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# OSU Chemistry Newsletter

Volume 27- Spring2008

One of the cornerstones of fundraising in the Campaign for OSU is the new Linus Pauling Science Center (LPSC), representing the first new instructional and research space for the Department of Chemistry since construction of Gilbert Addition in 1980. Space in this building will be shared with the Linus Pauling Institute.



Artist's conception of the current plan for the LPSC, looking east from 30th Street.

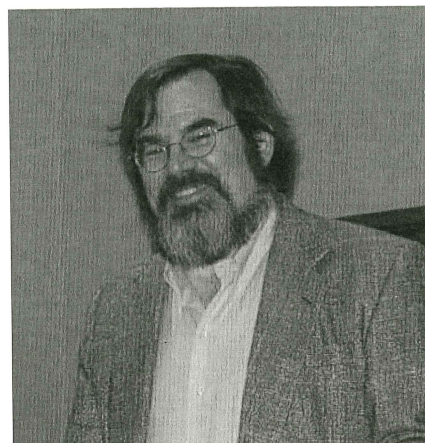
Planning has been underway for six months on the \$62.5 million facility. Although design planning is still underway, several major features have been established:

- ◆ It will be located at the intersection of 30th and Campus Way, just west of the ALS Building and Nash Hall.
- ◆ The first floor will have a heavy commitment to undergraduate instruction. A 250-seat auditorium, new instructional labs and a lab preparation facility will serve the needs of General Chemistry for Science majors (CH 221-3), General Chemistry for Engineers (201-2-5) and Honors General Chemistry (224H, 225H, 226H).
- ◆ There will be new facilities to house the NMR facility, and a completely revamped and updated Electron Microscopy Facility.
- ◆ New research labs for Chemistry, as well as faculty offices, graduate student/postdoc offices, instrument rooms and a clean room, will occupy the second floor.
- ◆ The LPI will have labs and offices on the third floor.

## From the Chair...

Friends of the Department:

The new academic year began with a number of major developments, only a few of which we are reporting on in this newsletter. It is a pleasure to announce that by all appearances, we will be getting new space in a joint Chemistry/Linus Pauling Institute building. The Oregon Legislature has committed more than \$30 million in funding, and we are well on the way to raising a matching amount from private sources. Our front page story contains all the details. It's worth noting that this is the first new space the Department has seen since the construction of Gilbert Addition in 1980. Notably, the University has made several recent investments in renovating labs in Gilbert Hall that we expect will allow us to maintain work here until we can move the remainder of the Department to a hoped-for Phase 2 building.



A second landmark achievement we'll be talking about in the Fall newsletter has been to secure funding for a new Nuclear Magnetic Resonance (NMR) instrument, thanks in large part to efforts by Professor Rich Carter. We expect to get a 700 MHz instrument with a cryoprobe that will be the most sensitive instrument in the world for measurement of  $^{13}\text{C}$  spectra. It's interesting that we have often been able to obtain what at the time was cutting edge, state-of-the-art equipment for structure elucidation of organic molecules; we are clearly staying on that path.

Of course, the most important aspect of the Department remains its people. We granted 35 bachelors' degrees, and 15 masters' and Ph. D. degrees in the year ending June 30. Both the undergraduate and graduate programs remain very strong, with the Ph. D. program being the largest on campus. Our best students earned eleven undergraduate scholarships, including four prestigious Hach Scholarships for students in the Chemical Education option. We have sent several of these award winners into the high school teaching ranks over the past couple years, and this pipeline looks to remain healthy.

The faculty remain highly productive, being near the top of University rankings in both instructional service provided and in research dollars raised. We boasted the largest summer program on campus in 2006, and continue to have more than half the student population come through our doors at some point in their academic careers. Professor Doug Keszler was recognized as OSU Distinguished Professor for his groundbreaking work in solid state materials. Professor Walt Loveland was coauthor for a textbook selected as "Best Undergraduate Textbook" by the Association of American Publishers. Professor Staci Simonich received the Savery Award as an Outstanding Young Faculty in the College of Agricultural Sciences.

There are a number of changes in the faces of the Department. Jennifer Travers left us in May, but is maintaining a relationship through teaching online Organic Chemistry courses. In her place, we hired Dr. Daniel Myles, who has had a fantastic start in contributing to the General Chemistry program. Staff members Leah Bandstra and Kristal Young left to pursue different opportunities. In Chem Stores we hired Tim Rogers, and we have welcomed Mary Mucia to the main office. John Westall announced he will be retiring at the end of June, and we are continuing efforts to add research faculty.

As always, I hope you find items of interest in this newsletter. I am happy to leave you with my sense that the Department remains a place of vibrant intellectual activity, and that our future is looking every bit as exciting. I hope you are finding success and fulfillment in your activities. And I hope you have a chance to visit over the next few years as we make some major transitions.



## Department News

### Barofsky receives another PhD

**Professor Douglas Barofsky** received a Doctor of Philosophy honoris causa from the Faculty of Science and Technology at Uppsala University in Sweden. Doug traveled to Uppsala in January to attend the commencement ceremony on January, 26 2007. The honor was a recognition for all of his past work in ion physics and the physical chemistry of desorption/ionization processes. In addition to his scientific achievements, Doug was recognized for his mentoring of several Ph.D. students at Uppsala University over the past fifteen years. Throughout his mentoring, Doug has traveled to Sweden to participate in the examinations of these students.

The ceremony was very festive and enjoyable as the photos below demonstrate. When asked about traveling to Sweden in January, Doug appeared unfazed. Living in Bend may be good preparation!

Doug appears to be enjoying his retirement. He is staying very active and recently took a rafting trip down the Grand Canyon. It is great to see his enthusiasm for his adventures.



Douglas Barofsky receiving his degree during commencement



Douglas Barofsky and Bo Sundqvist, (friend, colleague, and former Vice Chancellor of Uppsala University)

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**Douglas Keszler** presented a lecture, "New Materials for Energy and Process Efficiency" in honor of being named Distinguished Professor on May 22 in the MU Journey room.

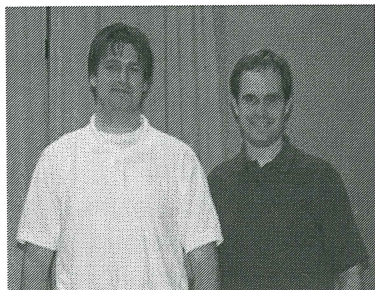
**Rich Carter** and graduate students **Michael Nafziger**, **Bradley Ashburn** and **Johanna Perkins'** article entitled "Diels-Alder Approach for the Construction of Halogenated, ortho-Nitro Biaryl Templates and Application to the Total Synthesis of anti-HIV Agent Siamenol" will be featured on the cover of the Journal of Organic Chemistry later this year.

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## Faculty News

**Rich Carter** has been selected as a 2007 Journal Awardee by the Editorial Board of *Synthesis and Synlett*. This award is intended to honor promising young professors in organic chemistry. **Rich Carter** is the recipient of the College's Sugihara Young Faculty Research Award. The Dean indicated this will include support for a symposium later this year, so please stay tuned for details.



**Vince Remcho** and his research group had several publications this past year: "Principles and Practice of Capillary Electrochromatography", in *Handbook of Capillary Electrophoresis*, (**Myra T. Koesdjojo**, **Carlos F. Gonzalez**, **Vincent T. Remcho**), "Development of a Semi-automated Procedure for the Synthesis and Screening of a Large Group of Molecularly Imprinted Polymers" in the *Journal of Combinatorial Chemistry* (**M. Koesdjojo**, **Henrik Rasmussen**, **Adam Fermier**, **Payal Patel**, and **V. Remcho**), "Organic solvent nanofiltration for microfluidic purification of poly(amidoamine) dendrimers", *Journal of Chromatography A* (**Jack T. Rundel**, **Brian K. Paul**, **V. Remcho**), and "Molecularly Imprinted Polymers as Sorbents for Separations and Extractions", in *HPLC Method Development for Pharmaceuticals* (**M. Koesdjojo**, **Yolanda H. Tennico**, **V. Remcho**). The group also gave several presentations: **Corey Koch** and **Jack Rundel** presented posters at MSB 2007: 21<sup>st</sup> International Symposium on Microscale Bioseparations January 14-18, 2007 in Vancouver, Canada, "Organic solvent nanofiltration for on-chip extraction of PAMAM dendrimer" (**J. Rundel**, **B.K. Paul**, **V. Remcho**), and "Micro-Flow Injection Device: Integration of Mixing and Optical Detection" (**C. Koch**, **James D. Ingle** and **V. Remcho**). **Corey** also presented his work, "Microfluidics in the Subsurface: towards in-situ analysis of microliter volumes in a miniaturized package" at OSU's Subsurface Biosphere Initiative

Graduate Conference, June 17-19, 2007 in Newport, OR. **Jack** presented, "Fabrication of a Bulk Microfluidic Nanofiltration System for the Processing of Macromolecules" (**J. Rundel**, **B.K. Paul**, **V. Remcho**), at ICOMM 2007: International Conference on Micromanufacturing at Clemson University, in South Carolina. **Carlos Gonzalez** presented "Development, fabrication, and evaluation of a microfluidic dielectrophoresis device" at the 12th Latin-American symposium on biotechnology, biomedical, biopharmaceutical and industrial applications of capillary electrophoresis and microchip technology, Mexico City, December 2006. **Jintana "Dao" Nammoonoy** presented "Microfluidic Devices for Selective Photoreversible Extraction of Heavy Metals from Drinking Water" (**J. Nammoonoy**, **C. Koch**, **Jeffrey R. Walker**, and **V. Remcho**) at the Nano-Micro Breakthrough Conference in Portland in September.

**Staci Simonich** has received a lot of press regarding her research on the measurement of pesticides and PCBs. An article title, "Asian pollutants found atop Mount Bachelor" was distributed by the Associated Press was included in many papers and periodicals including *Business Week* and *Forbes* detailing the findings of **Simonich** and other scientists studying pollution patterns.

**Walt Loveland** will travel to Switzerland in September to participate in a conference titled "Understanding the synthesis of the heaviest nuclei", presented at the 3rd International Conference on the Physics and Chemistry of the Transactinide Elements, meeting held on the Conference Centre of Davos.





## Advanced Degrees 2006/2007

### Master of Science

- Bin Cao** Bin completed her non-thesis MS and has joined her husband, Guoqiang Wang and her daughter Gina in Michigan where he is working as a Postdoctoral Associate at the University of Michigan (Remcho).
- Edgar Lee** Eddie completed his non-thesis MS (Horne).
- Ryan Link Cole** Ryan completed his non-thesis MS (Carter).
- Yuelong Ma** *Synthetic studies on indolic enamide natural products : 1. Total syntheses of coscinamide A, concinamide B and igzamide : 2. Synthetic studies towards the synthesis of halocyanine B* (Horne). May is now at the City of Hope pursuing her PhD under the direction of Dr. David Horne.
- Arkadiusz Piekarz** *Semi-volatile Fluorinated Organic Compounds in Asian and Pacific Northwestern U.S. Air Masses* (Simonich).

### Doctor of Philosophy

- Luke Ackerman** *Analysis of Semi-Volatile Organic Contaminants and Their Accumulation in Remote Aquatic Ecosystems of the Western U.S.*(Simonich). Luke is working for the US FDA Center for Food Safety and Applied Nutrition in College Park, MD.
- James Abbott** *Polarization spectroscopy and photodissociation studies of nitroaromatic compounds in the gas phase* (Kong).
- Carin Huset Ness** *Determination of Fluorochemicals in Waste-Dominated Aqueous Systems* (Barofsky). Carin is working as a Postdoctoral Associate at the University of South Carolina in the Department of Chemistry and Biochemistry.
- Eric Korf** *Studies toward the synthesis of halichlorine and pinnaic acid* (White).
- Tae Hee Lee** *Total synthesis of phorboxazole A* (White).
- Helmars Smits** *Studies towards the total synthesis of (-)-kendomycin* (White). Helmars is working as a Postdoctoral Associate at the University of Pennsylvania under the direction of Dr. Amos Smith III.
- Sorasaree Tonsiengsom** *Studies toward the total synthesis of alkaloids : nagelamide A and D, agelastatin D, dragmacidin A-C, salacin and almazoles* (Horne). Faye is living in Houston with her husband.
- Sascha Usenko** *Tracking Semi-Volatile Organic Pollutants in Remote Lake Systems* (Simonich).



## 2006/2007 Bachelor of Science

### Summer 2006

**Andy Larkin** (BS, forensic science option & German) is in a graduate forensics program at Florida International University.

**Preston Skaggs** (BS, biochemistry option (MTH Act. Sci minor)) is working at Chemica Technologies in Bend, OR.

### Fall 2006

**Stefanie Gibson** (BS, forensic science option) is working for the Oregon State Police in Springfield.

**Paul Heflinger** (HBS, ACS certified, advanced chemistry option) is in a graduate biology program at the University of Fairbanks.

**Lonnie Hetschel** (BS, forensic science option & ANTH) is working for Neilson Research Corp. in Medford.

### Winter 2007

**Nita Birdsong** (BS, environmental chemistry option & BRR (Tox))

**Briana Gentry** (BS, forensic science) is working as a lab asst. in Marine Environmental Biology at USC.

**Aryanto Herlambang** (BS, chemical engineering option) is studying Marine Environmental Biology.

**Abigail Joyce** (BS, ACS certified, advanced chemistry option (MTH minor)) is working for Bend Research.

**Tony Tong** (HBS, ACS certified, advanced biochemistry option & BB) is the the graduate Pharmacy program at OSU.

### Spring 2007

**Joshua Albus** (BS, ACS certified, advanced chemistry option) is applying to graduate school.

**Britta Anderson** (BS, forensic science option) is working at AVI-BioPharma, Inc. in Corvallis.

**Marcus Chiodo** (BS, pre-medicine option & Biology) is attending OHSU medical school in Portland.

**Laura Christ** (BS, forensic science option)

**Chandra Corley** (BS, business option (SPAN minor) is working for Test America in Portland.

**Keegan Duff** (BS, materials science option) is workig for R&D Biodiesel in Oregon.

**Andrew Dunatchik** (BS, biochemistry option) is in the graduate Pharmacy program at OSU.

**Kendall Dutcher** (BS, ACS certified, advanced biochemistry option & BRR (Tox)) is in a Biochemsitry graduate program at UW.

**Ian Elliott** (BS, chemical engineering option & CHE (MEP-MSE))is in a Chemical Engineering graduate program at UC Davis.

**Grant Farr** (BS, pre-medicine option (PHL minor)) is attending Medical School at the University of Iowa.

**Katherine Fordyce** (BS, ACS certified, advanced chemistry option) is working towards her MS in our Department under the direction of Dr. Alexey Shvarev, our newest analytical faculty member.

**Elizabeth Haggstrom** (BS, forensic science option)

**Adam Harney** (BS, pre-medicine option)

**Nicole Howell** (BS, ACS certified, advanced chemistry option) is working at Micron Tech, Inc. in Boise, ID.

**Spencer Huff** (BS, business option (BA minor))

**Matthew Jones** (BS, forensic science option) is a Biotech consultant in Albany, OR.

**Elizabeth Poore** (BS, pre-medicine option & Biology (MTH SCI minor)) is working at AVI BioPharma, Inc.

**Tyler Steinke** (BS, biochemistry option) is working at AVI BioPharma, Inc. in Corvallis.

**Kaleb Stinger** (BS, biochemistry option)

**Melinda Stoelk** (BS, forensic science option) is going to nursing school in Texas.

**Jason Warkentin** (BS, biochemistry option)

**Wesley Williams** (BS, environmental chemistry option) is attending a Polymers graduate program at the Univ. of TN.

**Shannon Williamson** (BS, ACS certified, advanced chemistry option) is in the graduate Material Science program at UO.

**Liecong Zhen** (BS, ACS certified, advanced chemistry option) is in Portland, OR.



## Department News (continued from page 4)

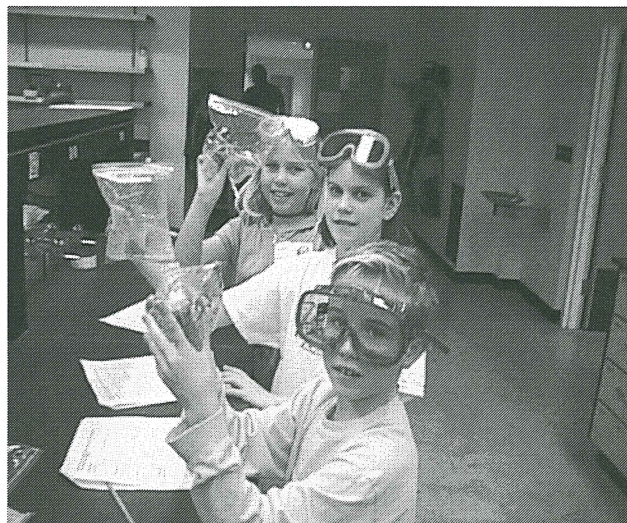
**Richard Nafshun** facilitated "Chemistry Afternoon." This event consisted of three activities to advance chemistry in the community. Chemistry demonstrations and hands-on laboratories were facilitated for 140 youngsters ages 2-14 and 120 adult chaperons; a social for 30 guests networked members of the OSU community; and ACS Tour Speaker Carolyn Fisher spoke on the Chemistry of Herbs and Spices to 55 guests. Richard hosted "Beaver Buddies" in which Chemistry demonstrations were conducted for 30 students on June 2. "Beaver Buddies" is a community outreach event which pairs OSU students with a school-aged child to attend an OSU sporting event, social gathering, or other events of interest. Richard facilitated "Expeditions." For the tenth consecutive year a hands-on chemistry class for talented and gifted 4th /5th grade students was offered. The ten day program runs from 8:45am-noon July 9-20 and has an enrollment of 48 students. Activities include polymers, batteries, crystals, electronic circuits, gases, chemical bonding, acids and bases, the chemistry of art, and chromatography. Richard instructed a General Chemistry course in which one of the recitation sections was a "Learning Community." 24 students participated in the program in which they attended three or more classes together in their field of study (Exercise and Sports Science) and met with the instructors once a week to make connections and foster study skills. This program initiated or increased interaction between students, between students and teachers, and between teachers.

One of this year's outstanding Expeditions courses is called:

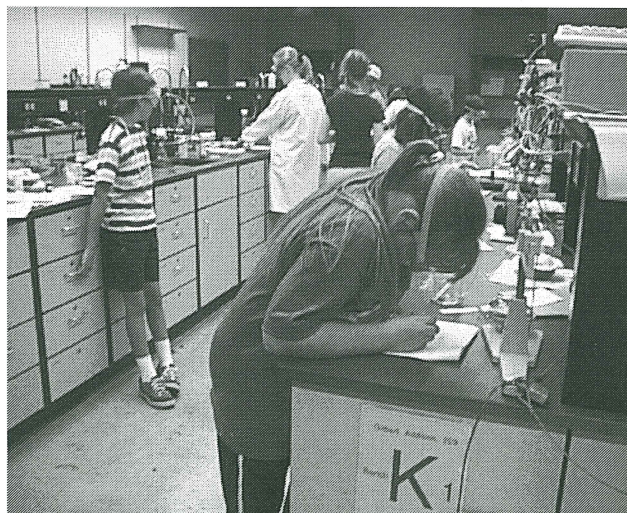
### **Chemistry Is Cool**

Make ice cream! Test cannons! Instantly freeze random objects! Blow stuff up! You'll do this and much more as you explore the world of chemistry. In a fun, hands-on way, experiment with things like liquid nitrogen, dry ice, acids and bases, and explosive reactions as you discover how chemistry relates to everyday life.

For more Chemistry news  
check us out online at:  
[www.chem.orst.edu](http://www.chem.orst.edu)



Our future chemists hard at work!



One of our many Expeditions classes facilitated by Richard Nafshun



**Alexey Shvarev** and his graduate students, **Hasini Perera** and **Katy Fordyce** attended Pittcon in March in Chicago. Shvarev was invited to speak at the conference and his talk was titled, "Experimental and Theoretical Investigation of the Response Mechanism of Light-Controlled Ion-Selective Optical Sensors" and covered his collaborative work with **John Westall**. Shvarev's proposal, "Beyond sensing under equilibrium: photoresponsive nanoprobe for rapid localized acid-base titration", Collaborators Oksana Ostroverkhova (OSU) and David McIntyre (OSU). for "ONAMI Nanometrology and Nanoelectronics Initiative" was funded by ONAMI and Office of Naval Research.

**Toby Primbs** received two awards from the Environmental Chemistry Division of the American Chemical Society: the Environmental Chemistry Graduate Student Award (with a one year subscription to Environmental Science and Technology and membership in the Environmental Division for one year) and the Graduate Student Paper Award (Award winners presented their papers at the American Chemical Society Meeting in Boston, MA in August, 2007. They will also receive a \$1,000 cash award at the Environmental Division Dinner).

**Myra Koesdjojo** extended her research effort through two internships, one at J&J Pharmaceutical Research and Development working on imprinted polymer sorbents for selective extraction of the active pharmaceutical ingredient in pharmaceutical formulations to facilitate impurity profiling, and one at ALZA Corporation (part of J&J), where she worked on development of an automated system for formulation development, salt screening, crystallization and polymorph screening.

**Yolanda Tennico** enjoyed an internship at ALZA Corporation, CA, from Jan to Dec 2006. Her research focused on analytical method development for oral drug delivery systems.

Three graduate students: **Stephen Meyers (Keszler)**, **Paul Newhouse (Tate)**, and **Annette Richard (Tate)** received fellowships from the NSF Integrative Graduate Education and Research Traineeship (IGERT).



Alexey Shvarev at coast with prospective graduate students

The Department hosted its third Graduate Recruiting Weekend. We hope to continue coordinating this event to recruit promising domestic applicants.

Another promising recruiting event has been the NSF Summer Research Program in Solid State and Materials Chemistry. It is a collaborative venture between **Doug Keszler** and the University of Oregon. The final symposium has been held over a weekend in August at OSU for two years. One of the promising participants from last year, **Alan Telecky**, has joined Keszler's lab for the summer and will be one of our new PhD students this fall.

**Dr. Harry Freund**, was a professor from 1947 until his retirement in 1980. He died on Monday, August 13, from complications related to Parkinson's Disease.

The Christensen Fund provided travel stipends for several graduate students to attend conferences and present their research. **Carin Huset Ness** attended the North American Meeting of the Society of Environmental Toxicology and Chemistry in Montreal in November to give a platform (oral) presentation and a poster presentation on "Quantitation of Fluorochemicals in Landfill Leachates" and "Mass Flow of Fluorochemicals in a Swiss River Valley". **Robynne Kirkpatrick** attended the International Symposium on Molecular Spectroscopy at Ohio State University in June and presented, "Pieces of the Propellane Puzzle: An Investigation of Rovibrational Coupling."

**Robynne Kirkpatrick's** research with **J. Nibler** in the area of high resolution molecular spectroscopy was recognized by receipt of a Coblentz Society Student Award, one of 12 nationally. She gave oral presentations on her work at the Western Spectroscopy Association meeting in Asilomar, CA in February.

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## Alumni News

**Dean Regier**, BS '76, visited last October with his family and received a personal tour of the changes to the chemistry facilities since his graduation from Dr. Pastorek. He was both disconcerted and reassured that the Department has changed so much physically and stated that, "I really missed the distinctive odor that marked the 3rd floor of Gilbert Hall as the organic labs! The renovations are certainly an improvement however. And as the years go by, there are fewer and fewer names on the faculty roster that I recognize". Even Jack Whitney has retired. He and I spent a Christmas vacation doing the annual chemical inventory one long ago Christmas. I'm sure you have the Integrated Lab Courses ironed out to the point of flawless execution by now but I'll say that being one of the first year guinea pigs during the '74-'76 introduction of that series and having most of the labs crash and burn at some point, was probably better training for real life than you might be willing to admit. Thanks for the training under live fire."

**William Bromps**, '88 (Yoke), is currently an R&D Chemist with Restek West in Shingle Springs, CA. We are a satellite research facility of Restek Corporation (Bellefonte, PA). My area of research is Porous Layer Open Tubular (PLOT)fused silica capillary columns for the analysis of light hydrocarbons and permanent gases. It is an exciting time for Restek. In recent years many chromatography companies have been swallowed up by huge conglomerates. The subsequent de-emphasis of chromatography research by these companies has enabled Restek to cherry-pick among the very best researchers in the fields of LC, GC, LC/MS, and GC/MS. I'm excited to help Restek make the most of this opportunity.

**Doug Lorenz**, BS '85 was on campus in April interviewing for a position at Bend Research. Doug was also working on setting up a summer internship program for chemistry undergraduate majors at Bend Research.

**John Salinas**, '85 (Ingle), continues to teach at Rogue Community College in Grants Pass, OR. Currently he is teaching general chemistry and general science to small classes of wonderful

students. He spends summers monitoring and surveying lakes in Southern Oregon. Of special concern presently are the lakes with toxic blue-green algae blooms. "Life is wonderful."

**Paul Forster**, HBS '98, has accepted a tenure track Assistant Professor position at University of Nevada, Las Vegas. He will start in January. Paul did his thesis research with Gable?, then received a Ph.D. from UCSB, and is currently a postdoc at SUNY Stonybrook.

**Tom Whitehead**, BS '98, has rejoined AVI BioPharma, Inc. in Corvallis.

**Ryan Moser**, HBS '99, teaches AP chemistry and physics at Marist HS in Springfield OR and brought his students to campus for some hands on activities last year.

**Luke Lavis**, BS(ACS) '00, is now a graduate student at UW-Madison and has just been awarded a prestigious ACS Division of Organic Chemistry Graduate Fellowship for 2007.

**Tony Masiello**, PhD '03, (Nibler) presented a talk at the 62<sup>nd</sup> International Symposium on Molecular Spectroscopy in Columbus, Ohio on his postdoctoral research at the National Institute for Science and Technology in Gaithersburg, MD in June.

**Cristian V. Ion**, HBA, '03 is a Legacy Program Associate with Global Green USA (The US Affiliate of Green Cross International, Mikhail Gorbachev, Chairman) [cion@globalgreen.org](mailto:cion@globalgreen.org); [www.globalgreen.org](http://www.globalgreen.org)

**Jason Schindler**, HBS, 03, is teaching English as a second language in Japan while he makes his way around the world on his bicycle.

**Mac Wisdom**, BS '03, has joined the Peace Corps.

**Veronica Chiu**, BS '04, is starting graduate school in Bioanalytical Chemistry at Washington State University. Veronica worked in this area at AVI BioPharma, Inc for the last three years.

**Jeff Bilyeu** (BS '04) is a Chemistry Instructor at West Linn High School in Oregon



### Alumni News (continued from page 9)

[BilyeuJ@wlwv.k12.or.us]. Jeff reports that he is doing great and loves teaching. He is sending as many of his students to OSU as possible (60 OSU; 40 UO).

**Chris Holms**, BS '04, received his MS in Oceanography at OSU.

**Darlene Valencia**, BS '05, is starting graduate school in Forensic Science at Pace University in NYC. Darlene spent the last year helping us in the chemistry teaching labs as a Laboratory Assistant.

**Melissa Schultz**, PhD (Barofsky) is an Assistant Professor in the Department of Chemistry at the College of Wooster in Wooster, Ohio.

**Kathy VanWormer**, HBS, '05, is working on an MS degree in Chemical Engineering and Mechanical Engineering at OSU.

**Angela Doneanu**, Ph.D. '06 (Remcho), had a daughter, Julia Elena – congratulations!

**Mollie Waller**, BS '06, is starting graduate school in nanostructures and nanolithography at UC Davis. Mollie worked as an analytical chemist for AVI BioPharma Inc last year before applying to graduate school.

**Amanda Wilson**, BS '06, graduated from Air Force Intelligence training on 31 July and has move to San Antonio after getting married on Sept 2 in Happy Valley, OR.

Three alums of Chemistry ('06) graduated this spring from the OSU Science Math Education department with MS degrees in Education: **Will Adrian, David Crawford, and Ryan Kanter**. Kanter and Crawford were recipients of the Hach Foundation Scholarships for High School. **Ryan Kanter** has accepted a position teaching chemistry at Crescent Valley High School here in Corvallis. **DJ Crawford** will be teaching middle school somewhere in Oregon.

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### Department News (continued from page 8)

**Hasini Perera** had her first publication this year, "Pulsed Galvanostatic Control of Solid-State Polymeric Ion-Selective Electrodes" in *Analytical Chemistry* 2007.

**Dr. Alfons Weber** from the National Institute for Science and Technology in Gaithersburg, MD spent three weeks at OSU this summer working on a research collaboration with J. Nibler and Dr. Art Maki, former Ph.D student of OSU Professor Jack Decius (dec). In Sept. Dr. Weber will present some of the results of this collaboration at the 20th Colloquium on High Resolution Molecular Spectroscopy at Dijon, France.

Four undergraduates, **Nicole Baker, Narumol Jariyasopit, Matthew Martin, and Robert Zaworski**, worked during the year with **Joe Nibler** on research and on the development of new physical chemistry laboratory experiments involving liquid crystal displays and dynamic light scattering. These experiments will be included in the eighth edition of the Shoemaker, Garland and Nibler laboratory text which is used worldwide.

**Michael Chan** (Chemistry undergrad) worked with Jack Rundel in the characterization of microfluidic

nanofiltration modules (MNMs) during Summer Term 2007. His long hours and scientific curiosity helped push the forward the effort to realize continuous-flow post-synthetic purification of gold nanoparticles in a microreactor system.

**Andrew McKenzie**, Sheffield U., UK, visited with us an exchange student. While at OSU he learned how to design and fab microfluidic chips for chemical analysis.

The Niobium chapter of Iota Sigma Pi, The National Honor Society for Women in Chemistry, is happy to announce that **Taralyn Tan** (undergraduate in BB) was awarded the 2007 Gladys Anderson Emerson National Scholarship from our chapter. Tari is an outstanding student and has been involved with several undergraduate research projects at OSU. In addition she was instrumental in starting the Sigma Delta Omega Women in Science Sorority which will kick off it's second year this fall.



## From the Chair... (continued from page 1)

Funding for the building has come from several sources. The State of Oregon has agreed to fund \$31.2 million, and the balance has been raised from private sources as part of the Campaign for OSU. Major donors include Al and Pat Reser, and the Valley Foundation. An additional \$15 million in program support for Science and for the LPI has also been raised to date as part of the Campaign. We are clearly quite grateful to all the donors for the wherewithal to proceed on this project.

Several key programming features will serve the Department's needs as we move into this new space. A grant from the Meyer Memorial Trust will enable installation of modern instructional media in the instructional spaces and conference rooms. Specifics have not yet been set, but current plans include 2-way conferencing capabilities for distance education and other applications, electronic "white boards" and related display technologies for the auditorium, capture-and-display technologies in the instructional labs, and state-of-the-art networking in the building.

Another plan is to make the NMR and Electron Microscopy facilities into showcases of the science we do. The facilities will share the first floor with instructional facilities, so students will be able to see some of the instruments on a day-to-day basis in addition to experiencing them in the course of class work.

General Chemistry labs will undergo a significant makeover when they move to the LPSC. We have evaluated needs of the labs, and have decided to make the experiments "green" enough that we can avoid installation of fume hoods! This has several benefits. We have carefully evaluated what concepts we really need to show in the lab. By avoiding compounds that would require fume hoods, we improve the safety environment in these labs, but the benefits go further. By not installing hoods, we improve the portion of recirculated air and drop the energy footprint for the building.

Research labs will be designed on a modern, modular basis. We will be able to segregate researcher desk and write-up space from the wet labs (a significant safety enhancement). The simple addition of modern climate control also represents a huge improvement in the safety environment, particularly for organic chemistry research. A new clean room facility will allow materials fabrication of a type not currently possible in facilities in Gilbert Hall.

An obvious question is, "What will become of Gilbert Hall?" Much of the Department will remain. We tentatively plan for a "materials wing" that will enhance the capabilities for solid state materials research and opens the possibility of bringing collaborators from Physics and Engineering into common space with Chemistry researchers. The move of the 200-level General Chemistry courses will lead to a cascade of opportunities in Gilbert Addition: more space for the non-majors' Organic Chemistry; expanded space for Experimental Chemistry; and freedom from space constraints for Analytical Chemistry. We will also have opportunities for using space for outreach activities, and we are thinking of a possible advanced lab course.

Planning is well underway. Our target is to break ground by next spring. A tentative move-in date is set for Fall, 2010. Details will follow!



# Philanthropy

We realize that you have received a large number of mailings with regard to the Campaign for OSU. Your philanthropy continues to play an important role in adding to the quality of our programs in ways that state funding cannot. Some examples of how we use contributions to the Chemistry Unrestricted Fund include:

- ◆ Outside seminar speakers: we hosted 10 seminar speakers from outside organizations in the 2007-08 academic year.
- ◆ Graduate recruiting: we sent 5 faculty on 10 recruiting trips to undergraduate institutions. We also went to China to interview applicants, and ran a Graduate Recruiting Weekend to bring in students to whom we had offered admission.
- ◆ Student travel: We subsidize travel and registration costs for a dozen graduate students to allow them to make presentations at scientific meetings.

We have endowment opportunities for a number of scholarships and fellowships; a couple recent additions that need contributions include:

- ◆ The Kenneth and Lise Hedberg Graduate Fellowship. Directed to students who are working in physical chemistry and/or structural chemistry.
- ◆ The James D. White Graduate Fellowship. Directed to students in organic chemistry and natural products synthesis.

We thank you for your past support, and invite you to help us continue our efforts.

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# Honors and Awards

## College of Science

### Undergraduate Scholarships for 2007/2008

Peter C. Culter Memorial Scholarship

Brian Knight Eric Titus

Jeff Wong

Carroll DeKock Scholarship

Margaret Dalgarno Alex Gilman

Shane Monares

Colleen Spurgeon Scholarship

Garrett Jones

Linda May Oleson Chemistry Scholarship

Layne Clemen

Milton Harris Scholarship

Ben Taucher

Hach Scientific Foundation Education Scholarship

Sarah Bierly Ashley Fullerton

Nicole Rae Tanguileg Dustin Welch

### Chemistry Department Awards, Sept. 2006

'05/'06 Employee of the Year Award

Cindy Persson

'05/'06 Milton Harris Teacher of the Year Award

Emile Firpo Christine Pastorek

'05/'06 Harris Graduate Teaching Assistant Award

Corey Koch Susan Genualdi

James Neeway

### Chemistry Department Awards, June 2007

William J. Ingram Memorial Fellowship

Khomson Suttisintong

Courtney & Dorothy Benedict Fellowship

Dao Nammoonoy Hasini Perera

Fall 2006 Laboratory TA Awards

Defne Cakin Jeremey Gunderson

Beth Knight



Kevin Gable and Hach Recipient,  
Sarah Bierly

### Winter 2007 Laboratory TA Awards

Christopher Emerson Andrew Smith

Jianyong Wu

### Spring 2007 Laboratory TA Awards

Hasini Perera Sheena Strohmayer

Jing Wang

### N.L. Tartar Summer Research Fellowships

Bradley Ashburn Chris Emerson

Susan Genualdi Heath Giesbrecht

Damien Kuiper John Melbardi

Johanna Perkins Keith Schwartz

Chad Teters

### Milton Harris Summer Research Fellowships

Corey Koch Myra Koesdjojo

Hasini Perera Jack Rundel

### David Shoemaker Award

Robynne Kirkpatrick

### Bruce Graham Memorial Scholarship

Andrew Smith

### Hedberg Fellowship/White Fellowship

Michael Naffziger

### Arnold Johnson Fellowship

Jie (Jessica) Zhang

### CRC Press Freshman Chemistry Awards

Michelle Adlong Lene Lang

### PLU Award

Eric Titus

### Analytical Chemistry Award

Sarah Furrer

### American Institute of Chemists Award

Ian Elliott

### Merck Award

Elizabeth Poore

### Hypercube Scholar

Joshua Albus



Department Benefactors: Carroll and Gerry DeKock,  
Ken and Lise Hedberg, Clare Shoemaker, and James  
White





The Atoms defended their title against the Broken Yolk Cafe!  
They won the first game 17-15 and dominated in the second game 16-8.



The Alchemists



Jessica Zhang received the Arnold Johnson Fellowship.



Lene Lang received the CRC Press Freshman Chemistry Award.





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### **Milestones in Service to OSU Chemistry**

- 20 years - Joey Carson, Chair's Assistant/Department Manager**
- 30 years - Glenn Evans, Professor of Theoretical Physical Chemistry**
- 40 years - Walter Loveland, Professor of Nuclear Chemistry**

OSU chemistry alumni are found on every continent these days. We would like to hear from you! Just log on to our alumni update site and tell us what you are doing. Go to [www.chem.orst.edu](http://www.chem.orst.edu)