

THE MIDLAND CHEMIST

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From the Chair

My World and Welcome to It

With the beginning of a new year, it is time for me, your chair, to pontificate about something or other, just to let you know that a) somebody out there is alive, and b) somebody out there gives a damn. You get a) and b) together.

What is it, anyway, about this great American Chemical Society that gets some of us all flustered up enough to care and say, okay, being a member is one thing, but we are going to do something about being a member. We are going to do something, even if we don't know what it is, we're going to do it!

So we get our duffs off the dust, get up and volunteer. That's right, that is what I said, volunteer. To get something out of being a member in an organization, you must, you simply must get involved. For many of the organizations such as the ACS, getting involved starts out by becoming interested and then involved in the local section.

Yes, many of us do get involved in

the national ACS meetings, attending, presenting, and so forth. Yet how many of us get involved in the local meetings? There are coffee cafes, there are SEED programs, there is an Educators day at the Saginaw Spirit, there are the things being planned for Earth Day in April, there is the Fall Scientific Meeting, Sci-Fest, and many, many more events being planned and worked on.

What gets me going is that what we have here is participation by a few for the benefits of many—many who aren't members of our society, but members of our communities who just might in some small way be served by the members of our society when we do what we do. One thing we can be sure of, if we don't do the many activities that we do, these people will not have the benefit of participating in our



John (Pat) Cannady

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Calendar for Feb./March

Feb. 10 Outreach Call-In Meeting
Feb. 17 Engineers Week Banquet
Feb. 27 Section Board Meeting
Mar. 26 Award Nominations Due
Mar. 28 Section Board Meeting

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

world—the world of what I will loosely refer to as the chemical sciences, an underpinning of the world that just should not be ignored.

I have gone on long enough for now. Why don't you come on and join us for a particularly thrilling year? You can help make it more thrilling than ever—volunteer your time, your efforts, in one or more of the activities you see mentioned in these pages.

John P. Cannady

Kevin Wier, Nominations & Elections Committee

2011 Election Results

The election of 2011 Midland Section ACS Board members is complete. Thank you to all of the candidates who accepted the invitation to participate.

Congratulations to the newly elected Board members listed below:

Chair-Elect: Gina Malczewski

Secretary: Abhijit Sarkar

Treasurer: Darren Hansen

Chair, Nominations and Elections Committee: Brian Pate

Councilor: Wendy Flory

Alternate Councilor: Gretchen Kohl

Directors: (3-year term) Wendell Dilling, Steve Keinath, Janet Smith. Dave Stickles was also elected by the Board to serve as director this year in Gina Malczewski's place.

Amendment 1: Midland Section By-Laws shall be amended as required by National ACS to be consistent with recent changes at the National level. *Approved*

Amendment 2: Midland Section By-Laws shall be amended as recommended by National ACS to be consistent with recent changes at the National level. *Approved*

Amendment 3: Midland Section By-Laws shall be amended to allow electronic voting in future elections. *Approved*

A detailed overview of the election results will be published in the Midland Section's Annual Report. It is also available to any member by contacting Kevin Wier, kevin.wier@dowcorning.com.

Diana K. Deese, Awards Chair

Call for Awards Nominations

Each year, the Midland Section of the American Chemical Society presents awards to recognize outstanding achievement in the teaching of the chemical sciences. Nominations for the 2011 awards are invited for the following areas:

- Outstanding Achievement in Elementary Level Science Teaching
- Outstanding Achievement in Middle Level Science Teaching
- Outstanding Achievement in High School Chemistry Teaching
- Outstanding Achievement in College Chemistry Teaching

(Continued on page 2)

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- Science Education Volunteer of the Year
- Outstanding Achievement and Promotion of the Chemical Sciences
- Outstanding Service to the American Chemical Society
- Outstanding Chemical Technician
- Outstanding High School/College Chemistry Students

Outstanding Achievement in Teaching

Candidates for the teaching awards must be educators at schools in the five-county geographical area of the Midland Section: Bay, Gratiot, Isabella, Midland and Saginaw Counties. The Science Education Volunteer of the Year award is presented to an individual who makes a substantial contribution to science learning in the Midland Section through voluntary efforts. Nominations should include a biographical sketch, list of pertinent activities/behaviors, evidence of involvement, and letters of support from colleagues and/or students. *Parents:* Does your child have a great science teacher? If so, consider nominating him/her.

Science Education Volunteer of the Year

The Science Education Volunteer of the Year award is presented to an individual who makes a substantial contribution to science learning in the Midland Section through voluntary efforts. Nominations should include a biographical sketch, list of pertinent activities/contributions, and, evidence of professional involvement.

Outstanding Achievement and Promotion of the Chemical Sciences

Each year the Midland Section honors an individual residing within the Section's geographical area who has demonstrated outstanding achievement and promotion of the chemical sciences. This award recognizes dedication and service to the chemical profession, but the recipient need not be an ACS member. Nominations should include a biographical sketch, list of pertinent publications, evidence of professional growth and involvement, and letters of support from colleagues.

Outstanding Service to the American Chemical Society

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

promotion of the goals and objectives of the Society. Nominees shall be members of the Midland Section. Nominations should include a biographical sketch, a history of service to the Midland Section, and supporting letters from fellow ACS members.

Outstanding Chemical Technician

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. Nominees must have worked for five years as a chemical technician or related field. Chemical technicians do not need to be an ACS member to be eligible for this award. Nominations should include a biographical sketch, contributions to industry, patents and papers, outside affiliations, and, supporting letters.

Recipients of all awards will be selected by the Awards Committee. Nominators should write a letter indicating the award and describing the attributes of the candidate. Supporting letters from students, colleagues, supervisors and community leaders are strongly encouraged. The deadline for nominations is March 26, 2011. Mail or Fax submissions are acceptable; *electronic (e-mail) submissions are preferred*. All submissions must be accompanied by the name, position, address and phone number of the nominator.

The Awards Committee also recog-

nizes outstanding chemistry students at the high school and collegiate levels. Those students should be selected by the respective departments and their names forwarded to the Awards Committee.

Award recipients, as well as Chemistry Olympiad winners and Fifty/Sixty Year ACS Members, will be honored at the 2011 ACS Recognition Dinner on April 28, 2011 at the Great Hall in the Valley Plaza, Midland.

The Awards Committee greatly appreciates the efforts involved in nominating someone and wishes to thank you for helping to recognize deserving educators in our section. Please pass this call for nominations along to anyone involved in our local science programs! For example nominations or more detail on any award, please contact Diana Deese.

Electronic submissions are acceptable and preferred (e-mail: diana.deese@dowcorning.com), or via U.S. mail to:

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Eldon Graham, Technical Society Interface Committee Chair

Feast Your Eyes on This

**Engineers Week Banquet
and Program
February 17, 2011
Bavarian Lodge and
Conference Center
Frankenmuth, Michigan**

The annual Engineers Week Banquet and Program will be held on Thursday, February 17 at the Bavarian Lodge and Conference Center (One Covered Bridge Lane) in Frankenmuth, Michigan. Times are as follows: 6:00 p.m., Social Hour; 7:00 p.m., Dinner; 8:00 p.m., Program.

The event is hosted by the Mid-Michigan Section of the American Society of Automotive Engineers. There will be an opportunity to meet Dr. Richard Kleine, National SAE President-Elect for

2011. Tickets are \$25 for you or your spouse. Student tickets are \$18. Tickets are available on-line at SAEmidmichsec@cs.com or from Bernard Santavy (810-635-7948).

There will be student speakers from Baker College, Central Michigan University, Kettering University, and Saginaw Valley State University, who will report on their design of vehicles for the Formula SAE, Clean Snowmobile Challenge, Supermileage, and Mini-Baja. It is a great opportunity to meet these future engineers.

The Midland Section ACS through its Technical Society Interface Committee is a member of the Saginaw Valley Engineering Council. The Council is composed of 18 area technical societies. ACS members and spouses are qualified to attend, at the member ticket rate.

David Baker, MC Staff Writer

An Idea and a Name Become a Business

Savant, Inc. is an independent research and development company working in the advancement of lubrication technology. The company was started in Midland, Michigan by its present Research and Development director, Theodore Selby, and is still based here. How Ted conceived and developed the company can be traced back to the early 1960s.

At the time, Dow Chemical was interested in the development of Viscosity Index (VI) Improvers for automotive lubricants. It was during this time they hired Ted, a physical chemist, to work on the so-called 'Ambifal Project.'

Before joining Dow Chemical, Ted had been working for General Motors at their Technical Center in Warren, Michigan, where he was one of relatively few physical chemists amidst many engineers. In his work, he studied and published papers on VI Improvers in automotive fluids.

Dow's VI Improver was shown to be a good product, but its economics were not as good. As interest waned, Ted was reassigned to other interesting areas of automotive research within Dow, including opportunities to help in developing automotive technical perspectives for Dow marketing.

With his background involving the chemistry and physics of lubricants, Ted thought it would be interesting and challenging to independently consult in this technical area. Accordingly, he approached Dow management with his thoughts and received both encouragement and support.

His new office was opened in 1971 under the name of Saginaw Valley Institute of Materials Engineering. The name was chosen to give the acronym 'Savant' (Saginaw Valley Institute), a French word which means 'wise friend,' and seemed appropriate for a scientifically-based consulting company.

Initially, Ted did the majority of his consulting for Dow Chemical. Shortly after setting up his office, he began to get requests for consulting work from other businesses, including the need for laboratory tests.

He then moved to an office and small lab space on Eastlawn Avenue. However, with the relatively rapid growth in requests for laboratory testing, Savant was required to find larger quarters. Exploring a two-story building for rent on Larkin Street in downtown Midland, Ted discovered an empty bottle of cologne called Savant, which sealed the deal.

With this new space came another opportunity: a request from a large petroleum company to develop an instrument needed for measuring viscosity at higher temperatures and shear rates—an important property of VI Improved lubricants.

This grew into the opportunity and challenge to recognize and meet growing needs for new laboratory instruments capable of improving the understanding, and application, of lubricants.

In turn, this led to the 1979 birth and development of a sister company, Tannas, who became an independent instrument manufacturer. Growth of the two companies pro-



Ted Selby, Savant, Inc. founder and R&D Director

ceeded.

As a consequence of field concerns about the quality levels of some of the many engine oils on the market, another sister company was generated in 1984. Its purpose was to sample marketed engine oils and have a number of laboratory tests performed to appraise their properties. The data was then published for those interested in such information. The new company carried the name 'The Institute of Materials,' or IOM, and today samples 650 oils from markets around the world.

In 1987 Ted realized the two companies needed a still larger location, so the present facilities were built to house all three companies on the intersection of James Savage Road and Rockwell Drive. These facilities were further expanded in the early 1990s to provide much needed space for storage needs of the Savant Group of sister companies.

Ted and his associates in the Savant Group have written well over 220 technical papers and generated over 46 patents on analysis techniques and instruments used in appraising the quality of lubricants.

As a consequence of such ongoing opportunities and challenges in the associated industries, Savant and Tannas have developed and provided several key engine oil bench tests. These are now required by industry specifications. For a small enterprise, Savant



Oil samples ready for testing.

(Continued on page 4)

Gina Malczewski, Outreach Group Leader

Join Outreach Conference Call, Learn About 2011 Events

**For all volunteers
Outreach Conference Call**

February 10, 2011

4–5 p.m.

Phone number: 866-299-7945

Participant code: 9837036

Outreach Activities for 2011 are already well underway. Have questions about what ACS Outreach / Kids in Chemistry is doing this year? Please call in to our first CONFERENCE call on Feb 10, from 4-5 p.m. We're testing this approach to see how it works to get people together with minimal fuss.

We would like to use this time to discuss all your options for participating in this year's events, some of which are listed below. We need volunteers—these are requests/plans that will not come to fruition without help!

At the meeting, we will also be brainstorming ideas for new demos and activity packages. (Just because you suggest it does not mean you have to develop it.) We also seek volunteers to help with supply inventory and shelf-building!

Please consider this your personal invitation to make the International Year of Chemistry a memorable time for our community. Join us for the call-in meeting if you can. Phone number:

866-299-7945; Participant code: 9837036.

If we know ahead that you will be joining, we may be able to share some documents for you to have handy as we chat. (That way we may also have an idea of response so we can increase the number of lines, if needed.)

You are welcome to contact Lisa or Gina with questions, or to volunteer, at any time. We will help you get the training or the prep you need.

Gina.malczewski@dowcorning.com

Lisa.thackery@dowcorning.com

Event	Date	Location
Dr. Seuss science cafe	Jan 22	Mt. Pleasant Public Library
Kids Day	Jan 29	Midland Mall
Demo/activities for middle school (Elements)	Jan 26 (?)	Saginaw Detention Center
Bringing Science to Life with Teachers	Feb 11	Beaverton
Michigan Science Teachers Association Meeting "Bringing Science to Life"	Feb 26	Grand Rapids
Science café	Feb	Oasis High School Mt. Pleasant: coffee and extraction
Science café: Molecular Gastronomy I	Feb/March?	Windover? (with Table chef Jamie Jeffrey)
Science café: Molecular Gastronomy II	Apr 4? (may repeat)	Bay City Central School, with Shari's chef Aaron Gaertner
Education Day (with Saginaw Spirit)	March 1	The Dow Event Center: Theme: "Energy—It's Everywhere!"
SPARK	March 4	Hemmeter School in Saginaw; Theme: "Carnival of Learning"
Pittcon demos and BSTL	March 12-16	Atlanta
Saginaw Science and Engineering Fair	March 12	SASA
Girl Scouts Camp Chemistry III: Polymers	April 16	Delta College
Bay City Science Fair	April	TBD
Explore Day	May 6	St. Thomas Aquinas, Saginaw

(Continued from page 3)

hired four new employees in 2010—a positive sign in this current economic climate.

Much of the work in the Savant laboratory is to generate quality-assured bench test data on lubricants. These tests are conducted according to standards of the American Society for Testing and Materials (ASTM) and

other technical societies generating standardized test methods, such as the Coordinating European Council (CEC).

The rest of the work in the laboratory is focused on providing customers with test data corresponding to required lubricant specifications, or generating data for research programs requested by clients.

In general, Savant performs a wide range of tests on engine oils, transmis-

sion fluids, gear oils and other industrial lubricants for companies throughout North America and other parts of the world.

For more information about Savant, Inc., its services and custom testing, you can contact them at Savant@savantgroup.com. Or, visit their website at www.SavantLab.com, and the group of companies' shared site at www.savantgroup.com.

Amy Tesolin-Gee and Deb Mendrick, MMTG 2010 AAF Coordinators

MMTG Members and Kids Adopt Local Family

The 2010 holiday season again saw MMTG members pulling together for the annual Salvation Army Adopt-a-Family (AAF) campaign. Generous members of the Dow Chemical and Dow Corning tech groups also contributed. Even MMTG members' kids got into the act.

The call for donations resulted in \$300 cash collected at the MMTG Holiday lunch, plus additional donations, for a total of \$465.

The family matched with MMTG was a local single-mom and her three children: two girls, 10- and 5-years-old, and an 8-year-old boy.

Michelle Rivard contacted the family to obtain their gift list. The mother did not request anything for herself, wanting the focus to be on her children. When pressed for what she needed, we were able to add "warm pajamas," sheets, and a robe to the list.

Michelle's daughter enthusiastically helped shop, select and wrap gifts for the youngest girl. Kris Syverud shopped for the items on the older girl's list. Cassie Hale handled gift-shopping for the boy, with the expert help of her sons who are close in age.

Upon learning of the youngest girl's wishes for My Little Pony (MLP)



Michelle Rivard's daughter, Alyssa, poses with gifts before delivery to the family.

items, Gerard Nowaczyk's daughter donated many of her own like-new MLP videos, and several brand new activity and coloring books.

Additionally, a Wal-Mart gift card was purchased with donation money reserved for the family's holiday meal, along with the leftover gift-shopping change. Since Wal-Mart gift cards can be purchased for any dollar amount—

including odd change—this ensured that every penny collected went to benefit the family.

A week before Christmas, volunteers met for the now-traditional AAF volunteers' lunch at Pi's. After lunch, the wrapped gifts were handed over to Michelle, who, with Debbie Bailey, kindly arranged to get them to the family.

National Science Foundation

Explore Materials Science With "Making Stuff" NOVA Series

How do far-out creations, such as airplanes that change shape in flight, invisibility cloaks, or military vehicles that heal themselves, become realities? Via scientific discoveries and generation of new materials, of course.

New and often revolutionary uses for materials are endless, and materials innovations drive civilization and inspire scientific breakthroughs. It's that notion that motivated the popular science television series NOVA to take viewers on a behind-the-scenes tour of the world of materials.

In a new, four-part NOVA series, *Making Stuff: Stronger, Smaller, Cleaner, Smarter*, New York Times technology reporter David Pogue travels the globe to examine the latest advancements in materials re-

search and to find out what the future might hold in this field. The series airs on four consecutive Wednesdays, which began on Jan. 19, 2011 at 9 p.m. ET/PT on local PBS stations. *Editors' note: Episodes can be viewed at <http://www.pbs.org/wgbh/nova/tech/making-stuff.html>*

Major funding for *Making Stuff* is provided by the National Science Foundation's (NSF) Informal Science Education program. NSF's Directorate for Math and Physical Sciences also provides funding through its Division of Materials Research and Office of Multidisciplinary Activities. Additional funding is provided by the Department of Energy.

The NOVA team, in association with the Materials Research Society, produced the series.

The *Making Stuff* series kicked-off with, *Making Stuff: Stronger*, investigating the world's strongest materials. The episode examines what these materials are and how "strength" is defined. Pogue tests materials ranging from the large colorful beaks of toucan birds to steel cables, as he seeks to find the strongest materials in the world and discover how scientists are re-engineering natural materials to make them even stronger in the future.

Additional episodes in this four-part series include:

Making Stuff: Smaller (premiered Wednesday, January 26, 2011)

Explore some of the world's smallest materials and how recent develop-

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Wendell Dilling, Director and Historian

In Past Issues of *The Midland Chemist*

40 Years Ago This Month

In Midland Section's Role in Nuclear Power Issue Argued at Board Meeting:

"A report including recommendations by the *Ad Hoc* Committee on Nuclear Power Production was presented by D. R. Petersen, Committee Chairman: ... The group strongly favoring such a plant is called the Midland Nuclear Power Committee; the group challenging its construction is the Saginaw Valley Nuclear Study Group. The Midland Division of the Dow Chemical Company has indicated direct interest in the project, while a number of conservation and wildlife-preservation organizations have opposed it. The present committee recommends to the Board of Directors that the involvement of the Midland Section in the question of nuclear power production be consistent with the objectives of the American Chemical Society as an educational and scientific organization; that an appropriate type of activity could well be the sponsoring of a conference or a seminar series on the technical and social aspects of power production; and that the use of the pages of *The Midland Chemist* by concerned readers as a forum for discussion of the issues involved is especially valuable."

30 Years Ago This Month

In Nobel Laureate to Address 1982 Regional Meeting by Harold G. Fravel, Jr., Publicity Committee Chairman,

14th Central Regional Meeting: "Dr. H. C. Brown of Purdue University, who shared the 1979 Nobel prize in chemistry, will be the keynote lecturer at the 14th Central Regional ACS Meeting, to be held at Northwood Institute June 16-18, 1982. The Midland Section will host the meeting."

20 Years Ago This Month

In Chairperson's Column by Peter Dreyfuss: "As we begin a new year it is appropriate to reflect on the year just past as well as to look forward to our goals for the year ahead. Bill Pike has just completed a noteworthy year as Chairman of our local Section and we should be very grateful for the fine job he did. His efforts at identifying and convincing new people to serve the section will make my job as Chairman this year immeasurably easier. In 1990, we hosted a very successful Central Regional Meeting at SVSU in June; in addition, our annual Fall Scientific Meeting in October came off very well; once again we were able to supply a finalist for the National Chemistry Olympiad competition; and as a section we did an outstanding job contributing to the National Campaign for Chemistry."

10 Years Ago This Month

In Dow Executives Discuss Midland Section Issues by Ann Birch: "Three Dow Chemical executives, Rick Gross, Pat Andreozzi, and Charlie Kresge, joined Midland Section officers and

other Section leaders at what has become the annual Section leadership dinner on December 12, 2000. Rick is corporate vice-president and director of R&D; he led the informal discussion on Midland Section issues and how they affect and are affected by issues and attitudes within Dow. Pat Andreozzi is Dow's global R&D director, engineering sciences; Charlie Kresge is global R&D director, chemical sciences. Rick began the discussion with a simple statement 'ACS is a priority for Dow and Dow employees.' However, he went on to acknowledge that Dow employee participation in the local Section has diminished significantly in the last 15 to 20 years. Rick gave the keynote address at the 1999 Fall Scientific Meeting and was surprised to discover that few Dow employees attended or participated in the meeting. Attendees and participants were mostly from Dow Corning and academia. The 2000 Fall Scientific Meeting was held at the Dow Employee Development Center, and the meeting was communicated thoroughly within the company. Again, however, participation was disappointing... At the conclusion of the discussion, Rick praised the Midland Section for its professional and public outreach and pledged his support and that of other senior leaders at Dow to help the Section take its service to members and the community to an even higher level."

(Continued from page 5)

ments in high-powered nano-circuits and micro-robots impact our daily lives. What are the vast technological implications of these "small" technologies? Pogue examines this question as he takes the audience on an investigative tour of the smallest materials at the atomic level.

Making Stuff: Cleaner (premiered Wednesday, February 2, 2011)

Pogue investigates clean energy and the use of materials to create a cleaner environment. What materials can we develop to help clean the environment? How can bio-based fuels be used as efficient energy sources? Innovations such as tires made from orange peels, batteries grown from viruses and plastics made of sugar are

just the tip of the iceberg of future energy sources.

Making Stuff: Smarter (premieres Wednesday, February 9, 2011 at 9 p.m. ET/PT)

Can we use materials around us to pioneer new technologies that react to their environment? What if an Army tanker truck could heal itself following bullet damage? How can sharkskin be used to create an antibacterial spray? Researchers find inspiration from nature and beyond as they explore new ways to develop and utilize various materials.

For more information, including links to learn more about the science behind the series, visit: http://www.nsf.gov/news/news_summary.jsp?cntn_id=118385&WT.mc_id=USNSF_51&WT.mc_e

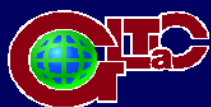
National ACS

Apply for ACS Teaching Grants

The ACS-Hach High School Chemistry Grant is awarded to teachers interested in enhancing the teaching and learning of high school chemistry.

Applicants can receive up to \$1,500 to support ideas that improve classroom learning, foster student development, and reveal the wonders of chemistry.

Applications are due on April 1, 2011. Apply for the ACS-Hach High School Chemistry Grant today at www.acs.org/hach.



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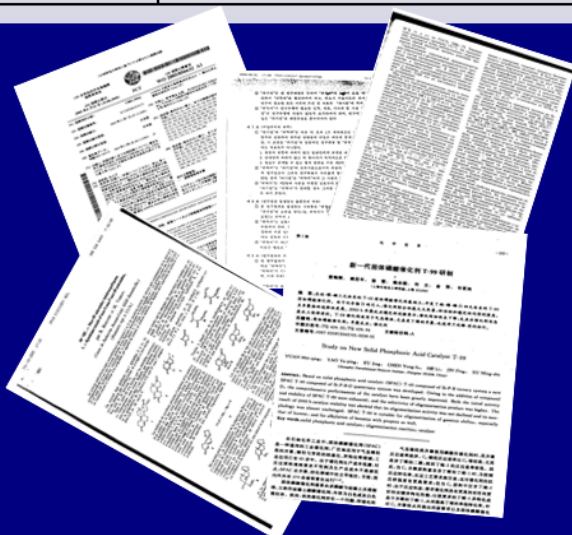
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