Wisconsin Chemical Engineering Centennial

Reserve these dates to reconnect with old friends and mentors—August 12-14, 2005

Join us for the celebration. Send us your ideas for centennial celebration activities to: alumni@che.wisc.edu

Help us make history

Bob Bird needs your help compiling the departmental history in time for our centennial celebration. Draft materials from the history will be made available on the departmental web site. Initially, we will post the names of ChEGS (the graduate student organization) presidents, as well as a list of departmental alumni who hold or have held faculty positions. Please drop Bob a note or send him an e-mail (bird@engr.wisc.edu) if you can help complete either list, if you can provide information about the founding of ChEGS, or if you have any interesting stories regarding ChEGS or anything else relating to the department for that matter. We expect to add additional materials over time and encourage you to visit the site periodically to review the material and provide your input. And you can also help us to make history by joining us for the 2005 centennial celebration!
The department recently received news that an outstanding PhD candidate in the research group of Ignacio Grossman at Carnegie Mellon University, Christos T. Maravelias, has accepted our offer of a position as assistant professor and plans to join us this fall. Perhaps no other activity that we engage in as a faculty forces us to look as deeply into the future as faculty hiring. Even as career changes and redirections have become increasingly frequent in many sectors, it is still the norm in academia for someone hired into a faculty position to remain with the same institution for 30 or 40 years or more. How will our research and instructional needs shift over this period, and how should our department position itself now in order best to address those distant needs?

In the longest timeframe, perhaps, this is impossible to predict, and the best we can do is hedge our bets by scouting for individuals with the intellect, the toolset and the character to adapt successfully over time to changes in the profession. But we do attempt to predict, over a somewhat shorter period, how an individual's background and interests will complement those of the current faculty, in terms of rounding out our teaching program, building synergism with other research programs and establishing new research directions. In doing so, we try to anticipate how a faculty candidate will interact not just with others in this department, but also with colleagues across the College of Engineering and the campus.

Coming from one of the world’s strongest research groups in the area of process systems engineering, Christos has the potential to take his research in any number of productive and industrially relevant directions. The need for ever-tighter control over industrial operations to improve safety and reduce environmental impacts in an ever more crowded world, to make more efficient use of non-renewable resources or to better utilize renewable resources drove Harmon Ray’s long and productive career, and we expect it will drive yet another. Christos will find opportunities to collaborate with Jim Rawlings, Ross Swaney and others, as well as with colleagues in the UW departments of industrial engineering, statistics, and mathematics.

But, for all the attention we devote to the future, as we enter our 99th year as a department, we find our attention increasingly drawn to the past as well, if only because Bob Bird keeps peppering us with questions as he continues his mission to update our departmental history. In fact, he would like your input too! (See p. 1.) Be sure to visit Bob’s corner of the department website where he will post draft historical materials for you to correct, and where you can add your contributions to the history. Or mail Bob a note at the departmental address.

Also, as highlighted on the front page, we’re beginning to plan for our centennial celebration next summer, and that process, too, causes us to reflect on the past and the many students, colleagues and friends who have been associated with the department over the years. This means you! Have you written August 12 through 14, 2005 into your calendar yet? Madison will be beautiful. The Union Terrace will be humming. You can show your family your old haunts and reconnect with old friends and mentors. And you can meet the young whippersnappers who have taken over this department instead of just reading about them in the newsletter.

So send us your ideas for activities for you, your spouse and your kids. And plan to be here!

---

Roger J. Altpeter Awards initiated

Thanks to generous gifts from Franz Altpeter (BS ’65) and Philip Altpeter (BS ’69), sons of the late Professor Roger Altpeter, the department has initiated a new student award for excellence in writing. The $700 award will be presented to students in the Transport Phenomena Laboratory who demonstrate the best or most improved writing skills. This year’s Roger J. Altpeter Awards were given to undergraduate students Sara Burney and Brianne Helm. The award complements the E. Johansen Crosby Award for Outstanding Performance, also associated with the Transport Lab. This spring’s winner of the Crosby award was Shawn Seifert. Roger Altpeter is remembered for his dedication to laboratory instruction and the importance he attached to strong writing skills. In addition, until the time of his death, Roger photographed each group of summer lab students and staff, and developed the photographs himself. The Altpeter Fund supports the tradition of summer lab class photos.
Faculty news and promotions

On the recommendation of the department’s full professors, the dean of engineering has promoted both Mike Graham and John Yin from associate professor to full professor. The promotions are based on their substantial accomplishments and contributions to teaching, research and service to the profession. For more on Mike’s current research, see p. 5. The Spring 2004 issue of the College of Engineering’s PERSPECTIVE highlights John’s recent work on a novel, parasitic, anti-viral strategy. (See also “In the News” at www.engr.wisc.edu/che/.)

Mike Graham received grants of $280,000 from NSF and $80,000 from the American Chemical Society to study “rheological drag reduction,” the reduction in energy required to pump a liquid that results from the addition of a small quantity of surfactants or very large polymer molecules. Working with mathematical models of flow of polymer solutions, Mike’s group plans to develop principles for the rational design of fluids and flow systems to best take advantage of drag-reducing additives and to enable development of energy-saving, flow-control strategies.

Tom Kuech received a $150,000 contract from the Air Force Office of Scientific Research to continue his work, in collaboration with researchers at the Colorado School of Mines, aimed at developing a process for producing high efficiency, polycrystalline GaAs-based solar cells on low-cost, lightweight substrates.

Tom and Luke Mawst in the Department of Electrical and Computer Engineering received a $210,000 NSF grant to develop novel approaches to extending the emission wavelength of diode lasers based on dilute nitride compounds, such as InGaAsN. Extending the emissions of such lasers into the mid-infrared range, while maintaining their performance advantages over conventional InP-based lasers, could revolutionize chemical sensing and free-space optical communication systems.

Finally, Tom is part of a team of chemists, electrical engineers, biomedical engineers, materials scientists and chemical engineers from Duke University, Wayne State University and UW-Madison that received a Nanoscale Interdisciplinary Research Team award from NSF totaling $1.3 million. The team aims to integrate nanoparticles into an optical sensing system, exploiting nanostructured materials as both multi-spectral emitters and as robust, targeted probes.

Manos Mavrikakis’ group recently published two papers in the Journal of the American Chemical Society. The first addresses the complete potential energy surface of methanol chemistry on platinum surfaces, which is at the heart of direct methanol fuel cells and hydrogen production from methanol. The second paper addresses the activation of dioxygen on transition metals and their alloys. The group elucidated the fundamental electronic structure of surface alloys responsible for the reaction rate enhancement that has been observed experimentally, but remained unexplained so far. Potential impact is far ranging, given that for all types of low-temperature fuel cells, activating the O-O bond is the slowest step of the fuel cell reaction.

Manos also recently presented an invited talk at the American Physical Society meeting, a keynote lecture at the Canadian Catalysis Society meeting, and a lecture at the Gordon Research Conference on Catalysis.

Finally, Manos and Jim Dumesic received a $340,000 award from NSF and EPA to pursue research on alkaline production from renewable biomass by aqueous-phase catalytic reforming. They will combine experimental and theoretical approaches to reveal the key factors enhancing selectivity towards production of alkanes from a variety of carbohydrates.

Jim Rawlings’ and John Ekerdt’s (BS ’74) text, Chemical Reactor Analysis and Design Fundamentals, received a glowing review recently. After teaching from the book for a year, Ioannis Kevrekidis and Stanislav Shvartsman, both of Princeton University, wrote in Chemical Engineering Science, “The book is completely self-contained: it succeeds in showing that a firm grasp of a few principles can take us a long way (and helps us build confidence about what we can do in a new situation). The ability to do ‘real-(study)-time’ computation, using standard contemporary student desktop tools, really changes the way a student studies the material. It is the availability and ease of computational verification/exploration that makes studying this book different from studying any other. This ease of computation really changes the face of the discipline. The authors thread this theme carefully throughout the book—from complex equilibrium computations to ideal reactors and transport-affected problems.”

Nick Abbott received a Kellett Mid-Career Award, a $60,000 award funded by the Wisconsin Alumni Research Foundation. The award is named for the late William R. Kellett (BS ’22), a former president of both the WAF Board of Trustees and Kimberly-Clark Corporation. Among his recent grants, Nick received a $190,000 National Science Foundation (NSF) grant together with Mike Graham to pursue a combined experimental (Nick) and theoretical (Mike) study of transport processes in the bulk of solutions that are driven by electrochemically controlled gradients in concentration of surfactant in microfluidic channels.

Together with Professor of Biomolecular Chemistry Paul Bertics, Nick has received a $374,000 NSF grant to develop a new approach for real-time, continuous sensing of biomolecular interactions at biomimetic interfaces.

Nick received a $152,000 contract from the Department of Defense to work with researchers at Geo-Centers, Inc. and Pennsylvania State University to assess the feasibility of integrating liquid crystals with “biomolecular motors,” or substances that may be capable of transporting biological agents to localized regions of surfaces for detection, to form the basis of sensors for rapid detection of large biological targets, such as bacteria and viruses.

Finally, Professor of Medical Oncology Joan Schiller, Paul Bertics, and Nick received a grant ($200,000) from the National Cancer Institute to develop a new method of analysis based on liquid crystals that will enable physicians to determine the precise mechanisms of action of novel anti-cancer agents in human tumors.

Jim Dumesic received this year’s Wisconsin Technology Achievement Award for individual achievement from the MIT Alumni Club of Wisconsin. The award recognizes Jim’s contributions toward development of technology to convert biomass to fuel-grade hydrogen, and toward commercialization of the technology through the start-up company, Virent Energy Systems.
FAQ about the period 1955-1980 (the “third quarter”)


What textbooks and treatises were written during the period 1955-1980? The second editions of the influential books Material and Energy Balances and Thermodynamics by Hougen, Watson, and Ragatz appeared. In addition, there were a baker's dozen new titles:
8. P.M. Berthouex* and D.F. Rudd, Strategy of Pollution Control, Wiley, New York (1977)

How are departmental chairmen chosen? A university regulation adopted by the regents in 1920 provided for annual balloting by the faculty for departmental chairmen, but this regulation was generally overlooked for about two decades, the chairs being chosen by the dean of the college. From about 1940 on, the chairs were chosen by a closed ballot, and the results of the ballot were transmitted to the dean, who then appointed the chairs.

What was the population of Madison and the UW campus? From 1950 to 1980 the population of Madison nearly doubled, from 96,000 to 171,000. The campus more than doubled, from 16,000 to 41,000.

What were the major campus events during the 25 years? The unpopular Vietnam War resulted in considerable student unrest. In 1967, there were riots staged against the interviewers who were on the campus recruiting for the Dow Chemical Company (because of their manufacture of napalm for the war effort). Much of the trouble was fomented by teams of people sent to the campus from outside, teams skilled in the organization of riots and disruption. The riots became increasingly violent and culminated in the bombing of Sterling Hall. The detonation of a car bomb, placed between the Chemistry Building and Sterling Hall, resulted in the collapse of the middle wing of the Chemistry Building and a huge hole in the side of Sterling Hall. The aim of the bombers had been to destroy the Army Mathematics Research Center, but instead they destroyed the research programs of physics Professors Barschall and Dillinger, which had nothing to do with the war at all. One postdoctoral student was killed.

What major changes occurred in the Chemical Engineering teaching program? A thorough curriculum study in 1956-1957 resulted in the creation of two new courses: a lecture course on “transport phenomena” and an associated lab course designed to illustrate the key physical concepts. Around the same time, elective courses in solar energy, non-Newtonian fluid dynamics, chemical operations analysis, and statistics were provided. The total number of credits for the BS degree was lowered from 141 to 133, and more flexibility was provided for the students to modify their course of study.
From DNA to drag reduction

What do next-generation cancer diagnostics and the Alaskan pipeline have in common? They both involve complex flows of polymeric liquids, and are among the many applications motivating the fundamental research in polymer dynamics taking place in Mike Graham's group.

Today cancers are diagnosed and characterized by the morphology of tumors and the cancerous cells that they contain. But what really makes a cancer cell different from a healthy one is its genes, so to get at the heart of what makes a cell cancerous one needs to characterize its DNA. This is where polymer dynamics comes in: a human chromosome is a single DNA molecule—a linear polymer—that is two nanometers across but up to several centimeters long. Along with David Schwartz, a professor in the UW Chemistry and Genetics departments, and CBE professor Juan de Pablo, Mike is building molecularly based mathematical models and computer simulation methods for studying the flow of solutions of individual DNA molecules. Particularly interesting and important is the case of a DNA molecule confined to a small channel, as many of the current approaches to single molecule DNA analysis make use of "microfluidic" devices comprised of tiny channels etched or molded into silicon, glass or silicone rubber.

With the tools Mike and his collaborators have developed, the behavior of DNA in these tiny channels can be accurately predicted and understood. A particularly important result of this work has been the prediction, confirmed by experiments, that DNA molecules flowing in a microchannel tend to migrate away from the channel walls. This migration process hinders adsorption of DNA to the microchannel walls, so if an assay technique relies on adsorption of DNA (as many do), this phenomenon lowers the effectiveness of the assay. However, the mathematical model also provides an explicit formula for the migration rate in terms of the flow rate and size of the DNA molecule, allowing the effect of migration to be correctly accounted for in the design of the assay. As illustrated by this example, Mike's work is providing the physical principles and engineering design tools that will enable the development of new devices for analyzing DNA one molecule at a time.

So what does this have to do with the Alaskan pipeline? Since 1979, a small amount of a large linear polymer, a polyalphaolefin, has been added to the flowing crude oil at the pumping stations along the pipeline. At essentially no cost in materials or energy, addition of this polymer has increased the pumping capacity of the pipeline from 1.4 million to 2.1 million barrels per day. This remarkable effect is due to the ability of small amounts of long-chain polymers to modify the chaotic eddies that characterize turbulent flows, dramatically decreasing the energy consumed by the flow. (DNA is also a drag reducer, albeit a very expensive one that doesn't dissolve in oil.) Although widely used, this "rheological drag reduction" phenomenon is very poorly understood, as it lies at the interface between two complex subjects, polymer dynamics and turbulence.

Mike's group is working to better understand this effect, building on the recent discovery of well-defined flow patterns that underlie the organized fluid motions of turbulence near solid surfaces like the walls of the Alaskan pipeline. These organized motions, or "coherent structures," are closely associated with the energy consumed by the turbulent flow, so they provide a natural starting point for better understanding rheological drag reduction.

Using models of the flow of polymer solutions very similar to those used in the DNA studies, Mike's group has shown that the effect of polymer additives on these model coherent structures is very similar to those observed experimentally. The knowledge gained under this study is leading to principles for rational design of both fluids and flow systems to best take advantage of drag-reducing additives. More broadly, it is enabling development of energy-saving, flow-control strategies by contributing to a firm understanding of the coherent structures of turbulence.

What was the most unusual happening in the Chemical Engineering Department?

In the early 1970s, there was a doctoral candidate, Morris Schoenberg (PhD ’74), who liked snakes. He had a boa constrictor that was 6 ft 4 in long (compared to Morris's height of 5 ft 10 in). The snake was kept in a cage in one of the first-floor labs, and Morris posted the feeding hours on the bulletin board. Everyone enjoyed watching Morris release several small furry animals into the cage, and then observing the consequences. The snake would coil up, take deadly aim, and then with incredible speed grab the unfortunate victim in his jaws and consume him. This went on for months, but then one day the snake disappeared. It seems that Morris had put a few too many furry animals into the cage—more than the snake could handle. He disposed of the lifeless bodies by putting them in the trash container in the hall. However, the container was not emptied promptly, and soon there was an appalling smell permeating the corridor. Wayne Neill had had enough and ordered Morris to get the snake out of the building. End of herpetological instruction.
Seniors now have the option of taking the Summer Lab course in Madison, Spain, or Austria, after the addition of a new lab section in Vienna in 2003. A group of 12 chemical engineering students ventured to the Technical University of Vienna (TUWien) with Thatcher Root last summer to pursue the capstone laboratory course, CBE 424—Operations and Process Laboratory, in new, old surroundings. By living in Vienna for the five-week course, students experienced the Austrian culture intensely. Their interactions with the Austrian staff and other lab participants from Clemson University contributed to a tremendously broadening experience. Charlie Hill will build on this success and accompany a new group in the summer of 2004.

The overseas lab sections are an interesting alternative to taking the required CBE 424 lab in Madison. The traditional course includes nine experiments (five formals and four informals), and gives the students tremendous experience with written reports and oral presentations. The overseas lab venues do not have the lab facilities or stockrooms for our free-form informal assignments, so all of the experiments are on existing equipment. Some classic experiments, such as distillation, are well laid out like the formal experiments in Madison, while others are more open-ended and vary between groups. Spray drying is always interesting, as groups are asked to make powdered milk, tea, instant coffee or even dried beer flavoring! The Chemical Engineering Department in Vienna has particular expertise with membrane separations and particle technology, giving our students insights Madison cannot match.

International programs have been a consistently popular Summer Lab option since the 1970s. A steady stream of students enjoyed taking Summer Lab at University College London in a program including students from other U.S. universities. In the 1990s, Jose Coca of the University of Oviedo drew on his long experience with Summer Lab here in Madison to start a session in the new chemical engineering facilities at his home university. This quickly became a popular option. In 2001, we ended our participation in the UCL lab due to overcrowding. With the opening of the Vienna lab in 2003, we have returned to having two choices for overseas lab sections. In 2003, 26 of 83 students (31%) participated on one of the overseas labs, and in 2004, 20 of 84 students (24%) are planning on an overseas lab section. Overseas summer lab sections are the main avenue for our students to take part of their studies abroad.

The overseas students generally manage to get lots of broadening experiences outside of the laboratory. Many students tour other parts of Europe with friends before or after the lab course. When their report writing duties permit, students sometimes manage quick weekend trips to nearby Prague, Salzburg or other places. Vienna has many attractions, ranging from the Hofberg (palace complex) to the Prater (one of the first municipal amusement parks). The Museumsquartier adjacent to the TUWien buildings contains some of the most interesting old and new art and science museums. Other museums devoted to Freud, Hundertwasser and other notables are scattered across Vienna. Last summer, our students found that their trolley ride back to their rooming house each night took them past the Rathausplatz (City Hall), where there are food booths similar to Taste of Madison and a film festival underway every night. Some of our students spoke German well enough to translate for their friends, and everyone managed to get by with their own combinations of English and German to discover many interesting things.

At TUWien, faculty member Michael Harasek organized the lab and staff based on his several years experience participating in the Madison Summer Lab. The lab course had the strong support of the dean, Herbert Stachelberger, who attended the oral presentations and the final banquet at an Austrian microbrewery. Student feedback on the lab has been very favorable, and we look forward to sending students to Vienna for years to come.
The last ChE Degree

Robert A. Ackerman (BS ‘51, ChE ‘58) wrote recently to ask how many students had received Chemical Engineer Degrees from the department. The original ChE Degree, awarded by the department to 26 students, was equivalent to and replaced by an academic MS degree. After 1922, the ChE Degree became professional in character, based on at least five years of professional practice. The department awarded only 14 professional ChE Degrees, the last to Bob Ackerman in 1958. Bob joined Eastman Kodak in 1951 and was granted leave of absence in January 1954, serving 18 months of reserve duty in the Army Corps of Engineers as chief of the Guided Missiles Support Section. He based his thesis on tests conducted under his supervision for the Army Corps on mobile carbon dioxide generating and processing equipment.

Bob returned to Eastman Kodak to pursue a successful 38-year career, during which he was responsible for, among other things, the worldwide expansion of the Film Emulsion Division, working in England, France, Australia, Mexico, India and Brazil. He reports that, as he approaches 16 years of retirement, he and his wife, Mary, have the best available: “both are in good health, traveled a lot, consumed innumerable rolls of film and have two homes,” in Crystal Lake, Michigan and Punta Gorda Isles, Florida.

Sarah (Storm) Mauldin (BS ‘96) and her husband welcomed their first child, Gavin Walter, last September. Sarah works as a technical writer for Intergraph Corporation in Huntsville, Alabama. Her division specializes in software solutions for the design, construction and operation of process and power plants, offshore rigs and ships.

Dan P. Miller (PhD ’00) wrote in April, “After completing PhD work and getting married, Lisa and I moved to the San Francisco Bay area, where I am now a scientist working in drug delivery at Nektar Therapeutics. Lisa and I now have a two-year-old boy, Padraic, and a two-month-old girl, Lucy. Would be good to see old friends—look me up if you’re ever in the area.”

Robert Uschan (BS ’49) visited campus on May 8 as part of the UW Alumni Association’s reunion. Along with other alumni, Bob toured the department with fellow veteran, Bob Bird. The two Bob’s served in the same company and battalion in World War II, so it was fitting that they would meet again on V-E Day.

Wade A. Wallinger (BS ’81) reports that in January, he was appointed as General Manager, Product Supply and Trading, Americas for ChevronTexaco, located in Houston. “Although I don’t directly use my chemical engineering training with this job,” he wrote, “I do indirectly as a primary interface with our refining business and as a homebrewer.”

Robert T. Brown (BS ‘47) died in August 2002 of natural causes after a swim. In addition to his BS in ChE, Robert earned BS, MS, and PhD degrees in botany from UW-Madison. He joined the forestry faculty at Michigan Technological University in 1951 and was instrumental in establishing the Department of Biological Sciences there in 1962. He received the Medal of Forestry from Finland for his research on coniferous tree growth, and three Fulbright Fellowships: to Turkey, Finland, and Trinidad. In addition, he served as an educational consultant in India, courtesy of the Agency for International Development, and he traveled to the former USSR. Robert and his wife, Viola, shared a love of nature and the environment and together worked to protect it. The Keweenaw Land Trust awarded Robert and Viola the organization’s Heart and Hands Award in 2000 for their years of work in promoting peace, justice and environmental stewardship. In 2002, the Michigan Nature Association dedicated its recently acquired Perrault Bog as the Dr. Robert T. Brown Teaching Sanctuary.

The department lost a particularly strong supporter with the death this past April of Howard J. Curler (BS ‘48) at his home in Neenah, Wisconsin following a protracted illness. In 1958, together with Robert Wood, Howard founded Curwood, Inc. and developed a process for making flexible plastic packaging. Their first customers were primarily cheese and then Popsicle® accounts and processed meats. They eventually moved to other food items, medical items, cooking oil, snacks and computer parts. Curwood became part of Bemis Company in 1965. Curler was appointed as a Bemis director in 1972, president in 1977 and chairman and CEO in 1987. Under Howard’s leadership, the market capitalization of the company grew from $94 million to $754 million. His son, Jeff Curler (BS ’73), himself a 30-year veteran with the company, now serves as president and CEO of Bemis, which has grown to be a world leader in the manufacture of flexible packaging and pressure sensitive materials, with sales approaching $2.3 billion annually and over 11,000 employees. In 1997, when Howard retired from the Bemis board of directors, the Bemis Company Foundation honored him and his dedication to technical innovation by endowing the Howard Curler Distinguished Chair in Chemical Engineering with a gift to the department of $1.25 million. Juan de Pablo is the current holder of the chair, which provides annual funding to support research, teaching and special projects.

Hsien-Wen Hsu (PhD ’59) died in December. He was professor emeritus in the Department of Chemical Engineering at the University of Tennessee at Knoxville, having retired in 1993. Upon graduation he took a job at Purdue University working on a project involved with the correlation and prediction of the properties of gases and liquids. After several years, he moved to the University of Tennessee, where he spent the rest of his academic career, advancing gradually to the rank of full professor. He was the sole author of the book, Separations by Centrifugal Phenomena, published by Wiley-Interscience in 1981. Having spent his youth in both China and Japan, he was completely fluent in both Chinese and Japanese.

Charles R. Wilke (PhD ’44) passed away in November after a long battle with cancer. After working for Union Oil in Richmond, Charlie joined the faculty of Washington State. He moved to the University of California, Berkeley in 1946, first as an instructor of Chemistry, then moving to Chemical Engineering. He became a full professor in 1953. He chaired the Division of Chemical Engineering from 1953 through 1956. He was chair of the Department of Chemical Engineering from its establishment in 1957 until 1963. He was the author of many papers, and a teacher and mentor for hundreds of undergraduate and graduate students. For several years he was Assistant to the Chancellor for Academic Affairs. He had been director of the American Institute of Chemical Engineers and a member of several advisory and editorial boards. He was elected to the National Academy of Engineering in 1975 and received many awards including the Colburn and Walker Awards of the American Institute of Chemical Engineers, and in 1983 he was designated as one of 30 Eminent Chemical Engineers at AIChe’s Diamond Jubilee Celebration. He became emeritus professor in 1987.
Harry L. Spiegelberg (BS ‘59) and his wife Bonnie (BS ‘60, School of Home Economics) have pledged an estate gift to the department of $1.5 million to establish the Harry L. Spiegelberg Professorship in Chemical and Biological Engineering.

As with other endowed professorships, annual income from an account at the UW Foundation will be assigned to a member of the faculty in support of his or her teaching and research. Dependable, unrestricted funding of this sort proves extremely useful in initiating unproven research projects or allowing release time for development of instructional materials, and is invaluable in recruiting and retaining top faculty.

Harry, whose family was featured in the Winter 2003 issue of On These Foundations (available on our web site, www.engr.wisc.edu/che/), is retired as vice-president of Kimberly-Clark Corporation. One of his sons, Steve Spiegelberg (BS ’88) is also a graduate of this department and heads the Cambridge Polymer Group, Inc., a contract research laboratory.

“I am very pleased with the whole-hearted support of my family for this gift,” said Harry. “They regard it as a legacy for the entire family.” Harry currently serves on the department’s Visiting Committee, an advisory committee to the department. He and Bonnie have endowed two scholarship funds with the department, the Outstanding Student Scholarship, offered annually to outstanding high school seniors who plan to attend UW and major in chemical engineering, and the International Studies Scholarship, which provides support to students participating in the overseas summer laboratory programs. In addition, Harry and Bonnie are contributing $25,000 to the Bird, Stewart and Lightfoot Graduate Fellowship Fund.

“Harry is a great supporter of the department in every way,” says Tom Kuech. “Through all of his contributions, he is helping to enhance the prestige and vitality of the department for the long-term.”