

THE MIDLAND CHEMIST

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www.midlandacs.org

From the Chair

Hook Your Wagon to the ACS Network

Last month I discussed my concept of an *ideal chemist*, one who is interested in sharing his or her knowledge with the greater community and one who desires to learn as much as he or she can concerning the beautiful subject of chemistry.

Today I would like to discuss one way to do both! Let's talk about the ACS Network. The ACS Network is first of all a global network as opposed to a local network that may be found within a corporation or a college. The ACS network is a professional network similar to LinkedIn; however, the ACS Network is the first professional network for chemistry professionals.

If it is true that each of us possesses a small piece of the knowledge pie, then by accessing a global network, our knowledge is leveraged by the expertise of others around the globe. For example, let us assume that a chemist working in a local industry is a specialist in catalysis. That chemist may search the ACS Network by name, expertise, or keyword for other chemists in the world who are involved in catalysis and who also belong to the ACS Network.

On the ACS Network, you may submit your profile, including your area of expertise, along with any of your published articles.

In this manner, you may share your knowledge with other chemists around the world.

The key purpose of all networks is to communicate and collaborate. The ACS Network is safe and secure and is a web-based network. This is a true "win-win" scenario for you and other chemists around the world.

The ACS Network is available and free to ACS members, student affiliates, and global partners. To access more information about the Network, visit www.midlandacs.org and click the ACS Network button. I suggest that you view the demo found on the Network page. Since I have recently joined this network (and the Midland Section is now an official "group" on the Network), I will be able to collabo-



Angelo Cassar
Midland Section Chair

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Calendar for April/May

Apr 6	ACS Tour Speaker
Apr 18	Earth Day
Apr 18	Camp Chemistry at CMU
Apr 20	Board Meeting
Apr 23	Science Education Dinner
Apr 26	Bay City Science Fair
May 11	Midland Chemist Deadline
May 18	Board Meeting

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

rate with other Midland Section leaders about Earth Day, assist in finding an appropriate speaker for FSM, or collaborate on a myriad of other subjects. A perfect professional network for the chemist who attempts to reach the unreachable *ideal chemist*.

Angelo J. Cassar

From the Editor

The New 'Face' of the Midland Section

By now, many of you will have received your first e-mail update and had a chance to look over the new website; both are part of the new "face" of the Midland Section. We are striving to communicate more efficiently and more effectively with Section members and friends, and increasing our electronic interface is a major effort to that end. However, if you do not have access to the Internet, we have not forgotten you! We will continue to send *The Midland Chemist* by surface mail to members who do not have e-mail addresses.

The Midland Chemist also has a new "face" in preparation for primarily Internet access. The newsletter is now in a more easily printed 8.5- x 11-inch

format and is in color on the web. Over the next couple of months we will continue to refine the format of the newsletter as we receive your suggestions.

We have a couple of requests for all our members and friends:

- If you are receiving *The Midland Chemist* by surface mail and *do* have Internet access, please send your e-mail address to me (Ann Birch, ann.birch@editech-mi.com) so that we can begin electronic communication with you.
- Please be patient with us as we continue to work with e-mail lists and website content. Just assembling all the e-mails and checking with members has been a bit of a challenge.

As always, your comments are welcome! Please let us know what we can do to improve communication not only to you but from you.



www.midlandacs.org

Eldon Graham

Engineers Week Banquet Shows Off Race Car Designs

At the Engineers Week Banquet in Frankenmuth on February 19, 2009, students from Saginaw Valley State University, Central Michigan University, and Kettering University described the features of the race cars that they are designing and building for the Society of Automotive Engineers international competitions.

The host for the Engineers Week Banquet this year was the Mid-Michigan Section of the Society of Automotive Engineers. The program was sponsored by the Saginaw Valley Engineering Council, of which the Midland Section ACS is a member. The Council is composed of 18 area scientific and engineering organizations. Eldon Graham is the Midland Section ACS representative.

The SAE Formula Car International Competition will be held in May at the Michigan International Speedway near Jackson, Michigan. Last year 140 top engineering schools from across the U.S and ten different countries competed.

In 2008, the entry from Saginaw Valley State University placed the highest of all the Michigan engineering schools and in 14th place internationally. The SVSU entry placed first, internationally, in the acceleration competition. In past years, the Saginaw Valley State University entry placed as high as 6th and 8th place, overall, in the international competition.

The SVSU Student Design Team is composed of 24 student members dedicated to this extracurricular activity. They learn about engineering design and material science properties of metals, plastics, and carbon fiber. They also learn about skills such as teamwork, planning, scheduling, construction, combustion, lubrication, electric circuits and controls, cost estimating, report writing, presentation, and driving.



Eldon Graham, Student Race Car Design Team Advisor, appears to be ready to take off for the speedway. He is accompanied by Angelo Cassar, Chair of the Midland Section.

SVSU Professor Brooks Byam and Professor Emeritus Eldon Graham have served as advisors for the past ten years. It is a fulfilling experience and lots of fun for the students and the advisors.

ACS Tour Speaker

Bates Discusses the Chemistry in Foods

What You Always Wanted To Know
about Chemicals in Foods But Were
Afraid to Eat

Robert P. Bates, Ph.D.

Monday, April 6, 2009; 4:00 pm
Dow 175, Central Michigan University
Mt. Pleasant, MI

Foods are complex mixtures of chemicals, but with a difference. There is a very important legal distinction between naturally occurring food constituents and other chemicals that end up in food by design or default. Conversely, the much more important matter, chemical compatibility—dictated by human physiology and nutritional biochemistry and vital to well-being, health, performance, and survival—is often ignored or misinterpreted by vocal yet chemically illiterate groups.

Despite considerable progress in understanding the science and technology of foods, culture and perception have a far greater influence upon food acceptance and regulation than the reality of nutrition and

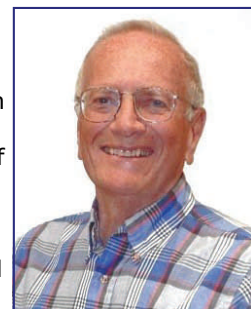
toxicology. Paradoxically, as science uncovers more about the complex interactions of foods with the human body, the less confident and more confused the public becomes regarding the safety, value, and nutritional efficacy of the U.S. (increasingly global) food supply. Food additives and now phytochemicals are examples of food consumption concerns that should also stress total diet, lifestyle, and common sense.

This presentation will deal with both essential and trivial food constituents and emphasize some of the positive and negative aspects of each. Despite our imperfect and changing knowledge, a better appreciation of the chemistry and metabolism of foods has dramatic potential for improving health, while ignorance is sure to have the opposite effect.

Biographical Information

Bob Bates received his B.S. degree in food technology from MIT. After several years in the food industry, he obtained an M.S. degree in food science

from the University of Hawaii and a Ph.D. in food science from MIT. After a year at the Institute of Nutrition of Central America and Panama in Guatemala, he joined the University of



Florida. He is presently professor emeritus of Food Science in the Food Science and Human Nutrition Department. His areas of interest include food processing and utilization, small-scale process and equipment development, fermentation technology and byproduct recovery, food product development, and international technical assistance. His major responsibilities involve teaching graduate and undergraduate food science processing and product development courses and conducting research/extension activities in home, community, and small-scale industrial food processing operations.

Tom Lane, President ACS

The Process of Reaching Out

Last month, we talked about helping me rebuild our Society's membership, which has fallen below 155,000 members. In Council, we plan to talk about ways to attract and retain members to the ACS. If you have ideas, concerns, or feedback please send them to me and I will be sure to include them. Remember, membership in the Society is less than 39 cents a day—less than 20 cents a day for students. Such a small investment has a huge impact in our discipline. Please, work with me to rebuild the Society!

This month, I would like to talk about the importance of reaching out and working with groups that we do not normally work with. It would be wonderful if the Section reached out to underrepresented groups and worked to build a new and productive relationship. One new thing that National is experimenting with is the Diversity Partner Program. This is a pilot program to supplant the aging Ambassadors program with the intent of reaching out to our underrepresented populations in a more organized and consistent manner. It is designed to broaden participation in the chemical sciences among diverse and traditionally underrepresented groups, starting with the African American, Hispanic, Native American, and Asian communities. The ACS Board of Directors officially launched this pilot program in January of this year. The activity will receive oversight from the Diversity Partner Working Group of P&MR (ACS Board Committee on Professional and Member Relations) and will be chaired by the ACS President. The Board ap-

proved annual funding of \$12,000 to help support the activities of the pilot with respect to the four targeted communities. The Diversity Partners were appointed last fall to three-year terms and will report at the June and December P&MR meetings.

Asian Community

(Diversity Partner: Guang Cao–Exxon Mobil)

Unlike the other communities targeted in this pilot, the Asian community is not underrepresented in science. The issue instead seems to be leadership and advancement in science and overall inclusion. This group will focus on the question of how we increase Asian American participation in the leadership of our scientific and engineering societies.

Hispanic Community

(Diversity Partner: Javier Macossay-Torres–University of Texas)

The plan is to reach out to key universities, federal policymakers, and other organizations (e.g. SACNAS, Society for the Advancement of Chicanos and Native Americans in Science) in select regions with high Hispanic populations to discuss and develop targeted outreach messages that showcase chemistry careers and their contributions to society. This effort will likely involve the creation of an informal group on the ACS Network.

Native American Community

(Diversity Partner: Shanadeen Begay–Boston University)

The primary focus will be to elucidate through better data the main barriers to Native American attainment of sci-

ence degrees and to facilitate a common understanding of how these barriers can be mitigated. This will involve recognition of the cultural and scientific diversity of Native American tribes.

African American Community

(Diversity Partner: Thomas Epps–University of Delaware)

This effort is focused on improving the recruitment and retention of the African American community in the chemical sciences through two aims. The first is to enhance recruitment into higher education degree programs by making middle and high school students aware of exciting career paths available to them. The second aim is to prepare them to succeed by making them aware of the educational and research requirements necessary to ensure a successful transition into the chemical workforce, while strengthening their mentorship opportunities along the way.

Come on, Midland Section...what can we do to make a difference in our community, in our nation, in our world? Your input is always welcome and I will keep you informed as this exciting pilot begins to take root. Please contact me via the ACS Network or e-mail (president@acs.org).



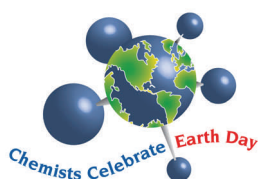
Photo Credit: Peter Cutts Photography

Gretchen Kohl

Midland Section To Celebrate Earth Day

Earth Day
Saturday, April 18, 2009
10:00 a.m. to 3:00 p.m.
Midland Center for the Arts
Midland, MI

The Midland Section, in conjunction with the Midland Center for the Arts, will celebrate Earth on Saturday, April 18. The theme this year is "Air - The Sky Is the Limit." This is a free event for the public, with displays and demonstrations from providers such



as Chippewa Nature Center, the Recycling Center, Dow Corning Solar Cars, and Little Forks Conservancy. Bring the

family and have some fun! Volunteers are also welcome. Contact Gretchen Kohl for more information, 989-631-7128.



Several young participants from the 2008 Earth Day.

David Baker

YCC Provides Networking for Young Professionals

The mission of the Younger Chemists Committee (YCC) is to engage local "chemists" both in networking opportunities and to make them aware of the resources available from the American Chemical Society.

Most of their activities are centered on social events. Last year they were able to co-sponsor a number of events, including one with the Dow YRC to a Great Lakes Loon game which had around 100 attendees. In July as part of their outreach the YCC co-sponsored with Auburn Jaycees and the Dow New Hire Social Group a kickball tournament called "Kickin' It in the Park". There were eight teams with around 130 participants representing a number of groups including Dow Chemical co-ops and the Central Michigan University student affiliates. From this event they raised over

\$1,000 for Relay for Life. During the Fall Scientific Meeting the YCC were responsible for the set-up and take-down of the poster boards, easels, and equipment

This year is no different and besides another kickball tournament in July, the YCC is hoping to co-sponsor a canoeing trip down the Chippewa River. They hope to plan other events with the student affiliates of Central Michigan University and Saginaw Valley State University as well as the Mid-Michigan Technician Group. One of these events maybe a brewing demonstration.

For more information about YCC or if you are interested in entering a team to participate in the 2009 Kickin' It in the Park you can contact the Midland Section YCC chair Todd Bryden at trbryden@dow.com.



After a day in the sunshine spent kickin' it in the park.

Bradley Fahlman

Spring Science Education Recognition Dinner on April 23

Spring Science Education
Recognition Dinner
Thursday, April 23, 2009
6:00-9:00 p.m.
Dow Corning Cafeteria
Midland, MI

Program:

6:00 p.m. Reception
6:30 p.m. Buffet Dinner
7:30 p.m. Awards Presentations

Teachers, students, and a volunteer will be recognized for their outstanding achievements in science education at this thirteenth annual event.

The cost of the dinner is \$18.00 per person and includes appetizers, dinner, dessert, and beverage. Please respond by mail using the form below. Your dinner reservation request must be received by April 17, 2009. You may also register by e-mail to Brad Fahlman (fahlm1b@cmich.edu) and pay at the door.

This event is sponsored by the Midland Section of the American Chemical Society and underwritten by grants from The Dow Chemical Company and Dow Corning Corporation. For further information, contact Brad Fahlman at 989-774-1195.

To reserve a place at the 2009 Spring Science Education Recognition Dinner, return this form with payment (\$18.00/person) by April 17, 2009, to Prof. B.D. Fahlman, Central Michigan University, Department of Chemistry, Dow Science 357, Mount Pleasant, MI 48859. Checks should be payable to "Midland Section ACS."



Outstanding high school chemistry students from 2008 recognition dinner, flanked by members Tom Lane (left) and Steve Kaganove (right).

Reservation for 2009 Spring Science Education Recognition Dinner

Name(s): _____

Affiliation: _____

Address: _____

Phone/Email: _____

ACS member? Y N

David Baker

Student Affiliates at SVSU Focus on Outreach

Editor's Note: This is the first in a series of articles on student affiliate groups at colleges and universities in the Midland Section area. The Student Affiliates of the American Chemical Society is the official ACS organization for undergraduate chemical science majors. Members participate in a wide range of programs and activities that enhance their college experience and prepare them for successful careers.

The student affiliate group at Saginaw Valley State University is called the "Chemistry Club of SVSU." The mission of the SVSU Chemistry Club is "to be effective in informing our members, fellow students, and community about the importance of chemistry in our daily lives through service and outreach."

Clearly the group's primary focus is on outreach and community service. Traditional activities they participate in include hands-on activities at the ACS-sponsored Sci-Fest and the Science and Math Extravaganza for Kids held at SVSU. Last fall they participated in a "trick or trunk" activity for kids in Saginaw on Halloween. Activities of a nonscience nature included participation in Relay for Life and Adopt-A-Highway.

Their focus on chemistry-related activities is quite wide-ranging. These include tutoring science students in chemistry courses, trips to graduate schools, and hosting career-related

speakers. The speakers have come from a variety of work environments, including industry, academia, and the government. Most recently, they competed in the "Battle of the Chem Clubs" hosted at U of M Flint. It was a competition involving sessions such as "Chemical Jeopardy," a titration contest, spectroscopy challenge, and a calculation relay. They came in first in the titration and spectroscopy challenges. SVSU plans to host the event next January.

In 2008 they received a Commendable Chapter Award from the ACS for their activities, following the "Honorable Mention" they received in 2007. This spring some of the students will be attending the National ACS meeting in Salt Lake City, Utah, to present a poster on their outreach activities for children.

David Karpovich appears to enjoy his role as faculty advisor to the student affiliates and says, "They are a great group of young adults, and I'm proud of their dedication."



The president of the Chemistry Club of SVSU, Christopher Alvey, and a young participant in the 2009 SMEK (Science and Math Extravaganza for Kids).

The current affiliates are not resting on their accomplishments—they are actively engaged in efforts to beef up the endowment of another chemistry research scholarship on campus.

The Midland Section website has links to Section area institutions that host student affiliate groups, including SVSU, Central Michigan University, and Alma College (<http://www.midlandacs.org>; click About Us|Section Leadership).

Janet Smith

Travel Grants

The Midland Section annually offers the Donald R. Weyenberg Memorial Student Travel Grant to help students present their work at scientific meetings. Don Weyenberg was a pioneering research chemist at Dow Corning. Two students were selected to receive a grant and will present their work at the 2009 Spring National ACS Meeting in Salt Lake City. Cassie Patterson (SVSU) will present "Using glycerin from biodiesel production as a co-fuel in a heating furnace: Emissions and efficiency." Christopher Alvey (SVSU) will present "Chemistry club members x [kids] = moles of fun at SVSU."

From National ACS

ACS Short Courses in Durham, NC

In a tight job market, education is power. The ACS Short Course Circuit in Durham, NC, from May 4-7, 2009, gives you a great opportunity to advance your career and invest in your future. Short Course Circuits provide you the chance to take advantage of a wide range of course offerings in a single location and network with fellow scientists. Visit www.acs.org/shortcourses for complete details.

- Chemical Engineering and Process Fundamentals for Chemists
- Pharmacokinetics and Pharmacodynamics: Principles and Applications in Pre-Clinical Drug Development
- Polymeric Coatings

- Laboratory Safety
- Experimental Design for Productivity and Quality in Research & Development
- Statistical Analysis of Laboratory Data
- Ecological Impact of Chemicals
- Recent Developments in Organic Synthesis
- Effective Supervision of Scientists and the Technical Staff
- Analysis and Interpretation of Mass Spectral Data
- Methods Development, Validation Procedures, and Conformity Assessment in the Analytical Laboratory

Wendell Dilling

In Past Issues of *The Midland Chemist*

40 Years Ago This Month

In *April Meeting*: "Determination of Trace Level Constituents in Environmental Systems" by Dr. David N. Hume: "The effects of the rapidly increasing pollution of the environment with the by-products of modern civilization are bringing a belated recognition of the significance of trace amounts of many constituents in our surroundings.... There is very little knowledge of what these species do, where they go, how long they persist, what their natural levels are, or what constitutes safe amounts. Standards are being set by lawmakers and it is essential that methods of measurement be available which are capable of giving reliable answers to some of these questions. Very few such methods now exist."

30 Years Ago This Month

In *Dow Corning Provides Exhibit for Alma College*: "'If you want something good, go for the best,' Alma College Chemistry Club president Lisa Cresswell decided when an exhibit in one of the Dow Science Building's display cases became hopelessly out-

dated. So Lisa contacted Dow Corning Corporation in Midland and her request for an up-to-date display generated the production of the exhibit she is viewing here. 'Although Dow Corning had nothing suitable when Lisa asked, the idea seemed like a good opportunity to enhance the corporation's image on the college campus,' said A.N. 'Pete' Hainline, director of college relations for Dow Corning. Design Craftsmen of Midland came to campus, measured the display case, and put together 'Silicones: Man-Made Materials Solving Today's Technological Problems,' an exhibit based somewhat on a display Dow Corning put together for the Chicago Museum of Science and Industry. (An estimated 4 -1/2 million people see that exhibit each year.)"

20 Years Ago This Month

In *Chairman's Corner* by Gretchen Kohl: "I would like to extend my personal congratulations to the Midland Chemist's editor, Muthyala Ramaiah, to the current staff and all previous editors and staff workers for achieving 25 years of the Section's publication."

There are countless hours of strictly volunteer work required to produce each issue. Our recent membership survey results indicated that most of the respondents read *The Midland Chemist*. It is one of the most visible benefits that one receives as a Midland Section ACS member and is our main vehicle to contact members with information."

10 Years Ago This Month

In *ACS Michigan State Capitol Day Slated for May 26* by Wendell L. Dilling: "The ACS Office of Legislative and Government Affairs and the local sections in Michigan have planned a one-day event at the state capitol in Lansing for Wednesday, May 26. This event will give interested Michigan ACS members the opportunity to meet Lt. Governor Dick Posthumus, who will be the keynote speaker, and also meet state legislators and state agencies personnel to discuss public policies that benefit the chemical profession in the areas of competitiveness, education, environment, research, workforce issues, and other Michigan specific issues."

Editor

Volunteer Opportunities

Earth Day

Contact Gretchen Kohl, 989-631-7182, gretchen.kohl@dowcorning.com

Where: Midland Center for the Arts, Lobby and Garden Room

What: Set-up, tear down, demonstrations

When: Saturday, April 18, 9:00 a.m. to 4:00 p.m., in 2-hour increments

Skills: Willing hands (set-up and tear down); enthusiasm for working with kids (demos)

Website

Contact Ann Birch, 989-832-7485, ann.birch@editech-mi.com

What: Assistant webmaster

Skills: Comfort with working in the web environment, working with graphics

Do You Have Outreach Materials?


We would like to consolidate and better organize ACS Outreach efforts by inventorying supplies and cataloging what we have, what it might be used for, and potential contacts for how to use it. We would like those who have equipment or demonstration materials that need a "home" to consider dropping these items off at Quadsil (on Arrow Cove, in the Eastwick Industrial Park off Waldo in Midland, 989-496-1434). Be sure your contributions are "usable." If you have materials earmarked for a specific activity, we can make sure stored items are available for those who have specific plans for them.

If you are interested in helping with inventory and cataloging, or if you have questions, contact Lisa Thackery (989-496-4077) or Gina Malczewski (989-496-4158). We also plan to start regular Outreach meetings that will deal with collaboration across activities.

National ACS

Fellows Program

In his "ACS Comment" in the Jan. 19th issue of *C&EN*, ACS Immediate Past President Bruce Bursten describes his vision for "... a new mechanism for ACS to celebrate the excellence of its membership." That vision has now been realized in the ACS Fellows program, in which ACS members are recognized and honored for outstanding contributions to science and the profession, as well as exceptional service to ACS. Fellows will be selected annually by a Selection Committee chaired by the ACS Immediate Past President. The deadline for nominations for the first class of ACS Fellows is April 15, 2009. Nominees must be ACS members; self-nominations will not be accepted. More information about the ACS Fellows program, including nomination criteria and documents, can be found online at www.acs.org/fellows or requested by e-mail to fellows@acs.org.



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National ACS

ACS Webcasts Offer Training

ACS Webcasts are one of the best ways to get technical training from a trusted and respected source. ACS recently lowered prices on basic-level courses to ensure that chemistry professionals can still advance their careers by accessing quality training. Check out these great features:

- Economical: Most ACS Webcasts cost less than \$100 an hour, which is far less than most technical training.
- Easy: Our technology is easy to use and works with all typical computer systems.
- Convenient: Class attendance is not required. If you miss a class, simply review the class recording at a later time. Or take the entire class as self-paced by just accessing the recordings.

- Informative: All class materials are available for download and you can email the instructor anytime.

Visit www.acs.org/webcourses for complete details on available discounts. ACS Webcasts are multi-session courses with a live instructor. Sessions are conducted online with audio teleconferencing. Questions? Contact ACS at shortcourses@acs.org.

The following courses are open for registration:

- Principles of Analytical Chemistry: Session 1: April 6-8; Session 2: September 28, October 1 and 2
- Modern HPLC in Pharmaceutical Analysis: April 7, 14, 21, 28, May 5 and 12
- Fourier Transform Infrared Spectroscopy: September 14, 16 and 18
- Infrared Spectral Interpretation, Basic: September 14, 16 and 18
- Infrared Spectral Interpretation, Intermediate: September 29 and 30

Want to preview a webcast? ACS is now offering free 30-minute micro-courses so you can get a sample of the content of our webcast courses. These micro-courses are taught by ACS webcast instructors and are a great way to get a taste of online learning to see if it's right for you and your team.

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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