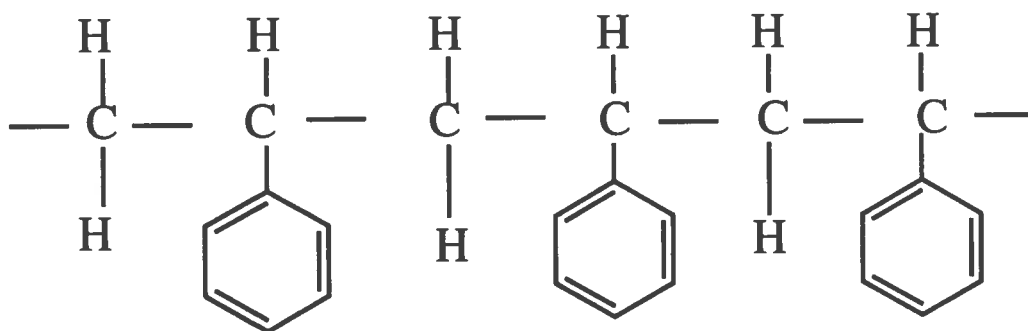


SECOND ANNUAL

WASHINGTON COLLEGE CHEMISTRY TEACHERS ASSOCIATION

CONFERENCE



November 11,12,13 1993
Yakima Washington

Welcome to the second annual meeting of the Washington College Chemistry Teachers Association (WCCTA). We hope you find the presentations stimulating and relevant.

Your Registration Packet should include:

- NAME BADGE
- THIS PROGRAM
- CERTIFICATE OF COMPLETION
- RECEIPT- IF YOU PAID BY CHECK
- BYLAWS FOR DISCUSSION
- EVALUATION FORM

We have a "Hospitality" room (#148) available for your use during the day and evening hours for informal discussions. We have beverages and snacks available on Thursday evening on a donation basis. This room will be available on Friday for small group discussions. Contact Kathy Ashworth, Richard Logan or Kathy Lyle for use of this room.

Guest passes to the YMCA exercise facilities are available at the front desk.

The lunch on Saturday will include an organizational meeting and selection of door prizes from the vendors. We need your input for future organization success and would like to have everyone read the Bylaws for review.

We have an evaluation form for the conference and would appreciate your returning the completed form and your name tags to the meeting coordinators before you leave.

VENDORS AND PRIZES

We wish to thank the following vendors for their monetary support for this conference. Many door prizes for the final lunch meeting were provided by these vendors.

Prizes may include:

microscale glassware; Alchemist or other software; The Periodic Table videodisc; American Heritage Dictionary; and many other donated materials.

Please plan to be present at the lunch meeting on Saturday November 13th. We will be picking prizes by your name tags and you must be present to win.

Please take your time and visit with these people in the vendor area during breaks and open times during the day on Friday November 12th.

| | |
|-------------------------------------|--|
| Ace Glass Inc. | John Rodriguez |
| Brooks/Cole Publishing Company | Gay Meixel |
| D.C. Heath | Stephen Reinhart |
| Harcourt Brace College Publishing | Ellen Wynn |
| Houghton Mifflin Company | Peter Atwood |
| John Wiley and Sons, Inc. | Nedah Rose, Bill May |
| McGraw-Hill | Marilyn Jacoby |
| Mosby Publishing Company | Mary Hamilton |
| Perkin-Elmer Corporation | Anita Kelley |
| Prentic-Hall Publishing Company | Kevin Johnson, Nancy Beals, Melissa Bryant |
| West Publishing | Trina Cummins, Barbara Clark |
| William C. Brown Company Publishers | Tom Paddon |

Special thanks to John Wiley and Sons, Inc. for providing the keynote speaker T.W. Graham Solomons.

FRIDAY NOVEMBER 12, 1993

| | | | | | | | | | |
|----------------------------------|---|-------------------------------------|---|------------------------------|--------------------------------|--------------------------------|-------------------------------------|---|--|
| 7:30-8:45 | 9:00-10:45 | 10:45-11:15 | 11:15-12:00 | 12-1 | 1-1:45 | 1:45-2:30 | 2:30-3:00 | 3:00-4:00 | 4:00-5:00 |
| BREAKFAST in MAPLE LEAF BALLROOM | WELCOME and | BREAK in EVERGREEN VENDOR area room | GENERAL DISCUSSION GROUPS | LUNCH in MAPLE LEAF BALLROOM | FIRST PAPER SESSION | SECOND PAPER SESSION | BREAK IN EVERGREEN VENDOR AREA ROOM | DISCUSSION GROUPS | DISCUSSION GROUPS |
| Registration in lobby | Program opening remarks by T. W. GRAHAM SOLOMONS in MAPLE LEAF BALLROOM | | Lead by NANCY HOWE Solomons and others on Organic in MAPLE LEAF BALLROOM room | | WALT VOLLAND in FOREST room | GEORGE KRIZ in FOREST room | | Lead by JOAN STOVER Articulation between high schools and colleges in FOREST room | Lead by RICHARD LOGAN Articulation between community and baccal. colleges in FOREST room |
| | Followed by a panel discussion of ORGANIC in MAPLE LEAF BALLROOM | | Lead by MARY OBRIEN General Chemistry in RIMROCK room | | RACHEL WANG in RIMROCK room | DAVID LYGRE in RIMROCK room | | lead by KAREN HARDING Health Sciences Chemistry in RIMROCK room | Lead by PAUL JACOBSON Liberal Arts Chemistry in RIMROCK room |
| | | | | | PAUL JACOBSON in LAKESIDE room | KAREN HARDING in LAKESIDE room | | | |

6:30-8:30 Banquet with no host bar in Maple Leaf Ballroom with entertainment by Roger Lent and group.

SATURDAY NOVEMBER 13, 1993

| | | | | | |
|---|--|------------------------------|--|-------------------------------|--|
| 7:30-8:45 | 9:00-9:30 | 9:30-10:00 | 10:00-10:30 | 10:30-11:30 | 11:30-1:00 |
| Breakfast in MAPLE LEAF BALLROOM | FIRST PAPER SESSION | BREAK in SUNCREST room | SECOND PAPER SESSION | CHECKOUT OF ROOMS BREAK | LUNCH AND BUSINESS MEETING |
| | DON KING JACK WEYH in FOREST room | | JAMES STRONG in FOREST room | | in MAPLE LEAF BALLROOM |
| | HELEN PLACE in RIMROCK room | | ROBERT JOHNSON in RIMROCK room | | PRIZES presented and organization discussion |
| | JOAN STOVER in LAKESIDE room | | MARY WHITFIELD in LAKESIDE room | | |

8:30-11:45 ORGANIC MICROSCALE WORKSHOP AT YVCC CHEMISTRY LAB.

PRESENTATION DESCRIPTIONS

(in chronological order)

FRIDAY

9:00

KEYNOTE: Opening presentation

Ways to Better Coordinate the Topics Covered in General Chemistry With Those in Organic Chemistry-BY T.W. GRAHAM SOLOMONS

1:00 -First Paper Session

Putting Organic Chemistry in General Chemistry Curriculum Merging Theory and Reality (Walt Volland)

We enrich the General Chemistry curriculum by using examples from Organic Chemistry. We make the General Chemistry more realistic because students see chemical ideas put to use. We reinforce General Chemistry ideas like stoichiometry, catalysis, kinetics, bond energy, equilibrium, spectroscopy, bonding and hybridization with applications in Organic Chemistry.

Writing Assignments in Chemistry Courses - A Tool for Increasing Comprehension, Communication, and Interest (Rachel Wang)

Examples of simple writing assignments such as 600-word article review, 150-word short essay, etc., will be given to demonstrate how chemistry students can benefit from "writing across the curriculum". By asking the students to APPLY what they have just learned in the chemistry course to either critique a semi-technical article; express their opinion over a consumer issue; or explain a technical concept to friends and relatives with zero chemistry background, in writing, helps the students learn and appreciate what they are learning. Samples of student writings and grading criteria will be provided.

Using Computer Assisted Instruction in Chem 100 (Paul Jacobson)

How CAI frees up instruction time in the classroom. Tacoma Community College is experimenting with computer assisted instruction in the chemistry 100 course, using a network of thirty computers. Data from pre and post tests and from student surveys will be presented.

1:45- Second Paper Session

New Developments in Microscale Organic Laboratory

(George Kriz, Don Pavia, Gary Lampman)

The presentation will outline new developments in microscale organic chemistry. Included will be descriptions of new experiments, new methods, and new approaches to solving early problems with microscale equipment.

Using a Science Calendar in Chemistry Classes (David Lygre)

A calendar is being developed that lists notable science and technology events that happened on each day of the year. This information is used in chemistry classes to increase student interest and to help students learn about the history of chemistry, especially the people whose ideas and discoveries provide the foundation of chemistry. Ways to develop and use a calendar are discussed.

Incorporating Writing and Research into General Chemistry (Karen Harding)

This presentation will describe a research and writing component that has been incorporated into general chemistry. The research has enhanced student confidence and has helped them improve their writing skills. I will describe the process, the content of a few of the projects as well as student responses to the research activity.

SATURDAY

9:00- First Paper Session

Computer Interfacing in the General Chemistry and Analytical Chemistry Laboratory (Don King, Jack Weyh)

Western Washington University's chemistry department has equipped its new general chemistry and analytical chemistry laboratories with computers and interfaces. We are a member school of a consortium (the CCLI Initiative) that has been funded by NSF to develop and student test interface-based experiments. A report will be given on experiments currently in use and those under development.

Using Small Group Problem Solving in Large Class Settings (Helen Place)

During my general chemistry lecture to 350 students we take 5-10 minute "chaos" breaks where students interactively work together to solve problems as TAs and I visit with the various groups.

Strategies for Creating Relevance in Chemical Education (Joan Stover)

South Seattle Community College is offering a new technical program in hazardous and nuclear materials technology that requires students to be knowledgeable in science. To satisfy this need, SSCC is developing courses in applied science that require about 40% to 50% of instructional time to be spent in hands-on activities that allow students to have experiences in laboratory and field situations similar to or related to those encountered at work, in the home, in the community, or in the environment.

10:00- Second Paper Session

Introduction of Environmentally Important Concepts to the Freshman Chemistry Lab. (James Strong)

South Puget Sound Community College is sited in a location which supports the inclusion of several topics in environmental chemistry into the lab experiences of freshmen. Experiments include mass changes, volumetric determinations (acidimetric and redox), Beer's law and some field instrumentation. The year ends with approximately four weeks of field work on board the college's research vessel.

Report--Portland Regional Collaborative Post-Secondary Education Project (Robert Johnson)

Student Programmed Spreadsheets- Application in General Chemistry Lecture and Lab (Mary Whitfield)

Most C.C. campuses have large computer labs. If Chemistry classes can be brought to these labs (perhaps via a coordinated studies class) students can be taught to program spreadsheets for applications in chemistry. Two examples (one for lecture, one for lab) are provided. Additional ideas are sought.

PARTICIPANTS LIST

| <u>NAME</u> | <u>SCHOOLS</u> |
|--------------------|--------------------------|
| ASHWORTH Kathy | YAKIMA VALLEY |
| BARKER Nancy | PIERCE COLLEGE |
| BERG Carole | BELLEVUE COMM. |
| BHAT Clarita | SHORELINE |
| BROWN David F. | HERITAGE COLLEGE |
| BRYCE Herb | SEATTLE CENTRAL COMM. |
| CARPENTER A. Kurtz | LOWER COLUMBIA COLLEGE |
| DIAL Jeff | OLYMPIC COLLEGE |
| DUNCAN Clint | CENTRAL WASH. UNIV. |
| EMKEN Walter C. | CENTRAL WASH. UNIV. |
| ENGEL Randy | EDMONDS COMM. |
| FRYHLE Craig | PACIFIC LUTHERAN UNIV. |
| GOLD Melodye | BELLEVUE COMM. |
| HAMEL Nick | LOWER COLUMBIA COLLEGE |
| HARDING Karen | PIERCE COLLEGE |
| HOWE Nancy | EVERETT COMM. |
| JACOBSON Paul | TACOMA COMM. |
| JOHNSON Rob | CLARK COLLEGE |
| KIEBURTZ Bob | OLYMPIC COLLEGE |
| KING Donald | WESTERN WASHINGTON UNIV. |
| KLETSCH Richard | CENTRALIA COLLEGE |
| KRIZ George S. | WESTERN WASHINGTON UNIV. |
| LAMPMAN Gary M. | WESTERN WASHINGTON UNIV. |
| LENT Roger | SPOKANE FALLS |
| LOGAN Richard | WENATCHEE VALLEY |
| LOPEZ Van | SHORELINE |
| LYGRE David | CENTRAL WASH. UNIV. |
| LYLE Cathy | BELLEVUE COMM. |
| MARR Ken | GREEN RIVER |
| MIR Qui-Chee | YAKIMA VALLEY |
| MUELLER Jay | GREEN RIVER |
| OBRIEN Mary | EDMONDS COMM. |
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| SANDHU Perminder | BELLEVUE COMM. |
| SIMONSEN Ann- Mari | SHORELINE |
| STOVER Joan C. | SOUTH SEATTLE |
| STRONG James M. | SOUTH PUGET SOUND |
| SURENDRANATH Jack | BELLEVUE COMM. |
| SWANK Duane | PACIFIC LUTHERAN UNIV. |
| TERJESON Robin | CLARK COLLEGE |
| VOLLAND Walter | BELLEVUE COMM. |
| WANG M. Rachel | SPOKANE COMM. |
| WEYH Jack | WESTERN WASHINGTON UNIV. |
| WHITFIELD Mary | EDMONDS COMM. |