The four hundred and fifty eighth meeting of the Susquehanna Valley Section of the American Chemical Society will be held on Wednesday, March 18<sup>th</sup>, 2020 (which is the THIRD Wednesday in March) in Seibert Hall, Room 108, on the campus of Susquehanna University in Selinsgrove, PA. The meeting will begin at 7:00 PM and will be preceded by a dinner at BJ's at 5:30pm. The speaker will be Dr. Sarah Tasker of Franklin & Marshall College in Lancaster, PA.

# "Photochemical Reactions of S-Aryl Thioformates: Toward a Synthesis of Oxetanes via Formal Formylation"

Dr. Sarah Tasker Chemistry Department Franklin & Marshall College Lancaster, PA

Oxetanes (four membered oxygen-containing rings) are an important structural motif found in a range of natural products and compounds of pharmaceutical interest. However, typical methods to make non-symmetrical oxetanes are lengthy and involve laborious functional group manipulation. Direct photochemical cycloaddition of aldehydes and alkenes (the Paternò–Büchi reaction) represents the most convergent synthetic method, but mechanistic limitations mean substrate scope is limited. We have explored the photochemistry of S-aryl thioformates as a possible general way to access 1,2-disubstituted oxetanes following reductive desulfurization, thereby accomplishing the unknown Paternò–Büchi formylation. Synthesis of a wide range of S-aryl thioformates with varying electronic properties was successful, and their reactivity under both direct UV irradiation and photoredox catalysis has been explored. In preliminary studies, a variety of products have been observed and isolated, including an interesting sulfoxide product. We will continue to explore the photochemical reactivity of S-aryl thioformates, with the ultimate goal of developing a new synthesis of oxetanes or discovering other novel reaction methodologies.

Paternò-Büchi reaction

# **BIOGRAPHY OF DR. TASKER:**

Sarah Tasker was born in Ohio but grew up in Grand Rapids, Michigan. She received her B.Sc. in Chemistry with a double major in Spanish from Calvin College (now called Calvin University) in 2010. She did undergraduate research with Professors Chad Tatko and Carolyn Anderson at Calvin, before moving on to do her Ph.D. with Tim Jamison at MIT, working to develop new nickel—catalyzed reactions. In 2015, Dr. Tasker moved to the University of Illinois at Urbana-Champaign (UIUC) as a Damon Runyon Cancer Research Foundation Postdoctoral Scholar with Paul Hergenrother. She investigated chemical diversification of natural products for high-throughput screening libraries, and small molecule transport at the blood—brain barrier. In 2018, Dr. Tasker started as an Assistant Professor of Chemistry at Franklin & Marshall College in Lancaster, Pennsylvania, where she teaches Organic and General Chemistry. She also does research in the fields of photochemical reaction methodology and antibacterial natural products with a talented team of undergraduate research students. Outside the lab, Dr. Tasker loves to travel, listens to way too many podcasts, and hosts lots of game nights.

# **DINNER:**

The lecture will be preceded by dinner at 5:30 PM at BJ's Steak and Rib House located at 17 North Market Street, Selinsgrove, Pennsylvania. RSVP to Bill Dougherty at <u>doughertyw@susqu.edu</u> or 570-372-4255 by 4:00 P.M. on Monday, March 16, 2020. Dinner will be ordered from the menu. Menu and directions to BJ's can be found at <u>bjsmstreet.com</u>.

# **DIRECTIONS TO SUSQUEHANNA UNIVERSITY:**

Address: 560 University Avenue, Selinsgrove, PA 17870

#### From Route I-80 West:

Take the Danville exit, 224. Take route 54 east to Route 11 south towards Selinsgrove. Continue left on Route 11/15 south (continue as directed below from Route 11/15).

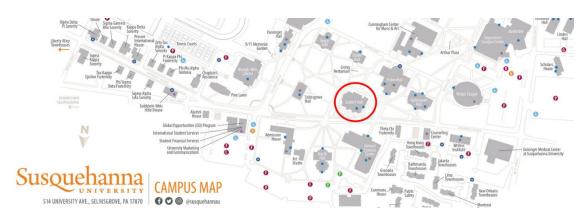
## From Route I-80 East:

Take the Lewisburg exit, 210A. Take Route 15 south towards Selinsgrove. Turn right onto Route 11/15 south (continue as directed below from Route 11/15).

#### From Route 11/15:

Follow Route 11/15 south until it becomes Market Street. Turn right onto West Pine Street. West Pine Street becomes University Avenue. Follow the campus map to visitor parking.

A full campus map can be found at <u>Susquehanna University Campus Map</u>. Seibert Hall is designated with the circle on the map below:



# **DIRECTIONS TO BJ'S:**

Address: 17 N Market St, Selinsgrove, PA 17870

Restaurant is on the left on Market St just before Pine St. There is parking behind the restaurant.

# **SECTION NEWS:**

# 2020 SVS HIGH SCHOOL CHEMISTRY EXAMS:

The annual exams, hosted by the Susquehanna Valley Section of the ACS, will be held Saturday, April 4, 2020. Students from across the section are nominated by their teachers to take this exam. Students with high scores in our different districts receive a David H. Frederick Memorial Award in High School Chemistry at our Awards Banquet on Wednesday, April 29 at the <a href="PineBarn Inn">Pine Barn Inn</a> in Danville, PA. If you are a teacher who would like to nominate student(s) or would like further information, please see the <a href="website">website</a>.



#### 2020 CHEMISTRY OLYMPIAD:



Chemistry Olympiad Qualifying Exams will be administered to participating Juniors and Seniors by their Chemistry teachers between March 9<sup>th</sup> and 13<sup>th</sup>. Upon passing the Qualifying Exam, the participating student becomes eligible to take the National Chemistry Olympiad Exam, which will be administered on Saturday April 18<sup>th</sup> at Bucknell University. If you have a student who is interested in participating, please contact Patrick Martino (patrick.martino@bucknell.edu) before March 2<sup>nd</sup>. For more details see the <u>local website</u> and <u>national website</u>.

# THE 2020 MEETING OF THE PENNSYLVANIA ACADEMY OF SCIENCE:

The 96<sup>th</sup> annual PAS meeting will be held on March 20-22 at York College. There will be oral and poster sessions broadly encompassing all fields of science, as well as student presentation awards, graduate school and career panels. See their website, <u>pennsci.org</u>, to register and for additional details.



## LOCAL STEM COMPETITIONS:



A list of all STEM competitions for high school students is posted on our <u>website</u>. If you have any questions about the contests or have suggestions for others, please contact either the person indicated on the site or the section webmaster, Ron Supkowski at <u>ronaldsupkowski@kings.edu</u> or 570-208-5900 x5733

#### JOSEPH PRIESTLEY HOUSE:

Sunday, March 8<sup>th</sup>, is the opening day of the current season at the <u>Joseph Priestley House</u> in Northumberland. The visitor center is open from 1 - 4 PM and will feature costumed guides and live chemistry shows. For more information, call the house at 570-473-9474 or go to: https://www.facebook.com/events/425132985107149/

#### MARM2020:



## Save The Date

The 48<sup>th</sup> Mid Atlantic Regional Meeting (MARM) will be held June 12, 2020. The meeting is hosted by the New York Local Section of the American Chemical Society. Check the website, <a href="http://marm2020.org">http://marm2020.org</a>, for more information.

Also, consider nominating someone for the following awards. Nomination information can be found at <a href="mainto:marm2020.org/Events">marm2020.org/Events</a>.

Award	Deadline
The Stanley C. Israel Regional Award for Advancing Diversity in the Chemical Sciences	March 15
ACS Division of Chemical Education (CHED) Middle Atlantic Region Award for Excellence in High School Teaching	April 20
E. Emmet Reid Award in Chemistry Teaching at Small Colleges in the ACS Mid-Atlantic Region	April 20
E. Ann Nalley Middle Atlantic Region Award for Service for Volunteer Service to the American Chemical Society	April 20

## OPEN POSITIONS IN THE LOCAL SECTION:

Do you want to use your talents to help other chemists in the Susquehanna Valley section? Listed below are examples of positions that need to be filled by willing individuals along with websites that give organizing ideas: Current committee chairs can be seen at the local section website.

- WCC (Woman Chemists Committee) Chair
  - Help attract, retain, develop, promote, and advocate for women to positively impact diversity, equity and inclusion in the Society and the profession
- Project SEED (<u>Summer Experiences for the Economically Disadvantaged</u>) Coordinator Coordinators are responsible for establishing programs, identifying mentors, recruiting students, fundraising, and organizing activities such as field trips
- CMA (Committee on Minority Affairs) Chair
  - Help increase the number & participation of racially & ethnically underrepresented scientists in the Society and its governance
- CH&S (Chemical Health and Safety) Committee Chair
  - Help provide authoritative technical resources and mentorship in chemical health and safety for all

## • SCC (Senior Chemists Committee) Chair

Help improve communication among senior chemists, increase the number of senior chemists' groups and the level of their engagement within local sections, and encourage the involvement of senior chemists in programs focused on K-12 education, undergraduate networking, and mentoring

• CCEW (Chemists Celebrate Earth Week) Coordinator

Help promote the positive role that chemistry plays in the protecting our planet (recyclable plastics, cleaner-burning fuels, phosphate-free detergents, environmental monitoring, and green chemistry initiatives).

If you are interested, contact the section Chair (William Dougherty, <u>doughertyw@susqu.edu</u>), Secretary (Ronald Supkowski, <u>ronaldsupkowski@kings.edu</u>) or any member of the Susquehanna Valley Section leadership team (executive committee, committee chairs, liaisons).

## **NATIONAL ACS NEWS:**

#### ACS LEGISLATIVE ACTION NETWORK:

Legislation that may impact the chemical enterprise comes before Congress on a regular basis, and the ACS is committed to keeping its members informed and encouraging them to weigh in on high-priority issues. To see the position of the ACS on many legislative issues visit the ACS LAN website: https://www.acs.org/content/acs/en/policy.html

To find out how to become more active in ACS advocacy activities, see the website: <a href="https://www.acs.org/content/acs/en/policy/memberadvocacy/advocacy-tools.html">https://www.acs.org/content/acs/en/policy/memberadvocacy/advocacy-tools.html</a>

To join ACS' grassroots legislative advocacy network, ACT4CHEMISTRY, which will allow you to stay up to date on policy issues and contact legislators on behalf of chemistry and chemists, go to their website, follow the <a href="mailto:Act4Chemistry Twitter">Act4Chemistry Twitter</a> account, or email <a href="mailto:advocacy@acs.org">advocacy@acs.org</a>.

## JOIN THE ACS:

If you know of anyone who would benefit from being a member of the American Chemical Society, please direct them to the membership website:

https://www.acs.org/content/acs/en/membership-and-networks/acs/join.html

## **NATIONAL MEETINGS:**

# Spring 2020 ACS National Meeting

Registration is open for the 2020 spring national meeting with the theme "Macromolecular Chemistry: The Second Century." The meeting will be held in Philadelphia, PA from March 22 – 26. See the <u>website</u> for details.

## Fall 2020 ACS National Meeting

There is a call for papers for the fall 2020 national meeting, "Moving Chemistry from Bench to Market." The meeting will be held in San Francisco, CA from August 16 - 20. Most divisions have submission deadlines of Monday April  $6^{th}$ . See the <u>website</u> for details.

# **BCCE 2020**

The 26<sup>th</sup> Biennial Conference on Chemical Education will be held at Oregon State University in Corvallis, Oregon July 18 – 23. See the <u>website</u> for more details.

Susquehanna Valley Section Web Page: <a href="http://departments.kings.edu/SusquehannaValleyACS">http://departments.kings.edu/SusquehannaValleyACS</a>
Please send any comments about the monthly newsletter to Ron Supkowski, Section Secretary
King's College 131 N River St Wilkes-Barre PA 18711 <a href="mailto:ronaldsupkowski@kings.edu">ronaldsupkowski@kings.edu</a>