



***Project SEED Students
Gain Knowledge, Lab
Experience... see page 3***



THE MIDLAND CHEMIST

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American Chemical Society
Midland Section
PO Box 2695
Midland, MI 48641-2695
<http://membership.acs.org/M/Midl>

Volunteer Staff

Ann F. Birch Editor
517-832-7485
ann.birch@editech-mi.com
Vicki Sible Coordinator
Dave Baker Writer
Kerry Pacholke Advertising
James R. Birch Design, layout

Please submit all articles and photographs to the editor, Ann Birch. Instructions for article submission are on the Midland Section web site, as is contact information for other staff members. Authors can also contact Ann directly with any questions.

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Cover photographs by Peggy Hill.

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*Chair Column***ACS Celebrates 125 Years**

Did you know that this is the 125th anniversary of the ACS? Well, I didn't, but it is. They tell us that local sections have been a part of the ACS since 1891, and further assert that local sections "are its sustaining force." The two oldest sections are the New York and Rhode Island sections, both formed in that year (1891). That would make them 110 years old. It dawned on me that I couldn't remember quite when the Midland section was formed. I recalled that we had a 75th anniversary a few years ago, but couldn't quite remember when. So I visited our web page at <http://membership.acs.org/M/Midl/> and refreshed myself on the details. A most handy site, that web page. As I did in last month's column, I highly recommend it to you.



George Eastland, Chair
ACS Midland Section

Turns out that we were founded in 1919, with 30 dues-paying members. That makes the section 82 years old...nearly as old as my kids think I am. Anyhow, back to the 125th anniversary. The national office has identified eight projects to commemorate the anniversary, chosen to involve the Society at all levels. Those are:

- 1) The designation of an insignia and slogan to use throughout 2001
- 2) A coordinated effort to supply local sections with materials featuring the 125th anniversary (We've already received some of that.)
- 3) Symposia and gatherings at the National Meetings
- 4) Several public-relations efforts, including a *Chemical and Engineering News* feature and a 25-year addendum (1976–2001) to the ACS history book
- 5) The development of a "timeline"—125 years of chemical achievement in graphical form
- 6) A National Historical Chemical Landmark event in New York City (the birthplace of the ACS)
- 7) Membership activities
- 8) Placing all donations to the ACS 125th anniversary into Challenge 2000, the matching gift fund of the American Chemical Society (I should note that, as a section, we received almost \$15,000 from Challenge 2000 last year and intend to apply for more this year.)

The national office has set as a goal that each section should have at least one observance, commemoration, or celebration during 2001. We would be very pleased to hear from anyone who has any ideas about how the

Midland section could conduct such an observance. We will be addressing this issue at our next couple of board meetings. Check the “Important Dates” section at the end of each issue of *The Midland Chemist* for the date, time, and location. And that reminds me... I hope that everyone realizes that board meetings are open to all members. Please come if you have something you’d like to contribute, or if you are just curious about what goes on. You will find a number of people who have given much time and effort to the Section in an effort to make the organization valuable for *all* members. If it hasn’t been so for you, let us know how it could be.

Speaking of the “Important Dates” section in *The Midland Chemist*, look for the programs that Pat Cannady and his program committee are developing. By the time this issue hits your desk, the first of those, a dinner with and talk by Dave Camp, will have come and gone (February 21), but there will be other, equally interesting programs during the year. Give one or two of these a try...you’ll like them.

Finally, I’d like to give a special notice to a new committee, the Minority Affairs Committee. Lin Dorman has managed to assemble a list of very capable people (like himself!) and I expect that the group will make a real addition to the efforts of the section. And, yessiree, you can read about the committee and their plans on our web page!

George Eastland



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Project SEED 2000 Students Show Off their Projects

By Peggy Hill

The summer of 2000 found five area high school students engaged in research in four chemistry laboratories in the mid-Michigan area as part of the Project SEED program. Every year the Midland Section provides a substantial portion of the funding for SEED students. In addition, a few Midland Section members volunteer their time to guide these students in their research projects.

These preceptors work directly with their student on a day-to-day basis for 8 to 10 weeks, providing them with a research project, supervising their work, and helping them prepare a written report and a poster to be presented at the annual Fall Scientific Meeting of the Midland Section.

SEED stands for "Summer Experience for Economically Disadvantaged." The program's mission statement reads, "to assure that students



Lekeisha Hibbler, Saginaw High, worked with Anne Leugers, Dow Chemical, on an analytical project.

Photo by Peggy Hill



Sandrena Hall, Saginaw High, presented her project on latex thickeners. Preceptors were Joann Surma and David Smith, Dow Chemical.

Photo by Peggy Hill

from economically disadvantaged backgrounds have opportunities to experience the challenges and rewards of chemically-related sciences". Despite being disadvantaged in an economic sense, our SEED students have been smart, conscientious, and sincere. They find that the exposure to a research environ-



Laura Platt, Shepherd High, worked with Estelle Lebeau, CMU, on analyzing rock samples.

Photo by Peggy Hill

ment is a very useful experience as they make plans for future careers. Since many of these students do choose a science-based career, their SEED experience gives them more background and awareness than they would otherwise have.

Two of our SEED II students, Lekeisha Hibbler and Sandrena Hall, entered the freshman class at Central Michigan University this fall. As a result of her many academic achievements, Sandrena Hall was also awarded an ACS Project SEED College Scholarship.

Five SEED students worked this year with preceptors at The Dow Chemical Company, Saginaw Valley State University, and Central Michigan University. Their research topics are summarized in the table below.

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SEED I Students	Preceptor	Project
Laura Platt, Shepherd H.S.	Estelle Lebeau, CMU	Extraction and identification of components in a volcanic rock sample from Big Bend National Park
Latisha Casery, Saginaw H.S.	Dave Karpovich, SVSU	DDT studies
Ebony Blackmon, Saginaw H.S.	Dave Karpovich, SVSU	DDT studies
SEED II Students	Preceptor	Project
Lekeisha Hibbler, Saginaw H.S.	Anne Leugers, Dow Chemical	Chemical analysis by infrared and Raman spectroscopy
Sandrena Hall, Saginaw H.S.	David Smith and Joann Surma, Dow Chemical	Latex-thickener interactions

*Chemists and Careers***Nibble While You Work***By Don Miller*

[Editor's note: Don Miller has been active for several years in the Career Services committee of the Midland Section. From time to time, Don will be providing articles related to the work environment and news about Section employment as we begin to develop a regular feature on careers.]

In a recent *Fortune Magazine* article, Michael Schrage wrote the following: When James Watson took over as director of the Cold Springs Harbor Lab, he spent more on refurbishing the dining room than on upgrading the lab equipment. Why would a Nobel Prize winning lab director spend time and money redecorating the cafeteria? Because that is where some of the most important conversations in the lab took place. He replaced the small tables with large ones which were less exclusive. Colleagues who had never met had no choice but to sit down and talk informally with one another. Those informal chats led to very serious ideas, said Watson, which would have been lost if employees spent their lunch breaks at outside restaurants where there was little incentive to discuss work projects.

Few companies treat their cafeterias as the strategic assets they could be. For starters, every cafeteria could be equipped with white boards or flip charts for any table that wants to brainstorm or record thoughts. This would be easy to do and inexpensive. To go more high tech, computer screens could be imbedded in the tables, transcription equipment installed as well as high-speed LANs so people could network as they eat.

Even in today's rather drab cafeterias, creative people often want to mix business with pleasure as they eat and scribble ideas on napkins and yellow pads. The well-designed cafeteria of the future could be the most productive place in tomorrow's enterprise.



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Tenth Annual Spring Science Education Recognition Dinner

Salute to Excellence—Places of Chemistry

Wednesday, April 25, 2001

6:00 p.m. to 9:00 p.m.

Hall of Ideas, Midland Center for the Arts

1801 West St. Andrews

Midland, Michigan

Program:

6:00 p.m.	Reception
6:30 p.m.	Buffet Dinner
7:30 p.m.	Program
8:00 p.m.	Awards Presentations

At the 2001 Recognition Dinner, teachers and students will be honored for their outstanding achievements in science education. The Midland Section's Science Literacy Committee will recognize important places in chemistry as part of ACS's Salute to Excellence.

The cost of the dinner is \$15.00 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 11, 2001. You may also register by fax (517-774-3883) or email (p.squatrito@cmich.edu) and pay at the door. The Center for the Arts is located off of Eastman Avenue between M-20 and Saginaw Road. This event is co-sponsored by the Midland Section of the American Chemical Society (underwritten by grants from The Dow Chemical Company and Dow Corning Corporation) and the Hall of Ideas. For further information, contact Phil Squatrito at 517-774-4407.

*To reserve your place, return this form with payment by **April 11, 2001** to Phil Squatrito, Department of Chemistry, Central Michigan University, Mt. Pleasant, MI 48859.*

Name(s): _____

Affiliation: _____

Address: _____

Phone/Email: _____ ACS member? Y N

Enclose payment of \$15.00 per person. Checks should be payable to "Midland Section ACS"

Volunteers Needed for Kids & Chemistry

By Pat and Pete Dreyfuss

More than 900 children have taken part in the Midland Section's Kids & Chemistry (K&C) program since hands-on K&C debuted in Midland in February 2000. We have many more opportunities pending for 2001. We need all the volunteers we can get if we are to satisfy the demand for our program from the community and the kids. The experiments are simple for trained scientists. It's fun! It's immensely rewarding! So far primarily retirees have staffed most of the presentations, but the kids also need younger role models. A 2-hour commitment is all you need to make. You won't regret it!

Typically, we have 25 to 50 kids at a time, and six tables that need staffing by at least one trained scientist each. (We usually get "assistants" from teachers, parents, or chaperones.) All of the programs currently planned will take place at the Midland Center for the Arts and would supplement other activities at the MCFTA. We need volunteers for:

- Sherlock Holmes Exhibit: Our contribution = The Case of the Unsigned Letter.

Dates: March 14, 15, 23, and 28.

Time: 9:00 a.m.–1:00 p.m. (2-hour shifts)

- Science & Technology Week: Our contribution = Chemistry of Toys (a new program for Midland)

Dates: April 23–27

Times: 9:00–11:00 a.m. and 12:00–2:00 p.m. Lunch provided for those who work both shifts!

- Wizardly Wednesdays: Our contribution = 15-minute activities to be determined

Dates: June 20–August 15

Times: 10 a.m.–noon

Whether we can cover all these activities depends on you, the members and affiliates of the Midland Section. We have a committee to set them up and an approved place to carry them out. Our community has the experts needed to give our kids a love and understanding of chemistry for life. Let's do it!

Interested? Contact us by e-mail at P2Drey@aol.com or phone (517) 832-7651 or write to P. Dreyfuss at 3980 N. Old Pine Trail, Midland, MI 48642. Tell us when you can help and we'll be ready for you and for the kids.

Project Science Literacy Expands

By John Blizzard

This year our Project Science Literacy program has expanded to include a “how to” guide and an *advanced* (second year) workshop designed around the environment and polymer chemistry. The following table summarizes the training sessions:

Year	Session	Counties	Teachers
2000	8 Midland	6	140
	1 Concordia College	1	23
1999	8 Midland	6	247
	1 Advanced	1	15
	2 Training	4	29

Since this program began, this brings the totals to:

1995–	52 Midland	
2000	6 Advanced	
	6 Training	> 1500

Our “how to” guide is a complete workshop guide detailing all of the information needed for any Section or group to organize, fund, and present the “Bringing Science to Life in the Classroom” teacher workshops. This has been distributed to over six groups within Michigan in 1999 and two additional states (New York, New Jersey) in 2000 (via ACS National). To date, two of these areas in Michigan (Saginaw and Macomb) and three out-of-state areas are in the process of establishing this workshop in their areas.

A new initiative in this program is with Native Americans. We are in the process of bringing science to life at three Chippewa schools in Mt. Pleasant. This includes establishing a complete science facility at this complex, including training, lab equipment, and lab set-up.

Committee members:

Jennifer Arnold	Dave Baker	John Blizzard
Karol Childs	Drew Colenrander	Claudia Douglass
Julie Eaton	Mike Ferrito	Todd Hogan
Gretchen Kohl	Nicole Lenz	Tara Estes
Joan McMahan	Paul Popa	Heather Quinn
Barb Roth	Chuck Roth	Joan Sabourin
Cheryl Schultz	Richard Skochdopole	Janet Smith
Marvin Tegen	Martha Rogers	Heidi Vandort

New Midland Section Members!

Connie Murphy

Midland Section Membership Chair

Welcome! to the following people who have recently either joined the American Chemical Society or transferred to the Midland Section:

- Kristine Danowski
- Yogesh Gala
- James Gall
- Csilla Kollar
- Gertrude Lathrop
- Richard Luczak
- Steven Martin
- Jonathan Moore
- Robert Mortensen
- Angela Taha
- Thomas Zak



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2000 Midland Section

Annual Report Summary

By Wendell L. Dilling

[Editor's note: Because many of the activities described in the summary have been previously covered in The Midland Chemist, we will present an abbreviated version. The entire summary will be placed on the Midland Section web site.]

Top Activities

The 56th Fall Scientific Meeting (FSM) occurred October 28 at the Dow Employee Development Center in Midland. The event's theme was *Changing Times*, highlighting the evolutionary period in which we live and emphasizing how we must adapt what we do as scientists and ACS members to accommodate technological, professional, social, and educational changes. Fifteen people made oral presentations in symposia on *Careers in Chemical Technology*, *Chemical Education*, *Thermophysical Properties of Elastomers*, and *Biochemistry: Applications to Medical Science*. Additionally, the technical program had 31 poster presentations from industrial and academic contributors.

The year 2000 brought about a new milestone for Project Science Literacy whereby a group of dedicated teachers/volunteers has helped "Bring Science to Life in the Classroom" to more than 1500 Michigan teachers. In 2000, Project Science Literacy expanded to include a "How To" guide and an advanced (second year) workshop designed around environmental and polymer chemistry.

The Midland Chemist (MC) is a publication of the Midland Section of the American Chemical Society. Substantial changes to *The MC* this year included the following:

- Complete layout redesign
- New ad designs
- Direct printing of addresses (rather than on gummed labels)
- Updating of nonmember mailing list
- Increased use of photos
- Inclusion of crossword puzzles
- Preparation of *MC* web page with instructions to authors and editorial calendar
- Generally increased coverage of Midland Section events

New Activities

The Minority Affairs Committee's mission is to increase participation in science and technology by under-represented minorities and others, liv-

ing in Midland, Bay, Saginaw, Gratiot, and Isabella Counties, by actively leveraging existing Section, corporate, and collegiate resources.

The main thrust of the Industry Relations Committee this year was to determine its objectives. One suggestion was to discuss with upper management at The Dow Chemical Company and Dow Corning Corporation what existing or potential Midland Section activities would be valuable to them and their employees. A discussion by leaders of the Midland Section with Dr. Rick Gross, Dow Chemical Company Corporate Vice-President and Director of Research and Development, and two other Dow research managers at the Midland Section Recognition Dinner, December 12, 2000, initiated this activity.

Kids turned into sleuths and Midland chemists became private detectives as they joined forces to solve the mystery of "The Unsigned Letter". The event was part of National Science & Technology Week (NSTW), April 10 through April 14, at the Hall of Ideas of the Midland Center for the Arts (MCFTA). It marked the Midland Section's debut of Kids and Chemistry, a program developed by the American Chemical Society to give scientists the resources and training necessary to share hands-on science with mainly middle school children ages 9 to 12.

The charter of the *ad hoc* Finance Committee was to draft a policy statement that would provide guidance for the present and future on the level of financial reserves the Midland Section should maintain. All committee "meetings" were conducted by e-mail.

Previously the Weyenberg Student Travel Grants had been handled by the Section Chair. Because of increased activity for Science Promotions involving Educator Travel Grants, a new committee was established. A set of guidelines, mirroring those in place for the Student Travel Grants for awarding Travel Grants to Educators was developed by the committee and approved by the Board of Directors.

Project Science Literacy expanded its program of training elementary teachers on presenting chemistry demonstrations to students to include a "How To" guide. Project Science Literacy also expanded its program of training elementary teachers on presenting chemistry demonstrations to students to include an advanced (second year) workshop designed around environmental and polymer chemistry. Project Science Literacy is bringing science to life at three Chippewa schools in Mt. Pleasant. This includes establishing a complete science facility at these schools, including training, lab equipment, and lab set-up.

Several Midland Section outreach programs require current address lists of schools and teachers in the Midland Section area. Trying to keep current lists for each committee has been difficult. Thus a centralized computerized database (542 entries initially) has been started to keep the

data available for all committees to use. Only one database rather than several will need to be updated.

Traditionally the Midland Section and the Mid-Michigan Technician Affiliate Group (MMTG) have a hands-on chemistry booth for six days and evenings every year at the Midland County Fair. This year fair booth volunteers presented a 2-hour glass-blowing demonstration and chemistry show for two evenings.

A new National Chemistry Week Committee activity this year was Professional Scientific Society Day at the Midland County Fair held August 18 at the Midland County Fairgrounds from 4:00–8:00 pm. The theme was “Polymers, Plastics and Sports.”

In recent years a significant portion of the funding for the Midland Section has been provided by The Dow Chemical Company Foundation and the Dow Corning Corporation. We again requested funding grants from these two companies. With the expansion of the ACS Challenge 2000 Matching Gift Program to gifts made to local sections for certain outreach programs, the Midland Section was able to secure a \$14,860 matching gift based on a portion of the corporate grants.

Other Section Activities

In addition to the top activities and new activities described above, the Midland Section continued and expanded many other member-oriented and outreach activities.

The Membership Growth and Retention Committee sent welcoming letters to all new, reinstated, and transferred-in members of the Midland Section. Their names were listed in *The Midland Chemist*. Member interest surveys were sent along with the welcoming letter.

The web site was continuously updated and its use expanded. An increasing number of Midland Section members requested placement of notices on the site for events of interest to chemists.

The Publicity/Public Relations Committee established many contacts and created an effective communications network for distributing information quickly and cheaply. Many publicity items about Section activities were distributed using this system throughout the year.

The major activity of the Government Affairs Committee was the planning and participation in the Science Education Government Affairs Coalition meeting in Lansing, Michigan, on February 11 with Michigan Local Section Representatives. Contacts were made with Senator Emmons and Representative Stamas to discuss ACS's interest in K–12 Education.

The Environmental Affairs Committee pursued getting more value from fuel consumed throughout the world. The approach has been to apply the science of thermodynamics and specifically the second law that

deals with entropy.

The Career Services/Professional Relations Committee continued to respond to members who request information or voice concerns over employment and career opportunities. The committee was instrumental in organizing the panel discussion on “Recent Trends in the Chemical Industry” for the Fall Scientific Meeting.

The Awards Committee organized the annual Science Education Recognition Dinner at which student, teaching, and 50-year ACS membership awards were presented. Three awards were presented at the Fall Scientific Meeting including one for Outstanding Achievement and Promotion of the Chemical Sciences.

The Program Committee scheduled seven events. Unfortunately three had to be cancelled because of speaker illness or schedule conflicts. Speakers John Fortman, Edwin Thomas, Attila Pavlath, and Thomas Tidwell delivered talks on topics ranging from nontechnical to technical subjects.

The National Chemistry Week Committee coordinated events all year. Some of the activities are described elsewhere in the annual report. “Masters of the Millennium” was held in the Bay City Mall, April 1–2, in which students and their teachers demonstrated their finished projects to mall shoppers.

During the summer three SEED I students and two SEED II students spent 8–10 weeks working full-time on research projects under the guidance of preceptors at Central Michigan University, Saginaw Valley State University, and The Dow Chemical Company.

The Section participated in the 2000 Chemistry Olympiad Competition. Students (297) from 11 schools participated. Monetary awards were presented to the top scorers.

Sci-Fest 2000 was held at Delta College on November 4. Twenty-three exhibitors demonstrated a variety of science-related activities, some of them hands-on, for 700–750 visitors.

The Midland Section affiliated Mid-Michigan Technician Group (MMTG) carried out an extremely active program. Several lunch seminars and programs resulted in an 85% increase in membership.

Other active committees were Nominations and Elections, Long Range Planning, Historian, Corporate Agent, and Technical Society Interface.

Important Dates on the ACS Midland Section Calendar

- March 19 Professor Brian Pfennig, "Electronic Coupling in Multinuclear Mixed-Valence Compounds," CMU Seminar Series, Dow 175, 4:00 p.m., reception preceding in Dow 264 (SAACS, Estelle Lebeau, 517-774-3116)
- March 26 Professor Charles Yocum, "Structure and Reactivity of the Photosystem II Manganese Cluster," CMU Seminar Series, Dow 175, 4:00 p.m., reception preceding in Dow 264 (Phil Squattrito, 517-774-4407)
- April 9 Midland Section board meeting, Delta College, University Center, Room D135, 7:00 p.m.
- April 11 Deadline for registration for Spring Science Education Recognition Dinner (Phil Squattrito, 517-774-4407)
- April 16 Rep. Sandra Caul, "Funding for Higher Education in Michigan," CMU Seminar Series, Dow 175, 4:00 p.m., reception preceding in Dow 264 (Bob Howell, 517-774-3582)
- April 25 Spring Science Education Recognition Dinner, Hall of Ideas, Midland Center for the Arts, 6:00 p.m.-8:00 p.m. (Phil Squattrito, 517-774-4407)

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

AMERICAN CHEMICAL SOCIETY

P.O. Box 2695

Midland, MI 48641-2695

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