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Ellen R. Fisher

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Message from the Chair



It is amazing to me that we have already hit the midpoint of the fall semester. I'm still not sure exactly where September went, have missed a good deal of the major league playoffs, and now it's nearly November. As a result, I have been gently nudged to write this column quickly so that we can get this edition of the newsletter out before some of the Department's upcoming events.

As I noted in my column in our last newsletter (Spring 2011), the department continues to evolve and change. Over the summer, we said goodbye to one of our long-time employees, Shelly Swanson, who left the department in August to care for her parents full time. Shelly started working in the department in 1986, earned a bachelor's degree in business at CSU while working full time in the department, and for the past four years served as the department's head of accounting and Director

of Operations. Shelly was a wonderful supporter of the chemistry program and a strong advocate for students and faculty. Although we wish her and her family the best, she will be sorely missed.

As you will read inside, on October 22, the Department will host the Stille Symposium for the first time in many years. The organizers, Profs. Matt Shores and Tony Rappé, have compiled an excellent slate of speakers, with the theme "Materials for a Sustainable World." The event will include for the first time, a student poster session, providing a venue for networking with these eminent scholars. The Stille symposium has a rich history, having been established after the death of Prof. John Stille in 1989. We hope to hold future Stille symposia on a biennial basis. In December, the Department will host Nobel Laureate Prof. Ei-ichi Negishi, who will present a departmental colloquium in our ongoing Boulder Scientific Distinguished Lecture series. Our own Bob Williams was an undergraduate in the Negishi laboratory and John Stille worked on very similar chemistry; thus there are many connections with CSU. Both events are likely to be well attended by members of the CSU community and scientists from around the region.

Over the past few months, I have had the opportunity to host two outstanding events that have allowed me to meet many alumni as well as reconnect with alumni and friends I hadn't seen in many years. In July, the Department held a surprise "Celebration of 40 Years of Service" event for Prof. Gary Maciel (he didn't want a "retirement" party) at the home of Mike and Elizabeth Elliott. Several of Gary's former students and postdocs attended, along with staff, faculty, family, and friends. It was amazing to see the impact that one individual has had on our department and to have had the privilege of having that person as a colleague and friend.

In August, the Department hosted a reception for alumni and friends at the Denver National ACS meeting. The event was held at the CSU Denver Center and the attendance far exceeded my expectations as current faculty and students mingled with alumni, donors and friends. We also announced the newly established Swanson scholarship for undergraduate chemistry majors at that event, and recognized the gifts of other donors. One personal highlight of the evening was seeing my former student Bernadette Hernandez-Sanchez (Ph.D., 2004), currently a staff member at Sandia National Labs in Albuquerque. Bernie came to the ACS meeting with several students that she is mentoring in her labs, so I had the opportunity to meet some of my academic grandchildren! Truly a "proud-parent" moment for me.

Over the next few months, I have several trips planned and as part of my travels, will be hosting alumni dinners in St. Louis, Salt Lake City, and possibly San Diego in the spring. I am excited about meeting more people with CSU connections and am looking for additional ways to enhance communication with our alumni and friends. Please feel free to contact me with your suggestions and possible stories we could include in future editions of this newsletter.

Upcoming Events

October 22, 2011

Stille Symposium

October 28, 2011

Chem Club Halloween

December 2, 2011

Oren & Jennifer Anderson
Retirement Reception

December 6, 2011

Boulder Scientific
Lecture - Ei-ichi Negishi

December 9, 2011

Chemistry Winter
Open House

Honors and Accomplishments



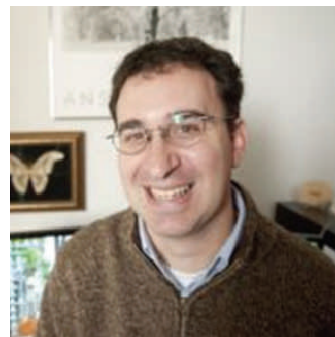
Professor **Eugene Chen** was recently awarded funding as a **SoGES Resident Fellow** to further his studies in global environmental sustainability. The School of Global Environmental Sustainability or SoGES funds research projects that are interdisciplinary in nature, involving faculty members and researchers from across colleges. These

projects focus on at least two of the school's research focal areas including climate change and energy, food security, environmental institutions and governance, land and water resources, sustainable communities, and biodiversity, conservation and management.

Genessa Smith (Advisor: John Wood) was one of 12 students recognized by **Roche** for her work in synthetic chemistry. Genessa was recognized for her work with developing laboratory syntheses of biologically important compounds that have been found in nature. This is the second year in a row that Roche, a leading pharmaceutical company, has recognized a Colorado State University chemistry graduate student for their research accomplishments.

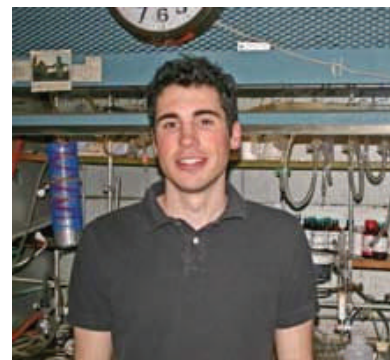


Nick Fisk, Assistant Professor of Chemical and Environmental Engineering and joint faculty member with the Department of Chemistry, was named one of only five **2011 Boettcher Investigators** as part of the Webb-Waring Biomedical Research Program.



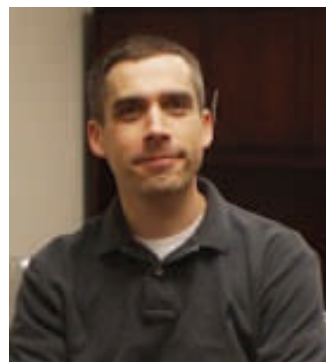
Nick's work focuses on developing new biotechnological tools with biomedical and materials applications.

Daniel Di Rocco (Advisor: Tom Rovis) received a **2011 Aldrich Graduate Student Innovation Award** (GSIA). Mr. Di Rocco's award included travel expenses to give a presentation at the 2011 GSIA Symposium at the Aldrich campus in Milwaukee, Wisconsin.



Prof. **Tom Rovis** was awarded a grant from the Colorado Center for Drug Discovery (C2D2) to study the application of a new chemistry technology, called "NHC catalysis," that enables the manufacture of drugs such as those used to treat central nervous system disorders like depression. The research is expected to identify important structural features in

the drugs that could lead to reduced side effects or increased potency. This research could one day produce new medications or new manufacturing processes for medications.



Assistant Professor of Chemistry **Eric Ferreira** was the recipient of a **Thieme Chemistry Journal Award, 2011**.

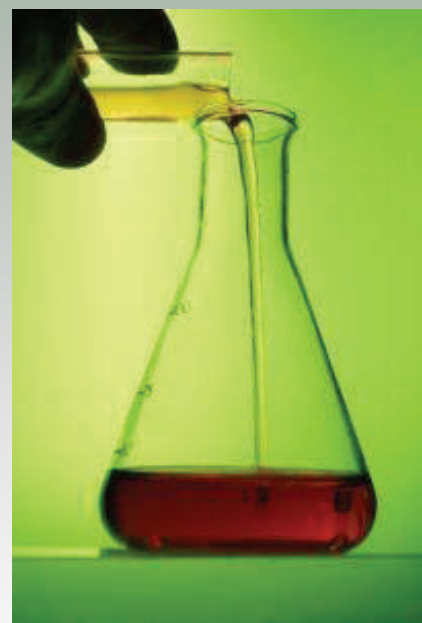
Thieme publishes a number of important international organic chemistry journals including Synthesis, Synlett and Synfacts. The Award recognizes the work of young professors from around the world, who are at the beginning of their independent academic careers. Eric's research at CSU has centered on synthetic transformations, especially those of interest in transition metal catalysis.

Honors and Accomplishments

Chemistry Undergraduate Honor Students

Chemistry is proud to have a total of 23 undergraduate honors majors. Freshman students accepted to the Honors Program come to Colorado State with an average GPA of 4.14 and an average ACT composite of 31. This is truly an outstanding group of students.

Ryan Ash
Sean Babbs
Christopher Barber
Geordan Brickey
Mikaela Cherry
Ryan Clark
Timothy Cuevas
Jessica Egner
Rebecca Ewing
Adam Golos
Melissa Gray
Patrick Kennedy
Ryan Lewis
Kenzie Moore
Christopher Nickell
Kylara Jane Ocheltree
Kristin Olsson
Damaris Roosendaal
Kelsey Schulte
Emily Strausbaugh
Emily Tully
Garrett Wheeler
Ryan Whitcomb



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Chemistry by the Numbers

The following list gives a snapshot of the chemistry department at CSU, by the number of:

Current graduate students (Fall 2011).....	159
International graduate students (Fall 2011).....	12
Current undergraduate majors (Fall 2011).....	152
Ph.D.'s granted 2010-2011.....	17
M.S. degrees granted 2010-2011.....	6
B.S. degrees granted 2010-2011.....	20
Full time research-active faculty (Fall 2011).....	28



Degrees Awarded 2010-2011

Doctor of Philosophy

William Alley	May 2011, Finke
Timothy Arthur	August 2010, Prieto
Ping Dong	May 2011, Wood
David Freeman	May 2011, Wood
Rebecca Friedman	December 2010, Rovis
Wesley Hoffert	May 2011, Shores
Ryan Holcomb	December 2010, Henry
Stephen Lathrop	May 2011, Rovis
Jeffrey McPhee	December 2010, Van Orden
Garret Miyake	May 2011, Chen
James Mosby	August 2010, Prieto
Scott Noblitt	May 2011, Henry
Dmitry Peryshkov	May 2011, Strauss
Brett Prigaro	May 2011, Wood
Natalia Shustova	December 2010, Strauss
Sarah Stevens	May 2011, Wood
Joshua Stillahn	December 2010, Fisher

Master of Science

George Bullock	May 2011, Levinger
Keven Clawson	December 2010, Bernstein
Tashi Herzmark	August 2010, Elliott
Jacob Kershman	December 2010, Prieto
Julian Metz	May 2011, Kennan
Tatyana Sabodash	May 2011, Williams

Bachelor of Science

Abdulaziz Al-Shamari	May 2011
Beatriz Da Silva	May 2011
Brett Fedack	December 2010
Travis Folsom	May 2011*
Lacie Glover	August 2010
Duncan Heyliger	December 2010*
Ethan Hill	May 2011*
Sheryl Johnson	August 2010
Andrew Kledzik	December 2010*
Jarrad McKay	December 2010*
Catherine Munson	May 2011*
Brandon Runkle	December 2010
Trevor Schwaab	December 2010*
John Shepherd	May 2011
Chris Shonka	December 2010
Jodi Stark	May 2011
Joanna Whatsitt	December 2010
Laura Witte	May 2011
Brendan Young	May 2011*
Benjamin Zigterman	May 2011*

*ACS Certified



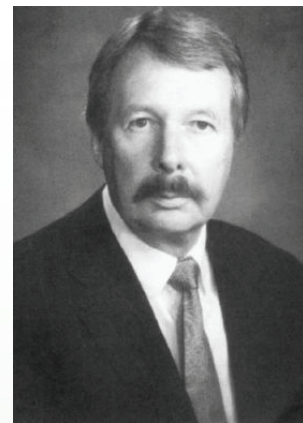
Happenings

2011 John K. and Dolores Stille Science Symposium

The Department of Chemistry is honored to host the seventh John K. and Dolores Stille Science Symposium, *Materials for a Sustainable World*, on Saturday, October 22, 2011.

Four world-renowned scientists will give plenary lectures on key aspects of materials for sustainable living:

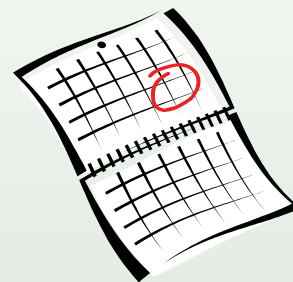
A. Paul Alivisatos - University of California, Berkeley
Daniel G. Nocera - Massachusetts Institute of Technology
Esther S. Takeuchi - The State University of New York, University at Buffalo
Robert M. Waymouth - Stanford University



The lectures will be followed by a student poster session highlighting materials research efforts at Colorado State University. This event is free and open to the public. For additional details and to register, please go to <http://stille.chem.colostate.edu/>

Important Dates

October 22	Stille Symposium
October 28	Chem Club Halloween
November 24 & 25	Chemistry Closed - CSU Holiday
December 2	Retirement Reception for Oren & Jennifer Anderson
December 6	Boulder Scientific Lecture - Ei-ichi Negishi
December 9	Chemistry Winter Open House
December 16	Fall Graduate School Commencement
December 17	Fall Undergraduate Commencement
December 26 - 28	Chemistry Closed - CSU Holiday
January 2	Chemistry Closed - CSU Holiday
January 16	Chemistry Closed - CSU Holiday
January 17	Spring Semester Begins
May 11	Spring Graduate School Commencement
May 12	Spring Undergraduate Commencement



CSU Chem Club Mad Scientist Halloween

The Chem Club Halloween Show is Friday, October 28 from 6:30 - 9 pm in the Chemistry Building lobby and large lecture halls.



The event provides free educational and entertaining activities, including several small demonstrations where kids can learn about science and get prizes and candy at the same time! We will also have several crafts, hands-on activities and one large show. Parents are welcome to bring children of any age.

The largest event that the nationally recognized CSU Chemistry Club puts on every year, the Mad Scientist Halloween is completely organized by CSU students and volunteer based. Please stop by and join us!

Happenings

Nobel Laureate Ei-ichi Negishi to Present Boulder Scientific Lecture at CSU

Chemistry is honored to present Professor Ei-ichi Negishi, Nobel Laureate and Professor of Chemistry at Purdue University, as the Boulder Scientific Distinguished Lecturer on December 6, 2011.

Negishi was born on July 14, 1935 in Changchun, China, as a Japanese citizen. His family moved to Harbin when he was one and then to Seoul, Korea, two years before the end of World War II. Shortly after the end of World War II in 1945, his family returned to Japan and moved into a house in Tokyo which his parents had purchased several years earlier that miraculously survived many intensive bombings.

Negishi entered Tokyo University and graduated in 1958 with a bachelor's degree in Engineering. He then worked as a research chemist at the Iwakuni Research Labs, which was the main research facility of Teijin Co. He won a Fulbright-Smith-Mund Scholarship in 1960 and entered graduate school at the University of Pennsylvania and obtained his PhD degree in just three years under Professor A.R. Day. In 1966, he joined H.C Brown's laboratory as a post-doc for two years and then stayed four more years as Prof. Brown's assistant and an instructor. During his tenure in the Brown laboratory, he worked mainly in the area of organoboron chemistry. He then moved to Syracuse University in 1972 to start his independent career as an Assistant Professor and it was that year, that Prof. Robert M. Williams of the CSU Chemistry Department joined his laboratory as an undergraduate research assistant. After achieving tenure, Negishi was quickly recruited back to Purdue in 1979 where he has remained ever since and is currently the H.C. Brown Distinguished Professor of Chemistry.

It was at Syracuse that Negishi first branched out into transition metal chemistry, leading to his interests in transition metal-catalyzed cross-coupling reactions that eventually evolved into his discovery of the zinc-based palladium-catalyzed cross-coupling reaction for synthesizing stereo-defined alkenes. This reaction is now known as the "Negishi Cross-Coupling Reaction". He also discovered a zirconium-catalyzed carboalumination reaction and several other important transition metal-catalyzed processes. His work has been recognized with many accolades, the most noteworthy of which are the Chemical Society of Japan Award (1997), ACS Award for Organometallic Chemistry (1998), the Yamada-Koga Prize (2007), ACS Award for Creative Work in Synthetic Organic Chemistry (2010) and the Nobel Prize in Chemistry (2010).

The 2010 Nobel Prize in Chemistry was "for palladium-catalyzed cross couplings in organic synthesis" and was shared between Prof. Negishi, Richard F. Heck (University of Delaware), and Akira Suzuki (Hokkaido University, Japan). It is vitally significant to recognize that the late John K. Stille, University Distinguished Professor in the CSU Chemistry Department who was killed on United Airlines flight 232 in Sioux City, Iowa in 1989, had also developed a highly cited and widely used palladium-catalyzed cross-coupling reaction involving organotin compounds that bears his name. Had Prof. Stille survived, many chemists believe that he would have shared the Nobel Prize with Prof. Richard F. Heck, who pioneered this field, and one of the other two Japanese Nobel laureates.



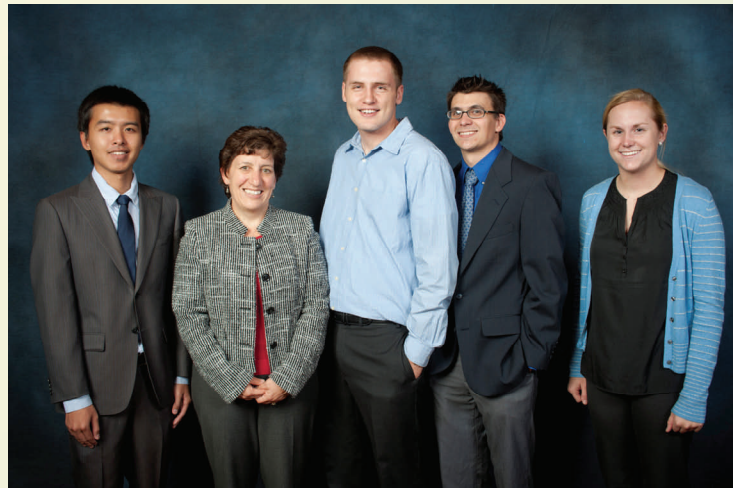
Ei-ichi Negishi receiving his Nobel Prize from His Majesty King Carl XVI Gustaf of Sweden at the Stockholm Concert Hall, December 10, 2010.

Giving Supports Chemistry Graduate & Undergraduate Students

Rodney Bush Fellowship in Organic Chemistry

Created by his wife, Cheryl, this fellowship is in memory of Rodney, who specifically recruited CSU students for Procter & Gamble. This is the seventh year of the Bush Fellowships.

Criteria: First year organic chemistry graduate student with a minimum 3.0 undergraduate GPA.



2011 Bush Fellowship Awardees (left to right): Natthawat Semakul, Department Chair Ellen Fisher, Darrin Flanigan, Timothy Dreier, and Suzie Stevenson.

Department Announces Newly Endowed Undergraduate Scholarships



The Department is pleased to announce two newly endowed scholarships for undergraduate students. The first is the **Harry Puleston Memorial Scholarship** which has been an annual scholarship for many years. Last fall, Dr. Rodney Otzenberger, a former student of Dr. Puleston's, provided significant funding to establish a pending endowment. Through the generous donations of current and former faculty members, students, and staff, the fund reached full endowment this summer. Dr. Puleston's legacy will now be honored in perpetuity. Dr. Harry "Shorty" Puleston was a renowned and beloved CSU Chemistry professor for 38 years before his death and a 50 year member of the American Chemical Society. In his career, he developed preservation techniques for wartime military food rations and worked on atomic energy projects in California and Nevada. His greatest interest, however, was in teaching and in helping students succeed in chemistry as well as in life. Students were the reason he happily went off to campus every day, and many of them kept in touch with him long after graduation. Dr. Puleston would undoubtedly be very pleased to see how his scholarship

assists a growing list of undergraduates in his memory. The opportunity to make this annual award continue as a permanent feature at CSU through an endowment is the best tribute possible, one that he would certainly consider the highest honor a teacher could receive. His wife, Pauline Puleston (above) is still an enthusiastic supporter of the Department and regularly attends departmental events.

The second newly endowed undergraduate scholarship was established this summer through a generous donation from CSU chemistry alum Dr. Mike Swanson (B.S. 1973) and his wife Kathy. The **Michael S. & Kathleen A. Swanson Scholarship**, which will be awarded for the first time in 2012, was established to support undergraduate students in chemistry and/or a student enrolled in the College of Natural Sciences with an interest in pursuing a medical doctor (M.D.) degree. Mike and his family (pictured at right) make their home in Highlands Ranch and have been strong supporters of CSU and the College of Natural Sciences for many years. We thank them for this generous gift that will undoubtedly help many CSU students achieve their career goals.



Recent Events

2011 NSF Research Experience for Undergraduates (REU)

For the 18th consecutive summer, the Department of Chemistry at Colorado State University hosted an NSF-sponsored undergraduate research program in chemistry. Co-directed by Chemistry professors Amy Prieto and Matt Shores, the 10 week program ran from June 5th through August 12th. Nine students outside CSU were fully supported by the REU program, including room, board and travel; three others enjoyed partial support from the NSF grant and participated fully in the REU activities. CSU undergrads doing research in the department were also invited to participate in the REU educational activities.

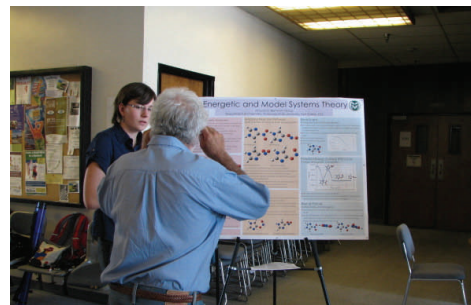
Our unique summer experience combined an enviable environment with access to world-class researchers working in all areas of chemistry, at length scales ranging from molecules to extended materials. The main focus was on individual projects in labs of some of the 27 faculty mentors, with day-to-day input from grad students and postdocs. In addition to the research, enrichment activities included discussions on scientific ethics and career building skills. The program was capped off with a poster session, highlighting the research progress of the participants over the summer. Somewhere along the way, the students managed to sneak out of lab long enough to take in a whitewater rafting trip on the Poudre River and have fun in the Rocky Mountains.

Our program has been working to strike a balance between providing research experiences to students who might not otherwise have the opportunity, and making research progress as measured by published manuscripts and presentations. Starting this year, we featured a subset of projects where advisors made extra efforts to plug students into thoughtfully constructed assignments, with the aim to maximize discoveries.



Having 27 potential faculty participants, including faculty from Chemistry, Chemical & Biological Engineering, Mechanical Engineering, Electrical & Computer Engineering, and Soil and Crop Sciences, gives our program significant flexibility in matching participants to projects relative to other REU programs sponsored by NSF.

Details for the 2012 program are being finalized; information and updates will be available at our website: www.chm.colostate.edu/reu



ACS Alumni Reception



Over 90 faculty, students, alums and friends gathered for The 2011 Chemistry Department Alumni Reception during the fall ACS National Conference and Expo, making the evening a huge success!

We were proud to recognize many faculty for their achievements, including Prof. Robert Williams, recipient of the 2011 ACS Ernest Guenther Award in Chemistry of Natural Products, Prof. Amy Prieto, 2011 ACS Inorganic Division ExxonMobil Solid State Chemistry Faculty Fellowship recipient, and ACS Fellows Prof. Debbie Crans, Prof. Lou Hegedus

(emeritus), Prof. Branka Ladanyi and Prof. Sandra Bonetti from CSU-Pueblo.

In addition, it was our honor to have several special guests join us for the evening. Professor Emeritus George Splittgerber, who taught with the Chemistry department for 40 years, from 1948 to 1988, and has been an ACS member for nearly 60 years. Edna Donar, 1958 alumnus, who along with husband David established in 2007 the Lamb-Donar Scholarship, an endowed scholarship to benefit students in the College of Natural Sciences. Dr. Edna Donar worked as a research assistant in the field of medicine and taught science throughout her career. Dr. Mike Swanson, 1973 alumnus and well-known expert in infertility, gynecology and obstetrics was also honored at the reception. Dr. Swanson and his wife Kathy just created an endowed scholarship that will support undergraduate students in chemistry or other natural sciences program who have an interest in a career in medicine.

We hope to have future alumni and friends receptions at ACS meetings and other professional conferences, so if you weren't able to attend in Denver we look forward to seeing you at future events!



What's New

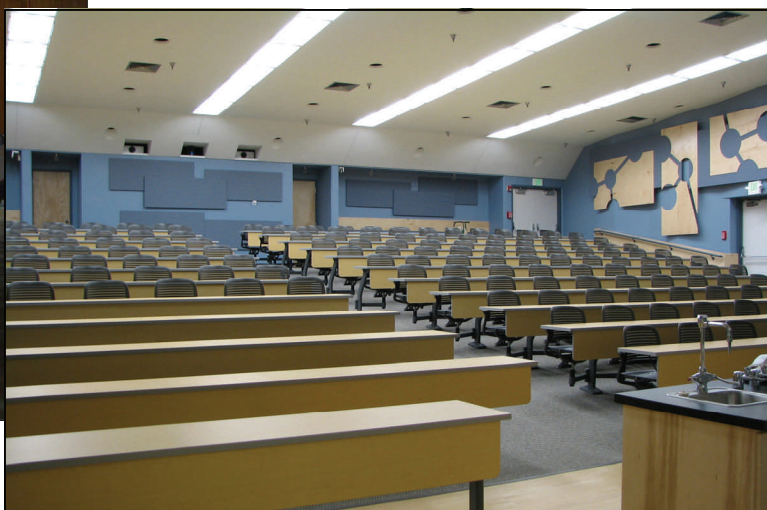
Chemistry Lecture Hall Gets Facelift

If you stopped by the Chemistry building this year, you probably noticed that big changes were underway in the west lecture hall. After 6 months of construction, A103 is completed and faculty and students are enjoying the newly updated space.

Improvements were made to seating, walkways, lighting, flooring, periodic tables, audiovisual systems, acoustics, and HVAC.



Our lecture halls were among several on campus selected for renovation. The east lecture hall is scheduled to begin construction in the summer of 2012.



I Love A Parade

You're never too geeky to enjoy a good parade! Undergraduate chemistry and pre-med majors showed their love of chemistry and dressed up as elements to enjoy a day of fun and sun in the 2011 New Belgium Tour de Fat parade. Their enthusiasm was summed up by one freshman chemistry major who said simply, "...the nerdiness runs deep!" We celebrate and applaud their nerdiness!



New Belgium Brewing hosts this annual event in Fort Collins and other cities nationwide to promote sustainability and the environmental friendliness of bicycles and public transportation.

