

A publication of the Midland Section of the American Chemical Society

October 2023, Vol. 60, No. 10

Contents

| Midland Section ACS Board of Directors 2024 Election | 2 |
|---|----|
| Attention STEM Students! Local College Co-op Position Open at Dow | 14 |
| National Hispanic Heritage Month Profile – Juan Venegas | 15 |
| Earth Day and a Half | 17 |
| Food Science Café Event: Scrumptious Seaweed, October 12 | 18 |
| Sturgeon Recovery in the Detroit River, October 17 | 19 |
| How WE Can Make a Difference: A Sustainability Event, October 21 | 20 |
| Frankenstein Friday at Central Michigan University, October 27 | 21 |
| Iota Sigma Pi Honor Society Membership Opportunities | 22 |
| ACS at Midland Center for the Arts Halloween Bash, October 28 | 24 |
| 2023 National Chemistry Week Illustrated Poem Contest, Submission Deadline October 29 | 25 |
| 2023 Fall Scientific Meeting, November 3 & 4 | |
| ACS Fall Scientific Meeting Registration | |
| 2023 Fall Scientific Meeting Flyer | 29 |
| "Munch at the Museum" Lunch at Fall Scientific Meeting, November 3 | 30 |
| ACS Presidential Candidates Connected to Midland | |
| National ACS Election is Underway! | 33 |
| Museum Meetup, November 4 | |
| Midland Section ACS Scholarship Fund Update and Encouragement to Give | 35 |
| Upcoming Dates, Events, and Other Updates | |



Midland Section ACS Board of Directors 2024 Election *Kelli Ogawa, Chair, Nominations and Elections Committee*

The annual election for the Midland Section ACS Board of Directors will be open starting <u>October 16, 2023, and</u> will close on November 6, 2023.

The positions that are open for election are:

- Chair-elect¹ (1-year term)
- Treasurer (1-year term)
- Secretary (1-year term)
- Chair, Nominations and Elections (1-year term)
- Directors² (3 open positions, 3-year terms)
- Director² (1 open position, 1-year term)
- Councilor (3-year term)
- Alternate Councilor (3-year term)

¹*The Chair-elect position is an overall three-year leadership commitment. The candidate elected to the Chair-elect position will serve the first year as Chair-elect, the second year as Chair, and the third year as Past-Chair.*

²The normal period of elected service for Directors is three years. There are three full-term Director positions open. In addition, due to the resignation of one Director who was elected in the 2022 election, there is one partial-term (1-year) Director position open. Of the candidates for Director positions on this year's ballot, the three with the highest vote counts will have three-year terms, while the candidate with the next highest vote count will have a 1-year term.

| Position (# of vacancies) | Candidates | | | |
|---------------------------|-----------------------------|-------------------------|--|--|
| Chair-elect (1) | Krishnaja Duvvuri | - | | |
| Treasurer (1) | Marc Coons | Justin Massing | | |
| Secretary (1) | Mayank Jhalaria | Paulami Majumdar | | |
| Chair, N&E Committee (1) | Raghida "Reggie" Bou Zerdan | Binbin Luo | | |
| | Asim Maity | - | | |
| Directors (3) | Kajari Bera | Marc-André Courtemanche | | |
| | Wenyi Huang | Nanguo Liu | | |
| | Regina Malczewski | Ashlin Sathyan | | |
| Councilor (1) | Dale LeCaptain | Ken Stockman | | |
| Alternate Councilor (1) | Allison Abdilla | Michelle Cummings | | |
| | Wendy Flory | - | | |

The candidates running for open Board positions are as follows:

American Chemical Society – Midland Section

P.O. Box 2695, Midland, MI 48641-2695 www.midlandacs.org

Below is a summary of the nominees and descriptions for each of the open positions.

Chair-elect: The chair-elect shall serve as Acting Chair of the Section in the absence of the Chair. Additionally, the chair-elect will succeed to the chairmanship of the Section in the following January (2024). They serve on the Board of Directors and the Executive Committee.

Candidates for Chair-Elect:

Krishnaja Duvvuri, Ph.D.



Krishnaja is an Associate Research Scientist at Dow in the Performance Silicones Product Development R&D. She joined Dow on the Research Assignments Program (RAP) in February 2020. After completing her rotation assignments in several R&D groups in early 2022, Krishnaja rejoined the Resins, Coatings and Adhesives group within DPS Product Development where she works at the intersection of polymer synthesis and material science. She currently leads a cross functional project team to develop and commercialize novel siloxane resins for high temperature applications.

Outside her research activities, she is actively involved in the Young

Researcher's Community (YRC) within Dow and has held several roles including seminar organizing chair (2021) and co-chair (2022). Within these roles, she organized events to educate and inform early career Dow researchers on wide ranging topics. She is also the Secretary of the ACS Midland Section for 2022 & 2023 and has been actively involved in organizing ACS events for young professionals within the Midland community.

Krishnaja received her Ph.D. in Chemistry in 2018 from The Ohio State University where she worked with Professor T.V. RajanBabu on transition metal catalyzed enantioselective hydrofunctionalization of alkenes. Upon completing her Ph.D., Krishnaja worked as a Process Engineer at Intel Corporation for a year, where she worked on developing and optimizing plasma etch process technology as well as process support for dry etch manufacturing process.

During graduate school, Krishnaja was active in STEM outreach activities, including being a chemistry instructor for a summer camp for girls entering high school, "*Science, it's a Girl's Thing*" and hosting middle school students at the Ohio State University's "Breakfast of Science Champions" outreach program.

Outside of work, Krishnaja enjoys spending time with her 10-month-old, reading, and travelling to National Parks.

Treasurer: The treasurer shall assist in the preparation of an annual budget in cooperation with the Chair and Finance Committee. They shall also pay the bills, handle receipts, keep financial records and report to the Board of Directors. Lastly, the treasurer will make out an annual report with the content and format required by National and file the IRS returns.

Candidates for Treasurer:

Marc Coons, Ph.D.



Marc Coons is currently an Associate Research Scientist in the Cheminformatics & Modeling group in Chemical Science, Core R&D.

Since joining Dow in 2017, he has been involved in Dow's external partnership with Good Chemistry Company (formerly 1QBit) that focuses on investigating the utility of leveraging quantum computing in materials R&D programs. In this collaboration, he focuses on developing methods that combine problem decomposition techniques with efficient quantum circuit representations to accurately approximate Schrödinger's

equation for molecules on quantum computers. Marc is also the Dow focal point for a UPI collaboration with UC Berkeley that also focuses on exploring quantum computing applications for quantum chemical problems.

Marc is also involved in the polyolefin catalyst discovery effort and previously has worked on efforts related to process chemistry to produce methyl methacrylate, exploring catalyst strategies for intermediate-low isomerization in allylpolyethers hydrosilylation, and transfer epoxidation.

Marc holds a Ph.D. from The Ohio State University where he studied under the tutelage of Prof. John Herbert. While a graduate student, he developed density functional and continuum solvation models for the Q-Chem software package. He deployed these methods to investigate the structure of hydrated electrons in bulk liquid water and at the liquid-vacuum interface.

Outside of work, he enjoys music, reading, the outdoors, and playing board and video games.

Justin Massing, Ph.D.



Justin Massing joined Dow as an Associate Research Scientist in May 2022 where he is a member of the Process Chemistry group in Engineering and Process Science within Core R&D. In this role, he is focused on process optimization and scale-up of materials to support various Dow businesses. Prior to Dow, Justin was an Assistant Professor at the University of Michigan–Flint. In addition to teaching various lecture and laboratory courses, Justin maintained a research program aimed at creating reaction-based probes for monitoring biologically relevant species via ¹⁹F nuclear magnetic resonance and fluorescence spectroscopy. While at UM–Flint, Justin served on numerous committees, including those involving allocation of scholarships, grants, and awards. He is currently the treasurer for the ACS Midland Section and a member of the 2023 D&I Steering Committee.

Justin obtained his B.S. from Florida Southern College in 2008, his Ph.D. from the University of New Hampshire in 2013, and conducted postdoctoral research at Northwestern University from 2013–2016. Justin lives in Midland with his wife Jordan, son Torsten, and their three cats. In his free time, Justin enjoys traveling, cooking, running, and playing games.

Secretary: The Secretary records the proceedings of the Section and its Executive Committee, maintains a list of members and associates, sends to members and associates such notices as the business of the Section may require, and carries out all other duties outlined in the SOCIETY and Section bylaws.

Candidates for Secretary:

Mayank Jhalaria, Ph.D.



Mayank Jhalaria has earned a B.Tech in Chemical Engineering from the Indian Institute of Technology, Gandhinagar, an M.S. degree in Chemical Engineering from Cornell University, and a Ph.D degree in Chemical Engineering from Columbia University where he focused on the development of polymer nanocomposites and polymer membranes for light gas transport as well as developing newer insights into the fundamental understanding of transport in polymers.

Mayank joined Dow in October 2020 on the Research Assignments Program. He spent time in three different groups focusing on a wide array of problems related to the development of heterogenous and homogenous catalysts, waterborne acrylic-epoxy coating technologies, and polyurethane technologies for use in EV batteries. He is currently a Senior Research Specialist with Analytical Science, Core

R&D at Dow, focused on applying a variety of surface science and spectroscopy tools to the development of organic and inorganic materials. He has held positions within the Young Researchers Committee at Dow (Treasurer, and ICF steering team member), volunteered at the FIRST robotics event at HH Dow and participated in several other STEM outreach events during his time at Cornell and Columbia. In his free time, Mayank enjoys reading, cooking, spending time outdoors and watching sports.

Paulami Majumdar, Ph.D.



Associate Research Scientist Dow, Chemical Science, Core R&D

Paulami joined Dow in 2018 and is currently an Associate Research Scientist in Core R&D, Chemical Science organization at Dow. She works on using quantum simulations for heterogeneous and homogeneous catalysts to investigate structure-property relationships for chemical reactions. At Dow, she has contributed to diverse technical areas such as olefin oxidation, alkoxylation, carbonylation and siloxane chemistries. Paulami is the Dow PI on a collaborative UPI project on fundamental kinetics of plastic pyrolysis with Penn State and Northwestern University. Outside of technical work,

Paulami currently serves as a peer reviewer for manuscripts in various journals, including ACS Catalysis, and is a member of the Early Career Editorial Board of the Journal of Catalysis. She is also a steering committee member of the Young Researchers Community within Dow and is active in the local ACS Diversity and Inclusion team at Midland, MI.

Paulami earned her Bachelor's in Chemical Engineering from Jadavpur University, India, and her Ph.D. in Chemical Engineering from Purdue University, USA. During her Ph.D., she worked on atomistic modeling using Density Functional Theory (DFT) simulations for heterogeneously catalyzed reactions.

Chair, Nominations & Elections Committee: The Nominations and Elections Committee is charged with identifying qualified candidates for leadership positions in the Section, setting up and certifying the elections.

Candidates for N&E Chair:

Raghida "Reggie" Bou Zerdan, Ph.D.



Associate Research Scientist Dow Performance Silicones – Product Development

Current Leadership roles:

- Event Coordinator, Si-Academy at Dow, 2021 present
- Co-chair Young Researchers Community at Dow, 2023 present

Raghida "Reggie" Bou Zerdan is currently an Associate Research Scientist in Dow Performance Silicones – Emulsions, Blends, Powders – Product Development group. In this role, Reggie is working on addressing the market needs from end-use industries for energy efficiency and substrate protection by developing a sprayable water-based coatings for high

temperature insulation and for condensation service. In addition, Reggie is supporting the development of an environmentally friendly slip additive for leather coatings that is currently entering the final commercialization stages.

Prior to joining Dow in 2019, Reggie was a postdoctoral fellow at the University of California Santa Barbara. There, she worked with industrial collaborators to develop polymeric additives for various applications such as triple function car-engine lubricants, dispersants, and antiscalants. Reggie holds a Ph.D. in Organic Chemistry from the University of Florida focused on the development of "smart" π -conjugated oligomers capable of mutually controlling the supramolecular architecture and tuning the optoelectronic properties in solution and solid-state of functional organic semi-conductive materials.

Binbin Luo, Ph.D.



Binbin Luo is currently an Associate Research Scientist in Resins, Coatings, and Adhesives (RCA) group. He joined Dow in 2020 as a Senior Research Specialist in the RCA group. His background is in materials science and engineering, particularly focused on colloidal and interfacial science. His current research activities involve development of new silicone PSAs for improved adhesion to silicone substrates, and establishment of polymer structure–PSA property relationship towards next-generation PSA development. Binbin has served on the DCS R&D digital team since 2021 where he assisted with development of the silicone PSA formulation database and is a co-focal point to maintain this critical resource. He has been serving as co-focal point for the Newsletter since 2023. He is also a member of the YRC steering team and is responsible for event planning.

Binbin has 3 patent filings along with 17 external publications. Binbin has a B.S. in Material Chemistry from University of Science and Technology of China (USTC) and a Ph.D. in Materials Science and Engineering from the University of Illinois at Urbana-Champaign. In his spare time, he enjoys hiking, biking, traveling, photography, etc.

Asim Maity, Ph.D.



Asim Joined Dow as a Senior Research Specialist in June 2022. He is a member of the Synthesis group in Chemical Science within Core R&D. In this role, he is focused on design and synthesis of new catalysts, monomers, and polymers to support various Dow businesses. Asim completed his undergraduate studies at Jadavpur University, Kolkata, India where he majored in chemistry. He obtained M.Sc. in chemistry from Indian Institute of Technology Kharagpur where he worked in the lab of Prof. Amit Basak studying Label-Assisted Laser Desorption/Ionization Mass Spectrometry (LA-LDI-MS). He then completed his Ph.D. in Chemistry under the supervision of Prof. David Powers at the Texas A&M University, College Station. His graduate work was focused on developing aerobic and electrochemical hypervalent iodine chemistry for sustainable oxidation catalysis.

During his graduate school, Asim was part of various student-led organizations to promote lab-safety, student well-being, diversity, and inclusivity.

Director: Directors are expected to attend Board meetings and to participate in the Board's deliberations. Directors should maintain an interest in local and national ACS affairs so that they can give informed consideration to the Section's issues. They should be alert to the needs and opinions of the Section membership. Three Directors must be elected to the Executive Committee, which may require attendance at additional meetings.

Candidates for Director:

Kajari Bera, Ph.D.



Kajari Bera is currently a senior research specialist at Dow's Core R&D Analytical Science organization. She received her Ph.D. in Chemistry from University of Minnesota and was a postdoctoral fellow at University of Illinois Urbana-Champaign. Since her joining at Dow in December 2021, she has led projects developing in-situ monitoring of reactions using optical vibrational spectroscopy. Kajari has extensively enabled collaborators in various Dow businesses to visualize and track their chemical reactions in real time, thereby enhancing safety and product quality.

Beyond research, Kajari is active in many professional organizations, both internal

and external to Dow. She has served as the chair for the Gordon Research Seminar on Vibrational Spectroscopy in 2022. She is an alumna of 'Science Outside the Lab' which aims to introduce the decision-making process in government and business at the local, state, federal and international levels to early career scientists. Kajari is a strong advocate of Diversity & Inclusion and is actively involved in many employee resource groups at Dow such

as Women's Inclusion Network, Asian Diversity Network to name a few, volunteers at ACS events performing hands-op demonstrations, and upholds safe work practices in her personal and professional life.

Marc-André Courtemanche, Ph.D.



Marc earned his Ph.D. from Université Laval, and after a postdoc at MIT, joined Dow Performances Silicones in 2017 where is now a Research Scientist. Marc's work has always focused on developing new sustainable technologies - from CO_2 transformation to the development of bio-sourced products or improving efficiency in industrial processes. He has co-authored 19 peer reviewed publications and over 40 provisional patent applications.

Marc is passionate about learning, mentoring, and the history of chemistry. He led the Si-Academy through a transformation that greatly improved access to learning materials, onboarding, and improved knowledge retention. Marc organized the chemical heritage symposium for CERM, and served as program co-chair for the

52nd SiliconSymposium.

He hopes to bring his strategic thinking, efficiency, work ethic, and innovative mindset to the Midland Section ACS as a director.

Wenyi Huang, Ph.D.



Bio: Dr. Wenyi Huang is a principal research scientist at DuPont. He is a Certified Six Sigma Black Belt and a trained Six Sigma Master Black Belt specialized in DFSS. He received his Ph.D. degree from Department of Polymer Engineering at The University of Akron, and completed his postdoctoral researches at The Ohio State University before joining Dow in 2012. In 2018, Wenyi made transition from Dow Materials Science & Engineering Core R&D to Dupont Performance Building Solutions Business. His expertise includes reactive extrusion and specialty compounding, breathable membrane technology, die design, microcapillary technology, functional materials and nanotechnology. He is an author of over 100 granted/published patents and 56 external publications including 11 book chapters and an edited book entitled

"Nanopapers: From Nanochemistry and Nanomanufacturing to Advanced Applications". He also serves as an Advisory Board Member for Cambridge Scholars Publishing and reviewers for 21 peer-reviewed journals.

Statement: I am writing this letter to apply for the Director position of ACS Midland Section. Throughout my academic and industrial careers, I have been actively contributing to technical and non-technical communities, which provides me an opportunity to pursue my career goals while helping our societies, building career networks, and developing leadership skills. I served as a co-editor of PMSE (Polymeric Materials Science & Engineering) Newsletters, and a moderator in ACS National Meetings. I was in the ACS Midland Section leadership team for many years, serving as Chair, Secretary, N&E Chair and Director. I also serve as Board of Directors for both Extrusion Division and Thermoplastic Materials & Foams Division in Society of Plastics Engineers. Internally, I am the founder and Chair of DuPont Polymer Processing Community (MTC) and DuPont Asian Group (DPAG), ACS @DuPont, the Chair for Dow Young Researcher's Community (YRC) in 2017, the President for Dow Materials Science & Engineering New Researchers' Organization in 2016. It will be a great

honor for me to contribute to the ACS Midland Section, allowing me to leverage my extensive experiences in professional societies to promote the growth of chemists/chemical engineers in the GLBR and beyond.

Nanguo Liu, Ph.D.



Nanguo Liu is a synthetic chemist in the Hybrids, Polymers, and Silanes (HPS) PD group within DPS. Nanguo joined heritage Dow Corning (hDC) in 2007 and has developed various novel technologies and intermediates since then, including Si+Metal technologies that enable the incorporation of a wide variety of metal elements into polysiloxane/siloxane materials for various applications, Smart Window devices based on SmA liquid crystal technology, low cost dendrimers, dumbbell crosslinkers, resin-reinforced silicone elastomers, dendritic siloxane surfactants for fluoro-replacement (AFFF, Oil&Gas, floor coating, etc.), immersion cooling fluids, adhesion promoters, Si-Ac intermediates, metal additives for high temperature

silicone gels, etc. Nanguo is a member of several external scientific societies (ACS, MRS and ISGS). Nanguo co-authored over 93 internal research reports, 85 patent applications, 21 journal articles (2000+ citation records), and 1 book chapter.

Nanguo earned his B.S. in Chemistry from Peking University in 2007 and Ph.D. in Chemical Engineering from the University of New Mexico in 2004. He was awarded the Distinguished CINT Postdoc Fellowship from the Department of Energy in 2004 and worked on nano/micro particles, semiconductor nanocrystals (quantum dots), and sol-gel materials at Los Alamos National Laboratory before join hDC in 2007.

Regina Malczewski, Ph.D.



I received a BS in Chemistry from the University of Dayton, a Ph.D. in Biological Chemistry from the University of Michigan, and did cancerrelated postdoctoral research at Michigan Molecular Institute in Midland. During my career at Dow Corning (29 years), I evaluated the biocompatibility of silicones for medical use, developed Si-based substrate binders using biotechnology, characterized the performance of silicones in personal care, tested materials for antimicrobial use and drug delivery, and investigated applications of nano-structured Si materials.

I obtained secondary teaching certification from Saginaw Valley State University in 2007, became an ACS Fellow in 2019, and received an award from Gov. Gretchen Whitmer as an outstanding senior volunteer that same year. I also volunteer for the Red Cross and also HELPS international.

ACS Activities:

-College Student Chem Club Chair

- -Local Section offices since 2008: Director, Scholarship Chair, Secretary, Chair (twice)
- -Centennial Exhibit Chair 2016- present (still collaborating with CMU on current display at Rowe Hall)
- -Outreach Leader since 2008 (received National Helen M. Free Award for Public Outreach, 2015)

-Have also done publicity and website management

-AACT Science Coach since 2010 -National Committee on Community Activities (current, since 2015)

Ashlin Sathyan, Ph.D.



Ashlin Sathyan is a Senior Scientist at DuPont Liveo[™] Health Care R&D Team at Midland, MI. In her current role at DuPont, Ashlin is responsible for identifying, assessing, and developing new scientific concepts and technologies to address global challenges. She also serves as the SI lead for Liveo[™], contributing to bringing more sustainable innovation projects and leveraging the best practices. Ashlin obtained her Ph.D. in Polymer Science and Engineering from University of Massachusetts Amherst in April 2021 where she conducted research under the guidance of Prof. Todd Emrick. Ashlin's doctoral work focused on the development of functional copolymers for material chemistry and interfaces, particularly polyamides and polyzwitterions. Prior to her Ph.D., Ashlin completed an integrated B.S. and M.S. in Chemical Sciences at the Indian Institute of Science Education

and Research in Kolkata, India, under the supervision of Prof. Raja Shunmugham. Her research during that time involved studying the influence of chain length on homopolymer amphiphilicity. Outside of her work she dedicates her time as an enthusiastic volunteer, lending her skills and passion to various organizations. She is a member of ACS (PMSE, Poly division) and AAAS. In the past, she served as a chair at the American Chemical Society Spring National Meeting, Orlando, FL (Session: General papers – new concepts in polymer materials) during Spring 2019.

Councilor: Councilors are representatives of the Midland Section to the Council. They are expected to attend Board meetings, participate in the Board's deliberations, report Society Council activities to the Board, and attend Council meetings as regularly as possible (at least once a year). Councilors should join in committee discussions to present their and the Section's viewpoints.

Candidates for Councilor:

Dale LeCaptain, Ph.D.



Professional Experience: Central Michigan University 2001 – present; Colorado State University 2000-2001; Michigan State University 1999-2000

Education: 1999 – Ph.D. Analytical Chemistry Michigan State University; B.S. 1994 – University Wisconsin LaCrosse

ACS Activities:

National

Councilor Midland Section 2014-present Meetings and Expositions Committee 2015-present Liaison to LSAC (Local Sections Activities Committee) 2023-present Regional Meetings Subcommittee Chair 2019-present Regional Meetings Subcommittee 2015- 2019 Alternate Councilor Midland Section 2005 – 2011

Regional

Planning committee CERM 2019 (Central Regional Meeting) Executive Director Committee and Social Chair CERM 2013

Local

Regional Experiment, H2O Q Co-creator and Director 2018- present Co-Chair Midland Section Fall Scientific Meeting 2023, 2011, 2004, 2003, 2002 Founding member of the local section Younger Chemists Committee, Faculty Advisor ACS Central Michigan University Student Members 2003 - present

Personal Statement:

I'm seeking re-election to my 3rd term as the Midland Local Section Councilor. Upon being elected in 2014 I originally positioned myself onto a councilor only committee of Meetings and Expositions (Regional subcommittee) at the National level. As the ACS is now transforming meetings and the format (in-person, hybrid, virtual) my service on the committee is term limited. Due to recent changes in the National ACS committee governance structure only the Nominations and Elections & Committee on Committees require Councilor membership. Both committees are elected by the council and therefore require networking for votes. I've asked for service on those committees and as my back-up requested moving over to the committees on professional training or education. As I continue to build a network at the national level, I seek out opportunities for Midland Local and the student members of the Midland Local Section. H2O Q, the middle school outreach program that I helped create has engaged several thousands of kids in water quality chemistry and I'm working to expand again to be a statewide and hopefully regional program. It's programs like this that engage school age kids with ACS volunteers both the professionals and student members that keep demonstrating the transforming power of chemistry.

Other: My 21+ years of active involvement with the local section, hundreds of former student members now in the ACS network, and my other volunteer offices in both the Midland and Mt. Pleasant community has really brought to light the strength that is Midland Local Section ACS (A national leader in the ACS!).

Ken Stockman, Ph.D.



Ken is a Senior R&D Leader for the Process Chemistry group in Dow Chemical's Core R&D Engineering and Process Science R&D organization. Ken started his industrial career in 1996 in Union Carbide's Low Pressure Oxo group. Since then, he has had a wide range of industrial research roles in current and former Dow businesses, including Glycol Ethers, Acetone Derivatives (Altivia), emulsion polymers (Arkema), and Dow Silicones, and Dow AgroSciences (Corteva). From 2007 to 2016 he worked in the Process Science (PS) group, which entailed working mostly on an Ag molecule and electronic materials (EM). His Ag research focused on the optimization and scale up of the process to make the <u>picolinic acid portion</u> of <u>Adavelt</u>[™], a next generation picolinamide fungicide, which was recently commercially launched. His work resulted in a reduction in the cost to manufacture by greater than 50%. The EM work included process development for monomers and polymers for photoresists and bottom anti-

reflective coatings (BARC) polymers. His team developed and commercialized robust processes for several embedded barrier layer (EBL) monomers, which are used to make EBL polymers. These polymers are added to photoresists and phase separate to the surface on drying and allow the elimination of a discrete barrier coat application during the photoresist process. While at a startup company (HyperBranch) from 2005-07, Ken

invented a novel hydrogel biomedical adhesive, which is used in <u>Adherus</u>[®] and is used a dural sealant in cranial surgery. In 2018, the startup was purchased by Stryker Medical for \$220M.

Ken earned his Ph.D. in Chemistry from the University of Virginia and did a postdoctoral Fellowship at MIT. Ken has 16 patent applications, of which 11 are granted patents.

Alternate Councilor: Alternate Councilors represent the Midland Section at deliberations of the Council if the elected Councilor is unable to attend. Alternate Councilors are expected to attend Board meetings and are voting members of the Board.

Candidates for Alternate Councilor:

Allison Abdilla, Ph.D.



Senior Research Specialist AS, Rotational Assignment Program (RAP) The Dow Chemical Company

Allison joined Dow on RAP in June 2022. During her first assignment in DPS-PD, Allison worked on the Hybrids Polymers & Silanes team supporting the Sustainable Silicones and Custom Synthesis portfolios. She is currently on a 6-month rotation in AS researching quality control of optical silicones. Allison is the seminar chair for the Young Researchers Community (YRC) steering team and organized the 2023 Si symposium along with the planning committee within Dow.

Allison received her Ph.D. in Chemistry in 2022 from the University of California, Santa Barbara under the joint advisement of Professor Craig Hawker and Professor Javier Read de Alaniz focusing on the synthesis of chainend functional materials through living anionic polymerization. She also actively contributed to the Dow-UCSB UPI titled 'Phase Behavior Fundamentals of Silicone Organic Hybrid Materials' focused on the synthesis, characterization and application of siloxane- and (meth)acrylate-based polymer blend compatibilizers. Outside of her research, Allison was the Co-President of the Chemistry Professional Development team and lead a team of 25+ graduate students to organize the annual UCSB Chemistry Career Day for over 130 participants and 33 industrial representatives. In her spare time, Allison enjoys exploring new food spots, dancing, and spending time with her senior cat Mia.

Michelle Cummings



Senior R&D Leader- Dow ACS Fellow ACS Committee on Chemists with Disabilities-Chair PROF CWD- Chair Elect

Michelle Cummings is the chair of the American Chemical Society Committee on Chemists with Disabilities since 2020 with the vision to *Make Chemistry Accessible to All*. Michelle has worked on projects to mainstream accessible resources such as an accessible PowerPoint template for ACS and a 3D printed tactile periodic table display. She also currently the chair-elect for the CWD PROF subdivision. As an ACS Fellow Michelle has been very active in bring several technical divisions together on the DEIR front to promote equity for all chemists.

Locally Michelle has served on the Fall Scientific committee, volunteered with the most recent CERM organizing committee, organized WCC outreach activities, and has served on the Midland section board in several roles from 2007-2020 including Chair.

She has been part of the Dow National Technical Institute for the Deaf recruiting team for the past 5 years after hosting an intern in her R&D lab for a summer. She is on the steering team of the Dow local area Employee Resource Group- Disabilities Employee Network (DEN) and on the People with Disabilities Hiring Task Force, driving one of the global key initiatives: *Attract, develop, and retain people with disabilities*.

Michelle is a Senior R&D Leader within the Hybrids, Polymers, and Silanes Group within Dow Performance Silicones. In this role Michelle is responsible for leading the Hybrids product development group to deliver on new innovative products combining organic and silicone chemistry for differentiated advanced performance. She is recognized as a strong project leader and known for setting strategy and executing on tasks to drive toward successful implementation of innovation. She has experience as a technical leader in silicone elastomers and has developed several commercialized elastomers and adhesive products for use in the electronics and automotive industry.

Wendy C. Flory, Ph.D.



Professional Experience: Dow, Inc. 2001 – present, State Chemical Co., Cleveland, OH 1993-1994

Education: 2000 - post graduate Colorado State University; 2000 - Ph.D. Analytical Chemistry Michigan State University; B.S. 1993 - Ohio State University

ACS Activities: Finance Committee 2014-current chair; Awards Committee 2019 – current; Nominations and Elections Chair 2016-2017; Treasurer – 2014-2016; Councilor – 2010-2013; WCC committee 2013 – 2020; YCC Chair 2002-2006; Co-Chair Fall Scientific Meeting

2003 and 2004

Local ACS sections offer many opportunities to chemists, in particular to expanding one's network both locally and nationally. Starting in graduate school and continuing with my 22+ years at Dow I have been involved with ACS serving on the national WCC for 2 years, as a Midland Section Councilor, local treasurer, the awards committee, chair of Nominations and Elections, and my continued chair of the Finance Committee. While on N&E, it was my goal to recruit a diversity of candidates from our area with varying years of experience. Having a board with a variety of experiences can only make our section stronger and can increase new ideas in all areas. I continue to increase awareness and encourage newer chemists in the midMichigan area to get involved.

Locally, I was the key person involved with starting the local younger chemist committee (YCC) and the younger research chemists (YRC) at Dow Chemical. I was instrumental in several Fall Scientific Meetings from 2002 – 2004, co-chairing it in 2003 and 2004. These meetings involved many presentations and was

attended by 300+ area scientists. Numerous times I've been a volunteer for outreach programs in the community, events such as the Dow Family Reunion, Professionals Day, Take Your Child to Work Day, etc. I have recently re-engaged at the national level and plan to join as a committee member in 2024.

Personal Statement: My passion for ACS has been to improve the impact that the local section has on its members. I believe that most members join or renew because of how our local section can really make a difference, through local outreach, professional programming, or volunteer opportunities. I'd like to continue to partner and leverage ideas that other sections may have to strengthen the ACS.



Attention STEM Students! Local College Co-op Position Open at Dow Vennesa Jansma, TERC Product Safety Research Laboratory, Dow

Interested in paid job experience that is relevant to your career and has flexible hours?

The Dow Toxicology and Environmental Research & Consulting organization (located in Midland, MI) is looking for a Local College Co-op to assist research scientists in our predictive toxicology team. We are looking for an undergraduate enrolled in a chemistry, biology, or biochemistry curriculum. If you or someone you know is interested, please refer to this link for more information and consider applying.



National Hispanic Heritage Month Profile – Juan Venegas Anne-Catherine Bedard, Diversity & Inclusion Committee, Midland Section ACS

Editor's note: The second page of this profile article was inadvertently omitted from the first pass publication as it appeared in the September 2023 issue of the *Midland Chemist*. Our apologies to Anne-Catherine Bedard and her team for making this publication error.

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: 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.

Juan M. Venegas, PhD

PhD, Chemical Engineering:

Associate Research Scientist, Dow

BS, Chemical Engineering: Worcester

Polytechnic Institute, Worcester, MA

University of Wisconsin - Madison,

(he/him)

Madison, WI

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.

Q. What are things you do to be an ally for D&I and young professionals?

A. I think allyship is recognizing that people of all backgrounds come from a different place and their needs/ambitions may be different from mine.

Being receptive to this and understanding the challenges they may face in their life is critical to tailor your support.

Does that person need people to treat them differently due to their needs?

Do they prefer to be recognized for things outside their diverse background?

I think continuously learning from other's is the key to be effective in that allyship journey.





For Juan, success is defined by his contribution to a sustainable world. His desire to make everyday products and processes safer and more sustainable reflects a profound commitment to global well-being. Juan's aims for his legacy to be one of environmental stewardship and a dedication to reducing our carbon footprint.

Passion, drive, and an hunger for knowledge propelled Juan to his current role at Dow where he develops new industrial processes to efficiently synthesize key industrial molecules.

Juan's career journey has been marked by its unpredictability. Reflecting on his path, he admits that it hasn't unfolded exactly as he had envisioned. He was surprised by the extent of freedom and responsibility he was granted when identifying problems and opportunities to improve technologies at Dow. The challenge turned out to be much more open-ended than he initially expected. This adaptability and willingness to embrace the unexpected have become defining traits of his career. Embracing challenges and seeking help when needed have been critical aspects of his journey, contributing to his achievements.

Juan attributes his success to his passionate and driven work ethic. His ability to approach tasks with enthusiasm and a hunger to learn and apply new ideas has been instrumental in reaching his current position. Moreover, he recognizes the importance of seeking help or support when needed.

"I aim to be somebody that supports other people's journeys and helps achieve an equitable world where we all help others move forward."

Juan is an avid photographer and enjoys nature photography as exemplified by this image capture at the Chippewa Nature Center.

Always find the "cool part" in all you do!

On a personal level, Juan contributes to a more inclusive world by sharing his own culture and background and by actively listening to others' experiences. His journey of moving to the US and encountering significant cultural diversity has broadened his perspective and taught him the value of inclusivity.

In sum, Juan is a scientist with a vision, a researcher with a purpose, and a guardian of sustainability. His journey from a high school chemistry class to the cutting-edge laboratories of Dow is a testament to the power of passion and perseverance. Juan's commitment to unraveling the mysteries of chemistry for a greener, safer world makes him not just a scientist but a example of hope for a sustainable future. As he continues to contribute positively to scientific discoveries, Juan's legacy will undoubtedly be one of innovation, sustainability, and unwavering dedication to making our world a better place.



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 18 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 19 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

"Scrumptious Seaweed" Food Science Café at Bay City Western Cafeteria, 500 Midland Rd, Auburn, MI October 12 6:30-7:45 pm--FREE

Two chefs from the Detroit Institute of Gastronomy will join us to discuss the chemistry behind algae and seaweed, associated nutrition, 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 "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). In-person limit: 75—you must sign-up to save a spot; please do not sign up if you are not committed to attend.

Sign up link: https://www.signupgenius.com/go/60B0B45AEAB29A5F85-food

ZOOM link: <u>https://us02web.zoom.us/j/82176856345?pwd=SIRyaFdKdHpMY1FIZTEzemZyaG9yUT09</u>



Sturgeon Recovery in the Detroit River, October 17 Carmen Folk, Co-chair Younger Chemists Committee, Detroit Section ACS



American Chemical Society - Detroit Local Section - Younger Chemists Committee Presents:





Brewing Chemistry is a monthly lecture series. These informal talks are designed to make science fun and accessible for all.

Sturgeon Recovery in the Detroit River

Justin Chiotti, Fish Biologist, U.S. Fish and Wildlife Service

Tuesday, October 17th, 2023

7pm presentation

An evening of libations, edible delights and science inquiry

There is no admission charge, and free parking is available.

Feel free to join us before the talk at 6:00 PM for a Dutch-treat dinner.



Maverick's | in the enclosed covered patio | 20970 West Rd, Woodhaven, MI 48183

The U.S. Fish and Wildlife Service, in partnership with Michigan Sea Grant, conducts Sturgeon recovery research. Join Justin Chiotti on a discussion of the Lake Sturgeon recovery being conducted in the St. Clair – Detroit River System.

"The Detroit River and the St. Clair River do more than just connect the upper Great Lakes to the lower Great Lakes. While most people know the Detroit River and St. Clair River — referred to collectively as the Huron-Erie Corridor — as major commercial waterways used to support shipping

and fishing. But this 32-mile connecting channel has another distinction: until the late 1800s, the corridor was an important spawning ground for lake sturgeon. Its fast-moving waters attracted thousands of the large, primitive fish every spring.

In the following decades, the number of lake sturgeon plummeted due to pollution, over-harvesting and loss of spawning habitat. The current population of lake sturgeon in Michigan is estimated to be about 1 percent of its former abundance. Organizations like Michigan Sea Grant and the U.S. Geological Survey are working to restore lake sturgeon and other native fish habitat in the waters of the Detroit River. " – from Michigan Sea Grant – partner in the Sturgeon Recovery Effort



<u>Please RSVP for a headcount</u> <u>https://forms.gle/BWNoPDXKkRkXVzXT6</u> How WE Can Make a Difference: A Sustainability Event, October 21 Erin Vogel, Chair-elect, Midland Section ACS



Sign-up link: Sustainability Event



Frankenstein Friday at Central Michigan University, October 27 Gina Malczewski, Director and Outreach Committee, Midland Section ACS



Iota Sigma Pi Honor Society Membership Opportunities Dr. Christine Hermann, Vice-President, Iota Sigma Pi Submitted by Hunter Woodward, Chair, Midland Section ACS



I am writing to invite you to share through your ACS Chapter an opportunity for female professional members and students to become a member of Iota Sigma Pi, the National Honor Society for Women in Chemistry. Our membership includes professional women chemists, teachers, and professors, as well as undergraduate and graduate students in the field of chemistry or allied fields.

Why join lota Sigma Pi? We have active chapters all over the United States that sponsor programs (both in person as well as virtual) that include professional talks by members and invited speakers, field trips, and social gatherings.

The National Iota Sigma Pi supports the development of women and non-binary people in chemistry and makes awards to qualified women and non-binary people in chemistry (for professionals as well as students). For more information about the awards, please see <u>lota</u> <u>Sigma Pi Awards</u>.

A benefit to membership in lota Sigma Pi is the networking opportunity between the members and mentoring the next generation of women chemists. Our organization has a mixture of women with a variety of chemical interests: our members are from industry, government, and academia and include both faculty and students. The size of our group is large enough to constitute a meaningful network, yet small enough for everyone to get to know one another. During lota Sigma Pi's existence, five of our members have won Nobel Prizes. We are hoping to have professional talks in the future from the most recent Nobel Prize winners (Carolyn Bertozzi, Jennifer Doudna, and Emmanuelle Charpentier).

The qualifications for student membership are:

Undergraduate students: women and non-binary people who have taken at least four semesters (or equivalent) of chemistry courses and have an overall 3.0 GPA.

Graduate students: women and non-binary graduate students in chemistry-related fields with at least one semester (or equivalent) of graduate school completed with a 3.0 GPA and are in good standing with their programs.

The qualifications for professional membership include:

Hold a master's or Ph.D. degree in chemistry or field closely related to chemistry

OR

Hold a baccalaureate degree in chemistry or field closely related to chemistry and have a one-year employment history in chemistry or a field where the principles of chemistry are important

Applications are accepted online at <u>lota Sigma Pi Application</u>. Click on Membership from the menu at the top of the page and select Membership again in the drop-down menu. Read through the requirements for

membership and click on the Membership Application button at the bottom of the page. Complete the membership application form and upload your resume. Upon successful submission, you will be redirected to a payment page for initiation fees and first-year's dues (\$80 for professional dues and \$45 for students), but you will not be able to checkout until you have been approved for membership and create a site login. You will also receive an email confirmation of your submission.

The video instructions are at lota Sigma Pi Application Video Instructions.

I look forward to receiving your application! If you know of others that are qualified, please share this information with them.

Please contact me if you have any questions at <u>chermann@radford.edu</u>.

Dr. Christine Hermann Vice-President, lota Sigma Pi Chair, Department of Chemistry Radford University



ACS at Midland Center for the Arts Halloween Bash, October 28 Gina Malczewski, Director and Outreach Committee, Midland Section ACS



Halloween Bash | Midland Center

Come in costume and do some early trick-or-treating outside of the Midland Center for the Arts! Enjoy spook-tacular science demonstrations, ghoulish hands-on activities, and don't forget to collect treats along the way! All ages are welcome. Make sure to purchase your time slot in advance online.

All ages are welcome. Tickets include entrance to our <u>museum exhibits inside the Center</u> on this day as well!

Saturday, October 28, 2023 – admission times start every 30 minutes, 10 AM - 2 PM.

Tickets: \$10 per person, Free for Museum Members, Free for ages 3 and under.

Everyone needs a ticket, including those 3 and under. Those needing 3 and under tickets and Members should register via our Ticket Office for their discount. 989.631.8250

Pre-registration will be required as this is a timed admission event; be sure to arrive on time for the event based on your purchase time. Children must be accompanied by an adult.

2023 National Chemistry Week Illustrated Poem Contest, Submission Deadline October 29 Hannah Bailey, NCW Illustrated Poem Contest Coordinator

THE EALING POWER **OF CHEM STRY**

October 15–21 | **2023** | #NationalChemistryWeek





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

Contest Deadline: Sunday October 29th, 2023

Visa/Master Card prizes for all 1st and 2nd place winners in each grade category!

New coordinator - Hannah Bailey - Hannah Bailey@dow.com

This contest is open to anyone in the Great Lakes Bay Region and beyond

Winners of the Midland 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!

On the following two pages you will find the flyer with the complete rules and the entry form that must be sent with all submissions – emailed to HannahBailey@dow.com

Illustrated Poem Contest - National Chemistry Week - American Chemical Society (acs.org)





2023 NCW Illustrated Poem Contest The Healing Power of Chemistry

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

Contest Deadline: Sunday October 29th

Visa/Master Card prizes for 1st and 2nd place!

Contact: Hannah Bailey at Hannah Bailey@dow.com

Winners of the Midland 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, "The Healing Power of 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:

- Skin anatomy and care
- Antibodies
- Vaccines

Antibiotics

- Wound healing
- Bandages Immune system
- Zoopharmacognosy
- Medications •
- Pathogens

Entries will be judged based upon:

- · Artistic Merit use of color, guality 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 atwork, 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.
- · Acceptance of prizes constitutes consent to use winners' first name, and entry for editorial, advertising, and publicity purposes.
- · Do not place participant names on the front of your poem





National Chemistry Week (NCW) Illustrated Poem Contest ENTRY FORM

Please fill out this form and attach it after the poem. All fields are required. Incomplete forms will invalidate the entry.

The deadline for the Midland Local Section Contest is Sunday October 29th, 2023

Submit poems to Hannah Bailey at HannahBailey@dow.com

| Student and Organization Information | | | | | | | |
|---|--|----------|-----------------------|-----|--------|--|--------|
| Student Name: | | | | | | | |
| Student Grade: | | | | | | | |
| Parent/Guardian Name: | | | | | | | |
| Parent/Guardian Email: | | | | | | | |
| Parent/Guardian Address | S: | | | | | | |
| Parent/Guardian City: | | | | | State: | | Zip: |
| School or Sponsoring Group (e.g. Boys and Girls Club or Scout Troop, 4-H, etc.): | | | | | | | |
| Teacher Name: | | | | | | | |
| Teacher Email: | | | | | | | |
| School Address: | | | | | | | |
| School Address 2: | | | | | | | |
| School City: | | | | | State: | | Zip: |
| Please send any follow u | Please send any follow up for the student to the parent or school address. | | | | | | |
| Illustration Type (Check | (one) | | | | | | |
| Hand-drawn art 🔲 | | | Digitally created art | | | | |
| If the poem was digitally created, please name the software used in the box below: | | | | | | | |
| | | | | | | | |
| Judging Category by G | rade (C | heck one | e) | | | | |
| К-2 🔲 | | 3-5 🔲 | | 6-8 |] | | 9-12 🔲 |
| FOR LOCAL SECTION USE ONLY | | | | | | | |
| Local Section Name: | | | | | | | |
| NCW Coordinator Name: | | | | | | | |
| NCW Coordinator Email/Phone: | | | | | | | |

More information is available at www.acs.org/ncw.

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 open from September 12
 - Science of Materials Design, Synthesis, Development, Applications
 - o 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 open from September 12

Saturday, November 4, 2023 – Day 2

- Careers & Outreach Networking Expo (9:30 AM 12:00 PM) Concurrent open visit format
 - 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 <u>fsm@midlandacs.org</u>.

ACS Fall Scientific Meeting Registration Steve Keinath, Co-Editor, The Midland Chemist

November 3rd and 4th, 2023 Central Michigan University Mt. Pleasant, Michigan

For information or to register, see the website at 2023 Fall Scientific Meeting (midlandfsm.org).

For registration questions, please contact Mary Tecklenburg and Bingbing Li via acsfsm2023@gmail.com.

For any other inquiries, please contact Eric Nelson and Dale LeCaptain, FSM co-chairs, via fsm@midlandacs.org.

2023 Fall Scientific Meeting Flyer

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



"Munch at the Museum" Lunch at Fall Scientific Meeting, November 3 Gina Malczewski and Bingbing Li, Midland Section ACS

The Senior Chemists Committee of the Midland Section (also known as Silver Circle, SCC) is sponsoring a **FREE early lunch at the Fall Scientific Meeting November 3 at Rowe Hall (Bellows Street).** Food service will begin at 11 am.

SCC is responsible for the Midland **ACS Centennial Exhibit**, adjacent to Rowe 124, which we encourage lunchgoers to visit. Though originally displayed in Midland in 2019, the updated exhibit was reopened in Sept 2022 at CMU—it deals with the power of Chemistry, the history of ACS in our area, and the contributions our members have made locally and globally. Augmented Reality options are available to learn more about featured molecules; puzzles can be completed for prizes and molecule-building is encouraged. A new display on "moles" will also be open!

A remote option is offered for the Keynote Address, so you can attend from Rowe without having to leave lunch early!

This event honors especially our senior chemists, but all are invited! Space is limited to **40 guests**, so be sure to sign up! If you don't want lunch, please come visit the exhibit.

Sign-up is part of FSM registration—look for details about free parking!

Fall Scientific Meeting registration: ACS Fall Scientific Meeting Registration (google.com)



ACS Presidential Candidates Connected to Midland Mark Jones, Director, Midland Section ACS

The future President of the American Chemical Society (ACS) will be familiar with Midland and have industrial experience at Dow Chemical. For the first time in the 146-year history of the ACS, the two candidates for President-elect are both former Midland residents and former Dow Chemical employees. Dorothy J. Phillips and Florian J. Schattenmann are running to be President-elect of the Society.

Dorothy came to Midland in December 1974 and moved away in October 1983. Florian lived in Midland from early 2011 to August 2019. Both were lured to Midland by jobs at The Dow Chemical Company, both in research. Dorothy worked in Central Research, what ultimately became today's Core R&D. She joined upon completion

of her Ph.D. Dorothy's work at Dow centered on antibiotics, leveraging her biochemistry Ph.D. She received three patents and followed one of the compounds through efficacy trials. Florian did not join Dow immediately upon receiving his Ph.D. He joined GE out of graduate school, leveraging his inorganic Ph.D. into development of silicones. A 2year stint at a startup company preceded his joining Dow as a Director in Dow Automotive. He moved through a variety of positions, ultimately becoming Vice President for Performance Materials & Coatings R&D.

A move to Waters Corporation marked the end of Dorothy's Dow career in 1984. Part of a dualchemist, dual-career couple, Dorothy's departure from Midland was prompted by her husband's decision to leave Dow for a new opportunity. She



Chartering of the Mu Alpha Chapter of Alpha Kappa Alpha Sorority in 1978. Shown, from left, are Octavia Walters, Carolyn Agee, Eleanor Jones Corothers, Rosie Bailey, Betty B. Jones, Dr. Gloria Smith, Pahe Hubble Dorman, **Dr. Dorothy Phillips**, Sheryl Bowman, Claudette Paritee, Bertha Amoso and Tommye Finley. Provided by Dorothy Phillips. Picture is a photo of a hardcopy and was edited to improve clarity.

remained at Waters for 29 years, moving through several functions during her Waters' career. She developed



The Shattenmann family in Midland in 2018. From left, Florian, Leah, Lucas and Sheree. Photo provided by Florian Schattenmann.

corporate relationship that grew Waters' business in major geographies. She retired as Director of Strategic Marketing. Florian left Dow to assume his current position, Chief Technology Officer at Cargill. As CTO, he oversees a global team creating value for Cargill and its customers across agriculture, food, animal feed and bioindustrial markets. Cargill is a privately held company with approximately \$177B in annual revenue, the world's largest food and agricultural products company. "It was too exciting an opportunity to pass up," says Florian. Florian is also part of a two-chemist household. His wife, Sheree, is a Ph.D. inorganic chemist turned entrepreneur, operating her company while in Midland.

Both have fond memories of their time in Midland and at Dow. Florian fondly recalls the infrastructure quality

and opportunities that far exceed expectations for a city the size of Midland. It was a great place to raise a family with good schools and ability to participate in many activities. He appreciated the diversity within the small community and within the company. Dorothy remembers the opportunities she seized in the community. She was, "involved in the Midland Black Coalition, charter member of Mu Alpha Omega Chapter of Alpha Kappa Alpha Sorority, helped to establish a NOBCChE Chapter and served in a leadership role." Florian remembers some of the challenges faced, and satisfaction over the outcomes. Florian was leading R&D that included silicones during the integration of Dow Corning. He comments, "with all the spotlight, pressures and more, I am quite proud how we did it and how we kept the 'secret sauce' of DC alive."

The President plays a critical role in the governance of the society during the three-year succession. During the Presidential year, the President develops a set of goals with corresponding tasks and events while serving as the Society's primary spokesperson and representative of the ACS. Dorothy and Florian came to run for President in very different ways. Dorothy is familiar with ACS National roles, having served nine years on the ACS Board of



Dorothy with her husband James and daughter Vickie in the back row, and children Crystal and Anthony in front. Photo in Midland, Easter 1981. Photo provided by Dorothy Phillips.

Directors, in addition to being an ACS Fellow and having a long history of service to the ACS. When asked why she desires to serve as President, she responded, "My vision is for a sustainable global ACS that nurtures the careers of all chemists. I will champion programs and investments that embrace and advance the careers of young chemists and those underrepresented in STEM. With global travel experience I will work with ACS international chapters to grow membership, especially industrial members." Florian has not previously been involved in ACS National governance. Approached by the Nominations and Elections Committee, he first questioned whether the ACS presidency could work with an active career. He shares, "I did a lot of soul searching



Colleagues Wayde Konze, Reetal Pai, Jerzy Klosin and Shawn Feist (I to r) at an event to celebrate Florian's time at Dow in 2018. Provided by Florian Schattenmann.

and talked to my two bosses, my wife and the CEO of Cargill. In the end, it was about making an impact and I felt that actually being at the peak of an executive career can bring clear advantages to the ACS presidency, such as current and relevant connections, up-to-date experience with startups, current challenges for employees, and more." He has been active supporting ACS efforts, such as the CTO Summits, involvement in the I&EC Division, speaking at meetings, and supporting ACS requests for industrial funding.

Both candidates believe their industrial experience will help in addressing continuing ACS challenges. Industrial members, which decades ago were in the majority, are now a minority and dropping. Seeking ways to improve the value proposition for industrial members is important to both. The same is true of the importance of diversity and inclusion, and the incorporation of international members. More about their full platforms can be found at <u>dorothyphillips.net</u> and <u>florianschattenmann.com</u>.

No matter how the votes are cast, the President-Elect of the ACS will be familiar with Midland and Dow. It is a plus that the future President will have positive views of both.

National ACS Election is Underway! Mark Jones, Director, Midland Section ACS

The National ACS election is underway. Ballots were sent on September 25 and the election closes on October 20. Spam filters, especially those employed by corporations have taken exception to emailed ballots, labeling them junk or spam. These emails contain the PIN required for a member to vote.

If you haven't received the email ballot, searching for "DirectVote" in junk/spam has worked to find the ballots.



2023 ACS National Elections

You may also seek the ballot through the ACS website. Go to DirectVote Election: Login (<u>ACS National Election</u> Voting)

If you have not voted and cannot find the email sent to you. You can request another PIN. Junk/spam filters can have a significant time delay in some environments. You may not receive it immediately.

Unfortunately, PINs are sent to the email on record with the ACS and may once again be filtered by the corporate networks. Changing the email on record with the ACS may ensure delivery.

Your vote matters. Vote in the ACS election.



Museum Meetup, November 4

Carmen Folk, Co-chair Younger Chemists Committee, Detroit Section ACS

Museum Meetup

Where: Cranbrook Institute of Science

39221 Woodward Avenue Bloomfield Hills, MI 48303-0801

Who: Everyone! Students, industry, academia, retirees, significant others, family, friends, children

Why: To network with others, have fun, go someplace who haven't been in awhile or never been to

When:

Saturday, November 4, 10am

RSVP

https://forms.gle/9K3iLGp sPMJ8YawdA



Admission

- Adults: \$13.00
- Children ages 2 12: \$9.50
- Seniors 65*: \$9.50
- Children under 2: Free
- All Members: Free

Galileo Exhibit Hall (in addition to museum admission)

- Adults: \$8
- <u>All CIS Standard Members</u>: \$6
- Seniors 65* & Children 2 12: \$5
- <u>CIS Enhanced Members</u> and Children under 2: FREE

Organized by YCC of Detroit ACS



One of the world's leading centers of education, science and art, Cranbrook was founded in 1904 by George and Ellen Scripps Booth. Its **National Historic Landmark** campus is graced by architecturally significant buildings, outdoor sculpture and natural and tended landscapes.

Permanent Exhibits:

- Acheson Light Lab
- Astronomy Gallery
- Every Rock Has a Story
- Flint Anthropology Gallery
- Ice Ages Come and Go
- Ice Age Survivors
- Life Changes Over Time
- Life on Earth
- M1 Hyper-Loop Aircar
- Mastodons Did Not Survive
- Megalodon
- Mineral Study Gallery
- Motion Gallery
- The Story of Us
- Water is Like Nothing Else
- Woodlands Den

Special Changing Exhibit:

Modern science owes a great deal to Galileo Galilei (1564-1642) the Italian scientist, astronomer and mathematician. His discoveries enabled great paradigm shifts in science and paved the way for space travel in the 20th and 21st Centuries. Visitors gain insights into how Galileo's fearless and pioneering work in Science, Physics, and Astronomy four centuries ago has shaped our modern world. Presented in themes:

- Theme 1 Astronomy
- Theme 2 Simple Machines
- Theme 3 Gravity, Motion and Time
- Theme 4 Military and Ballistics
- Theme 5 The Birth of Experimental Science

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 seven contributions amounting to \$2,080.76, and Wendell and Marcia honored their matching donation commitment by submitting a check in the amount of \$2,000 (matching contributions made through September 19, 2022) 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

- 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. FREE. Limit: 75 attendees. You must sign up to reserve a spot. Sign up link: <u>https://www.signupgenius.com/go/60B0B45AEAB29A5F85-food</u>
 ZOOM link: <u>https://us02web.zoom.us/j/82176856345?pwd=SIRyaFdKdHpMY1FIZTEzemZyaG9yUT09</u>
 For more information, please see the event flyer on page 18. For any questions, contact Gina Malczewski at reginamalczewski@gmail.com.
- October 16 Voting opens for election of 2024 Midland Section ACS Officers and Board. Voting will close Monday, November 6, 2023, at 11:59 PM. Watch your email for a ballot.
- October 17 (7:00 PM) *Sturgeon Recovery in the Detroit River*, presented by the Detroit Local Section Younger Chemists Committee. Optional Dutch-treat dinner at 6:00 PM, presentation begins at 7:00 PM. Maverick's, 20970 West Road, Woodhaven, MI. Please see the event flyer on page 19 for details.
- 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 20 (12:00 PM CDT) **Deadline to cast your ballot for the ACS National election.** Please see additional voting information on page 33.
- October 21 (10:00 AM 3:00 PM) How WE Can Make a Difference: A Sustainability Event. 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. Sign-up required at <u>Sustainability Event</u>. For more information, please see the event flyer on page 20 or contact Erin Vogel at <u>EVogel@dow.com</u>.
- October 27 (4:00 7:00 PM) Third Annual Frankenstein Friday at CMU Museum, 124 Rowe Hall, 650 E. Bellows Street, Mount Pleasant. FREE. For more information or to register, please see event flyer on page 21.
- October 28 (10:00 AM 2:00 PM) Halloween Bash at Midland Center for the Arts, 1801 W St Andrews Rd, Midland. Admission times start every 30 minutes, 10 AM - 2 PM. Pre-registration required at <u>Halloween</u> <u>Bash | Midland Center</u>. Tickets: \$10 per person, Free for Museum Members, Free for ages 3 and under. For additional information, please see event flyer on page 24.
- October 29 Deadline to enter the National Chemistry Week Illustrated Poem Contest. For more information, please see the article with details and an entry form, beginning on page 25.
- 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, registration information, and flyer on pages 28 and 29. 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 3 (10:00 11:00 AM) "Munch at the Museum" Senior Chemists Committee Lunch at the 2023 Midland Section ACS Fall Scientific Meeting. Central Michigan University, Rowe Hall, Mount Pleasant. Registration is available within the FSM registration form at: <u>https://midlandfsm.org/</u>. For more information, please see the event flyer on page 30.
- 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, registration information, and flyer on pages 28 and 29. For any questions, please contact the 2023 Fall Scientific Meeting Co-Chairs, Dale LeCaptain (Central Michigan University) and Eric Nelson (Dow) at <u>fsm@midlandacs.org</u>.

- November 4 (10:00 AM) *Museum Meetup* with the Detroit Local Section Younger Chemists Committee. Cranbrook Institute of Science, 39221 Woodward Avenue, Bloomfield Hills, MI. Please see the event flyer on page 34 for details.
- 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 6 (11:59 PM EST) **Deadline for election of 2024 Midland Section ACS Officers and Board.** Voting will start Monday, October 16, 2023, and will close Monday, November 6, 2023, at 11:59 PM. Watch your email for a ballot.
- 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 <u>abedard@dow.com</u>.
- 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, <u>http://www.midlandacs.org</u>. Current and past issues are available at <u>midlandchemist.org</u>.

Volunteer Staff

| Vickie Langer | |
|-----------------|--|
| Steve Keinath | |
| Mike Malczewski | |

Editor (vllanger@dow.com) Editor (<u>skeinath54@charter.net</u>) Webmaster (<u>web@midlandacs.org</u>)

Please submit all articles and photographs to the editor at <u>newseditor@midlandacs.org</u>. 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 <u>newseditor@midlandacs.org</u>.