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SPECIAL EDITION

Innovations in Graduate Education: More Opportunities and Practical Experience

Editor's Preface

This is the third and last of a three year sequence of special editions of the newsletter. The 2003 edition was a brief history of the Chemistry Department, founded in 1894. The 2004 edition highlighted important changes that are taking place in the first-year undergraduate chemistry education courses serving future chemists (as well as forty majors in other departments and programs). This 2005 edition will bring you up to date on changes occurring in graduate education.

Funding graduate education is always an obstacle. The first article reports an important step forward: The first privately-funded graduate fellowship, the Rosaria Haugland Graduate Fellowship in Chemistry. Following articles describe the graduate recruitment process—qualified students who apply to our department are provided with free transportation and lodging to come and visit before they make their decision about which graduate school to attend. There are no entrance or placement exams, and first-year students enter a rotation system to provide research experience in different areas and help each student find a research group that best fits his or her individual interests. Basic research is still at the core of the program, but now there are opportunities to get more practical experience in teaching and in industrial research through internships. The articles below describe some of the many innovations that are making graduate school more enjoyable and useful.

Elsewhere in this newsletter you will find thoughtful reflections in "Remembering Virgil Boekelheide" and humor and a touch of the past in "Herschel's Poem (or, The Timeless Plight of a Graduate Student)". The newsletter concludes with the familiar alumni, faculty, and staff news and commencement features.—Ed.

Department Head's Perspective

Glancing through the newsletter calls up vivid and warm memories of my colleagues who, starting in the '50s, brought the Department of Chemistry to national and international prominence for its research and instructional programs. As you read about Virgil Boekelheide, among others, I hope that you will also recall warm memories of your years at our department.

This history is part of the development of our future teaching and research programs, described in this newsletter. The establishment of the first privately funded graduate fellowship in chemistry through the generous gift of Rosaria Haugland is of particular importance. Funding graduate students has always been a challenge, and the Rosaria Haugland Graduate Fellowship is a historic step forward. It will strengthen graduate student recruitment and opportunities, particularly for women seeking a career in chemistry. It is appropriate that the gift is announced here, in the special issue highlighting innovations in our graduate program.

The work of our faculty and students is creating opportunities in the emerging areas of nanoscience and ultrafast chemical dynamics. We continue innovative development of "green" curricula and ground-breaking work in molecular biology and biochemistry. We celebrate the recognition of this work through funding received for major facilities to be built at the UO for the Oregon Nanoscience and Microtechnology Institute (ONAMI) and for the ultrafast laser laboratory; through faculty awards such as Pete von Hippel's election to the American Philosophical Society and Geri Richmond's Spiers Medal from the Faraday Council of the (UK) Royal Society of Chemistry.

Discoveries in basic research are generating new industries and applications for the benefit of our citizens. This relationship is increasingly important and our department is creating innovative programs in the various aspects of the basic research-application continuum, keeping us at the forefront. I hope you enjoy reading about this in the stories that follow!

*With best wishes,
Tom Dyke*

Rosaria Haugland Establishes the First Privately Funded Graduate Fellowship

This past year, Dr. Rosaria Haugland made a remarkable contribution by creating a \$100,000 fund to support the first Graduate Research Fellowship in the UO Chemistry Department. This generous gift established "The Rosaria Haugland Graduate Research Fellowship Fund in Chemistry" which will provide a full graduate fellowship and tuition award to an out-



Rosaria Haugland

standing student in the department for a three-year period. "It is my desire that the award be used to support and recognize individuals from groups that have not traditionally participated in the sciences and for whom the award will provide significant support. In particular, it is my preference that women, when possible, receive strong consideration for this award" said Dr. Haugland, adding "It is my intent to fund the Rosaria Haugland Graduate Research Fellowship Award in Chemistry every three years, with the hope of being able to do so in perpetuity." The first Rosaria Haugland Graduate Research Fellowship was awarded in 2004 to Takiya Ahmed. She has joined David Tyler's group where she is starting work on her Ph.D. thesis research.

Dr. Haugland's gift is a decisive step forward in strengthening the UO graduate program. It is also a pioneering step—the first fully funded private fellowship in any of the sciences at the UO. The importance is clear and three-fold: For the student it means flexibility. The fellowship is not tied to faculty research grants, and thus provides more freedom to explore new ideas. For the faculty, it means a competitive edge in applying for increasingly uncertain federal research grants. For the department, the fellowship helps in attracting and supporting the very best students.

The name of Rosaria Haugland is closely connected to the company she co-founded with her husband,

Dick Haugland, in 1975: Molecular Probes. This is one of the few large companies in Eugene and the leading provider of fluorescence reagents for scientific and biomedical research. It is a unique company born from the foresight of its founders who were able to see the necessity of providing fluorescence reagents in the emerging fields

of fluorescence spectroscopy and imaging for biomedical research. The Hauglands created a market in which they were the primary providers and, by meeting the needs of researchers, became extremely successful. Now Molecular Probes is world renowned among scientists in chemistry, biochemistry, and medicine.

Behind the success of an enterprise often stands the endless work of a remarkable woman. This is the case with Rosaria. She has been part of the Molecular Probes "project" from day one. She was co-founder of the company, and she has been its vice president since 1975. Starting in 1982, Rosaria became the head of Biochemistry Research and Development. Recently Rosaria retired, and the company has been sold, entering a new phase of growth in the hands of Invitrogen. When Rosaria retired, she began to actively dedicate her time to a range of philanthropic causes, providing major support for local social institutions such as Womenspace and Looking Glass, and the arts including the Eugene Ballet, the Eugene Opera, and the Eugene Symphony. With the establishment of this Fellowship, Rosaria Haugland has made a major commitment to helping women in science.

Rosaria has an interesting background. Her life has developed over two continents. As Rosaria Brivio, she was born in Italy in the glamorous city of

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Milan, a place well known for its roaring economy and cultural vitality. Milan is a miniature version of New York City, where fashion, industry, culture and art mingle together in an exciting mix. Rosaria was successful in her career right from the beginning, securing a research assistant position in biochemistry at the University of Milan, and then as a microbiologist at Farmitalia, one of the most prestigious pharmaceutical companies in Italy.

Rosaria moved to the United States in 1968, pursuing a successful research career in the Department of Biology at Syracuse University in New York State, and later moving in 1972 to the University of California, spending time at both San Francisco and Berkeley campuses. Rosaria's personal story had a profound effect on her professional life when she married another scientist, Dick Haugland. In 1974, she published her first scientific paper under her new name of Rosaria Brivio-Haugland, which was later simplified to Rosaria Haugland. Rosaria succeeded in raising a family of two children, while simultaneously pursuing an active scientific career and starting a new company. It is a tribute to her passion and intelligence that all of these endeavors have succeeded so beautifully. We thank Rosaria for her vision and generosity.

—Marina Guenza and Hayes Griffith

A Day in the Life of a Grad Recruiter

There is nothing more central to a successful graduate program than the recruitment of promising new students. On the front lines of this effort is Lynde Ritzow, graduate recruiting coordinator for the department of chemistry. Graduate student recruitment is a year-round effort. In the fall, she begins corresponding with interested students. Faculty visits to other universities, and student visits, are planned. Recruiting posters are mailed to other universities and the first of many meetings with the graduate selection committee is held. During winter term Lynde sends and receives a flurry of e-mails from prospective students and prepares for the annual student visit weekend, while working to complete a new brochure, a revamped website, or a new recruiting

poster. Assembling files and meeting with the graduate selection committee continues all winter. Finally, offers are made to the best students and they're invited to visit. The big event is in early April—when prospective students arrive for an all-expense-paid weekend. Much planning goes into this event—corresponding with visitors regarding everything from research interests to dietary preferences, ordering equipment and food, making hotel room assignments, designing name tags, pairing students with hosts, and planning events throughout the weekend. During spring term Lynde answers questions from incoming students, dealing with subjects including rentals, rainwear, teaching, childcare, and jobs for spouses. She updates the website year round. In the summer, she sends letters to those who recommended students, communicates with other universities about trends in admission and, of course, provides information to incoming students. After the new students arrive, she draws up the budget for next year and begins planning for the next round. Success as a graduate recruiter requires professionalism, excellent communication skills, and a sense of humor. Below is Lynde's witty description of a graduate student visitation weekend.—Ed.

It's 5:58AM and I turn the alarm off before it wakes the rest of the house. I've been tossing and turning all night, so I've been watching the minutes tick by—trying to remember all the things I might have forgotten before the day even starts. Did I spell everyone's name right? Does Michael go by "Mike?" Or by his middle name, "Brian?" What did I put on his nametag?

I shower and get dressed before my 2-year-old ambles out in the hallway for hugs and squeezes. We go downstairs and he plays with his dinosaurs while his dad fixes his breakfast—my mind already on the students arriving at the airport and the problems that haven't happened yet.

It's always hard to wrap my mind around the students I meet in person

after months of talking and emailing—exchanging ideas and opinions about the weather, hobbies, program details, life in general. And they always appear different in person than they did in my mind—taller, smaller, funnier, grumpier.

And here they are filing into the classroom on the third floor of Klamath, some of them looking the very picture of a doctoral student and some looking, well, very undoctoral. I smile, shake their hands, insist they put on a nametag. Since they look completely different than what I expect, I have trouble matching the names with the faces when they don't wear their tags. And they don't. By the end of the evening's dinner at Geri's, I'm testing myself to see if I can remember who they are, where they came from, what their favorite movies are. But they're all interesting; all have stories to tell. This is the fun part—finding out what all these people are about.

And the weekend unfolds with lunches, dinners, appointments—and small disasters I never thought of. Everything I worry about goes smoothly and those things I think are no-brainers are the

problems. The motor pool tells me they gave one of my vehicles to someone else because I didn't pick it up on time and after haggling with them over it, we end up with more vehicles than we need anyway. One of the male students tries to pick up on every woman he meets. Saturday night The Downtown Athletic Club runs out of food before everyone

has had a single serving and I'm explaining to everyone what the problem is. Geez, for \$25 a head, I guess my expectations were a little high! But the visitors don't see any of that. "You're so organized," they say. "This was by far the best visit I've been on," they say. "I just loved my host. How did you know we'd get along so well?"

Sunday morning I begin to regret that I've invited thirty people over to my house for breakfast. I'm exhausted and I want to sleep. But I get up and start making French toast and fruit salad, coffee and orange juice. A couple of



Lynde Ritzow

A Day in the Life of a Grad Recruiter

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current students come over to help. I'm like Martha before her fall. I want everyone to come and have a good time. And we do. We chat. We visit. We connect.

Then we pile into the van for a hike up Spencer's Butte. An avid cyclist, I always think this will be easy, but it's not. I'm completely exhausted from sleep deprivation and trying to be the hostess with the most-est. We finally get to the top and the view is spectacular—but I'm ready for bed. Too bad we have to walk all the way down.

After I say goodbye to everyone and make my way home, I crawl into bed for a nap before dinner. Another successful recruiting weekend has come to an end—warts and all. I take the next two days to recover and sleep—and it feels sooooo good. I just can't wait 'til next year!

—Lynde Ritzow

Industrial Internships Provide Chemistry Students with Practical Experience

Industrial internships have become an important part of many of our students' graduate educations. These internships provide an opportunity to gain practical experience and develop professional skills. They have grown out of extensive partnerships between the Department of Chemistry and local industry such as Intel, Molecular Probes, and Bend Research.

The internship program was initiated at the master's level as part of programs that bridge bachelor's level students in the basic sciences into industrial careers. Three such programs are currently offered, each focusing on a prominent sector of Oregon's industrial base: microelectronics, wood products, and biotechnology. Students in these programs receive specialized training through intensive summer coursework and also participate in a nine month internship. The content and nature of both the coursework and internship have been developed in a partnership between industrial and academic scientists. Over 75 master's students have participated in the program, and nearly all have received permanent job

The Rotation System for Entering Graduate Students

In recent years, the department has evolved a "rotation" system to give first year graduate students the experience of working in various research groups before they choose a research area for their thesis work. Although at times Ph.D. work may seem to be a maze of coursework, cumulative exams and other hurdles, the main requirement is really quite simple: do new and groundbreaking research, suitable for peer review and publication. In that sense, the most critical decision a first year student makes is the research area and faculty advisor to work with.

To help make that decision as informed as possible, for both the students and faculty advisors, Ph.D. students choose a different research group to "rotate" into for a term during each of the three terms of their first academic year. During that time they read papers, work on

theory, or perform experiments in that research group. Students have the opportunity to try research areas far from their initial interests, broadening their expertise. Students retain these faculty contacts throughout their graduate school days. Along with the courses they take and the teaching that they perform, this leads to a busy life, particularly since research is an open-ended commitment! Some students are able to make enough progress during this period to generate publishable results, but the main outcome is an exposure to the research done in various groups that is much deeper than that gained through short discussion and visits with faculty. In our experience, the rotation system is an excellent way to get first year students involved with our research programs and a critical experience for arranging a good "match".

—Tom Dyke

offers from the companies with which they interned.

Students in the doctoral program at Oregon also increasingly find industrial internships a valuable part of their graduate training. In addition to professional development, doctoral students find internship useful for exploring new scientific areas and building connections between their research and real world applications. In a number of cases, new research collaborations or areas of inquiry have been stimulated through internship experiences. The internship also provides students with exposure to a different type of research setting. Such exposure helps students in making career decisions and in their ability to adapt to varied scientific challenges.

The industrial internship opportunities available to UO students are an example of a successful partnership between the Department of Chemistry and its industrial affiliates. The educa-

tional value of this partnership has been recognized through the award of an Integrative Graduate Education Research and Traineeship grant from the National Science Foundation. This grant recognizes graduate programs for their research and educational merits, and at Oregon it helps support activities such as industrial internships. The practical value of university-industry partnerships has been recognized with, for example, the recent formation of the Oregon Nanoscience and Microtechnologies Institute (ONAMI), which has members from both industry and academics.

—Mark Lonergan



A group of polymer interns celebrating after graduating with master's degrees (spring 2004). From left to right: Andy Bedingfield, Milo Overbay, Matt Nye, Lance Hopman and Molly Warner. A complete list of graduating interns and the companies they worked for are listed in the article Commencement 2004.

The Oregon Nanoscience and Microtechnologies Institute (ONAMI)

Ducks, Beavers and Vikings might not get along on the sports field, but in the laboratory it's a whole different game. When UO Chemistry Professors Dave Johnson and Jim Hutchison together with OSU Engineering Professor Kevin Drost recognized the complementary research strengths the two universities had in nanoscience and microtechnology, they began to envision an Oregon-based institute that would foster interdisciplinary and inter-institutional collaborations and create new high-tech economic development opportunities for Oregon.

What is ONAMI?

In the Fall of 2003, the Oregon Legislature supported a visionary piece of legislation to provide \$21 million in seed funds for the creation of just such an institute for nanoscience and microtechnology research. The initiative, named Oregon Nanoscience and Microtechnologies Institute (ONAMI) now includes researchers from UO, OSU, Portland State University (PSU), Pacific Northwest National Lab, and selected researchers from the Oregon Graduate Institute and the Oregon Health and Sciences University School of Dentistry.

Support for ONAMI

ONAMI has received much support throughout the State of Oregon. ONAMI is a key component of the Oregon Business Plan, and has been endorsed by The Oregon Council for Knowledge and Economic Development (OCKED), the Engineering Technology Industry Council (ETIC), and the Oregon legislature, federal delegation and governor's office. ONAMI has several key industrial partners such as Hewlett-Packard, OVP Venture Partners, Intel, Battelle, FEI Company, and Pixelworks. ONAMI will receive \$5 million in federal research funding under a defense appropriations bill approved July 22 by the U.S. House and Senate.

ONAMI's Connection to Industry

The research of many companies in Oregon—hence the term “Silicon Forest”—aligns with ONAMI research.

The purpose of the institute is not only to support research into the next generation of technology, but also to encourage commercialization through partnerships with Northwest-based companies. In addition, many of these companies host graduate students as interns for several months, providing the graduate students with a unique educational opportunity.

UO's ONAMI Facilities

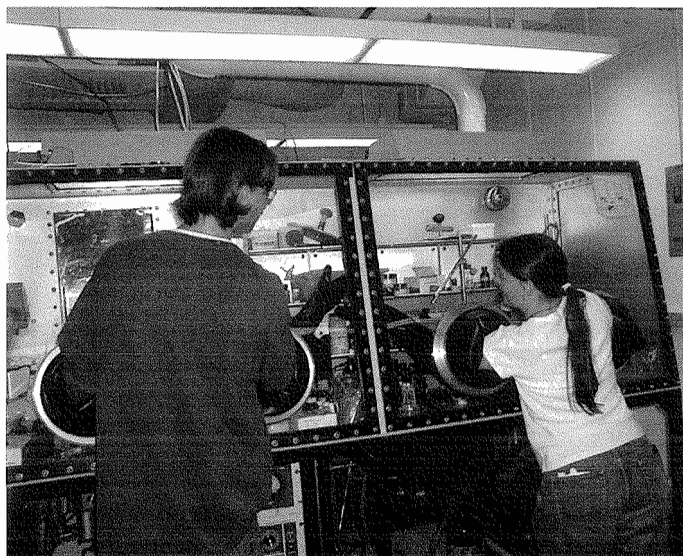
The institute is physically located at each of the 3 universities with the UO planning a new building for their ONAMI activities. UO will receive \$9.5 million in state bonds, raise matching funds from private donors, and plans to create a 60,000 square foot state-of-the-art facility. The new building will house labs for faculty research in materials and nanoscience, a nanofabrication lab, the Center for Advanced Materials Characterization in Oregon (CAMCOR), as well as incubator space for start-up companies, and will provide suite leases and lab space for companies wishing to be closer the UO's fabrication and characterization facilities. UO also recently was awarded over \$500K (including matching funds) from the NSF for a new electron-beam lithography system, which will form the cornerstone of the nanofabrication facility.

ONAMI's Connection to Graduate Education

One of the aims of ONAMI is to provide graduate students with more opportunities to receive practical training in areas needed by Oregon industry. All of the research programs in ONAMI are open to graduate students. Two of the research focus areas of ONAMI are: developing portable, miniature heating, cooling, and micro-power systems; and developing environmentally friendly “green” methods for the synthesis of selected nanoparticles. UO Chemistry Professor Dave Johnson's research on bulk superlattices in which different layers are organized on the nanoscale is aimed at developing new thermoelectric materials. These tiny materials can then be incorporated into microscale devices for portable heat- or power-generating systems. UO Chemistry Professor Jim Hutchison is developing methods for precisely spacing gold nanoparticles along a biomolecular scaffold and investigating their unique electrical properties and possible applications as nano-to-micro-sized transistors. A particularly appealing feature of this approach to patterning nanoparticles is that it is environmentally friendly—the “bottom-up” method of patterning electrical circuits is less wasteful than the “top-down” etching process currently in use. In addition,

the Hutchison lab has developed a new “greener” synthesis of gold nanoparticle precursors, which is now patented, that eliminates the need for hazardous reagents such as diborane and benzene and increases the yield and scale of the reaction while also cutting the reaction time from one week to one day. Visit www.onami.us to learn more.

—Christine Gramer



Fifth-year graduate student John Gilbertson shows proper glove-box technique to second-year graduate student Bevin Daglen, who is planning an industrial internship as part of her graduate education. Photo provided by Christine Gramer.

The NSF Teaching Outreach Program (K–12 Program): Experience for Our Graduate Students, and a Boost to Science Education in Local Schools

The Department of Chemistry continues to search for innovative ways to assure our students are as well prepared as possible for their chosen scientific careers. Industrial internships are just one example of the new opportunities being made available. Another exciting new opportunity involves off-campus teaching experience, which provides training and points of view not obtainable with a purely on-campus program. With funding from the National Science Foundation, the UO is currently providing eleven graduate students from the Departments of Chemistry and Physics the chance to teach science in seven elementary and middle schools in Lane County.

Graduate student Molly Emmons explains, "This year I am working with Creswell Middle School. The idea is that we gain teaching experience while

helping teachers be more comfortable with science, and encourage the use of inquiry based science lessons." Emmons adds that the school commitment involves about one day per week on location, with additional hours spent in preparation time. The rest of the week she is free to pursue her thesis research at the UO. This is in contrast to a standard internship, which typically involves a defined period of total immersion in the activity.

The graduate students do more than teach science lessons. The classroom time includes assisting the classroom teacher with science kits, running demonstrations, and supervising students performing their own experiments. More importantly, the graduate students get the chance to encourage curiosity and impart a love of science, which is difficult to find in the pages of a textbook. In this mutually beneficial situation, the NSF fellows have the opportunity to hone their instruction skills, while their students gain knowledge, appreciation of the sciences, and perhaps some new role models.

—Karen K. Griffith-Hedberg



Sarah "Molly" Emmons bringing science into the classroom in her previous teaching assignment, at Creslane Elementary School. In Molly's words: "The demo in the photo showed that hot water (top color) did not mix with the cold (bottom color) when I carefully put the two containers together with the hot on top. These 2nd graders were on the ball in predicting that when the two mixed, the solution would become green, but they were enthralled by the fact that it didn't mix at all. For the next step after the picture, their predictions were right on the money. When we flipped the containers over, the colors began to reverse positions and the solution mixed to become all green and all one temperature." Molly Emmons is a Ph.D. student in chemistry.



Melanie Hauser teaching in the educational outreach program at Lorane Elementary School. As quoted in the Register-Guard, Melanie said the program helps get children off on the right foot by showing them science can be fun, and it does that by letting them do experiments on their own.

"We want to get them really excited about science by showing them that it's something you do, not just something you read about in a book and then go home and forget," she said. "I think it's a really great way to teach science because it's really hands-on." Melanie is a PhD student at the UO.

In Memoriam

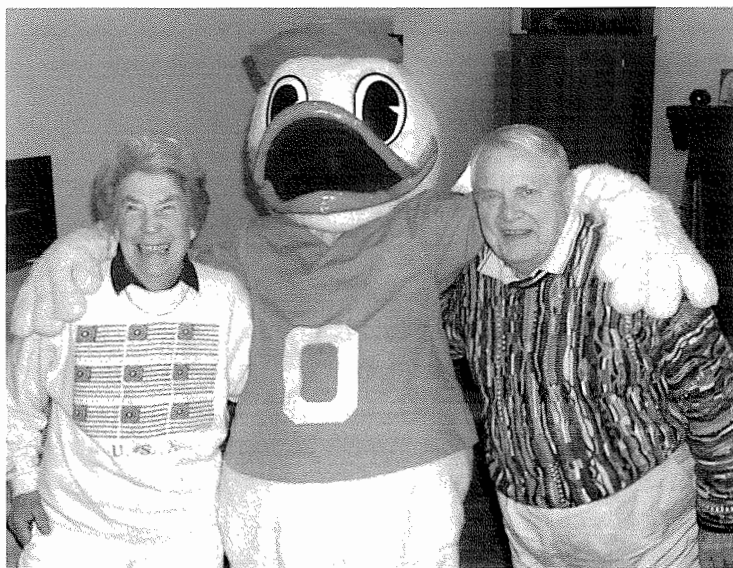
Gilbert Hunt, Ph.D. 1948, died in July of 2002 in Caldwell, Idaho at age 82. He was born in Aurora, Oregon. After graduating from Canby High School he attended Pacific University at Forest Grove, Oregon where he majored in chemistry and received his B.S. degree in 1942. He received his M.S. degree from the UO in 1944, after which he enlisted in the Navy, and as a First Lieutenant, saw duty in the South Pacific. After his discharge in 1946 he continued his education at the UO, receiving his Ph.D. in physical chemistry in 1948 with Pierre Van Rysselberghe. From 1948 to 1973 he taught analytical and physical chemistry at the College of Idaho (now the Albertson College of Idaho) in Caldwell, Idaho. He supplemented his income with research for the Idaho Power Co., sugar beet analysis for the farmers at Amalgamated Sugar Company, and for many summers, taught electronics at Oregon State University. In 1973 he left the College of Idaho and worked in the Engineering Department of the J. R. Simplot Co., retiring in 1986. He is survived by his wife of 57 years, Evelyn June Hunt (also a UO graduate in 1948, with a major in nursing and a minor in psychology) and six children: Kenneth of Albuquerque, NM; Molly of Nampa, ID; Peter of Atlanta, GA; Patti of Caldwell, ID; John of Caldwell, ID; and Beth of Pocatello, ID. He also leaves six grandchildren and one great-granddaughter.

(The special historical edition of UO Chemistry News, 2003, contains an article about Pierre Van Rysselberghe and a group photograph of the first four Ph.D. graduates from the UO Department of Chemistry, which included Gilbert Hunt. The other three were Paul Delahay, Roland McCully and Howard K. Zimmerman. —Ed.)

Herschel G. Frye, Jr., Ph.D. 1956, died April 12, 2001 in Stockton at age 81. He was born in Long Beach, CA on March 6, 1920 and grew up in Stockton. He graduated from Stockton High School in 1938 and attended Stockton

College and the College of the Pacific before World War II. He served in the US Army Medical Department (1944-46) during WWII in the US and in the Pacific Theater on Saipan and Guam. He returned as a disabled veteran and completed his B.A. at College of the Pacific, CA, in 1947 and his M.A. in 1949. After working as a chemist for Permanente in Lathrop and teaching at Linden High School, he completed his Ph.D. in chemistry at the University of Oregon in 1956. He was a visiting professor of chemistry at the UO during the summers of 1959, 1960, 1962 and 1964. He joined the chemistry faculty of the College of the Pacific in 1956 and remained there as professor until his retirement in 1990. He was a founding member of the Beta Pi Chapter of Alpha Chi Sigma. He also did extensive work in forensic sciences throughout central California for both private clients and for law enforcement, including the San Joaquin County District Attorney, Public Defender, Sheriff's Department, the Stockton Police Department, and the State of California. He was preceded in death by his wife of 52 years, Grace Tener Frye, and is survived by sons Wayne Frye (M.S., UO 1976) of Baker City, Oregon, and Gordon Frye of Stockton, and grandchildren Gilbert and Fallon of Coleville, California, and Elizabeth, Alexandra, and Catherine of Stockton.

(Information provided by Wayne Frye. See also "Reflections" article titled "Herschel's Poem." —Ed.)



Caroline and Virgil Boekelheide posing with the UO Duck. November 10, 2001

Remembering Virgil Boekelheide

Few people have had the impact of Virgil Boekelheide on the department and the University. A comprehensive autobiographical review of his research career and family history, titled simply "Memoir," was printed in 1991. Here we present excerpts from personal remembrances provided by friends and colleagues. For additional information please see the following pieces, printed in the indicated previous issues of the chemistry newsletter: "60s Reflections," a humorous glimpse of life as a graduate student in the Boekelheide group, by Andy Fedoruk (1998); the special historical edition (2003); and "In Memoriam," (2004). —Ed.

I have two vivid non-chemistry memories of Virgil Boekelheide, "VB", in addition to my overall recollection of him as an outstanding chemist, educator, and administrator. We also share the same birthday, July 28.

"In the mid-1960's I won the University Chess Championship. The following weekend we had a party at the Westmoreland Village community center to celebrate the successful research proposal defense of Bob Iwamoto, who worked with Lloyd Dolby. At the party, I had mentioned my chess victory and VB nonchalantly challenged me to a game then and there. Of course, with a confident chuckle, I fully believed that I would beat him easily. He crushed me in 20 moves!!

"During a visit to Eugene in 1978 while on sabbatical at Caltech, I mentioned to VB that I had taken up tennis and was pretty good. He immediately invited me to play with him at the Eugene Swim and Tennis Club. Of course, I was soundly thrashed again, winning not a single game in three sets and maybe winning but one point. His booming serve, echoing in the indoor club, haunted me for weeks!

"VB was a wonderful person, who always met with me during my several visits to Eugene over the past 30 years. I was especially pleased to be invited to the hugely successful 1991 VB Reunion, organized by Vic Snieckus and Andy Fedoruk, and I still enjoy reading VB's Memoir.

"My classmate, the late Tom McGuire, who worked for LeRoy Klemm, once characterized VB sitting behind his desk as exuding "raw power." Given VB's leadership and influence on the direction and success of the chemistry department, this is an apt characterization. Virgil Boekelheide will be missed."

—Gordon Gribble, UO Ph.D. 1967 with Lloyd Dolby, currently Professor of Chemistry, Dartmouth College

"I was a Ph.D. graduate student with Professor Boekelheide from 1971-1976. He, more than any other person in my life, influenced my personal and professional development simply by living as a model with intellectual excellence in the



Virgil Boekelheide photo in the chemistry graduate brochure circa 1982. "You will never get at the truth if you have to watch what you say." (VB quote as recalled by Victor Snieckus).

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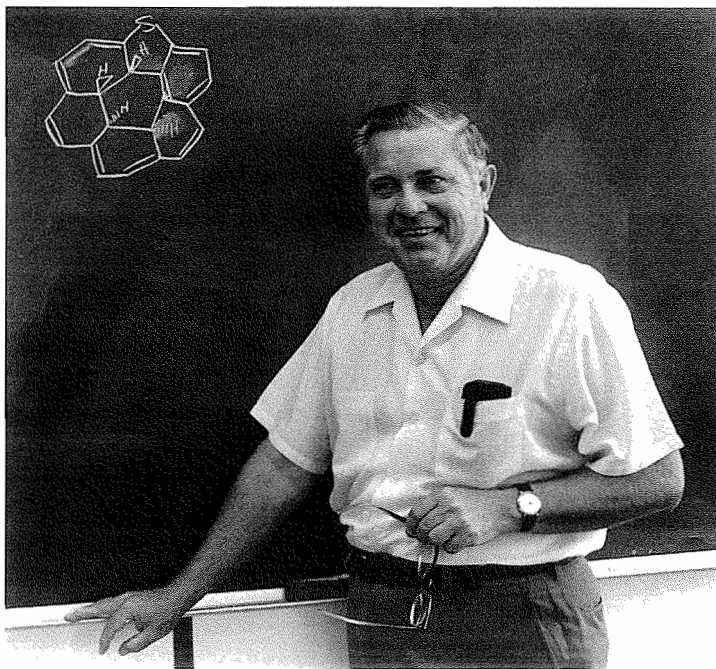
chemical sciences, a deep commitment to education and to his profession, an active lifestyle as an avid tennis player, and as a patron of the performing arts. He was a mentor without even trying to be one.

"It is tennis that reminds me of the one and only time Virgil misjudged, and believe me, he was right on most every issue, whether it involved politics, science or sports. Virgil was a betting man, and in 1973 the tennis hustler, Bobby Riggs, who defeated the reigning women's champion in two sets, faced the number two woman, Billy Jean King. An active round of discussion and wagers occupied a portion of our weekly research group meeting prior to the match. Virgil said no woman tennis player could beat a man

at that level of play, and he placed his bet. So powerful was his influence that to this day I carried the memory that Riggs won the match, contrary to what is recorded in tennis history. We had to Google the record of the match to settle the question. King won decisively in three sets, men's rules. It was disappointing to learn thirty years later that the boss missed his mark. Hey, he was as human as the rest of us, and it deepens my appreciation of all he was. He hated to lose, but he made good on the wagers. He would of been a bit happier if Riggs had won.

"Virgil told me a story about the pharmaceutical industry. He was doing some consulting for a company that was investing heavily in prostaglandin synthesis research, perhaps to the tune of thirty Ph.D. level chemists and their associates. No active compounds were forthcoming from the research, and he told me the company had a problem in

that it couldn't simply tell a big group of chemistry professionals that the project was suddenly over and send them packing. His argument was that these people had poured huge amounts, intellectually and physically, into the success of prostaglandins as promising pharmaceutical candidates, and that the company owed them an exit strategy that at least permitted publica-



Virgil Boekelheide, circa 1972. "There is something about teaching, not just the advanced courses but the early undergraduate courses as well. To take students that don't have that much background and get them excited about the subject is very satisfying" (Quote of VB. recalled by Victor Snieckus).

tion of the results of their hard work. As a consultant he could see how dedicated they were. Today it's not that way in many corporate environments. One result is that there is diminished allegiance among chemistry professionals, and is it any surprise? Without sensitive and ethical leadership, as demonstrated by Professor Boekelheide's remarks, we lose something intangible but very valuable in our profession. Business can move swiftly, but it must do so with a high level of ethics and responsibility."

—David Kamp, Corvallis, Oregon

"Virgil liked Cardinal Puff, and he was very good at it—after seminars, the group would often go over to "The Office" (River Road I think), the closest pub to campus (which was dry then), and he would take great delight in introducing new members of the group to Cardinal Puff, a drinking game

in which if you did not keep your wits about you, proved to be fatal.

"Virgil was also very good at poker—I remember games with Tom Koenig and others.

"Virgil was the nicest boss you could imagine—he did not push verbally but subtly, he somehow made you want to get the stuff to work.

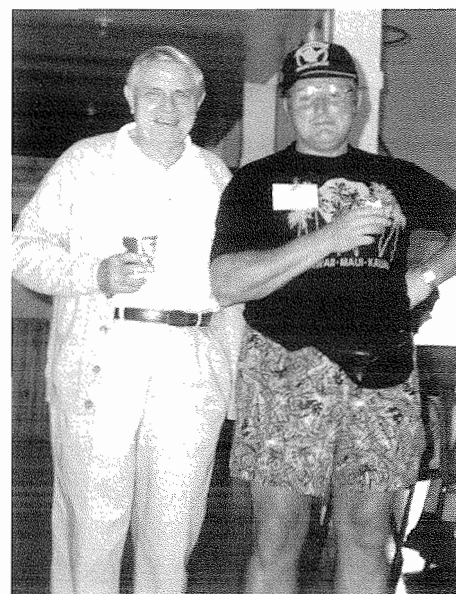
"I can remember a Welch symposium in 1968 in Houston; Sondheimer and I met Virgil and John Baldwin at the airport—their flight had been very turbulent—Virgil came off ready for drinks, John came off very sorry for himself.

"Virgil attended all the "Snow Symposiums" at Bend—however I never remember seeing him on skis—I always thought he spent the day finding tricky problems for us to solve at the pub in the evenings. However he did ski—in the snowstorm of '69 when Eugene got more than 3 feet of snow, Virgil skied in to the lab."

—Reg Mitchell, Professor of Chemistry, University of Victoria, Canada

"At the end of my senior year (1961) I took the one term course, Organic Qualitative Analysis, from Dr. Boekelheide. Organic Qualitative Analysis was the last chemistry course I had at the University of Oregon. It proved to be

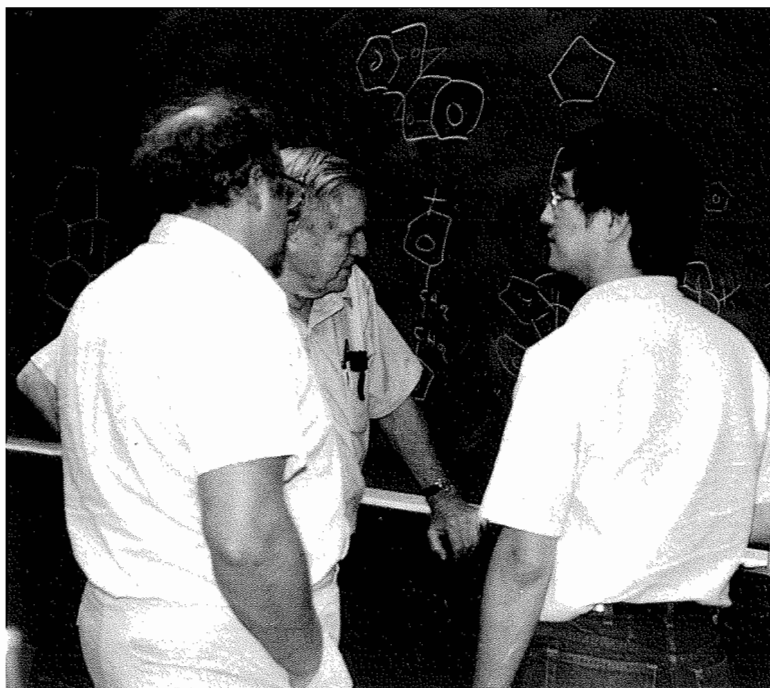
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Virgil Boekelheide and Reg Mitchell at ISNA7 in Victoria, 1992. Virgil loved conferences, and ISNA (International Symposium on Novel Aromatic Compounds) was one of his favorites.

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a very rigorous experience which helped me to definitely decide whether I wished to continue as a chemistry major. We had a laboratory with three single unknown compounds and two mixtures with three compounds in each. We all became acquainted with Beilstein as a reference in our work. The text used was *The Systematic Identification of Organic Compounds, A Laboratory Manual*, fourth edition (1960), by Ralph L. Shriner, Reynold C. Fuson, and David Y. Curtin. I still have this book in my personal library and was amazed to find its price of \$6.00 still stamped on its inside cover. Identification of unknowns involved determination of boiling points for liquids and melting points for solids. Color and odor were noted and elementary analysis for nitrogen, halogen and sulfur was conducted. Solubility properties were also investigated (water, acids, base). Based upon the results of the tests conducted, we checked tables for lists of possible compounds, then began preparation of derivatives, two being required to definitely establish the identity of each compound. Components of mixtures had to be individually separated prior to testing. Our class consisted of both undergraduate and graduate students. We were all upper division students, so we were allowed to work in the laboratory overnight, as long as two or more were present to insure personal safety if an accident should occur. The worst incident which occurred was when one of the graduate students cut his hand on a piece of broken glass. We all spent many "overnighters," then had to fight off sleep if we had class the following morning. I don't recall any of us dropping out of the course, but we all had to exert a determined and sustained effort to complete our work and pass the course. Two unknowns which I still remember having to this day include beta-picoline for its unpleasant odor and maleic acid for its conversion



A joint group meeting of the Boekelheide and Mitchell research groups in the new seminar room at the UO in 1979 or 1980. At the blackboard are Reg Mitchell, Yee Lai (right) and Virgil Boekelheide. Reg Mitchell recalls, "on one occasion we were predicting the outcome of a synthetic reaction, and so Virgil put up a bottle of scotch for the person who predicted the yield most closely—I won—however this cost me about 12 bottles of scotch at future meetings when his group predicted chemical shifts of benzannulenes we were synthesizing, more accurately than I did—however that was cheap consulting."

to fumaric acid with iodine and uv light ("sunshine" derivative, got it by exposing test tube mixture to spring sun and watching the product drop out).

"I had married at the end of fall term in my senior year (1960) and had to reduce my hours to the end of the school year, dropping physical chemistry and biochemistry courses while I worked part time. I was not sure what I could find for full time work and was considering moving to Portland. I approached Dr. Boekelheide for advice and was delighted to find him both approachable and encouraging, without telling me to wait to see him during his office hours. I'll always remember Dr. Boekelheide for this kind moment. Here was a brilliant scientist, who had won almost every honor except the Nobel Prize, taking the time to encourage a lowly undergraduate unsure where his path would take him. I'll always remember him as a very humane and caring person who certainly gave me the needed encouragement to move forward with my education and career.

"I look forward to spending the remainder of my days here (in Eugene), visiting the University of Oregon campus, maybe sitting in on some classes and

recalling the privilege of having taken courses from dedicated professors such as Dr. Boekelheide, whom I shall always remember with gratitude."

—Gary Miller, *Eugene* (For more from Gary Miller, see *Alumni News*.—Ed.)

"I was fortunate and had the distinct pleasure of working for Virgil as a student, an administrator, and as an instructor. Virgil afforded me a place in his laboratory as a struggling graduate student and called me two years later at a community college in California to "come back to Oregon" to work with him as the department's administrative assistant. He said that he was going to be the department head and he did not want to "do all of that administrative work." I was embarrassed to learn many years later that my negotiated starting salary

was the same as his when he started at Oregon only eight years earlier.

"Virgil Boekelheide, or "VB" as we knew him, was one of the best classroom lecturers I ever had the opportunity to study under in the classroom. It didn't make any difference whether the course was at the sophomore level, or a graduate course in synthetic chemistry, he was superb.

"As a student in the research laboratory it was tough to beat him to work in the morning. Coming back to the lab after dinner you knew VB would be leading you up the stairs, or already in his office. We knew VB would be available when advice and/or encouragement was important, and we also knew he would visit the laboratory. At times we relished the thought of him coming through the door, because it seemed as though he could make crystals form in a dish just by walking into the lab.

"As an administrator and department head, VB was a giant. It became obvious very quickly that he commanded much respect from both the Dean's Office and the President's Office and

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knew how to talk with them when necessary. He was called upon many times for advice from these offices. When he went to them with one of our questions I waited for him to return with that distinctive twinkle in his eye that said he had secured the answer or a promise the department needed. If a departmental goal or need was seemingly impossible to accomplish from a bureaucratic standpoint, VB would go for the moral and ethical solution to accomplish the goal. Sometimes the plan of attack went straight through the problem while at other times he knew how to go around the issue. That's not to say that we used illegal maneuvers, but we did not let bureaucratic road blocks stop us from pursuing the best interests of the department if a moral and ethical plan could be used.

"He led the department with a strong hand and he also had the respect of the faculty. He was interested in the faculty members and worked to make the success for the newest and young faculty possible and probable. He also ran efficient and regular faculty meetings. I do not recall faculty grouching that VB ran unnecessary and meaningless meetings. I do remember that when VB called a faculty meeting there was something of substantial value he wanted the faculty to know about and to hear their opinions on the subject. Initially these meetings were held in the Collier House Faculty Club, but upon completion of the science library in 1968 we moved to the library conference room, a new and bright facility, but still a "basement dungeon." After leading the department through three different stints as department head, VB "retired" to the third floor and focused all of his energies on research and teaching. He was everything one would want in a supervisor or boss. I personally missed our daily interactions, his leadership, and manner of communication for years afterward.

"I never played tennis against him, but I watched him at the poker table often and learned not to toy with him after he looked at his cards for the last time and



Virgil serving champagne in his garden at one of the joint group meetings with Reginald Mitchell's research group in the early 80's. "I brought my group down to the UO once a year for joint group meetings and discussions. He was a most generous host," said Reg Mitchell.

then let a puff of smoke from his cigar rise to the upper levels of the room.

"Another facet that I grew to appreciate in VB, and his wife Caroline, was their devotion to the arts, and especially to the Eugene Ballet and the Eugene Symphony. One could always look forward to seeing them at artistic events, and they would always take a moment to say hello. I grew to appreciate and treasure this seemingly trivial occurrence more and more."

—Ralph Barnhard, Assistant Department Head 1966-2000; Senior Instructor Emeritus, Department of Chemistry, UO

"I was a postdoc with Ron Breslow at Columbia when I was entered the job-hunting process back in 1964. Virgil met me in New York to take me to dinner and talk about the University of Oregon. He chose a fine restaurant, but we were immediately kicked out because--in fine Western style--Virgil wasn't wearing a tie.

"One day many years ago Virgil showed up in his office with a sleek, shiny new black ten-speed bike he got as a birthday (or was it Christmas?) present from his family. He chuckled as he said they thought he needed more exercise. He dutifully kept it in his office for the day and then apparently rode it

up the considerable hill to his home at the end of the day. We never saw the bike again.

"Well after retirement, Virgil enjoyed coming to his office to, among other things, play Go on his computer. Virgil was a ranked Go player, who thoroughly enjoyed the challenges of the game, playing with Japanese visitors, with his research group, and on the computer. He was always trying to improve his skills. He had one of those ancient Macintosh SE computers with the tiny screen integrated into the case. We asked him why he didn't upgrade to a new computer, which he surely could well afford. He responded by saying that he liked the slow speed of the machine--that way he had plenty of time to decide on his next move and he could actually beat the computer--so, no new computer."

—John F. W. Keana, Professor Emeritus, Department of Chemistry, UO

"I remember Virgil Boekelheide as he was in the 1960's, a great bear of a man chewing an ever-present cigar, a type A personality who could rip through thickets of University bureaucratic regulations and expected his decisions to be accepted, yet had a twinkle in his eye and a nurturing attitude toward young faculty.

"Virgil was department head when John Keana and I were recruited as assistant professors in 1965. I drove up from California with my father, all my worldly belongings plus a few pieces of equipment I had personally purchased to achieve a quick start in research packed into the back of my father's pickup truck. We unloaded in the alley behind what is now Pacific Hall, and Virgil was kind enough to come out and meet my father and give us a personal welcome.

"Virgil had a sense of humor; he often told jokes and his hearty laugh was frequently heard at department meetings. In 1968 he asked me to chair the Graduate Selection Committee. We produced the first full-sized gradu-

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ate brochure the department had ever had, gracing its cover with the NMR spectrum of Virgil's favorite compound: trans-15,16-diethylidihydropyrene. With this new brochure, luck, and vigorous recruiting, we succeeded in attracting many more students than the department could afford! I panicked and ran with this news into Virgil's office. He leaned back in his chair, looked out the window, and chewed on his cigar, calculating the financial implications. Then he swiveled his chair back around, looked me in the eye and said with a smile, 'That sounds like all of your summer salary, and most of mine.' I got on the phone and convinced just enough students to go elsewhere, and we got to keep our salaries.

"Virgil had the ability to keep his cool when the heat was on. During the Vietnam war era, one of our young faculty, John Froines, became infamous as a member of the Chicago Seven and was reported to have handed out fliers on how to make a Molotov Cocktail. Angry legislators and citizens from all over Oregon wrote and phoned to demand that Froines be fired. Virgil, backed by then UO President Bob Clark, stood firm. When John Froines eventually did

leave, for a nonacademic position elsewhere, it was not because of pressure from the Department. In addition, Virgil made sure Froines had every opportunity to return to his research (flash photolysis and emission spectroscopy of electronically excited molecules) at the UO if he had wanted to.

"Over the years Virgil Boekelheide was a staunch friend and supporter of the department, and a leader in two major transitions. One is well-known, the rise of the Chemistry Department to the level of international distinction. The second came later, when Virgil recognized the critical role of private endowments in providing a foundation of lasting quality in academic departments. He did not just talk, he acted on his beliefs. In 1993 he and his wife used their own funds to establish the Virgil and Caroline Boekelheide Endowment to support and enhance the teaching and research programs of the School of Music, the Department of Dance, and the Department of Chemistry. In 1994 he and a core of senior faculty made contributions of \$500 each to launch the Chemistry Achievement Endowment Fund. With the help of alumni and friends that fund has grown to over \$300,000 today. Virgil is gone,



Virgil Boekelheide photo, circa 1969. This photo appeared in the first full-sized edition of the chemistry graduate brochure, when Virgil was department head. On the cover of the brochure was the NMR spectrum of trans-15,16-diethylidihydropyrene.

but not his vision of the importance of private funds to enhance the strength of the department, and we will always be grateful for his role in launching this effort."

—O. Hayes Griffith, Professor Emeritus, UO Department of Chemistry



Reunion with friends and former colleagues in 1991 in Eugene, with formal dinner at the Hilton. A second reunion was held in 1999 with events in Eugene and Portland. The introduction to the 1999 reunion address was as follows: "Dear VB - This Reunion has been percolating in all of our minds for a number of years" is the leading sentence in the 1991 VB Reunion Memoirs booklet. And so it has but, this time, it can be defined: 7 years, 9 months, and 25 days. As we have grown older but not wiser, the recollections of our times in your group, Rochester or Eugene (or both) remain vivid. Snippets of these flash in our minds now during times, days, and events which have nothing to do with our times, days, and events which we passed in your group: the lectures you delivered with clarity and uncompromised interest in chemistry; the "have you looked at this JACS paper ..." notes you left on our desks: the problem sessions during our Monday night seminars, and, of course, the après seminar events, the softball games, and the late night poker games (at which more than shirts were lost).

"All of these flashbacks recall an environment of dedication to learning and research but they also bring back memories of friendships established during a most crucial period of our lives. Whenever we meet or call a former VB group member who was in our lab or one next door (or even next to next door, in the Lloyd Dolby group), it takes only a greeting before one of us states the obvious: 'it seems only like yesterday!'

"The 2nd VB Reunion is as important to us as the 1991 event but it has an additional special quality: we are celebrating a very special event, your 80th Birthday! We are delighted that we have this opportunity. To put it as succinctly as possible, in the flurry of email exchanges for the event, several responded with 'I wouldn't miss it for the world.' Some of us are also very happy to continue the VB Celebration at the Portland ACS meeting on June 20, 1999.

"In the 8 years since the 1st VB Reunion, you have kept in touch with many of us. Nevertheless, we hope that this edition of Memoirs may provide you with updates of our professional and personal activities. Aside from former VB group members, we have included also students of Lloyd Dolby and John Keana. This inclusion was by agreement of all attendees, which reflects your impact on the whole organic groups of the Oregon days. We also hope that this booklet will serve as a directory for future interactions among us all.

"A most sincere thank you to Sandie Leach at Queen's without whom this reunion, the book, the shirts—in short, the total event—would not have become a reality.

"On this special day, again we will attempt to recognize faces of those lab-mates from our past. We will also meet with others ahead of us or behind us, from the Rochester and the Oregon days, from the Dolby and the Keana labs. But, no matter! We will be here to reminisce and to enjoy seeing you, to toast your 80th Birthday and, once more, to reflect on the imprint you have left on all of us.

"With our warmest wishes for the future, which, as a last word, we leave to you: 'Caroline and I stay close to our children and grandchildren and find ways to involve ourselves with them in travel and other activities. One of these activities, of course, is tennis.'" For the VB Groups, for the Oregon Days, Andy Fedoruk and Victor Snieckus.

History and Humor: Herschel's Poem (or, the Timeless Plight of a Graduate Student)

INTRODUCTION TO HERSCHEL'S POEM. Don Swinehart wrote the following memo on July 6, 1983 (ten years before his death), and attached this poem, written by one of his graduate students. The poem is a humorous account of McClure Hall and the activities of the Swinehart and Reithel groups. This poem has a timeless quality. It could have been written today by a graduate student who stumbled early in his or her graduate career but eventually succeeded and went on to a distinguished career. See "In Memoriam" for a brief history of the author, Herschel G. Frye, Jr.

—Lars Svanevik and Hayes Griffith

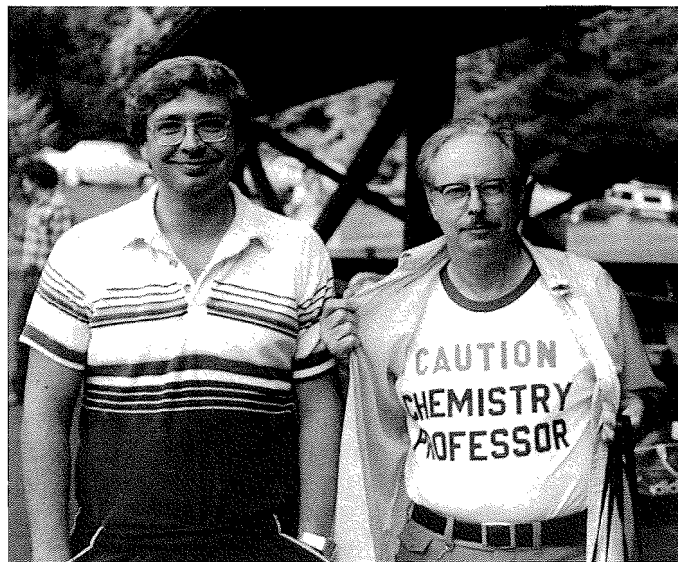
To My Colleagues, Past Graduate Students, and Friends, from D. F. Swinehart July 6, 1983

As many of you know, McClure Hall was the original chemistry building on this campus. When I arrived in 1946, it was an ancient mausoleum out of the past. It was built about the turn of the century.

In our early days here it was the custom of Dr. Reithel and I to have an annual Christmas party for our combined graduate students and our families. One year, about 1950, we decided that all concerned should draw names out of a hat and each one was supposed to provide a small gift for the name drawn and to write a poem to go with it, said poem to be read at the party. One of my graduate students, Herschel Frye, was supposed to write the piece de resistance for the party.

On the afternoon of the day of the party, someone asked Herschel if he had written his poem yet. He said, "Oh! Gosh! I forgot all about it!" He sat down at a typewriter and wrote two pages of rhymed couplets as fast as he could type. This note is written to present Herschel's poem to you.

Now it must be known that Herschel, in his first year here, was a disruptive influence in the department. He upbraided the other graduates for working so hard and he, himself, did not work hard. We had just tossed him out on his ear, figuratively speaking (i.e., we did not want him back the next year). Now a couple of years later I was in Stockton, California, and I stopped to talk with Herschel. He wanted to know if he could come back to Oregon and work on a degree. I laid it on the line what he had to do if he came back and he agreed. He came back about 1953 and wrote his Ph.D. thesis with me in 1956. He has now been on

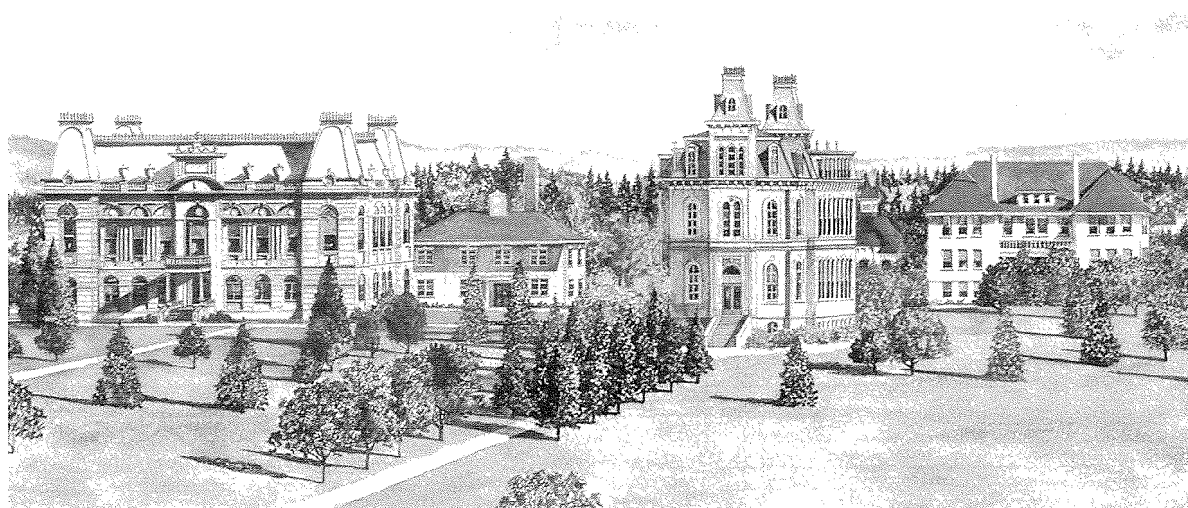


Don Swinehart (right) with David Herrick (left) at the 1980 Chemistry Department Septemberfest.

the staff at the College of the Pacific (now the University of the Pacific) for many years. He has even come back here and taught summer school for us. Herschel's poem is one of the funniest things I have encountered in my many years at Oregon.

Dramatis Personae—King Adolph: Adolph Kunz was the department head at that time; Sir Verbiage: D. F. Swinehart; Sir Epicure: Frank Reithel, who as many of you know, refused to wear a tie, he favored open necked sports shirts; Sir Reaction: Russel Gaertner, a young organic chemist who married one of the graduate students and left after 3 or 4 years; Sir Summation: Duncan Cleaves, a new physical chemist from California who was teaching senior physical chemistry; Chubby little child: Ray Stofer who was our first shop man.

As follows, Herschel's poem.



The UO campus circa 1907 from a painting by George C. Warner. Two landmarks remain today: Villard Hall on the left, and Deady Hall in the center. On the right is McClure Hall, home of the Chemistry Department from 1900 until 1953, after which it was torn down. The smaller building between Villard Hall and Deady Hall is the Mechanical Hall, built in 1901 to house the central heating and lighting plant of the University, and, while they existed, the departments of Civil and Electrical Engineering.

The Gaunt and Dour McClure

by Herschel Frye

Hear me for awhile, oh Comrades, for my story I must tell,
And the depths of my compassion make my aging bosom swell.

Long have I been a vassal in the gaunt and dour McClure;
That castle of the western reach the wicked must endure.

Faithfully I served my master; kept his armor helm aglow;
Polished sword and burnished buckler; watched his vast entourage grow.

Every morn I rose to wake him and to greet the rising sun;
Every dusk I curried horses when my other tasks were done.

Nobility engulfed him; he was called Sir Verbiage;
In the War of Prepositions he had been a humble page.

And later he was knighted at King Adolph's regal hand,
And followers flocked 'round him till he had a goodly band.

Soon the common folk looked to him for the wisdom of his words,
And so he spoke forever, like Saint Francis, to the birds.

One dark night in rousing wassail when the wind was howling wild
Three other knights did Visit with a chubby little child.

I recognized the noble ones; their fame had spread afar,
And to fail to heed—their glory was to fail to see a star.

The first was named Sir Epicure; he spoke in wond'rous phrase,
And his knowledge of Sir Webster kept the farmers in adaze.

By his armor I did know him, for it was the breath of doom;
All complete from helm to girdle, but he wouldn't wear a plume.

The second was the tallest and he carried helm in arm,
And the ladies of the castle did succumb to youthful charm.

His name was Sir Reaction; stinking vessels clogged his rooms,
And he choked his hapless urchins with a wave of noxious fumes.

And last came Sir Summation, wielding Newton's two edged sword
In a manner most unhappy for the sobbing senior horde.

Hyperborea was new to him, for he came from southern-climes
Where the bear plays in the roses to the tinkle of the chimes.

But ah! Who was the child with the out-stretched, greasy mitt
And the coyly bulging tummy and the worn-out auger bit?

How came he to these villains with his sweet unsullied mind?
And who among the nobles had an aged axe to grind?

And the child looked 'round all wond'rous as the others held converse;
In the quiet of a moment one might hear a muttered curse.

And their heads gave the appearance of a bunch of ripened grapes
Though the size did differ greatly and they were of different shapes.

Then they broke from out their huddle and they tweaked the child's ear
And they had a round of Bourbon but they gave the child some beer.

Up then arose Sir Verbiage to close the iron door
And within the voices muffled and were heard not any more.

I could see no more that happened, though the worst I did suspect
And I gazed into the sunset where the clouds were rosy flecked.

What transpired within that chamber? Only fleeting Time will tell
For the only sound to issue was a child's happy yell.

Soon they exited in number; each one took his separate way
To their place of needed slumber to await the coming day.

Oh what dire plots were hatching? Oh, what machinations wild?
Oh, what labyrinthine myst'ries? What about the chubby child?

But Sir Verbiage was silent, or as close as he could get
Sir Summation hung his noggin, but his fevered brow was wet.

Sir Epicure was thoughtful as he delved in Webster's tomes;
Sir Reaction brewed new evils to inflict upon his gnomes.

And I Sir? I was driven from the castle's mildewed walls,
And return there I can never to traverse those vaulted halls,

For they sensed that I had seen them, and they called on Brother Death
To persue me here forever; even now I feel his breath.

Still I know not what has happened in the castle of McClure,
And I would return to see it though the air out here is pure.

Did they steal the Baron's riches? Did they kill the aging King?
Did they torture some poor vassal by their singing of The Thing?

Does Verbiage still chatter and does Sir Summation grin?
Does Epicure of Mazda talk, or Reaction guzzle gin?

What was that secret meeting on that night so windy wild?
And I wonder what has happened to the pudgy, greasy child!

But alas! I know no secrets though my throbbing temples burn,
For I was cast away in anger, and I never can return.

But you, oh Stranger, hear me! A child who once was pure
Must still be coldly prisoned in the gaunt and stern McClure!

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Katherine Brown '97 and Mathew
Miller '97

Michael Montague-Smith '94
Pamela '79 and Mel Murphy-
Young
Kathy and Donald Ouimet Jr.
Anna Thorgerisson Park '99 and
Steven Park '99
Joanne and David Paxton
Marilyn and Robert Pinschmidt
Jr. '71
Katherine '66 and Chester Ramey
'68
Stephanie Delich Rasco and Peter
Rasco '86
Gary Riddle '65
Mordecai Rubin
Elizabeth Saltonstall '00

Lois White Smith and Brad Smith
'82
Gloria and Timothy Smith '92
Teresa Sparkman '78 and Paul
Yager '80
Wendy Law Steele '92 and Chris-
topher Steele
Michael Swanson '03
Brooke '97 and Michael Taylor '94
Marian McCaa Thomas and Timo-
thy Thomas '64
David U'Ren '64
Carrie Ireland Valentine '68 and
Jimmie Valentine
William Wan '01
Heidi Wierman '91 and Brian Daikh
'90
Janice and Michael Wilson
Mary and Richard Woods
Huei-Ying '61 and Shang-Jeong
Yao '61
Teresa and Stephen Yue

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Heidi Wierman '91 and Brian Daikh
'90
Janice and Michael Wilson
Mary and Richard Woods
Huei-Ying '61 and Shang-Jeong
Yao '61
Teresa and Stephen Yue

CORPORATIONS AND FOUNDATIONS

Al's Cycles & Hobbies, Inc.
American Chemical Society
American Heart Association
Bristol-Myers Squibb Foundation
Dow Chemical Company
Eastman Chemical Company
Eli Lilly & Company Foundation
Emerald Sky Foundation
General Electric Foundation
Hewlett-Packard Company
Hynix Semiconductor Manufactur-
ing America, Inc.
Johnson & Johnson
Mentor Graphics Foundation
Microsoft Corporation
Rosaria P. Haugland Foundation
Sony Corporation
The Lubrizol Foundation
The Richard P. Haugland
Foundation
Turnagain Dental Office
Alice C. Tyler Perpetual Trust

*Categories of individual giving:
Contributor (up to \$99), Associate
(\$100-249), Sponsor (\$250-\$499),
Patron (\$500-\$999), Benefactor
(\$1,000-\$9,999), and Boekelheide
Circle (\$10,000 and greater). The
UO designates as President's As-
sociates those individuals who give
annually \$2,500 and greater.*

Faculty News

Peter "Pete" von Hippel has been elected to the American Philosophical Society. This society is the oldest and one of the most elite scholarly organizations in the US. Pete, 73, is one of only two living Oregonians to hold this honor.

Geraldine "Geri" Richmond has been named a Fellow of the American Association for the Advancement of Science (AAAS) in 2003. Founded in 1848, the AAAS is the world's largest general federation of scientists, serving 10 million individuals through 272 affiliated organizations in more than 130 countries. The tradition of naming AAAS Fellows began in 1874. Richmond has received two additional awards: The 2004 Spiers Memorial Lectureship award from the Faraday Council of the Royal Society of Chemistry, UK, and the 2005 American Chemical Society Award for Encouraging Women into Careers in the Chemical Sciences, sponsored by The Camille and Henry Dreyfus Foundation, Inc. The latter award will be presented to her at the ACS National Meeting in San Diego on March 15, 2005.

Jim Hutchison and **Mike Haley** have been promoted to the rank of Professor of Chemistry.

Julie Haack and **Jim Hutchison** have developed a popular Freshman Interest Group (FIG) course called "Chemistry of Skiing" which brings chemistry to life.

Jim Hutchison and his graduate students have patented a new process that allows researchers to create gold nanoparticles in a "greener" way.

Julie Haack has received two grants to support the development of a database of green chemistry educational materials called Greener Educational Materials for Chemists (GEMs).

Gautam Bhattacharyya joined the chemistry department fall term 2004, as the new green organic chemistry lab instructor. Gautam received his B.S. in chemistry from Brown University in

1992, an M.A. in organic chemistry from Harvard in 1994, and his Ph.D. in Chemical Education from Purdue University in 2004.

Ken Doxsee and **Jim Hutchison** have recently published a textbook titled "Green Organic Chemistry: Strategies, Tools, and Laboratory Experiments".

Hayes Griffith was awarded a 2004 Outstanding Faculty Award by the Office of Multicultural Affairs, "Honoring faculty members who have shown commitment to working with students of color, and dedication to increasing ethnic and racial diversity at the University of Oregon."

David Johnson and **David Tyler** have been awarded a half million dollar grant from the National Science Foundation for their "GK12" program which supports UO graduate students as they teach and do experiments in six Lane County elementary schools and help teachers learn how to use science experiments.

Mark Lonergan has received a grant through the National Science Foundation for the study of nanotechnology.

Andy Marcus together with Mike Raymer of the physics department have been awarded a half-million-dollar grant from the M.J. Murdock Charitable Trust to build a new facility for the study of optical dynamics with ultrashort-pulse lasers. This will be constructed in renovated space in Klamath Hall.

Summer Session 2004 faculty were **Doug Chapman** and **Owen McDougal**, Southern Oregon University; **Jim Long** and **Randy Sullivan**, UO; and **Lars Svanevik**, Oregon Institute of Technology. All the summer session classes are experiencing increasing enrollments.

News articles on many of these and other activities can be found on the Chemistry Department web site: <http://darkwing.uoregon.edu/~chem/>

Staff News

Thanks to a year's worth of effort, the Chemistry Department now has an efficient web-based ordering system, and has honored the designer with the Outstanding Classified Employee Award. **Jim Rasmussen**, the department's buyer for the past three and a half years, received the award at a reception on April 27, 2004 following a presentation by President Frohnmayer. The well-deserved award honors Rasmussen's dedication in tackling the project, which took a year and required him to familiarize himself with web-authoring skills. "I didn't know anything about web site development and I didn't know a lot about online ordering. Yes, I had to do some learning and ask a lot of questions and go to some classes. It was very interesting," explains Rasmussen. The award came as a surprise, as he feels that people don't often receive special recognition for their hard work and achievements. The new system saves time and money, reduces errors, improves communication and is up-to-the-minute, thanks to Rasmussen's constant updating of information. The streamlined site also allows users access to the inventory list, which aids in recycling chemicals and reducing waste. With a grateful department happily using the website, we extend our thanks and congratulations to Jim Rasmussen for a job well done!

Kristi Mikkelsen was instrumental in planning a successful 4th annual "Green Chemistry in Education Workshop" held July 26 through August 1, 2004 on the UO campus. The faculty co-organizers were Jim Hutchison and Ken Doxsee. A graduate student, Lallie McKenzie (in Hutchison's lab) played an important role in the workshop too. This five-day workshop is a combination of lectures, discussion, and hands-on time in the laboratory. It is designed for educators who are interested in incorporating green or sustainable chemistry concepts into their organic chemistry curriculum and laboratory.

David Senkovich and **Clarisse Heinhorst** continue to provide valuable support for students and faculty, but in different surroundings.

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The student shop has been moved from Cascade Annex and combined with the technical science administration machine shop at the north end of Pacific Hall. David officially works part time in the student shop, but he can be seen there most hours of the day helping with research and a wide variety of other projects brought to him by members of the university community. Clarisse's smiling face is nearby. She presides over Science Stores, now located in Cascade Annex. Although smaller than in former days when it was Chemistry Stores in Klamath Hall, this stockroom still serves an essential function in research and teaching.

Timothy Weakley, who retired in 2003 after sixteen years as crystallographer in the Chemistry Department, is enjoying life in Dundee, on the east coast of Scotland. Tim writes "The city has a magnificent site on the northern shore of the Firth (estuary) of Tay which is over a mile wide at Dundee, wider upstream and tidal as far as Perth twenty miles inland, and there is splendid countryside behind the city and immediately across the river, and fine beaches to the north and south. The nearest Highland glens are an hour or so drive to the north. We (Tim and Brenda and two kittens) occupy the ground-floor flat of an old house, built ca. 1813, facing south about a quarter-mile from the Tay and just across the road from a pleasant park called Magdalen Green. We have a fair-sized front garden behind a stone wall, and are just opposite the elegant curve of the Tay Railway Bridge, successor to the one that blew down in a mighty gale on the last day of 1879 taking a passenger train with it. Beyond the bridge and river we can see the green hills of the county of Fife. From October to early March we can also enjoy splendid sunsets and sunrises. We're twelve minutes' walk from the university where we both used to work, and about 25 from the city centre." Tim Weakley can be reached at timothy.weakley@tesco.net

*Editor's note: We regret the omission of the second "e" in Tim Weakley's name in the 2004 edition of *UC Chemistry News*.*

Alumni News From All Over

1940s

John Weisel, B.A. 1948, went on to a career as a physician, graduating with honors from the University of Oregon Medical School in 1952 with election to membership in Alpha Omega Alpha. As an intern, he worked at Minneapolis General Hospital and was a resident in ophthalmology at the University of Oregon Medical School from 1952 until 1956. Dr. Weisel was certified by the American Board of Ophthalmology, is a member of the Fellow Americans College of Surgeons, and is retired and enjoying life in Medford, and Sunriver, Oregon.

1950s

Henn Soonpaa, M.S. 1953, completed his Ph.D. at Wayne State University in Detroit, Michigan, and was then drafted into the Army where he spent "two years as a Ph.D. potato peeler." Released from duty in 1956, Dr. Soonpaa continued his education, studying mathematics and physics at Iowa State University. Though he holds degrees in chemistry, his career has been in physics. Dr. Soonpaa worked as a senior and later, principal scientist at General Mills, Inc. and at Honeywell, Inc. From 1958 to 1959 he taught physics at Gustavus Adolphus College in St. Peter, Minnesota. Starting in 1966 he spent 28 years teaching physics at the University of North Dakota, and then retired. Dr. Soonpaa shares that his most significant research has been on mesoscopic systems, single crystal thin films, and quantum mechanical phenomena in restricted dimensions. Now that he is retired, he has been traveling more and reading about the history of science.

Jerry Christian, B.S. 1959, earned a Ph.D. in physical chemistry from the University of Washington in 1965. His years from 1972 to 1974 were spent as a National Research Council Senior Postdoctoral Fellow at NASA Ames Research Center. Dr. Christian's career was spent largely in nuclear waste management and fuel reprocessing research and development. He was instrumental in the development of the classified Fluorinel Dissolution Process for advanced naval fuels, a process that was implemented in a new \$250 million

facility at the Idaho Chemical Processing Plant in the mid-1980s. During the years Christian spent researching fuel dissolution technology, he developed the non-mercury catalyst fluoboric acid to replace the mercuric nitrate that had been used worldwide for fifty years for dissolving aluminum-clad fuels in nitric acid. Dr. Christian received a Special Award from the Chairman of Westinghouse for the development of the Fluorinel Dissolution Process. In 1993, Dr. Christian was one of ten annual Westinghouse Signature Award winners for a chloride volatility processing concept for spent nuclear fuels. The following year he received the American Nuclear Society Special Award for Innovations in Long-Term Storage of Spent Nuclear Fuels. Dr. Christian retired as Scientific Fellow from Idaho National Engineering & Environmental Laboratory in 2001, one year after The Idaho Academy of Science awarded him their inaugural Distinguished Scientist/Engineer Award. Presently, Dr. Christian is employed as a consultant and he owns Electrode Specialties Company, which manufactures electrodes for measuring hydrofluoric acid.

1960s

Gary R. Miller, Class of 1961. *Gary Miller wrote a contribution to *Remembering Virgil Boekelheide*. With it he sent information about his own career, and we have reproduced the latter text here.—Ed.*

"Dr. Virgil Boekelheide is among the three professors at the University of Oregon of whom I have fond memories, the other two being Dr. LeRoy H. Klemm from whom I took a year of organic chemistry (junior year), and Dr. Bayard McConnaughey from whom I took a year of bacteriology/microbiology (senior year). I changed my major from premed to chemistry in 1959 when I took Dr. Klemm's course in organic chemistry, a pivotal event in my university career. My wife and I moved to Portland, where I secured employment and took courses in physical chemistry and biochemistry at Portland State University part time (1962-1964). I did not resume my studies until 1982-1986 (an eighteen year

break), during which I took part time courses, among others, in spectroscopy (IR, proton NMR), toxicology and industrial hygiene. I finally graduated in August of 1987 [from PSU] with a B.S. in chemistry (a "late bloomer"). This stretched out for a period of thirty years (1957-1987), a trek which I do not recommend to others. It's really tough to go back and finish up.

"I am now sixty-five years old, retired and have over 42 years experience in the analytical laboratory. I have worked in a water bacteriology laboratory (state of Oregon), general testing commercial laboratory, a mild steel testing laboratory, environmental laboratories, an R&D pesticide and herbicide laboratory, an R&D pulp and paper manufacturer laboratory, a precipitated calcium carbonate laboratory (for papermaking), a diatomaceous earth filter aids laboratory, an herbal manufacturer's QC laboratory and lastly, at a government laboratory. I have found my current interest strongly oriented towards toxicology, especially as regards antidotes for chemical burns and for bacterial, viral and fungal infections. Nearly thirty years ago I discovered the amazing healing and detoxification properties of polyvinylpyrrolidone (aka PVP, Povidone and Plasdone). My wife has a business based on six formulations I developed from this compound, chief of which is a water based burn spray, safe anyplace on the body. We have found the soothing and healing properties shared with us by users to be both astounding and delightful. We are currently seeking a major manufacturer who may have interest in making this product available. It would benefit people worldwide.

"Over the years I have been privileged to have some of my work published to share with my contemporaries. What I consider to be my most important work to date is the determination of nitrate + nitrite and nitrite only (all as nitrogen) with resorcinol. This is very important in environmental work for water supplies, as the consequences to infants under six months of age is oxygen starvation by its effect on the hemoglobin (methemoglobinemia). Further details are available in the latest edition of Standard Methods for the Examination of Water and Wastewater at the beginning of the Nitrogen section. I hope to

have this work ultimately published in Spectroscopy magazine.

"My wife, Margaret, and I had planned to move to La Grande, Oregon, but the availability of better medical services and presence of family members in the Eugene area caused us to change our minds. I have moved full circle back to Eugene once more and am enjoying it more than ever. The relaxed atmosphere, friendly people, goods and services available and recreational opportunities are delightful."

Gary Hedden, B.A. 1967, did undergraduate work with Dr. Koenig. Today he manages the pilot plant for Roche Palo Alto, where he is involved in small molecule discovery for therapeutic drug development. At the pilot plant Dr. Hedden and staff are able to scale reactions up to 200 gallons and produce 20 to 30 kg of active ingredient. He has been employed there for 32 years, and says he still likes the work. Dr. Hedden has worked on two drugs that have made it into the marketplace. Thanks to his efforts at synthesizing a derivative of mycophenolic acid, we have Cell Cept, which is an immunosuppressant used by organ transplant patients. He also discovered the resolution agent used to manufacture Naproxen, sold as the pain reliever Aleve. Dr. Hedden points out that this was particularly satisfying as it enabled the drug to be made without using cinchonidine, a substance derived from certain Indonesian trees, thus saving the trees for a more productive use—that of supplying quinine for gin and tonics!

Celeste Roper, B.A. 1962, moved to California after graduation and worked three years as a literature chemist in the technical library of the Naval Ordnance Test Station at China Lake. While there, Roper met and married her husband and left to raise two boys. She returned to work at the Test Station, now named the Naval Air Warfare Center at China Lake. Roper's job was verifying and making material specifications (nonmetals) on design packages for the Sidewinder missile, Tomahawk cruise missile, Sparrow and other missiles. In the lab, Roper concentrated on failure analysis of various design flaws. 1993 saw Roper becoming involved in the Navy's efforts to cease using chlorofluorocarbons. This effort led Roper to working as an environmental chemist

in cooperation with research chemists to find substitutes for no-longer-useful products and to find new products. In this capacity Roper worked with UO alum Dr. Rich Hollands, among others. Roper's research group developed and holds the patent on a chemiluminescent light stick. After retiring from this research group in December 2002, Roper received the Navy's Meritorious Civilian Service award and a Naval Air Systems Command Environmental Competency award.

Diane Bradway, B.A. 1962, held an NSF funded Undergraduate Research Grant while at the UO and worked with the late professor LeRoy Klemm on a project involving stereospecific synthesis of various compounds. After receiving a masters from Oregon State University, Bradway worked for the U.S. Food and Drug Administration, sensing that the government more fully accepted women in the laboratory workplace. This experience led to her transfer to the newly created U.S. Environmental Protection Agency, where she spent most of the rest of her working career "developing the analytical methodology used by EPA contract laboratories to monitor exposure to pesticides and their metabolites in human tissues and fluids and in environmental samples." For ten years prior to retirement Bradway worked for the Denver Federal Center's EPA National Enforcement Investigations Center "monitoring laboratories that did health, safety and environmental fate studies to support the registration of pesticides." In this capacity, Bradway "helped assure that labs complied with the federal Good Laboratory Practice Standards regulations and that the studies were fully supported by the data and conducted under GLP standards." After retiring from the government she worked as an independent consultant in GLPs and quality assurance, primarily supporting researchers in Oregon and Washington. Bradway says she now lives in Hood River, having realized that she missed the rain and "found the weather in Denver just too darned perfect to suit an old Oregonian."

Wayne Stalick, B.A. 1964, did undergraduate work with Professor Leroy Klemm. He went on to receive a Ph.D. from Northwestern University in 1969. Stalick first taught as a visiting

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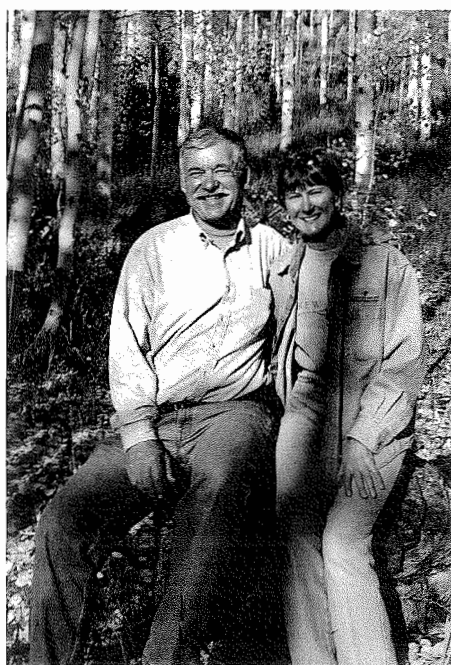
assistant professor of chemistry at San Jose State from 1969 to 1970, then was appointed as a postdoctoral fellow working with Mel Newman at Ohio State from 1970 to 1972. George Mason University hired him as an assistant professor of chemistry in 1972, promoted him to the associate professor rank in 1976 and to the professorial rank in 1987. As of August 2004, Stalick is tackling his new responsibilities as chair of the Department of Chemistry and Physics at Missouri State University in Warrensburg, Missouri.

Dennis Clark, B.A. 1966, worked his senior year with Professor John Keana, who supported Clark in applying to various graduate programs. Stanford was the winner, and Clark was awarded his Ph.D. in organic chemistry (working with Professor Harry Mosher) in 1971. He was a postdoctoral fellow for three years at Stanford in chemistry and pharmacology. Clark became the assistant director of the Drug Assay Lab at the Stanford University Medical Center and later in 1980 became the clinical chemist at the Clinical Laboratory at Stanford University Hospital. Clark left Stanford in 1991 to join Analytical Solutions, Inc, a company he helped found and which was later acquired by MDS International (a Canadian Health conglomerate) in 1998. In 2002, Clark retired from MDS Pharmaceutical Services and enjoys spending his time with his three grandchildren, sports cars and San Francisco Giants baseball.

Dennis Beetham, M.S. 1967, currently "should be retired but isn't" and lives on a ranch in Powell Butte, Oregon with his wife Kathy and their three children. Beetham is owner and president of D. B. Western, Inc., which has designed and built over 28 plants throughout the world. The company's most recent plant is the largest formaldehyde plant in the world, located in Houston, Texas. The plant produces 1.2 billion pounds per year of formaldehyde and supplies Dupont with 100% of its raw material for producing its trademark fabric "Lycra" and other chemical intermediates. "Thanks to good education and satellite computer systems", according to Beetham, the family is able to run D. B. Western from the ranch.

Al West, B.A. 1967, earned a Ph.D. from UC Berkeley, California in 1971. West has worked for Sandia National Laboratories since leaving Berkeley. He is currently director of Environmental Safety & Health & Emergency Management. West is a member of the Clark Honors College Alumni Advisory Council.

Friedhelm Baitis, B.S. 1968, did his undergraduate research in John Keana's laboratory. He married Anita Gleason Baitis (B.S. biology, 1968). Friedhelm and Anita visited the UO campus recently. Friedhelm said, "Due to the Vietnam War, I joined the USAF and flew for 20 years, and since then flew as a pilot for United Airlines.



Friedhelm and Anita Baitis

Anita works as a medical technologist at Yampa Valley Medical Center in Steamboat Springs, CO." Anita said to tell our readers that "Friedhelm and Anita are busy and having fun flying his Supercub and glider in Colorado. We live in paradise and we are the luckiest people in the world". E-mail address: baitis@springsips.com

Kazuo Koshida, M.S. 1968, worked with Tom Koenig while at the UO. Koshida spent more than forty years with Nippon Shokubai (Japan Catalytic) before retiring in July 2002. Koshida's last position was president of International Catalyst Technology (a joint venture company between Nippon Shokubai, Japan, and Degussa, Germany) to manufacture catalysts for automobile

exhaust gas purification in Japan and the United States. During the 1990s, Koshida served as vice president of Japan's University of Oregon Alumni Association. Koshida, his wife Mitsue, and their two daughters and a son live in Yokohama, Japan. Koshida's eldest daughter Reiko graduated from Tokyo Institute of Technology and currently works for Dupont Japan as a research chemist.

Victor Snieckus, Ph.D. 1965 with Virgil Boekelheide, received the 2003 Arfvedson-Schlenk Award from the German Chemical Society (GHDh). This award recognizes outstanding achievements in the field of lithium chemistry. Snieckus was cited as an exemplary representative of the synthetic organic community who has made fundamental contributions to the field of organolithium chemistry.

Alan S. Waggoner, Ph.D. 1969 with Hayes Griffith, is a professor of biological sciences and director of the Center for Light Microscope Imaging and Biotechnology, Carnegie Mellon University, Pittsburgh, PA. Alan's research focuses on the development of fluorescence-based biosensors for biology and biotechnology.

1970s

Choung Un Kim, Ph.D. 1970 with John Keana, is vice president for chemistry, Gilead Sciences, Inc., a biopharmaceutical company with operations in the United States, Europe, and Australia.

Neil Johnson, B.A. 1970, has just completed two years as a visiting scientist with Pete von Hippel. During this period he developed a new method, based on circular dichroism, to measure local conformations of DNA and RNA. Neil is returning to his position as research scientist at the Institut de Pharmacologie et de Biologie Structurale, Toulouse Cedex, France.

Jeffry Bland, Ph.D. 1971 with John Keana, is president and chief executive officer for Metagenics, Inc., headquartered in Gig Harbor, Washington. According to the company website, "Dr. Bland founded HealthComm International, Inc. in 1985, and served as its Chief Executive Officer until the merger with its strategic partner, Metagenics, in 1999. As the principal visionary of

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HealthComm, Dr. Bland had already distinguished the company as a leader in the development of medical foods by the time of the merger. He had also established the internationally respected Institute for Functional Medicine to train health practitioners globally in the application of nutritional and functional medicine.

"A nutritional biochemist and registered clinical laboratory director, Dr. Bland is a former professor of biochemistry at the University of Puget Sound, and a previous Director of Nutritional Research at the Linus Pauling Institute of Science and Medicine. Dr. Bland has authored five books on nutritional medicine for the healthcare professional and four books on nutrition and health for the general public. He is also the principal author of over 100 peer-reviewed research papers on nutritional biochemistry.

"Committed to advancing education in the natural health sciences, Dr. Bland is one of the four original founders of Bastyr University in Washington State, the first federally accredited university in the United States offering graduate and undergraduate degrees in natural medicine. With his highly regarded seminar series on science-based nutrition and health, Dr. Bland continues to focus on providing practical education to healthcare professionals worldwide."

David Jensen, Ph.D. 1974 with Pete von Hippel, is a professor at the Fels Institute of Temple University in Philadelphia where he is working on the chemistry of DNA mutagenesis.

Doug Engel, Ph.D. 1975 with Pete von Hippel, is a professor at the University of Michigan in Ann Arbor. Says Doug, "Our work is now principally focused on the generation of genetic models for human disease (breast cancer, beta-thalassemia and sickle cell anemia) using transgenic and knock-out mice. Even worse, two years ago I agreed to become chair of Cell and Developmental Biology at the University of Michigan, which distracts me even further from the science that Pete taught us all to love. The memories of playing NMR computer duck-shoot with Rick Dahlquist and closely interacting with so many other brilliant scientists in the IMB simply serve to reinforce my fondness for my all-too-few years at the UO."

Andy Butler, Ph.D. 1977 with Pete von Hippel, completed a postdoc at Oak Ridge National Laboratory in Tennessee. Butler has been on the faculty of the University of Texas MD Anderson Cancer Center Department of Carcinogenesis since 1983. The department is located in the MD Anderson Science Park, in the middle of a state park near Austin (rather than in the middle of Houston), which he finds quite pleasant. Butler's research is focused on the regulation of cell cycle genes that contribute to melanoma susceptibility in hybrids of the fish genus *Xiphophorus*, one of the few animal models available for analysis of melanoma.

David Draper, Ph.D. 1977 with Pete von Hippel, is a professor at Johns Hopkins University in Baltimore, Maryland. He has been director of the Program in Molecular and Computational Biophysics for the past five years. He still misses the northwest.

Terry Lee, Ph.D. 1977 with John Keana, is a professor of immunology at the Beckman Research Institute of the City of Hope in Duarte, California.

Greg Hager, M.S. 1978, did research with Hayes Griffith and then spent 14 years after graduation as an outside sales representative in the analytical instrument industry. He worked in succession for Beckman Instruments, Kevex, and Siemens, in Texas, Chicago, and Boston. Hager later spent 14 years working as a realtor in Boston.

Michael A. Buccino, B.S., 1978, did undergraduate research with Bruce Birrell in Hayes Griffith's lab. After leaving the UO he earned his DDS at Northwestern in 1982, with a specialty in pediatric dentistry in 1986. Michael lives in Falmouth, MA and practices pediatric dentistry in Fall River, MA. Michael returned to the UO for a visit on September 15, 2004.

Bradford B. Wright, B.A. with Honors 1979, went on to earn a M.S. from Ohio State and spent 1 year as a postdoctoral student at Yale. Wright has been employed at 3M since 1984, where he currently works as a patent agent in 3M's Office of Intellectual Property Counsel. 3M honored Wright in 1999 with their Corporate Circle of Technical Excellence Award. Wright has 14 publications and ten issued patents and has been married to his wife Julie for 22 years. He enjoys playing the

recorder semi-professionally with several Renaissance and Baroque period music groups.

1980s

David Anderson, Ph.D. 1980 with Dr. Rick Dahlquist, returned to the UO and is now director of the Genomics/Proteomics Facility in the Institute of Molecular Biology. (*In last year's newsletter we erroneously reported Dave Anderson as Dave Johnson—both are great guys! —Ed.*)

Christopher Dubay, B.S. 1980, worked as an application analyst, technical specialist, and information technology consultant at various sites in Portland, Oregon until 1986. He attended graduate school and received his Ph.D. in medical genetics from the Oregon Health Sciences University School of Medicine (OHSU) in 1990, did postdoctoral work in Paris, France, and in Oxford, England, and then received a joint appointment in the departments of Medical Informatics & Clinical Epidemiology and Molecular Medical Genetics at OHSU. Dubay was the recipient of the Tartar Trust Fellowship in 1988, the Chateaubriand Foreign Study Award in 1990 and 1991, and the National Library of Medicine Medical Informatics Fellowship award in both 1995 and 1996. Dr. Dubay has been an assistant professor at OHSU since 1996 and is currently teaching and doing research in bioinformatics.

Jamiu Ade Odutola, Ph.D. 1980 with Tom Dyke, is an associate professor of chemistry at Alabama A&M University in Huntsville, Alabama.

Rama Viswanathan, Ph.D. 1980 with Tom Dyke, is a professor at Beloit College in Beloit, Wisconsin.

Bruce Bale, B.S. 1983, shared with us that he is currently employed as environmental health and safety manager at Molecular Probes (a division of Invitrogen Corporation) in Eugene, Oregon.

Richard Voegeli, Ph.D. 1984, returned to Switzerland after graduation and held a job in the pharmaceutical industry. After that, he migrated to the insurance finance field. Voegeli worked 14 years at Swiss Re, a large reinsurance company, before he and two partners formed their own business three

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years ago, which "takes advantage of inefficiencies in the insurance claims market."

Mike Goerger, Ph.D. 1985, worked closely with Drs. Lloyd Dolby and Bruce Hudson while at the UO, developing a deuterated version of paranoic acid for use in biological membrane studies. Goerger received a Fulbright Fellowship and spent a year at the University of Heidelberg in Heidelberg, Germany working on prostaglandin analogs. Currently, Goerger works for Dynea Resins USA in Springfield, Oregon as North American R&D manager for the company's Wood & Specialty Adhesives Business Line.

Hung Tran, B.A. 1985, went on to OHSU for medical school, graduating in 1989 with an M.D. He completed his residency (also at OHSU) from 1989 to 1993, in the area of Psychiatry. Dr. Tran is currently in private practice in Salem, Oregon.

David Edlund, Ph.D. 1987, studied catalytic reactions of hydrogen and organometallic chemistry under the direction of Professor Richard Finke. After graduating, Dr. Edlund moved to Bend, Oregon where he worked as a research scientist at Bend Research, Inc. There he says he was involved in directing R&D programs aimed at hydrogen separation and purification, natural gas upgrading (nitrogen removal), artificial muscles, and oxygen separation from air. After nine years he founded the private company Northwest Power Systems and focused his efforts on developing fuel cell technology. Three years later a majority interest in the company was sold to Boise, Idaho's Idacorp, which changed the name to Idatech. Though Idatech conducts business in non-transportation fuel cell applications throughout North America, Europe, and Asia, the company is still located in Bend and Dr. Edlund retains the position of senior vice president and CTO. Dr. Edlund holds 33 issued U.S. patents and has authored or co-authored approximately 60 technological publications and presentations.

James Palandri, B.S. 1987, went on to receive his Ph.D. in geological sciences from the UO in 2000 and is currently employed by the U. S. Geological

Survey (Menlo Park, California). He is on a three-year grant to investigate carbon dioxide sequestration in deep saline aquifers as a method of trapping CO₂ and preventing it from entering the atmosphere and contributing to global climate change.

Karen Larison, M.S. 1988, has been working as a research assistant in Dr. Gail Bishop's lab in the Microbiology Department of the University of Iowa. There she investigates signal transduction in B lymphocytes.

Dan Robinette, B.A. 1988, is currently teaching regular physics and AP physics at Clackamas High School, which is in a district outside of Portland, Oregon.

Gerriann Walker, B.S. 1988, went on to receive a M.S. in science education from Oregon State University in 1994. Since 1988 she has taught high school chemistry, physics, and science research at Elmira High School in Oregon. She began teaching science methods at Pacific University in 1999.

Costi D. Sifri, B.S. 1989, went on to get his M.D. and is now an instructor in medicine at Harvard Medical School and the Division of Infectious Diseases at Massachusetts General Hospital, both in Boston. Dr. Sifri's research interests focus on the use of genetic model systems to study host-pathogen relationships, while his main clinical efforts are centered on the prevention and treatment of infections in solid organ and bone marrow transplant recipients.

1990s

Doug Mainwaring, B.S. 1990, received a M.S. in forestry from Oregon State University in 2000. Now Mainwaring works as a research assistant at OSU's College of Forestry, where he enjoys a workplace with "fewer chlorinated solvent vapors."

Jeffrey Mann, Ph.D. 1990 with John Keana, has joined the San Francisco office of Morgan Lewis as a partner to start up the west coast life sciences patent practice at the firm. He comes from Townsend & Townsend & Crew, and he focuses on complex patent strategies, licensing, counseling, and prosecution, mainly in organic and organometallic chemistry, materials, pharmaceuticals, spectroscopy, separations, catalysis, and biotechnology.

Ye-Xin Wu, Ph.D. 1990 with John Keana, is a scientist at Molecular Probes in Eugene.

Daniel Koos, Ph.D. 1991 with Geri Richmond, has been working in the semiconductor industry since leaving the UO. He was with Tektronix, Inc. in Portland for one year before moving to Micro Technology in Boise, Idaho. From there he went to Motorola in Phoenix, Arizona and then transferred to Motorola in Toulouse, France. In 1999 he left Motorola and began working for Novellus Systems in Portland. In 2002, he transferred to Phoenix, Arizona. In his spare time, Koos enjoys backpacking and skiing. He recently quit skydiving because he found it was too time consuming.

Chanrithy Him, B.S. 1992, became a research associate at OHSU studying post-traumatic stress disorder (PTSD) in Cambodian refugees. Ms. Him, who grew up under the Khmer Rouge in Cambodia, lost her parents and 3 siblings to the regime, as well as two brothers during the Vietnam War (which spilled over into Cambodia in the 70s). She intended to fulfill a promise to a deceased sister and become a medical doctor, but was overwhelmed by her work on the PTSD study. Chanrithy Him authored a book entitled *When Broken Glass Floats: Growing Up Under the Khmer Rouge* (W. W. Norton). This book won the Oregon Book Award in 2001 in Literary Nonfiction and was a finalist competing for the Kiriya Pacific Rim Book Prize in 2000. Her plans to become an M.D. have been further displaced by her international travels to speak about the book. Ms. Him's efforts in educating the world about Cambodia's tragic years and her personal journey to forgiveness were featured in an international documentary film entitled "The Will To Live", directed by Danish filmmaker Anne Gyrithe Bonne. The film features Archbishop Desmond Tutu and Juan Almeyda, a Honduran human rights activist and medical doctor. A Chanrithy Him Scholarship has been created by the U.S.- Indochina Educational Foundation, to be awarded to women from Cambodia, Laos or Vietnam who show commitment to social and economic justice in their communities. Ms. Him runs Project Empowerment from her home in Eugene; one of the foundation's goals is raising funds to have her book published in Khmer to benefit Cambodian schools.

John P. Jarecki, B.S. 1992, wrote "after a difficult decision to pursue medicine instead of a Ph.D., I went to OHSU (and received a M.D.). There I met my wife before leaving for an intern year in San Francisco and then residency in Tucson. After equal years apart and together, Cathy and I married in Buffalo, WY and settled in Wenatchee, WA. I am now in my third year with Wenatchee Anesthesia Associates and my wife practices in internal medicine. This past June we welcomed our first baby, Greta. The recent issue of Chemistry News had retirement notices and an obituary from some of my professors. Along with an 'I must be getting old' feeling, I fondly recall the high quality of teaching from dedicated faculty."

Jirong Lu, Ph.D. 1992, is involved in drug discovery and development efforts for therapeutic proteins, antibodies and peptides at Lilly, where she is a principal research scientist.

Maureen Wang, MS 1992, teaches chemistry part-time at Diablo Valley College and tutors high school students. She is enjoying her recently purchased house on California's Carquinez Straits, where she is gardening as many hours as there are in the day. Ms. Wang shares that her favorite teacher in the department was Dr. David Tyler and her favorite class was academic writing.

Yan Wang, Ph.D. with Pete von Hippel 1992, worked in Christine Guthrie's lab at the University of California at San Francisco as a postdoc until the summer of 1998. From there, she worked for MJ Bioworks, Inc., a biotech company in South San Francisco, doing research in developing new reagents for molecular biology and genomic applications. Recently, MJ Bioworks and MJ Research merged with BioRad. Wang is a principal scientist with the new firm, leading a small R&D team.

James Endrizzi, Ph.D. 1993 with Jim Remington, is now a postdoc at UC Irvine with Enoch Baldwin.

Hongdi Gu, B.A. 1993, went on to earn a Ph.D. in biochemistry from the University of Washington. While at the UO, Gu spent time as an undergraduate research assistant in the Griffith lab, and worked closely with Hayes'

wife, Dr. Karen Griffith-Hedberg. After receiving his Ph.D., Gu switched to the business world and obtained an M.B.A. from Yale in 1999. He began working as an investment banker with Lehman Brothers' healthcare group in New York. In this capacity, Gu has helped multinational pharmaceutical, biotech and medical device companies merge, restructure, and make acquisitions and divestitures. He has also advised companies on raising capital. Once again in career transition, Gu has recently accepted the position of senior vice president in Asia at JP Morgan to focus on mergers, acquisitions, and corporate finance. Gu moved with his family to Hong Kong over the summer.

Erik Lloyd, M.A. 1993, worked in the laboratory of Professor Bruce Hudson. From 1993 to 2004 Lloyd worked in the quality control and quality assurance departments at DEY, a pharmaceutical manufacturing company specializing in respiratory care and located in Napa, California. Since March of 2004 he has worked as quality control chemistry manager at a biotech company called XOMA in Berkeley, California. Married in 2003, Lloyd lives in Napa and shares his home with his wife Stacey, one-year old son Jacob, and two dogs, Stanley and Milo. A cat named Ted, acquired while Lloyd was at the UO, unfortunately hasn't been seen since escaping one night in 2002.

Tom Novet, Ph.D. 1993 with Dave Johnson, has been working at Hewlett Packard for the last ten years. He and wife Wendy have a two-year-old daughter who keeps them very busy.

Shirley Daube, Ph.D. 1994 with Pete von Hippel, is now head of the Helen and Martin Kimmel Center for Chemical and Biophysical Nanosciences Chemical Research Support Unit at the Weizmann Institute of Science, in Rehovot, Israel. Her lab focuses on research involving the combination of molecules and materials interfaces. When she's not in the lab, Daube has her hands full raising three boys.

Kyle Gano, B.S. 1994, was awarded a B.S. in biochemistry in 1996 from the University of Washington, and a Ph.D. in organic chemistry from the University of California at Los Angeles in 2000. He also received an M.B.A. from The Anderson School at UCLA in 2002. Gano currently serves as business

development manager at Neurocrine Biosciences in San Diego, California.

Mingdi Yan, Ph.D. 1994 with John Keana, is an associate professor of chemistry at Portland State University.

Ben Geertz, B.S. in biochemistry 1995, worked in Dr. Diane Hawley's lab for a year, then went to OHSU to focus on Alzheimer's research. After working two years toward an M.B.A. from Portland State University, Geertz began working as a risk analyst at Household Bank. Geertz received his M.B.A. in 2000 and relocated to Delaware to work at BankOne as a qualitative business analyst. As of February 2003, Geertz returned to the West Coast, and works at Wells Fargo in California's Bay Area as an AVP/Risk Consultant focusing on loss reduction strategies.

Wai L. Lau, B.S. 1995, did undergraduate research in the Griffith lab. He returned for a visit in July 2004, and related that he is now a postdoctoral fellow with K. Dane Wittrup in the Department of Chemical Engineering, MIT. Wai is using the yeast display method to make single chain antibodies to bind heparin.

James Riddle, B.A. chemistry and psychology 1995, currently works at Nike as a senior quality engineer in the Apparel Division.

David Schut, Ph.D. 1995 with David Tyler, taught organic chemistry lab at the UO before accepting a position at Hewlett Packard in November of 1996. His first position was as a wet etch engineer, involved in developing wet etch chemistries for Si processing and thin film processing as well as doing cost reduction/automation studies of the process. From there he joined the R&D group for ink development where he worked on colorant design and promotion of permanence in inkjet printing. Schut's next position was in the device design group where he led a team in the design of new materials and devices for memory technologies. He then moved to a group developing new materials for, and new methods of, deposition for the field of low-cost electronics. Currently, Schut is a visiting scientist at the Massachusetts Institute of Technology, coordinating efforts between MIT and Hewlett-Packard.

CONTINUED ON 22 ➤

Alumni News

► CONTINUED FROM 21

The assignment is scheduled to last from 13 to 24 months and will focus on printed electronics (novel materials development for improved process development of low-cost materials); molecular electronics (making practical devices smaller); and biological sensing (use of microelectromechanics/nanoelectromechanics technology) to create personal health monitoring devices. Schut has published 19 patents, with 15 under review. His patents cover the areas of ink chemistry; electron beam emitters for field emission devices; focusing column development for electron beam emitters; processing steps and material sets for development of low-cost electronic devices; and media material/device development for the storage of information using phase change or charge storage material sets.

Kevin S. Wilson, Ph.D. 1995 with Pete von Hippel, is an assistant professor at the University of Alberta, where he's been in the Department of Biochemistry since 2001. In 2002, Wilson received a Canadian Institutes of Health Research New Investigator award.

Michael Feese, Ph.D. 1996 with Jim Remington, is now working as a research scientist for DeCode Genetics in Seattle, Washington.

Bradley C. Gardiner, B.S. biochemistry 1996, received his M.D. from the Uniformed Services University of the Health Sciences at the National Naval Medical Center, Bethesda, Maryland. Gardiner currently works as a flight surgeon with the 2nd Squadron, 6th Cavalry, Illersheim, Germany.

Sally Horne-Badovinac, B.S. 1996, and **Matthew G. Miller**, B.A. 1997, are Ph.D. candidates at the University of California San Francisco. Sally is in the program in developmental biology and Matthew is in biochemistry and molecular biology. Sally and Matthew are among the sixteen national winners of the 2003 Harold M. Weintraub Graduate Student Award of the Fred Hutchinson Cancer Research Center, Seattle. Congratulations!

Rhett Koval, Ph.D. 1997 with Brian Matthews, recently finished a postdoc with Wayne Hendrickson at Columbia University in New York. His work was

published in the journal EMBO (EMBO J. 2004 Sep 1;23(17):3441-51) and featured on the cover. Koval, his wife Andrea, and their new-born son, Max, recently left New York for Cincinnati, Ohio, where Koval has accepted a faculty position in the department of molecular genetics, biochemistry and molecular biology at the University of Cincinnati College of Medicine.

Christopher Johnson, Ph.D. 1998 with Dave Johnson, spent two years working at PPG Industries on glass coatings for a variety of applications. His work focused on TiO₂ (anatase) for self-cleaning windows. Johnson then obtained a fellowship at the National Energy Technology Laboratory (NETL) where he spent a year synthesizing and testing catalysts for CO₂ reforming of methane. Johnson was then hired permanently at NETL, where he now works on solid oxide fuel cell (SOFC) technology. His primary research focus is the development of low-cost metal interconnect materials for SOFC stacks.

Ken Usher, Ph.D. 1996 with Jim Remington, is now an assistant professor in the natural sciences department at the Oregon Institute of Technology in Portland, Oregon.

Greg Baxley, Ph.D. 1997 with Dave Tyler, and **Lara Endres Baxley**, Ph.D. 1999 with Diane Hawley, recently moved from Bakersfield, California to San Luis Obispo. Both are still teaching chemistry. Lara is at California Polytechnic University and Greg is at Cuesta College. They and their two kids love the area and are happy to be near the ocean and grandparents. Greg reports that there are several UO alumni living in the area, which is an added bonus.

Geoffrey Lowman, B.S. 1998, finished his Ph.D. at U.C. Santa Barbara with Steven Buratto in May of 2003. Lowman is currently a postdoctoral fellow with Paula Hammond in the chemical engineering department at MIT, working on novel solar cell systems.

Lana M. Rossiter (formerly Grubb), Ph.D. with Bruce Branchaud in 1998 married Clint Rossiter on 3-13-2004. She is currently working at Albany Molecular Research, Inc. in Albany, N.Y., where she was promoted from senior research chemist to senior research scientist in March of 2003. Lana writes "Clint, our two cats and I are still trying

to get used to the cold winters and lots and lots of snow." Lana's E-mail address is lmgrubb@earthlink.net

Jonathan Ward, B.S. 1998 (biology major, chemistry and music minors), is currently a candidate for a doctorate in pharmacy in 2005. From 1997 to 1999, Ward worked in canine genetics with Dr. Ry Wagner at the UO. From 1999 to 2001 Ward studied cardiovascular remodeling in the Department of Cardiology at Washington School of Medicine. Jonathan's wife Catherine, who is also a UO grad, will be receiving a doctorate in pharmacy in 2005 as well. The couple are moving to Portland, Oregon in November 2004.

Django Andrews, B.A. 1999, went on to do doctoral research at the University of Colorado at Boulder, working with W. Carl Lineberger. (UO's Dr. Paul Engelking did postdoctoral research with Dr. Lineberger). Andrews works on photoelectron imaging of negative ions and plans to graduate in one year.

Heather Blanchette, Ph.D. 1999, worked with Dr. Michael Haley and Dr. Bruce Branchaud while at the UO. She worked as a scientist at Shionogi Bio-Research in Lexington, Massachusetts for two years. Now, Blanchette is in her 2nd year at Praecis Pharmaceuticals in Waltham, Massachusetts working in pre-clinical and clinical drug discovery and development specializing in pharmacokinetics/pharmacodynamics/drug metabolism. Dr. Blanchette lives in Chelmsford, Massachusetts with her husband Jim and 2 children, Isaac and Olivia.

Craig Stolarczyk, B.S. 1999, went on to earn a M.S. in materials science/polymer chemistry in 2001. Stolarczyk was hired on after interning with the Willamette Valley Company in 2001. He is currently involved with the design of performance polymer systems used in the railroad industry, with a focus on material lifetime and durability assessment. In his job, Stolarczyk calls upon his knowledge of rheology, microscopy, materials engineering, and organo-metallic synthesis. Stolarczyk shares that his aspirations are to move into the field of advanced material design or biotechnology where he can be further challenged.

2000s

George Hanson, Ph.D. 2000 with Jim Remington, is working as a research

CONTINUED ON 23 ►

scientist at Panvera Inc. in Madison, Wisconsin.

Lauren Huffman received both a B.A. (2000) and a M.S. (2002) in Chemistry from the UO. As an undergrad, Huffman worked in the Page lab studying metal-encrusted micelles, and as a master's student in the Hutchison lab she developed green chemistry curricula. She went on to work for Eastman Chemical Company in Kingsport, Tennessee, before enrolling fall 2004 as a graduate student at the University of Wisconsin, Madison.

Matt Kraynyak, M.S. 2001, is in his 3rd year teaching sophomore and AP chemistry at The Hill School in Pottstown, Pennsylvania. Kraynyak, who lives in a dorm at the school, also coaches soccer and heads the boy's squash program.

Steven Stuckmeyer, M.S. 2001, obtained his master's degree working in Dr. Geri Richmond's physical chemistry laboratory researching surfactant behavior at the air/water interface. Stuckmeyer reveals that, while interesting, this research was not his life's calling. Much of that was found instead in whitewater boating and other outdoor sporting activities facilitated by Oregon's unique physical geography. Stuckmeyer has been photographed for, and contributed to, *Soggy Sneakers*, the Oregon guide to whitewater boating, and he revels in spending close to 100 days a year pursuing kayaking throughout Oregon's many scenic waterways. When not in a kayak or canoe, he can usually be found spending weekends backpacking or climbing in the mountains. Stuckmeyer is employed as a coordinator for environmental compliance activities for Eugene's Monaco Coach Corporation, and lives in Eugene.

Brad Wan, Ph.D. 2001 with Mike Halley, is working for a small pharmaceutical company called Chimerix in San Diego. After a two-year stint as a postdoc at UC San Diego, Wan was hired out of the lab to work for Chimerix, which was a start-up at the time. He was the first scientist hired by that company. Wan is working on further development of a drug to protect people from the smallpox virus (the vaccine apparently has too many side effects to be widely used). The company has received fund-

ing, and the pressure that goes along with it, from the government. Wan and his associates have found a way to make small quantities of the drug and are working hard to modify the procedure to produce mass quantities. Wan looks forward to plans to work with a team in Italy to mass-produce the drug once he's developed the process.

Jake Jensen, Ph.D. 2003 with Dave Johnson, is working at Intel. Currently he's working on the development of the next generation of oxides and managing equipment improvements. He and wife Rebecca recently bought a home in the Bethany area north of Beaverton and they and their three kids are doing well. Rebecca is writing busy writing fiction. The kids are six, four, and 18 months. No, there isn't a fourth on the way—at least not yet.

Michelle Knowles, Ph.D. 2003 with Andy Marcus, spent a year as a visiting professor at the University of Portland and is now working as a postdoc in Wolf Almer's lab at OHSU. The lab uses fluorescence techniques to study endo- and exocytosis in neurons. Knowles recently returned from three weeks of hiking in Peru with assistant department head Julie Haack.

Gerd Woehrle, Ph.D. 2004 with Jim Hutchison, wrote "I am now working at the Max-Planck-Institute for Metals

Research in Stuttgart as a postdoc for Prof. Huajian Gao. We are studying interactions between nanomaterials and biological systems here; in particular, we try to understand how carbon nanotubes and quantum dots are incorporated into cells and how we can use these materials for drug delivery and imaging of biochemical pathways/cell responses to external signals."

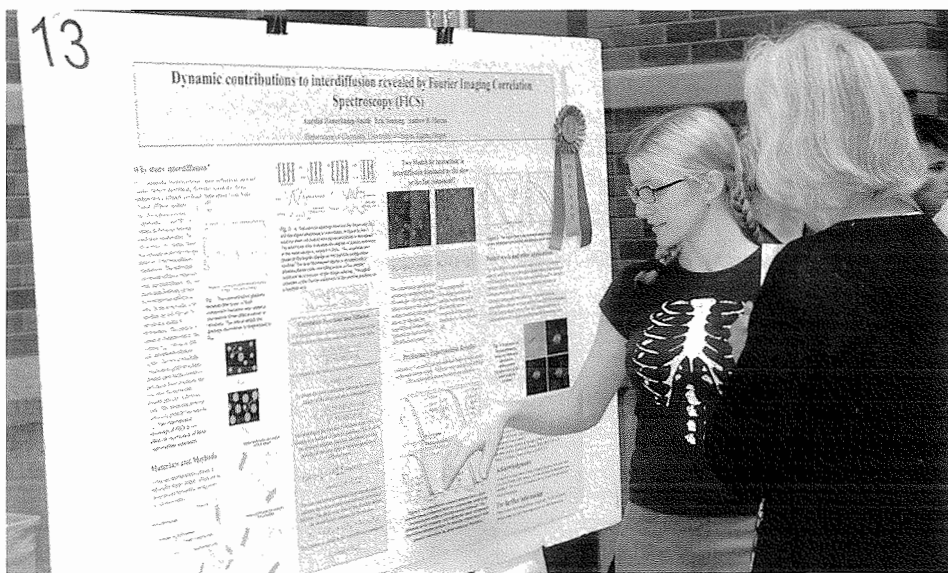
Mark Watry, M.S., 1997, Ph.D. 2002 with Geri Richmond, has been in a Camille and Henry Dreyfus postdoctoral position at Gonzaga University working with David Cleary. As of August 2004, Dr. Watry is entering a tenure-track position teaching chemistry at Rocky Mountain College, a small private liberal arts college in Billings, Montana.

Kevin Becraft, Ph.D. 2004 with Geri Richmond, just started a postdoc with Gabor Somorjai in the Materials Science Division at Lawrence Berkeley National Laboratory. He and wife Korin are settling in the Bay Area with daughter Kira. They miss Eugene, but are happy to be back near family.

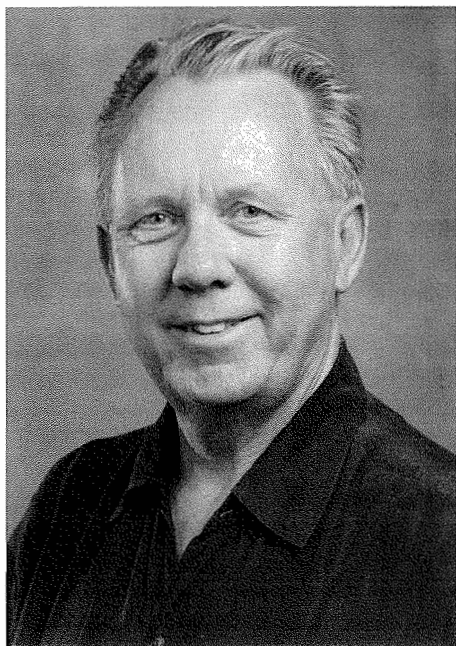
Gary Succaw, Ph.D. 2004 with Ken Doxsee, has accepted a faculty position at Howard Payne University in Brownwood, Texas.

Information for Alumni News From All Over was gathered by Lynde Ritzow and Vanessa Salvia, with assistance from Carol Gard.

Undergraduate Research in Chemistry in Partnership with Graduate Research



Undergraduate Aurelia Honerkamp-Smith discusses the results of her research project with Karen Sprague, vice provost for undergraduate studies, at the annual Focus on Undergraduate Research poster session in May 2004. Aurelia's research project, "Dynamic contributions to interdiffusion revealed by Fourier Imaging Correlation Spectroscopy (FICS)" was conducted under the guidance of Andy Marcus. Aurelia went on to win the Richard M. Noyes Physical Chemistry Achievement Award at the Spring commencement. Photo and information provided by Deborah Exton, co-organizer of the poster session.



**Charles L. Wilkins—
Leading the Way in
Analytical Spectroscopy**

Winners of the Alumni Achievement Award in Chemistry are a select group chosen for this honor on the basis of professional and personal achievements and service that exemplify the Oregon spirit and traditions of leadership and excellence. Awards celebrate achievement in many areas, in a matter similar to the awards given by the American Chemical Society: Pure Science, Applied Science, Education, or Service. We have alumni pursuing a wide variety of professions that we can be proud of, and that can serve as role models for our current and future students. Some alumni are involved in pure research, many others are in areas such as applied science, teaching, and administration, and many work in fields beyond the traditional areas of chemistry.—Ed.

2004 Alumni Achievement Award in Pure Chemistry

Charles Wilkins received his Ph.D. from the UO in 1966, working on organic reaction mechanisms with Lloyd Dolby. After a postdoctoral year at Berkeley, he joined the faculty at the University of Nebraska, rising through the ranks to the rank of professor of chemistry. In 1981 he moved to the University of California at Riverside, serving as chair of the Department of Chemistry from 1982-89, director, UCR Analytical Chemistry Facility, 1988-98; associate dean, Physical and Mathematical Sciences 1994-97, and Distinguished Professor of Chemistry, UCR, 1997-98. In 1998 he moved to the University of Arkansas, where his current title is Distinguished Professor of Chemistry and Biochemistry.

Charles Wilkins' research has contributed to developments in numerous analytical techniques, from NMR to infrared and mass spectrometry. He was one of the pioneers in combining computers with chemical instruments. His influence and collaboration with Chuck Klopfenstein put the UO Chemistry Department in the forefront of computerized chemical instrumentation in the 1970s. His contributions in the area of computer-assisted chemical analysis resulted in his election in 1980 as chair of the Division of Computers in Chemistry of the ACS. He has also made major contributions to the development of Fourier transform mass spectrometry (FTMS) and applied it to the studies of polymers and biomolecules. Recently he is extending the range of applications of these techniques from proteins to intact cells. A hallmark of his research is to produce combined or "hyphenated" analytical systems from developments in diverse areas of analytical chemistry. For example, his students were among the

first to establish the practical feasibility of a gas chromatography-infrared-mass spectrometry combination. "It is clear that his work has had a major influence on the commercial development of integrated GC-IR-MS systems" wrote one nominator. Wilkins also has advanced the technology of linking analytical nuclear magnetic resonance spectroscopy and high performance liquid chromatography. He was elected chair of the Analytical Chemistry Division of the American Chemical Society (1991) and has served on the editorial advisory boards of the journals *Analytical Chemistry*, *Applied Spectroscopy Reviews*, *J. of the American Society for Mass Spectrometry*, *Mass Spectrometry Reviews*, *Journal of Chemical Information and Computer Science*, and *Computational Biology and Chemistry*. He is also contributing editor for *Trends in Analytical Chemistry*.

Charles Wilkins' extensive research accomplishments have been recognized by named lectureships and numerous awards, including: the Lester W. Strock Award, Society for Applied Spectroscopy, 1982; Pittsburgh Analytical Chemistry Award, 1994; Tolman Medal, Southern California American Chemical Society, 1993; New York Section of the Society for Applied Spectroscopy Gold Medal Award, 1996; election as a Fellow of the American Association for the Advancement of Science, 1996; American Chemical Society Franklin & Field Award for Outstanding Achievement in Mass Spectrometry, 1997; 2002 Eastern Analytical Symposium Award for Outstanding Achievements in the Fields of Analytical Chemistry; and the 2003 Arkansas Alumni Faculty Distinguished Achievement Award in Research.

COMMENCEMENT 2004

GRADUATING CLASS OF 2004

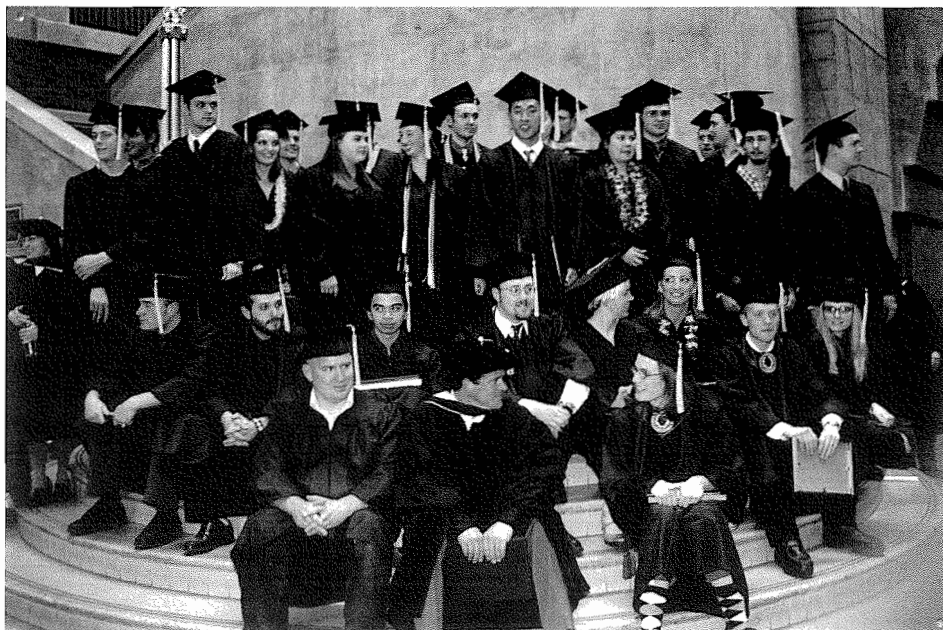
BACCALAUREATE

Biochemistry

Ardalan Ardeshiri
Justin Nathaniel Baker
Corinna Sternoff Beyer*
Marissa Lynn Burden-Dyke
Jason Rowell Burke*
Robert Nelson Duncan
Ned Ryan Ferguson
Bethany Rochelle Ford
Eric Charles Hatcher
Sawan A. Hurst
Mara Alissa Kelly
Brianna Joy Klein
Jonathan George Murphy
Atheana Marie Vichas
Krzysztof Mikolaj Wilczynski
James Christopher Walker*

Chemistry

Jacob Young Cha*
Po-Jen Chen
Bradley David Clifford
Karen Marie Denney
Matthew Stephen Dunne
Michael Natsuo Gonsalves
Kyle Harold Grogan
Aurelia Rose Honerkamp-Smith*
Adam Christopher Jordan
Kim Loan Thi Ly
Sochetra Ly
Emily Katina May
Nathan Patrick McNary
Jeremie Jay Miller
Peter Nhem
Michael Dwight Pluth*
Jennifer Lee Prest
James Adrian Raasch
Flynn Andrew Rowan*
Larissa Christine Rust
Peter John Stewart



The Chemistry Graduating Class of Spring 2004. Photo was taken on the steps of the Willamette Atrium.

UNDERGRADUATE AWARDS AND HONORS

UNIVERSITY HONORS

magna cum laude

Michael Dwight Pluth

cum laude

Marissa Lynn Burden-Dyke
James Christopher Walker

Phi Beta Kappa

Marissa Lynn Burden-Dyke
Michael Dwight Pluth
James Christopher Walker

AWARDS IN CHEMISTRY

American Chemical Society Analytical Award

Flynn Andrew Rowan

Biochemistry Achievement Award

Corinna Sternoff Beyer
James Christopher Walker

Organic Chemistry Achievement Award

John Kirkpatrick Ward

Inorganic Chemistry Achievement Award

Michael Dwight Pluth

Materials Chemistry Award

Sochetra Ly

Richard M. Noyes Physical Chemistry Achievement Award

Aurelia Rose Honerkamp-Smith

Leroy H. Klemm Award for Excellence in Undergraduate Chemical Research

Jeremie Jay Miller

American Institute of Chemists Foundation Award—

Outstanding Senior

Michael Dwight Pluth

* Graduating with departmental honors

Master of Science

Mark Ryan Allen
Dima E. Azar
Kevin Matthew Bourzac
Jared Matthew Clark
Jennifer Ann Dahl
Sarah Marie Emmons
Lin Fang
Jason Trevor Gatlin
Joshua Goodley
Michael L. Jespersen
Charles Andrew Johnson
Andrew J. Robak
Barbara Ann Stahl
Nathaniel Kolnik Szymczak
Andreas Ulrich Taglieber
Sachiko Takayama
Eric Douglas Tweeten

Masters—Organometallics/ Advanced Organic Synthesis Internship Program

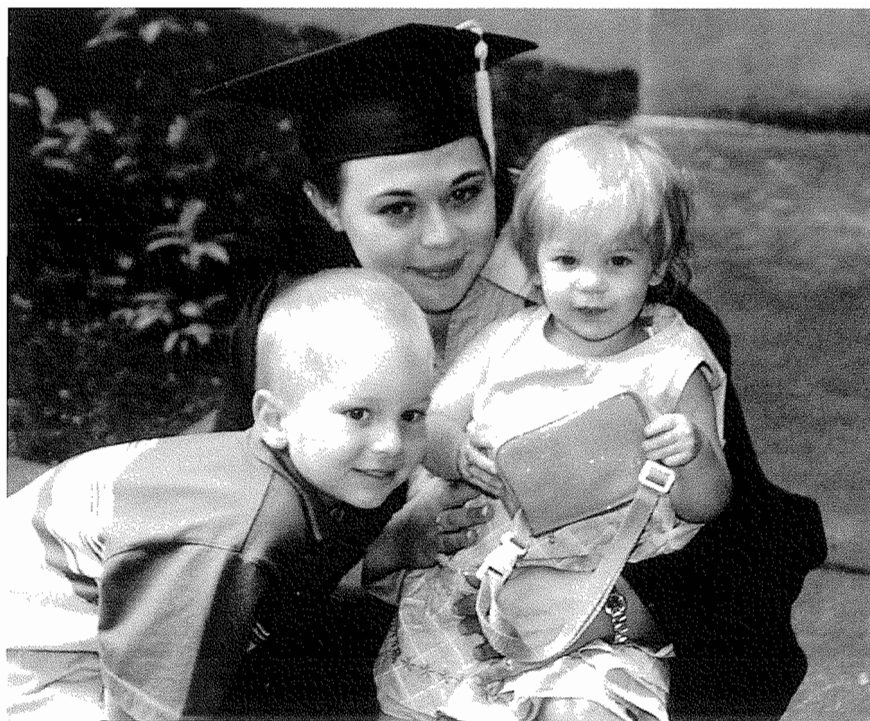
Buck Timothy Hanson (Molecular Probes,
Eugene, Oregon)
Tsz Man Ng (Molecular Probes, Eugene,
Oregon)
Michelle Amy Schwartz (TCI America,
Portland, Oregon)
Ryan Nolan Sieg (Marker Gene Technolo-
gies, Eugene, Oregon)
David Charles Summerville (AVI Biopharma,
Corvallis, Oregon)

Masters—Polymers and Coatings Internship Program

Andy Moyer Bedingfield (Willamette Valley
Co, Eugene, Oregon)
Lance D. Hopman (Bend Research, Bend,
Oregon)
Matthew Montgomery Nye (Dynea, Eugene,
Oregon)
Douglas Milo Overbay (Hewlett Packard,
Corvallis, Oregon)
Molly Kaye Warner (Bend Research, Bend,
Oregon)
Kimberly Corine Williams (Specialty Poly-
mers, Chester, South Carolina)

Masters—Semiconductor Device Processing Internship Program

Kristi Lisa Carlsen (Hynix, Eugene, Oregon)
Stefanie Noelle Low (Intel, Portland,
Oregon)



Graduate Bethany Ford with children.

Doctorate

Polly Anne Berseth

Synthesis and Characterization of Novel
Transition Metal Dichalcogenides
Professor David Johnson

Kerry Louise Breno

Organometallic Catalysis in Aqueous
Solution: Reactions and Mechanisms of
Water-Soluble Molybdocenes
Professor David Tyler

Clarke Robert Conant

Binding and cis-RNA Looping Interactions
that Determine Activity of the N-Antitermi-
nation Protein of Bacteriophage Lambda
Professor Peter von Hippel

Carrie Lynn Daniels-Hafer

Electrochemical Tuning of Charge Trans-
port at Inorganic Semiconductor-Doped
Conjugated Polymer Interfaces Through
Manipulation of Electrochemical Potential
Associate Professor Mark Lonergan

Xinli Ding

Generalized Critical Points Analysis of
Acetylene Vibrational Dynamics
Professor Mike Kellman

Jacob Michael Jensen

Selective Preparation of Nickel Silicides
and Nickel Germanides from Multilayer
Reactants
Professor David Johnson

Michelle Kay Knowles

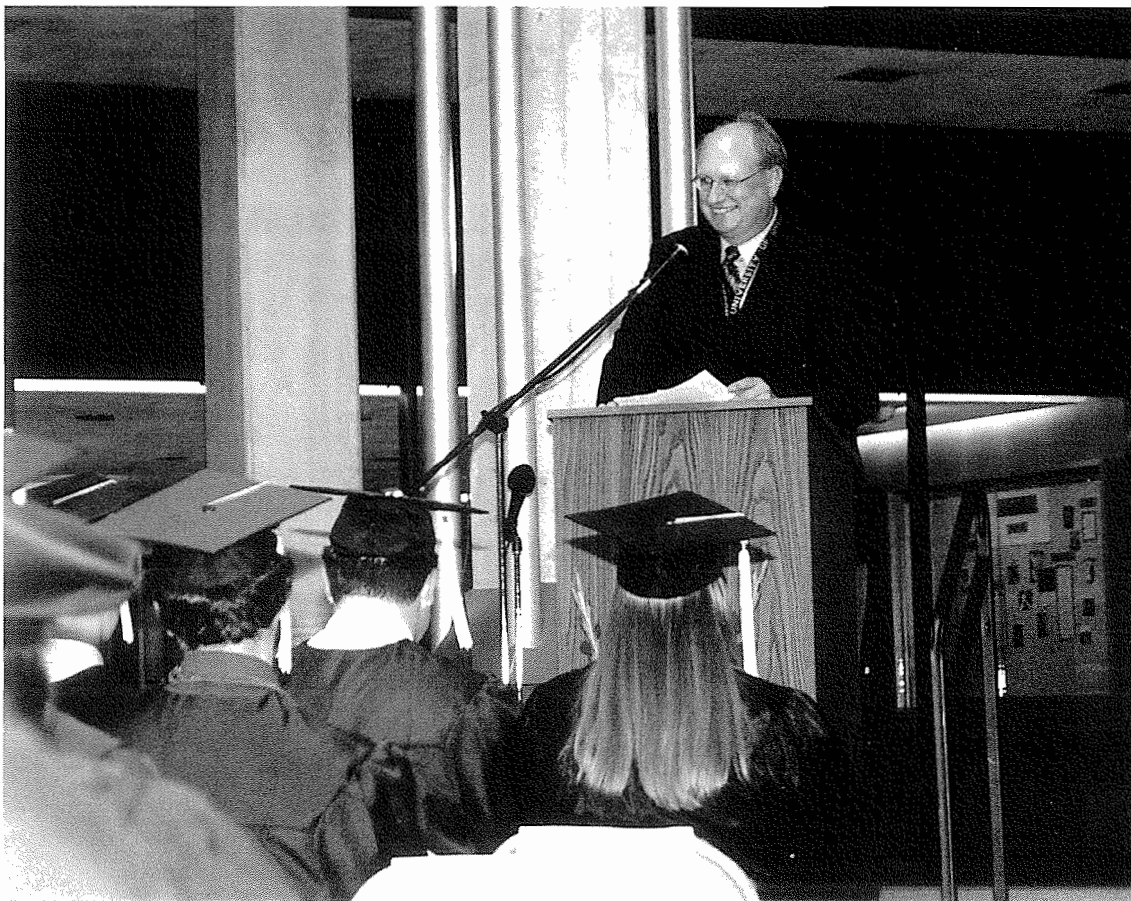
Fourier Imaging Correlation Spectroscopy:
Technique Development and Application
to Colloidal Thin Films and Intracellular
Mitochondrial Transport
Associate Professor Andy Marcus

Gary L. Succaw

Dynamics of Crystal Growth of Self-Assem-
bling Systems
Professor Ken Doxsee

Gerd Heinz Woehrlie

Synthesis of Functionalized Gold Nanopar-
ticles and their Controlled Organization
into Ordered One- and Two-Dimensional
Assemblies on DNA Templates
Professor Jim Hutchison



Paul Engelking: "There are many milestones in life. Some we see coming; others catch us by surprise. Parents don't always get to see, or sometimes want to see, the milestones their kids—you always think of your offspring as kids—reach. I remember when my father wanted to teach me how to drive. Within a block from home, on a fifty-foot wide street, another car approached. 'We are going to hit!' my father exclaimed, as he threw himself down below the dash, against the firewall. So, I took driver training from one of the gym teachers at school. There are milestones that parents don't get to see, but other people get to see, their kids achieving. We, the faculty at the UO, have had the privilege of watching your offspring achieve. Reading from the ACS guidelines, here is some of the heavy equipment chemistry graduates are expected to have driven out of the barn as we have watched, sometimes nervously, often proudly: Atomic absorption spectrometers, apparatus for inert atmosphere manipulations, computers for computational chemistry and modeling, FT-NMR spectrometers, gas and liquid chromatographs, FT-IR, UV-visible spectrometers, and vacuum systems. And they may have had learner's permits for calorimetry, electrophoresis, kinetics, lasers, mass spec, molecular weight determinations, radiochemistry, Raman spectrometry, ultracentrifugation, and X-ray crystallography, to name a few. Meanwhile, our chemistry graduates have had to master a wide range of general and specialized subjects of other fields, too. Emerging from a program in chemistry, students are expected also to have a firm foundation in the fundamentals and applications of calculus, including proficiency with partial derivatives and some knowledge of differential equations, an understanding of the principles of linear algebra, practical knowledge of statistics with application to validation of data and design of experiments, experience with computers and a good foundation in physics. ... You know, and we know, it can be done: you have done it, and you are doing it..! Congratulations, with all of the best wishes and hopes, from the faculty of the Department of Chemistry and the University of Oregon."

—Excerpts from Paul Engelking's address to the Class of 2004



UNIVERSITY OF OREGON

College of Arts and Sciences

DEPARTMENT OF CHEMISTRY

1253 University of Oregon, Eugene OR 97403-1253

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Farewell from Your Editor

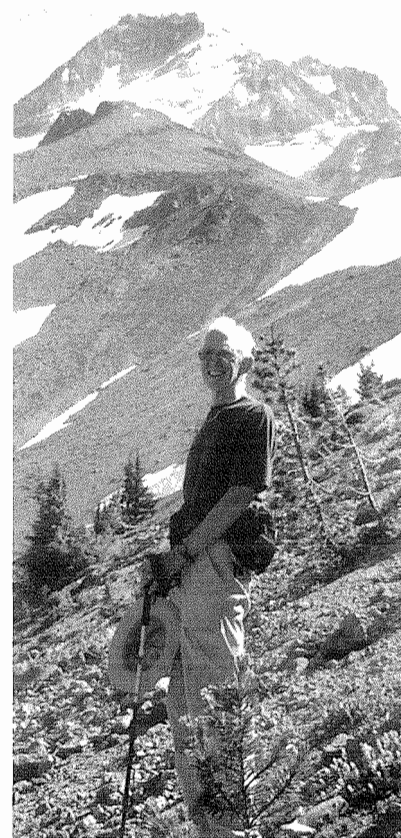
It has been a pleasure helping to bring to you, alumni, friends, and faculty, this newsletter during the past decade. This has been a team effort. I owe a special debt of gratitude to my wife, Karen K. Griffith-Hedberg, who has been in the background editing and improving articles for all the editions, and to Lynde Ritzow, who has served as co-editor of many editions. Other key people who deserve special thanks are Julie Haack, Kathleen Hand, Lori Howard, Jeanne Maasch, Scott Skelton, Marilyn Howard, Ellen Wojahn, and Polly Habliston. A hearty "thank you" also to the many others who have contributed articles and information.

The Chemistry Department has a tradition of newsletters. They began as just that—letters containing news, written to chemistry alumni and friends. The letters were often written by the department head. There were

undoubtedly many we don't have copies of—the department has a 110-year history! In more recent times, Dick Noyes wrote newsletters in 1976 and 1977 during his tenure as department head. Bob Mazo followed Dick Noyes and wrote three newsletters dated 1979, 1980, and 1981. Pete von Hippel wrote a newsletter in 1982. From 1876 to 1981 the newsletters were titled "Oregon Chemistry Alumni/ae Newsletter" and tended to be informal. David Herrick was the next department head after Pete, and wrote the first newsletter that looked like a professional publication. It was four pages in length and called "Chemistry News," a name that has been continued. The most recent three editions (including this one) are special issues dedicated to the history of the department, and documenting the department's commitment to undergraduate and graduate education in chemistry. Future issues will very likely be shorter, but newsletters will continue to serve as an important communication link between all members of our community.

The best part of working on the newsletter has been the opportunity to get to know alumni and hear of all their achievements. The Chemistry Department's undergraduate and graduate alumni follow remarkably diverse careers both within and beyond chemistry. There are alumni practicing law, in aviation, education and business, and in many other fields. Our alumni have overcome obstacles, are successful, savvy, out there helping society and having fun. They inspire optimism for the future. So, why am I leaving newsletter editing? There are many backpacking trails and hot springs in Oregon beckoning Karen and me. It is time for us to hit the trail while we can shoulder the packs. I won't forget you, and I hope you never forget the UO Chemistry Department. Best wishes to all.

—Hayes Griffith



Hayes Griffith in a meadow on the Timberline Trail, Mount Hood.