THE MIDLAND CHEMIST

A publication of the Midland Section of the American Chemical Society

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Contents

Chair Column – Winning Effort

Robbyn Prange, Chair, Midland Section ACS

At the Tokyo Olympic Games (summer 2021), Allyson Felix earned her eleventh Olympic medal to become America's most decorated track and field athlete in Olympic history. By my tabulation, Ms. Felix's medal-winning races took less than 17 minutes, but occurred over the course of five Olympic Games. That kind of sustained success requires far more commitment and effort than what this individual put forth in her podium-placing competitions. Ms. Felix trained 4-6 hours, almost daily, for 20 years. Over 30,000 hours of training were directly responsible for Ms. Felix's thirteen Olympic finals and eleven Olympic medals.

Like Allyson Felix, the Midland Section recently garnered eleven "medals." Our section's 2019 efforts, the 100th year of the Midland Section, resulted in eleven ChemLuminary Awards (see ChemLuminary article). And this year, we've been selected as a finalist for ten ChemLuminary awards (winners to be announced on October 21 – join our ChemLuminary watch party). As many likely do with Allyson Felix's eleven medals, it can be easy to focus on our Midland ACS awards, but let's take stock of what is behind the

recognition and awards our section earns. Our Section's eleven 2019 ChemLuminary awards were a result of roughly 500 volunteer opportunities spanning over 20,000 hours in that calendar year… volunteer hours committed to offer recurring and robust programs for members, students, educators, and the community; volunteer hours that enabled events similar to those highlighted in the Midland Section Spring & Summer 2021 video.

As fall gets underway, the section's members and volunteers are busy preparing events that align to the 30th Anniversary of the Mid-Michigan Tech Group (Diana Deese), National Chemist Week (Michelle Rivard), the Fall Scientific Meeting (Roozbeh Dargazany), H20Q Water Quality (Dale Lecaptain), Frankenstein Friday (Gina Malczewski) and much, much more. If you are not already involved, I encourage you to do so… and be a part of the Midland Section's winning efforts.

Midland Section ACS Board of Directors 2022 Election

Shuting Feng, Chair, Nominations and Elections Committee, Midland Section ACS

The annual election for the Midland Section ACS Board of Directors will be open starting **Monday, October 11 and will close at 11:59 pm EST on Monday, November 1**.

The positions that are open for election are:

- Chair- Elect *(3-year term)*
- Treasurer *(1-year term)*
- Secretary *(1-year term)*
- Nominations and Elections Chair *(1-year term)*
- Director - 3 positions *(3-year term)*

Below is a summary of the description and nominees 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 on the following January. They serve on the Board of Directors and the Executive Committee.

Candidate for Chair-Elect:

William Henry Hunter Woodward, Ph.D.

William Henry Hunter Woodward joined Dow Chemical Core R&D in 2011 and has contributed to several projects involving the electrical, thermal, and rheological characterization of polymers. Working in Dow Core R&D he has enhanced Dow's capabilities in Broadband Dielectric Spectroscopy and applied it in innovative ways for such industries as Oil, Gas, & Mining, Building Materials, Food & Pharmaceuticals, Electronic Materials, and Packaging & Specialty Plastics. Hunter has co-authored 12 patent applications, 30 journal articles, and recently edited a book for the ACS Symposium Series. Hunter believes strongly in the promotion of scientific exploration at all levels of education. He regularly mentors undergraduate students and delivers annual seminars to graduate students on the perspectives of

a career in industrial R&D. He received his B.S. in Chemistry from Dickinson College and his Ph.D. in Chemistry from Penn State. https://www.linkedin.com/in/hunterwoodward/

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

Margery Cortes-Clerget, Ph.D.

Margery Cortes-Clerget has joined the Hybrids, Polymers & Silanes Product Development team in February 2021. She supports initiatives aligned with the Sustainable Silicones portfolio, for Home and Personal Care applications. She is also involved in the Product Development Sustainability Community and the Sustainability R&D Network within Dow.

Margery has a doctorate degree in Organic Chemistry from the University of Paris 13 (France) where she developed phosphonopeptides for asymmetric synthesis. She developed a solid expertise in micellar catalysis during her postdoctoral research at the University of California, Santa Barbara, with a strong emphasis on peptide synthesis, biocatalysis and transition-metal catalysis. During her academic career, Margery authored 17 peer-reviewed journal articles and two book chapters.

She also has a M.Sc. in Organic & Medicinal Chemistry from University of Paris 11 and a Masters (Professional) in Cosmetic Formulation from ISIPCA. During her free time, you can find her at a Crossfit gym or travelling with her camera to shoot landscape photography.

Elena Montoto, Ph.D.

Elena Montoto is currently a Senior Research Specialist at Dow. Elena obtained her B.S. in Chemistry at Saint Joseph's University and her Ph.D. from the University of Illinois at Urbana-Champaign. Her work at UIUC focused on designing and electrochemically characterizing redox active macromolecules such as polymers and colloids for redox flow battery applications. At Dow, she works in Core R&D within the Formulation, Automation and Materials Science group focusing on high throughput research method development as well as formulation design. She's worked on projects in collaboration with multiple Dow businesses for a diverse set of application spaces including liquid silicone rubber, conformal coatings, sealants, and molded plastics. Elena has been an active member of local ACS chapters both in Illinois (East Central Illinois ACS) and now in Midland. In Illinois she held treasurer and secretary roles for the WCC and YCC groups and in Midland ACS she's been a committee member of the YCC since 2019.

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:

Krishnaja Duvvuri, Ph.D.

Senior Research Specialist
Core R&D, on Rotational Assignment Program (RAP)
The Dow Chemical Company

Krishnaja joined Dow on RAP in February 2020. During her first assignment in the Engineering & Process Science organization of Core R&D, Krishnaja worked on the process development and scale up routes for next generation polyolefin catalysts, in collaboration with P&SP business. She was also part of a multi-functional team developing novel silicone-polyurethane materials. During her second assignment at Product Development, Dow Performance Silicones, she is working at the intersection of synthesis and material characterization to develop novel siloxane resins for insulation applications. Outside her research activities, she is actively involved in the Young Researcher's Community (YRC), Midland within Dow, and is the seminar organizing chair for 2021.

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, 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".

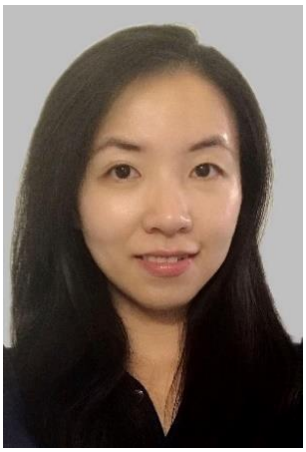
Samuel Moffat

I graduated with a B.S. in Chemical Engineering in 2016 from Brigham Young University. After a post-graduation trip to the Philippines with my wife, I started work at Exxon Mobil. While there, I ran two different technologies at the plant level: Synthesis Gas production from natural gas, and metallocene-catalyzed polymerization of poly-alpha-olefins. After 2 years there I moved to Midland Methocel (Dow at the time, then DuPont, now IFF), where I run the "innovation" train and have since added the low viscosity train as well.

Nominations and Elections Chair: The Nominations and Elections Committee is charged with identifying qualified candidates for leadership positions in the Section.

Candidates for N&E Committee Chair

Shuting Feng, Ph.D.



Education:
B.S. in Chemical Engineering with Distinction, Minor in Chemistry, University of Delaware, 2014
M.S. in Chemical Engineering Practice, MIT, 2016
Ph.D. in Chemical Engineering, MIT, 2019

Professional Experience:
Senior TS&D Specialist, Dow, July 2019 – present

- R&D Research Assignments Program (RAP), July 2019 – August 2021
- Automotive & Elastomers TS&D, DPS, Sept 2021 – present

ACS and SWE Activities
Chair, Nominations and Elections Committee, Midland ACS, 2021
Member, Diversity and Inclusion Committee, Midland ACS, 2019 – present
Member, Nominations Committee, Mid-Michigan SWE, 2019 – present

Biography: Shuting Feng was born and raised in Guangxi, China, and she came to the U.S. in 2010 for undergraduate studies at the University of Delaware and earned a B.S. in Chemical Engineering with Distinction and a minor in Chemistry in 2014. In 2014, she began her graduate studies at Massachusetts Institute of Technology where she worked on the design and characterizations of new electrolyte materials for rechargeable lithium-oxygen batteries. Shuting received her M.S. in Chemical Engineering Practice in 2016 and her Ph.D. in Chemical Engineering in 2019.

Shuting started at Dow in July 2019 on the Research Assignments Program. She has worked on the formulation and characterizations of lighting-grade silicone elastomers, conducted proof-of-concept projects in the areas of associative thickening in cementitious mortars and PE barrier films, and investigated the thermal degradation of waterborne silicone binders for heat insulative coatings.

Shuting enjoys serving in the Nominations and Elections Committee as well as the Diversity and Inclusion Committee in Midland ACS, and the Nominations Committee in the Mid-Michigan Society of Women Engineers (SWE). In her spare time, Shuting enjoys reading, spending time with her husband and friends, listening to musicals, and hiking.

Sweden Yocom

Sweden has over 15 years of professional experience in the Chemical Industry. She holds a Bachelor of Science in Chemical Engineering from Texas Tech University and an MBA from Central Michigan University. She is a core team member of the DuPont Innovation Talent Strategy & DE&I team, leading the Corporate External Awards and Recognition Strategy Initiative. She currently serves on the steering committee of the DuPont Asian Network as well as the Thrive@DuPont grassroot efforts to advances fellow team members' leadership skills, dynamic capabilities, and career opportunities through mentoring, networking, and learning by participating and sharing.

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 the Executive Committee, which may require attendance at additional meetings.

Candidates for Director:

Hyder Aliyar, Ph.D.

Hyder works as a Research Investigator in the Medical Silicones group at DuPont in Midland. He focuses to investigate and evaluate polymer technologies towards product development primarily on drug delivery via skin. He has a PhD in Polymer Science from University of Madras, India. He has gained research and product development experience on polymeric materials for medical or pharmaceutical applications via working in research institutes, universities and industries both in Japan and US over the last 20 years. Beyond research, he likes teaching and mentoring, especially communicating technical material to non-technical audience which he improved with the experience from his association with Toastmaster International for about 10 years. He was at Dow Corning and subsequently at Dow prior to DuPont. He has been a member of ACS since 2003.

Michael Coote, Ph.D.

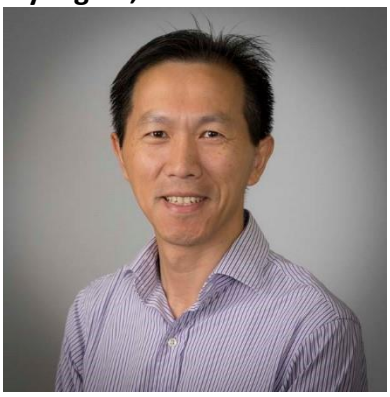
Michael Coote is originally from Flint, Michigan where he served in public safety as a police officer and paramedic for 25 years. Michael earned his Bachelor of Science degree as a biochemistry major at the University of Michigan-Flint in 2004. In 2006, Michael earned a Master of Science degree in chemistry at Oakland University in Rochester, MI under Dr. Amanda Bryant-Friedrich ("Spectroscopic and Physical Properties of the Malachite Green-Calf Thymus DNA Complex and Synthesis of a Malachite Green Analog"). In 2012, Michael retired from public safety and in 2017 earned a Doctor of Philosophy in biomedical science at Oakland University under Dr. Arthur Bull ("Activation of Peroxisome Proliferator-Activated Receptor Gamma by the Glutathione and Synthetic Glucuronide Conjugates of 13-Oxooctadecadienoic Acid).

Michael is currently an Assistant Professor of chemistry employed at Saginaw Valley State University since 2015, has been an ACS member since 2004 and has served in the role of Director of the Midland ACS section since November 2019. Michael moved to the Midland area in 2019 with his wife, Jennifer, and their two young daughters.

Leanna Foster, Ph.D.

Leanna Foster is a member of the DuPont T&I Healthcare Silicones Team in Midland, MI. Her primary focus has been leading root cause investigations for manufacturing and customer application challenges, in addition to interfacing with direct customers to guide selection and support for healthcare silicone materials. Recently, she's expanded her roles to include new talent acquisition, where her goal is to enhance the new hire experience through mentoring and network development. She has a PhD in Macromolecular Science and Engineering from the University of Michigan, where she was involved with the ACS POLY/PMSE Student Chapter.

Yiyong He, Ph.D.



Yiyong He is currently a senior Principal Investigator in Core Analytical Sciences and the lead of global NMR technology of DuPont. Prior to joining DuPont in 2018, Yiyong worked in the core R&D of Dow Chemical for 11 years. He has a broad background in polymer science and technical expertise in Analytical. He earned his BS (1997) and MS (2000) in Materials Science from the University of Science and Technology of China. Then he moved to US and obtained his PhD in Chemistry from the University of Wisconsin-Madison in 2005. Yiyong has 38 journal publications, is co-inventor of 19 granted and pending patent applications. He started to be a member of ACS since 2003.

Mark E. Jones, Ph.D.

A love of science and a passion for chemistry propelled a farm kid from Virginia to a satisfying industrial career. Mark Jones retired in March 2021 as Executive External Strategy and Communications Fellow for Dow Chemical, having spent a decade on the CTO's staff. He retired with responsibility, among other things, for next generation sustainability goals associated with innovation at Dow.

Mark is a frequent contributor to the American Chemical Society, as previous chair of the Midland Local Section, writing for Industry Matters, hosting webinars, currently serving on the Communications and Public Relations and National Historic Chemical Landmarks committees, and former Corporation Associates member. In 2017, he was named a Fellow of the American Chemical Society, recognized for his commitment to communicating chemistry. Mark current serves on and is past co-chair of the National Academy's Chemical Sciences Roundtable. He is a co-author on the recently released National Research Council reports on ARPA-E and "Sustainable Development of Algal Biofuels in the United States". Mark also volunteered his services in creating videos for the American Center for Life Cycle Assessment in 2020. Mark was a member of the Board of Directors of the Biotechnology Innovation Organization (BIO) Industrial and Environmental Section, serving on Communications, Regulatory and other committees, and was an active member of the American Chemistry Council's Biobased Chemistry Network. The White House's Advanced Manufacturing Partnership was a focus from 2013-15, looking both at technology options and improving scale-up of new technologies. He participated in a number of World Economic Forum events, leading discussions around energy and bioproducts. He chaired DOE review panels for the Office of the Biomass Program from 2007-2011 and continues to serve as a reviewer for DOE and other organizations. He supports awards that recognized scientific advancement. He currently serves on the Edison Awards Steering Committee, served on the R&D 100 Steering Committee, and served or serves as a judge for BIO's Rosalind Franklin Award for Leadership in Industrial Biotechnology and Agriculture, ACS's Heroes of Chemistry, the SCI's Moore medal, the BIG Innovation Award, the R&D 100 Awards and a collection of Dow internal awards.

Mark is a frequent keynote speaker. His talks include multiple times at Chemicals America conferences, American Chemical Society national, regional and local meetings, the 2017 SATA conference, AIChE national and local meetings, multiple R&D 100 conferences, American Association for the Advancement of Science National Meetings, the Edison Universe Meet the Innovators Forum, R&D 100 Conference, REFOCUS, American Center for Life-cycle Assessment, Sustainable Manufacturer, Plastics Recycling, National Academy events, and many universities.

Mark joined Dow in 1990 following a graduate career that had very little to do with his ultimate career path. He followed a degree from Randolph-Macon College with a Ph.D. from the University of Colorado-Boulder where he studied gas-phase ion molecule chemistry - not an area of great industrial interest. A post-doc at the Cooperative Institute for Research in Environmental Science preceded coming to Dow. His early Dow career was spent in Catalysis, in what is now Core R&D. Mark discovered a family of catalysts useful for conversion of ethane directly to vinyl chloride, and other catalysts for both chlorocarbon chemistry and alkane activation. Moves to Performance Plastics, Hydrocarbons, Chemicals, Energy and Licensing R&D, Ventures and New Business Development and the Energy Storage Devices followed. Mark co-directed the Renewable Chemistries Expertise Center (RCEC) for over a decade. Mark touched many areas of technology, including experience in chemical processing, the processing of inorganic materials, fuel cell development for both stationary and portable power applications, battery materials, cellulosic conversion, polymer recycling, and broad technology exploration.

Michael Servinski

My name is Michael Servinski and I am currently a science teacher at Midland High School, located in Midland, Michigan. I have been teaching for 26 years and my experience over this time encompasses three socially and economically different schools. I have been an educator at Elisabeth Ann (EA) Johnson High School in Mt. Morris, MI (1 year, 1996-1997), Saginaw High School, Saginaw, MI (20 years, 1997-2017) and Midland High School (5 years, 2017-present).

My collegiate education was completed at Saginaw Valley State University in 1996. While studying there I earned a Bachelor of Science degree, majoring in Biology and minoring in Natural Science. I also earned a Master of Education degree in school administration in 2000.

During my teaching career I have had the opportunity to teach many different science classes for high school students. Over the years I have instructed Biology, Environmental Science, Human Biology (Anatomy/Physiology), Earth Science, Geoscience (Earth with some Environmental), Physical Science and Physics. The current school year, 2021-2022, I am teaching Biology and Geoscience. I have also been involved in and integrated Diversity, Social Emotional Learning and Restorative Practices training into my classroom.

Introducing students to 'hands on' science and STEM opportunities has always been a focus in my classroom. I have worked with my students on many projects including greenhouse cultivation vegetable seedlings, small scale hydroponics, rearing of Salmon from eyed eggs through the Salmon in the Classroom Project with the Michigan DNR (Department of Natural Resources) and working with Midland High School Chief Science Officers as their faculty advisor.

Eleven ChemLuminary Awards Won by Midland Section for 2019

Wendell L. Dilling, Midland Section Historian

The eleven ChemLuminary Awards won by the Midland Section for 2019 were shown recently in the Chemistry Department at Central Michigan University. The awards shown were for (front row left to right) (1) Local Section Partnership Award/Marinda Li Wu Award – "Public Museum Exhibition: Science Paints Our World, Chemistry and Arts", (2) Chemists with Disabilities Inclusion Award - "Creation of a tactile 3D printed periodic table in Braille & ASL", (3) Outstanding Local Section Programming Related to the Promotion of Ethics in Chemistry – "100 yr Exhibit, with Unintended Consequences Display", (4) Outstanding Continuing Public Relations Program of a Local Section - "Public Relations for Midland Section 2019 Activities - Midland Chemist, Section Website, Social Media, Marketing Partners, News Outlets, etc", (5) Best Event or Activity Organized by, or Benefiting, the Applied Chemical Technology Professional Community – "Mid-Michigan Technologist Group at CERM 2019", (6) Outstanding Leadership Development Program – "Women Chemists Committee, Skills Beyond the Bench", (back row left to right) (7) Most Innovative New Activity or Program – "H2O Q - Citizen Science Water Quality Experiment", (8) MAC Industry Engagement & Outreach – "Technologist in Industry Symposium at CERM", (9) Best New Senior Chemists Activity within a Local Section – "Silver Circle Midland Section Centennial Celebration", (10) Fostering Interactions between Local Sections and Student Chapters – "Events and partnerships with Women Chemists Committee, CERM2019, Mid-Michigan Technologist Group, CMU/Midland Section Joint Meeting", (11) Outstanding Performance by a Local Section (Medium Size).

Photograph by Patty Esch, Central Michigan University Chemistry Department.

MSU St. Andrews Family Astronomy Night via Zoom – October 6
Clare Light, Project/Event Coordinator, MSU St. Andrews

MSU St. Andrews
MICHIGAN STATE UNIVERSITY

Family Astronomy Night, Wednesday, October 6, 2021 at 7 PM EST –

VIRTUAL EVENT
October 6 @ 7:00 pm - 8:30 pm EDT
FREE

Deep-Sky Objects: Marvels Of The Night

Did you know that there are many objects you can see in the night sky that are neither stars nor planets? Were you aware that many clusters or clouds of glowing deep-space gas can be seen with your unaided eye, and dozens more are visible with simple binoculars? Have you heard that some deep-sky objects are so large and bright that we can see them even though they are thousands of light-years away, up to halfway across the galaxy? And that there are even *other galaxies* that we can see with our unaided eye? And what are the planets and constellations doing in our skies in October? Join us by Zoom to learn more!

Please register to receive the Zoom login. You may register up to the presentation start time or even during the meeting to join us.

https://msu.zoom.us/webinar/register/WN_9PCuUNGeQnmp6M1Lt_F4RQ

We will describe some of the basic types of deep-sky objects: open clusters, globular clusters, emission nebulae, planetary nebulae, and galaxies. We will also describe how each of them is formed, how they create the light that we see, and how long they typically last. And, we will show you how to find some of them in the sky!

No presentation on the beauties of the deep sky is complete without mentioning light pollution, so we will describe that and show how it affects our abilities to see such wonderful objects.

Finally, for our technology update, the recent launch of Landsat 9 prompts us to highlight the Landsat program, its long and storied history, and how it has been helping scientists, governments, and businesses worldwide for almost 50 years—and all for free!

And, as always, we will show you how to find the planets and other cool things that are in the sky this month and into early November. Did you know that right now is probably the easiest chance to find Capricorn for the next many years? Have you noticed the Summer Triangle high in the sky? Have you learned how to use it to find other seasonal stars and constellations, like Cygnus the swan, Sagitta the arrow, and Delphinus the dolphin? Can you recognize the bright "W" of Cassiopeia the queen? Are you aware that Pegasus, now rising in the east, can be used as a pointer to help you find many other constellations? Plus, Jupiter, Saturn, and Venus are all visible, and Mercury makes a fine (but brief) appearance before dawn. We will help you find all of these things for yourself.

Image: https://commons.wikimedia.org/wiki/File:Andromeda_Galaxy_560mm_FL.jpg

Please join our mailing list to receive notices about upcoming Astronomy Night presentations and other events at MSU St. Andrews.

Michigan State University is committed to providing equal opportunity for participation in all programs, services, and activities. Accommodation for persons with disabilities may be requested by contacting (517) 432-4499 by Wednesday, September 29, 2021. Requests received after this date will be honored whenever possible.

Programming is made possible through the support of several local organizations: the Herbert H. and Grace A. Dow Foundation, the Rollin M. Gerstacker Foundation, the Charles J. Strosacker Foundation, and the Dow Chemical Company Foundation.

Mid-Michigan Technician Group 30th Anniversary Celebration – October 7

Join us for our Mid-Michigan Technician Group 30th Anniversary Celebration

"The Vital Role of Technologists in Chemistry, the Related Sciences, and the Community"

The Mid-Michigan Technician Group (MMTG) was formed in 1991 and is a professional organization for technicians and technologists working in chemistry related industries, and for students actively pursuing a degree in the field of chemistry. For the past 30 years, MMTG has focused on promoting personal and career related growth throughout the Technician community. Current and past members have participated in networking, skill-building, educational programs, virtual and hands-on activities, Lunch-and-Learn seminars, numerous public outreach events, and many other career-enhancing opportunities.

Join us for an evening of networking, good food, good company, and the recognition and celebration of our profession. The cost is free for technicians; guests are $15/prepaid if paid by Oct. 4th, and $20 at the door. Dinner includes plated chicken or pasta primavera dinner, drink ticket, and keepsake. This event is open to anyone in chemistry and the related sciences in the ACS - Midland Section region (Gratiot, Isabella, Midland, Bay, and Saginaw Counties) and is sponsored by MMTG.

Mid-Michigan Technician Group 30th Anniversary Celebration Dinner

October 7, 2021

5:30 open bar and social time

6 – 8:30 dinner and celebratory remarks

The Great Hall, 5121 Bay City Road, Midland, Michigan

Keynote Speaker: A. Sreeram (SVP/Chief Technology Officer-Dow) with additional remarks by Andre Argenton, Mukund Parthasarathy, Jim Helwick, and David Parrillo (esteemed members of the Dow R&D Leadership Team)

Reservations must be received by October 4th

Register at: https://www.signupgenius.com/go/70A054BADAA2EA20-mmtg10

Art and Science from Plant Pigments – October 13

Gina Malczewski, Director and Outreach Committee, Midland Section ACS

The Midland Section
of the American Chemical Society
and Creative 360
invite you to
COLORS THAT COMMUNICATE:
Art and Science from Plant Pigments
6:30-7:30 pm October 13, 2021
FREE
Please register at 989 837-1885
or at https://becreative360.org/classes/

Sprouts & STEMs Garden Program

Beauty in the plant world derives from colors, shapes and smells. Where do those colors come from and what benefits do they have for the plant? Join Dr. Gina Malczewski to learn about plant pigments—some of which we will extract to study their reactions with other compounds. Combining art and science, we will use these reactions to create some interesting effects on two-dimensional surfaces!

ACS Chemistry for Life® American Chemical Society

Creative 360 Stage, Studios & Gallery

ChemLuminary Awards Watch Party – October 21

Mark Jones and Robbyn Prange, Midland Section ACS

23rd Annual ChemLuminary Awards

The Midland Local Section will again host a watch party for the for the 23rd Annual ChemLuminary Awards Ceremony, held virtually on Thursday, October 21, 4:00 PM. Keep an eye on the website (www.midlandacs.org) for how to connect. The watch party will be an all-virtual event. The Local Section party will allow us to talk and celebrate while watching the National event.

We are finalists for eleven 2021 ChemLuminary Awards for activities completed in 2020, recently adding Outstanding Regional Meeting, recognizing the 2019 Central Regional Meeting held in Midland. See the August *Midland Chemist* for the remainder of the nominations list.

Joining the local watch party is a fun event and open to all.

Equity in STEM Symposium, October 22, and 2021 Fall Scientific Meeting, October 23
Margaret Hwang, Fall Scientific Meeting Committee, Midland Section ACS

Fall Scientific Meeting Invited Speakers:

- Babak Borhan (Keynote), MSU Dept. of Chemistry
- Nirala Singh, UofM Dept. of Chemical Engineering
- Bingbing Li, CMU Dept. of Chemistry
- Jake Steinbrecher, Dow Automotive & Elastomers

Fall Scientific Meeting Registration:
To register for the 2021 Fall Scientific Meeting, go to https://sites.google.com/view/acs-2021-fsm/home.

Fall Scientific Meeting Abstract Submissions:
The deadline for abstract submissions for oral and poster presentations has been extended to Friday, October 1. Please submit your abstracts to acsfallsubmits@gmail.com. For more information, please see ACS 2021 FSM (google.com).

Equity in STEM Symposium Information:
The deadline for abstract submissions for poster presentations has been extended to Friday, October 1. For more information, please see ACS 2021 FSM (google.com). For any questions, please contact the STEM Symposium co-organizers, Bingbing Li at li3b@cmich.edu or Gina Malczewski at reginamalczewski@gmail.com.

The first 20 students to register as presenters will receive an Amazon gift card worth $25. Awards will be presented for the three best posters in the Fall Scientific Meeting, and for the single best poster in the Equity in STEM Symposium.

'Fixing' STEM Education – A First-ever FSM Pre-event

Gina Malczewski, Ph.D., and Bingbing Li, Ph.D.

Not all students have the capacity to learn and benefit from a STEM education—this may not be what we believe, but it is too often the message delivered by the way we teach and train our K-12 youth. Inherent biases in the structure of STEM experiences, the images we project to marginalized populations, and the way classroom instruction is targeted, as well as access to hands-on experiences, all impact what students consider possible for themselves in STEM fields. Gender, cultural, and race differences impact STEM education and hinder our advances in those fields, so we need to identify inequities and correct them.

Join us for a discussion of the biases in STEM education and what may work to correct them - - participate in the first-ever pre-Fall Scientific Meeting (virtual) Panel Discussion on the afternoon of **October 22**! More information on the meeting and the symposium (and the opportunity to sign up) is available at https://sites.google.com/view/acs-2021-fsm/home?authuser=0

The Panel participants are:

Speakers:

Barbara Schneider, Ph.D., John A. Hannah University Distinguished Professor, Department of Counseling, Educational Psychology and Special Education, Michigan State University

Sabrina Gomez, M.Ed., Founder & Principal Consultant, STEM Higher

Panelists:

Frimpomaa Ampaw, Ed.D., Professor, Department of Educational Leadership, Central Michigan University

Veronica Barone, Ph.D., Professor and Department Chairperson, Department of Physics, Central Michigan University

Rich Van Tol, Supervisor, School-Home-Community Partnerships (Bay-Arenac ISD), Great Start & Starting Strong Supervisor (Bay-Arenac ISD), OST STEM Network Leader (Great Lakes Bay Regional STEM Alliance)

"Fast or Slow" – National Chemistry Week is Ready to Go! – NCW October Events!

Gina Malczewski, Director and Outreach Committee, Midland Section ACS

Building on our success addressing the challenges of 2020, Midland ACS will be expanding activities for National Chemistry Week 2021 (which will actually occur throughout October, and perhaps beyond).

The **K-12 poster contest** is underway, with cash prizes and national recognition on the line; details can be found in the flyer in this newsletter. Contact Michelle Rivard if you have questions: michelle.rivard@dow.com

A new digital edition of "Celebrating Chemistry" with activities, puzzles, and games around the theme "Fast or Slow…Chemistry Makes it Go!" is available for free at:
https://www.acs.org/content/acs/en/education/outreach/celebrating-chemistry-editions.html.
This pamphlet is targeted at grades 4-6, but information and events appropriate for other age groups are also available from National ACS.

Locally, we are planning community projects for the "Chemists Catalyze Change" aspect of this celebration, including **volunteer opportunities at the Midland Recycling Center** in the month of October (stay tuned for additional information in a flyer on the website, and sign-up opportunities on the Section's homepage). Families are welcome! Additional projects may also be planned.

On **October 27**, there will be a **"Pumpkin Party" at Creative 360**, open to the public (please register!) for pumpkin decorating, spooky stories, and squash-associated science—**6:30 to 8:00 pm and FREE**! This will be the Season Finale for the "Sprouts and STEMs" Garden series, and will also address some NCW-themed concepts.

"Frankenstein Friday" will be 3:30-6:30 pm on October 29th at Rowe Hall on the CMU campus—free and full of monster-, glow-, and electricity-related science as well as history, art, and literature-related fun. Registration is required due to COVID concerns—protective masks must be worn, and costumes are encouraged!

You get another chance to show off your costumes at **MCFTA's "Halloween Bash"** (a ticketed event) on **October 30, outside, 10 am-2 pm**. Contact the Midland Center for the Arts for more details, and to register. Midland ACS will be offering NCW-related activities there in a walk-by interactive format.

We hope you will participate in one of these NCW events and take advantage of all the great programming available for students, adults, and families!

Pumpkin Party at Creative 360 – October 27

Gina Malczewski, Director and Outreach Committee, Midland Section ACS

Creative 360, 1517 Bayliss St.
6:30-8:00pm Oct 27, 2021
REGISTER by calling
989 837-1885 or visiting
https://becreative360.org/classes/
Pumpkins provided

ACS Chemistry for Life®
American Chemical Society

Creative 360
Stage, Studios & Gallery

The Midland Section
of the American Chemical Society
and Creative 360 present the:

Sprouts & STEMs Garden Program

SEASON FINALE:
FREE PUMPKIN PARTY!

Join us to learn more about our favorite Halloween squash! Decorate your own, participate in Pumpkin Science, and listen to some spooky stories.

NOTE: Some activities may be outside if weather permits.

Call for Abstracts for ACS Spring 2022 National Meeting

ACS Meetings & Expositions

Editor's note: The information contained in this article is reprinted, in part, from an e-mail message sent from the ACS Meetings & Expositions team to all ACS members, dated August 25, 2021.

Abstracts for oral and poster presentations for the ACS Spring 2022 National Meeting will be accepted until Monday, October 11. The theme, *Bonding Through Chemistry*, will be at the core of the programming.

Sessions for the hybrid meeting (in-person and virtual) will be held in San Diego, CA, and virtually, March 20 - 24, 2022. Those who wish to submit an abstract will have the option of selecting a virtual or an in-person abstract submission.

While the ACS Spring 2022 National Meeting & Exposition is planned as a hybrid event, we continue to carefully monitor the situation relative to the COVID-19 pandemic and its potential impacts on the meeting. ACS will provide additional updates about the meeting as they become available.

Please see Call for Abstracts - American Chemical Society (acs.org) to find a list of the programming divisions and planned symposia open for submissions.

Midland Section ACS Scholarship Fund Challenge

Gina Malczewski, Director and Scholarship Committee, Midland Section ACS

The Midland Section of the 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.

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 Section has been to raise the base amount to $100,000 to serve more students.

Dr. Wendell and Marcia Dilling (photo at right), both trained chemists and stalwart supporters of our Local Section, are now prepared to help us reach that goal by donating up to $18,000 as part of a Challenge Grant to the Scholarship Fund, which currently stands at $64,953.22. **They will match 1:1 any new contributions to the fund at the Midland Area Community Foundation over the next couple of years ($18,000 X 2 + $64,953.22 = $100,953.22).**

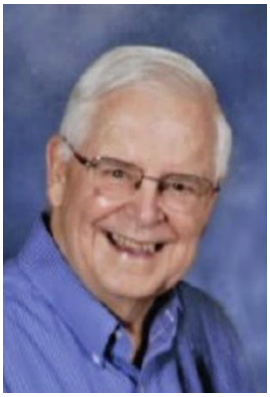
Please consider contributing to this worthwhile cause. **Your donations will help shape the future of chemistry!** If you have any questions about contributing to the Midland ACS Scholarship Fund, please call the Midland Area Community Foundation at 989-839-9661. Thank you.

An online donation form can be found through the following link:
Midland Section American Chemical Society Endowed Scholarship Fund #399

In Memoriam – Wilson F. Gum, Jr.

Steve Keinath, Co-Editor, The Midland Chemist

Editor's note: The obituary notice for Wilson Gum as it appears here is reprinted, in part, from the Saturday-Sunday (Weekend), September 18-19, 2021, issue of the *Midland Daily News*. Wilson joined the American Chemical Society in 1961 and at the time of his passing he was a 60-year member of the ACS. Wilson served two, three-year terms as a Director of the Midland Section ACS, in 1972-1974 and again in 1981-1983. He also served as the Program Committee Chair for the 1970 Midland Section ACS Fall Scientific Meeting. While at the Dow Chemical Company, Wilson worked in the Organic Chemicals Department R&D group.



Wilson F. Gum, Jr., Ph.D., 82, of Midland, passed away on September 7, 2021, peacefully at home surrounded by family. He was born to the late Wilson and Doris (Hess) Gum, Sr. on July 14, 1939, in Pen Argyl, PA. He married Barbara J. Heimer on December 26, 1959, and they shared 61 blessed years together.

Wilson graduated from high school in Pen Argyl, PA in 1957, Muhlenberg College, Allentown, PA with a B.S. in Chemistry in 1961, and the University of Pennsylvania, PA with a Ph.D. in Organic Chemistry in 1965. While at Muhlenberg, Wilson served on the Board of Trustees for six years prior to being elected an Emeritus Trustee and was a founding member of RECBS. He was also a lifetime member of the ACS.

Wilson joined Dow Chemical in 1965 and worked for the company until he retired in 1993. In 1994 he joined Velsicol Chemical Corporation retiring in 2001. Wilson was active in all of the churches that he attended. He was also president of two Boy Scout Councils, and as a lifelong supporter and leader, Wilson achieved many scouting honors including the Distinguished Eagle Scout Award.

Wilson is survived by his wife, Barbara; children Wilson Gum, III, of Midland, Charles (Carrie) Gum of Midland, Andrew (Florence) Gum of France, and Tamara Gum of Houston, TX; grandchildren Kristin (Craig) Miller, Michelle Gum, Shannon Gum, Justin (Kara) Gum, Tyler Atkins, Alyssa (James) Oakley, Logan Gum, and Alek Gum; and great grandchildren, Aubrey, Peyton, and Emma. He is also survived by his siblings, Dale (Shirley) Gum and Glenwood (Jill) Gum, Ph.D.

A memorial visitation took place on Thursday, September 23, 2021, from 5:00-7:00 PM at Smith-Miner Funeral Home, in Midland. Those planning an expression of sympathy are asked to consider Muhlenberg College, in Allentown, PA, Trinity Lutheran Church, in Midland, MI, or St. Peter's Evangelical Lutheran Church, in Pen Argyl, PA.

Smith-Miner Funeral Home (2700 West Wackerly Street, Midland, MI 48640, Phone 989-832-8844) was honored to serve the Gum family. To share a special memory, please visit www.smith-miner.com.

In Past Issues of *The Midland Chemist*

Wendell L. Dilling, Director and Historian, Midland Section ACS

From these volumes . . .

50 Years Ago, *The Midland Chemist* **1971**, *8*, No. 7, 12.

In *Chairman's Column* by Elmer Wymore: "In an attempt to provide an opportunity for you, our members, to meet and discuss ideas, programs and needs of the ACS, one or more of the local officers will be present from 9:00-10:30 a.m. at the Fall Scientific Meeting in Room T. One or more of our councilors will also be available. We are fortunate in that our councilors to the National ACS hold several important posts, so an easy path is available to influence the National ACS as well as the local section."

40 Years Ago, *The Midland Chemist* **1981**, *18*, No. 8, 2.

In *Section to Lose Councilor Slot*: "The Midland Section will lose one of its three councilor positions as a result of a recent ACS decision.
At its meeting in New York in August, the ACS Council Policy Committee set the divisor for determining the number of 1982 local section councilors at 370. This number, divided into the number of members in the local section on July 1, 1981, determines the number of councilors the section is entitled to in 1982. Based on the Midland Section's membership of 884, the section will be entitled to only two councilors and two alternate councilors."

30 Years Ago, *The Midland Chemist* **1991**, *28*, No. 7, 3.

In *From the Chair* -- by Peter Dreyfuss, Chair ACS Midland Section: "The Midland Section is an award winning section, and proud of it! What award, you say?? Oh, come now, surely you know by now that we won this year's National ACS Outstanding Performance award in the medium large section category. This issue of the Midland Chemist highlights several of our award winning programs, and offers an opportunity to overcome one of our greatest weaknesses."

20 Years Ago, *The Midland Chemist* **2001**, *38*, No. 7, 12.

In *Thanks to Active Section Members!* by Wendell Dilling: "On the evening of August 28 at the ACS National Meeting in Chicago, I was privileged to accept, as the representative of the Midland Section, the Outstanding Performance by Local Section Medium-Large Size Category Award for programs and activities in 2000. (Actually it was a tie between the Midland and the Rochester Sections, and each section received one of the awards.)"

10 Years Ago, *The Midland Chemist* **2011**, *48*, No. 5, 2.

In *Ann Duffy of 2010 Olympics to Speak at 2011 FSM* by Melissa Strait, 2011 FSM Chair: "The 2011 Fall Scientific Meeting will be held at Alma College on Saturday, October 22, 2011. Appropriate to our theme of Think Globally, Act Locally, we will be hosting Ann Duffy, Corporate Sustainability Officer, for the Vancouver 2010 Winter Olympics.
Ann will deliver the keynote address, Ann Duffy-Raising our Game, discussing the creation of the first integrated approach to address environmental, social and economic aspirations in new ways (www.AnnDuffyGroup.com)."

Upcoming Dates, Events, and Other Updates

- October 1 – **Deadline for abstract submissions for virtual poster presentations for the October 22 *Equity in STEM Symposium*, and for oral and poster presentations for the October 23 Virtual Fall Scientific Meeting.** For more information, please see ACS 2021 FSM (google.com).
- October 4 (7:00 – 8:00 PM) – Hybrid Midland Section ACS Board meeting, Primrose Retirement Community Clubhouse, 5600 Waldo Avenue, Midland (in person), and via a WebEx conference call connection at Cisco Webex Meeting - October 2021, phone number: 989-633-1166.
- October 6 (7:00 PM) – MSU St. Andrews Family Astronomy Night program via Zoom. Presentation topic: *Deep Sky Objects*. For more information, please see Family Astronomy Night – MSU St. Andrews.

- October 7 (5:30 – 8:30 PM) – Mid-Michigan Technician Group 30th Anniversary Celebration Dinner, The Great Hall, 5121 Bay City Road, Midland. Cost: Free for technicians; $15.00 for guests if prepaid by October 4, $20 at the door. For more information, see the flyer on page 13 of this newsletter.
- October 11 – **Deadline for abstract submissions for the ACS Spring 2022 National Meeting**. This meeting is being planned as an in-person and virtual hybrid meeting. Meeting theme: *Bonding Through Chemistry*. For more information, please see Call for Abstracts - American Chemical Society (acs.org).
- October 13 (6:30 – 7:30 PM) – Sprouts and Stems Garden Program, *Colors that Communicate: Art and Science from Plant Pigments*. Creative 360, 1517 Bayliss St., Midland. FREE; please register in advance at 989-837-1885 or https://becreative360.org/classes. See the flyer on page 14 of this newsletter for details.
- October 21 (4:00 PM) – Watch Party for the for the 23rd Annual ChemLuminary Awards Ceremony, held virtually on Thursday, October 21, 4:00 PM. Keep an eye on the Midland Local Section website (www.midlandacs.org) for details on how to connect and watch.
- October 22 (12:30 – 5:00 PM) – *Equity in STEM Symposium*, a Midland Section ACS sponsored virtual symposium poster session event held the afternoon before and in conjunction with the 2021 Fall Scientific Meeting. **The deadline for abstract submissions for poster presentations has been extended to Friday, October 1**. For more information, please see ACS 2021 FSM (google.com). For any questions, please contact the STEM symposium co-organizers, Gina Malczewski at reginamalczewski@gmail.com or Bingbing Li at li3b@cmich.edu.
- October 23 (8:00 AM – 5:00 PM) – 2021 Midland Section ACS Virtual Fall Scientific Meeting. Meeting theme: *Fast or Slow … Chemistry Makes it Go!* See the meeting flyer in this newsletter for more information. Register at https://sites.google.com/view/acs-2021-fsm/home. **The deadline for abstract submissions for oral and poster presentations has been extended to Friday, October 1.** Please submit your abstracts to acsfallsubmits@gmail.com. For more information, see ACS 2021 FSM (google.com).
- October 27 (6:30 – 8:00 PM) – "Pumpkin Party" at Creative 360, 1517 Bayliss St., Midland. FREE and open to the public. Please register in advance at 989-837-1885 or https://becreative360.org/classes. See flyer on page 18 of this newsletter.
- October 29 (3:30 – 6:30 PM) – "Frankenstein Friday" at Rowe Hall on the CMU campus. FREE event. Registration required. For questions, contact reginamalczewski@gmail.com.
- October 30 (10:00 AM – 2:00 PM) – MCFTA Halloween Bash at Midland Center for the Arts, 1801 W. Saint Andrews Road, Midland. Ticket required. Contact the MCFTA for information.
- November 1 (7:00 – 8:00 PM) – Hybrid Midland Section ACS Board meeting, Primrose Retirement Community Clubhouse, 5600 Waldo Avenue, Midland (in person), and via a WebEx conference call connection at Cisco Webex Meeting - November 2021, phone number: 989-633-1166.
- November 1 (11:59 PM EST) – **Deadline for voting in election of 2022 Midland Section ACS Officers and Board.** Voting will start October 11, 2021 and will close November 1, 2021. Watch your email for a ballot.
- December 6 (7:00 – 8:00 PM) – Hybrid Midland Section ACS Board meeting, Primrose Retirement Community Clubhouse, 5600 Waldo Avenue, Midland (in person), and via a WebEx conference call connection at Cisco Webex Meeting - December 2021, phone number: 989-633-1166.
- January 3 (tentative date) (7:00 – 8:00 PM) – Hybrid Midland Section ACS Board meeting, Primrose Retirement Community Clubhouse, 5600 Waldo Avenue, Midland (in person), and via a WebEx conference call connection at Cisco Webex Meeting - December 2021, phone number: 989-633-1166.
- February 7 (tentative date) (7:00 – 8:00 PM) – Hybrid Midland Section ACS Board meeting, Primrose Retirement Community Clubhouse, 5600 Waldo Avenue, Midland (in person), and via a WebEx conference call connection at Cisco Webex Meeting - December 2021, phone number: 989-633-1166.
- March 7 (tentative date) (7:00 – 8:00 PM) – Hybrid Midland Section ACS Board meeting, Primrose Retirement Community Clubhouse, 5600 Waldo Avenue, Midland (in person), and via a WebEx conference call connection at Cisco Webex Meeting - December 2021, phone number: 989-633-1166.

- March 20-24, 2022 – ACS Spring 2022 National Meeting and Exposition, San Diego, CA. This meeting is being planned as an in-person and virtual hybrid meeting. Meeting theme: *Bonding Through Chemistry*. For more information, please see Call for Abstracts - American Chemical Society (acs.org).
- April 4 (tentative date) (7:00 – 8:00 PM) – Hybrid Midland Section ACS Board meeting, Primrose Retirement Community Clubhouse, 5600 Waldo Avenue, Midland (in person), and via a WebEx conference call connection at Cisco Webex Meeting - December 2021, phone number: 989-633-1166.

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