ACS Local Section Cincinnati

CINTACS

Newsletter of the Cincinnati Section of the American Chemical Society

MAY 2021

SPECIAL POINTS OF INTEREST:

- Reservations for May 19 Monthly Meeting; Virtual Beer Tasting
- Reservations for May and June Neusole Glassworks Demonstration (513-751-3292)

INSIDE THIS ISSUE:

May 2021 Section Meeting

May Monthly Meeting

ACS Social Meeting: Enjoy Local Beers!

Wednesday, May 19, 2021

Virtual via ZOOM

Program:

6:45 – 7:00 Social interactions
7:00—7:15 Business meeting
7:15 – 8:15 Virtual Beer Tasting

Register at http://tinyurl.com/cintacs-beertasting.

Get your favorite mug ready and join us for a sampling of different beers from several of Cincinnati's more than 50 breweries (http://www.cincyweekend.com/full-list-of-cincinnati-breweries/). The Cincinnati Enquirer publishes an annual bracket of local favorites (https://www.cincinnati.com/story/entertainment/nightlife/bars-and-clubs/2021/03/28/cincinnatis-favorite-beer-2021-winner/4802323001/).

Dr. Michael Weaver will guide attendees through the differences in styles, ingredients, and brewing processes of local brews as well as the resulting differences in aroma, flavor, and appearance. Dr. Weaver is a retired P&G chemist, homebrewer, and has previously qualified as a judge in the Beer Judge Certification Program (BJCP).

During this meeting we will be tasting and enjoying some of the more popular ales made by local Greater Cincinnati Breweries. We in the Cincinnati area are fortunate to have a great variety of tasty, locally brewed beers. However, that poses a problem for us – which beer to choose? Because of that challenge, we will limit ourselves to a few of the most popular styles. (Continued on page 3.)

ACS Local Section
Cincinnati

The CINTACS Newsletter
Volume 55, No. 5
May, 2021

CINTACS is published nine times per year (September through May) by the Cincinnati Section of the American Chemical Society.

Guest Editor for May: Susan Marine

A permanent editor is needed. In the meantime, send submissions to Susan Marine (mariness@miamioh.edu).

We're on the Web!
acscincinnati.org

From the Chair:

The May Cincinnati ACS meeting has been traditionally a social event before our summer hiatus. Last year we had to cancel plans for dinner at the Hofbrau Haus across the river. Unfortunately, we still cannot hold that dinner. Instead, we will explore Cincinnati breweries with a virtual beer tasting on May 19 from 7-8:30 PM. Join us wherever you will be; be sure to buy your beer in advance of the tasting. (Details on pages 1, 3, and 4 of this Newsletter.) A big salute to Peter Koenig and Michael Weaver for the hours that went into organizing this event!

The Section received a nice thank you note from Nicole Pedicini, the 1st place winner of the Second-Year Chemistry Oesper Award and a qualifying student for the national Chemistry Olympiad Exam. (page 7)

Make your reservation with Neusole Glassworks to make a glass paperweight. Deadlines are approaching.

Check out our reactivated Facebook page. Gratitude to Kendra Denlinger for taking on this mode of communication.

Our gratitude to Jill Page for organizing and overseeing Cincinnati's Chemistry Olympiad exams and the student Oesper Awards, to Lynn Hogue for overseeing the Teacher Awards, and to Bill Crawford and Mark Laskovics for judging the Southwest Ohio Science Fair.

Enjoy your summer! — Susan Marine

Shout Out:

ZHIWEI SHI

Organized and led a successful discussion group in April. He engaged ACS members, who listened to a presentation by Greg Beaucage, from the Dept of Chemical and Materials Engineering, UC. One attendee wrote, "Thanks for organizing. Most informative and the research seems to me to be very industry relevant. Also a great example to teach students that things do not turn out as kitchen logic suggests."

We look forward to more discussion group meetings in the fall!

(Continued from page 1)

May 2021 Cincinnati ACS Social Meeting: Enjoying local beers!

Presented by Dr. Michael Weaver

We suggest picking out one or more of your favorite beers brewed locally (see: https://cincinnatiusa.com/bars-and-nightlife/breweries for complete list of local breweries.) The beers we list below can be found in your local grocery or wine/beer specialty store; but you also can pick up a growler from your favorite local brewery.

Light Ales: These are refreshing in warm weather but can be enjoyed year round.

- Belgian style **Witbier** – a light body, effervescent wheat ale with orange and spicy notes. The spicy notes come from the yeast used to ferment, but those brewed in the Belgian style may have coriander and orange peel. Some examples: 50 West's Doom Pedal; Rheingeist's Whiffle
- German style **Weissbier** – a light body, creamy wheat ale often with clove or banana like flavors. Some examples: Rheingeist's Hugh, Sonder's Schwester
- German style **Kölsch** – style originally from Cologne, Germany. This golden ale has a refreshing crisp flavor similar to lagers. Some examples: Madtree's Lift, Sonder's Voss, Rheingeist's Kalmer

Hoppy IPA Ales: The inspiration for these came from India Pale Ales originally brewed in the late 18th and 19th centuries in England. The higher alcohol and high hop bittering content helped keep the beer from spoiling during the long, warm voyages from England to the Indian subcontinent. The advent of the craft beer movement in the US revived the style, with the American interpretation having more hop flavor and aroma, from American grown hops.

- **'West Coast' style IPAs** – Tend to be bright, mostly clear beers with noticeable hop aroma and flavor which leave a lasting impression on the tongue. These can be piney, flowery, citrusy or have a tropical fruit-like quality. The hops also provide bitterness that "dries out" the subtle sweet character from the malt. Some examples: Braxton's Revamp, Fretboard's Bootsy, Madtree's Psychopathy, Paradise's All American Ale, Rheingeist's Truth, 50 West's Coast to Coast, Taft's Gavel Banger
- **'East Coast' or NE style IPAs** – A style recently gaining in popularity. Similar in hop character as the 'West Coast' style, but are hazy in appearance with a silky smooth mouth feel, with typically less hoppy aroma and bitterness. Some examples: Braxton's Tropic Flare, 50 West's Shortcut, Sonder's You Betcha, Streetside's Suh, Brah?
- **'Double' or 'Imperial' IPA's** – these are higher alcohol and hoppy versions than either West Coast or East Coast style beers. No examples listed. (continued on page 4)

(continued from page 3)

Join us for the May Social Event!
Cincinnati Beer Favorites
(in the comfort of your own home,
possibly with a friend)
May 19th at 7pm

Prior to the meeting:

- Register at http://tinyurl.com/cintacs-beertasting.
- Choose the beer(s) for your tasting. We suggest you pick one from each of the categories (Light Ales, West Coast Style IPA, East Coast Style IPA); many of these are available at your local grocery or Beer/Wine specialty store. Some stores have species sections for individual bottles or cans.
- 20-30 minutes before the meeting, pull the beers out of the refrigerator and let sit on counter. Refrigerator temperatures are too cold to properly present the aromatics from beer. Ideal beer tasting temperatures for these style beers are around 45-55°F (7-13°C).
- For each beer, have a clean glass ready. A pint glass is good, or a 'snifter' may better help present the aromas.

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News from the Spring ACS Council Meeting

1. The ACS Council approved the 2022 Schedule of Membership, upon recommendation of the Committee on Membership Affairs.
    - The 2022 Schedule reduces the base rate to $160 per year.
    - It establishes various dues categories and benefits packages based upon career stages, role in the chemical enterprise, and desired level of interaction by the Member with the Society.

2. The Council approved the recommendation that the Committee on Ethics be continued.

3. Membership on a Society Committee will be limited to two successive terms (6 years) beginning in 2022, decreased from the current three successive terms (9 years). This will provide more rotation of members on a given committee.

ACS Cincinnati is on Facebook!

Our local section is once again active on Facebook! Follow us @ACSCincinnati or find our webpage at www.facebook.com/acscincinnati. Like our page and follow us to see updates, news, events, and more! Following us on Facebook is a great way to get reminders about what's happening at our local section. Don't use Facebook that much but still want to stay in touch? You can sign up to receive an email notification every time we share a post. The next time you're on Facebook on your computer, just go to your account by clicking the down arrow icon at the top right of the page (it's right next to the bell icon). Choose Settings & Privacy » Settings » Click Notifications (on the left side menu) » Scroll down to "How you get notifications" » Click Email » Scroll down and switch "Pages You Follow" to On!

If you have any questions or would like something shared via our Facebook page, get in touch with Kendra Denlinger at denlingerk@xavier.edu!

ACS Chemistry for Life®

AMERICAN CHEMICAL SOCIETY

Become Involved in ACS on the National Level!

Ever think about doing something important for ACS?
Wonder how things are decided or even discussed?
Want to learn more about your ACS Society?

Consider becoming a Committee member! Committee members are appointed on an annual basis. Usually your first year or two on a committee is as an Associate Member without voting rights. After that, an assignment is a 3-year commitment. You must be able to attend the committee meetings (usually held with the National ACS Meetings) physically or virtually and participate in work between meetings. These are definitely working committees! If interested, check out the letter from Flint Lewis, Secretary and General Counsel, the list of national Committees, and the Guidelines for the committee preference form.

Start thinking about being involved. If possible, attend an open committee meeting to see the committee in action and hear the status of their current activities.

**** SCIENCE TEACHERS OF THE YEAR 2021 ****

Elementary Science Teacher of the Year 2021: Patty Laker

Patty Laker teaches science and reading to 4th and 6th graders at Our Lady of Lourdes School in Cincinnati, Ohio. By providing a nurturing, safe classroom environment and diverse educational experiences, Patty's goal is to help every student reach their full potential. She uses several methods of instruction, including lots of hands-on activities to engage all her students and enhance their learning.

Patty is a master at using cross-curricular lessons that seamlessly connect the subjects she teaches. She incorporates technology, engineering, and art into her lessons. For example, her class used the Mars Rover landing to discover how NASA can land a robot in a predetermined location. Students became Citizen Scientists and tracked the Monarch butterfly migration in their school yard and reported the data. While reading a book about mold, the class grew some and studied it.

Patty does what she does because she wants her students to become the problem solvers of their generation and life-long learners. Her nominator stated, "Patty clearly loves what she does and is an inspiration to all."

Middle School Teacher of the Year 2021: Matt Young

Matt Young is an experienced teacher who is not only committed to the best education for his eighth-grade science students, but also to the students themselves. Hands-on experiments, new technology and apps are some of the varied strategies Matt uses to help his students understand science concepts and how to apply them to real life. To help all science students at North Adams High School, Matt was instrumental in bringing two apps to the science department. One app creates simulations of scenarios that are difficult to create in a classroom and allows students to manipulate the data, analyze it, and draw conclusions. The other app allows Matt to monitor his students grasp of a concept and adjust his teaching methods according to the data.

Matt feels that the key to success in the classroom is subject knowledge, preparation, and a good relationship with your students. Matt's principal, Dr. Linda Naylor, states, "Matt is also great at building relationships with students. Students feel comfortable in his class and work hard for him. When electives were added to the junior high curriculum, Matt had the most requests."

Matt took a break from the classroom and became a principal for four years. He missed the classroom and students and returned to the classroom as an eighth-grade science teacher. Eighth-grade students are required to take a state proficiency test in science that is reported on the district report card. State test scores showed only 50% of students were proficient in science before Matt took over. After completing a year as a science teacher, and putting his tenet of knowledge, preparation, and relationships into practice, the state score was raised to 81%.

High School Chemistry Teacher of the Year 2021: Brett Becker

Brett Becker strongly believes students find energetic, engaging teachers who are passionate about their subject to be more impactful. He puts this belief into action every day in his classroom as is evident in what Mr. David Kennedy, principal of Madeira High School, wrote in his nomination letter: "Brett is a teacher with an endless capacity for finding ways to engage his students. He has a talent for animating his lectures with his personality, his robust content delivery, and his creative abilities. Brett Becker has a bottomless passion for teaching and his relentless drive to make his instructional activities relevant and engaging makes him a leader as well as a very effective teacher."

Brett always takes into consideration each student's strengths, weaknesses, and struggles so learning opportunities are varied to ensure each student learns. He incorporates student directed activities designed to generate discussion, student inquiry, experience with laboratory data, and problem-solving practice, and follows with assessments designed to extend learning activities. Many studies have shown that student conceptual understanding and long-term recall are greatly enhanced when they "discover" a concept on their own. As a result, Brett incorporates inquiry activities whenever possible. Brett has self-authored labs that have been refined over years of reflection, student observation, and peer review, to guarantee student success. In his words, "I emphasize these types of activities whenever I can, especially when we are wrestling with conceptually rich challenges and navigating the three "levels" of understanding chemical phenomena (macroscopic, particulate, and symbolic)."

Congratulations to Brett Becker, Cincinnati Local Section's High School Chemistry Teacher of the Year!

ACS USNCO
U.S. National Chemistry Olympiad

2021 Student Award Winners

USNCO Qualifying Exam

(in alphabetical order)

Kunal Arora
Madison Boni
Christian Fitzpatrick
Pooja Kantemneni
Aahana Katneni
Kentaro Kawata
William Lee
Benjamin Lu
Evan Osgood
Nicole Pedicini
Manan Vij

(Will Klenke qualified but was unable to attend the exam.)

2nd Year Chemistry Oesper Awardees

Nicole Pedicini — 1st Place
Evan Osgood — 2nd Place
Eddie Kong — 3rd Place

1st Year Chemistry Oesper Awardees

Riley de Buys — 1st Place
Will Klenke — 2nd Place
Rohan Nambiar — 3rd Place (tie)
Annie Ye — 3rd Place (tie)

2021 Southwest Ohio Science and Engineering Expo

ACS Local Section Judges: **Bill Crawford and F. Mark Laskovics**

Once again the Cincinnati Local Section provided three $100 prizes for the top three chemistry projects at the Southwest Ohio Science and Engineering Expo held at the University of Cincinnati. Due to COVID-19 restrictions, this year's Science and Engineering Expo was again held virtually. A total of 186 projects were submitted; the titles and abstracts were reviewed by the judges. Eleven projects were determined to be the best chemistry projects, and the video presentations of these 11 finalists were reviewed by the judges. Three projects were selected as the top three chemistry projects by the judges, and each project was awarded a $100 prize from the Cincinnati ACS Section. One project was a team project, so the two students will share the prize. Each student was sent a congratulatory letter containing an award check.

Winning Projects:

"A Product Which Protects Against All Pathogens" by Sarvesh Thirumalai

"Clean Energy with an Affordable Hydrogen Fuel Cell" by Janu Gadthula and Tanya Keskar

"Removing Chromium(VI) from Contaminated Water Using Low-cost Chitosan Coated Diatomaceous Earth" by Johan Demessie

(Finally, it just so happened that all award winners were from the Mason school district.)

SOCIAL MEDIA

Re-invigorating our Facebook Page

Did you know that the Cincinnati Section of the American Chemical Society has a Facebook page? Check it out: https://www.facebook.com/acscincinnati/ Kendra Denlinger has volunteered to oversee this mode of communication for the Section. **Join our page to follow new posts and receive reminders.**

CCC:Chemistry and Chemists from around Cincinnati

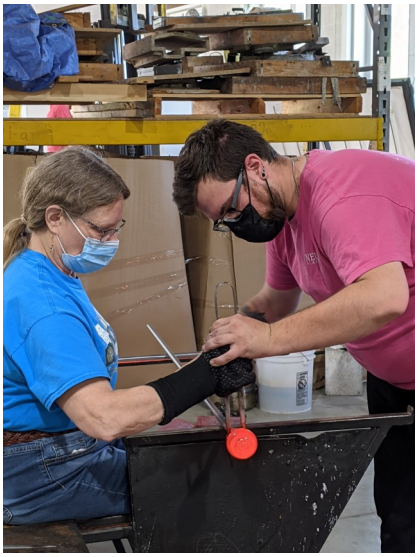
CCC covers news from the chemical community around Cincinnati. Do you have a piece of news that you would like to see covered? Contact news@acscincinnati.org.

- Will Carson, currently a chemistry student and member of Dr. Hartley's lab at Miami University, was awarded an NSF graduate research fellowship. Mr. Carson's proposal titled "Late Stage Aliphatic Cyanation of Alkyl Bromides via Copper(III)-Mediated Reductive Elimination" describes the synthesis of an important intermediate for pharmaceuticals, agrochemicals, materials, and fine chemicals. Current established reactions have limited scope and yields in addition to toxicity concerns. The research aims to deliver a safer and precious metal-free means to cyanate a wide range of alkylbromides.

- Dr. Anna Gudmundsdottir (Professor of Chemistry, University of Cincinnati) was awarded an NSF grant of $535,000 for the research proposal titled "Crystals on the Move". The project is analyzing how crystals respond to external stimuli such as light and mechanical force. These studies focus on producing motility or movement in crystalline materials using momentum generated by releasing a gas. The mechanism is analogous to the operation of a gasoline engine. The response of crystals to external stimuli can be quite dramatic, as such crystals that can propel themselves over distances much larger than their own size, twist, coil, crawl, bend, fracture, or even shatter. Because dynamic crystals respond rapidly to external stimuli such as light, heat, and mechanical force, they have potential for use in various smart materials applications, such as sensors and actuators in industrial processes and devices.

- Dr. Jennifer Marsh (Victor Mills Society Research Fellow at Procter and Gamble) was featured in the ACS Podcast *Solutions*. In this episode titled "Natural Plant Extracts: From Imposters to Invaluable Ingredients" she describes her research on natural products, the role of antioxidants and oxidative damage in hair. Natural ingredients can play a critical role in preventing oxidation damage. As natural ingredients become more popular overall, testing and validation for authenticity, amounts and efficacy through organizations like the Kew Royal Botanical Gardens in London has become critical.
- Dr. Janet Marshall (recently retired Teaching Professor from Miami University) is the sole inventor on a new patent "Method for the synthesis and purification of aryl acid esters" issued April 6, 2021.

Neusole Glassworks: Report of First Activity Group



On Thursday May 6, 2021, ten people (5 members, 1 retired member, 1 future member, and 3 guests) participated in a hands-on demonstration at Neusole Glassworks. After a 45-minute glassblowing demonstration by John Carter, who made a green pitcher with white lip and handle, we all made paperweights. Each person chose a shape (egg, round, or flat), two colors, and an internal design (helix, swirl, or "messy"). No two choices were alike! Two people worked simultaneously, with John Carter and Taylor Davis overseeing and assisting us. (Pictured here is John guiding Susan Marine's hand.) The glass pieces will be annealed overnight, inspected, and ready for pick-up one week later.

The dates remaining are listed below. A new date (Thursday May 20 at 10 AM) has been added. Reminder: Reservations and payment are due about 10 days prior to the event. Make reservations directly with Neusole Glassworks at 513-751-3292, identifying yourself as an ACS member and paying in advance. Invite your spouse, child, or friend to explore the exciting chemistry of glass with you. Please bring these liability release forms with you when you come: Neusole Glassworks Liability Release Form and ACS COVID-19 Liability Release Form. What to wear (proper "lab attire") is listed here.

I hope you enjoy the activity as much as the first group did. Also, be sure to notice the poster in the hot glass shop on the chemical source of color in glass.

Date	Time	Product	Price	Registration Deadline
Saturday May 15	2:00 PM	Paperweight	$20	May 5
Sunday May 16	3:00 PM	Paperweight	$20	May 5
Thursday May 20	10:00 AM	Paperweight	$20	May 16 (new date)
Saturday June 19	10:00 AM	Paperweight	$20	June 9
Any of these dates		None	free	as listed above

(To watch is free, but a reservation is needed.)

Neusole Glassworks
11925 Kemper Springs Dr. (near I-275 and Winton Road)
Forest Park, OH 45240
(Neusoleglassworks.com)
Phone: 513-751-3292

Business Hours:
9AM—6PM Wednesday thru Friday
10AM—6PM Saturday
10AM—5PM Sunday
Closed Monday and Tuesday

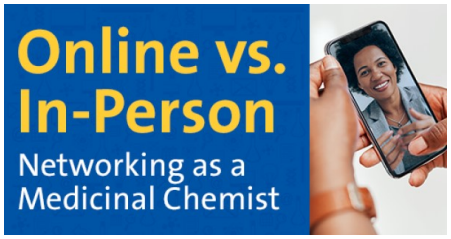
What a dilemma!

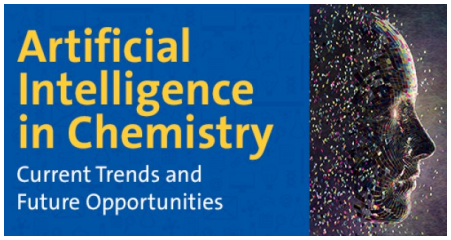
Planning Ahead: Which beers should I sample on May 19? I've wanted an excuse to visit the new brewery 3 miles from home; this is a good excuse. What about the other brewery a few miles in the opposite direction? Help the local economy and try both? I'm not driving after the meeting!

Upcoming Webinars

Go to https://www.acs.org/content/acs/en/acs-webinars.html for more information and to register for these free Zoom webinars.

May 12	2:00-3:30 ET	How Industry is Driving Sustainability
May 13	2:00-3:00 ET	Nanosafety
May 18	2:00-3:00 ET	Scientific Espionage, Open Exchange, and American Competitiveness
May 19	8:30-9:30 am ET	How to Start a Start-up
May 20	2:00-3:30 ET	Online vs. In-person Networking
May 27	2:00-3:00 ET	How to Win Funding
May 28	1:00-2:00 ET	Skin-inspired Organic Electronics
June 2	2:00-3:00 ET	Artificial Intelligence in Chemistry
June 3	2:00-3:00 ET	Chemistry and the Economy





ACS Great Lakes Regional Meeting 2021

June 6 at 7:00 AM – June 9 at 10:00 PM Central Time
Hosted on the ACS Zoom platform
After May 3, registration is $30.

Registration Now Open for GLRM 2021!

Register and join your peers for the 2021 Virtual Great Lakes Regional Meeting (GLRM). The virtual meeting will bring together chemists, students, and educators in a virtual format, including technical **symposia**, **flash talks** in place of poster presentations, **work shops**, **a career fair, networking opportunities, and award ceremonies.**

Workshops and events for GLRM will begin as early as June 5 and end June 10, while the Technical Program will take place June 6-9.

To register and attend, you will need to register with your ACS ID. If you don't already have one, you can easily create a free ACS ID.

New Undergraduate ACS Membership Offer

Undergraduate students may Join ACS for FREE during GLRM registration. Experience ACS membership for the first time. Join and download the 2021 ACS Handbook to learn more about membership benefits.

Workshops During GLRM

- **ACS CHAS Workshop: Empowering Academic Researchers to Strengthen Safety Culture**
- **ACS Chemistry and the Law Workshop**
- **Empowering Women in Chemistry Luncheon**
- **Lunch N' Learn Series**

Career and Graduate Fair

Family and Friends Picnic

— coming September 19, 2021 —

Hold the Date: September 19, 2021

September Meeting

The 2021 Family and Friends Picnic will be held on Sunday September 19 at Germania Park. This is our traditional start to the fall activities. We plan on meeting in-person, even if it means wearing masks and physically distancing ourselves outdoors. Save the date; details will be coming in the September CINTACS!

Deadlines and Scheduled Events

May 19	Party Night:Virtual Beer Tasting
May 15 @ 2, May16 @3, May 20 @10	Neusole Glassworks Hands-on Demonstrations
June 6-9	Joint Great Lakes / Central Regional Meeting online
June 19@10	Neusole Glassworks Hands-on Demonstrations
Aug 22-26	National ACS Meeting in Atlanta and online
Sept 19	Family nd Friends Picnic; Germania Park
Oct 22	Oesper Symposium
Oct 20	Midwest Regional Meeting in Springfield, MO

September CINTACS Deadline

ACS Local Section Cincinnati

Send news for the September CINTACS Newsletter to Susan Marine (mariness@miamioh.edu) before August 25 to be included. Thank you!