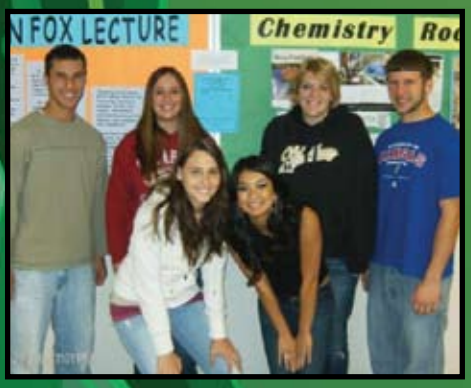
The Magazine for ACS Student Affiliates
February/March 2009

inChemistry

Build Career Skills



Follow Your Passions and Get Involved

ON THE WEB

Interesting Articles

Tooling Up: Defying Gravity
David Jensen writes about scientist getting jobs in an imperfect world. *Science Careers,* August 22, 2008 http://sciencecareers.sciencemag.org/career_magazine/previous_issues/articles/2008_08_22/caredit.a0800124

Behavioral Interviewing Strategies for Job-Seekers
Katharine Hansen writes about how to succeed in a behavioral interview. http://www.quintcareers.com/behavioral_interviewing.html

Interesting Web Sites

- http://www.career.vt.edu/
  This site has many tips and suggestions on job searches, interviewing, and proper attire.

- http://www.symsdress.com/basics.htm
  This site presents tips on proper attire for different occupations and interviews.

Graduate School Web Links

Research M.S. and Ph.D. Programs

Boston College: www.bc.edu/chemistry
Duquesne University: www.science.duq.edu/chemistry/index.html
Florida Atlantic University: www.science.fau.edu/chemistry
Florida International University: www.fiu.edu/orgs/chemistry
George Washington University: www.gwu.edu/~gwchem
Marshall University Forensic Science: forensics.marshall.edu
Old Dominion University: www.sci.odu.edu/chemistry
Oklahoma State University: www.chem.okstate.edu
Rice University: www.chem.rice.edu
SUNY–Environmental Sciences and Forestry: www.esf.edu/chemistry
Temple University: www.chem.temple.edu
Texas A&M University: www.chem.tamu.edu
University of Central Florida: www.cos.ucf.edu/chemistry/
University of Cincinnati: www.che.uc.edu
University of Idaho: www.chem.uidaho.edu/gradprogs.asp
University of Nebraska at Lincoln: www.chem.unl.edu
University of San Francisco: www.usfca.edu/mschemistry
University of South Dakota: www.usd.edu/chemistry
University of Tennessee: www.chem.utk.edu

Professional Master's Degree Programs

Arizona State University: math.asu.edu/~cbs
Keck Graduate Institute: aboldnewhybrid.kgi.edu
Rice University: www.profms.rice.edu
Temple University: www.temple.edu/psm
Towson University Forensic Science: www.grad.towson.edu/frscm.mg

Published for Student Affiliates of the American Chemical Society

Published by the American Chemical Society Education Division at 1155 Sixteenth Street, NW, Washington, DC 20036.

Canadian GST Reg. No. 127571347

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Volume 18 ■ Number 3
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EDITORIAL

You Can Make a Difference 2
By Thomas H. Lane

SAACS CHAPTER SPOTLIGHT 3

Compiled by Audley S.V. Burke

CHAPTERS

Chapter Activity Ideas 5
By Robin Y. Lindsey

FEATURES

Learn to Become a Leader by Following Your Passions 6
By Lynne Friedmann

Deciphering the Code
How to Attract Attention (of the Right Kind!) at Scientific Meetings 9
By Raychelle Burks

Henry Eyring: His Science and Legacy 12
By Janan M. Hayes and Patricia L. Perez

CAREERS

Tell Me About a Time…
How to Ace a Behavioral Interview 14
By Samina Azad

RXN'S AND SLN'S

Blogging about Building Career Skills 17
Compiled by Lori Betsock

ACS RESOURCES

Become a Voice of National Influence 19
The ACS Younger Chemists Committee
By Burt Hollandsworth

MEETINGS

ACS National and Regional Meetings 20

Celebrating Chemistry Under the NeON Lights of Sin City 24
By Hanna Angelica M. Magno

This Is How We Roll – Midwest Style 26
By Anna Barber and Danielle Policarpio


MARGARETA SÉQUIN


CLEMSON UNIVERSITY


ISTOCK

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University of Nebraska at Kearney.

in Chemistry is available free to Student Affiliates of the American Chemical Society and the faculty advisors to Student Affiliates chapters. For an application, call the Undergraduate Programs Office at 800-227-5558, ext. 4480.

You Can Make a Difference

By Thomas H. Lane

PETER CUTTS PHOTOGRAPHY

Someday, *you* may be president of the American Chemical Society — and if you are, you'll have many opportunities to talk with people about the importance of chemistry and how it contributes to their health, well-being, and quality of life.

As an undergraduate chemistry student at Purdue University, I never imagined that I would ever have the honor of being a spokesperson for the world's largest scientific society of chemists. This underscores a point I always strive to make to students: You can be anything you want to be!

I firmly believe this holds true for all students. Anything is possible. Of course, it requires a lot of hard work and it may not be a straight-line evolution, but if you really want to do something, it's possible to achieve it. I encourage you to be daring and brave enough to set your goals high, and then do everything in your power to reach them.

As ACS president, I wish to advance three goals: promoting education; building relationships; and measuring outcomes.

All three goals are critically important to the future of the ACS and to furthering the quality and effectiveness of our science and its practitioners. We need new ideas and initiatives that will help advance these goals. I hope you will get involved and share your thoughts about how we might reach out to community groups, youngsters, and others.

The ACS Education Division offers many programs for students, from kindergarten through graduate school. Many of the programs designed for elementary students involve hands-on activities that require adult supervision. If your Student Affiliates chapter isn't already doing so, consider using these resources and helping teachers with these activities. It's a great opportunity for some one-on-one interaction with youngsters. You can help pique children's curiosity about chemistry, especially among those who are in the early grades.

U.S. high school students are on an academic decline in math and science when compared to other industrialized countries. The National Center for Education Statistics published a 2006 international academic assessment of 15-year-old students from 30 countries showing that, on average, we trail 16 of these countries in science literacy, and lag behind 23 in math literacy.

I urge you to volunteer to help stop this slide. To do so, we need to start early in a child's academic development. This is where you can make a difference, by talking to elementary students about what chemists do and sparking their imaginations about the possibilities that science offers.

I also encourage you to begin building relationships. It is critically important that as we reach out to non-chemists, we help them understand the important role chemistry plays in their lives. If you aren't already, please make a concentrated effort to develop partnerships with civic organizations, including Big Brothers and Sisters, Boys and Girls Clubs, and the Girl Scouts and Boy Scouts.

These organizations are experts at mentoring young people. Perhaps your Student Affiliates chapter could reach out to some of these service organizations and arrange to do chemistry demonstrations for the children or help them earn science-related badges. And while you're at it, let them know that as chemists, we create things that improve lives. We help people!

Metrics are central to everything we do as scientists and engineers. It is imperative that we measure the outcomes and perceptions of our work, no matter how hard it might be to do so. If we hope to have a positive influence we must understand the attitudes of people — especially students — toward science, technology, engineering, and math. Of course, this will require a personal commitment and an investment of time and money. However, I firmly believe our collective efforts will pay off for all of society in the long run.

It can be especially difficult to volunteer and get involved in outreach efforts while you are pursuing your education. For many of you studying for mid-term exams, finding a job after college, or preparing to attend graduate school are probably your highest priorities. Even so, I know from experience of the good that can come from giving a few hours of one's time whenever possible.

Undergraduate students are the foundation of our future. You will inherit, and hopefully improve upon, current efforts to develop new energy sources, clean up the environment, feed the world, and teach subsequent generations about the transforming power of chemistry.

No matter which path you take in life, I hope you will do one important thing: Believe in kids. Give them respect. Listen to what they have to say about science. Treat them as you would like to be treated. Help them understand the importance of staying in school. If you do that, you *will* make a difference. iC

Tom Lane is currently the President of ACS and Director, Global Science and Technology Outreach and Senior Research Scientist, Dow Corning Corporation.

Share what's going on in your chapter! If your chapter would like to be featured in the Chapter Spotlight, please contact Audley Burke at 800-227-5558, ext. 4565 or e-mail a_burke@acs.org.

COMPILED BY AUDLEY S.V. BURKE

Northwestern University
Evanston, Illinois

Chapter president: Jeff Martell
Number of chapter members: 173
Number of ACS Student Affiliates: 11
Institution environment/ composition: Large, private, suburban, 4-year institution
Chapter website: http://chem-groups.northwestern.edu/ucc/

Q What is your most successful recruiting method?
A Most people learn about our chapter, called the Undergraduate Chemistry Council (UCC), by word of mouth, such as through friends in their chemistry classes. Most of our members are chemistry majors, so we've found it very effective to recruit by making announcements about UCC events in chemistry classes, bringing friends to events, and getting them interested in the organization.

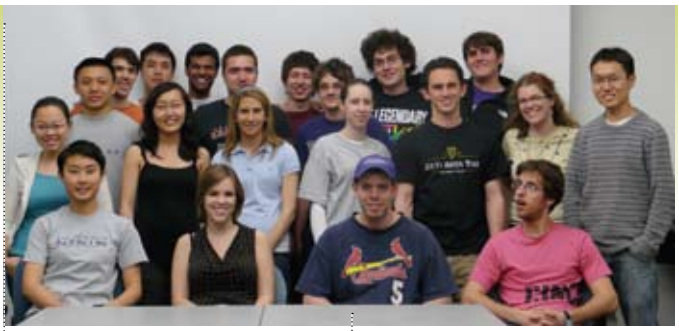
Q What are some of the interesting ways your chapter recruits members?
A Every week we host a lunch seminar in which a professor presents his or her research highlighting opportunities for undergraduates. We provide pizza and soda with money generated by our fundraising events. We publicize these events heavily, and chemistry students attend the seminars because they are interested in hearing about the professors' research. In the process, many students become interested in our organization and ultimately end up as members.

Q What are some ways your chapter encourages transitions from ACS Student Affiliation to New Graduate Membership?
A Most of our members end up going to graduate school for chemistry, and since we make our members aware of the advantages of being affiliated with ACS as undergraduates, they usually decide to continue their ACS membership.

Q What is your most popular chapter activity?
A Our chapter's most popular activity is our end-of-the-year barbecue/demonstration outreach event. Chemistry department demonstration lecturer Eberhard Zwergel holds a light/explosion-filled chemistry show at dusk on Northwestern's property on the shore of Lake Michigan, and the event is very well-attended. Last spring, more than 400 people showed up.

Q Does your chapter participate in National Chemistry Week? What types of activities do you sponsor?
A The UCC combined our recognition of National Chemistry Week with our celebration of Halloween by setting up a booth at Project Pumpkin, a major philanthropic event at Northwestern, where we teach children how to make "Silly Putty" using Borax. Project Pumpkin is a Halloween carnival held for children who are underprivileged or live in parts of Evanston and Chicago that are unsafe for trick-or-treating.

Q How did your chapter develop its Web page?
A UCC member Brian Radak, a senior, served as our technology coordinator for the last two years. He is skilled in computer programming, so he developed and programmed our website within the framework of the Northwestern chemistry webpage.


NORTHWESTERN UNIVERSITY

Q What methods of communication are used to inform students of chapter activities?
A To advertise events, members of the executive board write announcements on chalkboards in all the large science lecture halls. This method has boosted attendance to record levels for our faculty research lunch seminars.

Faculty Advisor
SonBinh T. Nguyen,
10 years

Q Why did you become a faculty advisor?
A I became a Faculty Advisor because I enjoy teaching and working with students outside of the classroom. I also wanted to bring together a group of enthusiastic chemistry talents who want to popularize science and spread the positive attributes of the chemical sciences to the general public.

Q What is your role as a faculty advisor?
A My role is to facilitate activities of the chapter and provide advice to its executive board. I also serve as a bridge between the faculty and the students.

Q What has been the most rewarding aspect of your service as a faculty advisor?
A Seeing students grow in their confidence as leaders, chemists, and future educators.

Q What advice can you offer those new to the advisor position?
A Be positive and encouraging.

CORRECTION

In the November/December issue (Volume 18, Number 2), in the chapter award listings, the faculty advisor for Samford University should have been Denise J. Gregory.

Samford University was recognized with an Honorable Mention award.

Pennsylvania State University
University Park, PA

Chapter president: Leah Giaccotto
Number of chapter members: 45
Number of ACS Student Affiliates: 10
Institution environment/ composition: Large, public, rural, 4-year institution
Chapter website: http://www.clubs.psu.edu/up/nittanychemsoc

Q What are some of the interesting ways your chapter recruits its members?
A At the start of the fall semester, the chapter matches up new chemistry students with chapter members to introduce them to the program, in hopes that they will join the chapter. We also have a booth at the recruitment fairs held at the beginning of each semester, and we display our chapter poster at social and outreach events for anyone who is interested in joining.

Q What is your most popular chapter activity?
A Every year, the chapter puts on a Halloween Show, usually around the end of National Chemistry Week, as our main outreach event in the fall; this year's show was "Scooby Doo and the Case of the Chemistry Crook." Last year, we included a Haunted Lab Tour that goes through the basements of three connected laboratories that we decorate with lights, cotton spider webs, and many other props. We tell interesting stories as we take the kids and their parents through the tour, and at the end, they get to watch several professors do exciting demos.

Q What is the most unique activity your chapter sponsors?
A This year, as part of the annual Penn State IFC/Panhellenic Dance Marathon [a student-run philanthropic event whose website claims is the largest event of its kind in the country], we will be making liquid nitrogen ice cream for the kids, dancers, and participating members. Over the past three years, we have helped children from the Make-a-Wish Foundation to do exciting science experiments.

Q Has your chapter presented at a national meeting?
A Last year, at the ACS national meeting in New Orleans, we presented our chapter activities at the Sci-Mix poster session, and one of our members presented research findings from a summer REU program. The spring 2009 meeting in Salt Lake City will be attended by four chapter members, who will present their research and our chapter poster.

Q How did your chapter develop its web page?
A Our chapter's webpage was developed by our previous webmaster. Over the past two years, it was heavily updated with the names of the officers, pictures from many of our events, an extensive list of chemistry courses, useful chemistry-related resources, and chapter information.

Faculty Advisor
Jackie Bortiatynski,
6 years

Q What is your role as a faculty advisor?
A I facilitate the activities of the chapter and advise the students. I also assist the officers and other members, give insight and guidance in event planning and participation, and try to provide anything else they might need.

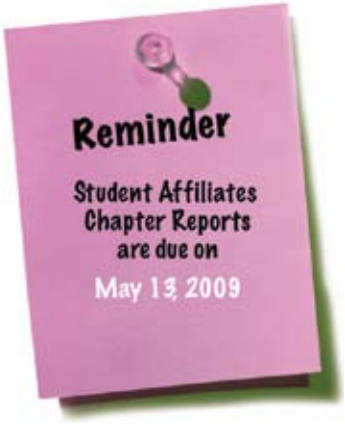
PENNSYLVANIA STATE UNIVERSITY

Q What challenges have you faced in your position?
A I wish I had more time to spend with the students, because they are all wonderful.

Q What has been the most rewarding aspect of your service as a faculty advisor?
A The most rewarding aspect has been watching the students succeed.

Q What was your most memorable experience while attending an ACS national meeting?
A It was, by far, having the opportunity to watch the students present their posters and interact with other professionals.

Q What advice can you offer those new to the advisor position?
A Listen to the students and be patient. Encourage them to continue with everything that they do because they are all capable of great things.



GOT FACEBOOK?!

We have developed a Facebook page, complete with group and fan pages. Student Affiliates can access this page to learn about happenings at ACS, view pictures from meeting events, and network with other Student Affiliates nationwide.
Just look up Audley "SAPROGRAM" Burke in the search box and send us a friend request.

Why Wait? Join Now!

LOOKING FOR CHAPTER ACTIVITY IDEAS?

By Robin Y. Lindsey

Departmental Service
Roanoke College, Salem, Virginia

This year, the Roanoke College Student Affiliates chapter prepared and sold 'Exam Survival Kits.' The last weekend in September is Family Weekend at Roanoke College, when parents and other family members are invited to visit their student and faculty members on campus. The chemistry department puts on a "Chemistry Magic Show" on Saturday afternoon, open to the entire campus. This show, which has earned a reputation for being a "don't miss" activity, usually starts with a "Welcome to Chemistry" message written on a large sheet with a sodium hydroxide solution and dried. When sprayed with phenolphthalein the hidden message appears.

At this event, the Student Affiliates handed out forms that family members or others could use to order an Exam Survival Kit to be distributed during final exams in the fall. Sold at a price of $10, each kit consisted of a large graduated plastic beaker stuffed with a pocket-sized periodic table, pens, pencils, a high-polymer eraser, Play-Doh, an ACS "mole," and packs of gum and candy including "Maroons" M&Ms (Maroons is the nickname for Roanoke College's sports teams). The kit was wrapped with colored plastic wrap and decorated with glitter and a ribbon. The total cost to the chapter per kit was about $8.

How long did it take to plan the activity and what was involved?

It took two planning meetings to organize the activity and prepare the order forms. It took another meeting and a trip to a discount store to figure out what we could buy for under $10. Then it took some time to purchase all the materials, spread out among several people over several weeks, and one meeting with a group of chapter members to put the kits together.

COURTESY OF ROANOKE COLLEGE

How many SA participated?

The planning and research was done by the Executive Committee (officers, committee chairs, and faculty advisor), about seven people altogether. The kits were put together by a larger group of chapter members. Two chapter members distributed and collected order forms and gave receipts at the Magic Show, and approximately 15 chapter members helped with presentations at the Magic Show.

How many people attended the event?

The Massengill Auditorium, with approximately 253 seats, was completely full, and people were even sitting in the aisles.

What was the age range of the audience?

The ages ranged from 6 to 66 years old.

How long did it last?

The Magic Show lasted for an hour. We accepted order forms for two months, although almost all of the kits were ordered at the Magic Show.

What safety equipment was required?

No safety equipment was needed for preparing or distributing the Exam Survival Kits. At the Chemistry Magic Show, protective goggles and lab coats were used, and a fire extinguisher was nearby, all arranged by the chemistry department.

Note: Exam Survival Kits is an activity that could be done by any Student Affiliates Chapter group, scaled to their own particular situation.

For more information contact Ben Huddle, faculty advisor at Roanoke College, at **Huddle@Roanoke.edu**. ic

Robin Y. Lindsey is a lead program associate in the ACS Undergraduate Programs Office. To submit your chapter activities, contact Robin at r_lindsey@acs.org

Learn to Become a Leader by Following Your Passions

ISTOCK

BY LYNNE FRIEDMANN

THE FOUNDATION FOR SUCCESS IN UNDERgraduate studies — and eventually in your chemistry career — requires both a high GPA and the intangible quality known as leadership.

"Leadership is the 'hidden curriculum' of your college experience," says **Matthew J. Mio**, associate professor of chemistry and biochemistry at the University of Detroit Mercy. "Beyond grades, you need to learn how to successfully interact with other people."

How do you go about developing the leadership skills needed to reach your academic and career goals? You do this by pursuing your passions. When it comes to science, an obvious place to start is the Student Affiliates of the American Chemical Society. But don't overlook the arts, sports, political advocacy, and even hobbies as additional avenues through which to become involved and develop leadership skills.

For example, Matt Mio has a passion for Halloween, and so he took the initiative, when just starting his career, to found the Motor City Haunt Club — a group that "lives, breathes, and dreams about everything Halloween." Starting with four members (Mio, his father, and two friends) the club now has recruited over 100 like-minded individuals.

ARTHUR HAMAN, UNIVERSITY OF DETROIT MERCY

Professor **Matt Mio** advises students to take ownership of their degrees by becoming all-around students with solid academic credentials, learning to network, and keeping up with what's going on in the chemistry field.

Chen Zhao, president of the Student Affiliates chapter at the University of California San Diego (UCSD), entered college as a pre-med student. By his second year, his interests turned to chemistry and led him to Student Affiliates. Over time, Zhao's involvement progressed from meeting planning to community outreach. Taking on a leadership role, however, was new territory.

Zhao counts among his accomplishments getting UCSD chapter members to volunteer with the Sally Ride Science Festival. Spearheaded by the first American woman astronaut in space, this event brings together hundreds of students for a day of science and socializing to encourage young girls to pursue math and science with an eye on future careers. "We pursued this," says Zhao, "and it's now one of our signature events."

Gain skills while making a difference

During her tenure as ACS president, **Helen Free** felt honored when called upon to bestow Student Affiliates Chapter Awards in recognition of outstanding chapter programs and activities. Free, who also chaired the National Chemistry Week task force for five years, has high praise for the leadership role of Student Affiliates. "They are the backbone of this outreach," she says.

"We wouldn't have National Chemistry Week if it weren't for the efforts of Student Affiliates."

Retired and now in her 80s, Free remains active promoting science education through programs around the world. "Nothing turns me on like the boy who decided to be a chemist when he tested a sample from a patient with diabetes and got a positive for glucose," says Free. "Or, the little girl who upon seeing my medal from the National Inventors Hall of Fame, declared 'I'm going to get one of these when I grow up!'"

AMERICAN CHEMICAL SOCIETY

When she assumed the presidency of ACS in 1993, **Helen Free** pledged to initiate and support activities that would "improve the public's awareness of chemistry's contributions to the quality of daily life."

Look for opportunities to grow

Margareta Séquin, a lecturer in the Department of Chemistry and Biochemistry, San Francisco State University (SF State), has watched students who are otherwise shy in the classroom "blossom" through volunteer activities such as taking part in Family Science Night. "Standing before a group explaining chemistry to young people gives them tremendous confidence," Séquin says.

MARGARETA SÉQUIN

Chapter advisor **Margareta Séquin**, has watched students who are otherwise shy in the classroom, "blossom" through volunteer activities.

Séquin has seen other students step up to leadership by suggesting which underserved, ethnically-diverse schools to include in future community outreach programs. In some cases, students propose the schools they attended before coming to State. "Some of my most successful students speakers are those who acknowledge they weren't convinced about the importance of education when they were younger," says Séquin.

Tap into support networks

Austin Peay State University, in Clarksville, TN, has won a Student Affiliates Outstanding Chapter Award in five of the last seven years. Contributing to the chapter's success is an officer-succession plan that allows a smooth transition of leadership. Students who aspire to chapter leadership "shadow" current officers and learn by doing months before taking over the reins. Among the skills stressed is communications. "Communication has to be through the ranks," says **Kimberly Anderson**, chapter president. "Everybody needs to know what's going on, or else you can't have a successful group."

Anderson is a non-traditional student who served in the Navy and then worked in industry before deciding to pursue a bachelor's degree in chemistry. She'd been away from the classroom for 20 years. Anderson credits Student Affiliates with giving her the confidence to pursue her goals. "The first year I got involved, I didn't want to be an officer," she says. "I just sat back and observed. The next year, I thought 'OK, I can do this.'"

Become involved for the right reasons

Don't be guilty of becoming a "résumé builder" who joins an organization but then disappears after attending a few meetings. You may think that going to another meeting is a bother versus catching an extra nap or playing Xbox," says Mio. "But time invested in an organization pays dividends. "I challenge students to put on one or two new events a year," says Mio. "If these events flop, fine. We just won't do them again."

"Getting involved is crucial," says **Colin Gilligan**, past president of the Student Affiliates chapter at Armstrong Atlantic State University, Savannah, GA. "Any position in leadership gives you a bigger sense of responsibility and can be a reward in itself." Once you have a track record as a committee chair or officer, don't rest on your laurels. Innovation and risk taking are also marks of a leader.

ARMSTRONG ATLANTIC STATE UNIVERSITY

Colin Gilligan, a recent graduate from Armstrong Atlantic State University, benefited from the sense of responsibility he gained as president of the Student Affiliates chapter.

SAN FRANCISCO STATE UNIVERSITY

San Francisco State University Student Affiliates chapter with advisor, **Margareta Séquin.**

Master the balancing act

Students often find balancing professional, volunteer, and personal life commitments challenging. While it's exciting to be asked to join a club or committee, do take the time to examine your priorities before making a commitment. Otherwise, there's a danger of being drawn into too many student organizations. The downside of putting too much on your plate is failing...or succeeding, but being stressed out in the process. Both are no-win situations. Taking on a leadership position should enhance academic accomplishments – not substitute for what's missing.

"[Balancing commitments] is one thing I wish I'd done better in college," says **Gloria Thomas MaGee**, assistant professor of chemistry, Xavier University of Louisiana. MaGee eventually developed a "no committee": a group of trusted friends available as a sounding board when too many tantalizing opportunities presented themselves. They'd bring her down to earth by saying: "Gloria, are you crazy? You can't fit that into your schedule." Today MaGee is a busy faculty member, yet still finds time to work with at-risk youth through groups such as Court Appointed Special Affiliates (for foster children), The Girl Scouts of America, and Masonic groups.


AMERICAN CHEMICAL SOCIETY

Assistant professor **Gloria MaGee** cautions students that professional development skills don't make up for a lack of core scientific knowledge.

"Stay on top of your academic game," advises MaGee. "Keep a high GPA, obtain research experience, and cultivate technical expertise. No amount of professional development will make up for a lack of core knowledge."

ACS Leadership Development System

Obtain practical leadership skills and tools in your volunteer leadership roles now and later, when you enter the work force, with the new ACS Leadership Development System.

To find out which leadership skills you already have and which you need to develop, complete the checklist of core ACS leadership competencies below.

Core Leadership Competencies	These Are My Strengths	I Need to Develop These Skills
Character		
1. Integrity and honesty		
Personal Capabilities		
1. Innovation		
2. Networking		
3. Personal confidence		
4. Technical expertise		
Results Orientation		
1. Taking initiative		
2. Asking others to step up		
3. Delegating/sharing responsibilities		
4. Keeping projects moving forward		
Interpersonal Skills		
1. Involving others		
2. Consensus building		
3. Coaching and mentoring		
4. Listening		
5. Valuing differences		
6. Dealing with conflict		
7. Influencing others		
Setting a Clear Direction		
1. Planning and organizing		
2. Clear vision of desired results		
3. Setting priorities		
4. Communicating a sense of purpose		
5. Decisiveness		

Are there leadership skills you need to develop? If so, the ACS Leadership Development System can help you. Whether you want to conduct meetings more effectively, lead more challenging efforts, or collaborate better with others, the skills you gain will be immediately applicable. The Leadership Development System courses are available at national, regional, and local section meetings and are also offered online.

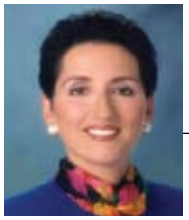
The modules will help you gain core leadership skills to help you be more competitive in the workplace and in your leadership roles.

For a list of courses, visit www.acs.org/leaderdevelopment.

Poise yourself for success

According to Mio, the easiest letters of recommendation he writes are "for those who have taken ownership of their degrees." This means becoming an all-around student with solid academic credentials in addition to knowing what's going on in the chemistry field and how to network.

By following your passions, you can build a solid foundation for success. Actively participating in chapter and scientific meetings can help you develop networking and speaking skills. Learning to give back through community service can foster your team building and other interpersonal skills. Taking field trips to local chemical companies and reading ACS publications, such as *inChemistry* and *Chemical & Engineering News* can increase knowledge about the field of chemistry. If you're passionate about the sciences, Mio says, "ACS is a great place to start." IC



Lynne Friedmann is a freelance science writer based in Solana Beach, CA. She is a Fellow of the American Association for the Advancement of Science.

D3c1fr1ng th3 C0d3

Deciphering the Code

How to Attract Attention (of the Right Kind!) at Scientific Meetings and Conferences

ISTOCK

By Raychelle Burks

YOU'VE DONE THE RESEARCH, ANALYZED the data, submitted an abstract, and had it accepted. You have painstakingly planned and practiced your talk or poster, and are prepared to answer just about any research question that comes your way. Travel and accommodations are complete. Soon you will be on your way to your first conference.

You've taken care of practically everything. But have you thought about your *conference etiquette*? Yes, etiquette. If you haven't 'deciphered' the accepted codes of social behavior at a professional meeting or conference, all your hard work and planning could go to waste.

The mysterious element of etiquette

You may be surprised to learn that etiquette isn't just for social events. Etiquette is for *any* occasion that requires social interaction, including conferences. Unlike social events where you are probably very familiar with those in attendance, conferences bring together close colleagues and total strangers in a professional setting. This setting combines the professional and the social, often leaving first-time conference attendees wondering how to behave.

et • i • quette [et-i-kit, -ket]

1. Conventional requirements as to social behavior; proprieties of conduct as established in any class or community or for any occasion.
2. A prescribed or accepted code of usage in matters of ceremony, as at a court or in official or other formal observances.
3. The code of ethical behavior regarding professional practice or action among the members of a profession in their dealings with each other: *medical etiquette.*

www.dictionary.com

"Treat your conference experience as an extended job interview," advises Yolanda Zepeda, associate director of academic and international programs for the Committee on Institutional Cooperation (CIC). From attitude to appearance, Zepeda advises students to keep it *strictly* professional. "The national community in your desired field is surprisingly small, and people talk," says Zepeda. You don't want to be remembered for social gaffes, she explains — but rather, for your research.

Presenting your research, after all, is likely one of the main benefits you can get from attending a conference. "You get to present your hard work to other scholars who appreciate it," says University of Nebraska–Lincoln (UNL) student Morrel Wax, who recently attended the McNair Berkeley Research Conference. Fellow UNL student Martin Diaz agrees, adding, "sharing information with others is an opportunity to receive information and feedback on your research area and can also help others with their research."

Making networking work

Research may be the main reason you're attending a conference, but it's not the only reason. Diaz says that another key reason to attend a conference is to "network with people from potential employers and with students and faculty from other schools." Mark Hill, University of Wisconsin–Madison professor, agrees: "A lot of people who go to their first conference think they're not

getting their advisor's money worth unless they go to all the talks. But a conference is more than that."

A conference is where you present your past and current research while planning for your future. Gaining information on "internships, co-ops, as well as employment and graduate school," notes Cyndi Freeman, director of graduate student recruitment and diversity initiatives at Ohio State University, are common "extracurricular" reasons students attend conferences. Treating a conference like an extended job interview is more than good advice — your graduate school or job interview may actually be scheduled during the conference, or you may even attend a career or graduate school fair while there.

Networking is more than investigating new careers or graduate programs. Think of networking as socializing for professionals. With networking, forget the old adage, "never talk to strangers." Networking is *new-working*: meeting new colleagues and collaborators. Networking often means making the first move and breaking away from the pack. "I see a lot of students who walk around with the same people all of the time, which inhibits new interactions," says James Alfano, a professor at UNL. "Don't just hang out with your lab mates," he advises. A conference is no time to impersonate an ostrich either, according to UNL student Diaz. "Students should not just keep to themselves and only come out for their presentation," says Diaz, "but rather, network."

Networking may be socializing, but "job interview behavior" still applies. Think about networking this way: fellow conference attendees are "interviewing" you to be their colleague/collaborator, and you're likewise interviewing them. These interviews tend

How to Dress for Success

By Austa Marie Parker

IT'S A FACT OF LIFE THAT PEOPLE JUDGE us by the way we dress. Making a great first impression that exudes credibility and professionalism at a conference or meeting is critically important. In addition to your student peers, you'll be surrounded by potential employers, graduate school advisors, and mentors. The way you present yourself can be just as important as the way you present your research.

Mary K. Moore, a senior technologist at Eastman, points out, "Many employers use poster presentations as a first step in screening potential applicants. Students should always present themselves in a professional manner. It will make a difference in the future." John Engleman, a scientist at SC Johnson, adds, "First impressions really do count and may well be the swing factor in the interview process of two equally qualified candidates."

When you are attending poster sessions and oral presentations, the "business casual" look is suitable. When you are presenting a poster or paper at a scientific meeting, a more polished and professional look is necessary. It is important to always be well-groomed and polished. Jewelry should be kept to a minimum.

- **Wear shirts** that are ironed, and a simple color or pattern. The shirt should fit well: neither too tight, too loose, nor too revealing. Men should wear dress shirts.
- **Select skirts** of an appropriate length — two inches above or below the knee — that fit comfortably along the wasteline.
- **Choose slacks** that are neatly pressed and professional in appearance. If you are a woman, you should avoid Capris and similar styles of slacks. Men should wear khakis, cotton twill trousers, or dress pants when presenting a poster. Jeans are never an appropriate element in the "business casual" regime. Even if they look nice to you, they do not come across as professional.
- **Wear shoes** that are polished and complement your attire. Sandals, and especially flip-flops, are not appropriate. It is important is to make sure the shoes are comfortable enough to wear for an entire poster session or a full day at the conference.
- **Add a jacket to your attire,** especially if you are presenting a poster or paper. Black, navy, or gray is best, in either a solid color or pinstripe.

CLEMSON UNIVERSITY

Students displaying a range of business attire, from appropriate business casual attire (left), to more formal business attire suitable for making poster presentations (center), to inappropriate business casual attire (right).

If you stick within these guidelines, you will look professional and poised to your colleagues. If you look professional, then you will feel more confident and your research will be more highly regarded.

Dressing appropriately doesn't have to be complicated; look your best and dress for success! IC

Austa Marie Parker is a senior chemistry major at Clemson University and plans to attend graduate school in environmental engineering in the fall of this year.

Looking for More Advice?

Wrong*

Attending Talks & Poster Sessions

- **Go to every talk/poster session.**
  Why waste any time with idle chit-chat, vendor exhibits, grad school or career fairs?
- **Ask questions as soon as the speaker puts up their outline slide.**
  Why wait for the speaker to explain their research?
- **Point out every error you've found while reading someone's poster.**
  They'll appreciate the feedback.
- **Skip the questions, just make statements.**
  This will let others know you already know the answer.
- **Never consider another's feelings when asking questions.**
  Say something like, "Why did you waste time using that method?" People will remember you as a zealous truth seeker.
- **Don't turn off your cell phone.**
  Receiving lots of calls and text messages just makes you look important.

Networking

- **Don't go out of your way to meet new people.**
  Why meet new colleagues/collaborators?
- **Always wait for people to introduce themselves.**
  All will be naturally drawn to you, particularly if you stand against a wall.
- **Only talk about your research.**
  People will be impressed by your expertise and you won't be bothered with new information.
- **Drink and eat as much as you can at receptions.**
  It's free and you're on vacation, right?

*Based on "Conference Etiquette" by University of Wisconsin – Madison Professors Mark D. Hill and David A. Wood. Please visit http://pages.cs.wisc.edu/~markhill/conference-etiquette.html

Right

Attending Talks & Poster Sessions

- **Be selective.**
  Consult the conference proceedings in advance and plan to attend talks that interest you – both in and out of your area.
- **Listen carefully and take notes.**
  This will help you draft thoughtful questions.
- **Engage a poster presenter in conversation.**
  They'll appreciate talking about their work rather than standing next to it.
- **Always be diplomatic.**
  Disagreements are no reason to make disparaging remarks. Professionalism is always appreciated.
- **Hand-out compliments.**
  Let a presenter know you enjoyed their talk/poster one-on-one. This is a great way to start a conversation and make new contacts.
- **Forget your cell phone.**
  Giving your undivided attention lets people know you're fully engaged in the meeting.

Networking

- **Make time for "non-academic" events.**
  These are excellent places to make professional contacts.
- **Talk to strangers.**
  Conferences are great places to meet new colleagues/collaborators, future graduate school advisors, or employers.
- **Ask people about their research.**
  They're just as excited to talk about their research as you are.
- **There is no such thing as a "social event."**
  You're at a conference representing your institution, and your behavior at all times reflects on both you and your school.

to be fairly casual, occurring in hallways, at receptions, and over shared meals – but even so, you shouldn't treat them *too* casually.

"Remember you are always on stage and not just representing yourself, but also your mentor and institution," warns Jason Kautz, UNL professor and coordinator of undergraduate education. Keep in mind the words of CIC's Zepeda: your field is small, and people talk. Just ask a faculty advisor from a small private school, who took undergraduate researchers to last year's ACS meeting in New Orleans. "My students were flashing people on Bourbon Street," shares the advisor, continuing, "I heard about it later from my post-doc advisors."

These students were "off duty" – but they were still "on stage." Such behavior can mean more than *just* an embarrassing conversation with your advisor. Ohio State's Freeman recalls that a "student had a great time on Friday night and slept right through his presentation on Saturday morning." Social gaffes can have serious professional consequences. CIC's Zepeda warns students to avoid "silliness that can close doors of opportunity that might otherwise have been opened for them."

Open doors and *keep them open* by carefully preparing for your conference. Preparation isn't just for your talk or poster, but also for your behavior. A conference can be a stormy sea to navigate … but with proper preparation, it will be smooth sailing. iC

Raychelle Burks is a graduate student at the University of Nebraska-Lincoln, defending her dissertation in spring 2009. She is an analytical chemist focused on the detection of explosives.

Henry Eyring:

His Science and Legacy

By Janan M. Hayes and Patricia L. Perez

In your general chemistry or physical chemistry course, you probably studied absolute rate theory (ART). This theory was developed from the wisdom and imagination of Henry Eyring as he "stepped outside the box" to explain many observations and theoretical predictions of molecular interaction.

ART holds that when atoms or molecules collide, they briefly combine to enter a fourth dimension, forming a new and different high-energy combination that is unstable. This unstable combination (called the activated complex or transition state) must then collapse back into three dimensions. Whether the resulting combination is the same as the initial atoms or molecules (reactants) or is a new and different combination (products) depends upon the energy difference between the reactants and the transition state (activation energy) and the energy difference between the reactants and the products (enthalpy change).

This theory represented a unifying point of view whose principles have been applied to areas of science ranging from quantum mechanics to catalysis. The understanding of this mechanism led to the development of rate theory based on the energy factors discussed above. One focus of Eyring's later work was the expansion and refinement of ART, but there were other dimensions to his work as well. He applied his expertise to such diverse areas as shock waves in explosives, corrosion rates of metals, and protein structure and function.

But who was Henry Eyring, the man behind these seminal theories with their applications? While he modestly thought of himself as just a "simple man," he was also a physical chemist, a family man, an outstanding scientist, and a Mormon. A biographer has described him as having a fertile imagination, unbounded curiosity, a warm and outgoing personality, a high degree of intellectual talent, the ability to work hard, and a determination to succeed. For him, people were key: he cherished his family, friends, and professional colleagues.

Henry Eyring was genuinely interested in anyone and everyone. He felt that he could learn something from each person he met, whether a scientist or not. A review of his many scientific papers and books shows that Eyring was interested in and made contributions to a number of scientific topics. He had a unique way of considering problems and questions: focus on the overall big picture, not the minutiae, and learn from your life experiences.

From his early experiences at Berkley, Berlin, and Princeton, where he met and/or worked with several eminent scientists, e.g., G.N. Lewis, Michael Polyiani, and Albert Einstein, he learned to "think outside the box." Because physical chemistry involves the study of chemical reactions and physical changes

Learn more about this unique chemist at a symposium offered by the Division of the History of Chemistry.

Henry Eyring, His Science and Legacy

Tuesday, March 24, at the spring 2009 ACS meeting in Salt Lake City, UT

A Model Life	Steven M Kuznicki, University of Alberta
Henry Eyring's Role in U. S. Theoretical Chemistry	Jack Simons, University of Utah
Henry Eyring and "Quantum Chemistry"	Gary D. Patterson, Carnegie Mellon University
Mentor Models of Research and Emerging Protein	Dan W. Urry, University of Alabama at Birmingham
A Mentor and a Colleague	Josef Michl, University of Colorado
Statistical Mechanics and Dynamics Significant Structure Theory	Douglas J. Henderson, Brigham Young University
A Model for Young Chemists	Janan M. Hayes, Project Inclusion

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at the molecular and atomic level, it is relevant across chemistry and other disciplines. Lewis once said, "physical chemistry is everything that is interesting"and Eyring probably agreed with this statement, says Jack Simons, one of Eyring's colleagues at the University of Utah. For this reason, Simons has stated, Eyring was not shy about using his skills to attack such diverse problems as molecular electronic surfaces, rates of chemical reactions, flames and explosions, and biological processes associated with aging. He liked to figure out how molecules worked, and he would bring any and all tools at his disposal to the task.

All of Eyring's sons were encouraged to study chemistry and physics in their youth. His oldest son, Edward, is still a working chemist at the University of Utah; but his second son, Henry, switched from physics to business. They were both following the advice of their father that they pursue something for which they had a passion.

What can we learn from Henry Eyring's life? Perhaps it is that "simple" people can indeed change the world. We must take nothing for granted, work hard, and be humble. We should follow our passions. And finally, each person must be dedicated to truth, wherever one finds it, and to live in such a way as to make one's self comfortable in the company of good people.

More about Eyring's work and life is detailed in the June 9, 2008 issue of *Chemical & Engineering News*. Also, a symposium in his honor will be presented at the upcoming spring 2009 ACS meeting in Salt Lake City, Utah. iC

Biographical Information
Henry Eyring (1901-1981)

Eyring was born in Colonia, Juarez, Mexico, where his grandparents migrated in the late 1880s during the Mormon migration from Utah. Political unrest in 1910 necessitated the family's move to El Paso, TX. In the move, the family lost nearly everything, but Henry's father was able to purchase a small farm in Arizona that everyone worked hard to make a success.

He graduated from high school in 1919. By earning a state fellowship and also working, Eyring graduated in 1923 from the University of Arizona with a B.S. in mining engineering. The following year, he earned an M.S. in metallurgical engineering. A summer job with exposure to burning sulfur (smelly sulfur dioxide) prompted Eyring to change professions and become a chemistry instructor at the University of Arizona. There, he was encouraged by several faculty members to study for his doctorate.

Two years later, in 1927, he earned a Ph.D. at UC Berkeley. He did a post doc at the University of Wisconsin and was a National Research Foundation fellow at the Kaiser Wilhelm Institute in Berlin before going to Princeton University (1931-46). In 1946 he became a professor of chemistry at the University of Utah and founded its Graduate School. His many honors include the ACS Priestley Medal, National Medal of Science, Sweden's Berzelius Medal, election to the National Academy of Sciences, and the presidency of the American Chemical Society (1963).

The Eyring Foot Race

One thing Henry Eyring prided himself on was his physical fitness. He was remembered for walking to and from his office, doing standing jumps from the floor to the top of his desk, and challenging his graduate students to an annual foot race.

The tradition of the Eyring foot race began in 1958, when he challenged his secretary at the Dean's office at the University of Utah to a foot race. Much to her surprise he won easily. Dean Eyring then challenged two administrative colleagues, G. Homer Durham and Sterling M. McMurrin, to another foot race. Much to the amusement of the crowd who had gathered to watch the race, both challengers fell while running the race, leaving Henry Eyring with an undefeated record.

Thereafter, Eyring kept the foot race tradition alive by challenging his graduate students to a 50-yard dash each year. Eyring did not win any of these races, but he did award cash prizes to the first four winners in each year's competition. Finally, in 1978, Eyring retired from his foot racing career at age 78.

While the Eyring foot race is no longer run at the University of Utah, the event is still fondly remembered within the chemistry community. According to Ted Eyring, Henry's eldest son who is now a professor at the University of Utah, "The key ingredients for these shenanigans were Henry Eyring's fleetness of foot, his prestige in the international chemistry community, and his willingness to be humiliated annually in public (including on national television one year) by his youthful graduate students."

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Janan M. Hayes and Patricia L. Perez are professors emeriti of chemistry at California Community College with over 35 years in teaching and co-directors of Project Inclusion, a project that supports information on non-traditional people, places, and times in the traditional chemistry curriculum. Jan is also a member of the American Chemical Society Board of Directors.

Tell Me About a Time...

How to Ace a Behavioral Interview

By Samina Azad

THERE IS NO DENYING THAT one's analytical and technical skills will be important factors in the ability to land a position with an employer. But as I learned in my own job search following my career as a post-doc, there is an entirely different skill set required to succeed in the crucial job interview process: the ability to effectively answer seemingly simple questions about how one behaves in various workplace scenarios.

Toward the end of my second post-doc position, I began applying for industrial jobs on monster.com. My résumé was picked up by several recruiters. I passed the phone screening interviews and was invited to three on-site interviews, which were a few days apart from each other.

At this point I was feeling very confident. The potential employers were already convinced that my background was a good match for the positions. The next step would be to present a seminar at each of these on-site interviews and meet the employers in person. I thought all that was left to do now was to dress professionally and shake hands firmly with my interviewers. Then I would be left with the difficult task of deciding which of these jobs to choose for my next career move. It turned out, however, that I was wrong.

Unexpected questions

I flew from Texas to the west coast for my first interview. It was for a process engineer position in a large semiconductor company. I arrived at 7:30 a.m. and presented my seminar to a group of 12 people.

After that, I was scheduled to meet with each person individually throughout the day. The hiring manager started the interview, saying, "We know you are technically competent — otherwise, we wouldn't be talking to you today. However, the purpose of today's interview is to gauge how well you will fit into the group. We would like to know how you handle stress, how you take criticism, and how good you are at teamwork. For example, if your team members think that there is a problem in your process, but you are convinced that there is no problem, how would you react?"

I was not really sure how to answer this. Was he testing how confident I felt about my technical ability and communication skills? I was fresh out of academia and trained to defend my research. The rest of the interviewers I talked with that day discussed the same problem. They said, "Product development in the semiconductor industry is extremely stressful and fast-paced. Managers need to make fast decisions to move production for-

ward. There is not a lot of time for long arguments. We follow an internal policy: disagree and obey. How does this sound to you?"

My next interview was with another semiconductor company in New York. This was a small startup. I thought I would have a lot of freedom with this company and could design the process the way I wanted. Again, I was wrong. This interview went exactly the same way as the first, and similar questions were asked, such as: "How good are you at teamwork? What would be your reaction if the team suggests that your process has a problem, but you are convinced otherwise?"

Getting serious about preparation

My third on-site interview was with a chemical company in the Midwest. In an effort to help me prepare for the interview, the recruiting firm told me this would be a behavioral interview. They e-mailed me a list containing 40 or so questions that the employers might ask and provided me with some suggestions for answering behavioral interview questions.

The recruiter suggested that I use storytelling to convince the employer that I would be capable of overcoming challenges associated with the position. I should give examples from the past where I encountered similar situations as described in each question. He explained the 'SAR' method, where S is situation, A is action, and R is result. To answer each question, I should first describe a situation or problem, then what action I took to solve the problem, and lastly what the outcome was. He also revealed why he was eager to help me: the position was still open after many on-site interviews, because none of the previous candidates satisfactorily answered the SAR questions. It also became clear to me why the previous two on-site interviews focused so heavily on behavioral questions. According to the recruiter, behavioral questions can predict an employee's on-the-job performance five times more accurately than traditional interview questions about the candidate's analytical and technical skills.

I also realized that the same SAR example could be used to answer more than one question. The SAR response that describes "the toughest group to get cooperation from" may also be an example of "difficulty to get others to accept my ideas." The employers would have a list of desired behaviors that were critical for this position and they would try to find out if I had demonstrated these behavioral skills in the past. I worked hard to prepare answers for all the questions on the list. I was finally well prepared for an on-site interview and was able to convince the interviewers that I had the skill sets, both analytical and behavioral, that were required for these positions.

Finding flaws

After starting my work as an industrial scientist I, too, have used behavioral questions during interviews to gauge the characteristics of candidates for positions that opened up in our group. After all, the cost of hiring the wrong person for

Typical Behavioral Interview Questions

Questions on ability to handle stress, take criticism, and take initiative:

- Describe a situation in which you were required to work under pressure and how you reacted.
- Describe a time when you showed initiative.
- Describe a time when you found yourself challenged. How did it work out?
- Talk about a time when your work or idea was criticized and how you handled it.

Questions on decision making and problem solving abilities:

- Give an example of a time when you had to keep from speaking or making a decision because you didn't have enough information.
- Discuss an example of a time when you had to make a quick decision.
- What is the toughest group you have had to get cooperation from?
- Did you ever have difficulty getting others to accept your ideas? What was your approach? Did it work?

Questions on motivation, communication, interpersonal skills, and prioritization:

- Describe a situation when you were able to have a positive influence on the action of others.
- Talk about a situation when you had to speak up in order to make a point that was important to you.
- Have you ever had to "sell" an idea to your team members? How did you do it? Did they buy it?
- What have you done in the past to contribute toward a teamwork environment?
- How do you decide what gets top priority when scheduling your time?

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Most people learn behavioral techniques through personal experiences. The SAR interview process assumes that past performances are capable of predicting future performances. An interviewer is looking to see whether the candidate demonstrates mastery of behavioral skills and competencies that are critical for the position at hand.

That being said, many employers ask more general, behavioral-based questions that are less involved than SAR. Often these questions have little or nothing to do with your knowledge of chemistry per se. Examples of such questions include: "What are your strengths and weaknesses? Where do you see yourself five or ten years from now? Why are you considering leaving the current position? What is your biggest accomplishment so far? What do you like the most about your current job and what do you dislike the most? What motivates you to keep going when you face constant failures in your project? How did you select your graduate school? How did you choose your Ph.D. topic and thesis advisor?"

These questions are all meant to gauge the personality and behavioral skills of the candidate. During interviews, try to describe all your previous experiences in a positive tone. If it is not a story of success, mention the lessons you learned from an experience. In the process, the employers will get a first impression of you as a candidate.

Most employers like candidates who appear confident, trusting, dependable, and interested in the position. In addition to the behavioral questions, the proper use of body language can show confidence and dependability.

Be sure to smile when you meet your potential employer. Shake hands firmly and make eye contact. Be an active and interested listener throughout the interview. Take notes. Ask pertinent and thoughtful questions that you've prepared ahead of time.

The most important lesson that I learned from my job searches was that it was easiest to get a job offer when I knew why I wanted the job and why I should get it — and was able to express these thoughts in the interview process.

An interviewer is looking to see whether the candidate demonstrates mastery of behavioral skills and competencies that are critical for the position at hand.


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an industrial chemist position is very high, and could adversely affect the productivity and performance of the entire team.

Behavioral skills play a very important role in an employee's performance. Even the most competent chemists may not have successful careers if they are incapable of aligning their personal goals with the overall goals and objectives of the team and the corporation or institution. Behavioral skills can also be more difficult to learn than laboratory analytical techniques.


JUPITERIMAGES

Samina Azad is a senior scientist at STERIS Corporation. She graduated from the University of Wisconsin and worked as a post doc at Pacific Northwest National Lab and Rice University.

Rxn's and SIn's

In this installment of Reactions and Solutions, bloggers describe how volunteer efforts and experiences can reap professional benefits.

Compiled By Lori Betsock

→ BLOG

Creating Opportunities to Succeed

The courses and labs required for undergraduate programs provide opportunities to show your potential as a professional chemist. Although these degree requirements afford you chances to impress potential employers (or graduate schools), getting involved in outside organizations can create additional opportunities to succeed.

While a graduate student at the University of Wisconsin-Madison, I co-founded a student-organized research seminar series. Following a campus recruiting visit, I invited a member of Abbott Laboratories' human resources department to give a seminar and arranged meetings between the Abbott representative and undergraduate and graduate advisors. During the course of preparing for and hosting the seminar, the presenter from Abbott and I discussed my job search. As a result, she recommended me for a position in Abbott's Diagnostics Division. I had already submitted a general application and participated in a behavioral-based screening interview, but I had not yet received a response. However, after she recommended me, I was promptly contacted by the hiring manager for an open position and began the interview process. This experience underscores the importance of networking.

Posted by Chris

The Ability to Influence without Authority

One of the most valuable things I have gained from being a volunteer within the ACS has been the refinement and expansion of my leadership skills. I have found these skills to be quite useful in my daily interactions with others. An advantage of participating in a volunteer organization is gaining experience leading other volunteers in a setting where you have limited ability to influence their actions. If someone is unsatisfied with your leadership or their role in the organization, they can choose to no longer participate. This situation is distinctly different from a conventional workplace environment, where leadership roles are have well-defined responsibilities and authority to deliver negative or positive consequences. This provides additional incentives for cooperation.

In contrast, it is more difficult to motivate and inspire individuals in a volunteer setting. In this context, it is essential to explain why a particular course of action is in the best interests of either the individual concerned or the organization (ideally both). One attribute that can facilitate management of a volunteer group is that those involved are, after all, volunteers. Thus, they already have an intrinsic desire to participate at some level. To be an effective leader in this setting, it is important to appeal to the qualities and aspirations that originally motivated them to be involved.

I have found that these abilities are directly relevant to achieving personal and professional goals. It is much easier to lead if one can motivate people to perform of their own volition, even if you do have "authority" over them. Moreover, learning to lead in this way has parallels to common circumstances we encounter daily. One often needs to convince someone else to act without having the power to dictate their actions, including peers at work or school, friends, and family members. Thus, the leadership skills gained at volunteer organizations are applicable to many facets of life.

Posted by Ian

New Town, New Opportunities

Since leaving graduate school I've been active in ACS at the local section level. I recently moved to a new town and wanted to become active in my new local section. Knowing that National Chemistry Week was on the horizon, I volunteered for the local section's celebration. Chemistry Day was a great experience! Not only did I help share a positive image of chemistry with the public, I also met a lot of people with interests similar to mine. One person I met was an undergraduate student who was a second-year volunteer. We talked about our experiences, and he told me that last year while volunteering at Chemistry Day, he met the coordinator of the internship program at a local chemical company. He had already applied for the very same internship; however, after meeting the coordinator at Chemistry Day, he got the internship had a great experience. He credits his involvement with Chemistry Day for his success.

As a student, giving back to the community is a great way to meet professionals and learn about their experiences. The desire to be an active part of several groups or projects might be strong, but limit your involvement based on the time you have available. Focus on your career now so you can give back more later.

Posted by Emilio

Teaching Kids and Ourselves

One thing I have learned about chemists is that they enjoy volunteering, especially when it comes to working with kids and teaching them about the world of science. For me it started when I was a graduate student, helping with outreach activities. After some time in the food industry learning some good flavor chemistry demonstrations, I joined the teaching faculty at Northwestern University and worked with the Student Affiliates chapter. All the community outreach activities were energizing and confirmed what it means to be a chemist through exploration, observation, and sharing of knowledge. My own children by then were school age, so all the great demos were easy to share with their classrooms.

Now back in the corporate world, I am using the same demos I learned from my Student Affiliates chapter outreach activities in current educational programs at our site in Lean Six Sigma [business management strategy] programs. Even though the audience is adults whose experience with chemistry is minimal, they have the same energy as a third-grade class, and ask just as many questions during the "Green Skittles Chromatography" experiment. Teaching through ourtreach is a great way to celebrate being a chemist. Volunteering with ACS and in the community builds continued positive energy for what we do as chemists and how we think. It also gives you the opportunity to 'plant a seed' with a future scientist, and build bridges through translation, which is an important skill to develop as a professional. Have you taught a kid today?

Posted by Angela

Maintaining Balance between Ourselves and Others

As a chemist and Diné (Navajo) woman, I have been willing to apply my training as a theoretical chemist to exploration of the wholeness of our interactions with the immortal universe. A central goal in my life is to maintain balance between myself and others by putting my energy into realities outside my existence.

Volunteering in Native American communities is a reflective experience that gives an identity to the cultural roots of Turtle Island (a.k.a. North America). The time we spend getting to know other people who cultivate the spirit of our continent provides a chance to share a humanity and dignity surviving beyond these past 500 years of barriers and loss. As each of us applies our problem-solving skills to immediate issues facing the indigenous inhabitants of the Americas, we find we are the ones who benefit most. By clearly projecting ourselves into another reality, we expand our network to include those who bring about the best in our nature. And when we work with and help those who live in the 5th world (the world in which we currently reside as human people, according to the Diné), each action guides the mind toward the meaning of *Sa'ah Naaghai Bik'eh Hozho*, and the clockwise walk into empowerment begins.*

The time is at hand for chemists to move across boundaries that undermine the strength of the human spirit and begin to heal ourselves by healing our planet. You can put these experiences on your résumé and describe them in an interview, and it will be evident you have grown within your profession to encompass the human condition. Namasté (the light in me honors the light in you) and Hagoné (until next time),

Posted by Shanadeen

* The idea of *Sa'ah Naaghai* is the heroic male (Sky Man) process of living into ripe old age through repeated spiritual renewal so as to attain everlasting life, and Bik'eh Hozho is the female (Earth Woman) energy of giving life and taking life. Maintaining a unity of polarities is a fundamental meaning of *Sa'ah Naaghai Bik'eh Hozho* and the Diné way of life, where walking clockwise is a way to maintain protection and abide in a state of beauty.

Christopher J. Ciolli is a senior scientist in process chemistry at Ricerca Biosciences, LLC, in Concord, Ohio and a member of the ACS Younger Chemists Committee.

Ian Thorpe is a postdoctoral associate in the Center for Biophysical Modeling and Simulation and the Department of Chemistry at the University of Utah and a member of the ACS Younger Chemists Committee.

Emilio Xavier Esposito is an independent consultant who provides scientific consulting services to academia and industry, and is a member of the ACS Younger Chemists Committee.

Angela Ashton is a QC lab manager in the Drug Delivery Systems Division of 3M in Northridge, California.

Shanadeen Begay is a fourth-year graduate student at Boston University. She is an ACS diversity partner and member of the ACS Younger Chemists Committee.

Become a Voice of National Influence

The ACS Younger Chemists Committee

By Burt Hollandsworth

According to recent news reports, two-thirds of voters aged 18 to 29 cast their ballots in the most recent presidential election for Barack Obama. In fact, the votes of younger citizens helped Obama carry battleground states like Indiana, North Carolina, and Ohio. Regardless of your political leanings, you have to admit that this is an impressive display of the influence that younger people can have on society.

The Younger Chemists Committee (YCC) believes that the influence of younger people in *our* society, the American Chemical Society, can be just as powerful! Established in 1974, YCC is a joint Board-Council committee of the ACS consisting of 33 members and associates, all of whom are under the age of 35. Each individual brings a unique perspective to the committee. Members are employed in all areas of the chemical enterprise including academics, industry, and government. The committee meets in person twice a year at the ACS national meetings, but the members work year-round to ensure that the voices of younger chemists are heard throughout the ACS. You can read more about the history of the YCC at http://www.acsycc.org/committee/history.htm.

Sharing ideas

The primary mission of the YCC has always been to facilitate the sharing of ideas and opinions between the governing bodies of ACS and its younger chemists. To understand why this dialog is important, you may recall that legislation was recently proposed to change the status of "Student Affiliates" to "student members." Before this change was adopted by ACS, the YCC was asked weigh in on the possible impact that this change could have on younger chemists.

BURT HOLLANDSWORTH

YCC seeks opinions and participation in its events from young chemists such as Katie Vaughan and Taylor Hendrixson, undergraduates at Harding University in Searcy, Arkansas.

Planning events

YCC also organizes and operates activities of special interest to younger chemists at the national, regional, and local levels. For example, at the fall 2008 ACS national meeting in Philadelphia, YCC organized a five-kilometer "Fun Run" that was well-attended. A variety of runners participated, both young and old, but the event attracted mostly chemists in their twenties and thirties. Meanwhile, the committee co-sponsored a graduate school information breakfast at the Southwest Regional Meeting in Little Rock, and Local Section Younger Chemists Committees (LSYCCs) organized many more regional and local events across the country.

One of the more time-intensive activities of YCC is providing programming at national meetings dealing with topics geared toward a younger audience. At the national meeting in Philadelphia, for example, YCC sponsored or co-sponsored programs including, "Getting Your First Industrial Job," "Opportunities and Challenges for Non-Tenure Track Faculty," and "From Test Tube to Startup Company." If you have any ideas for symposium topics that would be of interest to younger chemists at future meetings, please e-mail them to ycc@acs.org.

Learning new skills

YCC also serves as a training ground for leaders within the ACS. Many committee members go on to serve on other ACS committees or within their local section after they "age out" of their YCC appointment. In addition, YCC facilitates and co-sponsors a program of Leadership Development Workshops for younger chemists at national and regional meetings where participants discuss characteristics and skills of effective leaders and write personal leadership development plans. Often these workshops provide the 'foot in the door' that younger chemists need in order to start getting involved on other ACS committees and task forces.

If YCC sounds interesting to you, please stop by one of our open house events at a national meeting, drop us a line at **ycc@acs.org**, or join our group on Facebook. Use the YCC as a way to voice your concerns and opinions to your Society and your fellow members. inC

Burt Hollandsworth is assistant professor of chemistry at Harding University and chair of YCC's Local and Regional Activities Subcommittee.

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Here's the Latest Buzz

on the 237th ACS National Meeting

SALT LAKE CITY, UTAH
Salt Palace Convention Center*
MARCH 22-26, 2009

Undergraduate Program

ACS Chemistry for Life™

SUNDAY, MARCH 22

Undergraduate Hospitality Center
8:00 A.M. – 5:00 P.M.

Making the Most of Your First ACS National Meeting
8:00 – 8:45 A.M.

Career Options in Chemistry
9:00 – 10:30 A.M.

Graduate School Reality Check
9:00 – 10:30 A.M.

Networking Social with Graduate School Recruiters
10:30 A.M. – NOON
Co-sponsored by the ACS Member Insurance Program.

Chem Demo Exchange
10:30 A.M. – NOON

Community Outreach Workshop
1:00 – 2:00 P.M.
Co-sponsored by the ACS Committee on Community Activities.

Art Conservation and Archeological Research Symposium
2:00 – 3:30 P.M.

Kids and Chemistry Workshop
3:30 – 5:00 P.M.

Student Affiliates Chapter Awards Ceremony
7:00 – 8:30 P.M.

Undergraduate Social
8:30 – 11:30 P.M.

MONDAY, MARCH 23

Undergraduate Hospitality Center
8:00 A.M. – 5:00 P.M.

Graduate School Recruiting Breakfast
8:00 – 10:00 A.M.

Advances in Nanotechnology Symposium
9:30 – 11:00 A.M.

Chemistry Survival Guide: Learning How to Learn Chemistry
9:30 – 11:00 A.M.

Undergraduate Research Poster Session
12:00 – 3:00 P.M.

Sponsored by the ACS Division of Chemical Education and Co-sponsored by the ACS Divisions of Analytical Chemistry, Biochemistry, Environmental Chemistry, Inorganic Chemistry, Medicinal Chemistry, Nanotechnology, Polymer Chemistry, and Polymeric Materials: Science & Engineering.

Eminent Scientist Lecture* *featuring Luis Echegoyen*
3:30 – 4:30 P.M.

Chemical Industry Networking Roundtable*
Co-sponsored by the ACS Committee on Corporation Associates.
4:30 – 6:00 P.M.

Sci-Mix/Successful Student Affiliates Chapter Poster Session
8:00 – 10:00 P.M.

Program format and times are subject to change. Please consult the final program.

All events are sponsored or co-sponsored by the Society Committee on Education Task Force on Undergraduate Programming. Chair: Charles Baldwin, Union University, Jackson, TN. Program Chair: John Kaup, Clemson University, SC.

Follow the Swarm to the Graduate School Recruiting Events in Salt Lake

It's a great opportunity to network with graduate students and recruiters from prestigious graduate programs and learn about the in's and out's of graduate school.

Recruiting events kick off on Sunday, March 22, with the **Graduate School Reality Check** from 9:00 – 10:30 a.m., immediately followed by the **Networking Social with Graduate School Recruiters** from 10:30 a.m. – noon.

Recruiting events culminate with the **Graduate School Recruiting Breakfast** from 8:00 – 10:00 a.m. on Monday morning.

Buzz on over and enjoy the free food and opportunities to network.

Attention: Graduate School Recruiters

Attract students to your graduate school programs by participating in these events.

Please contact Lori Betsock at l_betsock@acs.org
Registration materials are also available online at www.acs.org/saprogram

*All events will take place at the Salt Palace Convention Center, except for the Eminent Scientist Lecture and the Chemical Industry Roundtable, which will be held at the Salt Lake City Marriott Downtown.

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Save the Dates!
2009 ACS Meetings

National

237th
Salt Lake City, UT
March 22-26, 2009

238th
Washington, DC
August 16-20, 2009

Regional

38th Great Lakes
Chicago, IL
May 13-16, 2009

41st Central
Cleveland, OH
May 20-23, 2009

64th Northwest
Tacoma, WA
June 28-July 1, 2009

65th Southwest
El Paso, TX
November 4-7, 2009

36th Northeast
Hartford, CT
October 7-10, 2009

44th Midwest
Iowa City, IA
October 21-24, 2009

61st Southeastern
San Juan, PR
October 21-24, 2009

All events are tentative. Please consult the final programs for any changes.

For more information, go to www.acs.org/meetings

ACS Chemistry for Life™

JUPITERIMAGES

Celebrating Chemistry Under the NeON Lights of Sin City

By Hanna Angelica M. Magno

When most people think of Las Vegas, images of bright lights, showgirls, and gambling come to mind. However, Las Vegas is also a city that's rich in culture, the arts, and the sciences. In fact, last September, the ACS Western Regional (WRM) and the Two Year College Chemistry Consortium ($2YC_3$) meetings were both held in Las Vegas. Our Student Affiliates chapter, Chemical Interactions, from the University of Nevada, Las Vegas, hosted the WRM undergraduate session.

We'd never done anything like this before, but we were excited to tackle the challenge. From the beginning, we set three goals: we wanted to attract lots of people, provide plenty of networking opportunities, and — have fun!

Getting the word out

To accomplish our goals, we needed to do some advertising. We worked on our section of the conference website and consulted a graphic designer to help us create an eye-catching logo. The logo branded our program perfectly: the small faces in different colors on top of the bold, capitalized letters "WRM" aptly depicted the theme: "Representing the New Faces of Chemistry."

We sent e-mails that included a link to the conference website to Student Affiliates chapters and their advisors in the western region. Our website contained short descriptions of the planned events, a link to the meeting registration page, the abstract submission page, and some information about Las Vegas. To encourage attendance, we also sent flyers to universities announcing raffle prizes and registration fee waivers for those who qualified. Finally, we sent multiple e-mail reminders to Student Affiliates to make sure they didn't forget to register.

The meeting

Tuesday. On Tuesday night, Thomas H. Lane, the president-elect of the ACS, invited Chemical Interactions to meet with him. We took this opportunity to thank him for the generous contribution he made to our program and to learn about his plans for the ACS.

Friday. The Undergraduate Program officially started with an ice cream social on Friday night. Our sundae bar provided a relaxed atmosphere where everybody could make new connections. To encourage interaction, we played an ice-breaker game. As attendees walked in the door, they received a name tag with an element symbol. Later on, everyone received a list of 30 elemental puns. Participants had to solve the puns and then find and meet the people who were wearing the corresponding element symbols and get their signatures. Attendees who finished successfully with all the correct answers were given candy bars. Try solving a few sample puns (shown below) for yourself!

After enjoying the delicious

Match the pun with the corresponding element!

Puns		Elements	
1.	Half a dime	a.	Er
2.	Not fat	b.	Hf
3.	Watered down gin	c.	H
4.	What torpedoed ships do	d.	B
5.	What to do with the dead	e.	Si
6.	Molly's blue jeans	f.	Sn
7.	Frivolous prisoner	g.	Zn
8.	What many courses do	h.	Ni
9.	Holmium x 0.5	i.	Ba
10.	To spice	j.	Mo

Sample elemental puns.

Answers: 1. h; 2. f; 3. c; 4. g; 5. i; 6. j; 7. e; 8. d; 9. b; 10. a.

JUPITERIMAGES

ice cream and playing the fun-filled game, everyone settled in to listen to the speaker of the night, Ken Barr, director of medicinal chemistry at Amplyx Pharmaceuticals, Inc. and an ACS volunteer career consultant. He talked to us about what to expect during graduate school, introduced us to a valuable networking tool called LinkedIn.com, and gave us tips on how to write a winning résumé. He imparted some additional important advice, which we are taking to heart: "scrub your Myspace and Facebook accounts!" We learned, believe it or not, that employers do Google potential employees, and that we must carefully scrutinize all of the hits that are associated with our names.

Saturday. Early Saturday morning, Clemens Heske of the University of Nevada, Las Vegas, gave a talk on alternative energy sources, focusing mainly on solar power. This energy resource is virtually inexhaustible, free, and environmentally friendly — unlike oil. These make great arguments why solar energy should be explored, according to Heske. He also brought in a mini solar cell as a visual aid and explained how it worked.

At our poster session, 65 posters were presented by secondary teachers and students from two-year and four-year colleges. We designed the poster session to allow the participants to both present their own research and to interact with other poster presenters. In the first hour of the poster session, half of the participants presented while the other half judged the posters that were on display and voted for the "Best Poster"


UNIVERSITY OF NEVADA, LAS VEGAS

WRM 2008 education program poster session.

and "Best Poster Presenter" in three categories: students from a two-year college, students from a four-year college, and secondary teachers. In the second hour, the roles were reversed.

After the poster session, Chemical Interactions hosted an awards luncheon. While the results of the poster session judging were being tallied, we held a raffle for prizes including a periodic table shower curtain (which we hear is being used in a dorm at the University of Arizona!). After the raffle, we gave each poster presenter a certificate of appreciation, and gift bags of goodies from the ACS store to the six poster presenters who were chosen as winners.

In addition to the awards for the poster session, Morton Hoffman presented Judith (Judie) Ann Flint Baumwirt with a plaque and a check for winning the 2008 ACS Division of Chemical Education Western Region Award for Excellence in High School Teaching. Chemical Interactions presented this deserving teacher with a framed picture that said, "Teachers are worth their weight in Au!"

Judie teaches at Granada Hills Charter High School in California and is passionate about chemistry and her students, constantly devising innovative ways to help young minds absorb chemistry concepts.

Little details

In the course of the planning, it is easy to forget the little details. It is important not to forget thank-you notes to those who helped us present our program: the speakers who came out of their way to share what


Education awards luncheon attendees (left to right) Hanna Magno, Josué Dueñas, Judie Baumwirt, and Daniella Sandoval.

they know, the administrative assistants who provided office supplies, the designer who helped create the logo that branded the event, and the friend who printed the flyers at a discount.

What helped us

The planning of this event was a huge undertaking. One thing that helped in the planning was setting deadlines. A simple "to do" list with due dates helped push the planning along. We delegated tasks to spread the workload; and for this, communication and organization was key. Everybody needed to know what they were responsible for. Our meetings kept everyone up to date, allowing us to solve problems as they arose.

Worth more than megabucks

Attending the meeting allowed us to network, meet new people, and attend talks to find out what is going on in the chemistry world. Planning the meeting strengthened our leadership skills by giving us responsibilities. On a personal note, presenting at the meeting gave me a chance to talk in front of an interactive audience, something I thought I could never do.

The meeting was a giant success, and a great learning experience for all involved. And you thought all we do is gamble over here! ic

Hanna Angelica Magno is a senior at the University of Nevada, Las Vegas majoring in pre-professional biology and serves as the secretary of the UNLV ACS Student Affiliates group.

JUPITERIMAGES

This Is How We Roll – MIDWEST STYLE

Hosting the Undergraduate Program at MWRM

By Anna Barber and Danielle Policarpio

In the fall of 2007, when our department chair at the University of Nebraska Kearney asked our Student Affiliates chapter to plan the undergraduate activities for the ACS Midwest Regional Meeting (MWRM) in Kearney, Nebraska the coming year, we gladly accepted. Little did we realize the amount of work and the many challenges that were to follow. However, after a year of planning, teamwork, and innovation, we successfully made it all come together.

Getting the ball rolling

We broke this enormous project into smaller tasks. First we organized a committee within our chapter to help plan the program and lead the other members. Next we wrote a grant proposal to fund our undergraduate program and activities to provide for an enjoyable experience for all the undergraduates attending. Our committee met after our regular business meetings to plan a program and schedule of events that would be fun, educational, and beneficial to the students.

We began contacting possible speakers and experts in various fields of chemistry, and brainstormed events that would bring together the diverse undergrads during the meeting and give them an opportunity to network. Our proposal included a mix of social events, eminent scientific speakers, and a career "question and answer" panel discussion. Fortunately, our grant proposal was funded, giving us the resources we needed to bring our vision to life.

As the meeting time drew closer, we finalized the many necessary details. We realized that without the ongoing help of each and every member, the meeting could not succeed to its full potential.

Kicking into gear

As registration opened at the local Ramada Inn, excitement rose among our chapter members. We were finally bringing to life all the plans on which we had worked so very hard.


UNIVERSITY OF NEBRASKA KEARNEY

A few undergraduates and ACS staff member Audley Burke hanging out in the "Undergrad Suite" before bowling.

Our opening night event was a "photo scavenger hunt," which involved teams composed of five undergraduate students each. All the teams were given disposable cameras, list of various items that could be found only at the meeting … and one hour in which to find and photograph them. After the photos were developed by a local one-hour photo shop, the teams met back at the "undergraduate suite." There, we gave each team a sheet of poster board, markers, and tape, and the groups had 20 minutes to assemble collages of their photos. To complete the event, a panel consisting of the meeting's general manager, exhibit chair, and a committee member selected the winning collage. We then


UNIVERSITY OF NEBRASKA KEARNEY

MWRM committee members (left to right): Andrew Prososki, Whitney Clark, Anna Barber, Danielle Policarpio, Bobbi Arnold, and Patrick Teten.


AMERICAN CHEMICAL SOCIETY

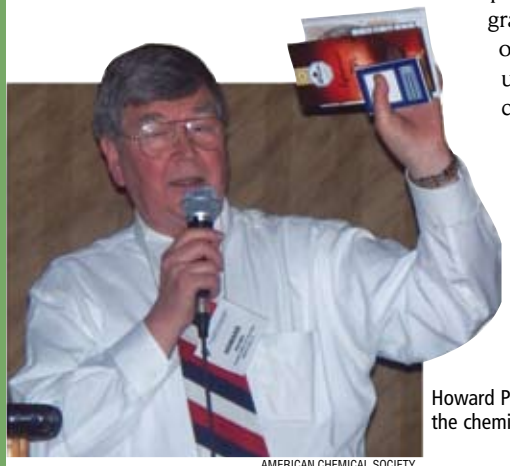
Undergraduate students showing their scavenger hunt results poster.

awarded prizes to the winning team, which happened to be named the "Hungry, Hungry Hydrogens."

The following evening we had a symposium of eminent scientists. The event included a presentation entitled, "Chemistry of Chocolate," by Howard Peters, a former ACS Board of Directors member and a retired chemical patent attorney, and "Carbohydrates in Food Systems," by Randy Wehling, professor of food science at the University of Nebraska-Lincoln. This event attracted undergraduates and many other meeting attendees. Later that evening, we invited the undergraduates for a night of bowling at "The Big Apple." Everyone involved enjoyed games of bowling, sodas, and delicious pizza!

The last day of the undergraduate program ended with a very beneficial career panel symposium, which included chemists from various institutions. The panelists answered many questions about graduate school, options after our undergraduate careers, and fellowship and stipend opportunities.

Thanks to a great group of volunteers who worked to make our program run smoothly, our meeting was a huge success!


AMERICAN CHEMICAL SOCIETY

Howard Peters presenting the chemistry of chocolate.

The first 10 people who arrived at the program received door prizes. In keeping with this year's National Chemistry Week theme, "Having a Ball with Chemistry," our prizes included a football and a basketball.

Thanks to a great group of volunteers who worked together as a group to accomplish such an ambitious program! Each member of our chapter had an opportunity to act as a leader by providing their ideas and putting them into action. This experience allowed our chapter to broaden our capabilities for even bigger projects. We have also learned to work better and more collaboratively as a chapter. The importance of volunteerism has become very apparent to us and has motivated all of us to reach out and help to make our program run smoothly, our meeting was a huge success!


UNIVERSITY OF NEBRASKA KEARNEY

Undergraduate students working on their photo scavenger hunt poster.

Learning and growing from the experience

Planning, organizing, and executing the MWRM was both a challenging and rewarding experience for our chapter. We had to learn to work together as a group to accomplish such an ambitious program! Each member of our chapter had an opportunity to act as a leader by providing their ideas and putting them into action. This experience allowed our chapter to broaden our capabilities for even bigger projects. We have also learned to work better and more collaboratively as a chapter. The importance of volunteerism has become very apparent to us and has motivated all of us to reach out and help our community through more involvement with different groups of people.

In the end, the experience also drew us together as a family, and helped us better appreciate the different contributions made by everyone involved. This was definitely a wonderful experience, and one that we highly recommend to other chapters. iC

Danielle Policarpio, UNK Student Affiliates chapter president, and **Anna Barber,** UNK Student Affiliates chapter treasurer are both junior chemistry majors.

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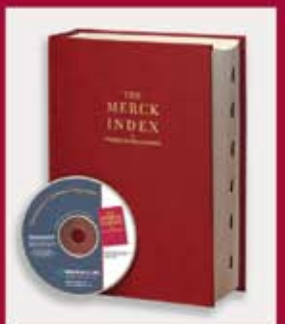

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