

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

Organization: Michigan State University

Year: 2002

A. Activities

Please describe and rank up to ten of your section's activities during 2002. 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 16th annual "Chemistry Day" hands-on activity/demonstration event held from 11 am - 3:30 pm on Saturday, October 19, 2002 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 2,259.

Though the event was open to the public, Girl Scout and Boy Scout troops were specifically invited to attend by publicizing the event through the local councils. Any scout attending received a specially designed Participation Patch illustrating the theme "Chemistry Keeps Us Clean!" This is the third year we've designed and distributed a patch to the scouts. The total scout attendance was 712, including 326 Boy Scouts and 386 Girl Scouts. Activities were provided so that Boy Scouts could earn their Chemistry Merit Badge (130 Boy Scouts participated in this and 86 completed the requirements at the event). Fifteen Michigan State University faculty and graduate students were available to discuss the activities with the scouts and to check their understanding as they progressed through the requirements. In addition, 196 Cub Scouts and Webelos completed the requirements for their Science Belt Loop, Science Academic Pin and/or Science Activity Pin.

Twenty-six table of hands-on activities, many consistent with the theme, were presented by 40 students from the Departments of Chemistry, Chemical Engineering, Environmental Engineering, and Food Science; by 15 employees of MBI International and an employee of the Board of Water and Light; as well as by 45 students from Perry High School and Lakeside Christian School.

Moles, mugs, and element pins were raffled off each hour. Each participant received a NCW activity newspaper, a "Hooray for Chemistry" bag, and an NCW helium balloon. Hundreds of nanomoles and chemistry tattoos were also given away.

A report on National Chemistry Week events was in the December 16, 2002 issue of Chemical & Engineering News. Pictures of our local "Chemistry Day" event taken by Dr. Tom Atkinson appeared in the article: <http://pubs.acs.org/cen/acsnews/8050/8050acsnews.html>.

Additional pictures can be viewed at the local section website:

b) one paragraph): http://www.cem.msu.edu/~msuacs/ncw2002_after.html

c) Which Strategic Thrust 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 2002

Activity #2

a) Title **Women in Chemistry**

The year 2002 was the sixth successful year of the Women in Chemistry group here at MSU. Its mission to provide a venue for women chemists to meet, interact and to facilitate both their professional and personal growth was the backbone of all its activities. We also participated in several outreach activities throughout the year. For instance, we presented experiments to determine the hardness of water at the Girls Math Science Conference in February. March saw us volunteering at Science day at Steele Elementary. WIC members participated in many of the hands on experiments that went on all day. We also had our annual barbecue/ potluck event in April, at which members relaxed and socialized after a hectic academic year.

Fall semester began with our annual departmental ice-cream social kick-off meeting in September, where we welcomed new members and increased awareness about the organization and its activities. Some of our members participated in a network building workshop organized by the Pfizer Women's Network later in the semester. We also participated in Chemistry Day at Impression 5 Science Center during National Chemistry Week. In keeping with this years theme "Clean Chemistry", experiments highlighting alternative energy sources were presented. The potential for use of Hydrogen gas as a fuel was demonstrated with an exploding egg experiment and with electrolysis experiments that included an up and running fuel cell car.

Among all the other excitement, the year saw the most "Meet the Speaker" events in the history of ACSWiC. We met with sixteen women scientists who were scheduled to give seminars in the chemistry department as part of our "Meet the Speaker" program. A wide variety of topics were discussed including mentoring, balancing career and family, past and present statistics of women in science etc.

Description

(Please limit

b) to one paragraph)

For more information, visit our website at:

<http://www.cem.msu.edu/~acswic>

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 2002

Activity #3

a) Title **Project SEED**

Project SEED was started by the American Chemical Society in 1968 to provide a summer research experience in chemistry or a related field to economically disadvantaged high school students. Students are placed in academic, industrial, and government laboratories for eight to ten weeks during the summer to participate in hands-on research. This past summer, Michigan State University's Department of Chemistry joined the many other entities that have

hosted Project SEED students. Professor Babak Borhan, assisted by graduate student Courtney Olmsted, undertook the challenge of recruiting and mentoring students. Fliers and brochures were sent out to local high school science teachers with significant populations of economically disadvantaged students since the ACS requires the family income of each participating student to be no more than 200% of the Federal Poverty Guidelines for his/her family size. Teachers with interested students responded and were sent an application designed by the MSU team. Each application required a resume, a statement of interest, and a letter of recommendation from a science teacher. This encouraged the students to highlight their talents as well as taught them important business skills for requesting recommendation letters and submitting applications.

Dr. Borhan enlisted the help of Professors Robert E. Maleczka, James E. Jackson, and Greg Baker to host Project SEED students. Each professor was responsible for designing a research experiment suitable for a short-term project. The four projects from the past summer included crystallization of biodegradable polylactate and polymethylmethacrylate polymers, synthesis of novel porphyrins for spectroscopic studies, development of environmentally benign dehalogenation reactions, and application of the dihydrogen binding motif for synthesis and hydrogen storage.

Two students from Everett High School and two students from Okemos High School were chosen to participate in this pilot program (three females, one male; two African-American, two Caucasian). Each student received \$1750 for the eight-week session. Funding was generously provided by the MSU Office of the Provost, the College of Natural Science, and the American Chemical Society. All of the students were very excited about the opportunity to participate in this program which began with a meeting to introduce them to each other and to their respective professors. Meetings were held each week to allow the students to present their research as well as ask questions about various scientific issues, including working with graduate students and using laboratory equipment. At each meeting, Professor Borhan and Ms. Olmsted covered different topics in organic chemistry to help the students better understand their research and how it related to larger projects or industrial research. Project SEED students were responsible for maintaining a lab notebook and following appropriate laboratory safety procedures, as well as understanding their project and the chemistry it involved. Each student had taken at least one chemistry class, but high school students generally have very little knowledge of organic chemistry, so it became the responsibility of the professors and their research assistants to ensure that the students had the necessary skills and knowledge to undertake their individual research projects.

At the end of the summer, all of the Project SEED students were required to present their research in the form of a poster session held in conjunction with the Research Experience for Undergraduates (REU) poster session in the recently opened Biophysical Sciences building here at MSU. Each student was required to display their research in a way that would be easy to understand for visitors observing the posters. The students stood next to their posters and fielded questions on their research from faculty and graduate students from various departments. The students were encouraged by the fact that they were able to describe their research

and discuss it with people they had formerly considered authority figures instead of scientific peers. The students were also required to write up a formal paper of their research accomplishments from the summer. This helped develop their scientific writing skills and ensured they understood the research they had performed.

Project SEED mentors are also encouraged to support their students with college and career counseling. In addition to discussions of the wide variety of jobs available to people with degrees in science, the Project SEED students attended a tour of Dow Chemical in Midland, Michigan. This tour allowed them to experience a large-scale industrial setting compared to their small-scale research laboratory, and also showed them the many different areas people with a chemistry degree may work. They spoke with a Dow recruiter and were able to ask questions about interviewing, salaries, and differences in bachelor, masters, and Ph.D. degrees. The Project SEED students also toured the MSU Cyclotron Facility, giving them the opportunity to witness another field of chemistry and see the different types of equipment that can be used for experiments.

All four of the student participants from last summer enjoyed their Project SEED experience. All four are now planning on attending college, and will qualify for a scholarship sponsored by the ACS for students who have participated in Project SEED. All of the students expressed interest in pursuing further studies in science, and one student who was interested in journalism is now looking into the possibility of combining her love of science and writing for a career in scientific reporting. Plans are in progress to expand this program in the summer of 2003 to include other areas of the Chemistry Department and to increase the number of student participants. An attempt is being made to target more local high schools and develop a network of teachers to promote this program to the students they feel would benefit most from this experience.

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 2002

Activity #4

a) Title: Attila Pavlath Visit to Local Section

The MSU Local Section hosted a public lecture by Dr. Attila Pavlath, Immediate Past President of the American Chemical Society and emeritus lead scientist at the Western Region Research Center of the USDA on Thursday, May 23, 2002. Dr. Pavlath presented the topic "Edible Coatings on Food, or How to Keep Fruits and Vegetables Fresh after Light Processing." Over 100 members of the MSU local section and campus communities attended the lecture. While here, Dr. Pavlath met with the Younger Chemists Committee and with the Women in Chemistry group (local section WCC).

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 2002

Activity #5

a) Title Salutes to Excellence

Before his lecture, Dr. Pavlath presented Salutes to Excellence Awards to three organizations in recognition of their support of the MSU Local Section's 2001 National Chemistry Week activities. The awards were presented to MBI International for a donation that allowed Impression 5 to host Chemistry Day without an admission charge; to the Michigan Capitol Girl Scout Council (MCGSC) for facilitating the participation of over 400 girl scouts in Chemistry Day; and to Impression 5 Science Center for serving as the host site for Chemistry Day and for coordinating public relations and fund raising activities. Accepting the awards were Dr. Mark Stowers, President MBI International, Ms. Pamela Sievers, Executive Director of MCGSC, and Ms. Ellen Sprouls, Director Impression 5 Science Center. A reception for Dr. Pavlath and the award winners followed the meeting. Pictures can be seen at: http://www.cem.msu.edu/~msuacs/pavlath_after.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 2002

Activity #6

a) Title: Younger Chemists Committee

The Younger Chemists Committee met with Dr. Atilla Pavlath former president of the ACS to discuss grass roots efforts of increasing our membership. The discussion was well attended and fruitful. Additionally, we sponsored the annual "unofficial" bar night at Trippers, welcoming new graduate students in an informal setting. There was a large turn out of both domestic as well as international students and of course the all-important faculty- to provide beverages to supplement the food bought by YCC. Conversation was abundant and all enjoyed the evening. Furthermore, we had a panel discussion with faculty representatives from a small university, Butler, and a large university, MSU, to discuss teaching experiences at both types of schools. For next year the YCC plans to have a similar panel discussion for undergraduates deciding upon graduate school or working after finishing their degree. We are also going to sponsor a poster session before the ACS National meeting in New Orleans, Louisiana so students can have input and practice before presenting.

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 2002

Activity #7

a) Title: ACS/MSU High School Teachers Group

We continued our sponsorship of this important outreach activity which serves to bring local area high school teachers to MSU to share teaching ideas, learn about demonstrations to enhance presentations,

Description:

Please limit to one paragraph and to utilize resources available through MSU and the MSU local section.

c) What 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 2002

Activity #8

a) Title: MSU Student Awards Reception

The following students were recognized for their outstanding performance in undergraduate chemistry. Awards were presented to the students at their colleges. A reception was held in the Department of Chemistry during April, 2002 for the award winning MSU students.

2001-2002 Outstanding Graduating Students in Chemistry:

? Kevin Clawson Albion College
? Cynthia Nall Jackson Community College
? Doug Ebaugh Lansing Community College
? Robin Stein & Zachary Lemon Michigan State University

? Ben Kopek Spring Arbor College

2001-2002 ACS Awards for Outstanding Performance in Undergraduate Chemistry at Michigan State University:

? Rosemary Kanasty Freshman Chemistry
? Jeffrey Gour Freshman Honors Chemistry
? Andrew Goetz Organic Chemistry
? Tessa Fojut Physical Chemistry
? Elizabeth Croal Analytical Chemistry
? Steven Guillaudeu Advanced Chemistry

Description:
Please limit 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 2002

Activity #9

a) Title: Chemistry Olympiad

The MSU Local Section has been a participant in the USNCO program for many years. In 2002 we hosted 40 students from Charlotte, St. Johns, Hastings, Holt, Okemos, Perry, Dansville, and Leslie High Schools in the local section qualifying exam held at the MSU chemistry building. The students took a multiple choice exam and the top finishers subsequently worked two practical lab problems. Eight students qualified to write the USNCO test which was held at MSU.

Description:
Please Limit 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 2002

Activity #10

a) Title: Organic Chemistry Club

The organic chemsits club was established in 1995 and has received financial support from the MSU local section for the past three 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, post-docs, and students are the primary participants, we have also had students from Central Michigan and other institutions attend meetings.

Description:
Please limit to
b) one paragraph

Please indicate which Strategic Thrust(s) is supported by this activity. (Please refer to the list of Strategic Thrusts)

c) Thrusts)

1 2 3 4 5 6 7 8 9 10

This Activity was new in 2002

B. Summary - Overall Section Activities

Please summarize in *1,000 words or less*, the activities of the section in 2002 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.

This summary will be especially useful to the Local Section Activities Committee in assessing the overall program and selecting sections for the ACS Award for Outstanding Performance by Local Sections, to be presented at the ChemLuminary Awards program at the Fall National ACS Meeting.

C. Local Section and Chair Goals

2002 Goal Attainment. The Local Section Activities Committee strongly encourages local section planning. As a result, the 2002 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:**

b) **2002 Chair's Goals and Assessment:**

2003 Goals. (This section should be completed by the 2003 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) 2003 Local Section Goals (Include at least three goals):

b) 2003 Chair's Goals:

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.