



SPECIAL POINTS OF INTEREST:

- [Reservations](#) for
April 15
Monthly
Meeting;
Teacher and
Student Awards
- [Reservations](#) for
April 29
Colloid/Polymer
Discussion
Group meeting
- Reservations for
May Neusole
Glassworks
Demonstration
(513-751-3292)

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April 2021 Section Meeting

April Monthly Meeting

Teachers and Student Award Night

Thursday, April 15, 2021

Virtual via ZOOM

Program:

6:45 – 7:00 Social interactions or Zoom help for new users

7:00—7:15 Business meeting

7:15 – 8:15 Awards Presentations:

50, 60, 70-year Membership

Teacher Awards

Student Awards

Reservations: Register in advance for this meeting:

<https://american-chemical-society.zoom.com/meeting/register/tZUtcumupzgvEtTE6RU8YXdIIKZR7Pm27-4O>

After registering, you will receive a confirmation email containing information about joining the meeting.





ACS Local Section
Cincinnati

The CINTACS Newsletter
Volume 55, No. 4
April, 2021

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

Guest Editor for April: Susan Marine

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



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From the Chair:

Welcome to Spring, new life, and April! The April monthly meeting is devoted to celebrating excellence in our teachers and students. Congratulations to our teachers who are being recognized for their dedication and innovation in teaching science. The first-year and second-year Chemistry Oesper Award winners will be announced at the April 15 meeting, as will the 11 students who qualify for the National Chemistry Olympiad Examination Part I on Saturday April 17. Twenty ACS members will be honored for their 50, 60, or 70 years of ACS membership in 2021. Join us Thursday April 15 for this annual event.

Later this month on April 29, the Colloid/Polymer Discussion Group will meet for the first time. A short presentation by Greg Beaucage (UC Dept of Chemical and Materials Engineering) on manipulating chemical and nanostructure to control macroscopic structure will be followed by discussion of different systems.

Join us in May for a tour and hands-on demonstration to make glass flowers or paperweights at Neusole Glassworks. (You did not have to attend the February lecture on glass to participate.) Also in May is a beer tasting, virtually since we cannot gather in large groups yet.

Check out our reactivated Facebook page! Much is happening with more to come! — Susan Marine

Shout Out:

RICK MULLINS AND VASILEIA VOGIAZI

led very successful discussion groups in March. They each engaged about a dozen members, who listened to a presentation and discussing applications and implications of the topics. Hopefully, they will organize other discussions in the future. Thank you to the speakers who shared their research work. You can look forward to a Colloid/Polymer Discussion Group this month. See pages 7 and 8 in this CINTACS for details.

Congratulations!
Thanks for your membership and service.

Membership Milestones

The American Chemical Society and its local sections are honoring those who have reached special membership milestones in 2021. Congratulations to the following members:

50 Year Members

Mr. Richard Robert Bose
Dr. Charles Raymond Degenhardt
Dr. David E. Gillum
Dr. William Harned
Mr. Donald William Luken
Dr. Mark Phillip Mack
Dr. Richard Timothy Taylor
Mr. Louis Fay Wong

60 Year Members

Dr. Patrick F. Aluotto
Mr. A. Blair Battistini
Dr. William Louis Budde
Dr. Michael Eugene Burns
Dr. Ronald L. Keener
Dr. Jerry B. Pausch
Mr. Robert W. Slater, Jr.
Mr. J. D. Woledge

70 Year Members

Dr. Eleanor M. Behrmann
Mr. Charles H. Campbell
Dr. Hubert Joseph Keily
Mr. John F. Werdmann

Join us April 15 to honor these teachers:

High School Chemistry Teacher:
Brett Becker, Madeira High School

Middle School Science Teacher:
Matt Young, North Adams High School

Elementary School Science Teacher:
Patty Laker, Our Lady of Lourdes School



**Save the date for the May Social Event!
Cincinnati Beer Favorites
May 19th, 7pm**

Get your favorite mug ready and join us for a sampling of different beers from several of Cincinnati's more than [50 breweries](#). The Cincinnati Enquirer publishes an annual bracket of [local favorites](#).

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).

Cincinnati Section meetings of the American Chemical Society continue to be virtual for the near future. You will need to purchase your own beverages. Instructions and further information, including registration, will be included in the May CINTACS Newsletter.



ACS 2020 National Award Recipients and Recognition —Virtual Ceremony

Come celebrate the 2020 ACS National Award recipients during the first virtual National Awards Ceremony on **Friday, April 9, 2021** at **8:30PM EDT** as we honor their accomplishments!

The 84th Awards Ceremony will recognize 75 recipients of 59 national awards and sponsor representatives. The 2020 Priestley Medalist, Dr. JoAnne Stubbe, Professor Emerita, MIT, will give the keynote presentation “The Road Less Traveled -- for Love of Detection, Discovery and All things Radical in Nature.”

Registration is free, but required to [join this event](#). For more information, contact awards@acs.org. The ceremony will include closed captioning.

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.

Ph.D. student Nethmi De Alwis (Department of Chemistry and Biochemistry, Miami University) received a Global Marie Curie Global Fellowship from the Marie Sklodowska-Curie Actions program. The fellowship will support De Alwis to pursue postdoctoral studies at the Swiss Federal Institute of Technology (ETH Zurich). [Link to story at Miami University](#).

Graduate student Moriah Weese (Chemistry Department, University of Cincinnati) received a National Science Foundation graduate research fellowship (GRFP).

Boss Talk Interviews in the ACS [Industry Matters Newsletter](#) features leadership perspectives from industry leaders. The January issue featured an interview with Victor Aguilar, Chief Research, Development and Innovation Officer at Procter and Gamble. Read the [interview](#) (ACS Membership required).



We had 112 first and second year Chemistry students from 9 different local area high schools compete in the 2021 ACS Olympiad Local Exam on Saturday, March 27th. This year, students took the exam virtually through the ACS Learning Center. The top scorer was William Lee from William Mason High School with a score of 57/60.



We nominated 11 National Qualifiers to compete in the National ACS Exam based on their scores and other eligibility requirements. Those students will take the National ACS Exam, Part I on Saturday, April 17th.

A big thank you to all the teachers who encouraged students to participate and helped with communication and proctoring of the exam! Our gratitude to Dr. Jill Page for organizing and overseeing the Cincinnati area testing!

Innovation Portfolio Management Call for Abstracts

The [ACS Division of Business Development & Management \(BMGT\)](#) is the ACS Technical Division that focuses on the needs and development of people involved in the business of chemistry. The BMGT membership includes lab managers, business directors, corporate executives, intellectual property attorneys, regulatory managers, technical sales, financial analysts, and safety officers. Each of these careers involves specialized training, skills, knowledge, and experiences that enable the success of their practitioners; and BMGT is committed to serving these members and supporting their career aspirations.

During the Fall 2021 ACS Meeting (currently planned to be held as a hybrid meeting out of Atlanta, GA from August 22-26), BMGT is planning on hosting the first in a series of symposia focused on providing opportunities for individuals who pursue careers outside of the bench to contribute to, and learn from, others within their respective technical roles. The first symposium will focus on *Innovation Portfolio Management* (description below). This will provide an opportunity for individuals involved in innovation portfolio management from across the chemical industry to participate in an ACS Meeting on a topic that directly impacts their current roles and responsibilities, as well as network with others to learn from best practices out in the field.

In addition to several invited speakers who will present on fundamental aspects of innovation portfolio management, BMGT is currently seeking speakers to submit abstracts for the call for papers that is currently open on the ACS Website. It may be an interesting opportunity for your colleagues to share their insights, as well as a chance to learn about how others across the chemical industry conduct portfolio management. Please let them know they are free to submit abstracts prior to the **April 12 deadline** to the following link: <https://acsnm262.abstractcentral.com/>. If they are interested in presenting, but may have difficulty submitting abstracts by the deadline, please contact Dr. Matthew Grandbois (matthew.grandbois@dupont.com; 508-787-4607) to discuss potential options to enable participation.

**Call for Abstracts by WCC
Fall 2021 National ACS Meeting
“Resilience of (Women in) Chemistry”**

The symposium "Resilience of (Women in) Chemistry" will focus on the challenges women chemists faced during 2020 and how they overcame them, including insights into the sources of their resilience. The intent is to provide participants with anecdotal data to contextualize the events of the past year. Some presentations could resonate with and help frame attendees' personal experiences, while others could bring attention to unperceived challenges in our community. This event may not only be cathartic and inspirational but also provide a historic record that will contribute to the documentation of a shift in cultural ethos. Part of resilience is responding with grace to pressure.

We look forward to contributions in a wide array of topics ranging from challenges typical of the discipline, such as interruption of experimental work during the pandemic, to the effects of social justice movements on chemistry practitioners. We wish to include voices across a broad range including teaching remote and hybrid classes, supply chain disruptions in the laboratory, parenting while working or working while parenting, connecting with colleagues, attending meetings while working, and video conference exhaustion. Discussion of the personal effects of the pandemic are also welcome, such as illness and loss, caregiving in the family, and isolation and mental health. Workplace issues could include being a chemist in an anti-science environment, working in unsafe environments, information overload, and microaggressions. These are just some examples; we welcome your suggestions.

While this year's difficulties would fit well into the historic context, we also welcome talks about lessons learned and successes accomplished, and especially about the nature and the sources of resilience in difficult times. Please consider submitting an abstract for this event and sharing among your network. **Abstract deadline is April 12, 2021**; log into ACS maps (maps.acs.org), select ACS Fall 2021, and then select Women Chemists Committee. Choose Resilience of (Women in) Chemistry and submit your abstract.

Organizers: Lorena Tribe, Kelley Caflin, and Mary Virginia Orna

**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. Other social media may be phased in also as we build our presence. Join our page to follow new posts.

Colloid/Polymer Discussion Group Background Information

Thursday April 29 at 7pm

Speaker: Greg Beaucage, UC, Dept of Chemical and Materials Engineering

Many commercial products involve manipulation of chemical and nanostructure to control macroscopic structure for targeted properties. Additives with limited or no miscibility with a base resin or solvent are often encountered, and in the final application many systems are immiscible even when a shelf-stable miscible mixture is the source. Through manipulation of interfacial agents and kinetic milling, mixing or extrusion, nano- to colloidal-scale additives assemble into micron- to millimeter-scale structures that can gel or produce desired optical scattering, electrical conduction, mechanical reinforcement, and engineered rheology. These emergent networks are important in many applications.

We have studied several examples of these systems. Generally they can be categorized into thermally dispersed and mechanically dispersed systems. **Thermal dispersion:** Inks containing organic pigments are miscibilized in water using non-ionic surfactants. Depending on the phase behavior of these surfactants and the milling history, the primary structure, aggregate structure and macroscopic network structure can be tuned. In a printer the complex structure can be subject to shear that further influences the structure. Finally, as concentration increases with drying a complex, robust network on the micron scale, fused with binder in some cases, can scatter light and give mechanical strength to the dried film. Although the initial, shelf-stable system is thermally dispersed, a complex interplay between kinetic and thermodynamic features govern the resulting product. A similarly thermally-dispersed complex system involves worm-like micelles in body wash. In this case an anionic surfactant produces the entire structure (in the absence of coacervates). The initial shelf-stable assembly involves entangled thread-like micelles with diameters on the nanoscale and lengths in microns reminiscent of synthetic polymers in semi-dilute solution. The function of these friable polymers is to generate viscoelastic shear thinning and gelation on application followed by solvation of grease and dirt after which the material can be easily removed with water. The key feature is a macro-scopic network that has proven elusive to study since the size is too large for computer simulations based on small surfactant molecules and the structure is not completely amenable to microscopy or scattering techniques due to overlap of structural features. In this case, secondary structural techniques, particularly rheology play a crucial role in estimating the emergence of complex features. **Kinetic dispersion:** For reinforced elastomers and many filled polymers such as carbon black filled polyethylene for UV protection or polymer solid electrolytes the additives are inherently immiscible, yet it is desired to produce a macroscopic network from nanoscale structures for mechanical strength, electrical conductivity and optical and UV scattering. In these systems we can make a crude approximation that the accumulated strain shows similarity to temperature in that it leads to random dispersion of nano- or colloidal particles. We can make some gross approximations using what is known about thermally dispersed colloidal systems to understand the impact of excluded volume and interaction energies in the context of a kinetic pseudo-temperature. This approach has proven fruitful in understanding dispersion with some nuances. For instance, in thermally dispersed systems small particles disperse better since the diffusion coefficient is small. For kinetically dispersed systems, large particles are better dispersed since the lever arm for large particles is larger. This leads to nano clusters of immiscible aggregates at about 5% filler which reach a large enough size-scale to form a stable emergent network on the micron-scale at about 20% filler. This conductive network leads to enormous improvement in tear strength and electrical conductivity, both important in tires. More subtle improvements and control over the rheological response and high frequency behavior in cured materials results. All of these properties are subject to modification through surface treatment, though miscibility on the nanoscale is not desired.

This link has some related papers from our group on these subjects:

<http://www.eng.uc.edu/~beaucag/NanoDispersionPapers.html>

Neusole Glassworks Hands-on Demonstrations

As a follow-up to our February meeting, we have scheduled hands-on demonstrations at Neusole Glassworks (11925 Kemper Springs Dr, Cincinnati; near I-275 and Winton Rd). Each date/time slot needs a minimum of 5 people and can accept a maximum of 10. There will be a 30-minute glassblowing demonstration, followed by individuals making paperweights or flowers. For these times, watching is free (but you still need a reservation); flowers cost \$5 each; paperweights cost \$20. Make reservations directly with Neusole Glassworks at 513-751-3292, identifying yourself as an ACS member and paying in advance. Invite your spouse, child, friend to explore the exciting chemistry of glass with you. Allow 2-3 hours for the activity. Also, you must return to pick up your item one week later after it has been properly annealed.

Dates/Times:

Thursday May 6 at 10:00 AM making paperweights

Saturday May 8 at 3:00 PM making flowers

Saturday May 15 at 2:00 PM making paperweights

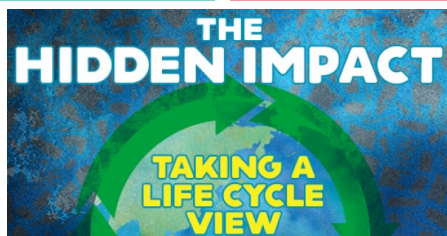
Sunday May 16 at 3:00 PM making paperweights

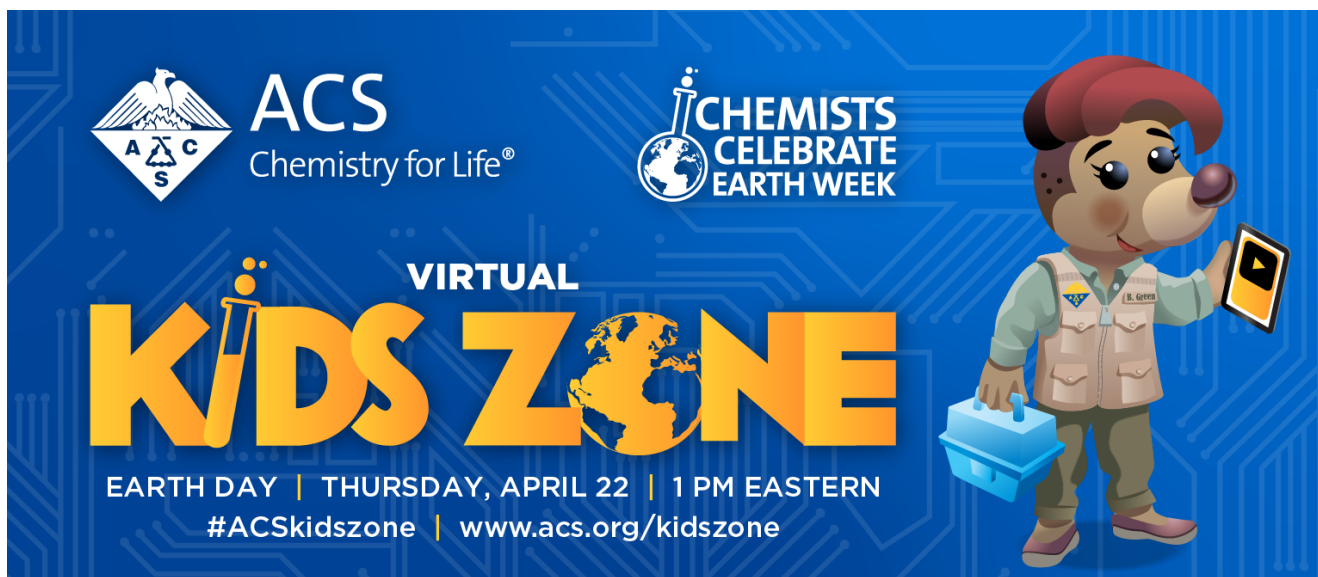
Saturday June 19 at 10:00 AM making paperweights

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.

April 14	2:00-3:30 ET	Next Gen Additive Manufacturing
April 15	2:00-3:00 ET	Preparing Students for Collaborative Work Beyond Graduation
April 21	2:00-3:00 ET	Think like a CEO
April 22	2:00-3:00 ET	The Hidden Impact: Taking a Life Cycle View
April 28	2:00-3:30 ET	Solving the Plastics Problem through Chemistry





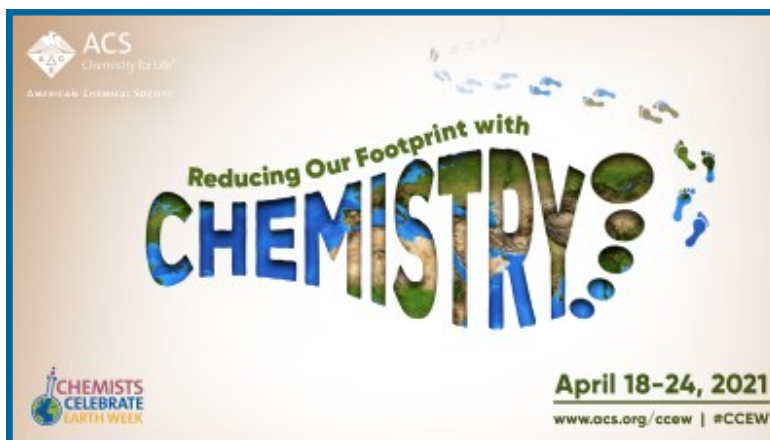
Spread Awareness of the Virtual ACS Kids Zone on Earth Day!

The ACS Committee on Community Activities and President H. N. Cheng will host a virtual Kids Zone presidential outreach event as part of ACS Spring 2021 and Chemists Celebrate Earth Week. The online educational event will take place on Earth Day, **Thursday, April 22**, from **1-2 PM EDT**. Viewers will be led through three activities by experienced science educators. Activities align with the CCEW and ACS meeting themes “Reducing Our Footprint with Macromolecular Chemistry” with the goal of educating students, parents, and teachers about the vital role green chemistry plays in bettering our lives. More info at www.acs.org/kidszone.

Activity 1: Reduce Your Footprint with Shrinky Dinks

Activity 2: Cleaning Up Oil Spills with Chemistry

Activity 3: Choose and Reuse Compostable Plastics



ACS Great Lakes Regional Meeting 2021

June 06, 7:00 AM – June 09, 10:00 PM Central Time
Hosted on the ACS Zoom platform
Early registration (before May 3rd) will be \$25 for all categories
except >50-year members (free).
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, **workshops**, 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

Beer Tasting (virtual) Meeting
— coming May 19, 2021 —

Hold the Date: May 19, 2021

May Meeting

The “social event” of 2021 will be held on May 19 at 7 PM. This is a nontraditional approach to a social event. Feel free to gather in small groups, but it will be a virtual meeting. Free registration is required to obtain the Zoom details, instructions, and handouts. Save the date; details will be coming in the May CINTACS!

Deadlines and Scheduled Events

April 5-30	ACS National Meeting online; April 5-16 oral presentations
April 15	Awards Night monthly meeting
April 18-24	Chemists Celebrate Earth Week (CCEW)
April 29	Colloid/Polymer Discussion group
May 19	Party Night: Virtual Beer Tasting
Various dates	Neusole Glassworks Hands-on Demonstrations
June 6-9	Joint Great Lakes / Central Regional Meeting online
Aug 22-26	National ACS Meeting in Atlanta and online
Oct 20	Midwest Regional Meeting in Springfield, MO

May CINTACS Deadline



ACS Local Section
Cincinnati

Send news for the May CINTACS Newsletter to Susan Marine (mariness@miamioh.edu) before Wednesday April 28 to be included. Thank you!