

chemistry@wwu

Chemistry Department • Western Washington University
Newsletter for Alumni and Friends of the Chemistry Department

Number 9 Spring 2008

Message from the Chair



“Who is that” you may ask yourself when you look at the picture that accompanies the “Message from the Chair” for this edition of the newsletter. As many of you are aware, Mark Wicholas retired from the Chemistry Department in June 2007 after serving as department chairman since 1982. To say the least, I have found that his departure has left a very large pair of shoes to fill, but his extraordinary dedication and commitment to the department has left us all well positioned to continue the tradition of excellence in teaching and research. Thanks to Mark’s legacy and the opportunity to support great colleagues and students, I look forward to serving the department as chairman over the next few years.

Two of the mainstays of the organic chemistry program, Don Pavia and Gary Lampman, retired in December of 2007. Gary had been on the faculty for 43 years and Don 37. Gary continues to teach for us and mentor students and Don makes regular appearances

at lunch. We have had a very busy year recruiting new faculty with four searches. To date, we have been successful in making three tenure track hires. John Gilbertson has been hired for inorganic chemistry, Greg O’Neil for organic chemistry, and Serge Smirnov for biochemistry. John obtained his PhD at the University of Oregon and did postdoctoral work at Trinity University. Greg earned his PhD at the University of Colorado and is currently performing postdoctoral work at the Max-Planck Institut für Kohlenforschung (Germany). Serge Smirnov obtained his PhD from the State University of New York at Stony Brook and was a postdoc at Boston University. We are excited about the potential that Greg, John, and Serge bring to our department as teachers and research mentors. In addition to chemistry hires, the AMSEC program, directed by our David Patrick, has hired Janelle Ledger. She obtained her PhD in physics at the University of California-Santa Cruz and is completing a postdoc in chemistry at the University of Washington. Janelle will have appointments in both the physics (primary) and chemistry departments. Although housed in the physics department, she will also teach courses and mentor research students in chemistry.

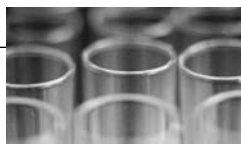
The continued high research productivity of students and faculty has left us in dire need of additional space to perform our work. Thankfully, the legislature has provided funds to support a major renovation of the chemistry building. The construction work is slated to begin in September of 2008. This renovation will convert much of the “back” portion of the second floor (currently used for a classroom, computer lab, and departmental office complex) into research labs and instructional lab space for chemistry and biology. Upon completion of the project in the fall of 2009, the new departmental office and conference room will be on the second floor and a student computer lab and a new large classroom will be on the third floor. Although the construction promises to present a host of challenges, we are all looking forward to the results.

Next time you are on campus, we invite you to stop by and say hello and see first hand all of the exciting things that are going on in your department. We will have many stories, faces, and spaces to share with you during your visit.

inside:

Retired Faculty	3
Current Faculty	6
Graduation	9
Awards	10
Scholarships	11
Alumni News	12
Annual Colloquium	14
Thank You	15
Questionnaire	16

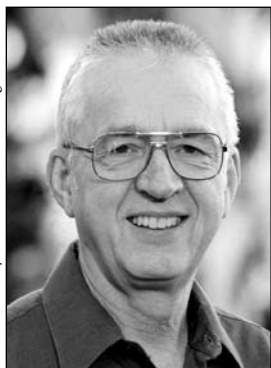
~Steve Gammon



Spring 2008

Message from the Editor

Kelly Heese/ WWU Publishing Services



Retirement brings more opportunity to travel. In May 2007, I spent a week in Venice with my daughter Amy, son-in-law Andreas, and grandson Holden, which was then followed by a Rick Steves tour of Florence. My first visit to Italy was filled with visual and gastronomic delights.

I want to thank everyone who made contributions to the text of the newsletter. Gary Lampman and I did the planning while Bernadette Davidson and Denice Hougen collected much of the information. Thank you to my wife, Judy, who carefully proof-read the entire newsletter. Chris Baker and Kim Baldrige of Publishing Services were responsible for design and production. In addition, we gratefully acknowledge the Research Corporation/Murdoch Charitable Trust who paid for the printing. We invite you to fill out an alumni questionnaire that you will find on the last page. You may also contact the department at the following e-mail address: Chemdept@chem.wvu.edu.

I encourage you to view our website (www.chem.wvu.edu) that has current information about departmental activities and copies of previous newsletters. This site is maintained by Steven Emory.

~Sal Russo

In Memoriam

Lowell P. Eddy was born in 1920, in Portland, Oregon, and died on September 10, 2007, in Bellingham. His wife, Caroline, died in September 2005. The couple was married for nearly sixty years. He is survived by 3 children, 6 grandchildren, 10 great-grandchildren, and 3 great-great-grandchildren.

During World War II, Lowell served in the Army in the Philippine Islands and as part of the occupation in Japan. Work at Puget Sound Pulp and Paper Company brought Lowell and his family to Bellingham in the early fifties.

Lowell was on the chemistry faculty from 1957 until his retirement in 1985. He was for many years an active member and deacon in the First Christian Church, where he also taught Sunday School for adults. He was a member of the Kulshan Kiwanis club and participated in the Liar's Club (a group of men who gathered to tell stories). He had many hobbies including remodeling, gardening, stone polishing and cutting, and silversmithing.

Toby Ligon and Rebecca Swanson accept an Honorable Mention award at the 2008 ACS meeting in New Orleans for Student Affiliate activities in the Chemistry Department.



Faculty

Gary Lampman Retires



A long time ago, Gary Lampman joined the faculty at then Western Washington State College! He was a young recently-minted PhD who joined with the existing chemistry faculty that consisted of Marian Besserman, Lowell Eddy, Andy Frank, Fred Knapman, and Ed Neuzil. Gary first heard of Western through Fred Knapman who at that time was working with

Gary's research mentor, Professor Ken Wiberg, at the University of Washington. Fred told Gary about the great things going on in Bellingham. When Gary moved with Wiberg's group to Yale in 1962, he remembered what he had heard about Western. After completing his PhD thesis, he had the opportunity to interview at Western. Gary joined the faculty in the fall of 1964 along with Sea Bong Chang.

The middle to late 1960s was a time of great change at Western. That included hiring new faculty at a brisk pace. John Whitmer, Don King, John Miller, Bill Wilson, George Kriz, Mark Wicholas, Sal Russo, Jack Weyh, George Gerhold, John Searle, Joe Crook, Pat McIntyre, and Don Pavia were all brought to Western between 1965 and 1970. Jim MacMillan, a WWU graduate, also joined Western after completing his PhD degree. The enrollment was increasing dramatically. This was the time when many baby boomers were going to college, and larger enrollments meant that we needed more faculty members. We hit a few speed bumps when enrollments plummeted in the early 1970's. Those were lean times. We even decided to share phone lines as a cost cutting measure! The department did survive more or less the "reduction in force". No further permanent hires were made until Gerry Prody joined us in 1984 followed by Mark Bussell in 1990. The department is currently embarking on a series of new faculty hires as the "old timers" retire. Gary says that you can be assured that the department is in good hands and the quality will remain high now and in the future.

Gary enjoyed his years at Western. We have always had great students, and Gary found undergraduates in his organic chemistry courses a joy to teach. He served as a mentor to a number of undergraduates and some master's research students over these years. They did outstanding research in Haggard Hall and in the "new" chemistry building. Students played a big role in working with his varied research endeavors. He took great pleasure in having students move on to bigger and better things.

In Gary's opinion, Western's organic chemistry faculty is the pride of the department. That includes George Kriz, Don Pavia, Jim Vyvyan, Tim Clark, and Emily Borda. This group has contributed a great deal to the development of one of the best undergraduate chemistry departments in the country. Although Gary is formally retiring after 43 years, he won't be turning in his key any time soon. He will continue working with some undergraduates in new lab space shared with George and Don. His current interests focus on chemical education. Gary's group has been working on introducing organometallic syntheses into the organic laboratory courses. He continues to work with Don, George, and Randy Engel in the writing of their organic laboratory books and with Don, George, and Jim Vyvyan in the writing of their spectroscopy book.

Gary and Marian have enjoyed traveling to several European destinations over the years. In fact, they were in Italy last year and have a trip to France scheduled for early September. They attended a wedding in New York state in April 2008. They will continue choir activities with the Whatcom Chorale and St. Paul's Episcopal Church choir. Family is close by, with Liz living in rural Whatcom county, and Karl, recently married, living around the corner from Marian and Gary. Grandchildren are an important priority now with two delightful grandchildren to spoil. Gary finds that they are interested in science.

In case you are interested in making donations to the department, and we hope you do that, you may want to consider adding to the endowment that Don, George and Gary have established with the Western Foundation. They anticipate that it will be used for funding visiting speakers that support our undergraduate research program in the department. In establishing the fund, it was their desire to show gratitude and thanks for the many years that students have brought joy into their lives! Currently the endowment has over \$30,000. It needs to grow!

Gary always loves seeing former students. You should feel free to drop by to see how chemistry is changing. Come to one of our end-of-the-year picnics at Fairhaven Park. Introduce yourselves to our excellent faculty. Come see all of our new instrumentation. E-mail is always appreciated, but seeing faces is great, too!



Faculty

Don Pavia Retires



Don Pavia retired in December 2007 after 38 years of teaching at Western. He joined the faculty in 1970 when chemistry was still located in Haggard Hall along with biology and science education.

His early research funded by a PRF Type B grant was on the photochemical and autoxidative rearrangements of pyrylium-3-oxides. Don had a number of talented undergraduate and master's

degree students that worked in a small research lab shared by two or three other faculty and their students. Haggard Hall, dedicated in 1960, was only 10 years old at that time and seemed like a pretty nice facility, but research space was limited. Faculty felt really privileged to have a Varian 60 MHz (!) NMR. Even then, however, just as we do today, students were trained and allowed to run the instrument. The instrumentation that is currently available in the Chemistry Department is quite staggering and is matched by few other undergraduate departments in the nation.

In 1974, Gary Lampman and Don Pavia reviewed the available organic lab manuals and decided to write their own experiments for organic chemistry laboratory. George Kriz joined the project soon thereafter. Today, that lab book is in its 6th edition and has been joined by a microscale version (4th edition) which is now used in the 354/355 labs. Randy Engel, a Western chemistry alumnus (MS 1975) now teaching at North Seattle Community College, joined them in writing the microscale version. Thanks to the efforts of many Western students, and those of Randy, those experiments have worked very well. In 1976, Pavia, Lampman, and Kriz published the first edition of "Introduction to Spectroscopy for Students of Organic Chemistry." That book recently appeared in its fourth edition with Jim Vyvyan as a coauthor.

A major event in the last 20 years was the construction of a new chemistry building. George Gerhold and Don Pavia worked tirelessly to lobby both the administration and the state legislature to fund a new building. They had to prove to the state the necessity of a new, safer laboratory building. Finally, in 1991 a new building was approved and after two years of construction, the department moved in the summer of 1993. Don served as a liaison to the architects which he found to be a very rewarding experience. The department is indebted to Don for his efforts to produce a wonderful up-to-date facility.

Don says the following about his time at Western: "I have really appreciated working at Western all these years – it has been a 'dream job.' There isn't another department on campus that has had such a supportive and collegial group of faculty. The students have also been great and have been highly involved in the department's activities as well as the development of my own career. I have especially enjoyed working with my colleagues Gary Lampman and George Kriz. We didn't always agree, but over the years we learned to work together seamlessly."

Don looks forward to retirement and some time to do "whatever he wants to do." He expects to be involved in writing chemistry texts for the foreseeable future. In addition, he enjoys woodworking and model building. Whenever possible, he relaxes by working on a large model railroad layout. He loves local history and is now quite involved in the Great Northern Railway and Skykomish Historical Societies. Don's wife, Neva, continues to enjoy substitute teaching in math and science in several of the local high schools. Their older son, Morgan, graduated from Pacific Lutheran University with a history major about 5 years ago. Their other two children, Kevin and Bronwyn, are both attending Western. Kevin is a geology major while Bronwyn is studying art. Don expects to keep in contact with the Chemistry Department and perhaps will see you there at a seminar or other group event. He thanks everyone "for a great ride."

74	183.85	99	(252)	52	127.60	86	(222)
W	Es	Te	Rn				
Tungsten	Einsteinium	Tellurium	Radon				

6	12.011	2	4.003	74	183.85	53	126.9	16	32.07	112	(270)	39	88.91
C	He	M	I	S	Tr	Y							
Carbon	Helium	Tungsten	Iodine	Sulfur	Treatium*	Yttrium							



Faculty

Mark Wicholas Retires



Mark Wicholas retired in June 2007 after 40 years in the department with the last 25 years as department chair. He reports that retirement is great! He recommends it to everyone and advises not to wait as long as he did. In the beginning, Mark was recovering from foot surgery at the end of May 2007, so that slowed him down for a while. Now he is back to full speed and can concentrate on important

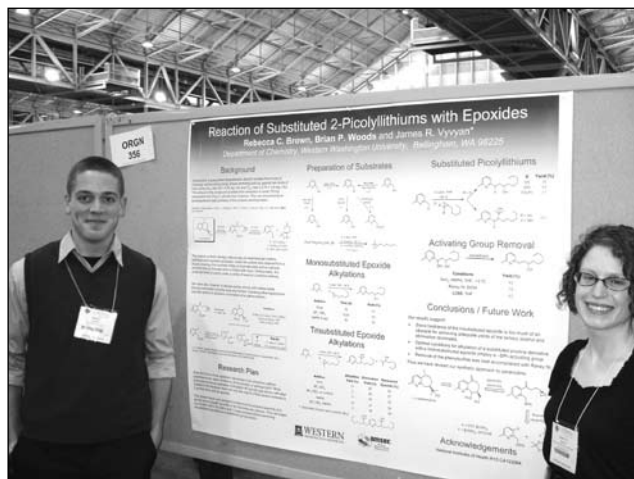
things ahead, specifically travel. He was in Guatemala for three weeks in February/March 2008 as a tourist with no specific itinerary. He is still active in chemistry and is a national councilor in the American Chemical Society representing Puget Sound Section. In this capacity, he attended the national meeting in New Orleans in April. Later in spring, he goes to Germany to visit friends and travel from there to Portugal. A trip to New Zealand is being planned for January 2009.

Mark's contact with the department continues. He is there writing papers based on the work of his last two research students who finished in June 2007. He is working hard to see that their work is published. Mark enjoys following the careers of his students and knowing that their time in the department

and research lab at WWU made a difference. When he went to the national ACS Meeting in New Orleans in April, he visited Jake Soper, a former research student. Jake is now an Assistant Professor of Chemistry at Georgia Tech, and presented four research papers at the meeting.

At this point, Mark asks for your help in keeping undergraduate research vital and funded in our department. The university has established a research fund in his name with the interest to be used in support of undergraduate research. We now have over \$20,000 in funds and pledges and would like to see the principal grow as quickly as possible to \$100,000 and beyond. Initially, the fund will be used to support undergraduate travel to regional and national professional meetings. As the fund grows, the department will use it to award ten week summer undergraduate research stipends. Using funds from a very generous Department Development Grant from Research Corporation and the Murdock Charitable Trust, now mostly depleted, we started a tradition seven years ago of sending our students to national meetings where they shared their research results with a professional audience. This is a vital component of each student's development, and it is important to have it continue. So, Mark asks you to share in the future of our students by contributing to this fund. A \$1,000 donation will gain you entry into the President's Club and free parking on campus! Please consider this and contact Denice Hougen or Steve Gammon, the current department chair, for further information.

Brian Woods, Rebecca Brown, and Professor Jim Vyvyan (not pictured) presented a poster at the 2008 national ACS meeting in New Orleans



Faculty

Emory Promoted



Congratulations to Steven Emory who was promoted to Associate Professor and tenured effective September 2007. Steven, a member of the WWU chemistry faculty since 2001, earned his BS from California Lutheran University and PhD from Indiana University where his mentor was Professor Shuming Nie. He was a postdoctoral fellow with Dr. Richard Keller at Los Alamos National Laboratory from 1999-2001.

In 2001, he was the recipient of a Dreyfus Faculty Start-Up Award and a Research Corp Cottrell College Science Grant.

His research group continues to focus on the characterization and use of novel metal and semiconductor nanomaterials in the development of new ultrasensitive chemical methods of detection and identification. Steven's research group has developed two new detection methods based on surface-enhanced Raman scattering properties of colloidal metal nanoparticles and the luminescent properties of semiconductor nanocrystals (i.e. quantum dots). This research is interdisciplinary in nature and therefore exposes students to various aspects of laser spectroscopy, microscopy, biochemistry, molecular biology, photophysics, and materials science.

Steven and his wife, Christy, have two children (Aili is 10 years old and Alec is 5). Steven will be on sabbatical leave during the 2008-2009 academic year at Emory University and Georgia Tech in Atlanta. He plans to use this time to develop new synthesis methods for piezoelectric and magnetic nanoparticles and to expand his current research program into more biological applications.

Vyvyan Receives NIH Grant



James Vyvyan was awarded a \$204,473 grant from the National Institutes of Health to research a naturally occurring compound found in the fruit of an Asian tree that may be useful in treating liver cancer. A small amount of cananodine was isolated by Taiwanese researchers in 2001 from the fruits of the *Cananga odorata* (ylang-ylang) tree which is native to the Philippines and Micronesia.

Various parts of the ylang-ylang tree have been used in Asian folk medicine. It is significant that in vitro testing of cananodine has shown activity against two types of liver cancer cells.

While effective treatments are available for a number of other cancers, liver cancer is generally drug-resistant. Most chemotherapies tested have a low response rate and have not shown increased survival times, giving urgency to development of new chemical compounds to use in treating the disease.

Vyvyan's three-year project funded by this grant will involve developing ways to synthesize cananodine in relatively large quantities. Cananodine has a seven-membered carbocycle fused to a pyridine nucleus (the so-called guaipyridine skeleton), which presents an interesting synthetic challenge. Only a handful of compounds with this structure are known.

Students funded by the grant during the summer of 2007 include Toby Ligon, Hayley Wall, Rebecca Brown, and Brian Woods. They presented posters describing their results at the national meeting of the American Chemical Society held in April 2008 in New Orleans.

Vyvyan, a member of the WWU chemistry faculty since 1997, earned his bachelor's degree from the University of Wisconsin-Eau Claire and a PhD from the University of Minnesota. He was an invited speaker at the 34th National Science Foundation (NSF) Workshop on Organic Synthesis and Natural Products Chemistry in 2004. He was recognized with a Henry Dreyfus Teacher-Scholar Award in 2003 and received an NSF Faculty Early Career Development Award for 2001-2006. Since coming to Western, he has been awarded nearly \$2 million in grants for research and equipment.



Faculty

Progress Toward Engineered Hemoglobin



Spencer Anthony-Cahill was awarded \$183,000 from the National Institutes of Health in 2005-2008 for the development of single-chain hemoglobin which binds oxygen reversibly and cooperatively. A single-chain hemoglobin could more easily be engineered for optimum performance as a blood substitute than the naturally occurring multisubunit complex. That has been a long-term

goal of the research effort in his lab since 1997. The lab has not yet made a single-chain hemoglobin, but this past year they did succeed in expressing a permuted beta globin with a wild-type alpha globin. They recently collected some ligand binding data and hope to have a more complete picture of the effects of the permutation on the function of the new hemoglobin.

His group is also working with the HGL16 permutein of sperm whale myoglobin in which the N-terminal helix is the H-helix and the C-terminal helix is the G-helix and there is a 16 residue linker between the H- and A-helices. Work with permuted myoglobin has yielded some encouraging data in the form of an HSQC NMR spectrum. The challenge now is to find an efficient method for reconstituting apo-permuteins with heme so that more NMR spectra can be recorded. Ultimately, they want to map the backbone dynamics of the permuteins HGL16 and DCL16 using NMR. In the meantime, they are trying to take advantage of a newly-acquired LC-MS instrument to map amide hydrogen exchange in the HGL16 permutein.

Tim Clark Joins Faculty



Tim Clark joined the department in fall 2007 as an assistant professor in organic chemistry. He was born and raised near San Diego, CA, and obtained his BA degree in chemistry at the University of San Diego in 2001. Tim attended the University of California, Irvine for his graduate work, and obtained his PhD in organic chemistry in 2006. His doctoral work with Professor Keith Woer-

pel focused on the use of strained ring silicon compounds in organic synthesis. After completing his PhD, Tim was an NIH postdoctoral fellow at the University of Wisconsin-Madison with Professor Charles P. Casey. His research with Professor Casey was much more inorganic/organometallic than his previous projects, and focused on the synthesis and reactivity of ruthenium boryl complexes.

Tim is currently teaching organic chemistry and initiating his research program. Thus far, he has three undergraduates that are working with him. The group's research interests are focused on the use of organometallic complexes in organic synthesis.

Tim and his wife, Nicole, have a two-year old daughter, Hannah. Nicole is a registered nurse and is very interested and actively involved in childbirth education and assistance. As a family, they have started attending Sacred Heart Catholic Church in Bellingham. They also enjoy family bicycle and hiking trips and look forward to exploring the Pacific Northwest. Tim enjoys playing sports, especially basketball, football, softball, and golf.

Faculty News

In addition to teaching, **Mark Bussell**, is participating in feasibility and planning studies for the Northwest Consortium for Technological Innovation and Development (NCTID). NCTID will include an innovation facility on WWU's proposed waterfront campus in which small and growing technology companies in northwest Washington would partner with WWU faculty and students in research and development projects that enhance the commercial competitiveness of these companies. Thus far, a partnership of the Port of Bellingham, WWU, and a local builder was selected to receive a million dollar award from the state of Washington to remodel a portion of a warehouse on the Bellingham waterfront to provide space for research and

development work focused on the use of advanced composite materials in the fabrication of a prototype high-speed, low-wake passenger ferry.

Chris Daley is now an Assistant Professor of Chemistry at the University of San Diego.

David Patrick and **Brad Johnson** (physics) received a three-year, \$300,000 grant from the National Science Foundation to conduct research into ways to replace the silicon in conventional electronics with organic molecules.

Loren Williams is on leave for the 2007-08 academic year.



Faculty

Clint Spiegel Joins Faculty



Clint Spiegel joined the department in fall 2007 as an assistant professor in biochemistry. After a short adventure in California, Clint is happy to be back in the northwest. He grew up in Forest Grove, Oregon and completed his undergraduate studies in biochemistry and biophysics at Oregon State University. If you ask Clint, he will admit that wherever he currently resides, he will always

bleed orange and black (Go Beavers!). For his graduate studies, Clint attended the University of Washington and enrolled in the Biomolecular Structure and Design program. Clint's doctoral research was completed at the Fred Hutchinson Cancer Research Center, where he studied under Dr. Barry Stoddard. His work there involved using x-ray crystallography, chemical biology, and physical biochemical techniques to study protein cofactors involved in blood coagulation. After graduate school, Clint accepted a position as a postdoctoral scholar in Professor Harry Noller's lab at the University of California, Santa Cruz. While there, he was awarded a postdoctoral fellowship for his studies of ribosome structure and function. During Clint's postdoctoral studies, he discovered a previously uncharacterized mechanism for antibiotic action against the ribosome, which could ultimately lead to the development of novel antibiotic compounds.

The future research efforts in Clint's group will focus on combining his expertise as a protein structural biologist and ribosome biochemist to understand the fundamental mechanisms of ribosome structure and function. In particular, he is interested in understanding how transient protein factors bind to the ribosome and catalyze movement of transfer RNA molecules through the ribosome to synthesize polypeptide chains. His group presently consists of five undergraduates who have started learning the techniques of molecular biology and protein biochemistry. More to come soon!

When Clint is not in the lab or teaching classes, he is actively playing outdoors. At the mercy of Spencer, he has already been properly introduced to mountain biking on Galbraith Mountain (with a few bruises and scrapes to show for it). Clint and his wife, Heather, enjoy playing with their pets (a dog and a cat), heading up to the mountains for backpacking excursions, and playing soccer in the mud.

Candace Thompson



Candace Thompson began teaching general chemistry in fall 2007. She grew up in Skagit Valley and did the first half of her undergraduate work at Whitman College in Walla Walla. After some time off, she finished her undergraduate degree in chemistry at WWU. During her senior year, she joined Steven Emory's research group, working on sulfur-core gold-shell nanoparticle synthesis. She stayed

at WWU to complete her MS, working on an interdisciplinary project with both Steven Emory (analytical chemistry) and Christopher Daley (inorganic chemistry) that involved the development of nanoparticle-based optical probes for single cellular analyte analysis. The goal was to localize pH and Ca²⁺ detection in a single human macrophage cell (white blood cell). She presented her research at both the American Vacuum Society regional meeting, and the ACS national meeting in Chicago, IL. While working toward her MS, she also completed a Certificate in Community and Technical College Teaching through the Continuing and College Education graduate program in Woodring College.

Candace has had a life-long goal of becoming a teacher, and she thoroughly enjoys that aspect of her job. She looks forward to a career in college education, which will include two major efforts: The first involves her research as a chemist that is fueled by intellectual curiosity and the second involves her continued quest to be an effective teacher who can develop curious minds in the classroom.

Her spare time includes active involvement in the local community, spending time with her large extended family, running, and the arts. Candace has played piano since age 5 and enjoys both classical and modern music.



Graduation



RECENT DEGREES

CLASS OF 2006/2007

Congratulations to our graduation class of 2006/07. Graduation honors and immediate post-graduation activities as known to us are in parentheses behind each graduate's name.

MS Chemistry

Autumn Burns

(PhD program in Chemistry, Univ of Wash)

Craig Campbell

(Chemistry Instructor, Skagit Valley College)

James Coats

(Research Scientist, Albany Molecular Research Inc)

Jennifer Johnson

(PhD program in Bio-Inorganic Chemistry, Univ of British Columbia)

Melinda Kangala**Rachel Saunders**

(mother of 2, homemaker)

Laura Stoll

(Medical School, Univ of Wash)

Candace Thompson

(Chemistry Instructor, WWU)

Sian Thornton

(Teaching in Japan)

BA ED Chemistry/ Mathematics

Daniel Mickelson

BA Chemistry

Amy Olson

(Lab Tech, La Belle Inc)

Liz Oxford

(Academic Advisor in Biology, Univ of Arizona)

BS Chemistry and ACS Certification

Jennifer Angelosante

(Presidential Scholar Award; Math Dept Outstanding Graduate Award; Chemistry Dept Research Honors; University Honors Program; Magna Cum Laude; 2nd degree B. S. Math; M.S. Program in Math, WWU)

Jon Askim

(applying to graduate school)

Kevin Bufkin

(MS program in Chemistry, WWU, Patrick Lab)

Chase Carter**Blake Fleischer**

(Science Instructor, Peace Corps, Ghana)

Amy Gaudette

(MS program in Chemistry, WWU, Bussell Lab)

Joseph Gibbons

(Organic Chemist, Edge Analytical Labs)

Nick Gislason

(Chemistry Dept Outstanding Graduate Award; Chemistry Dept Research Honors; University Honors program; Magna Cum Laude; Master's program in Enology/Viticulture Dept, Univ Calif-Davis)

Elizabeth Golden

(Sample Entry Tech, Laucks Testing Labs)

Mallory Higgins**Soontak Kim****Sergey Kochelayev**

(Quality Control Chemist, BioRad)

Toby Ligon

(MS program in Chemistry, WWU, Vyvyan Lab)

Christine Nelson

(Inorganic Chemist, Edge Analytical Labs)

Chung Pak**Katie Pendrak**

(Research Associate, Myriad Pharmaceuticals)

Jacob Pitzer

(seeking employment)

Hiram Rasmussen

(Production Tech, Invitrogen)

Avery Sakshaug

(Materials Chemist, Sienna Technologies)

Brandon Smith

(Service Engineering Tech, Mason County Public Utility District)

Patricia Tillmann

(applying to graduate school)

Dustin Titus

(applying to graduate school)

David Tullis

(Lab Supervisor, Intertek Testing Services)

Lance Visser

(Teaching in Suriname)

Courtney Willis

(Forensic Scientist, Washington State Patrol Crime Lab)

Bradley Zeiger

(Chemistry Dept Research Honors; PhD program in Inorganic/Materials Chemistry, Univ Illinois Urbana-Champaign)

BS Biochemistry

Nicholas Clayville

(pursuing professional bicycle racing)

Laura Costello

(Masters in Health Admin program, Univ of Wash)

Lindsey Foley**Michael Gallo****N. Todd Hauck**

(Dentistry School, Univ of Southern Calif)

Bennett Johnson

(Pediatric Mental Health Specialist, Children's Hospital)

Brandon Lesniak**Heather Marshall****Laura Morton**

(German Academic Exchange program Internship, Dept of Enzyme Technology at Henkel, Dusseldorf, Germany)

Christopher Mullins

(Pharmacy Tech, Fred Meyer; applying to pharmacy school)

Ryan Rosetti

(employed at Hollister-Stier Laboratories)

Lisa Thomas

(PhD program in Molecular Biology/Genetics/Biochemistry, Univ of Calif-Irvine)

Meride Torgerson

(Scribe, North Sound Family Medicine)

Halena VanDeusen

(Chang Biochemistry Award; Chemistry Dept Research Honors; Cum Laude; MS program in Chemistry, WWU, Trent Lab)

Justin Walter

(Post Bac Studies, WWU)



Awards



Front Row, left to right: Halena VanDeusen, Nick Gislason, Derek Paul. Back Row, left to right: Anna Asmundson, Scott Bray, Brad Zeiger, Jenny Novotney

2006/07 Department Awards

Outstanding Chemistry Department Graduate

Nick Gislason

Sea Bong Chang Memorial Biochemistry Award

Halena VanDeusen

Hypercube Scholar

Bradley Zeiger

Outstanding Analytical Student

Anna Asmundson

Outstanding Organic Series Student

Scott Bray

Outstanding Honors Student

Jenny Novotney

CRC Press Freshman Chemistry Award

Derek Paul

VanDeusen Chosen for Award

Halena VanDeusen was chosen as the recipient of the Sea Bong Chang Memorial Award in biochemistry. She began doing scientific research during her sophomore year, when she worked with Lisa Gentile characterizing the glutamate receptor. Over-activation of this receptor during strokes leads to neuron death and memory loss. Halena began a new project with Loren Williams her senior year that involved characterizing the mechanism of RNA folding. Halena shared her research with a variety of audiences, including the RNA Society at an annual meeting in Madison, WI. Halena completed her honors thesis project on this topic.

After graduation, Halena enrolled in the master's program at Western. She is currently working with Carol Trent in the Biology Department to determine the effect of methylated DNA in wasps. Halena plans to pursue a PhD in the future.

Gislason Chosen as Outstanding Graduate

Nick Gislason, the 2006-07 outstanding graduate, and his mentor, David Patrick, were honored at the spring 2007 commencement ceremony. Nick graduated Magna Cum Laude and with honors in chemistry. Previously, he had been selected as the outstanding organic series student in 2003-04 and outstanding analytical chemistry student in 2004-05. Nick was also the recipient of the Jerry Price/Nancy Sherer Chemistry Scholarship.

During his time at Western, he did research on organic molecular thin-films under the guidance of David Patrick. This research led him to be selected as a Beckman Scholar, a prestigious award given nationally to students with outstanding potential and achievements in undergraduate research. He presented his work at numerous national conferences, including a Gordon Conference in New Hampshire, the Materials Research Symposium in San Francisco, a Beckman Scholars Symposium in Irvine, CA, as well as numerous regional conferences across Oregon and Washington. Mentors, colleagues, friends, and family attended his thesis dissertation in the spring.

He is now studying the science of winemaking, working as an intern at O'Shaughnessy Winery in Napa Valley for the 2007 harvest, and will travel to New Zealand for the 2008 vintage. In fall 2008, he will begin the Master's Program in Enology and Viticulture at UC-Davis. His passion for commercial scale fermentation began at Boundary Bay Brewery, where he was a brewer's assistant during his senior year.

Finally, he plans to maintain his role as lead pyrotechnic for the annual Lopez Island July 4th fireworks display well into the future.



Scholarships

Jennifer Angelosante is a Presidential Scholar



Jennifer Angelosante with her research adviser, Chris Daley

Jennifer Angelosante (BS Chemistry and BS Math) was honored at graduation as a WWU Presidential Scholar. This award recognizes graduates for their exceptional scholarship and service to the university and community. Jennifer was active in research for two years in Chris Daley's lab, where she worked on an improved synthesis for $\text{HSCH}_2\text{CH}_2\text{C}(\text{O})\text{NHCH}_2\text{C}(\text{O})\text{NHCH}_2\text{CH}_2\text{SH}$. Her work was published and she also made presentations at several conferences, including the Murdock Charitable Trust Undergraduate Research Conference and the 230th ACS national meeting in Washington, D.C. She was a Math Fellow (tutor) in the Math Department. At the university level, Jennifer served on the College of Science and Technology Strategic Planning Committee.

Jennifer enjoys the hobbies of home brewing beer and of wine making. She is a founding member of the Western Homebrew Association. In connection with this, she did volunteer work at San Juan Vineyards where she helped with the local harvest and wine tasting events.

She has been the recipient of numerous awards and scholarships at WWU, including: the WWU Math Department Outstanding Graduate, Dreyfus Undergraduate Research Grant, Western Foundation Academic Excellence Scholarship, Women in Science Scholarship, and the Chemistry Department 2-year Knapman Scholarship. She is currently enrolled in the WWU MS Math program.

2007/08 Scholarship Recipients

Knapman Senior Renewal

Matthew Holt

Rathmann Foundation

Hayley Wall

Knapman Junior Scholarship

Karla Slenkamp

Barbara French Duzan Biotechnology

Bennett Johnson
Brad Zeiger

Ruth Watts Female Research Scientist

Anna Asmundson

Tuition Waiver Scholarship

Paul Craig
Travis McMahon

Jerry Price/Nancy Sherer

Laura Steffens

Hach Scientific Foundation Chemistry Teaching

Rose Elkins
James Pearson

Verna A. Price

Brooks Ohlson



Front Row, left to right: Matt Holt, Paul Craig, Brooks Ohlson. Back Row, left to right: Travis McMahon, Laura Steffens, Hayley Wall, Karla Slenkamp, Anna Asmundson, Brendan Abolins. Absent: Adam Morris-Cohen

Alumni News

1980's

William "Greg" Cox '82 is a freelance writer with recent publications entitled *52: The Novel*, *Death Defying Acts*, *The 4400: The Vesuvius Prophecy* and has contributed short stories to two recent anthologies, *Star Trek: The Sky's The Limit* and *Tales of Zorro*. More information is available at: <http://www.gregcox-author.com>

Eric Jacobson '84, MEd '91 offers a "doff of the cap to Professors Pavia, Lampman, and Kriz for years of brilliant service. Dr. Kriz's organic chemistry class is still one of the coolest things I've ever done." Eric completed his second year as a civilian logistic analyst for the U.S. Air Force as part of his 20 years of service in uniform. He still lives in Germany and travels extensively, this year visiting New York City (big mistake – his daughter now wants to live on Central Park East), the beaches of Normandy, and Vienna, Austria. He's also an active cyclist and rode portions of the Tour de France course in July for the tenth year in a row. Eric plans to retire to the Black Forest within the next couple of years but asks that we don't tell his relatives, lest they descend upon him in droves!

Michael Schlender '84 was recently promoted to Deputy Laboratory Director for Battelle Memorial Institute, Pacific Northwest National Laboratory, located in Richland, WA.

1990's

Marc Kirchmeier '90 has been promoted to Associate Director with Merck and is a member of the Editorial Advisory Board for Drug Delivery Technology Magazine www.drug-deliverytech.com/about.shtml. He states in a recent e-mail update that "things are going great and we are all well adjusted to life on the east coast, with only one exception. I'm not sure I've fully adjusted to cheering for the Eagles as the Seahawks still shine very brightly. We spent the summer touring the many caverns and caves that Pennsylvania has to offer. Cole turned 9 this year and is now big enough to start rafting rivers. So, next year we plan a 'back to the river' theme. So far, we've only run two of the Pennsylvania rivers and there are another five we would like to run this next spring and summer. Please tell everyone who remembers the class of 1990 hello!"

John Harold '92, MS '94 (Bussell group) is a tenure track faculty member with South Puget Sound Community College (SPSCC). John tells us that SPSCC is building a new Science/Math building with occupancy scheduled for winter 2009. He's been a part of teaching in new science facilities at WWU (moving from Haggard Hall to the current Chemistry Building), Whatcom Community College, and now South Puget Sound Community College!

Anthony Diaz MS '93 (Bussell group) received his PhD from Oregon State in 1996 with Doug Keszler. In 2005, Anthony received tenure and promotion to Associate Professor with the Chemistry Department at Central Washington University. "Nothing real exciting to report after that. Maybe except that I'm in a really good rock band..."

Byron Gates '97, PhD Univ of Wash '01, Postdoc Harvard Univ, is an Assistant Professor and Canada Research Chair in Surface Chemistry at Simon Fraser University. Byron presented a seminar for his alma mater, the WWU Chemistry Dept, in March 2007.

David Germack '97 received his PhD in organic chemistry from Washington University August 2007. David is currently a National Research Council Postdoctoral Fellow at the National Institute of Standards and Technology.

Keith McCrea '97, PhD Univ Calif-Berkeley '01, is a Research Scientist with Polymer Technology Group of Berkeley. Keith visited campus in February 2007 as an invited speaker for the new Advanced Materials Science & Engineering Center program.

Ryan Looper '98, MS '99 (Vyvyan group), PhD Colorado State-Ft Collins '04, completed his Post-Doc at Harvard Univ in 2007, accepted a tenure-track faculty position in the Dept of Chemistry at the University of Utah, got married, moved to Salt Lake City and bought his first house!

Daryl Kaiser '99 completed an MBA in 2005 at the University of Washington, relocated back to Bellingham, and is currently in technical sales with Encore Fruit Marketing, Inc. Daryl married Jamie in March 2006. Since returning to Bellingham, Daryl also allows his former research supervisor, Spencer Anthony-Cahill, to punish him on mountain bike outings on Galbraith Mountain.

Meredith Morgan '99, PhD Duke Univ '04, is now a Senior Scientist with GlaxoSmithKline Consumer Healthcare in New Jersey.

Paul Wadlow '99 has been promoted to SVP Manufacturing Supervisor III with Hollister-Stier Laboratories. "For the past year I have been in charge of the start up operations for a brand new state-of-the-art sterile liquid injectable fill line. We are close to completion and will soon be making pharmaceutical products for commercial use." Also, Paul and Abby just welcomed their second son!



Alumni News

2000's

Christian Holst '00, MS '01 (Vyvyan group) and wife Kim announce with great pleasure the birth of their daughter Amelia. Chris and family are doing great back on the east coast!

Ha Nguyen '00 graduated from Temple University School of Podiatric Medicine. After his residency in Philadelphia, Ha returned to his home town of Tacoma and set up his practice there. He loves his work which keeps him very busy!

Brian Woodruff '00 reports that "after nearly seven years I have left Amgen to pursue an entirely different career path. I will be entering graduate school at the University of Washington in the fall of 2007 in the department of architecture. I'm still living in Seattle with my long-time girlfriend Joan. We like Seattle okay, but expect to move somewhere less expensive and less crowded when I finish school. Give my best to Dr. Bussell and all the other faculty that have probably long since forgotten me!"

Nikki Chin '01, after a recent trip to St. Thomas and the warm sun, continues her work as a dentist with Swanson Dental Associates in Bellevue.

Scott Korlann '01 is finishing a PhD in Materials Chemistry at UCLA. Scott is now married with a little one, daughter Emma!

Bevin Parks-Lee '01, PhD U Oregon '06, has a full life with husband Gary and a blended family of four kids and a new home! Bevin works at Champion Technologies outside of Houston, Texas. Her work is related to corrosion inhibition in oil pipelines and wells.

Joe McLellan '01, MS '03 (Patrick group) received his PhD from the University of Washington in 2007, where he worked in the lab of Younan Xie. Joe then relocated to the east coast after accepting a position as a Senior Scientist with Nano-Terra of Boston.

Amanda Murphy '01, PhD Univ Calif-Berkeley '06, has been awarded a NIH Ruth Kirschstein Postdoctoral Fellowship. Amanda's postdoc position is in the Department of Biomedical Engineering at Tufts University.

Barrett Nelson '01 is a Senior Associate with Amgen, Seattle and recently completed the MBA Program at the University of Washington.

David Schock '01 and his wife **Amy (Kendall) Schock '01** still live "down-under" where David manages the Australian office of Phenomenex in Sydney. He has enrolled at University of Western Sydney in a PhD program in chemistry.

Jeanette Brizendine '03 is the Recycling Project Manager for the City of Federal Way.

Peter Kasselmann '03 is a Lab Technician for Cascadia Community College in Bothell. Peter "lives in the beautiful town of Everett" with his girlfriend and their 100 pound black lab/rottweiler Princess.

Alexei Lissounov '03 stopped by the department recently to catch up with his former research supervisor, Spencer Anthony-Cahill. Alexei will begin medical school in Serbia in 2008.

Andy Morgan '03 and his wife Jamie had a daughter in June 2007. Andy continues to work for Steven Henikoff at Fred Hutchinson Cancer Research Center.

Julie (King) Terry '03 completed her MD at St. Louis University School of Medicine in June 2007 and is currently a resident specializing in Family Medicine at Scott Air Force Base and holds the rank of Captain. Julie and husband Josh have a beautiful baby boy!

Brandon Dietrich '04 is pursuing his PhD in Chemistry at the University of Washington and is engaged to **Abigail Lambert '04**, who is pursuing her PhD in Biochemistry at the University of Washington. Congratulations!

Nicole Mead '04 is employed by Brooks Rand Labs, Seattle, a company that performs trace metal analyses. She has worked her way from lab technician to supervisor of the sample control group. Her long-term career goal is to become a high school teacher. She tutors part-time and is applying to graduate school (Masters in Teaching).

Haley Pugsley '04 announces her engagement to Ryan Jessup. Haley is working towards completion of her PhD in Analytical Chemistry in the lab of Norm Dovichi at the University of Washington.

Melanie Rehm '04 and **Jeff McMahon '05** have purchased their first house just outside of Chicago. Jeff is pursuing his PhD in Chemistry in a joint project between Northwestern University and Argonne National Lab. More importantly, their wedding is set for February 2008 in Italy!

Marisa Bebee '05 is a second year medical student at the University of Washington and "although it can be draining, overall I am enjoying it." Marisa is engaged to Mark Alunni (a fellow WWU alumnus, '06 College of Business and Economics). The wedding and honeymoon are planned for next year "in time to return to start my third year clinical rotations. It is going to be a whirlwind, but I can't wait!"

Alumni News

Jennifer Johnson '05, MS'07 (Vyvyan group) is currently living in Vancouver, BC, working on her PhD in Bio-Inorganic Chemistry in the lab of Martin Tanner at the University of British Columbia.

Erik Kellison '05 is completing his course requirements for pharmacy school here at WWU as a post bac student.

Peggy Leviton '05 married Tom Pratum (WWU Chemistry Dept Research Associate) in June of 2007. "We delayed our honeymoon until November, and had a fabulous time on the Big Island of Hawai'i. So happy to share this news!"

Sean Morgan '05 is completing his second year of dental school at Indiana University. A second son named Noah was born to Sean and his wife in March 2008.

Amalia (Stevenson) Oppie '05. Congratulations to Amalia on her marriage to Nathan Oppie last May of 2007. She is "still working at Sienna Technologies in Woodinville (2 ½ years and going strong) and still loving it!"

Laura Stoll '05, MS '06 (Gentile group) is in her second year of medical school at the University of Washington School of Medicine. "Nothing else is new, just school, school, school!"

Michelle Frome '06 worked immediately after graduation as a volunteer with the nephrology research laboratory at Seattle Children's Hospital Medical Research Center. Michelle then accepted a position as an Environmental Engineer/Scientist with Boeing's Commercial Airlines 737 manufacturing program. "The current big news is that I am saving for and attempting to find affordable housing in the south Seattle area."

Jacqui Hawkins '06 is "still plugging away, trying to discover the secret of life...or just graduating at some point." Jacqui is pursuing her PhD in genetics at Washington University, St. Louis, Missouri.

Sandlin (Preecs) Seguin '06 joined the Bordsky lab at the University of Pittsburgh and is kept very busy with her graduate work, "...looking for small molecule inhibitors of polyoma virus (SV40) replication."

Jennifer Sherin '06 is pursuing training in massage therapy at Ashmead College. "This has been an area of great interest to me for a long time, so a break from chemistry for me while also pursuing other interests such as being in the musical *Brigadoon* and swing dancing!...it was awesome! I had never acted or really even sang much before, so it was a neat opportunity. The show was amazing!"

Jessica Telleria '06 completed a medical community health research project in summer of 2006 in Cali, Colombia. "I was there for nine weeks and had a blast!" She continues work on her medical degree at Stanford University.

Annual Colloquium

Our annual Scholars Day was held on May 18, 2007. There were 22 undergraduate posters, 7 graduate posters, and 3 Honors oral presentations. The keynote speaker was Elsa Reichmanis, Director of the Materials for Communications Research Department at Bell Laboratories. Her talk was entitled "Chemical Design Challenges in Organic and Polymer Materials for Electronic Applications."

For Scholars Day on May 23, 2008, our keynote speaker will be Charles Casey, Emeritus Professor of Chemistry at University of Wisconsin – Madison.

Annual Picnic

You are invited to attend the annual picnic at Fairhaven Park on May 31, 2008 from 12:30 – 4:00 PM. We would love to see you again.



Thank You to Donors

We wish to thank the following alumni and friends of the department who donated to the following Chemistry Department Western Foundation Funds during the 2006/07 academic year. Employers that matched donations are noted in brackets following the donors' names. Donations during the past year

funded a variety of activities, including scholarship matching, academic awards, undergraduate research projects, small equipment purchases, and events for department majors and alumni.

Chemistry Fund

Paul and Cecily Aegerter
Kelly Arntzen and Joseph Erickson
Tom Aeschliman
Gary and Poppy Arvan
James and Gail Assink
Brent Barber
Joel and Rebecca Barton
Alfred and Laurie Belanger
Sophia Berg
David Bishop
John and Gayle Bittinger
James Boaz
Ylisabyth Bradshaw
Nancy Brennan
Allen and Kim Bruce
Jeff Bullock
Gary Burtch
Andrea Buser
Sena Camarata
James Cannon IV
Michael Carpenter [General Motors]
Melissa Chalfant
Jesse and Gloria Close
Ted and Theresa Clowes
Brian Colclazier and Elizabeth Melching [Intel]
Ann Dagle
Joseph Deverich
Anthony Diaz
Brian Diaz
Kathleen Foss-Mollan
Michelle Frome
Lynne and John Galligan
Jennifer Bergen Garner
Michael Gass
John and Tamako Gipson
Raymond and Nancy Gross
Michael and Janna Haas
Paul William Hager
Colin Michael Hall
Karen Halley
Amber Nicole Maria Hamilton
Nordea Hansen
Bruce Alan Harder

John Hatfield
Kristine Herrmann
Joe and Coni Hickey
J.C. and Mary Hickman
Matthew James Higgins
Thomas and Cynthia Hinds
Kathleen Holt
Matthew Jack Hovde
Larry Hubacka
Eric Jacobson
William and Trudy Kindler
Derick Krutsinger
Tom and Lisa LaGrandeur [Eli Lilly]
Abigail Rose Lambert
Gary and Marian Lampman
Gayle Laufer
Peggy Lemmer
Kenneth and Gwen Lennon [IBM]
Brian D. Lewis [Boeing]
John and Heloise Logan
Craig MacGowan
James and Carol MacMillan
Dean and Renee Matson
Jeffrey May
Richard Maynard
Joshua McBee
Dan Miller
Gwen Mills
Scott Mokler [Intel]
Leslie Ann Moore
Leonard Moothart
Karen and Joseph Morse
David Nelson
Dennis Olson
Don Overmiller II
David N. Patsiga
Elaine M. Peterson
John Peterson
John and Sherry Priest
Robert Quinn
Mike L. Radder
Scot and Donna Rassat
Julie Reimer [Weyerhaeuser]

Brian Riley
Kenneth Roberts
Charles Ross
John Rosser
Mark and Martha Sadler
Wesley Sadler
Stephanie Sawhill
Mary Scheibler
Robert and Gennine Scuderi
Kenneth Self
Steven D. Sharpe
Jennie Sheaffer
Brian and Alison Skoczenski
Amalia Stevenson
James Sutton and Michiyo Kaneko
Blas and Bobbie Telleria
Kelly Lyn Tessitore
Gary and Millie Tetrick
Richard Tucker
Timothy Tuura
Thomas Vedvick
Dawn and Robert Wagner
Brett Watts
Robert Williams [Weyerhaeuser]
Richard and Kaye Wojt
Sheryl Wood
Brian Woodruff [Amgen]
Gina Maria Ylitalo
Heather and Alex Zecha

Duzan Scholarship Endowment
Barbara (French) and Stephen Duzan

Hach Science Education Scholarships
Hach Scientific Foundation

Knapman Scholarship Endowment
Janet and Bob Harris

PLK Organic Endowment
George and Carolyn Kriz
Gary and Marian Lampman
Don and Neva (Jones) Pavia



2008 Alumni Questionnaire

Today's Date: _____

Name: _____

WWU degree(s), date(s), Research supervisor (if any): _____

Please update the following if you have any changes or additions:

Other institution(s) degree(s) and date(s): _____

Current employer: _____

Job title and description: _____

Work address: _____

Work phone: _____ Work email: _____

Home address: _____

Home phone: _____ Home email: _____

Which address should be used for mailings? Work? _____ Home? _____

Is this a change? _____

Do you have any news to share in the 2009 Alumni Newsletter?
Information of interest might include job descriptions, promotions, research,
awards, publications, outside interests, and news of your family.

Please complete and return to:

Department of Chemistry
Western Washington University
516 High Street
Bellingham, WA 98225-9150



Kelly Heese / WWU Publishing