

THE MIDLAND CHEMIST

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From the Chair

Be a Chemistry Ambassador!

Do you know the difference between perception and reality as it applies to the word "chemical"? How about the word "organic"? How many times have you heard advertising about a product that "contains only organic materials and no chemicals"? Dr. Mary Kirchhoff, a keynote speaker for our upcoming Fall Scientific Meeting, recounted a story recently of a very successful dry cleaning establishment in her neighborhood that advertises, "We only use organic solvents!" You know you are a chemist if you find these slogans amusing.

I attended the August National ACS meeting held in Washington, DC. In the exposition area I discovered the ACS Ambassador for Chemistry booth, which is their attempt to narrow the gap between the sometimes negative perception of "chemicals" and the reality of "chemicals." In the past several years, I have often wondered what I can do to help. Are you also interested in promoting a positive realistic image of chemistry? If the answer is YES, I would suggest that you equip yourself with the suggestions

found at the ACS web site www.acs.org/chemistryambassadors. Allow me to quote from this excellent ACS web site (used by permission): "As chemists, we help solve some of the world's biggest challenges and improve people's lives through the transforming power of chemistry. By becoming a Chemistry Ambassador, you can help educate people about the importance of chemists and chemistry, while taking part in community activities that are engaging and fulfilling for you on your own time schedule."

Finally, let us ponder the word "educate," which literally means to draw out. As an *educated* Ambassador for Chemistry, you will assist others to *draw out* the truth about chemistry



Angelo Cassar
Midland Section Chair

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Calendar for Oct./Nov.

Oct. 10	Fall Scientific Meeting
Oct. 19	Board of Directors Meeting
Oct. 20	Green Chemistry Speaker
Oct. 24	Kids & Chemistry Make-a-Difference Day
Oct. 31	SciFest
Nov. 9	Midland Chemist Deadline
Nov. 16	Board of Directors Meeting

Click on the Calendar button at <http://www.midlandacs.org> for more details.

from the plethora of interspersed honest data and false perceptions. Join me in becoming a Chemistry Ambassador!

A handwritten signature in black ink that reads "Angelo J. Cassar".

Wendell L. Dilling, Director and Historian

Central Regional Meeting To Be Hosted by Midland Section

The 44th Central Regional ACS Meeting will be hosted by the Midland Section in 2013. The bid for this meeting was made after we held the 1997 meeting and the Board of Directors noted that the Midland Section's centennial year is 2019, a year that we definitely would want to host the regional meeting. The Board chose to bid for meetings in 2006, 2012, and 2019. The 2012 meeting was later traded to the Detroit Section for 2013 because 2012 is their centennial year.

The Midland Section has hosted four very successful Central Regional ACS Meetings—1982 at Northwood University, 1990 at Saginaw Valley State University, 1997 at Valley Plaza in Midland, and 2006 in Frankenmuth.

Usually the planning for regional meetings begins 3-6 years prior to the meeting, so now is the appropriate time to start planning for 2013.

Having a regional ACS meeting in the Midland Section area provides an opportunity for a large number of our local section members to attend and participate at relatively little expense. In recent years 800-1000 members have attended central regional meetings, and Midland Section attendees are able to interact with a large number of other chemists from the eastern Midwest. The ACS Central Region includes parts of Michigan, Indiana, Ohio, Kentucky, West Virginia, and Pennsylvania. By hosting these meetings we have an opportunity to in-

crease the visibility of the Midland Section and our local chemical institutions and industries. Holding regional meetings also gives local section members an opportunity to experience planning and conducting a large scientific meeting.

Anyone who is interested in helping with the planning of the 2013 Meeting is welcome to contact Wendell Dilling (989-631-1621; dilli1wl@cmich.edu). Committees will likely include program, poster session, treasurer, program book editor, facilities, accommodations, transportation, awards, fundraising, undergraduate/SAACS program, exposition, publicity, registration, webmaster, education program, and social activities.

Susan Rhodes and Matt Gave, FSM Co-chairs

Advancing Chemistry through Science Education

Fall Scientific Meeting
8:30 a.m. – 5:00 p.m.
Saturday, October 10, 2009
Delta College
University Center, MI

The Fall Scientific Meeting is the premier science and technology meeting for the Section. The meeting has been held, excepting one year, since 1945. It is organized by Section members and attended by scientists, college faculty, high school teachers, college students, and other people from a variety of organizations such as Central Michigan University, Saginaw Valley State University, Alma College, Delta College, and Michigan Molecular Institute in addition to Dow Chemical and Dow Corning.

The 65th Fall Scientific Meeting will be held at Delta College on October 10, 2009. The theme for this year's meeting is "Advancing Chemistry through Science Education." We are particularly excited about this year's program because it brings together scientists, science educators, and students in a unique way, encouraging networking and providing a forum for new ideas.

But why should you be interested in science education? After all, you're already educated, right? Consider your children, your grandchildren, the neighbor kids...there is no future science without science education. And only with top-notch science education can we meet the scientific challenges of the future. This responsibility belongs to all of us. Come and contribute or just come, listen, and consider.

Please see the FSM link on the website (<http://www.midlandacs.org>) for details, room locations, bios for speakers, and to register for the

meeting. To qualify for the free lunch you must register by October 2. There is no charge for attending the meeting, which is open to the community as well as ACS members.

The agenda is below as are summaries of keynote addresses, symposia, and other meeting features. Programs will be available online by October 1. If you usually receive *The Midland Chemist* by surface mail and would like to receive a program by surface mail, contact Ann Birch (989-832-7485). For more information on the FSM, please contact Matt Gave (matthew.a.gave@dowcorning.com; 989-496-5642).

FSM Keynote Speakers

The Chemistry of Advocacy

Glenn S. Ruskin
 ACS Director of Office of Public Affairs

The ACS Congressional Charter, passed in 1937 and signed by President Franklin Delano Roosevelt, calls upon the ACS to "encourage in the broadest and most liberal manner the advancement of chemistry in all its branches; increase the diffusion of chemical knowledge, ...promote scientific interest and inquiry, ...foster public welfare and education, aiding the development of our nation's industries, and adding to the material prosperity and happiness of our people."

This presentation will examine how ACS fulfills its congressional charter through the advocacy efforts of mem-



bers, governance, and staff. At the core of ACS advocacy are the members of the Society—without them there would be no ACS positions or advocacy. The members decide through the ACS committee structure what the positions and priorities of the Society shall be, and government relations staff in the ACS Office of Public Affairs, joined by members of the ACS Legislative Action Network and local section Government Affairs Committees and ACS governance, communicate those priority positions on Capitol Hill, with the Executive branch and other interested organizations.

The presentation will pull together all the various pieces of ACS advocacy to give participants an overall understanding of how ACS policies are created, communicated, and advocated, and the presentation will explain how the ACS priorities fit into the larger legislative environment in Washington, DC.

Serving Learners and Educators

Mary Kirchhoff
 ACS Director of Education

Education features prominently in the charter of the American Chemical Society, a charter that promotes the education of both citizens and professional chemists. Education equips professional chemists, as well as all members of society, to advance in the new millennium, developing twenty-first century solutions to com-



(Continued on page 3)

FSM Agenda

8:30 a.m. – 1:00 p.m.	Registration
8:45 a.m. – 9:00 a.m.	Welcome
9:00 a.m. – 10:00 a.m.	Keynote Address # 1: Glenn Ruskin – ACS Director of Office of Public Affairs
10:00 a.m. – 11:00 a.m.	Keynote Address # 2: Mary Kirchhoff – ACS Director of Education
11:00 a.m. – 12:00 p.m.	Poster session and vendor booths
12:00 p.m. – 1:00 p.m.	Lunch break
1:00 p.m. – 4:00 p.m.	Symposium 1: "Every Dipole Has Its Moment": Student Presentations Symposium 2: "Keep Your Ion the Ball": Advancement in Science Education Symposium 3: Promoting Excellence in Science Education and Community Outreach
4:00 p.m. – 5:00 p.m.	Awards presentation and other acknowledgements

(Continued from page 2)
plex problems. In fulfilling its congressional charter, the Society has created a number of long-standing, dynamic education programs. At the same time, ACS must be responsive in meeting the needs of the changing chemistry enterprise. This presentation will examine the challenges and opportunities facing science education today and will highlight the education resources of the American Chemical Society using the five goals of the Education Division strategic plan as a framework.

FSM Awards

Thomas H. Lane Science Education Award

Dow Corning Corporation is sponsoring an annual American Chemical Society Midland Section award in honor of Dr. Thomas H. Lane. Dr. Lane, former senior scientist and director of global science and technology outreach at Dow Corning and current ACS President, has always emphasized the need for education and science literacy. He believes that ACS must ensure that all people, particularly students, understand the "transforming powers of chemistry."

This premier award will be presented to a student demonstrating academic excellence through their participation in the Midland Section ACS Fall Scientific Meeting for a category selected each year by the FSM committee. This year's award will be presented to the student giving the best presentation at the first symposium. They will receive a plaque and a \$500 cash award.

Best Student Poster Award

Dow Corning Corporation is sponsoring a \$200 cash award for the best student poster.

Science Education Promotion Award
Meeting attendees can submit suggestions for ways to locally promote science education. The best idea will be selected by the local ACS board and FSM committee members. A \$50 cash award will be provided, sponsored by Dow Corning Corporation.

Outstanding Achievement and Promotion of the Chemical Sciences Award

Each year the Midland Section honors an individual residing within the Sec-



Dale Meier, Midland Section director, flanked by two poster presenters from the 2008 FSM.

tion's geographical area who has demonstrated outstanding achievement and promotion of the chemical sciences. This award recognizes dedication and service to the chemical profession.

Outstanding Service to the American Chemical Society Award

The Section sponsors an annual award to a member to recognize outstanding service to the Midland Section of the ACS. This award recognizes achievement in the promotion of the goals of ACS.

Outstanding Chemical Technician Award

The Section presents an annual Outstanding Chemical Technician Award to an individual who has demonstrated an extremely high degree of professionalism as a chemical technician.

Emeritus Member Awards

An award is presented to each member who has reached 50, 60, or 70 years membership.

FSM Vendors

A vendor exhibit will feature an array of companies and organizations of interest to industry and academia. Come and see the latest developments in equipment and services.

FSM Posters

Posters from industry and academia will be available for viewing and discussion from 11:00 a.m. to 1:00 p.m.

This is always a highlight of the meeting, representing a wide area of research and other science activities in the Section area.

FSM Symposia

Symposium # 1: "Every Dipole Has Its Moment": Student Presentations

This symposium will consist of high school and/or college level presentations of 20 minutes each. All areas of chemistry, chemistry-related, and science education topics have been invited.

Symposium # 2: "Keep Your Ion the Ball": Advancement in Science Education

Assessment and Instruction Aligned to Science Content Standards

or

"Keeping an Ion the Learning Goal"
Cari Herrmann-Abell

Project 2061 is a long-term effort by the American Association for the Advancement of Science (AAAS) to advance literacy in science, mathematics, and technology. Our current work includes creating middle and early high school science assessment items that are precisely aligned with national content standards and developing resources to support the creation and use of these types of assessment items. Each item is developed using a

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procedure designed to evaluate an item's match to important science ideas and its overall effectiveness as an accurate measure of what students do and do not know about those ideas. During item development, feedback is obtained from students during pilot testing and from scientists and science education experts during a review using a set of criteria to ensure content alignment and construct validity.

After revisions are made based on the feedback, the items are field-tested on a large national sample to determine the psychometric properties of the items. As part of our work in instruction, we are writing descriptions of scientific phenomena that can be used to illustrate or be explained by targeted ideas, identifying simulations and graphic representations that can clarify those ideas for students, and making suggestions for guiding students' thinking about the relationship between the phenomena, representations, and ideas.

Creative Science for the Classroom
*Bernadette Harkness, Brian Aldrich,
and David Baker*

This will be a discussion of potential hands-on activities that will explore current applications of chemistry in technology. Applications will include biodiesel, solar energy, fuel cells, wind energy, exploring the nanoworld, and providing experiences with nanotechnology. New approaches to using small-scale experiments and equipment to address issues of sustainability and pollution prevention in the laboratory will be presented.

There will be an additional discussion of visualization in chemical education. Storyboard and animation exercises can be used to increase student understanding of macroscopic concepts. These exercises or "atomic comics" compel students to incorporate the particulate view of matter with important concepts in chemistry. Chemsense animation software has been used by students and will be demonstrated to illustrate examples of student-generated work.

Researching Inquiry-Based General Chemistry Labs and Online Learning at Central Michigan University
Janice Hall Tomasik

This presentation will describe new lab

experiments developed at Central Michigan University. The labs incorporate authentic research-based experiences that highlight CMU faculty research. It is hoped this design allows students to learn important concepts in a more relevant and familiar context. The goals of this project are to 1) study the best methods for development and implementation, and 2) study the effects of this research-based approach for teaching chemistry. The topics discussed will include the development of the new labs, a pilot test with two students, and the survey created to assess impacts on student learning.

This presentation will also discuss the learning environment of an online continuing education course for teachers scheduled to begin at CMU in the summer of 2010. The results of a survey given to participants a year after completing the course will reveal information about the online learning environment.

Symposium # 3: Promoting Excellence in Science Education and Community Outreach

Chemistry and the Food Scientist
Julie Lorenz and Jeff Paxhia

The food production and manufacturing industry is arguably the largest in the world. This industry employs scientists of diverse backgrounds to contribute to the development of abundant, safe, nutritious, high-quality products to feed a growing world population. Many scientifically inclined students are unaware of the opportunities for technical careers in the food industry. Typical food science and technology careers include culinologist, product development scientist, food technologist, food process engineer, quality assurance scientist, food chemist, sensory scientist, and nutrition scientist. Demand for professionals trained in the science of food production and manufacture is expected to be strong into the future. In this talk we will highlight the science behind the food we eat and opportunities for chemists within the food industry.

Pyrotechnics – What You Should Know About Fireworks
Jim Malek

This presentation will cover fireworks information in general, with emphasis on the chemistry involved.

Register Today!

Attendees who register before October 2 get a free lunch.

Go to <http://www.midlandacs.org>

Click on Direct Link to FSM
Click on Registration link and follow instructions.

A Day in the Life of a Forensics Scientist
Elaine Dougherty

This presentation will include information on the daily operations of a forensic laboratory, the education and qualifications required to become a forensic scientist, and the use of chemistry in solving crimes. Topics covered include latent print analysis, firearms analysis, biological materials analysis, crime scene investigation, and controlled substances analysis. In addition, several short demonstrations will be shown, including some suitable for the classroom.

National ACS

Undergrads Welcome at ACS

Effective June 2009, all ACS Student Affiliates are now Student Members. Last fall, the ACS membership voted to change the Society bylaws to grant all undergraduates the rights of full membership as Student Members, including membership in ACS Local Sections. ACS is now actively recruiting undergraduates to become members of the ACS. The website <http://www.undergrad.acs.org> is the primary recruitment tool for this audience. Please refer students to this website if they are interested in joining ACS. The site describes benefits of ACS membership geared specifically for undergraduates. Be sure to have the student select your local section as the referral on the online membership application.

Tom Lane, President ACS

Harnessing the Value of Membership



Photo Credit: Peter Cutts Photography

I have answered hundreds of letters over the last eight months, many of which were from members trying to justify

their membership and the dues required to retain it. I understand that times are tough and that we are all watching our money carefully. However, I don't think that the business principle of return on investment (ROI) can be applied to professional membership dues in a learned society. For clarity, ACS is not likely to reduce membership dues anytime soon. But maybe we all need to look at the value proposition of membership in a slightly different way, not "how much can you give me for my \$145.00?" What follows is a letter I recently sent to Dr. X., a member for over thirty years who struggles each year when it comes time to renew his commitment to the Society.

I would be very interested in hearing why you retain your membership and how you think ACS should describe our value to the members. As always you can contact me directly at tom.lane@charter.net or maingeeek1@gmail.com.

Dear Dr. X:

Thank you for continuing your membership in the American Chemical Society. I understand that it may not always be clear why we, as chemists, need to remain part of something that does not give us a satisfactory personal ROI. I read your note and I understand your concerns but allow me to offer you a different value proposition that you can consider during your annual struggle with membership renewal. My name is Tom Lane, 2009 President of the ACS and a 36-year member of the Society. Let me be completely upfront with you. I do not make use of many (any) of the advertised "benefits" of membership. C&EN issues continue to pile up—now in my computer instead of on my desk—until I have time to skim them. If I calculated my personal ROI of ACS

membership based on what I take from the Society in terms of "benefit value" the number would certainly be much less than 1! I am not a member of ACS (the largest professional society in the world dedicated to a single discipline) because I can get a few discounts on things that I don't want, a weekly news magazine, or insurance. I belong to ACS because it allows me to be part of something much larger than myself; something that allows my voice to be amplified nearly 160,000 times in support of issues important to society, our discipline, and to the men and women of science who are improving people's lives through the transforming power of chemistry.

You may not be aware that the Society operates under a congressional charter (granted in 1937) which clearly states the purpose of the Society. In just one hundred words (Section 2 of the charter) the authors make clear our purpose and why I choose to invest about forty cents a day to be a member of ACS. Those one hundred words are...

SEC. 2. That the objects of the incorporation shall be to encourage in the broadest and most liberal manner the advancement of chemistry in all its branches; the promotion of research in chemical science and industry; the improvement of the qualifications and usefulness of chemists through high standards of professional ethics, education, and attainments; the increase and diffusion of chemical knowledge; and by its meetings, professional contacts, reports, papers, discussions, and publications, to promote scientific interests and inquiry, thereby fostering public welfare and education, aiding the development of our country's industries, and adding to the material prosperity and happiness of our people.

Dr. X, your Society works hard to fulfill the purpose outlined in Section 2 of our charter. I have personally been on Capitol Hill advocating, educating, and lobbying on behalf of chemists—helping policymakers understand the importance of investing in long-term research and the importance of STEM education. Last year, ACS's efforts helped secure \$400 million in emer-

gency supplemental aid for research and education. This year ACS helped educate Congress on the importance of investing in research. The result was \$22 billion in stimulus money for the sciences. Clearly, we are not doing this alone, but our voice of nearly 160,000 brings power to our message. The ACS is highly respected on the Hill, and we are listened to on topics of science and education. Our involvement on the Hill over the years may have even allowed you to capture some grant money.

As an active research scientist, I know that you have published in ACS journals and that you have made use of ACS databases (we are approaching our 50 millionth registered compound) to help establish yourself as a credible contributor to the body of knowledge which improves our collective lives.

Dr. X, I hope that next year when you are faced with the ACS membership renewal notice you will grab your pen and with a smile on your face—remembering the pride you had when you first joined the Society—write the check knowing that the Society is more than C&EN, insurance, and other benefits. We are chemists charged by Congress to improve people's lives through the transforming power of chemistry.

Sincerely,
Tom

P.S. Dr. X, if any of this resonated with you, please share it with your students. Let them feel the pride of membership and being a chemist. Thanks.

Why Am I an ACS Member?

To get a glimpse of how some of your colleagues feel about ACS membership, go to the website (<http://www.midlandacs.org>), click on About Us, Why Am I an ACS Member.

Lisa Thackery, Kids & Chemistry Co-chair

Kids & Chemistry Launches Into Fall with "Discovery Day"

Volunteers for Kids & Chemistry recently participated in "Discovery Day," hosted by the Mt. Pleasant Discovery Museum (MPDM). Despite the chilly, rainy weather on Saturday, August 22, the event at Island Park still attracted over 400 participants and involved at least 25 local organizations in the Mt. Pleasant area. Throughout the day, ACS members, CMU students, and Dow Chemical and Dow Corning employees and retirees performed food science, chromatography, and solar demonstrations with children and their families.

"Every time I looked at the science area, I felt giddy," said Jennifer Fields, Chair of MPDM board. "I was discouraged from chemistry when I was a kid, but now I am thankful we have help with providing kids a positive science experience that I never had!"

The main objective of "Discovery Day" was to share the vision for the Mt. Pleasant Discovery Museum with the community through hands-on science, arts and crafts, and music activities. Participation by the Midland Section marked the beginning of many potential partnering activities for science education outreach with MPDM and opened up opportunities for the Section to expand its presence in Isabella County.

MPDM is a grassroots organization dedicated to establishing a children's museum in Mt. Pleasant, MI. The group is made up of local educators and business people, many who are also parents, and who have been working together since early 2008. In early August, the organization received 501c3 status, declaring them to be a nonprofit organization and qualifying them for federal and local grants. The Mt. Pleasant Discovery Museum is actively searching for a permanent building in order to reach their goal of opening their doors in 2011. For more information about MPDM, you can visit their website at www.mpdiscoverymuseum.org.

"Discovery Day" was just the beginning, and Kids & Chemistry has many other activities in the works for this fall. We have initiated a "demo training" program so participants can teach each other various science demos and experiments to take to

different venues. The goal of this program is to discuss ways to engage kids at various age levels in science; communicate what resources may be available through ACS, local companies, or local colleges; and network and expand the "scientist in the classroom" volunteer base. To date, three sessions have occurred and have included chromatography, food science lessons, and a quick run-through of the "Unsigned Letter" program that was initiated with Girl Scouts and Big Brothers Big Sisters this past spring. Thanks to Dr. Tom Lane, ACS President, and his generous funding, the demo trainings will be continuing this fall. Please check the Section calendar for updates to the schedule and note that anyone interested is welcome to attend.

Planning is underway for National Chemistry week events with this year's theme being "Chemistry - It's Elemental!" On October 24, Kids & Chemistry will have a booth at CMU's "Make a Difference Day" in Finch Fieldhouse in Mt. Pleasant. Also this year, SciFest will be held on October 31 at the Dow Event Center prior to the Saginaw Spirit hockey game (see pg. 12). Volunteers are needed to help set up and facilitate science activities at these events as we anticipate many children and families at both venues.

In addition, we are in the process of planning a couple of programs supported by grant monies. One such program includes working with Big Brothers Big Sisters and helping provide science lessons as a part of the Teaming Up with YOUth programs at schools in Midland and Isabella counties. Dates and locations, as well as requested activities, will be posted as soon as Big Brothers Big Sisters has their

Biggs and Littles paired up and the schedules at the schools are available. Also, on November 14, the second offering of Camp Chemistry for Girl Scouts will be offered at CMU. This is a full-day, inquiry-based learning program, where middle school girls will rotate through a series of color-related chemistry experiments, experience university facilities, and learn about science opportunities for women.

Many other organizations have expressed needs for help with science education, too. Kids & Chemistry has been having discussions with the Saginaw Community Foundation; many area public schools, teachers, and administrators; and the juvenile care center for ways the Midland Section can help supplement science programming.

Please contact Gina Malczewski (gina.malczewski@dowcorning.com; 989-496-4158) or Lisa Thackery (lisa.thackery@dowcorning.com; 989-496-4077) for ways to become involved! We could use your help, whether it is participation in a one-time event or a commitment for regular science mentoring. Remember, your contribution paves the way for the next generation of scientists and can have an impact on how both children and adults view chemistry and other sciences.



Rob Huber performs food science experiments with the Skeel family on "Discovery Day."

Joan Sabourin, SciFest Co-chair, and others

Members Visit Policymakers "On the Hill"

Six Midland Section members made "on the hill" visits to Michigan policymakers in Washington, DC, while attending the Fall National ACS Meeting. We visited the offices of Debbie Stabenow, Carl Levin, Dave Camp, and Dale Kildee. Discussion centered around support for basic research and science education, but another goal was to introduce them to constituents who work in chemistry and tell the stories of how federal support of research and science education has benefited us, our employers, and our communities. ACS offered a training/briefing session on Sunday at the national meeting for those local section members who were planning to do congressional visits. They have put together a great video on what to do and what not to do. There were quite a few local sections who participated, and it is hoped that this participation will continue to increase.

ACS continues to serve as an advocate for science, serving as a neutral and credible source of scientific information for members of Congress and their staff. Programs include:

- ACS's Science & the Congress Project conducts a series of congressional briefings, bringing in panels of



Midland Section members (l-r) Angelo Cassar, Gretchen Kohl, Connie Murphy, Janet Smith, and Joan Sabourin. Not pictured: Bob Howell.

- experts from academia, industry, and government.
- ACS fosters the participation of its members in the legislative process by promoting ACS member activities on the Hill.
- ACS works to promote the importance of National Chemistry Week through activities on the Hill.

- ACS runs a public policy fellowship program, offering an opportunity for ACS members to gain practical experience and insights into public policy.

To find out more about these programs, go to the national ACS website (<http://www.acs.org>), and click on Policy/ACS On the Hill.

In Memoriam

Henry E. Hennis, Ph.D.



Henry E. Hennis, Ph.D., 83, of Coleman died Tuesday, August 25, 2009. Henry joined the American Chemical Society in 1954 and was an emeritus member. He was born in Madelia, MN, on Oct. 23, 1925, the

son of John and Frieda (Boelter) Hennis. He married Marian E. Lovett on Sept. 4, 1951, at Ft. Wayne, Ind. She predeceased him on Sept. 18, 1989.

Henry graduated from Madelia High School in 1943. He then joined the U.S. Navy V-5 pilot training program. He spent two semesters in a pre-engineering course at Northwest Missouri State University and completed several ground and flight training

schools and was in advanced flight training when World War II ended and he was released in 1945. He then entered the University of Minnesota-Minneapolis and received a bachelor of chemistry degree and a commission as a second lieutenant in the U.S. Air Force in 1950. After a year of graduate training at the University of Missouri-Columbia, he served during the Korean Conflict as a radar calibration officer. He was the leader of one of several teams that were responsible for the calibration of early warning radar installations in the United States from the Pacific Ocean to the Rocky Mountains and north to the Pine Tree Line, Canada. After two years in the Air Force, he was released with the rank of first lieutenant.

Henry returned to the University of Missouri-Columbia and received a Ph.D. in organic chemistry in 1956. He

also studied at the Institut für Organische Chemie at the University of Munich, Germany, in 1968.

Henry joined The Dow Chemical Company in Midland in 1956 as a research chemist and retired in 1986 after 30 years in research and development, attaining the title of senior associate scientist. Henry also served as an instructor at the University of Missouri-Columbia for one year and as an off-campus instructor at Central Michigan University for two years.

During his professional career, he was a member of Alpha Chi Sigma, Sigma Xi, the New York Academy of Sciences, and was elected a fellow in the American Institute for Chemists. At the time of death, he was a member of the American Chemical Society, the Sanford American Legion Post No. 433, and Trinity Lutheran Church, Midland.

Call for Nominations

Nominations Sought for 2010 ACS TAOC Award

The Organic Division of the American Chemical Society is seeking to increase the involvement of bachelor- and master-level chemists in Divisional activities. Although these chemists make important contributions in the workplace, they often receive little or no recognition for their efforts from the scientific community. To address this situation, the Organic Division has instituted an annual symposium at the Fall National ACS meeting to recognize the achievements of non-Ph.D. chemists. We are now seeking nominations for the 2010 program.

The fifteenth annual Symposium on Technical Achievements in Organic Chemistry (TAOC) will be held during the 240th National Meeting of the ACS in Boston, MA (August 22-26, 2010). The invited speakers will present their recent discoveries in basic or development research during 30-minute presentations. Speakers are selected in a two-phase process. First, a letter of

nomination is submitted to the Division on behalf of the nominee; then a Subcommittee, composed of several members of the Organic Division Executive Committee, selects the awardees based on several criteria: (a) evidence illustrating the creativity and independence of the nominee; (b) the nominee's publication and patent record; (c) any other information that documents the special achievements and/or contributions made by the nominee.

The Organic Division encourages nominators to select candidates who are both excellent scientists and good communicators. To nominate a bachelor- or master-level chemist for this symposium, please send a letter describing the nominee's contributions and include a copy of the candidate's curriculum vitae. (Additional letters and supporting documents are most welcome, but not essential.) Nominees should hold at least a bachelor degree

(or equivalent), be currently working in chemistry, and should not have received a previous Technical Achievements in Organic Chemistry Award. Nomination materials are strongly encouraged to be submitted electronically as one pdf document, and the file can be e-mailed to Dr. Christopher J. Welch, 2010 TAOC Chair, at christopher_welch@merck.com. Alternatively, the nomination package can be mailed to:

Dr. Christopher J. Welch
Merck & Co., Inc
RY 801 A100
Rahway, NJ 07065
Attn: TAOC Nomination

Questions may be directed to Chris Welch via e-mail or by phone at 732-594-0032. The deadline for receipt of nominations is December 31, 2009. Information is also available at the Division of Organic Chemistry website (<http://www.organicdivision.org>).

Dana Fuerst, MMTG Immediate Past Chair

MMTG Members Help Students in Need Succeed

The Mid-Michigan Technician Group (MMTG) put out a call to members for donations of school supplies or money to purchase school supplies. In less than 4 days, members contributed over \$200 worth of school supplies and an additional \$150 in cash donations! On September 4, over \$500 worth of school supplies were donated to the Midland County United Way.

Right now you are thinking \$200 plus \$150 equals \$350, not \$500, right? Because of some incredible back-to-school sales and the Midland Meijer store allowing the use of promotional coupons, we were able to save over \$150 on our purchase of school supplies!

Thanks to the generosity of MMTG members and the Meijer store, 11 children in Midland County will have new backpacks when they return to school. Fourteen students will have scissors to cut with; 26 students will be able to glue; 5 will be able to measure (or learn to) and draw straight lines; 33 will have their own box of crayons, markers, or colored pencils to draw and color with; 51 will

have paper to write on; and many will receive some of the hundreds of erasers, pens, and pencils that were donated. There were also 40 folders and binders donated, a few bottles of hand sanitizer, some highlighters and index cards, a pencil box, and several boxes of tissues for elementary students who are required to take them for their classroom.

With the correct supplies, hopefully the families and students receiving these goods will be able to worry less about what they will write with or on and instead be able to concentrate on their school work and earning the grades to help them succeed. Thank you to all the members who donated items or money to help make this outreach a success.

If you weren't able to contribute this time and would like to donate



Here's just a portion of the supplies collected and donated by MMTG members for schoolchildren.

school supplies to the Midland County United Way, there is still plenty of time. While the need *is* greatest at the beginning of the school year, remember that it continues until the school year is done. To find out about making a donation, contact Christy Thompson (thompson@unitedwaymidland.org). To find out more about MMTG membership, contact the MMTG Chair, Gerard Nowaczyk (989-496-3613; gerard.s.nowaczyk@dowcorning.com).

Wendell L. Dilling, Historian and Director

Midland Section Members Fill ACS Presidency

Two ACS members from the Midland Section have been elected to the American Chemical Society presidency: Dr. Edgar C. Britton served as president in 1952, and Dr. Thomas H. Lane is serving in 2009.

At the time of his election, Britton was director of the organic research laboratory and vice chairman of the executive research committee at The Dow Chemical Company. Lane was director, global science and technology outreach, and a research scientist at Dow Corning Corporation.

Interestingly, both men grew up in western Indiana, about 72 miles apart, Britton in Rockville, Lane in Brook. Both men received part of their college education in Indiana and Michigan. Britton studied at Wabash College and received B.A. and Ph.D. degrees from the University of Michigan. Lane received B.S. and M.S. degrees from Purdue University and Central Michigan University, respectively. Lane earned his Ph.D. degree from the Open University in England.

Britton was 60 years old when he became ACS President; Lane was 56. Lane was born in the year Britton served as ACS President.

In addition to the usual responsibilities an ACS President has, such as presiding at Council meetings and national meeting presidential symposia, and presenting awards, presidents usually have special areas of emphasis during their presidential year.

Britton's emphases during his presidential year were expanding

original research in order to lay the foundation for future chemical businesses, establishing a balance between original and developmental research, maintaining and expanding ACS publications and Chemical Abstracts, and utilizing military reservists to support a large active military and an industrial and agricultural program for the U.S.

Lane's emphases during his presidential year are keeping education

and science literacy at the forefront of our thinking and pivotal in our actions; keeping an open mind, hearing all voices, and practicing tolerance and acceptance as ACS continues to reach out; building new and productive relationships that support the ACS strategic plan; and developing outcome-based metrics to guide ACS.

More details will be presented in a poster at the Fall Scientific Meeting in October.



ACS President Dr. Thomas Lane with poster about ACS Presidents from the Midland Section, which was presented by the author at the Central Regional ACS Meeting in Cleveland, May 20, 2009.

Jennifer Dingman, Director

9th Annual Professionals Day a Success!

The Midland Section of the ACS hosted its 9th annual Professionals Day at the Midland County Fair on Thursday, August 20, 2009. The event was held in the Brown Picnic Building on the north end of the fairgrounds next to the grandstand. Members and their families were provided with free drinks, hot dogs, popcorn, and sno-cones in addition to live science demonstrations and goodie bags. Midland County Fairgrounds graciously provided our members with a discounted "VIP ride bracelet" for unlimited ride access for nine fun-filled

hours, and we had 154 people take advantage of that deal. Despite the rainy weather, the event was visited by over 300 people during the course of the 3.5 hours. Please mark your calendars for next year's event which will take place on August 19, 2009.

Thank you to all the members who attended, and a special thanks goes out to the volunteers who helped put the event together. Our volunteers were from across organizations, including ACS, Mid-Michigan Technician Group (MMTG), and Society of Women Engineers (SWE). Without their valu-

able time and energy, this event wouldn't be possible.

Volunteers

Bill Warren
Mike Ferritto
Debra Mendrick
Hobart Barker
Sue Perz
Paul Popa
Michelle DeBuck
Jennifer Dingman

Howard Peters, Santa Clara Valley Section

Chemists Shine at Senior Olympics

In early August over 10,000 senior athletes (ages 50 to 100) from around the nation descended on the Stanford University campus for the senior version of the National Summer Olympics: swimming, tennis, track and field, cycling and the like. For more general information see <http://www.2009seniorgames.org>. Included among these remarkable athletes were at least two chemists, both long active in ACS.

Dr. Wendell Dilling retired in 1992 from The Dow Chemical Company in Midland, Michigan, and is presently an adjunct professor at Central Michigan University (CMU) in Mt. Pleasant, Michigan. Wendell and the author worked together briefly in the same Edgar C. Britton lab at Dow in 1968. Wendell qualified in his events in Michigan and competed in the pole vault, hammer throw, javelin, shot put, high jump, long jump, and triple jump, receiving a sixth place award in the pole vault. He qualified for the 100 m, 400 m, 5K, and 10K runs, but a recent hamstring injury prevented him from competing, this time in the 70–74 age category. Wendell served as chair of the ACS Midland Section in 2000 and as a councilor from 1976 to 1996. Starting about 1990 he mentored Project SEED students at CMU and continues to be very active in the Section, serving as historian and as a

director. He is a graduate of Manchester College in North Manchester, Indiana, and holds a Ph.D. in chemistry from Purdue.

A bit of chemistry trivia—two other chemists of note (who roomed together) were graduates of Manchester College in Indiana: the late polymer chemist Dr. Paul Flory, of Stanford University and Nobel laureate in chemistry in 1974, and the late polymer chemist Dr. Roy Plunkett, inventor of Teflon at DuPont (see U.S. Patent 2230654).

The other “chemical” competitor is Dr. E. Gerry Meyer, who is familiar to many within the ACS. He is now retired (officially, at least) as professor of chemistry at the University of Wyoming but has remained active in energy matters and research. Before relocating to Wyoming, Gerry served in the U.S. Navy in World War II. Gerry is a graduate of New Mexico State University and earned a Ph.D. from Carnegie Institute of Technology (now Carnegie Mellon University).

Long active in ACS matters, he served as chair of the Wyoming Section and for many years as a councilor. In 2008 he received the National ACS Volunteer Award. Gerry qualified for events in Wyoming and competed at Stanford in both the 1500 meter and 5000 meter events, and received an award in the age 85–89 category.

This author’s most enduring memory of Gerry is riding a motorcycle over 250+ miles from Anchorage to Fairbanks, Alaska, at the age of 85 to attend the ACS NORM meeting in 2005.

Editor’s Note: This article was first published in the September 2009 issue of the Silicon Valley Chemist. Wendell is a director on the Board of Directors for the Midland Section and also the Section historian.



Wendell Dilling at the Senior Olympics pole vault competition.

Kevin Wier, N&E Committee

Call for 2010 Officer Candidates

Why volunteer with ACS? Read what Tina Leaym has to say:

“Several years ago I was pursuing a major career change. In my interview, the questions were very difficult and required personal examples of how I had handled many different situations. Had it not been for my volunteer work with ACS, I would have struggled to come up with examples of leadership and problem-solving at this early point in my career. The ACS provided a risk-free environment for me to get my feet wet leading teams and projects.”

“Volunteering to work with ACS gives me multiple opportunities to contribute; whether it’s doing a cool demo to pique a child’s interest in science, or working with science educators, or stuffing envelopes, I always learn something! The people are great—friendly and helpful—and we all have the same goal. ACS is one of those examples with great return on investment potential. The more you put into it, the more rewarding it becomes. And if you sit back and don’t get involved, you are really missing out! You could be meeting great people, contributing to the scientific enterprise, and demonstrating your leadership skills.”

Here is *your* chance to become more involved in your local ACS section. We need candidates to run for the following positions for 2010:

One-Year Terms

Chair-elect
Secretary
Treasurer
Chair, Nominations & Elections Comm.

Three-Year Terms

Directors (3 slots open)

If you are interested in running for any of these positions or know someone who might be interested, please contact Kevin Wier at 989-496-4596 or kevin.wier@dowcorning.com. If you have any questions regarding what the positions entail, contact your current officers listed on the Section web site <http://www.midlandacs.org> at About Us/Section Leadership/Board Members.

Dee Strand, Midland Section Director, and Anne Wallin, The Dow Chemical Company

Green Chemistry Scientist and Leader to Speak in Midland

Introduction to Green Chemistry

Dr. John C. Warner

Warner Babcock Institute for
Green Chemistry

7:00 – 8:30 p.m.

Tuesday, October 20, 2009

Midland Center for the Arts
Midland, MI

The Dow Chemical Company and the Midland Section of the American Chemical Society are very pleased to sponsor a presentation by Dr. John C. Warner, one of the founders of Green Chemistry and co-author of the seminal book *Green Chemistry: Theory and Practice*. Local community members and ACS members should not miss this unique opportunity to hear from Dr. Warner about his dedication to advancing the development of environmentally benign and practical, sustainable technological solutions for society. Dr. Warner's presentation will highlight how green chemistry can deliver innovative solutions and how each of us can facilitate its widespread adoption. An interactive question and answer session will follow Dr. Warner's presentation.

Abstract

Imagine a world where all segments of society demanded environmentally benign products! Imagine if all consumers, all retailers, and all manufacturers insisted on buying and selling

only nontoxic materials! The unfortunate reality is that, even if this situation were to occur, our knowledge of materials science and chemistry would allow us to provide only a small fraction of the products and materials that our economy is based upon. The way we learn and teach chemistry and materials science is for the most part devoid of any information regarding mechanisms of toxicity and environmental harm. Green Chemistry is a philosophy that seeks to reduce or eliminate the use of hazardous materials at the design stage of a materials process. It has been demonstrated that materials and products *can* be designed with negligible impact on human health and the environment while still being economically competitive and successful in the marketplace. This presentation will describe the history and background of Green Chemistry and discuss the opportunities for the next generation of materials designers to create a safer future.

Biographical Sketch

Dr. Warner is President, Chief Technology Officer, and Chairman of the Board of the Warner Babcock Institute for Green Chemistry and currently serves on the Board of Directors of the Green Chemistry Institute in Washington, DC. He also serves on the Science Advisory Board of the Strategic Environmental Research and Development Program, the Department of Defense's

environmental science and technology program.

Dr. Warner worked at the Polaroid Corporation from 1988 to 1997 in exploratory research and media research. In 1997, he accepted a position in the chemistry department at the University of Massachusetts-Boston, where he started the world's first Green Chemistry doctoral program. In 2009, the Council of Scientific Society Presidents honored Dr. Warner with the Leadership in Science Award for founding the field of Green Chemistry.

In addition to its commitment to identifying technological green solutions for business, the Warner Babcock Institute for Green Chemistry (<http://www.warnerbabcock.com>) actively supports Green Chemistry outreach and education. Through its foundation *Beyond Benign* (<http://www.beyondbenign.org>), the Warner Babcock Institute visits K-12 schools, colleges, and universities to speak with students about green chemistry and sustainable science, conducting age-appropriate hands-on activities and experiments that demonstrate sustainable technologies.



Chicago Section of the American Chemical Society

Trading Places – The Effects of Density

Editor's Note: ChemShorts for Kids is copyrighted by the Chicago Section. All chemicals and experiments can entail an element of risk, and no experiments should be performed without proper adult supervision.

Here is a chance for your kids to experience the scientific phenomenon of density. Take two glasses of different-colored liquids, and they can watch the liquids switch places in the glasses.

For liquid materials, you need water and another liquid with a different density. If the liquids don't mix at all (such as water and oil), you will get a clearly-defined separation. You'll also

need two small identical glasses (shot glasses work well) and a thin waterproof card, such as a driver's license or a thick plastic playing card of some type. Here is what you do:

1. Fill one glass completely full with water.
2. Fill the other glass completely full with the other liquid you selected.
3. Place the card over the water glass and, while holding the card onto the glass, flip the water glass over and set it and the card on top of the second glass. (Tip: You may want to be near a sink for any spillage.)
4. Line the glasses up so that their rims are aligned and move the card

so that there is just a tiny bit of open space at the edge of the glasses.

5. Over the next few minutes, the liquids will exchange places. The oil will rise to the top while the water sinks and fills the bottom glass. You can tint the water with food coloring to aid in watching this.

This is an easy way to demonstrate how density affects the mixture of materials. The result is the same if you remove the card entirely and quickly but this way it is easier to observe the change as it slowly evolves. Have fun!

Wendell Dilling, Historian and Director

In Past Issues of *The Midland Chemist*

40 Years Ago This Month

In *A History of the Midland Section of the American Chemical Society*: by Stanley P. Klesney, Historian: "This year the Midland Section of the American Chemical Society celebrates 50 years of activity and service to the chemical profession. Chartered on December 8, 1919, the Midland Section has grown from 30 members in 1919 to 366 in 1945; the milestone of 1,000 members was passed in 1965, and in 1969 there were over 1,100 members. This growth parallels that of the national society, the largest scientific organization in the world."

30 Years Ago This Month

In *1979 ACS Fall Scientific Meeting* by Paula B. Moses, General Chairperson: "Dr. Robert E. Olson, Professor of Medicine at St. Louis University School of Medicine, will present the keynote address. His address will highlight the general theme of the meeting, 'Scientists and Society.' Numerous submitted papers and a symposia entitled 'Women in Industry and Chemi-

cal Hazard to the Unborn' will emphasize the theme of the meeting."

20 Years Ago This Month

In *...and from Saudi Arabia* by James W. Espy, ex-editor of *The Midland Chemist*: "Dear Ms. Kohl: I wish to thank you and the Midland Section for the beautiful plaque you sent to me and for remembering me in such a thoughtful way. The plaque arrived here last Tuesday, August 29th and it is now proudly hanging here in my home where everyone can view it. I am still actively involved with the ACS. Besides being Chairman of the Saudi Arabian Interest Group – American Chemical Society, I have been deeply involved trying to establish some sort of formal affiliation between ACS and our group in Saudi Arabia. Thanks again for remembering me and congratulations on the 25th anniversary of *The Midland Chemist*."

10 Years Ago This Month

In *Midland Section ACS Dinner Meeting – Science, Policy, and Politics –*

Speaker: Congressman Vernon J. Ehlers – Monday, November 22, 1999, 6:00 to 9:00 PM, Garden Room Holiday Inn of Midland, 1500 W. Wackerly Street, Midland, MI 48640:

"Congressman Ehlers has had a distinguished tenure of service in teaching, scientific research, and community service. A former member of the Michigan House and Senate, Vice Chairman of the House Science Committee, he was selected to rewrite the nation's science policy. This report, "Unlocking Our Future – Toward a New National Science Policy," was presented to Congress in 1998. The continued health of the scientific enterprise is a central component in reaching this vision. Ehlers received his undergraduate degree in physics and his Ph.D. in nuclear physics from the University of California at Berkeley. He taught physics and later became chairman of the Physics Department at Calvin College."

Joan Sabourin and Dave Stickles, SciFest Co-chairs

SciFest and the Saginaw Spirit Celebrate NCW

SciFest

3:30 – 7:00 p.m.

Saturday, October 31, 2009

7:11 p.m.

Saginaw Spirit Hockey Game

Dow Event Center

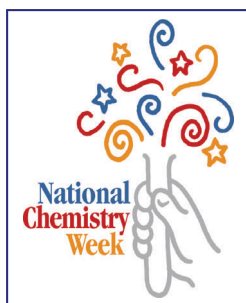
Saginaw, MI

The theme for National Chemistry Week 2009 (October 18-24) is "Chemistry: It's Elemental!" Elements are the basis of the entire universe and of life on Earth. They are an important part of everyday life. They compose the graphite in pencils, tungsten in light bulbs, neon lights, copper for cooling applications, sodium in table salt—the list literally never ends! The year 2009 is the 140th anniversary of Mendeleev's Periodic Table of the Elements, and this is a wonderful opportunity to investigate and appreciate the discovery and use of the elements in every aspect of our lives.

In celebration of NCW, the Midland Section of the American Chemical Society, the Mid-Michigan Technician

Group, Delta College, and the Saginaw Spirit hockey team are working together to bring you an exciting SciFest 2009. On October 31, area scientists, educators, and organizations will provide hands-on science activities and exhibits for all ages at the Dow Event Center. After SciFest, stay to watch the Saginaw Spirit hockey team battle it out with the Windsor Spitfires. Each player's number will represent the element with that atomic number. Other features include:

- Free game ticket(s) for exhibitors (2 guaranteed per table)
- Raffles for free game tickets for participants
- On-ice costume parade with prize for best "element-related" costume; all ages invited to participate
- Four students get Zamboni ride



- T-shirts thrown to fans during the game


Participation in SciFest is free. Tickets for the game are only \$8.50 for adults and \$6.50 for students, including college students, when purchased through ACS. Don't miss this unique family activity! Contacts include:

Hands-on activities: Joan Sabourin (989-686-9250; jmsabour@delta.edu), Gretchen Kohl (989-496-8200; gretchen.kohl@dowcorning.com), or Gina Malczewski (989-496-4158; gina.malczewski@dowcorning.com)
Game tickets and activities: Dave Stickles (989-496-3273; dstick44@chartermi.net)

Call for Exhibitors


Exhibitors are still needed for hands-on activities!

Contact Joan, Gretchen, or Gina for more information



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Please submit all articles and photographs to the editor. An editorial calendar and instructions for article submission are on the Midland Section website on the Communications|Newsletter menu.

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