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College of Chemistry, Univerity of California, Berkeley
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Reimer takes the helm at chemical engineering

in this issue:

Jeff Reimer, the Warren and Katharine Schlinger Professor of Chemical Engineering and former Associate Dean of the Graduate Division, has assumed the chairmanship of the Department of Chemical Engineering.

Last year, Reimer conducted research while living in Bonn, Germany, with his family. He worked two days each week on a book on applied spectroscopy methods. In addition, Reimer commuted to the Rheinisch-Westfälische Technische Hochschule (RWTH) in Aachen, near the border with Belgium. Founded in 1870, RWTH is one of Germany's leading technical universities.

Jeff Reimer, the new chair of chemical engineering, feels most at home in his lab, surrounded by superconducting NMR magnets.

"Living with my family in Germany was a very rewarding experience, although at times the culture shock was tough. You don't realize how American you are until you live abroad."

While at RWTH, Reimer helped develop a portable magnetic resonance imaging (MRI) device that could be used in rural clinics and hospitals or in less developed countries. About the size of a steam iron, the instrument both transmits and receives signals in much the same way as an ultrasound device. Reimer is working on the portable MRI with UC Berkeley chemistry professor Alex Pines and colleagues at RWTH.

An experienced administrator, Reimer served from 2000 to 2005 as Associate Dean of the Graduate Division, where he assessed doctoral and other graduate student programs. His love of teaching has been rewarded with the Donald Sterling Noyce Prize for Excellence in Undergraduate Teaching in the Physical Sciences (1998), the AIChE Northern California Section Award for Excellence in Teaching (1998), the Chemical Engineering Departmental Outstanding Teaching Award (2000) and the campus's Distinguished Teaching Award, the highest award bestowed on Berkeley faculty for their teaching (2003).

Reimer has a clear vision for the department. "One of my short-term goals is to increase the visibility of chemical engineering research and the chemical engineering profession, in the college and on the campus," he says. "On the longer term, I see our department as continuing its leadership in biochemical (and related) engineering, and towards that end I plan on growing our faculty strength in this area. Of course no department can excel without the very best students, and such students need unrestricted financial support to work at the interface of disciplines and undertake the truly bold steps in generating and applying new knowledge.

"Returning to play a small part in leading the world's best public university is a great privilege, one that I cherish," says Reimer. "The extraordinary faculty and the gifted students form the perfect backdrop for my priorities as incoming chair: a richer undergraduate experience, resources for nimble and innovative graduate research, and an administrative structure that enables new initiatives."

Keasling leads NSF's SynBERC research center

A new research center launched this summer at Berkeley seeks to make it as quick and easy to engineer biology as it now is to assemble microprocessors, hard drives and memory chips into a computer.

Funded by a five-year, $16 million grant from the National Science Foundation (NSF), the Synthetic Biology Engineering Research Center, or SynBERC, is gathering pioneers in the field of synthetic biology from around the United States into a unique "engineering" center.

"The focus of SynBERC is to make biology easier to engineer," said

Bioethicist Laurie Zoloth and SynBERC director Jay Keasling ponder a question during a webcast meeting on ethical issues in synthetic biology.

SynBERC director **Jay Keasling**, professor of chemical engineering at UC Berkeley. "SynBERC will construct the biological components that will allow engineers to build biological solutions to important societal problems, such as the environmentally-friendly production of chemicals using microbes or replacing damaged or malfunctioning genetic circuits inside human cells to cure disease."

The center will focus on an emerging discipline — synthetic biology — that the researchers say will transform the biotechnology, high-tech, pharmaceutical and chemical industries by providing less expensive drugs and fuels, novel materials, biological sensors and replacement organs from stem cells.

Center collaborators hail from the Massachusetts Institute of Technology (MIT), Harvard University, UC San Francisco and Prairie View A&M University in Texas. The center's researchers hope to ignite the field of synthetic biology in the same way that the developers of standardized integrated circuits in the 1960s ignited the field of semiconductor electronics.

Keasling expects that the techniques, chassis, parts and devices developed will help his other efforts at UC Berkeley: to develop a microbe that changes the hard-to-digest cellulose of plants directly into fuel, and to improve the bacteria and yeast he has already engineered to produce an antimalarial drug, artemisinin.

SynBERC engineers will make the designs for their biological parts and devices available to other engineers through an open source registry of standard biological parts. This will allow other biological engineers to re-use parts and devices developed for one application in other, very different applications, much like microprocessors are now used in computers, cell phones and automobiles.

"This grant will bring people together to decide which avenues to pursue in order to make it easy for many people to use the technology," he said. Matching funds from industry and the participating universities bring the total five-year commitment to $20 million, with the NSF offering the possibility of a five-year extension of the grant.

College welcomes new students, new programs

The number of College of Chemistry undergraduate students has reached a record level, rising from 797 last fall to 868 for the fall 2006 semester.

Of the three undergraduate majors, chemical engineering has the highest number of students at 373. When combined, the number of students in the two chemistry majors totals 495, with 272 in chemical biology and 223 in chemistry. These totals include dual majors, so the actual number of full-time equivalent students is 833.

The rising enrollments reflect the remarkable growth of the chemical biology major. Initiated in the fall 2004 semester with 142 students, chemical biology has almost doubled its enrollment since then. The growth of the major also helps explain the rising proportion of female undergraduates. Fifty-three percent of chemical biology majors are women, compared to 44 percent in chemistry and 35 percent in chemical engineering. For the college as a whole, 44 percent of undergraduates are women.

Combining freshmen and transfers, there will be 98 new undergraduates in chemical engineering, 82 in chemical biology and 49 in chemistry this fall.

At the graduate level, the chemistry department will welcome 87 entering students, 26 women and 61 men. The new graduate students will bring the total enrollment to 449 (151 women and 298 men). Sources of student support, in addition to teaching assistantships, include 66 fellowships — 37 federal, 14 university, 14 donor-supported and 1 international.

Chemical engineering will welcome 15 entering graduate students this fall, 4 women and 11 men. Three federal and two university fellowships will help support the entering students. These new students will bring the total enrollment to 111 for the department.

Included in these totals are an additional seven students who have enrolled for chemical engineering's new Product Development Program (PDP). The PDP is a master's degree program aimed at filling the need for graduates trained in transforming technical innovations into commercially successful products. During the one-calendar-year program, students will gain exposure to real-world product development practices in a range of industries including biotechnology, microelectronics, nanoscience and consumer products.

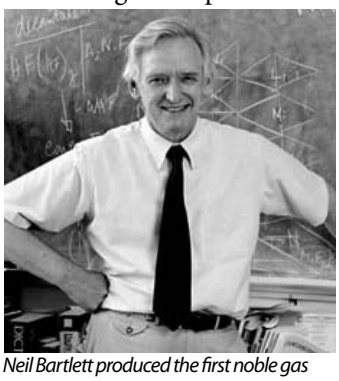
"This is our pilot year for the Product Development Program, and we are off to a good start with a diverse entering group in the fall semester," says program director **Keith Alexander** (Ph.D. '83). Of the seven entering master's degree students, three are women, and four earned their undergraduate degrees in chemical engineering at Berkeley. "We will also kick off our product development certificate program for Ph.D. chemical engineering students this fall," adds Alexander. "We're looking forward to a successful and exciting year."

News &Notes

ACS dedicates landmark to work of Neil Bartlett

The American Chemical Society, in conjunction with the Canadian Society of Chemistry, has designated a new International Historic Chemical Landmark to honor the work of Professor Emeritus **Neil Bartlett**.

The Vancouver, B.C., landmark commemorates Bartlett's experiment that produced the first noble gas compound. Bartlett conducted the experiment in 1962 while he was a professor of chemistry at the University of British Columbia in Vancouver.



Neil Bartlett produced the first noble gas compound.

Before this seminal experiment, chemists believed that helium, neon, xenon and the other noble gases were inert and could not form chemical compounds. Bartlett produced an orange-yellow solid that was subsequently identified in laboratory studies as xenon hexafluoroplatinate ($XePtF_6$).

He joined the College of Chemistry faculty in 1969 and continued his research on noble gas and fluorine chemistry while at Berkeley. The most definitive paper on the nature of $XePtF_6$, published in 2000 by Bartlett and his colleagues, came 38 years after his initial discovery and a year after Bartlett had retired from active research at the College of Chemistry.

Shank, former LBNL director, returns to College of Chemistry

Charles Shank, who served as the Director of the Lawrence Berkeley National Laboratory for five years, returns to the College of Chemistry after a year's sabbatical.

Shank had an unusual triple appointment at Berkeley as professor in the departments of physics, chemistry, and electrical engineering and computer sciences. He graduated from UC Berkeley with a B.S. in 1965 and a Ph.D. in 1969, both in electrical engineering and computer science.

Following graduation, Shank joined the technical staff at AT&T Bell Laboratories before returning to Berkeley in 1989. He held many leadership positions at Bell Labs, including Director of the Electronics Research Laboratory.

Shank will be teaching a graduate course, Ultrafast Processes in Chemistry, this fall, and a physical chemistry class in the spring.

Trauner wins tenure

Dirk Trauner is the chemistry department's newest associate professor. Trauner's research centers on the total synthesis of complex natural products and rationally designed molecular probes and their application to biological problems, especially in neuroscience.

After juggling responsibilities as an assistant professor, Dirk Trauner has been promoted to associate professor. The models in his office share symmetry properties with viral capsids and other complex molecular structures.

Fréchet garners UK award

The Pure and Applied Macromolecular Chemistry Group (Macro Group UK), a joint interest group of the Royal Society of Chemistry and the Society of Chemical Industry, has awarded the 2006 Macro Group UK Medal for Outstanding Achievement to Berkeley chemistry and chemical engineering professor **Jean Fréchet**.

Jean Fréchet holds a joint appointment in chemistry and chemical engineering.

Fréchet's research is at the interface of organic and polymer chemistry with emphasis on design, synthesis and applications of functional macromolecules. He has published well over 600 scientific papers and has more than 60 patents. He also is head of Materials Synthesis in the Materials Science Division of Lawrence Berkeley National Laboratory.

Lester, Head-Gordon elected to quantum science academy

Berkeley chemistry professors **William A. Lester, Jr.** and **Martin Head-Gordon** were elected to the International Academy of Quantum Molecular Science at its 43rd annual meeting, held in May 2006, in Kyoto, Japan. With their election, Lester and Head-Gordon join fellow faculty member William H. Miller as members of the academy.

In Memoriam: Chester O'Konski

Emeritus Professor **Chester (Chet) Thomas O'Konski** passed away suddenly on August 2, 2006, at home in El Cerrito. O'Konski joined the faculty in the chemistry department in 1948 and became emeritus in 1991. Please see our upcoming fall news magazine for more information.

Bryan Krantz joins chemistry department

Bryan Krantz hard at work assembling one of his bacterial incubators.

Bryan Krantz, a native of Cincinnati, OH, is the Department of Chemistry's newest assistant professor. He joins the faculty after a postdoctoral position with John Collier at Harvard Medical School. Krantz will have 50 percent appointments in chemistry and the Department of Molecular and Cell Biology.

Krantz is busy setting up his lab on the third floor of Hildebrand Hall in the space formerly occupied by Jack Kirsch, who retired during summer 2006. He is installing several pieces of equipment that he has built himself. Krantz attributes his knack with tools and hardware to his father, a chemical engineer.

After earning his B.S. in chemistry at Atlanta's Emory University in 1996, Krantz pondered what to do next. "I almost went to medical school," he says, "but I decided that my interest really lies in research, not clinical work." Instead, Krantz opted for a Ph.D. in the Department of Biochemistry and Molecular Biology at the University of Chicago.

Krantz began his postdoc in 2003 at Harvard, where his research focused on pores in cellular membranes and how they cause proteins to unfold. His mentor, John Collier, has spent more than 15 years studying the three components of anthrax toxin. Together their research has led to seminal findings on how components of anthrax toxin unfold and move into cells.

Imagine trying to push a paper clip through a hole only one millimeter wide. The only way to do it is to unfold the paperclip into a long straight wire. To move complex folded proteins across cell membranes, cells use a similar strategy—they cause the proteins to unfold and then employ a force to pull the unfolded molecule through a pore in their membrane.

But how cells do this has been a mystery. Krantz's work with Collier at Harvard has helped solve the mystery, at least for anthrax, a rare but dangerous bacteria that hijacks these mechanisms to transport toxins into cells.

Krantz is the lead author of a paper published in the July 29, 2005, edition of *Science* magazine that describes in detail how the anthrax toxin is pulled into cells. Using electron paramagnetic resonance, a sophisticated spectroscopic technique, Krantz and colleagues described both the structure of the pore and what they call the molecular "ratchet" that transports the unfolded protein.

"Anthrax is just one of many diseases caused in part by bacterial toxins," says Krantz. "Others include diphtheria, tetanus and botulism. But my work doesn't focus on a particular disease," Krantz adds. "Instead, I am trying to understand more generally how pores in cellular membranes interact with proteins to cause them to unfold and move."

When asked what drew him to Berkeley, Krantz cites the new Stanley Hall facilities and "the ability to work on the interdisciplinary boundary of chemistry and biology." Krantz lives in El Cerrito with his wife, Kristin Krantz, a recently ordained Episcopal priest, and their 16-month-old son.

Marletta wins grant to develop blood substitute

Blood is one of those things you take for granted, until you start losing it. If you're injured near a hospital, then you'll probably be okay. But if you are injured in a less developed country miles from the nearest refrigerator, or if you are a soldier on a foreign battlefield, or even if you are injured at home but have an unusual blood type, you may not be so lucky.

In these situations lives could be saved by a blood substitute that maintains the supply of oxygen to vital organs. **Michael Marletta**, current chair of the Department of Chemistry and a researcher in the interdisciplinary Quantitative Biomedical Research Institute (QB3), has identified proteins that could safely transport oxygen in the blood.

The potential of Marletta's work has so impressed T. Gary Rogers, the CEO of Dreyer's Grand Ice Cream and the head of the Rogers Family Foundation, that he has granted Marletta $250,000 to continue his research.

The funding will allow Marletta to bridge the so-called "valley of death" between university research and the marketplace. These Rogers "Bridging the Gap" grants are intended to allow researchers to advance promising work to a point where investors will fund commercialization.

"We've proved the concept in the relatively safe confines of a test tube. Now we need to see if it will work in animals," says Marletta. "If it does, then investors will be lured by the potential. But we need to move the research forward, and this grant will allow us to do that."

Most attempts at blood substitutes have started with hemoglobin, the natural iron-based molecule in red blood cells that carries oxygen. But hemoglobin was designed by nature to selectively bind and release oxygen from inside red blood cells. When hemoglobin circulates freely in the blood, things can go haywire.

Hemoglobin interacts with nitric oxide (NO), a dissolved gas in the bloodstream that plays a critical role in regulating blood pressure. The oxygenated form of hemoglobin reacts with NO, destroy-

ing both the NO and the ability of the hemoglobin to deliver oxygen. The end result is no oxygen and no NO.

What is needed are proteins that can freely circulate in the blood, binding and releasing oxygen like red blood cells, but not interfering with nitric oxide and its regulation of blood pressure. Marletta's research group has identified just such a group of proteins.

Marletta, whose expertise runs from understanding protein function to inorganic biochemistry (the biological properties of non-carbon compounds), has studied the role of NO in the body and has identified a class of proteins, called H-NOX (Heme-Nitric Oxide and/or OXygen) binding proteins, that control the delivery of NO. These proteins are found in bacteria, fruit flies and humans, indicating that the role of NO is an early adaptation in the evolution of cellular forms of life.

"We have already achieved our first goal," says Marletta. "We have identified several candidates among the H-NOX family of proteins that would be suitable for genetic modification to give them the desirable oxygen and NO binding properties. The next goal will be to produce enough quantities of the proteins for testing in animals."

photo: Peg Skorpinski

Michael Marletta, the Joel H. Hildebrand Distinguished Professor and the Aldo DeBenedictis Distinguished Professor, is working on a blood substitute that could carry oxygen.

Marletta foresees a blood substitute that could be stored simply as a package of dry chemicals in an otherwise empty intravenous fluid bag. Sterile water could be added and the resulting blood substitute infused like standard IV fluids. "The life-saving potential is tremendous," says Marletta.

Jhih-Wei Chu joins chemical engineering department

Jhih-Wei Chu is starting this fall as an assistant professor in the Department of Chemical Engineering. Chu was born in Taipei, Taiwan, and received his B.S. in chemical engineering at the National Taiwan University in Taipei. He earned his M.S. and Ph.D. in chemical engineering at MIT with Bernhardt Trout and Daniel Wang, and he comes to Berkeley from a postdoctoral position with Greg Voth at the University of Utah.

Chu specializes in the multiscale modeling of biomolecules. "I think my general area of study is similar to that of ChemE professors Harvey Blanch and Doug Clark," says Chu, "but my work is more theoretical and computational. I see it as complementing the current work on biomolecules in the department."

At Utah, Chu studied actin filaments, helical polymers of the actin protein that help cells maintain their shape and allow them to move. Actin is also one of the main components of muscle cells, and it helps give them their mechanical properties.

In an article in the September 13, 2005, edition of the *Proceedings of the National Academy of Sciences*, Chu and Voth describe how they used a computational method, molecular dynamic simulation, to explore the behavior of actins. These computational techniques are useful to examine detailed structures at resolutions beyond the capabilities of electron microscopy or x-ray diffraction.

Chu's research at MIT focused on the oxidation of methionine, one of two sulfur-containing amino acids that form the basis of complex proteins. When the methionine residues in a protein-based pharmaceutical are oxidized, the drug can become deactivated.

Chu examined this problem in a medication called granulocyte-colony stimulating factor (G-CSF), a genetically engineered growth factor that stimulates the production of white blood cells. G-CSF is often given to cancer patients undergoing chemotherapy to counteract the destruction of these cells and to improve immune response.

Jhih-Wei Chu is joining the chemical engineering faculty after postdoctoral work at the University of Utah..

To protect G-CSF and other protein pharmaceuticals against oxidation, stabilizers are added to the medications. "But formulating the additives is difficult," says Chu, "because we don't fully understand how the oxidation happens. My research is about helping to overcome these problems in developing new protein-based medicines."

While at MIT, Chu also consulted for Alkermes, Inc. in Cambridge, MA. Founded in 1987 by researchers from MIT and the Scripps Research Institute of San Diego, CA, Alkermes develops new medicines based on sophisticated drug delivery technologies. These include extended-release injectable drugs and inhaled formulations. Chu helped Alkermes develop techniques to enhance the injectability of microsphere drug delivery systems.

Although primarily attracted to Berkeley by the reputation of the department and the campus, Chu is also looking forward to the Bay Area's climate and cultural amenities. Berkeley is also relatively close to Taipei, where Chu returns to visit his family.

What is an endowment?

An endowed fund is an investment in the University's future. When a donor makes a gift designated for an endowment, the funds are held in perpetuity by the university.

The principal amount of the gift is usually invested and a portion of the return — averaging 4-5 percent of the fund's market value — is used each year to support the designated program. The rest of the return, which has recently averaged 6-7 percent, is added back to the endowment so that it continues to grow.

Endowed chairs help make it possible for Berkeley to recruit and retain the nation's best scholars. Although the state currently provides basic faculty salaries, those salaries average 15 percent below those of peer institutions. Endowed chairs recognize exceptional talent and provide stable funding for research, teaching and public service.

Last year, one of the college's senior professors was pursued by another university, which offered him a chair, generous lab space, and a large sum of unrestricted research funding. The college was able to persuade him to stay in part with the promise of an endowed chair.

Endowed chairs can be named to recognize the donor(s) or another honoree, and since only the income from the endowment is spent, their impact lasts forever.

The college currently has 17 endowed chairs and distinguished professorships, and provisions have been made for two more chairs in the estate plans of alumni.

The most recent chairs to be established are the Larry and Diane Bock Endowed Chair in Nanotechnology and the Charles W. Tobias Endowed Chair in Electrochemistry. They will be profiled in the fall issue of our news magazine.

Cupola Era alumni pursue endowed chair

Some of them graduated sixty years ago, others a "mere" forty-three years ago. But for the nearly 100 alumni who have contributed to the Cupola Era Endowed Chair, their appreciation for Berkeley, and for the College of Chemistry in particular, has only grown with the passing years.

These alumni of the Cupola Era have joined together to launch the Cupola Era Endowment Fund, with the goal of raising $500,000 to establish a new chair in the college.

War veterans and seventeen-year-olds, refugees from Communist China and graduates from Oakland Tech, sons (and an occasional daughter) of professionals and of parents who had not themselves completed high school — these students came together during the years from 1946 to 1963 to learn chemistry and chemical engineering. They experienced Berkeley and all it had to give them. And now they want to give back.

"Cal opened doors to start my career," said one. "Berkeley gave me the confidence to do what I wanted to do, physical chemistry," said another. "There is no doubt I would not be where I am today if I had not graduated from Cal," said a chemical engineer.

For several donors, their contribution to the Cupola Era Endowed Chair was their first gift to Berkeley. Recognizing that Berkeley now receives only one-third of its budget from the state, one donor wrote, "We who enjoyed the many benefits from this great college at a time when educational funds were much more generously dispensed by the state now have a duty to make a significant contribution to the college."

Other donors gave "because the future of our country depends on technology, and the college fits into what is important for the future."

And still other donors were motivated by the worthiness of the cause: helping young faculty to launch their careers. The chair will be used to support a junior faculty member and will alternate every few years between the departments of chemistry and chemical engineering.

The future of the college lies in the quality of the young faculty it attracts, and money to start a research program is one of the most important enticements that Berkeley can offer in the competition for the best young scholars in the country. With research funds in short supply, the Cupola Era Endowed Chair will provide invaluable support for young faculty.

The Cupola Era Endowed Chair Fund currently stands at over $359,000. The volunteers who brought this group together saw an opportunity to do collectively what they could not do individually — endow a chair that would have a lasting impact on the future of the College of Chemistry. Now they are hoping that a great many more of the alumni who graduated during those years will choose to join them and make a difference.

Faculty support Named Fund Initiative

For the first time on campus, current and retired faculty members are being invited to establish named endowed funds specifically designed to support graduate students. The Named Fund Initiative is a new campus-wide effort, sponsored by the Graduate Division, which encourages support of graduate students — who remain at the heart of Berkeley's excellence.

The minimum to establish a named endowed fund as part of this special initiative is $10,000, which can be given as a one-time gift or pledged over five years. Thanks to the generosity of UC Berkeley Foundation Board Member Bill Ausfahl and his wife, Trudy, all gifts of up to $10,000 are being matched —

for a total of $20,000 when a new fund is established.

"I'm thrilled about our faculty's contributions to this program, especially when they already give so generously through scholarship and teaching," says Dean **Charles Harris**. "I think it says a lot to our donor community that our faculty, whose salaries don't compare to those of our private peers, have been more than willing to participate."

UC Berkeley faculty members know that increasing funding for graduate students is a campus priority — graduate students play a crucial role in maintaining Berkeley's status as a premier research university. "The Named Fund Initiative is helping us recruit first-rate graduate students who, in turn, help us recruit and retain first-rate faculty," says Harris.

— Mindy Rex and Jane Scheiber

Paying respects

Charles "Chuck" Stehr chose to attend Berkeley because it was "thirty-seven dollars per term, all the credits you could take. It was an affordable state university and had probably the best chemistry department in California."

That was 57 years ago. In the years since he graduated with a B.S. in chemistry, he has earned a Ph.D. from the University of Liverpool, raised three children and pursued a rich and varied career in the oil industry.

Yet the years he spent at Berkeley remain in his memory — largely because of the quality of his education, and a special professor who became a mentor and a friend.

"I first showed up at UC Berkeley in 1949," says Stehr. "I lived in a fraternity, somehow found the time to manage the swimming and water polo teams, but for the most part spent my days in the lab. Those were busy years.

"After I survived two years at Cal, my class sizes decreased and I began to get to know my professors, especially **William G. Dauben**. Although I was not one of his star pupils, Bill Dauben went out of his way to make undergraduate research opportunities available to me. When it came time to pick a grad school in England, where my family had relocated, he was a big help."

(Left) Chuck Stehr appears on the lower left in this photograph from the 1954 Blue & Gold*, the UC Berkeley yearbook. (Right) Stehr today in Houston with his wife, Dorothy.*

When Dauben died in 1997, the college established a memorial fund to support graduate students, and Stehr became a steady contributor. He has also contributed to the Cupola Era Fund for an endowed chair.

Stehr's career has spanned both research and marketing, mostly with Shell Corporation in Houston, Texas. "In all my various positions, the appreciation for a technical background was always present," says Stehr. "My undergraduate work at Berkeley was at the heart of this background."

Stehr retired in 1991 and now spends his time in Houston with his wife, Dorothy, pursuing his favorite hobbies — fishing, raising Labradors and tasting wine.

"When you are involved in raising and educating children, you tend to forget about your university years. But I have always been proud of my association with Cal chemistry, and this was the motivation I needed to start giving. These gifts have been modest, but the amounts have increased over time and have been augmented by a generous matching program sponsored by Shell, even during my retirement."

This fall Stehr will visit Berkeley, and now that he is not busy studying in the labs, he plans on taking the time to see a Cal football game with College of Chemistry Dean Charles Harris.

Stehr will soon pass an important benchmark — his lifetime contributions to the college, including the matching contributions from Shell, will reach $100,000. It is a goal he has been steadily striving towards for many years. "Chemistry at Cal was in a class of its own and set a standard in my mind that was hard to top. My goal is to continue the giving for the rest of my life at the highest level possible. Cal has certainly been worth it to me."

Professor William G. Dauben started teaching in the chemistry department in 1945, and hundreds of graduate students, postdocs and undergraduates, including college donor Chuck Stehr, benefited from his mentorship during his 51-year career.

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Upcoming Events

Check chemistry.berkeley.edu/alumni for the latest information

September 11, 2006, 6:00 – 8:00 p.m.
ACS Reception for Alumni and Friends
The City Club of San Francisco
155 Sansome Street, 10th floor
San Francisco, CA

All college alumni and friends are invited to attend this complimentary, festive event during the ACS National Meeting in San Francisco. Reservations are required by September 5, 2006, to colufson@berkeley.edu or by calling (510) 643-7379.

October 7, 2006, 9:30 – 11:00 a.m.
Complimentary Continental Breakfast
9:30 a.m. - 10:00 a.m. Tan Hall Lobby

Faculty Lecture
Professor Christopher Chang
"Metals on the Brain: Towards Understanding the Chemistry of Aging"
10:00 a.m. - 11:00 a.m. 180 Tan Hall

Alumni and friends are invited to join us for a complimentary continental breakfast prior to Professor Chang's lecture.

October 7, 2006, 11:00 a.m. – 1:00 p.m.
"Free Radi*cals*" and "CHEMillennium"
Alumni Era Brunch
Heyns Room, The Faculty Club

After hearing Christopher Chang's lecture, head over to The Faculty Club for a brunch with fellow classmates and alumni from the graduating years of 1963 – 1999. Reserved parking will be available. Children are welcome at this casual event!

October 24, 4:00 p.m.
G.N. Lewis Lecture
Sibley Auditorium
Bechtel Engineering Center

Richard Schrock
2005 Nobel Laureate and the Frederick G. Keyes Professor of Chemistry at MIT

"Metathesis Chemistry and the Nobel Prize"

November 14, 2006, 7:00 – 9:00 p.m.
AIChE Reception for Alumni and Friends
Location to be announced

Join us for this annual reception in connection with the AIChE Annual Meeting to be held in San Francisco. Check for more details as the date approaches.

November 16, 2006, noon – 2:00 p.m.
"Alumni of the G. N. Lewis Era" Luncheon
Heyns Room, The Faculty Club

Alumni and friends from the pre-1945 graduating years are invited to attend this annual luncheon. Dr. Patrick Coffey will be presenting a talk entitled "Gilbert Newton Lewis: His Life and Death." Look for a separate mailing in early fall.