

ALUMNI NEWS

DEPARTMENTS OF CHEMICAL ENGINEERING AND CHEMISTRY WINTER 2003

Noyes Lab Centennial

In September 13-15, over 200 alumni, former and current faculty, friends, and students from around the country converged at Noyes Lab to commemorate the 100th anniversary of the building's construction.

The Centennial celebration opened with a slide presentation by Professor Emeritus Nelson Leonard, who provided personal reminiscences of the significant figures who worked in Noyes Lab, including William Noyes himself and luminaries such as Roger Adams, William Rose, and Harry Drickamer.

The Centennial's keynote address, the inaugural Parr Lectureship in the Department of Chemical and Biomolecular Engineering, was given by alumnus Steve Miller, former CEO of Shell Oil. (A feature story on Steve Miller appears on page 2 of this newsletter.) Other speakers included Nobel Prize winner and former faculty member Rudy Marcus and U of I Director of General Chemistry Steve Zundahl. More information about the Centennial events, including numerous photographs and reminiscences, is available at <http://www.scs.uiuc.edu/centennial>.

The celebration concluded with the designation of Noyes Lab as a National Historic Chemical Landmark by the American Chemical Society. The ACS brochure describing the designation and giving a brief history of the lab is included as an enclosure with this newsletter. Historian Sharon McGraw, author of *Prometheans*



in the Lab—Chemistry and the Making of the Modern World, spoke at the dedication ceremony on the history of the lab, and a commemorative plaque was unveiled by Nina McClelland, director of the board at the ACS. The ACS website contains historical data, photographs, and biographies,

Nina McClelland, director of the board at the American Chemical Society announced Noyes Laboratory's designation by ACS as a National Historic Chemical Landmark.

as well as the text from the dedication plaque (<http://center.acs.org/landmarks/landmarks/noyes/>).

The plaque commemorating Noyes Laboratory as a National Historic Chemical Landmark reads:

Noyes Laboratory occupies a central place in the development of chemical sciences in the United States. Four departments of national and international stature—Chemistry, Biochemistry, Chemical Engineering, and the Illinois State Water Survey—were at one time simultaneously located within its walls. Generations of scientists and engineers trained here under the leadership of renowned chemists such as William A. Noyes and Roger Adams. Chemical sciences in the United States have been immeasurably strengthened by the important and continuing interdisciplinary research conducted by Noyes Laboratory scientists.

From the Director

In this issue we highlight the events celebrating the Centennial of Noyes Laboratory, a venerable building that has served as the incubator for generations of students and numerous discoveries here at the University of Illinois. The designation of Noyes Lab as a National Historic Chemical Landmark by the American Chemical Society confirms the important role that chemical sciences has played in the lives of thousands of alumni and friends. A number of alumni asked about the future of Noyes Lab. We are planning on a full and dramatic overhaul of this building into a stunning environment that integrates classroom and laboratory instruction, a modern electronic and print library, and a research center. These plans will be described in a future newsletter. As with the rest of the nation, we had a poor budget year, but despite this downturn, we are experiencing many successes. The latest round of national awards further confirms our pre-eminence, with SCS faculty being recognized for contributions to analytical instrumentation, organic synthesis, surface science, chemical engineering, and enzyme mechanisms.



Thomas B. Rauchfuss

To reach the editor...

Please send us your news and also include comments on the newsletter, and any questions you may have.

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Inaugural Parr Lectureship

As part of the Centennial celebrations, the Department of Chemical and Biomolecular Engineering began a lecture series honoring Samuel W. Parr, the father of Chemical Engineering at the University of Illinois. The Parr Lectureship was initiated by faculty in the Department to recognize outstanding chemical engineers who have had significant societal or technological impact. Nominations are solicited from the faculty, who then vote on the recipient. The award will be given approximately once a year.

The inaugural lecture was given by UI alumnus Steven L. Miller, CEO, President and Chairman of the Board of Shell Oil Company. Mr. Miller's talk, "Crucible of Change," focused on the role of land-grant colleges in the development of future leaders and the fiscal challenges facing those land grant colleges. Mr. Miller challenged his corporate peers to work with academic leaders to develop fiscal responsiveness and to assist land-grant universities in meeting the challenges of diversity and multiculturalism in the new global economy.

A native of Kansas City, Missouri, Steven Miller graduated with a BS degree in Chemical Engineering from the University of Illinois. He began his career with Shell Oil in 1967 and was named Vice President of Refining and Marketing for Shell in 1988. After working with Royal Dutch/Shell management in London for a number of years in the 1990s, Mr. Miller returned to the U.S. in 1999 to assume his current responsibilities.

Active in the business community, Mr. Miller serves on the boards of a number of local and national organizations and institutions, including Rice University's Board of Trustees and the James A. Baker III Institute for Public Policy. Mr. Miller resides in Houston with his wife and two children. A full biography is available at www.scs.uiuc.edu/chem/parr/miller.htm.



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Department of Chemical Engineering Announces Name Change

New Faculty

Chad Rienstra joined our Chemistry faculty this year following a NIH postdoc at Columbia University with Ann McDermott. Rienstra grew up in western Michigan and graduated from Macalester College in 1993. His received his PhD under Robert Griffin at MIT in 1999.

His research interests are in NMR spectroscopy of membrane protein structure and dynamics. Says Rienstra, "Some of the most important advances in NMR and MRI have occurred at U of I. The common link is a culture that recognizes the value of enabling technologies for fundamentally new science and encourages risk-taking and the development of new paradigms." He continues "For me, the wonderful history of NMR, the intellectual environment, and the infrastructure and support for junior faculty offered an unbeatable combination."

Rienstra lives in Champaign with his wife, Jennifer Gartside, who supervises student-teachers part time, and their nine-month-old daughter Elizabeth, a skillful crawler and "future spectroscopist."

In September 2002, the Department of Chemical Engineering officially changed its name to the Department of Chemical and Biomolecular Engineering. The addition of "biomolecular" to the name reflects the growing faculty and student interests in biological applications of chemical engineering's systems approach. The department continues to maintain a significant presence in polymer, materials, and semiconductor processing as well as fluid dynamics and control theory.

The name change recognizes the department's significant activity in the biological arena, including at present, drug delivery, biocatalysis, and bioenergetics. Students can choose between two degrees: one in Chemical Engineering, as before the name change, and a new degree in Chemical and Biomolecular Engineering. For the latter track, students will take biochemistry-oriented courses for their technical electives.

The name change was foreshadowed several years ago when Professor Deborah Leckband created a course called "The Physical Basis of Life," a popular sophomore-level class that surveys biochemical and cellular processes from the perspective of a chemical engineer. The vitality of the more traditional Chemical Engineering degree is reflected in the creation, under the guidance of Professors Mark Kushner and Ed Seebauer, of a new laboratory course in Materials Processing. Look forward to the next newsletter for a feature article on this innovative coursework and the corporate partnerships that are making it possible.

Department of Chemical & Biomolecular Engineering

THE UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



Remembering Harry Drickamer

Professor of Chemistry, Harry G. Drickamer, scientific pioneer and longtime educator and colleague in the School of Chemical Sciences, died May 6, 2002 at the age of 83.

Drickamer was Center for Advanced Study Professor of Chemical Engineering, Chemistry and Physics at the University of Illinois at Urbana-Champaign. His experiments utilized ultra high pressure as a tool for understanding electronic behavior in condensed systems.

Drickamer received his bachelor's degree in 1941, his master's degree in Chemical Engineering in 1942, and his doctorate in Chemical Engineering in 1946, all from the University of Michigan. He joined the Illinois faculty in 1946 and became a full professor in 1953. During

his career, he trained more than 120 doctoral students and postdoctoral researchers. Several years ago, his former students honored him by establishing the Drickamer Graduate Fellowship for students in the departments of Chemical Engineering, Chemistry and Physics, reflecting Harry's broad interests.

Drickamer was associated with materials research programs of the U.S. Department of Energy, and among numerous other awards, he received the DOE Award for Outstanding Sustained Research and the National Medal of Science. He was a member of the National Academy of Sciences, the National Academy of Engineering, the American Philosophical Society, and a fellow of the American

Academy of Arts and Sciences, the American Association for the Advancement of Science, and the Royal Society of Chemistry. He was appointed professor in the University of Illinois Center for Advanced Study, the highest recognition the university bestows upon members of its faculty.

Born Nov. 19, 1918, in Cleveland, Ohio, Professor Drickamer is survived by his wife, Mae Elizabeth McFillen, whom he married in 1942, and five children.

The School of Chemical Sciences will sponsor a symposium in Dr. Drickamer's memory later in 2003. Memorial donations to the Drickamer Fellowship Fund can be made online at www.scs.uiuc.edu/chem_eng/alumni/makeagift.htm or sent to the School of Chemical Sciences.

Noyes Lab Centennial Celebration



The designation of Noyes Lab as a National Historic Chemical Landmark occurred on Saturday morning, September 12. The keynote lecture was delivered by Sharon Bertsch McGrayne (above). Ms. McGrayne's address included a history of the building itself as well as describing many of the significant scientists who worked in the building and some of the most notable achievements that occurred here.



Noyes Lab Centennial Alumni 1872-2012

Throughout the day, visitors browsed a list of the more than 13,000 alumni who have graduated from School of Chemical Sciences degree programs since 1872, the first graduating class from the Department of Chemistry. Visitors also viewed displays which described the history of the Chemical Sciences at the U of I. You can see many of these images in the enclosed ACS Historic Chemical Landmark brochure on Noyes Lab.



Celebration participants registered at the door of the 100-year-old Noyes Lab (left). All registrants received a commemorative paperweight made from original bricks removed during the renovations of Noyes Lab Room 100.



Professor Emeritus Nelson Leonard presented his talk "Signal to Noyes: Voices Still Hear" to assembled guests in the recently renovated Noyes 100 (top). Professor Leonard joined the faculty at the I in 1943 and has been a Faculty Associate in Chemistry at Cal Tech since his retirement in 1992. Centennial participants enjoyed a wine and cheese reception (above) following the Inaugural Carr Lectureship.



Visitors enjoyed seeing old friends at the continental breakfast in Noyes Lab (left) first thing on Friday morning. A dinner (above) concluded Friday's activities. Professor Bill Hammack of the Department of Chemical and Biomolecular Engineering presented the after-dinner remarks; Professor Hammack produces a weekly radio essay called "Engineering and Life" that is syndicated nationally on National Public Radio.

Professor Pirkle Becomes Emeritus

The School of Chemical Sciences congratulates Professor William H. Pirkle of the Chemistry Department on his recent retirement. Professor Pirkle received his B.S. from the University of California, Berkeley, in 1958 and his Ph.D. from the University of Rochester in 1963. He joined the faculty at Illinois in 1964. His research in organic chemistry, which he continues as an emeritus professor, entails the use of chromatographic and spectroscopic NMR techniques to study optical resolutions. His numerous awards include the Chirality Medal from the Swedish Academy of Pharmaceutical Sciences, the ACS Award in Chromatography, A. S. Martin Medal from the British Chromatographic Society, and the Robert Boyle Gold Medal for Analytical Chemistry from the Royal Society of Chemistry.



Hammack Receives AMSE Medal

Professor Bill Hammack, MS '86, PhD '88, Chemical Engineering, received the Edwin F. Church medal from the American Society of Engineers in May 2002. The AMSE established the medal to be awarded annually if warranted to the individual who has rendered eminent service in increasing the value, importance and attractiveness of engineering.

Professor Hammack received the award for his weekly NPR program "Engineering and Life." The citation reads "for more than 120 radio commentaries serving to increase the public's understanding and appreciation of the role of engineering and technology in society." The award features a bronze medal and a \$2500 honorarium. Congratulations Bill!



Chemistry Alumnus Receives National Medal of Science



In a ceremony at the White House on June 12, President George W. Bush awarded Dr. Charles Keeling the 2002 National Medal of Science. Dr. Keeling graduated from the U of I in 1948 with a degree in Chemistry. After a PhD from Northwestern and a postdoc at CalTech, he joined the Scripps Institution of Oceanography.

The National Medal of Science is awarded by the National Science Foundation for lifetime achievement in the sciences. Dr. Keeling was recognized for key research for understanding the carbon cycle and global warming. Keeling was the first to measure the accumulation of carbon dioxide in the atmosphere and his resulting data set is named the "Keeling Curve."

Keeling's latest research, with Scripps colleague Timothy Wharf, discusses the coincidence of major tidal fluctuations and significant global phenomena, proposing an 1800 year cycle of strong tidal forces that increases vertical mixing in the oceans and causes cooling at the sea surface.

—adapted from the LAS alumni newsletter, Summer 2002

IN MEMORIUM

Ted Kurowski (BS '44, Chemistry) died on January 1, 2002 at the age of 79 in Covina, California. During the Second World War, Mr. Kurowski was assigned to the Manhattan Project in Oak Ridge Tennessee. He is survived by his sister, Sophie Williams, and her family. We thank the Williams family for a generous donation in Mr. Kurowski's memory.



J. Wayne Cole (MS '36/PhD '38, Chemistry, Fuson) died September 12, 2002 of lung cancer. He was 88. Dr. Cole's research in the synthesis of equilinene, an estrogen-related hormone, was essential in the development of the birth control pill. He was the head of steroid research at Abbott Labs in Chicago from 1958 until his retirement in 1979, and was a former president of the Illinois Chapter of the ACS. He is survived by three children, three siblings, and numerous grandchildren.

James P. Lodge, Jr., BS '47, Chemistry, passed away December 14, 2001. He was a consulting chemist in Boulder, CO.

William D. Emmons, PhD '51, Chemistry (Fuson), December 8, 2001 in Philadelphia.

Dr. Charles Price, Professor Emeritus, February 11, 2002.

Dr. William F. Henry, BS '29/MS '30/PhD '32 Chemistry (Rodebush), March 15, 2002. Dr. Henry was retired from Pillsbury and lived in Minneapolis.

Dr. Linda J. Cline-Love, PhD '69, Chemistry (Malmstadt), died July 12, 2002. In 1972, she joined the faculty of Seton Hall, where her research in chiral chromatography and phosphorescence analysis made important contributions to analytic chemistry. Especially noteworthy were her efforts to support the work of women in science.

Alumni Make a Difference

Chemistry Alumnus Endows Chemistry Fellowship Fund

The late Lester Coleman, MS '53, PhD '55, former CEO of Lubrizol and loyal supporter of the Department of Chemistry, has left a bequest that will support new fellowships in the Department. The \$500,000 gift will reward excellence in graduate education and provide fellowships for outstanding graduate students.

"We are very grateful to the Coleman family for their generosity," says Tom Rauchfuss, director of the School of Chemical Sciences. "Not only does this bequest honor Lester's memory, it enables the most deserving students to receive the very best training available in the United States."

Chemistry Library Announces Scientific Volumes Collection

The SCS Chemistry Library announces the creation of the "Eugene P. Bertin Scientific Volumes Collection." The collection will be developed from a gift of more than 900 volumes of Chemistry-related books donated to the library by Dr. Eugene P. Bertin (BS '48, MS '49, PhD '52). Dr. Bertin also presented the Main Library with an extensive collection of WWII military memorabilia.

Additionally, the yearly net income from a planned bequest of approximately \$250,000 will be divided and 25% allocated to maintain each of the library collections, with the remaining 50% given to the Chemistry Department to be spent at the department's discretion.

Dr. Bertin was born in Williamsport, PA and served in the Signal Corps for five years in WWII. Following his graduation in 1953, he held scientific positions with RCA Corp in both Princeton and Harrison, NJ, retiring in 1987. He is an expert in the area of X-Ray Fluorescence Spectrometry. His book, *Introduction to X-ray Spectrometric Analysis*, is still considered the industry standard. For the past 33 years, Dr. Bertin has lectured at the Annual X-Ray Conference sponsored by the International Centre for Diffraction Data, located in Newtown Square, PA.

The School of Chemical Sciences would like to thank Dr. Bertin for his thoughtful generosity and foresight.



Submit Your Memories to the Centennial Website

More than 200 alumni and friends of the Departments of Chemistry, Biochemistry, and Chemical Engineering participated in the Noyes Centennial. Images of the events can be viewed on the Centennial Celebration website. The site also contains reminiscences and images sent in by alumni. There is a place for you to submit your memories as well!

www.scs.uiuc.edu/centennial

Did You Know?

The first Native American chemist, Carlos Montezuma, was educated at the University of Illinois, graduating with a degree in chemistry in 1884. A new book on his life, *Carlos Montezuma and the Changing World of American Indians* by Peter Iverson, was recently published by the University of Arizona Press.