

THE MIDLAND CHEMIST



Vol. 39, No. 8

December 2002



Judging from the big smiles, you're never too young for science fun. Marvin Tegen brought daughters Brianna and (in backpack) Mikayla to Sci-Fest 2002, a celebration of science for families. Also in this issue: Election results (pg. 10) and more!

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Chair Column

The Magic of Volunteers

When I was a teenager, there was a popular song titled “Do You Believe in Magic?” It was a love song, but the title suggests the way I feel. Just over a year ago, as I was preparing for this year of keeping track of the Section, the stroke that I suffered was quite a blow. While the doctors told me that my stroke was only a minor affair, they also told me that it was significant, that certain things would have to be done differently, or else...well, the future was uncertain. As I was recovering, I needed to decide if I would take my elected spot as chair of the Section, or pass it on, according to the just completed election, to the very able chair-elect, Mike Owen. Mike generously offered to take over, a year sooner than expected. While his offer would have been an easy answer to the problem, I felt that I had something to give and something to get. Obviously, I took the spot and the responsibility, and for this year of 2002, I’ve been the chair. Along with relearning my basic tricks of life, I also learned a lot about the members of the Midland Section of the American Chemical Society.



Pat Cannady, Chair
ACS Midland Section

I learned that there are quite a few people in our Section who care a lot about all of us. They demonstrate this care by doing the things they’ve learned to do. They are quite busy people who do a wide number of jobs, including retirement. All have one thing in common—they’re members of the ACS! Whether it’s quite a few hours a month or a few hours per year, the members of the ACS that I’ve come into contact with all have one thing going for them—the feeling that chemistry, chemical engineering, or related technical fields make a positive difference in our quality of life.

I want to mention a couple of things in final passing. First, something I’ve done recently for you, members of ACS. In early November, with Wendell Dilling and Gretchen Kohl, I went north to West Branch, where they had National Chemistry Week activities in October. This date was the “celebration” night, a night of meeting people, eating excellent food, and presenting awards. Basically, we gave out about thirty plaques, certificates, and a few checks. Several thousand dollars, in fact, were handed over from one part of the community to the other in a spirit of giving. So much so, that the national American Chemical Society matched the donations to the tune of \$5000! What was even more exciting was that it had been only that morning that our local section treasurer, Doug Beyer, in-

formed me that ACS had come up with the matching funds. It was all a rather nice end to what had begun as a way in which one of our ACS members, John Blizzard, decided to give to West Branch some of the fun that is chemistry.

The other thing to mention is the annual Fall Scientific Meeting—chaired this year by Wendy Flory and Dale LeCaptain—and that is to say, wow! These two relatively new members of the Section just happen to be husband and wife, which certainly made communication a lot easier. Along with the management of The Dow Chemical Company, who hosted the meeting on a Friday afternoon, they certainly did a wonderful job this year in pulling together quite an impressive show. Good job!

I would like to thank all the people in the ACS who have made this year another successful year. You people have left nothing undone that could have been done. (Well, okay, so you didn't tell me about it if you did, but the impression is still great.)

Well, that's about all, it's been fun. Now, Mike, it's your turn!

Pat Cannady



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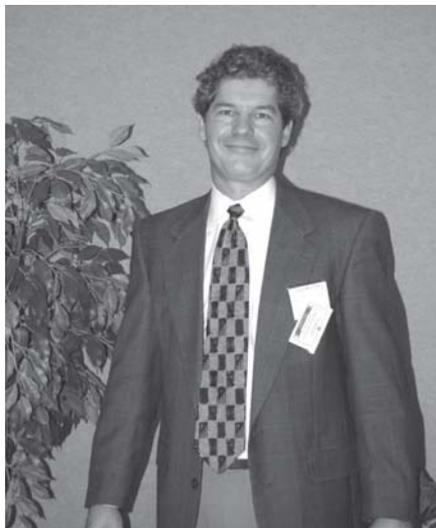
58th Annual FSM Promotes Science, Interaction

By Wendy Flory and Dale LeCaptain

The 58th annual Midland Section ACS Fall Scientific Meeting was held

on Friday afternoon, October 11th. FRIDAY?!?! Usually held on a Saturday it was moved to Friday in an attempt to turn around the trend in decreasing member attendance. Friday did seem to work out better for everyone—280 members and guests were treated to lunch, a variety of technical talks, posters, an exposition, and a social at Frick's. The keynote speaker, J. Michael Ramsey, Oak Ridge National Laboratory, summed it up nicely with "I had a great time scientifically and socially."

The meeting began with the poster session, a lunch graciously provided by The Dow Chemical Company, and the return of the exposition. Rick Gross donated The Dow Chemical Company's Midland Learning Center (EDC) facilities and lunch. "Excellent facilities really make the meeting come together," said one attendee. There were 30 posters in the poster session that lasted from noon until 4 p.m. The presentations were primarily of local research efforts from The Dow



J. Michael Ramsey, Oak Ridge National Laboratory, was the keynote speaker at the 58th Fall Scientific Meeting.

Chemical Company, Dow Corning Corporation, Central Michigan University, Ferris State University, Saginaw Valley State University, Eastern Michigan University, and Delta College.

The return of the exposition was a huge success due mainly to the hard work of MMTG and their project leader for this event, Wendy Mallory. An excerpt from her summary: "The following vendors participated: Agilent, Argonaut Technologies Inc., Dionex, Envision Communications, Facility Matrix Group Inc., Fisher Scientific, Grainger, H-E-L Inc., MTS, Sigma Aldrich, and TA Instruments. Other vendors in addition to these listed are interested in participating next year. This was a great way for attendees to visit with vendors and discuss their service and supply needs. Numerous comments could be heard throughout the day on how much the exposition was appreciated. These vendors were all interested

in returning to future meetings. Also included were booths for the American Chemical Society Midland Section and the Division of Chemical Technicians (TECH).”

The meeting got underway at 2:00 p.m. with the welcome and awards presentation by the Midland Section of the ACS. This year’s meeting theme was “More Reactions on a Smaller Scale, *Faster*.”

The keynote speaker was J. Michael Ramsey from Oak Ridge National Laboratory. His keynote address, “Smaller, Faster, Cheaper, Better: Good for Electrons, Why Not Molecules?” gave the history of microscale devices.

“There were so many excellent choices for speakers and topics, my only regret is there wasn’t time to see all of them,” said attendee Buford Lemon. The presentations for the two technical research sessions focused on the meeting theme and ranged from micro- and nanofluidic devices to single-walled carbon nanotube-polysaccharide complexes. The MMTG section organized a talk schedule as well, from the story of a personal journey by a Dow Chemical employee to John Engelman, S.C. Johnson and Son, Inc., talking about “You want me to do what?!”

A post-meeting social, absent since the earliest of Midland Section Fall Scientific Meetings, returned to this meeting and was held at Frick’s. It was sponsored by exposition vendors Agilent, Envision Communications, Facility Matrix, Fisher Scientific, and MTS. It was an excellent way to catch up with old friends, meet some new ones, and relax from the rigors of an informative meeting.

Thanks to all those who helped out that day to make the meeting a huge success!

- The Dow Chemical Company, especially Rick Gross for donating the use of the world-class facilities and for donating the superb lunch
- The 2002 FSM organizational volunteers: Dan Dermody, Mindy Keefe, Buford Lemon, Dave Karpovich, Becky Lorenz, Steve Booth, Beth Cork, Stacey Beyer, Alisa Silvernale, Danielle Gingerich, Dave Mitchell, Wendy Mallory, Carrie Briggs, Stephanie Gabelnick, Didem Oner-Deltormanli, Angelo Cassar.



Young-Jun Cho and Professor Bob A. Howell, CMU, presented their poster on amine-based organophosphorus flame retardants.

Thank You to 2002 Volunteers!

By Pat Cannady

As we near the holiday season of 2002, it's time to reflect back on the year and realize what wouldn't have happened if not for all the time spent by you in volunteer work for the Section and for the members of the communities that surround us. Thanks go to many of you, but, right up front, I'll apologize to any I forget!

Thanks go to Debbie Bailey and the rest of her crew at the Mid-Michigan Technician Group, for everything you've done, especially at the county fair and other Section events. Thanks to Ann Birch, with another fantastic year on *The Midland Chemist*. What a great benefit this is to the Section! Wendy Flory and Dale LeCaptain, co-chairs of the Fall Scientific Meeting this year, what a great job! A move to Friday, Dow Chemical involvement looking good, what's next? Angelo Cassar, what a great job you've done on the Publicity-Public Relations committee. Phil Squatrito has done a fine job finishing up his third year heading up the Awards Committee (and his last in this capacity, I'm told). Don Miller, thanks for all your help with the Careers and Professional Relations Committee. Eldon Graham, your kindness never fails and your handling of the Technical Society Affairs group was again excellent. Kermit Kwan and the Nominations and Elections committee did great work on this year's election.

Another solid year of effort, again, in the area of Public Education and Student Programs. We have once again had Margaret Hill to thank in heading Project SEED. In the area of Minority Affairs, Lin Dorman got things rolling strongly. John Blizzard has been once again—well, John Blizzard!—heading up Science Literacy. Marvin Tegen continues to guide Science Promotions.

Wendell Dilling continued his long-term interest in helping the Section. Joined by George Eastland, Dave Stickles, and Joan Sabourin with their help in matters pertaining to the board and Sci-Fest, this year has had many wonderful events. Thanks go to Bobby Howell, that tireless soul who has been so long a member, contributor, and councilor to the Section. And, of course, Gretchen Kohl – thanks go to you for all the help you've given everybody!

Thanks to everyone for making this another wonderful year for the Midland Section of the ACS!

2002 Midland Section Fall Awards Presented

By Philip J. Squatrito

The Midland Section presented three awards for outstanding performance at the 58th Fall Scientific Meeting, October 11, at The Dow Chemical Company Employee Development Center in Midland.

The award for Outstanding Achievement and Promotion of the Chemical Sciences went to Dr. Thomas J. Delia, emeritus professor of chemistry at Central Michigan University. Dr. Delia holds a B.S. degree from Holy Cross College and M.S. and Ph.D. degrees in organic chemistry from Virginia Polytechnic Institute. Following completion of his graduate studies in 1961, Dr. Delia was a research associate at the University of Virginia and the Sloan-Kettering Institute before becoming an assistant professor at Central Michigan University in 1966.

During his academic career, Dr. Delia has carried out an active research program in the synthesis of new heterocyclic organic molecules with potential medicinal applications. A recognized expert in pyrimidine chemistry, he is the author of over 40 journal articles and several book chapters in this field. His work has been supported in recent years by the Research Excellence Fund of Michigan and by Community Cancer Services of Isabella County. Dr. Delia has mentored numerous undergraduate and Masters-level research students, many of whom have gone on to successful academic and industrial careers. He is a member of the American Chemical Society, Sigma Xi, Phi Lambda Upsilon, the International Society of Heterocyclic Chemistry, and the Council on Undergraduate Research. Though he retired from teaching in 2001, Dr. Delia continues to maintain an active research laboratory and is the recipient of a 2002 Camille and Henry Dreyfus Foundation Senior Scientist Mentor Award.

The award for Outstanding Service to the Midland Section was presented to Joan Sabourin of Delta College. Ms. Sabourin received a B.S. degree from Aquinas College and an M.S. degree from Purdue University. She is currently Science Division Chair and a professor of chemistry at



Midland Section Chair Pat Cannady presents the "Outstanding Achievement and Promotion of the Chemical Sciences" award to Dr. Thomas Delia.

Delta. She has been very active in the Midland Section, serving as Section chair in 1997, past-chair in 1998, and a member of the Board of Directors in 1988-1996 and 1999-2002. She has served on numerous section committees, including Project Science Literacy/National Chemistry Week (1995-present), Sci-Fest (1995-2001), and Fall Scientific Meeting (1999). She also directed the Odyssey of the Mind program for many years. Ms. Sabourin is a recipient of the 1989 Midland Section Award for Outstanding Achievement in College Chemistry Teaching. She is a member of the Divisions of Chemical Education and of Chemical Technicians.



Cynthia Gould receives the "Outstanding Chemical Technician" award.

The award for the Outstanding Chemical Technician was given to Cynthia J. Gould of Dow Corning Corporation. Ms. Gould holds a B.A. degree from Western Kentucky University. She joined Dow Corning in 1984 as a chemical technician in Quality Assurance, working with gas chromatography, IR spectroscopy, and other analytical techniques applied to the determination of physical properties of monomers and polymers. As a result of her demonstrated proficiency, Ms. Gould became a Senior Science & Technology Technician in Analytical Sciences in 1992. She is described as a principal analytical gas chromatography expert at Dow Corning and a technical leader in her field. Ms. Gould has led several analytical projects and was a key participant in Analytical Science's new initiative of selling external analytical services. She developed a robust analytical method where other contract labs had failed, consistently provides high quality data to customers with low turn-around times, and demonstrated exceptional documentation that convinced customers that Dow Corning Analytical was the right choice for outsourcing their analytical work. Ms. Gould is the author of a number of internal technical reports and presentations, and has participated in Pittsburgh Analytical Conferences and National ACS meetings. She is a member of the American Chemical Society and the Mid-Michigan Technician Group.

Section Honors 50-Year Members

By Ann Birch

Eleven Midland Section members were honored at the 58th Fall Scientific Meeting for 50 years of membership in the American Chemical Society.

Dr. Fred A. Blanchard obtained a B.S. degree in mechanical engineering from Louisiana State University in 1944. He obtained an M.S. degree (1948) and Ph.D. (1951) from the University of Cincinnati. He retired from The Dow Chemical Company as an associate scientist after 35 years with the company.

Mr. Harold H. Gill, Jr. obtained his B.S. degree in 1949 and an M.S. degree in 1950. He retired from the Analytical Sciences Laboratory at The Dow Chemical Company as senior research manager after 35 years with the company.

Mr. George K. Greminger, Jr. obtained his B.S. degree in 1938 from the State University of New York College of Environmental Science and Forestry. He retired from The Dow Chemical Company as an associate development scientist after 48 years with the company.

Dr. George A. Lane obtained an A.B. degree in 1952 from Grinnell College and a Ph.D. in 1955 from Northwestern University. He retired from The Dow Chemical Company in 1992 after 37 years with the company. He then worked for OmniTech until his retirement in 1997.

Dr. Frank L. Saunders obtained his B.A. degree in 1950 from Augustana College and his M.S. (1952) and Ph.D. (1953) degrees from Western Reserve University.



George K. Greminger, Jr., accepts his 50-year award from Pat Cannady, Midland Section chair.



George A. Lane



Frank L. Saunders

He retired from The Dow Chemical Company as associate scientist after 38 years with the company.

Dr. David P. Sheetz obtained his B.S. degree in chemistry from Lebanon Valley College (1948) and his M.S. (1951) and Ph.D. (1952) from the University of Nebraska. He retired from The Dow Chemical Company as chief scientist after 39 years with the company.

Mr. Leroy E. Swim obtained a B.S. degree in 1952 and an M.S. degree in 1953 from Kansas State College. He retired from The Dow Chemical Company as a research chemist after 38 years with the company.

Mr. William C. Taylor obtained his B.S. and B.A. degrees in 1952 from Otterbein College. He retired from The Dow Chemical Company as an analytical chemist after 34 years with the company.

Three other 50-year members—**Mr. Loren A. Haluska**, **Dr. F. M. Scheidt**, and **Mr. Nicholas C. Angelotti**—were also honored. Unfortunately, no additional information was available about these honorees as this issue of *The Midland Chemist* goes to press.



Leroy Swim



William C. Taylor

2003 Publishing Dates for *The Midland Chemist*

By Ann Birch

Issue	Copy Deadline	Issue Delivery
February, Vol. 40, No. 1	Jan. 6	Jan. 31
March, Vol. 40, No. 2	Feb. 3	Feb. 28
April, Vol. 40, No. 3	Mar. 3	Mar. 31
June, Vol. 40, No. 4	May 5	May 31
August, Vol. 40, No. 5	Jul. 7	Jul. 31
September, Vol. 40, No. 6	Aug. 4	Aug. 31
October, Vol. 40, No. 7	Sep. 8	Sep. 30
December, Vol. 40, No. 8	Nov. 3	Nov. 30

Midland Section Elects Officers for 2003

By Kermit Kwan

The 2002 Nominations and Elections Committee (NEC) is pleased to announce the following Midland Section ACS 2003 officers:

Chair-Elect:	Joe Ceraso
Secretary:	Sharyl Majorski-Briggs
Treasurer:	Doug Beyer
Chair, NEC:	Gary Kozerski
Councilor:	Bob Howell
Alt. Councilor:	Angelo Cassar
Director:	George Eastland (3-yr term) Sarah Snow (3-yr term) Art Smith (1-yr term) Connie Murphy (3-yr term)

We would like to thank all the Midland Section ACS members who voted. We would particularly like to thank all of the candidates who agreed to run for positions. The commitment and enthusiasm displayed by all of the candidates led to another successful Midland Section ACS election.

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Update on MMTG Fall Activities

by Amy L. Betz

The Mid-Michigan Technician Group (MMTG) hosted two educational seminars this fall. The first, entitled "Taking (some of) the Pain Out of Technical Writing," was offered in September. This seminar provided organizational tips to improve the technical report writing process, such as how to reduce procrastination, how to break up large amounts of data into manageable sizes, how to organize your report (and your thoughts), how to edit your writing, and other strategies for taking one of the researcher's most dreaded tasks and making it not only tolerable, but efficient.

This was followed by the second seminar offered in October entitled "Using Microsoft Word for Technical Writing." This was an excellent follow-up to the first seminar. As the first seminar taught how to prepare to write and how to organize your writing, the second seminar focused on how to use Microsoft Word to write what you want (a not altogether simple task at times). Techniques for imbedding images and graphs, linking the table of contents to document headings, auto-naming tables and figures, customizing toolbars, and working with macros were just a few of the many clever techniques presented to make the most of Microsoft Word's often obscure and unused capabilities. Both seminars were presented by Ann Birch. Ann is the founder and co-owner of Editech, a technical communications firm in Midland, Michigan. She has 11 years experience as a research chemist and 17 years experience as a free-lance technical writer and editor. Ann works extensively with technical authors and writes, edits, and formats technical reports and other technical documents. Pizza and pop were provided by MMTG for attendees at both seminars, which were open to all local technologists and technicians.

MMTG has also been working closely with the Midland Section of the ACS to participate in community science education events such as Sci-Fest. At Sci-Fest this year, MMTG members staffed a refreshment booth providing apple cider and donut holes, a hands-on booth featuring simple chemistry demonstrations, and a child safety booth. The child safety booth, in conjunction with local law enforcement personnel, fingerprinted each child as a record in the event the child is ever abducted. In addition, a digital photo of each child was taken, printed out, and laminated into an ID tag along with information about the child such as name and address. MMTG also put on public science demonstrations at the Midland County Fair, geared toward adolescents, to promote an interest in science among children.

In addition to educational events, MMTG also provides social activities for its members. MMTG recently organized a second dinner at Genji,

a traditional Japanese steakhouse and sushi bar. This was the third social event of the year and was held at Genji for a second time due to popular demand by MMTG membership. Plans are also currently underway for an end-of-the-year holiday social and membership appreciation party. Social events such as these provide opportunities for members to get to know each other in an informal setting, leading to enhanced relationships, increased networking, and improved teamwork.

MMTG is also involved in community outreach programs. MMTG is once again participating in the Adopt-A-Family program in cooperation with the local Salvation Army. The Salvation Army screens needy families in our local community that apply to be adopted to ensure the families meet necessary low income guidelines, then matches the families with willing sponsors who “adopt” them for the holidays. The sponsor provides gifts and a holiday meal for their adopted family. This will be the third year in a row that MMTG has participated in this program.

MMTG Elects Leadership for 2003

by Amy L. Betz

The ballots have been counted in the election of new members to the Mid-Michigan Technician Group (MMTG) Executive Committee and Board of Directors for 2003:

Chair-elect	Sarah Kushon
Secretary	Dana Bitzer
Treasurer	Wendy Mathews
Delegates	Nathan Malowinski and Sue Perz
Directors	Wendy Mallory and Dave Stickles

A special thank you to all who ran. It is the willing involvement and leadership of all the members that make MMTG successful.



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Section Initiates Scholarship Fund Drive

By Lin Dorman

In keeping with the mission of the American Chemical Society “to encourage in the broadest and most liberal manner the advancement of the chemical enterprise and its practitioners,” the Midland Section has endowed a scholarship fund to provide financial support to college students seeking academic degrees in the chemical sciences at colleges and universities in the Section’s area. Since educational costs have risen faster than inflation, there is a constant need for monetary reinforcement to support academic pursuits. This endowed scholarship fund will help address this need.

Eligible students will be those majoring in a chemical science who are entering the sophomore, junior, or senior level of study. The size of the scholarship will be \$1,000 or more, depending on the amount of available money in the scholarship fund. The number of scholarships awarded each year will be determined by the amount of available money in the fund.

The requirements for receiving a scholarship will be based on academic achievement and potential for contributions to the chemical sciences. Selection of scholarship recipients will be carried out by a Scholarship Awards Committee duly elected by voting members of the Board of Directors of the Section. Scholarships will be presented annually. The award recipients will be recognized at the Midland Section Science Awards banquet. Scholarship awards will commence in 2004.

The endowment was initiated by the Section with The Midland Area Community Foundation at the threshold level of \$5,000. The ultimate endowment goal is \$100,000, which would enable the funding of five annual scholarships for the collegiate institutions in the Midland Section area.

This *Inaugural Fund Drive* is to run for two years, commencing January 1, 2003, and ending December 31, 2004. Pledges can be made now and be completed by December 31, 2004. Early payments, however, are encouraged since they begin to appreciate sooner. Contributors to this drive will be permanently recognized as *Inaugural Fund Drive* donors.

A letter regarding the fund drive and a pledge form will be sent to all Midland Section members. Questions about this scholarship fund drive can be addressed to any of the committee members:

Lin Dorman, Chair 631-0213; lcdorman@aol.com

Wendell Dilling 631-1621; dilli1wl@cmich.edu

Bob Howell 774-3582; bob.a.howell@cmich.edu

Joan Sabourin 686-9249; jmsabour@alpha.delta.edu

Sci-Fest 2002 Features Cleaning Chemistry

By Dave Stickles and Joan Sabourin

The theme for National Chemistry Week this year was “Chemistry Keeps us Clean,” and when our committee met we added “From A to Z”. The committee then went through the alphabet and came up with several cleaning items for each letter and the name of a company that worked with that cleaning item. For example, under the letter A we had antimicrobial, where we came up with Aquilon and the Tri-Cities Microbiology Club that put on antimicrobial exhibits. We invited companies that dealt with each cleaning item, but they did not all attend. We also invited most of the groups from the previous few years and informed them of the theme so they could design their exhibits.

Oxyclean supplied free samples of Oxyclean, Orange Clean, and Orange Glo; MMTG gave out cleaning sponges; and Dow Chemical supplied some guides with 8 experiments. Many other hand-outs were given out by the various exhibitors.

On center stage we had Steve Spangler, who has his own science TV show. Steve put on many science demos that caught the audience’s attention and used a lot of audience participation. His show finale was quite impressive. Steve filled a plastic garbage can with smoke and shot smoke



Wa-a-i-i-t a minute...what's he going to do? A science show put on by Steve Spangler brought forward many young volunteers.



Members of the Mid-Michigan Technician Group are well-known for their dedication to chemistry education and their rapport with young audiences. Here, Rebecca Swanson talks to a participant.

rings across the gym. He had audience members with foam cups on their head and knocked the cups off their head with the smoke rings from as far away as about 40 ft. With one ring he was able to score two direct hits, knocking two cups off with one ring. Dr. Slime assisted Steve and did a couple of demos as well. In one he ignited a hydrogen/oxygen-filled balloon, and it definitely caught everyone's attention with its echoing boom and large plume of flames.

The companies and groups that put on exhibits included:

Adaptive Imaging	Midland Volunteers for Recycling
Aegis Environmental Management	Mid Michigan AICHe
Alpha Omega Telescopes	Mid Michigan Technician Group
ACS Midland Section	National Chemistry Week
Aquilon	Oxyclean/Orange Glo Wipes
Delta College Astronomy Club	Saginaw Spirit Hockey Club
Delta Campus Police	Science Literacy
Delta College Dental Hygiene	S.C. Johnson
Delta College Environmental Club	SPE MidMichigan Section
Delta College Science Division	Sunset Astronomical Society
Glass Blowing – Tim Drier	Tri-Cities Microbiology Club -
Delta	
Michigan State Police	West Branch Community Group .
Midland County Mosquito Control	

Some of the topics for the exhibits were:

ID badges	Glassblowing
Fingerprinting	Home cleaning products
Cleaning hands/antimicrobial	Oil spill cleanup
Cleaning ice - Zamboni	Teeth cleaning
Recycling plastics	Color separation

About 40,000 flyers were distributed to the following school systems: Bay City, Blessed Sacrament, Coleman, Freeland, Meridian, Midland, Midland Bullock Creek, Mt. Pleasant Sacred Hearts, Saginaw, St. Bridget, and St John's Lutheran. Ads were run in area newspapers and TV bulletin boards.

In all we had approximately 1000 people attend Sci-Fest, providing them with free cider and donut holes. We provided lunch for all the presenters. A fun time was had by all!

Your Weakest Link

Submitted by Don Miller

Here's an excerpt from Classified Market Place, *The Detroit Free Press*, November 13, 2002:

It seems like a simple enough question, one easily answered. But is it? If an interviewer asks you, "What is your biggest weakness?" how would you respond? Not having any answer can be as bad as not having the right one. Saying, "I have no weaknesses" would be as foolish as saying, "I really hate to work before noon." But you have to say something, so...what? First of all, make your answer as concise as possible. Speaking too much about your weaknesses would indicate that you have plenty of them. Some might suggest that in the area of weakness, you should state that sometimes you are too hard working or pay too much attention to detail or you are too critical of your work. The key word is *too*. Take one of your strengths and add the word 'too' in front of it.

Good advice.

Board of Directors Meeting Schedule for 2003

By Mike Owen

Jan. 13	Midland, Delta College Midland Center, Room 12
Feb. 10	Midland, Delta College Midland Center, Room 12
Mar. 17	Midland, Delta College Midland Center, Room 12
Apr. 14	Midland, Delta College Midland Center, Room 12
May 12	Delta College, meeting room to be announced
Jun. 9	Central Michigan University, meeting room TBA
Aug. 11	Saginaw Valley State University, meeting room TBA
Sep. 15	Midland, Delta College Midland Center, Room 12
Oct. 13	Midland, Delta College Midland Center, Room 12
Nov. 10	Midland, Delta College Midland Center, Room 12
Dec. 8	Midland, Delta College Midland Center, Room 12

Please Note: Because of scheduling difficulties, these dates are for the second Monday in the month (except March, which is the third Monday). It was not possible this year to adhere to the well-established pattern of first Monday meetings. I hope the change will not cause too great an inconvenience to attendees. All members are welcome at these meetings.

Explorer Advisors Needed for Midland Section

By Sarah Ratcliff

Explorers is a young adult career education program of Learning for

(through the Scout program) for young men and women who are 14 and graduates of the eighth grade or 15 through 20 years of age. Engineering & Science Exploring is a youth development program centered on engineering and technology careers.

Exploring groups range from 10–20 students, are conducted after school hours, and meet for 1–2 hours twice monthly between October and April. The intention is to have enough adult leaders involved so that any individual only has to lead the group for 3–4 sessions. They might take trips to places like Air Force bases, engineering museums, companies, or college facilities. They might learn to design equipment or use computers. Engineering & Science Exploring is action-oriented.

The primary focuses of Engineering and Science Explorers are:

- Promote post programs that open and expand Explorers' understanding of the many opportunities in engineering and technology
- Help young men and women who are interested in careers in the field of science or engineering
- Offer experiential learning with lots of fun-filled, hands-on activities that promote the growth and development of adolescent youth

I am looking for science or engineering professionals of any discipline who are interested in being advisors for the Explorers program. As an advisor you would help with activity ideas, planning, and facilitation. If you are interested in the program or would like more information, contact Sarah Ratcliff at (989) 496-5675 or e-mail at sarah_ratcliff@dowcorning.com

Job Opening for R&D Manager

A research and development manager is needed for a specialty chemical business based in Midland. Responsibilities include supervising and/or conducting formulation research work, consulting on packaging and manufacturing process development issues, writing research reports, and assisting with technical customer service in small business environment. The position requires a master's degree in chemistry, related professional experience, and good communications skills. If interested, please write to: Catherine Anders, General Manager, Caltech Industries, Inc. 2420 Schuette Rd., Midland, MI 48642.



Call for Volunteers for 2003

By Mike Owen

We are approaching that time of the year when we look back on the events and achievements of the last twelve months and begin to anticipate what is in store for next year. I will leave it to others to address the former aspect; suffice it to say that this has been a highly successful year for the Midland Section. My purpose here is to look forward to next year.

What makes this section successful is the dedicated group of volunteers who give freely of their time in many different ways. The problem is that there are not enough. I know how busy we all are, but I ask that you seriously consider devoting time to the Midland Section next year. Several committees are significantly understaffed. A few new participants would ease the burden on those already serving, would not create major commitments for these new members, and most importantly would create fresh insight and new approaches to the challenges we face. I would love to hear from you. If you want more detail on which specific committees need reinforcing, I would be happy to share that information with you.

I stress no major commitment as I realize it is best to start slowly with new ventures. However, if you seek a major challenge, we can provide that too! Specifically, we have at least one committee chair leaving next year and are also creating a few new committees. One is a Retirees Committee. I would welcome volunteers for chair and other participants on this committee. It is being formed to answer the needs of a significant section of our membership. In a way, it counterbalances our desire to better address the interests of another group of our members, younger chemists.

I am delighted that Wendy Flory has agreed to be our liaison with National ACS for younger chemists activities and will be establishing a new Midland Section Younger Chemists Committee. What we need are more Wendys. Please note that you don't have to be young to be a part of this committee, just young at heart. I suppose by analogy you don't have to be retired to serve on the Retirees Committee, just not retired from community participation. I am sure of one thing: if you are waiting to retire before you volunteer to help, presuming you will have more time then, please think again. Help us now, we need you. Besides, you won't have more time after you retire; I know!

Please write, e-mail, phone, or waylay me wherever you can find me. You can contact me best at:

michaelowen01@chartermi.net
1505 W. St. Andrews Road
Midland MI 48640
(989) 631-7339

Final Report for the 1997–1999 Member Interest Survey

By Wendell L. Dilling

First, I would like to thank the many Midland Section members who took the time to complete one of the surveys. Eventually, 73% of the members returned a survey, many with additional comments. All these data should help the Midland Section to better serve the members and the public in the future.

Anyone who has not had a chance to complete a survey, or who would like to complete a new one may do so by printing the form from the Section website at <http://membership.acs.org/M/Midl/MemServ.htm#Survey>. The completed form should be returned to Connie Murphy, chair of the Membership Growth and Retention Committee (cjmurphy@dow.com), The Dow Chemical Company, 1707 Bldg., Midland, MI 48674.

I would also like to thank the members of the Personnel Committee during 1997–1999 who helped solicit responses from members who did not return them on their own: Jerry DeVrieze, Dale Hauenstein, Peter Lo, Don Miller, Vicki Sible, Art Smith, and Dave Young. Ann and Catherine Birch and Al Steinhauer entered the data into a Microsoft Access database for use of future officers and committee chairs.

Copies of survey responses from those interested or maybe interested in helping the Section were given to Section chairs as they were received to aid in the recruitment of helpers, and, similarly, responses from those interested in specific topics such as employment information were given to pertinent committee chairs.

Survey Distribution and Collection

Surveys were distributed to all Midland Section members (~830) via *The Midland Chemist* 1997, 34, No. 2, 8–9 (March 21). A preliminary report of the survey along with another copy of the survey was published in *MC* 1999, 36, No. 2, 9–11 (March 26). Only 14 (2%) members returned a completed survey. During 1997–1999, 797 (98%) members were contacted personally to request that they complete and return the survey. Thus a total of 811 members either returned a survey or were contacted personally. These 811 members represent all the members who were listed in the 1997 Section roster plus additional members who were new to the Section during 1997–1999 minus members who left the Section prior to the time personal contact could be made during that time period. Of the 797 members contacted personally, 575 (72%) returned surveys, and 222 (28%) did not return them after at least two requests. In most of the latter cases the members had agreed to return the survey. In the data tabulation,

these 222 members were considered to have either not answered the question or not to be interested in helping with Section activities.

Responses given most often to the survey questions are given in the following sections. A complete listing of the responses can be seen on the Section website at <http://membership.acs.org/M/Midl/>.

Current employer

562 (69%) answered question, 251 (31%) did not answer. Of those who answered, the responses were:

- The Dow Chemical Co.—182 (32%)
- No employer—141 (25%)
- Dow Corning Corp.—120 (21%)
- Central Michigan University—29 (5%)
- Michigan Molecular Institute—14 (2%)
- Self employed—8 (1%)
- Alma College—5 (0.9%)
- Delta College—5 (0.9%)
- Kelly Scientific Resources—4 (0.7%)
- Saginaw Valley State University—4 (0.7%)
- Omni Tech International Ltd.—3 (0.5%)
- CPI Engineering Services, Inc.—2 (0.4%)
- Leng Associates—2 (0.4%)
- TPI Petroleum, Inc.—2 (0.4%)
- Contracting, consulting—2 (0.4%)

There were 39 other employers with one response each (0.2%)

Retired

566 (70%) answered question, 243 (30%) did not answer. Of those who answered, the responses were:

- Not retired—413 (73%)
- Retired—153 (27%)

ACS Division memberships

377 (46%) answered question, 434 (54%) did not answer (probably some have no memberships). Of those who answered, the responses were:

- No memberships—139 (37%)
- Polymer Chemistry—65 (17%)
- Organic Chemistry—50 (13%)
- Polymeric Materials Science and Engineering—40 (11%)
- Analytical Chemistry—28 (7%)
- Industrial and Engineering Chemistry—19 (5%)
- Uncertain—19 (5%)

- Chemical Education—18 (5%)
- Inorganic Chemistry—17 (5%)
- Environmental Chemistry—15 (4%)
- Colloid and Surface Chemistry—14 (4%)
- Chemical Information—11 (3%)
- Professional Relations—7 (2%)
- Rubber—6 (2%)
- Agrochemicals—5 (1%)
- Physical Chemistry—5 (1%)

22 others with less than five responses each.

Highest academic degree

546 (67%) answered question, 264 (33%) did not answer, Of those who answered, the responses were:

- Doctorate—318 (58%)
- Bachelor—120 (22%)
- Master—102 (19%)
- Associate—4 (0.7%)
- None—2 (0.4%)

Interests relevant to ACS

313 (39%) answered question, 498 (61%) did not answer. Of those who answered, the responses were:

- Areas of science—174 (56%)
 - Polymer science—43 (14%)
 - Organic chemistry—18 (6%)
 - Analytical science—16 (5%)
 - Environmental science—12 (4%)
 - Computers—9 (3%)
 - Materials science—8 (3%)
 - Biological chemistry—6 (2%)
 - Catalysis science—6 (2%)
 - Physical chemistry—6 (2%)
 - Other areas of science—50 (16%)
- Education—61 (19%)
 - General and science—36 (12%)
 - (Including science) for youth—13 (4%)
 - Continuing, (including science) for science professionals—7 (2%)
 - (Including science) post high school—5 (2%)
- Meetings, lectures, and seminars—48 (15%)
 - Meetings—37 (12%)
 - Lectures and seminars—11 (4%)

- Publications—48 (15%)
 - *Chem. Eng. News*—19 (6%)
 - *Midland Chemist, The*—7 (2%)
 - Other specific publications—8 (3%)
 - General—14 (4%)
- No interest or uncertain—44 (14%)
- Outreach activities and interaction with public—31 (10%)
 - For youth—11 (4%)
 - For adults—9 (3%)
 - General—11 (4%)
- Information and news—14 (4%)
- Employment and careers—13 (4%)
- Chemical industry—12 (4%)
- Business aspects—7 (2%)
- General and miscellaneous areas—66 (21%)
- Other specific programs—10 (3%)
- Other specific organizations—9 (3%)

How are Section activities filling your needs as an ACS member?

346 (43%) answered question, 465 (57%) did not answer. Of those who answered, the responses were:

- Satisfactory to well—95 (27%)
- Neutral—17 (5%)
- Poorly—29 (8%)
- Not active—53 (15%)
- No impact or no needs—29 (8%)
- Not aware of activities—14 (4%)
- No time to be involved—6 (2%)
- Meetings and talks—75 (22%)
- Information dissemination and publications—60 (17%)
- Personal interaction—11 (3%)
- Outreach programs—10 (3%)
- Youth education and serving children—7 (2%)
- Science and other activities—6 (2%)
- Other and miscellaneous—8 (2%)

What kind of Section activities would be most beneficial to you?

254 (31%) answered question, 557 (69%) did not answer. Of those who answered, the responses were:

- Meetings and speakers—126 (50%)
 - Specific topic meetings and speakers—22 (9%)
 - Fall Scientific Meetings—15 (6%)

- General topic meetings and speakers—7 (3%)
- Regional meetings—5 (2%)
- Discussion groups—4 (2%)
- Dinner meetings—3 (1%)
- Other meetings and speakers—70 (28%)
- Uncertain—36 (14%)
- No interest—33 (13%)
- Educational and student activities—26 (10%)
 - Public school related—12 (5%)
 - Midland Section activities—3 (1%)
 - General 11 (4%)
- Information dissemination and publications—23 (9%)
 - *Midland Chemist, The*—6 (2%)
 - Other information dissemination—17 (7%)
- Social activities and networking—20 (8%)
 - Networking—7 (3%)
 - Other social activities—13 (5%)
- Continuing science education—15 (6%)
- Employment activities—15 (6%)
- Career information—9 (4%)
- Outreach activities—8 (3%)
- Status of current Section activities—6 (2%)
 - Current activities are fine—3 (1%)
 - Suggested action —3 (1%)
- Miscellaneous—27 (11%)

Are you interested in helping with Midland Section activities?

811 (100%) answered question (no response was considered to be an answer of no):

- Current officers or committee members (therefore is interested in helping)—35 (4%)
- Yes, is interested—47 (6%)
- May be interested —101 (12%)
- May be interested in the future—88 (11%)
- No, is not interested—540 (67%)

Other comments

Editor's note: Because of space considerations, we have not included comments and have omitted some minor subtopics. Please refer to the web site for the entire text of the report: http://membership.acs.org/m/midl/Survey_Rept_for_website,_02.doc

West Branch NCW Event “Cleans Up”

By John Blizzard

During National Chemistry Week, the Midland Section ACS, Ogemaw Heights High School, and National City Bank in West Branch, Michigan, joined forces to celebrate National Chemistry Week. This began with a six-hour, hands-on teacher training session. This session, “Bring Science to Life in the Classroom,” was provided by Midland Section members to assist teachers with 16 hands-on experiments and present the NCW theme, *Chemistry Keeps Us Clean*.

During National Chemistry Week, 43 high school/intermediate school/grade school student volunteers performed over 1100 individual experiments or demonstrations for area students and the public over the six-day NCW time. These experiments were performed at National City Bank in West Branch, Michigan, during business hours from Monday to Saturday (October 21-26). Science demonstrations included cleaning colors (chromatography), protecting fabrics with Teflon, demonstrating water repellency, how much water can be placed on a one cent piece (penny) using super adsorbing polymers (the record was 201 drops of water), along with the chemistry and clean-



The famous “Golden Beaker” award (famous among aspiring scientists, anyway). How many “cleaning things” did you find? Photo by Doug Grezeszak



Laboratory equipment donated by Midland Section to West Branch area schools.

ing of money. The money cleaned was obtained from a competition at the local high school. The organizing Ogemaw Heights chemistry teacher, Doug Grezeszak, began a "Gold Beaker" competition between the science classes to see which class could raise the most change. The various classes raised over \$250 in change, with Russ Odette's class getting the prize. After cleaning, the money was donated to the local food bank and Good Samaritan Fund in West Branch.

During the entire week, 71 area teachers and teacher helpers assisted over 1200 area students (out of the Ogemaw County school population of 2600) in a scavenger hunt and field trip to National City Bank and area businesses. Every student from kindergarten to fourth grade along with intermediate and high school students participated in a scavenger hunt; "*Chemistry Keeps Us Clean From A to Z.*" The scavenger hunt was designed to encourage students to find "cleaning with chemistry" areas at local West Branch businesses. High school students were given extra credit for participation. Over 30 businesses participated in the event, representing approximately 75% of the total downtown businesses. Prizes donated by ACS and local businesses were awarded to each grade for the students who completed the hunt. According to the West Branch Chamber of Commerce president, this program was "the biggest success at West Branch in which the local businesses and schools have ever cooperated and participated. Area businesses were pleased to participate and were astounded at the number of parents, teachers, and students involved." Doug Grezeszak, Ogemaw Heights chemistry teacher and NCW coordinator put it this way: "From this whole experience, one thing really stands out. It is how much the elementary children got out of the presentations at the bank. I still have parents stopping me in the grocery store and telling me how much they got out of this work. The wonder of a young person's mind awakened to the world of science is truly amazing."

Ms. Andrea Hales, National City Community Bank president for the West Branch Area emphasized: "We are committed to improving the quality of life in the community and proud to partner with and support the



Andrea Hales receives a "Salute to Excellence" award from Section Chair Pat Cannady and Director Wendell Dilling.



The West Branch event was truly a community affair. These National Bank employees display their certificates of appreciate for all their efforts to make this event a success.

efforts of the Midland Section of the ACS during this event.” Ms. Hales also announced that National City Bank would make a donation to the Midland Section ACS and West Branch-Rose City area schools in the amount of \$2500. National ACS will match this money for community outreach programs. During the week at the bank, 12 National City Bank employees participated in and assisted with the NCW activities, handing out over 600 samples of Oxyclean and cleaning products to bank customers while they were dressed up as chemists in lab coats and safety glasses.

To further enhance the program, a \$2500 donation from Tanger Outlet Mall was presented to ACS and area schools to encourage participation in the community outreach program. Approximately \$7000 in science equipment was donated to Ogemaw Heights High School and area elementary schools from the Midland Section ACS to enhance the science programs at these schools.

To cap off the week of activities, awards were presented at a gala celebration. Attending this were National City Bank executives, the area Chamber of Commerce, local business leaders, area school superintendents, principals and teachers, Midland Section members, and public officials. Midland Section chair Pat Cannady and bank president Andrea Hales presented ACS certificates of appreciation to 23 area businesses, two ACS Section members, four area school teachers, and twelve bank employees. The Midland Section chair also presented “Salute to Excellence” awards to Ms. Hales, the West Branch Chamber of Commerce, National City Bank, and Tanger Outlet Mall.

There's a New SmartZone in Town

By Peggy Hill

What do you get when you combine one university, one city development board, several high-tech businesses, a cache of creative thinkers, and toss it with a public economic development corporation catalyst? A very innovative reaction mix that's targeted to synthesize high-tech business results.

The Central Michigan University Center for Applied Research and Technology (www.smartzone.cmich.edu) is one of eleven SmartZones in Michigan—business centers designed to generate that synthetic reaction mix. Created jointly by CMU and the city of Mt. Pleasant in June 2002, the center occupies a 350-acre site just southwest of the CMU campus. Research space on the CMU campus is also used in conjunction with the center.

According to Robert Berry, president and CEO of the CMU Research Corporation that manages the center, a

grant of \$250,000 from the Michigan Economic Development Corporation will fund the center in finding companies that need assistance with scientific research, patent attainment, or other business research. "This is about building the economy across the entire middle of Michigan," he says. "Anything we can do to make this economy more diverse and robust by using the intellectual assets that we have in this region makes a whole lot of sense to the university and to the community."

With a mission to create efficient growth of technology-based industries, the Center for Applied Research and Technology (CART) provides a number of advantages to fledgling businesses. These include ready access to university resources such as faculty collaboration, super-computing capabilities, software, research space, and equipment. Space at the center site is available for start-up companies. Business insight services are also available on site.

A shining example of an emerging young business is Dendritic Nanotechnologies, Ltd (DNT). Headed by organic chemist Donald



The Center for Applied Research and Technology is one of eleven SmartZones in Michigan.

Tomalia, DNT has been a partner under the CART umbrella from the start. DNT develops dendrimers and dendritic polymers for applications in life sciences, electronics, and materials sciences. The company plans to research new dendrimer technology as well as develop as a commercial supplier of dendrimers and the licensing rights to them.

Announced recently, a \$3.5 million Department of Defense contract was awarded for dendrimer nanotechnology research to be carried out by Dendritic Nanotechnologies, Ltd. Construction is planned for a 20,000–25,000 square foot building that will house wet lab space for the research. The purchase of analytical instrumentation and equipment to support the research is also planned.

It's expected that the success of DNT will carry over into more new business ventures at the center. As Robert Berry remarked, "The chemistry research facility associated with the dendrimer research will allow us to start to contract to build commercial wet lab space for start-up companies like Dendritic Nanotechnologies, Ltd. It represents an incubator process for that technology niche here in Mt. Pleasant."

Currently on the CART site south of the CMU campus is a 12,000 square foot building that houses business office space as well as the CART business insight services (see photo). These latter services assist businesses with data and text mining for strategic business planning. Boasting an 83 gigaflop computing facility with a terabyte capacity for data storage, the center can assist businesses by evaluating past, present, and future business practices with an eye toward improving their efficiency and profitability. The Dow Chemical Company, Dow Corning Cor-



This building houses the center's facility for business insight services and provides office space for center tenants. Other buildings are in the planning stage.

poration, and International Paper, Inc. are some of the businesses that have contracted with the center for these business insight services.

The CMU Research Corporation manages the center. Its board of directors includes president and CEO Robert Berry, Chairman Michael Rao, Interim Treasurer Jonas Cook, Secretary James Hageman, and Directors Joe Kerbleski, Roger Kessler, Bob Kohrman, Janis Landry-Lane, and David Stevens.

The SmartZone concept is the brainchild of the Michigan Economic Development Corporation, a public corporation established to facilitate economic growth in Michigan. There are currently eleven SmartZone centers in the state, and each was created to foster collaboration between businesses, communities, and schools of higher education. Since technology-based businesses typically require extensive research support, these centers help new businesses get started by pairing them up with colleges and universities that can help that research effort by supplying access to research facilities, equipment, faculty, student researchers, and computing power. Since their start in 2001, several SmartZones have already made great strides in stimulating new, innovative economic development in high-tech industries in Michigan. The newest SmartZone here in central Michigan shows great promise of doing the same.

In Brief

- *Chemical & Engineering News*, Oct. 7, 2002—Three local student affiliates each received a 2001–02 Student Affiliates Chapter Award from the ACS Society Committee on Education: Alma College, Frederick Schroeder (president), Melissa Strait (adviser); Central Michigan University, Misty Bennett (president), Estelle Lebeau (adviser), and Saginaw Valley State University, Ron Nowak and Jon Markey (co-presidents), Deborah Huntley (adviser).
- *Chemical & Engineering News*, Nov. 11, 2002—Several Midland Section members were recognized for their efforts in the Midwest Pharmaceutical Process Chemistry Consortium during a 10-year reunion of its founders. Local people attending the meeting included Sheldon Messing, Dennis Kreil, Robert Appell, Christian T. Goralski, Richard Gross, Carol Jensen, and Ian Lennon.
- Free Brochure from Dow Makes Chemistry Cool for Kids—The Dow Chemical Company is making a new educational brochure available free of charge to the public. To obtain copies of “Chemistry: The Enabling Science,” call Dow’s Customer Information Group at 1-800-441-4369 and request form number 667-00027-902 or visit <http://www.dow.com> to download a copy.

Important Dates on the ACS Midland Section Calendar

January 6	Deadline for February issue of <i>The Midland Chemist</i>
January 13	Midland Section board meeting, Delta College, Midland Center, Room 12
February 3	Deadline for March issue of <i>The Midland Chemist</i>
February 10	Midland Section board meeting, Delta College, Midland Center, Room 12

All meetings are open to all ACS members and the public.

In Past Issues of *The Midland Chemist*

By Wendell Dilling

- **30 years ago this month**—Thomas J. Delia reported on his ten-month study and the state of chemical research in Czechoslovakia in “An American in Prague.”
- **20 years ago this month**—Wendell Dilling gave a summary report on the 14th ACS Central Regional Meeting hosted by the Midland Section at Northwood Institute in June.
- **10 years ago this month**—Peter Dreyfuss is shown in a photo accepting the ACS 1991 Award for Outstanding Performance by Local Sections, Medium-Large Size Category, on behalf of the Midland Section at the National Meeting in Washington, D.C., August 27, 1992.

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