

"PERIODIC NOTES"

THE IDAHO STATE UNIVERSITY CHEMISTRY NEWSLETTER

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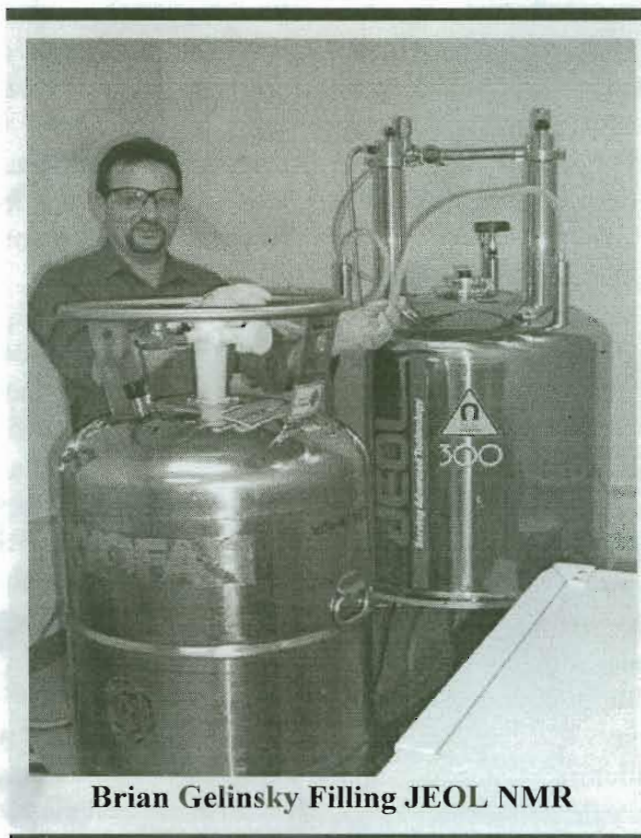
Welcome alumni and friends of the ISU Chemistry Department. If you have not had the chance to stop by to visit and catch up on things then please read on as I share with you some highlights from the past year. Firstly, we have several new faces in the Department. Dr. Caryn Evilia has joined the department, having had moved over from the ISU Biological Sciences Department. Caryn is a wonderful addition in every respect. She has already established a reputation as an excellent teacher (she teaches Biochemistry), has an active research group whose presence enables ISU students to engage in biologically significant chemistry research, and she is truly an energetic and positive force in the department. Welcome Caryn!

Brian Gelinsky joins us as a new staff member serving as Laboratory Technician. Brian has done a great job, and like the rest of the staff in the department, has made and continues to make our department more efficient and productive. Secondly, we say a sort of good-bye to an old friend. Dr. Lyle Castle has moved on to be the Dean for Academic Programs for ISU-Idaho Falls. Lyle's appointment is formally outside the Chemistry Department, yet he is, as always, still part of the Chemistry family and we still see him a great deal. We wish him well in his service as Dean and extend a hearty thank you to Lyle for many outstanding years of service to ISU chemistry students.

Thirdly, our faculty has been recognized this past year for their contributions. Andy Holland was awarded the distinction of ISU Master Teacher, an outstanding honor for such a young faculty member — congratulations, Andy. Jeff Rosentreter was presented an Inventor's Award by the Idaho National Laboratories this past year

— way to go, Jeff. Fourthly, collaborative research is alive and growing in the department. John Kalivas was on leave performing research for InLight Solutions and is currently deeply engaged in the collaboration of developing calibration algorithms. Josh Pak and Rene Rodriguez have collaborations with people in Physics, Engineering, the INL, and Pacific Northwest Labs. Byron Bennett has a productive collaboration with Pharmaceutical Sciences. Jeff Rosentreter is working with anthropologists on an array of fascinating projects. Karl De Jesus is working with people in Biological Sciences as are Caryn Evilia and Rob Holman. Fifthly, student research opportunities continue to grow as new grants or continued funding have been awarded this past year to faculty (Byron Bennett, Todd Davis, Caryn Evilia, Lisa Goss, Andy Holland, John Kalivas, Josh Pak, Rene Rodriguez and Jeff Rosentreter).

Finally, some truly outstanding contributions to student experience were launched (or continued) in 2008. These include offering Honor's laboratory sections of Chem 111 and Chem 112 where students do far more challenging projects/experiments than their non-Honors peers (Andy Holland teaches these labs). Majors-only lab sections for Chem 303 and Chem 304 where students get exposure to air-sensitive synthetic methods and use advanced instrumentation have been very popular (taught by Karl De Jesus). All of our Chem 301 pre-lab lectures were made into podcasts and posted on the internet so that students could watch the entire treatment of the theory, the purpose and the safety aspects of the lab (and take an electronic quiz) before arriving to perform the lab (this project featured contributions from Enouri Omar, Todd Davis, Karl DeJesus, Josh Pak and Rob Holman). For this project,



Brian Gelinsky Filling JEOL NMR

filming took place in the summer, featuring Sam Loshe (an ISU graduate returning from graduate school at the University of Oregon) and Aaron Wilkerson as our “movie stars.” This podcast approach will soon be utilized in most, if not all the chemistry laboratory offerings in the department. The Biochemistry program is now administered by the Chemistry Department (in conjunction with Biological Sciences and Pharmaceutical Sciences) and a completely revamped undergraduate curriculum has been developed and implemented. All the Biochemistry laboratory courses are undergoing complete modernization and renovation (by Caryn Evilia), as is the Physical Chemistry laboratory course (by Lisa Goss). And... so much more — but so little space to write. I guess you’ll just have to visit us to hear the rest. We look forward to hearing from you. Call or visit us at any time. Nothing would please us more than hearing from old friends.

Robert W. Holman

RHETORIC FROM RETIREES

Bruce and Alice Ronald

We still love retirement and never have enough time for all we want to do! Driving across the midwest to and from Chicago was a new adventure for us. The destination was the wedding of our son, James, to Leah Scanlin. Both are MD/PhD students at the University of Washington. James finished his Ph.D. in computational genetics, and Leah in microbiology. So there are two more Dr. Ronalds headed for academia! Our daughter, Lisa, and her husband are enthusiastic about their back country lives - complete with 1 cat, 2 dogs and 3 dozen chickens. Sales of fresh eggs are booming. Healthwise, Bruce’s PSA went up, so we chose proton radiation at Loma Linda Med Center in California for 2 ½ months of treatment. With no side effects and a successful outcome, this was a great place to spend the winter. Be sure all the men you know follow their PSA’s! Bruce continues as a “flower child” with his botany interests, and Alice dabbles with watercolors.

Dennis Strommen

This year was rather interesting. I went to Poland to visit some former students and was treated like royalty. They are all Deans and Department Chairs now. I guess I didn’t treat them too badly when they were here! I went to Warsaw, Krakow and Wroclaw as well as a few other smaller towns. In Krakow I visited the Copernicus Museum which is a must if you ever get there. One of my students got us rooms for a night in a famous castle

called Ksiaz. Try to say that five times fast. When I left they asked me if I would accept one of their grad students (Kasia Hernik) six weeks to do some Raman for her thesis. She came and was absolutely delightful—and athletic. The first weekend she was here I asked her what she did and she told me that she went to the mall in Chubbuck---on foot! Later she got a bike and went to American Falls. Ah, to be young again! The good news there is that she now has her Ph.D. I’m glad that I could help a little bit.

Recently I began a quest that I have been thinking about for at least 10 years. I am taking flying lessons. I am really enjoying it and understand the aeronautical principles. The trick is to get the hands and feet connected with the brain. Take-offs are relatively easy and stalls are actually fun, but landings are hard—and in my case I do mean HARD! Hopefully, I’ll improve.

Gayl Wiegand

Now retired since 2004, I have spent my time relaxing, reading, gardening, teaching, traveling, and hunting – not exactly in that order. It’s really nice to be able to start a book and actually finish it before I forget what the first part was all about. I’m an organic gardener: I plant and water, and if the plants live and produce something, fine, I’ll eat it. If not, I’ll buy my produce. I taught one semester of Chem. 101, and gave a few lectures for ISU’s New Knowledge Adventures series. Florida beckoned last year, and I visited my brother in Titusville, not far from Cape Canaveral. Took in the Kennedy Space Center, visited Merritt Island Wildlife Refuge (manatees are huge, and after a while alligators get boring), and wandered through the Epcot Center. The fish didn’t bite. Last fall, I attended my 50th high school class reunion in Iowa, my first time for that gathering. Fortunately there were name tags to look at to help identify folks, or I’d have been in real trouble. Had a great time, though. I chased antelope in Montana several times and took an elk on a guided (horseback) hunt here in Idaho. I try to stay in shape, but discovered new muscles after a couple of days on the trail.

WE WOULD LIKE TO HEAR FROM YOU!

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“Welcome to our New Faculty”



Dr. Caryn Evilia joined the Department of Biological Sciences as an assistant professor of biochemistry in Fall 2006. In Summer 2008, her position was transferred to Chemistry, but she currently holds a joint appointment in both departments. Before joining ISU, she was an NSF postdoctoral fellow in the Department of Biochemistry at Thomas Jefferson University in Philadelphia.

Dr. Evilia's research centers on organisms that live in extreme environmental conditions (such as high salt concentration and high pressure), and specifically, the evolutionary adaptations to both proteins and nucleic acids that allow these organisms to survive. Her lab uses many techniques to probe the structure of these molecules, including NMR, fluorescence spectroscopy, dye-binding studies, and melt curves, as well as basic molecular biology techniques like cloning, PCR, column chromatography, and gel electrophoresis. Her lab currently includes 3 graduate students and 7 undergraduates from both Chemistry and Biological Sciences.

Welcome to our New Staff Member

Brian Gelinsky
(picture on front)

Born an avid Packer fan in Milwaukee, Wisconsin, before we were called cheese heads, we were just the Pack and one day we would be back. I moved to the golden mountains of Pocatello in 1976 where I developed a zest for mule deer hunting and trout fishing in the pristine outdoors of this area. In 1980 I was 18 and full of curiosity for what the world had to offer while being caught up in the recession of that era. Most of my employment during this time was working as a custodian for the local school district. I went back to school in 1994

and graduated from ISU in 2003. Since then I have been working in education and am honored to have this opportunity to be part of the staff here at my Alma Mater.

NEWS FROM DR. HOYT

Hey all, Lew and I have some news: we are expecting a baby (our first, last and only) in March of next year. It was wonderful when we heard the heartbeat for the first time. We're both excited and freaked out. I'm not planning to make any kind of an announcement at work, for a while anyway. Please don't send presents. However, good wishes, and bending your thoughts toward its NOT being twins are much appreciated! LATEST-IT'S A GIRL!!

Love to you all.

Chemistry Majors Laboratory

For the past five years the chemistry department has offered a chemistry majors laboratory section for organic labs. The driving force was to offer chemistry and biochemistry majors a greater discovery based laboratory experience, more hands on instrument usage, and a greater exposure to modern synthetic techniques such as those involved in inert atmosphere reactions. The goal is to provide a laboratory that may serve as a launching pad for students to engage in undergraduate research. This goal has been met, as the majority of students join research groups by the end of the second semester. While many of the experiments in the first semester are similar to those carried out by those in the standard Chem 303 laboratory, there is always a discovery element or new technique added. The second semester laboratory has little in common with the mainstay Chem 304 laboratory. Here, students apply first semester techniques such as TLC, NMR, and GC/MS to following reactions and the solution of mechanistic problems. For example, the stereochemistry of epoxidation and the Wittig reaction are explored. Many of these reactions utilize an inert atmosphere and septum/syringe techniques necessary to perform the work. In order to give them an appreciation for the challenges in synthesis a multi-week synthetic project is undertaken at the end of the Spring term. The synthesis, which utilizes David Evans' elegant work in enantioselective aldol reactions, requires the use of all the previously learned inert atmosphere techniques and serves as a capstone for the course.

FACULTY NEWS

Dr. Byron Bennett started the year out “with a bang” as a grant was funded by the FRC and provided “fuel” for this year’s chemistry. Brandon Grover, Robert “David” Grigg, and Scott Woodbury continued the outfitting of the Bennett laboratory while preparing Pt(II) and Re(I) complexes. Critical collaboration with Drs. Lai, Bhushan, and Dainels in the College of Pharmacy resulted in selection of several complexes for a first time *in-vivo* study.

Dr. Bennett presented information from the Pt chemotherapeutics project at the 50th annual IAS and annual INBRE meetings. The group attended at the Northwest-Rocky Mountain Regional Meeting of the ACS in June and presented work on bipyridine synthesis and Pt coordination work: presenters - Brandon Grover and David Grigg. Additionally a preliminary report was made at the meeting regarding a Re(I) metal-organic-framework (MOF) project carried out by Scott Woodbury. Matt May (associated with the Pharmacy group) has provided insight through ES/MS experimentation and has begun to identify portions of the structures of these macrocyclic species.

The group was supported this summer through Project SEED. Our talented SEED student, Alex Hyde, assisted in generating several new bipyridine ligands during his time in the group. Additionally Jesse Zamora generated a key compound for us during a short visit this summer.

This Fall Fatima Awol began an independent project investigating a route to selectively prepare the enantiomers corresponding to one of David’s Pt complexes [currently identified for *in-vivo* work as the simple racimate!].

From the home front: Annie gave birth to Kayenta Aldebaran on June 2nd! Little Kayenta joins the Bennett team: Triton Wingate, Callisto Moran, and Tioga Rigel.

Dr. Lyle Castle This past year has been a year of great change in my life. I was happily minding my own business on my annual family vacation to Bear Lake in August of 2007, when I found a message on my cell phone from the office of the Academic Provost. That next Monday morning I returned the call, and later that day was offered the position of Interim Director for Academic Programs for Idaho State University in Idaho Falls. I accepted the position which became permanent in the spring of 2008 with a title change to Dean for

Academic Programs for Idaho State University in Idaho Falls. So for the first time in many years I am not teaching any classes. Although I really miss teaching, I am thoroughly enjoying the challenges of running a campus and working with the college Deans to support existing academic programs as well as bringing new programs to Idaho Falls. Another big change in my life is that the Journal of Heterocyclic Chemistry has signed a publishing agreement with Wiley. My role with the Journal will now be limited to that of Editor and Chief. We are very excited to work with Wiley because of their strong presence in Science and our shared philosophy of being a friend to the author and the library. On a personal note, my children seem to be growing up (while I of course am staying the same age!). My oldest son Nicholas is now a chemistry student in our department. I guess if you bike and snowboard with chemistry professors all your life you will eventually find your way into a chemistry class. My other two children are also teenagers and each of them is doing well, while making their dad adapt to this new phase in their lives. Finally, a few days after the Dean position became permanent, my wife Joanne resigned from being a chemistry professor at BYU and is now, at least temporarily, enjoying her time as a stay home mom.

Dr. Todd Davis enjoyed his first year at ISU as a professor in the Department of Chemistry. Along with starting his first academic position, Dr. Davis and his wife welcomed the birth of their second child exactly one week before the start of the 2007 fall semester. Teaching a 9:00am lecture, in addition to being sleep deprived, was a challenging yet enjoyable experience. Dr. Davis’s research lab has been extremely busy with six students currently working on two projects in the areas of synthetic methodology and molecular recognition. Current lab members are Anushka Burde (BS 10), Whitney Hess (BS/MS 11), Joel Janke (BA 09), Roy Malamakal (BS 11), Lucas Marchand (BS 09), and Edon Vitaku (BS/MS 11). Although a relatively new research program, Dr. Davis’s students have already presented initial results at three research symposiums, including the Northwest ACS regional meeting in Park City.

Dr. Karl De Jesús has had a busy and exciting year. After a year spent mostly out of teaching, he said it was fun to go back to teaching the organic major’s lab and have a last go around with the advanced organic lab. The latter he co-taught with Dr. Todd Davis and had

a blast designing new experiments and sharing all the challenges with such an upbeat young colleague. This year's organic major's lab was the largest since inception and presented large logistical challenges as a result. He is grateful for John Malamakal's assistance during both semester courses, particularly with the larger Spring semester lab. His research laboratory continues to be involved in a wide variety of studies. The largest thrust this year was the synthesis of a number of thalidomide derivatives with potential usage in studying its mechanism of action. Two new members of the research group, undergraduates Suela Kumbulla and Kirsten Bullington are spearheading the synthesis of these different molecules. Aaron Wilkinson continues his studies on enantioselective deuteride additions to oxazolidinones and presented his work at the summer's ACS NORM meeting in Park City. John Patton continues his work with prolinol-derived bicyclic azoacetals as chiral auxiliaries for enantioselective nucleophilic additions to ketoaldehydes. The remnants of last year's service in the Faculty Senate carried over to this year. It seemed the year started with a bang as Dr. De Jesus was in charge of the processional for President Vailas' Investiture. Months of planning led to relief as a smooth celebration took place. Not long after completing that task, the work on two fronts began. One was the budget process. As chair of the Faculty Senate's Budget Council and latter chair of the University Budget Planning Committee (BPC), he was charged with leading both the Council and BPC through the review of each unit budget during the budget process. Council recommendations and observations were passed on to the BPC which ultimately made recommendations to the upper administration. He can only describe as awesome the experience of being in such a transparent process. For the better part of the year he also chaired the Hispanic Initiative Task Force. This group of dedicated faculty, which includes our own Dr. Rene Rodriguez, have for a long time endeavored to improve the recruiting and retention of Hispanic students. We are currently putting together the pieces of a plan that may potentially double the number of Hispanic students at ISU. While the latter two efforts will continue throughout the next academic year, he was surprised to find that he could not pass on one hat to a successor – past chair of Faculty Senate. He is honored to wear that hat one more year. No year would be complete without a share of adventure. Last summer he had the privilege of hooking up with Dr. Lyle Castle and his Idaho Falls friends in two cycling events the Tour of Marsh Valley century and LOTOJA. The latter is a 206 mile race from Logan to Jackson. The 200 miles are not so bad. Both Dr. Castle and he agree it is

the six miles and the three mountain passes that give you pause. This year Dr. D. plans to once again do the century and cap the year with Pocatello's Duathlon competition in late September. That means some running training is in order. And as is often said, "I got to run".

Lisa Goss was on a leave of absence for the Fall 2007 - Spring 2008 academic year due to the arrival of Katherine "Kate" Trula on November 2, 2007. Her son Chris is now 2 1/2 years old and a big fan of GeoTraxx trains and toy construction equipment. Dr. Goss will be teaching the B.S. majors physical chemistry sequence next year as well as the graduate course and is looking forward to getting back to work full time. During her "free" time on leave, she wrote a proposal "Preparation of Peroxy Acyl Nitrates and Measurement of Their Band Strengths" for \$14993 which was funded by the WeLEAD program at I.S.U. and will be looking for some undergraduate students to hire for this project.

Dr. Andy Holland had a year of firsts for him and his research group. Andy's first paper as a faculty member at ISU was published in the *Journal of Organic Chemistry*; interestingly this is also the first time he has published in that or any other organic chemistry journal. In May, Kelsey Seipel became the first BS/MS student to graduate from the Holland group, and depending on the phase of the moon she may or may not be planning to eventually attend graduate school after taking some time away from school for missions abroad. Kathryn Myers and incoming BS/MS student Minh Nguyen are picking up Kelsey's Research Corporation-funded project involving amidometal complexes, and Poky High student Zed Platt will return this summer to continue the microwave chemistry he started as an ACS SEED student in summer 2007. On the teaching front, Andy planned and taught ISU's first section of honors general chemistry this year, and was recognized by ISU as a Master Teacher in the spring. Andy spends most of his free time enjoying the outdoors, or marveling at the appetite for vegetables that his cat Spud has recently developed.

Dr. Robert Holman The Holman research group has a name now — Jennifer Teixeria. Jen, my singular student, is working on her BS/MS degree and published her first paper this year in the *Journal of Chemical Education*. A second paper has been submitted and a third is under construction with Kevin Housely as co-author (an ACS Project SEED student from Pocatello High School who worked in our group last summer and is currently at RPI as an undergraduate). Two of the three aforementioned projects are chemical education projects

that reflect Jen's desire to be a chemical educator upon graduation. This as well represents an emphasis shift in research direction for me — one that has been enjoyable, though likely not permanent. I am teaching a 100-level course (Chem 102 which is primarily for nursing majors) for the first time in 20+ years and it has been a great deal of fun. Serving alongside my colleagues as Chairperson has continued to be both challenging (in a good way) and rewarding. I could not imagine a better group of colleagues than those that I have in the ISU Chemistry Department. My thanks to each of the faculty for their contributions to the student life at ISU.

Dr. John Kalivas had his undergraduate NSF grant renewed for another 4 years. This will allow him to hire another group of undergraduates and pursue NSF supplemental funding to continue his collaborative research with Professor Károly Héberger and his students at the Hungarian Academy of Sciences in Budapest and Professor Héctor Goicoechea and his students at the Universidad Nacional del Litoral in Santa Fe, Argentina. These collaborative efforts provide great international experiences for undergraduates. With Professor Héberger and his graduate student, John and recent BS graduate Forrest Stout published their most recent collaborative effort in the Journal of Chromatography on using chemometric approaches to select ideal molecular descriptors in order to build a model that can efficiently predict compound retention indices. From the collaborative efforts with Professor Goicoechea, a paper is being presented at the Chemometrics in Analytical Chemistry meeting this July in Montpellier, France, and a manuscript is in preparation. This work involves developing a new method of calibration transfer, e.g., moving a calibration model developed on an IR instrument in the USA to an IR instrument in Argentina. This last year John had one book chapter and four journal papers published, one book chapter and one research manuscript were submitted, and he was involved in five presentations. Two of these presentations were invited. One was presented in the Active Learning symposium at the ACS Northwest Regional Meeting in Boise on his work redeveloping the general chemistry laboratory curriculum. The second one was at the Conferentia Chemometrica meeting in Budapest, Hungary. This work involves John's development of a new data preprocessing method that allows significantly improved concentration predictions from calibration models. The method focuses on ensuring the input data is properly centered. Turns out that not only is it good for people to be centered in their

lives, but data likes to be centered as well. Lastly, John was on sabbatical for fall 2007 and spring 2008 in Albuquerque, New Mexico, at InLight Solutions developing calibration algorithms using IR spectroscopy to solve the problem of building a non-invasive glucose device for diabetics. This project is a tough nut to crack as the company has been working on it for 12 years. With John's return to ISU, the InLight will be funding some of his calibration transfer work for the next school year. In addition to serving on the editorial board for the journals Journal of Chemometrics, Analytical Letters, and Applied Spectroscopy, John was invited to serve on the editorial boards for Talanta and the on-line journal The Open Spectroscopy Journal. During the last year he continued his editorial duties as the section editor for the Linear Regression Modeling section to be published in the four volume book Comprehensive Chemometrics: Chemical and Biochemical Data Analysis, by Elsevier. Hopefully, this will finish up by the end of 2008.

Dr. Joshua Pak spent a significant part of last year conducting research at Idaho National Laboratory (working with Dr. Fox) as part of his sabbatical activities. He retained his research group at ISU during this time, making him doubly busy. Nonetheless, the time spent at INL was fruitful resulting in several presentations, future papers, and a patent application. As usual, Pak Lab was packed with activities this summer. Dr. Pak, two BS/MS students, four undergraduates and two high school students have cutting-edge research in alternative energy related materials preparation and studies for twelve weeks. The Pak Lab welcomed new faces during the summer, especially eight new and continuing ACS Project SEED students. The ISU Chemistry Department and Dr. Pak are excited to continue the ACS Project SEED providing meaningful chemical research experiences to local high school students during the summer. The ACS Project SEED program could not have happened without generous financial support from ISU College of Arts and Sciences, Department of Chemistry, ACS Idaho Section, and American Chemical Society. Anyone interested in participating or assisting future Project SEED should contact Dr. Joshua Pak for more information (208-282-2612, pakjosh@isu.edu). The Pak Lab has several new members who are Jeffrey Hess (BS09), Ben Donahoo (BS09), Richard Westover (BS/MS12), Hans Le (BS 10), and Gary Long (MS11). As we welcome new group members, we also say good-byes to four graduating members. They are Dominic Denty (BS/MS) and Stephanie Pritchard (BS). Some of the past graduates from Pak Lab are doing very well in their endeavors. Jaime (Bates) Mayo had a short stint as a postdoc at BYU before

moving to part-time teaching while Tyler finishes his medical training at University of Iowa. Jaime and her husband also welcomed a lovely girl, Ashtyn Olivia on August 7th, 2007. Please send your double congratulations to Jaime (jaimelmayo@gmail.com). If you have any news on past Pak Lab members, please send them to Dr. Pak. He loves to hear from his OLD students.

Dr. René Rodriguez The Rodriguez research lab continues to be busy with research projects and researchers. It is currently comprised of 7 members. Lisa Lau, recently upgraded her position from technician to Research Associate. Patrick Whitham and Jeff Mottishaw are BS/MS students that are working in the lab, and Cyril Bajacharya and Mike Fernandez are also working hard as well. Cyril just graduated with his BS in Chemistry, and Mike is a first year student. Dr. BarJean Phillips is also currently helping out on one of the projects as well. Gibril Omar is the newest addition. He is a high school student, funded through the American Chemical Society SEED program. We are currently working on two overall projects. One is an investigation into the use of supercritical CO₂ for the preparation of nanoparticles of CuInS₂. These could potentially be used in solar cells or detectors. The other project is to develop a plasma enhanced chemical vapor deposition method to deposit Ge_xS_y or Ge_xSe_y thin films. These have potential applications for a type of computer memory called phase memory. The solar cell research is currently being funded by the Dept. of Energy, EPSCoR Division and INL/CAES LDRD funding, and the phase memory research through a joint project with Prof. Kris Campbell at Boise State Univ. in the Dept of Materials Science. Dr. Campbell received a NASA EPSCoR grant to perform this work, and she is subcontracting the work with us. Some results of this work were recently reported at the Northwest Regional Meeting of the American Chemical Society in Park City Utah. Lisa Lau, Patrick Whitham and Jeff Mottishaw presented posters. Patrick tied for the 1st Place award in the poster exhibit.

Dr. Jeffrey Rosentreter's just like the rest of the chemistry department Dr. Rosentreter's lab realized unprecedented success this past year. Some of the highlights included both technical accomplishments and public recognition. Professor Rosentreter began the school year as the guest of ISU President Valis, on the PBS radio program ISU In Motion. Accompanied by graduate student Moises Moreno, the program highlighted the many steps taken by the Rosentreter

group to move successfully from concept to completion of a U.S. patented cyanide detector. Of special interest were the efforts of the many undergraduate and graduate students, like Moises, that all worked towards this singular goal while in tandem completed their research education. Later in the year, Professor Rosentreter and the ISU chemistry department were recognized by the Idaho National Laboratory at their annual inventors banquet, where Rosentreter was presented with a plaque and honorarium check for his invention. A professionally produced film describing his and other INL inventions was shown. The film included the fact that the patent issued to Rosentreter et al. describes a detector for the "Continuous real-time measurement of aqueous cyanide." As reported by the Worldwide Health Monitor, the new method for detecting cyanide in drinking water and other sources offers numerous advantages over cumbersome existing technology. The new sensor produces results of toxins in water instantaneously and targets the specific form of cyanide toxic to humans and other organisms – making it especially attractive for safety and security applications. In the future, the Rosentreter laboratory will continue to investigate research areas related to three fundamental projects. These include residue analysis of fatty acids on archeological artifacts, chemical geo-thermometry for the Yellowstone caldera, and continued development for the automation of the recently patented cyanide detector. On going research will be carried out by three BS/MS students currently working in the Rosentreter Laboratory. Research grants totaling \$567,000 were obtained during the past academic year. The majority of these funds were from a collaborative NSF grant for instrumentation and were submitted jointly with the anthropology and geo-sciences departments. These funds will be used to acquire a new isotope resolution mass spectrometer, and a laser ablation inductively coupled argon plasma mass spectrometer, both of which are especially useful for elemental analysis of environmental samples. This diverse spectrum of research accomplishments was aptly recognized by his peers in the ISU Faculty Research Committee. After nomination by the department chair, the committee selected Dr. Rosentreter as one of ISU's 2008 Outstanding Researchers. Again his accomplishments were honored at the University research dinner, and at the President's Graduation Luncheon. Dr Rosentreter said it has been nice to be so widely recognized and so well fed this year.

STUDENT ACCOMPLISHMENTS 2007/2008

CHEMISTRY ALUMNI ENDOWMENT AWARD SCHOLARSHIP to:

Jessica Harker
Anil Mandal
Minh Nguyen
Edon Vitaku
Udipta Wagley

PATTIE FAMILY SCHOLARSHIP to:

Jessica Harker
John Malamakal

KASISKA SCHOLARSHIP to:

Sarah Nathan
John Patton
Kara Rossback
Aaron Wilkinson

AWARDS:

ACS Outstanding Senior

Alicia Case

Analytical Chemistry Award

Moises Moreno

CRC Freshman Chemistry Award

Sarah Nathan
Jordan Reynolds

Organic Chemistry Award

Anushka Burde

2007/2008 BS GRADUATES:

Cyril Bajarchary Jeff Mottishaw
Stephanie Nielson

2007/2008 BA GRADUATES:

Ryan Case **Alicia Case**
Ryan Dick **Rick Holsten**
Yonas Tadesse

THIS YEARS BS/MS GRADUATES WERE:

Dominic Denty Bikul Koirala
Rita Jones Eric Malm
Moises Moreno Kelsey Seipel

Congratulations to our new BS/MS students who started the program this fall.

The awardees are:

Whitney Hess
Minh Nguyen
Edon Vitaku
Udipta Wagley
Richard Westover
Aaron Wilkinson

CHEM CLUB 2007-2008

My name is John Malamakal and I'm currently the Chem Club President. Basically our club puts on events where people can learn more about chemistry. One of our most well known activities is the Magic Show that we put on every year during National Chemistry Week which usually falls around the time of Thanksgiving. We plan different chemistry presentations that will hopefully catch the interest of young students. Usually we end up performing two main shows, one on the Pocatello campus and one on the Idaho Falls campus. Along with doing main presentations, we also go to elementary schools and perform short demos. This last year was probably our most active year for the Chem Club. We actually had a couple of social events as well. Most of them dealt with Student vs. Faculty competitions. We played bowling and basketball this year. Many of the members in the club enjoyed this a lot. Usually after big events we like to celebrate by going out to eat somewhere. We also participated in Earth Week. The chem club constructed solar ovens so that food could be cooked in them by only using the sun light. If the weather had been a bit warmer, it would have had a better turn out.

**THE DEPARTMENT OF CHEMISTRY
WOULD LIKE TO THANK ALL OF YOU
WHO GENEROUSLY DONATE FUNDS
FOR SCHOLARSHIP AND SPECIAL
PROJECTS FOR THE STUDENTS.**

ALUMNI NEWS

Sam Lohse '05

Oregon

Sam has been in the PhD program at the University of Oregon doing research in the laboratory of Jim Hutchinson. Sam's research focuses on developing more efficient syntheses for functionalized gold nanoparticles, and working with biochemists in the department is developing a synthesis for gold nanorods using RNA molecules as a growth template. In every other available moment, he is out on the soccer field, either playing or coaching goalkeepers for Willamette FC. Sam credits the BS/MS program for giving him a nice head start on his first year of classes at Oregon. Particularly helpful were Dr. Wiegand's advanced organic class, the Rosentreter advanced analytical class (which got him addicted to various microscopy techniques), and Dr. Strommen's advanced inorganic class (got him thinking while he read articles.) This past summer, Sam returned to ISU, under the auspices of his NSF-IGERT traineeship to prepare and deliver organic lab lectures by podcast.

Penny Pink

Pocatello, ID

The brewery celebrated it's 12 year anniversary. Thought I'd share share with you how this all started....Back in 1996, Dr. Bob told me to go make some money. About that same week, he told me I needed to get all my homebrewing paraphernalia out of the house. Hum....Penny puts 2 and 3 together and gets 6....not uncommon, I don't add well. I got to thinking, what could I do in Poky with a degree in Biology and Chemistry and a masters in Hazardous Waste Management that has flexible hours to ride herd on the boys and make some money. Hey, I could start a microbrewery! Well as luck would have it after a couple of phone calls I discovered that a guy that had tried to start a small microbrewery inside Dudley's had just left town and the space had opened up for lease again. After a trip to a scrap metal yard in Portland in my 1982 diesel Suburban over spring break in 1996, I returned with my two young sons stuffed in the corners and a truck-load full of stainless steel tanks from a defunct soda pop factory, including one tank strapped to the luggage rack. We looked like the Beverly Hillbillies coming down the interstate. I unloaded the tanks on my driveway. Drank a few beers. Scratched my head and figured out what orifices to take out, new ones to put in, and reconfigured

the tanks into a brewing system. The rest is history. Come and see us at Portneuf Valley Brewing.

Tim Weers '99

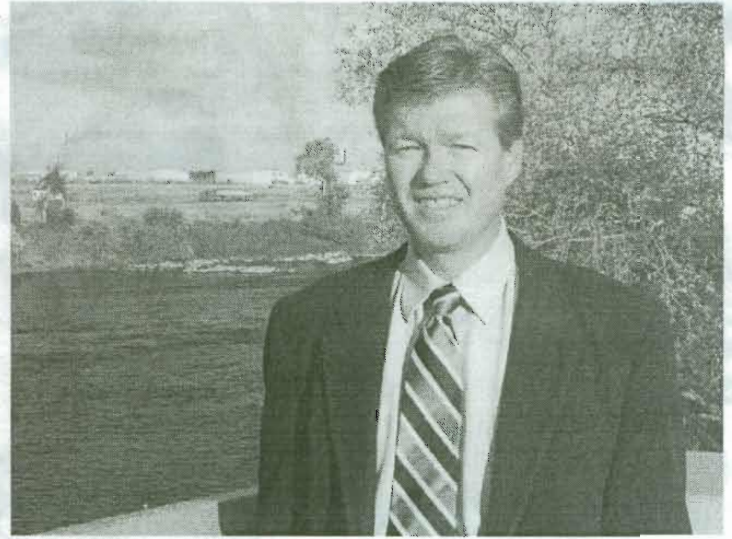
Connecticut

I was recently in town and I was unable to come by and visit, but that got me thinking that I should at least write and say hello. I wanted to thank Dr. Rodriguez for all the letters of recommendation he has written for me. I never did get a teaching job, but that is ok. I did do a few interviews and a practice lecture, but alas no job offers. However, I have gotten a new job in the last year. I am now working for Pratt & Whitney (jet engine maker) doing coatings. Thermal barriers coatings and more. It has been a very good job for me so far. I have much better management here and I have been getting better training in my use of statistical methods for handling designs of experiments and for handling variation in design (monte carlo simulations).

I have two sons now. Ben is almost 4 and Josh is 2 and a half. Still living in Connecticut, though for a little while last year I thought I was going to be moving to San Jose to take a job with a startup company out there. At any rate I hope things are going well. I was looking at the Website and it looks like the department is growing.

I'd like you pass along to the other professors that I feel like I have been exceedingly well prepared for many different tasks by the training I got at ISU. In general, my technical training has always been adequate to every technology I have gotten into. Whether it has been medical coatings, thermal barrier coatings, electronic coatings, semiconductor materials, adhesives, or optical coatings. The education I got there has been applicable and prepared me to understand the basic mechanisms involved in each situation. I wanted to thank you for that. I'm quite certain I got as good of an education as any of my peers and I know I got the best value. The most face time with professors and the greatest variety of technical exposure.

CHECK OUT OUR WEB SITE
www.isu.edu/departments/chem



Lyle, Thank you for many years of service and dedication to the Department! You will be missed.

