

## **Chemistry Outlook**

An Activity of
The Committee on Chemistry in the Two-Year Colleges
Division of Chemical Education
American Chemical Society



Frank Koch, 2001 Chair

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#### otes From The Chair

Frank Koch
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As I write this article, it is only two weeks until the next  $2YC_3$  meeting in San Diego, hopefully many of you will be able to attend. The agenda includes many interesting topics that may be used in teaching chemistry for the remainder of this school year.

The COCTYC committee will be having a retreat on the Thursday before the  $2YC_3$  meeting. Our agenda is centered on how the COCTYC members can better serve the organization, improve communications, and utilize the Regional Advisory Board members. The results of the retreat will be summarized in our next newsletter.

The theme for the 2001 National Chemistry Week (November 4 — 1) is Chemistry in Art and everyone is encouraged to organize some type of chemistry event for the public. Last year the theme was Kitchen Chemistry which proved to be an interesting and exciting event for the public and the students at Bismarck State College. Below is a summary of some of the hands-on events Bismarck State College hosted at a local shopping mall last year.

Starting with this issue, I would like to start a new section in the Chemistry Outlook. The title for this section will be It Worked for Me. Chemistry teachers are invited to share a new or different teaching concept (approach) that could be included in future issues of the Chemistry Outlook.



#### onference Calender

#### 2001-2002 Academic Year

156<sup>th</sup> Conference (Midwestern) www.ar.cc.mn.us/2yc3 September 14-15, 2001Anoka-Ramsey Community

College

11200 Mississippi Blvd., NW Coon Rapids, MN 55433

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157th Conference (Western) www.ccsn.nevada.edu/2yc3

**November 2-3**, **2001** Community College of Southern

Nevada, West Charleston Campus 6375 West Charleston Blvd.

Las Vegas, NV 89102-1124

Contact Kaveh Zarrabi

Email: <u>zarrabi@nevada.edu</u>

158th Conference (Southern)

April 5-6, 2002 National ACS meeting, Orlando,

FL

2YC<sub>3</sub> meeting site pending

159th Conference (Western) http://atom.chem.wwu.edu/

acs/bcce2002.html

July 30-August 3, 200217th Biennial Conference

Western Washington University

Bellingham, WA

Program Chair: Clarita Bhat

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#### It Worked for Me

The analysis of water is an activity that has been used at Bismarck State College to enhance appreciation of Chemistry. This concept has been used at all levels of Freshmen Chemistry. Some of the experienced chemistry students supervised the analysis of water by the public (elementary students to senior citizens) in

a local mall during National Chemistry Week.

The water parameters that were tested were: chlorine, chloride, conductivity, Total Dissolved Solids, Total Harness, pH, sulfate, Total Alkalinity, nitrate, phosphate, fluoride, iron, and sodium. All of these tests are relatively easy to do. Some of the procedures involved the use of color wheels (colorimetric), pocket meters, dropwise titrations, and ion selective electrode(sodium).

The participants brought their own water samples for analysis. Participants rotated from station to station to do the analysis. Each station consisted of the procedure, the reagents, and a water quality chart indicating the significance of the concentration of the analyte (high, low, average). A college chemistry student monitored each station to make sure the procedure was followed correctly. The water quality chart, made from regulatory values issued by the EPA and the ND State Health Department, allows the participants to compare their values to accepted values and relates to possible health effects of elevated concentrations of the ions. After the participants analyzed their samples some of their water was passed through a water softener, Brita filter, reverse osmosis or any other water treatment gimmicks advertised. The treated water was analyzed and the results compared to the original water quality. This comparison allowed the participant to see what really changed when these water treatment devices were used.

For college students these procedures illustrate a variety of theories such as: acid-base chemistry, complex ion formation, stoichiometry, electrochemistry, colorimetry, sampling techniques, relative solubility, electrolytes and conductivity. These activities also gave them an opportunity to explain chemical concepts to others. The results of the activity created excitement and self esteem for the students.

Please share a new or different teaching concept for our next newsletter by emailing your thoughts to our newsletter editor!

#### 2001 COCTYC AND SUPPORT STAFF

Division of Chemical Education, Inc American Chemical Society 2001 Roster of Committee Members

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#### 2YC3 World Wide Web Page

URL: <a href="http://2yc3.vinu.edu/">http://2yc3.vinu.edu/</a> Jay Bardole, WebMaster

#### 2YC<sub>3</sub>/Division of Chemical Education Joint Membership Form

dues for 2YC <sub>3</sub> an Education, you c Renew my 2YC <sub>3</sub>	I offer for 2YC <sub>3</sub> members who and the Division of Chemical Education join the Division and renew you membership I wish to join Dian Affiliate (non ACS Members)*  *affiliates	ion are \$15.00 each. If you are now $_3$ for only \$	ot now a member of the E \$25.00, a savings of \$5.0 CS Members only)	Division of Chemical 0.
Your Name:				
Home Address:				
	Street	City, State	Zip Code	
Work Address:				
	Street	City, State	Zip Code	
College Phone:		Email:		
Send ACS Memb	sletter and CHED Newsletter to Ho per Form Yes No			
	ip Information: Are you a Two-Year College Teacher?	Four-Year College Te	eacher?	
	High School Teacher?	Other		

Please send your check, payable to 2YC<sub>3</sub>, for \$15 (2YC<sub>3</sub> only) or \$25 (joint membership) to: Dolores C. Aquino, San Jacinto College Central, 8060 Spencer Highway, Pasadena, TX 77501-2007



### onference Program

#### 156th 2YC<sub>3</sub> Conference Anoka-Ramsey Community College, Coon Rapids, MN September 14-15, 2001

#### **Discovery and Inquiry in Chemistry Education** http://www.ar.cc.mn.us/2yc3

Come visit the great state of Minnesota for the 156th Conference of the 2YC<sub>3</sub>. September is a beautiful time of year in Minnesota. The weather is comfortable and the conference theme is hot. Participate with your colleagues from around the country to discuss discovery and inquiry in chemistry education and other related topics. Speakers and topics listed as tentative are subject to change. Limited space and time for proposals are still available. Proposals may be submitted to the Program Chair. The program will be updated on the website as proposals are accepted.

#### Friday Santambar 14 2001

Friday, September 14, 2001 8:00-4:00 Registration and Exhibits			
8:45-9:30	COCTYC Business Meeting		
9:15-9:30	Welcome and Opening Remarks Patrick Johns, President, Anoka-Ramsey Community College		
9:30-10:30	Keynote Address  Bridging the Great Divide: Student and Faculty Cooperative Learning Facilitated by Technology Paul Jackson, St. Olaf University, Northfield, MN		
10:30-11:00	Refreshment Break - Exhibits Area		
11:00-11:45	Concurrent Sessions  A. Cooperative Learning in Chemistry Gordy Savela, Itasca Community College, Grand Rapids, MN  B. Teaching Introductory Chemistry Online Using WebCT Kirk Boraas, Minneapolis Community and Technical College, Minneapolis, MN  C. A New Twist for Guided Inquiry and Discovery Labs: Industrial Scenarios John Kenkel, Southeast Community College, Lincoln, NE		
11:45-1:00	Lunch and Exhibits		
1:00-1:45	Concurrent Sessions or Speaker Undetermined (Proposals Invited)		
1:45-2:00	Refreshment Break - Exhibits Area		
2:00-5:00	Concurrent Session: Block Sessions  A. Starting a Biomedical Program    Kathie Whelchel, ARCC    Tour: Biomedical Device Company (tentative)    Medtronic		

B. Curricular Change/Inquiry Based Labs (tentative)

C. *Undetermined* (Proposals Invited)

#### 5:30-6:30 **Social Mixer**

#### 6:30-8:30 **Dinner Banquet and Address**

Innovation: The Key to the Future

Art Fry, Retired Corporate Scientist, 3M and Inventor of the Post-It® Note

#### Saturday, September 15, 2001

8:30-12:30	Registration and Exhibits
8:30-9:00	Continental Breakfast - Exhibit Area
9:00-9:15	Opening Remarks Kelly Befus, Dean of Educational Services, ARCC
9:15-10:15	Opening Speaker Inquiry Labs for the New ACS General Chemistry Curriculum Melanie Cooper, Clemson University, Clemson, SC
10:15-10:30	Refreshments - Exhibits area
10:30-12:00	Concurrent Session A  Peer-Led Team Learning  Victor Strozak, CUNY, New York, NY  Dennis Bartow, Prince George's Community College, Largo, MD
10:30-11:15	Concurrent Session B1  Roundtable or Speaker (Proposals Invited)
11:15-12:15	Concurrent Session B2  Learning Chemistry is not a Spectator Sport  Steven Zumdahl and Susan Arena Zumdahl, University of Illinois Urbana-Champaign
12:15-1:15	Lunch
1:15-3:15	Grand Finale  Amazing Chemical Demonstrations  Don Showalter, University of Wisconsin-Stevens Point and World of Chemistry video series demonstrator Marvin Lang, University of Wisconsin-Stevens Point
3:15-3:45	Closing Remarks Frank Koch, 2YC <sub>3</sub> Chair, Bismark State College, Bismark, ND

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**Exhibits Coordinator** Tina M. Wade North Hennepin Community College 7411 85th Avenue North Brooklyn Park, MN 55445 Email: <a href="mailto:twade@nh.cc.mn.us">twade@nh.cc.mn.us</a> Phone: 763.424.0872

**Special Assignments** Susan Reid Anoka-Ramsey Community College 11200 Mississippi Blvd NW Coon Rapids, MN 55433-3470 Email: <a href="mailto:sreid@an.cc.mn.us">sreid@an.cc.mn.us</a> Phone: 763.422.3480

Conference registration materials will be posted to the conference website at <a href="http://www.ar.cc.mn.us/2yc3">http://www.ar.cc.mn.us/2yc3</a> by July 15, 2001 for those who would like to make their plans early.

#### LODGING (when calling, mention 2YC, Chemistry Conference)

Country Hospitality Suites –reserve by phone

155 Coon Rapids Blvd 2 queen beds or \$72.95 + tax

Coon Rapids, Minnesota 554331 queen + pullout sofa

Toll free: 1-800-456-4000 <a href="http://www.countryinns.com">http://www.countryinns.com</a> **Fairfield Inn** – reserve by phone

8965 Springbrook Drive 2 queen beds or \$69.95 + tax

Coon Rapids, MN 55433 1 king bed

1-763-785-8922

http://www.fairfieldinn.com

**Holiday Inn Express** – reserve by phone

9222 Springbrook Drive 2 queen beds \$71.00 + tax

Coon Rapids, MN 55433 Toll Free: 1-800-465-4329 http://www.holiday-inn.com

The hotels listed above will hold rooms until August 23, 2001. Other lodging nearby the college will be posted to the conference website at http://www.ar.cc.mn.us/2yc3 by July 15, 2001.

Make Plans to Attend the.....

## 159 th 2YC<sub>3</sub> Western Conference, 17th Biennial Conference on Chemical Education, Western Washington University, Bellingham, WA

Program Chair: Clarita Bhat, email: ccbhat@msn.com Website: http://atom.chem.wwu.edu/acs/bcce2002.html

Dr. Busch was scheduled to be the banquet speaker at the Vincennes meeting. Unfortunately he was unable to attend the meeting due to inclement weather conditions. Below is a copy of the speech he had prepared.

Prepared for the 154th 2YC3 Conference (Central Region) 2YC<sub>3</sub> = Two Year College Chemistry Consortium Vincennes University, Vincennes, IN, Nov. 10, 2000, by Daryle H. Busch, President, American Chemical Society

Mr. Bardole and members of 2YC<sub>3</sub>,

It is a disappointment to not spend a little time with all of you. I have attended a meeting of this group once; I think it was the Central Region . This was many years ago, probably in 1970. When Bob Conley, Harry Shull and I saw the first edition of our general chemistry book published, 2YC<sub>3</sub> invited me to come and talk about our book. Now that book was a product of passion. We authors firmly believed, and I still believe, that chemistry should be taught so that the learner can understand the field in the same way its practitioners understand it. Possibly our pedagogy wasn t quite up to our ideal.

Now, it is my understanding that 2YC<sub>3</sub> liaisons with, or is directed by, the Committee on Chemistry in the Two-Year Colleges of the Division of Chemical Education of the American Chemical Society. So it would seen that we have a long history of working together.

I also understand that this organization, 2YC<sub>3</sub> The Two-Year College Chemistry Consortium is a well organized, active organization with much value to the community it serves and the broader community and that it has a long record of accomplishment. 2YC<sub>3</sub> and who and what it represents are vital and critical parts of the science-education institution of the nation and I prepared my remarks with these facts in mind.

This time I want to tell you about our American Chemical Society.

THE AMERICAN CHEMICAL SOCIETY. The ACS is the largest scientific society in the world with over 160,000 chemists and chemical engineers as members. You know our society publishes journals and magazines the number is, I think, 34 and growing. ACS is organized into 188 local sections, one just about anyplace in the country where there is a cluster of members and two local sections in foreign countries. Its technical activities are collected in 36 Divisions, involving the usual chemical subjects like Organic, Inorganic, physical, and analytical, but also computers in chemistry, small businesses, industrial and engineering chemistry, chemistry and the law, and other subjects that not everyone would think of.

From your affiliation, I suppose the Chemical Education Division affects this group the most.

Governance and many of the other activities are conducted through a large number of committees and task forces, and all activities that involve members are correlated with staff. And you are connected to the Division of Chemical Education through the Committee on Chemistry in the Two-Year Colleges. I think you may also be very interested in the work of the Committee on Professional Training.

In all, the American Chemical Society employs something like 1800 people, 2/3 of them in Columbus, Ohio, where Chemical Abstracts and publications are concentrated. The remaining 600 or so are mostly at ACS headquarters in Washington, D.C. Since we have a lot of employees, we are a sizeable business the annual revenue stream is about \$300,000,000. In fact the total dollar value of the ACS, not counting the sales value of CAS and the journals, is about a billion dollars. Part of that is the endowment called the Petroleum Research Fund which is our own research foundation. Other parts are our large reserves and an insurance fund.

THE ACS IS BIG. I make a big point of our size. Why is big good? Three reasons:

- (1)to the government and to other agencies, like federal funding agencies and societies like those for math, physics and biology, this is recognized as the basis for power in the case of government voter power .
  - (2) Size is accompanied by resources and this enables many of the valuable activities and services that the ACS provides.
- (3) Finally, the large membership means a large number of people give their vote of confidence to their Society when they pay their dues.

THE ACS COMMUNITIES. To me, the most important thing the American Chemical Society does is create the professional community within which I live. Though its many meetings and volunteer works, chemists get to know each other mainly in subcommunities created by our local sections and by the divisions that represent our special interests. Because of the involvement in these events of chemists from all over the world, the community is genuinely international.

How about 2YC<sub>2</sub>, doesn t it create a greater community for its constituency?

Other general activities that are especially important to me professionally are our publications, which are the finest chemistry publications in the world, the many services that are provided to members, for example insurance programs, and placement services, initiatives that promote policies we favor in areas like education, freedom of information, intellectual properties, and the research capability of the nation, and matters relating to such subjects as problems in the workplace, the public image of chemistry, and the health of those industries and other institutions that employ chemical scientists and engineers.

PROBLEMS IN THE WORKPLACE. I want to say more about problems in the workplace. Earlier this year I passed on to the readers of Chem. & Eng. News the observations made by the Committee of Professional Training about abusive hiring practices in our colleges and universities. The practices of excessive use of part-time personnel, that and other ways to evade tenure track appointments, strong deviations from recommended teaching loads and related practices that regularly relegate conspicuously large fractions of the faculty to an employment tier below professional expectations. We need to know more about these abuses in the work place.

A sequence of events earlier this year has focused attention on the failure of long standing efforts to provide equitable employment of women in the chemical workforce. Particularly distressing areas are

- (1) the shockingly low percentage of tenured women on the faculties of the top research universities, and
- (2) the shrinking representation of women as you look higher up the ladder of responsibility and compensation.

With regard to the first there are no more women chemists in most research universities today than there were when I was a student 50 years ago! Turning to the second, relatively few women hold the highest paying jobs in all categories of organizations that hire chemical scientists and engineers. The Society has responded strongly to this realization. A Presidential/Board task force has been established to look with great care at the matter of women in the chemical workforce and bring recommendations, hopefully bold and new recommendations, that will assure insidious progress toward equity in the employment of women as professional chemists. I held the kick off session for this group in late October at the Midwest Regional Meeting.

Through the efforts of outstanding committee members and staff, the American Chemical Society has a high quality program to enhance participation in the chemical profession by under-represented minorities. As one views the demographics of the future and the predicted needs for chemical scientists and engineers, it is clear that the profession must bring all groups into the workplace and that the numbers of chemists who are minorities just has to increase. It is particularly difficult to create a professional interest in a community that has not previously participated substantially in a field. Issues include role models, mentoring patterns, and even the question of realization of what the field of chemistry has to offer. I am very proud of two major successes of the ACS in the area.

First of all, heroic efforts have produced strong working relationships between the minority affairs groups of the ACS and three major minority advocacy groups, those for chemists and engineers of Black, Native American, and Hispanic heritage.

The second subject is the ACS Scholars program operated for the minority students; the program began in 1996. It has been both remarkably productive and successful. Over 800 students have studied chemistry while supported as ACS Scholars and the retention rate for the scholars has been more than 80%, and has graduated 267 chemists, chemical engineers, biochemists and materials scientists.

GOVERNMENT ACTION. Remember I said that one reason why the fact that the ACS is big is important is that size represents voter power to the government. Let me quickly tell you what we are doing there and then focus briefly on legislative actions relating to science education.

For years, empathetic members of congress have urged scientists to become proactive in behalf of science and its needs. They tell us that we have to constantly tell the government what is needed to keep U.S. science at the top. The American Chemical Society is doing its best to help this happen. Through its officers and its Office of Governmental and Legislative Affairs, or Olga for short, the ACS is proactive in promoting matters critical to the profession and its members. OLGA has focused on 5 priority areas:

National Competitiveness of industries that employ chemists, Education in all of its aspects Matters relating to the Environment, Funding and support of Research, and the Professional Workforce.

ACS officers, Board and governance members, and ACS staff have held many meetings with their senators and representatives. And these same folk have testified in behalf of various funding issues before appropriations committees of the congress.

We believe these actions have helped, but the biggest effects probably come from the ACS activity in which many of you are the key participants THE LEGISLA TIVE ACTION NETWORK. Toward the end of last year, ACS put on-line a web page (at Http://www.legislators.com/chemical/) that describes the issues of the moment and through which its members can immediately send e-mail to their senators and representatives. Typing in your zip code immediately brings up the names of your legislators and a prepackaged e-mail message. The suggested message is readily changed or replaced.

During the first 6 months e-mail and other notices brought in something like 1200 participants from among ACS members. At every opportunity I have spoken about the Legislative Action Network and, finally, I wrote a snail-mail letter to all of you asking you to participate and you, the members, responded some 6500 of you have done so. You (we) have sent more than 10,000 messages to our Senators and Representatives on critical issues, mostly in the last few months.

If you don't already belong to the legislative action network, I urge you, to join. PLEASE PARTICIPATE. We may not be able to change the whole world in short order, but we can affect governmental decisions that affect us and our profession.

PROMOTION OF R&D FUNDING. This year, along with other Professional Societies, we have worked very hard on federal funding of R&D and the results have been very satisfying. For background, the fraction of the Federal budget dedicated to non-military research has declined by two-thirds from its peak in 1965, reaching an all-time low in 1997. The funding of the NSF is my example of how we can affect change; that has been a major target for the ACS this year. In addition to congressional visits and testimonies, we solicited support from executives of the chemical industry and they have written to congress urging R&D support. We also used the 50th anniversary of NSF to publicize its impact on Science and the society at large.

The results are exhilarating: we made a major breakthrough for NSF funding it had been continuing on a downward path with increases of only 5 or 6 %/year this time the National Science Foundation will receive a 14% increase.

The Nation seriously needs a new covenant between the federal government and the research community in order to get on course again. And I believe that, with the participation of increasingly large numbers of our members in our Legislative Action Network, we can get there!!

PROMOTION OF EDUCATION FUNDING. If you support increased federal funding for K-12 math and science education this was a very good year despite the partisan bickering and gridlock in Washington. Early this year, Congress attempted to renew the expiring Elementary and Secondary Education Act, commonly referred to as ESEA, the major federal law guiding K-12 education. While progress was made in the House, election-year politics prevented action in the Senate. The chief barrier was not funding but philosophy. To de-emphasize the federal role in education (and thus increase flexibility for states), Republican leaders proposed a major consolidation of education programs, and this was unacceptable to most Democrats.

While not entering the partisan fray, ACS cautioned against broadly reallocating funding away from such nationally important programs as those designed to improve the quality of math and science teachers and teaching. In particular, we asked Congress to support the Eisenhower Professional Development program, which is a key program for K-12 science teachers, and we asked them to reaffirm the program's long-standing focus on math and science. Although we helped build Senate support for this position, in the end action on ESEA was postponed until next year.

Congressman Vernon Ehlers has also proposed separate legislation that would improve and enhance K-12 science and math education programs at both the NSF and the Department of Education. The legislation mainly supported improvements in science teacher quality and retention, through mentoring, support for the use of technology and hands-on materials, and long-term, content-based professional development. ACS issued detailed recommendations on the measure and won substantial changes to the bill by meeting with Rep. Ehlers, presenting congressional testimony, and activating our growing grassroots Legislative Action Network. Although the House Science Committee approved the legislation, the Education Committee was slow to act. When Rep. Ehlers finally convinced the Education Committee to allow the legislation to move to the floor in the closing days of the session, Democrats prevented passage of the bill by objecting to a provision that would allow direct NSF support for teachers in private schools. While election-year politics prevented passage this year, we expect early action on this legislation next year.

The most important advance this year was a 20% increase in the annual funding bill for the Department of Education. Although this bill is one of the few remaining spending bills that Congress must complete later this month in its lame-duck session, reports indicate that funding for the Eisenhower program are set to increase dramatically from \$335 million last year to \$585

million this year. Congress is also expected to retain the provision that mandates that the first \$250 million of this funding be designated for the professional development of math and science teachers. This means that science and math teachers will have a guarantee of \$250 million and will be able to compete openly for the balance. ACS is currently working with other science and education organizations to prepare a proactive strategy on ESEA and education appropriations next year. OLGA works very closely with the ACS Committee on Education on policy issues. We look forward to even greater success next year especially since our legislative action network is barely a year old.

IMAGE OF CHEMISTRY. Now I want to talk about the image of chemistry. Some chemists, including me, have long been troubled by our perceptions that chemistry has had a bad image for many years. You know chemists are polluters of the earth . The chemical people are those who make heavy use of illicit drugs. It got so bad that people and organizations tended to avoid the word DuPont abandoned the slogan better things for better living through chemistry .

The ACS has a Communications Department with staff competent to deal with the news media and Denise Graveline, head of that staff, decided that she wanted to know if there is really any justification for the pessimism that she hears from chemists about their public image. They hired Worthlin Worldwide . a well known professional polling organization, and had them check on the reactions of people to words like chemistry, chemicals, chemists, and chemical industry.

So, how about those bad images? Well, that s history!!

56% of the Worthlin Worldwide poll sample made positive associations with the word chemistry and 59% said chemicals make people s lives better. The negatives were only 14% and 20%, respectively.

With regard to chemists almost all respondents would either give a positive (49%) or neutral (44%) recommendation to anyone thinking of chemistry as a career. Only 5% would offer a negative recommendation.

Common attributes of chemists were reported to be Visionary, Innovative, & Results- oriented (top ratings 7.2-7.7) and caring, trustworthy, accountable, and cooperative (next ratings 6.2-6.5) and traditional (5.8) (all on 10 point scale). Any number over 6 is considered high.

So hold your head high the public believes we really are good scouts. On the other hand, I don't believe we could do enough to maintain and expand the good image of our profession in the public's eyes.

What could we do that we aren t already doing to accelerate and widen scientific literacy and to increase public respect for chemistry and its applications?

How about the internet? Isn t it an unlimited resource for promotion of any legal cause?

Could the ACS compete with NASA and such museums as the Exploratorium and Smithsonian at producing popular websites?

Could interaction between the public and ACS websites enhance the public image of chemistry?

Could an ACS website become the popular source of real chemical knowledge for the home, shop and factory?

Could the ACS convince most citizens that they all do chemistry? Need chemistry?

Could familiarity with chemistry remove the conviction that the subject is, and must forever be, obscure, even esoteric?

These notions relate to a familiar experience for a chemist from Kansas. Suppose I am in a gas station in a small town in Texas, or California, or Ohio, waiting for a flat tire to be fixed.

A stranger says Sorry about your flat where you headed?

Kansas.

Oh, Where you from?

Kansas.

Oh (its like they don t believe Kansas is really out there). What do you do?

I teach at KU.

Ah the basketball school. What do you teach?

chemistry.

Oh, not my favorite subject in school.

That last line is the one that bugs me. I would like that to be replaced by a statement like. Hey, I work in the repair shop here and we use chemistry all the time. I ve always wondered, why does....a high compression engine require high octane fuel? Are we doing anything about the public image of chemistry?

One of the questions I asked a minute or so ago was Could an ACS website become the popular source of real chemical knowledge for the home, shop and factory? My view is well yes maybe if we can build some kind of an enduring relationship through our web site. In that direction, ACS has decided only recently to expand its internet activities for members **to all chemists**, and to include pages and links directed at the general public.

News about chemistry.

Activities for children.

Information sources for chemists and the public.

Links to all manner of chemically related sources.

We believe this can have great public relations value. But it is only a beginning.

Many thanks, again, for your kind invitation to join with you this evening. And also thank you for being who you are and for doing what you are doing, both as teachers and as citizens of the scientific community.



### CALL FOR PAPERS

## Two-Year College Chemistry Consortium 157th 2YC<sub>3</sub> Conference (Western)

## Challenges of Teaching Chemistry in the New Millenium

Community College of Southern Nevada, Las Vegas November 2-3, 2001

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Las Vegas, NV 89102

**Program Chair** 

Kaveh Zarrabi, Ph.D.

Phone: 702-651-5693 email: kaveh zarrabi@ccsn.nevada.edu

**Exhibits Arrangements Chair** 

**Gunay Ozkan** 

Phone: 702-651-4230 email: <a href="mailto:gunay\_ozkan@ccsn.nevada.edu">gunay\_ozkan@ccsn.nevada.edu</a>

Local Arrangements Chair

Marion W. Hammond

Phone: 702-651-5855 email: marion hammond@ccsn.nevada.edu

## Call for application for the office of Chair-Elect of COCTYC for the year 2003

Application for Chair-Elect must include:

- a. Pertinent personal data such as name, college, job title, address, etc.
- b. Brief statement of pertinent qualification, signed by the nominee
- c. A statement indicating a willingness to serve signed by the nominee.
- d. A statement of support from an appropriate person in the applicant's school.
  - e. To be eligible to be nominated an individual must:
    - 1. be a two-year college chemistry teacher
- 2. have been a dues paying member of 2YC<sub>3</sub> a minimum of three years prior to nomination
  - 3. be a member of DivCHED
  - 4. be a member of ACS
- 5. have demonstrated leadership and organizational ability by serving as Chair or Co-Chair for a conference and in one or more of the following capacities:
  - a. served three years on the Executive Committee
  - b. served as Local Arrangements Chair for a Conference
  - c. chaired a sub-committee
  - d. contributed within the past three years two or more ways such as:
    - -acted as local industrial sponsor coordinator
    - -chaired a conference section
    - -presented a paper at a conference
    - -moderated a panel at a conference
    - -other ways an individual has contributed
- -Applications must be received by the Chair no later than September 1, 2001.
- -The COCTYC will serve as a nominating/screening committee to generate a slate of two candidates.
- -Each  ${\rm 2YC_3}$  member shall vote for one nominee and the candidate who received the greater number of votes shall be declared elected.
- -Ballots must be received by the Chair postmarked no later than 12/31/2001.
- -Ballots will be counted by the Chair in the presence of a Notary.
- -The results of the election will be reported in the first possible newsletter.

#### Call for application for the office of Industrial Sponsors Chair of COCTYC for a three year term beginning 2003

Application for Industrial Sponsors Chair must include:

- a. Pertinent personal data such as name, college, job title, address, etc.
- b. Brief statement of pertinent qualification, signed by the nominee.
  - A statement indicating a willingness to serve signed by the nominee.
- c. A statement of support from an appropriate person in the applicant's school.

- d. To be eligible to be nominated an individual must:
  - 1. be a two-year college chemistry teacher
  - 2. have been a dues paying member of

2YC<sub>3</sub> a minimum of three years prior to nomination

- 3. be a member of DivCHED
- -Applications must be received by the Chair no later than September 1, 2001.
- -The COCTYC will serve as a nominating/screening committee to generate a slate of two candidates.
- -Each 2YC<sub>3</sub> member shall vote for one nominee and the candidate who received the greater number of votes shall be declared elected.
- -Ballots must be received by the Chair postmarked no later than 12/31/2001.
- -Ballots will be counted by the Chair in the presence of a Notary.
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