

# The Alembic

Newsletter of the Central Wisconsin Section of the American Chemical Society

## October 2020 CWS ACS Meeting Notice

**Seminar: Wood Adhesives;  
Chemistry for Bio-materials  
and business meeting!**

**See page 2 for details**

**What: Seminar by Chris Hunt, USDA Scientist and Fulbright Scholar**

**Where: Zoom Meeting!**

**When: Wednesday October 21st, 6:00 PM**

### 2020 ACS - CWS Mini-Directory

#### Chair

Dave Szpunar  
Department of Chemistry  
Univ. Wisc - Stevens Point  
Phone: (715) 346-3328  
Email: [dszpunar@uwsp.edu](mailto:dszpunar@uwsp.edu)

#### Chair-Elect

Katie McGarry  
Department of Chemistry  
Univ. Wisc - Stevens Point  
Phone: (715) 346-3328  
Email: [kmcgarry@uwsp.edu](mailto:kmcgarry@uwsp.edu)

#### Immediate Past Chair

Katie McGarry  
Department of Chemistry  
Univ. Wisc - Stevens Point  
Phone: (715) 346-3328  
Email: [kmcgarry@uwsp.edu](mailto:kmcgarry@uwsp.edu)

#### Secretary - Treasurer

David Thiel  
Phone: (715) 887-4338  
E-mail: [thiel@wctc.net](mailto:thiel@wctc.net)

#### Councilor

Robin Tanke  
Department of Chemistry  
Univ. Wisc - Stevens Point  
Phone: (715) 346-4325  
Email: [rtanke@uwsp.edu](mailto:rtanke@uwsp.edu)

#### Newsletter Editor

Jerry Gargulak  
LignoTech USA

## The Chair's Corner

Hello, chemists!

A lot has happened this past spring and summer, and I hope that all of you, your friends, and your families are staying safe and healthy. The COVID pandemic has changed so many things—from the way we work to the way we live our everyday lives. Everyday tasks and activities have been moved to the virtual world as we all stayed home to weather the storm.

This is definitely true for us here in the ACS Central Wisconsin Section. Although we cancelled all meetings in the spring, we are ready for a comeback! During National Chemistry Week, we will hold our first CWSACS meeting of the fall in virtual format on Tuesday, Oct. 20. In keeping with the National Chemistry Week theme of glues and adhesives, I am happy to write that Chris Hunt from the USDA will be presenting a seminar focusing on wood adhesives. Please see page 2 of this Alembic for details. Other virtual events are in the planning stage, so please stay tuned for more information.



Finally, we will be voting this fall whether to change the CWSACS bylaws to allow the replacement of traditional mail-in ballots with electronic ones. Keep an eye out for what could be the last CWSACS mail-in ballot!

Although nothing can replace the face-to-face interactions of a traditional ACS meeting, I hope that we will all enjoy the virtual programs this fall, and I'm looking forward to "seeing" you there.

Have a great one, and see you soon!

Dave



**ACS**  
Chemistry for Life™





## CWS ACS Meeting Notice



## Seminar: Wood Adhesives; Chemistry for Bio-materials

**Speaker:** Christopher Hunt, PhD. USDA Forest Products Lab

**Where:** Virtual Zoom meeting (see below for RSVP)

**When:** Wednesday October 21st, 6:00 PM

**Biography:** Dr. Chris Hunt is a research chemist at the US Forest Service's Forest Products Laboratory in Madison. It is the one federal lab devoted to better use of forest resources. Chris has many industry, national, and international collaborations working on fundamentals of wood properties, wood-adhesive interactions, and biomass utilization. He has been working to understand and improve soy-based wood adhesives since 2007. As a Fulbright Scholar he will be living in Tallinn, Estonia next year focusing on the impact of primers and wood preparation on bond performance.



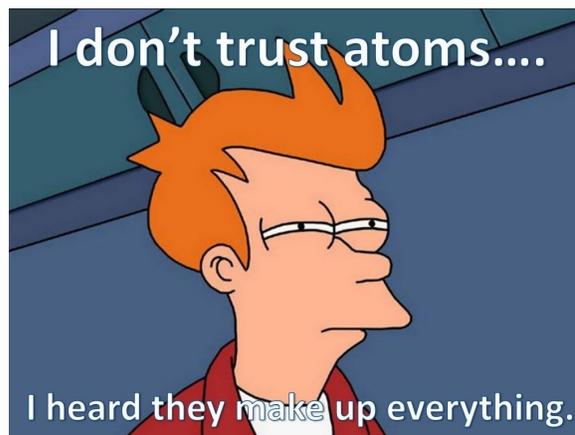
**Abstract:** Wooden building materials have a far smaller carbon footprint than their steel and concrete alternatives. These wood construction products depend on adhesives. We will explore some wood properties that provide challenges and opportunities for adhesives, and then look at how various adhesive chemistries interact with wood to give durable bonds. We will look at the chemistry behind the high-profile issue of formaldehyde emissions from bonded wood products, and the chemistry challenges associated with replacing petroleum feedstocks for adhesives with biomaterials.

To access the meeting, please RSVP to Katie at [kmcgarry@uwsp.edu](mailto:kmcgarry@uwsp.edu), or simply follow the link here to sign up:

[https://uwsp.az1.qualtrics.com/jfe/form/SV\\_423NGYU83tlMRpz](https://uwsp.az1.qualtrics.com/jfe/form/SV_423NGYU83tlMRpz)

### AGENDA:

1. Welcome
2. Christopher Hunt Presentation
3. Chapter business
  - a. New By-Laws
  - b. Open Future Chair position





I think we all can agree 2020 has been a bear of a year. For someone like myself who is used to frequent travel, keeping work productive has been a challenge. Digital means of communication seem to help. We all probably have become experts in one form or another in electronic communication to supplant face to face communications. But, nothing replaces visiting a customer or partner in person to review a process, and to find solutions using chemistry that bring value!



Surprisingly, I have found spending more time at home much more to my liking. And, with the extra time have taken up some new hobbies. I enjoy gardening, and at my house you will always find extra squash, beans, raspberries and asparagus to take home if you are visiting. This year, I decided to try hops. A friend happened to have some extra stock, and I thought it would be fun. For those who don't know, hops are spread from rhizomes, which means a part of the root is active and can be transplanted in the spring. While 1st year harvests are generally meager, we did quite well with only two rhizomes planted. The harvest was shared with friends for beer making, but also tried an evening tea, which can help with sleep. If you'd like to try, I suggest not making it too strong, as it is quite high on the bitter scale. In my first cup I used six hops. Next time I am backing off to two or three. However, it was very relaxing, and I was asleep in 2 minutes! See page 5 for some more interesting facts on the chemistry of Hops, grapes and soil chemistry.

Thanks for reading, *Jerry*



# Now Online

The Central Wisconsin Section now has a website!

You will find some history on our section, a list of our officers, and information on upcoming meetings and event. Please check it out at the link below!

<https://communities.acs.org/groups/central-wisconsin>



## The Councilor's Report

### Robin Tanke



Hello!

The ACS Spring meeting in Philadelphia was cancelled due to COVID-19 and the ACS Meeting in San Francisco was virtual. For the virtual meeting I attend the District V Caucus (Sunday, 8/16/20) and the Councilors Meeting (Wednesday, 8/19/20)

#### Spring 2020 Action

The council met briefly following the scheduled Spring 2020 meeting to hear from the 4 people running for ACS president-elect in 2021. That was followed by a vote which resulted in narrowing the contest to two individuals, Mary K Carrol from Union College ([marycarroll-asc.org](http://marycarroll-asc.org)) and Angela K. Wilson from Michigan State (<https://www.angelakwilson.com>)

#### Councilor Talking Points from the Council Meeting 8/19/2020:

**Summary of Governance Issues and Actions** The continuous and ongoing struggle in this country to create a safe and equitable society for all was brought to Council's attention. The ACS encourages inclusivity and opposes discrimination in scientific learning and practice. Councilors were urged to take active roles in dismantling any barriers that may deter or impede their colleagues in their research or careers. Councilors and guests were encouraged to review the ACS statements on diversity and reflect on how to implement these in their local sections and divisions.

**Elections to various committees** The Council elected **Elizabeth M. Howson, Zaida C. Morales-Martinez, Margaret J. Schooler, and Jeanette M. Van Emon** for three-year terms (2021-2023), and **Mark D. Frishberg** for a one-year term (2021) on the Council Policy Committee (CPC). The Council elected **Martha G. Hollomon, Diane Krone, Sarah M. Mullins, Andrea B. Twiss-Brooks, and Javier Vela** for three-year terms (2021-2023) on the Committee on Committees (ConC). The Council elected **Jetty L. Duffy-Matzner, Kevin J. Edgar, Neil D. Jespersen, Julianne M. D. Smist, and Linette M. Watkins** for three-year terms (2021-2023) on the Committee on Nominations and Elections (N&E).

**Key Actions** On the recommendation of the Committee on Committees, and with the concurrence of the Council Policy Committee, Council approved the Petition to Clarify Amendments to the Standing Rules and disbanded the Joint Board-Council Committee on Chemical Abstracts Service, contingent on approval by the Board of Directors. On the recommendation of the Committee on International Activities, and with the concurrence of the Council Policy Committee, Council approved the creation of an ACS International Chemical Sciences Chapter in the Israel, contingent on approval by the Board of Directors.

#### Other items

Ballots for the 2020 fall national election will be distributed starting on September 28th, with a voting deadline four weeks later on October 23rd.

The Society's 2020 financial performance through July 31st yielded a Net from Operations of \$55.7 million, or \$25 million greater than the same period in 2019. Total revenues are \$354 million, 5% ahead of last year, and total expenses are \$298 million, or 3 percent below last year. The most direct revenue impact to the Society related to the COVID pandemic has been to meeting-related revenues with the termination of the in-person Spring National Meeting and termination of the in-person Green Chemistry Conference. Significant effort has been devoted to expense management. The Society expects to meet its budgeted net contribution of \$41.3M.

The theme of the 260th ACS National Meeting was "Moving Chemistry from Bench to Market." As of August 19th, the registration for the Meeting was 6,477.

Important to CW-ACS! New petitions to amend the Constitution or Bylaws must be received by the Chief Executive Officer no later than December 2, 2020 to be included in the Council agenda for consideration at the spring 2021 meeting in San Antonio. Please vote on our Bylaws!

#### ACS Board News of Interest

The re-envisioned **Professional and Leadership Development Portfolio** will position ACS to cultivate strategic partnerships with colleges and universities, corporations, and government agencies. There will be a continued focus on members/potential members as well, one adhering to the goal of developing Highly Effective Professionals, which is the center point of the project framework developed by the NextGen Task Force on Leadership Development in December 2019.

I hope you all are healthy in mind and body! These are certainly interesting times requiring extraordinary flexibility. All the best! *Robin*



AGRICULTURE

## How does a crop's environment shape a food's smell and taste?

Scientists explore whether terroir leaves a lasting imprint

About seven years ago, Kristin and Josh Mohagen were honeymooning in Napa Valley in California, when they smelled something surprising in their glasses of Cabernet Sauvignon: green pepper. A vintner explained that the grapes in that bottle had ripened on a hillside alongside a field of green peppers. “That was my first experience with terroir,” Josh Mohagen says.

It made an impression. Inspired by their time in Napa, the Mohagens returned home to Fergus Falls, Minn., and launched a chocolate business based on the principle of terroir, often defined as “sense of place.”

Different countries produce cocoa with distinct flavors and aromas, Kristin Mohagen says. Cocoa from Madagascar “has a really bright berry flavor, maybe raspberry, maybe citrus,” she says, while cocoa from the Dominican Republic “has a little more nutty, chocolaty taste.”

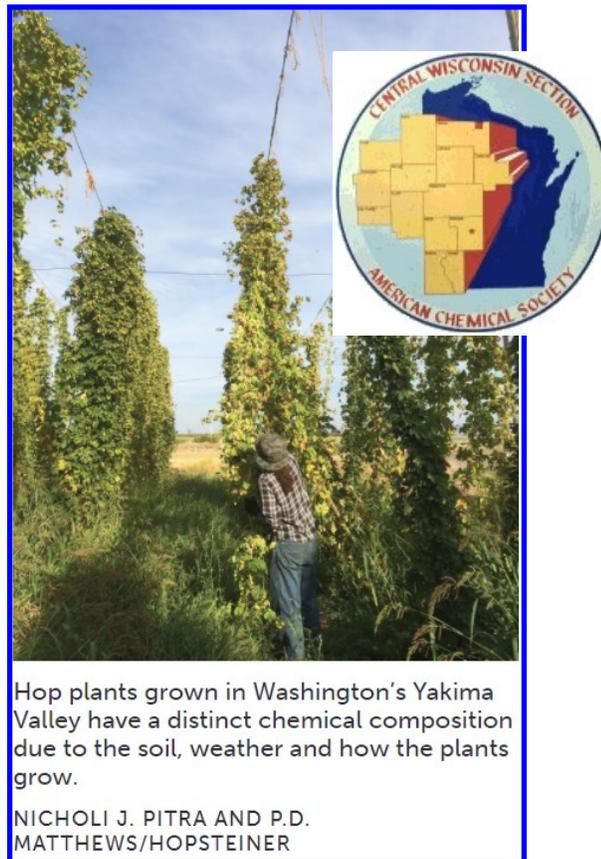
The couple estimates that back in 2013, when they founded Terroir Chocolate, about 50 other small batch chocolate companies in the United States were also touting terroir as integral to their products' flavors.

Since then, terroir has continued to take hold as a marketing strategy — and not just for wine and chocolate. Terroir labels are also becoming more common for products like coffee, tea and craft beer, says Miguel Gómez, an economist at Cornell University who studies food marketing and distribution. Consumers “are increasingly interested in knowing where the products they are eating are produced — not only where but who is making them and how,” he says. People “value differences in the aromas, the flavors. Hop plants grown in Washington's Yakima Valley have a distinct chemical composition due to the soil, weather and how the plants grow.”

The definition of terroir is somewhat fluid. Wine enthusiasts use the French term to describe the environmental conditions in which a grape is grown that give a wine its unique flavor. The soil, climate and even the orientation of a hillside or the company of neighboring plants, insects and microbes play a role. Some experts expand terroir to include specific cultural practices for growing and processing grapes that could also influence flavor.

The notion of terroir is quite old. In the Middle Ages, Cistercian and Benedictine monks in Burgundy, France, divided the countryside into *climats*, according to subtle differences in the landscape that seemed to translate into unique wine characteristics. Wines produced around the village of Gevrey-Chambertin, for example, “are famous for being fuller-bodied, powerful and more tannic than most,” says sommelier Joe Quinn, wine director of The Red Hen, a restaurant in Washington, D.C. “In contrast, the wines from the village of Chambolle-Musigny, just a few miles south, are widely considered to be more fine, delicate and light-bodied.”

Some scientists and wine experts are skeptical that place actually leaves a lasting imprint on taste. But a recent wave of scientific research suggests that the environment and production practices can, in fact, impart a chemical or microbial signature so distinctive that scientists can use the signature to trace food back to its origin. And in some cases, these techniques are beginning to offer clues on how terroir can shape the aroma and flavor of food and drink.



Hop plants grown in Washington's Yakima Valley have a distinct chemical composition due to the soil, weather and how the plants grow.

NICHOLI J. PITRA AND P.D. MATTHEWS/HOPSTEINER

(REPRODUCED FROM SCIENCENEWS.ORG, SEPTEMBER 10, 2020 )



## 2020 NCW Illustrated Poem Contest *Sticking with Chemistry*

The Central Wisconsin Local Section of the American Chemical Society (ACS) is sponsoring an illustrated poem contest for students in Kindergarten through 12th grade.

**Contest Deadline: Friday, October 23, 2020 (MOLE DAY)**

**Prizes: \$25 for the local section winner for each group (K-2; 3-5; 6-8 and 9-12)**

**Contact: Robin Tanke, [rtanke@uwsp.edu](mailto:rtanke@uwsp.edu) with questions**

**All submissions must be done online at:**

**<https://www.acs.org/content/acs/en/education/outreach/ncw/plan-an-event/illustrated-poem-contest.html> - Enter under the appropriate age group.**

Winners of the Central Wisconsin Local Section's Illustrated Poem Contest will advance to the National Illustrated Poem Contest for a chance to be featured on the ACS website and to win prizes!

Write and illustrate a poem using the NCW theme, "Sticking with Chemistry." Your poem must be **no more** than 40 words and in the following styles to be considered:

**HAIKU - LIMERICK - ODE - ABC POEM - FREE  
VERSE - END RHYME - BLANK VERSE**

**Possible topics related to the theme include:**

Glue	Slime	Tape	Adhesives
Geckos	Polymers	Adhesion	Cohesion

**Entries will be judged based upon:**

- Artistic Merit - use of color, quality of drawing, design, and layout
- Poem Message - fun, motivational, inspiring about yearly theme
- Originality Creativity - unique, clever and/or creative design
- Neatness - free of spelling and grammatical errors

**Contest rules:**

- All poems must be no more than 40 words, and in one of the following styles to be considered: Haiku, Limerick, Ode, ABC poem, Free verse, End rhyme, and Blank verse.
- Entries are judged based upon relevance to and incorporation of the NCW theme, word choice and imagery, colorful artwork, adherence to poem style, originality and creativity, and overall presentation.
- All entries must be original works without aid from others. Poems may be submitted by hand on an unlined sheet of paper not larger than 11" by 14" or scanned and sent via email. Illustrations may be created using crayons, watercolors, other types of paint, colored pencils, or markers. The illustration may also be electronically created by using a digital painting and drawing app on a computer, tablet, or mobile device.
- The text of the poem should be easy to read and may be typed before the hand-drawn or digital illustration is added, or the poem may be written on lined paper, which is cut out and pasted onto the unlined paper with the illustration.
- No clipart or unoriginal images can be used.
- Only one entry per student will be accepted; all entries must include an entry form. If the illustration is created using a digital painting or drawing app, the name of the program must be included on the entry form.
- All illustrated poems and/or digital representations of the poems become the property of the American Chemical Society.
- Acceptance of prizes constitutes consent to use winners' names, likenesses, and entries for editorial, advertising, and publicity purposes.



## **New CWSACS Proposed Bylaws Section Members: Please review carefully!**

New Bylaws are up for vote for our chapter. The executive committee would like to use e-mail for this process, but our current bylaws require mail ballots. While voting by mail ballot is slow and expensive, it is required.

The current bylaws are outdated in other ways. We are told that these are the oldest unchanged bylaws in all of ACS. The new proposed bylaws presented here were developed in cooperation with the ACS Committee on Constitution and Bylaws (C&B). They fit the template demanded by C&B. Changes are highlighted in blue so that they can be easily reviewed.

Amendments (in this case the entire bylaw document) must be approved in accordance with the Section's current bylaws. The first step in that process is to provide members of the Section with a copy of the proposed new Bylaws. This step was completed with the mailing of the Alembic in February 2020. Following the Central Wisconsin Section meeting during National Chemistry Week (October 18-24) mail ballots will be sent to all members. If the proposed bylaws receive the affirmative vote of two thirds of the ballots cast they will be adopted.

Dave Thiel, Secretary - Treasurer

The Proposed Bylaws can be found online at our new website. Please take a moment to look them over!

## The Alembic (March 2019)

Newsletter of the Central Wisconsin Section, ACS  
c/o Chemistry Department (#605516)  
University of Wisconsin – Stevens Point  
Stevens Point, WI 54481

**Mark your calendar ... plan to Log  
In! Virtual CWA ACS Meeting  
October 21, 2020, 6 PM**

Member Address Label

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6 JUN	Great Lakes Regional Meeting (GLRM)	📅 June 6, 2021 📍 Minneapolis, MN
14 JUN	25th Annual Green Chemistry & Engineering Conference	📅 June 14, 2021 📍 Reston, Virginia
16 DEC	PACIFICHEM 2021: A Creative Vision for the Future	📅 December 16, 2021 📍 Honolulu, HI