

Chemistry Outlook

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



Clarita Bhat, 2002 Chair

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otes From The Chair

Greetings from the Chair!

Clarita Bhat Shoreline Community College Shoreline, WA 98133

As you read this message, the BCCE will be just a wonderful memory and we will have much to think about and ponder. It is my wish that the rest of the summer and fall will bring you much excitement, satisfaction and time to enjoy family and friends. Since this message is in between meetings, I thought that I would like to try something new. It has occurred to me that many of you have had no chance to share your views on important issues or to give input on how to make teaching better and more rewarding to the students and to each of us. I would like to propose that this column launch a new feature in our Newsletter: Letters to the Editor. If there is response to our initial call for letters, it will become a regular feature and will give you a chance to share with us without having to compose a long article. Your opinion is very valuable to us. Please let us know how you

As I contemplated how to get this started, my thoughts immediately turned to the many unresolved questions I have had since listening to many speakers in recent years extol various techniques for teaching in the new millennium. As I have stated in a previous message, I easily date myself in revealing the fact that I have seen the days of the slide rule, the first calculator, syllabi and tests questions written on the blackboard, answers in a blue book; snacks in the lab, addressing the teachers as Professor Smith instead of by their first name, and being in awe of my instructors. I also feel proud of the fact that over the years I have adapted to the new teaching styles and I have enjoyed being knows only as Clarita or Ms. Clarita. Use of technology is now routine in our classes and yet, there are so many questions about the new directions. I hope that some of you will have thought about some of the new ideas and would be willing to share with us. Here are some of the queries I have of all of you:

1. Green Chemistry—the emphasis now is to eliminate toxic and dangerous reagents from the general and organic chemistry curricula. How does one weigh the benefits of safety against the need to know how to handle potentially dangerous materials and

continued on page 2



onference Calendar

2002-2003 Academic Year

160th Conference (Eastern)

http://www.commnet.edu/co/academic/cot/

Oct. 4-5, 2002 Tunxis Community College

271 Scott Swamp Road Farmington, CT 06032

Contact: Karen Wosczyna-Birch

Email: kwbirch@commnet.edu

161st Conference (Midwestern)

http://www.kckcc.edu/2YC3/

Nov. 8-9, 2002 Kansas Community College

7250 State Avenue Kansas City, KS 66112

Contact:: Ed Kremer

Email: ekremer@toto.net Phone: (913) 288-7111

162nd Conference (Southern) ACS National Meeting, New Orleans, LA, March 23-27, 2003

March 21-22, 2003 Delgado Community College

City Park Campus New Orleans, LA

Contact: Tom Gruber

Phone: (504) 361-6410 Email: tagruber@aol.com

163rd Conference (Southern) ChemEd 2003

July 27-31 Auburn U, AL

CONSULT THE 2YC, WEBSITE,

http://2YC3.vinu.edu,

FOR THE LATEST UPDATES ON FUTURE CONFERENCES!

Have you paid your 2YC₃ dues for the year 2002 yet? The cost, \$15, is a small price to pay for the many benefits of belonging to the organization. Please continue to support the activities of the 2YC₃ by paying

your dues. A membership form is located on page 3.

Consult our membership chair, Dolores Aquino,

DCAquino@Compuserve.com, if you are not sure if you have paid your 2002 dues.

continued from page 1

- how to dispose of them? Are some of you still using dichromate and permanganate oxidizing agents? Is it necessary to use only experiments with safe materials? Are we shortchanging our students by protecting them too much?
- 2. More and more of the research papers in our courses are written from Internet sources. I feel that a lot has been compromised with this trend as it becomes very tempting to copy whole papers verbatim? How do we control this? Should we still require some old-fashioned library search? I would love to hear what you do in your courses and your experiences to date. In my courses, I have always required research papers and oral presentations. Do you think this is an important part of a chemistry course?
- 3. The textbooks these days all package CD's as added study aids. We have found that very few of the students in our General Chemistry and Organic Chemistry classes actually use these CD's. They have little time to do the regular reading, homework, and projects with no extra energy left to do more research. Is this your experience also? How do you use these CD's in your lectures?
- One of my great beliefs is that Organic Chemistry laboratory should not be taught solely with microscale equipment. Many years ago we were among the first schools to embrace microscale experiments for our majors organic. As the years went by, I found myself introducing a few macroscale experiments so students could handle real lab equipment, such as reflux and distillation set-ups. The first group to be re-introduced to the larger glassware, broke at least half a dozen condensers. They thought they could lift the whole assembly without clamps! Then, on the other hand, most of our students now are premed, pre pharmacy, pre dentistry or engineering majors. Do they need to handle this larger equipment? Should we simplify experiments and curriculum to accommodate the trend to the Health Sciences? I am really in a dilemma about this. Please share your own ideas on the subject.
- 5. Finally, I would love for some of you to play "Devil's Advocate" and speak in favor of on-line chemistry labs. I am fervently against the idea and need to hear something from the other side. The trend is there; somehow I cannot embrace it.

As you can tell from my comments, I seem to have a bias towards the "old school". It will be so refreshing to have some ideas to the contrary. Please drop as a line on these or any other topics. Send your letters via e-mail to: "Letters to the Editor", c/o Carol Handy, e-mail: mh2ch@aol.com. She will publish them in the next edition of "Chemistry Outlook". Hope to hear from you! Note: The views expressed in this column are strictly those of Clarita Bhat and in no way represent the views or beliefs of other officers or support staff.

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2600 General Meyer Avenue, New Orleans, LA 70114 Office: (504) 361-6410 Fax: (504) 361-6411 Home: (504) 943-5507 Email: tagruber@aol.com

2YC, World Wide Web Page

URL: http://2yc3.vinu.edu/, Jay Bardole, WebMaster

2YC₃/Division of Chemical Education Joint Membership Form

This is a special offer for 2YC ₃ members wh 2YC ₃ are \$15.00 and the dues for the Division of Chemical Education, you can join the Division at Renew my 2YC ₃ membership I wish to join the Division of Chemical Education, you can join the Division of Chemical Education, you can join the Division of Chemical Education of	of Chemical Education are \$20.00. If y and renew your membership with 2YC ₃ n DivCHED as: a Member (AC an Affiliate (no	ou are not now a membe for only \$30.00, a saving S Members only) n ACS Members)*	er of the Division of gs of \$5.00.
*affili	ates have all membership privileges ex	cept voting and holding	elective office
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Home Address:			
Street	City, State	Zip Code	
Work Address:			
Street	City, State	Zip Code	
College Phone:	Email:		
Send 2YC ₃ Newsletter and CHED Newsletter to Send ACS Member Form Yes No 2YC ₃ Membership Information: Are you a			
	P Four-Year College Te	acher?	
High School Teacher?	Other		
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Please send your check, payable to 2YC₃, for \$15 (2YC₃ only) or \$30 (joint membership) to: Dolores C. Aquino, San Jacinto College Central, 8060 Spencer Highway, Pasadena, TX 77501-2007

THE FALL 2002 NORTHEAST REGIONAL CONFERENCE OF THE 2YC₃ DIVISION OF THE AMERICAN CHEMICAL SOCIETY TUNXIS COMMUNITY COLLEGE FARMINGTON CT

http://www.commnet.edu/co/academic/cot/

OCTOBER 4TH AND 5TH

INDUSTRY DRIVEN CURRICULUM AND INQUIRY BASED LEARNING
CEU'S PROVIDED

FRIDAY October 4th 2002

- 8:30 to 9:00am. Registration: TXCC Farmington Room
- **9:00am. Welcome:** President Addy from TXCC

Colleen Keyes, Academic Dean at TXCC

• 9:15am. Keynote Address: Solving Crimes Using Forensic Science

Elaine Pagliaro, MS, JD

Attorney Pagliaro is a Forensic Scientist who currently is the Assistant Director of the Connecticut State Forensic Labs and a member of the Editorial Board of "*Today's Chemist*".

Ms. Pagliaro has been involved in most of the major criminal investigations in Connecticut and in several cases of national prominence. She has qualified as an expert witness in the areas of Biochemistry, DNA, Hair Analysis, and Crime Scene Reconstruction in Federal courts and in Connecticut, New York, Rhode Island, Vermont and Lousiana. Elaine has worked with various hospitals and sexual assault crisis-training personnel in the collection and preservation of physical evidence related to sexual assault cases and serves as a member of the Commission on the Standardization of the Collection of Evidence in Sexual Assault Investigations.

A recent graduate of Quinnipiac College School of Law, Ms. Pagliaro is a member of the bar in Connecticut and New Hampshire. She serves as adjunct faculty at several local colleges including University of New Haven, Forensic Sciences Department and Quinnipiac University, Department of Nursing.

Elaine will present actual crime scene evidence collected from nationally renowned cases, including the recently publicized Skakel/ Dorothy Moxel murder case.

- 10:15am. Break
- 10:30 to 11:30am. Panel Presentation. Industry Externships for Faculty

Moderator: Karen Wosczyna-Birch; Lauren Kaufman, VP CBIA

This presentation will include faculty from both two-year colleges and high schools who have completed industry externships and have used the experience to develop classroom and lab materials. These industry externships have been funded in part by National Science Foundation ATE grant (# 0101654), the State Department of Education, and the Connecticut Business and Industry Association (CBIA).

• 11:30 to 12:15pm. Papers: Final call for Presentations (Deadline September 6 2002)

- 1:00 to 4:00pm. Workshops.
- **➡** Workshop One (Friday)

Dr. Samuel Stevenson

American Chemical Society

Description:

A workshop will be provided based on the recent ACS publication entitled, "A Guide to Classroom Instruction for Adjunct Faculty" (John Reed, 2002; ISBN 0-8412-3820-0). This publication is fully crossed disciplinary and is a useful reference for full-time 2YC/4YC faculty as well. During this session we will cover the following topics: (1) Fundamentals of Classroom Instruction, (2) Fundamentals of Learning, (3) Methods of Delivering Instruction, and (4) Administration, Evaluation and Feedback. We will also have a discussion in each of these areas.

Workshop Two (Friday and Saturday)

Dr. Gerald DeMenna

FUN-SCI and BUCK Scientific

Real World Hands-on Experiments: Spectroscopy

Description:

Just a few "fun" and "interesting" experiments that you will be involved with in this session for advanced High School level, Collegiate Undergraduate and Basic Research Teaching of Analytical Instrumentation. The list of laboratory tools includes the following: Infra-Red Spectrometry, Gas Chromatography, and Liquid Chromatography. All systems will be set up with Data-Stations and individual "FUN-SCI" experiments for presentation to all educators to work with during the workshop, or for demonstrations if the numbers are too high for actual hands-on.

The concept of the "FUN-SCI" program is to focus on topics that the students deal with or are concerned with everyday, and thus inspire them to remember what they did during the experiment. A brief lecture on the Fundamentals of Analytical Spectroscopy & Chromatography; followed by a Hands-On Workshop to show the Teachers examples of the Primary tools for analytical measurements:

- ✓ **Atomic Absorption Spectroscopy:** Determination of Minerals in Vitamin Tablets
- ✓ **Infrared Spectrometry:** Oils Well that Ends Well, Natural or "Fake" Engine Oil?
- ✓ **Ultraviolet- Visible Spectrophotometry:** Examination of Sun-Screen Lotions SPF
- ✓ Gas Chromatography: Measurement of Alcohols from Consumer Products
- ✓ **Liquid Chromatography:** Sodas & Drinks, How much caffeine can be seen?
- ✓ **Fluorometry:** The Chemical "highlights" of Fluorescent Markers
- ✓ Colorimetry: Check your M&M Candies for "True Colors"!

BANQUET 6:00 UNTIL???? LOCATION TO BE ANNOUNCED

SATURDAY October 5th 2002

- 8:30 to 9:00am. Registration: TXCC Farmington Room
- **9:00am. Welcome:** Dr. Karen Wosczyna-Birch.
- 10:00 to 12:00pm. Keynote Address and Demo: Dr. Babu George.

Dr. Babu George is the Chair of the Science, Math and Computer Science Dept at Sacred Heart University and a nationally renowned educator. He will be addressing the 2YC₃ participants and present his famous chemistry demonstrations.

- 12:00 to 1:00pm. Lunch
- 1:00 to 4:00pm. Workshops.
- **■** Workshop One.

Dr. Gerald DeMenna

FUN-SCI and BUCK Scientific

Real World Hands-on Experiments: Spectroscopy

Jerry DeMenna will provide another interactive workshop using real world applications and instrumentation available for the conference. See Friday's workshop description for a sample of the activities

⇒ Workshop Two.

Analyzing Crime Scenes Using Blood Splattering Patterns and other Forensic Techniques Attorney and Scientist Elaine Pagliaro, Asst. Director, CT State Forensic Labs

Elaine will conduct a hands-on workshop that analyzed blood splattering patterns and other forensic techniques used at crime scenes. This workshop will provide participants with activities that they can take back to their classroom/labs.

For an update on the final agenda and registration form, please access the website for the conference by clicking on the link to the 2YC₂ Fall Northeast Conference: http://www.commnet.edu/co/academic/cot/

Conference Chair: Dr. Karen Wosczyna-Birch

Tunxis Community College 271 Scott Swamp Road Farmington CT 06032 Telephone (860) 679-9509 Email: kbirch@commnet.edu

Conference Co-Chair: Professor Judy Donnelly

Three Rivers Community College

Norwich CT 06360

Telephone: (860) 886-0177

E-mail: jdonnelly281@earthlink.net

Exhibitor Chair: Dr. Ron Adrezin

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Regular Rate: \$139.00 plus tax

➤ The Farmington Inn

Address: 827 Farmington Ave #3

Farmington CT

Contact: Aggie

Telephone: (860) 267-2311, (800) 677-2821 **Government/conference Rate:** \$99.00 plus tax

Regular Rate: \$109.00 plus tax

➤ The Marriot Hotel- Farmington

Address: 15 Farm Spring Road

Farmington CT

Contact: Steve

Telephone: (860) 678-1000

Government/conference Rate: \$99.00 plus tax

(if available)

Regular Rate: starting at \$120.00 and up.

The Radisson Inn Bristol

Address: 42 Century Dr.

Bristol CT

Contact: Samantha Telephone: (860) 589-7766

Government/conference Rate: \$99.00 plus tax

Regular Rate: \$108.00 plus tax

Pre- Registration (160th Conference, Farmington, CT)

Name		
Institution	E-mai	1
Home Address	State	Zip Code
Work Address	State	_Zip Code
Home Phone ()	Work Phone	2()
Current 2002 Membership: 2YC ₃	ACS	DivCHED
Teach at: 2-year College	4-year College_	High School
CEU's Desired: Yes	No	_
Conference Registration:		
2YC ₃ Member		\$20
Not 2YC ₃ Member (includes 1	\$35	

Send registration form and check (payable to TXCC/2YC) by <u>September 26th</u> to:

Dr. Karen Wosczyna-Birch Professor of Applied Science 160th 2YC Conference Tunxis Community College 271 Scott Swamp Road Farmington CT 06032 Email: kbirch@commnet.edu (860) 679-9509

^{*} Breakfast and Lunch will be provided on Friday and Saturday

"IT WORKED FOR ME"

An interesting article from Frank Kock and Tim Thorstenson describing how they enhance the chemistry curriculum. As always, you are invited to share a new or revised teaching concept by submitting an article for publication in the Chemistry Outlook to the newsletter editor, Carol Handy (mh2ch@aol.com).

It Worked For Me

"How do bubble lights work?" This question was asked on the first day of class after Christmas break. It occurred to me that an exhibit with a working bubble light and an explanation would be of interest to everyone on campus. The timing for this question happened to coincide with the chapter on solutions. which was being covered in class at that time.

Near a chemistry classroom at Bismarck State College is a small enclosed display area, perfect for our first exhibit on "How Things Work." The first exhibit featured a functioning 'Bubble Light' and a 'Drinking Bird'. Both objects contain methylene chloride and their functionality depends upon the volatility of the methylene chloride.

Preparation and maintenance of this display required a timer switch used to start and stop the bubble light each day and adding water to the water glass every other day to keep the "Drinking Bird" drinking. An explanation of each object was placed in a slant stand near each display.

The response to these public exhibits was most gratifying. We frequently observed individuals from various disciplines reviewing the exhibit. One of the exhibits, the lava lamp, was suggested by our college president. Other suggestions have come from students and faculty.

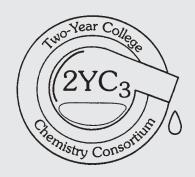
Since the first exhibit we have purchased



a special display cabinet with lighting. The exhibits are changed about every two weeks and are chosen to illustrate chemistry applied to everyday objects. Other exhibit themes have been: a plasma ball, a lava lamp, a fuel cell, a solar cell, properties that change with heat (a digital thermometer (thermistor), a Galileo thermometer, and a turkey popup timer).

The exhibits are subsequently shared with the Gateway to Science, a local hands-on science center.

Frank Koch Tim Thorstenson **Chemistry Department** Bismarck State College Bismarck, ND 58501



Kansas City Kansas Community College 2YC, Conference

"The Changing Face of Chemical Education"

November 8 & 9, 2002

Please plan to attend the 161st $2YC_3$ Conference at Kansas Community College. More information can be found on the website.

http://www.kckcc.edu/2YC3/

Contact Ed Kremer, ekremer@toto.net, if you are interested in presenting or have any suggestions for the conference.

We hope to see you there!

Call for application for the office of Chair-Elect of **COCTYC** for the year 2004

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 2YC₂ 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, 2002.
- -The COCTYV will serve as a nominating/screening committee to generate a slate of two candidates.
- -Each 2YC, member shall vote for one nominee and the candidate who receives the greater number of votes shall be declared elected.
- -Ballots must be received by the Chair postmarked no later than 12/31/2002.
- -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 Treasurer of **COCTYC** for the year 2003

Application for Treasurer 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 2YC₂ 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, 2002.
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H. Stephen Stoker, Weber State University with Sharon K. Stoffels, Boise State University Nursing Department, contributing editor Second Edition • ©2001 • Hardcover • Available July 2000

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