

# **17<sup>th</sup> Annual WCCTA Conference**

**Sleeping Lady Mountain Retreat  
Leavenworth, WA  
October 8<sup>th</sup> -10<sup>th</sup>, 2009**

**Hosted by  
Bellevue College  
Bellevue, WA**

**Organizers:**

**Carole Berg, Jacqui Drak, Brett Goldston, Linda Kuehnert,  
Cathy Lyle, Jennie Mayer and Chris Shelley**

**2009 WCCTA Annual Conference  
Conference Program**

<b>Thursday, October 8<sup>th</sup></b>	
<b>3:00 - 10:00 pm</b>	<b>Check-In</b> (Sleeping Lady Main Office)
<b>4:30 - 10:00 pm</b>	<b>Conference Registration</b> (Woodpecker)
<b>6:00 - 7:30 pm</b>	<b>Dinner</b> (Kingfisher Dining Lodge)
<b>8:00 - 10:00 pm</b>	<b>Evening Social, No-Host Bar</b> (Woodpecker)  <b>"Chemistry Trivia Night"</b>

<b>Friday, October 9<sup>th</sup></b>			
<b>7:30 - 8:30 am</b>	<b>Breakfast</b>		
<b>8:45 - 9:00 am</b>	Welcome, Chapel Theatre		
<b>9:00 - 10:15 am</b>	Keynote Address (Chapel Theatre) <b>"Challenges to Change"</b> C.A.(Tina) Bailey		
<b>10:15 - 11:00 am</b>	<b>Vendor Break</b> (Salmon Gallery)		
<b>11:00 - 12:00 pm</b>	<b>Chapel Theatre</b>	<b>Woodpecker</b>	<b>Flicker</b>
	JoAnn Peters (CWU) & Deb Simon (Whitman)  "Teaching Chemistry and Art"	Dharshi Bopegedera (Evergreen)  "Putting the Lab at the Center of Teaching"	Mark Bishop (Chiral Pub.) "A Novel Approach to Publishing" (25 min)  Phil McHale (CambridgeSoft) "ChemDraw: The Basics" (25 min)
<b>12:00 - 1:15 pm</b>	<b>Lunch</b>		
<b>1:15 - 2:15 pm</b>	<b>Keynote Speaker Workshop</b> (Chapel Theatre)  "Thinking Outside the Test Tube"		

<b>2:15 - 3:00 pm</b>	<b>Vendor Break (Salmon Gallery)</b>		
<b>3:00 - 4:00 pm</b>	<b>Chapel Theatre</b>	<b>Woodpecker</b>	<b>Flicker</b>
	Martha Kurtz (CWU) "Training Chemistry Teachers"	Cameon Geyer (Olympic) "Critical Thinking Assignment"	Lance Mayhofer (PASCO Scientific) "Solid State Spectrophotometry"
<b>4:00 - 4:30 pm</b>	John Thompson (LCC) "Greening the Gen. Chem. Lab"	Fryhle, Waldow & Yakelis (PLU) "A Regional Resource: PLU's NMR"	Phil McHale (CambridgeSoft) "Using Queries in ChemDraw"
<b>4:30 - 6:30 pm</b>	<b>Break</b>		
<b>6:30 - 7:30 pm</b>	<b>Dinner</b>		
<b>8:00 - 10:00 pm</b>	After-Dinner Talk: Jerry DeMenna (FUN-SCIENCE Academics Group) <b>"Reading What You Eat"</b>		

<b>Saturday, October 10<sup>th</sup></b>	
<b>8:00 - 9:00 am</b>	<b>Breakfast</b>
<b>9:00 - 9:30 am</b>	<b>Woodpecker</b>
	Vicky Minderhout (Seattle U) "Identifying Learner Needs to Improve Performance"
<b>9:30 - 10:00 am</b>	<b>Flicker</b>
	Karyn Mlodnosky & Dave Reichgott (Cascadia) "The Volatile Nature of Learning Hybridization"
<b>10:00 - 10:40 am</b>	George Kriz (WWU) "Making the Most of ACS Guidelines"
<b>10:00 - 10:40 am</b>	Tim Sorey & Anthony Diaz (CWU) "A Research Based Approach to Pseudo-order Reactions"
<b>10:40 - 11:00 am</b>	<b>Check-Out by 11:00 am</b>
<b>11:00 - 11:50 am</b>	Business Meeting (Woodpecker)
<b>12:00 - 1:00 pm</b>	<b>Lunch</b>
Drive safe! See you next year!	

## *Keynote Address*

**Dr. Christina A. Bailey, California Polytechnic State University (San Luis Obispo)**

### **"Challenges to Change"**

"Nothing endures but change." (Heraclitus c. 535-475 BCE) How has your teaching changed, evolved, adapted over time? For many the answer is "Not much." How can we embrace change and encourage others to do so? Experiences from the development of Cal Poly's Studio Classroom and ongoing developments in adaptive pedagogies will be the focus of this presentation.

### **Afternoon Workshop: "Thinking outside of the test tube"**

The workshop will focus on the attitudes and means to facilitate learning and new approaches to pedagogy.

### **About Dr. Bailey**

Dr. Christina Bailey is Professor and Chair in the Department of Chemistry and Biochemistry at the California Polytechnic State University (San Luis Obispo).

Besides teaching a wide variety of courses, Tina has been the director of the Chemistry Studio Project at Cal Poly for several years. In a "Chemistry Studio classroom" lecture and lab activities are combined into one space, and "students are encouraged to learn science through a continuous cycle of observation, reasoning, and experiment". At a national level, Dr. Bailey is involved in consultations with several colleges that want to implement the "Studio Classroom ideas" at their own institutions.

Dr. Bailey did her undergraduate studies at the College of St. Elizabeth (Morristown, New Jersey), graduating *magna cum laude*. She obtained her doctorate in Chemistry from Purdue University working with Dr. Albert Light. She has been a Visiting professor of Chemistry at both Cornell and Purdue University.

Dr. Bailey has earned numerous teaching awards. She is also the co-author of "Organic Chemistry: A Brief Survey of Concepts and Applications", now in its 6<sup>th</sup> Edition

**Abstracts**  
*(In order of appearance...)*

**JoAnn Peters (Central Washington University) and Deb Simon (Whitman College)**

**“Teaching Chemistry and Art: Why?!?! and How???”**

The presenters have been a workshop leader and a participant in the Chemistry and Art Workshops sponsored by the NSF-funded Center for Workshops in the Chemical Sciences. We will briefly discuss our experiences and present plans for an upcoming workshop at Whitman College. We will describe the Chemistry and Art courses that we are teaching, as well as several specific laboratory exercises and a student research project. The laboratory exercises that we will present are appropriate for, or could easily be adapted to, traditional undergraduate chemistry courses.

**Dharshi Bopegedera, The Evergreen State College**

**“Putting the lab at the center of teaching and using a Lab Practical Exam as a Tool to Assess Student Learning”**

It is no wonder that many of our students need to be reminded often that “chemistry is a laboratory science” because we the instructors pay so much emphasis on learning the concepts in our lectures. As a result we find students who are very capable of solving complex problems on paper but incompetent in the chemistry laboratory. They can “get away with it” considering that they do all their lab work with a lab partner, fill out “data sheets” instead of writing proper lab reports, have all their chemicals and solutions prepared for them, know ahead of time what kind of answers they should be getting in the laboratory, and all that seems necessary to pass the lab class is to show up and do their best!

In this presentation I will discuss how an attempt was made to eliminate these myths about the chemistry laboratory by conducting a lab practical exam (at the end of the academic year) and how it was used as an effective tool to assess student learning. Pros and cons of this approach will also be discussed.

**Mark Bishop, Monterey Peninsula College**

**“Bringing the cost of student textbooks down: A novel approach to publishing and distributing a preparatory chemistry textbook and its tools”**

Textbooks have become hugely expensive, but at the same time, new computer tools have made it easier for individuals to create and distribute quality textbooks without the high overhead of the academic publishers, making it possible to bring costs way down. This presentation describes a learning package called *An Introduction to Chemistry*. Although the package includes a traditional printed textbook of equal quality to those available from the larger publishers, it also includes an Internet site ([preparatorychemistry.com](http://preparatorychemistry.com)) with the complete text and all of its tools available with no user names or passwords. The student cost is between \$0 and \$79.95, depending on whether the student uses the online text or the printed text. Other textbooks in this same market cost from about \$120 to \$160. The various components of the package will be described - PDF files of the text and study guide, flash-based audio presentations, animations, tutorials, glossary quizzes, concept maps, Jmol structures, chapter checklists, and more. There will also be a description of the tools necessary to create your own collection of similar tools.

**Phil McHale, CambridgeSoft**

### **"Drawing Structures and Searching Chemical Databases with ChemDraw from CambridgeSoft"**

ChemDraw is one of the most widely used chemical drawing programs in academia and industry, and in addition to being used for drawing structures, it can calculate properties, name compounds, predict NMR spectra, and calculate reaction stoichiometry. It can also be used to formulate a variety of structure-based queries for searching chemical databases.

In the morning presentation I will introduce ChemDraw to those who might not have used it in the past, covering:

- Drawing tools for chemists and biologists
- Drawing molecules and reactions
- Advanced drawing tools: stereochemistry, polymers, peptides and more
- Analysis tools: calculating properties, predicting NMR spectra, calculating reaction stoichiometry
- Links to 3D visualization and databases

The afternoon part of the talk will describe the use of ChemDraw to formulate structure-based queries to search chemical databases, and will cover:

- Types of structure searches: exact, substructure and similarity
- Drawing substructure queries: variable atoms, variable points of attachment, variable bond types

- Searches will be run in a selection of CambridgeSoft databases including The Merck Index, ChemACX, and Martindale for Scientists.

**Martha J. Kurtz, Central Washington University**

**“New Perspectives in Training Chemistry Teachers”**

In response to the continuing demand for a scientifically literate society and highly qualified middle level and high school math and science teachers, the State of Washington has updated the science standards for students and the criteria for secondary certification. We will discuss these changes and what we, as college chemistry teachers, can do to support the preparation of teachers. We will look at the current competencies for secondary high school teachers and discuss the process for certification. We will review the new Middle Level Science Endorsement Competencies in search of chemistry concepts. We will also discuss the newly adopted science standards for K-12 that categorize science concepts into nine “big ideas” in science.

**Cameon Geyer, Olympic College**

**“Critical Thinking Assignment”**

I have developed a writing assignment that addresses three aspects of teaching introductory chemistry that I regard as crucial to giving students a basic understanding of science. These are:

- (1) an understanding and appreciation of the scientific method,
- (2) an introduction to scientific research literature, and
- (3) an introduction to those aspects of critical thinking that are important in science.

Students in their first college chemistry course typically have only a superficial understanding of the scientific method, with only a vague idea of what constitutes a scientific law, and very little comprehension of the difference between a scientific theory and a “theory” as the word is used outside of science. As media consumers, students are bombarded by reports of scientific research results, with little context for understanding what actually lies behind such reports. Students also often have only a slight understanding of what constitutes critical thinking, in particular assessing the validity of information, and its importance in scientific endeavors.

The assignment is entitled *“How Scientific Research is Presented to Nonscientists: An Exploration of the Scientific Method and Critical Thinking.”* During this session you will learn about the

Textbooks have become hugely expensive, but at the same time, new computer tools have made it easier for individuals to create and distribute quality textbooks without the high overhead of the academic publishers, making it possible to bring costs way down. This presentation describes a learning package called *An Introduction to Chemistry*. Although the package includes a traditional printed textbook of equal quality to those available from the larger publishers, it also includes an Internet site ([preparatorychemistry.com](http://preparatorychemistry.com)) with the complete text and all of its tools available with no user names or passwords. The student cost is between \$0 and \$79.95, depending on whether the student uses the online text or the printed text. Other textbooks in this same market cost from about \$120 to \$160. The various components of the package will be described - PDF files of the text and study guide, flash-based audio presentations, animations, tutorials, glossary quizzes, concept maps, Jmol structures, chapter checklists, and more. There will also be a description of the tools necessary to create your own collection of similar tools.

**Phil McHale, CambridgeSoft**

### **“Drawing Structures and Searching Chemical Databases with ChemDraw from CambridgeSoft”**

ChemDraw is one of the most widely used chemical drawing programs in academia and industry, and in addition to being used for drawing structures, it can calculate properties, name compounds, predict NMR spectra, and calculate reaction stoichiometry. It can also be used to formulate a variety of structure-based queries for searching chemical databases.

In the morning presentation I will introduce ChemDraw to those who might not have used it in the past, covering:

- Drawing tools for chemists and biologists
- Drawing molecules and reactions
- Advanced drawing tools: stereochemistry, polymers, peptides and more
- Analysis tools: calculating properties, predicting NMR spectra, calculating reaction stoichiometry
- Links to 3D visualization and databases

The afternoon part of the talk will describe the use of ChemDraw to formulate structure-based queries to search chemical databases, and will cover:

- Types of structure searches: exact, substructure and similarity
- Drawing substructure queries: variable atoms, variable points of attachment, variable bond types



- Searches will be run in a selection of CambridgeSoft databases including The Merck Index, ChemACX, and Martindale for Scientists.

**Martha J. Kurtz, Central Washington University**

**“New Perspectives in Training Chemistry Teachers”**

In response to the continuing demand for a scientifically literate society and highly qualified middle level and high school math and science teachers, the State of Washington has updated the science standards for students and the criteria for secondary certification. We will discuss these changes and what we, as college chemistry teachers, can do to support the preparation of teachers. We will look at the current competencies for secondary high school teachers and discuss the process for certification. We will review the new Middle Level Science Endorsement Competencies in search of chemistry concepts. We will also discuss the newly adopted science standards for K-12 that categorize science concepts into nine “big ideas” in science.

**Cameon Geyer, Olympic College**

**“Critical Thinking Assignment”**

I have developed a writing assignment that addresses three aspects of teaching introductory chemistry that I regard as crucial to giving students a basic understanding of science. These are:

- (1) an understanding and appreciation of the scientific method,
- (2) an introduction to scientific research literature, and
- (3) an introduction to those aspects of critical thinking that are important in science.

Students in their first college chemistry course typically have only a superficial understanding of the scientific method, with only a vague idea of what constitutes a scientific law, and very little comprehension of the difference between a scientific theory and a “theory” as the word is used outside of science. As media consumers, students are bombarded by reports of scientific research results, with little context for understanding what actually lies behind such reports. Students also often have only a slight understanding of what constitutes critical thinking, in particular assessing the validity of information, and its importance in scientific endeavors.

The assignment is entitled *“How Scientific Research is Presented to Nonscientists: An Exploration of the Scientific Method and Critical Thinking.”* During this session you will learn about the

details of this writing assignment and how it has been received by students in both majors and non-majors introductory chemistry classes. Assignment guidelines and a grading rubric will be provided, and samples of student work will be available.

**Lance Mayhofer, PASCO Scientific**

**“Solid State Spectrophotometry at Community College Pricing**

Ocean Optics, the leader in solid state spectrometry, has teamed exclusively with PASCO Scientific to offer a spectrophotometer covering 350-1000 nm in a package of unequaled value. Come to this demonstration and learn how the Amadeus will meet your needs with less size and more durability than your current spec.

**John Thompson, Lane Community College**

**“Adventures in Greening the General Chemistry Lab Curriculum”**

The Lane Community College chemistry faculty spent the last year working on greening our general chemistry laboratory curriculum. The task was much more complicated than expected (surprise!). I will report on the challenges we faced, our process, and the labs we produced.

**Craig Fryhle, Dean Waldow and Neal Yakelis, Pacific Lutheran University**

**“A Regional Resource at Pacific Lutheran University for 500 MHz Nuclear Magnetic Resonance Spectrometry”**

A new 500 MHz nuclear magnetic resonance (NMR) spectrometer at Pacific Lutheran University (PLU) with solid and liquid sample capabilities provides a resource for schools and industries in the south Puget Sound area. Regional two- and four-year colleges can request analysis time on the instrument. Solution samples may be run by trained visitors who come on-site, or by PLU staff who set up analysis runs using samples delivered to PLU. Automated liquid sample changing with email data delivery provides routine one- and two-dimensional NMR spectra to classes of almost any size. Web-based remote operation of the instrument is possible, and can include webcam video and audio communication links to the NMR laboratory. The new NMR spectrometer has been incorporated into undergraduate teaching, student-faculty research, and K-12 outreach activities at PLU. Research and upper

division students have hands-on use of the instrument for projects ranging from organic synthesis to polymer chemistry, and in courses such as the Organic Special Projects Laboratory and Instrumental Analysis. While primarily supporting research and teaching at PLU, the new 500 MHz NMR is an instrumental resource that can enrich programs at other area institutions in the south Puget Sound area.

### **Dr. Jerry DeMenna, FUN-Science Academics Group**

#### **“Nutritional Labeling Lies!” = Reading what you “eat”**

QUESTION: You are a manufacturer of a Cream-filled Chocolate Wafer Cookie... commonly known as Oreos (Nabisco), Hydrox (Keebler), Zeer-Ohs! (Voortman), Double-Os! (Meijer) and a host of other names. By law, you must perform a Nutritional Analysis of the “complete” Cookie product and verify its content on the Nutritional Label, but practically speaking; how do you sample part of a production batch of over 5 million non-homogeneous items (i.e.: Cookies) and expect to get anything that is statistically significant?

ANSWER: You can’t... and the plethora of Government guidelines and regulations allows you to legally “lie” about the values put on a Food’s Nutritional Label. We’ll actually evaluate the tremendous variability in labeled Nutritional content for a variety of food products and demonstrate analytically unacceptable precision that these Government guidelines allow. “Free” on the label does not always mean the food is “free” of that component... and “Light” and “Low” are relative terms. Learn from the “lies” and eat better... maybe live healthier, too!

### **Vicky Minderhout, Seattle University**

#### **“Identifying Learner Needs to Improve Student Performance”**

One of the first tasks for a class instructor is to discover, validate, and classify the learning needs of the students. Some common learner needs are motivation, making connections to prior knowledge, and building skills. The needs of a learner represent the gap between what the learner wants to get out of the learning experience and his or her current state of knowledge, skill, and enthusiasm. It is important to recognize these needs at the start of a learning experience because it will allow us to prepare a teaching approach based on learner needs and best practices from research into how people learn. We will discuss techniques for eliciting and validating student needs and how to merge learner needs with instructor goals.

**Karyn Mlodnosky and David Reichgott, Cascadia Community College**

***“The Volatile Nature of Learning Hybridization”***

Hybridization is taught in the General Chemistry curriculum in addition to most Introductory and Preparatory curricula. Our experience is that this learning is “volatile”, that is, when you look for the prior learning a year later in Organic Chemistry, it appears to have evaporated. The authors have collaborated over the past two years to improve content retention with limited success. We would like to explore with you the reasons why learning hybridization is challenging, and to exchange ideas on making its retention more successful.

**George S. Kriz, Western Washington University**

***“ACS Guidelines for Chemistry in Two-Year College Programs: Making the Most of the Guidelines in Tough Times”***

Community colleges play a vital role in training the 21<sup>st</sup> century workforce by providing access to higher education and fostering success for a diverse student body. The recently released *Guidelines for Chemistry in Two-Year College Programs* seeks to promote institutional excellence and increase communication between community college chemistry programs and their partners in education, industry, and government. This paper will provide an overview of the guidelines, and develop strategies for raising awareness, increasing the use of the guidelines, and leveraging their impact. The audience will be asked to consider strategies to increase the effectiveness of the guidelines through a combination of group discussion and role playing.

**Susan Brookhart and Peter Ritson, Clark College**

***“What is important in a GOB chemistry class?”***

People in Health Science fields are a critical part of our society. While faculties within the science departments have a continuing commitment to provide experiential, hands-on learning, currently no standard set of processing skills is established. Additionally, content knowledge is largely driven by textbooks and standardized tests rather than a systemic review of what our Health Science practitioners need. Feedback from pre-health students and other pre-health instructors suggests that the traditional “Nursing Chemistry” curriculum is not serving our students as well as desired. Students who complete our first quarter GOB class have not systematically developed processing skills because they are not

outlined visibly nor assessed methodically. At Clark College, our conversation began with surveys of science, math, nursing and dental hygiene faculty to select core processing skills. We are now beginning a redesign of our first quarter GOB class.

**Timothy L. Sorey and Anthony Diaz, Central Washington University**

**“A Research-Based Approach to Learning Pseudo-Rate Reactions”**

A laboratory experiment was designed for upper division chemistry majors to solve a pseudo-rate constant by incorporating mathematical modeling, technological measuring, and analytical calculating. During this six hour lab, the instructor fills the role of principal investigator as students interact researchers who co-construct theoretical mathematical models of metal-ligand chemistry. Students then apply first order reaction conditions for the Nickel II/Pyridine-2-azo-p-dimethylaniline complex ( $\text{Ni}^{2+}$ /PADA) with  $\text{NH}_3$  reaction, collect spectroscopic data, and calculate pseudo-rate constant values using Beer-Lambert Law from their kinetics data. This research-based approach applies multiple supporting teaching strategies that chemists recognize in solving research problems. Student lab results within *CHEM 383: Physical Inorganic Chemistry Laboratory* will be reported from the 2008 and 2009 Spring Quarters, where students apply measurement technology of MicroLab FS522 software and hardware systems and calculation technologies from Microsoft's EXCEL.

## Participants (alphabetically)

Last Name	First name	Institution	e-mail
Ashworth	Kathy	Yakima Valley Community College	kashworth@yvcc.edu
Bailey	Marci	Linn-Benton Community College	Marci.Bailey@linnbenton.edu
Bailey	Tina	Cal Poly San Luis Obispo	cbailey@calpoly.edu
Bailey	Karl	Clark College	kbailey@clark.edu
Baldwin	Ted	Olympic College	tbaldwin@oc.ctc.edu
Berg	Carole	Bellevue College	cberg@bellevuecollege.edu
Bishop	Mark	Monterey Peninsula College	mbishop@mpc.edu
Bopegedera	Dharshi	The Evergreen State College	bopegedd@evergreen.edu
Brackett	Anne	Everett Community College	abrackett@everettcc.edu
Brookhart	Susan	Clark College	sbrookhart@clark.edu
Carriagan	Kathy	Portland Community College	kcarriga@pcc.edu
Crochet	Amanda	Clark College	acrochet@clark.edu
DiBari	John	Yakima Valley Community College	jdibari@yvcc.edu
Drak	Jacqueline	Bellevue College	jdrak@bellevuecollege.edu
Eastman	Brandy	Tacoma Community College	beastman@tacomacc.edu
Endsley	Stephanie	South Seattle Community College	SEndsley@sccd.ctc.edu
Fabry-Asztalos	Levente	Central Washington University	fabryl@cwu.edu
Fattaleh	Nadine	Clark College	nfattaleh@clark.edu
Fiorini	Gina	Bellevue College	gina.fiorini@bellevuecollege.edu
Fryhle	Craig	Pacific Lutheran University	fryhle@chem.plu.edu
Glavin	Jenny	Bellevue College	glavinjenny@gmail.com
Goldston	Brett	Bellevue College	bgoldsto@bellevuecollege.edu
Gorman	Anna	Tacoma Community College	agorman@tacomacc.edu
Grant	Karen	Columbia Basin College	kgrant@columbiabasin.edu
Greyer	Cameon	Olympic College	cgeyer@olympic.edu
Hendrickson	Shane	Wenatchee Valley College	shendrickson@wvc.edu
Hong	Jackie	North Seattle Community College	jhong@sccd.ctc.edu
Khakimova	Guzel	Bellevue College	gkhakimo@bellevuecollege.edu
Kiebertz	Bob	Olympic College	rkiebertz@olympic.edu
Knutsen	Roger	Green River Community College	rknutsen@greenriver.edu
Kontulis	Mark	Everett Community College	mkontulis@everettcc.edu
Kriz	George S.	Western Washington University	George.Kriz@wwu.edu
Kuehnert	Linda	Shoreline Community College	lkuehner@shoreline.edu
Kurtz	Martha	Central Washington University	kurtzm@cwu.edu
Logan	Richard	Wenatchee Valley College	rlogan@wvc.edu
Lundquist	Wendy	Green River Community College	wlundquist@greenriver.edu
Lyle	Cathy	Bellevue College	clyle@bellevuecollege.edu
Mayer	Jennie	Bellevue College	jmayer@bellevuecollege.edu
Mazhari	Sam	Yakima Valley Community College	smazhari@yvcc.edu
Minderhout	Vicky	Seattle University	vicky@seattleu.edu
Mitchell	Dan	Bellevue College	dmitchel@bellevuecollege.edu
Mixon	April	Clark College	amixon@clark.edu
Mlodnosky	Karyn	Cascadia Community College	kmlodnosky@cascadia.edu

Last Name	First Name	Institution	e-mail
Morasch	Ralph	Pierce Community College	rmorasch@pierce.ctc.edu
OBrien	Mary	Edmonds Community College	mobrien@edcc.edu
Olsen	Katy	Pierce College	kolsen@pierce.ctc.edu
Owens	Jerry	Shoreline Community College	jowens2@shoreline.edu
Peters	JoAnn	Central Washington University	petersj@cwu.edu
Powell	Steve	Everett Community College	spowell@everettcc.edu
Price	Heather	Highline Community College	hprice@highline.edu
Randall	Jack	Vernier Software & Technology	jrandall@vernier.com
Reichgott	David	Cascadia Community College	dreichgott@cascadia.edu
Ritson	Peter	Clark College	pritson@clark.edu
Sandhu	Perminder	Bellevue College	psandhu@bellevuecollege.edu
Schmitt	Bob	Tacoma Community College	rschmitt@tacomacc.edu
Selfe	Sara	Edmonds Community College	sara.selfe@edcc.edu
Shelley	Chris	Bellevue College	cshelley@bellevuecollege.edu
Simon	Deberah	Whitman College	simondm@whitman.edu
Singh	Sumita	Everett Community College	ssingh@everettcc.edu
Sorey	Timothy	Central Washington University	soreyt@cwu.edu
Swift	Tom	Varian	Tom.swift@varianinc.com
Symon	David	Edmonds Community College	david.symon@edcc.edu
Terjeson	Robin	Retired - Clark College	robinterjeson@yahoo.com
Thomson	John	Lane Community College	thomsonj@lanecc.edu
Thorsell	David	Seattle University	dlt@seattleu.edu
Villarba	Marie	Seattle Central Community College	mvillarba@sccd.ctc.edu
Vo	Loan	Clark College	lvo@clark.edu
Waldow	Dean	Pacific Lutheran University	waldow@plu.edu
Whitfield	Mary	Edmonds Community College	mary.whitfield@edcc.edu
Wick	Doug	Seattle Central Community College	Dwick@sccd.ctc.edu
Wood	Ted	Pierce Community College	twood@pierce.ctc.edu
Yakelis	Neal	Pacific Lutheran University	yakelis@chem.plu.edu
Yetter	Jaclyn	Edmonds Community College	jaclyn.yetter@edcc.edu

## 2009 WCCTA Exhibitors

<b>Vendors</b>	<b>Company</b>	<b>e-mail</b>
Carole Berg	Puget Sound Section ACS	cberg@bellevuecollege.edu
Mark Bishop	Chiral Publishing Company	bishopmark@comcast.net
William Davis	WH Freeman Hayden-McNeil	wdavis@bfpwpub.com
Jerry DeMenna	MeasureNet Technology Ltd.	ChemChek@aol.com
Bryan Endreson	Cengage Learning	bryan.endreson@cengage.com
Gordon Fromm	Extech Ltd.	gfromm@teleport.com
Nancy Gregorio	EDU-CHEM Innovations	Sales@edu-chem.com
Phil McHale	CambridgeSoft	pmchale@cambridgesoft.com
Amelia Keeney	McGraw-Hill	amelia_keeney@mcgraw-hill.com
Peggy Lucas	McGraw-Hill	Peggy_Lucas@mcgraw-hill.com
Lance Mayhofer	PASCO Scientific	most@pasco.com
Jack Randall	Vernier Software & Technology	jrandall@vernier.com
Tom Swift	Varian	Tom.swift@varianinc.com
Kris Yesley	WH Freeman Hayden-McNeil	kyesley@bfpwpub.com



## Participants (by institution)

Last Name	First Name	e-mail	Institution
Berg	Carole	cberg@bellevuecollege.edu	Bellevue College
Drak	Jacqueline	jdrak@bellevuecollege.edu	Bellevue College
Fiorini	Gina	gina.fiorini@bellevuecollege.edu	Bellevue College
Glavin	Jenny	glavinjenny@gmail.com	Bellevue College
Goldston	Brett	bgoldsto@bellevuecollege.edu	Bellevue College
Khakimova	Guzel	gkhakimo@bellevuecollege.edu	Bellevue College
Lyle	Cathy	clyle@bellevuecollege.edu	Bellevue College
Mayer	Jennie	jmayer@bellevuecollege.edu	Bellevue College
Mitchell	Dan	dmitchel@bellevuecollege.edu	Bellevue College
Sandhu	Perminder	psandhu@bellevuecollege.edu	Bellevue College
Shelley	Chris	cshelley@bellevuecollege.edu	Bellevue College
Bailey	Tina	cbailey@calpoly.edu	Cal Poly San Luis Obispo
Mlodnosky	Karyn	kmlodnosky@cascadia.edu	Cascadia Community College
Reichgott	David	dreichgott@cascadia.edu	Cascadia Community College
Fabry-Asztalos	Levente	fabryl@cwu.edu	Central Washington University
Kurtz	Martha	kurtzm@cwu.edu	Central Washington University
Peters	JoAnn	petersj@cwu.edu	Central Washington University
Sorey	Timothy	soreyt@cwu.edu	Central Washington University
Bailey	Karl	kbailey@clark.edu	Clark College
Brookhart	Susan	sbrookhart@clark.edu	Clark College
Crochet	Amanda	acrochet@clark.edu	Clark College
Fattaleh	Nadine	nfattaleh@clark.edu	Clark College
Mixon	April	amixon@clark.edu	Clark College
Ritson	Peter	pritson@clark.edu	Clark College
Vo	Loan	lvo@clark.edu	Clark College
Grant	Karen	kgrant@columbiabasin.edu	Columbia Basin College
OBrien	Mary	mobrien@edcc.edu	Edmonds Community College
Selfe	Sara	sara.selfe@edcc.edu	Edmonds Community College
Symon	David	david.symon@edcc.edu	Edmonds Community College
Whitfield	Mary	mary.whitfield@edcc.edu	Edmonds Community College
Yetter	Jaclyn	jaclyn.yetter@edcc.edu	Edmonds Community College
Brackett	Anne	abrackett@everettcc.edu	Everett Community College
Kontulis	Mark	mkontulis@everettcc.edu	Everett Community College
Powell	Steve	spowell@everettcc.edu	Everett Community College
Singh	Sumita	ssingh@everettcc.edu	Everett Community College
Knutsen	Roger	rknutsen@greenriver.edu	Green River Community College
Lundquist	Wendy	wlundquist@greenriver.edu	Green River Community College
Price	Heather	hprice@highline.edu	Highline Community College
Thomson	John	thomsonj@lanecc.edu	Lane Community College
Bailey	Marci	Marci.Bailey@linnbenton.edu	Linn-Benton Community College
Bishop	Mark	mbishop@mpc.edu	Monterey Peninsula College
Hong	Jackie	jhong@sccd.ctc.edu	North Seattle Community College
Baldwin	Ted	tbaldwin@oc.ctc.edu	Olympic College
Greyer	Cameon	cgeyer@olympic.edu	Olympic College

<b>Last Name</b>	<b>First Name</b>	<b>e-mail</b>	<b>Institution</b>
Kieburz	Bob	rkieburz@olympic.edu	Olympic College
Fryhle	Craig	fryhle@chem.plu.edu	Pacific Lutheran University
Waldow	Dean	waldow@plu.edu	Pacific Lutheran University
Yakelis	Neal	yakelis@chem.plu.edu	Pacific Lutheran University
Olsen	Katy	kolsen@pierce.ctc.edu	Pierce College
Morasch	Ralph	rmorasch@pierce.ctc.edu	Pierce Community College
Wood	Ted	twood@pierce.ctc.edu	Pierce Community College
Carriagan	Kathy	kcarriga@pcc.edu	Portland Community College
Terjeson	Robin	robinterjeson@yahoo.com	Retired - Clark College
Villarba	Marie	mvillarba@sccd.ctc.edu	Seattle Central Community College
Wick	Doug	Dwick@sccd.ctc.edu	Seattle Central Community College
Minderhout	Vicky	vicky@seattleu.edu	Seattle University
Thorsell	David	dlt@seattleu.edu	Seattle University
Kuehnert	Linda	lkuehner@shoreline.edu	Shoreline Community College
Owens	Jerry	jowens2@shoreline.edu	Shoreline Community College
Endsley	Stephanie	SEndsley@sccd.ctc.edu	South Seattle Community College
Eastman	Brandy	beastman@tacomacc.edu	Tacoma Community College
Gorman	Anna	agorman@tacomacc.edu	Tacoma Community College
Schmitt	Bob	rschmitt@tacomacc.edu	Tacoma Community College
Bopegedera	Dharshi	bopegedd@evergreen.edu	The Evergreen State College
Swift	Tom	Tom.swift@varianinc.com	Varian
Randall	Jack	jrandall@vernier.com	Vernier Software & Technology
Hendrickson	Shane	shendrickson@wvc.edu	Wenatchee Valley College
Logan	Richard	rlogan@wvc.edu	Wenatchee Valley College
Kriz	George S.	George.Kriz@wwu.edu	Western Washington University
Simon	Deberah	simondm@whitman.edu	Whitman College
Ashworth	Kathy	kashworth@yvcc.edu	Yakima Valley Community College
DiBari	John	jdibari@yvcc.edu	Yakima Valley Community College
Mazhari	Sam	smazhari@yvcc.edu	Yakima Valley Community College



<http://www.wccta.org/news.php>

WCCTA Web Site The WCCTA (Washington College Chemistry Teachers Association) web site includes a large array of services including forums, a shout box, user registration, articles, FAQs, News, and much more. In you are interested in the WCCTA, [register](#) as of user of this web site and contribute to the online WCCTA community!

## wccta -- Washington College Chemistry Teachers Association Email List

### About wccta

English (USA)

Welcome to the information page for the Washington College Chemistry Teachers Association (WCCTA) Email List. This list is for members and friends of the WCCTA. It is intended for communications relevant to WCCTA business, conferences, and professional discussions about the art of teaching chemistry. It is not for postings of a commercial nature.

Subscriptions to this list will be permitted for individuals who already hold a position in chemistry higher education in Washington (or nearby in bordering states), or who are seeking employment as a Washington college chemistry teacher. Please use an email address with a suffix that indicates your affiliation with an institution of higher education, if you have such an address. Or, please explain your affiliation to higher education through an email to [fryhle@chem.plu.edu](mailto:fryhle@chem.plu.edu), the list moderator.

We hope that you find the messages posted to this list stimulating and informative.

Information about UNSUBSCRIBING from this list is given at the bottom of this page.

When you reply to a message from the list it will be automatically addressed only to the author of the original message and not to the list as a whole. If you wish for your reply to be shared with all of the list subscribers then you must include the list's email address in your reply.

Note that attachments are allowed on this list, but that for the sake of security and economy of bandwidth they are limited to 40 Kb. Please be judicious about decisions to send attachments. If you need to send a larger attachment, please contact one of the list administrators (see below).

To see the collection of prior postings to the list, visit the [wccta Archives](#).

### Using wccta

To post a message to all the list members, send email to [wccta@chem.plu.edu](mailto:wccta@chem.plu.edu).

You can subscribe to the list, or change your existing subscription, in the sections below.

## Subscribing to wccta

Subscribe to wccta by filling out the following form. You will be sent email requesting confirmation, to prevent others from gratuitously subscribing you. Once confirmation is received, your request will be held for approval by the list moderator. You will be notified of the moderator's decision by email. This is also a private list, which means that the list of members is not available to non-members.

Your email address:

Your name (optional):

You may enter a privacy password below. This provides only mild security, but should prevent others from messing with your subscription. **Do not use a valuable password** as it will occasionally be emailed back to you in cleartext.

If you choose not to enter a password, one will be automatically generated for you, and it will be sent to you once you've confirmed your subscription. You can always request a mail-back of your password when you edit your personal options. Once a month, your password will be emailed to you as a reminder.

Pick a password:

Reenter password to confirm:

Which language do you prefer to display your messages?

English (USA)

Would you like to receive list mail batched in a daily digest?

No  Yes

## wccta Subscribers

*(The subscribers list is only available to the list members.)*

Enter your address and password to visit the subscribers list:

Address:

Password:

To unsubscribe from wccta, get a password reminder, or change your subscription options enter your subscription email address:

If you leave the field blank, you will be prompted for your email address

---