



George Bell Frankforter, the Department of Chemistry's first bachelors and masters student — Historical Perspectives (PART 5)

BY MARK A. GRIEP



George Bell Frankforter

George Bell Frankforter was the first student to earn a B.A. (1886) and the first to earn an M.A. (1888) from the Department of Chemistry at the University of Nebraska. His handwritten M.A. thesis titled "The economic value of limestones of southeastern Nebraska" is still available to read in the University of Nebraska Archives. It was an important document because Nebraska's first and second capitol buildings had been constructed using inferior limestone. The first Capitol

quickly fell into disrepair and the second had a cracked foundation.

Chemistry Chair Hudson Nicholson was desperately in need of more instructors in the 1880s. So, Frankforter was hired to teach introductory chemistry during his last year as an undergraduate and during his first year as a graduate student. When Dr. Rachel Lloyd was hired as the department's second faculty member in 1887, Frankforter taught chemistry at Lincoln High School for a year. His Ph.D. experience in Germany will be explained in more detail below, but please note that after he returned to Nebraska, Chair Nicholson arranged for him to become the third faculty member of the department. Before the paperwork was signed, however, Frankforter agreed to become the chair at the University of Minnesota.

G. B. Frankforter was born April 22, 1860 in Potter, Ohio, to Andrew Frankforter and Elizabeth Clunk. When he was 12 years old, his family moved to Lincoln as did other branches of the Frankforter family. In fact, his nephew, Clarence Jackson Frankforter, who was 25 years younger than he, was born in 1885 in Lincoln and also earned his B.A. and M.A. in chemistry at the University of Nebraska. In an interesting twist, Frankforter's nephew C.J. did his chemistry graduate research at the University of Minnesota. Apparently, he completed the work but never earned his Ph.D. Afterward, C.J. became a professor of industrial

chemistry at the University of Nebraska in 1908 and retired in 1955, a record-establishing 47 years for our department. Including his years as a graduate student, C.J. was active in the UNL Department of Chemistry for 52 years!

In 1888, Frankforter traveled to Germany where he joined the laboratory of August Wilhelm von Hofmann at the University of Berlin. Hofmann had studied under Justus von Liebig in the 1840s, where he isolated aniline from coal tar. In 1845, Queen Victoria recruited the young and promising Hofmann to start the Royal College of Chemistry in London. He accepted and held this position for 20 years. Among his students was William Henry Perkin who attempted to synthesize quinine from coal tar compounds. Instead of quinine, Perkin serendipitously synthesized the first synthetic aniline dye mauveine. This began a fruitful period for Hofmann of discovering many new dyes. In 1860, Hofmann became the

Historical Perspectives continued on page 3

2011 Chemistry Reunion...

Celebrating 125 Years of Chemistry Education
at the University of Nebraska-Lincoln

Friday, April 15-16, 2011

For all the details,
please see our ad on the
inside back cover.

MESSAGE FROM THE CHAIR



James M. Takacs
Chair of the Department of Chemistry

Dear Alumni and Friends,

Preparations are well underway for the 2011 Chemistry Reunion. I urge you to mark your calendar for **April 15th & 16th**. I, along with current and former faculty, hope to see many friends and former students back in Lincoln. The event recognizes the 125th anniversary of the first chemistry degree granted by the department; the theme is *Excellence in Education and Research*.

The Reunion will be held in conjunction with the Alumni Association's 2011 Big Red Weekend, and in addition to events planned by the department (e.g., Avery and Hamilton Hall building tours, Chemistry Alumni and Friends banquet, Alumni tailgate before the Spring Red-White Game, etc.), the Alumni Association will schedule campus-wide events, including tickets to the Spring game. It promises to be a fun

weekend and a chance to catch up on what's happening with friends and the department.

As we prepare for April, we would very much like to hear from you about the more-or-less expected, or perhaps unexpected, ways your undergraduate or graduate chemistry degree impacted your career. Please contact Kate Honeyman-Engel at ChemReunion2011@unl.edu with your story and to indicate you are planning to attend. A list of attendees and up-to-date information about the reunion are on our Web site.

As we look to the future, we continue our commitment to excellence in undergraduate and graduate education. I thank Dr. Robert S. Marianelli for his idea and his help in establishing the Chemistry Faculty Remembrance Fund. Many of you contributed to this now endowed fund to recognize the commitment and accomplishments of former Chemistry faculty. By remembering the efforts of past faculty, we are able to recognize the accomplishments of the next generation of chemists at UNL. Thank you for your support. We hope endowments for the Remembrance Fund and the research-focused Chemistry Excellence Fund continue to grow through your support.

The 2010-2011 school year is in full swing and we are excited about the progress that is being made by faculty and students. We are seeing increased undergraduate enrollments and an increasing number of chemistry majors. In August, we welcomed a class of 28 graduate students. Two outstanding new faculty members, Eric Dodds and Jiantao Guo, joined in August and are quickly adjusting to life in Lincoln and building research groups in Hamilton Hall. Eric's research is in the area of biomolecular mass spectrometry. Jiantao is pursuing research in bioorganic chemistry and chemical biology. In spite of a challenging economy, we have searches ongoing to fill two new positions related to energy science and nanohybrid materials chemistry, respectively.

From all of us here, we hope you have a wonderful holiday season and hope to see you at the 2011 Chemistry Reunion. Make your plans today!

Jim Takacs
Bessey Professor and Chair of Chemistry

In This Issue:

- Cover:** Historical Perspectives
Page 2: Letter from the Chair
Page 3: Historical Perspectives, Continued
Page 4: Outreach
Page 5: Faculty and Staff
Page 8: Awards and Achievements
Page 14: Reconnect
Page 15: Chemistry Reunion
Page 16: Chemistry Funds

Support the Chemistry Department

If you would like more information about specific needs of the department, such as graduate and undergraduate fellowships/scholarships, award lectureships, or research instrumentation, please contact:

Amber Antholz (402) 458-1182 direct
Director of Development (800) 432-3216 toll free
aantholz@nufoundation.org

Story ideas, activities and achievements can be submitted by sending an email to khoneyman2@unl.edu. Receipt does not guarantee publication and the editor reserves the right to edit for space, clarity, grammar and style.

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Updates

Alumni members, now you can update your contact information by visiting <http://chem.unl.edu/dept/alumnreg.shtml>.

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HISTORICAL PERSPECTIVES

Historical Perspectives continued from page 1

first chemist to use molecular models during his lectures, a feature that his many graduate students would imitate when they began their careers. We still use Hofmann's color scheme of carbon is black, hydrogen is white, nitrogen is blue, oxygen is red, chlorine is green, and sulfur is yellow. Hofmann left his London position in 1865 to work at the University of Berlin, where he stayed until his death in 1892. In 1881, he determined the first known structure of an alkaloid, coniine. Coniine is the active poison in hemlock, which acts by blocking cholinergic nerve transmission. Frankforter was his last graduate student. During Frankforter's four years of thesis work, he isolated the plant alkaloid narceine, established its elemental composition, and prepared derivatives. After earning his Ph.D. in 1893, Frankforter returned to Nebraska for a year as an instructor of chemistry but was then called to the University of Minnesota.

In an early history at the University of Minnesota, George Bell Frankforter was described as "a man of great vision, imagination, ambition, and energy, bringing with him much of the old world charm and culture." He was chair and professor of Minnesota's Department of Chemistry from 1894 to 1904 and then dean and director of its School of Chemistry from 1904 to 1917. As the School grew, Frankforter hired the following faculty: Edward E. Nicholson (M.A. 1896 Nebraska; son of Nebraska's Hudson Nicholson), E. P. Harding (Ph.D. 1900 Heidelberg), Frank H. MacDougall (Ph.D. 1907 Leipzig), William H. Hunter (Ph.D. 1910 Harvard), and W. Kritchevsky (Ph.D. Tech Hochschule Berlin). Frankforter then

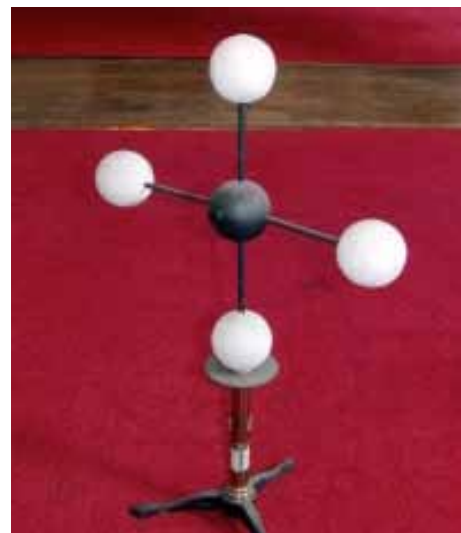
planned and presided over the construction of Smith Hall, one the earliest buildings on the University of Minnesota campus. The department moved into the building when it was three-quarters complete in 1913. The last quarter was completed during the next year. During that same period, he founded the chemistry graduate program. Most of his students prepared derivatives of the alkaloids narceine, narcotine, and veratrine, and half of his Ph.D. students became faculty members at Minnesota including: Francis C. Frary (Ph.D. 1912), Lillian Cohen (Ph.D. 1913, Minnesota's first woman chemistry professor), Sterling N. Temple (1915), Paul H. Brinton (1916), and Woldemar M. Sternberg (1918).

Another early Minnesota departmental history states, "There is hardly one of Dr. Frankforter's old students who does not remember the courtly bow that began and ended his lectures." As chair of chemistry at Minnesota, Frankforter lectured to students in General Chemistry and Organic Chemistry. He was remembered as being an excellent lecturer. He followed the custom of his doctoral mentor by having a display of apparatus and chemicals on the lecture table. The students were encouraged to examine the display on their way out of the class but an early wag reports that few ever did. His junior colleagues were relegated to teaching the quiz and laboratory sections and apparently resented it.

During the last three years of his term as dean (1914-1917), he served as a Major in the Chemical Warfare Division of the U.S. Army. During this time, there was a mutiny of sorts during which the teaching duties were

distributed more democratically within the School of Chemistry. By the end of the War, the faculty had convinced the college president to choose someone else to become the Director of the School. This effrontery caused Frankforter to take his leave of absence at Stanford even though he returned to Minnesota and finished his career there in 1925.

Frankforter married Mary Spaulding Carter (b. March 1879 in Minneapolis) in 1898 and they had four children: Alice (born 1899), Elizabeth (born 1902), Eleanor (born 1908) and George Bell Jr. (born 1921). George Bell Frankforter died in August of 1947 at age 87.



Hofmann's methane molecule, courtesy Wikipedia

OUTREACH

CHEMISTRY DAY 2010

Chemistry Day 2010 took place on Saturday, October 9, and was a huge success. Over 75 participants from Nebraska, Missouri, and Texas visited Hamilton Hall and took part in research lab tours, hands-on science demonstrations, a Chemistry Quizbowl, a scavenger hunt, and a chromatography lab in which students were able to design their own T-shirts. Students also learned about scholarship opportunities, the benefits of a chemistry education and degree, and enjoyed a free lunch.



Chemistry Day 2010 Scholarship Winners



Professor James Takacs and Dr. John Donaldson



A student designs her own T-shirt during the chromatography lab.

Five \$500 scholarships were awarded during Chemistry Day. The scholarship winners are:

- Chance Christensen, Grand Island Senior High
- My Kim, Lincoln High
- Tyler Reeson, Roncalli Catholic High
- Eric Ryan, Northstar High School
- Olivia Choate, James Madison High, San Antonio, TX



Jason Kautz, associate professor, shows how an acid and base interact during Chemistry Day 2010.

The University of Nebraska–Lincoln Department of Chemistry gratefully acknowledges the generous support of Chemistry Day 2010 by the Carl A. Donaldson Fund in Chemistry. Dr. John Donaldson, son of Carl A. Donaldson, was able to attend the day's festivities. In a brief presentation, he told students, parents, and teachers about his father's involvement in the expansion of the university and his connection to the Department of Chemistry. Dr. Donaldson also encouraged students to consider a degree in chemistry because so many careers involve chemistry. Again, a huge thank you goes out to the Donaldson family for their support of Chemistry Day 2010.

For more photos of Chemistry Day 2010 and details about Chemistry Day 2011, please visit www.chem.unl.edu/chemday.



Professor Rick Hartung provides a demonstration at a Parent/Teacher Round Table discussion.



New to Chemistry Day 2010 was a Chemistry Quizbowl encouraging students to test their Chemistry knowledge.

FACULTY AND STAFF

NEW FACES

BY JEFF BUNKER



Dr. Eric D. Dodds

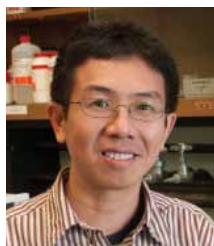
Eric D. Dodds

Dr. Eric D. Dodds received his undergraduate education at the University of Alaska-Anchorage, where he received degrees in chemistry and biology. He went on to complete his Ph.D. at the University of California-Davis Department of Chemistry with Dr. Carlito B. Lebrilla. After completing his Ph.D., he joined the laboratory of Dr. Vicki H. Wysocki at the University of Arizona Department of

Chemistry and Biochemistry, where he remained until the Fall of 2010, when he began his appointment at the UNL Department of Chemistry.

Dr. Dodds' expertise and research interests lie in the areas of analytical chemistry, biological chemistry, and the increasingly central role of mass spectrometry at the intersection of these disciplines. His lab strives to build knowledge about biological systems through application of analytical technologies. Specifically, they seek to develop strategies to determine the sites of carbohydrate attachment on many proteins simultaneously, to understand the architecture of multi-protein assemblies, and to implement new methods for rapid genotyping.

On behalf of the department, we extend a warm welcome to Dr. Dodds.



Dr. Jiantao Guo

Jiantao Guo

After obtaining his B.S. and M.S. degrees from Nankai University in China, Dr. Jiantao Guo entered the Michigan State University Department of Chemistry Ph.D. program to study bioorganic chemistry under the direction of Professor John W. Frost. Upon graduation, he became a research assistant professor and began to collaborate with Professor Frost on biocatalysis projects. His interest in protein

chemistry and molecular evolution led him to The Scripps Research Institute where he worked on the genetic incorporation of unnatural amino acids into proteins in bacteria, yeast, and mammalian cells.

Dr. Guo's research reflects broad interests at the interface of chemistry and biology, focusing on the study, modulation, engineering, and synthesis of a range of biologically important molecules including proteins, natural products, and artificial molecules. He is particularly interested in the elucidation of molecular mechanisms that are used by living organisms to achieve essential chemical transformations and the adaptation of combinatorial strategies that emerge in nature when nature is forced to solve problems. A main theme running through his research program, which ranges across the fields of bioorganic chemistry, protein chemistry, and synthetic biology, will be the integration of chemical and biological strategies. The goal is to use such multidisciplinary and innovative

approaches to tackle fundamental problems associated with human diseases and sustainable chemical production and the translation of the fundamental scientific findings into biomedical and biotechnological applications. Specific areas that are being explored include: (1) protein posttranslational modification; (2) natural product biosynthesis; (3) small-molecule modulators of protein-protein interactions; and (4) chemo-biocatalytic syntheses.

We are very pleased to welcome Dr. Guo as a member of our faculty.

NEW GRAD STUDENTS

Welcome Graduate Class of 2010!

Every August, the UNL Department of Chemistry organizes a New Graduate Student Orientation for all incoming graduate students. This eight-day orientation informs new students about the UNL Department of Chemistry graduate program procedures and expectations as well as offers new students necessary safety and teaching training, helps with class registration, and answers any questions about living in Lincoln, NE.

August 2010 brought 28 new graduate students to the UNL Department of Chemistry. These students arrived from 13 different states and four different countries. We are excited to see these new faces around the department and welcome the Graduate Class of 2010!



New and current graduate students, faculty, and staff enjoy lunch during the department picnic. The department picnic is held during New Graduate Student Orientation.



A few graduate students braved the heat and enjoyed lunch outside during the department picnic.

FACULTY AND STAFF

IN REMEMBRANCE

Nolan Sommer



Nolan Sommer

Nolan Sommer, affectionately known to his family as “Nonie,” was a devoted husband to Eula and loving father, grandfather and great-grandfather. Nolan’s outgoing, affectionate and optimistic personality endeared him to friends far and near. His early morning adage, “rise and shine,” coupled with his enthusiasm, energy and gracious service to others inspired all ages. Nonie appreciated every aspect of life and the essence of the American spirit. He loved the congeniality and compassion of

the Lanier Village community and its spectacular and serene landscape.

Born on June 27, 1919 in Merna, Nebraska, Nolan grew up on a small farm where he learned the value of thrift and perseverance as he worked his way through the University of Nebraska, graduating with a bachelor of science and later a masters of science. He went on to earn his doctorate of chemistry at Indiana University in 1944 and then joined American Cyanamid as a research scientist in Stamford, Connecticut, working on the Manhattan Project (the development of the atomic bomb). Nolan later moved through marketing and management responsibilities to become president of Jefferson Chemical Company in Houston, Texas, in 1964. In 1966, he became president of The Formica Corporation in Cincinnati, Ohio. Two years later, he returned to Cyanamid headquarters in Wayne, New Jersey, where he served the next ten years as executive vice-president and director with responsibility for the areas of international operations, governmental relations and academic affairs. He was recognized with the 1968 Honor Award of the Commercial Chemical Development Association and the 1971 Chairmanship of the American Section of the Society of Chemical Industry.

Following his retirement from American Cyanamid after 34 years in 1978, Dr. Sommer devoted his time to health care activities, serving for five years as Chairman of the Board of Trustees of Valley Hospital in Ridgewood, New Jersey, as well as Vice Chairman of the New Jersey Health Care Administration Board. He was honored with the West Bergen Mental Health Distinguished Service Award in 1989 and the New Jersey Hospital Association Distinguished Service Award in 1992.

Robert Hutchison Harris



Dr. Harris

Professor Robert Hutchison Harris, age 89, of Bend, Oregon, formerly of Lincoln, died peacefully at home on Wednesday, December 2, 2009.

Robert was raised in Dayton, Ohio and received his undergraduate degree from the California Institute of Technology. He received his doctorate from Purdue University and became a professor of chemistry at the University of Nebraska-Lincoln, where he worked for 39 years.

Robert and his wife, Betty Ann Morin, had three children. In 2008, Robert moved to Bend, Oregon, to be near his daughter. No services were held per Robert’s request. Memorials in Robert’s name have been requested to be directed to the Alzheimer’s Association or a charity of one’s choice.

Chemistry Faculty Remembrance Fund

The UNL Chemistry Faculty Remembrance Fund was created to establish an endowed fund for those wanting to honor professors who impacted their lives.

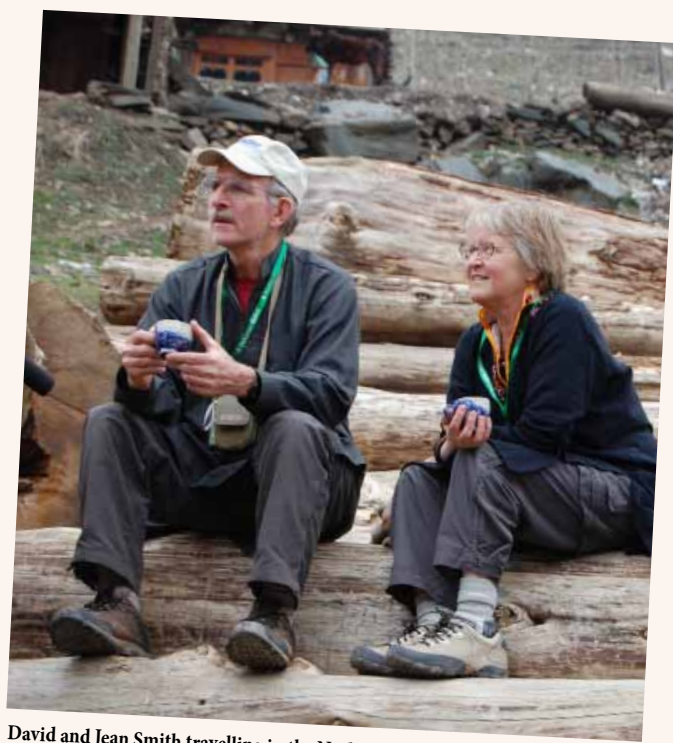
Each year, an award will be made in honor of a former faculty member to a deserving undergraduate or graduate student with the spendable income generated by this fund. Please consider making a donation today by visiting <https://nufoundation.org/SSLPage.aspx?pid=2078&chid=25>.

CATCHING UP WITH EMERITUS PROFESSORS DAVID AND JEAN SMITH

BY JEFF BUNKER

UNL Emeritus Professors David and Jean Smith have been busy building better relations between Pakistanis and Americans. Their community, Pagosa Springs, Colorado, has adopted the Gurais Valley in northern Pakistan as its Sister Community. Both communities are small mountain communities. Children from each community have been exchanging letters and drawings with one another, and several humanitarian aid projects intended at improving quality of life in the Gurais Valley have been initiated, including training residents in first aid, establishing a computer and sewing center, and providing midwifery training to several women. These efforts have been led by Drs. Dave and Jean Smith, who have met with the 16 leaders of the Gurais Valley directly, and have been working to coordinate some of the humanitarian aid projects.

David first visited the HEJ Research Institute of Chemistry at the University of Karachi in 1982 to set up a mass spectrometry laboratory, and there have been more than 15 visits since. During the past few years, he has returned to Pakistan each year to teach a 2-credit course in mass spectrometry. Part of each visit is spent with the Pakistani volunteer organization Pakistan Relief (www.pakistan-relief.org), which plans activities that will improve understanding between Pakistanis and Americans.



David and Jean Smith travelling in the Neelum Valley of northeastern Pakistan

“The ultimate goal is for both Pakistanis and Americans to understand that our similarities outweigh by far our differences, and that there is plenty of room for both cultures on this earth.”

David and Jean originally came to UNL from Purdue to direct the Nebraska Center for Mass Spectrometry. Jean’s research focused on determining the effects of aging and cataract on the proteins of the eye lens, while Dave worked to develop the amide hydrogen exchange method for determining the structure and dynamics of proteins. When they’re not busy with their humanitarian efforts, Jean enjoys playing piano, attending book club, hiking, and watercolor painting, while Dave has interests in hiking, skiing, and solar energy.

AWARDS AND ACHIEVEMENTS

Dr. Carr Celebrates 50 Years as a Member of the American Chemical Society

BY JEFF BUNKER



Professor J.D. Carr

This year, Professor J.D. Carr celebrated a milestone 50-year anniversary of membership with the American Chemical Society (ACS). Throughout the tenure of his membership, Dr. Carr has served two terms as president of the Nebraska chapter of the ACS, and has also served terms as secretary, treasurer, and vice president.

“When I joined the UNL faculty, it was expected that new faculty would run for, be elected to, and serve as officers in the Nebraska section of ACS. It was several years after I arrived before an officer was chosen who was not a UNL chemistry department faculty member!”

Dr. Carr fondly remembers the many enjoyable talks given by ACS lecturers at UNL:

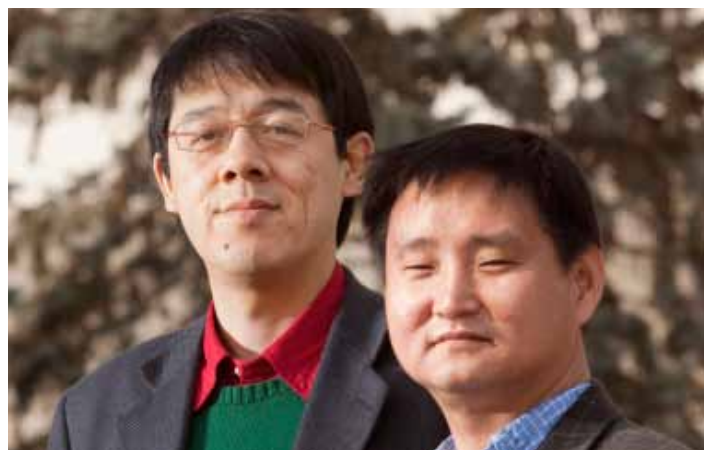
“ACS traveling speakers were a major source of visiting speakers, and their talks were very well attended. Each speaker was a guest at a dinner prior to the talk which was always given in a chemistry department lecture hall. Additionally, there was frequently a dessert after the talk at a faculty member’s home.”

Dr. Carr came to UNL in 1966, after receiving his Ph.D. in analytical chemistry from Purdue in 1965 with Dale Margerum, and doing postdoctoral work at North Carolina with Charles Reilley. His research has focused on chemical behavior in aqueous solutions, including studies on the formation, dissociation, and exchange reactions of metal complexes with multidentate ligands, oxidation reactions involving ferrate(VI) ions, and the concentration, movement and degradation of atrazine in the Platte River and its adjacent aquifer and tributaries.

We congratulate Dr. Carr on this membership milestone!

UNL Chemist Xiao Cheng Zeng Makes New Ice Discoveries, Receives ORCA Award

BY JEFF BUNKER



Dr. Xiao Cheng Zeng (L) and research technologist, Jaeil Bai (R)
(Photo courtesy of University Communications)

This spring, UNL chemist Xiao Cheng Zeng received the university’s Outstanding Research and Creative Activity (ORCA) award, the university’s highest award for research and creative activity. As an ORCA award recipient, Zeng joins a distinguished group of former UNL chemists, including Norman Cromwell, Naba Gupta, Reuben Rieke, and Pill-Soon Song.

Zeng originally came to UNL in 1993 from Los Angeles, California. Since then, he has established his research group as leaders in the field of ice research. UNL has recently been placing a strong emphasis on nanoscience research, and Zeng has taken full advantage, leading to discoveries in silicon nanotubes and nanoring structures.

Recently, Zeng’s group published a paper in the *Proceedings of the National Academy of Sciences* detailing their discovery of a three-dimensional ice clathrate, a molecular cage in which molecules of one substance are completely enclosed in the crystal structure of another. These clathrates could provide a key to tapping into the vast reserves of methane hydrates trapped beneath the ocean floor. Methane clathrates could provide an estimated 20,000 terawatt years of energy, in comparison to the estimated 1,000 terawatt years remaining in oil and gas.

Dr. Zeng’s receipt of the ORCA award is certainly well deserved. We congratulate him on his successes.

UNL Assistant Professor Rebecca Lai Receives NSF Career Award

BY JEFF BUNKER



Professor Rebecca Lai (Photo courtesy of University Communications)

We congratulate Professor Rebecca Lai on her recent receipt of the NSF Career Award, a highly prestigious award given to pre-tenure faculty to help them develop as teacher-scholars and researchers. Professor Lai will receive \$455,000 between July 2010 and June 2015 to study electrochemical biosensors, hire graduate students, develop two new courses, and develop summer workshops for high school teachers.

“Professor Lai will develop a potentially generalizable peptide-based electrochemical biosensing platform for detection of clinically relevant proteins. Professor Lai’s work will address the question of how ligand-induced folding in peptides can be utilized in the design of folding-based electrochemical biosensors. A proof-of-concept study will focus on the detection of anti-HIV antibodies using peptide epitopes from HIV-related antigens. The sensor constructs to be investigated include both stem-loop and linear designs. In both sensor constructs, the distal end of the peptide is attached to an electrochemically active reporter, whereas the proximal end is selectively immobilized to an electrode surface. The analyte-induced change in the location of electrochemically active reporter will then determine the current observed in the system.”

The proposed study has the potential to impact the field of biosensor development and facilitate the use of peptides as recognition components in a wide range of chemical and biological applications. Integrating concepts of electrochemistry and molecular biology, the project will provide training opportunities to undergraduate and graduate students. To support this training, an undergraduate course in general electrochemistry and a graduate course in advanced biosensing techniques will be developed. Professor Lai will also host an annual summer workshop on biosensor technology for Nebraska high school teachers, with the goal of preparing them with the knowledge of easy-to-demonstrate experiments for high school classes to spur students’ interests in chemistry and biosensor technology.”

– NSF

Professor Lai came to UNL in 2007 after receiving her Ph.D. from the University of Texas at Austin in 2003 and performing postdoctoral work at the University of California-Santa Barbara.

Please join us in extending congratulations to Professor Lai for her receipt of this prestigious award.

AWARDS AND ACHIEVEMENTS

SMART SCHOLARSHIP

UNL Graduate Student Paul Goodman Receives Department of Defense's SMART Scholarship

BY JEFF BUNKER



Paul Goodman (Photo courtesy of University Communications)

Paul Goodman, a graduate student in Dr. Redepenning's lab, was recently awarded the Department of Defense Scholarship for Science, Mathematics, and Research for Transformation (SMART). The award provides for full coverage of tuition and education-related fees, a yearly cash award, paid summer internships, health insurance reimbursement, a book allowance, mentoring, and employment placement after graduation. Paul is guaranteed a job in a lab at the Department of Defense after graduation, and will be attending summer internships oriented towards preparation to work for the department.

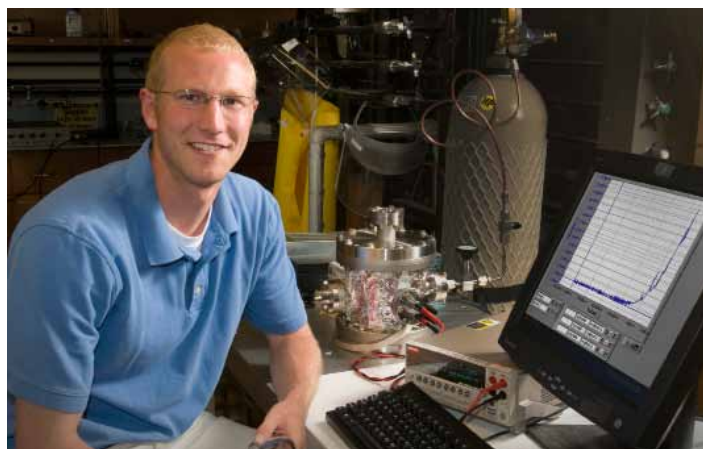
Paul was selected from a pool of over 3,000 applicants, and is one of only 300 nationwide to receive the award. Paul came to UNL from Truman State University in Kirksville, Missouri, where he received a B.S. in chemistry. Paul is currently working on two projects in Dr. Redepenning's lab, one involving the study of electron transport processes in nanoscale conducting polymer devices for use as chemical sensors for explosives, and the other dealing with development of supercapacitors, storage devices that can serve the same function as rechargeable batteries but are able to be charged and discharged a large number of times without wearing out, and are typically prepared with much more environmentally friendly chemicals.

We congratulate Paul for his outstanding achievement, and wish him continued success as he continues to work towards his Ph.D.

GOLDWATER SCHOLARSHIP

Undergraduate Robert Jacobberger is Awarded Prestigious Goldwater Scholarship

BY JEFF BUNKER



Robert Jacobberger (Photo Courtesy of University Communications)

Each year, the prestigious Goldwater Scholarship is awarded to approximately 300 undergraduates nationwide who are highly qualified for pursuing a career in science, mathematics, or engineering. Robert Jacobberger, a senior chemical engineering major who works in Dr. Cheung's lab, was a recipient of the Goldwater Scholarship this past year. The Goldwater Scholarship provides honorees with up to \$7,500 per year which can be used towards tuition, books, room and board, and other school-related expenses.

Robert is also supported through UNL's Undergraduate Creative Activities and Research Experiences (UCARE). He has had the opportunity to work with Dr. Barry Cheung in the Department of Chemistry and Fereydoon Namavar at the University of Nebraska Medical Center. Robert's research has focused on nanomaterials synthesis for incorporation into biomedical devices, including methods for increasing cell growth and decreasing formation of harmful biofilms on device surfaces.

We congratulate Robert for his outstanding achievement, and wish him continued success.

STAFF

Applause Award Recipients



Mike Cook, 2010

Mike Cook and Bob Rhynalds

The APPLAUSE Program recognizes consistently outstanding performance and service above and beyond the call of duty to managerial/professional (B-line) and clerical/tech/service (C-line) staff in the College of Arts and Sciences.

So far in 2010, Applause awards have gone to Mike Cook, buyer in the Department of Chemistry, and Bob Rhynalds, scientific instrument maker with the Department of Chemistry/Physics and Astronomy.

Mike's nominators say: "I have worked with Mike for nearly two decades. He is efficient at what he does, and is a real team player. Mike goes the extra mile to find a better product or a better price, shipping arrangement, etc. There isn't a detail that escapes his attention. Mike always acts as expeditiously as he can, and always does so with a smile. His efforts help all of us to do research as smoothly as possible. Mike also volunteers to help out with activities beyond work, being famous in the department for bringing and running the grill for departmental picnics. This UNL employee deserves a lot of Applause!"

Bob's nominators share: "Bob Rhynalds is one of the best machinists I have met. This is a testament not only to his superb machining skills, but also to his ability to design, visualize and create solutions to sometimes rather difficult engineering problems. Working with Bob is a pleasure.

You can take him a seemingly difficult problem, with tight constraints on space, weight, and materials and his solutions are elegant and doable, with one careful eye always trained on the cost. Alternatively, one can talk with him about a design that one is sure is a VERY clever answer to a problem and he will tactfully suggest a simpler, or cheaper alternative. All of the students in my group acknowledge him as the go-to machinist for difficult problems. His gentle manner is much appreciated by novice students who are still easily intimidated and unsure of themselves. His guidance in matters of the appropriate constraints on machined parts provides a wonderful education for students. He is an invaluable resource for our research endeavors and is deserving of an Applause!"

Applause
The Perfect Thank You

Date _____

Pay to the Order of _____ \$ **200.00**

Two Hundred and no/100 Dollars

(Your monetary award will be added to your next paycheck.)

UNL
COLLEGE OF ARTS AND SCIENCES
Office of the Dean

Memo *Staff Awardee*

STUDENTS

Ovation Award Recipient

Austin Jones

Recipient of the
September 2010 Ovation Award



Austin Jones

"I would like to nominate Austin Jones for the Ovation award. I have worked with Austin over the last seven months on the Department of Chemistry's Web page. Austin

has been instrumental in the development of the department Web site as well as updating and maintaining the site. Austin provides both creative and technical services that include: Web site planning, design, development, content management, and maintenance. Austin always has a positive attitude when he comes into work and is a true joy to work with."

"Austin Jones has done a great job for this department. He has been able to quickly implement and improve upon the department's Web site as well as contribute to other efforts. Austin's performance has consistently shown a very high standard for both the quantity and quality of his work."

"Austin is an amazing student worker. He completes his tasks with ease and efficiency. He works well with all temperaments, is friendly and has a great sense of humor. Austin is a great asset to the department."

OVATION
The Perfect Thank You... for Student Employees

Date _____

Pay to the Order of _____ \$ **50.00**

Fifty and no/100 Dollars

(Your award will be added to your paycheck.)

UNL
COLLEGE OF ARTS AND SCIENCES
Office of the Dean

Memo *Student Awardee*

AWARDS & ACHIEVEMENTS

Faculty Awards

- **Dr. David B. Berkowitz** – collaborates with Columbia University and Stockbridge Pharmaceuticals, Inc., for new cancer treatment
- **Dr. David B. Berkowitz** – 2010 Arts & Sciences Outstanding Research and Creative Activity Award
- **Dr. Wonyoung Choe** – Dean's Award for Excellence in Graduate Education
- **Dr. Jason Kautz** – ASUN Student Government Outstanding Educator 2009-2010 (Large Classroom)
- **Dr. Andrzej Rajca** – Willa Cather or Charles Bessey Professor
- **Dr. Xiao Cheng Zeng** – University of Nebraska Outstanding Research and Creative Activity Award

Staff Awards

- **Leslie Marquart** – James V. Griesen Award for Exemplary Service to Students

Student Awards

- **Nan Shao** – Outstanding Graduate Research Assistant Award Honorable Mention
- **Paul Goodman** – SMART Scholarship
- **Lili Lou & Michelle J. Yoo** – 2010-2011 Milton E. Mohr Fellowship
- **Rhitankar Pal** – 2010-2011 Black Hills Corporation, UNL Energy Sciences Fellowship

2009-2010 Graduate Student Awardees

John J. Stezowski Graduate Teaching Assistant Award

- **Jacob Friest**

Chemistry Graduate Teaching Assistant Award

- **Steve Halouska**
- **Mattie Peck**
- **Leah Thompson**

Korean Alumni Research Award

- **Paul Barron**

Chemistry Graduate Research Assistant Award

- **Joseph Brewer**
- **Krina Joseph**
- **Rhitankar Pal**

Cromwell Award

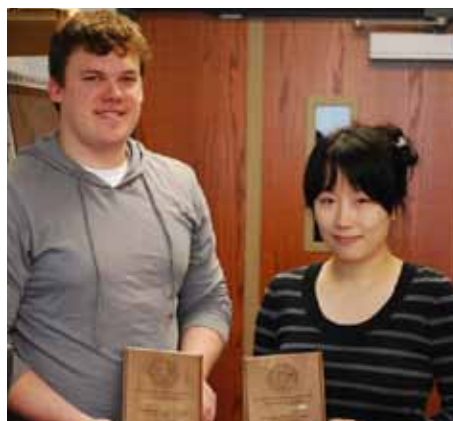
- **Bijia Wang** – 2009 Winner
- **Sean Smith** – 2010 Winner

Fuerniss Fellowship Award

- **David Nelson** – 2009 Winner
- **Nathan Thacker** – 2010 Winner



David Nelson (L) and Nathan Thacker (R) received the Fuerniss Fellowship Award during the 2009-2010 Graduate Student Awards ceremony in April 2010.



Sean Smith (L) and Bijia Wang (R) received the Cromwell Award during the 2009-2010 Graduate Student Awards ceremony in April 2010.

2009-2010 Undergraduate Student Awards

- **Ross Cheloha** – 2009-2010 T. Adrian George Undergraduate Research Award
- **Robert Jacobberger** – 2010 Goldwater Scholarship
- **Laura J. Clouston & Amanda L. Witte** – 2010-2011 Milton E. Mohr Scholarships

*Congratulations to
all 2010 Chemistry
Department Graduates
and Awardees!*

2010 SERVICE AWARDS

Years of Service	Awardee
40 years	Les Marquart
35 years	Walter Hancock
30 years	Jonathan K. Skean
25 years	Michael R. Cook
20 years	Mark A. Griep
15 years	Pat Pribil
10 years	Robert H. Wilson
5 years	Keith Placek
5 years	Chin Li 'Barry' Cheung
5 years	Deanna M. Larson

Quotes from Service Award Winners

"There are quite a few things I enjoy about working at UNL. First of all, everyone at UNL is friendly and willing to help. This makes it a pleasant place to work but it also means people are committed to helping achieve our common goals whether they be for research, teaching, or service. Everyone is always willing to brainstorm for solutions to the complex issues that face us. We discuss things broadly and deeply, from intent to outcome, and then use the information to make decisions that are logical for UNL."

– Mark Griep, Professor and Department Vice Chair

"What I love best about my job is the people I work with and the students."

– Deanna Larson, Graduate Recruiting and Admissions Assistant

"I enjoy working in the chemistry department for many reasons. Everyone really works well together, from the professors to the grad students and staff. We always seem to be on the same page. When I first came to chemistry, Dr. George Sturgeon was my supervisor. He taught me a lot about the department and showed me how to best serve them. After 25 years, I still enjoy coming to work here."

– Mike Cook, Buyer II

CONGRATULATIONS TO GRADUATES

May 2010 Ph.D. Graduates

Name	Area	Adviser
Krina Joseph	Analytical	Hage
Bija Wang	Analytical	DiMagno

May 2010 Masters Graduates

Name	Area	Adviser
Lucas DeVries	Inorganic	Choe
Joseph Graskemper	Organic	DiMagno

August 2010 Ph.D. Graduates

Name	Area	Adviser
Omar Barnaby	Analytical	Hage
Joseph Brewer	Physical	Cheung
Adrienne Roehrich	Physical	Harbison
Chris Schwartz	Physical	Dussault
Nan Shao	Physical	Zeng
Jun Wang	Physical	Zeng

August 2010 Masters Graduates

Name	Area	Adviser
Jennifer Gerasimov	Analytical	Lai
Judy Miska	Analytical	Takacs

Updates:

Alumni members,
now you can update your
contact information by
visiting <http://chem.unl.edu/dept/alumnreg.shtml>

Where are they now?

Attention alumni! We want to know where you are and what you're doing! Please take a moment to answer the following questions and return your responses to us by mail to:

University of Nebraska–Lincoln
Department of Chemistry
515A Hamilton Hall
Lincoln, NE 68588-0304

Or, email your responses to: khoneyman2@unl.edu

Name: _____

Degree: _____

Year Earned: _____

UNL Advisor: _____

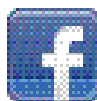
Email: _____

Current and past career positions: _____

Please let us know of any significant events in your life and/or career since leaving the University of Nebraska–Lincoln. Also, please feel free to send any photos and/or recollections of your time here at UNL!

RECONNECT

Facebook, Twitter and LinkedIn



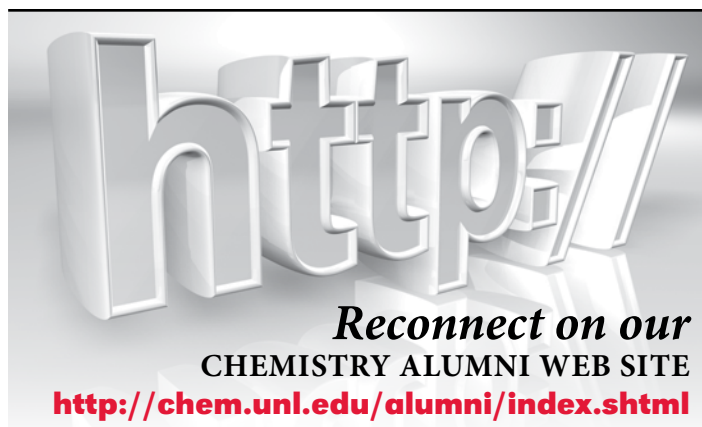
The UNL Department of Chemistry is now on Facebook! Become a fan of the University of Nebraska–Lincoln Department of Chemistry today.



Follow the UNL Department of Chemistry on Twitter! Keep up to date on department awards, events, and research by following @UNLChemistry on Twitter.



Join the University of Nebraska–Lincoln Chemistry Alumni group on LinkedIn and reconnect with professors, colleagues, classmates, and friends! The Department of Chemistry Alumni group will help you expand and strengthen your professional networks while keeping you posted on all of the happenings in the department.



Offering:

Class Listings: Current listings of Ph.D., M.A., and B.S./B.A. graduates

Connections: Career Networking Services provide links to job listings, help with chemistry job searches, and opportunities to use Chemistry Facebook Group and LinkedIn for social and professional networking.

Update your contact information by sending to alumni@huskeralum.org

Events/News: Keep up with current events, past happenings, alumni newsletter, alumni stories

Support the Department: Learn how to support the UNL Department of Chemistry through a variety of ways

2011 Chemistry Reunion...



George Bell Frankforter

Celebrating 125 Years of Chemistry Education at the University of Nebraska–Lincoln

Mark your calendars and start making travel plans for the 2011 Chemistry Reunion! Join us April 15-16, 2011, to celebrate the 125th anniversary of the first B.A. degree in chemistry awarded to George Bell Frankforter. Come back to campus, meet up with former professors and classmates, and take part in all of the exciting activities planned in conjunction with the Alumni Association's 2011 'Big Red Weekend.'

Planning on attending? Please let us know by emailing ChemReunion2011@unl.edu.

For the most up-to-date information on the 2011 Chemistry Reunion, please visit www.chem.unl.edu/alumni/2011reunion.shtml.

Friday, April 15, 2011:

- Department of Chemistry Awards Reception & Presentations
- View 'Research First' Poster Session Award Winning Posters
- Football Friday Program (Sponsored by the UNL Alumni Association)
- Department of Chemistry Alumni Banquet

Saturday, April 16, 2011:

- Hamilton Hall Building Tours
- Find out Professor Mark Griep's Favorite Department Artifacts
- Department of Chemistry Tailgate
- Spring Red & White Football Game

We look forward to seeing you back on campus in April!



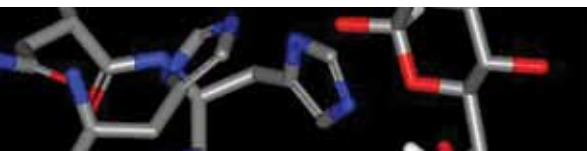
This event is part of the 2011 'Big Red Weekend' brought to you by the Nebraska Alumni Association.

Find out more at www.huskeralum.org/events/bigredweekend



UNIVERSITY OF
Nebraska
Lincoln

Department of Chemistry
552 Hamilton Hall
P.O. Box 880304
Lincoln, NE 68588-0304



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Supporting the Greatest Opportunities:

THE CHEMISTRY EXCELLENCE FUND

The Chemistry Excellence Fund will provide flexible, discretionary funds for the chair of Chemistry to aggressively pursue the big picture opportunities and address the most pressing needs of the department in pursuing its Strategic Plan for Excellence. Join other alums and friends in assisting the department to develop cutting edge programs of transformative research. Your gift of any amount is greatly appreciated. To donate, please visit <https://nufoundation.org/SSLPage.aspx?pid=1270>.

CHEMISTRY FACULTY REMEMBRANCE FUND

The UNL Chemistry Faculty Remembrance Fund was created to establish an endowed fund for those wanting to honor professors who impacted their lives.

Each year, an award will be made in honor of a former faculty member to a deserving undergraduate or graduate student with the spendable income generated by this fund. Please consider making a donation today by visiting <https://nufoundation.org/SSLPage.aspx?pid=2078&chid=25>.



WHAT'S HAPPENING IN
CHEMISTRY