



In Conjunction with the American Chemical Society
Student Affiliates at the University of Pittsburgh



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Some Incredibly Important Dates to Know...

November 7 Deadline for undergraduates to apply for April 2020 graduation in 140 Thackeray Hall

**November 25-
November 29:** Thanksgiving Recess-No Classes!
Have a great Holiday!



*Happy
Thanksgiving*



Congratulations to our Fall Term Award Winners!

On Friday, November 22, 2019, the American Chemical Society-Student Affiliates at the University of Pittsburgh will host the annual Fall Term Awards Ceremony. This year's award winners include the following students:

Bridget Murray	<i>Undergraduate Analytical Chemistry Award</i>
Grace A. Leone	<i>Undergraduate Inorganic Chemistry Award</i>
Sasha J. Chernenkoff	<i>Undergraduate Organic Chemistry Award</i>
Mathew Chow	<i>Undergraduate Physical Chemistry Award</i>
Cassandra D. Vu	<i>Silverman Award</i>

Four of our awardees are ACS-SA members and we are very proud to have them in our gang. We extend our sincere congratulations to all of our awardees for a job well done!

Everyone is invited to attend the awards ceremony in Room 150 Chevron Science Center on November 22nd. Come join us as we celebrate undergraduate achievements with our awardees!

2019-2020 ACS-SA Officers and Staff

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Madison Keating-Senior Affairs Committee
Bridget Murray-Senior Affairs Committee

Visit us at <http://www.chem.pitt.edu/acs-sa/>

CHEM
MAJOR
NEWS

Our November Schedule

November 1 All About Safety *with Dr. Ericka Huston*



8 Meet our New Faculty *with Dr. Tim Tseng*

15 Looking for a Job
with Nikki Hillard, Recruitment Advisor

22 Fall Term Awards Ceremony

Everyone is welcome to attend our weekly ACS-SA meetings. Every Friday at noon we get together in 150 Chevron Science Center to hear interesting talks, learn more about science and enjoy each other's company. Come join us for all of the above mentioned meetings.

Saturday Science Academy

Looking for something fun to do on February 22, 2020?

Try Saturday Science! It is an opportunity to help ambitious area high school students learn both general and organic chemistry in the lab. With your help, the students get to make crystal gardens, do a simple thin layer chromatography experiment, witness an acid base reaction with dry ice, measure the pH of some favorite soft drinks, and synthesize slime. Volunteers will play the role



of a teacher: demonstrating the experiments, helping the students perform them, and finally, answering their questions. Saturday Science is a fun and rewarding volunteer experience in chemistry. So, are you still looking for something fun to this year?

Please mark your calendar for February 22, 2020 and join us for a great day of fun and caring!

Happy Thanksgiving!

Thanksgiving: The Chemistry of Food Science

by: Dale Erikson-Newsletter Co-Editor

Since it's almost Thanksgiving break, I thought it would be fun to talk about something fun: food! Have you ever wondered why a cooked turkey tastes better than a raw one? What about why we add lemon juice into a cranberry preserve or put lovely, lovely butter on a baked potato? It's all one very simple answer: chemistry.

I'd like to dedicate this article to Samin Nosrat. She's the author of *Salt, Fat, Acid, Heat: Mastering the Elements of Good Cooking*. I highly recommend this book as it reinforces the idea that cooking isn't about meticulously following instructions step by step. It's an art, a form of cultural expression, and a way to bring people together. Samin captures this quite well where she focuses on two important facets of cooking: ingredients and technique.

When I say ingredients, I don't mean the packets of ramen or frozen mac and cheese you buy. I'm talking about vegetables, fruits, nuts, seeds, spices, meat, seafood, and more. Finding the freshest and most local food possible ensures you're using the best ingredients possible. Unfortunately, too many people focus their attention on preprocessed, convenient foods that are full of additives instead of whole foods that are fresher, healthier, and more versatile. Your ingredients really set the stage for success in the kitchen. It's quite analogous to lab experiments in a way. You wouldn't have that much faith in your results if reagents were old, contaminated, or spoiled.

Remember though, cooking isn't just about the ingredients you're using. It's about technique and how you combine ingredients together. For instance, some people don't realize how important salting is to cooking. The sodium chloride you know of in the lab is used to induce osmosis to bring out the flavor in foods. This, in turn, allows heating to occur faster. Heating foods denatures proteins and permits the Maillard reaction to occur. This chemical reaction between amino acids and sugars gives browned food its distinctive flavor. Additionally, fats such as butter serve as a cooking medium and seasoning. Cooking something in fat will allow the outside to be golden and crispy while the inside can remain tender. Acids are similar in that they are flavor enhancers yet they will physically harden food and toughen them. Hence, the ingredients you use in tandem with different techniques synthesize new textures and flavors that are appealing to the pallet.

To reiterate, being a good cook is not about following recipes. It's about understanding the tools available and how to intertwine them together to make something creative and delicious. The ability to find the freshest ingredients and harnessing the power of salt, fat, acid, and heat will allow for the development of beautiful yet complex flavors to impress any dinner guest. After all, dinner tastes a lot better when you have someone you love to share it with.

Stay Thankful & Happy Thanksgiving!





2020
Undergraduate Summer
Research Fellowships
in Organic & Biological
Chemistry



- We are pleased to offer Undergraduate Summer Research Fellowships for Pitt students sponsored by *the Organic and Biological Chemistry Divisions*.
- These Fellowships are intended to support a 10-week full-time organic chemistry or chemical biology research project, including stipend & supplies, in the summer of 2020 at the Department of Chemistry in Pittsburgh.

Please submit applications consisting of a current resume, course records, and a letter of recommendation by a suitable Faculty Sponsor with details of the planned research project (not exceeding 1 page) by

February 20, 2020 to Desirae Crocker, CHVRN 757.

- The Award will be presented at the Undergraduate Award Ceremony in April 2020.
- The Awardee and Faculty Sponsor(s) are strongly encouraged to present a poster on their research at Science 2020 in Pittsburgh in the fall of 2020, and/or actively participate in an equivalent departmental, regional or national scientific conference.