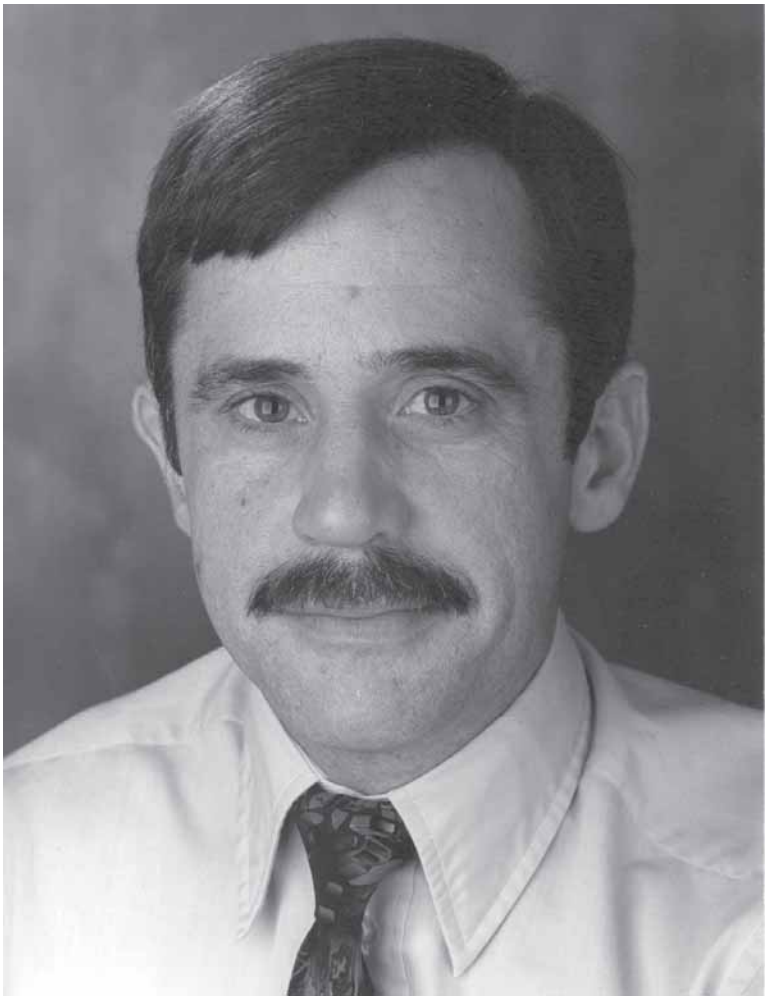
THE MIDLAND CHEMIST
Vol. 45, No. 2 April 2008



Professor Thomas P. Russell is 2008 Turner Alfrey Visiting Professor at MMI. *See pg. 9*

More inside!

THE MIDLAND CHEMIST

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In this Issue ...

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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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Chair Column

Midland Section—What's In It for Members?

Dorie Yontz, Chair
ACS Midland Section

In my last column, I talked about how our Section spends its money and showed how we have a strong emphasis on community outreach and education. I'd like to emphasize another aspect of our organization in this issue's column—our members. The core of ACS is its members. We are, after all, a society for chemistry professionals. The membership is our base, and it is the mechanism by which we achieve all that we do. We've shown what ACS does for the community, but what do we do for our members? To be honest, that's been an area of active debate within our Section.

At its most basic level, ACS membership provides all of the benefits of being part of the national organization. We get discounts on journals, access to national meetings, and for those of us involved in the job market in some form, we get access to the ACS clearinghouse. Here's where I struggle: for those of us who have jobs with electronic subscriptions to the journals and with limited ability to publish or discuss our work, what's the benefit? For some, like me, ACS was appealing because of the local section's active community involvement, but that doesn't interest everyone. How about activism? Did you know that ACS has a Legislative Action Network, which makes it easy to keep up-to-date on what Congress is doing on science-related topics? For some, our annual Fall Scientific Meeting is the main way that ACS gives back to the members. What about you? We'd love to hear about what you would like from ACS. Please e-mail me at dyontz@dow.com with your thoughts.

If you have a program idea in mind, regardless of whether it is a way of bringing some benefit to our membership or a way of reaching into the community, we may be able to get a grant to turn your vision into reality. Twice a year, national ACS accepts proposals for innovation grants (up to $3,000). The application is a simple form and the next deadline is July 1. Contact me if you have an idea and we can help you write the proposal.

Guidelines for innovation grants:

- The amount of funding will be up to $3,000 per application.
- Funds may be used for materials and supplies, hardware (only if it is integral to the nature of the project), sponsoring exhibits or symposia, travel expenses, reasonable program marketing, and related items.

- Funds may not be used for honoraria (including payment to contractors), pass-through donations to other organizations, alcoholic beverages, or meals for local section members (snacks are acceptable).
- Whenever possible, local sections are encouraged to use low-cost or free meeting facilities and advertising (e.g. through local section or sponsoring organization newsletters).
- A funded program/project should be completed within 12 months of the award date.
- A final report must be submitted to LSAC within three months of the funded project describing how the funds were used and the impact the project had.
- A project should be launched, conducted, and evaluated within 12 months from the award date.
- Only one proposal per local section will be funded each year.
- Funding will be awarded to a section only if it has submitted the most recent annual report.
- Funding will be awarded to a section only if it has submitted a final report for all previous ACS Local Section Innovative Projects Grants.

Dorie J. Yontz

Call for Volunteers

Program: Dow Chemical's Public Affairs group has asked the Midland ACS for help during the Dow Family Reunion. Members of the Dow family will be taking a tour of the plant and they would like to have chemistry-related activities for the kids.
Position/Job: Volunteers to conduct hands-on demos with kids of various ages. (All materials and instructions will be provided.)
Time/Date Needed: Morning of Friday, June 27, 2008. Starts at 9:00. Ends before lunch.
Location: Lobby of 1790 building at Dow Chemical. This is a public building, so no special access is required.
Skills Needed: Willingness to spend a few hours out of your work day to bring science to life for kids.
Contact: Dorie Yontz by June 1, dyontz@dow.com, 989-636-2571

Call for Nominations

2008 Science Teaching and Education Volunteer Awards

Each year the Midland Section of the ACS presents awards to recognize outstanding achievement in the teaching of the chemical sciences. Nominations for the 2008 awards are invited. Awards are presented for Outstanding Achievement in the following areas:

- Elementary Level Science Education
- Middle Level Science Education
- High School Chemistry Teaching
- College Chemistry Teaching
- Science Education Volunteer

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 will be presented to an individual who makes a substantial contribution to science learning in the Midland Section through voluntary efforts. 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 31, 2008**. Electronic submissions are preferable. All submissions must be accompanied by the name, position, address, and phone number of the nominator. Award recipients as well as high school and college student award recipients and Chemistry Olympiad winners will be honored at the ACS Science Education and Awards Banquet in April 2008. (Please see the local ACS Section web site for updated awards information, http://membership.acs.org/M/Midl/.) The Awards Committee greatly appreciates the efforts involved in nominating someone and thanks you for helping to recognize deserving educators in our section. See pages 12 and 13 for lists of previous award recipients.

Parents: Does your child have a great science teacher? If so, consider nominating him/her and pass this flier along to that teacher's principal or section head.

Please submit nominations to:
Scott G. Gaynor, Awards Committee Chair
The Dow Chemical Co.
1603 Building
Midland, MI 48674
Phone: (989) 638-1806; Fax: (989) 636-6454
e-mail: sggaynor@dow.com

Elementary Level Science Education

1992	Karen Ziemelis
1993	Lela Wade
1994	Constance A. Dullock
1995	Joan Klopcic
1996	Mark Hackbarth
1997	Denise Koppleberger, Cheryl Ruthig
1998	Barbara McGivern
1999	John Clark
2000	Sue Burtch, Robin Harshman-Rogers, Vicki Richard, Clare Jorgensen
2001	Cathy Egerer, Amy Hindbaugh-Marr
2002	Maureen Becker
2003	Leon Katzinger
2004	Joan Roels
2005	Curt Moses
2006	Robin Allen
2007	Diane Huckins

Middle Level Science Education

1992	Derrell Steffen	2000	not awarded
1993	Laurie Hepinstall	2001	not awarded
1994	JoAnn Kraut	2002	Joel Mikusko
1995	not awarded	2003	not awarded
1996	Barbara J. Bibbee	2004	Christine Brillhart
1997	Gary J. Johnson	2005	not awarded
1998	not awarded	2006	Matthew Miller
1999	not awarded	2007	John Hoving

High School Chemistry Teaching

1989	Robert Wallace	1999	Robert Enszer
1990	Gary Ronk	2000	Steven Kelly
1991	not awarded	2001	William Stokes
1992	John Clark, Edna Konwinski	2002	Robert Hansen
1993	Mary Irons	2003	not awarded
1994	Jo Ann Pelkki	2004	Doug Grezeszak
1995	not awarded	2005	Pamela Thompson
1996	Sandra Schafer	2006	Daniel Sealey
1997	Mary Fredell	2007	not awarded
1998	Dale Ressler		

College Chemistry Teaching

1989	Joan Sabourin	1999	Steven Keinath
1990	Bob Howell	2000	James Hutchison
1991	Robert Kohrman	2001	Sandra Smith
1992	Scott Hill	2002	Margaret Hill
1993	Ajit Sharma	2003	Dale Meier
1994	Laura Vosejpka	2004	Katharine Blystone
1995	George Eastland	2005	Ronald Sharp
1996	Martin Spartz	2006	Arthur G. Smith
1997	Philip Squattrito	2007	Cynthia N. Peck
1998	Thomas Delia		

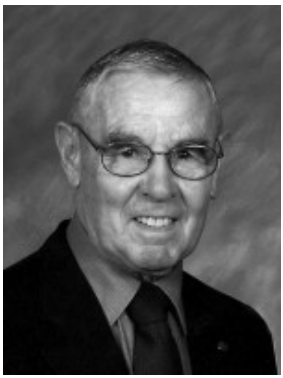
Science Education Volunteer

1992	Gregg Young	2000	Karol Childs
1993	Peter Bonk	2001	Donald Petersen
1994	Peter Moehs	2002	Joan McMahon
1995	Gretchen Kohl	2003	John Blizzard
1996	John Blizzard, Dick Van Effen	2004	Jan Zanyk
1997	Marvin Tegen	2005	Eldon Graham
1998	Carlton Beyer	2006	Tom Chamberlin
1999	William Albe	2007	Teri Bickmore, Cal Goeders

In Memoriam

Leonard J. Lefevre

Leonard J. Lefevre, 78, of Midland, died Feb. 4, 2008, at the MidMichigan Medical Center. He was born Jan. 8, 1930, in Bay City, son of the late Raymond and Jeanne (Talbot) Lefevre. He graduated from St. Mary's High School in Bay City and honorably served with the U.S. Army during the Korean War. He graduated from Michigan Tech with bachelor degrees in chemistry and chemical engineering. On June 16, 1956, he married Patricia Leaveck at Holy Trinity Catholic Church in Bay City. He worked for The Dow Chemical Company as a senior research scientist in ion exchange technical service and development. He held 13 patents with Dow and retired after 35 years of service. He had been a member of the American Chemical Society for 48 years.



Call for Nominations

2008 Promotion of Diversity in Chemistry, Related Sciences and Engineering Award

The Midland Section of The American Chemical Society presents the "Promotion of Diversity in Chemistry, Related Sciences and Engineering Award" biannually to a person or group residing in Midland, Bay, Saginaw, Isabella or Gratiot county for outstanding achievement in enhancing the participation of underrepresented groups in the study of chemistry, related sciences and engineering. The award will be presented at the ACS Science Education and Awards Banquet in April. (Please see the Section web site for complete awards information, http://membership.acs.org/M/Midl/.)

The criteria for this award include teaching, mentoring, serving as a role model, and active and sustained participation in organizations that support diversity which have had a demonstrable impact on the promotion of diversity in chemistry, related sciences and engineering. Members of the Midland Section Minority Affairs Committee are ineligible to receive this award. Previous recipients of the award include:

2002	George Gant and Richard Stringfield
2004	Smallwood Holoman, Jr.
2006	Joan Sabourin

Recipients of this award will be selected by the Midland Section Awards Committee. Nominators should write a letter describing the attributes of the candidate. Supporting letters from students, colleagues, supervisors, and community leaders are strongly encouraged. The deadline for nominations is **March 31, 2008**. Electronic submissions are acceptable and preferred. All submissions must be accompanied by the name, position, address, and phone number of the nominator.

Please submit nominations to:
Scott G. Gaynor, Awards Committee Chair
The Dow Chemical Co.
1603 Building
Midland, MI 48674
Phone: (989) 638-1806; Fax: (989) 636-6454
e-mail: sggaynor@dow.com

Spring Science Education Recognition Dinner

By Scott Gaynor

Wednesday, April 23, 2008
6:00 p.m. to 9:00 p.m.
Dow Corning Cafeteria
Midland, Michigan

Program:

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

Teachers and students will be recognized for their outstanding achievements in science education at this annual event. The 2008 Promotion of Diversity award will also be presented. The cost of the dinner is $18.00 per person and includes appetizers, dinner, dessert, and beverage. Please respond by mail using the form below. Your dinner reservation request must be received by April 18, 2008. You may also register by e-mail to Scott Gaynor (sggaynor@dow.com) and pay at the door. This event is sponsored by the Midland Section of the American Chemical Society and underwritten by grants from The Dow Chemical Company and Dow Corning Corporation. For further information, contact Scott Gaynor at (989) 638-1806.

To reserve a place at the 2008 Spring Science Education Recognition Dinner, return this form with payment ($18.00/person) by April 18, 2008, to Scott Gaynor, The Dow Chemical Company, 1603 Building, Midland, MI 48674.

Name(s): _____

Affiliation: _____

Address: _____

Phone/Email: _____ ACS member? Y N

Enclose payment of $18.00 per person. Checks should be payable to "Midland Section ACS."

ACS Tour Speaker

Alternate Energy Sources: From the Sun to the Depth of the Earth

Dr. Attila E. Pavlath
Western Regional Research Center, USDA
Central Michigan University, Dow 175
April 14, 4:00 p.m.

Abstract

This lecture gives a general description of the availability of various energy resources other than coal, gas, and oil. It summarizes the present technological background of possibilities from geothermal to fusion power. It is presented in a way understandable to a large degree even by nontechnical audiences. The amount available in each area and the future outlook are discussed.

Biographical Sketch

Dr. Attila E. Pavlath received his education at the Technical University of Budapest in Hungary, where he became assistant professor. In 1956, he left Hungary first for Montreal, Canada (McGill University), then in 1958 he joined Stauffer Chemical Company in Richmond, California. Since 1967, he has been with the U.S. Department of Agriculture in Albany, California. He is leading a group involved in research on various agricultural chemical problems. He has published over 120 scientific papers on these subjects, three books and has presented numerous lectures in the U.S. and abroad. He also holds 25 patents. Dr. Pavlath is also well-known for his activities in the ACS during the past 35 years to make the ACS more responsive to the professional needs of its members. He rose from his Section's treasurer to the position of president of ACS.

MMI Announces 2008 Turner Alfrey Visiting Professor Course

By Steven Keinath

Course 1035:	Surface and Interfacial Behavior of Polymers
Lecturer:	Prof. Thomas P. Russell, Silvio O. Conte Distinguished Professor of Polymer Science and Engineering, University of Massachusetts, Amherst, MA 01003
Location:	Lecture Hall (Room 101), Michigan Molecular Institute, 1910 West St. Andrews Road, Midland, MI 48640
Time:	Formal lectures: Monday-Friday, May 12-16, 2008, 3:00-6:00 p.m.
Fee:	There is no fee for auditors if they belong to organizations that are financial sponsors of the Turner Alfrey Visiting Professor program: The Dow Chemical Company, Dow Corning Corporation, Central Michigan University, Michigan State University, Saginaw Valley State University, Midland Section of the ACS, and Mid-Michigan Section of the SPE. For all others, a course fee of $300 will be required at registration. *All participants, however, must register.*
Registration:	Pre-registration is required no less than one week in advance with the Registrar by visiting *www.mmi.org*, emailing *registrar@mmi.org*, or by calling (989) 832-5555, ext. 571.

Course Abstract

There has been an enormous surge of interest in the surface and interfacial behavior of polymeric materials. This interest, in part, arises from the remarkable interest in nanostructured materials where the surfaces and interfaces become increasingly important. Yet, age-old questions continue to be of interest, like wetting, adhesion, and the glass transition temperature, where surfaces and interfaces provide unique avenues to arrive at some answers. Wrapped up with all of this has been the tremendous growth in the number of techniques that have emerged with sufficient spatial resolution and sensitivity to address questions on the nanoscopic level. This short course is designed to delve into the area of the surface and interfacial behavior of polymers by discussing some of the techniques that have emerged that enable questions to be answered. It will then

discuss the interactions that polymers experience at surfaces and interfaces (favorable or otherwise) and the ramifications of these interactions. It then moves into the use of external fields to overcome interfacial interactions and to use these external fields to impart marked orientation and ordering in polymeric, specifically block copolymeric materials, and the use of these structures as scaffolds and templates for the fabrication of nanostructured materials. Unlike polymers, the interfacial behavior of nanoparticles is strongly influenced by the physical size of the particles. The assembly of nanoparticles at interfaces will be discussed in terms of self-healing and self-corralling systems that are beginning to emerge as candidates for photovoltaic devices. Finally, the ultrathin films formed by nanoparticles are known to wrinkle and the manner in which the wrinkling occurs can be used to determine the modulus, relaxation behavior, and Tg of thin films.

Lecture Topics Outline

I. Characterization Methods. Optical microscopy, dynamic secondary ion mass spectroscopy, forward recoil spectroscopy, neutron and x-ray reflectivity, ellipsometry, electron tomography, transmission electron microscopy, grazing incidence x-ray scattering, resonance x-ray scattering, near edge x-ray adsorption spectroscopy, x-ray microscopy, scanning force microscopy, laser scanning fluorescence spectroscopy.
II. Preferential Interfacial Interactions. Interfacial interactions, surface energy, adhesion, polymer mixtures, block copolymers, patterned surfaces, ultrahydrophobic surfaces, commensurability.
III. Balanced Interfacial Interactions. Interfacial interactions, surface modification, block copolymer templating, internal fields (salts, homopolymers), long-range lateral ordering, commensurability.
IV. External Fields. Electrohydrodynamic instabilities, microdomain orientation (electric fields, magnetic fields, solvent fields), block copolymer lithography (scaffolds).
V. Interfacial Behavior. Block, random, and multi-block copolymers at interfaces (influence on adhesion), nanoparticles at fluid interfaces (assembly, dynamics, chemistries, encapsulation, self-healing systems, nanorods at interfaces), self-healing and self-corralling (applications).
VI. Wrinkling in Thin Polymer Films. Modulus thickness, relaxation behavior, Tg in thin films.

Biographical Sketch

Thomas P. Russell, the Silvio O. Conte Distinguished Professor of Polymer Science and Engineering, received his PhD in 1979 in Polymer Science and Engineering from the University of Massachusetts Amherst. He was a Research Staff Member at the IBM Almaden Research Center in San Jose, CA

from 1981 to 1996, and then became a Professor of Polymer Science and Engineering at the University of Massachusetts Amherst in 1997. He is the Director of the Materials Research Science and Engineering Center on Polymers, an Associate Director of MassNanoTech, Director of the Multi-University Research Initiative on Nanoscopic Assembly of Biologically Active Materials, and an Associate Editor of Macromolecules. He is also a fellow of the American Physical Society, the American Association for the Advancement of Science, and the Neutron Scattering Society of America.

His research interests include the surface and interfacial properties of polymers, phase transitions in polymers, directed self-assembly processes, the use of polymers as scaffolds and templates for the generation of nanoscopic structures, the interfacial assembly of nanoparticles, and the influence of supercritical fluids on phase transitions and dynamics in polymer thin films. The outcome of Prof. Russell's research and development work has resulted in about 450 publications, 13 patents, and an untold number of invited lectures and presentations.

Spring 2008 ACS National Meeting & Exposition

Sunday, April 6 — Thursday, April 10, 2008
New Orleans, LA USA

Join us in New Orleans for outstanding technical programming and, for the first time, cosponsored symposia with the American Institute of Chemical Engineers (AIChE). Registered attendees from both societies can attend technical symposia at either meeting and explore the ACS Exposition. See http://portal.acs.org/portal/acs/corg/content for more information.

SPE/ACS/ASM/AIChE Joint Technical Society Dinner Meeting

Block Copolymer Lithography: Where "Top Down" Meets "Bottom Up"

Prof. Thomas P. Russell

Silvio O. Conte Distinguished Professor of Polymer Science and Engineering, University of Massachusetts, Amherst, MA 01003

As the size scale of device features becomes increasingly smaller, conventional lithographic processes become increasingly more difficult and expensive, especially at a minimum feature size of less than 50 nm. To achieve higher density circuits, storage devices, or displays, alternative routes are needed to circumvent cost and manufacturing issues. An ideal process would be compatible with existing technological processes and manufacturing techniques, and these strategies, together with novel materials, could allow significant advances to be made in meeting both short-term and long-term demands for higher density and faster devices.

The self-assembly of block copolymers (BCP), two polymer chains covalently linked together at one end, provides a robust solution to these challenges. The integration of novel chemistries with the manipulation of self-assembly is giving rise to applications ranging from ultrahigh-density storage devices to separations devices for virus particles. A few of these leading edge applications will be discussed to illustrate the continuing great potential of block copolymer technology.

Date:	Thursday, May 15, 2008
Time:	Social 6:30 p.m. Dinner 7:00 p.m. Program 8:00 p.m.
Location:	NADA Center, Northwood University, 4000 Whiting Drive, Midland, MI 48640, Phone: 989-837-4277
Cost:	$25.00 for SPE/ACS/ASM/AIChE members or guests, $15.00 for students
Reservations:	Reservations can be made via phone, fax, or e-mail to Dawn Wright at MMI. They must be received no later than Thursday, May 8, 2008. Phone: 989-832-5555, ext. 571, Fax: 989-832-5560, E-mail: wright@mmi.org

MMTG Update

MMTG Learns What Water and Running Have in Common

By Dana Fuerst
Photos by Debbie Bailey

Awesome!" "A really worthwhile lunch meeting!" "Entertaining and interesting." "Excellent!" Such was the feedback on the MMTG lunchtime speaker event that was held on February 12. MMTG hosted speaker Dr. Heiko Weiner, runner participant of the Blue Planet Run (BPR) 2007. Dr. Weiner shared his stories from the BPR 2007 for 29 members. The members not only enjoyed hearing about his once-in-a-lifetime run around the world, but they also were provided with lunch and had a chance to win a BPR 2007 t-shirt and a BPR 2007 book (valued at $45).

Kris Stoneburner and Julie Cook won t-shirts by being the first two people to RSVP for the event. The winners of the drawing for the t-shirts at the lunch were Mike Bourbina, Kerry Pacholke, Amy Tesolin-Gee, Marilyn Shope, and Greg Butch. The big winner of the day was Amy Tesolin-Gee, who also won the personalized book! As a thank-you to Dr. Weiner,

Dr. Weiner (center) poses with MMTG members (l-r) Chair Dana Fuerst, 2008 NCTA Recipient Janet Smith, Director Wendy Klein and Past Chair Deb Mendrick.

MMTG made a donation in his name to the BPR to supply two people with clean drinking water for life. For more information on BPR 2007 or to make a donation, visit www.blueplanetrun.org.

MMTG's next event will be a celebration dinner honoring the 2008 National Chemical Technician Award recipient, Janet Smith. Janet has been a member of MMTG for over 10 years and has served as treasurer, delegate, director, chair-elect, and chair for the group. The dinner event is being planned for the end of March. For details on the event, please contact Dana Fuerst at dfuerst@dow.com.

Janet Smith Wins 2008 National Chemical Technician Honors

From National ACS

Janet M. Smith, Associate Technologist at Dow Corning Corporation, is the 2008 winner of the National Chemical Technician Award. Janet is the 20th recipient of this award, given annually for demonstration of technical achievements, leadership, and mentoring.

"[Janet] is truly an ambassador for chemical technicians."

Dr. William Schulz, Science and Technology Leader, stated "…I trust (Janet and her work) implicitly…" Dr. Schulz further states, "I also respect Janet tremendously in the way she prioritizes her life … she is able to balance her work and life outside work very well."

During Janet's 19-year career at Dow Corning she has been an indispensable member of the research and development organization. Her significant contributions have been summarized in 21 patents, 5 peer-reviewed external publications, and 20 internal publications. Janet has also presented her work in 6 external venues and 15 internal venues, sharing her discoveries and insights with audiences from around the world.

Janet's extraordinary commitment to her profession and community has made her highly sought to serve in leadership and committee positions. She has served in NSF grant review panels, chaired the Bay Area Dow Corning Employees Scholarship Fund, participated in the Midland Local Section Project Literacy Program, served on the Delta College Technology Advisory Committee, and has been both treasurer and chair of the Division of Chemical Technicians.

About Our Members

Dvornic to Deliver Reed Lecture at Rensselaer

By Ann Birch
Photo by Angelo Cassar

Dr. Petar R. Dvornic, professor of polymer science and senior research scientist at Michigan Molecular Institute in Midland and long-time Midland Section member, has accepted an invitation to deliver the Reed Lecture at Rensselaer Polytechnic Institute in April. According to Len Interrante, chairman, Reed Lecture Committee, this is an annual lectureship that was started in 1996 to honor Dr. Charles Reed, a former GE senior vice president who was a pioneer in the commercial development of silicones.

The main focus of this lecture series has been organosilicon polymer chemistry, so Petar's work on organosilicon dendrimers is particularly appropriate. The Reed Lecture is one of four endowed lectures in the Chemistry Department at Rensselaer and is normally presented in the Spring semester as part of their regular seminar series. The Lecture is widely advertised in the area around Rensselaer and, in addition to the faculty and students in chemistry and other sciences from Rensselaer, it is often attended by scientists from GE CRD, as well as from other academic institutions in this area, such as SUNY Albany and Union College.

Petar's participation in the Reed Lecture marks an addition to a long list of prestigious scientists:

2007	Y. Kawakami, Ishikawa, Japan
2006	M. Fujiki, Nara, Japan
2005	R. Miller, IBM San Jose
2004	J.E. Mark, U. Cincinnati
2003	I. Manners, U. Toronto
2002	D. Tilley, UC Berkeley
2001	W. Weber, USC
2000	R. Corriu, Montpelier
1999	D. Seyferth, MIT
1998	K. Matyjaszewski, Carnegie Mellon
1997	R. West, U. Wisconsin
1996	W. Ando, Japan

100-Year-Old Text Still Speaks to Chemists

Adapted from "This Month in Chemical History" by Harold Goldwhite with permission

Allen Rogers was the author of *Laboratory Guide of Industrial Chemistry*, published in 1908 in New York. This modest volume of only 158 pages makes interesting reading. The frontispiece is a photograph depicting a chemical works (type unspecified). A supervisor (?) dressed in a monk-like dark-colored laboratory coat which covers him down to the ankles is peering anxiously into a tank. Three workers, all wearing shirts and ties, one wearing a jacket, and the other two wearing aprons, are tending to various pots being stirred by belt-driven devices. All are male and no-one is wearing safety glasses. Prominent in the photograph are two metal retorts presumably being used for distillations. All the vessels depicted, and their contents, are open to the air.

The book begins with a set of admonitions: facts which should be remembered. Here are a few to give you the flavor and the philosophy of the author:

- Do the task which is set before you, and do it with a smile.
- Do not use your neighbor's standard solution for accurate determinations.
- Glassware will break if dropped to the floor.
- Leave your machine or kettle in better condition than you found it.

Dr. Rogers wrote this text with a particular goal in mind. To quote from his preface: "In the average course of chemistry as taught in our technical schools there is little or no attempt made to bring the student in close touch with manufacturing conditions." He attempts to remedy this by introducing students to a few commercial processes, teaching them how to handle materials on a large scale, instructing them on cost estimating, and discussing supervision of factory labor. The specific industrial subjects covered in eight brief chapters include inorganic preparations; dyeing of textile fibers; commercial organic compounds, coal tar colors, and synthetic oils; pigments and lakes; driers, varnishes, paints and stains; soap and allied products; leather manufacture; and wood fiber, pulp, and paper.

As an inorganic chemist—once upon a time—I found the chapter on inorganic preparations of particular interest. The reactions include the manufacture of aluminium (yes: the European spelling!) sulfate (and now the American spelling!) from bauxite, of tartar emetic from cream of tartar, of ammonium sulfate from ammonia solution, of barium chlorid (Rogers' spelling) from witherite, and, among others, lead acetate, potassium dichromate, potassium permanganate from pyrolusite, and disodium hydrogen phos-

phate from bone-ash. Eminently practical preparations all.

Another interesting photograph introduces the chapter on soap and allied products and shows a miniature soap works which I surmise is the one Rogers had constructed at the Pratt Institute. Depicted are five male students, formally dressed, engaged in pressing the final soap product. Illustrations in this chapter (the whole text is generously illustrated, showing many pieces of industrial chemical equipment) include a soap frame, two views of crutchers, a slabbing machine, a cutting machine, a plodding machine, and a soap press. Recipes are given for laundry soap, green Castile soap, half boiled soap, tar soap, and dog soap.

Rogers' book is a fine practical text. It includes references in each chapter to current books in the area covered, a table of useful data, and a full index. Reading it one has to respect its author and his dedication as a teacher—a hundred years after its publication.

Earth Day 2008 Activities Planned

By Dorie Yontz

Mark your calendars! Planning has begun for Earth Day on Saturday, April 19. Once again, ACS and the Alden B. Dow Museum of Science and Art are organizing activities at the Midland Center for the Arts from 10:00 a.m. to 3:00 p.m. The theme this year is "Streaming Chemistry," and a variety of booths and activities are being planned. Some of the organizations anticipated to participate include the Midland Section, Chippewa Nature Center, and Delta College. There are even rumors that there might be a live animal show!

2008 Weyenberg Grants Announced

By Brian Marinik

Each year, the Midland Section of the American Chemical Society has the pleasure of announcing the recipients of the Donald R. Weyenberg Memorial Student Travel Grants. Since 1999, these grants have been given to young people in an effort to support their travel and participation at scientific conferences. This enables them to present their research and interact with academic and industry professionals with whom they will work in the future to solve the next generation of chemistry challenges.

On February 20, Mrs. Barbara Ann Weyenberg, wife of Donald, passed away. Mrs. Weyenberg, like her husband, was a strong supporter of education, science, and providing opportunities for young people to present their work. Mrs. Weyenberg said of her late husband: "He always sought out the young people (to mentor and share the joy of discovery)." Indeed, the same can be said of Mrs. Weyenberg. In addition to the travel grant sponsored by Dow Corning Corporation in her husband's memory, Mrs. Weyenberg advocated for and supported many other community and educational outreach activities, including the Donald and Barbara Science Scholarship at Saginaw Valley State University and the Midland County Donald R. Weyenberg Memorial Scholarship to aid outstanding high school seniors interested in pursuing chemistry or biochemistry at the university level.

This year it is with mixed emotions that the Midland Section announces the recipients of the 2008 Weyenberg Memorial Student Travel Grants. We are grateful for the opportunity to act, through the generosity of Dow Corning Corporation, on behalf of the Weyenbergs' mission to support and inspire young students to learn and contribute to better science, but we are equally saddened by the loss of Mrs. Weyenberg. It seems appropriate to remember her by considering how each of us acts to promote science and provide opportunities to young students for growth and outreach, and how we might enhance those contributions. It is with sincere hope and anticipation that the recipients of the 2008 Donald R. Weyenberg Memorial Student Travel Grant strive to meet the standards for science and philanthropy set by Donald and Barbara Ann Weyenberg. This year's awardees are:

- Stephan Jahn, Saginaw Valley State University, presenting *Evaluating a Biodiesel Cloud Point Reduction Additive Synthesized from Waste Glycerin*.

- Michael S. Todd, Central Michigan University, presenting *Raman Spectroscopy and Mass Spectroscopy Analysis of Biodiesel Processing*.
- Megan McCallum, Central Michigan University, presenting *Determination of Molecular Interactions between Bio-based Plasticizers and Polyvinyl Chloride*.
- Young Jun Cho, Central Michigan University, *Brominated Aryl Phospholanes as Dual Functional Reactive Flame Retardants for Polymeric Materials*.

Letter to the Editor

Climate Change Issue Discussed at Board Level

The purpose of this letter is to report to Midland Section members on recent actions taken by the Section's Board of Directors regarding speakers for both sides of the global warming issue. As part of the Section's 2007 ACS Earth Day program, Professor Henry Pollack, professor of geophysics at the University of Michigan, spoke to the view that a major portion of the current global warming is caused by human activities.

Not all scientists agree with this view. In the interest of providing data for the opposite view and helping Section members and the public become better informed, I suggested we have a speaker in 2008 who would address the evidence that anthropogenic global warming may not be the major factor in current global warming. I identified a possible speaker, who tentatively agreed to come to Midland. The board and others agreed this person is a respected climate scientist and voted 10 to 4 in favor of issuing an invitation to speak in Midland.

Significant opposition occurred from some board members and other persons who might be involved in the arrangements towards having the lecture associated with the 2008 ACS Earth Day Program or with any other ACS program open to the public. Subsequently, although a majority of the board voted in favor of inviting the climate scientist, the board voted 9 to 5 against paying all of the speaker's expected expenses. One person offered to personally make up the difference between the amount the board was willing to pay and the speaker's actual expenses.

At this point, it appears the other side of the global warming issue will not be heard in Midland this spring at an ACS program, as the intended speaker declined to come after learning about the controversy and the unwillingness of key people to allow this lecture. I hope that some means can be worked out that will allow the opposing viewpoint to be heard in the future, perhaps in a symposium at the Fall Scientific Meeting or elsewhere.

Wendell Dilling

In Past Issues of *The Midland Chemist*

By Wendell L. Dilling, Midland Section Historian

- **40 Years Ago This Month**—In *The Chairman's Column* by D. A. Rausch: "In several respects, the Midland Section of the American Chemical Society is unique when compared with the other 167 local sections. This Section's membership, to a very large degree, consists of industrial chemists living in a small geographical area. This fact may be either advantageous or detrimental depending upon one's objectives and outlook. Unfortunately, the Section may be, through the years, slowly approaching another unique position. Despite efforts by the Program Committee to provide an outstanding series of speakers, the Section ranks less than 150th in average percent attendance."
- **30 Years Ago This Month**—In *E. C. Britton Symposium* by Kathy McCreedy: "The 1978 E. C. Britton Symposium will be held April 20 and 21. This symposium is sponsored annually by the Midland ACS Chapter to foster open communication between the academic and industrial sectors. Approximately thirty chemistry professors are expected to attend the two day symposium on the chemical industry in 1978. The objective of this year's symposium is to present to the professors an updated overview of the chemical industry operation and its employment needs."
- **20 Years Ago This Month**—In *A Historical View of Dow Corning* by Earl L. Warrick: "Dow Corning was incorporated in February 1943 in the midst of World War II. The research and many other activities that led to Dow Corning, as it is today, began much earlier when Dr. E. C. Sullivan, Vice President and Director of Research for Corning Glass Works, Corning, New York, hired Dr. James Franklin Hyde, an organic chemist, to seek materials having properties of both plastics, then known, and glass. The time was 1930."
- **10 Years Ago This Month**—In *1998 Local Section Dues* by The Midland Section Board of Directors: "You may recall that in 1997 we announced the establishment of voluntary local section dues of $5. These dues were to be billed by National on the national dues statement. You may further recall that this did not take place, i.e., the local section dues did not show on the 1998 dues statement that we received last October. Now we wish to inform you that the Membership Division, Office of Local Section Activities, has acknowledged their error and told us that 'Due to a staff error, your local section members were not billed $5.00 for 1998 local section dues…'. They go on to propose 'that the national office reimburse the Midland Section for the lost revenue.' Since the national overall average shows that 75% of all members so billed elect to pay

these voluntary local section dues, they proposed to reimburse us $3255 based on our current roster of 868 ACS members in the Midland Section ($5 x 868 x 75%). We felt this was an eminently fair proposal and so informed the Office of Local Section Activities."

Important Dates on the ACS Midland Section Calendar

Mar. 31	Deadline for nominations for 2008 Science Teaching and Education Volunteer Awards and Diversity in Chemistry, Related Sciences and Engineering Award (Scott G. Gaynor, sggaynor@dow.com, 989-638-1806)
Apr. 14	ACS Tour Speaker, Dr. Attila Pavlath, USDA, "Alternate Energy Sources: From the Sun to the Depth of the Earth," Central Michigan University, Dow 175, 4:00 pm. (Minghui Chai, chai1m@cmich.edu, 989-774-3955)
Apr. 18	Deadline for reservations for 2008 Science Education Recognition Dinner (Scott Gaynor, sggaynor@dow.com, 989-638-1806)
Apr. 19	Earth Day, 10:00 a.m.–3:00 p.m., Midland Center for the Arts (Dorie Yontz, dyontz@dow.com, 989-636-2571)
Apr. 23	2008 Science Education Recognition Dinner, 6:00 p.m.–9:00 p.m., Dow Corning Cafeteria (Scott Gaynor, sggaynor@dow.com, 989-774-3955)
Apr. 21	Midland Section board meeting, Midland Center for the Arts, 7:00 p.m., Board Room (on lower level) (Dorie Yontz, dyontz@dow.com, 989-636-2571)
May 5	Deadline for June issue of The Midland Chemist (Ann Birch, ann.birch@editech-mi.com, 989-835-2856)
May 5	Deadline for registration for TAVP course (registrar@mmi.org, 989-832-5555, ext 571)
May 8	Deadline for reservations for SPE/ACS/ASM/AIChE Dinner Meeting (Dawn Wright, wright@mmi.org, 989-832-5555, ext 571)
May 12-16	Prof. Thomas Russell, Turner Alfrey Visiting Professor, "Surface and Interfacial Behavior of Polymers," 3:00 p.m.–6:00 p.m, Michigan Molecular Institute, 989-832-5555, ext 571)
May 15	SPE/ACS/ASM/AIChE Joint Technical Society Dinner Meeting, Prof. Thomas Russell, "Block Copolymer Lithography: Where Top Down Meets Bottom Up," NADA Center, Northwood University; Social: 6:30 p.m., Dinner: 7:00 p.m., Program 8:00 p.m. (Dawn Wright, wright@mmi.org, 989-832-5555, ext 571)
May 19	Midland Section board meeting, Midland Center for the Arts, 7:00 p.m., Board Room (on lower level) (Dorie Yontz, dyontz@dow.com, 989-636-2571)

See pg. 22 for calendar events

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