeth Perda, Alma Martinez, Malaquias Loiza, John Stathouloupoulos, Edward J. McClain, Seann P. Mulcahy	Providence College
T53	Synthesis and Study of Organometallic Intermediates in Base Metal-Catalyzed Aminoquinoline-Directed C-H Functionalization	Emily L. Nolan*, Fengrui Qu, Melanie S. Sanford	University of Michigan
T54	Synthesis of (Z)-10,11-dihydrobenzo[e][1,2,3]triazolo[1,5-a]azocine	Ronald Brisbois*, Scott Pedersen, Sarah Solomon, Hazel Waters	Macalester College
T55	Synthesis of 3,6-Diiodo-2,7-Dichloro-1,8-Naphthyridine and Its Application in Palladium- Catalyzed Cross-Coupling and Macrocyclic Assembly	Lily Qin*, Andrew L. Clevenger, Jeffrey L. Katz	Colby College
T56	Synthesis of a D3h cyclo(3,3'-p-terphenylene ethynylene) carbon nanobelt precursor	Jasmine Bordelon*, Karalyn Murray, Thomas S. Hughes	Department of Chemistry and Biochemistry, Siena College
T57	Synthesis of Antitubulin Indole-Substituted Furanones	Ameer H. Muse 1*, Elle S. Grillo 1, Keira L. Potvin 1, Marcella Venetozzi 1, Kathryn E. Cole 2, Patricia Mowery 1, Erin T. Pelkey 1	1 Hobart and William Smith Colleges

T58	Synthesis of aqueous bis-lactam-1,10-phenanthroline ligand for lanthanides separation	Joshua Olaf Aggrey*, Subhamay Pramanik, Ilja Popovs, Santa Jansone-Popova	Oak Ridge National Laboratory
T59	Synthesis of Benzo-fused Cycloheptanones from Cyclobutanol Derivatives by a C–C Cleavage/ Cross Coupling/ Enolate Arylation Sequence	Gwyneth L. Pudner*, Selena Dessain, Eric K. Wu, Richmond Sarpong	University of California, Berkeley
T60	Synthesis of Bicyclo[2.1.0]pentanes and Vinylcyclopropanes Using a Pd(0) Carbene	Isaiah K. Eckart-Frank, Emily S. Arnold*, Liam P. Murphy, Prof. Sidney M. Wilkerson-Hill	Department of Chemistry, The University of North Carolina at Chapel Hill
T61	Synthesis of Functionalized Indole-Dihydrothiopyran Hybrids through Intramolecular Alkyne-Carbonyl Metathesis	Miguel Andrade, Mukund Jha*	Department of Biology Chemistry and Geography, Nipissing University, North Bay, Ontario, Canada
T62	Synthesis of Guaiazulene-3-Carboxylic Acid and Oxalic Acid Derivatives	Emma Audi*, Carly M. Zack*, J. Patrick Lutz	St. Lawrence University
T63	Synthesis of Isatin through DMSO Mediated Oxidation of Indigo	Alivia Roerdink*, James Shriver	Central College
T64	Thermally Hazardous 1,3-Dioxolane Coupling Reaction Made Safer by Employing Process Safety Data	James Clarke 1, Duncan Farr 1, Jimmy Wang 1, Heather Ingram 1, Caroline Chapman 1, Harriet Field 1, Christopher P. Breen 2, Eva M. Gulotty 2*, Sara Mason 2, Grace Russell 2, Oliver Williams 2, Shruti Kumta 2, Jerry Britto 2, Li-Jen Ping 2	1. Pfizer U.K., Discovery Park House, Ramsgate Road, Sandwich, U.K.; 2. Snapdragon Chemistry, A Cambrex Company, Waltham Massachusetts
T65	Three Component Coupling Using a Sustainable Iron Catalyst to Form Substituted Imidazole Products	Celia McGhiey 1*	1. Saint Louis University
T66	Using a Packed-Column Gas Chromatograph as a Fixed-Bed Flow Reactor	Mark Wilson, Dr. William Hutcherson, Dr. Charles M. Garner, Jared Kaiser, Annabel Doyle	University of Memphis

T67	Visualizing Molecules: An Innovative Extra Credit Assignment Linking Organic Chemistry and Art Museum Visits	Zachary J Poulos	Massachusetts College of Pharmacy & Health Sciences
T68	The influence of N-(2-(tetrafluoro(trifluoromethyl)- λ 6-sulfanyl)ethyl)((N-CF ₃ SF ₄ -ethyl) groups on peptide bond formation and on amide bond conformation	Willow Desoucey*, Sakshi Shah, John T. Welch	University at Albany
T69	The reactivity of tetrafluoro(trifluoromethyl)- λ 6-sulfanyl chloride (CF ₃ SF ₄ Cl) with substituted alkynes and alkenes	Eleanor van der Riet*, John T. Welch	University at Albany
W1	A Catalytic Wittig Approach to the Piperacase Family of Natural Products	James C. Adrian, Jr.* and Anthony J. Condeemi	Union College, Chemistry Department
W2	Activated benzyloxypyridinium salts for mild and efficient benzylation of oxygen nucleophiles	Emma E. Horton*, Colleen R. Kinney*, Philip A. Albiniaik	Ball State University
W3	Amphiphilic Dendrons as Supramolecular Holdase Chaperones	Elizabeth Piedmont 1*, Erin Christensen 1*, Todd Krauss 1 2*, Benjamin Partridge 1*	University of Rochester and Institute of Optics, University of Rochester
W4	Analysis of Electronic and Steric Factors in Bis-Chalcone Synthesis	Nikolas Bodnar*, Jacob Bundesmann*, Emma Fallon*, Dr. Sarah Zingales	US Coast Guard Academy
W5	CDK2 Bivalent Inhibitors for Anti-Cancer Therapy and Non-Hormonal Male Contraception	Laila Aiad 1*, Gunda Georg 2	1. Dept. of Chemistry, College of Science and Engineering, Univ. of Minnesota Twin Cities; 2. Dept. of Medicinal Chemistry, College of Pharmacy, Univ. of Minnesota Twin Cities
W6	Cross Carbonyl-Olefin Metathesis (XCOM) of Unactivated Olefins	Jason Wu*, Moises Vargas-Penalver, Tristan H. Lambert	Cornell University, Department of Chemistry & Chemical Biology

W7	Design and Synthesis of Novel Cyclopentyl Dinucleotides (CPNs) as STING Agonists	Jacqui Hoffman*, Daniel Canterbury, Ramalakshmi Chandrasekaran, Chan Huh, Indrawan McAlpine, Ryan Patman, Stephanie Scales, Jianmin Sun, Tuan Tran, Michelle Tran-Dubé, Fen Wang, Joseph Warmus, Martin Wythes, Shouliang Yang & WuXi	Oncology Medicinal Chemistry, Pfizer
W8	Design, syntheses, and cytotoxic bioevaluations of some benzylidene cinnamoylhydrazides	Mohammad Hossain 1*, Stephen M. Markley 1, Jacquelynn J. Wiles 1, Jolie N. Dionne 1, Jacqueline Pena-Zacarias 2, Praveen K. Roayapalley 3, Renato J. Aguilera 2, Jonathan R. Dimmock 3	1. School of Sciences, Indiana Univ. Kokomo; 2. Department of Biological Sciences, University of Texas at El Paso; 3. College of Pharmacy and Nutrition, Univ. of Saskatchewan, Canada
W9	Design, Synthesis and Evaluation of Next-Generation Glycosidase Inhibitors through Side Chain Conformational Control	Po-Sen Tseng*, Kelley W. Moremen, Zachary A. Wood, David Crich	University of Georgia
W10	Design, synthesis, and testing of isatin-linked cholinesterase inhibitors	Todd J. Eckroat*	Penn State Behrend
W11	Developing photoswitchable GTP analogs to control protein assembly	Abhishek Roy*, Kari Maxian, Benjamin E. Partridge	Department of Chemistry, University of Rochester
W12	Development of a Naphthalimide-Based Fluorogenic Probe for Detection of Galanin	Austin Apesa*, Glenn Gilyot	Hampden-Sydney College
W13	Development of a Naphthalimide-Based Fluorogenic Probe for Detection of Leptin	Davis Mills*, Glenn Gilyot	Hampden-Sydney College
W14	Development of a near-infrared naphthalimide-based fluorogenic probe for detection of leucine aminopeptidase (LAP)	Glenn Gilyot*, Benjamin Gerber, Thomas Morris, Garrett Regan	Hampden-Sydney College

W15	Development of a sustainable process to florylpicoxamid from renewable raw materials	Nakyen Choy*, Nicholas R. Babij, Megan Cismesia, David Couling, Nicole Hough, Elizabeth McCusker	Corteva Agriscience
W16	Development of Bivalent Inhibitors of Cyclin-dependent Kinase 2 for the Treatment of Cancer and Male Contraception	Maryam Nazari*, Kelsey A. Holdaway, and Gunda I. Georg	Dept. of Medicinal Chemistry and Institute for Therapeutics Discovery and Development, University of Minnesota.
W17	Development of pyruvate carboxylase (PC) inhibitors for studying cancer cell metabolism	Subhabrata Chaudhury 1, Nick Schneider 2, William A. Donaldson 3, Martin St. Maurice 2	1. Dept. of Biological and Chem. Sciences, New York Institute of Tech.; 2. Dept. of Biological Sciences, Marquette Univ.; 3. Dept. of Chem., Marquette Univ.
W18	Direct-to-Biology Enabled Molecular Glue Discovery	Maowei Hu*, Daniel J. Blair	St Jude Children's Research Hospital
W19	Drug Target Identification through Visible Light Photocrosslinking	Brianna Uquillas*, Allison Hurd*, Josephine Cochran, Lindsay Repka	Middlebury College
W20	Dynamic Kinetic Asymmetric Hydroacylation: Racemization by Soft Enolization	Stephanie Corio*, Jennifer Hirschi	Binghamton University
W21	Examining The Electronic Structure of the Primary and Secondary Quinone Acceptors of Photosystem II	Caitlyn Mutchler 1,2*, Patrick Landry 2, and K. V. Lakshmi 2	1. The Biochem. and Biophysics Program; 2. the Dept. of Chem. and Chem. Biology and the Baruch '60 Center for Biochem. Solar Energy Research, Rensselaer Polytechnic
W22	Exploring Synthetic Pathways Towards Efavirenz: Replacement of the Side Chain with Larger Hydrocarbon Rings	Rocco Vargas 1*, Kaya Brooks 2, Ralph N. Salvatore Ph.D. 3	Southeastern University and University of South Florida
W23	Fit-For-Purpose Process Development of TEAD inhibitor GDC-8025	Jeff Shen*, Nick White.	Genentech

W24	Generation and Trapping of 1,7-Quadricyclene	Jiaming Ding*, Arismel Tena-Meza, and Neil K. Garg	University of California, Los Angeles
W25	Identification of Indoline-Containing Inhibitors of Glycine Transporter 2	Tanmay K Pati 1*, Christopher L. Cioffi 1, Mahesh Gaddam 1, Parthasarathy Muthuraman 1, Arun Raja 1, Srinivasan Jayakumar 1, Ramajayam Kuupusamy 1, Arunan Palanimuthu 1, Snigda Singh 1, Irina Lotsaris 2, Ryan Cantwell-Charter 2, Sally Evans 2, Julian Peiser-Oliver 2, Sarasa Mohammadi 2, Robert J. Vandenberg 2	1. Rensselaer Polytechnic Institute, Department of Chemistry and Chemical Biology, Troy, New York; 2. University of Sydney, School of Medical Sciences, New South Wales, Australia
W26	Identification of Novel Sulfoximine Inhibitors of RPE65 – Potential Therapeutics for Stargardt Disease	Benjamin Howard 1*, Christopher L. Cioffi 1, Lucia Maldonado-Vasquez 1, Darian Topolski 1, Krishna Yadav 1, Konstantin Petrukhin 2, Gennadiy Moiseyev 3	1. Rensselaer Polytechnic Institute; 2. Columbia University; 3. Wake Forest University
W27	Improving the Bioavailability of Gefitinib Across the Blood-Brain Barrier: A Prodrug Strategy for Inhibition of P-gp-mediated Efflux	Douglas S. Chan*, Christine A. Hrycyna, & Jean Chmielewski	Purdue University
W28	Investigations into the Mechanism of Cambiarene Formation	Katie Morrison*, Jay Wackerly	Central College
W29	Late-Stage Serine Modification Enables Noncanonical Peptide Synthesis	Zhenyan Guo*, Tianning Diao	New York University
W30	Lewis Base-Mediated Nucleophilic Additions of beta-Silyllallenes	Gregory W. Adams* and Timothy J. Barker	College of Charleston
W31	Mechanistic investigation for catalytic carbonyl-olefin and carbonyl-alkyne metathesis reaction.	Anjali Ravindran Nair*, Mathew J. Vetticatt	Binghamton University

W32	Mechanistic investigation into the many roles of indole in Ni/photoredox C-N coupling	Olivia Taylor*, Harsh Chavda, Kevin Liang, Tanner Megna, Angie Lopez, Grace Kim, Ana Bahamonde	University of California, Riverside
W33	Mechanistic Investigation of Nitrogen Atom Insertion Skeletal Rearrangements	Somnath Ganguly*, Stephanie Corio, Suchand Basuli, Jennifer Hirschi	SUNY Binghamton University
W34	Mechanistic Investigation of Nucleophilic Aromatic Substitutions between Nitrogen Nucleophiles and Aryl Fluorides	Harrison W. Toll 1, Xiaoyi Zhang 1, Tong Gao 1, Guilherme Dal Poggetto 2, Mikhail Reibarkh 2, Joshua J. Lee 1, Katherine J. Yang 1, Eugene E. Kwan 2, Amanda K. Turek 1	1. Williams College; 2. Merck & Co., Inc.
W35	Mechanistic Investigations into The Electrophotocatalytic C-H Functionalization of Ethers	Joshua Crow*, Tamal Das, and Jennifer Hirschi	Binghamton University
W36	Mechanistic Study of Diphenylprolinol Silyl Ether-Catalyzed Michael Addition	Lucian Fioretto*, Joseph A. Izzo, Chetan Joshi, Juliet M. Macharia, Sierra Marker, Mathew J. Vetticatt	Binghamton University
W37	Metallooxaziridine Catalysis for the Functionalization of Alkenes	Jenna Doran*, Erin Doran, Ali Pinarci, Morgan Rossi, Rufai Madiu	Rowan University
W38	Optimizing the solid-phase synthesis of amphiphilic peptoid sequences for the assembly of gold embedded nanosheets.	Khadija Amir [1], Sasha Stark [1], Raquel Duenas [1], Ellen Robertson [1], Kristiana Witte [2], Karlee McKinny [2], Caroline Proulx [2]	[1] Union College, [2] North Carolina State University
W39	Organic Chemistry for Kids and other Educational Initiatives	Daniel W. Turner*, Julianna A. Miseo, Benjamin A. Janda, and Neil K. Garg	University of California, Los Angeles
W40	Palladium-Catalyzed Annulation of Anti-Bredt Olefins	Zach G. Walters*, Aimee K. Long, and Neil K. Garg	University of California, Los Angeles

W41	PLP-Dependent Biocatalysts for C-C Bond Formation	Alexander Kim 1*, James Howard 2, Will Aye 1, Ryan Russo 1, Kendrick Smith 1, Matthew Sigman 2, Alison Narayan 1	1. University of Michigan; 2. University of Utah
W42	Radical-Mediated Protein Editing Allows 18F Protein Labelling	Andrew M. Giltrap 1,2,3*; Adeline W. J. Poh 2,3,4; Nan Yang 2,3,4; Daniel C. Anthony 3; David Leppert 5; Veronique Gouverneur 4; Benjamin G. Davis 2,3,4.	1. Univ. of Technology Sydney, Australia; 2. The Rosalind Franklin Institute, UK; 3. Pharmacology, The Univ. of Oxford, UK; 4. Chem., The University of Oxford, UK. 5. Neurology, Univ. Hospital Basel, Switzerland
W43	Regio-, Stereo-, and Chemoselective Iterative Glycosylation via Fluoride Migration	Timothy Emmel*, Chandana Sunil, John Montgomery	University of Michigan
W44	Rhodamine-dipeptide Conjugates for Cellular Tracking and Drug Delivery	Sagarika Taneja*, Ziyuan Meng, Bingxun Li, Benjamin Conrad, Jon R. Parquette	The Ohio State University
W45	Shining Light on the Use of Sensor Arrays to Detect Anions	Nicola Edwards* 1, Eben Holmes 1, Guo Chen* 2, Nathan Lam* 2	1. University of St. Joseph, West Hartford, CT; 2. The Loomis Chaffee School, Windsor, CT
W46	Size Isn't Everything: Diastereoselective Synthesis of Azetidines	Matthew Kiernan*, Paul Evans	University College Dublin, Ireland
W47	Spectroscopic Investigation of the Energetics of Electron Transfer using menB variants of Photosystem I	Brandon P. Russell 1,3*, Vasily Kurashov 2, David F. Iwig 2, Patrick Landry 3, Wade Johnson 4, Art van der Est 5, John H. Golbeck 2, David J. Vinyard 1, and K. V. Lakshmi 3	1. Louisiana State University; 2. The Pennsylvania State University; 3. Rensselaer Polytechnic Institute; 4. Susquehanna University 5 Brock University
W48	Structural Impact of 8-oxoG on Oligonucleotides of RNA Containing 1-Nucleotide Bulges	Dagoberto Grijalva-Flores*, Marino J.E. Resendiz	University of Colorado Denver

W49	Sulfinate Protecting Groups for the Development of Sulfonyl Fluoride Inhibitors	Twinkle I. Patel, Makayla L. Williams, Yumeng Chi, Ramkrishna Laha, Geoffrey H. Chan*, Matthew J. Moschitto	Rutgers
W50	Supramolecular hydrogen-bonded assembly of novel Janus nucleobases	Parbhat Kumar*, Aiden J. Ward, Alejandro Lazaro, and Benjamin E. Partridge	Department of Chemistry, University of Rochester
W51	Synthesis of Adamantyl-Based Cambiarenes	*Brady Birkenholtz, Jay Wackerly	Central College
W52	Synthesis of hydrophilic polymers from renewable sources	Lillian Fairchild* Teah Miller* Jay Wackerly	Central College
W53	Withdrawn		
W54	Synthesis of Polysubstituted Cylcobutanes and Natural Product Analogues as Potential Therapeutics	Thomas J. Osberger*, Constantinos G. Gofas, Tatiana E. Lopez, Christa M. Larino, Mario Godinez, Daniel S. Jaramillo, Patricia Daniela Rodriguez, Kimchou Lao, Timmy B. Nguyen, Joanna Feng, Tommy Truong, Nhi Le, Minh T. Lu, Tan. N. Tan, Priscilla Laguna, Jessica A. Coronel, Rei J. David, Dean Papatheodouro, Andrew Hsieh, Kaitlin Paguio, Donna Hajhamid, Fatima L. Martinez, George M. Hernandez, Kristie E. Quintero, Lance Ochoa, Gil C. Rodriguez, Bridget Yang, Brianna Duenas, Li Kuang, and Francis Audrey Pamaran	California State Polytechnic University, Pomona
W55	Thiolactone-assisted Chemo-selective Desulfurization of Native Peptides	Anil Talakokkula*, Godwin Iwara, Qiang Zhang	State University of New York, University at Albany.

W56	Towards an Enzyme Mimic through DNA-Palladium Conjugation	Jingyi Sze*, Kadiatou Diallo*, Chu Luo, Rachel Jiang, Dave Gorin	Smith College
W57	Unexpected Orthogonality in the Highly Site-Selective Oxidation of Macrolide Antibiotics	Olivia C Langner*, Brandon Q Mercado, Nicolò Tampellini, Scott J Miller	Yale University
W58	Water has a pKa of 14.00, not 15.74: Experimental, theoretical, and historical evidence leave no doubt	Stephanie Schaertel 1*, Tom Neils 2, Todd Silverstein 3	1. Grand Valley State University; 2. Grand Rapids Community College; 3. Willamette University
W59	σ -Bond Insertion Reactions of Two Strained Diradicaloids	Christina A. Rivera*, Arismel Tena Meza, Huiling Shao, Andrew V. Kelleghan, K. N. Houk, and Neil K. Garg	University of California, Los Angeles
W60	<i>Ab-Initio</i> Investigation of the Mechanism of Phenazine Condensation Reactions	Viktorija Miseljc, Anne F. Kiely, Brian H. Northrop*	Wesleyan University
W61	Kinetic Isotope Effects of Pd0 and Blue Light Catalyzed Mizoroki-Heck Cross-Coupling Reactions	Mathew J. Vetticatt, Patrick Cole*	Binghamton University
W62	Zirconium-Catalyzed Reductive Sulfonamidation of Amides and Its Application to Site-Selective N-Alkylation of Pharmaceuticals	Abhishek Raj*, Weiheng Huang, Chabush Haldar, Liela Bayeh-Romero	Baylor University

General Information

Food, shops, etc. near campus

<https://www.downtowntroyny.org/businesses>

Local attractions and activities

The two NOS organized events are the Capt. JP riverboat cruise and NYS Capitol Building/Albany Institute of History and Art outings. There are many other local attractions such as Grafton Lakes State Park, walking tours of Troy, the Hart-Cluett Museum, and golfing options. For more details: <https://www.nationalorganicsymposium.org/activities/>

Yankee Trails Shuttle Service

There is a complementary shuttle service provided for attendees staying at the RPI Blitman dormitory and the three local Troy hotels: the Hilton Garden Inn (235 Hoosick Street), Best Western Plus – Franklin Square Inn (1 4th Street), and the Courtyard Marriott Albany/Troy Waterfront (515 River Street). This complementary service is for transportation between the Troy hotels and RPI Blitman and EMPAC. This service does not include transportation to and from the Albany International Airport and the Amtrak station.

RPI Campus Parking

Parking will be available free of charge at two specified locations on campus:

- **South Campus parking garage** (located at the upper/east College Ave entrance, #75 on map below) near EMPAC (building #76).
- **North Lot** (located at Sage Ave, entrance located near the North Hall Residential Commons, #8 on map below)
-

Uber Drop-off / Pick-up Locations

- 105 Eighth St. Troy, NY 12180 (next to Winslow Bldg. #78 on map below)
- 1623 15th Street, Troy, NY (next to CBIS building #74 on map below)

WiFi Access

WiFi login credentials will be provided to all NOS attendees upon arrival. Details will be included in your registration materials, and assistance will be available if you encounter any connectivity issues. Attendees from higher education and research organizations which participate in the eduroam authentication service will not need additional credentials for WiFi.

Public Safety & Emergencies

In an emergency you can call 911 or RPI Public Safety 518-276-6611. There are also 100 blue light telephones or call boxes on and near campus. Contact with Public Safety is established as soon as the button is pushed.

RPI Alert System

Starting on Friday June 20th, Attendees and family members of the NOS can opt into the RPI Alert System by texting “RPINOS” to 888777. Subscribers will be automatically removed from the system at the conclusion of NOS.

Anti-Harassment Policy

The Division of Organic Chemistry (DOC) seeks to foster a positive and safe environment for meeting attendees free from sexual or other forms of harassment, and characterized by courtesy and respect.

If you have been subjected to or witnessed harassment, you are encouraged to report the incident to Ed Fenlon (efenlon@fandm.edu) or Amy Howell (amy.howell@uconn.edu). Alternatively, you may contact any DOC officer (listed on page 10) or use the ACS anonymous hotline: 855-710-0009 (English) or 800-216-1288 (Spanish). All reports will be treated confidentially, seriously, and acted upon promptly.

Lactation room

Soloist Suite #1, 6th floor EMBAC (one floor up from Concert Hall backstage) is provided as a lactation room for nursing mothers.

EMPAC Concert Hall Policy

Food and beverages are not permitted inside the EMPAC Concert Hall. However, bottled water is allowed.

RPI Blitman Dormitory Check-In

Attendees staying at the RPI Blitman Dormitory should check in and pick up their room keys directly at the dormitory on Sat 6/21 or Sun 6/22. Public safety will have an overnight presence at Blitman and can assist with the distribution of keys after hours.

Info for Attendees Staying at Blitman Dormitory

The RPI Blitman Dormitory is a smoke-free and alcohol-free building.

Check-In and Room Key Distribution

Attendees will check in at the Blitman Dormitory and receive their room keys (physical keys provided in a labeled envelope).

Check-in times:

- Saturday, June 21: 12:00 PM – 4:00 PM
- Sunday, June 22: 11:00 AM – 5:00 PM

RPI Public Safety will be on site to distribute keys to attendees arriving after regular check-in hours.

Check-Out and Room Key Return

Keys must be returned in the original envelope using the designated drop-off box at Blitman.

Please note: A \$100 fee will be charged for any lost or unreturned keys.

Parking at Blitman Dormitory

Attendees with vehicles may park in the Blitman parking lot, located directly adjacent to the dormitory.

To facilitate access, attendees are required to provide their:

- Name
- Vehicle make, model, year
- License plate number

This information will be shared with RPI Public Safety and Transportation to ensure proper access and monitoring.

Complimentary Yankee Trails Shuttle Service for Blitman Attendees

Please note: RPI's campus is located on a steep hill (EMPAC is 0.2 miles away from the RPI Blitman Dormitory but there is a 108-foot elevation change over a short distance). Therefore, walking between campus locations may be difficult, especially for those with mobility concerns. We recommend using the complimentary shuttle services (or planning accordingly (Uber or Lyft)). Shuttle services will be provided exclusively for NOS attendees staying at Blitman and the Troy Hotels to and from EMPAC.

- Attendees should wait at the bus shelter located at 6th Avenue and Broadway.

- The shuttle will run multiple trips during each scheduled window.
- Please note: Pick-up and drop-off times are approximate and may vary due to traffic and passenger volume. If there are delays, attendees may need to consider alternative transportation options.
- **This shuttle does not provide service to/from Albany International Airport or the Rensselaer Amtrak Station.**

RPI Campus Pick-Up/Drop-Off Location: EMPAC 7000-Level Entrance

Shuttle Schedule

Sunday, June 22

- 2:00 PM – 4:00 PM: Blitman → EMPAC
- 10:00 PM – 12:00 AM: EMPAC → Blitman

Monday, June 23

- 7:00 AM – 9:00 AM: Blitman → EMPAC
- 12:30 PM – 2:30 PM: EMPAC → Blitman
- 5:00 PM – 7:00 PM: Blitman → EMPAC
- 10:30 PM – 12:00 AM: EMPAC → Blitman

Tuesday, June 24

- 7:00 AM – 9:00 AM: Blitman → EMPAC
- 12:30 PM – 2:30 PM: EMPAC → Blitman
- 5:00 PM – 7:00 PM: Blitman → EMPAC
- 10:30 PM – 12:00 AM: EMPAC → Blitman

Wednesday, June 25

- 7:00 AM – 9:00 AM: Blitman → EMPAC
- 12:30 PM – 2:30 PM: EMPAC → Blitman
- 5:00 PM – 7:00 PM: Blitman → EMPAC
- 10:30 PM – 12:00 AM: EMPAC → Blitman

Thursday, June 26

- 7:00 AM – 9:00 AM: Blitman → EMPAC
- 12:00 PM – 2:00 PM: EMPAC → Blitman

Info for Attendees Staying at Troy Hotels

Complimentary Shuttle Service Information

A complimentary Yankee Trails shuttle service is provided for NOS attendees staying at the designated Troy hotels. This service offers transportation between the hotels and RPI EMPAC only.

Please note: This shuttle does not provide service to/from Albany International Airport or the Rensselaer Amtrak Station.

Troy Hotels and Pick-Up/Drop-Off Locations

- Franklin Square Inn Best Western – Intersection of Museum Place and 4th Street
- Hilton Garden Inn – Hotel Portico
- Courtyard by Marriott – Curbside on River Street

RPI Campus Pick-Up/Drop-Off Location

- EMPAC 7000-Level Entrance

Shuttle Service Details

Approximate pick-up times are listed below. Each window includes multiple shuttle runs to accommodate attendees.

Please be aware that pick-up and drop-off times may vary due to traffic conditions and rider volume. The estimated full route duration is 25–30 minutes.

Alternate transportation methods may be necessary in the event of significant delays.

Troy Hotels → EMPAC Shuttle Schedule

Sunday, June 22

- 2:00 PM – 4:00 PM: Troy Hotels → EMPAC
- 10:00 PM – 12:00 AM: EMPAC → Troy Hotels

Monday, June 23

- 7:00 AM – 9:00 AM: Troy Hotels → EMPAC
- 12:30 PM – 2:30 PM: EMPAC → Troy Hotels
- 5:00 PM – 7:00 PM: Troy Hotels → EMPAC
- 10:30 PM – 12:00 AM: EMPAC → Troy Hotels

Tuesday, June 24

- 7:00 AM – 9:00 AM: Troy Hotels → EMPAC
- 12:30 PM – 2:30 PM: EMPAC → Troy Hotels
- 5:00 PM – 7:00 PM: Troy Hotels → EMPAC
- 10:30 PM – 12:00 AM: EMPAC → Troy Hotels

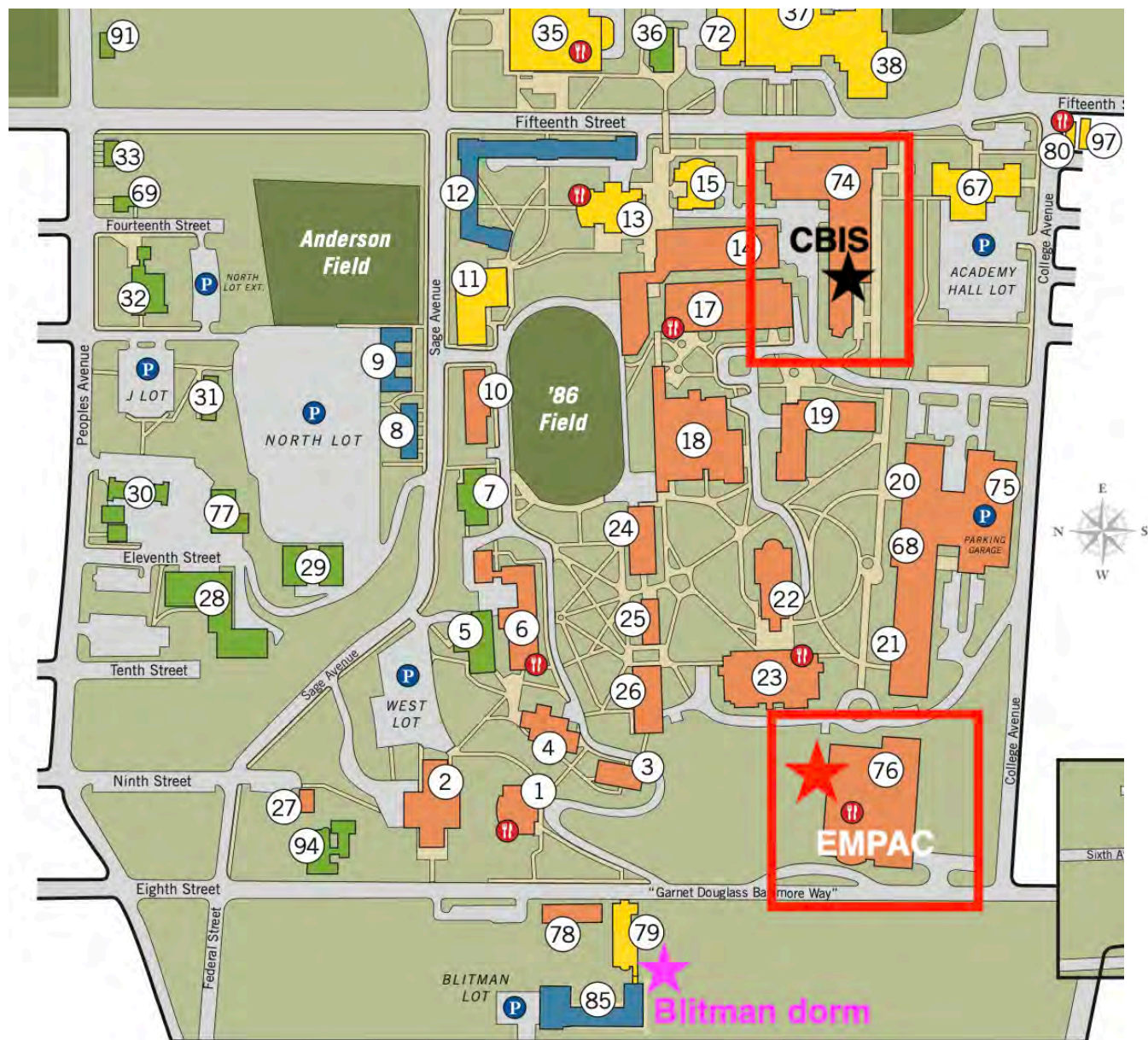
Wednesday, June 25

- 7:00 AM – 9:00 AM: Troy Hotels → EMPAC
- 12:30 PM – 2:30 PM: EMPAC → Troy Hotels
- 5:00 PM – 7:00 PM: Troy Hotels → EMPAC
- 10:30 PM – 12:00 AM: EMPAC → Troy Hotels

Thursday, June 26

- 7:00 AM – 9:00 AM: Troy Hotels → EMPAC
- 12:00 PM – 2:00 PM: EMPAC → Troy Hotels

Partial Campus Map with NOS sites ★



[Click here for Full Campus Map](#)