

Form: Part II - Annual Narrative Report **Optional for EZ Submission**

Organization: Michigan State University
Year: 2003

A. Activities

Please describe and rank up to ten of your section's activities during 2003. Provide (a) the title of the activity, (b) a one paragraph description of the activity, and (c) an indication of which ACS Strategic Thrusts. Please refer to the end of this section for a listing of the ACS Strategic Thrusts or see Part I, questions 3-12. If you wish to provide details beyond these paragraphs, please do so in Appendix 1.

Activity #1

a) Title: Chemistry Day at Impression 5

The MSU Local Section once again ushered in National Chemistry Week with our 17th annual "Chemistry Day" hands-on activity/demonstration event held from 11 am - 3:30 pm on Saturday, October 25, 2003 at Impression 5 Science Center, a local science museum. Admission to the museum was free, thanks to a generous donation from MBI International, a Lansing biotechnology firm. The total attendance for the event was 2,551.

Though the event was open to the public, Girl Scout and Boy Scout troops were specifically invited to pre-register and attend by publicizing the event through the local councils. Any scout attending received a specially-designed Participation Patch illustrating the theme "Earth's Atmosphere and Beyond!" This is the fourth year we've done this. The total scout attendance was 660, including 316 Boy Scouts and 344 Girl Scouts. In addition, 220 other children participated, each earning a patch.

Thirty tables of hands-on activities, most consistent with the theme, were presented by students from the Michigan State University Department of Chemistry including members of NOBCChE, ACS Women in Chemistry, the Younger Chemists Committee, Alpha Sigma Chi, and Science Theatre; by employees of the Board of Water and Light and MBI International; and by students from Okemos, Perry, and Eaton Rapids High Schools. Theme related activities included the CO₂ leaky faucet, H₂ pipette rockets, observation of line spectra (each participant received a diffraction grating card to take home), collapsing pop can, Cartesian divers, Bernoulli principle demonstrations, Hero's fountain in a bottle, and the tornado tube.

In addition to the participation patch, each participant received a "Periodic Table of the Elements", an NCW activity newspaper, a "Hooray for Chemistry" bag, and an NCW helium balloon.

The event was publicized through the local scout councils, by articles appeared in the Lansing State Journal, the Towne Courier community newspaper, The State News, and the MSU News Bulletin. Radio and television public service announcements were made and the week before the event it was listed on the Michigan State University homepage. The local CBS affiliate television station covered the event.

Description
(please limit to
b) one paragraph):

c) Which Strategic Thrust(s) does this activity support? (Please refer to the List of Strategic Thrusts)

1 2 3 4 5 6 7 8 9 10

This activity was new in 2003

Activity #2

a) Title

Women in Chemistry

The ACS Women in Chemistry (ACSWiC) program at Michigan State University, now in its seventh year, has had an eventful and activity packed year including workshops, "Meet the Speaker" events, and many outreach activities. ACSWiC provides a venue for women chemists to interact and the programs are designed to facilitate both professional and personal growth, to provide opportunities for network building, and to establish mentoring relationships. Members of ACSWiC are primarily graduate students, postdocs, specialists, and faculty members in the MSU Department of Chemistry, but participants also include women from other departments, undergraduate students, and professional women from the community. ACSWiC began the spring 2003 semester by offering a workshop entitled "Multi-National Perspectives on Education" in which we invited graduate students to come and discuss their experiences with education in their home countries. This was a great opportunity to learn about the educational systems and cultural differences in the many countries that are represented in our department. Toward the end of summer 2003, we hosted a workshop given by Professor Vicki McGuffin entitled "How To Buy the Perfect Suit" that was well attended by both men and women. Dr. McGuffin gave us all valuable tips on dressing for professional occasions on a tight budget. We started the fall semester with a kick-off lunch for incoming women graduate students to tell them about our activities and invite them participate in ACSWiC. Women faculty, ACSWiC steering committee members, and incoming women graduate students attended. Outreach and community involvement were also a large part of our activities for the 2002-2003 academic year. During the spring, we presented a hands-on demonstration called "Writing with Electrons" at the St. Thomas Aquinas science fair. We also presented our annual "Hard Water" titration activity at the Girls' Math Science Conference and new this year we also presented a forensic science workshop at the event. During the fall, several members from our group participated in the American Cancer Society's "Making Strides against Breast Cancer Walk" in October, representing the group with personalized ACSWiC t-shirts. Also in October, we held an analytical instrumentation workshop for Okemos high school students. A class of 24 AP chemistry students from the school performed experiments and gained exposure to state-of-the-art instrumentation in analytical chemistry laboratories in the department. Finally, our presentations at Chemistry Day at Impression 5 Science Center during National Chemistry Week (NCW) in October were a success, including a hands-on experiment with "hydrogen" oxygen pipet rockets" as part of the NCW theme, "The Earth's Atmosphere and Beyond." Over 2000 people attended this event!

We were very excited this year to meet with women scientists scheduled to give seminars in the chemistry department as part of our "Meet the Speaker" program. Among others, we met with Dr. Heather Allen from the Ohio State University, Dr. Julia Kovacs from the University of Washington, and Dr. Jetty L. Duffy-Matzner from Augustana College.

Anne Fischer and Prerna Sonthalia are the 2003-2004 WCC co-chairs. Other members of the steering committee are Leslie Passeno, Scheila Vaezeslami, Elizabeth Croal, and Melissa Meaney. For more

Description
(Please limit
b) to one paragraph) information about ACSWiC or to find out about
upcoming events, visit us on the web at
<http://www.cem.msu.edu/~acswic/acswic.html>.

c) Which Strategic Thrust(s) does this activity support? (Please refer to the list of Strategic Thrusts)

1 2 3 4 5 6 7 8 9 10

This activity was new in 2003

Activity #3

a) Title Project Seed

For the second year in a row, the MSU Department of Chemistry hosted high school students during the summer as part of the American Chemical Society Project SEED. Three economically disadvantaged students (two females, one male) participated in eight weeks of hands-on research with Professors Babak Borhan, Greg Baker, and Robert E. Maleczka. The projects involved studies of steroid hydrolysis using green chemistry, synthesis of self-assembling porphyrins, and kinetic studies of the crystallization of polylactide polymers. Two of the students attended Project SEED for the first time, while one student returned for her second summer of research.

To develop the students' understanding of the chemistry they were using, weekly meetings were held to discuss techniques and teach basic organic chemistry concepts. Students were required to maintain a laboratory notebook to emphasize good record-keeping and wrote a research paper discussing their results. The students also presented their research at the end of the summer in a poster session held in conjunction with the MSU Research Experience for Undergraduates (REU) program. In addition to activities within the department, students were given college and career counseling and participated in a field trip to Dow Chemical Company to observe the industrial laboratories there.

Students enjoyed the program immensely and remarked that this type of program is useful in deciding whether or not to follow a career in chemistry, as well as making them aware of different options available for persons with a chemistry degree. Two students will be returning for a second summer of research this year. More information on our program can be seen at our website:
<http://poohbah.cem.msu.edu/faculty/Borhan/ProjectSEED.html>.

Description
(Please limit
b) to one paragraph)

c) Which strategic thrust(s) does this activity support? (Please refer to the list of Strategic Thrusts)

1 2 3 4 5 6 7 8 9 10

This activity was new in 2003

Activity #4

a) Title: Younger Chemists Committee

The YCC has been active this year. Descriptions of two of the most notable activities follow:

A student faculty mixer was held the week before the semester began to allow new graduate students to meet other graduate students and faculty in a relaxed informal atmosphere. We had our own room in a local

bar and approximately 75 people showed up, this included most all of the new graduate students, both domestic and international, professors and current graduate students. The YCC provided appetizers and made all the arrangements and advertisement for the event.

We participated in the Chemistry Day at Impressions 5 Museum by doing two demonstrations. The first demonstration we did was "hot air balloon". By heating partially filled mylar balloons with a hair dryer we illustrated Archimedes' Principle: as the temperature of a gas sample increases, so does its volume. Initially the balloon does not rise, but upon heating it expanded noticeably and rose to the ceiling. Then after it had cooled (by holding it on a cold window), it again descended to the floor. Our other demo was a "CO₂ leaky faucet". Smokey CO₂ gas- from dry ice subliming under water- was passed through a faucet-like series of pipes, the mouth of which had a soap film across it. Children tried to catch the dense CO₂ bubbles that formed without breaking the bubble and were very impressed with the "smoke" that was inside of the bubble. Over 2200 parents and children attended the event.

Description
(Please limit
b) to one paragraph)

c) Which Strategic Thrust(s) does this activity support? (Please refer to the list of strategic thrusts.)

1 2 3 4 5 6 7 8 9 10

This activity was new in 2003

Activity #5

a) Title Chemistry Olympiad

The MSU Local Section has been a participant in the US National Chemistry Olympiad (USNCO) program for many years. In 2003, we hosted 35 students from East Lansing, Holt, Lansing Sexton, Okemos, Leslie, Perry, Fowlerville, and Stockbridge High Schools in the local section Chemistry Olympiad qualifying examination held in the MSU chemistry Building. The students took a multiple choice examination. Several MSU faculty members served as proctors for the written and laboratory examinations. Eight students qualified to write the USNCO test, which was held at Michigan State University.

Description
(Please limit
b) to one Paragraph)

c) Which Strategic Thrust(s) does this activity support? (Please refer to the list of Strategic Thrusts)

1 2 3 4 5 6 7 8 9 10

This activity was new in 2003

Activity #6

a) Title: Organic Chemistry Club

The Organic Chemists Club was established in 1995 and has received financial support from the MSU local section for the past four years. This group meets Wednesday evenings to discuss current and historic literature, consider various mechanistic, synthetic, and spectroscopic problems, etc. The club is organized by Professors Borhan and Maleczka. While MSU faculty, students, and post-docs are the club's primary participants, we have also had students from Central Michigan and other institutions attend meetings.

Description
(Please limit
b) to one Paragraph)

c) Which Strategic Thrust(s) does this Activity Support? (Please refer to the list of Strategic Thrusts).

1 2 3 4 5 6 7 8 9 10

This activity was new in 2003

Activity #7

a) Title: Awards to Outstanding Chemistry Students

The local section recognised the outstanding chemistry students in all levels of undergraduate chemistry with monetary awards and plaques:

ACS Awards for Outstanding Performance in Undergraduate Chemistry

Freshman Chemistry ? Matthew John Mathison
Freshman Honors Chemistry ? Kathryn C. Ambrose
Organic Chemistry ? Jeffrey R. Gour
Physical Chemistry ? Andrew C. Goetz
Analytical Chemistry - Kevin M. Doyle
Inorganic Chemistry ? Sara E. Mess

Description: ACS Robert Clark Kedzie Award for the
Please limit to Outstanding Chemistry Major - Stephen Marc Stout, BS
b) one paragraph and Zachary W. Behler, BA

c) Which strategic Thrust(s) does this activity support? (Please refer to the list of Strategic Thrusts).

1 2 3 4 5 6 7 8 9 10

This activity was new in 2003

Activity #8

a) Title:

Description:
Please limit to

b) one paragraph.

c) Which Strategic Thrust(s) does this activity support? (Please refer to the list of Strategic Thrusts).

1 2 3 4 5 6 7 8 9 10

This activity was new in 2003

Activity #9

a) Title:

Description:
Please Limit to

b) one paragraph

c) Which Strategic Thrust(s) does this activity support? (Please refer to the list of strategic thrusts)

1 2 3 4 5 6 7 8 9 10

This activity was new in 2003

Activity #10

a) Title:

Description:
Please limit to

b) one paragraph

c) Which Strategic Thrust(s) does this activity support? (Please refer to the list of Strategic Thrusts)

1 2 3 4 5 6 7 8 9 10

This Activity was new in 2003

B. Summary - Overall Section Activities

Please summarize in *1,000 words or less*, the activities of the section in 2003 which have not been already described. Outstanding events should be described in some detail and appropriate attachments included in Appendix 1. Programs described here may be featured in publications produced by the ACS Membership Division and/or at the Local Section Leadership Conferences.

C. Local Section and Chair Goals

2003 Goal Attainment. The Local Section Activities Committee strongly encourages local section planning. As a result, the 2003 local section annual report should follow-up on the attainment of goals. Please list the goals you set at the beginning of your term for your section and yourself, and report on the attainment of the

1. goals.

a) Local Section Goals and Assessment:

1. To enhance the professional development of our section members.
2. To encourage and inspire young students to pursue careers in the natural sciences, especially chemistry.
3. To provide a mechanism for informing/educating the general public on chemical issues.
4. To initiate a mentoring program to expand our outreach activities and support of minority students.
5. To organize our outreach activities at local schools to match the goals of Kids and Chemistry program.

Assessment:

Through programs like the Inorganic and Organic Chemistry Clubs, Younger Chemists Committee, and Women in Chemistry, we have provided valuable development services for our members. These organizations have provided information both on technical expertise and contact development.

Goals 2 and 3 above have been addressed through several different programs for the general public and young students in particular. For example, "Chemistry Day at Impression 5" brought ~2200 people to hear about the contributions of chemistry to society and to see chemical demonstrations.

For minority students, the MSU local section is in its second year of participation in the ACS SEED program, which is designed for disadvantaged students to come to MSU over the summer to do research in faculty laboratories. Hopefully, through this program more minority and disadvantaged students will gain the interest and confidence to begin careers in the sciences.

Although improvement in our outreach activities at local schools still needs improvement, we did have significant programs involving area schools. For example, several high schools participated in our Chemistry Day activities, members gave demonstrations at area schools, WiC participated at a local science fair, and we continued participation in Chemistry Olympiad.

b) 2003 Chair's Goals and Assessment:

1. Continue to provide financial support for the broad range of outstanding activities currently promoted by

the section.

2. Build on the continuing effort to involve the broader membership who are not on the MSU campus in local section activities.

3. Increase involvement of schools and the local section membership with National Chemistry Week and other activities which inform/educate the general public on chemistry-related issues.

Assessment:

In the past year, we aided ten students financially in attending a National ACS Meeting. In addition, we supported the WiC, Inorganic Chemistry Club, Organic Chemistry Club, and Younger Chemists Committee in their activities.

We continued to have contact with people outside of the Michigan State campus regarding activities through the newsletter. Several of our activities were attended by members off the MSU campus.

National Chemistry Week activities were very well attended this year with ~2200 people coming to "Chemistry Day at Impression 5" and 120 students doing demonstrations. Many of the demonstrators were from area high schools.

For K-12 teachers, we continued to sponsor the ACS/MSU High School Teachers Group, which provides an opportunity for area educators to receive information on demonstrations to enhance presentations, share teaching ideas, and utilize MSU/ACS resources on chemistry.

2004 Goals. (This section should be completed by the 2004 local section chair.) Please list below at least 2. three goals that you and your local section plan to accomplish during your term as local section chair.

a) 2004 Local Section Goals (Include at least three goals):

1. To enhance the professional development of our section members.
2. To encourage and inspire young students to pursue careers in the natural sciences, especially chemistry.
3. To provide a mechanism for informing/educating the general public on chemical issues.
4. To initiate a mentoring program to expand our outreach activities and support of minority students.
5. To increase the amount of career counseling available through the local section.

b) 2004 Chair's Goals:

1. Continue to provide financial support for the broad range of outstanding activities currently promoted by the section.
2. Increase involvement of schools and the local section membership with National Chemistry Week and other activities which inform/educate the general public on chemistry-related issues.
3. Encourage increased activity by K-12 teachers by making them affiliate members of the local section.
4. Collaborate with other local sections.
5. Involve members of other professional societies such as AIChE.

D. Suggestions/Concerns

List any suggestions you have for the Local Section Activities Committee (LSAC). How can LSAC specifically

help your section?

Listing of Strategic Thrusts

Please refer to the numbers below when identifying activities as they relate to the ACS Strategic Thrusts

- 1 Be the world's leading provider and deliverer of chemical information.
- 2 Provide programs and activities to facilitate the career development of chemical professionals
- 3 Provide programs to improve the scientific literacy of students and ensure quality education in the chemical sciences.
- 4 Increase participation of students and young chemists in the activities of the society.
Provide programs and activities to encourage participation and leadership in all aspects of the chemical sciences by women (W), underrepresented minorities (M), and persons with disabilities (D).
- 5
- 6 Expand services to members and prospective members working in industry.
- 7 Expand activities at the interdisciplinary boundaries of chemistry.
- 8 Encourage funding of research in science, technology, and engineering .
- 9 Encourage activities and programs applying scientific principles to environmental issues.
Provide programs and activities to improve the public's recognition and appreciation of the contributions of chemistry.
- 10

For more information on the strategic thrusts or the ACS Strategic Plan 2001-2003 please visit www.chemistry.org.