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# UO CHEMISTRY NEWS

UNIVERSITY OF OREGON • COLLEGE OF ARTS AND SCIENCES • DEPARTMENT OF CHEMISTRY • 1998

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## Department Launches *Microchip Masters Program*

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The summer of '98 provided five students with new insight on the production of computer chips. Through the new Industrial Internship Program, students can earn a master's degree in Physics or Chemistry and learn on the job at the same time. Hewlett-Packard, Hyundai, Mitsubishi Silicon America, Planar and Intel will all have the opportunity to interview prospective interns this fall to launch the program, aimed at bringing industry and science together for mutual gain. Though one might think chemistry has little to do with chips, faculty in the Materials Science Institute (MSI) at the UO say chemical principles actually occupy an important role in chip processing.

Historically, integrated circuit fabrication has been the domain of electrical engineers and applied physicists. But many of the processes involved in manufacturing actually fall under the realm of chemistry. The absence of qualified chemists in this field represents a missed career opportunity for chemistry graduates as well as an untapped resource for a growing industry in desperate need of qualified applicants. For the MSI, it is an opportunity to further promote interdisciplinary research and education between physics and chemistry. Unfortunately, traditional studies in physics and chemistry do not prepare students for a career in chip manufacturing.

According to Assistant Professor James Hutchison, coursework in semiconductor design, fabrication and characterization is not new. Engineering schools and some universities are incorporating such coursework into their curriculum as high-tech industries boom. What is unique about this program is the internship component, which makes it a complete educational package. This innovative new program owes its origins to the combined efforts of chemistry faculty **Dave Johnson**, **Mark Lonergan**, and **Hutchison**, and physics faculty **Pete Sercel**, **Gregory Bothun**, and **Dave Cohen**, all members of the MSI. The program was developed and shaped through brainstorming and dialog with industry and students.

The program combines classroom instruction and laboratory work with a six- to nine-month internship program. Students spend the summer in courses designed to give them a solid foundation in semiconductor processing, including hands-on chip manufacturing in the laboratory. In the fall, students are interviewed and selected as interns with participating companies.

Johnson says most interns will be *process engineers* and will be responsible for finding

*Continued on page 3*

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*“This program provides a unique educational opportunity for chemists to move into a non-traditional area; one in which they have great potential to make meaningful contributions,” says Lonergan.*

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## From THE DEPARTMENT HEAD

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*Incoming heads, Rick Dahlquist and Peter von Hippel flank outgoing head David Tyler.*

*Dear Chemistry Alumni and Friends:*

*I am delighted to have the opportunity to write and send you my greetings as newly-appointed Interim Chair of the Department of Chemistry. Many of you may have a feeling of “deja vu” when you see my name at the bottom of this column. Recycling, of course, is a proud Oregon tradition! I will be serving in this capacity until next March, and then Rick Dahlquist — who is one of my Biochemistry colleagues and is currently Director of the Institute of Molecular Biology — will take over and serve a full term as Chair.*

*The Department is in good health and our undergraduate and graduate programs continue to be strong. The enthusiasm of our graduating students at the departmental ceremonies in June was palpable, and the list of departmental and university honors garnered by these students was lengthy and impressive.*

*The faculty continue to win awards and impressive grants, fueling our entrance into the next decade, as the articles in this newsletter attest. Recent appointees in the Physical and Organic/Inorganic Divisions are making strong progress in their research programs, contributions to teaching and grant writing. Senior faculty continue to garner stellar recognition for their accomplishments, both locally and nationally, which reflects well on the department. And of course, the contributions of our active emeritus professors create a strong sense of history and tradition in the department.*

*The future looks bright for the overall program at Oregon. We continue to be grateful for your kind contributions to the Chemistry Endowment Fund, which provides the Department with flexible income that can be used in important ways to shore up our program as needs arise. Each dollar received in such*

*unrestricted funds is worth several dollars in restricted programs, since our needs are often diverse and hard to predict in advance (e.g., sending an undergraduate to a scientific meeting, helping to provide a small piece of critical equipment for a teaching lab or a research program, supporting an occasional seminar visit).*

*Most of all, we value our continued interactions with you, our Alumni, and welcome your return to the campus, either informally as you pass through on vacation, or formally on more official visits. It is always a delight to see you and to learn about your continued accomplishments. Please be sure that you look in on us whenever you are in the area!*

*With my very best personal wishes to each of you for a successful year!*

*Sincerely yours, Peter von Hippel*

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# Tom Stevens

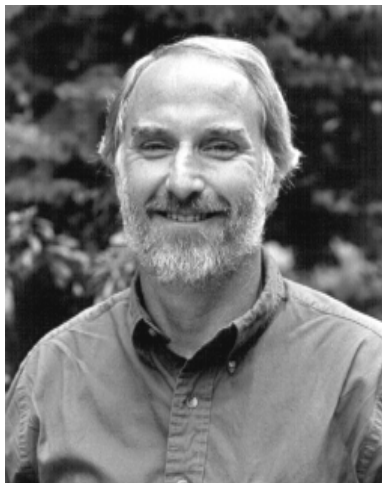
## *Wins Discovery Award*

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*The following was taken from the Oregon Health Sciences Foundation Program distributed at the awards dinner in Portland on November 19, 1997.*

To make one major advance during your research career, an advance that changes the way the world's scientists look at a particular field, is a rare thing. To do it twice is astounding. Dr. Stevens has done it twice in his first 15 years of work in cell biology.

The first breakthrough made by Dr. Stevens and his group was in the area of protein processing and sorting within cells. There is a complex biochemical machinery that distributes and places proteins in their proper positions within the cell. Get the positions wrong, and disease can result. Understanding this critical process is the essential step in developing treatments for this group of diseases and conditions.



Jack Liu

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### ***Dr. Stevens and his colleagues developed novel ways to map and study the pathways along which proteins are sorted and transported.***

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Dr. Stevens and his colleagues developed novel ways to map and study the pathways along which proteins are sorted and transported. Their analysis has become the model used worldwide in the study of this elegant molecular traffic and how it goes astray.

In the course of this landmark work, Dr. Stevens' group also discovered and described a heretofore unknown phenomenon known as protein splicing. In this process, similar to genetic RNA splicing, pieces of protein chains are spliced away by elements called "inteins." To the international scientific community, this discovery is likely to represent an entirely new component in the control of gene expression.

Tom Stevens, who received his B.A. and M.S. degrees at San Francisco State and his Ph.D. in biological chemistry at the California Institute of Technology, is also recognized as an outstanding teacher and mentor. He has been a

professor of chemistry at the University of Oregon since 1992, and was recently elected director of the Institute of Molecular Biology. Effective September 16, 1998, Dr. Stevens will direct the Institute for two years.

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## Microchip Masters,

*continued from pg. 1*

solutions to manufacturing problems using their knowledge of physics and chemistry. Smaller companies like Planar will likely engage them in applied research.

Students earn 30 credits and \$2,000 to \$3,000 a month for the internship portion of the program, which will help offset the cost of tuition. In addition to the summer curriculum, students are required to complete 12 credits in their field to meet requirements for graduation.

The laboratory portion of the summer program became more important as planning progressed because

it gives students the opportunity to experience the production process from start to finish, something industry saw as a crucial first step. Circuit fabrication and characterization equipment were needed to facilitate these labs and make them a reality. Hutchison and Lonergan wrote successful proposals to the National Science Foundation (NSF) for \$309,000, and the Dreyfus foundation for \$36,544. Sercel and Bothun were successful in getting a grant from the NSF through ILI for \$26,000. These grants will help fund equipment purchases for the program and create additional educational opportunities for Ph.D. students, allowing them to comple-

ment their education with training in industry. In addition, some funds will be used for a science semiconductor summer camp for undergraduates, a shorter version of the regular curriculum.

Johnson, who pitched the idea to industry, believes the program is the beginning of a mutually rewarding relationship between industry and the University, which ultimately benefits students. "To thrive, the University has to be viewed as important by these high-tech industries...We'd like these companies to be advocates for the University and MSI," he says.

- L. Ritzow

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# New & Old Instrumentation

## *Provides exciting avenues for research*

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### **BIAcore X**

An optical biosensor, the BIAcore X, has just been installed in the Biotech Lab in the Institute of Molecular Biology, Room 262, Klamath Hall. The complete system, including computer and software, was purchased from Biacore AB (Sweden) for \$103,000. BIA is an acronym for biomolecular interaction analysis. In BIAcore, one of the interacting partners (the ligand) is coupled to the sensor surface and the other partner (the analyte) is flowed past the surface through a precision liquid handling system. Surface plasmon resonance is used to measure changes in refractive index as molecules interact with the sensor surface. Responses are continuously monitored and plotted against time in a sensorgram.

The instrumentation is capable of monitoring binding events between two or more molecules, including proteins, peptides, nucleic acids,



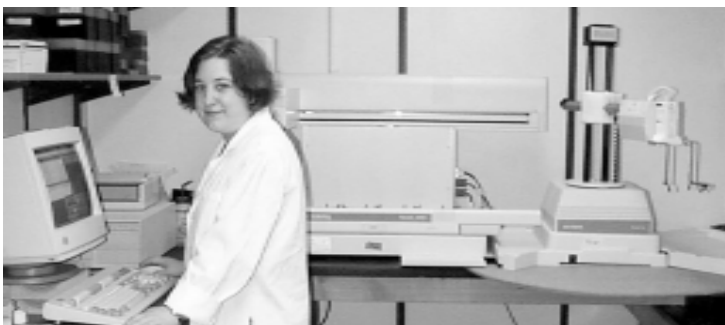
carbohydrates, lipids, and certain low-molecular-weight molecules, such as drug candidates or signaling substances. Further information on

the BIAcore can be obtained from Debra McMillen in the Biotech Lab (541-346-3185)

- Bruce Birrell

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### **BIOMEK 2000**



One of the more frequently overlooked pieces of equipment in the Biotechnology Lab is the Biomek 2000 liquid handling system, purchased several years ago from Beckman Instruments

at a cost of about \$130,000. The Biomek 2000 has many applications, including the creation of condition matrices for protein assays, and combinatorial chemistry. The machine's versatility is due largely to the simplicity of its two basic

actions: transferring liquid from one place to another, and moving objects, such as microplates, between locations. These simple actions can be combined to perform anything from serial dilution to setting up libraries

of possible drugs.

The Biomek 2000 consists of three parts: the computer, the workbench, and the side loader. The computer controls the machinery and is also used to develop new protocols. The workbench contains the automated pipette and a number of holders for microplates, pipette tips, reagent reservoirs, etc. The side loader is a mechanical arm and a semi-circular array of shelf stacks, which allows the user to move such objects as micro-plates or culture tube racks on and off the workbench. For more information, contact John Gunther in the Institute of Molecular Biology (541-346-4284) or Debra McMillen in the Biotech lab (541-346-3185).

- Besty Cogan

# Geraldine Richmond

## *Appointed Knight Professor*

Geraldine Richmond was recently appointed Knight Professor by UO President Dave Frohnmayer in recognition of her scholarship and undergraduate teaching achievements. "It's really an honor because it recognizes teaching and research, both of which play such an integral role in what we do in a research university such as this one," said Richmond.

More than just an honorary title, the appointment provides funds to supplement faculty salary, hire graduate students, and help cover the costs of travel and teaching supplies. Richmond is one of eight Knight Chairs who have been appointed since Nike CEO Phil

### ***Knight donated \$15 million to create the endowed chairs in an effort to keep valuable faculty at Oregon.***

Knight challenged the University to raise matching funds to create fifteen chairs.

Knight donated \$15 million to create the endowed chairs in an effort to keep valuable faculty at Oregon. To qualify for a Knight chair, UO schools, colleges, or departments must raise \$1.2 million in matching funds, generally from alumni, faculty and friends of the University. Richmond's chair was funded by a generous contribution from the Rippeys to the College of Arts and Sciences and is the first such chair in chemistry. But the money isn't foremost in Richmond's mind. Rather, it is the honor of the appointment. Richmond was nominated by her peers in the department of chemistry. "It was particularly heartwarming to know I had the support of so many of my colleagues



Jack Liu

in the sciences in winning this esteemed position," said Richmond.

"The recognition wouldn't have come to me if I hadn't been blessed with such a spectacular group of graduate, undergraduate and postdoctoral students over the years," she said. Current research in the Richmond laboratory is focussed in two directions. The first involves the study of photo-induced processes at semiconductor/electrolyte junctions by laser induced photoluminescence. The second aims to understand molecular structure and bonding of molecules at liquid surfaces and interfaces by nonlinear optical methods. She has been at the University since 1985.

- L. Ritzow

### **Keep us Posted!**

*Let us know what you're up to.*

**1-800-782-4713**

lynde@oregon.uoregon.edu

## H.S. SCIENCE TEACHER PRODUCES WINNERS

Edie Anderson, a science teacher at South Eugene High School in Eugene, is a superb teacher who gets results. She simply returns compliments like this, saying that she gets good *students*. Well, she does. But she also knows what to do with them once she's got them. Edie, a former student in Hayes Griffith's physical chemistry class, charms them into enjoying learning all the topics that we work so hard to get our freshman students to understand. And the students learn well.

Perhaps the best evidence of Edie's success as a teacher and mentor is the run of finalists she has produced in the annual National Chemistry Olympiad. Few teachers across the country have had as many! In the past decade, Edie has sent seven student finalists to Colorado Springs for an expense-paid Chemistry Camp at the Air Force Academy. The camp brings the top twenty Olympiad performers together, out of the approximately 2000 who take the test annually. The test is administered at the UO by professor and local American Chemical Society (ACS) Councilor, Jim Long.

At the spring meeting of the Oregon Local Section of the ACS, held here on May 11, Long presented Edie Anderson with an award recognizing her as the teacher of last year's National Chemistry Olympiad finalist, Sami Amashi.

#### Edie's Winners:

Jeff Marks, '89  
Dan Brau, '91  
Greg Hudson, '92  
Jacita Conrad, '95  
Natt Grier, '96  
Sami Amashi, '97  
David Hong, '98

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# News from All Over

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## 1950s

**John F. Brown**, B.A. '58, has retired from the National Institute of Health in Phoenix where he has worked since 1976. He worked for the federal government for 33 years. After graduating in '58, Brown lived in Phoenix, New Mexico, and Nevada, where he worked for mining and refining companies. In '73, he returned to federal service (he had worked at the post office while attending the UO) at the San Diego Naval Regional Medical Center. In 1976, Brown returned to Phoenix to take his position at NIH, where he worked with the Clinical Diabetes and Nutrition section. During his stint at NIH, Brown worked with the Pima Indians on the Gila Indian Reservation to study the causes and effects of non-insulin dependent diabetes (type 2). The Pima Indians have a greater than 50% rate of having diabetes.

## 1960s

**Shervin Esfandiari**, Ph.D. '69 with Lloyd Dolby, is working as a senior chemist at Organic Consultants, a research company owned by Dr. Dolby, in Eugene, Oregon.

**Joanne E. Groves**, M.S. '63 with Virgil Boekelheide, is currently working as a Remote Sensing Image Analyst at the Alaska SAR Facility, Geophysical Inst., UAF.

**Paul A. Robisch**, M.A. '63 with Donald Swinehart, is now a research chemist with the National Oceanic and Atmospheric Administration in Seattle, Washington.

**Victor Snieckus**, Ph.D. '63 with Virgil Boekelheide, has received the Alexander von Humboldt Research Award in recognition of his research in synthetic chemistry. The award

enables him to conduct extensive research in collaboration with Dr. Dieter Hoppe at the University of Muenster, Germany. Snieckus is recognized for development of directed *ortho* metalation and transition metal catalyzed cross coupling methods for the construction of aromatic and heteroaromatic compounds, which have found considerable utility in industry. Recently, the Snieckus group announced the first sparteine-induced enantioselective synthesis of planar chiral ferrocenes, compounds used in catalysis, polymer, and material science applications. It is in this area that the collaboration with Prof. Hoppe is of mutual benefit. Snieckus also received the R.U. Lemieux Award for Organic Chemistry from the University of Waterloo, where he is currently a professor of chemistry. He is currently holder of the NSERC/Monsanto Industrial Research Chair at Waterloo.

## 1970s

**Endre Körös** was a visiting professor in 1970 doing collaborative research on oscillating chemical reactions with Richard Noyes and Dr. Richard J. Field (currently at the University of Montana). Since January '98, he has been professor emeritus at the Eötvös University in Budapest. His research team is still active in non-linear chemical dynamics. Professor Körös was elected into the Hungarian Academy of Sciences in 1990 and into the Academia Europaea (London) in 1996. He was honored with the Széchenyi Prize, the highest honor in Hungary for scientific achievements.

**Prapon Wilairat**, Ph.D. '74 with Ed Herbert, received the 1997 Outstanding Scientist Award in Thailand. He also received an Alumni Fellow Award from the University of Oregon College of Arts and Sciences.

The Award will be presented to Dr. Wilairat at the Profiles in Achievement Awards Banquet on November 6, 1998 at the University of Oregon. Dr. Wilairat is currently a professor at Mahidol University in Bangkok, Thailand. See story, pg. 12.

## 1980s

**Isaac Babbs**, B.A. '83, is currently Vice President and General Manager of the Video Business Unit of Macromedia in Redwood City, California.

**Mary Kay Dolejsi**, Ph.D. '88 with Peter Von Hippel, is director of the BioTech Laboratory at The Fred Hutchinson Cancer Institute in Seattle.

**Mark L. Grimes**, Ph.D. '86 with Ed Herbert, was a postdoc at the University of California in San Francisco after his years at Oregon. Grimes has been at Massey University in Palmerston North, New Zealand for three years and is currently a Senior Lecturer (comparable to Associate Professor in the U. S.). He has four students and a technician. He and Gretchen McCaffrey (Ph.D. '87 in Biology) have two daughters, Lindsey and Shannon. He reports that New Zealand is a lot like Oregon and a great place to raise kids.

**John F. Kauffman**, B.S. '83, is currently an Associate Professor of Chemistry with the University of Missouri at Columbia. Kauffman received his Ph.D. from the University of Illinois in physical chemistry in 1988 and then returned to the UO as a postdoc in Geri Richmond's group. He became an assistant professor at Missouri in '91 and was promoted to associate with tenure in '97. Kauffman's research at MU has focused on chemical reactivity in supercritical fluid solvents. "These are substances such as CO<sub>2</sub> which are

heated to temperatures above their critical point and then pressurized to hundreds of atmospheres. Under these conditions CO<sub>2</sub> is able to dissolve many non-polar compounds, and has found numerous applications in environmentally-friendly chemical processing. We have been studying chemistry in these fluids using ultra-fast lasers for the past 7 years. I am especially excited about our new femtosecond laser system which was just installed in July. This system will allow us to broaden our studies to primary events in chemical kinetics in supercritical fluid solvents." When he's not solving the mysteries of solvents, Kauffman finds time to hang out with his kids, ages 19, 11 and 8. He plays the guitar in a fiddle band and has been working on the construction of a garage and wood shop, "which was supposed to take a month." He's also managed to find time to flyfish the waters of Missouri. Kauffman was recently at the UO to present a seminar titled "Solvent-Solute Interactions and Unimolecular Reaction Kinetics in Liquids and Supercritical Fluids."

**Andreas Kuppe**, Ph.D. '89 with Hayes Griffith, has started his own company in Germany. It's focus is the translation of scientific and technical publications.

**Samuel M. Kunes**, B.S. '80, is an Associate Professor in the Department of Molecular and Cellular Biology at Harvard University. Kunes was appointed the John Loeb Associate Professor of Natural Sciences in 1997. His previous awards include the National Research Service Predoctoral Award, the Damon Runyon-Walter Winchell Cancer Fellowship, and the Pew Scholars Award in the Biomedical Sciences.

**Scot Kellar**, B.S. '85, received his Ph.D. from the University of California at Berkeley in 1996 and is currently a postdoctoral fellow with Professor Z. X. Chen at Stanford University.

**Sarina C. McBride**, B.S. '85, received her MBA from the University of Chicago and is currently Project Manager at ARCH Development Corporation in Chicago, IL. Sarina says she took the position because it marries science and business. She licenses inventions in an effort to commercialize technology for the school. The University of Chicago works closely with Argonne National Labs to develop and keep high-technology companies in the Midwest.

**David Rivier**, Ph.D. '88 with K. Sprague, is working as a Research Associate at the University of California at Berkeley.

**Luis A. Valls, Jr.**, Ph.D. '88 with Tom Stevens, is currently an intern at the Oregon Health Sciences University in Portland, OR.

**Edward M. Weaver**, B.A. '88 with Warner Peticolas, received his M.D. from Yale in 1993. He was a resident at Yale from 1993-98 in Otolaryngology—Head and Neck Surgery. From July 1998 to 2000, he will work under a Robert Wood Johnson-sponsored clinical research fellowship at the University of Washington as a Clinical Instructor in the Department of Otolaryngology. Dr. Weaver married Dr. Jeanne Lim, a biophysical chemist, in 1994 and they had their first child in March of 1998.

**Gabi Werle**, Postdoctoral Fellow '86-'88, with Dr. Boekelheide, is currently working for Givaudan-Roure, a flavor and fragrance company in Switzerland.

## 1990s

**Pilar Bradshaw**, B.S. '91, attended medical school at Oregon Health Sciences University in Portland and completed her residency in pediatrics in June. She recently accepted a position at Peacehealth in Eugene, a job she is postponing until July of '99 as she awaits the arrival of her first child in October. Bradshaw just

completed her 11<sup>th</sup> season with the Oregon Bach Festival playing violin.

**Rhett Kovall**, Ph.D. '97 in chemistry with Brian Matthews, was recently featured on the cover of Science. The September 19, 1997 issue of the journal included Rhett's determination of the three-dimensional structure determination of the protein I-exonuclease and its proposed interaction with double-stranded DNA. The work was done in the laboratory of Brian Matthews, a professor of physics and associate of the Howard Hughes Medical Institute. The activity of I-exonuclease is to catalyze the sequential cleavage of a single strand of DNA from a piece of double-stranded DNA. In general terms, the protein binds a free end of double-stranded DNA and processively degrades one of the strands, releasing thousands of mononucleotides, before the protein falls off the DNA substrate. The structure of the protein consists of three monomers that come together to form a toroid, or donut-shaped molecule. This creates a large channel that runs through the middle of the protein. The dimensions of the channel suggest that the protein actually encircles its DNA substrate, like a bead on a string, providing a structural explanation for the processivity of the protein. Rhett has subsequently received his Ph.D. and in January will move to New York to take up a postdoctoral position at Columbia University.

**Timothy A. Collins**, B.S. '96, will graduate from Oregon State University in June of 1998 with a Master's of Arts Degree in Teaching Secondary Chemistry and Integrated Science.

**Devin L. Drew**, B.A. '97, is beginning work on his Ph.D. at the University of California at San Diego this September.

**David D. Dunlap**, Ph.D. '93 with Carlos Bustamante, is currently a Research Associate at DIBIT, Instituto Scientifico San Raffaele in Milan, Italy.

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## News, *cont.*

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**Mary Foley**, Postdoc with Bruce Hudson from 1994-96 and Rick Dahlquist from 1996-97, has returned to England.

**Marc A. Van Gilst**, Ph.D. '97 with Peter von Hippel, completed his research with Dr. von Hippel and took a month off to explore Asia. He has accepted a position as Research Associate with Dr. Keith Yamamoto in the Department of Molecular and Cellular Pharmacology at the University of California at San Francisco.

**Margaret A. Haughton**, Ph.D. '96, is Research Officer of the Bone and Mineral Research Program at the Garvan Institute of Medical Research, St. Vincent's Hospital in Darlinghurst, Sydney, Australia.

**Christopher D. Johnson**, Ph.D. '98 with Dave Johnson, has accepted a position as a postdoctoral researcher with PPG Industries Inc in Pittsburgh, Pennsylvania.

**Daniel A. Koos**, Ph.D. '91 with Geraldine Richmond, is Principal Staff Scientist with Motorola Semiconductor in Toulouse, France.

**Cheng-Hao Lee**, B.S. '94 received his Master of Science (with honors) in Materials Chemistry from the Hong Kong University of Science and Technology (HKUST). He is currently working as a Junior Research Associate in the field of biopolymers and protein engineering at HKUST.

**Eric Jung Sing Mah**, B.A. '95 spent two years in Taiwan studying Mandarin on a scholarship. He traveled around Southeast Asia. Eric is currently the Environmental Protection Officer for the Subic Bay Industrial Park in Subic Bay, Phillipines. He is responsible for preparing environmental management plans and coordinating environmental guidelines and regulations between local authorities and companies seeking to locate in the Phillipines.

**Megan M. McEvoy**, Ph.D. '97 with F. W. Dahlquist is continuing her research with Dr. Dahlquist at the Institute of Molecular Biology here at the University of Oregon.

**Cynthia Phillips**, Ph.D. '93 with Rick Dahlquist, is a Research Associate in the Biology Department at the University of Utah in Salt Lake City.

**John A. Printen**, Ph.D. '95 with George Sprague, is a Research Associate in the Department of Signal Transduction at Parke-Davis Pharmaceuticals in Ann Arbor, MI.

**Douglas Barry Starr**, Ph.D. '93 with Diane Hawley, is a Research Scientist with GeneLabs in Redwood City, California.

**Barbara "Betsy" Turner**, Ph.D. '97 with Bruce Branchaud has accepted a postdoctoral position at the University of California at Santa Barbara with Dr. Allison Butler.

**Lynn C. Thomason**, Ph.D. '93 with Frank Stahl, has accepted a Research Associate position in the Department of Microbiology at the University of Texas in Austin.

**Kevin S. Wilson**, Ph.D. '95 with Peter von Hippel, is a Research Associate in the Division of Natural Sciences at the University of California in Santa Cruz.

**Mingdi Yan**, Ph.D. '94 with John Keana, is starting an assistant professorship at Portland State University in September.

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## *In Memorium*

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**Al Singer** died of age related causes on June 19, 1998. Al served as a lecture demonstrator in the Department of Chemistry from 1978 to 1985, when he retired for the third time. His first year at Oregon was as a volunteer. Al was very good in the classroom and had the ability to make demonstrations "come alive." He obviously enjoyed teaching and

for a time Al was the instructor in the department's elementary chemistry laboratory course. He also made substantial contributions in the department's general chemistry tutorial program. Student evaluations of Al and his work were consistently positive and endearing.

Plans are underway to plant a tree and place a bronze plaque in memory of Al Singer. The site will be along the "science walk" between Huestis and Klamath Halls. Planting is scheduled for late February to optimize the success of the planting. A bronze plaque giving tribute to Al will be ready soon. -*Ralph Barnhard*  
Related story, pg. 16.

**Heather Williamson Messenger**, who received her Master's Degree in 1981 with Bruce Hudson was murdered in Chaplin, Connecticut on January 3, 1998. Heather was Executive Editor of "Laser Focus World" magazine with Penn Well Publishing in Nashua, New Hampshire at the time of her death. She is survived by her five-year-old son.

**Ronald E. Merrill**, Ph.D. '73 with Leroy Klemm, died May 7, 1998 at age 50 after an extended illness from multiple myeloma. Ron, a native Oregonian, attended Willamette University and M.I.T. (B.S., 1968). He held a postdoctoral fellowship with E.-I. Negishi at Syracuse University, and spent three years (1974-7) as a visiting Assistant Professor at Rochester Tech. Later, he worked in R&D at various small chemical companies in New Jersey and California with special interest optical resolving agents and catalysts. Failing health led him to resign from his official position in 1993, but he kept active in writing and research until his death. In 1974 he married **Yoon Hwang** (M.S., '73, with Klemm) who is a group leader at Bachem Co. in southern CA. Bachem synthesizes peptides in bulk quantities. Also surviving in the family are two children, Brian (a Freshman in high school) and Emily (in eighth grade). - *Leroy Klemm*



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## 60s Reflections

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*This is a light-hearted look at the social side of the Organic Chemistry group at the University of Oregon between 1962 and 1966. It is not meant to lessen the excellence of the academic work that was taking place during those years.*

My wife, Sandy, and I traveled to Eugene in mid July, 1962, with an 8' X 8' U-Haul trailer full of wordly possessions. Upon arrival at the University Chemistry Department, we met Virgil Boekelheide, my future research advisor. We were surprised and delighted by the casual, laid-back atmosphere at the University of Oregon. Virgil arranged for our "possessions" to be stored in Chem Stores and may have even helped us unload some of the lighter things. This allowed us to vacation in Canada while the new Westmorland Married Student housing apartments were being completed. The rent for a two bedroom unit at that time was \$76.00 a month which included \$2.00 a month for TV Cable.

I was part of a new era for the Chemistry Department at Oregon. Virgil Boekelheide had arrived at the University in 1960 along with a professor named Lloyd Dolby. These new professors attracted students and Post Doctoral Fellows from all over the world and they had at least two things in common: they were poor, and they wanted to do well in their studies. The new students quickly learned the expectations of the University of Oregon and settled into a regime of hard work.

Attendance at the Monday night seminars was mandatory. After the seminar, everyone adjourned to the Paddock, where faculty and students chipped in \$1.00 for beer and could laugh, play games and unwind. The games included Cardinal Puff - a recitation of a similar verse three times followed by the downing

of a glass of beer after each recitation. Any mistake in the recitation meant you failed the Cardinal test and had to start over again. . . After considerable practice, Virgil became a Cardinal and later a Pope - the same routine nine times through without a mistake. He actually got so proficient at the game he would play it at parties at his house with



*Jeff Brown, Dave Booth, and another party animal at UO in 1965.*

unsuspecting visitors and graduate students using martinis instead of beer.

Another Monday night game was called Thumper. It involved everyone choosing a signal, like touching your nose or ear. The most popular signals were the hand signals using one or more fingers pointing in the air. The idea of the game was to flash your signal and then the signal of someone else. If your signal was flashed and you did not respond within five seconds, you had to drink your glass of beer. It was a great chance to give your co-worker or professor the "bird" without offending them.

This close-knit group of students and spouses continued to fraternize at all the graduate school events. Sandy recalls a party held at our apartment in Westmorland, which was attended by faculty and students. Two days after the party we

received a warning letter from the University Housing advising us that any further loud parties would result in the loss of our housing privilege. Virgil and Caroline were both at the party, but Caroline left early. We know Virgil was there because "someone" left cigar ashes in the flash attachment of our Brownie Starmite camera which had been used to photograph the event. The ashes must have caused the camera to jam and the roll of highly incriminating photographs was destroyed.

In addition to fishing, golfing and bridge, the Oregon and Oregon State Chemistry Department soft ball games were always a good time for our class. The home team would supply a keg of beer, hot dogs and beans. The OSU professors were very serious about the event and would not allow their students to partake of any liquid refreshment while the game was in progress. Our pitcher and captain was Virgil, who always had his glass at the mound while pitching. He was usually very relaxed, but could move very quickly if a ball was hit close enough to threaten his "mug on the mound". In the two years of competition (total of four games), we are sure we won at least once (by one run).

With all the fun times we had in graduate school, our class did some very good chemistry. Although we live thousands of miles from one another, many of us remain best of friends to this day and get together as often as possible. When we are together we always remember how fortunate we were to have a group of encouraging and caring mentors who allowed us to explore freedom of thought and expression so that we could invent new chemical materials. I will always remember my four years at the University of Oregon with fondness.

*- Andy Fedoruk, Ph.D. '66 with Virgil Boekelheide, worked for Dupont for 19 years before retiring in 1985. He and Sandy live in Eugene.*

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# Undergraduate Research Projects

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*A record number of undergraduates participated in research groups this year. We can only feature a sampling here.*



**Jennifer Peterson**

Medford, OR

Prof. David Johnson, Supervisor  
Anticipated graduation date: 6/98

**Research Project:**

We have been making and analyzing skutterudites (I have spent time focusing on lead cobalt antimonides), materials interesting because of their thermoelectric properties. A friend who worked in the Johnson lab explained her work to me. I found it fascinating, and after reading some of the recent papers published by members of the Johnson lab, I realized that my interest was also in material science.

I have been accepted into the industrial co-op master's program with the Material Science Institute.



**Susan Chen**

Portland, OR

Prof. Diane Hawley, Supervisor  
Anticipated graduation date: 6/99

**Research project:**

Investigations in the Hawley lab focus on the three stages of eukaryotic transcription by RNA polymerase II: initiation, elongation, and termination. My project deals with the TATA-Binding Protein (TBP), the first protein to bind to the TATAAAAG sequence at the promoter. The biological relevance of transcription and application to understanding altered regulation mechanisms present in diseases such as cancer and AIDS gives my project personal significance. Having lost my grandmother to liver cancer, this project starts me towards reaching a long-term goal of contributing to finding a cure for cancer.

My research experience has been valuable in helping to solidify my intentions to pursue a Ph.D. and ultimately do research in oncology.



**Derek Gregory**

Boca Raton, FL

Prof. Rick Dahlquist, Supervisor  
Anticipated graduation date: 6/99

**Research Project:**

The objective of my project is to study the folding pathway of the protein Lysozyme from the bacteriophage T4 by exchange rates at different denaturant concentrations using Multidimensional NMR. The study of these partially unfolded forms (intermediates) may help to illuminate the fundamental cooperative nature of protein structure and define the unfolding and refolding

pathways of a protein, even though the intermediates are normally invisible.

Being a biochemistry major and interested in protein folding dynamics, I found out that the Dahlquist lab was approaching these problems using multidimensional NMR, a technique that I found quite interesting. I plan to pursue a Ph.D. program in biochemistry where I hopefully can continue to approach biochemical problems using NMR.



**Joshua Hanna**

West Linn, OR

Laurie Graham (Stevens' lab), Spvsr.  
Anticipated graduation date: 6/99

**Research project:**

In all eukaryotic cells, there is a multi-subunit enzyme called the Vacuolar-type ATPase. This enzyme creates an electrochemical and pH gradient across membranes. The enzyme is composed of two sub-complexes: The catalytic domain,  $V_1$ , consists of peripheral membrane proteins including a hexamer of alternating a and b-like proteins. The "proton pore",  $V_0$ , is made up of integral membrane proteins and is responsible for the translocation of protons. I am currently attempting to elucidate the role of the protein encoded by VMA7 in the yeast *Saccharomyces cerevistae*. The protein encoded by VMA7 is thought to play an important role in bridging the  $V_1$  and  $V_0$  sub-complexes.

My research experience in the Steven's lab has helped me decide on a career in research.



**Charles Johnson**

Ridgecrest, CA

Prof. Mike Haley, Supervisor

Anticipated graduation date: 6/98

Research Project:

My research project involves determination of new routes to synthesize dehydrobenzoannulenes which were previously inaccessible by traditional methods. Dehydrobenzoannulenes exhibit important chemical properties, such as acting as precursors for carbon abundant polymeric systems. My production of the [20]annulene "warhead" resulted in co-authorship of a paper published in the Journal of the American Chemical Society.

Commissioned a 2nd Lieutenant in the U.S. Army, I will have an active duty assignment for approximately eight years after graduation. I plan to attend college after the military to earn a Master's degree.



**Geoffrey Lowman**

Lebanon, OR

Prof. Catherine Page, Supervisor

Anticipated graduation date: 6/98

Research project:

My research is in an area of inorganic/materials chemistry known as "self-assembled hybrid multilayer thin films". These involve alternating layers of organic and inorganic molecules. The self-assembly process allows control at each step of construction, which makes incorporation of interesting properties possible. I am hoping to show that the films I build will exhibit nonlinear optical effects that can make these materials useful in the field of optoelectronics.

I am interested in novel materials, especially when new materials can be used for energy conservation. After graduation, I will be off to graduate school at UC Santa Barbara.



**Jana Mooster**

Medford, OR

Prof. Jim Hutchison, Supervisor

Anticipated graduation date: 3/00

Research project:

The goal of the project which I am working on is to organize gold nanoparticles on surfaces in order to study their unique electrical properties. The nanoparticles we synthesize have an approximately 1.7 nm gold core and are stabilized by organic ligands. Current work involves functionalizing the particles in order to form one-dimensional arrays of them using biopolymer templates.

I became interested in this project because it was different from what I learned in class and promised to teach me a lot. I plan to go to graduate school and do biochemistry research.



**Andrea Sieg**

Eugene, OR

Prof. Catherine Page, Supervisor

Anticipated graduation date: 6/01

Research project:

Cleavage of Thin Film Layers via UV Light. In order to "manually" control the specific layering and side-by-side formation of certain thin film multilayers with 2nd harmonic properties, we can photolytically cleave unmasked portions of these films and relayer only on those certain spots to give finely characterized films.

I plan to refine certain techniques developed with Lisa Hommel, a graduate student working in the Page lab. In the very near future, I would like to work for NASA.



**William Oldham**

Orinda, CA

Prof. Bruce Branchaud,

Research Project:

I am currently synthesizing both enantiomers of ibuprofen. Dr. Branchaud and I have thought of a new synthesis that can isolate either

*Undergrad, Continued from page 11*  
enantiomer and radio-label it with tritium or deuterium. I am utilizing beta carbocation chemistry with cobalt as a carbocation stabilizer.

I became interested in research after taking Dr. Branchaud's CH 336 class. At the start of spring term '97, I went to see him about working in his lab. I started my research summer term '97 and plan to continue until graduation.

I plan to attend graduate school and work in the chemical industry. I'm very interested in pharmaceutical synthesis and hope to pursue it as a career.



**Eric Bercot**

Klamath Falls, OR  
Prof. Mike Haley, Supervisor  
Anticipated graduation date: 6/99

**Research Project:**

The main goal of our project is to achieve a general synthetic pathway to differently substituted metallabenzenes via 3-vinylcyclopropenes. Presently, there are only a handful of known metallabenzene species, none of which have been made by a general synthetic route. My role in the project consists of making appropriately substituted 3-vinylcyclopropene precursors.

In light of the experience I've had as an undergraduate researcher with team Haley, I have decided to go on to graduate school where I plan to pursue a Ph.D. in chemistry.

## Prapon Wilairat ('74)

### *Honored by College of Arts & Sciences*

*The College of Arts & Sciences Alumni Fellow Award is presented to three alumni each year – one each from natural sciences, social sciences and humanities. The awards will be presented during the Profiles in Achievement Awards Banquet on November 6, 1998.*

**D**r. Prapon Wilairat, Ph.D. '74 with Ed Herbert, is an Associate Professor of biochemistry at Mahidol University in Bangkok, Thailand, where he has taught since 1974. He received his B.S. in 1966 from Australian National University and has authored over 80 research publications.

Dr. Wilairat's recent awards include Thailand Outstanding Scientist (1997), Thailand Research Fund Senior Research Scholar Award (1996), National Research Council of Thailand Outstanding Researcher (1996), and the National Research Council of Thailand First Prize for Invention (*shared*, 1996). He currently serves as Associate Director for the Institute of Science and Technology for Research and Development at Mahidol.

"It was with pleasant surprise that I learned the UO had chosen to bestow upon me the 1998...Award," writes Wilairat. "At the UO I met two people who profoundly influenced my life: Ed Herbert, my Ph.D. thesis advisor, and Mullika Bhongsvej, my wife. Ed introduced to me the red blood cell, which continues to be a focus of my research...From Ed, I learned to be a scientist, skeptical, but open-minded, magnanimous and caring. Mullika taught me that there was more to life than just the laboratory. Sadly, both will not be by my side when I return to the UO this November." (*Dr. Wilairat lost his wife this past year; Ed Herbert died in 1987. Both died of pancreatic cancer.*)

Recent research in Dr. Wilairat's lab has focused on the biochemistry of malaria, thalassemia and the func-



tions of vitamin E. He has focused his malarial studies on *plasmodium falciparum*, the most infectious of the four malaria parasites to affect humans. Wilairat's lab has focused on testing novel compounds directed against malaria parasite DNA replicating enzymes, particularly DNA topoisomerases, and on the cloning and expressing of these genes so that large numbers of drugs can be screened quickly.

In collaboration with his colleague, Professor Prawase Wasi, Dr. Wilairat has worked with hematologists at Mahidol University studying thalassemia, a hereditary anemia which affects the Thai population at a high rate. They have used polymerase chain reaction to study genes, which has led to the identification of 25 mutations in the B-globin gene of Thai patients who have thalassemia.

Dr. Wilairat's studies of Vitamin E have focused on the effect of deficiency in different animals. He and collaborator Dr. Prayad Komaratat, have shown that anemia in a vitamin E-deficient monkey was due to blockage in erythroid cell differentiation in the bone marrow, which may explain why anemia responds to vitamin E supplements in some premature children. Vitamin E was also found to have a hypocholesterolemic effect on the rabbit.

- L. Ritzow

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# Gordon Gribble

## 1998 Alumni Achievement Award in Chemistry

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**W**inners of the Alumni Achievement Award are a select group chosen for this honor in recognition of professional and personal achievements that exemplify the Oregon spirit and traditions of leadership and excellence. The award, in the College of Arts and Sciences, was established in 1989 by Dean Donald R. Van Houten. This year's award will be presented in ceremonies held November 6 during the Profiles in Achievement Banquet.

Gordon W. Gribble, Ph.D. '67 with Lloyd Dolby, is a professor of chemistry at Dartmouth College in New Hampshire, where he has received numerous awards and presides over the most popular lab among students of chemistry. Professor Gribble received his B.S. degree in Chemistry in 1963 from the University of California, at Berkeley. After completing his Ph.D. at Oregon, he spent a year as a National Cancer Institute Postdoctoral Fellow at UCLA, and then joined the faculty at Dartmouth in 1968.

"This award is the single most important professional honor with which I have been bestowed," Gribble wrote recently. "The time spent in Eugene getting my doctorate was among the most satisfying and pleasurable four years of my life, and it culminated my dream of wanting to become a chemist since getting a chemistry set at age 10 for Christmas!" Looking back, Gribble recalls a department committed to research – and extracurricular activities. "We played hard with Saturday morning touch-football games, round table discussions over a beer, and pool games at the Paddock and Foo's after a night in the lab. And many of us did frequent hikes and climbs in the Cascades. Although during an unplanned overnight bivouac in a

crevasse on Mt. Adams, I wasn't sure I would ever amount to anything!"

Fortunately, for chemistry, Gribble survived the night. An organic chemist, Gribble has focused much of his research on synthesis, including biologically active natural products, heterocyclic chemistry, DNA-targeted anticancer drug design, new synthetic methodology, and a novel cycloaddition chemistry. An important area of research for Dr. Gribble is the synthesis of plant indole alkaloids and marine natural products that are potent anticancer or antibiotic agents. Dr. Gribble has developed a highly efficient synthesis of ellipticine, a derivative of which is currently used

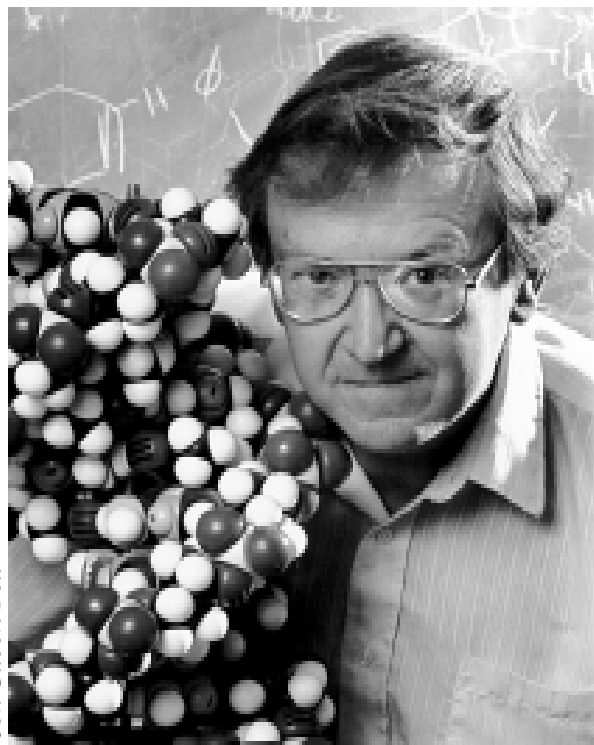
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***"During an unplanned overnight bivouac in a crevasse on Mt. Adams, I wasn't sure I would ever amount to anything!"***

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to treat several forms of human cancer. A major effort in this area is the design of novel poly-functional compounds that will bind to DNA at more than one site, which will hopefully lead to the discovery of more potent anticancer agents.

Gribble's research on sodium borohydride in acidic media is nationally recognized. He has demonstrated that borohydride coupled with certain carboxylic acids makes powerful and versatile reducing systems. Currently, he is studying the synthesis of novel plant-derived



Jon Gilbert Fox

triterpenoids as new cancer and inflammatory chemopreventive agents; as well as natural organohalogen compounds, a topic on which he recently wrote a monograph. Based on his research with Dr. Dolby at Oregon, Gribble will be starting work on a book, "The Chemistry of Indoles" next year.

Gribble's reputation extends beyond the bounds of Oregon and Dartmouth. Over the past 30 years, he has been invited to speak 210 times and has received awards recognizing his numerous contributions to science, including an NIH Research Career Development Award, a NSF Professional Development Award, and an American Cyanamid Academic Award.

These days, Gribble still takes time away from the lab to scuba dive and hone his wine-making skills.

- L. Ritzow

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# Faculty News & Awards

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**David Johnson**, Professor of Chemistry and Director of the Materials Science Institute is using a complicated evaporation chamber to make exciting new materials. By vaporizing material at very high temperatures, then "letting the dust settle," the machine lays down extremely thin layers of individual materials one on top of another. The layers can then be made to combine into new compounds. One of the compounds that Johnson is investigating has outstanding thermoelectric properties. Johnson's lab has devised techniques to produce numerous new thermoelectric compounds and there are several manufacturers working with the lab to explore the commercial potential of the new materials.

**Deborah Exton** will receive renewed funding for the Success Utilizing Peer Resources in Chemistry program (SUPeR), which was developed to supplement the existing general chemistry program. The goal of the voluntary, proactive program is to promote content mastery, generate enthusiasm, and increase student retention in introductory chemistry classes. Undergraduate peer learning assistants act as model students and facilitate study sessions. The program received initial funding during the 1997-98 school year from the Williams Fund for Teaching Innovation (\$14,000), the Howard Hughes Medical Institute (\$6,000), and the Department of Chemistry. Funding provides for student wages and a stipend for a graduate student to supervise the program. Funding for the 1998-99 school year has been renewed by the Williams Fund (\$15,600), and the Department of Chemistry.

**Jim Hutchison**, Assistant Professor since 1994, has received a four-year NSF Career Award to study conjugated polymer nanostructures. He and his group are also investigating methods for preparing nanoelectronic circuit elements using chemical

self-assembly methods. The university has recently filed for patent protection for a nanoscale transistor developed by Hutchison's group in collaboration with Martin N. Wybourne, Department of Astronomy and Physics, Dartmouth College.

**Thomas Dyke**, Arts and Sciences Associate Dean, was appointed Vice Provost for Research by Provost John Moseley. The interim appointment was effective July 1, 1998. Dyke, a Professor of Physical Chemistry and Chemical Physics, will fill the role until a national search is held to fill the position vacated by former Vice Provost Steadman Upham, who is assuming the presidency of Claremont Graduate University.

**Mark Lonergan**, Assistant Professor since 1996, recently discovered a potential new tool for electronic circuitry design: the tunable diode. While conventional diodes control current flow in a fixed manner, the tunable diode utilizes electrically conducting plastics (polymers) to provide much greater flexibility. Though the commercial potential of the diode is still up to the speculation of scientists and engineers, the possibilities are numerous. The University is currently considering a patent, which could bring the University, the Department and Lonergan royalties if the device becomes marketable. Partly in recognition of this important discovery, Lonergan recently received a Beckman Young Investigator Award from the Arnold and Mable Beckman Foundation. This award provides \$200,000 over two years to help Lonergan and his lab do research.

**Ken Doxsee & Dave Johnson** have received a GAANN Grant from the U.S. Department of Education. Termed, "Expanding the Horizons: Increased Opportunity for Non-Traditional Graduate Students," the grant provides support for six grad students.

**Carlos Bustamante**, who has been with the department since 1991, has taken a position at Berkeley. Bustamante will be working in the Biology and Physics departments and he will be missed at Oregon. During a send-off celebration in the Institute of Molecular Biology, Professor Bustamante was presented with a limited edition print of Fall Creek by artist Mike Pease.

**Warner L. Peticolas**, who retired from the University 1994, was honored by the University of Science and Technology of Lille, France in December, 1997. Peticolas has done collaborative research and student exchanges with the university over the years and is fluent in French. He was awarded an honorary doctor's degree for his contributions in chemistry. Peticolas is still an active researcher at the University and continues to teach a class in Chemical Thermodynamics each fall. His current research focuses on the effect water has on the conformation of biological macromolecules.

**Tom Stevens** was one of two recipients of the 1997 Discovery Award presented by the Oregon Health Sciences Foundation. He was also recently appointed as director of the Institute of Molecular Biology. See story, page 3.

**David Tyler** was honored for three-years of service as Department Head at the traditional Changing of the Guard Party held on July 8, 1998 at the home of Hayes and Karen Griffith. After the potluck dinner, David was presented with a gift certificate for a stay at the Overleaf Lodge in Yachats, on the Oregon Coast. Incoming Department Heads, Pete von Hippel and Rick Dahlquist, were also welcomed.

**Rick Dahlquist & Tom Stevens** have been elected into the Fellowship of the American Academy of Microbiology.

**Mike Haley**, an Assistant Professor since 1993, was selected as a Camille Dreyfus Teacher-Scholar for 1998. The nomination acknowledges

Haley's scientific accomplishments and his excellence as a teacher and includes a \$60,000 allocation. Haley plans to use the funds to support research stipends. Haley also received the College of Arts and Sciences Bray Award in recognition of his outstanding contributions to the University of Oregon. The award is for \$5,000.

**John A. Schellman**, who began his research at the University of Oregon in 1958 and retired in 1990, has been given the rank and title of Professor Emeritus. He is a member of the Institute of Molecular Biology and the National Academy of Science. Dr. Schellman, a physical biochemist, received his Bachelor Degree from Temple University in 1948, and Ph.D. from Princeton in 1951. His principal research interests are studies on the solvation of macromolecules, chain statistics, optical properties of biopolymers, and the theory of polarizaiton spectroscopy.

**Diane Hawley**, who joined the Chemistry faculty in 1986, was recently promoted to full professor. Hawley's current research focuses on the enzymology of RNA polymerase II, which synthesizes messenger RNAs in cell nuclei, and on the mechanisms that regulate transcription initiation and elongation in yeast and mammalian cells.

**Geri Richmond** has been named Knight Professor. See story, page 5.

**Andy Marcus**, Assistant professor, is developing new spectroscopic techniques to study the dynamics of complex fluids. **Marina Guenza**, Research Assistant Professor, is developing new theoretical approaches in the Statistical Mechanics of Polymer. Andy and Marina are the proud parents of a new baby boy, **Jeremy**.

**The Chemistry Department** has been given the green light by the university administration to conduct national searches for a new biochemist and a new organic chemist during the next academic year.

## Staff News

**Marilyn Howard**, Graduate Secretary, has retired after 29 years with the state and 11 years in the Chemistry Department. The department office has been strangely quiet since her departure. Fellow staffers say they will miss her sense of humor and her talents as a stickler for detail. Marilyn was a good resource for information, which she continually updated on her computer. Currently, she is spending her time with husband Corky in the yard, travelling in their RV, square dancing, and working on crafts. When asked if she missed anything about working in the chemistry department, Marilyn said, "I miss my kids!"



*Marilyn, with photographer Jack Liu, at her retirement party.*



*Jack Liu*

**Lynde Ritzow** has replaced Marilyn as Graduate Recruiting Coordinator. The new position was created in an effort to facilitate recruiting for the department. Lynde is responsible for coordinating the newsletter, brochure and web page in addition to her recruiting duties. Lynde has B.S. degrees in Journalism and Sociology from the University of Oregon. She came to the department from the private sector, where she worked as a buyer, manager and advertising coordinator for McKenzie Outfitters, an outdoor specialty store in Eugene. If you have ideas for recruiting or ideas for the newsletter, please let her know!

You can reach her at [lynde@oregon.uoregon.edu](mailto:lynde@oregon.uoregon.edu). She welcomes news of all alumni to report in the next issue of the newsletter.

## HALLOWEEN SCARE

"A remarkable event reported in Organic Chemistry 331 on October 31, 1997 was the "return" of Emil Fischer to teach stereochemistry. Although there was some talk of a hoax, the visitor's German was exceptional. Some observers noticed, however, that the guest was left-handed, suggesting that it was only the mirror image of Emil Fischer." Words by Richard Feinman, who introduced Professor Emil Fischer to the class. Richard Feinman, a visiting faculty member, taught the following term.



*Emil Fischer (Hayes Griffith) after the Halloween lecture in Chem. 331.*



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# Chemistry Holiday Party

## *A December Tradition*

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Drinks from separatory funnels? At the Annual Chemistry Department Holiday Party, red and white wines are dispensed from separatory funnels on ring stands. The Chemistry Holiday tradition started back in the early 1960s and is an event designed for families, students and faculty. Held in Gerlinger Hall Lounge, balloons are everywhere and the food is served on long tables.

Preparation for the big day starts just after the September Chemistry picnic. Diane Lachenmeier makes the December reservations for Gerlinger Hall, ordering the salmon, table setups, champagne, punch and coffee. Approaching December, Linda Sappington obtains and wraps the presents for the children, and office staff get out the flyer. Lynn Woolfe

persuades a jolly person to be Santa Claus.

On party day Lynn Wolfe fills the balloons, Clarisse Heinhorst sets the table decorations and brings the separatory

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***The party is set in motion when David Herrick begins to play the piano.***

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funnel “de-cant-ers”. The party is set in motion when David Herrick begins to play the piano.

After dinner, children enjoy a surprise visit from Santa, while faculty, staff and students wish each other happy holidays. The children take the balloons home, the last songs are sung, and in two or so weeks, Diane reserves the shelter for the September Chemistry picnic, and the Chemistry “reaction cycle” starts once again.

- Clarisse Heinhorst



*David Tyler at the Christmas Party bar. Note the three separatory funnels serving as decanters, and supported by ring stands.*



*David Herrick & Clarisse Heinhorst at the 1997 Chemistry Department Holiday Party.*

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## How I met Al Singer

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It happened almost 20 years ago, in 1978. I had just begun a term as department head of the Department of Chemistry and was only a few days into the job. A distinguished-looking man came into my office and introduced himself as Al Singer, a retired chemistry professor from Tennessee, newly moved to Eugene. He was looking for part-time work in our department.

I did not know how to respond to this. I had just returned to Eugene from a year's leave, and had been immediately immersed in complex

problems concerning the research space of two new faculty members. I had not yet had a chance to learn of the state of the department budget, the TA demand, and our general teaching manpower needs. Confused and unprepared, I responded to Al by saying something like, “Don't call us, we'll call you.”

After Al left, I learned he had been to the department earlier, and had been told to return when the new head came back from leave. But no one had told me about this, though Al assumed I had been told. So he was, I believe, surprised by my reaction.

When I looked into the matter, it became clear that Al would be a valuable addition to the department. But our budget was already committed, and we would be unable to pay him. But we did “call him” and he became a volunteer member of our teaching staff as a lecture demonstrator. After the first year, we were able to find the money to pay Al for his efforts, and he remained a colleague for eight years. I believe that Al forgave me early on for my gauche-rie during that first meeting in my office, and I thoroughly appreciated having him as a colleague.

- Robert Mazo is a retired Professor in the Chemistry Department. He still carries on research for the department and specializes in theoretical chemistry, specifically statistical mechanics.



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## *Looking Back*



*Send us your memories in pictures or words for publication in Chemistry News!*



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## CHEMISTRY ENDOWMENT CAMPAIGN A SUCCESS

*In 1995 the Chemistry Department started its first general endowment drive, as part of the Oregon Campaign. It is a five-year fundraising challenge seeded by contributions from present and retired faculty. Income from the first \$60,000 is matched by the State Board of Higher Education. The response to this challenge is gratifying. There have been 278 gifts to date from alumni, faculty and friends. The total now stands very near the target for the State match. These funds are now invested in the UO Foundation's "Willamette Pool", a balanced fund with a broad exposure to the stock market. Future contributions to the Department are automatically deposited into this fund, so it will grow and provide for the future of the Department. We thank all of you who have contributed. The names of contributors during the 1997-98 academic year are listed below. Previous donors are listed in past Newsletters, which can be found on the Chemistry Web Page.*

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Tim Aukett	Shervin Esfandiari	Clyde Kaneshiro	Robert Pinschmidt
Isaac H. Babbs	Pam Fischer	Herbert Kopperman	(AirProducts)
Kevin & Laura Bagin	Glen Frerichs	Ralph LeMar	Lucius Rivers
Andrew Barofsky	Stanley Gill	Eli Lilly	James Roberts
Greg Baxley	Hayes Griffith	Lefford Lowden	Mordecai Rubin
J. Michael Bozarth	Joanne Groves	Richard Ludescher	Douglas Runkel
Curtis Brothers	Steven Hadley	Susan Magic (Abbot Labs)	Robynn Schillace
Ernie Bush	Michael Hahn	Mohammed Malekzadeh	Maurice Schwarz
Diane Byrd	Thomas Harris	David McCoy	Joyce Shiro
Elizabeth Cerny	Lucas Hawkins	Mark Meier	Linda Smith
Catherine Chanin	Gary Hedden	David Menlhaff	Claibourne Smith
Laurie Chaplen	William Herzog	Yoon Merrill	Catherine Smith
David Chasko	Meagan Hessel	Matthew Miller	Wayne Solomon
Daneil Chelsky	Marion Hill	Bruno Morosin	Timothy Thomas
Lawrence Cohn	J. Hofrichter	Richard Moulton	David Thomkins
Johnny Deblock	Myer Horowitz	William Nolan	(Dow Chemical)
M. Debono	Carol Houk	Juris Orle	Mike Uhler
Brandon Doyle	(Hewlett Packard)	Joseph Owens	Ralph Vaughn
David Draper	Vincent Houmes	(Rohm & Haas)	(Boise Cascade)
Tom & Francis Dyke	Charles Jacobs	Tom Patapoff	Elizabeth Waterman
Vickie Eggers Lyon	David Jensen	David Paxton	Pancras Wong
Patrick Ellison	Robert Johnson	Lynn Reilly	Joseph Zoller

### Dick Noyes (1919-1997) Memorial Symposium

**Saturday, October 10, 1998**

“To honor the life and work of Richard M. Noyes.”

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Please RSVP to:  
Noyes Symposium, Department of Chemistry  
1253 University of Oregon  
Eugene, OR 97403

Voice: (541) 346-4601  
Fax: (541) 346-4643  
Email: barnhard@oregon.uoregon.edu

*All alumni are welcome to attend.*

# Saturday, June 13

## GRADUATES

### *Chemistry*

Dana Arritola  
Bridgette Barron  
Craig Brooksby  
Alex Chasko  
Ryan Cole  
Mary Dricken  
Geoffrey Lowman  
Adam Moule  
Michael Newman  
Gabriel Newton  
Mario Oliver  
Jennifer Petersen  
Gary Plant  
Lucius Rivers  
Noa Sakurai  
Justin Staggs  
Cuong Tran  
Austin Whelchel  
Gene Yoon

### *Biochemistry*

Kane Anderson  
Brian Bell  
Matthew Borisch  
Amie Corbin  
Farhood Farjah  
Deniz Gokcay  
Joy Green  
Charles Johnson  
Scott McLoud  
Dan Morgan  
Mick O'Keefe  
Michele Phillips  
Alexander Pico  
Jonathan Sowins  
Ryan Walkup  
Jeffrey Wong

### *Masters of Science*

Kevin Becraft  
Wendy Breyer  
Bradley Goehring  
Rebecca Hamblin  
Keith Keana  
Britt Lindfors  
Eden Reed  
Simon Sauter  
Bennett Straw  
J. Bret Wood  
Colin Wozencraft

### *Masters of Art*

Danielle Quigley

### *Doctorate*

Derek Gragson  
Ken Hillers  
Chris Johnson  
Rhett Kovall  
Grace Ann Neff  
Sean O'Connor  
Brian Reid  
Barbara Turner  
Marc Van Gilst

## AWARDS

### *Chemistry Major with Honors*

Kane Anderson  
Amie Corbin  
Farhood Farjah  
Charles Johnson  
Alexander Pico  
Lucius Rivers

### *Phi Beta Kappa*

Kane Anderson  
Katherine Brown  
Elizabeth Cogan  
Amie Corbin  
Desiree Pepper  
Gary Plant  
Alexander Pico (Oregon  
Six)  
Noa Sakurai  
Jeffery Salerno

### *University*

### *Academic Honors*

#### *Summa Cum Laude*

Kane Anderson  
Alexander Pico  
Gary Plant

#### *Magna Cum Laude*

Farhood Farjah  
Charles Johnson  
Mick O'Keefe

#### *Cum Laude*

Lucius Rivers  
Jeffrey Wong

### *ACS*

#### *Analytical Chemistry Award*

Noa Sakurai

### *ACS*

#### *Certification*

Geoffrey Lowman  
Jennifer Petersen

### *Biochemistry*

#### *Achievement Award*

Kane Anderson

### *Inorganic Chemistry*

#### *Achievement Award*

Geoffrey Lowman

### *Organic Chemistry*

#### *Achievement Award*

Charles Johnson

### *Richard M. Noyes*

#### *Physical Chemistry Achievement Award*

Amie Corbin  
Noa Sakurai

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Alexander Pico

### *Chemistry*

#### *Teaching Assistant Award*

Leif Brown  
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### *Graduate*

#### *Research Award*

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