

A publication of the Midland Section of the American Chemical Society

September 2023, Vol. 60, No. 9

Contents

Midland Section ACS Wins Six ChemLuminary Awards for 2022 Programs	1
Dow's David Parrillo Named Recipient of the National ACS 2024 Earle B. Barns Award for Leadership	in Chemical
Research Management	2
Summer 2023 Outreach Wrap-Up	3
ACS Garden News – Properties and Produce	4
Earth Day and a Half	5
Food Science Café Event: Scrumptious Seaweed, October 12	6
How We Can Make a Difference: A Sustainability Event, October 21	7
2023 Fall Scientific Meeting, November 3 & 4	7
25th Annual ChemLuminary Awards Banquet Celebration	8
National Hispanic Heritage Month Profile – Juan Venegas	9
Colombian Arepas (Grilled Corn Cakes) Recipe	10
Midland Section ACS Scholarship Fund Update and Encouragement to Give	10
Upcoming Dates, Events, and Other Updates	11

Midland Section ACS Wins Six ChemLuminary Awards for 2022 Programs Joel McDonald, Past Chair, Midland Section ACS



In recent months, the Midland Section of the American Chemical Society was honored to be nominated for nine 2022 ChemLuminary awards, once again including the competitive award for Outstanding Performance by a Local Section in the Medium Small Size Category.

These nominations represent many volunteer hours, interactions with diverse community groups, and successful engagement on scientific topics at various levels. The dedication of Midland Section ACS volunteers is truly impressive!

The winners of these prestigious awards were announced at the ChemLuminary Awards ceremony at the ACS 2023 Fall National Meeting, at the Moscone Center, in

San Francisco, CA, on August 15. I'm very pleased to report that the Midland Section ACS earned six ChemLuminary awards in the following categories:

Award Name	Event Name
Best Continuing Senior Chemists Activity within a Local Section	Rebuilding the Midland ACS Centennial Exhibit for Display at CMU Rowe Hall
Best Event or Activity Organized by, or Benefiting, the Applied Chemical Technology Professional Community	MMTG Year End Celebration and Membership Drive
Outstanding Engagement with K-8 Students	Summary of K-8 Outreach Activities for 2022
Outstanding Ongoing CCEW Event	Earth Action Expo at Dow High School
Outstanding Project SEED Program Award - Small Site	Midland ACS 2022 Project SEED Summer Research Program Summary
Outstanding Performance by a Local Section - Medium Small Size Category	(Overall local section performance award, not related to any specific event)

Of particular note, the Midland Section of the ACS has now won the "Outstanding Performance by a Local Section" ChemLuminary award for the past eleven consecutive years for our overall mix of high-quality programs, spanning the years from 2012 through 2022. Prior to that, the Midland local section enjoyed a not-quite-as-long, six-year running streak for this same prestigious award from 2002 through 2007. This level of sustained, high performance is truly unprecedented and places the Midland local section in a class all its own.

Congratulations, Midland Section ACS team!

Dow's David Parrillo Named Recipient of the National ACS 2024 Earle B. Barns Award for Leadership in Chemical Research Management

Steve Keinath, Co-Editor, The Midland Chemist

Editor's note: This news item is reprinted, in part, from material that appeared on Dave Parrillo's LinkedIn profile, accessed on September 21, 2023.

David Parrillo, Dow Vice President of R&D, has been awarded the National ACS 2024 Earle B. Barnes Award for Leadership in Chemical Research Management.

During his 16-year career with Dow, Dave has established himself as an R&D leader through his relentless pursuit of innovative solutions, visionary leadership, and pivotal contributions in a variety of Dow business portfolios.

Please join us in congratulating Dave on this well-deserved achievement!



Added note: Three prior Midland area leaders have received this award – Malcolm E. Pruitt in 1987, Gregg A. Zank in 2009, and William F. Banholzer in 2014.

Summer 2023 Outreach Wrap-Up

Gina Malczewski, Director and Outreach Committee, Midland Section ACS

Outreach opportunities were abundant in of summer of 2023 and included three camps:

- "Sound Science," June 19-23, free and open to middle schoolers, at MSU St. Andrews
- "Science Works," July 24-26, at Delta College
- "Changemakers," August 1-4, Vacation Bible School (VBS) Camp, at St. John's Episcopal Church

"Sound Science" focused on music, hearing, and the physics of sound. We hosted in-person speakers who discussed insect communication by sound, human hearing and speech, the mathematical origins of the eight-note scale, music therapy, food and music, art and music, and hearing impairment (with a focus on Beethoven.) Students were taught to code music on Micro:bits and learned to play keyboards using color coding. Through a Zoom connection, a drum designer in Kalamazoo showed us his process and the impact of materials on sound, and a medicinal chemist from the University of Michigan told the group about turning molecules into music to aid in drug design. Students and teachers gave parents a concert at a final reception, where music-inspired artworks were displayed.

Eleven Possible Dream (PD) students participated in the "Sound Science" camp above (with about 12 others from the Great Lakes Bay area). 14 students in grades 6-8 also attended the "Science Works" camp held at Delta College. This camp offered a "Formulation Day," a "Forensics Day," and a "Space Day" and was sponsored by the Mid-Michigan Technician's Group. Two other PD-focused programs focused on recycling with polymer re-purposing and paper-making activities (June

26), and food science (starch, protein, alginate), on July 17. Over 20 students attended each of these programs at Delta College's Midland campus.

The St. John's Episcopal Church's VBS camp hosted a mix of youngsters on August 1-4 (some with parents and/or grandparents) and offered chromatography/diffusion experiments (with a T-shirt-decorating component), density activities, engineering focus (pasta bridges), and a recycling/sustainability component (with dry ice as a carbon dioxide surrogate).



Sound Science Camp, Micro:bit Coding, photo by Gina Malczewski



Sound Science Camp Reception, photo by Gina Malczewski



Science Works Camp, photo by Dave Stickles

At River Days on August 5, three activities demonstrated the importance of "Dave Stickles" ("Oil and Water." There were hands-on activities demonstrating oil spill clean-up (very timely since a damaged oil freighter had just released up to 46,000 gallons of diesel fuel into Lake Michigan), the use of emulsified oil and propellant as shaving cream to do art, and the compatibilization of oil and water to make a take-home lotion.

All of these events required a lot of advance planning and willing volunteers were key to our success. If you have any interest in helping with future outreach programs, please contact Gina Malczewski at reginamalczewski@gmail.com.



St. John's Episcopal VBS Camp, Chromatography Activity, photo by Dave Stickles



River Days Science Demo Tent, photo by Gina Malczewski

ACS Garden News – Properties and Produce Gina Malczewski, Director and Outreach Committee, Midland Section ACS

The Midland Section ACS has two gardens this summer – one at Bay City Western (BCW) Middle School in Auburn and one at the new location of Creative 360 at the corner of Chapel Lane and Jefferson Avenue in Midland.

The ACS Garden was located at Creative 360 on Bayliss Street in Midland from 2015 (when our recycled-bottle greenhouse was constructed) through 2022. In February of this year, we got news of a possible move. Creative 360 purchased and has moved to 5501 Jefferson Avenue (the previous home of Chapel Lane Presbyterian Church). The garden's status was uncertain (although the new property had a "community garden" on site, with most produce made available for free pick-up). In May, we were told that "planter boxes" were available for planting. We again took over management of the garden (with no rental fees, approval to set up another "Teaching Garden," and the ability to use any un-rented garden plots).

The new Chapel Lane garden is fenced, sunnier than the former garden location on Bayliss Street, has ready water access, and it has been a banner year for produce! We have already donated over 300 lbs. of cucumbers, beans, eggplant, squash, kale, chard, and tomatoes to four area food pantries, and to Café Zinc for the chef to use to feed employees. Compost bins have been built and piles are being "fed" by discarded grounds and leaves from Grove Tea Lounge, The Coffee Grounds Shoppe, and Biggby Coffee; gardeners are also contributing grass clippings.

Programs have been temporarily suspended due to the work required to weed and lay wood chips, build compost bins, and transplant materials from the former Bayliss Street location. However, the annual "Pumpkin Party" might happen as usual in late October (stay tuned).

The Teaching Garden has dye plants (yellow tansies, black hollyhocks, black-eyed susans, etc.), strawberries, plants that attract pollinators (including dwarf sunflowers), and herbs. Pumpkins and cucumbers are also growing there.

As part of our involvement with the BCW "Green/Science Club," we were involved in the replanting of a big area by the Middle School with pollinator-attracting plants (seeds donated by Pheasants Forever), and the re-establishment of the garden space there, this year dedicated to herbs. Those, along with herbs from the Chapel Lane garden, are being dried for possible sale this fall.

If you have any questions about the gardens, or wish to donate or volunteer, please contact Gina Malczewski at reginamalczewski@gmail.com.



Earth Day and a Half Gina Malczewski, Director and Outreach Committee, and Erin Vogel, Chair-Elect, Midland Section ACS

Because spring is always so busy as the school year winds down, it has been difficult to offer all the sustainability-related programs that we have wanted to in past years. For the first time, the Midland Section ACS is sponsoring Earth Day activities in October this year and are proud to announce some wonderful new programs that include one related directly to the 2023 ACS theme: "The Curious Chemistry of Amazing Algae."

"Scrumptious Seaweed" Food Science Café at Bay City Western Cafeteria, 500 Midland Road, Auburn, October 12, 6:30 – 7:45 PM, FREE event

Two chefs from the Detroit Institute of Gastronomy will join us to discuss the chemistry behind algae and seaweed, associated nutrition information, and ways to use their unique properties to make delicious food. Cooking demonstrations will be provided, and free samples will be available to all. There will be three meal "courses" – smoothies (focus on health benefits), Kombu Chicken with kelp noodles (focus on flavor), and coconut pudding with mango gel, raspberry pearls, and crispy seaweed (focus on texture).

Limit: 75 attendees. You must sign up to reserve a spot at this event. Watch for the Signup Genius link in the October 2023 issue of the *Midland Chemist*. Also, please see the event flyer on page 6 for more information.

ACS Sustainability Event at Delta College Midland campus and at Midland Recyclers, October 21, FREE event

This event is intended to inform and inspire attendees by explaining local recycling and waste-reduction efforts and suggesting ways that everyone can participate. At 10:00 AM, a panel of experts including Esther Williams (Midland Recyclers), Cyndie Roberts (adviser to the award-winning Dow High Go Green Club), and Chelsea Butcher (Northwood Sustainability co-chair), along with other representatives from local universities and businesses, will discuss their activities and answer questions. A free pizza lunch will be provided (please bring your own re-usable drink container or water bottles to reduce waste). Suggestions for individual commitment to sustainability will be shared. Then, at approximately 1:30 PM, attendees will proceed to Midland Recyclers (4305 East Ashman Street, Midland, next to the landfill) to volunteer at various positions there. Additional recycling opportunities may be planned for later dates.

Limit: 90 attendees: You must sign up to reserve a spot by going to: https://www.signupgenius.com/go/70A054BADAA2EA20-howwecan. Please see the event flyer on page 7 for more information.

Environmental Summit (students only) at MSU St. Andrews, Midland, October 17, 3:30 – 5:30 PM (tentative)

This event is intended to gather middle and high school "green club" students to meet researchers engaged in finding sustainable solutions to real world issues. They will see some of the current work being done locally, suggesting fields and careers they might consider pursuing. The student groups will also have a chance to share ideas, discuss activities they are planning, and consider possible collaborations.

Food Science Café Event: Scrumptious Seaweed, October 12

Gina Malczewski, Director and Outreach Committee, Midland Section ACS



How We Can Make a Difference: A Sustainability Event, October 21 Erin Vogel, Chair-Elect, Midland Section ACS



2023 Fall Scientific Meeting, November 3 & 4

Eric Nelson, Co-Chair, 2023 Fall Scientific Meeting, Midland Section ACS

Biosciences Building - Central Michigan University - Mount Pleasant, MI

Friday, November 3, 2023 – Day 1

- Keynote Presentation (12:00 PM)
 - "Infrared Spectrometry Entrepreneur's Journey from Technology to Start-up to Fortune
 500" by Dr. Martin Spartz
- Speed Presentation Sessions (1:00 2:30 PM) Abstract submission opening September 12
 - Science of Materials Design, Synthesis, Development, Applications
 - Biochemistry Chemical Biology and all Things Analytical
- Invited Speaker Sessions (3:00 4:30 PM)
 - Chemistry and Health
 - Materials Applications
- Posters & Networking Session (4:30 6:00 PM) Abstract submission opening September 12

Saturday, November 4, 2023 - Day 2

- Careers & Outreach Networking Expo (9:30 AM 12:00 PM) Concurrent open visit format
 - o Careers in Chemistry, Networking, Opportunities
 - Outreach Opportunities and Volunteering with the ACS
- Brewery Lunch and Learning about Fermentation (12:00 2:00 PM)

For more information, contact the 2023 Fall Scientific Meeting co-chairs, Dale LeCaptain (Central Michigan University) and Eric Nelson (Dow Chemical Company) at fsm@midlandacs.org.

25th Annual ChemLuminary Awards Banquet Celebration Steve Keinath, Co-Editor, The Midland Chemist

Editor's note: The photo below was part of a photo montage assembled by Sydney Smith, *C&EN* Staff, entitled *Scenes from the ACS Fall 2023 Hybrid Meeting in San Francisco*, that appeared on pages 34-37 in the August 28, 2023, issue of *C&EN*. (Photo credit: EPNAC.COM)



It was bound to happen, and it finally did. Midland Section ACS leaders **Gina Malczewski** (front, off center left, in the floral print on black dress) and **Michelle Rivard** (front, off center right, in the black dress) were caught on camera celebrating on the dance floor at the ChemLuminary Awards banquet at the ACS Fall 2023 Meeting in San Francisco. Thank you, Gina and Michelle, for representing the Midland Section ACS at this event.

National Hispanic Heritage Month Midland ACS Diversity and Inclusion

"I strive to contribute positively to making the products and processes we use and do every day safer and more sustainable."

Any advice you would give your 20-year-old self?

I would encourage myself to take advantage of college and learn and use data science. I have learned about it only in the last few years and already get great value from it.

BEYOND THE LAB

In an alternate reality, Juan envisions himself as a trained chef, blending flavors and creating culinary masterpieces. This desire for experimentation and creativity extends beyond his professional life into his culinary pursuits.





Juan M. Venegas, PhD (he/him)

Associate Research Scientist, Dow

BS, Chemical Engineering: Worcester Polytechnic Institute, Worcester, MA

PhD, Chemical Engineering: University of Wisconsin — Madison, Madison, WI

Juan M. Venegas: A Journey of Passion, Innovation, and Inclusion.

In the realm of science and sustainability, Juan M. Venegas stands as an example of dedication and discovery. An Associate Research Scientist at Dow, Juan's career has taken unexpected twists and turns, leading him to a place where his passion, innovation, and commitment to inclusion converge. In this profile, we explore the pivotal moments, advice, and aspirations that define Juan's journey.

Originally from Colombia, Juan's academic journey commenced at Worcester Polytechnic Institute, where he earned his BS in Chemical Engineering. He further solidified his expertise with a PhD from the University of Wisconsin – Madison. These academic milestones laid the groundwork for his career in research and innovation.

In the pursuit of a career, we often encounter individuals who ignite our passion and shape our choices. For Juan, that influential figure was his high school chemistry teacher.

Their dynamic teaching style and an unforgettable experiment involving metal salts and fireworks laid the foundation for his fascination with the "why" behind chemical phenomena.

This experience not only sparked his interest but also set the course for his future career with this teacher's counsel resonating deeply with Juan: "Find excitement in all that you do." This advice became a guiding principle, fostering his curiosity and driving his pursuit of new discoveries.

One of Juan's proudest achievements is his PhD work, where he delved into the fascinating world of Boron as a catalyst for aerobic oxidation chemistry. His research unraveled surprising chemical reactions, shedding light on the potential applications of this element in sustainable chemical processes. Juan's dedication to pushing the boundaries of science and uncovering hidden potential is emblematic of his commitment to making a positive impact.

Colombian Arepas (Grilled Corn Cakes)

Makes about 12 arepas (depending on size)

Ingredients:

- 2 cups of precooked corn meal (look for P.A.N. brand in Kroger or Meijer)
- · 2 tbsp of melted butter (can be dairy-free butter, or oil)
- · Optional: ½ cup of grated cheese (any cheese that melts works, like mozzarella. Vegan brands like Daiya or Follow Your Heart work well)
- 1 tsp of salt
- ¼ ½ tsp of sugar, depending on desired level of sweetness
- 4 cups of warm water
- Toppings of choice: Eggs, avocado, cheese. For a different take: spread nut butter and drizzle with honey or maple syrup.

Steps:

- In a large bowl: Mix cornmeal, salt, cheese, and sugar.
- Begin pouring water into mixture and knead with your hand. Add about ½ cup at a time. The dough will be crumbly at first and not stick together.

 Keep adding water until dough holds together and doesn't crumble when pulled apart. If dough becomes too wet, add a bit more corn meal to mix. Final dough should not stick to your hands.
- Separate dough into balls about ¼ cup in size. It is easiest to measure out by mass to 70-80g. Vary size as desired, for example 40g in size make great appetizers.
- Using parchment paper, press dough ball and shape until it forms a -1/4" thick disk. Venezuelan recipes tend to use thicker arepas (1-2" thick) to cut open and stuff with toppings instead of layering on top of the arepa.
- · Heat a cast iron pan with medium heat and add butter to the pan.
- Cook arepas for 5-7 minutes on each side, watching for dark spots to form. Arepa can be flipped when dark spots begin forming.
- · Top with desired toppings and enjoy! Uneaten arepas can be stored for a week and reheated in a pan (recommended) or toaster oven.

Midland Section ACS Scholarship Fund Update and Encouragement to Give Gina Malczewski, Director and Scholarship Committee, Midland Section ACS

In May of 2021, Dr. Wendell and Marcia Dilling issued a challenge relative to growing the Midland Section ACS Scholarship Fund. At that time, they committed \$18,000 of matching money to grow the fund to \$100,000 by matching dollar for dollar all contributions made to the fund until it reached the target goal.

To date, there have been six contributions amounting to \$1,980.76, and Wendell and Marcia honored their matching donation commitment by submitting a check in the amount of \$2,000 to the Midland Area Community Foundation, the entity that holds and manages the Midland Section ACS Scholarship Fund.

Wendell and Marcia have recommitted to their original pledge and will continue to provide matching money until their contribution reaches \$18,000, or perhaps a little more upon future reflection. The long-rang goal remains the same, to increase the Midland Section ACS Scholarship Fund principal balance to \$100,000 to enable offering additional and perhaps larger year-by-year scholarships to well-deserving students across the greater Midland Section ACS region.

The Midland Section ACS has been proud to offer scholarships to deserving undergraduate students majoring in a chemical science since 2002. Annually, two to four scholarships are awarded to candidates who have graduated from a high school in one of the Section's five counties (Bay, Midland, Saginaw, Isabella, and Gratiot), are studying at a Michigan university, and are ideally intending to pursue a career in some aspect of chemistry or chemical engineering. Selections are made by a committee and are based on academics, service and extracurricular contributions, and an essay on the student's sources of motivation as well as future plans. Past scholarship recipients are often highlighted in issues of the *Midland Chemist*.

Awards usually range from \$1,000-2,000, depending on the financial performance of the Midland ACS Scholarship Fund (#399) administered through the Midland Area Community Foundation. A long-standing goal of the Midland Section ACS has been to raise the base amount to \$100,000 to serve more students.

Wendell and Marcia Dilling, both chemists and long-time supporters of the Midland Section ACS, are prepared to continue to help us reach that goal by donating up to \$18,000 as part of a challenge grant to the scholarship fund. They will match 1:1 any new contributions to the fund at the Midland Area Community Foundation over the next couple years.

Please consider contributing to this worthwhile cause. **Your donations will help shape the future of chemistry!** If you have any questions about contributing to the Midland Section ACS Scholarship Fund, please call the Midland Area Community Foundation at 989-839-9661. Thank you.

An online donation form can be found through the following link:

Midland Section American Chemical Society Endowed Scholarship Fund #399

Upcoming Dates, Events, and Other Updates

- September 11 (7:00 8:00 PM) Hybrid Midland Section ACS Board meeting, MSU St. Andrews, Midland (in person), and via a WebEx conference call connection at <u>Webex Board Meeting September 2022</u>, Meeting number: 126 651 0648, or by phone at Phone number: 415-655-0001, Access code: 126 651 0648.
 Please note: This Board meeting is being held on the second Monday of September, not the usual first Monday of most months due to the Labor Day holiday.
- October 2 (7:00 8:00 PM) Hybrid Midland Section ACS Board meeting, MSU St. Andrews, Midland (in person), and via a WebEx conference call connection at <u>Webex Board Meeting October 2022</u>, Meeting number: 126 651 0648, or by phone at Phone number: 415-655-0001, Access code: 126 651 0648.
- October 12 (6:30 7:45 PM) Scrumptious Seaweed Food Science Café, Bay City Western Cafeteria, 500 Midland Road, Auburn. Limit: 75 attendees. You must sign up to reserve a spot. Watch for the Signup Genius link in the October 2023 issue of the Midland Chemist. For more information, please see the event flyer on page 6. For any questions, contact Gina Malczewski at reginamalczewski@gmail.com.
- October 18-21 (Save the Date) 2023 Joint Midwest–Great Lakes Regional Meeting, St. Louis, Missouri.
 Meeting theme: Scale Up Your STEM. Visit the <u>MWGLRM website</u> for more information. Note that the deadline to submit an abstract was July 17, 2023.
- October 21 (10:00 AM 3:00 PM) ACS Sustainability Event: How We Can Make a Difference. Panel discussion at Delta College Midland Campus, 10:00 to 11:30 AM; pizza lunch, 11:30 AM to 12:30 PM; and

volunteering opportunity at Midland Recycling Center, 1:00 to 3:00 PM. For more information, please see the event flyer on page 7 or contact Erin Vogel at EVogel@dow.com.

- November 3 (12:00 6:00 PM) 2023 Fall Scientific Meeting (Day 1), Biosciences Building, Central Michigan University, Mount Pleasant. Keynote presentation by Dr. Martin Spartz, speed presentation sessions, invited speaker sessions, and posters & networking session. For more information, please see the 2023 FSM program outline on pages 7 and 8. For any questions, please contact the 2023 Fall Scientific Meeting Co-Chairs, Dale LeCaptain (Central Michigan University) and Eric Nelson (Dow) at fsm@midlandacs.org.
- November 4 (9:30 AM 2:00 PM) 2023 Fall Scientific Meeting (Day 2), Biosciences Building, Central Michigan University, Mount Pleasant. Careers & outreach networking expo and Brewery lunch & learning about fermentation. For more information, please see the 2023 FSM program outline on pages 7 and 8. For any questions, please contact the 2023 Fall Scientific Meeting Co-Chairs, Dale LeCaptain (Central Michigan University) and Eric Nelson (Dow) at fsm@midlandacs.org.
- November 6 (7:00 8:00 PM) Hybrid Midland Section ACS Board meeting, MSU St. Andrews, Midland (in person), and via a WebEx conference call connection at <u>Webex Board Meeting</u> <u>November 2022</u>, Meeting number: 126 651 0648, or by phone at Phone number: 415-655-0001, Access code: 126 651 0648.
- November 16 (Save the Date) Fall Social Event hosted by the Midland Section ACS Diversity & Inclusion Committee, Three Bridges Distillery & Taproom, 240 East Main Street, Suite A, Midland. For more information, please contact Anne-Catherine Bedard at abedard@dow.com.
- December 4 (7:00 8:00 PM) Hybrid Midland Section ACS Board meeting, MSU St. Andrews, Midland (in person), and via a WebEx conference call connection at <u>Webex Board Meeting December 2022</u>, Meeting number: 126 651 0648, or by phone at Phone number: 415-655-0001, Access code: 126 651 0648.

The Midland Chemist is published twelve times a year by the Midland Section of the American Chemical Society, P.O. Box 2695, Midland, MI 48641-2695, http://www.midlandacs.org. Current and past issues are available at midlandchemist.org.

Volunteer Staff

Vickie LangerEditor (vllanger@dow.com)Steve KeinathEditor (skeinath54@charter.net)Mike MalczewskiWebmaster (web@midlandacs.org)

Please submit all articles and photographs to the editor at newseditor@midlandacs.org. Neither *The Midland Chemist*, nor the Midland Section, nor the American Chemical Society assumes any responsibility for the statements and opinions advanced by contributors of or to *The Midland Chemist*.

© Copyright 2023 Midland Section of the American Chemical Society

The Midland Chemist is available online with publication notification through an email alert to its readership. If you have any questions or comments about the content of or submissions to *The Midland Chemist*, please contact the editor at newseditor@midlandacs.org.