ISU honors Chemistry alum who helped transform biotechnology

Marvin Caruthers
Dear Friends of Chemistry and of Iowa State University,

As many of you are no doubt aware, Iowa and ISU have not been spared from the global economic maelstrom that began over a year ago. Nevertheless, thanks to the continued support of alumni and friends, the dedication of the staff and faculty of the Department of Chemistry, and the commitment of the upper administration of Iowa State University we are confident in our ability to weather the current storms and continue to navigate our mission of teaching, research, and scholarship for generations to come.

We are thus delighted to announce that the construction of Hach Hall is on schedule. We expect that it will be substantially completed in June 2010 so that we can begin moving into the lovely facility on July 1, 2010. We look forward to teaching undergraduate laboratory classes in Hach Hall in the Fall semester and to begin moving faculty laboratories into the research areas. You can monitor the progress of the construction of Hach Hall by using the following link to our live webcam: http://www.fpm.iastate.edu/webcam/chemistry/.

Thanks to the presence of Hach Hall, we have been able to retain key faculty in the Department; and in the past two years, we have hired six new faculty members. We are fortunate to have continued support from President Geoffroy for our Presidential Lecturer series. Our fifth Presidential Lecture will be given on Tuesday, April 6, 2010 by Geraldine Richmond, the Richard M. and Patricia H. Noyes Professor of Chemistry of the University of Oregon. In addition to her numerous scientific credentials, she is the founder and chair of COACh (Committee on the Advancement of Women Chemists), an organization assisting in the advancement of women faculty in the sciences.

Professor Richmond’s visit to ISU is particularly timely given our Department’s current involvement in an NSF sponsored program, ADVANCE, to increase the participation and advancement of women in academic science and engineering careers. The ISU ADVANCE Program is funded for 5 years (2006-2011). The goal of the ISU ADVANCE Program is to investigate the effectiveness of a multilevel collaborative effort to produce institutional transformation that results in the full participation of women faculty in science, technology, engineering and math fields in the university.

If you have the opportunity to visit Ames, please stop by the Department. I welcome the occasion of meeting you and discussing the exciting developments Chemistry is undergoing.

Yours sincerely,

Jacob W. Petrich
Professor and Chair

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Greenbowe named Iowa Professor of the Year by Carnegie Foundation

Tom Greenbowe teaches chemistry courses using principles such as guided inquiry, group work and peer instruction. He will also toss in rock ‘n’ roll analogies to prove a point.

For his emphasis on teaching and learning, Greenbowe, a professor of chemistry at Iowa State University, was named the 2009 Carnegie Foundation for the Advancement of Teaching Iowa Professor of the Year. The award is sponsored by The Carnegie Foundation for the Advancement of Teaching and the Council for Advancement and Support of Education.

“It’s nice to receive recognition from outside the university for efforts put forth in teaching and advising,” said Greenbowe, who joined the ISU Department of Chemistry in 1990. He quickly praised his students and colleagues for his winning the award. “The quality of students and the cooperative efforts of the people at Iowa State make this university a very good place to be a faculty member.”

“Tom is a wonderful and popular teacher,” said Jake Petrich, professor and chair of the Department of Chemistry. “He is especially gifted in handling large introductory classes. Tom also is internationally known for his research in chemical education.”

A student-centered professor, Greenbowe believes students learn best through self-discovery. “Stepping aside from being the ‘guide on the side’ allows my students to learn chemistry,” he once wrote.

Lin’s research is recognized as ‘most cited’

RSC Publishing has recognized Victor Lin’s research among the most cited papers published by the company’s flagship journals, ChemComm and Chemistry. Lin is a professor of chemistry at Iowa State University.

“Mesoporous silica nanoparticle based controlled release, drug delivery and biosensor systems” was recognized as within the top 10 articles published by RSC in 2007. The paper was co-authored by Brian Tiewyn and Igor Slowing, both assistant scientists at the Ames Laboratory, and Supratim Giri, a former graduate student of Lin’s. Lin’s research centers on the design of functional nanoporous materials for biotechnological and biomedical applications, such as biosensor design, drug delivery and gene transfection.

Chemistry softball league a home run

Aaron Kempema has been in the league two years. He’s now the commissioner. Such is the life in the Iowa State Chemistry Department’s summer softball league.

Started in 2004 and open to males and females, the four-team league consists of graduate students, a few faculty members and others who can claim some connection to the department. The talent ranges from heavy-hitting former baseball players to international students experiencing the game for the first time.

Kempema is a third-year Ph.D. student from Sioux Falls, S.D. “All of us are on campus in the summer, so as soon as school is out, we begin,” he said.

Competitiveness takes a backseat to enjoying fresh air and meeting colleagues. Teams do, however, vie for the post-season tourney championship trophy, named for former graduate student and league player Ben Baird, who unexpectedly died in 2008.

As for Kempema’s duties as the player commissioner, he says, “It’s not too stressful of a job.”

Three new faculty members join ISU’s Chemistry Department

A trio of new faculty members has joined the Department of Chemistry for the 2009-10 academic year. Two are new to campus and another is joining the department in a joint appointment.

Javier Vela is an assistant professor whose lab is using techniques in physical organic chemistry to tackle challenges in medicine by developing tools for biological and biomedical applications. He earned his Ph.D. at the University of Rochester in 2007.

Arthur Winter is an assistant professor whose lab is investigating nanoscience, polymers and inorganic chemistry. He earned his Ph.D. from the University of Rochester in 2005, was a postdoctoral researcher at the University of Chicago from 2005-2006 and was a Director’s Fellow at the Los Alamos Laboratory from 2007 to 2009.

Edward Yu has joined Chemistry in a joint position with the Department of Physics and Astronomy. An associate professor who has been at ISU since 2004, he examines membrane proteins. Yu uses crystallographic techniques to study biological structures, such as those involved in how drugs bind to cell membranes. He earned his Ph.D. from the University of Michigan in 1997 and was a National Institutes of Health Postdoctoral Fellow at the University of California, Berkeley.

Faculty members Kraus, Schmidt-Rohr named AAAS Fellows

Two Iowa State University chemists have been named AAAS Fellows by the American Association for the Advancement of Science. George Kraus and Klaus Schmidt-Rohr were among 486 fellows honored in 2009 for “their scientifically or socially distinguished efforts to advance science or its applications.” The honor is bestowed on association members by their scientific peers.

Kraus, a University Professor of chemistry, was honored for “developing syntheses of natural products and other imaginative applications of organic chemistry and for promoting chemistry through visionary administrative leadership in the university environment.” Kraus’ research program includes developing bio-based products using catalysis. He’s also working to synthesize biologically active molecules, including antiviral agents and plant-based drugs for treatment of type 2 diabetes.

Schmidt-Rohr, a professor of chemistry, was honored for “using and developing solid-state NMR to answer important questions about diverse materials, including synthetic polymers, bone, soil and fuel cell membranes.” Schmidt-Rohr’s research program includes studies of thermoelectric materials, the nanostructure of diamond cell walls and the structure-property relations in Nation fuel cell membranes.

AAAS is the world’s largest general scientific society. It was founded in 1848, includes 262 affiliated societies and academies of science, and publishes the journal “Science.”
Pat Thiel was awarded the 2010 Klaus Schmidt-Rohr Award. John Verkade, University Professor of chemistry, and Venkat Reddy Chintareddy, postdoctoral research associate, are part of a team honored for its work to use a microscopic fungus to produce biodiesel from plant processing wastes. The special biodiesel they developed, now being commercialized, is made from lipopolysaccharidic biomass. Hans van Leeuwen, an ISU professor of civil, construction and environmental engineering, is the lead researcher.

Chemistry faculty, staff recipients of several awards and honors

- John Corbett has been named a Fellow of the Royal Society of Chemistry. The award honors those who have made substantial contributions to advancing the wider application of chemical science.
- Mark Gordon was elected to the inaugural class of American Chemical Society Fellows. The ACS Fellows Program recognizes ACS members for outstanding achievements in and contributions to science, the profession and the society.
- Mark Gordon was chosen as the 2009 recipient of the American Chemical Society’s Award for Computers in Chemical and Pharmaceutical Research. The ACS award is given annually for “outstanding achievement in the use of computers in research, development or education in the chemical and biological sciences.”
- Tom Greenbowe received the College of Liberal Arts and Sciences 2009 Ruth Swenson Award for Outstanding Advising.
- Paul Hollander received the 2009 College of Liberal Arts and Sciences Merit Excellence Award.
- Malika Jeffries-EL was honored with the Lloyd Ferguson Young Scientist Award, presented by the National Organization for the Professional Advancement of Black Chemists & Chemical Engineers in 2009.
- William Jenks received the 2009 College of Liberal Arts and Sciences Excellence in Graduate Teaching Award.
- Richard Lanwick received the American Chemical Society Midwest Award in 2009 for outstanding achievements in chemistry in the Midwest region. The award is conferred annually to a scientist who has made meritorious contributions to the advancement of pure or applied chemistry, chemical education, and the profession of chemistry.
- Nicola Pohl and Tom Greenbowe were named 2009-2010 College of Liberal Arts and Sciences Master Teachers.
- Klaus Schmidt-Rohr received the ISU Award for Outstanding Career Achievement in Research. The award recognizes faculty members for achievements in research and/or creative activity.
- Jacob Petrich received the 2009 College of Liberal Arts and Sciences Outstanding Achievement in Departmental Leadership Award.
- Michael Schmidt received the 2009 College of Liberal Arts and Sciences Professional & Scientific Excellence Award.
- Pat Thiel was awarded the 2010 David Adler Lectureship Award by the American Physical Society. The award recognizes Thiel as an outstanding contributor to the field of materials physics through her contributions to surface structure and dynamics of complex metallic alloys.
- Pat Thiel has been named the winner of the 2010 Arthur W. Adamson Award for Distinguished Service in the Advancement of Surface Chemistry.
Genomic cornerstone
Chemistry alumnus Marvin Caruthers helped revolutionize biotechnology and basic biological research.

Marvin Caruthers says he doesn’t much care for publicity. Yet, when you’re in the National Academy of Sciences, have successfully navigated the academic and business worlds, and your research became one of the cornerstones of the genomics revolution, people take notice.

Caruthers, a 1962 Iowa State University chemistry graduate, is a Distinguished Professor of chemistry and biochemistry at the University of Colorado. He was a recipient of the Distinguished Alumni Award presented at VeiShea 2000 by the Iowa State Alumni Association. The award is the university’s highest alumni honor.

The native Iowan has a long list of awards, honors and patents, the result of a career of achievements that helped reshape biotechnology, basic biological research and pharmacology.

His chief scientific achievement was his groundbreaking accomplishment at the University of Wisconsin and followed Khorana to Massachusetts Institute of Technology. During Caruthers’ time at Wisconsin, Khorana won the 1968 Nobel Prize in Physiology or Medicine with two other scientists for their earlier work in interpreting the genetic code and its function in protein synthesis. Caruthers joined Har Gobind Khorana as a post-doctoral researcher at the University of Wisconsin and followed Khorana to Massachusetts Institute of Technology.

Caruthers grew up on a farm in Johnston, Iowa, on cropland now covered by Des Moines’ urban growth. Although an exceptional student in a Johnston High class of only some 28 graduates, Caruthers was not valedictorian—nor even salutatorian. Those honors went to ISU alumni Bob Kinsley (Ph.D. Cal-Berkeley) and the late Ted Leffler (M.D., Ph.D. Johns Hopkins). Another high school classmate, Stari Perin, earned at ISU degree in aerospace engineering and spent his career at The Boeing Co.

“It was a strong class,” Caruthers said. “Money was tight and Caruthers, who put himself through college, decided to stay in state. He chose chemistry at Iowa State.”

“Even in those days, it was really an outstanding department,” Caruthers said. “They had a lot of people who were internationally recognized.”

After graduation he went to Northwestern University and earned a Ph.D. in chemistry and biochemistry. Caruthers anticipated he would use his Ph.D. for a management career in the business world. He learned, however, he enjoyed research. “I like the thrill of figuring out something nobody else has been able to do,” said Caruthers, who still maintains a research lab at Colorado.

While at Northwestern, his lab did some research on processes to chemically synthesize DNA, the building blocks of life. Processes used at that time were lengthy and inefficient. The research would prove to be the foundation for later discoveries.

With Ph.D. in hand, Caruthers joined Har Gobind Khorana lab as a post-doctoral researcher at the University of Wisconsin and followed Khorana to Massachusetts Institute of Technology. During Caruthers’ time at Wisconsin, Khorana won the 1968 Nobel Prize in Physiology or Medicine with two other scientists for their earlier work interpreting the genetic code and its function in protein synthesis.

As the news media descended on the lab, Khorana (also one to shun publicity) aimed the reporters on his researchers, mainly Caruthers, who reluctantly gave several interviews.

In 1973 Caruthers started his own lab at Colorado. A major turning point took place three years later when a graduate student wanted to pursue a Ph.D. in organic chemistry. “Nobody had figured out how to synthesize DNA efficiently,” Caruthers said. “Let’s give it a whirl and see what we can come up with.”

This was a new type of chemistry in which Caruthers had been involved at Northwestern with his Ph.D. director. “I talked to him,” Caruthers recalled, “and he wasn’t interested in pursuing it again, so we picked up the ball and ran with it and developed it.”

Others were skeptical. Caruthers remembers relaxing at a lecture on synthesizing DNA.

“’What else?’”

“’This one person – he’s now in the National Academy of Sciences – looked at me and said, ‘Marv, why do you want to learn how to synthesize DNA?’ Khorana used it to solve the genetic code and now he’s made a gene, but what else you going to do with it. You’re a bright guy. Why don’t you do something more interesting?’”

“That was the community attitude at the time,” Caruthers continued. “There wasn’t anybody sitting around waiting for us to figure out how to synthesize DNA. Biochemists, biologists couldn’t care less. I just happened to be associated with the labs where I could figure out this was something worth pursuing.”

A few other laboratories were also trying to develop chemistries for synthesizing DNA, but none of them turned out to be very successful. “The one we developed,” Caruthers said, “is far more efficient that anything else. Far better. As soon as we published our work, everybody started using it. They abandoned everything else.”

The importance of synthesized DNA came into play when it was combined with three other watershed technologies: sequencing DNA, sequencing protein, and the ability to move genes around for expression in other organisms.

Those technologies pretty much revolutionized biochemistry and biotechnology. Caruthers said: “And they all came down about the same time, the late 70s. You can just chart the takeoff of the biotechnology industry.”

Nominations for this and other achievements came his way. In 2006 he accepted the nation’s highest honor for scientific accomplishment, the National Medal of Science, in a White House ceremony.

As time went on, Amgen grew. It pioneered “blockbuster” medicines and today serves millions of patients. Caruthers later co-founded other companies, yet all the while kept his University of Colorado research lab, which once grew to an unwieldy 40 members. He still has a six-person research group, but he no longer works in the lab. Travel, philanthropic and humanitarian interests keep him busy.

“I’m kind of retired from the things I don’t want to do,” he laughed. “No more committees, no chairing the department. ‘I keep a low profile. I’m known for avoiding publicity.’
Greener rockets
Chemist Mark Gordon looks for cleaner, cheaper rocket fuel.

Mark Gordon recently held up a small vial containing three liquids layered one on top of another. That middle layer, the brownish one, is an ionic liquid, Gordon explained.

And that kind of liquid could be a solution to the U.S. Air Force’s quest for a next generation rocket fuel that packs a lot of energy but is better for the environment and easier on the federal checkbook. Gordon, Iowa State University’s Frances M. Craig Distinguished Professor of Chemistry and director of the Applied Mathematics and Computational Sciences program for the U.S. Department of Energy’s Ames Laboratory, has been working as part of an Air Force research collaboration for more than a decade to come up with ideas for a new and better rocket fuel. Spencer Pruitt and Toni Smith, Iowa State doctoral students in chemistry, are also working on the project.

Department of Defense
Total support for Gordon’s rocket fuel work has been more than $1 million. The Air Force Office of Scientific Research has supported Gordon’s work with grants of about $70,000 per year. The U.S. Department of Defense is also supporting the work with grants of supercomputing time. The defense department has also provided $250,000 for a computer cluster featuring high-speed graphical processing units. Gordon’s Craig Chair at Iowa State features high-speed graphical processing as well.

And, Gordon said, there could be potential to build an ionic liquid that can ignite by chemical reaction rather than an ignition mechanism. That, he said, would be the “holy grail” of the project because it makes rocket engines much easier to control.

“We think we can figure this out,” Gordon said. “We need to optimize all the properties we’re looking for. But some of those properties are in opposition to each other –– to optimize one you minimize another –– so the challenge is to balance all of this.”

Ionic liquids
The project’s current focus is to study ionic liquids as a potential rocket fuel. Ionic liquids are salts that can melt down to liquids at room temperatures. They’re composed entirely of ions, atoms that carry electrical charges because they’ve lost or gained one or more electrons. The positively and negatively charged atoms and molecules within the ionic liquids can be changed, creating a range of materials with adjustable properties.

Gordon says he’s optimistic that ionic liquids might work as a rocket fuel. First, they’re not new materials and have already demonstrated a range of properties. Second, they’re generally non-toxic and can be designed to minimize pollutants. Third, they can be designed to contain very high energy.

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“This early days of the project focused on developing solid hydrogen fuels augmented with light materials such as boron to boost the fuel’s energy content. While these new materials worked in theory, Gordon said they weren’t always stable enough to work in practice.

Two chemistry faculty earn NSF CAREER Award

Two assistant professors of chemistry at Iowa State University have earned prestigious National Science Foundation awards. Malika Jeffries-EL and Emily Smith have each won an NSF CAREER Award, designed to boost the careers of junior faculty. The CAREER Award recognizes non-tenured faculty who exemplify the role of teacher-scholars through outstanding research and education, and integration of education and research within the context of their organization’s mission. The awards provide funds for five years. Jeffries-EL’s $480,000 award was announced in the latter part of 2008.

“I’m really excited because it’s a very competitive program,” she said. “I feel like a weight has been lifted off my shoulders to get research funding, and I’m glad to clear that hurdle.”

Polymers
Her current research involves polymers, particularly the development of a new class of materials and exploring how to manipulate the chemical structures to introduce new properties into the polymer. Jeffries-EL said this research is different from her graduate and post-doctoral research, which may have helped identify her as a scholar in the chemistry field and therefore receive this award.

“It’s good to know the outer community views my ideas as solid,” she said. “This was research I developed independently as a young investigator, and it’s nice to know the review panel regarded it favorably.”

The NSF award will fund Jeffries-EL’s research, including the purchase of chemicals, supplies and graduate student support. “One of the most exciting aspects of this award is that I can focus on my science,” she said. “I don’t have to worry about a funding source.”

Stimulus funds
The NSF announced Smith’s Career Award in mid-2009. Her $600,000, five-year grant was funded through the American Recovery and Reinvestment Act (ARRA). Iowa State University researchers to date have won 19 grants worth a total of $7.7 million from federal agencies awarding money from ARRA.

Smith said the stimulus funding can help build America’s scientific expertise. She said research grants – even for highly rated proposals – have been hard to come by, especially for junior faculty. That makes it difficult to advance projects, build careers and prepare the next generation of science leaders.

She will use the award to advance her studies of cell membranes. Smith is working to understand how the molecules that make up cell membranes organize and interact with each other. These measurements are needed to understand how cells receive information from their environment and respond to outside signals.

The award will also allow Smith to hire two graduate students for each of the grant’s five years.

“Stimulus funds are important for the research agencies to support young faculty,” Smith said. “It allows young faculty to move up the ranks and become established researchers. This helps young faculty grow.”

Two chemistry faculty earn NSF CAREER Award

Malika Jeffries-EL

Emily Smith
The road to home
If Lauri Suominen decides to take over the family business, he has big plans in the meantime.

Among the requirements for the Franke H. and Ethel A. Spedding Scholarship in Physical Science is that the recipient must possess “an inquisitive mind and spark” – someone who has an intellectual curiosity and passion toward their field. “This year’s recipient of the college scholarship, Lauri Suominen, has a passion for chemistry. His goal, ever since he selected chemistry as his major when he was a freshman, is to take as many chemistry courses as possible to prepare him for graduate school, where he plans to pursue chemistry further. Suominen, now a senior, is already taking a graduate-level chemistry course this fall along with his regular undergraduate classes.

Ph.D. priority
After graduation in May 2010, and following a one-year Army commitment in his home country of Finland, Suominen hopes to enter graduate school in Fall 2011. His studies may very likely lead him back home to Minnesota to take over his father’s purification business. “My dad wants me to know the processes he invented,” he said. “That requires a lot of chemistry, some physics and other areas of study.”

If Suominen decides to work in the family business, he already has built a solid resume. In addition to his jump-start on graduate level classes, Suominen has conducted research alongside graduate students and Richard Larock, distinguished professor of chemistry. In fall 2008, Suominen said he and fellow students used kenaf fiber and conjugated soybean oil-based resin to make different bio-based composites, which they tested for various physical properties. Only a handful of chemistry undergraduates participate in such graduate-level research at Iowa State, according to the department.

Fore fun
Suominen plans to participate in more research during his last year at Iowa State. “It’s good experience because it shows what graduate school will be like,” he said.

Another of Suominen’s passions is golf. He said he plays as often as possible when he’s not studying chemistry. In the summers he teaches children ages 6 to 12 at his local golf course. After graduate school, Suominen said it’s possible that he will attempt a professional bid in golf.

“It’s a long stretch, but it’s something I’ve always wanted to do,” he said. “Golf is something I know I’ll be involved in the rest of my life, no matter what job I have.”

Jonathan Rich to receive honorary degree from Iowa State in spring

An Iowa State chemistry graduate who has distinguished himself as a scholar in the corporate world will receive an honorary degree from the university in spring.

Jonathan Rich, who earned a B.S. degree in chemistry from ISU in 1977, will receive an honorary Doctor of Science degree at Iowa State’s spring 2010 Commencement. The honor recognizes Rich’s scientific and leadership contributions to the chemical industry and for his ongoing advocacy for public and private investment in research.

Rich earned his Ph.D. in chemistry from the University of Wisconsin where he studied under noted chemist Robert C. West. He began his career in 1982 as a research chemist with GE Corporate Research and Development, and in 1996, he was named manager of operational excellence for GE Silicones. When GE Silicates merged with Bayer Silicones in 1998, he became technical director of the German-based company, leading a group of 145 scientists.

He joined Goodyear Tire and Rubber Company in 2000, becoming president of Goodyear’s North American Tire division two years later.

In 2006, when Momentive Performance Materials (MPM) was acquired from GE, Rich was appointed its chief executive officer. MPM has 4,000 employees and more than $2.6 billion in annual sales and is the world’s second-largest manufacturer of silicones and silicone derivatives.

Rich has led several technological advancements, including the development of the PADS system of producing silicone co-polymers at GE. This created a new field for GE and resulted in 26 patents.

Outstanding Chemistry Alumnus honor goes to Joe Templeton

An Iowa State chemistry alumnus and longtime University of North Carolina professor has been honored as the 2009 Outstanding Chemistry Alumnus at ISU.

Joseph L. Templeton is the Francis Preston Venable Professor of Chemistry and also the Special Assistant to the Chancellor at the University of North Carolina at Chapel Hill. He was honored with other College of Liberal Arts and Sciences alumni at the college’s annual Alumni Awards and Recognition Ceremony during Homecoming week at ISU in October.

An outstanding researcher, Templeton’s UNC research group specializes in organometallic chemistry. Templeton also is known as a gifted teacher who puts a priority on students.

A native of Knoxville, Iowa, Templeton earned a B.S. degree in chemistry from California Institute of Technology in 1971. After earning his Ph.D. in chemistry from Iowa State in 1975, he spent a year doing postdoctoral research as a NATO fellow at the Imperial College of Science and Technology in London. He joined the North Carolina faculty in 1976.

During his tenure at North Carolina, Templeton was Chair of the Faculty from 2006 until 2009, chair of the Department of Chemistry, acting associate dean of the College of Arts and Sciences, senior associate dean of Science, and the Duncan MacRae Jr. Professor of Chemistry from 1993-06. Templeton resides in Chapel Hill, N.C.
Thank You

Gifts to Chemistry from November 1, 2008 through October 1, 2009

Thank You

Providing a high-quality education

As you read through the accomplishments, news and updates in this newsletter, I hope it instills a sense of pride as a Chemistry graduate of Iowa State. The department continues to provide the highest quality education for both major and non-major students, and YOU are making an impact! Many new scholarships have been created and provide much-needed support for our students. Students have been given the opportunity to travel internationally. Countless speakers have been brought to campus. Our classrooms and laboratories have the latest technologies.

And, of course, your generosity has made the new chemistry building, Hach Hall, a reality. The building is slated to be completed by fall 2010. As my colleagues and I travel around the country, we are grateful for the opportunity to visit with you – to learn about your experiences and interests. If you are interested to learn more about how you might invest philanthropically in the Department of Chemistry, please contact me at mgens@iastate.edu or 1-866-419-6768.

Once again, thank you for your continuing interest and support. I hope you will have the chance to return to our beautiful campus sometime soon.

Michael Gens
Senior Director of Development
College of Liberal Arts and Sciences
The Department of Chemistry at Iowa State University is committed to providing outstanding opportunities for the university community. In order to have the resources necessary to take these programs into the future, support for the department is essential. Funding is required to aid the program in developing new opportunities in technology, continuing and advancing outreach activities, maintaining and expanding current performance and educational opportunities, and supporting students and faculty. These services are crucial as the Department of Chemistry strives to keep up with the student demand for these experiences. To help make a difference, simply fill out the form (left), drop it in the mail (ISU Foundation, 2505 University Blvd, Ames, Iowa 50010-8644) and check our next newsletter.

For more information about making a gift to the Department of Chemistry or including ISU in your estate plans, please contact the College of Liberal Arts and Sciences Development Office at 515-294-3607 or Erin Steinkamp at estein@iastate.edu.

www.las.iastate.edu/giving/index.shtml