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Faculty members prepare for move to Stanley Hall

Judith Klinman returns to her interdisciplinary research roots

Stanley Hall features:

- 11 stories overall, 3 basement levels, 8 above-grade levels.
- 65,000 sq. ft. of research labs and direct lab support areas.
- 51,000 sq. ft. of specialized lab facilities.
- 39,000 sq. ft. of office, meeting and instructional facilities.
- 37 research labs designed for tissue engineering, chemical, structural and computational biology, and physics.
- NMRs, electron and atomic force microscopes, tissue culture rooms, X-ray crystallography facilities and clean rooms.
- 3 large classrooms, a multimedia classroom and a café.

It has been six years since the last time chemistry professor Judith Klinman moved her office and lab. Now comfortably situated in Lewis Hall, Klinman will be moving soon to the new Stanley Hall, the Berkeley home of the California Institute for Quantitative Biomedical Research (QB3).

QB3 is a partnership among the state of California, industry, and the UC campuses at Berkeley, San Francisco and Santa Cruz. QB3 will tackle complex biological problems by bringing together powerful quantitative tools from the physical sciences, engineering and mathematics.

Judith Klinman admires the view from her new lab in Stanley Hall, home of QB3. Klinman's group will make the move in summer 2007.

It's not the appeal of new space or improved facilities, but the potential for interacting with her colleagues that has lured Klinman into making the move. Stanley Hall was designed from the ground up to encourage researchers from different disciplines to mingle and work together.

The move to Stanley is in many ways a return to her roots for Klinman, who started her career in an interdisciplinary research institute. After completing her Ph.D. in organic chemistry in 1966 at the University of Pennsylvania, she spent 10 years as a research scientist at the Institute for Cancer Research, now a part of Philadelphia's Fox Chase Cancer Center.

Klinman will be joining several College of Chemistry colleagues in moving this spring and summer, including Jamie Doudna Cate, Jay Groves, Bryan Krantz, Michael Marletta, Alex Pines, David Schaffer and David Wemmer. All are QB3 faculty affiliates.

Klinman is also a professor in the Department of Molecular and Cell Biology. She was the first female faculty member in the physical sciences at Berkeley and the first female chair of the Department of Chemistry (making her the first woman to chair a chemistry department in a major research university in the United States).

She has also served as President of the American Society of Biochemistry and Molecular Biology. She has worked toward diversifying the faculty at Berkeley and encouraging female and minority students to pursue careers in academia.

Klinman's research group focuses on enzymes. Living cells depend on enzymes to act as catalysts, dramatically increasing the speed of critical chemical reactions within the cell.

One target of her research is a group of enzymes called copper amine oxidases, which are located on the outer surfaces of cells that line blood vessels. These enzymes trigger the activation of white blood cells, leading to inflammation that can result in clogged blood vessels and artery disease. Finding inhibitors to copper amine oxidases may help create drugs that control this inflammation.

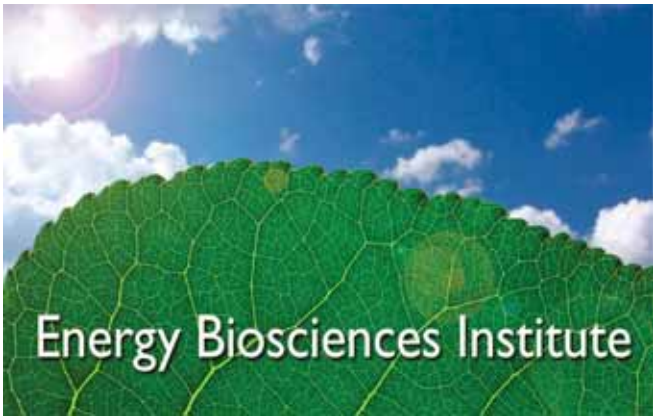
"I'm looking forward to the interdisciplinary research institute setting of Stanley Hall," says Klinman. "The more you surround yourself with different people doing different things, the more innovative you become."

BP selects UC Berkeley to lead $500 million energy research institute

by Robert Sanders, Media Relations

Global energy firm BP has selected the University of California, Berkeley, in partnership with Lawrence Berkeley National Laboratory (LBNL) and the University of Illinois at Urbana-Champaign, to lead an unprecedented $500 million research effort to develop new sources of energy and reduce the impact of energy consumption on the environment.

The funding will create the Energy Biosciences Institute (EBI), which will initially focus its research on biotechnology to produce biofuels—turning plants and plant materials, including corn, field waste, switchgrass and algae, into transportation fuels. The EBI also will be dedicated to fundamental research into the development of new alternative fuels and methods for consuming fossil fuels with less environmental damage.



The EBI will be a joint effort among UC Berkeley, the Lawrence Berkeley National Laboratory, and the University of Illinois at Urbana-Champaign.

"We are extremely pleased that BP has chosen Berkeley and its partners to create the Energy Biosciences Institute," says UC Berkeley Chancellor Robert Birgeneau. "Combining our world-class expertise in the area of alternative energy research and policy with BP's ambitious vision for the EBI will harness the most creative science and innovative technologies to develop viable solutions to global energy challenges."

In support of these energy initiatives, and in anticipation of the awarding of the BP grant to a UC campus, California Governor Arnold Schwarzenegger and Assembly Speaker Fabian Nuñez proposed last December that if BP awarded half a billion dollars to UC, the state would add $40 million more. This funding would boost an existing pledge of $30 million from the state to help both the lab and UC Berkeley build a research facility to house the lab's Helios research project (and now EBI), tentatively planned on the border between LBNL and the campus.

"This partnership with BP will develop new, sustainable energy technologies that can transform the landscape," said Nobel Laureate Steven Chu, director of LBNL—a U.S. Department of Energy-funded lab—and a Berkeley professor of physics and of molecular and cell biology. "Our new institute will combine the best qualities of individual genius in our faculty and staff with the capability to form teams that can rapidly explore bold approaches that are well beyond the reach of a single investigator or a single discipline."

BP announced in June 2006 its plan to invest $500 million over 10 years "to fund ground-breaking research aimed at probing the emerging secrets of bioscience and applying them to the production of new and cleaner energy, principally fuels for road transport." In October, it invited five universities, including UC Berkeley in partnership with LBNL, to submit plans for an institute to explore the fuels and energy sources of the future.

Berkeley invited the University of Illinois, known for its research on corn breeding and on growing, harvesting and storing crops, to participate in its proposal. The University of Illinois brings expertise in genetics, agronomy and sustainable agricultural practices. Field tests, harvesting techniques and the storage and handling of "feedstocks," or plants well suited to conversion to biofuels, in addition to other research, will take place on that campus.

California Governor Arnold Schwarzenegger pledges a total of $70 million in support of EBI and LBNL's Helios project as Chancellor Robert Birgeneau looks on.

LBNL and UC Berkeley have been leaders for decades in research on energy, including battery technology, combustion, the design of energy-efficient buildings, energy policy, advanced transit, renewable energy and nuclear power. LBNL has created novel technologies that have helped decrease energy use for the entire nation.

In addition to its expertise in the physical sciences, including chemistry and chemical engineering, UC Berkeley also is home to a critical mass of social scientists interested in the societal, business, legal and ethical implications of switching from fossil fuel to clean, sustainable fuel, as well as scientists studying the impact of global warming. The university is in the process of negotiating the details of the contract. (For updates see *www.ebiweb.org*.)

News & Notes

College professors win major awards

- **Paul Alivisatos**, director of the Materials Sciences Division at the Lawrence Berkeley National Laboratory, is one of eight winners of the Ernest Orlando Lawrence Award. Alivisatos, the Larry and Diane Bock Professor of Nanotechnology, and also a professor of materials science, shares the award in the materials research category with Moungi Bawendi of the Massachusetts Institute of Technology (MIT) for their work on quantum dots.

  Alivisatos has also been named co-winner of the Eni Italgas Prize from Premio Italgas Energia & Ambiente, the Italian gas company. The prize, worth 120,000 Euros, honors Alivisatos's research on nanotechnology-based solar cells.

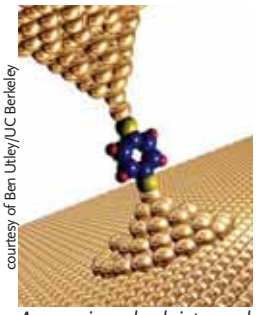
- **Alexis Bell**, Professor of Chemical Engineering, has been selected for the 2007 Michel Boudart Award for the Advancement of Catalysis. The award recognizes individual contributions to the development of new methods that advance the understanding and practice of heterogeneous catalysis. Sponsored by the Haldor Topsøe Company, the award is administered jointly by the North American Catalysis Society (NACS) and the European Federation of Catalysis Societies (EFCATS). It is presented biennially in odd-numbered years.

- **Michael Marletta**, the Joel H. Hildebrand Distinguished Professor and the Aldo DeBenedictis Distinguished Professor, has been chosen by the American Chemical Society as the recipient of the 2007 Gustavus John Esselen Award for Chemistry in the Public Interest. The award recognized "his work in nitric oxide biology and malaria, and his communication of fundamental chemical research to non-science audiences."

  Michael Marletta has also won the 2007 Emil Thomas Kaiser Award, sponsored by the Protein Society. Previous UC winners include Berkeley molecular and cell biologist Randy Schekman and UCSF's Nobel Laureate Stanley Prusiner. The Protein Society award honors the memory of Emil Thomas Kaiser, a pioneering bioorganic chemist who died in 1988 at age 50 from complications following kidney transplant surgery.

- **Robert Bergman**, Chemistry's Gerald E. K. Branch Distinguished Professor, has won the prestigious National Academy of Sciences Award in Chemical Sciences. This honor—including a medal and prize of $15,000—is awarded annually for innovative research in the chemical sciences that contributes to the better understanding of the natural sciences and to the benefit of humanity. Bergman was acknowledged "for numerous innovative contributions at the interfaces of physical, organic, and inorganic chemistry."

Segalman and colleagues find key to thermoelectric energy



courtesy of Ben Urley/UC Berkeley

An organic molecule is trapped between gold nanoparticles.

Assistant Professor of Chemical Engineering Rachel Segalman and Berkeley colleagues have successfully generated electricity from heat by trapping organic molecules between metal nanoparticles, an achievement that could pave the way toward the development of a new source for energy.

For the past 50 years, utilizing wasted heat from power plants has been a major focus of research into thermoelectric converters. These converters rely upon the Seebeck effect, a phenomenon in which a voltage is created when the junctions of two different metals are kept at different temperatures.

The new UC Berkeley study marks the first time the Seebeck effect has been measured in an organic molecule, laying the groundwork for the development of more cost-effective thermoelectric converters.

In Memoriam: Donald N. Hanson

Emeritus Professor of Chemical Engineering Donald N. Hanson died on January 11 in Orinda, following a year of illness and hospice care.

He began his 40-year career at UC Berkeley in 1947, earned tenure in 1953 and was promoted to full professor in 1958. Hanson served as chairman of the chemical engineering department from 1963 to 1966, and he served for many years as its director of graduate admissions.

"Don was a beloved professor whose benevolent, often self-sacrificing devotion to students and colleagues was remarkable. He was the most generous colleague I have experienced during my many years at Berkeley," says departmental colleague John Prausnitz. (A more complete story will appear in the spring issue of *Catalyst*.)

Journey to the red planet

Mathies device will search for signs of life on Mars

courtesy of European Space Agency

In this artist's rendition, the ExoMars rover, scheduled for landing on Mars in 2015, drills beneath the surface to collect soil samples to test for amino acids and other signs of life.

The possibility of life on the red planet has captivated the imaginations of science fiction writers from H. G. Wells to Ray Bradbury. In the year 2015, with help from chemistry professor Richard Mathies and colleagues, we may finally learn whether life exists or ever existed on Mars.

In that year, the European Space Agency's ExoMars mission is scheduled to land a rover on Mars. The rover's instrument package will drill as far as six feet into the soil, extract and grind samples, and test them for telltale markers of life—amino acids. The tools on board are so fantastically miniaturized that it seems they could exist only in a science fiction story.

But the tools are real, and one of them was developed in Lewis Hall on the Berkeley campus. Anxiously awaiting the first reports from Mars will be the scientists who spent over a decade building the Mars Organic Analyzer (MOA)—Mathies and colleagues Jeff Bada of the Scripps Institution of Oceanography and Frank Grunthaner of NASA's Jet Propulsion Laboratory (JPL).

The MOA's early development was funded mostly by NASA's acclaimed astrobiology program. But with a renewed focus on manned space missions, NASA reduced funding for its search for life on other planets, putting the MOA at risk.

In January 2007, the Mathies instrument cleared a major hurdle. The MOA, part of a large instrument package called Urey, was selected for advanced development for flight with $750,000 of NASA mission funding and a $5 million commitment from JPL.

"We squeaked by just in time," says Mathies. "The ExoMars mission will probably be the last chance in my lifetime to send the MOA to Mars."

The Urey instrument package is named for Harold Urey (1893-1981), who earned his Ph.D. with G. N. Lewis

Katz is chemical engineering's newest associate professor

Alex Katz was promoted to associate professor in July. He joins his colleague David Schaffer as one of two associate professors in the Department of Chemical Engineering.

After his birth in Minsk, Belarus, one of the former Soviet republics, Katz and his family immigrated to Minneapolis, Minnesota. In middle school Katz attended Minneapolis's Technology Learning Campus.

It was there he was exposed to both science and poetry by teacher Jim Threinen, and Katz made a permanent connection between the two. "I wanted to do beautiful science," says Katz. He attended the University of Minnesota, where a chemical engineering honors thesis on measuring viscoelastic polymers developed into his master's thesis.

A desire to learn more about materials took him on a Hertz Fellowship to Caltech, where he earned his Ph.D. with Mark Davis in 1998. After a one-year postdoctoral appointment in Strausbourg, France, Katz came to Berkeley as an assistant professor in 2000.

Katz's research emphasizes new heterogeneous catalysts and techniques for producing them. The Katz research group is exploring catalysts with active organic components, which can be active at temperatures low enough to be useful in applications such as catalytic converters for cleaner-burning diesel engines, where they can eliminate low-temperature NO_x emissions.

Katz is also interested in tuning the characteristics of the support for catalysts to increase the rate of catalysis or to affect the selectivity.

Alex Katz works on catalysts in his research lab in Latimer Hall.

Although Katz's emphasis is on heterogeneous catalysts, the techniques he has developed have a broad application in materials science and nanotechnology. "The intricate nanoscale patterning techniques we are developing can lead to more general discoveries and to the development of new nanoscale electronic and optoelectronic devices," says Katz.

Katz recently won the first grant competition sponsored by Micromeritics Instrument Corporation. The prize, a catalyst characterization system, will be awarded to the College of Chemistry's Berkeley Catalysis Center.

at Berkeley in 1923. Urey later won the Nobel Prize for chemistry in 1934 for his discovery of deuterium, the heavy isotope of hydrogen.

In 1953 Urey and Stanley Miller conducted the famous Urey-Miller experiment. The pair mimicked conditions on early earth and created amino acids by passing electric sparks through a mixture of water, ammonia, methane and hydrogen.

During the ExoMars mission, the Urey instrument will dissolve Martian soil with water, add fluorescent tags that selectively bind with certain organic molecules, dry the samples and use a laser to check for amino acids, amines and fragments of DNA and RNA.

Amino acids can be detected at concentrations as low as a few parts per trillion. If they are detected, the MOA will use microcapillary electrophoresis to analyze their composition and to check the "handedness" or chirality of the acids. The whole Urey instrument will fit on the palm of one's hand, and the MOA is a "lab-on-a-chip" that will be contained on a small wafer inside.

Most amino acids are chiral—they can exist in one of two mirror image forms that are referred to as right-handed or left-handed. They are similar to the nuts and bolts at a hardware store that can have either right-hand or left-hand threads (depending upon whether the threads spiral in clockwise or counterclockwise direction).

Nuts and bolts will fit together only if the threads have the same handedness. To solve this problem, humankind standardized on right-hand threads for almost all hardware in common use. Amino acids are the nuts and bolts of life, and they can only work together if they, too, share the same handedness. Very early in the evolutionary process, life on earth emerged exclusively with left-handed amino acids.

The MOA is essentially a chirality checker. Inorganic processes, like those of the Urey-Miller experiment, produce left- and right-handed amino acids in roughly equal proportions. If the MOA detects only left-handed amino acids on Mars, that would indicate they were produced by life processes similar to those on earth.

"But what if the MOA detects mostly right-handed amino acids in Martian soil?" asks Mathies. "That would indicate that Martian life evolved in a way distinct from life on earth."

Mathies and his group are not resting easy. Between now and the 2013 launch date of the ExoMars mission, the MOA must be simplified and miniaturized even further to meet the stringent weight, power and environmental requirements of the mission. They are also working hard on expanding the MOA's analysis capabilities.

"We'll be busy until 2013," says Mathies. "But then comes the spacecraft's two-year trip to Mars and the landing. We'll be biting our nails then, hoping that all goes well for an experiment that may change our understanding of our position in the universe."

Toste is chemistry's newest associate professor

The Department of Chemistry has promoted Dean Toste to associate professor, effective last July.

Toste's family is from the Azores, a group of Portuguese-governed islands in the Atlantic Ocean about 1,000 miles west of Portugal. Toste was born there, but he moved soon after with his family to Toronto.

As an undergraduate, Toste majored in chemistry and biochemistry and went on to obtain an M.Sc. in organic chemistry at the University of Toronto. It was there that Toste first heard a presentation by Stanford University chemist Barry Trost.

Toste made his way to Stanford and earned his Ph.D. with Trost in 2000. He then spent two years as a postdoctoral fellow with Robert Grubbs at Caltech before becoming an assistant professor at Berkeley in 2002.

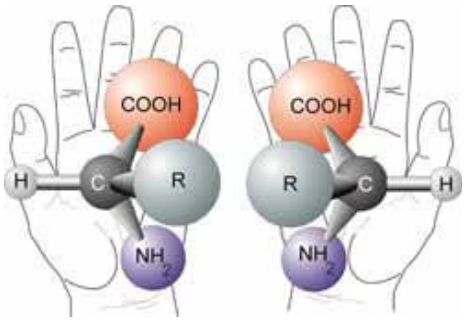
Toste's research group focuses on new catalysts and methods in organic synthesis, especially those techniques that could be useful in medicinal chemistry (see chemistry.berkeley.edu for a story on his work with gold catalysts). Toste credits his upbringing in Toronto, an ethnically diverse melting pot, for the broad perspective he brings to organic chemistry.

"Some chemists see organic chemistry as a mature field that can be reduced to a set of principles, like a cookbook," says Toste. "My grandfather grew up in the Azores, and he loved spicy food. When we moved to Toronto, he discovered a whole new range of spicy flavors, like Indian curries." For Toste there are new ingredients to be discovered in organic synthesis, new ways to combine them, and cookbooks yet to be written.

Chemistry's newest associate professor, Dean Toste, in his lab. Toste is an organic chemist with an interest in new synthetic techniques.

Toste points to a row of awards in his office from pharmaceutical firms. "These companies appreciate the creativity of my lab," he says, "and our exploration of fundamentals and new concepts in catalysis. If all we do is focus on applications, then we don't train students to find the applications of the future."

In Toste's lab there is no dichotomy between synthesis and fundamental research. "Synthesizing a new drug is a good thing," he concludes, "but better still if it yields a new molecule *and* a new fundamental discovery. The best discoveries are the ones that change the way we think."



courtesy of NASA/JPL

Amino acids can exist either in left-handed or right-handed versions. The acid group (COOH), the amine group (NH_2) and the functional group (R, which varies between the amino acids) can be arranged as mirror images.

Keeping posterity in mind

Jeanne Pimentel is a woman with a mission. Her goal is to make the papers of her late husband, the College of Chemistry's beloved professor George Pimentel, accessible to the public. She can often be found at UC Berkeley's Bancroft library, where she works several hours each week with Teri Doizaki, George's administrative assistant in the early 1960s (who later worked as the Department of Chemistry's Management Services Officer) and with Jessie Herr, who earned her Ph.D. with George in 1975. Together they sort the papers, eliminate duplicate copies, remove material that belongs in other archives, and use their knowledge of George's career to prepare the papers for processing by a professional archivist.

At the Bancroft library, Teri Doizaki and Jeanne Pimentel examine a document from the papers of George Pimentel. Jeanne is sorting the papers of her late husband to assist the Bancroft archivists.

"Jeanne's efforts will save us $10,000 to $20,000 in early sorting," says campus archivist David Farrell.

George Pimentel had a remarkable career that included a brief stint during World War II at Berkeley working on the Manhattan Project, which he abandoned in favor of joining the Navy as a submariner. Following the war, Pimentel returned to Berkeley, completed his Ph.D. with Kenneth S. Pitzer and joined the faculty in 1949. He received many honors for his work on chemical lasers and high-speed infrared spectroscopy, including Israel's Wolf Prize, the National Medal of Science, the Welch Award, the Priestley Medal and the Berkeley Citation.

He was equally well known for his CHEM STUDY project to improve high school chemistry education, and for his outstanding teaching to thousands of freshman chemistry students.

George died in 1989 after a 40-year career at the college. Upon his death the Bancroft library, home to the campus's archives and rare book collections, requested his papers. The contents of George's office were placed in 138 acid-free cartons and stored by the Bancroft.

While the library had originally intended to process the papers quickly, budget cuts in the 1990s left them unable to begin. "Each one-cubic-foot carton can hold up to 2,500 pieces of paper," says Farrell, "and it costs $500–$600 per carton to process documents."

The Pimentel papers languished until 1996, when Laurel Kirkland, a geophysics grad student studying the spectroscopy of Mars at Houston's NASA-funded Lunar and Planetary Institute, discovered them and realized their importance. In 1969, the Mariner 6 and 7 spacecraft had flown to Mars and analyzed its features using an infrared spectrometer designed by Pimentel and grad student Ken Herr and built at UC Berkeley.

Jeanne helped Kirkland find a prototype of the instrument and the original data tapes, buried deep in storage. By digging into the Pimentel documents at the Bancroft library, Kirkland also found valuable unpublished data and papers about the mission.

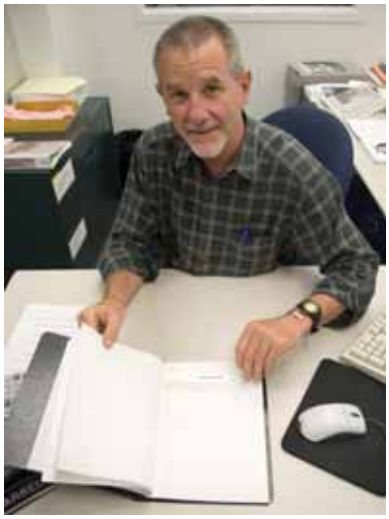
"It would be a sin not to make the papers accessible to the public," says Jeanne. In 2005 she began her mission to process the papers. Her strategy has been two-pronged: she is working with Doizaki and Jessie Herr to edit the size of the collection, and she has also enlisted the college's help with fundraising to defray the cost of the processing.

In these fundraising efforts, Jeanne has been joined by two allies—former UC president Richard Atkinson and Nobel Laureate Mario Molina. George served as Deputy Director with Atkinson, then the Director of the National Science Foundation in Washington, D.C., from 1977–80. Molina earned his Ph.D. with Pimentel in 1975 and remembers him as "an excellent teacher and a wonderful mentor; his warmth, enthusiasm, and encouragement provided me with inspiration to pursue important scientific questions."

Making generous commitments themselves, Atkinson and Molina have written to Pimentel's students and colleagues, informing them of the value of the collection and asking for their financial support for the archiving project and the Pimentel award (see sidebar on page 7).

Once the papers are processed, the index, or "finding aid," will be available on the Internet through UC's Online Archive of California (http://oac.cdlib.org/). The Bancroft History of Science and Technology Collection includes the papers of College of Chemistry professors Melvin Calvin, Harold Johnston, Y. T. Lee, G. N. Lewis, Henry Rapoport, Kenneth Pitzer, and Charles Wilke, among others.

For Jeanne Pimentel, the project is a bittersweet reminder of the past. "George was a wonderful writer, and even the most mundane correspondence often contains one of his wry comments," says Jeanne. "It makes me realize that even after all these years, I still miss him." She is not alone. *(For more on Pimentel, see the website Jeanne maintains at www.georgepimentel.com.)*



Bancroft archivist David Farrell displays the finding aid for the papers of Henry Rapoport. When the Pimentel papers have been processed, the finding aid also will be available on the Internet.

Giving back

For Kai-Ye Fung, multiculturalism is not a Berkeley buzzword, it's a business necessity. Born in Hong Kong, Fung spent 19 years with the Silicon Valley firm Applied Materials after completing her B.S. in chemical engineering at Berkeley in 1979.

Kai-Ye Fung (B.S. '79, ChemE) retired after 19 years with Applied Materials and plans to return to Hong Kong to set up a consulting business.

She retired in 2000 after having lived and worked in several countries. Her next goal is to return to Hong Kong and start a consulting practice in cross-cultural communication strategies for companies doing business in mainland China.

Living with more than one culture has been a reality for Fung since birth. Her father came from a long line of Manchu bureaucrats who moved to the city of Guangzhou (Canton) during the Qing Dynasty (1644–1912). He was the first member of his family to marry a Cantonese woman. The couple moved to Hong Kong as the communist revolution swept the country in 1948–49.

Fung, their only child, was born in 1958. She attended college for one year in Hong Kong before she moved with her parents to San Francisco in 1976. She completed another year of education at City College and then enrolled at Berkeley for the final two years of her undergraduate degree. "My years in chemical engineering at Berkeley were the best thing that happened to me," says Fung.

She started with Applied Materials, an equipment manufacturer for the semiconductor industry, in 1981. There Fung worked in a multitude of areas, from engineering to marketing, retiring as a senior director. During her career she spent four years working in Japan and another year in Taiwan, and she traveled to many cities in Asia and Europe for shorter business trips.

"As a Chinese woman," says Fung, "I think I've experienced more gender discrimination than racial discrimination." She recalls with a laugh some of the cultural collisions during the years she spent working in Japan.

At first, some of the collisions were physical—especially in doorways. "I quickly realized that in Japan, I was expected to hold doors open for men, even if I was their manager." Fung was able to earn the respect of colleagues, "not because of my managerial status," she says, "but because of my engineering skills."

After almost two decades of constant travel and six-day work weeks, Fung was getting tired. As 1999 drew to a close, she exercised years of accumulated stock options and retired a few months later.

Financially secure, Fung turned to caring for her aging parents. When she was 48, in 2006, her father passed away. Fung is now spending a few years traveling, and in her 50th year she will return with her mother to Hong Kong, where Fung will set up her consulting business.

"For international companies," says Fung, "profitability depends on good cross-cultural communication. We need to learn how to tolerate and respect each other if we are to work together successfully."

To acknowledge the value of her education, Fung has given generously to the College of Chemistry. She has designated the college as a beneficiary of both her life insurance policy and a bequest in her will. She further strengthened her support in 2006 by endowing the Kai-Ye Fung Dean's Opportunity Fund to provide discretionary income.

Through her hard work and tax contributions, Fung has given back to this country. Now she feels it is time to contribute in her former home. Says Fung, "I don't have any kids or expensive hobbies, so it's time to return to China and give something back there."

Establishing a Named Endowed Fund

George Pimentel always knew what he wanted. An inspiring teacher, outstanding scientist, and educational pioneer, he knew that the education he received at the University of California made it possible for him to study with some of the world's best chemists.

During his 40-year career as a professor at Berkeley, he wanted to establish a fund to encourage promising students to pursue undergraduate research as part of their science education. But he passed away before he could act on his plan.

To mark the 80th anniversary of his birth in 1922, the George C. Pimentel Endowment was established in honor of his longtime wish to create an endowed fund to support students. The fund was created with gifts from George's many loving friends, family members, students and colleagues.

The fund provides an annual prize to a graduating senior engaged in undergraduate research, who is planning to pursue graduate education in chemistry or a related field and who, like George, is also a member of the first generation in his or her family to attend college.

Named endowed funds can currently be established for an initial gift or pledge of $50,000 or more (pledges are typically paid over five years). A portion of the payout from endowed funds supports the purpose for which the fund was established, and a portion is added back into the principal to help the fund grow over time.

To learn more about how you can establish a named endowed fund, please contact Mindy Rex, Director of Development, College Relations, (510) 642-9506 or rex@berkeley.edu.

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Upcoming Events

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

April 21 — Cal Day
Berkeley Campus

Join us for this annual campus open house which will include lectures, tours and various activities for people of all ages.

9:00 – 10 a.m. Professor of Chemical Engineering and Bioengineering Jay Keasling will speak on "Synthetic Biology: From Bugs to Drugs and Fuels." 390 Hearst Memorial Mining Building. (Hosted by the College of Engineering.)

1:00 – 2:00 p.m. Chemistry Lecturer Michelle Douskey and Lonnie Martin of the Chemistry Demonstration Lab will present "Chemistry: Molecules, Materials, and Us." Pimentel Hall.

2:00 – 3:30 p.m. UC Berkeley is fast becoming an international center for energy-related research. Hear an all-star faculty panel, including chemistry's Jamie Doudna Cate, discuss "Curbing Climate Change." 10 Evans Hall.

2:00 – 4:00 p.m. Associate Dean Herbert L. Strauss and undergraduate advisors will discuss the college's undergraduate programs in chemistry, chemical biology and chemical engineering. 100 Lewis Hall.

For the complete Cal Day program, visit *calday.berkeley.edu*.

May 1 & 2 — Discover Cal Lecture Series
Southern California

"Being Good When Times are Bad: Reflections on Ethical Life from Stoic and Buddhist Traditions"

Visit *discovercal.berkeley.edu* for details and registration, or call (888)UNIVCAL or (888) 864-8225.

May 2 — Springfest
6:30 – 8:30 p.m., Pyramid Alehouse
901 Gilman Street, Berkeley

Join us as we celebrate our graduating undergraduate and graduate students from the Class of 2007. All alumni and friends are invited to this complimentary event! Reservations are not required.

May 19 — Commencement
2:00 p.m., Zellerbach Hall

Larry Bock, former President and CEO of NanoSys, Inc., and a member of the College of Chemistry's Advisory Board, will be this year's commencement speaker.