

*Lessons Learned: Professionalism During Downsizing, p. 3*

*Fall Scientific Meeting Coming Up!, p. 8*



*Dave Stickles accepted the Best Technician Group ChemLuminary award at the ACS national meeting in Boston. Brief mention, p. 9. More details in the October issue.*

# THE MIDLAND CHEMIST

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## ***In This Issue ...***

Chair Column: Survey Indicates Member Interests .....	1
Lessons Learned: Professionalism During Downsizing .....	3
Call For Nominations: 2002 Midland Section Awards .....	6
Call for Posters: 2002 Fall Scientific Meeting .....	8
Announcement: 2002 Fall Scientific Meeting .....	9
In Short: Midland Section Receives Awards at National .....	9
Opportunities at National Level for Chemical Technicians .....	10
MMTG Technical Communication Seminars .....	10
New Chemistries: Chiral High-Performance Liquid Chromatography ....	11
Section Councilor Encourages Support of Research Bill .....	13
Important Dates on the ACS Midland Section Calendar .....	14

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*Chair Column*

## Survey Indicates Member Interests

**A**bout now, most of us have called an end to a vacation and returned to work or school or both. All is quiet from the national ACS—as I write this, the ACS meeting is going on in Boston, so not much news from there. So, instead of going into national meeting events, let me turn to some other issues.

At the August meeting of the Midland ACS Board of Directors, we were fortunate to have a look at the results of a survey completed in 1999. This was a survey of the members of the Midland Section. Do you remember this? It has been three years, but I firmly believe that the results of the survey are still quite good. I won't go into detail here; you'll get the detail later. I just wanted to share some of the thoughts I had while I listened to Wendell Dilling review the survey.

When Wendell told us the number of surveys returned, I was quite impressed. I don't remember the total, but it was well over half the members—a clear majority had been heard from. Now, there are 800+ members of the ACS in the Midland Section, which includes Midland, Isabella, Saginaw, Gratiot, and Bay counties. Employment at the time was something like 25% percent retired, 75% working, with the largest employers being Dow, Dow Corning, Central Michigan University, Saginaw Valley State University, and Delta. People went on answering a few questions like that, but the very interesting things came later on, when people were asked questions like "Would you be willing to do volunteer work for the ACS?" While the "yes" answers weren't as few they might be to questions like "Would you like to volunteer as a tax collector?" they did clearly indicate that the majority of the people in this section of the ACS are just happy and fine and well-tuned into paying for their membership, but not much else.

I had to think about this for a while. Certainly it is true that you will have, in a group of chemists and chemical technicians, a normal range of likes and dislikes, of actives and inactives, for whichever field you present. Many people are busy with family, church, civic, and other well-placed activities, in addition to their jobs or schooling. I'm sure you'll get all this and more some time in the future, but I just wanted to comment now, on the people who said "Hey, I've got an interest in volunteering for the ACS."



Pat Cannady, Chair  
ACS Midland Section

You can see news about them on the web site and in every issue of *The Midland Chemist*. If you want to do a little more, be a little more involved, the ACS is one of the places, right here in your own backyard, where you can get involved. Would you like to volunteer? If you do, and you aren't sure where you'd fit in, here's an idea. Get on the computer, and check out the site, <http://membership.acs.org/M/Midl/>. This is the home page of our section. Click on the part called "Leaders", and you will see the names, phone numbers, and e-mail addresses of the people involved in this year's ACS, and what they are doing. Look around here, look around the general site. If you find something that interests you, call or e-mail the person listed. If you don't find anything interesting there, call me (Pat Cannady, 989-496-6471) or e-mail me, [pat.cannady@dowcorning.com](mailto:pat.cannady@dowcorning.com), and let me know what you are interested in. And, hey, if you don't want to volunteer, that's fine, too! At least you've read this column, haven't you?

*Pat Cannady*



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*Lessons Learned***Professionalism During Downsizing***By Deb Bergstrom*

**I**n these times, downsizing is a part of the professional life of most workers from one perspective or another. Most of us will experience downsizing by either seeing our friends and coworkers released or by losing our own jobs.

There is significant information available on overall job market trends and how to find a new job in a tough market. There is, however, less information on how to handle professional and personal relationships between former coworkers during these emotional separations. Typically this is a challenging time—we are not always at our professional best, regardless of whether we are retained in the company or lose our jobs. There are many opportunities for missteps.

Like many these days, I have experienced downsizing from both the perspective of the retained worker and that of the released worker. Recognizing that this is a difficult and agonizing situation for all involved, there are ways to handle the situation with greater professionalism and compassion. This is a time when thoughtful action counts. In addition, the people we treat with compassion today may be in a position to help us tomorrow. Here are some thoughts on interactions between the surviving insider and the newly released outsider.

**If you are a surviving insider:**

- Don't be silent with friends and coworkers who were let go. Acknowledge their loss and your continuing support.
- Acknowledge your former coworker's contributions to the company. Realize that their departure was without recognition for many years of service.
- Be careful with light-hearted comments regarding increased leisure time, a long paid vacation, greater freedom, etc. Most do not choose to be in this situation.
- Offer your name as a reference to acknowledge your continuing belief in their capabilities, which may be in doubt under the circumstances.
- Offer to provide key contact information, phone numbers, and e-mail addresses which may have been lost during the abrupt transition.
- Offer new contact information, introductions to others, and job tips, if available. This is greatly appreciated.
- Don't be afraid to indicate that the organization has moved on after their departure. They need to move on too. Don't discuss how and why things happened. It is irrelevant.

- Meet with people when they are ready. They need to know you are OK too. Don't be afraid to make the first contact.
- Recognize and be open about the changes in the basis of your professional or personal relationships resulting from the lack of future shared work experiences.
- Do not offer key company information to new outsiders, but recognize their need to know how former coworkers are doing personally.
- Expect former coworkers to feel some anger at the organization or specific individuals. Don't read these as an indictment of anyone in particular.
- Understand that some new outsiders may need to completely separate and will desire no further interaction.
- Don't expect the outsider to do any further work for the company unless it has been contracted with them upon their departure.

**If you are a new outsider:**

- Recognize that your coworkers remaining inside are in a chaotic situation resulting from reductions. They are picking up the slack and feeling their own loss.
- Understand that the organization will go on without you. Don't expect inside information about what happened, why and what is going on now. Don't ask. Don't probe.
- State your understanding of the change in the basis of your professional relationships with former coworkers in an open and matter-of-fact way.
- When you are ready, contact your former coworkers and friends to let them know you are OK and moving on. Focus on the future, not the past.
- If you have angry feelings, don't vent them on surviving insiders or their spouses. They need to reestablish belief in the changed organization.
- As quickly as possible, transition to standard professional courtesies when dealing with former coworkers, as you would associates of any separate organization.
- Express your appreciation for offers to help, job tips, and contact information from your coworkers in a sincere and professional way.
- Understand that your former coworkers may be feeling a sense of insecurity resulting from downsizing. Don't feed it with your own negativism.
- If you have strong feelings regarding individuals closely connected to your own release, avoid contact until you can handle it or have put it

behind you.

- Recognize that certain surviving insiders may consider you a liability to their own future and may choose to reduce further contact.
- Sustain your broader external professional network by informing collaborators, suppliers, and consultants, etc., of your changed situation as soon as possible.
- Understand that those who made the decisions and carried out the reductions have also probably suffered through a very difficult time.

Overall, with a little thoughtful consideration, this difficult transition can be made with greater professionalism, kindness, and common sense. This helps everyone to move on more quickly and put it behind them.

*[Editor's Note: In August, Deb accepted a position with Dendritic Nanotechnologies Limited in Mount Pleasant, where she will be taking a leadership role in technology development and commercialization.]*



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*Call For Nominations*

## **2002 Midland Section Awards**

### **Outstanding Achievement and Promotion of the Chemical Sciences**

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

1976	Turner Alfrey, Jr.	1989	Do Ik Lee
1977	Etcyl H. Blair	1990	Joseph E. Dunbar
1978	David C. Young	1991	Thomas H. Lane
1979	Vernon A. Stenger	1992	Donald A. Tomalia
1980	Daniel R. Stull	1993	Dale J. Meier
1981	Bob A. Howell	1994	Philip T. Delassus
1982	Wendell L. Dilling	1995	Duane B. Priddy
1983	Donald R. Weyenberg	1996	Hans G. Elias
1984	Edwin P. Plueddemann	1997	Ludo K. Frevel
1985	Raymond P. Boyer	1998	Patrick B. Smith
1986	Stanley P. Klesney	1999	David E. Henton
1987	Warren B. Crummett	2000	Steven J. Martin
1988	A. Lee Smith	2001	Edwin C. Steiner

### **Outstanding Service to the American Chemical Society**

The Section sponsors an annual award to recognize outstanding service to the Midland Section of the ACS. This award recognizes achievement in the promotion of the goals of ACS. Nominees shall be members of the Midland Section. Nominations should include a biographical sketch, a history of service to the Midland Section, and supporting letters from fellow ACS members. Previous recipients are:

1989	David C. Young	1996	Fran K. Voci
1990	Linneaus C. Dorman	1997	Thomas H. Lane
1991	Donald R. Petersen	1998	Vicky S. Cobb
1992	Wendell L. Dilling	1999	Theodore E. Tabor
1993	Bob A. Howell	2000	Peter and Patricia Dreyfuss
1994	Eldon L. Graham	2001	George W. Eastland, Jr.
1995	Gretchen S. Kohl		

## Outstanding Chemical Technician

The Section presents an annual Outstanding Chemical Technician Award to an individual who has demonstrated an extremely high degree of professionalism as a chemical technician. The ACS defines a chemical technician as a person whose training includes successful completion of a two-year post-high school level chemistry curriculum leading to an Associates Degree, or the equivalent course work in a Baccalaureate program, or the equivalent knowledge gained by experience. The primary work of a chemical technician is conducting experimentation and/or correlating information to help solve chemical problems and/or discover new chemical knowledge. Criteria used to judge the award include job skills, safety, teamwork, leadership, publications and presentations, reliability, communication skills, and additional professional and community activities. Nominees must have worked for five years as a chemical technician. Chemical technicians do not need to be a TECH Division Affiliate or ACS member to be eligible for this award. Nominations should include a biographical sketch and supporting letters that address each of the criteria above.

Previous recipients are:

1997	Connie J. Murphy	2000	Kurt A. Bell
1998	David Stickle	2001	Gordon R. Roof
1999	Ronald L. Good		

Nominations for all three awards are invited. The deadline for receipt of nominations and all supporting materials is September 13, 2002. Nominations should be sent to:

Philip J. Squatrito  
Department of Chemistry  
Central Michigan University  
Mt. Pleasant MI 48859

Fax (989-774-3883) or electronic nominations are also welcome.

If you have questions or need additional information, please contact Phil at 989-774-4407 or [p.squatrito@cmich.edu](mailto:p.squatrito@cmich.edu). Nominators should provide their address and phone number in case the committee needs to contact them. The Awards Committee encourages all section members to nominate deserving colleagues and appreciates your efforts in helping these individuals receive recognition for their efforts. We look forward to hearing from you!

Call for Posters

## 2002 Fall Scientific Meeting

### ACS Midland Section

**P**lease consider presenting a poster at the Fall Scientific Meeting. Abstracts are being accepted now through **September 13th**. Abstracts must be e-mailed to:

Dr. David S. Karpovich                      989-790-4349  
Department of Chemistry                fax 989-790-2717  
Saginaw Valley State University        dsk@svsu.edu

or

Dr. Dale LeCaptain                        989-774-3993  
Department of Chemistry                dale.lecaptain@cmich.edu  
Central Michigan University

For additional information check out the local section website: <http://membership.acs.org/m/midl/>. An example of the abstract format is depicted and described below.

### Instructions for Preparing Abstracts for the Fall Scientific Meeting of the Midland Section of the American Chemical Society

John Doe and Joe Smith, Department of Chemistry, Saginaw Valley State University, University Center, MI 48410

Begin typing your abstract here. Use Microsoft Word (IBM or Mac) or WordPerfect(IBM or Mac) to create your files. Limit abstracts to one per file. Use Times font, 12 point size. Single space your work and double space between paragraphs. Do not use any indentations. **Bold** the title only. Body copy of the text should be typed in normal type. Use superscripts, subscripts, and correct symbols where appropriate. Use *italic* only when required. All copy should be typed flush left. Do not center or justify your type. Use a four and one half inch wide line. Each abstract is limited to a maximum of a 4-line title and 1300 characters in the body of the abstract. The information should appear in the following order: title, author list with complete address; presenter underlined; one blank line between title and abstract. Electronic submissions are required and the e-mail address of the submitter will be the contact person unless otherwise noted.

*Announcement***2002 Fall Scientific Meeting****ACS Midland Section****Date:** Friday, October 11, 2002**Time:** 12:00 p.m. to 5:00 p.m.**Location:** Employee Development Center at The Dow Chemical Company

**T**he 2002 Fall Scientific Meeting will feature poster sessions and a vendor exhibition. Lunch will be provided. Following the meeting there will be a pizza social at Frick's beginning at 5:00 p.m. Look for more information in the October issue of *The Midland Chemist* and on the Midland Section web site: <http://membership.acs.org/M/Midl/FSM2002HOME.html>

**Schedule**

Registration, lunch, posters, exhibition .....	12:00 – 2:00 p.m.
Welcome .....	2:00 – 2:05 p.m.
Awards .....	2:05 – 2:30 p.m.
Keynote speaker .....	2:30 – 2:55 p.m.
Oral presentations .....	3:00 – 5:00 p.m.
Social .....	5:00 p.m. – ???

*In Short***Midland Section Receives Awards at National**

**T**he Midland Section received four awards at the national meeting in August. Briefly, awards were received for the Minority Affairs Committee, Polymer Innovation, Best Technician Group, and Outstanding Medium-Large Section. The Technicians Division won a best division award. Watch for the October issue of *The Midland Chemist* for more stories and photos.

## Opportunities at National Level for Chemical Technicians

By Janet Smith

The Division of Chemical Technicians, Inc., is announcing several opportunities at national ACS meetings for chemical technicians. <http://members.aol.com/ACSDoCT/techhome.htm>

### Call for Papers

For more information on presenting papers, contact the session chair for the meeting listed below. The TECH division is scheduling for the following meetings in order to give presenters more time to obtain company support and prepare for their presentations.

- New Orleans, LA, March 23-26, 2003, 225<sup>th</sup> Meeting (*Abstract deadline Nov. 2002*) Michael Miller, Dow Automotive, 3200 Kanawha Turnpike, South Charleston, WV 25303, 304-747-4623, millemjl@dow.com

### Session Chairs

Several positions for session chair are open for the following meetings:

Fall 2003, New York, NY

Spring 2004, Anaheim, CA

Fall 2004, Philadelphia, PA

No experience is necessary! If you are interested in chairing a technical session/symposium at a national meeting, please contact Illene Henson at [Hensonef@dow.com](mailto:Hensonef@dow.com) or call 304-747-4061.

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## MMTG Technical Communication Seminars

### Using Microsoft® Word for Technical Writing: Things Your Mother Never Told You

#### October 16

Many researchers spend as much, or more, time formatting their reports than writing them. With figures that won't behave, numbers that won't line up, and multimegabyte files that crash computers, researchers are becoming increasingly frustrated with the writing process.

This lunchtime seminar shows how to use MS Word to organize a technical report. It also gives guidelines on inserting tables and figures and keeping electronic file size to a reasonable level. MS Word features that make report writing more efficient will be demonstrated. RSVP by October 4 to Amy Betz at [albetz@dow.com](mailto:albetz@dow.com) or call 989-636-9549.

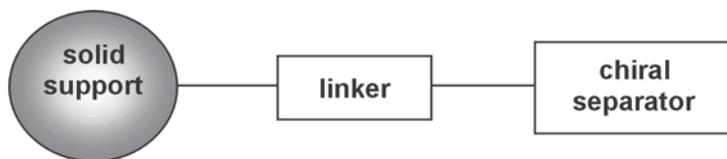
## Chiral High-Performance Liquid Chromatography

by Kristine Danowski

In the past decade, developments in the pharmaceutical, food, and agricultural industries have increased the demand for enantiomerically pure substances. Individual enantiomers interact differently with biological systems, thus economic incentive and regulatory requirements direct the replacement of racemic products with the desired single enantiomer. Synthesizing chiral compounds frequently produces racemic mixtures unless a chemist uses enantiomerically pure reagents, but even an asymmetric synthesis can produce an unacceptable quantity of both enantiomers. Separating a racemic mixture during or after conventional synthesis is an alternative. The goal of an enantiomeric separation is to selectively retain more of one enantiomer than the other. One separation method, from preparative to production scale, is chiral chromatography.

High-performance liquid chromatography (HPLC) is often the most convenient chromatographic method. HPLC commonly uses a chiral selector, either a polymer or a small molecule, as the stationary phase and a racemic or achiral mobile phase containing the enantiomers to be separated. Both synthetic and naturally occurring chiral polymers, such as polyacrylates, proteins, and polysaccharides, can function as the stationary phase. Small-molecule stationary phases include metal ion complexes, crown ethers, cyclodextrins, chiral molecules, and macrocyclic glycopeptides. Generally, polymers such as proteins often contain more than one chiral binding site. Each binding site may have more affinity for one enantiomer than for another. Small molecules exhibit preferential interaction with one of a pair of enantiomers; this preference need not be very large. However, for both polymers and small molecules, the actual separation mechanisms are frequently quite complex.

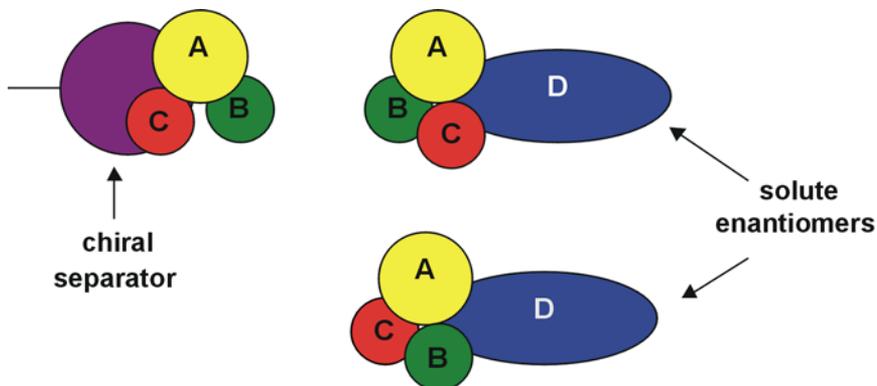
A schematic of a chiral stationary phase is depicted below (adapted from Subramanian):



The most common solid support is porous silica beads. They provide high efficiency, but their surface silanol groups may contribute to nonse-

lective interactions with the enantiomers to be separated. Another solid support is molecularly imprinted polymers. These supports can be custom-made for specific enantiomers, thus providing very high selectivity.

The most important part of the stationary phase is, of course, the chiral selector. Whichever type of selector is used, it must selectively interact with one of a pair of enantiomers to achieve a good separation. Proposed mechanisms of chiral recognition have been based on Dalgliesh's three-point interaction. According to this model, three simultaneously operating interactions between an enantiomer and the stationary phase are required for chiral separation, one of which must be stereochemically dependent. These interactions can be coordination to transition metals, charge transfer (p-p interaction), hydrogen bonding, hydrophobic interaction, steric interaction, and inclusion phenomena. The illustration below shows Dalgliesh's model (adapted from Allenmark).



A chiral mobile phase with an achiral stationary phase can also separate enantiomers using HPLC. For example, an enantiomer in the mobile phase may adsorb strongly onto an achiral stationary phase and convert it to a chiral stationary phase. On the other hand, an enantiomer in the mobile phase may not adsorb on an achiral stationary phase, but rather to another component of the mobile phase. In this case, enantiomer separation is achieved by a normal LC diastereomer separation. Most separations lie between these two examples. Mechanisms of interaction include metal complexation, interaction with uncharged chiral mobile phase additives, and ion pairing.

There are other methods that can be used for separating enantiomers, for example, membranes, crystallization, capillary electrophoresis, gas chromatography, and supercritical fluid chromatography.

## Further Reading

Allenmark, S. *Chromatographic Enantioseparation: Methods and Applications*. Second Edition. New York: Ellis Horwood, 1991.

Dalgliesh, C. *J. Chem. Soc.* 1952, 137.

Subramanian, G, ed. *Chiral Separation Techniques: A Practical Approach*. Second Edition. Weinheim, Federal Republic of Germany: Wiley-VCH, 2001.

Ward, T.J. Chiral separations. *Anal. Chem.* 2002, 74, 2863.

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## Section Councilor Encourages Support of Research Bill

*By Bob Howell*

*[Editor's Note: The letter below was sent on August 29 to Representative Dave Camp and signed by Midland Section Councilor Bob Howell.]*

**I** respectfully urge you to co-sponsor Rep. Judy Biggert's (R-IL) bipartisan bill, the Energy & Science Research Investment Act of 2002 (H.R. 5270). H.R. 5270 reauthorizes the Department of Energy's Office of Science until fiscal year 2006 and ensures better coordination and advice on scientific issues at DOE. More specifically, H.R. 5270 recommends increasing the Office of Science budget to \$5.3 billion by fiscal year 2006, up from \$3.2 billion in FY 2002.

As a chemistry educator and professional chemist, I am acutely aware of the need to increase federal funding for the support of research in the physical sciences. The well-being of our nation and our citizens depend upon it. This is particularly the case in the area of alternative energy sources. Funding for DOE R&D programs needs to be dramatically improved.

I appreciate your continued support for science and research and would urge that you cosponsor HR 5270 as part of this support.

## **Important Dates on the ACS Midland Section Calendar**

- September 9 Midland Section board meeting, Delta College Midland Center, Room 12, 7:00 p.m.
- September 13 Deadline for Section award nominations (Phil Squattrito, 989-774-4407)
- September 13 Deadline for Fall Scientific Meeting poster abstracts (David Karpovich, 989-790-4349)
- October 7 Midland Section board meeting, Delta College Midland Center, Room 12, 7:00 p.m.
- October 11 Fall Scientific Meeting, EDC, The Dow Chemical Company, 12:00 p.m.

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

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